HULL
Environment / Energy / Infrastructure

January 13, 2021

Mr. Thomas Alcamo
Remedial Project Manager
US EPA Region 5
Ralph Metcalfe Federal Building
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

RE: Decision Unit Sampling Soil Data Package for USS lead Operable Unit 1; Zone 1, East Chicago, Indiana; IDA001.0011

Dear Mr. Alcamo:

Enclosed is the Decision Unit soil sampling data package for the U.S. Smelter and Lead Refinery, Inc. (USS. Lead) Superfund Site Operable Unit 1 (OU1) Zone 1 located in East Chicago, Indiana (Site). Sampling was performed by Hull & Associates, LLC (Hull) on behalf of Industrial Development Advantage LLC (IDA) in November 2020 in accordance with the approved 2020 Work Plan for Decision Unit Soil Sampling.

Sampling was based on a Geospatial Sample/Incremental Composite Sampling (ICS) Design with the Site divided into 55 Decision Units as shown on Figure 1. Within each decision unit, sub-sample locations were arrayed in a "five on a die" pattern for compositing five (5) 0.0 to 1.0-foot depth interval sub-samples into a single sample within each decision unit for laboratory analysis of total arsenic and total lead. As the maintenance building and parking lot in the east-central portion of the Site will remain post-development and soil beneath the hardscape materials will not be excavated, the sampling pattern was modified such that sub-samples were collected from existing green space areas in affected decision units per the approved work plan. Triplicate sub-samples were collected within nine (9) of the decision units for statistical evaluation for determining a confidence level. Each composited decision unit sample was also analyzed for toxicity characteristic leaching procedure (TCLP) extraction for arsenic and lead to assist with determining the need for on-Site treatment (e.g., stabilization) prior to off-Site disposal, as applicable. Additional waste characterization sampling was performed at select sample locations (E2-3, C5-3, and B8-3) to provide waste disposal facilities with data to support/evaluate off-Site disposal options.

Any aggregate material for road subbases or in former building areas, large roots or anthropogenic materials (plastic, metals, etc.) was discarded from the sample. Only material below the aggregate was submitted to the laboratory in accordance with the Work Plan. Samples were sent to ALS Environmental USA in Holland, Michigan under chain-of-custody for processing and analyses. Hull utilized the services of ECT.CON Inc for third-party data validation. Third-party data validation was completed on all analyses with the exception of ALS Work Order 20111764 associated with samples that were collected and analyzed to provide additional waste characterization data to disposal facilities.

The decision unit soil sampling data package includes the following information:

- Site Plan showing Layout of Decision Units;
- Tabulated arsenic and lead soils data and TCLP laboratory data;
- Electronic (pdf) copy of ALS Work Order 20111251 Level IV Data Report;
- Electronic (pdf) copy of ALS Work Order 20111574 Level IV Data Report;
- Electronic (pdf) copy of ALS Work Order 20111754 Level IV Data Report;
- Electronic (pdf) copy of ALS Work Order 20111764 Level IV Data Report;

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614.793.8777 614.793.9070 fax www.hullinc.com

- Electronic (pdf) copy of third-party data evaluation of ALS Work Order 20111251 Report;
- Electronic (pdf) copy of third-party data evaluation of ALS Work Order 20111574 Report; and
- Electronic (pdf) copy of third-party data evaluation of ALS Work Order 20111754 Report;

If you have any questions regarding the data package, please contact me at (614) 793-8777.

Sincerely,

Raymond Kennedy

Raymond L. Kennedy
Senior Project Manager

Attachments

Cc: Steve Radel – IDA
Brett Hickman – IDA
Milton Reed - Global Consulting
Ann Viner – Corporate Law Partners
PRP Group (via email)

FIGURE

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Site Boundary
Adjoining Property
Decision Unit Grid
Composite Sampling Location (0.0' - 1.0')
Waste Disposal Profiling Sample Location
Triplicate Sampling Locations

0 80 160 320 Feet
1:1,920

Note:
The aerial photo was acquired through Bing Maps.
Aerial photography dated 2020.

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January 2021

Data Package Deliverable
USS Lead Operable Unit 1 Zone 1
Industrial Development Advantage, LLC

Decision Unit Sampling Locations

East Chicago, Lake County, Indiana

Figure 1

Produced using ArcGIS 10.8

File Name: IDA001_14_Fig01_PropSamps.mxd

Edited: 1/12/2021 By: rkaip

TABLE

EAST CHICAGO
USS LEAD OPERABLE UNIT-1 ZONE 1

TABLE 1

SUMMARY OF DECISION UNIT SAMPLING RESULTS

Decision Unit Sample Location	Sample ID	Sample Depth (ft)	Sample Date	Analytical Method	SW6010D	SW6010D	SW6010D	SW6010D
				Parameter	Arsenic	Lead	TCLP-Arsenic	TCLP- Lead
				CASNumber	7440-38-2	7439-92-1	7440-38-2	7439-92-1
				ReportingUnits	mg/kg	mg/kg	mg/L	mg/L
				Regulatory Limits	26	800	5	5
DU-A1	IDA001:DU-A1:S000010	0-1 ft	11/9/2020		11	300	<0.05	0.61
DU-A2	IDA001:DU-A2:S000010	0-1 ft	11/9/2020	triplicate sample	9.5	500	<0.05	0.4
DU-A2-TE	IDA001:DU-A2-TE:S000010	0-1 ft	11/9/2020	triplicate sample	11	520	---	---
DU-A2-TS	IDA001:DU-A2-TS:S000010	0-1 ft	11/9/2020	triplicate sample	13	570	---	---
DU-A3	IDA001:DU-A3:S000010	0-1 ft	11/10/2020		9.5	410	0.017 J	0.45
DU-A4	IDA001:DU-A4:S000010	0-1 ft	11/11/2020		23	560	0.022 J	0.93
DU-A5	IDA001:DU-A5:S000010	0-1 ft	11/11/2020		**69**	**1,200**	0.052	0.58
DU-A6	IDA001:DU-A6:S000010	0-1 ft	11/15/2020		**64**	**1,300**	0.042 J	3.6
DU-A7	IDA001:DU-A7:S000010	0-1 ft	11/15/2020		19	700	0.023 J	1.1
DU-A8:	IDA001:DU-A8:S000010	0-1 ft	11/14/2020	triplicate sample	**56**	**2,300**	0.058	**7.2**
DU-A8-TE	IDA001:DU-A8-TE:S000010	0-1 ft	11/14/2020	triplicate sample	**42**	**1,700**	---	---
DU-A8-TS	IDA001:DU-A8-TS:S000010	0-1 ft	11/14/2020	triplicate sample	**46**	**1,400**	---	---
DU-A9	IDA001:DU-A9:S000010	0-1 ft	11/14/2020		**180**	**8,900**	0.074	**30**
DU-B1	IDA001:DU-B1:S000010	0-1 ft	11/9/2020		9.3	680	0.022 J	1.1
DU-B2	IDA001:DU-B2:S000010	0-1 ft	11/10/2020		7.3	250	<0.05	0.88
DU-B3	IDA001:DU-B3:S000010	0-1 ft	11/10/2020		13	**1,200**	<0.05	**17**
DU-B4	IDA001:DU-B4:S000010	0-1 ft	11/11/2020	triplicate sample	5.0	**1,600**	<0.05	**44**
DU-B4-TE	IDA001:DU-B4-TE:S000010	0-1 ft	11/11/2020	triplicate sample	5.9	**1,500**	---	---
DU-B4-TS	IDA001:DU-B4-TS:S000010	0-1 ft	11/11/2020	triplicate sample	8.2	660	---	---
DU-B5	IDA001:DU-B5:S000010	0-1 ft	11/12/2020		24	**2,500**	0.021 J	**26**
DU-B6	IDA001:DU-B6:S000010	0-1 ft	11/15/2020		**87**	**12,000**	0.031 J	**53**
DU-B7	IDA001:DU-B7:S000010	0-1 ft	11/15/2020		**97**	**3,100**	<0.05	**23**
DU-B8	IDA001:DU-B8:S000010	0-1 ft	11/14/2020		20	550	<0.05	0.53
DU-B9	IDA001:DU-B9:S000010	0-1 ft	11/14/2020		**280**	**4,700**	0.1	**39**
DU-C1	IDA001:DU-C1:S000010	0-1 ft	11/13/2020		8.5	190	0.023 J	0.11
DU-C2	IDA001:DU-C2:S000010	0-1 ft	11/10/2020		20	**1,700**	<0.05	**6.6**
DU-C3	IDA001:DU-C3:S000010	0-1 ft	11/10/2020		14	720	<0.05	**11**
DU-C4	IDA001:DU-C4:S000010	0-1 ft	11/11/2020		12	**3,300**	<0.05	**7.2**
DU-C5	IDA001:DU-C5:S000010	0-1 ft	11/12/2020		25	**3,400**	<0.05	**32**
DU-C6	IDA001:DU-C6:S000010	0-1 ft	11/15/2020	triplicate sample	**180**	**1,500**	0.017 J	**8.2**
DU-C6-TE	IDA001:DU-C6-TE:S000010	0-1 ft	11/15/2020	triplicate sample	24	**1,400**	---	---
DU-C6-TS	IDA001:DU-C6-TS:S000010	0-1 ft	11/15/2020	triplicate sample	**32**	**10,000**	---	---
DU-C7	IDA001:DU-C7:S000010	0-1 ft	11/15/2020		15	**830**	<0.05	**8.9**
DU-C8	IDA001:DU-C8:S000010	0-1 ft	11/14/2020		**28**	**940**	0.044 J	**9.9**
DU-C9	IDA001:DU-C9:S000010	0-1 ft	11/14/2020		**32**	770	0.024 J	0.63
DU-D1	IDA001:DU-D1:S000010	0-1 ft	11/13/2020		25	**1,000**	0.04 J	**25**
DU-D2	IDA001:DU-D2:S000010	0-1 ft	11/10/2020		13	**950**	<0.05	3.8
DU-D3	IDA001:DU-D3:S000010	0-1 ft	11/11/2020		**52**	**2,900**	<0.05	1.4
DU-D4	IDA001:DU-D4:S000010	0-1 ft	11/11/2020		9.1	**2,100**	<0.05	**9.6**
DU-D5	IDA001:DU-D5:S000010	0-1 ft	11/12/2020	triplicate sample	15	**4,500**	<0.05	2.2
DU-D5-TE	IDA001:DU-D5-TE:S000010	0-1 ft	11/12/2020	triplicate sample	11	**2,300**	---	---
DU-D5-TS	IDA001:DU-D5-TS:S000010	0-1 ft	11/12/2020	triplicate sample	9.5	**970**	---	---
DU-D6	IDA001:DU-D6:S000010	0-1 ft	11/15/2020		20	**1,900**	<0.05	2.3
DU-D7	IDA001:DU-D7:S000010	0-1 ft	11/15/2020		**42**	**1,800**	<0.05	2.6
DU-D8	IDA001:DU-D8:S000010	0-1 ft	11/14/2020		**70**	**2,300**	0.038 J	**29**
DU-D9	IDA001:DU-D9:S000010	0-1 ft	11/14/2020		**34**	**1,100**	0.025 J	1.6
DU-E1	IDA001:DU-E1:S000010	0-1 ft	11/10/2020		12	**900**	<0.05	4.2
DU-E2	IDA001:DU-E2:S000010	0-1 ft	11/10/2020		**30**	**12,000**	<0.05	**11**
DU-E3	IDA001:DU-E3:S000010	0-1 ft	11/11/2020	triplicate sample	11	**5,400**	<0.05	**19**
DU-E3-TE	IDA001:DU-E3-TE:S000010	0-1 ft	11/11/2020	triplicate sample	14	**1,200**	---	---
DU-E3-TS	IDA001:DU-E3-TS:S000010	0-1 ft	11/11/2020	triplicate sample	10	**1,500**	---	---
DU-E4	IDA001:DU-E4:S000010	0-1 ft	11/11/2020		22	**5,700**	<0.05	**64**
DU-E5	IDA001:DU-E5:S000010	0-1 ft	11/12/2020		**43**	**7,300**	<0.05	**16**
DU-E6	IDA001:DU-E6:S000010	0-1 ft	11/15/2020		4.9	240	<0.05	1.3
DU-E7	IDA001:DU-E7:S000010	0-1 ft	11/15/2020		9.1	650	<0.05	**6.7**
DU-E8	IDA001:DU-E8:S000010	0-1 ft	11/15/2020		19	**840**	<0.05	1.5
DU-E9	IDA001:DU-E9:S000010	0-1 ft	11/14/2020	triplicate sample	**450**	**10,000**	0.26	**69**
DU-E9-TE	IDA001:DU-E9-TE:S000010	0-1 ft	11/14/2020	triplicate sample	**570**	**8,400**	---	---
DU-E9-TS	IDA001:DU-E9-TS:S000010	0-1 ft	11/14/2020	triplicate sample	**1,000**	**14,000**	---	---
DU-F0	IDA001:DU-F0:S000010	0-1 ft	11/16/2020		8.0	450 B	<0.05	0.73

EAST CHICAGO
USS LEAD OPERABLE UNIT-1 ZONE 1

TABLE 1

SUMMARY OF DECISION UNIT SAMPLING RESULTS

Decision Unit Sample Location	Sample ID	Sample Depth (ft)	Sample Date	Analytical Method	SW6010D	SW6010D	SW6010D	SW6010D
				Parameter	**Arsenic**	**Lead**	**TCLP-Arsenic**	**TCLP- Lead**
				CASNumber	7440-38-2	7439-92-1	7440-38-2	7439-92-1
				ReportingUnits	mg/kg	mg/kg	mg/L	mg/L
				Regulatory Limits	**26**	**800**	**5**	**5**
DU-F1	IDA001:DU-F1:S000010	0-1 ft	11/16/2020	triplicate sample	**47**	**2,000 B**	<0.05	0.43
DU-F1-TE	IDA001:DU-F1-TE:S000010	0-1 ft	11/16/2020	triplicate sample	**37**	**2,400 B**	---	---
DU-F1-TS	IDA001:DU-F1-TS:S000010	0-1 ft	11/16/2020	triplicate sample	18	770 B	---	---
DU-F2	IDA001:DU-F2:S000010	0-1 ft	11/16/2020		18	**900 B**	<0.05	0.47
DU-F3	IDA001:DU-F3:S000010	0-1 ft	11/16/2020		26	**1,300 B**	<0.05	0.36
DU-F4	IDA001:DU-F4:S000010	0-1 ft	11/16/2020		25	**1,300 B**	<0.05	0.41
DU-F5	IDA001:DU-F5:S000010	0-1 ft	11/16/2020		6.1	200 B	<0.05	0.08
DU-F6	IDA001:DU-F6:S000010	0-1 ft	11/17/2020		7.7	240 B	<0.05	1.1
DU-F7	IDA001:DU-F7:S000010	0-1 ft	11/16/2020	triplicate sample	13	610 B	<0.05	0.3
DU-F7-TE	IDA001:DU-F7-TE:S000010	0-1 ft	11/16/2020	triplicate sample	17	620 B	---	---
DU-F7-TS	IDA001:DU-F7-TS:S000010	0-1 ft	11/16/2020	triplicate sample	10	310 B	---	---
DU-F8	IDA001:DU-F8:S000010	0-1 ft	11/17/2020		**33**	**880 B**	<0.05	0.44
DU-F9	IDA001:DU-F9:S000010	0-1 ft	11/17/2020		**46**	740 B	<0.05	0.29

Notes
BOLD and shaded indicates detected parameter exceeding regulatory threshold.
--- Not Applicable
J - Estimated Value
B - Analyte detected in the associated method blank above the reporting limit.

LEVEL VI DATA PACKAGES

December 29, 2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Work Order: **20111251**

Re: **IDA001**

Dear Ray,

ALS Environmental received 44 sample(s) on Nov 13, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 975.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Bill Carey
/S/ Bill Carey

Bill Carey
Project Manager

Narrative Documents

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client:	Hull & Associates
Project:	IDA001
Work Order:	20111251

Case Narrative

Samples for the above noted Work Order were received on 11/13/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168040, Method SW6010D, Sample 20111251-35AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168042, Method SW6010D, Sample 20111251-43AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168037, Method SW6010D, Sample 20111251-42AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168040, Method SW6010D, Sample 20111251-35AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168042, Method SW6010D, Sample 20111251-43AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Wet Chemistry:

No other deviations or anomalies were noted.

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-A1:S000010			Lab ID: 20111251-01			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	11		1.0	3.8	mg/Kg-dry	SW6010D
Lead	300		3.1	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A1:S000010			Lab ID: 20111251-02			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.61		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B1:S000010			Lab ID: 20111251-03			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	9.3		0.98	3.8	mg/Kg-dry	SW6010D
Lead	680		3.0	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B1:S000010			Lab ID: 20111251-04			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.022	J	0.016	0.050	mg/L	SW6010D
Lead	1.1		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E1:S000010			Lab ID: 20111251-05			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	12		1.1	4.2	mg/Kg-dry	SW6010D
Lead	900		3.3	4.2	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	9.5		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E1:S000010			Lab ID: 20111251-06			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	4.2		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-A2:S000010			Lab ID: 20111251-07			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	9.5		1.2	4.7	mg/Kg-dry	SW6010D
Lead	500		3.7	4.7	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	13		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A2:S000010			Lab ID: 20111251-08			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.40		0.013	0.050	mg/L	SW6010D

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-A2-TE:S000010			Lab ID: 20111251-09			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	11		0.98	3.8	mg/Kg-dry	SW6010D
Lead	520		3.0	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A2-TS:S000010			Lab ID: 20111251-10			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	13		0.92	3.5	mg/Kg-dry	SW6010D
Lead	570		2.8	3.5	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	9.4		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B2:S000010			Lab ID: 20111251-11			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	7.3		1.0	3.9	mg/Kg-dry	SW6010D
Lead	250		3.1	3.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	6.4		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B2:S000010			Lab ID: 20111251-12			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.88		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-C2:S000010			Lab ID: 20111251-13			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	20		1.1	4.1	mg/Kg-dry	SW6010D
Lead	1,700		3.3	4.1	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	9.2		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-C2:S000010			Lab ID: 20111251-14			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	6.6		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-D2:S000010			Lab ID: 20111251-15			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	13		0.95	3.7	mg/Kg-dry	SW6010D
Lead	950		2.9	3.7	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	8.4		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-D2:S000010			Lab ID: 20111251-16			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	3.8		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E2:S000010			Lab ID: 20111251-17			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	30		1.0	4.0	mg/Kg-dry	SW6010D
Lead	12,000		32	40	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E2:S000010			Lab ID: 20111251-18			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	11		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-A3:S000010			Lab ID: 20111251-19			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	9.5		0.99	3.8	mg/Kg-dry	SW6010D
Lead	410		3.0	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A3:S000010			Lab ID: 20111251-20			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.017	J	0.016	0.050	mg/L	SW6010D
Lead	0.45		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B3:S000010			Lab ID: 20111251-21			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	13		0.96	3.7	mg/Kg-dry	SW6010D
Lead	1,200		2.9	3.7	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	5.0		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B3:S000010			Lab ID: 20111251-22			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	17		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-C3:S000010			Lab ID: 20111251-23			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	14		1.1	4.0	mg/Kg-dry	SW6010D
Lead	720		3.2	4.0	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	4.5		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-C3:S000010			Lab ID: 20111251-24			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	11		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-D3:S000010			Lab ID: 20111251-25			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	52		1.2	4.5	mg/Kg-dry	SW6010D
Lead	2,900		3.6	4.5	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	19		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D3:S000010			Lab ID: 20111251-26			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	1.4		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E3:S000010			Lab ID: 20111251-27			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	11		1.0	4.0	mg/Kg-dry	SW6010D
Lead	5,400		32	40	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E3:S000010			Lab ID: 20111251-28			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	19		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E3-TE:S000010			Lab ID: 20111251-29			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	14		0.93	3.6	mg/Kg-dry	SW6010D
Lead	1,200		2.8	3.6	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E3-TS:S000010			Lab ID: 20111251-30			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	10		1.1	4.3	mg/Kg-dry	SW6010D
Lead	1,500		3.4	4.3	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A4:S000010			Lab ID: 20111251-31			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	23		0.96	3.7	mg/Kg-dry	SW6010D
Lead	560		3.0	3.7	mg/Kg-dry	SW6010D

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-A4:S000010			Lab ID: 20111251-31			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A4:S000010			Lab ID: 20111251-32			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.022	J	0.016	0.050	mg/L	SW6010D
Lead	0.93		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B4:S000010			Lab ID: 20111251-33			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	5.0		0.96	3.7	mg/Kg-dry	SW6010D
Lead	1,600		2.9	3.7	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	6.4		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B4:S000010			Lab ID: 20111251-34			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	44		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B4-TE:S000010			Lab ID: 20111251-35			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	5.9		1.0	4.0	mg/Kg-dry	SW6010D
Lead	1,500		3.2	4.0	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	5.7		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B4-TS:S000010			Lab ID: 20111251-36			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	8.2		1.1	4.1	mg/Kg-dry	SW6010D
Lead	660		3.3	4.1	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	6.0		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-C4:S000010			Lab ID: 20111251-37			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	12		1.1	4.1	mg/Kg-dry	SW6010D
Lead	3,300		3.2	4.1	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-C4:S000010			Lab ID: 20111251-38			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	7.2		0.13	0.50	mg/L	SW6010D

CLIENT ID: IDA001:DU-D4:S000010			Lab ID: 20111251-39			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	9.1		1.1	4.4	mg/Kg-dry	SW6010D
Lead	2,100		3.5	4.4	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D4:S000010			Lab ID: 20111251-40			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	9.6		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E4:S000010			Lab ID: 20111251-41			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	22		1.1	4.1	mg/Kg-dry	SW6010D
Lead	5,700		33	41	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E4:S000010			Lab ID: 20111251-42			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	64		0.13	0.50	mg/L	SW6010D

CLIENT ID: IDA001:DU-A5:S000010			Lab ID: 20111251-43			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	69		1.1	4.4	mg/Kg-dry	SW6010D
Lead	1,200		3.5	4.4	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A5:S000010			Lab ID: 20111251-44			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.052		0.016	0.050	mg/L	SW6010D
Lead	0.58		0.013	0.050	mg/L	SW6010D

Sample Receipt Information

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

ALS Group, USA

Date: 29-Dec-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111251**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111251-01	IDA001:DU-A1:S000010	Soil	DU-A1	11/9/2020 11:08	11/13/2020 09:00	☐
20111251-02	IDA001:DU-A1:S000010	Tclp Extract	DU-A1	11/9/2020 11:08	11/13/2020 09:00	☐
20111251-03	IDA001:DU-B1:S000010	Soil	DU-B1	11/9/2020 11:22	11/13/2020 09:00	☐
20111251-04	IDA001:DU-B1:S000010	Tclp Extract	DU-B1	11/9/2020 11:22	11/13/2020 09:00	☐
20111251-05	IDA001:DU-E1:S000010	Soil	DU-E1	11/10/2020 08:20	11/13/2020 09:00	☐
20111251-06	IDA001:DU-E1:S000010	Tclp Extract	DU-E1	11/10/2020 08:20	11/13/2020 09:00	☐
20111251-07	IDA001:DU-A2:S000010	Soil	DU-A2	11/9/2020 16:01	11/13/2020 09:00	☐
20111251-08	IDA001:DU-A2:S000010	Tclp Extract	DU-A2	11/9/2020 16:01	11/13/2020 09:00	☐
20111251-09	IDA001:DU-A2-TE:S000010	Soil	DU-A2-TE	11/9/2020 16:30	11/13/2020 09:00	☐
20111251-10	IDA001:DU-A2-TS:S000010	Soil	DU-A2-TS	11/9/2020 16:11	11/13/2020 09:00	☐
20111251-11	IDA001:DU-B2:S000010	Soil	DU-B2	11/10/2020 12:40	11/13/2020 09:00	☐
20111251-12	IDA001:DU-B2:S000010	Tclp Extract	DU-B2	11/10/2020 12:40	11/13/2020 09:00	☐
20111251-13	IDA001:DU-C2:S000010	Soil	DU-C2	11/10/2020 11:47	11/13/2020 09:00	☐
20111251-14	IDA001:DU-C2:S000010	Tclp Extract	DU-C2	11/10/2020 11:47	11/13/2020 09:00	☐
20111251-15	IDA001:DU-D2:S000010	Soil	DU-D2	11/10/2020 11:13	11/13/2020 09:00	☐
20111251-16	IDA001:DU-D2:S000010	Tclp Extract	DU-D2	11/10/2020 11:13	11/13/2020 09:00	☐
20111251-17	IDA001:DU-E2:S000010	Soil	DU-E2	11/10/2020 10:48	11/13/2020 09:00	☐
20111251-18	IDA001:DU-E2:S000010	Tclp Extract	DU-E2	11/10/2020 10:48	11/13/2020 09:00	☐
20111251-19	IDA001:DU-A3:S000010	Soil	DU-A3	11/10/2020 13:12	11/13/2020 09:00	☐
20111251-20	IDA001:DU-A3:S000010	Tclp Extract	DU-A3	11/10/2020 13:12	11/13/2020 09:00	☐
20111251-21	IDA001:DU-B3:S000010	Soil	DU-B3	11/10/2020 14:10	11/13/2020 09:00	☐
20111251-22	IDA001:DU-B3:S000010	Tclp Extract	DU-B3	11/10/2020 14:10	11/13/2020 09:00	☐
20111251-23	IDA001:DU-C3:S000010	Soil	DU-C3	11/10/2020 14:45	11/13/2020 09:00	☐
20111251-24	IDA001:DU-C3:S000010	Tclp Extract	DU-C3	11/10/2020 14:45	11/13/2020 09:00	☐
20111251-25	IDA001:DU-D3:S000010	Soil	DU-D3	11/11/2020 07:50	11/13/2020 09:00	☐
20111251-26	IDA001:DU-D3:S000010	Tclp Extract	DU-D3	11/11/2020 07:50	11/13/2020 09:00	☐
20111251-27	IDA001:DU-E3:S000010	Soil	DU-E3	11/11/2020 08:35	11/13/2020 09:00	☐
20111251-28	IDA001:DU-E3:S000010	Tclp Extract	DU-E3	11/11/2020 08:35	11/13/2020 09:00	☐
20111251-29	IDA001:DU-E3-TE:S000010	Soil	DU-E3-TE	11/11/2020 09:05	11/13/2020 09:00	☐
20111251-30	IDA001:DU-E3-TS:S000010	Soil	DU-E3-TS	11/11/2020 09:40	11/13/2020 09:00	☐
20111251-31	IDA001:DU-A4:S000010	Soil	DU-A4	11/11/2020 10:50	11/13/2020 09:00	☐
20111251-32	IDA001:DU-A4:S000010	Tclp Extract	DU-A4	11/11/2020 10:50	11/13/2020 09:00	☐
20111251-33	IDA001:DU-B4:S000010	Soil	DU-B4	11/11/2020 11:20	11/13/2020 09:00	☐
20111251-34	IDA001:DU-B4:S000010	Tclp Extract	DU-B4	11/11/2020 11:20	11/13/2020 09:00	☐
20111251-35	IDA001:DU-B4-TE:S000010	Soil	DU-B4-TE	11/11/2020 12:00	11/13/2020 09:00	☐
20111251-36	IDA001:DU-B4-TS:S000010	Soil	DU-B4-TS	11/11/2020 12:40	11/13/2020 09:00	☐
20111251-37	IDA001:DU-C4:S000010	Soil	DU-C4	11/11/2020 13:20	11/13/2020 09:00	☐
20111251-38	IDA001:DU-C4:S000010	Tclp Extract	DU-C4	11/11/2020 13:20	11/13/2020 09:00	☐
20111251-39	IDA001:DU-D4:S000010	Soil	DU-D4	11/11/2020 13:50	11/13/2020 09:00	☐

Client: Hull & Associates
Project: IDA001
Work Order: **20111251**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111251-40	IDA001:DU-D4:S000010	Tclp Extract	DU-D4	11/11/2020 13:50	11/13/2020 09:00	☐
20111251-41	IDA001:DU-E4:S000010	Soil	DU-E4	11/11/2020 14:41	11/13/2020 09:00	☐
20111251-42	IDA001:DU-E4:S000010	Tclp Extract	DU-E4	11/11/2020 14:41	11/13/2020 09:00	☐
20111251-43	IDA001:DU-A5:S000010	Soil	DU-A5	11/11/2020 15:30	11/13/2020 09:00	☐
20111251-44	IDA001:DU-A5:S000010	Tclp Extract	DU-A5	11/11/2020 15:30	11/13/2020 09:00	☐

20111251

DATA ADMIN PAGE 1 OF 3

LANCE TURLEY NO. 374

REPORT TO: RAY KENNEDY

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

Client: IDA

Site: USS LEAD OU-1, ZONE 1

Project #: IDA0001 Phase: DU SAMPLING

Samplers: TIM LAS / JEREMY GARNER

Purchase Order # IDA0001_DUS_RI.01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC GOLD	LEAD GOLD	TCLP - ARSENIC	TCLP - LEAD					COMMENTS
IDA0001 : DU-A1 : S000010	1	COMPOSITE	11/09/20 / 1108	N	X	X	X	X					
IDA0001 : DU-B1 : S000010	1	COMPOSITE	11/09/20 / 1122	N	X	X	X	X					
IDA0001 : DU-E1 : S000010	1	COMPOSITE	11/10/20 / 0820	N	X	X	X	X					
IDA0001 : DU-A2 : S000010	1	COMPOSITE	11/09/20 / 1601	N	X	X	X	X					
IDA0001 : DU-A2-TE : S000010	1	COMPOSITE	11/09/20 / 1630	N	X	X	X	X					
IDA0001 : DU-A2-TS : S000010	1	COMPOSITE	11/09/20 / 1611	N	X	X	X	X					
IDA0001 : DU-B2 : S000010	1	COMPOSITE	11/10/20 / 1240	N	X	X	X	X					
IDA0001 : DU-C2 : S000010	1	COMPOSITE	11/10/20 / 1147	N	X	X	X	X					
IDA0001 : DU-D2 : S000010	1	COMPOSITE	11/10/20 / 1113	N	X	X	X	X					
IDA0001 : DU-E2 : S000010	1	COMPOSITE	11/10/20 / 1048	N	X	X	X	X					
IDA0001 : DU-A3 : S000010	1	COMPOSITE	11/10/20 / 1312	N	X	X	X	X					
IDA0001 : DU-B3 : S000010	1	COMPOSITE	11/10/20 / 1410	N	X	X	X	X					

RELINQUISHED BY:	DATE: 11 NOV 20	RECEIVED BY: FEDEX	DATE: 11 NOV 20	Deliver To: ALS-HOLLAND, MI.
	TIME: 1730		TIME: 1730	Method of Delivery: FEDEX
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:	Airbill Number:
	TIME:		TIME:	Regulatory Program: CERCLA
RELINQUISHED BY: FEDEX	DATE: 11/13/20	RECEIVED BY:	DATE:	Required Limits:
	TIME: 0900		TIME:	

COOLER TEMPERATURE AS RECEIVED: IR1 4.0 °C, 5.2, 5.0

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

975

20111251

DATA ADMIN PAGE 2 OF 3

LANCE TURLEY NO. 375

REPORT TO: RAYMOND KENNEDY

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

Client: IDA
Site: VSS LEAD DU-1; ZONE 1
Project #: IDA0001 Phase: DU SAMPLING
Samplers: Tim Lois / Jeremy Conner
Purchase Order # IDA001_DUS_RLK01

SAMPLE MATRIX	PRESERVATIVES	METALS
AA-AMBIENT AIR C-ASBESTOS D-SEDIMENT G-GROUNDWATER IA-INDOOR AIR L-LEACHATE P-PRODUCT S-SOIL SG-SOIL GAS SS-SUBSLAB VAPOR W-WATER X-CONCRETE	A-Cool only, <4 deg. C B-HNO_3 pH<2 C-H_2SO_4 pH<2 D-NaOH pH>12 E-ZnAcetate + NaOH, pH>9 F-$Na_2S_2O_3$ (0.008%) G-HCL pH <2 H-EDTA I-5ml 1:1 HCL J-none K-Stored in dark L-NH4Cl M-Methanol S-Sodium	N - Not filtered F45u- filtered with 0.45 micron F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC, total J	LEAD, total J	TCLP-ARSENIC	TCLP-LEAD	COMMENTS
IDA0001 : DU-C3 : S0000010	1	COMPOSITE	11/10/20 / 1445	N	X	X	X	X	
IDA0001 : DU-D3 : S0000010	1	COMPOSITE	11/10/20 @ / 0750	N	X	X	X	X	
IDA0001 : DU-E3 : S0000010	1	COMPOSITE	11/11/20 / 0835	N	X	X	X	X	
IDA0001 : DU-E3-TE : S0000010	1	COMPOSITE	11/11/20 / 0905	N	X	X	X	X	
IDA0001 : DU-E3-TS : S0000010	1	COMPOSITE	11/11/20 / 0940	N	X	X	X	X	
IDA0001 : DU-A4 : S0000010	1	COMPOSITE	11/11/20 / 1050	N	X	X	X	X	
IDA0001 : DU-B4 : S0000010	1	COMPOSITE	11/11/20 / 1120	N	X	X	X	X	
IDA0001 : DU-B4-TE : S0000010	1	COMPOSITE	11/11/20 / 1200	N	X	X	X	X	
IDA0001 : DU-B4-TS : S0000010	1	COMPOSITE	11/11/20 / 1240	N	X	X	X	X	
IDA0001 : DU-C4 : S0000010	1	COMPOSITE	11/11/20 / 1320	N	X	X	X	X	
IDA0001 : DU-D4 : S0000010	1	COMPOSITE	11/11/20 / 1350	N	X	X	X	X	
IDA0001 : DU-E4 : S0000010	1	COMPOSITE	11/11/20 / 1441	N	X	X	X	X	

RELINQUISHED BY: DATE: 11 NOV 20 TIME: 1730
RECEIVED BY: FEDEX DATE: 11 NOV 20 TIME: 1730

RELINQUISHED BY: DATE: TIME:
RECEIVED BY: DATE: TIME:

RELINQUISHED BY: FEDEX DATE: 11/13/20 TIME: 0900
RECEIVED BY: DATE: TIME:

Deliver To: ALS - HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

COOLER TEMPERATURE AS RECEIVED: 1.0-C °C
5.2
5.0 C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

154975

20111251

PAGE 3 OF 3

HULL

CHAIN OF CUSTODY RECORD

NO. 376

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: DATA ADMIN
LANCE TOLLEY
RAYMOND KENNEDY

Client: IDA
Site: USS LEAD OU-1 ; ZONE 1
Project #: IDA0001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA0001_DUS_RUL01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	PRESERVATIVES J	ARSENIC 6010D	LEAD 6010D	TCLP-ARSENIC	TCLP-LEAD					COMMENTS
IDA0001 : DU-A5 : S0000110	1	COMPOSITE	11/11/20 / 1530	N		X	X	X	X					
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											

RELINQUISHED BY:	DATE: 11 NOV 20	RECEIVED BY: FEDEX	DATE: 11 NOV 20	Deliver To: ALS - HOLLAND, MI
RELINQUISHED BY:	TIME: 1730	RECEIVED BY:	TIME: 0930	Method of Delivery: FEDEX
	DATE:		DATE:	Airbill Number:
RELINQUISHED BY:	TIME:	RECEIVED BY:	TIME:	Regulatory Program: CERCLA
FEDEX 1975	DATE: 11/13/20		DATE:	Required Limits:
COOLER TEMPERATURE	TIME: 0900	DISTRIBUTION: WHITE	TIME: -LAB USE (MUST BE RETURNED WITH REPORT)	NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS
AS RECEIVED	IR1 4.0 °C 5.2 °C 5.0 °C	YELLOW	-LAB USE	
		PINK	-RETAINED BY HULL	TURN AROUND TIME: STD DAYS

20111251

DATA ADMIN PAGE 1 OF 3

HULL

CHAIN OF CUSTODY RECORD

NO. 374

Dublin, OH [X]	Newark, OH [ ]	Mason, OH [ ]	Bedford, OH [ ]	Toledo, OH [ ]	St. Clairsville, OH [ ]	Pittsburgh, PA [ ]
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: RAY KENNEDY

Client: IDA
Site: USS LEAD OU-1; ZONE 1
Project #: IDA0001 Phase: DU SAMPLING
Samplers: TIM LOAS / JEREMY GARNER
Purchase Order #: IDA001_DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
FSu- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA0001 : DU-A1 : S0000010	1	COMPOSITE	11/09/20 / 1108	N	X	X	X	X	
IDA0001 : DU-B1 : S0000010	1	COMPOSITE	11/09/20 / 1122	N	X	X	X	X	
IDA0001 : DU-E1 : S0000010	1	COMPOSITE	11/10/20 / 0820	N	X	X	X	X	
IDA0001 : DU-A2 : S0000010	1	COMPOSITE	11/09/20 / 1601	N	X	X	X	X	
IDA0001 : DU-A2-TE : S0000010	1	COMPOSITE	11/09/20 / 1630	N	X	X	X	X	DO NOT RUN TCLP ON THESE TWO SAMPLES DU-A2-TE AND DU-A2-TS
IDA0001 : DU-A2-TS : S0000010	1	COMPOSITE	11/09/20 / 1611	N	X	X	X	X	
IDA0001 : DU-B2 : S0000010	1	COMPOSITE	11/10/20 / 1240	N	X	X	X	X	
IDA0001 : DU-C2 : S0000010	1	COMPOSITE	11/10/20 / 1147	N	X	X	X	X	
IDA0001 : DU-D2 : S0000010	1	COMPOSITE	11/10/20 / 1113	N	X	X	X	X	
IDA0001 : DU-E2 : S0000010	1	COMPOSITE	11/10/20 / 1048	N	X	X	X	X	
IDA0001 : DU-A3 : S0000010	1	COMPOSITE	11/10/20 / 1312	N	X	X	X	X	
IDA0001 : DU-B3 : S0000010	1	COMPOSITE	11/10/20 / 1410	N	X	X	X	X	

RELINQUISHED BY:	DATE: 11 NOV 20	RECEIVED BY: FEDEX	DATE: 11 NOV 20
	TIME: 1730		TIME: 1730
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

COOLER TEMPERATURE AS RECEIVED °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED/SIEVED/HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

HULL

CHAIN OF CUSTODY RECORD

DATA ADMIN PAGE 2 OF 3

LANCE TURLEY NO. 375

REPORT TO: RAYMOND KENNEDY

Dublin, OH — 6397 Emerald Pkwy, Suite 250, Dublin, OH 43016, P (614) 793-8777

Newark, OH — 59 Green St, Newark, OH 43055, P (740) 344-5451

Mason, OH — 4770 Duke Dr, Suite 300, Mason, OH 45040, P (513) 459-9677

Bedford, OH — 4 Hemisphere Way, Bedford, OH 44146, P (440) 232-9544

Toledo, OH — 219 S. Erie St, Toledo, OH 43604, P (419) 385-2018

St. Clairsville, OH — 146 W. Main St, 2nd Floor, St. Clairsville, OH 43950, P (800) 241-7173

Pittsburgh, PA — 350 Mansfield Dr, Suite 307, Pittsburgh, PA 15205, P (412) 446-2315

Client: IDA

Site: WESTLEAD DU-1, ZONE 1

Project #: IDA001 Phase: DU INVESTIGATION

Samplers: Trent Lis / Jeremy Cooper

Purchase Order #: IDA001_DUS_RUK01

SAMPLE MATRIX: A-AMBIENT AIR; C-ASBESTOS; D-SEDIMENT; G-GROUNDWATER; H-INDOOR AIR; L-LEACHATE; P-PRODUCT; S-SOIL; SG-SOIL GAS; SS-SUBSLAB VAPOR; W-WATER; X-CONCRETE

PRESERVATIVES: A-Cool only, <4 deg. C; B-HNO_3 pH<2; C-H_2SO_4 pH<2; D-NaOH pH>12; E-ZnAcetate + NaOH, pH>9; F-$Na_2S_2O_3$ (0.008%); G-HCL pH <2; H-EDTA; I-5ml 1:1 HCL; J-none; K-Stored in dark; L-NH4Cl; M-Methanol; S-Sodium

METALS: N - Not filtered; F45u- filtered with 0.45 micron; F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES: ARSENIC 6010D; LEAD 6010D; TCLP - ARSENIC; TCLP - LEAD; J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C3 : S000010	1	COMPOSITE	11/10/20 / 1445	N	X	X	X	X	
IDA001 : DU-D3 : S000010	1	COMPOSITE	11/10/20 / 0750	N	X	X	X	X	
IDA001 : DU-E3 : S000010	1	COMPOSITE	11/11/20 / 0835	N	X	X	X	X	
IDA001 : DU-E3-TE : S000010	1	COMPOSITE	11/11/20 / 0905	N	X	X	X	X	DO NOT RUN TCLP ON THESE TWO SAMPLES DU-E3-TE AND DU-E3-TS
IDA001 : DU-E3-TS : S000010	1	COMPOSITE	11/11/20 / 0910	N	X	X	X	X	
IDA001 : DU-A4 : S000010	1	COMPOSITE	11/11/20 / 1050	N	X	X	X	X	
IDA001 : DU-B4 : S000010	1	COMPOSITE	11/11/20 / 1120	N	X	X	X	X	
IDA001 : DU-B4-TE : S000010	1	COMPOSITE	11/11/20 / 1200	N	X	X	X	X	DO NOT RUN TCLP ON THESE TWO SAMPLES DU-B4-TE AND DU-B4-TS
IDA001 : DU-B4-TS : S000010	1	COMPOSITE	11/11/20 / 1210	N	X	X	X	X	
IDA001 : DU-C4 : S000010	1	COMPOSITE	11/11/20 / 1320	N	X	X	X	X	
IDA001 : DU-D4 : S000010	1	COMPOSITE	11/11/20 / 1350	N	X	X	X	X	
IDA001 : DU-E4 : S000010	1	COMPOSITE	11/11/20 / 1441	N	X	X	X	X	

RELINQUISHED BY:	DATE: 11/20/20	RECEIVED BY: FEDEX	DATE: 11/20/20
	TIME: 1730		TIME: 1730
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

COOLER TEMPERATURE AS RECEIVED °C

DISTRIBUTION: WHITE - LAB USE (MUST BE RETURNED WITH REPORT); YELLOW - LAB USE; PINK - RETAINED BY HULL

Deliver To: HLS - HOLLAND, MI

Method of Delivery: FEDEX

Airbill Number:

Regulatory Program: CERCLA

Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

HULL

CHAIN OF CUSTODY RECORD

PAGE 3 OF 3

NO 376

Dublin OH	Newark DE	Marietta OH	Bedford UK	Toledo OH	Jacksonville FL	Pittsburgh PA
6640 Riverside Dr	46 Howard St	4710 Fisher Dr	4 Hampshire Way	6800 Doyle Dr	1845 Rosselle St	400 Rouser Rd
Suite 200	Newark, DE 19713	Suite 101	Bedford MK40 2PR	Toledo, OH 43612	Jacksonville, FL 32204	Suite 307
Dublin, OH 43016	P (302) 368-9421	Marietta, OH 45750	P (+44) 1234 832	P (419) 476-6351	P (904) 388-6251	Coraopolis, PA 15108
P (614) 761-8867		P (740) 374-6373				P (412) 264-2431

REPORT TO: [illegible]

ANALYSES

PRESERVATIVES

Client	ATL												
Site	[illegible]												
Project #	[illegible]	Phase	[illegible]										
Samplers	[illegible]												
Purchase Order #	[illegible]												

PROJECT NO	SAMPLE LOCATION	SAMPLE MATRIX # ID	NO OF CONT	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS								COMMENTS
[illegible]	DW-A5	[illegible]	1	[illegible]	11/4/20 / [illegible]	A5	X	X	X	X				
					/									
					/									
					/									
					/									
					/									
					/									
					/									
					/									
					/									
					/									
					/									
					/									

SAMPLE MATRIX: AA Ambient air; B Biological; DW Drinking water; GW Groundwater; I Insoluble; L Liquid; O Oil; P Product; S Soil; SD Solid waste; SW Surface water; W Water; X Unspecified

PRESERVATIVES: A Ascorbic acid; B HCl pH<2; C H2SO4 pH<2; D NaOH pH>12; E Zn(Ac)2 + NaOH pH>9; F NaHSO4 pH<2; G Sodium thiosulfate; H HNO3; I Ice; J Methanol; K Methanol; L Sodium bisulfate; M Multilevel; N Nonlevel

METALS: N Not filtered; P Field filtered with a 0.45 micron; Q Field filtered with a different

RELINQUISHED BY:	DATE: 11/4/20	TIME: [illegible]	RECEIVED BY:	DATE: 11/4/20	TIME: [illegible]
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:

Deliver to: [illegible]
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

TEMP OF SAMPLES UPON AS RECEIVED °C

DISTRIBUTION: WHITE; YELLOW; PINK

LABORATORY COPY: LABORATORY MAINTAINS THIS COPY

NOTES: [illegible]

TURN AROUND TIME: [illegible]

DATE: 11/6

FedEx Office

Address: 17952 HALSTED ST
HOMEWOOD
IL 60430
Location: JOTKN
Device ID: -BTC01

FedEx Express Package(s) - Dropped Off
166879254269 46.95 lb (S)

FedEx Express Package(s) - Dropped Off
166879254247 46.65 lb (S)

FedEx Express Package(s) - Dropped Off
166879254258 47.55 lb (S)

Total Pieces: 3

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

Nov 11, 2020 5:47:40 PM

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Redemption Code: _____

*** Thank you ***

Custody Seal
http://www.alsglobal.com

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263 Name: TIM LOLS
Phone: 616-399-6070
Attn: Sample Receiving Date: 11-11-2020

HULL

Ref:
Dept:

Date: 04NOV20
Wgt: 40.00 LBS

DV:

SHIPPING: 0.00
SPECIAL: 0.00
HANDLING: 0.00
0.00 TOTAL: 0.00

Svcs: STANDARD OVERNIGHT Master 1668 7925 4247
TRK: 1668 7925 4247

ORIGIN ID:GRRA (614) 793-8777
JEREMY CONNOR
HULL & ASSOCIATES
6397 EMERALD PARKWAY
SUITE 200
DUBLIN, OH 43016
UNITED STATES US

SHIP DATE: 04NOV20
ACTWGT: 40.00 LB MAN
CAD: 0122071/CAFE3311

10 ALS ENVIRONMENTAL
ALS ENVIRONMENTAL
3352 128TH AVENUE

HOLLAND MI 494249263

(616) 399-6070 REF:
INV:
PO:
DEPT:

RMA:

FedEx Express

RETURNS MON-FRI
STANDARD OVERNIGHT

TRK# 0221 1668 7925 4247

49424

MI-US

MI - US

49424

RETURNS MON-FRI
STANDARD OVERNIGHT

TRK# 0221 1668 7925 4258

FedEx Express

RMA:

DEPT:

(616) 399-6070
INV:
PO:
REF:

HOLLAND MI 494249263

TO ALS ENVIRONMENTAL
ALS ENVIRONMENTAL
3352 128TH AVENUE

ORIGIN ID:GRRA (614) 793-8777
JEREMY CONNOR
HULL & ASSOCIATES
6397 EMERALD PARKWAY
SUITE 200
DUBLIN, OH 43016
UNITED STATES US

SHIP DATE: 04NOV20
ACTWGT: 40.00 LB MAN
CAD: 0122071/CAFE3311

SVCE: STANDARD OVERNIGHT Master 1668 7925 4247
TRK: 1668 7925 4258

Ref:
Dep:

Date: 04Nov20
Wgt: 40.00 LBS

DV:

SHIPPING: 0.00
SPECIAL: 0.00
HANDLING: 0.00
0.00 TOTAL: 0.00

0550/8815/KJSS5

0297-435 RRDW2 EXP 08/21

Custody Seal
http://www.alsglobal.com

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263 Name:
Phone: 616-399-6070
Attn: Sample Receiving

Company: HULL
Date: 11.11.2020

Custody Seal
http://www.alsglobal.com
ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263
Phone: 616-399-6070
Attn: Sample Receiving
Company: HULL
Name: TM CAIS
Date: 11-11-2020

ALS Group, USA

Sample Receipt Checklist

Client Name: ***HULL&ASSOC-DUBLIN*** Date/Time Received: ***13-Nov-20 09:00***

Work Order: ***20111251*** Received by: ***DS***

Checklist completed by Bill Carey (eSignature) 13-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 13-Nov-20 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	4.0, 5.2, 5.0 C		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/13/2020 2:53:27 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Miscellaneous Forms

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111251**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
µg/L	Micrograms per Liter
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
ng/L	Nanograms per Liter

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-A1:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-01A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-A1:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-02A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Name: IDA001:DU-B1:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-03A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-B1:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-04A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-E1:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-05A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-E1:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-06A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Name: IDA001:DU-A2:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-07A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-A2:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-08A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-A2-TE:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-09A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-A2-TS:S000010 **Date Collected:** 11/09/2020
Lab Code: 20111251-10A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-B2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-11A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-B2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-12A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-C2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-13A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-C2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-14A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Name: IDA001:DU-D2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-15A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-D2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-16A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-E2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-17A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-E2:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-18A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Name: IDA001:DU-A3:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-19A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-A3:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-20A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-B3:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-21A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-B3:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-22A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Name: IDA001:DU-C3:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-23A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-C3:S000010 **Date Collected:** 11/10/2020
Lab Code: 20111251-24A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-D3:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-25A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-D3:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-26A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Name: IDA001:DU-E3:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-27A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-E3:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-28A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-E3-TE:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-29A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-E3-TS:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-30A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-A4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-31A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-A4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-32A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-B4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-33A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-B4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-34A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Name: IDA001:DU-B4-TE:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-35A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-B4-TS:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-36A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-C4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-37A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-C4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-38A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC
SW6010D		ABL

Sample Name: IDA001:DU-D4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-39A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-D4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-40A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Sample Name: IDA001:DU-E4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-41A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-E4:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-42A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC
SW6010D		ABL

Sample Name: IDA001:DU-A5:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-43A **Date Received:** 11/13/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-A5:S000010 **Date Collected:** 11/11/2020
Lab Code: 20111251-44A **Date Received:** 11/13/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		DSC

Sample Results

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Metals

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www.alsglobal.com

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Dry
Lab Code:	20111251-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	3.8	10	11/20/20 19:08	11/19/20 15:33	
Lead	SW6010D	**300**	mg/Kg-dry	3.8	10	11/20/20 19:08	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:06	11/19/20 13:52	
Lead	SW6010D	**0.61**	mg/L	0.050	1	11/19/20 22:06	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Dry
Lab Code:	20111251-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.3**	mg/Kg-dry	3.8	10	11/20/20 19:13	11/19/20 15:33	
Lead	SW6010D	**680**	mg/Kg-dry	3.8	10	11/20/20 19:13	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.022 J**	mg/L	0.050	1	11/19/20 22:12	11/19/20 13:52	
Lead	SW6010D	**1.1**	mg/L	0.050	1	11/19/20 22:12	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Dry
Lab Code:	20111251-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**12**	mg/Kg-dry	4.2	10	11/20/20 19:18	11/19/20 15:33	
Lead	SW6010D	**900**	mg/Kg-dry	4.2	10	11/20/20 19:18	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:17	11/19/20 13:52	
Lead	SW6010D	**4.2**	mg/L	0.050	1	11/19/20 22:17	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Dry
Lab Code:	20111251-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	4.7	10	11/20/20 19:23	11/19/20 15:33	
Lead	SW6010D	**500**	mg/Kg-dry	4.7	10	11/20/20 19:23	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:22	11/19/20 13:52	
Lead	SW6010D	**0.40**	mg/L	0.050	1	11/19/20 22:22	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	3.8	10	11/20/20 19:43	11/19/20 15:33	
Lead	SW6010D	**520**	mg/Kg-dry	3.8	10	11/20/20 19:43	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.5	10	11/20/20 19:48	11/19/20 15:33	
Lead	SW6010D	**570**	mg/Kg-dry	3.5	10	11/20/20 19:48	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Dry
Lab Code:	20111251-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**7.3**	mg/Kg-dry	3.9	10	11/20/20 19:53	11/19/20 15:33	
Lead	SW6010D	**250**	mg/Kg-dry	3.9	10	11/20/20 19:53	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:27	11/19/20 13:52	
Lead	SW6010D	**0.88**	mg/L	0.050	1	11/19/20 22:27	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Dry
Lab Code:	20111251-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	4.1	10	11/20/20 19:58	11/19/20 15:33	
Lead	SW6010D	**1,700**	mg/Kg-dry	4.1	10	11/20/20 19:58	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:32	11/19/20 13:52	
Lead	SW6010D	**6.6**	mg/L	0.050	1	11/19/20 22:32	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Dry
Lab Code:	20111251-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.7	10	11/20/20 20:03	11/19/20 15:33	
Lead	SW6010D	**950**	mg/Kg-dry	3.7	10	11/20/20 20:03	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:52	11/19/20 13:52	
Lead	SW6010D	**3.8**	mg/L	0.050	1	11/19/20 22:52	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Dry
Lab Code:	20111251-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**30**	mg/Kg-dry	4.0	10	11/20/20 20:08	11/19/20 15:33	
Lead	SW6010D	**12,000**	mg/Kg-dry	40	100	11/21/20 19:27	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:58	11/19/20 13:52	
Lead	SW6010D	**11**	mg/L	0.050	1	11/19/20 22:58	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Dry
Lab Code:	20111251-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	3.8	10	11/20/20 20:13	11/19/20 15:33	
Lead	SW6010D	**410**	mg/Kg-dry	3.8	10	11/20/20 20:13	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.017 J**	mg/L	0.050	1	11/19/20 23:03	11/19/20 13:52	
Lead	SW6010D	**0.45**	mg/L	0.050	1	11/19/20 23:03	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Dry
Lab Code:	20111251-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.7	10	11/20/20 20:18	11/19/20 15:33	
Lead	SW6010D	**1,200**	mg/Kg-dry	3.7	10	11/20/20 20:18	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:08	11/19/20 13:52	
Lead	SW6010D	**17**	mg/L	0.050	1	11/19/20 23:08	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Dry
Lab Code:	20111251-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**14**	mg/Kg-dry	4.0	10	11/20/20 20:23	11/19/20 15:33	
Lead	SW6010D	**720**	mg/Kg-dry	4.0	10	11/20/20 20:23	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:13	11/19/20 13:52	
Lead	SW6010D	**11**	mg/L	0.050	1	11/19/20 23:13	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Dry
Lab Code:	20111251-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**52**	mg/Kg-dry	4.5	10	11/20/20 20:28	11/19/20 15:33	
Lead	SW6010D	**2,900**	mg/Kg-dry	4.5	10	11/20/20 20:28	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-26		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:18	11/19/20 13:52	
Lead	SW6010D	**1.4**	mg/L	0.050	1	11/19/20 23:18	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Dry
Lab Code:	20111251-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	4.0	10	11/20/20 20:48	11/19/20 15:33	
Lead	SW6010D	**5,400**	mg/Kg-dry	40	100	11/21/20 19:32	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-28		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:24	11/19/20 13:52	
Lead	SW6010D	**19**	mg/L	0.050	1	11/19/20 23:24	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**14**	mg/Kg-dry	3.6	10	11/20/20 20:53	11/19/20 15:33	
Lead	SW6010D	**1,200**	mg/Kg-dry	3.6	10	11/20/20 20:53	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**10**	mg/Kg-dry	4.3	10	11/20/20 20:58	11/19/20 15:33	
Lead	SW6010D	**1,500**	mg/Kg-dry	4.3	10	11/20/20 20:58	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Dry
Lab Code:	20111251-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**23**	mg/Kg-dry	3.7	10	11/20/20 21:03	11/19/20 15:33	
Lead	SW6010D	**560**	mg/Kg-dry	3.7	10	11/20/20 21:03	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-32		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.022 J**	mg/L	0.050	1	11/19/20 23:29	11/19/20 13:52	
Lead	SW6010D	**0.93**	mg/L	0.050	1	11/19/20 23:29	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Dry
Lab Code:	20111251-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**5.0**	mg/Kg-dry	3.7	10	11/20/20 21:08	11/19/20 15:33	
Lead	SW6010D	**1,600**	mg/Kg-dry	3.7	10	11/20/20 21:08	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-34		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:34	11/19/20 13:52	
Lead	SW6010D	**44**	mg/L	0.050	1	11/19/20 23:34	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**5.9**	mg/Kg-dry	4.0	10	11/20/20 21:13	11/19/20 15:33	
Lead	SW6010D	**1,500**	mg/Kg-dry	4.0	10	11/20/20 21:13	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.2**	mg/Kg-dry	4.1	10	11/20/20 21:53	11/19/20 15:33	
Lead	SW6010D	**660**	mg/Kg-dry	4.1	10	11/20/20 21:53	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Dry
Lab Code:	20111251-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**12**	mg/Kg-dry	4.1	10	11/20/20 21:58	11/19/20 15:33	
Lead	SW6010D	**3,300**	mg/Kg-dry	4.1	10	11/20/20 21:58	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-38		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:39	11/19/20 13:52	
Lead	SW6010D	**7.2**	mg/L	0.50	10	11/20/20 18:52	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Dry
Lab Code:	20111251-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.1**	mg/Kg-dry	4.4	10	11/20/20 22:03	11/19/20 15:33	
Lead	SW6010D	**2,100**	mg/Kg-dry	4.4	10	11/20/20 22:03	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-40		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:59	11/19/20 13:52	
Lead	SW6010D	**9.6**	mg/L	0.050	1	11/19/20 23:59	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Dry
Lab Code:	20111251-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**22**	mg/Kg-dry	4.1	10	11/20/20 22:08	11/19/20 15:33	
Lead	SW6010D	**5,700**	mg/Kg-dry	41	100	11/21/20 19:37	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-42		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 18:36	11/19/20 13:58	
Lead	SW6010D	**64**	mg/L	0.50	10	11/20/20 16:29	11/19/20 13:58	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Dry
Lab Code:	20111251-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**69**	mg/Kg-dry	4.4	10	11/20/20 22:14	11/19/20 15:33	
Lead	SW6010D	**1,200**	mg/Kg-dry	4.4	10	11/20/20 22:14	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-44		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.052**	mg/L	0.050	1	11/19/20 18:51	11/19/20 13:58	
Lead	SW6010D	**0.58**	mg/L	0.050	1	11/19/20 18:51	11/19/20 13:58	

General Chemistry

ALS Enviromental - Holland Laboratory
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Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.5**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-10		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.4**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.4**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.2**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**8.4**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.0**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**4.5**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-25		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**19**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-27		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-29		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-30		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-31		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-33		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.4**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-35		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.7**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-36		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.0**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-37		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-39		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-41		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-43		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 14:54	NA	

QC Summary Forms

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Metals

ALS Enviromental - Holland Laboratory
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Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/19/20 12:20						
Arsenic	SW6010D	ICP2_201119A	0.9994	1	99.9	90-110
Barium	SW6010D	ICP2_201119A	1.056	1	106	90-110
Cadmium	SW6010D	ICP2_201119A	1.015	1	101	90-110
Chromium	SW6010D	ICP2_201119A	1.035	1	104	90-110
Lead	SW6010D	ICP2_201119A	1.055	1	106	90-110
Selenium	SW6010D	ICP2_201119A	1.005	1	101	90-110
Silver	SW6010D	ICP2_201119A	1.081	1	108	90-110
CCV 11/19/20 13:07						
Arsenic	SW6010D	ICP2_201119A	0.4927	0.5	98.5	90-110
Barium	SW6010D	ICP2_201119A	2.508	2.5	100	90-110
Cadmium	SW6010D	ICP2_201119A	0.5006	0.5	100	90-110
Chromium	SW6010D	ICP2_201119A	0.4739	0.5	94.8	90-110
Lead	SW6010D	ICP2_201119A	0.505	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.472	2.5	98.9	90-110
Silver	SW6010D	ICP2_201119A	0.4771	0.5	95.4	90-110
CCV 11/19/20 14:18						
Arsenic	SW6010D	ICP2_201119A	0.4946	0.5	98.9	90-110
Barium	SW6010D	ICP2_201119A	2.453	2.5	98.1	90-110
Cadmium	SW6010D	ICP2_201119A	0.5031	0.5	101	90-110
Chromium	SW6010D	ICP2_201119A	0.4643	0.5	92.9	90-110
Lead	SW6010D	ICP2_201119A	0.5045	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.504	2.5	100	90-110
Silver	SW6010D	ICP2_201119A	0.4708	0.5	94.2	90-110
CCV 11/19/20 15:20						
Arsenic	SW6010D	ICP2_201119A	0.4897	0.5	97.9	90-110
Barium	SW6010D	ICP2_201119A	2.479	2.5	99.1	90-110
Cadmium	SW6010D	ICP2_201119A	0.4983	0.5	99.7	90-110
Chromium	SW6010D	ICP2_201119A	0.465	0.5	93.0	90-110
Lead	SW6010D	ICP2_201119A	0.499	0.5	99.8	90-110
Selenium	SW6010D	ICP2_201119A	2.46	2.5	98.4	90-110
Silver	SW6010D	ICP2_201119A	0.4737	0.5	94.7	90-110
CCV 11/19/20 16:29						
Arsenic	SW6010D	ICP2_201119A	0.5013	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.563	2.5	103	90-110
Cadmium	SW6010D	ICP2_201119A	0.5098	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4756	0.5	95.1	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/19/20 16:29						
Lead	SW6010D	ICP2_201119A	0.5093	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.5	2.5	100.0	90-110
Silver	SW6010D	ICP2_201119A	0.4832	0.5	96.6	90-110
CCV 11/19/20 17:19						
Arsenic	SW6010D	ICP2_201119A	0.4981	0.5	99.6	90-110
Barium	SW6010D	ICP2_201119A	2.491	2.5	99.6	90-110
Cadmium	SW6010D	ICP2_201119A	0.5085	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4683	0.5	93.7	90-110
Lead	SW6010D	ICP2_201119A	0.5095	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.496	2.5	99.8	90-110
Silver	SW6010D	ICP2_201119A	0.4751	0.5	95.0	90-110
CCV 11/19/20 18:21						
Arsenic	SW6010D	ICP2_201119A	0.5022	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.476	2.5	99.1	90-110
Cadmium	SW6010D	ICP2_201119A	0.5122	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4707	0.5	94.1	90-110
Lead	SW6010D	ICP2_201119A	0.51	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.498	2.5	99.9	90-110
Silver	SW6010D	ICP2_201119A	0.4806	0.5	96.1	90-110
CCV 11/19/20 19:22						
Arsenic	SW6010D	ICP2_201119A	0.4992	0.5	99.8	90-110
Barium	SW6010D	ICP2_201119A	2.556	2.5	102	90-110
Cadmium	SW6010D	ICP2_201119A	0.5078	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4656	0.5	93.1	90-110
Lead	SW6010D	ICP2_201119A	0.5064	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.465	2.5	98.6	90-110
Silver	SW6010D	ICP2_201119A	0.4756	0.5	95.1	90-110
CCV 11/19/20 20:29						
Arsenic	SW6010D	ICP2_201119A	0.4988	0.5	99.8	90-110
Barium	SW6010D	ICP2_201119A	2.495	2.5	99.8	90-110
Cadmium	SW6010D	ICP2_201119A	0.5063	0.5	101	90-110
Chromium	SW6010D	ICP2_201119A	0.4673	0.5	93.5	90-110
Lead	SW6010D	ICP2_201119A	0.5035	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.439	2.5	97.6	90-110
Silver	SW6010D	ICP2_201119A	0.4797	0.5	95.9	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/19/20 21:36						
Arsenic	SW6010D	ICP2_201119A	0.5098	0.5	102	90-110
Barium	SW6010D	ICP2_201119A	2.559	2.5	102	90-110
Cadmium	SW6010D	ICP2_201119A	0.5207	0.5	104	90-110
Chromium	SW6010D	ICP2_201119A	0.4726	0.5	94.5	90-110
Lead	SW6010D	ICP2_201119A	0.5175	0.5	104	90-110
Selenium	SW6010D	ICP2_201119A	2.495	2.5	99.8	90-110
Silver	SW6010D	ICP2_201119A	0.481	0.5	96.2	90-110
CCV 11/19/20 22:42						
Arsenic	SW6010D	ICP2_201119A	0.5018	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.53	2.5	101	90-110
Cadmium	SW6010D	ICP2_201119A	0.511	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4694	0.5	93.9	90-110
Lead	SW6010D	ICP2_201119A	0.5096	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.454	2.5	98.2	90-110
Silver	SW6010D	ICP2_201119A	0.4793	0.5	95.9	90-110
CCV 11/19/20 23:49						
Arsenic	SW6010D	ICP2_201119A	0.5011	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.515	2.5	101	90-110
Cadmium	SW6010D	ICP2_201119A	0.5102	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4718	0.5	94.4	90-110
Lead	SW6010D	ICP2_201119A	0.5098	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.448	2.5	97.9	90-110
Silver	SW6010D	ICP2_201119A	0.4785	0.5	95.7	90-110
CCV 11/20/20 00:25						
Arsenic	SW6010D	ICP2_201119A	0.4913	0.5	98.3	90-110
Barium	SW6010D	ICP2_201119A	2.482	2.5	99.3	90-110
Cadmium	SW6010D	ICP2_201119A	0.5006	0.5	100	90-110
Chromium	SW6010D	ICP2_201119A	0.4663	0.5	93.3	90-110
Lead	SW6010D	ICP2_201119A	0.5003	0.5	100	90-110
Selenium	SW6010D	ICP2_201119A	2.411	2.5	96.5	90-110
Silver	SW6010D	ICP2_201119A	0.4726	0.5	94.5	90-110
ICV 11/20/20 14:21						
Arsenic	SW6010D	ICP2_201120A	0.9628	1	96.3	90-110
Barium	SW6010D	ICP2_201120A	1.027	1	103	90-110
Calcium	SW6010D	ICP2_201120A	6.141	6	102	90-110
Iron	SW6010D	ICP2_201120A	1.015	1	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/20/20 14:21						
Lead	SW6010D	ICP2_201120A	1.014	1	101	90-110
Magnesium	SW6010D	ICP2_201120A	1.021	1	102	90-110
Manganese	SW6010D	ICP2_201120A	1.008	1	101	90-110
Potassium	SW6010D	ICP2_201120A	21.48	21	102	90-110
Silicon	SW6010D	ICP2_201120A	1.018	1	102	90-110
Sodium	SW6010D	ICP2_201120A	21.25	21	101	90-110
Strontium	SW6010D	ICP2_201120A	1.017	1	102	90-110
CCV 11/20/20 15:08						
Arsenic	SW6010D	ICP2_201120A	0.4932	0.5	98.6	90-110
Barium	SW6010D	ICP2_201120A	2.467	2.5	98.7	90-110
Calcium	SW6010D	ICP2_201120A	2.359	2.5	94.4	90-110
Iron	SW6010D	ICP2_201120A	2.412	2.5	96.5	90-110
Lead	SW6010D	ICP2_201120A	0.5034	0.5	101	90-110
Magnesium	SW6010D	ICP2_201120A	2.348	2.5	93.9	90-110
Manganese	SW6010D	ICP2_201120A	0.4805	0.5	96.1	90-110
Potassium	SW6010D	ICP2_201120A	49.64	50	99.3	90-110
Silicon	SW6010D	ICP2_201120A	2.351	2.5	94.1	90-110
Sodium	SW6010D	ICP2_201120A	49.23	50	98.5	90-110
Strontium	SW6010D	ICP2_201120A	0.4946	0.5	98.9	90-110
CCV 11/20/20 16:14						
Arsenic	SW6010D	ICP2_201120A	0.5031	0.5	101	90-110
Barium	SW6010D	ICP2_201120A	2.517	2.5	101	90-110
Calcium	SW6010D	ICP2_201120A	2.381	2.5	95.3	90-110
Iron	SW6010D	ICP2_201120A	2.528	2.5	101	90-110
Lead	SW6010D	ICP2_201120A	0.5124	0.5	102	90-110
Magnesium	SW6010D	ICP2_201120A	2.43	2.5	97.2	90-110
Manganese	SW6010D	ICP2_201120A	0.4719	0.5	94.4	90-110
Potassium	SW6010D	ICP2_201120A	50.79	50	102	90-110
Silicon	SW6010D	ICP2_201120A	2.45	2.5	98.0	90-110
Sodium	SW6010D	ICP2_201120A	48.67	50	97.3	90-110
Strontium	SW6010D	ICP2_201120A	0.5094	0.5	102	90-110
CCV 11/20/20 17:15						
Arsenic	SW6010D	ICP2_201120A	0.4953	0.5	99.1	90-110
Barium	SW6010D	ICP2_201120A	2.423	2.5	96.9	90-110
Calcium	SW6010D	ICP2_201120A	2.269	2.5	90.8	90-110
Iron	SW6010D	ICP2_201120A	2.45	2.5	98.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/20/20 17:15						
Lead	SW6010D	ICP2_201120A	0.5046	0.5	101	90-110
Magnesium	SW6010D	ICP2_201120A	2.339	2.5	93.5	90-110
Manganese	SW6010D	ICP2_201120A	0.4692	0.5	93.8	90-110
Potassium	SW6010D	ICP2_201120A	50.01	50	100	90-110
Silicon	SW6010D	ICP2_201120A	2.379	2.5	95.2	90-110
Sodium	SW6010D	ICP2_201120A	46.82	50	93.6	90-110
Strontium	SW6010D	ICP2_201120A	0.4957	0.5	99.1	90-110
CCV 11/20/20 18:27						
Arsenic	SW6010D	ICP2_201120A	0.4837	0.5	96.7	90-110
Barium	SW6010D	ICP2_201120A	2.39	2.5	95.6	90-110
Calcium	SW6010D	ICP2_201120A	2.26	2.5	90.4	90-110
Iron	SW6010D	ICP2_201120A	2.459	2.5	98.4	90-110
Lead	SW6010D	ICP2_201120A	0.4958	0.5	99.2	90-110
Magnesium	SW6010D	ICP2_201120A	2.37	2.5	94.8	90-110
Manganese	SW6010D	ICP2_201120A	0.4557	0.5	91.1	90-110
Potassium	SW6010D	ICP2_201120A	50.09	50	100	90-110
Silicon	SW6010D	ICP2_201120A	2.377	2.5	95.1	90-110
Sodium	SW6010D	ICP2_201120A	46.14	50	92.3	90-110
Strontium	SW6010D	ICP2_201120A	0.4919	0.5	98.4	90-110
CCV 11/20/20 19:28						
Arsenic	SW6010D	ICP2_201120A	0.4844	0.5	96.9	90-110
Barium	SW6010D	ICP2_201120A	2.475	2.5	99.0	90-110
Calcium	SW6010D	ICP2_201120A	2.358	2.5	94.3	90-110
Iron	SW6010D	ICP2_201120A	2.597	2.5	104	90-110
Lead	SW6010D	ICP2_201120A	0.4969	0.5	99.4	90-110
Magnesium	SW6010D	ICP2_201120A	2.488	2.5	99.5	90-110
Manganese	SW6010D	ICP2_201120A	0.4708	0.5	94.2	90-110
Potassium	SW6010D	ICP2_201120A	52.04	50	104	90-110
Silicon	SW6010D	ICP2_201120A	2.5	2.5	100.0	90-110
Sodium	SW6010D	ICP2_201120A	48.1	50	96.2	90-110
Strontium	SW6010D	ICP2_201120A	0.512	0.5	102	90-110
CCV 11/20/20 20:33						
Arsenic	SW6010D	ICP2_201120A	0.4811	0.5	96.2	90-110
Barium	SW6010D	ICP2_201120A	2.423	2.5	96.9	90-110
Calcium	SW6010D	ICP2_201120A	2.323	2.5	92.9	90-110
Iron	SW6010D	ICP2_201120A	2.55	2.5	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/20/20 20:33						
Lead	SW6010D	ICP2_201120A	0.4926	0.5	98.5	90-110
Magnesium	SW6010D	ICP2_201120A	2.431	2.5	97.2	90-110
Manganese	SW6010D	ICP2_201120A	0.4628	0.5	92.6	90-110
Potassium	SW6010D	ICP2_201120A	50.77	50	102	90-110
Silicon	SW6010D	ICP2_201120A	2.433	2.5	97.3	90-110
Sodium	SW6010D	ICP2_201120A	46.62	50	93.2	90-110
Strontium	SW6010D	ICP2_201120A	0.5009	0.5	100	90-110
CCV 11/20/20 21:38						
Arsenic	SW6010D	ICP2_201120A	0.4797	0.5	95.9	90-110
Barium	SW6010D	ICP2_201120A	2.39	2.5	95.6	90-110
Calcium	SW6010D	ICP2_201120A	2.313	2.5	92.5	90-110
Iron	SW6010D	ICP2_201120A	2.519	2.5	101	90-110
Lead	SW6010D	ICP2_201120A	0.4934	0.5	98.7	90-110
Magnesium	SW6010D	ICP2_201120A	2.422	2.5	96.9	90-110
Manganese	SW6010D	ICP2_201120A	0.464	0.5	92.8	90-110
Potassium	SW6010D	ICP2_201120A	49.95	50	99.9	90-110
Silicon	SW6010D	ICP2_201120A	2.419	2.5	96.8	90-110
Sodium	SW6010D	ICP2_201120A	46.39	50	92.8	90-110
Strontium	SW6010D	ICP2_201120A	0.4928	0.5	98.6	90-110
CCV 11/20/20 22:49						
Arsenic	SW6010D	ICP2_201120A	0.4781	0.5	95.6	90-110
Barium	SW6010D	ICP2_201120A	2.45	2.5	98.0	90-110
Calcium	SW6010D	ICP2_201120A	2.35	2.5	94.0	90-110
Iron	SW6010D	ICP2_201120A	2.556	2.5	102	90-110
Lead	SW6010D	ICP2_201120A	0.4915	0.5	98.3	90-110
Magnesium	SW6010D	ICP2_201120A	2.515	2.5	101	90-110
Manganese	SW6010D	ICP2_201120A	0.4629	0.5	92.6	90-110
Potassium	SW6010D	ICP2_201120A	50.79	50	102	90-110
Silicon	SW6010D	ICP2_201120A	2.462	2.5	98.5	90-110
Sodium	SW6010D	ICP2_201120A	47.04	50	94.1	90-110
Strontium	SW6010D	ICP2_201120A	0.5051	0.5	101	90-110
CCV 11/20/20 23:55						
Arsenic	SW6010D	ICP2_201120A	0.4715	0.5	94.3	90-110
Barium	SW6010D	ICP2_201120A	2.316	2.5	92.7	90-110
Calcium	SW6010D	ICP2_201120A	2.239	2.5	89.6 *	90-110
Iron	SW6010D	ICP2_201120A	2.401	2.5	96.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/20/20 23:55						
Lead	SW6010D	ICP2_201120A	0.4842	0.5	96.8	90-110
Magnesium	SW6010D	ICP2_201120A	2.339	2.5	93.6	90-110
Manganese	SW6010D	ICP2_201120A	0.4518	0.5	90.4	90-110
Potassium	SW6010D	ICP2_201120A	48.43	50	96.9	90-110
Silicon	SW6010D	ICP2_201120A	2.329	2.5	93.2	90-110
Sodium	SW6010D	ICP2_201120A	44.79	50	89.6 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4753	0.5	95.1	90-110
CCV 11/21/20 01:03						
Arsenic	SW6010D	ICP2_201120A	0.4774	0.5	95.5	90-110
Barium	SW6010D	ICP2_201120A	2.394	2.5	95.8	90-110
Calcium	SW6010D	ICP2_201120A	2.309	2.5	92.4	90-110
Iron	SW6010D	ICP2_201120A	2.492	2.5	99.7	90-110
Lead	SW6010D	ICP2_201120A	0.4917	0.5	98.3	90-110
Magnesium	SW6010D	ICP2_201120A	2.458	2.5	98.3	90-110
Manganese	SW6010D	ICP2_201120A	0.4554	0.5	91.1	90-110
Potassium	SW6010D	ICP2_201120A	49.7	50	99.4	90-110
Silicon	SW6010D	ICP2_201120A	2.414	2.5	96.6	90-110
Sodium	SW6010D	ICP2_201120A	45.94	50	91.9	90-110
Strontium	SW6010D	ICP2_201120A	0.4926	0.5	98.5	90-110
CCV 11/21/20 02:10						
Arsenic	SW6010D	ICP2_201120A	0.4627	0.5	92.5	90-110
Barium	SW6010D	ICP2_201120A	2.254	2.5	90.2	90-110
Calcium	SW6010D	ICP2_201120A	2.225	2.5	89.0 *	90-110
Iron	SW6010D	ICP2_201120A	2.376	2.5	95.0	90-110
Lead	SW6010D	ICP2_201120A	0.4789	0.5	95.8	90-110
Magnesium	SW6010D	ICP2_201120A	2.347	2.5	93.9	90-110
Manganese	SW6010D	ICP2_201120A	0.4371	0.5	87.4 *	90-110
Potassium	SW6010D	ICP2_201120A	46.63	50	93.3	90-110
Silicon	SW6010D	ICP2_201120A	2.284	2.5	91.4	90-110
Sodium	SW6010D	ICP2_201120A	43.36	50	86.7 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4624	0.5	92.5	90-110
CCV 11/21/20 03:17						
Arsenic	SW6010D	ICP2_201120A	0.4694	0.5	93.9	90-110
Barium	SW6010D	ICP2_201120A	2.35	2.5	94.0	90-110
Calcium	SW6010D	ICP2_201120A	2.32	2.5	92.8	90-110
Iron	SW6010D	ICP2_201120A	2.474	2.5	99.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 03:17						
Lead	SW6010D	ICP2_201120A	0.4856	0.5	97.1	90-110
Magnesium	SW6010D	ICP2_201120A	2.457	2.5	98.3	90-110
Manganese	SW6010D	ICP2_201120A	0.4503	0.5	90.1	90-110
Potassium	SW6010D	ICP2_201120A	49.09	50	98.2	90-110
Silicon	SW6010D	ICP2_201120A	2.389	2.5	95.5	90-110
Sodium	SW6010D	ICP2_201120A	45.03	50	90.1	90-110
Strontium	SW6010D	ICP2_201120A	0.4834	0.5	96.7	90-110
CCV 11/21/20 04:18						
Arsenic	SW6010D	ICP2_201120A	0.4647	0.5	92.9	90-110
Barium	SW6010D	ICP2_201120A	2.307	2.5	92.3	90-110
Calcium	SW6010D	ICP2_201120A	2.336	2.5	93.4	90-110
Iron	SW6010D	ICP2_201120A	2.468	2.5	98.7	90-110
Lead	SW6010D	ICP2_201120A	0.4776	0.5	95.5	90-110
Magnesium	SW6010D	ICP2_201120A	2.393	2.5	95.7	90-110
Manganese	SW6010D	ICP2_201120A	0.4542	0.5	90.8	90-110
Potassium	SW6010D	ICP2_201120A	48.1	50	96.2	90-110
Silicon	SW6010D	ICP2_201120A	2.321	2.5	92.9	90-110
Sodium	SW6010D	ICP2_201120A	44.25	50	88.5 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4781	0.5	95.6	90-110
CCV 11/21/20 05:31						
Arsenic	SW6010D	ICP2_201120A	0.4504	0.5	90.1	90-110
Barium	SW6010D	ICP2_201120A	2.16	2.5	86.4 *	90-110
Calcium	SW6010D	ICP2_201120A	2.138	2.5	85.5 *	90-110
Iron	SW6010D	ICP2_201120A	2.289	2.5	91.6	90-110
Lead	SW6010D	ICP2_201120A	0.4671	0.5	93.4	90-110
Magnesium	SW6010D	ICP2_201120A	2.262	2.5	90.5	90-110
Manganese	SW6010D	ICP2_201120A	0.4262	0.5	85.2 *	90-110
Potassium	SW6010D	ICP2_201120A	45.58	50	91.2	90-110
Silicon	SW6010D	ICP2_201120A	2.194	2.5	87.8 *	90-110
Sodium	SW6010D	ICP2_201120A	41.85	50	83.7 *	90-110
Strontium	SW6010D	ICP2_201120A	0.447	0.5	89.4 *	90-110
CCV 11/21/20 06:01						
Arsenic	SW6010D	ICP2_201120A	0.4391	0.5	87.8 *	90-110
Barium	SW6010D	ICP2_201120A	2.184	2.5	87.3 *	90-110
Calcium	SW6010D	ICP2_201120A	2.171	2.5	86.9 *	90-110
Iron	SW6010D	ICP2_201120A	2.301	2.5	92.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 06:01						
Lead	SW6010D	ICP2_201120A	0.4569	0.5	91.4	90-110
Magnesium	SW6010D	ICP2_201120A	2.324	2.5	93.0	90-110
Manganese	SW6010D	ICP2_201120A	0.4281	0.5	85.6 *	90-110
Potassium	SW6010D	ICP2_201120A	46.17	50	92.3	90-110
Silicon	SW6010D	ICP2_201120A	2.227	2.5	89.1 *	90-110
Sodium	SW6010D	ICP2_201120A	42.2	50	84.4 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4504	0.5	90.1	90-110
ICV 11/21/20 15:14						
Aluminum	SW6010D	ICP2_201121A	1.063	1	106	90-110
Antimony	SW6010D	ICP2_201121A	0.9981	1	99.8	90-110
Arsenic	SW6010D	ICP2_201121A	0.9697	1	97.0	90-110
Barium	SW6010D	ICP2_201121A	1.054	1	105	90-110
Beryllium	SW6010D	ICP2_201121A	0.9887	1	98.9	90-110
Boron	SW6010D	ICP2_201121A	1.064	1	106	90-110
Cadmium	SW6010D	ICP2_201121A	0.9995	1	99.9	90-110
Calcium	SW6010D	ICP2_201121A	6.453	6	108	90-110
Chromium	SW6010D	ICP2_201121A	1.022	1	102	90-110
Cobalt	SW6010D	ICP2_201121A	1.013	1	101	90-110
Copper	SW6010D	ICP2_201121A	1.013	1	101	90-110
Iron	SW6010D	ICP2_201121A	1.054	1	105	90-110
Lead	SW6010D	ICP2_201121A	1.036	1	104	90-110
Lithium	SW6010D	ICP2_201121A	1.032	1	103	90-110
Magnesium	SW6010D	ICP2_201121A	1.053	1	105	90-110
Manganese	SW6010D	ICP2_201121A	1.029	1	103	90-110
Molybdenum	SW6010D	ICP2_201121A	1.029	1	103	90-110
Nickel	SW6010D	ICP2_201121A	1.018	1	102	90-110
Potassium	SW6010D	ICP2_201121A	21.45	21	102	90-110
Selenium	SW6010D	ICP2_201121A	0.9875	1	98.8	90-110
Silicon	SW6010D	ICP2_201121A	1.079	1	108	90-110
Silver	SW6010D	ICP2_201121A	1.056	1	106	90-110
Sodium	SW6010D	ICP2_201121A	21.61	21	103	90-110
Strontium	SW6010D	ICP2_201121A	1.054	1	105	90-110
Thallium	SW6010D	ICP2_201121A	1.056	1	106	90-110
Tin	SW6010D	ICP2_201121A	1.026	1	103	90-110
Titanium	SW6010D	ICP2_201121A	1.045	1	104	90-110
Vanadium	SW6010D	ICP2_201121A	1.02	1	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/21/20 15:14						
Zinc	SW6010D	ICP2_201121A	0.9883	1	98.8	90-110
CCV 11/21/20 16:00						
Aluminum	SW6010D	ICP2_201121A	2.489	2.5	99.6	90-110
Antimony	SW6010D	ICP2_201121A	0.4908	0.5	98.2	90-110
Arsenic	SW6010D	ICP2_201121A	0.4867	0.5	97.3	90-110
Barium	SW6010D	ICP2_201121A	2.492	2.5	99.7	90-110
Beryllium	SW6010D	ICP2_201121A	0.4935	0.5	98.7	90-110
Boron	SW6010D	ICP2_201121A	2.454	2.5	98.1	90-110
Cadmium	SW6010D	ICP2_201121A	0.4917	0.5	98.3	90-110
Calcium	SW6010D	ICP2_201121A	2.503	2.5	100	90-110
Chromium	SW6010D	ICP2_201121A	0.4924	0.5	98.5	90-110
Cobalt	SW6010D	ICP2_201121A	2.49	2.5	99.6	90-110
Copper	SW6010D	ICP2_201121A	2.445	2.5	97.8	90-110
Iron	SW6010D	ICP2_201121A	2.469	2.5	98.8	90-110
Lead	SW6010D	ICP2_201121A	0.5021	0.5	100	90-110
Lithium	SW6010D	ICP2_201121A	2.442	2.5	97.7	90-110
Magnesium	SW6010D	ICP2_201121A	2.506	2.5	100	90-110
Manganese	SW6010D	ICP2_201121A	0.4905	0.5	98.1	90-110
Molybdenum	SW6010D	ICP2_201121A	2.473	2.5	98.9	90-110
Nickel	SW6010D	ICP2_201121A	2.49	2.5	99.6	90-110
Potassium	SW6010D	ICP2_201121A	48.71	50	97.4	90-110
Selenium	SW6010D	ICP2_201121A	2.451	2.5	98.0	90-110
Silicon	SW6010D	ICP2_201121A	2.438	2.5	97.5	90-110
Silver	SW6010D	ICP2_201121A	0.4946	0.5	98.9	90-110
Sodium	SW6010D	ICP2_201121A	49.44	50	98.9	90-110
Strontium	SW6010D	ICP2_201121A	0.4954	0.5	99.1	90-110
Thallium	SW6010D	ICP2_201121A	0.5131	0.5	103	90-110
Tin	SW6010D	ICP2_201121A	0.5039	0.5	101	90-110
Titanium	SW6010D	ICP2_201121A	0.4944	0.5	98.9	90-110
Vanadium	SW6010D	ICP2_201121A	0.4878	0.5	97.6	90-110
Zinc	SW6010D	ICP2_201121A	1.228	1.25	98.3	90-110
CCV 11/21/20 17:02						
Aluminum	SW6010D	ICP2_201121A	2.514	2.5	101	90-110
Antimony	SW6010D	ICP2_201121A	0.4935	0.5	98.7	90-110
Arsenic	SW6010D	ICP2_201121A	0.4883	0.5	97.7	90-110
Barium	SW6010D	ICP2_201121A	2.532	2.5	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 17:02						
Beryllium	SW6010D	ICP2_201121A	0.4925	0.5	98.5	90-110
Boron	SW6010D	ICP2_201121A	2.551	2.5	102	90-110
Cadmium	SW6010D	ICP2_201121A	0.4924	0.5	98.5	90-110
Calcium	SW6010D	ICP2_201121A	2.529	2.5	101	90-110
Chromium	SW6010D	ICP2_201121A	0.4935	0.5	98.7	90-110
Cobalt	SW6010D	ICP2_201121A	2.487	2.5	99.5	90-110
Copper	SW6010D	ICP2_201121A	2.453	2.5	98.1	90-110
Iron	SW6010D	ICP2_201121A	2.644	2.5	106	90-110
Lead	SW6010D	ICP2_201121A	0.5016	0.5	100	90-110
Lithium	SW6010D	ICP2_201121A	2.482	2.5	99.3	90-110
Magnesium	SW6010D	ICP2_201121A	2.568	2.5	103	90-110
Manganese	SW6010D	ICP2_201121A	0.4892	0.5	97.8	90-110
Molybdenum	SW6010D	ICP2_201121A	2.479	2.5	99.1	90-110
Nickel	SW6010D	ICP2_201121A	2.489	2.5	99.6	90-110
Potassium	SW6010D	ICP2_201121A	49.16	50	98.3	90-110
Selenium	SW6010D	ICP2_201121A	2.461	2.5	98.4	90-110
Silicon	SW6010D	ICP2_201121A	2.532	2.5	101	90-110
Silver	SW6010D	ICP2_201121A	0.4943	0.5	98.9	90-110
Sodium	SW6010D	ICP2_201121A	49.96	50	99.9	90-110
Strontium	SW6010D	ICP2_201121A	0.5051	0.5	101	90-110
Thallium	SW6010D	ICP2_201121A	0.5112	0.5	102	90-110
Tin	SW6010D	ICP2_201121A	0.5045	0.5	101	90-110
Titanium	SW6010D	ICP2_201121A	0.5024	0.5	100	90-110
Vanadium	SW6010D	ICP2_201121A	0.4871	0.5	97.4	90-110
Zinc	SW6010D	ICP2_201121A	1.229	1.25	98.3	90-110
CCV 11/21/20 18:05						
Aluminum	SW6010D	ICP2_201121A	2.355	2.5	94.2	90-110
Antimony	SW6010D	ICP2_201121A	0.4856	0.5	97.1	90-110
Arsenic	SW6010D	ICP2_201121A	0.4816	0.5	96.3	90-110
Barium	SW6010D	ICP2_201121A	2.359	2.5	94.4	90-110
Beryllium	SW6010D	ICP2_201121A	0.4679	0.5	93.6	90-110
Boron	SW6010D	ICP2_201121A	2.38	2.5	95.2	90-110
Cadmium	SW6010D	ICP2_201121A	0.4844	0.5	96.9	90-110
Calcium	SW6010D	ICP2_201121A	2.398	2.5	95.9	90-110
Chromium	SW6010D	ICP2_201121A	0.4687	0.5	93.7	90-110
Cobalt	SW6010D	ICP2_201121A	2.447	2.5	97.9	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 18:05						
Copper	SW6010D	ICP2_201121A	2.37	2.5	94.8	90-110
Iron	SW6010D	ICP2_201121A	2.395	2.5	95.8	90-110
Lead	SW6010D	ICP2_201121A	0.4921	0.5	98.4	90-110
Lithium	SW6010D	ICP2_201121A	2.324	2.5	92.9	90-110
Magnesium	SW6010D	ICP2_201121A	2.385	2.5	95.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4669	0.5	93.4	90-110
Molybdenum	SW6010D	ICP2_201121A	2.437	2.5	97.5	90-110
Nickel	SW6010D	ICP2_201121A	2.447	2.5	97.9	90-110
Potassium	SW6010D	ICP2_201121A	45.77	50	91.5	90-110
Selenium	SW6010D	ICP2_201121A	2.429	2.5	97.1	90-110
Silicon	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Silver	SW6010D	ICP2_201121A	0.4722	0.5	94.4	90-110
Sodium	SW6010D	ICP2_201121A	46.72	50	93.4	90-110
Strontium	SW6010D	ICP2_201121A	0.472	0.5	94.4	90-110
Thallium	SW6010D	ICP2_201121A	0.5055	0.5	101	90-110
Tin	SW6010D	ICP2_201121A	0.4933	0.5	98.7	90-110
Titanium	SW6010D	ICP2_201121A	0.47	0.5	94.0	90-110
Vanadium	SW6010D	ICP2_201121A	0.4672	0.5	93.4	90-110
Zinc	SW6010D	ICP2_201121A	1.21	1.25	96.8	90-110
CCV 11/21/20 19:07						
Aluminum	SW6010D	ICP2_201121A	2.513	2.5	101	90-110
Antimony	SW6010D	ICP2_201121A	0.476	0.5	95.2	90-110
Arsenic	SW6010D	ICP2_201121A	0.4755	0.5	95.1	90-110
Barium	SW6010D	ICP2_201121A	2.497	2.5	99.9	90-110
Beryllium	SW6010D	ICP2_201121A	0.4971	0.5	99.4	90-110
Boron	SW6010D	ICP2_201121A	2.523	2.5	101	90-110
Cadmium	SW6010D	ICP2_201121A	0.4798	0.5	96.0	90-110
Calcium	SW6010D	ICP2_201121A	2.589	2.5	104	90-110
Chromium	SW6010D	ICP2_201121A	0.4967	0.5	99.3	90-110
Cobalt	SW6010D	ICP2_201121A	2.443	2.5	97.7	90-110
Copper	SW6010D	ICP2_201121A	2.43	2.5	97.2	90-110
Iron	SW6010D	ICP2_201121A	2.582	2.5	103	90-110
Lead	SW6010D	ICP2_201121A	0.4928	0.5	98.6	90-110
Lithium	SW6010D	ICP2_201121A	2.442	2.5	97.7	90-110
Magnesium	SW6010D	ICP2_201121A	2.58	2.5	103	90-110
Manganese	SW6010D	ICP2_201121A	0.4938	0.5	98.8	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 19:07						
Molybdenum	SW6010D	ICP2_201121A	2.426	2.5	97.0	90-110
Nickel	SW6010D	ICP2_201121A	2.448	2.5	97.9	90-110
Potassium	SW6010D	ICP2_201121A	48.54	50	97.1	90-110
Selenium	SW6010D	ICP2_201121A	2.381	2.5	95.3	90-110
Silicon	SW6010D	ICP2_201121A	2.525	2.5	101	90-110
Silver	SW6010D	ICP2_201121A	0.4902	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201121A	49.4	50	98.8	90-110
Strontium	SW6010D	ICP2_201121A	0.5022	0.5	100	90-110
Thallium	SW6010D	ICP2_201121A	0.4995	0.5	99.9	90-110
Tin	SW6010D	ICP2_201121A	0.4981	0.5	99.6	90-110
Titanium	SW6010D	ICP2_201121A	0.5023	0.5	100	90-110
Vanadium	SW6010D	ICP2_201121A	0.4918	0.5	98.4	90-110
Zinc	SW6010D	ICP2_201121A	1.202	1.25	96.2	90-110
CCV 11/21/20 20:08						
Aluminum	SW6010D	ICP2_201121A	2.374	2.5	95.0	90-110
Antimony	SW6010D	ICP2_201121A	0.4663	0.5	93.3	90-110
Arsenic	SW6010D	ICP2_201121A	0.47	0.5	94.0	90-110
Barium	SW6010D	ICP2_201121A	2.328	2.5	93.1	90-110
Beryllium	SW6010D	ICP2_201121A	0.4832	0.5	96.6	90-110
Boron	SW6010D	ICP2_201121A	2.345	2.5	93.8	90-110
Cadmium	SW6010D	ICP2_201121A	0.4724	0.5	94.5	90-110
Calcium	SW6010D	ICP2_201121A	2.45	2.5	98.0	90-110
Chromium	SW6010D	ICP2_201121A	0.4843	0.5	96.9	90-110
Cobalt	SW6010D	ICP2_201121A	2.423	2.5	96.9	90-110
Copper	SW6010D	ICP2_201121A	2.333	2.5	93.3	90-110
Iron	SW6010D	ICP2_201121A	2.406	2.5	96.2	90-110
Lead	SW6010D	ICP2_201121A	0.4887	0.5	97.7	90-110
Lithium	SW6010D	ICP2_201121A	2.282	2.5	91.3	90-110
Magnesium	SW6010D	ICP2_201121A	2.443	2.5	97.7	90-110
Manganese	SW6010D	ICP2_201121A	0.4814	0.5	96.3	90-110
Molybdenum	SW6010D	ICP2_201121A	2.391	2.5	95.6	90-110
Nickel	SW6010D	ICP2_201121A	2.422	2.5	96.9	90-110
Potassium	SW6010D	ICP2_201121A	45.55	50	91.1	90-110
Selenium	SW6010D	ICP2_201121A	2.336	2.5	93.4	90-110
Silicon	SW6010D	ICP2_201121A	2.344	2.5	93.8	90-110
Silver	SW6010D	ICP2_201121A	0.4746	0.5	94.9	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 20:08						
Sodium	SW6010D	ICP2_201121A	46.78	50	93.6	90-110
Strontium	SW6010D	ICP2_201121A	0.4662	0.5	93.2	90-110
Thallium	SW6010D	ICP2_201121A	0.4928	0.5	98.6	90-110
Tin	SW6010D	ICP2_201121A	0.4898	0.5	98.0	90-110
Titanium	SW6010D	ICP2_201121A	0.4761	0.5	95.2	90-110
Vanadium	SW6010D	ICP2_201121A	0.4751	0.5	95.0	90-110
Zinc	SW6010D	ICP2_201121A	1.188	1.25	95.1	90-110
CCV 11/21/20 21:10						
Aluminum	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Antimony	SW6010D	ICP2_201121A	0.4527	0.5	90.5	90-110
Arsenic	SW6010D	ICP2_201121A	0.4577	0.5	91.5	90-110
Barium	SW6010D	ICP2_201121A	2.339	2.5	93.5	90-110
Beryllium	SW6010D	ICP2_201121A	0.4811	0.5	96.2	90-110
Boron	SW6010D	ICP2_201121A	2.333	2.5	93.3	90-110
Cadmium	SW6010D	ICP2_201121A	0.459	0.5	91.8	90-110
Calcium	SW6010D	ICP2_201121A	2.462	2.5	98.5	90-110
Chromium	SW6010D	ICP2_201121A	0.4831	0.5	96.6	90-110
Cobalt	SW6010D	ICP2_201121A	2.37	2.5	94.8	90-110
Copper	SW6010D	ICP2_201121A	2.314	2.5	92.5	90-110
Iron	SW6010D	ICP2_201121A	2.381	2.5	95.2	90-110
Lead	SW6010D	ICP2_201121A	0.4755	0.5	95.1	90-110
Lithium	SW6010D	ICP2_201121A	2.308	2.5	92.3	90-110
Magnesium	SW6010D	ICP2_201121A	2.436	2.5	97.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4804	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201121A	2.324	2.5	93.0	90-110
Nickel	SW6010D	ICP2_201121A	2.361	2.5	94.4	90-110
Potassium	SW6010D	ICP2_201121A	45.42	50	90.8	90-110
Selenium	SW6010D	ICP2_201121A	2.263	2.5	90.5	90-110
Silicon	SW6010D	ICP2_201121A	2.352	2.5	94.1	90-110
Silver	SW6010D	ICP2_201121A	0.4715	0.5	94.3	90-110
Sodium	SW6010D	ICP2_201121A	47.64	50	95.3	90-110
Strontium	SW6010D	ICP2_201121A	0.4643	0.5	92.9	90-110
Thallium	SW6010D	ICP2_201121A	0.4799	0.5	96.0	90-110
Tin	SW6010D	ICP2_201121A	0.4758	0.5	95.2	90-110
Titanium	SW6010D	ICP2_201121A	0.4831	0.5	96.6	90-110
Vanadium	SW6010D	ICP2_201121A	0.4712	0.5	94.2	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 21:10						
Zinc	SW6010D	ICP2_201121A	1.157	1.25	92.6	90-110
CCV 11/21/20 22:12						
Aluminum	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Antimony	SW6010D	ICP2_201121A	0.4507	0.5	90.1	90-110
Arsenic	SW6010D	ICP2_201121A	0.4544	0.5	90.9	90-110
Barium	SW6010D	ICP2_201121A	2.37	2.5	94.8	90-110
Beryllium	SW6010D	ICP2_201121A	0.4693	0.5	93.9	90-110
Boron	SW6010D	ICP2_201121A	2.351	2.5	94.0	90-110
Cadmium	SW6010D	ICP2_201121A	0.4554	0.5	91.1	90-110
Calcium	SW6010D	ICP2_201121A	2.471	2.5	98.9	90-110
Chromium	SW6010D	ICP2_201121A	0.4697	0.5	93.9	90-110
Cobalt	SW6010D	ICP2_201121A	2.346	2.5	93.8	90-110
Copper	SW6010D	ICP2_201121A	2.275	2.5	91.0	90-110
Iron	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Lead	SW6010D	ICP2_201121A	0.4717	0.5	94.3	90-110
Lithium	SW6010D	ICP2_201121A	2.339	2.5	93.6	90-110
Magnesium	SW6010D	ICP2_201121A	2.499	2.5	100.0	90-110
Manganese	SW6010D	ICP2_201121A	0.4684	0.5	93.7	90-110
Molybdenum	SW6010D	ICP2_201121A	2.308	2.5	92.3	90-110
Nickel	SW6010D	ICP2_201121A	2.34	2.5	93.6	90-110
Potassium	SW6010D	ICP2_201121A	45.83	50	91.7	90-110
Selenium	SW6010D	ICP2_201121A	2.259	2.5	90.3	90-110
Silicon	SW6010D	ICP2_201121A	2.375	2.5	95.0	90-110
Silver	SW6010D	ICP2_201121A	0.4608	0.5	92.2	90-110
Sodium	SW6010D	ICP2_201121A	47.97	50	95.9	90-110
Strontium	SW6010D	ICP2_201121A	0.4703	0.5	94.1	90-110
Thallium	SW6010D	ICP2_201121A	0.4759	0.5	95.2	90-110
Tin	SW6010D	ICP2_201121A	0.4702	0.5	94.0	90-110
Titanium	SW6010D	ICP2_201121A	0.487	0.5	97.4	90-110
Vanadium	SW6010D	ICP2_201121A	0.4604	0.5	92.1	90-110
Zinc	SW6010D	ICP2_201121A	1.148	1.25	91.8	90-110
CCV 11/21/20 23:14						
Aluminum	SW6010D	ICP2_201121A	2.446	2.5	97.8	90-110
Antimony	SW6010D	ICP2_201121A	0.4523	0.5	90.5	90-110
Arsenic	SW6010D	ICP2_201121A	0.4571	0.5	91.4	90-110
Barium	SW6010D	ICP2_201121A	2.4	2.5	96.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 23:14						
Beryllium	SW6010D	ICP2_201121A	0.473	0.5	94.6	90-110
Boron	SW6010D	ICP2_201121A	2.372	2.5	94.9	90-110
Cadmium	SW6010D	ICP2_201121A	0.4588	0.5	91.8	90-110
Calcium	SW6010D	ICP2_201121A	2.488	2.5	99.5	90-110
Chromium	SW6010D	ICP2_201121A	0.4746	0.5	94.9	90-110
Cobalt	SW6010D	ICP2_201121A	2.376	2.5	95.0	90-110
Copper	SW6010D	ICP2_201121A	2.289	2.5	91.5	90-110
Iron	SW6010D	ICP2_201121A	2.435	2.5	97.4	90-110
Lead	SW6010D	ICP2_201121A	0.4752	0.5	95.0	90-110
Lithium	SW6010D	ICP2_201121A	2.384	2.5	95.4	90-110
Magnesium	SW6010D	ICP2_201121A	2.434	2.5	97.3	90-110
Manganese	SW6010D	ICP2_201121A	0.4732	0.5	94.6	90-110
Molybdenum	SW6010D	ICP2_201121A	2.33	2.5	93.2	90-110
Nickel	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Potassium	SW6010D	ICP2_201121A	46.34	50	92.7	90-110
Selenium	SW6010D	ICP2_201121A	2.261	2.5	90.5	90-110
Silicon	SW6010D	ICP2_201121A	2.392	2.5	95.7	90-110
Silver	SW6010D	ICP2_201121A	0.463	0.5	92.6	90-110
Sodium	SW6010D	ICP2_201121A	48.79	50	97.6	90-110
Strontium	SW6010D	ICP2_201121A	0.4758	0.5	95.2	90-110
Thallium	SW6010D	ICP2_201121A	0.4778	0.5	95.6	90-110
Tin	SW6010D	ICP2_201121A	0.475	0.5	95.0	90-110
Titanium	SW6010D	ICP2_201121A	0.4957	0.5	99.1	90-110
Vanadium	SW6010D	ICP2_201121A	0.4639	0.5	92.8	90-110
Zinc	SW6010D	ICP2_201121A	1.159	1.25	92.8	90-110
CCV 11/22/20 00:16						
Aluminum	SW6010D	ICP2_201121A	2.348	2.5	93.9	90-110
Antimony	SW6010D	ICP2_201121A	0.45	0.5	90.0 *	90-110
Arsenic	SW6010D	ICP2_201121A	0.4544	0.5	90.9	90-110
Barium	SW6010D	ICP2_201121A	2.324	2.5	92.9	90-110
Beryllium	SW6010D	ICP2_201121A	0.4663	0.5	93.3	90-110
Boron	SW6010D	ICP2_201121A	2.288	2.5	91.5	90-110
Cadmium	SW6010D	ICP2_201121A	0.4538	0.5	90.8	90-110
Calcium	SW6010D	ICP2_201121A	2.407	2.5	96.3	90-110
Chromium	SW6010D	ICP2_201121A	0.4656	0.5	93.1	90-110
Cobalt	SW6010D	ICP2_201121A	2.35	2.5	94.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/22/20 00:16						
Copper	SW6010D	ICP2_201121A	2.274	2.5	91.0	90-110
Iron	SW6010D	ICP2_201121A	2.34	2.5	93.6	90-110
Lead	SW6010D	ICP2_201121A	0.4686	0.5	93.7	90-110
Lithium	SW6010D	ICP2_201121A	2.319	2.5	92.8	90-110
Magnesium	SW6010D	ICP2_201121A	2.36	2.5	94.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4664	0.5	93.3	90-110
Molybdenum	SW6010D	ICP2_201121A	2.307	2.5	92.3	90-110
Nickel	SW6010D	ICP2_201121A	2.338	2.5	93.5	90-110
Potassium	SW6010D	ICP2_201121A	45.01	50	90.0	90-110
Selenium	SW6010D	ICP2_201121A	2.243	2.5	89.7 *	90-110
Silicon	SW6010D	ICP2_201121A	2.307	2.5	92.3	90-110
Silver	SW6010D	ICP2_201121A	0.4603	0.5	92.1	90-110
Sodium	SW6010D	ICP2_201121A	47.55	50	95.1	90-110
Strontium	SW6010D	ICP2_201121A	0.4598	0.5	92.0	90-110
Thallium	SW6010D	ICP2_201121A	0.4736	0.5	94.7	90-110
Tin	SW6010D	ICP2_201121A	0.4688	0.5	93.8	90-110
Titanium	SW6010D	ICP2_201121A	0.4819	0.5	96.4	90-110
Vanadium	SW6010D	ICP2_201121A	0.4578	0.5	91.6	90-110
Zinc	SW6010D	ICP2_201121A	1.147	1.25	91.8	90-110
CCV 11/22/20 01:23						
Aluminum	SW6010D	ICP2_201121A	2.434	2.5	97.4	90-110
Antimony	SW6010D	ICP2_201121A	0.4476	0.5	89.5 *	90-110
Arsenic	SW6010D	ICP2_201121A	0.4509	0.5	90.2	90-110
Barium	SW6010D	ICP2_201121A	2.414	2.5	96.6	90-110
Beryllium	SW6010D	ICP2_201121A	0.4675	0.5	93.5	90-110
Boron	SW6010D	ICP2_201121A	2.347	2.5	93.9	90-110
Cadmium	SW6010D	ICP2_201121A	0.4501	0.5	90.0	90-110
Calcium	SW6010D	ICP2_201121A	2.458	2.5	98.3	90-110
Chromium	SW6010D	ICP2_201121A	0.467	0.5	93.4	90-110
Cobalt	SW6010D	ICP2_201121A	2.34	2.5	93.6	90-110
Copper	SW6010D	ICP2_201121A	2.296	2.5	91.8	90-110
Iron	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Lead	SW6010D	ICP2_201121A	0.465	0.5	93.0	90-110
Lithium	SW6010D	ICP2_201121A	2.423	2.5	96.9	90-110
Magnesium	SW6010D	ICP2_201121A	2.403	2.5	96.1	90-110
Manganese	SW6010D	ICP2_201121A	0.4681	0.5	93.6	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/22/20 01:23						
Molybdenum	SW6010D	ICP2_201121A	2.295	2.5	91.8	90-110
Nickel	SW6010D	ICP2_201121A	2.325	2.5	93.0	90-110
Potassium	SW6010D	ICP2_201121A	46.13	50	92.3	90-110
Selenium	SW6010D	ICP2_201121A	2.225	2.5	89.0 *	90-110
Silicon	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Silver	SW6010D	ICP2_201121A	0.4618	0.5	92.4	90-110
Sodium	SW6010D	ICP2_201121A	49.39	50	98.8	90-110
Strontium	SW6010D	ICP2_201121A	0.4749	0.5	95.0	90-110
Thallium	SW6010D	ICP2_201121A	0.4696	0.5	93.9	90-110
Tin	SW6010D	ICP2_201121A	0.4642	0.5	92.8	90-110
Titanium	SW6010D	ICP2_201121A	0.5022	0.5	100	90-110
Vanadium	SW6010D	ICP2_201121A	0.4586	0.5	91.7	90-110
Zinc	SW6010D	ICP2_201121A	1.14	1.25	91.2	90-110
CCV 11/22/20 01:58						
Aluminum	SW6010D	ICP2_201121A	2.411	2.5	96.4	90-110
Antimony	SW6010D	ICP2_201121A	0.4421	0.5	88.4 *	90-110
Arsenic	SW6010D	ICP2_201121A	0.4471	0.5	89.4 *	90-110
Barium	SW6010D	ICP2_201121A	2.379	2.5	95.1	90-110
Beryllium	SW6010D	ICP2_201121A	0.4689	0.5	93.8	90-110
Boron	SW6010D	ICP2_201121A	2.346	2.5	93.9	90-110
Cadmium	SW6010D	ICP2_201121A	0.4453	0.5	89.1 *	90-110
Calcium	SW6010D	ICP2_201121A	2.456	2.5	98.3	90-110
Chromium	SW6010D	ICP2_201121A	0.4688	0.5	93.8	90-110
Cobalt	SW6010D	ICP2_201121A	2.319	2.5	92.8	90-110
Copper	SW6010D	ICP2_201121A	2.303	2.5	92.1	90-110
Iron	SW6010D	ICP2_201121A	2.397	2.5	95.9	90-110
Lead	SW6010D	ICP2_201121A	0.4599	0.5	92.0	90-110
Lithium	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Magnesium	SW6010D	ICP2_201121A	2.385	2.5	95.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4706	0.5	94.1	90-110
Molybdenum	SW6010D	ICP2_201121A	2.268	2.5	90.7	90-110
Nickel	SW6010D	ICP2_201121A	2.303	2.5	92.1	90-110
Potassium	SW6010D	ICP2_201121A	45.58	50	91.2	90-110
Selenium	SW6010D	ICP2_201121A	2.189	2.5	87.5 *	90-110
Silicon	SW6010D	ICP2_201121A	2.378	2.5	95.1	90-110
Silver	SW6010D	ICP2_201121A	0.4614	0.5	92.3	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/22/20 01:58						
Sodium	SW6010D	ICP2_201121A	49.47	50	98.9	90-110
Strontium	SW6010D	ICP2_201121A	0.4691	0.5	93.8	90-110
Thallium	SW6010D	ICP2_201121A	0.4627	0.5	92.5	90-110
Tin	SW6010D	ICP2_201121A	0.4597	0.5	91.9	90-110
Titanium	SW6010D	ICP2_201121A	0.5039	0.5	101	90-110
Vanadium	SW6010D	ICP2_201121A	0.461	0.5	92.2	90-110
Zinc	SW6010D	ICP2_201121A	1.128	1.25	90.2	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Arsenic	SW6010D	ICP2_201119A	0.00419	0.005	83.8	80-120	11/19/20 12:31
Barium	SW6010D	ICP2_201119A	0.00541	0.005	108	80-120	11/19/20 12:31
Cadmium	SW6010D	ICP2_201119A	0.00874	0.01	87.4	80-120	11/19/20 12:31
Chromium	SW6010D	ICP2_201119A	0.00465	0.005	93.0	80-120	11/19/20 12:31
Lead	SW6010D	ICP2_201119A	0.00496	0.005	99.2	80-120	11/19/20 12:31
Selenium	SW6010D	ICP2_201119A	0.00856	0.01	85.6	80-120	11/19/20 12:31
Silver	SW6010D	ICP2_201119A	0.00509	0.005	102	80-120	11/19/20 12:31
LLICV							
Arsenic	SW6010D	ICP2_201120A	0.00438	0.005	87.6	80-120	11/20/20 15:18
Barium	SW6010D	ICP2_201120A	0.00522	0.005	104	80-120	11/20/20 15:18
Calcium	SW6010D	ICP2_201120A	0.5011	0.5	100	80-120	11/20/20 15:18
Iron	SW6010D	ICP2_201120A	0.0828	0.08	103	80-120	11/20/20 15:18
Lead	SW6010D	ICP2_201120A	0.00622	0.005	124 *	80-120	11/20/20 15:18
Magnesium	SW6010D	ICP2_201120A	0.224	0.2	112	80-120	11/20/20 15:18
Manganese	SW6010D	ICP2_201120A	0.00504	0.005	101	80-120	11/20/20 15:18
Potassium	SW6010D	ICP2_201120A	0.2656	0.2	133 *	80-120	11/20/20 15:18
Silicon	SW6010D	ICP2_201120A	0.2309	0.2	115	80-120	11/20/20 15:18
Sodium	SW6010D	ICP2_201120A	0	0.2	96.9	80-120	11/20/20 15:18
Strontium	SW6010D	ICP2_201120A	0.00522	0.005	104	80-120	11/20/20 15:18
LLICV							
Aluminum	SW6010D	ICP2_201121A	0	0.01	92.8	80-120	11/21/20 15:29
Antimony	SW6010D	ICP2_201121A	0.00502	0.005	100	80-120	11/21/20 15:29
Arsenic	SW6010D	ICP2_201121A	0.00477	0.005	95.4	80-120	11/21/20 15:29
Barium	SW6010D	ICP2_201121A	0.00478	0.005	95.6	80-120	11/21/20 15:29
Beryllium	SW6010D	ICP2_201121A	0.00185	0.002	92.5	80-120	11/21/20 15:29
Boron	SW6010D	ICP2_201121A	0.0138	0.02	69.0 *	80-120	11/21/20 15:29
Cadmium	SW6010D	ICP2_201121A	0.00974	0.01	97.4	80-120	11/21/20 15:29
Calcium	SW6010D	ICP2_201121A	0.4976	0.5	99.5	80-120	11/21/20 15:29
Chromium	SW6010D	ICP2_201121A	0.00498	0.005	99.6	80-120	11/21/20 15:29
Cobalt	SW6010D	ICP2_201121A	0.00504	0.005	101	80-120	11/21/20 15:29
Copper	SW6010D	ICP2_201121A	0.00976	0.01	97.6	80-120	11/21/20 15:29
Iron	SW6010D	ICP2_201121A	0	0.08	94.0	80-120	11/21/20 15:29
Lead	SW6010D	ICP2_201121A	0.00591	0.005	118	80-120	11/21/20 15:29
Lithium	SW6010D	ICP2_201121A	0.00896	0.01	89.6	80-120	11/21/20 15:29
Magnesium	SW6010D	ICP2_201121A	0.2214	0.2	111	80-120	11/21/20 15:29
Manganese	SW6010D	ICP2_201121A	0.00497	0.005	99.4	80-120	11/21/20 15:29

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Molybdenum	SW6010D	ICP2_201121A	0.00513	0.005	103	80-120	11/21/20 15:29
Nickel	SW6010D	ICP2_201121A	0.00512	0.005	102	80-120	11/21/20 15:29
Potassium	SW6010D	ICP2_201121A	0.2313	0.2	116	80-120	11/21/20 15:29
Selenium	SW6010D	ICP2_201121A	0.00984	0.01	98.4	80-120	11/21/20 15:29
Silicon	SW6010D	ICP2_201121A	0.2146	0.2	107	80-120	11/21/20 15:29
Silver	SW6010D	ICP2_201121A	0.00507	0.005	101	80-120	11/21/20 15:29
Sodium	SW6010D	ICP2_201121A	0	0.2	98.8	80-120	11/21/20 15:29
Strontium	SW6010D	ICP2_201121A	0.00488	0.005	97.6	80-120	11/21/20 15:29
Thallium	SW6010D	ICP2_201121A	0.01113	0.01	111	80-120	11/21/20 15:29
Tin	SW6010D	ICP2_201121A	0.0101	0.01	101	80-120	11/21/20 15:29
Titanium	SW6010D	ICP2_201121A	0.00461	0.005	92.2	80-120	11/21/20 15:29
Vanadium	SW6010D	ICP2_201121A	0.00464	0.005	92.8	80-120	11/21/20 15:29
Zinc	SW6010D	ICP2_201121A	0.00963	0.01	96.3	80-120	11/21/20 15:29

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/19/20 12:25				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 13:12				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 14:23				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 15:25				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 16:34				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/19/20 16:34				
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 17:24				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 18:25				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 19:27				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 20:34				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/19/20 21:40				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 22:47				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 23:54				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/20/20 00:29				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
ICB 11/20/20 14:26				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/20/20 14:26				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 15:13				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 16:19				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 17:25				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/20/20 17:25				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 18:32				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 19:37				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 20:43				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/20/20 20:43				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 21:48				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 22:54				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 00:00				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 00:00				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 01:07				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 02:14				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0.1877	J
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 03:22				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 03:22				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0.1914	J
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 04:28				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 05:36				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 06:06				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 06:06				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
ICB 11/21/20 15:19				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000641	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0.00372	J
Vanadium	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/21/20 15:19				
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 16:05				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0.00989	J
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.00103	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 17:07				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 17:07				
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000928	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 18:09				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 18:09				
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000816	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 19:11				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 19:11				
Molybdenum	SW6010D	ICP2_201121A	0.000855	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 20:13				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000816	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 20:13				
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 21:15				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000859	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 21:15				
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 22:17				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000833	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 23:19				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 23:19				
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000818	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/22/20 00:26				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/22/20 00:26				
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.00102	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/22/20 01:33				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/22/20 01:33				
Molybdenum	SW6010D	ICP2_201121A	0.00103	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/22/20 02:03				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.00103	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/22/20 02:03				
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168036	**Basis:**	Wet
Lab Code:	MBLK-168036		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 21:56	11/19/20 13:52	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 21:56	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168037	**Basis:**	Wet
Lab Code:	MBLK-168037		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 18:05	11/19/20 13:58	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 18:05	11/19/20 13:58	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168040	**Basis:**	Wet
Lab Code:	MBLK-168040		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 18:57	11/19/20 15:33	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 18:57	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168042	**Basis:**	Wet
Lab Code:	MBLK-168042		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 21:28	11/19/20 15:33	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 21:28	11/19/20 15:33	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201119A	93.07	100	93.1	80-120	11/19/20 12:41
Arsenic	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Barium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Cadmium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Calcium	SW6010D	ICP2_201119A	91.43	100	91.4	80-120	11/19/20 12:41
Chromium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Iron	SW6010D	ICP2_201119A	91.67	100	91.7	80-120	11/19/20 12:41
Lead	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Magnesium	SW6010D	ICP2_201119A	94.64	100	94.6	80-120	11/19/20 12:41
Molybdenum	SW6010D	ICP2_201119A	1.957	2	97.9	80-120	11/19/20 12:41
Potassium	SW6010D	ICP2_201119A	99.93 E	100	99.9	80-120	11/19/20 12:41
Selenium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Silver	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Sodium	SW6010D	ICP2_201119A	96.84 E	100	96.8	80-120	11/19/20 12:41
Titanium	SW6010D	ICP2_201119A	1.836	2	91.8	80-120	11/19/20 12:41

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201120A	94.23	100	94.2	80-120	11/20/20 14:42
Arsenic	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Barium	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Calcium	SW6010D	ICP2_201120A	93.4	100	93.4	80-120	11/20/20 14:42
Iron	SW6010D	ICP2_201120A	93.91	100	93.9	80-120	11/20/20 14:42
Lead	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Magnesium	SW6010D	ICP2_201120A	95.37	100	95.4	80-120	11/20/20 14:42
Manganese	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Molybdenum	SW6010D	ICP2_201120A	2.001	2	100	80-120	11/20/20 14:42
Potassium	SW6010D	ICP2_201120A	100.9 E	100	101	80-120	11/20/20 14:42
Silicon	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Sodium	SW6010D	ICP2_201120A	98.72 E	100	98.7	80-120	11/20/20 14:42
Strontium	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Titanium	SW6010D	ICP2_201120A	1.934	2	96.7	80-120	11/20/20 14:42

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201121A	101.7	100	102	80-120	11/21/20 15:34
Antimony	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Arsenic	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Barium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Beryllium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Boron	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Cadmium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Calcium	SW6010D	ICP2_201121A	101.2	100	101	80-120	11/21/20 15:34
Chromium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Cobalt	SW6010D	ICP2_201121A	0.00117 J	-	-	-	11/21/20 15:34
Copper	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Iron	SW6010D	ICP2_201121A	100.3	100	100	80-120	11/21/20 15:34
Lead	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Lithium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Magnesium	SW6010D	ICP2_201121A	104.5	100	104	80-120	11/21/20 15:34
Manganese	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Molybdenum	SW6010D	ICP2_201121A	2.027	2	101	80-120	11/21/20 15:34
Nickel	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Potassium	SW6010D	ICP2_201121A	105.2 E	100	105	80-120	11/21/20 15:34
Selenium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Silicon	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Silver	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Sodium	SW6010D	ICP2_201121A	104.3 E	100	104	80-120	11/21/20 15:34
Strontium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Thallium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Tin	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Titanium	SW6010D	ICP2_201121A	2.07	2	104	80-120	11/21/20 15:34
Vanadium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Zinc	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-B4-TE:S000010	**Units:**	mg/Kg
Lab Code:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

20111251-35AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	5.531	12.33	7.704	88.2	75-125
Lead	1460	1510 SO	7.704	661 *	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/19/20 - 11/20/20
		Date Extracted:	11/19/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-E4:S000010	**Units:**	mg/L
Lab Code:	IDA001:DU-E4:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

20111251-42AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	-0.005643	0.9515	1	95.7	75-125
Lead	64.26	65.23 O	1	97.2	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-A5:S000010	**Units:**	mg/Kg
Lab Code:	IDA001:DU-A5:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

20111251-43AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	58.49	64.84 O	7.205	88.1	75-125
Lead	1003	433 SO	7.205	-7910 *	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

Matrix Spike Summary
Metals

Sample Name:	BatchQC	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

20111584-02AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	-0.002717	0.935	1	93.8	75-125
Lead	0.2176	1.16	1	94.2	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111251-35A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111251-35AMS			**Duplicate Matrix Spike** 20111251-35AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	5.531	12.33	7.704	88.2	12.65	7.669	92.9	75-125	2.62	20
Lead	1460	1510 SO	7.704	661 *	1507 SO	7.669	624 *	75-125	0.2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/19/20 - 11/20/20
		Date Extracted:	11/19/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111251-42A	**Units:**	mg/L
Lab Code:	IDA001:DU-E4:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111251-42AMS			Duplicate Matrix Spike 20111251-42AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	-0.005643	0.9515	1	95.7	0.9185	1	92.4	75-125	3.53	20
Lead	64.26	65.23 O	1	97.2	62.16 SO	1	-210 *	75-125	4.82	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111251-43A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-A5:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111251-43AMS			Duplicate Matrix Spike 20111251-43AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	58.49	64.84 O	7.205	88.1	54.52 SO	7.53	-52.8 *	75-125	17.3	20
Lead	1003	433.0 SO	7.205	-7910 *	559.4 SRO	7.53	-5890 *	75-125	25.5*	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111584-02A	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111584-02AMS			**Duplicate Matrix Spike** 20111584-02AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	-0.002717	0.9350	1	93.8	0.9031	1	90.6	75-125	3.47	20
Lead	0.2176	1.160	1	94.2	1.123	1	90.5	75-125	3.24	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

POST SPIKE SAMPLE RECOVERY

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
20111251-43APDSA								
Arsenic	SW6010D	ICP2_201121A	58.49	126	74.52	90.6	80-120	11/21/20 19:48
Lead	SW6010D	ICP2_201121A	1003	1043	74.52	53.6 *	80-120	11/21/20 19:48

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/19/2020
Sample Matrix:	Water	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201119A

LCS-168036

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.09101	0.1	91.0	80-120
Lead	0.1006	0.1	101	80-120

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/19/2020
Sample Matrix:	Water	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201119A

LCS-168037

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.08954	0.1	89.5	80-120
Lead	0.09922	0.1	99.2	80-120

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/20/2020
Sample Matrix:	Soil	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201120A

LCS-168040

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.575	5	91.5	80-120
Lead	5.189	5	104	80-120

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/20/2020
Sample Matrix:	Soil	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201120A

LCS-168042

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.4	5	88.0	80-120
Lead	4.915	5	98.3	80-120

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP SERIAL DILUTIONS

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
20111251-43ASD							
Arsenic	SW6010D	ICP2_201121A	58.49	56.63	3.18	10	11/21/20 19:43
Lead	SW6010D	ICP2_201121A	1003	977.7	2.51	10	11/21/20 19:43

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Detection Limits

Instrument: ICP2 **Matrix:** Soil

Analyte	Units	MRL	MDL	Method
Arsenic	mg/Kg-dry	0.25	0.065	SW6010D
Lead	mg/Kg-dry	0.25	0.20	SW6010D

Instrument: ICP2 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.0016	SW6010D
Lead	mg/L	0.0050	0.0013	SW6010D

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Detection Limits

Instrument: ICPMS3 **Matrix:** Soil

Analyte	Units	MRL	Method
Miscellaneous		0	MISC

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201119A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/19/2020	11:55	
2	ICAL2	ICAL2	11/19/2020	12:00	
3	ICAL3	ICAL3	11/19/2020	12:06	
4	ICAL4	ICAL4	11/19/2020	12:11	
5	ICAL5	ICAL5	11/19/2020	12:15	
8	ICVLL	ICVLL	11/19/2020	12:31	
10	ICSA	ICSA	11/19/2020	12:41	
11	LDR1	LDR1	11/19/2020	12:46	
12	LDR2	LDR2	11/19/2020	12:52	
15	CCV	CCV	11/19/2020	13:07	
16	CCB	CCB	11/19/2020	13:12	
27	CCV	CCV	11/19/2020	14:18	
28	CCB	CCB	11/19/2020	14:23	
39	CCV	CCV	11/19/2020	15:20	
40	CCB	CCB	11/19/2020	15:25	
52	CCV	CCV	11/19/2020	16:29	
53	CCB	CCB	11/19/2020	16:34	
62	CCV	CCV	11/19/2020	17:19	
63	CCB	CCB	11/19/2020	17:24	
71	MBLK-168037	MBLK-168037	11/19/2020	18:05	
72	LCS-168037	LCS-168037	11/19/2020	18:10	
74	CCV	CCV	11/19/2020	18:21	
75	CCB	CCB	11/19/2020	18:25	
77	IDA001:DU-E4:S000010	20111251-42	11/19/2020	18:36	
78	20111251-42AMS	20111251-42AMS	11/19/2020	18:41	
79	20111251-42AMSD	20111251-42AMSD	11/19/2020	18:46	
80	IDA001:DU-A5:S000010	20111251-44	11/19/2020	18:51	
86	CCV	CCV	11/19/2020	19:22	
87	CCB	CCB	11/19/2020	19:27	
99	CCV	CCV	11/19/2020	20:29	
100	CCB	CCB	11/19/2020	20:34	
112	CCV	CCV	11/19/2020	21:36	
113	CCB	CCB	11/19/2020	21:40	
116	MBLK-168036	MBLK-168036	11/19/2020	21:56	
117	LCS-168036	LCS-168036	11/19/2020	22:01	
118	IDA001:DU-A1:S000010	20111251-02	11/19/2020	22:06	
119	IDA001:DU-B1:S000010	20111251-04	11/19/2020	22:12	
120	IDA001:DU-E1:S000010	20111251-06	11/19/2020	22:17	
121	IDA001:DU-A2:S000010	20111251-08	11/19/2020	22:22	
122	IDA001:DU-B2:S000010	20111251-12	11/19/2020	22:27	
123	IDA001:DU-C2:S000010	20111251-14	11/19/2020	22:32	
125	CCV	CCV	11/19/2020	22:42	
126	CCB	CCB	11/19/2020	22:47	
127	IDA001:DU-D2:S000010	20111251-16	11/19/2020	22:52	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201119A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
128	IDA001:DU-E2:S000010	20111251-18	11/19/2020	22:58	
129	IDA001:DU-A3:S000010	20111251-20	11/19/2020	23:03	
130	IDA001:DU-B3:S000010	20111251-22	11/19/2020	23:08	
131	IDA001:DU-C3:S000010	20111251-24	11/19/2020	23:13	
132	IDA001:DU-D3:S000010	20111251-26	11/19/2020	23:18	
133	IDA001:DU-E3:S000010	20111251-28	11/19/2020	23:24	
134	IDA001:DU-A4:S000010	20111251-32	11/19/2020	23:29	
135	IDA001:DU-B4:S000010	20111251-34	11/19/2020	23:34	
136	IDA001:DU-C4:S000010	20111251-38	11/19/2020	23:39	
138	CCV	CCV	11/19/2020	23:49	
139	CCB	CCB	11/19/2020	23:54	
140	IDA001:DU-D4:S000010	20111251-40	11/19/2020	23:59	
142	20111584-02AMS	20111584-02AMS	11/20/2020	00:10	
143	20111584-02AMSD	20111584-02AMSD	11/20/2020	00:15	
145	CCV	CCV	11/20/2020	00:25	
146	CCB	CCB	11/20/2020	00:29	

Analysis Lot:ICP2_201120A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/20/2020	13:56	
2	ICAL2	ICAL2	11/20/2020	14:01	
3	ICAL3	ICAL3	11/20/2020	14:07	
4	ICAL4	ICAL4	11/20/2020	14:11	
5	ICAL5	ICAL5	11/20/2020	14:16	
10	ICSA	ICSA	11/20/2020	14:42	
11	LDR1	LDR1	11/20/2020	14:47	
12	LDR2	LDR2	11/20/2020	14:53	
15	CCV	CCV	11/20/2020	15:08	
16	CCB	CCB	11/20/2020	15:13	
17	ICVLL	ICVLL	11/20/2020	15:18	
27	CCV	CCV	11/20/2020	16:14	
28	CCB	CCB	11/20/2020	16:19	
30	IDA001:DU-E4:S000010	20111251-42	11/20/2020	16:29	
31	20111251-42AMS	20111251-42AMS	11/20/2020	16:34	
32	20111251-42AMSD	20111251-42AMSD	11/20/2020	16:39	
39	CCV	CCV	11/20/2020	17:15	
41	CCB	CCB	11/20/2020	17:25	
53	CCV	CCV	11/20/2020	18:27	
54	CCB	CCB	11/20/2020	18:32	
58	IDA001:DU-C4:S000010	20111251-38	11/20/2020	18:52	
59	MBLK-168040	MBLK-168040	11/20/2020	18:57	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201120A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
60	LCS-168040	LCS-168040	11/20/2020	19:03	
61	IDA001:DU-A1:S000010	20111251-01	11/20/2020	19:08	
62	IDA001:DU-B1:S000010	20111251-03	11/20/2020	19:13	
63	IDA001:DU-E1:S000010	20111251-05	11/20/2020	19:18	
64	IDA001:DU-A2:S000010	20111251-07	11/20/2020	19:23	
65	CCV	CCV	11/20/2020	19:28	
67	CCB	CCB	11/20/2020	19:37	
68	IDA001:DU-A2-TE:S000010	20111251-09	11/20/2020	19:43	
69	IDA001:DU-A2-TS:S000010	20111251-10	11/20/2020	19:48	
70	IDA001:DU-B2:S000010	20111251-11	11/20/2020	19:53	
71	IDA001:DU-C2:S000010	20111251-13	11/20/2020	19:58	
72	IDA001:DU-D2:S000010	20111251-15	11/20/2020	20:03	
73	IDA001:DU-E2:S000010	20111251-17	11/20/2020	20:08	
74	IDA001:DU-A3:S000010	20111251-19	11/20/2020	20:13	
75	IDA001:DU-B3:S000010	20111251-21	11/20/2020	20:18	
76	IDA001:DU-C3:S000010	20111251-23	11/20/2020	20:23	
77	IDA001:DU-D3:S000010	20111251-25	11/20/2020	20:28	
78	CCV	CCV	11/20/2020	20:33	
80	CCB	CCB	11/20/2020	20:43	
81	IDA001:DU-E3:S000010	20111251-27	11/20/2020	20:48	
82	IDA001:DU-E3-TE:S000010	20111251-29	11/20/2020	20:53	
83	IDA001:DU-E3-TS:S000010	20111251-30	11/20/2020	20:58	
84	IDA001:DU-A4:S000010	20111251-31	11/20/2020	21:03	
85	IDA001:DU-B4:S000010	20111251-33	11/20/2020	21:08	
86	IDA001:DU-B4-TE:S000010	20111251-35	11/20/2020	21:13	
87	20111251-35AMS	20111251-35AMS	11/20/2020	21:18	
88	20111251-35AMSD	20111251-35AMSD	11/20/2020	21:23	
89	MBLK-168042	MBLK-168042	11/20/2020	21:28	
90	LCS-168042	LCS-168042	11/20/2020	21:33	
91	CCV	CCV	11/20/2020	21:38	
93	CCB	CCB	11/20/2020	21:48	
94	IDA001:DU-B4-TS:S000010	20111251-36	11/20/2020	21:53	
95	IDA001:DU-C4:S000010	20111251-37	11/20/2020	21:58	
96	IDA001:DU-D4:S000010	20111251-39	11/20/2020	22:03	
97	IDA001:DU-E4:S000010	20111251-41	11/20/2020	22:08	
98	IDA001:DU-A5:S000010	20111251-43	11/20/2020	22:14	
99	20111251-43AMS	20111251-43AMS	11/20/2020	22:19	
100	20111251-43AMSD	20111251-43AMSD	11/20/2020	22:24	
105	CCV	CCV	11/20/2020	22:49	
106	CCB	CCB	11/20/2020	22:54	
118	CCV	CCV	11/20/2020	23:55	
119	CCB	CCB	11/21/2020	00:00	
131	CCV	CCV	11/21/2020	01:03	
132	CCB	CCB	11/21/2020	01:07	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201120A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
144	CCV	CCV	11/21/2020	02:10	
145	CCB	CCB	11/21/2020	02:14	
157	CCV	CCV	11/21/2020	03:17	
158	CCB	CCB	11/21/2020	03:22	
169	CCV	CCV	11/21/2020	04:18	
171	CCB	CCB	11/21/2020	04:28	
183	CCV	CCV	11/21/2020	05:31	
184	CCB	CCB	11/21/2020	05:36	
189	CCV	CCV	11/21/2020	06:01	
190	CCB	CCB	11/21/2020	06:06	

Analysis Lot:ICP2_201121A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/21/2020	14:43	
2	ICAL2	ICAL2	11/21/2020	14:48	
3	ICAL3	ICAL3	11/21/2020	14:54	
4	ICAL4	ICAL4	11/21/2020	14:59	
5	ICAL5	ICAL5	11/21/2020	15:04	
10	ICVLL	ICVLL	11/21/2020	15:29	
11	ICSA	ICSA	11/21/2020	15:34	
12	LDR1	LDR1	11/21/2020	15:39	
13	LDR2	LDR2	11/21/2020	15:45	
16	CCV	CCV	11/21/2020	16:00	
17	CCB	CCB	11/21/2020	16:05	
28	CCV	CCV	11/21/2020	17:02	
29	CCB	CCB	11/21/2020	17:07	
40	CCV	CCV	11/21/2020	18:05	
41	CCB	CCB	11/21/2020	18:09	
52	CCV	CCV	11/21/2020	19:07	
53	CCB	CCB	11/21/2020	19:11	
56	IDA001:DU-E2:S000010	20111251-17	11/21/2020	19:27	
57	IDA001:DU-E3:S000010	20111251-27	11/21/2020	19:32	
58	IDA001:DU-E4:S000010	20111251-41	11/21/2020	19:37	
59	20111251-43ASD	20111251-43ASD	11/21/2020	19:43	
60	20111251-43APDS	20111251-43APDS	11/21/2020	19:48	
64	CCV	CCV	11/21/2020	20:08	
65	CCB	CCB	11/21/2020	20:13	
76	CCV	CCV	11/21/2020	21:10	
77	CCB	CCB	11/21/2020	21:15	
88	CCV	CCV	11/21/2020	22:12	
89	CCB	CCB	11/21/2020	22:17	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201121A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
100	CCV	CCV	11/21/2020	23:14	
101	CCB	CCB	11/21/2020	23:19	
112	CCV	CCV	11/22/2020	00:16	
114	CCB	CCB	11/22/2020	00:26	
125	CCV	CCV	11/22/2020	01:23	
127	CCB	CCB	11/22/2020	01:33	
132	CCV	CCV	11/22/2020	01:58	
133	CCB	CCB	11/22/2020	02:03	

Analysis Lot:ICPMS3_201117D
Analysis Method: MISC **Instrument ID:**ICPMS3

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
	IDA001:DU-A1:S000010	20111251-01	11/17/2020	00:00	
	IDA001:DU-B1:S000010	20111251-03	11/17/2020	00:00	
	IDA001:DU-E1:S000010	20111251-05	11/17/2020	00:00	
	IDA001:DU-A2:S000010	20111251-07	11/17/2020	00:00	
	IDA001:DU-A2-TE:S000010	20111251-09	11/17/2020	00:00	
	IDA001:DU-A2-TS:S000010	20111251-10	11/17/2020	00:00	
	IDA001:DU-B2:S000010	20111251-11	11/17/2020	00:00	
	IDA001:DU-C2:S000010	20111251-13	11/17/2020	00:00	
	IDA001:DU-D2:S000010	20111251-15	11/17/2020	00:00	
	IDA001:DU-E2:S000010	20111251-17	11/17/2020	00:00	
	IDA001:DU-A3:S000010	20111251-19	11/17/2020	00:00	
	IDA001:DU-B3:S000010	20111251-21	11/17/2020	00:00	
	IDA001:DU-C3:S000010	20111251-23	11/17/2020	00:00	
	IDA001:DU-D3:S000010	20111251-25	11/17/2020	00:00	
	IDA001:DU-E3:S000010	20111251-27	11/17/2020	00:00	
	IDA001:DU-E3-TE:S000010	20111251-29	11/17/2020	00:00	
	IDA001:DU-E3-TS:S000010	20111251-30	11/17/2020	00:00	
	IDA001:DU-A4:S000010	20111251-31	11/17/2020	00:00	
	IDA001:DU-B4:S000010	20111251-33	11/17/2020	00:00	
	IDA001:DU-B4-TE:S000010	20111251-35	11/17/2020	00:00	
	IDA001:DU-B4-TS:S000010	20111251-36	11/17/2020	00:00	
	IDA001:DU-C4:S000010	20111251-37	11/17/2020	00:00	
	IDA001:DU-D4:S000010	20111251-39	11/17/2020	00:00	
	IDA001:DU-E4:S000010	20111251-41	11/17/2020	00:00	
	IDA001:DU-A5:S000010	20111251-43	11/17/2020	00:00	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201119A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
ICAL1	1	11/19/20 11:55		X																X					
ICAL2	1	11/19/20 12:00		X																X					
ICAL3	1	11/19/20 12:06		X																X					
ICAL4	1	11/19/20 12:11		X																X					
ICAL5	1	11/19/20 12:15		X																X					
ICV/QCS	1	11/19/20 12:20		X																X					
ICB	1	11/19/20 12:25		X																X					
ICSA	1	11/19/20 12:41		X																X					
CCV	1	11/19/20 13:07		X																X					
CCB	1	11/19/20 13:12		X																X					
ZZZZZZ	10	11/19/20 13:47																X							
ZZZZZZ	10	11/19/20 13:53																X							
ZZZZZZ	100	11/19/20 13:58																X							
ZZZZZZ	100	11/19/20 14:03																X							
ZZZZZZ	10	11/19/20 14:08																X							
ZZZZZZ	10	11/19/20 14:13																X							
CCV	1	11/19/20 14:18		X																X					
CCB	1	11/19/20 14:23		X																X					
ZZZZZZ	100	11/19/20 14:28																X							
ZZZZZZ	100	11/19/20 14:34																X							
ZZZZZZ	100	11/19/20 14:39			X		X							X				X							
ZZZZZZ	100	11/19/20 14:54			X		X							X				X							
ZZZZZZ	10	11/19/20 15:15																X							
CCV	1	11/19/20 15:20		X																X					
CCB	1	11/19/20 15:25		X																X					
ZZZZZZ	1	11/19/20 15:34			X																				
ZZZZZZ	1	11/19/20 15:59			X																				
ZZZZZZ	1	11/19/20 16:04			X																				
ZZZZZZ	1	11/19/20 16:09			X																				
ZZZZZZ	1	11/19/20 16:14			X																				
ZZZZZZ	10	11/19/20 16:19			X															X					
CCV	1	11/19/20 16:29		X																X					
CCB	1	11/19/20 16:34		X																X					
ZZZZZZ	10	11/19/20 16:39			X						X														X
ZZZZZZ	10	11/19/20 16:44			X															X					
ZZZZZZ	100	11/19/20 16:59										X													
ZZZZZZ	100	11/19/20 17:04																		X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201119A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
CCV	1	11/19/20 17:19		X																X					
CCB	1	11/19/20 17:24		X																X					
ZZZZZZ	1	11/19/20 17:40	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 17:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 18:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
MBLK-168037	1	11/19/20 18:05		X																X					
LCS-168037	1	11/19/20 18:10		X																X					
ZZZZZZ	10	11/19/20 18:15	X																						
CCV	1	11/19/20 18:21		X																X					
CCB	1	11/19/20 18:25		X																X					
IDA001:DU-E4:S000010	1	11/19/20 18:36		X																					
20111251-42AMS	1	11/19/20 18:41		X																					
20111251-42AMSD	1	11/19/20 18:46		X																					
IDA001:DU-A5:S000010	1	11/19/20 18:51		X																X					
ZZZZZZ	1	11/19/20 18:56	X	X	X			X		X										X	X				
CCV	1	11/19/20 19:22		X																X					
CCB	1	11/19/20 19:27		X																X					
ZZZZZZ	1	11/19/20 19:32	X	X	X			X		X										X	X				
ZZZZZZ	1	11/19/20 19:37	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:42	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:48	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:53	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:58	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:13	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:19	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
CCV	1	11/19/20 20:29		X																X					
CCB	1	11/19/20 20:34		X																X					
ZZZZZZ	1	11/19/20 20:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:20	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201119A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
ZZZZZZ	1	11/19/20 21:26	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
CCV	1	11/19/20 21:36		X																X					
CCB	1	11/19/20 21:40		X																X					
ZZZZZZ	1	11/19/20 21:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
ZZZZZZ	1	11/19/20 21:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
MBLK-168036	1	11/19/20 21:56		X																X					
LCS-168036	1	11/19/20 22:01		X																X					
IDA001:DU-A1:S000010	1	11/19/20 22:06		X																X					
IDA001:DU-B1:S000010	1	11/19/20 22:12		X																X					
IDA001:DU-E1:S000010	1	11/19/20 22:17		X																X					
IDA001:DU-A2:S000010	1	11/19/20 22:22		X																X					
IDA001:DU-B2:S000010	1	11/19/20 22:27		X																X					
IDA001:DU-C2:S000010	1	11/19/20 22:32		X																X					
CCV	1	11/19/20 22:42		X																X					
CCB	1	11/19/20 22:47		X																X					
IDA001:DU-D2:S000010	1	11/19/20 22:52		X																X					
IDA001:DU-E2:S000010	1	11/19/20 22:58		X																X					
IDA001:DU-A3:S000010	1	11/19/20 23:03		X																X					
IDA001:DU-B3:S000010	1	11/19/20 23:08		X																X					
IDA001:DU-C3:S000010	1	11/19/20 23:13		X																X					
IDA001:DU-D3:S000010	1	11/19/20 23:18		X																X					
IDA001:DU-E3:S000010	1	11/19/20 23:24		X																X					
IDA001:DU-A4:S000010	1	11/19/20 23:29		X																X					
IDA001:DU-B4:S000010	1	11/19/20 23:34		X																X					
IDA001:DU-C4:S000010	1	11/19/20 23:39		X																					
CCV	1	11/19/20 23:49		X																X					
CCB	1	11/19/20 23:54		X																X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201119A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
IDA001:DU-D4:S000010	1	11/19/20 23:59		X																X					
ZZZZZZ	1	11/20/20 00:04		X																X					
ZZZZZZMS	1	11/20/20 00:10		X																X					
ZZZZZZMSD	1	11/20/20 00:15		X																X					
CCV	1	11/20/20 00:25		X																X					
CCB	1	11/20/20 00:29		X																X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201120A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
ICAL1	1	11/20/20 13:56		X												X				
ICAL2	1	11/20/20 14:01		X												X				
ICAL3	1	11/20/20 14:07		X												X				
ICAL4	1	11/20/20 14:11		X												X				
ICAL5	1	11/20/20 14:16		X												X				
ICV/QCS	1	11/20/20 14:21		X												X				
ICB	1	11/20/20 14:26		X												X				
ICSA	1	11/20/20 14:42		X												X				
CCV	1	11/20/20 15:08		X												X				
CCB	1	11/20/20 15:13		X												X				
ZZZZZZ	100	11/20/20 15:45													X					
ZZZZZZ	1	11/20/20 16:00										X					X			
ZZZZZZ	10	11/20/20 16:09													X		X			
CCV	1	11/20/20 16:14		X												X				
CCB	1	11/20/20 16:19		X												X				
ZZZZZZ	10	11/20/20 16:24													X		X			
IDA001:DU-E4:S000010	10	11/20/20 16:29														X				
20111251-42AMS	10	11/20/20 16:34														X				
20111251-42AMSD	10	11/20/20 16:39														X				
ZZZZZZ	10	11/20/20 16:44										X			X		X			
ZZZZZZ	10	11/20/20 16:50										X			X		X			
ZZZZZZ	10	11/20/20 16:55										X			X		X			
ZZZZZZ	10	11/20/20 17:00										X			X		X			
ZZZZZZ	1	11/20/20 17:05										X					X			
ZZZZZZ	10	11/20/20 17:10										X			X		X			
CCV	1	11/20/20 17:15		X												X				
CCB	1	11/20/20 17:25		X												X				
ZZZZZZ	10	11/20/20 17:30										X			X		X			
ZZZZZZ	1	11/20/20 17:35															X			
ZZZZZZ	1	11/20/20 17:41															X			
ZZZZZZ	1	11/20/20 17:46															X			
ZZZZZZ	1	11/20/20 17:51															X			
ZZZZZZ	1	11/20/20 17:56															X			
ZZZZZZ	1	11/20/20 18:01															X			
ZZZZZZ	1	11/20/20 18:06															X			
ZZZZZZ	1	11/20/20 18:12															X			
ZZZZZZ	10	11/20/20 18:17										X			X		X			

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201120A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
CCV	1	11/20/20 18:27		X												X				
CCB	1	11/20/20 18:32		X												X				
ZZZZZZ	10	11/20/20 18:37										X			X		X			
ZZZZZZ	10	11/20/20 18:42													X		X			X
ZZZZZZ	10	11/20/20 18:47													X		X			X
IDA001:DU-C4:S000010	10	11/20/20 18:52														X				
MBLK-168040	1	11/20/20 18:57		X												X				
LCS-168040	1	11/20/20 19:03		X												X				
IDA001:DU-A1:S000010	10	11/20/20 19:08		X												X				
IDA001:DU-B1:S000010	10	11/20/20 19:13		X												X				
IDA001:DU-E1:S000010	10	11/20/20 19:18		X												X				
IDA001:DU-A2:S000010	10	11/20/20 19:23		X												X				
CCV	1	11/20/20 19:28		X												X				
CCB	1	11/20/20 19:37		X												X				
IDA001:DU-A2-TE:S000010	10	11/20/20 19:43		X												X				
IDA001:DU-A2-TS:S000010	10	11/20/20 19:48		X												X				
IDA001:DU-B2:S000010	10	11/20/20 19:53		X												X				
IDA001:DU-C2:S000010	10	11/20/20 19:58		X												X				
IDA001:DU-D2:S000010	10	11/20/20 20:03		X												X				
IDA001:DU-E2:S000010	10	11/20/20 20:08		X																
IDA001:DU-A3:S000010	10	11/20/20 20:13		X												X				
IDA001:DU-B3:S000010	10	11/20/20 20:18		X												X				
IDA001:DU-C3:S000010	10	11/20/20 20:23		X												X				
IDA001:DU-D3:S000010	10	11/20/20 20:28		X												X				
CCV	1	11/20/20 20:33		X												X				
CCB	1	11/20/20 20:43		X												X				
IDA001:DU-E3:S000010	10	11/20/20 20:48		X																

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201120A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
IDA001:DU-E3-TE:S000010	10	11/20/20 20:53		X												X				
IDA001:DU-E3-TS:S000010	10	11/20/20 20:58		X												X				
IDA001:DU-A4:S000010	10	11/20/20 21:03		X												X				
IDA001:DU-B4:S000010	10	11/20/20 21:08		X												X				
IDA001:DU-B4-TE:S000010	10	11/20/20 21:13		X												X				
20111251-35AMS	10	11/20/20 21:18		X												X				
20111251-35AMSD	10	11/20/20 21:23		X												X				
MBLK-168042	1	11/20/20 21:28		X												X				
LCS-168042	1	11/20/20 21:33		X												X				
CCV	1	11/20/20 21:38		X												X				
CCB	1	11/20/20 21:48		X												X				
IDA001:DU-B4-TS:S000010	10	11/20/20 21:53		X												X				
IDA001:DU-C4:S000010	10	11/20/20 21:58		X												X				
IDA001:DU-D4:S000010	10	11/20/20 22:03		X												X				
IDA001:DU-E4:S000010	10	11/20/20 22:08		X																
IDA001:DU-A5:S000010	10	11/20/20 22:14		X												X				
20111251-43AMS	10	11/20/20 22:19		X												X				
20111251-43AMSD	10	11/20/20 22:24		X												X				
ZZZZZZ	10	11/20/20 22:29			X	X				X	X		X	X	X			X	X	
ZZZZZZ	10	11/20/20 22:34			X	X				X	X		X	X	X			X	X	
CCV	1	11/20/20 22:49		X												X				
CCB	1	11/20/20 22:54		X												X				
ZZZZZZ	1	11/20/20 23:04	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:19	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:24	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/20/20 23:29	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:34	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/20/20 23:40	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:45	X	X	X		X	X		X				X		X				
CCV	1	11/20/20 23:55		X												X				
CCB	1	11/21/20 00:00		X												X				

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201120A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
ZZZZZZ	1	11/21/20 00:05	X	X	X		X	X		X				X		X				
ZZZZZZ	1	11/21/20 00:11	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/21/20 00:16	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/21/20 00:21	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/21/20 00:27	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/21/20 00:32								X	X		X							
ZZZZZZ	10	11/21/20 00:37			X					X	X		X							
CCV	1	11/21/20 01:03		X												X				
CCB	1	11/21/20 01:07		X												X				
ZZZZZZ	1	11/21/20 01:18		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:33		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:39		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:44		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:49		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:54		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:00		X	X		X		X	X	X		X							X
CCV	1	11/21/20 02:10		X												X				
CCB	1	11/21/20 02:14		X												X				
ZZZZZZ	1	11/21/20 02:20		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 02:25		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 02:30		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:35		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 02:40		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:46		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:51		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:56		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 03:01		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 03:07		X	X		X		X	X	X		X			X				X
CCV	1	11/21/20 03:17		X												X				
CCB	1	11/21/20 03:22		X												X				
ZZZZZZ	1	11/21/20 03:27	X	X	X		X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 03:32	X	X	X	X	X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 03:37	X	X	X	X	X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 03:53	X	X	X	X	X	X	X	X	X		X	X						X
ZZZZZZ	1	11/21/20 03:58	X	X	X	X	X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 04:03									X		X							
CCV	1	11/21/20 04:18		X												X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201120A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
CCB	1	11/21/20 04:28		X												X				
ZZZZZZ	1	11/21/20 04:33									X		X							
ZZZZZZ	1	11/21/20 04:38									X		X							
ZZZZZZ	1	11/21/20 04:44									X		X							
ZZZZZZ	1	11/21/20 04:49									X		X							
ZZZZZZ	1	11/21/20 04:54											X							
ZZZZZZ	1	11/21/20 04:59											X							
ZZZZZZ	1	11/21/20 05:05									X		X							
ZZZZZZ	1	11/21/20 05:10											X							
ZZZZZZ	1	11/21/20 05:15									X		X							
ZZZZZZ	1	11/21/20 05:21									X		X							
CCV	1	11/21/20 05:31		X												X				
CCB	1	11/21/20 05:36		X												X				
ZZZZZZ	1	11/21/20 05:41									X		X							
ZZZZZZ	1	11/21/20 05:46											X							
ZZZZZZ	1	11/21/20 05:51											X							
CCV	1	11/21/20 06:01		X												X				
CCB	1	11/21/20 06:06		X												X				

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201121A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	CA	CR	K	MN	NA	PB	SE
ICAL1	1	11/21/20 14:43			X						X	
ICAL2	1	11/21/20 14:48			X						X	
ICAL3	1	11/21/20 14:54			X						X	
ICAL4	1	11/21/20 14:59			X						X	
ICAL5	1	11/21/20 15:04			X						X	
ICV/QCS	1	11/21/20 15:14			X						X	
ICB	1	11/21/20 15:19			X						X	
ICSA	1	11/21/20 15:34			X						X	
CCV	1	11/21/20 16:00			X						X	
CCB	1	11/21/20 16:05			X						X	
CCV	1	11/21/20 17:02			X						X	
CCB	1	11/21/20 17:07			X						X	
ZZZZZZ	1	11/21/20 17:12		X								
ZZZZZZ	1	11/21/20 17:17		X								
ZZZZZZ	1	11/21/20 17:23		X								
ZZZZZZ	1	11/21/20 17:28		X								
ZZZZZZ	1	11/21/20 17:33		X								
ZZZZZZ	1	11/21/20 17:38		X								
ZZZZZZ	1	11/21/20 17:43		X								
ZZZZZZ	1	11/21/20 17:49		X								
ZZZZZZ	1	11/21/20 17:54		X								
ZZZZZZ	1	11/21/20 17:59		X								
CCV	1	11/21/20 18:05			X						X	
CCB	1	11/21/20 18:09			X						X	
ZZZZZZ	1	11/21/20 18:15		X								
ZZZZZZ	1	11/21/20 18:20		X								
ZZZZZZ	1	11/21/20 18:25		X								
ZZZZZZ	1	11/21/20 18:30		X								
ZZZZZZ	1	11/21/20 18:35		X								
ZZZZZZ	1	11/21/20 18:41		X								
ZZZZZZ	1	11/21/20 18:46		X								
ZZZZZZ	1	11/21/20 18:51		X								
ZZZZZZ	1	11/21/20 18:56		X								
ZZZZZZ	1	11/21/20 19:01		X								
CCV	1	11/21/20 19:07			X						X	
CCB	1	11/21/20 19:11			X						X	
ZZZZZZ	1	11/21/20 19:17		X								

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201121A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	CA	CR	K	MN	NA	PB	SE
ZZZZZZ	1	11/21/20 19:22		X								
IDA001:DU-E2:S000010	100	11/21/20 19:27									X	
IDA001:DU-E3:S000010	100	11/21/20 19:32									X	
IDA001:DU-E4:S000010	100	11/21/20 19:37									X	
20111251-43ASD	50	11/21/20 19:43			X						X	
20111251-43APDS	10	11/21/20 19:48			X						X	
ZZZZZZ	10	11/21/20 19:53				X				X		X
CCV	1	11/21/20 20:08			X						X	
CCB	1	11/21/20 20:13			X						X	
ZZZZZZ	10	11/21/20 20:18				X				X		X
ZZZZZZ	1	11/21/20 20:23				X				X	X	X
ZZZZZZ	1	11/21/20 20:29				X				X		X
ZZZZZZ	10	11/21/20 20:34				X				X	X	X
ZZZZZZ	10	11/21/20 20:39				X				X		X
ZZZZZZ	10	11/21/20 20:44				X		X		X		X
ZZZZZZ	10	11/21/20 20:49				X		X		X		X
ZZZZZZ	10	11/21/20 20:54				X				X	X	X
ZZZZZZ	10	11/21/20 21:00				X				X	X	X
ZZZZZZ	10	11/21/20 21:05				X				X		X
CCV	1	11/21/20 21:10			X						X	
CCB	1	11/21/20 21:15			X						X	
ZZZZZZ	10	11/21/20 21:20				X				X		X
ZZZZZZ	10	11/21/20 21:25				X				X		
ZZZZZZ	100	11/21/20 21:31				X				X		
ZZZZZZ	10	11/21/20 21:36	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 21:51	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 21:57	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:02	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:07	X			X	X		X	X		X
CCV	1	11/21/20 22:12			X						X	
CCB	1	11/21/20 22:17			X						X	
ZZZZZZ	10	11/21/20 22:22	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:27	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:33	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:38	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:43	X			X	X		X	X		X

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201121A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	CA	CR	K	MN	NA	PB	SE
ZZZZZZ	10	11/21/20 22:48	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:53	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:58	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 23:04	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 23:09	X			X	X		X		X	X
CCV	1	11/21/20 23:14			X						X	
CCB	1	11/21/20 23:19			X						X	
ZZZZZZ	10	11/21/20 23:24	X			X	X		X			
ZZZZZZ	1	11/21/20 23:29	X				X		X			
ZZZZZZ	10	11/21/20 23:35				X				X		
ZZZZZZ	10	11/21/20 23:40								X		
ZZZZZZ	10	11/21/20 23:45								X		
ZZZZZZ	10	11/21/20 23:50								X	X	
ZZZZZZ	10	11/21/20 23:55								X		
ZZZZZZ	10	11/22/20 00:01				X				X		
CCV	1	11/22/20 00:16			X						X	
CCB	1	11/22/20 00:26			X						X	
ZZZZZZ	1	11/22/20 00:31								X		
ZZZZZZ	10	11/22/20 00:36				X				X		
ZZZZZZ	10	11/22/20 00:41				X				X		
ZZZZZZ	10	11/22/20 00:47				X				X		
ZZZZZZ	1	11/22/20 00:52				X				X		
ZZZZZZ	1	11/22/20 00:57				X				X		
ZZZZZZ	10	11/22/20 01:02				X				X		
ZZZZZZ	1	11/22/20 01:07				X				X		
ZZZZZZ	10	11/22/20 01:12				X				X		
ZZZZZZ	10	11/22/20 01:18				X				X		
CCV	1	11/22/20 01:23			X						X	
CCB	1	11/22/20 01:33			X						X	
ZZZZZZ	10	11/22/20 01:38				X				X		
ZZZZZZ	1	11/22/20 01:43				X				X		
ZZZZZZ	1	11/22/20 01:48				X				X		
CCV	1	11/22/20 01:58			X						X	
CCB	1	11/22/20 02:03			X						X	

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168040
Analytical Method: SW6010D **Extraction Date:** 11/19/20 15:33

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-A1:S000010	20111251-01A	11/9/20	11/13/20	0.743 g	50 mL	88
IDA001:DU-B1:S000010	20111251-03A	11/9/20	11/13/20	0.756 g	50 mL	88
IDA001:DU-E1:S000010	20111251-05A	11/10/20	11/13/20	0.662 g	50 mL	90.5
IDA001:DU-A2:S000010	20111251-07A	11/9/20	11/13/20	0.616 g	50 mL	87
IDA001:DU-A2-TE:S000010	20111251-09A	11/9/20	11/13/20	0.757 g	50 mL	88
IDA001:DU-A2-TS:S000010	20111251-10A	11/9/20	11/13/20	0.781 g	50 mL	90.6
IDA001:DU-B2:S000010	20111251-11A	11/10/20	11/13/20	0.681 g	50 mL	93.6
IDA001:DU-C2:S000010	20111251-13A	11/10/20	11/13/20	0.673 g	50 mL	90.8
IDA001:DU-D2:S000010	20111251-15A	11/10/20	11/13/20	0.744 g	50 mL	91.6
IDA001:DU-E2:S000010	20111251-17A	11/10/20	11/13/20	0.74 g	50 mL	84
IDA001:DU-A3:S000010	20111251-19A	11/10/20	11/13/20	0.741 g	50 mL	89
IDA001:DU-B3:S000010	20111251-21A	11/10/20	11/13/20	0.714 g	50 mL	95
IDA001:DU-C3:S000010	20111251-23A	11/10/20	11/13/20	0.648 g	50 mL	95.5
IDA001:DU-D3:S000010	20111251-25A	11/11/20	11/13/20	0.689 g	50 mL	81
IDA001:DU-E3:S000010	20111251-27A	11/11/20	11/13/20	0.716 g	50 mL	88
IDA001:DU-E3-TE:S000010	20111251-29A	11/11/20	11/13/20	0.785 g	50 mL	89
IDA001:DU-E3-TS:S000010	20111251-30A	11/11/20	11/13/20	0.66 g	50 mL	89
IDA001:DU-A4:S000010	20111251-31A	11/11/20	11/13/20	0.757 g	50 mL	89
IDA001:DU-B4:S000010	20111251-33A	11/11/20	11/13/20	0.727 g	50 mL	93.6
IDA001:DU-B4-TE:S000010	20111251-35A	11/11/20	11/13/20	0.659 g	50 mL	94.3
Matrix Spike	20111251-35AMS	NA	NA	0.649 g	50 mL	0
Duplicate Matrix Spike	20111251-35AMSD	NA	NA	0.652 g	50 mL	0
LCS-168040	LCS-168040	NA	NA	1 g	50 mL	0
MBLK-168040	MBLK-168040	NA	NA	1 g	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168036
Analytical Method: SW6010D **Extraction Date:** 11/19/20 13:52

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-A1:S000010	20111251-02A	11/9/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B1:S000010	20111251-04A	11/9/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-E1:S000010	20111251-06A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-A2:S000010	20111251-08A	11/9/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B2:S000010	20111251-12A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-C2:S000010	20111251-14A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-D2:S000010	20111251-16A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-E2:S000010	20111251-18A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-A3:S000010	20111251-20A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B3:S000010	20111251-22A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-C3:S000010	20111251-24A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-D3:S000010	20111251-26A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-E3:S000010	20111251-28A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-A4:S000010	20111251-32A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B4:S000010	20111251-34A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-C4:S000010	20111251-38A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-D4:S000010	20111251-40A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
Matrix Spike	20111584-02AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111584-02AMSD	NA	NA	2.5 mL	27.5 mL	0
LCS-168036	LCS-168036	NA	NA	25 mL	27.5 mL	0
MBLK-168036	MBLK-168036	NA	NA	25 mL	27.5 mL	0

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168042
Analytical Method: SW6010D **Extraction Date:** 11/19/20 15:33

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-B4-TS:S000010	20111251-36A	11/11/20	11/13/20	0.644 g	50 mL	94
IDA001:DU-C4:S000010	20111251-37A	11/11/20	11/13/20	0.691 g	50 mL	89
IDA001:DU-D4:S000010	20111251-39A	11/11/20	11/13/20	0.678 g	50 mL	84
IDA001:DU-E4:S000010	20111251-41A	11/11/20	11/13/20	0.694 g	50 mL	88
IDA001:DU-A5:S000010	20111251-43A	11/11/20	11/13/20	0.671 g	50 mL	84
Matrix Spike	20111251-43AMS	NA	NA	0.694 g	50 mL	0
Duplicate Matrix Spike	20111251-43AMSD	NA	NA	0.664 g	50 mL	0
LCS-168042	LCS-168042	NA	NA	1 g	50 mL	0
MBLK-168042	MBLK-168042	NA	NA	1 g	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168037
Analytical Method: SW6010D **Extraction Date:** 11/19/20 13:58

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-E4:S000010	20111251-42A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
Matrix Spike	20111251-42AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111251-42AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-A5:S000010	20111251-44A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
LCS-168037	LCS-168037	NA	NA	25 mL	27.5 mL	0
MBLK-168037	MBLK-168037	NA	NA	25 mL	27.5 mL	0

General Chemistry

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	WBLKS	**Basis:**	Wet
Lab Code:	WBLKS		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/18/20 14:54	NA	
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/18/20 13:32	NA	

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/18/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111251-27A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-E3:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111251-27A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	11.73	11.71	0.171	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/18/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111251-43A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-A5:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111251-43A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	15.52	15.54	0.129	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/18/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111353-01A DUP	**Units:**	% of sample
Lab Code:	BatchQC	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111353-01A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	0.01	0.10 U	0	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/18/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111582-16A DUP	**Units:**	% of sample
Lab Code:	BatchQC	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111582-16A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	7.8	7.61	2.47	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/18/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201118B

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	100	100	100	98-102

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/18/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201118C

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	99.99	100	100.0	98-102

Raw Data

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Metals

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Dry
Lab Code:	20111251-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	3.8	10	11/20/20 19:08	11/19/20 15:33	
Lead	SW6010D	**300**	mg/Kg-dry	3.8	10	11/20/20 19:08	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:06	11/19/20 13:52	
Lead	SW6010D	**0.61**	mg/L	0.050	1	11/19/20 22:06	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Dry
Lab Code:	20111251-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.3**	mg/Kg-dry	3.8	10	11/20/20 19:13	11/19/20 15:33	
Lead	SW6010D	**680**	mg/Kg-dry	3.8	10	11/20/20 19:13	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.022 J**	mg/L	0.050	1	11/19/20 22:12	11/19/20 13:52	
Lead	SW6010D	**1.1**	mg/L	0.050	1	11/19/20 22:12	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Dry
Lab Code:	20111251-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**12**	mg/Kg-dry	4.2	10	11/20/20 19:18	11/19/20 15:33	
Lead	SW6010D	**900**	mg/Kg-dry	4.2	10	11/20/20 19:18	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:17	11/19/20 13:52	
Lead	SW6010D	**4.2**	mg/L	0.050	1	11/19/20 22:17	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Dry
Lab Code:	20111251-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	4.7	10	11/20/20 19:23	11/19/20 15:33	
Lead	SW6010D	**500**	mg/Kg-dry	4.7	10	11/20/20 19:23	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:22	11/19/20 13:52	
Lead	SW6010D	**0.40**	mg/L	0.050	1	11/19/20 22:22	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	3.8	10	11/20/20 19:43	11/19/20 15:33	
Lead	SW6010D	**520**	mg/Kg-dry	3.8	10	11/20/20 19:43	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.5	10	11/20/20 19:48	11/19/20 15:33	
Lead	SW6010D	**570**	mg/Kg-dry	3.5	10	11/20/20 19:48	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Dry
Lab Code:	20111251-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**7.3**	mg/Kg-dry	3.9	10	11/20/20 19:53	11/19/20 15:33	
Lead	SW6010D	**250**	mg/Kg-dry	3.9	10	11/20/20 19:53	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:27	11/19/20 13:52	
Lead	SW6010D	**0.88**	mg/L	0.050	1	11/19/20 22:27	11/19/20 13:52	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Dry
Lab Code:	20111251-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	4.1	10	11/20/20 19:58	11/19/20 15:33	
Lead	SW6010D	**1,700**	mg/Kg-dry	4.1	10	11/20/20 19:58	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:32	11/19/20 13:52	
Lead	SW6010D	**6.6**	mg/L	0.050	1	11/19/20 22:32	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Dry
Lab Code:	20111251-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.7	10	11/20/20 20:03	11/19/20 15:33	
Lead	SW6010D	**950**	mg/Kg-dry	3.7	10	11/20/20 20:03	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:52	11/19/20 13:52	
Lead	SW6010D	**3.8**	mg/L	0.050	1	11/19/20 22:52	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Dry
Lab Code:	20111251-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**30**	mg/Kg-dry	4.0	10	11/20/20 20:08	11/19/20 15:33	
Lead	SW6010D	**12,000**	mg/Kg-dry	40	100	11/21/20 19:27	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:58	11/19/20 13:52	
Lead	SW6010D	**11**	mg/L	0.050	1	11/19/20 22:58	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Dry
Lab Code:	20111251-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	3.8	10	11/20/20 20:13	11/19/20 15:33	
Lead	SW6010D	**410**	mg/Kg-dry	3.8	10	11/20/20 20:13	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.017 J**	mg/L	0.050	1	11/19/20 23:03	11/19/20 13:52	
Lead	SW6010D	**0.45**	mg/L	0.050	1	11/19/20 23:03	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Dry
Lab Code:	20111251-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.7	10	11/20/20 20:18	11/19/20 15:33	
Lead	SW6010D	**1,200**	mg/Kg-dry	3.7	10	11/20/20 20:18	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:08	11/19/20 13:52	
Lead	SW6010D	**17**	mg/L	0.050	1	11/19/20 23:08	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Dry
Lab Code:	20111251-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**14**	mg/Kg-dry	4.0	10	11/20/20 20:23	11/19/20 15:33	
Lead	SW6010D	**720**	mg/Kg-dry	4.0	10	11/20/20 20:23	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:13	11/19/20 13:52	
Lead	SW6010D	**11**	mg/L	0.050	1	11/19/20 23:13	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Dry
Lab Code:	20111251-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**52**	mg/Kg-dry	4.5	10	11/20/20 20:28	11/19/20 15:33	
Lead	SW6010D	**2,900**	mg/Kg-dry	4.5	10	11/20/20 20:28	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-26		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:18	11/19/20 13:52	
Lead	SW6010D	**1.4**	mg/L	0.050	1	11/19/20 23:18	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Dry
Lab Code:	20111251-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	4.0	10	11/20/20 20:48	11/19/20 15:33	
Lead	SW6010D	**5,400**	mg/Kg-dry	40	100	11/21/20 19:32	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-28		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:24	11/19/20 13:52	
Lead	SW6010D	**19**	mg/L	0.050	1	11/19/20 23:24	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**14**	mg/Kg-dry	3.6	10	11/20/20 20:53	11/19/20 15:33	
Lead	SW6010D	**1,200**	mg/Kg-dry	3.6	10	11/20/20 20:53	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**10**	mg/Kg-dry	4.3	10	11/20/20 20:58	11/19/20 15:33	
Lead	SW6010D	**1,500**	mg/Kg-dry	4.3	10	11/20/20 20:58	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Dry
Lab Code:	20111251-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**23**	mg/Kg-dry	3.7	10	11/20/20 21:03	11/19/20 15:33	
Lead	SW6010D	**560**	mg/Kg-dry	3.7	10	11/20/20 21:03	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-32		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.022 J**	mg/L	0.050	1	11/19/20 23:29	11/19/20 13:52	
Lead	SW6010D	**0.93**	mg/L	0.050	1	11/19/20 23:29	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Dry
Lab Code:	20111251-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**5.0**	mg/Kg-dry	3.7	10	11/20/20 21:08	11/19/20 15:33	
Lead	SW6010D	**1,600**	mg/Kg-dry	3.7	10	11/20/20 21:08	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-34		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:34	11/19/20 13:52	
Lead	SW6010D	**44**	mg/L	0.050	1	11/19/20 23:34	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**5.9**	mg/Kg-dry	4.0	10	11/20/20 21:13	11/19/20 15:33	
Lead	SW6010D	**1,500**	mg/Kg-dry	4.0	10	11/20/20 21:13	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.2**	mg/Kg-dry	4.1	10	11/20/20 21:53	11/19/20 15:33	
Lead	SW6010D	**660**	mg/Kg-dry	4.1	10	11/20/20 21:53	11/19/20 15:33	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Dry
Lab Code:	20111251-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**12**	mg/Kg-dry	4.1	10	11/20/20 21:58	11/19/20 15:33	
Lead	SW6010D	**3,300**	mg/Kg-dry	4.1	10	11/20/20 21:58	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-38		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:39	11/19/20 13:52	
Lead	SW6010D	**7.2**	mg/L	0.50	10	11/20/20 18:52	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Dry
Lab Code:	20111251-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.1**	mg/Kg-dry	4.4	10	11/20/20 22:03	11/19/20 15:33	
Lead	SW6010D	**2,100**	mg/Kg-dry	4.4	10	11/20/20 22:03	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-40		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:59	11/19/20 13:52	
Lead	SW6010D	**9.6**	mg/L	0.050	1	11/19/20 23:59	11/19/20 13:52	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Dry
Lab Code:	20111251-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**22**	mg/Kg-dry	4.1	10	11/20/20 22:08	11/19/20 15:33	
Lead	SW6010D	**5,700**	mg/Kg-dry	41	100	11/21/20 19:37	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-42		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 18:36	11/19/20 13:58	
Lead	SW6010D	**64**	mg/L	0.50	10	11/20/20 16:29	11/19/20 13:58	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Dry
Lab Code:	20111251-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**69**	mg/Kg-dry	4.4	10	11/20/20 22:14	11/19/20 15:33	
Lead	SW6010D	**1,200**	mg/Kg-dry	4.4	10	11/20/20 22:14	11/19/20 15:33	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/17/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-44		

Metals

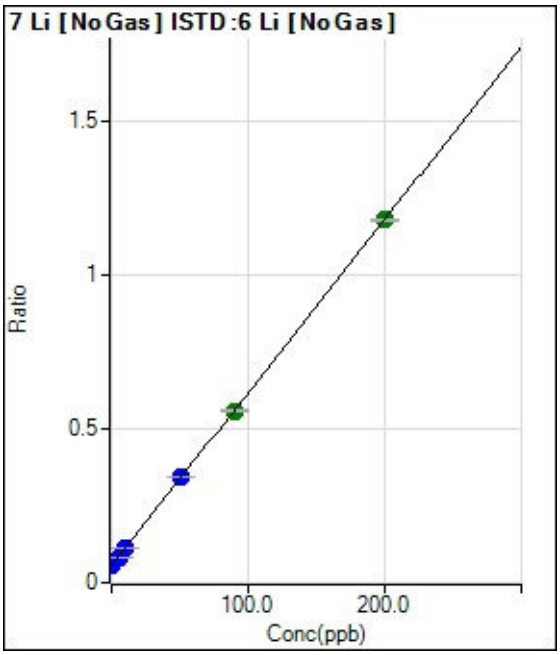
Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.052**	mg/L	0.050	1	11/19/20 18:51	11/19/20 13:58	
Lead	SW6010D	**0.58**	mg/L	0.050	1	11/19/20 18:51	11/19/20 13:58	

Calibration for 016_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b\
Analysis File: ICPMS3_201117.batch.bin
DA Date-Time: 2020-11-17 12:23:54
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	007CALB.d	std 1	2020-11-17 12:06:04
2	008CALS.d	std 2	2020-11-17 12:08:11
3	009CALS.d	std 3	2020-11-17 12:10:04
4	010CALS.d	std 4	2020-11-17 12:11:57
5	011CALS.d	std 5	2020-11-17 12:13:50
6	012CALS.d	std 6	2020-11-17 12:15:43
7	013CALS.d	std 7	2020-11-17 12:17:35
8	014CALS.d	std 8	2020-11-17 12:19:27

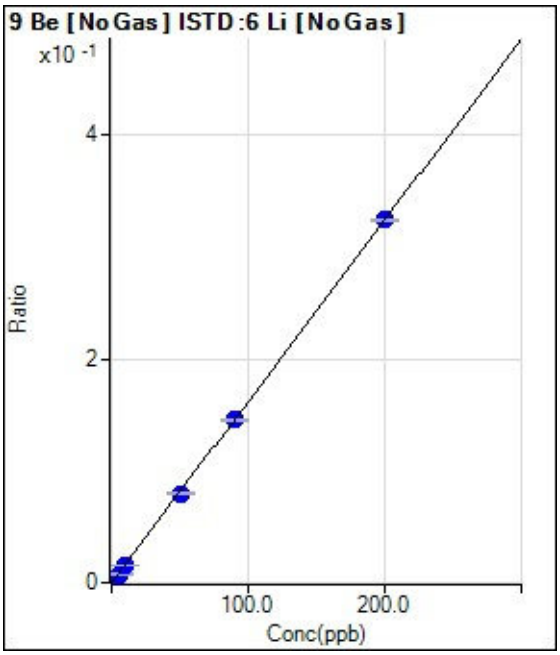
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	104748.26	0.0554	P	2.2
2	☐	0.200	0.102	106105.09	0.0559	P	0.8
3	☐	2.000	2.009	126417.77	0.0667	P	0.4
4	☐	5.000	4.880	154983.29	0.0828	P	1.3
5	☐	10.000	9.730	203569.08	0.1101	P	0.9
6	☐	50.000	50.941	619071.86	0.3421	P	0.1
7	☐	90.000	89.658	995673.91	0.5600	A	1.0
8	☐	200.000	199.935	2037375.71	1.1807	A	0.4

y = 0.0056 * x + 0.0554
R = 1.0000
DL = 0.6384
BEC = 9.837

Weight: <None>
Min Conc: <None>

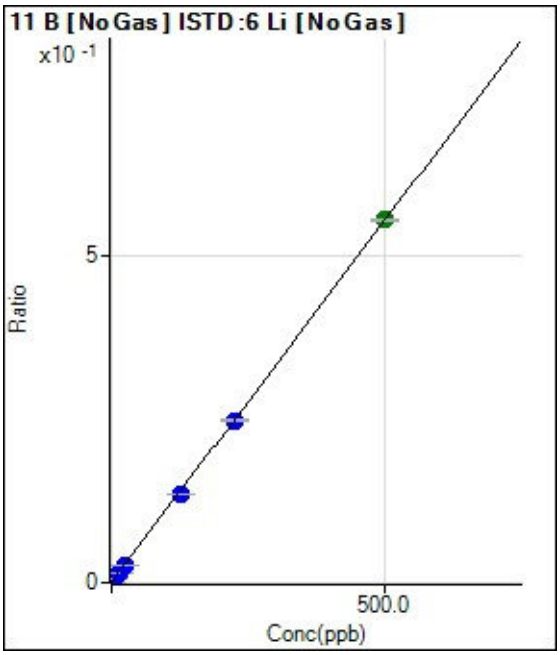


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.34	0.0000	P	173.2
2	☐	0.200	0.208	640.67	0.0003	P	19.1
3	☐	2.000	1.842	5650.22	0.0030	P	4.3
4	☐	5.000	4.769	14432.02	0.0077	P	4.6
5	☐	10.000	9.527	28480.83	0.0154	P	1.1
6	☐	50.000	49.334	144365.23	0.0798	P	1.5
7	☐	90.000	89.736	258002.92	0.1451	P	0.6
8	☐	200.000	200.316	558949.76	0.3239	P	0.7

y = 0.0016 * x + 1.7539E-006
R = 1.0000
DL = 0.005636
BEC = 0.001085

Weight: <None>
Min Conc: <None>

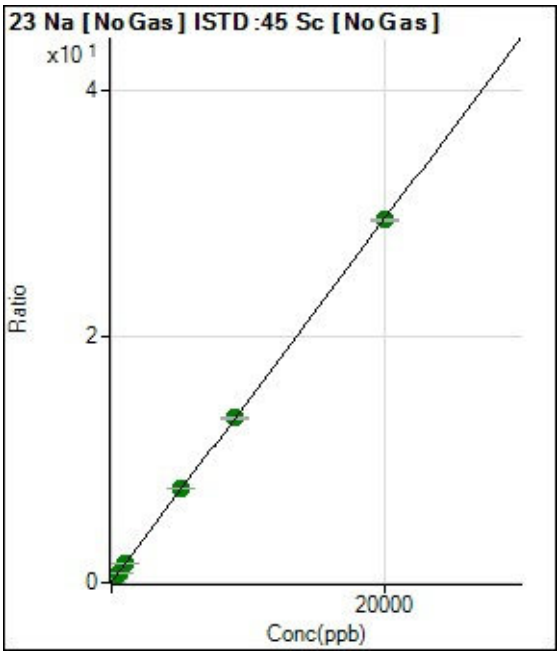
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1541.65	0.0008	P	1.7
2	☐	0.500	0.410	2402.66	0.0013	P	4.3
3	☐	5.000	4.518	10985.44	0.0058	P	3.9
4	☐	12.500	11.391	25014.14	0.0134	P	0.3
5	☐	25.000	23.177	48723.08	0.0264	P	1.9
6	☐	125.000	121.743	244296.02	0.1350	P	0.1
7	☐	225.000	224.124	440648.40	0.2478	P	1.2
8	☐	500.000	501.332	954860.07	0.5534	A	0.5

y = 0.0011 * x + 8.1489E-004
R = 1.0000
DL = 0.03756
BEC = 0.7393

Weight: <None>
Min Conc: <None>

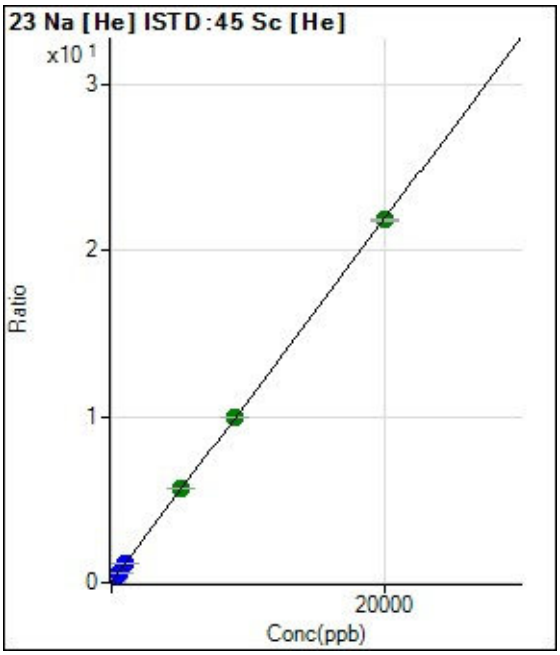


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	379053.15	0.0398	P	18.3
2	☐	20.000	18.287	636387.19	0.0668	P	1.1
3	☐	200.000	200.473	3220623.64	0.3353	A	2.0
4	☐	500.000	500.691	7433446.00	0.7777	A	0.5
5	☐	1000.000	999.901	14290187.30	1.5135	A	1.5
6	☐	5000.000	5137.777	70637970.33	7.6119	A	0.9
7	☐	9000.000	9031.503	123535952.76	13.3505	A	0.7
8	☐	20000.000	19951.364	270256789.37	29.4443	A	0.7

y = 0.0015 * x + 0.0398
R = 1.0000
DL = 14.82
BEC = 27.01

Weight: <None>
Min Conc: <None>

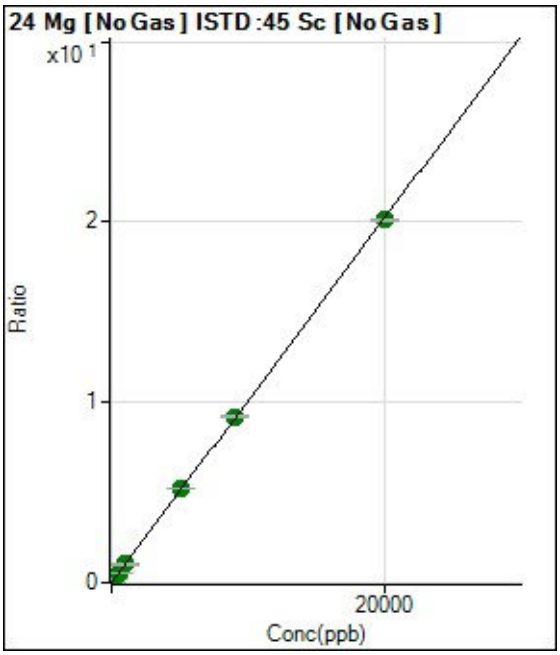
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13100.43	0.0406	P	3.2
2	☐	20.000	24.761	21671.71	0.0677	P	2.7
3	☐	200.000	208.141	85237.38	0.2682	P	2.9
4	☐	500.000	505.090	187119.13	0.5929	P	1.0
5	☐	1000.000	1006.264	355530.20	1.1409	P	1.3
6	☐	5000.000	5121.526	1731704.92	5.6409	A	0.2
7	☐	9000.000	9070.019	3061164.85	9.9584	A	0.7
8	☐	20000.000	19937.583	6597799.28	21.8418	A	0.2

y = 0.0011 * x + 0.0406
R = 1.0000
DL = 3.583
BEC = 37.13

Weight: <None>
Min Conc: <None>

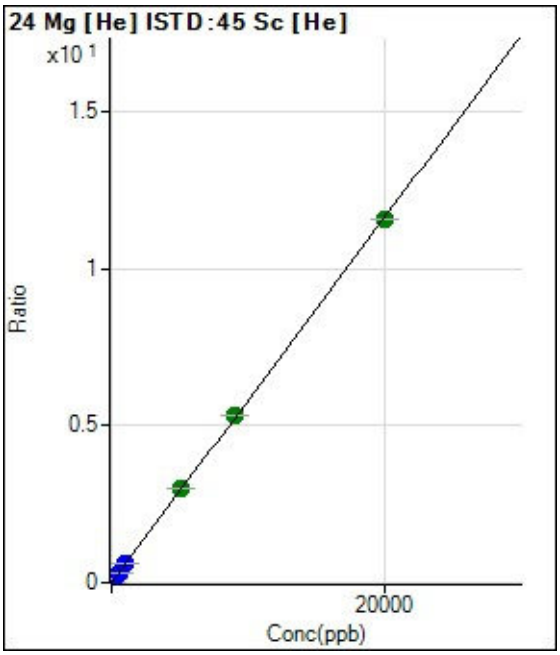


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3827.45	0.0004	P	7.1
2	☐	20.000	20.976	205848.41	0.0216	P	2.1
3	☐	200.000	205.706	2000202.21	0.2082	A	1.6
4	☐	500.000	506.146	4890963.05	0.5117	A	0.7
5	☐	1000.000	1002.640	9567529.86	1.0133	A	0.9
6	☐	5000.000	5151.567	48298974.28	5.2047	A	0.1
7	☐	9000.000	9121.301	85268852.06	9.2150	A	0.7
8	☐	20000.000	19907.179	184587843.92	20.1112	A	0.3

y = 0.0010 * x + 4.0176E-004
R = 0.9999
DL = 0.08427
BEC = 0.3977

Weight: <None>
Min Conc: <None>

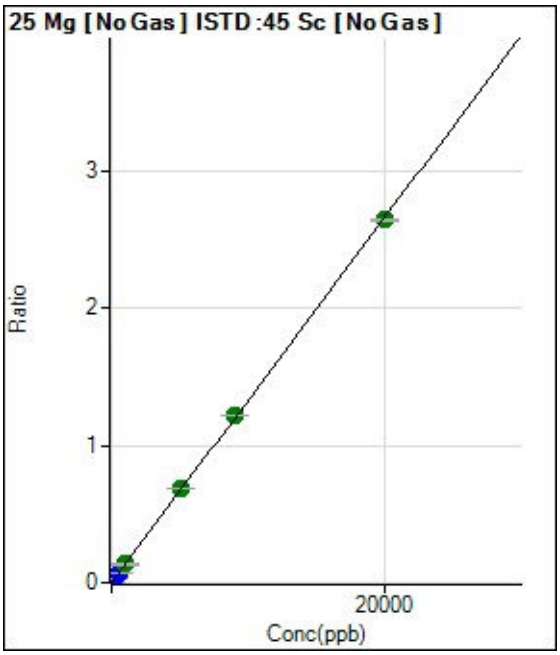
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.35	0.0004	P	46.2
2	☐	20.000	18.505	3574.06	0.0112	P	7.4
3	☐	200.000	202.036	37425.88	0.1177	P	2.0
4	☐	500.000	509.339	93489.62	0.2962	P	0.9
5	☐	1000.000	1016.837	184150.32	0.5909	P	1.6
6	☐	5000.000	5162.405	920470.43	2.9984	A	0.4
7	☐	9000.000	9181.009	1639075.34	5.3321	A	0.7
8	☐	20000.000	19876.851	3486970.68	11.5435	A	0.1

y = 5.8073E-004 * x + 4.1373E-004
R = 0.9999
DL = 0.9867
BEC = 0.7124

Weight: <None>
Min Conc: <None>

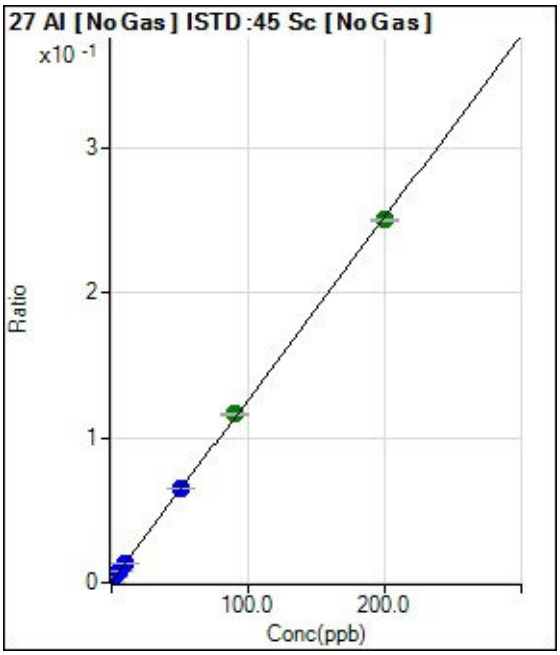


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.05	0.0001	P	7.3
2	☐	20.000	20.830	26974.56	0.0028	P	2.1
3	☐	200.000	204.982	262502.01	0.0273	P	0.3
4	☐	500.000	510.663	649767.41	0.0680	P	0.6
5	☐	1000.000	1004.380	1261925.14	0.1337	A	1.1
6	☐	5000.000	5151.923	6359564.07	0.6853	A	0.9
7	☐	9000.000	9177.280	11295975.66	1.2207	A	0.5
8	☐	20000.000	19881.707	24272639.64	2.6445	A	0.3

y = 1.3301E-004 * x + 5.8790E-005
R = 0.9999
DL = 0.09686
BEC = 0.442

Weight: <None>
Min Conc: <None>

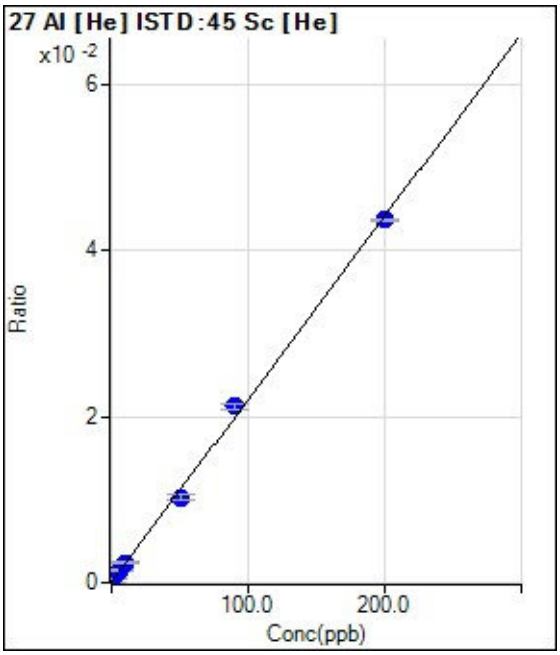
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5748.91	0.0006	P	10.4
2	☐			66724.72	0.0070	P	3.8
3	☐	2.000	2.848	40194.05	0.0042	P	5.1
4	☐	5.000	5.714	74444.15	0.0078	P	0.6
5	☐	10.000	10.473	130037.62	0.0138	P	1.5
6	☐	50.000	51.085	601687.69	0.0648	P	0.9
7	☐	90.000	92.305	1079667.33	0.1167	A	1.1
8	☐	200.000	198.641	2298077.31	0.2504	A	0.6

y = 0.0013 * x + 6.0332E-004
R = 0.9999
DL = 0.1497
BEC = 0.4798

Weight: <None>
Min Conc: <None>

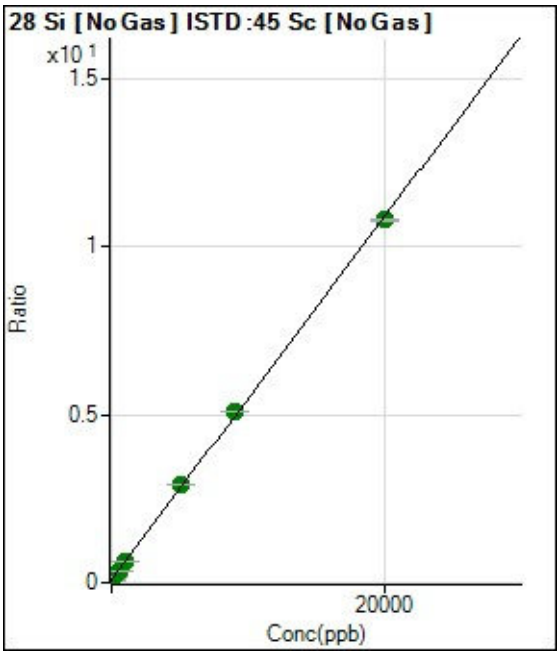


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0001	P	86.6
2	☐			430.01	0.0013	P	24.1
3	☐	2.000	2.774	213.34	0.0007	P	54.1
4	☐	5.000	6.388	463.35	0.0015	P	7.9
5	☐	10.000	10.495	740.03	0.0024	P	7.6
6	☐	50.000	46.120	3137.07	0.0102	P	7.0
7	☐	90.000	96.031	6521.64	0.0212	P	2.4
8	☐	200.000	198.189	13206.40	0.0437	P	0.7

y = 2.2029E-004 * x + 6.2064E-005
R = 0.9991
DL = 0.732
BEC = 0.2817

Weight: <None>
Min Conc: <None>

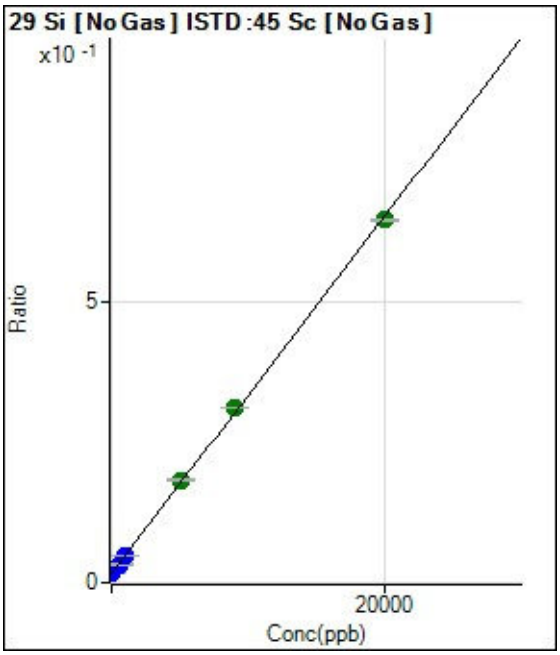
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	809423.62	0.0850	A	1.0
2	☐	20.000	20.570	916037.13	0.0961	A	0.5
3	☐	200.000	203.062	1871205.85	0.1948	A	0.6
4	☐	500.000	509.016	3443051.18	0.3602	A	0.3
5	☐	1000.000	1011.437	5966735.08	0.6319	A	0.6
6	☐	5000.000	5208.443	26926789.34	2.9016	A	0.5
7	☐	9000.000	9269.128	47169859.96	5.0976	A	0.4
8	☐	20000.000	19825.953	99185856.06	10.8066	A	0.5

y = 5.4079E-004 * x + 0.0850
R = 0.9998
DL = 4.621
BEC = 157.1

Weight: <None>
Min Conc: <None>

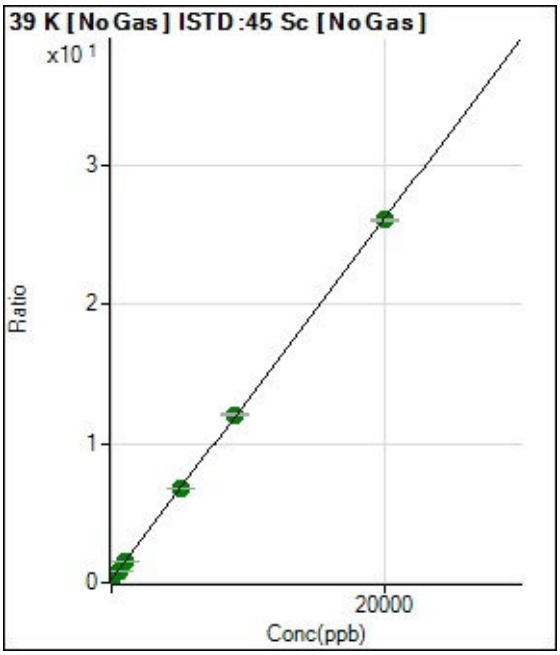


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155056.15	0.0163	P	0.9
2	☐	20.000	16.040	160017.52	0.0168	P	0.7
3	☐	200.000	199.810	217287.17	0.0226	P	1.5
4	☐	500.000	508.376	309804.38	0.0324	P	1.3
5	☐	1000.000	1010.370	456516.74	0.0483	P	0.5
6	☐	5000.000	5238.844	1694326.10	0.1826	A	0.5
7	☐	9000.000	9274.958	2875065.80	0.3107	A	0.5
8	☐	20000.000	19815.836	5922983.41	0.6453	A	0.4

y = 3.1745E-005 * x + 0.0163
R = 0.9998
DL = 13.14
BEC = 512.7

Weight: <None>
Min Conc: <None>

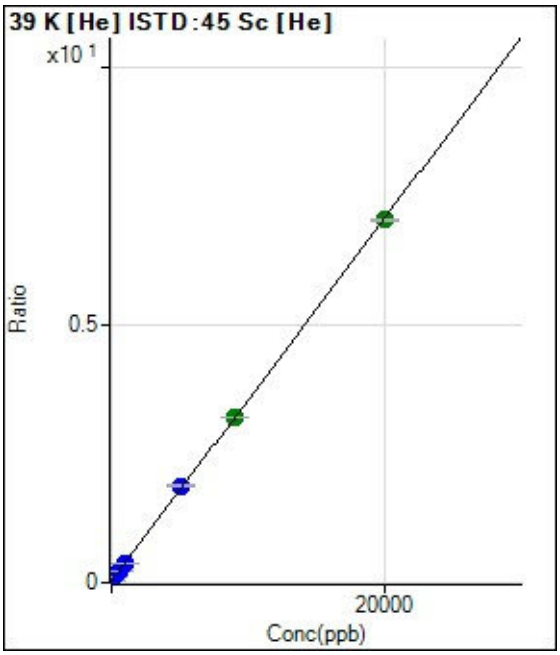
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2244400.12	0.2356	A	0.8
2	☐	20.000	22.683	2526077.88	0.2650	A	0.4
3	☐	200.000	201.394	4769574.09	0.4965	A	0.7
4	☐	500.000	500.024	8442668.00	0.8833	A	0.2
5	☐	1000.000	997.230	14421722.29	1.5274	A	0.6
6	☐	5000.000	5054.386	62946539.06	6.7831	A	0.2
7	☐	9000.000	9103.479	111299261.67	12.0283	A	1.0
8	☐	20000.000	19939.959	239240476.43	26.0659	A	0.9

y = 0.0013 * x + 0.2356
R = 1.0000
DL = 4.175
BEC = 181.9

Weight: <None>
Min Conc: <None>

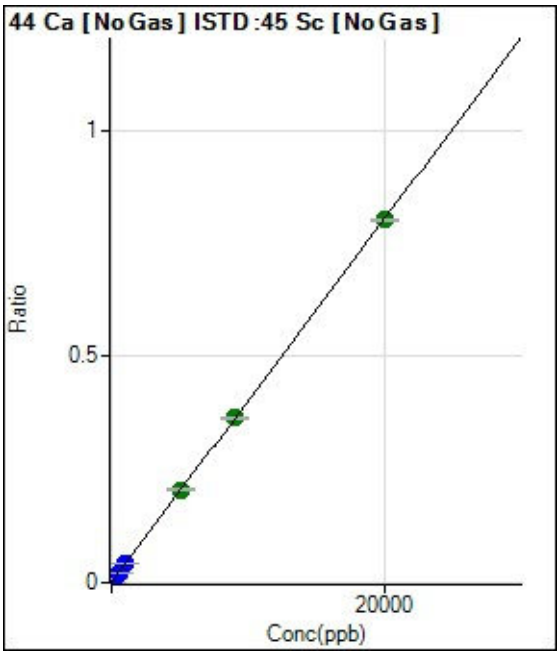


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9964.18	0.0309	P	2.1
2	☐	20.000	12.141	11258.65	0.0352	P	5.2
3	☐	200.000	229.163	35431.78	0.1115	P	8.8
4	☐	500.000	517.765	67207.68	0.2130	P	4.5
5	☐	1000.000	1012.880	120648.68	0.3871	P	1.5
6	☐	5000.000	5263.070	577749.55	1.8820	P	1.0
7	☐	9000.000	9013.347	984007.80	3.2011	A	0.4
8	☐	20000.000	19926.855	2126492.31	7.0397	A	0.3

y = 3.5173E-004 * x + 0.0309
R = 0.9999
DL = 5.578
BEC = 87.8

Weight: <None>
Min Conc: <None>

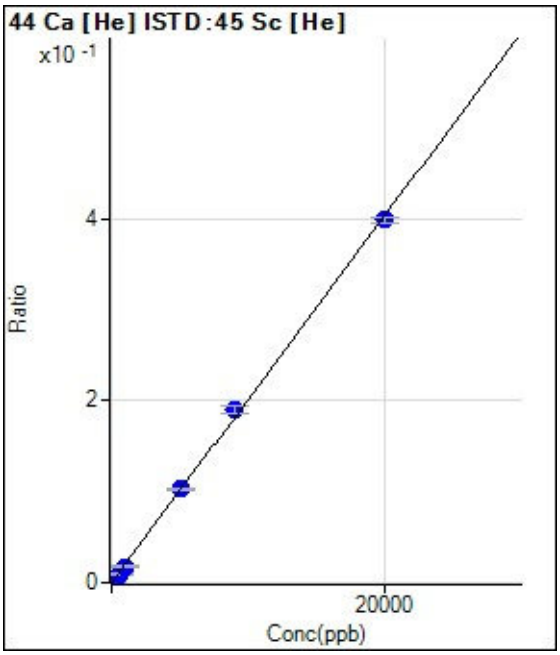
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8109.60	0.0009	P	5.8
2	☐	20.000	22.880	16878.46	0.0018	P	8.9
3	☐	200.000	201.642	86005.65	0.0090	P	0.7
4	☐	500.000	501.205	200589.14	0.0210	P	2.0
5	☐	1000.000	993.537	384920.98	0.0408	P	1.4
6	☐	5000.000	5101.387	1909779.14	0.2058	A	0.6
7	☐	9000.000	9060.006	3375857.24	0.3648	A	1.0
8	☐	20000.000	19947.924	7363190.52	0.8022	A	0.4

y = 4.0174E-005 * x + 8.5123E-004
R = 1.0000
DL = 3.66
BEC = 21.19

Weight: <None>
Min Conc: <None>

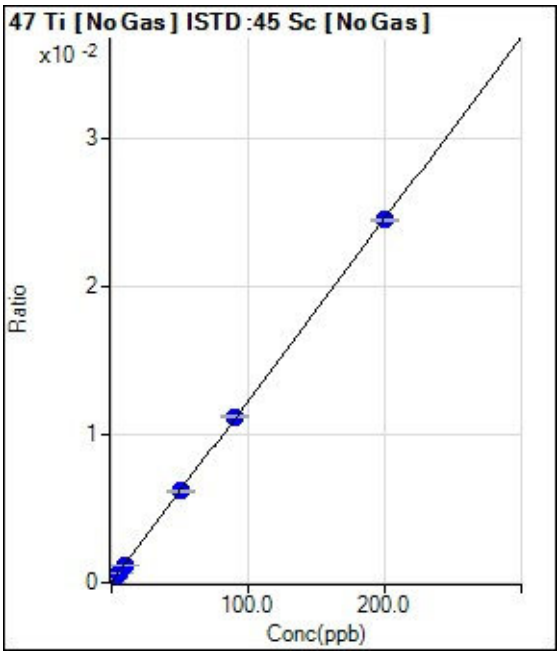


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	173.2
2	☐	20.000	16.572	133.34	0.0004	P	75.2
3	☐	200.000	242.053	1573.55	0.0050	P	11.4
4	☐	500.000	451.745	2893.87	0.0092	P	8.9
5	☐	1000.000	869.779	5481.47	0.0176	P	8.2
6	☐	5000.000	5099.880	31531.38	0.1027	P	1.9
7	☐	9000.000	9435.291	58394.47	0.1900	P	3.4
8	☐	20000.000	19786.449	120317.81	0.3983	P	1.8

y = 2.0125E-005 * x + 8.2470E-005
R = 0.9996
DL = 21.29
BEC = 4.098

Weight: <None>
Min Conc: <None>

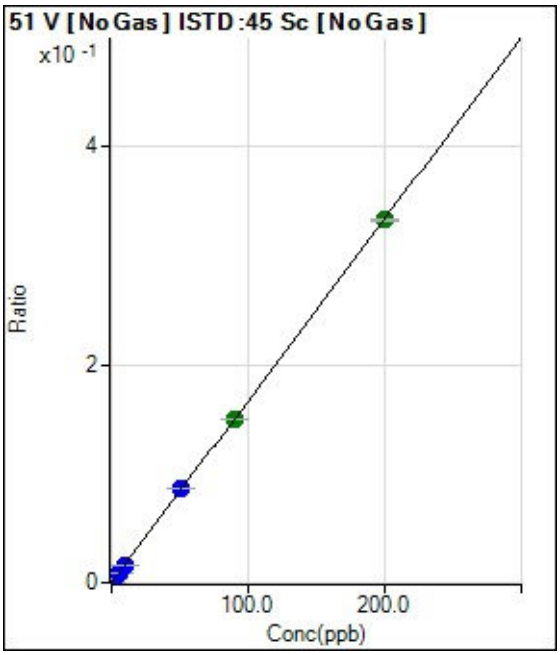
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.18	0.0000	P	15.0
2	☐	0.200	0.233	453.80	0.0000	P	15.1
3	☐	2.000	1.867	2385.97	0.0002	P	3.8
4	☐	5.000	4.911	5947.34	0.0006	P	1.9
5	☐	10.000	9.640	11359.56	0.0012	P	5.1
6	☐	50.000	50.203	57413.80	0.0062	P	1.2
7	☐	90.000	91.024	103654.40	0.0112	P	0.9
8	☐	200.000	199.510	225148.98	0.0245	P	0.4

y = 1.2286E-004 * x + 1.8919E-005
R = 1.0000
DL = 0.06929
BEC = 0.154

Weight: <None>
Min Conc: <None>

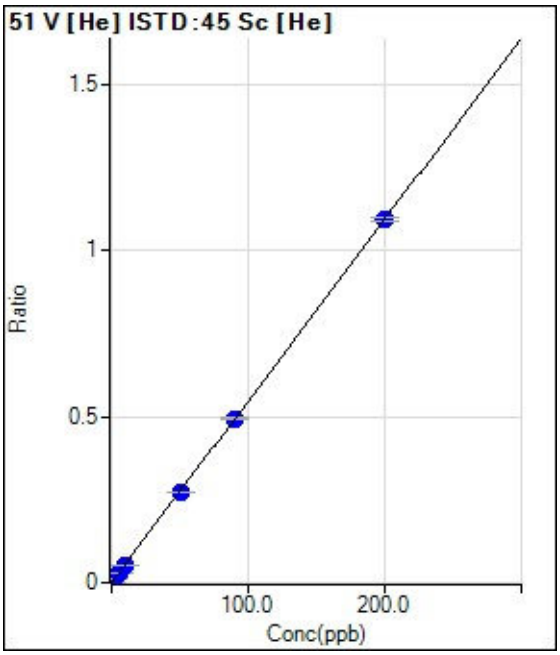


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1359.62	0.0001	P	35.0
2	☐	0.200	0.050	2160.21	0.0002	P	46.5
3	☐	2.000	1.944	32522.71	0.0034	P	1.8
4	☐	5.000	4.938	80094.86	0.0084	P	0.7
5	☐	10.000	9.753	154961.88	0.0164	P	3.0
6	☐	50.000	51.609	800282.89	0.0862	P	0.4
7	☐	90.000	90.022	1390957.78	0.1503	A	0.4
8	☐	200.000	199.602	3057465.04	0.3331	A	0.6

y = 0.0017 * x + 1.4260E-004
R = 1.0000
DL = 0.08965
BEC = 0.08548

Weight: <None>
Min Conc: <None>

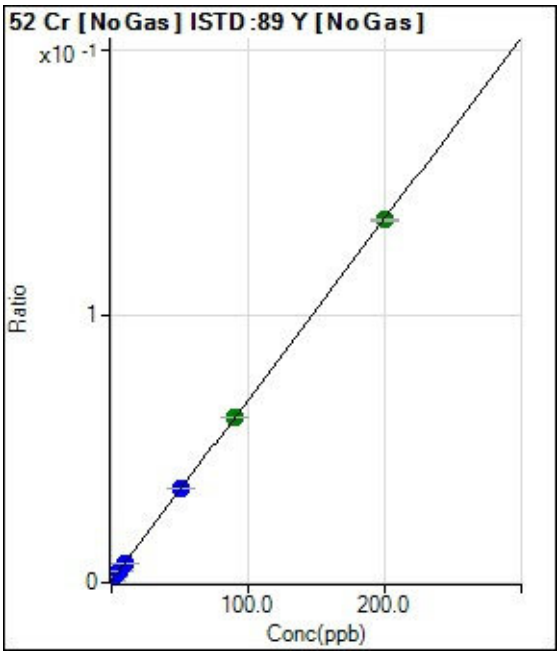
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.14	0.0004	P	14.0
2	☐	0.200	0.213	510.53	0.0016	P	12.7
3	☐	2.000	1.932	3490.67	0.0110	P	9.5
4	☐	5.000	5.005	8755.01	0.0277	P	3.2
5	☐	10.000	9.543	16359.75	0.0525	P	2.9
6	☐	50.000	49.661	83311.22	0.2714	P	0.9
7	☐	90.000	90.451	151832.60	0.4939	P	0.7
8	☐	200.000	199.905	329598.88	1.0911	P	1.0

y = 0.0055 * x + 4.3425E-004
R = 1.0000
DL = 0.03341
BEC = 0.07959

Weight: <None>
Min Conc: <None>

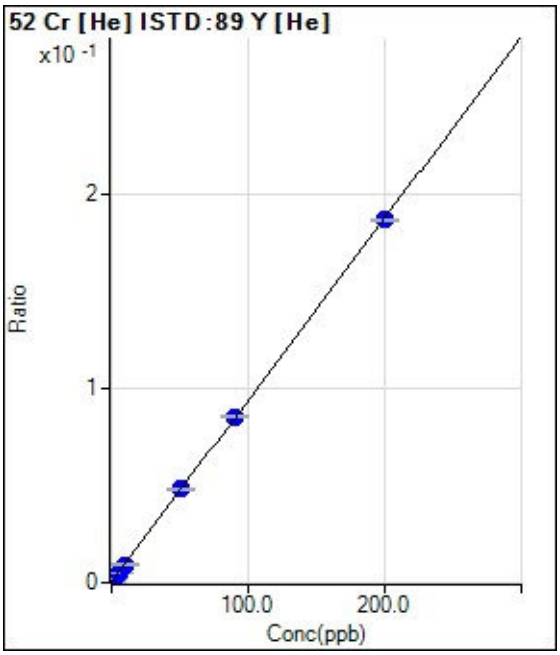


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13820.98	0.0007	P	2.6
2	☐	0.200	0.225	17034.52	0.0008	P	2.5
3	☐	2.000	2.081	43281.84	0.0021	P	1.2
4	☐	5.000	5.071	85530.48	0.0041	P	1.2
5	☐	10.000	10.067	154138.53	0.0075	P	1.6
6	☐	50.000	51.456	723656.42	0.0356	P	0.2
7	☐	90.000	90.459	1251537.43	0.0621	A	0.3
8	☐	200.000	199.424	2714817.22	0.1362	A	0.6

y = 6.7969E-004 * x + 6.6513E-004
R = 1.0000
DL = 0.0756
BEC = 0.9786

Weight: <None>
Min Conc: <None>

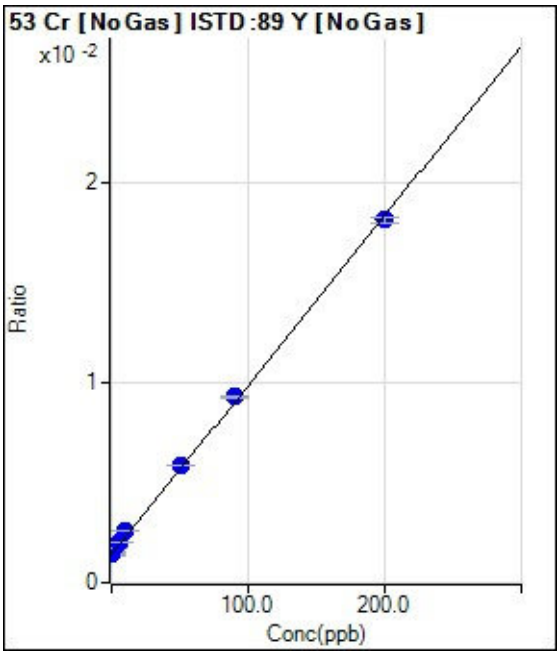
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1007.73	0.0004	P	6.1
2	☐	0.200	0.230	1508.28	0.0006	P	3.1
3	☐	2.000	1.880	5092.80	0.0022	P	4.2
4	☐	5.000	4.873	11536.59	0.0050	P	7.3
5	☐	10.000	9.564	21358.33	0.0094	P	2.2
6	☐	50.000	51.277	107687.64	0.0485	P	1.8
7	☐	90.000	91.052	189374.98	0.0858	P	0.3
8	☐	200.000	199.234	406620.45	0.1871	P	0.8

y = 9.3711E-004 * x + 4.3101E-004
R = 1.0000
DL = 0.08408
BEC = 0.4599

Weight: <None>
Min Conc: <None>

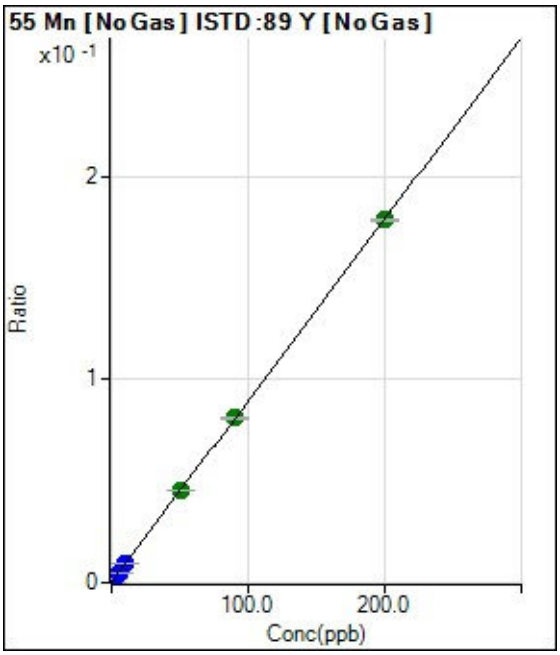


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29070.20	0.0014	P	0.4
2	☐	0.200	1.899	32487.88	0.0016	P	0.9
3	☐	2.000	3.740	35729.08	0.0017	P	0.8
4	☐	5.000	7.396	42160.64	0.0020	P	0.5
5	☐	10.000	13.956	53048.93	0.0026	P	2.2
6	☐	50.000	52.881	119570.55	0.0059	P	0.4
7	☐	90.000	93.157	187450.30	0.0093	P	0.7
8	☐	200.000	197.582	362223.45	0.0182	P	1.7

y = 8.4903E-005 * x + 0.0014
R = 0.9997
DL = 0.1808
BEC = 16.48

Weight: <None>
Min Conc: <None>

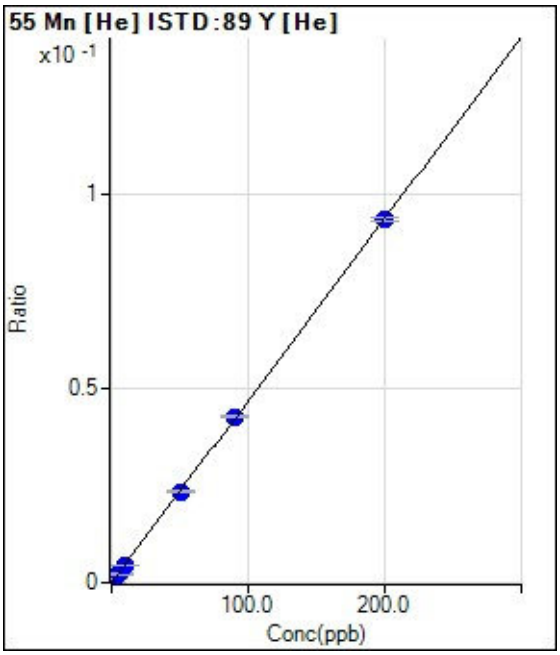
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5459.96	0.0003	P	2.4
2	☐	0.200	0.207	9325.98	0.0004	P	3.8
3	☐	2.000	2.093	44359.66	0.0021	P	1.8
4	☐	5.000	5.022	98695.50	0.0047	P	2.0
5	☐	10.000	10.025	189107.64	0.0092	P	1.2
6	☐	50.000	50.488	920405.85	0.0453	A	0.3
7	☐	90.000	90.405	1630341.28	0.0810	A	0.3
8	☐	200.000	199.693	3557865.17	0.1785	A	0.8

y = 8.9261E-004 * x + 2.6276E-004
R = 1.0000
DL = 0.02079
BEC = 0.2944

Weight: <None>
Min Conc: <None>

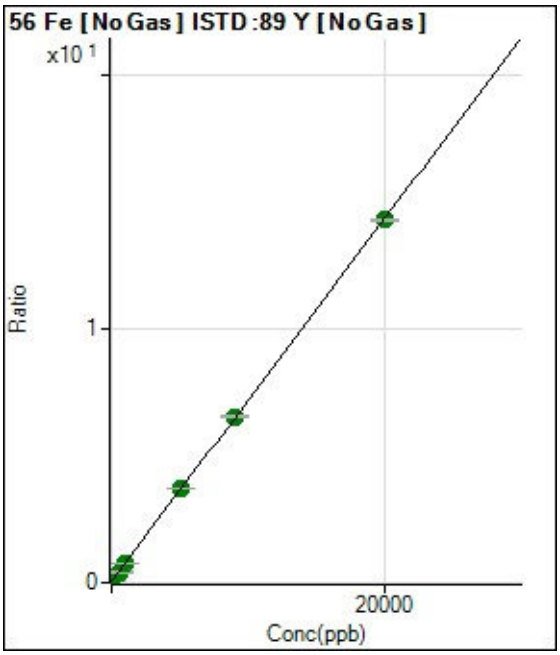


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.44	0.0000	P	11.1
2	☐	0.200	0.211	333.68	0.0001	P	10.1
3	☐	2.000	1.921	2192.41	0.0009	P	2.2
4	☐	5.000	4.757	5246.36	0.0023	P	8.6
5	☐	10.000	9.747	10477.97	0.0046	P	0.8
6	☐	50.000	49.839	51923.80	0.0234	P	2.6
7	☐	90.000	91.248	94448.39	0.0428	P	0.6
8	☐	200.000	199.498	203087.32	0.0935	P	1.1

y = 4.6823E-004 * x + 4.4232E-005
R = 1.0000
DL = 0.03146
BEC = 0.09446

Weight: <None>
Min Conc: <None>

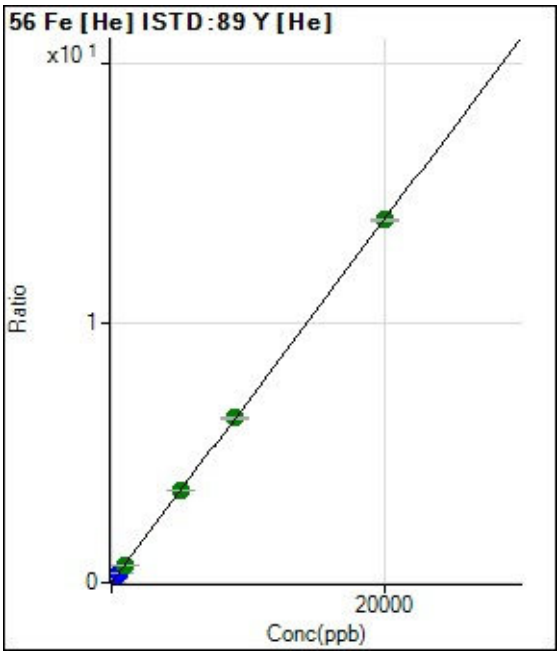
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1104216.82	0.0531	A	1.4
2	☐	20.000	19.376	1394814.78	0.0670	A	0.7
3	☐	200.000	200.299	4085670.79	0.1963	A	0.5
4	☐	500.000	505.401	8618245.24	0.4143	A	1.4
5	☐	1000.000	994.376	15681005.04	0.7638	A	0.3
6	☐	5000.000	5083.080	74841182.92	3.6858	A	0.3
7	☐	9000.000	9086.797	131844869.61	6.5471	A	1.0
8	☐	20000.000	19940.315	285092914.71	14.3037	A	0.2

y = 7.1466E-004 * x + 0.0531
R = 1.0000
DL = 3.184
BEC = 74.35

Weight: <None>
Min Conc: <None>

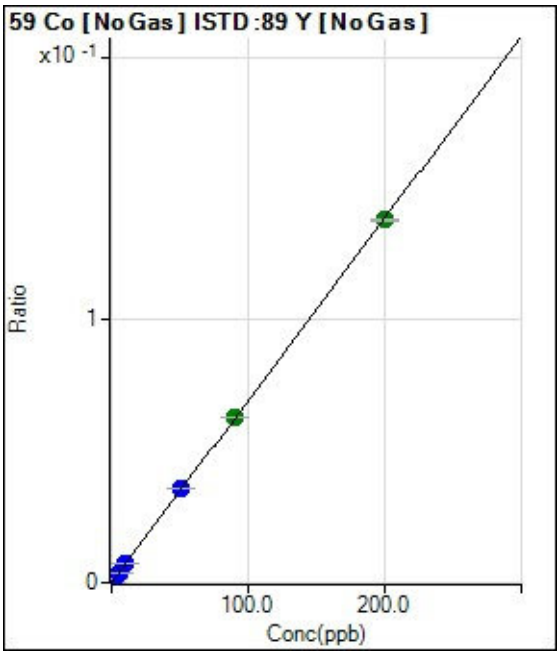


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14288.48	0.0061	P	6.0
2	☐	20.000	20.663	48007.40	0.0206	P	2.2
3	☐	200.000	210.676	356507.52	0.1535	P	0.7
4	☐	500.000	522.142	857540.69	0.3714	P	0.7
5	☐	1000.000	980.923	1574303.83	0.6924	A	0.3
6	☐	5000.000	5045.491	7853332.59	3.5359	A	1.0
7	☐	9000.000	9050.963	13996518.54	6.3382	A	0.2
8	☐	20000.000	19965.987	30364860.38	13.9743	A	0.6

y = 6.9960E-004 * x + 0.0061
R = 1.0000
DL = 1.585
BEC = 8.735

Weight: <None>
Min Conc: <None>

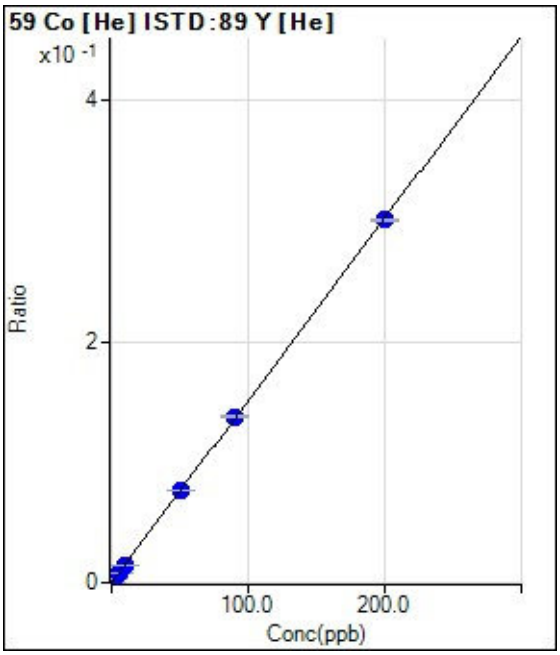
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.80	0.0000	P	9.0
2	☐	0.200	0.194	3253.71	0.0002	P	5.6
3	☐	2.000	2.061	30180.38	0.0014	P	0.9
4	☐	5.000	5.089	73803.06	0.0035	P	2.8
5	☐	10.000	10.068	143696.52	0.0070	P	0.3
6	☐	50.000	51.346	722969.30	0.0356	P	0.6
7	☐	90.000	90.882	1268779.64	0.0630	A	0.6
8	☐	200.000	199.260	2752747.96	0.1381	A	0.5

y = 6.9302E-004 * x + 2.1836E-005
R = 1.0000
DL = 0.008494
BEC = 0.03151

Weight: <None>
Min Conc: <None>

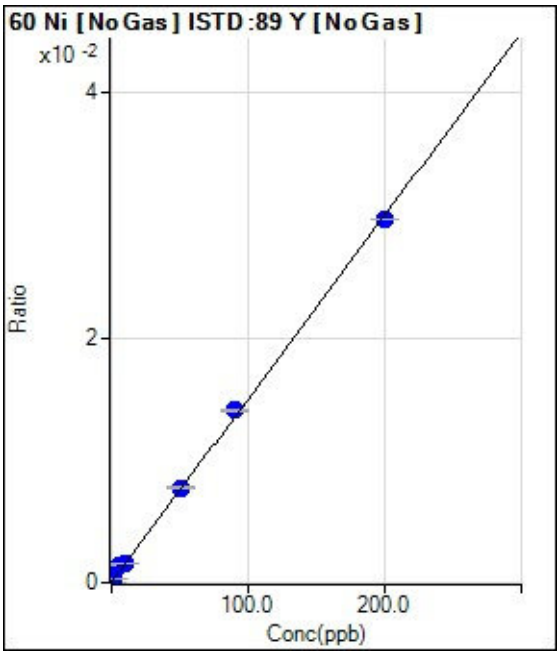


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0000	P	16.2
2	☐	0.200	0.172	704.07	0.0003	P	10.2
3	☐	2.000	2.007	7139.13	0.0031	P	3.2
4	☐	5.000	4.908	17221.57	0.0075	P	2.3
5	☐	10.000	9.677	33344.36	0.0147	P	1.1
6	☐	50.000	50.736	170385.12	0.0767	P	1.1
7	☐	90.000	91.262	304651.84	0.1380	P	0.7
8	☐	200.000	199.267	654436.26	0.3012	P	0.6

y = 0.0015 * x + 4.1397E-005
R = 1.0000
DL = 0.01328
BEC = 0.02739

Weight: <None>
Min Conc: <None>

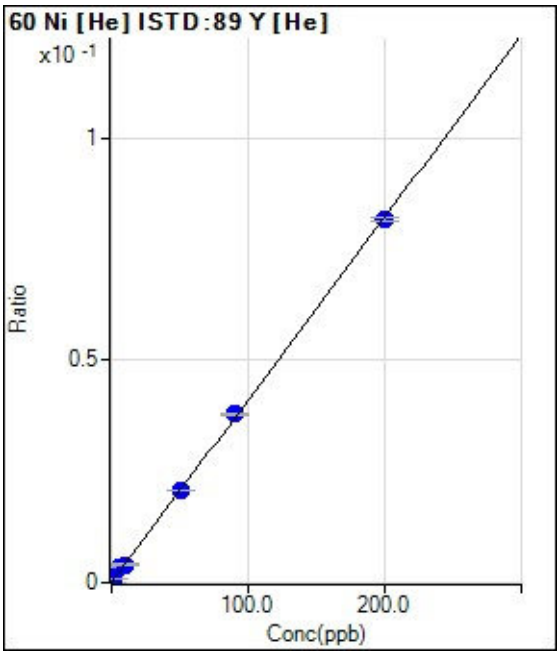
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	623.98	0.0000	P	5.7
2	☐	0.200	0.261	1438.21	0.0001	P	6.9
3	☐	2.000	2.022	6922.14	0.0003	P	2.5
4	☐	5.000	8.905	28338.07	0.0014	P	2.5
5	☐	10.000	10.154	31805.76	0.0015	P	1.0
6	☐	50.000	51.687	157618.63	0.0078	P	1.2
7	☐	90.000	93.861	283385.63	0.0141	P	1.2
8	☐	200.000	197.735	590214.51	0.0296	P	0.2

y = 1.4961E-004 * x + 3.0029E-005
R = 0.9996
DL = 0.03444
BEC = 0.2007

Weight: <None>
Min Conc: <None>

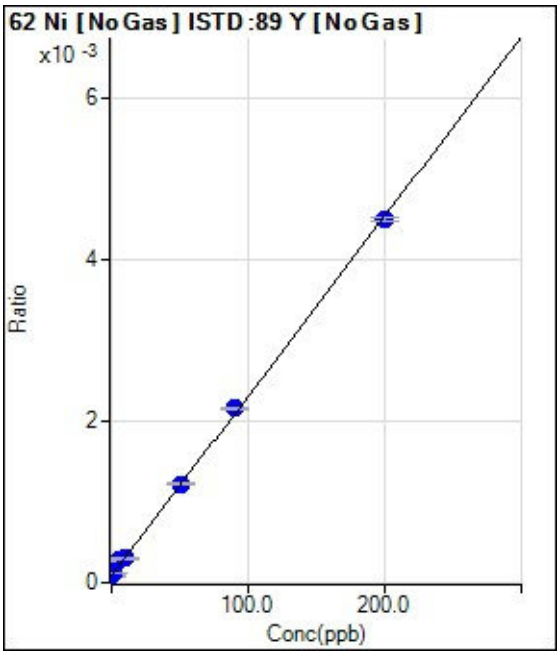


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.73	0.0000	P	37.9
2	☐	0.200	0.220	276.95	0.0001	P	15.1
3	☐	2.000	2.006	1978.83	0.0009	P	4.5
4	☐	5.000	8.551	8170.76	0.0035	P	4.4
5	☐	10.000	9.909	9312.60	0.0041	P	4.2
6	☐	50.000	50.364	45976.84	0.0207	P	1.6
7	☐	90.000	92.570	83967.48	0.0380	P	1.0
8	☐	200.000	198.668	177252.63	0.0816	P	0.9

y = 4.1045E-004 * x + 2.8543E-005
R = 0.9998
DL = 0.07904
BEC = 0.06954

Weight: <None>
Min Conc: <None>

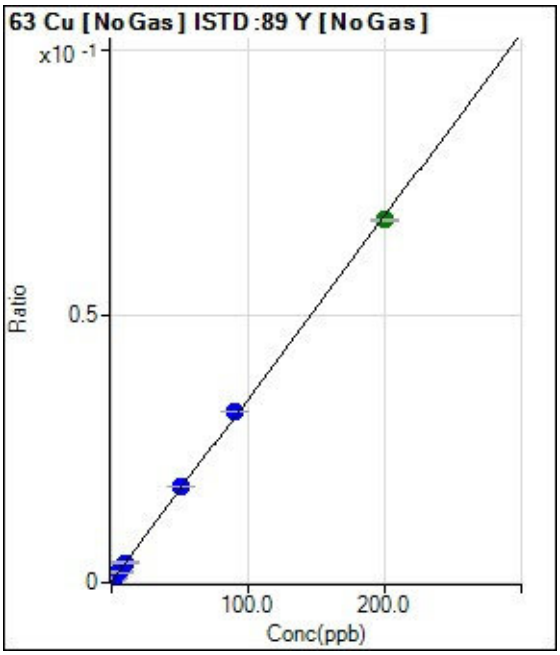
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1761.91	0.0001	P	12.6
2	☐	0.200	0.258	1885.39	0.0001	P	7.7
3	☐	2.000	1.789	2592.89	0.0001	P	1.5
4	☐	5.000	8.574	5727.02	0.0003	P	7.1
5	☐	10.000	9.782	6204.40	0.0003	P	5.2
6	☐	50.000	51.170	24810.95	0.0012	P	3.2
7	☐	90.000	93.284	43456.15	0.0022	P	1.0
8	☐	200.000	198.153	89458.38	0.0045	P	1.0

y = 2.2223E-005 * x + 8.4802E-005
R = 0.9997
DL = 1.438
BEC = 3.816

Weight: <None>
Min Conc: <None>

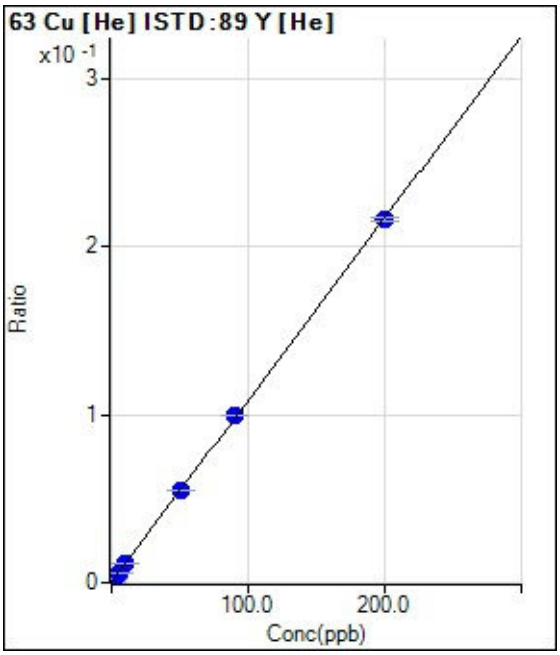


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4024.69	0.0002	P	5.6
2	☐	0.200	0.399	6878.71	0.0003	P	4.6
3	☐	2.000	2.053	18668.45	0.0009	P	2.4
4	☐	5.000	5.224	41250.65	0.0020	P	1.2
5	☐	10.000	10.459	77533.99	0.0038	P	0.9
6	☐	50.000	52.235	367261.67	0.0181	P	0.4
7	☐	90.000	93.284	647412.08	0.0321	P	0.2
8	☐	200.000	197.934	1355261.62	0.0680	A	0.7

y = 3.4256E-004 * x + 1.9369E-004
R = 0.9998
DL = 0.09466
BEC = 0.5654

Weight: <None>
Min Conc: <None>

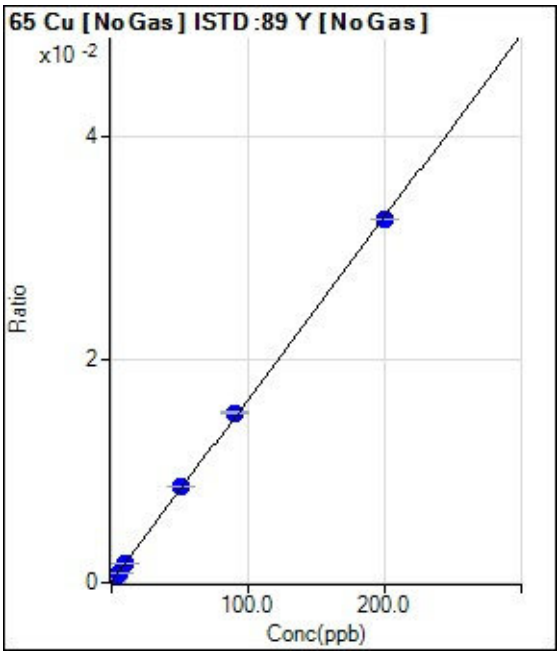
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	717.42	0.0003	P	8.6
2	☐	0.200	0.329	1545.00	0.0007	P	10.8
3	☐	2.000	1.961	5636.92	0.0024	P	4.8
4	☐	5.000	5.009	13216.51	0.0057	P	2.1
5	☐	10.000	9.979	25235.51	0.0111	P	2.0
6	☐	50.000	50.739	122552.93	0.0552	P	0.9
7	☐	90.000	91.399	218954.87	0.0992	P	0.4
8	☐	200.000	199.187	468761.18	0.2157	P	1.0

y = 0.0011 * x + 3.0683E-004
R = 1.0000
DL = 0.07305
BEC = 0.2837

Weight: <None>
Min Conc: <None>

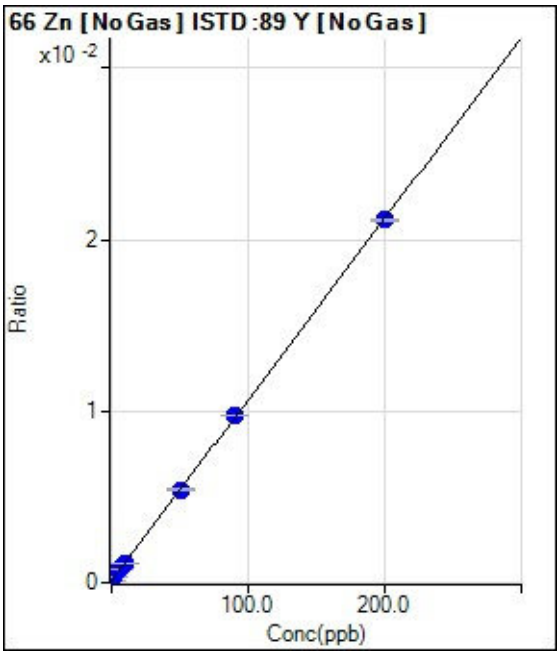


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1691.83	0.0001	P	6.7
2	☐	0.200	0.404	3070.13	0.0001	P	5.7
3	☐	2.000	2.088	8808.47	0.0004	P	4.9
4	☐	5.000	5.093	19035.93	0.0009	P	0.7
5	☐	10.000	10.405	36642.88	0.0018	P	0.5
6	☐	50.000	52.141	174967.39	0.0086	P	0.5
7	☐	90.000	92.299	305909.50	0.0152	P	1.2
8	☐	200.000	198.407	648986.68	0.0326	P	0.1

y = 1.6370E-004 * x + 8.1416E-005
R = 0.9999
DL = 0.09938
BEC = 0.4973

Weight: <None>
Min Conc: <None>

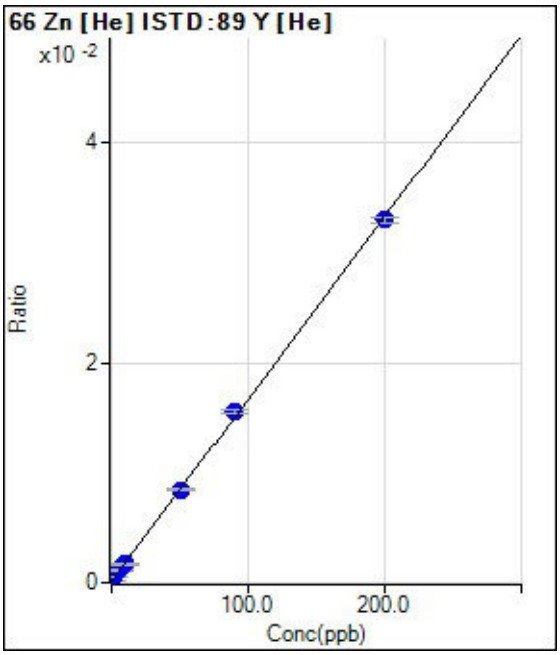
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2048.92	0.0001	P	6.1
2	☐	0.200	0.221	2539.48	0.0001	P	4.6
3	☐	2.000	2.030	6511.57	0.0003	P	4.8
4	☐	5.000	6.202	15664.91	0.0008	P	2.5
5	☐	10.000	9.985	23657.88	0.0012	P	2.6
6	☐	50.000	50.442	110089.49	0.0054	P	1.6
7	☐	90.000	91.034	195452.21	0.0097	P	0.1
8	☐	200.000	199.394	421367.40	0.0211	P	0.6

y = 1.0553E-004 * x + 9.8593E-005
R = 1.0000
DL = 0.171
BEC = 0.9342

Weight: <None>
Min Conc: <None>

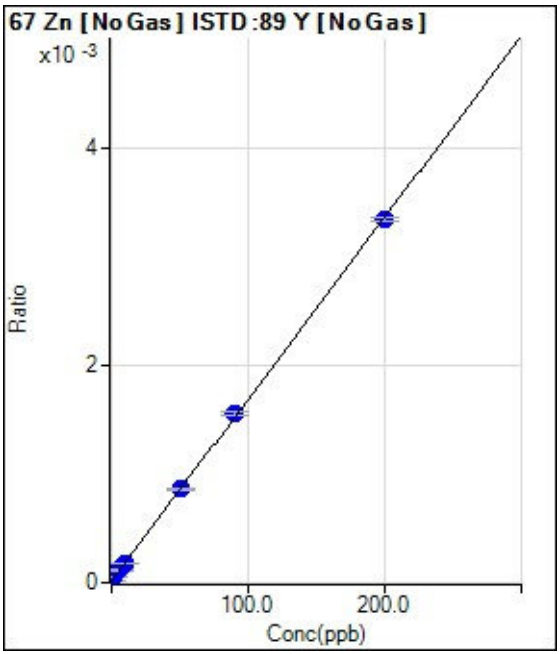


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	306.98	0.0001	P	16.4
2	☐	0.200	0.277	413.76	0.0002	P	15.2
3	☐	2.000	2.133	1124.53	0.0005	P	12.6
4	☐	5.000	6.141	2649.62	0.0011	P	7.6
5	☐	10.000	9.447	3854.48	0.0017	P	4.2
6	☐	50.000	50.233	18758.59	0.0084	P	1.7
7	☐	90.000	93.166	34344.61	0.0156	P	1.3
8	☐	200.000	198.515	71676.61	0.0330	P	1.8

y = 1.6553E-004 * x + 1.3133E-004
R = 0.9998
DL = 0.3904
BEC = 0.7934

Weight: <None>
Min Conc: <None>

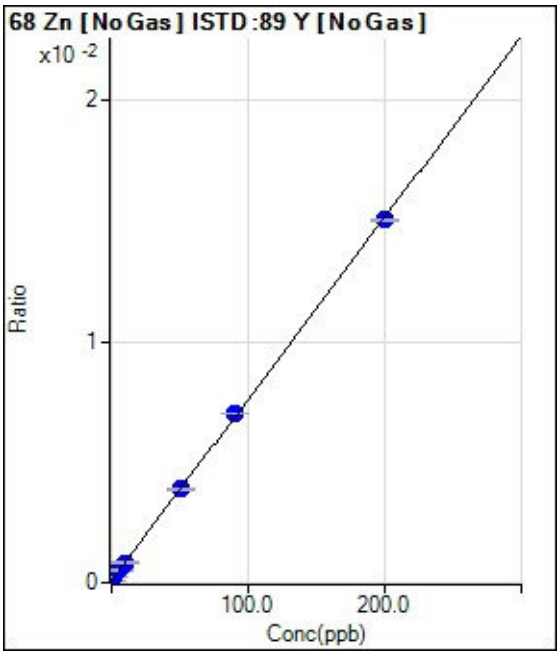
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	316.99	0.0000	P	8.9
2	☐	0.200	0.353	440.46	0.0000	P	8.8
3	☐	2.000	1.864	967.69	0.0000	P	2.8
4	☐	5.000	6.253	2496.10	0.0001	P	10.9
5	☐	10.000	9.608	3617.50	0.0002	P	7.5
6	☐	50.000	50.454	17472.22	0.0009	P	2.5
7	☐	90.000	92.503	31514.95	0.0016	P	2.0
8	☐	200.000	198.749	66666.91	0.0033	P	1.0

y = 1.6753E-005 * x + 1.5253E-005
R = 0.9999
DL = 0.244
BEC = 0.9105

Weight: <None>
Min Conc: <None>

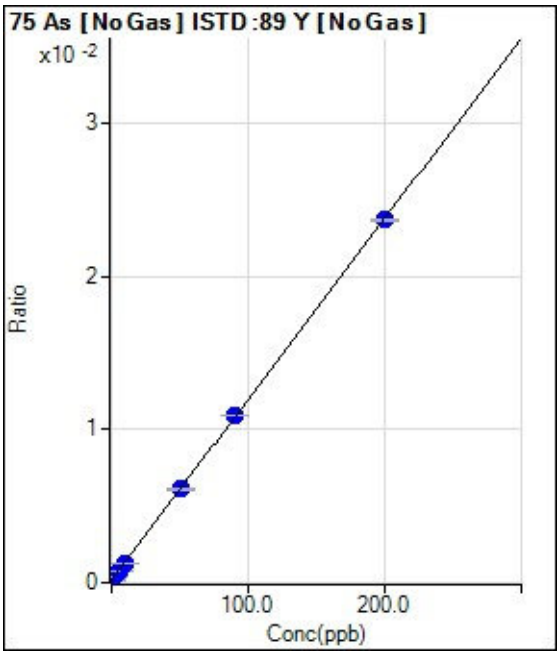


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1668.46	0.0001	P	5.5
2	☐	0.200	0.204	1992.17	0.0001	P	2.9
3	☐	2.000	1.989	4789.05	0.0002	P	5.2
4	☐	5.000	5.844	10825.30	0.0005	P	2.8
5	☐	10.000	10.045	17181.60	0.0008	P	1.5
6	☐	50.000	50.724	79199.34	0.0039	P	2.1
7	☐	90.000	92.231	141501.80	0.0070	P	0.7
8	☐	200.000	198.792	300013.65	0.0151	P	0.2

y = 7.5316E-005 * x + 8.0294E-005
R = 0.9999
DL = 0.1759
BEC = 1.066

Weight: <None>
Min Conc: <None>

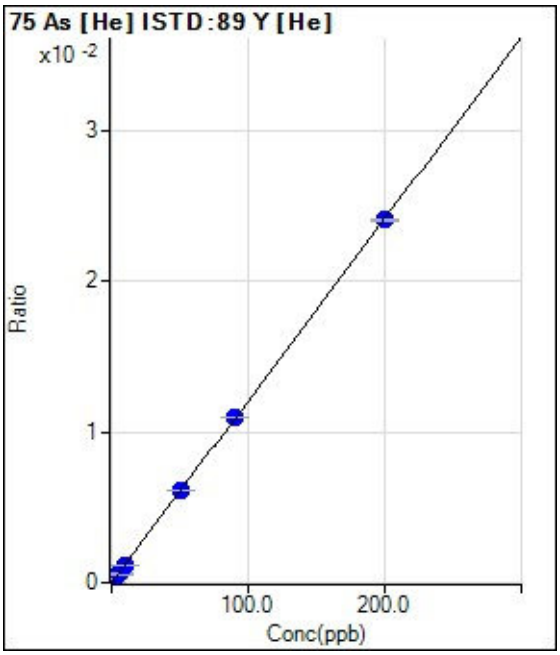
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3690.27	0.0002	P	23.3
2	☐	0.200	0.562	5072.80	0.0002	P	17.0
3	☐	2.000	2.039	8691.14	0.0004	P	12.9
4	☐	5.000	4.654	15094.68	0.0007	P	2.7
5	☐	10.000	9.394	26358.68	0.0013	P	4.0
6	☐	50.000	50.199	123635.26	0.0061	P	1.6
7	☐	90.000	91.205	219861.79	0.0109	P	0.5
8	☐	200.000	199.446	471654.86	0.0237	P	0.7

y = 1.1776E-004 * x + 1.7761E-004
R = 1.0000
DL = 1.054
BEC = 1.508

Weight: <None>
Min Conc: <None>

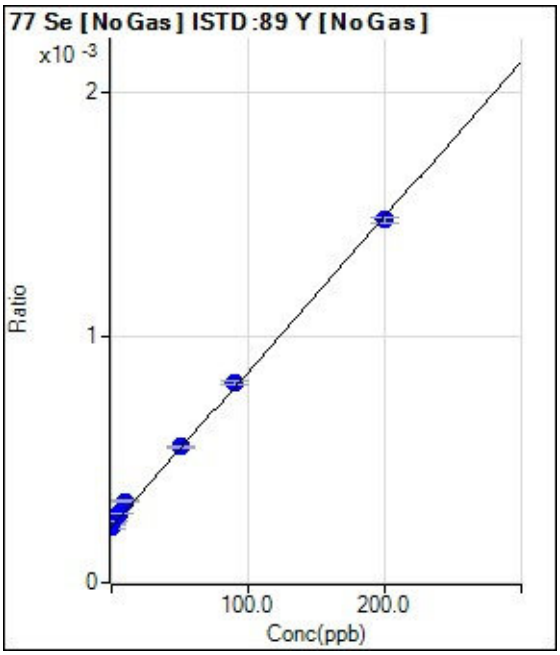


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	50.0
2	☐	0.200	0.222	68.89	0.0000	P	24.3
3	☐	2.000	1.839	521.12	0.0002	P	8.2
4	☐	5.000	4.857	1357.86	0.0006	P	5.6
5	☐	10.000	9.690	2661.39	0.0012	P	1.8
6	☐	50.000	50.549	13534.61	0.0061	P	0.7
7	☐	90.000	90.740	24151.55	0.0109	P	0.6
8	☐	200.000	199.550	52256.16	0.0240	P	0.3

y = 1.2050E-004 * x + 2.8499E-006
R = 1.0000
DL = 0.03551
BEC = 0.02365

Weight: <None>
Min Conc: <None>

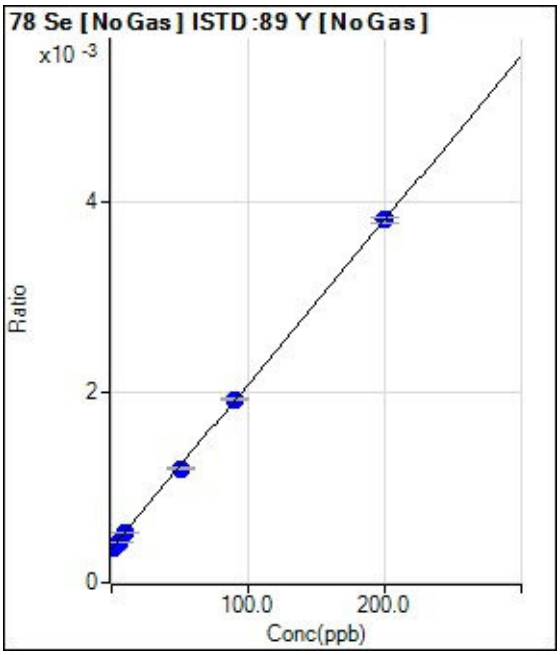
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4718.94	0.0002	P	4.9
2	☐	0.200	1.877	4975.99	0.0002	P	1.0
3	☐	2.000	5.137	5403.25	0.0003	P	4.3
4	☐	5.000	8.799	5880.58	0.0003	P	1.7
5	☐	10.000	16.716	6832.03	0.0003	P	3.9
6	☐	50.000	51.661	11242.80	0.0006	P	2.3
7	☐	90.000	92.788	16386.60	0.0008	P	1.3
8	☐	200.000	197.866	29458.52	0.0015	P	1.6

y = 6.3221E-006 * x + 2.2709E-004
R = 0.9995
DL = 5.305
BEC = 35.92

Weight: <None>
Min Conc: <None>

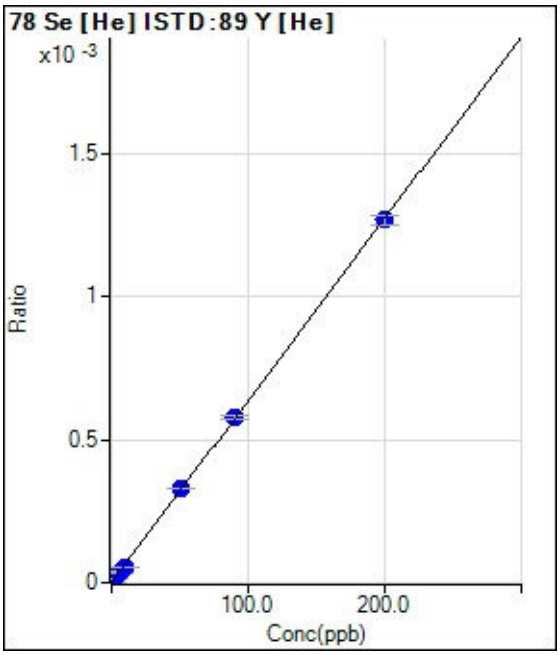


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7473.01	0.0004	P	4.2
2	☐	0.200	0.365	7619.89	0.0004	P	2.6
3	☐	2.000	0.785	7766.85	0.0004	P	1.5
4	☐	5.000	3.961	8901.97	0.0004	P	2.8
5	☐	10.000	9.309	10681.78	0.0005	P	0.7
6	☐	50.000	48.797	24403.41	0.0012	P	1.9
7	☐	90.000	90.787	38798.30	0.0019	P	1.6
8	☐	200.000	200.019	75975.79	0.0038	P	1.9

y = 1.7261E-005 * x + 3.5960E-004
R = 1.0000
DL = 2.602
BEC = 20.83

Weight: <None>
Min Conc: <None>

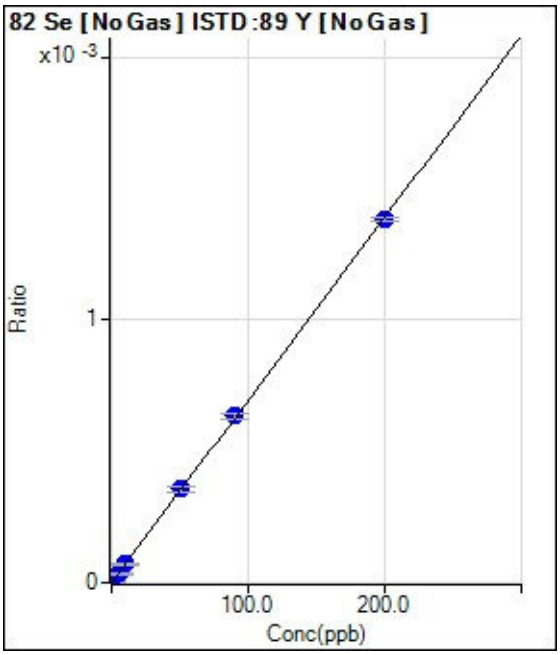
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	86.6
2	☐	0.200	0.075	3.33	0.0000	P	0.5
3	☐	2.000	2.264	35.56	0.0000	P	22.1
4	☐	5.000	5.609	84.45	0.0000	P	15.5
5	☐	10.000	8.549	125.55	0.0001	P	3.3
6	☐	50.000	51.388	726.69	0.0003	P	0.8
7	☐	90.000	90.618	1272.29	0.0006	P	2.8
8	☐	200.000	199.429	2753.64	0.0013	P	2.6

y = 6.3477E-006 * x + 9.5140E-007
R = 0.9999
DL = 0.3894
BEC = 0.1499

Weight: <None>
Min Conc: <None>

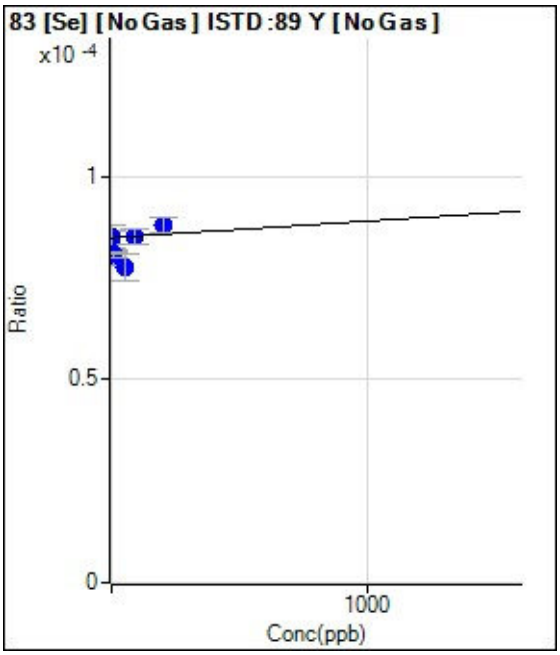


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-75.95	0.0000	P	-220.2
2	☐	0.200	0.902	54.13	0.0000	P	374.0
3	☐	2.000	3.622	448.84	0.0000	P	24.9
4	☐	5.000	4.821	622.45	0.0000	P	13.4
5	☐	10.000	10.128	1373.41	0.0001	P	7.4
6	☐	50.000	51.134	7159.14	0.0004	P	4.3
7	☐	90.000	91.518	12765.20	0.0006	P	3.4
8	☐	200.000	199.015	27560.52	0.0014	P	1.3

y = 6.9663E-006 * x - 3.6565E-006
R = 0.9999
DL = 3.467
BEC = -0.5249

Weight: <None>
Min Conc: <None>

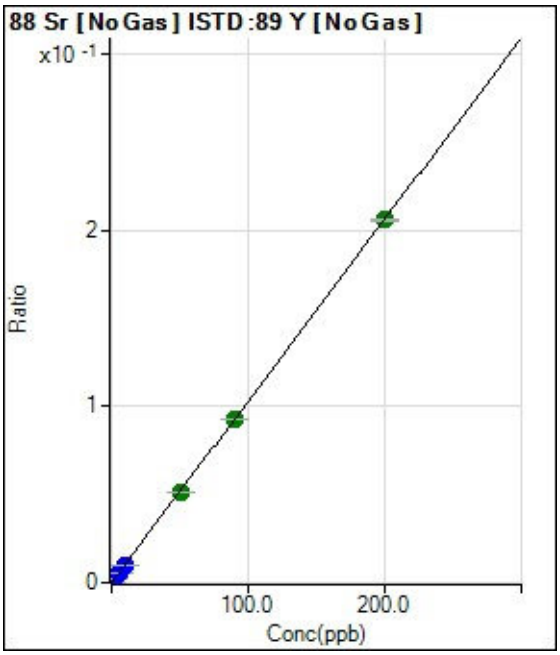
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1765.24	0.0001	P	4.3
2	☐	0.200	33.718	1771.93	0.0001	P	6.5
3	☐	2.000	-1167.126	1668.47	0.0001	P	4.4
4	☐	5.000	-1230.811	1661.80	0.0001	P	4.6
5	☐	10.000	-1014.432	1658.46	0.0001	P	2.1
6	☐	50.000	-1752.233	1578.36	0.0001	P	8.7
7	☐	90.000	54.058	1715.19	0.0001	P	4.9
8	☐	200.000	760.507	1755.23	0.0001	P	4.8

y = 4.1121E-009 * x + 8.4950E-005
R = 0.5708
DL = 2681
BEC = 2.066E+04

Weight: <None>
Min Conc: <None>

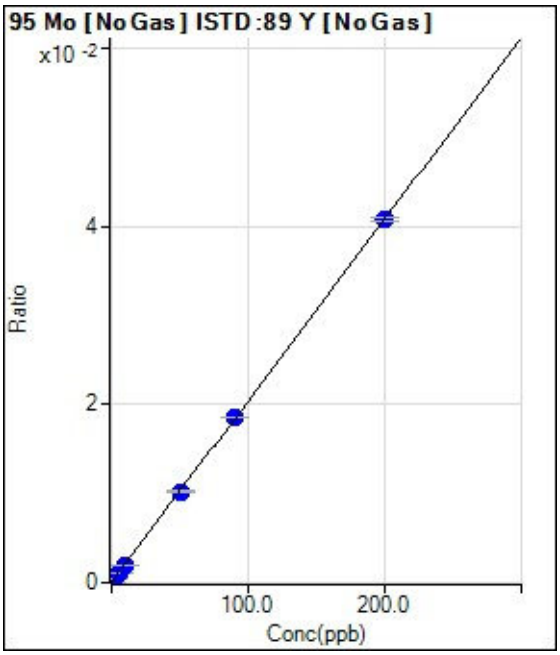


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.17	0.0000	P	25.5
2	☐	0.200	0.199	4431.91	0.0002	P	4.7
3	☐	2.000	1.979	42623.65	0.0020	P	1.6
4	☐	5.000	5.058	108608.70	0.0052	P	1.5
5	☐	10.000	9.800	207543.19	0.0101	P	0.6
6	☐	50.000	50.009	1046769.14	0.0516	A	0.9
7	☐	90.000	90.404	1876534.66	0.0932	A	0.3
8	☐	200.000	199.825	4105026.70	0.2060	A	0.2

y = 0.0010 * x + 8.1870E-006
R = 1.0000
DL = 0.006067
BEC = 0.007943

Weight: <None>
Min Conc: <None>

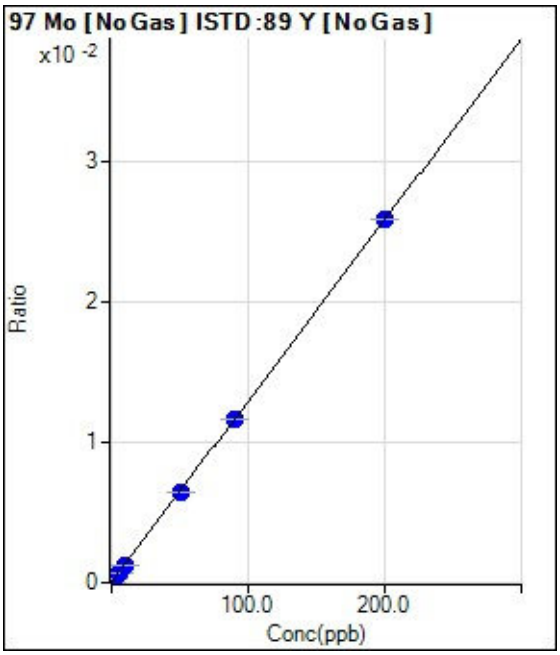
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1184.59	0.0001	P	5.4
2	☐	0.200	0.078	1518.30	0.0001	P	14.0
3	☐	2.000	1.794	8785.19	0.0004	P	1.9
4	☐	5.000	4.714	21141.44	0.0010	P	2.5
5	☐	10.000	9.590	41238.40	0.0020	P	3.1
6	☐	50.000	49.967	207618.03	0.0102	P	0.7
7	☐	90.000	90.740	372996.06	0.0185	P	0.1
8	☐	200.000	199.705	811112.57	0.0407	P	1.0

y = 2.0350E-004 * x + 5.7002E-005
R = 1.0000
DL = 0.04566
BEC = 0.2801

Weight: <None>
Min Conc: <None>

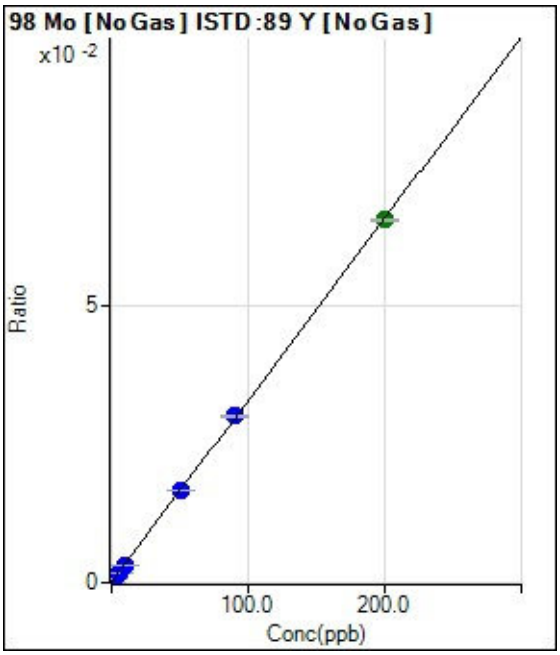


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	780.82	0.0000	P	8.7
2	☐	0.200	0.085	1011.07	0.0000	P	13.5
3	☐	2.000	1.786	5570.16	0.0003	P	3.6
4	☐	5.000	4.668	13286.75	0.0006	P	2.1
5	☐	10.000	9.202	25102.36	0.0012	P	7.0
6	☐	50.000	49.593	130442.67	0.0064	P	0.6
7	☐	90.000	90.119	234466.61	0.0116	P	0.4
8	☐	200.000	200.099	514353.14	0.0258	P	0.2

y = 1.2878E-004 * x + 3.7571E-005
R = 1.0000
DL = 0.07632
BEC = 0.2917

Weight: <None>
Min Conc: <None>

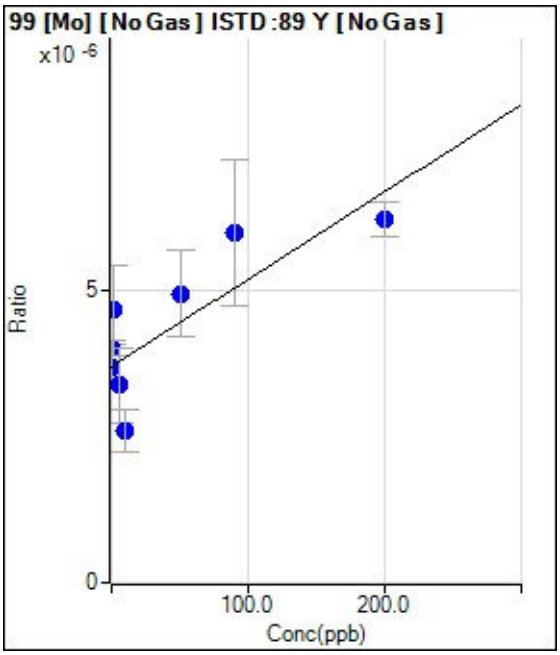
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2117.80	0.0001	P	3.2
2	☐	0.200	0.100	2804.32	0.0001	P	0.5
3	☐	2.000	1.781	14281.39	0.0007	P	2.8
4	☐	5.000	4.660	33913.81	0.0016	P	1.7
5	☐	10.000	9.511	66139.16	0.0032	P	1.7
6	☐	50.000	50.558	338785.64	0.0167	P	1.6
7	☐	90.000	91.276	604946.50	0.0300	P	0.4
8	☐	200.000	199.322	1305049.44	0.0655	A	0.8

y = 3.2800E-004 * x + 1.0191E-004
R = 1.0000
DL = 0.02995
BEC = 0.3107

Weight: <None>
Min Conc: <None>

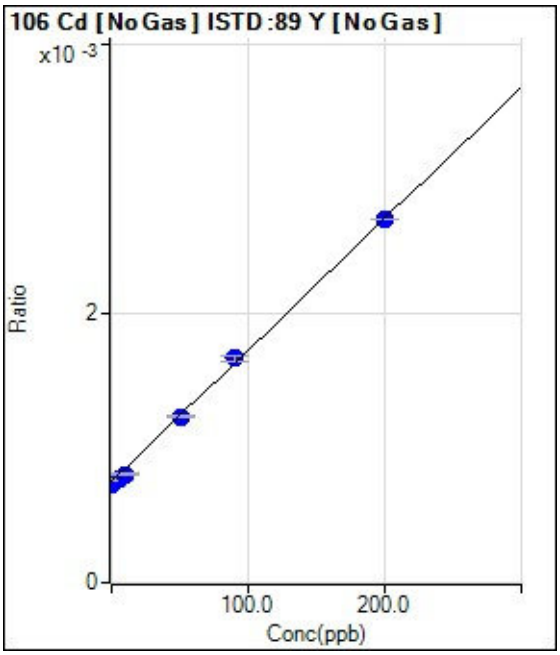


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.74	0.0000	P	19.8
2	☐	0.200	20.956	83.42	0.0000	P	6.4
3	☐	2.000	64.059	96.76	0.0000	P	33.2
4	☐	5.000	-21.866	70.07	0.0000	P	37.6
5	☐	10.000	-73.265	53.39	0.0000	P	28.6
6	☐	50.000	83.163	100.10	0.0000	P	30.2
7	☐	90.000	152.499	120.12	0.0000	P	41.7
8	☐	200.000	167.778	123.46	0.0000	P	9.4

y = 1.4912E-008 * x + 3.6925E-006
R = 0.8004
DL = 147.2
BEC = 247.6

Weight: <None>
Min Conc: <None>

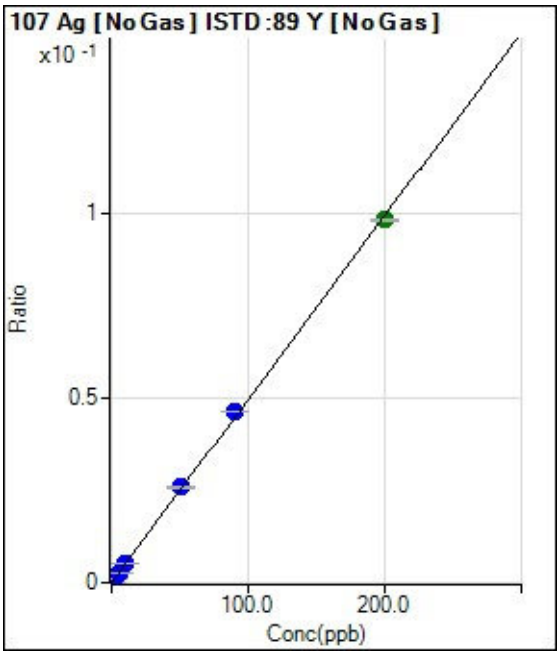
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15625.08	0.0008	P	1.8
2	☐	0.200	-2.565	15137.36	0.0007	P	2.1
3	☐	2.000	0.517	15755.30	0.0008	P	3.6
4	☐	5.000	1.654	15975.84	0.0008	P	1.8
5	☐	10.000	5.370	16513.71	0.0008	P	1.6
6	☐	50.000	49.006	24982.16	0.0012	P	1.1
7	☐	90.000	93.595	33543.03	0.0017	P	3.2
8	☐	200.000	198.963	53699.28	0.0027	P	0.1

y = 9.7621E-006 * x + 7.5192E-004
R = 0.9995
DL = 4.093
BEC = 77.02

Weight: <None>
Min Conc: <None>

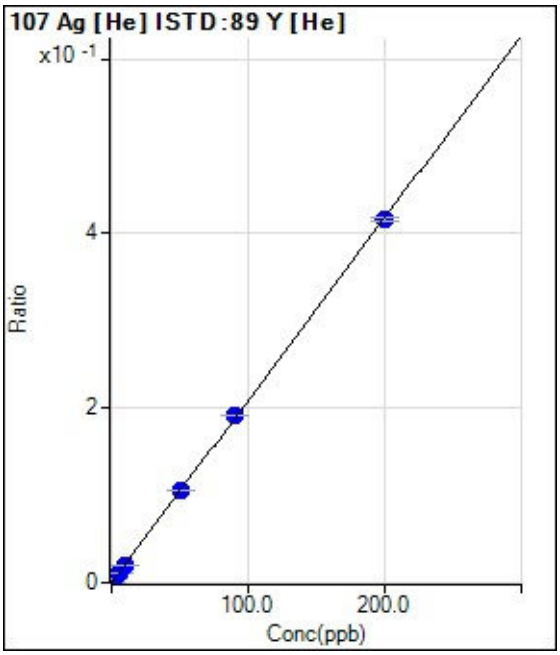


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	212.22	0.0000	P	7.8
2	☐	0.200	0.203	2312.44	0.0001	P	2.6
3	☐	2.000	2.058	21506.35	0.0010	P	0.5
4	☐	5.000	5.077	52708.82	0.0025	P	1.1
5	☐	10.000	10.036	102644.49	0.0050	P	0.5
6	☐	50.000	52.133	526477.31	0.0259	P	0.8
7	☐	90.000	93.382	935115.31	0.0464	P	0.3
8	☐	200.000	197.940	1961564.30	0.0984	A	0.4

y = 4.9715E-004 * x + 1.0212E-005
R = 0.9997
DL = 0.004829
BEC = 0.02054

Weight: <None>
Min Conc: <None>

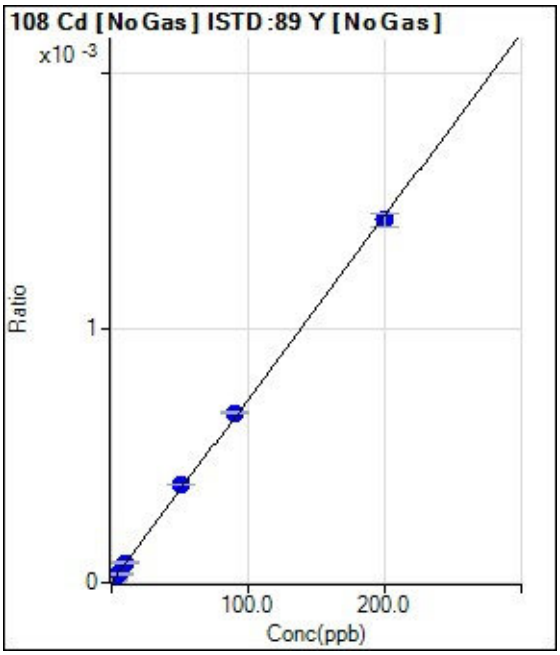
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.07	0.0000	P	37.6
2	☐	0.200	0.175	920.97	0.0004	P	8.9
3	☐	2.000	2.002	9780.23	0.0042	P	2.8
4	☐	5.000	4.954	23945.84	0.0104	P	2.8
5	☐	10.000	9.686	46049.54	0.0203	P	1.1
6	☐	50.000	50.519	234336.41	0.1055	P	1.0
7	☐	90.000	91.923	423886.30	0.1920	P	0.2
8	☐	200.000	199.022	902928.66	0.4156	P	1.0

y = 0.0021 * x + 2.9953E-005
R = 0.9999
DL = 0.0162
BEC = 0.01435

Weight: <None>
Min Conc: <None>

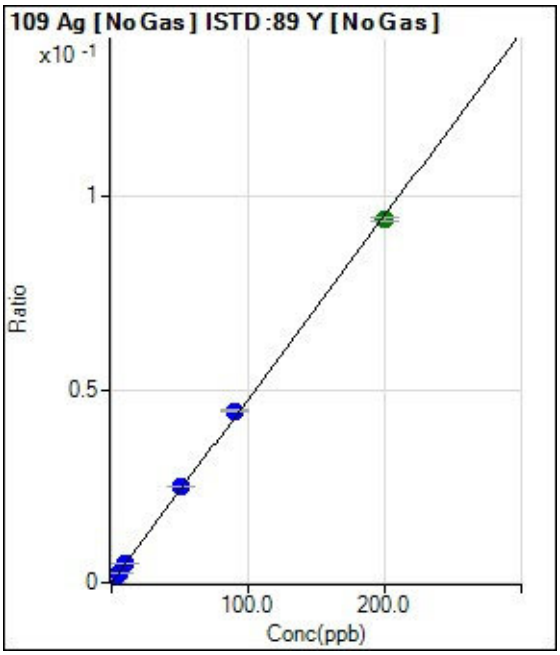


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.02	0.0000	P	86.6
2	☐	0.200	0.356	73.41	0.0000	P	15.8
3	☐	2.000	1.757	283.63	0.0000	P	38.5
4	☐	5.000	4.723	727.43	0.0000	P	8.1
5	☐	10.000	10.433	1561.69	0.0001	P	8.7
6	☐	50.000	53.158	7790.26	0.0004	P	0.6
7	☐	90.000	92.732	13463.84	0.0007	P	1.6
8	☐	200.000	197.969	28426.11	0.0014	P	3.9

y = 7.1993E-006 * x + 9.6344E-007
R = 0.9997
DL = 0.3477
BEC = 0.1338

Weight: <None>
Min Conc: <None>

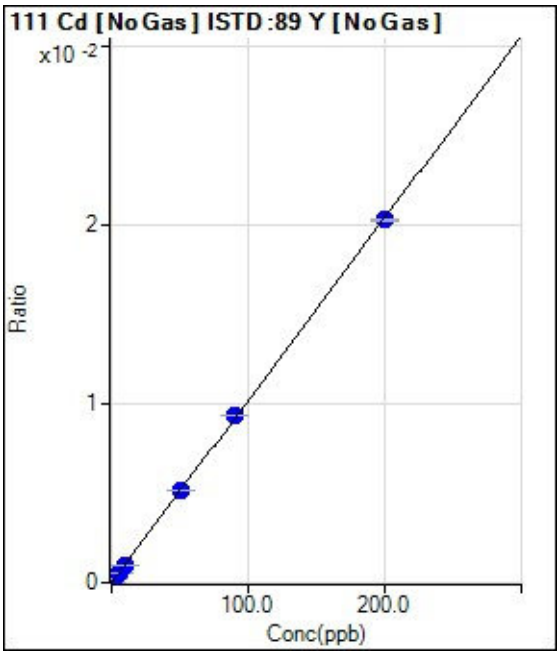
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.73	0.0000	P	31.2
2	☐	0.200	0.208	2122.33	0.0001	P	3.9
3	☐	2.000	2.095	20814.07	0.0010	P	1.3
4	☐	5.000	5.069	50218.84	0.0024	P	2.0
5	☐	10.000	10.072	98432.74	0.0048	P	1.1
6	☐	50.000	52.341	505600.83	0.0249	P	0.6
7	☐	90.000	93.740	898000.45	0.0446	P	0.2
8	☐	200.000	197.726	1874601.27	0.0941	A	0.9

y = 4.7567E-004 * x + 3.2111E-006
R = 0.9997
DL = 0.006318
BEC = 0.006751

Weight: <None>
Min Conc: <None>

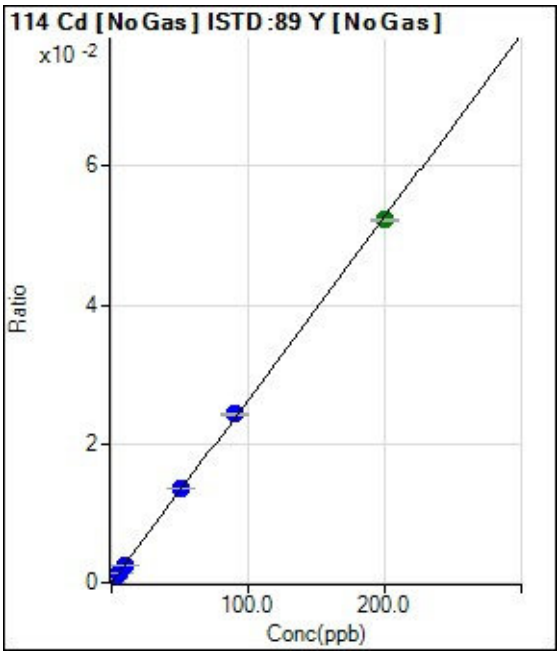


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-18.15	0.0000	P	-121.5
2	☐	0.200	0.192	387.91	0.0000	P	3.0
3	☐	2.000	2.014	4245.37	0.0002	P	3.6
4	☐	5.000	4.890	10329.73	0.0005	P	2.4
5	☐	10.000	9.734	20313.76	0.0010	P	3.3
6	☐	50.000	50.524	104350.82	0.0051	P	0.6
7	☐	90.000	91.750	187945.47	0.0093	P	0.9
8	☐	200.000	199.097	403683.74	0.0203	P	0.6

y = 1.0173E-004 * x - 8.7361E-007
R = 0.9999
DL = 0.03131
BEC = -0.008587

Weight: <None>
Min Conc: <None>

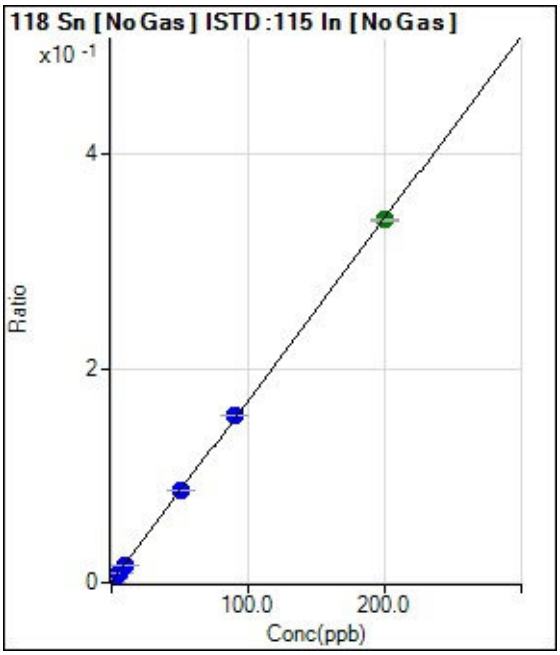
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.71	0.0000	P	12.2
2	☐	0.200	0.205	1171.24	0.0001	P	4.7
3	☐	2.000	1.959	10782.02	0.0005	P	0.7
4	☐	5.000	4.959	27195.51	0.0013	P	2.0
5	☐	10.000	9.776	52872.39	0.0026	P	0.7
6	☐	50.000	51.548	275532.71	0.0136	P	1.3
7	☐	90.000	92.487	490261.54	0.0243	P	1.0
8	☐	200.000	198.506	1041405.10	0.0522	A	0.4

y = 2.6320E-004 * x + 2.2477E-006
R = 0.9999
DL = 0.003129
BEC = 0.00854

Weight: <None>
Min Conc: <None>

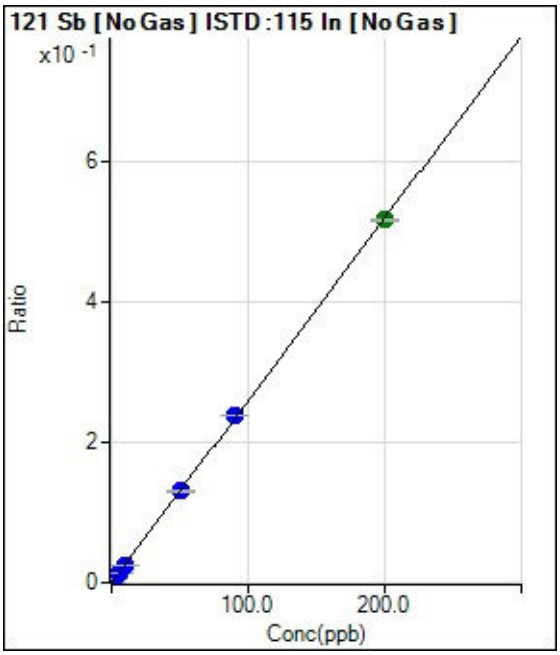


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	880.04	0.0002	P	5.4
2	☐	0.200	0.215	2324.66	0.0006	P	1.4
3	☐	2.000	1.936	13970.80	0.0035	P	0.7
4	☐	5.000	4.880	33755.39	0.0085	P	0.6
5	☐	10.000	9.706	65575.85	0.0167	P	0.2
6	☐	50.000	50.706	336096.67	0.0863	P	0.3
7	☐	90.000	91.449	597551.80	0.1555	P	0.4
8	☐	200.000	199.190	1266505.19	0.3385	A	0.5

y = 0.0017 * x + 2.2339E-004
R = 1.0000
DL = 0.02127
BEC = 0.1315

Weight: <None>
Min Conc: <None>

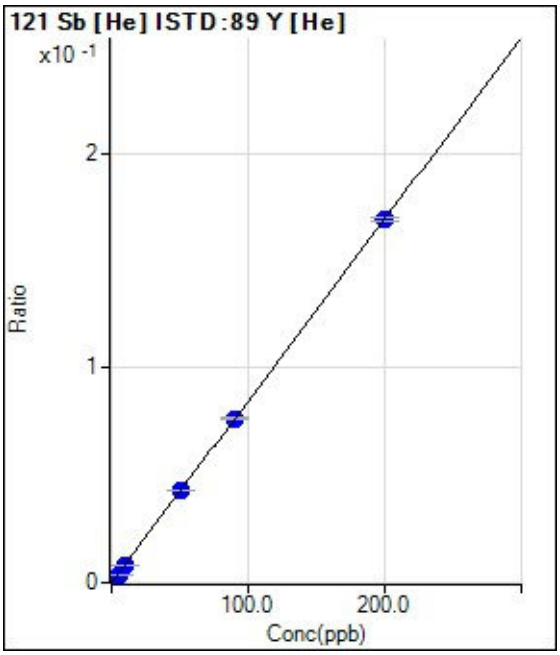
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125.56	0.0000	P	13.1
2	☐	0.200	0.194	2116.85	0.0005	P	3.9
3	☐	2.000	1.952	20267.87	0.0051	P	2.0
4	☐	5.000	4.798	49490.65	0.0125	P	1.5
5	☐	10.000	9.613	98000.41	0.0250	P	0.9
6	☐	50.000	50.199	507073.92	0.1303	P	0.4
7	☐	90.000	91.630	913381.28	0.2378	P	0.1
8	☐	200.000	199.241	1933985.69	0.5169	A	0.5

y = 0.0026 * x + 3.1892E-005
R = 1.0000
DL = 0.004819
BEC = 0.01229

Weight: <None>
Min Conc: <None>

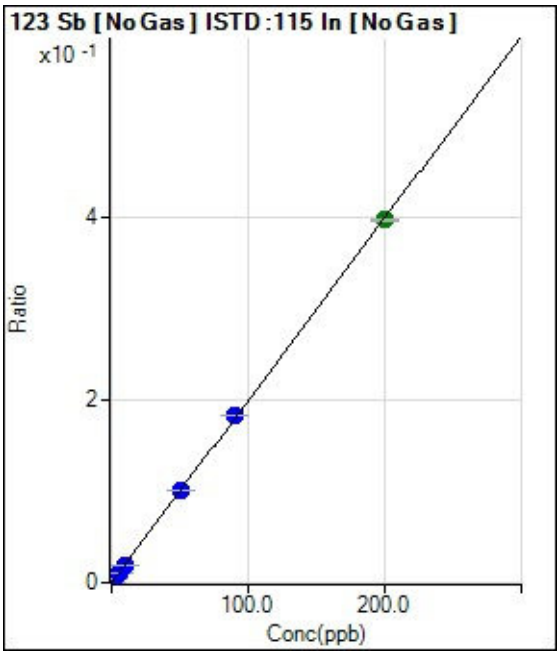


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	24.8
2	☐	0.200	0.221	483.35	0.0002	P	7.7
3	☐	2.000	1.852	3687.25	0.0016	P	4.3
4	☐	5.000	4.713	9256.71	0.0040	P	1.1
5	☐	10.000	9.487	18302.98	0.0080	P	0.3
6	☐	50.000	50.452	94894.63	0.0427	P	0.5
7	☐	90.000	90.460	169118.81	0.0766	P	0.4
8	☐	200.000	199.714	367329.15	0.1691	P	1.0

y = 8.4639E-004 * x + 1.9960E-005
R = 1.0000
DL = 0.01758
BEC = 0.02358

Weight: <None>
Min Conc: <None>

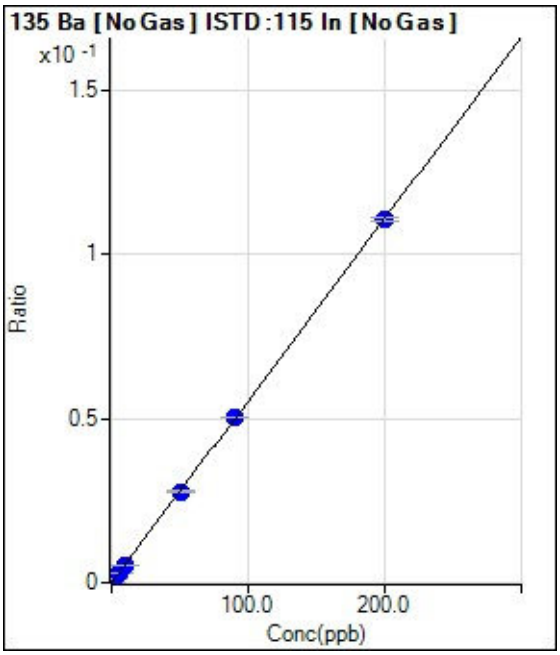
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.12	0.0000	P	17.1
2	☐	0.200	0.198	1681.83	0.0004	P	6.0
3	☐	2.000	1.865	14913.59	0.0037	P	2.0
4	☐	5.000	4.797	38060.36	0.0096	P	0.4
5	☐	10.000	9.597	75226.73	0.0192	P	1.4
6	☐	50.000	50.369	391113.97	0.1005	P	0.8
7	☐	90.000	91.684	702495.70	0.1829	P	0.7
8	☐	200.000	199.176	1486092.40	0.3972	A	0.6

y = 0.0020 * x + 3.0511E-005
R = 0.9999
DL = 0.007833
BEC = 0.0153

Weight: <None>
Min Conc: <None>

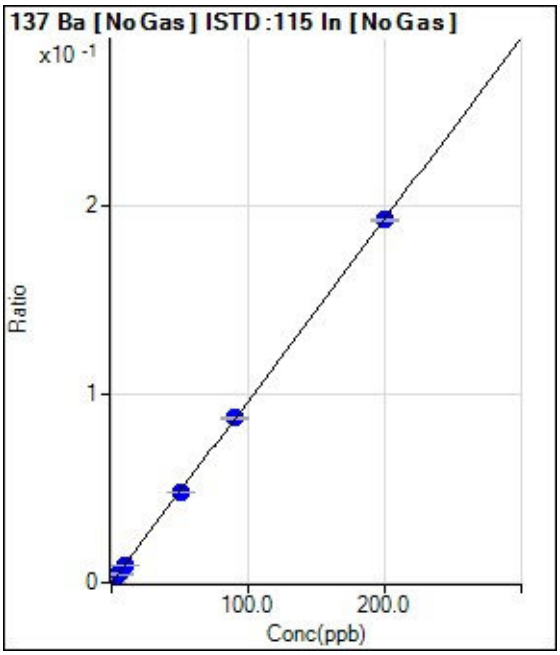


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.35	0.0000	P	86.6
2	☐	0.200	0.175	397.07	0.0001	P	10.0
3	☐	2.000	2.046	4518.73	0.0011	P	2.8
4	☐	5.000	4.910	10792.07	0.0027	P	1.3
5	☐	10.000	9.615	20901.25	0.0053	P	2.4
6	☐	50.000	50.145	108066.67	0.0278	P	1.3
7	☐	90.000	91.135	193820.85	0.0505	P	0.5
8	☐	200.000	199.474	413108.05	0.1104	P	0.9

y = 5.5356E-004 * x + 3.3904E-006
R = 1.0000
DL = 0.01591
BEC = 0.006125

Weight: <None>
Min Conc: <None>

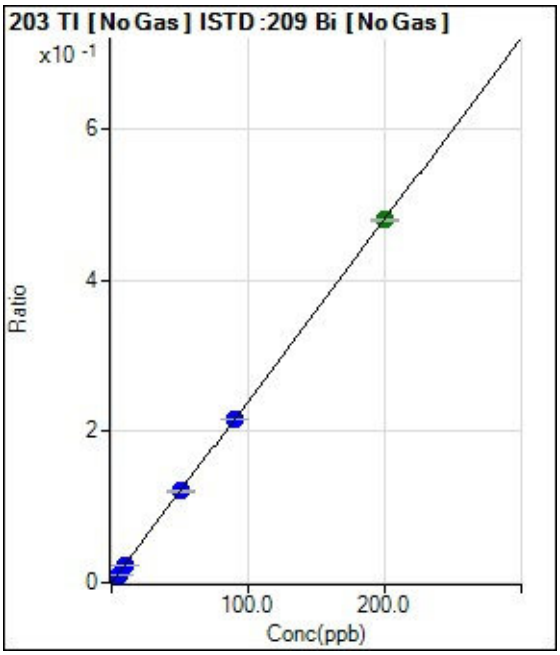
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.04	0.0000	P	66.1
2	☐	0.200	0.205	820.87	0.0002	P	22.2
3	☐	2.000	1.903	7329.50	0.0018	P	6.0
4	☐	5.000	4.779	18291.34	0.0046	P	1.3
5	☐	10.000	9.586	36273.75	0.0092	P	2.0
6	☐	50.000	49.742	186524.29	0.0479	P	0.4
7	☐	90.000	90.869	336247.09	0.0875	P	1.5
8	☐	200.000	199.701	719595.48	0.1923	P	0.7

y = 9.6309E-004 * x + 1.0167E-005
R = 1.0000
DL = 0.02092
BEC = 0.01056

Weight: <None>
Min Conc: <None>

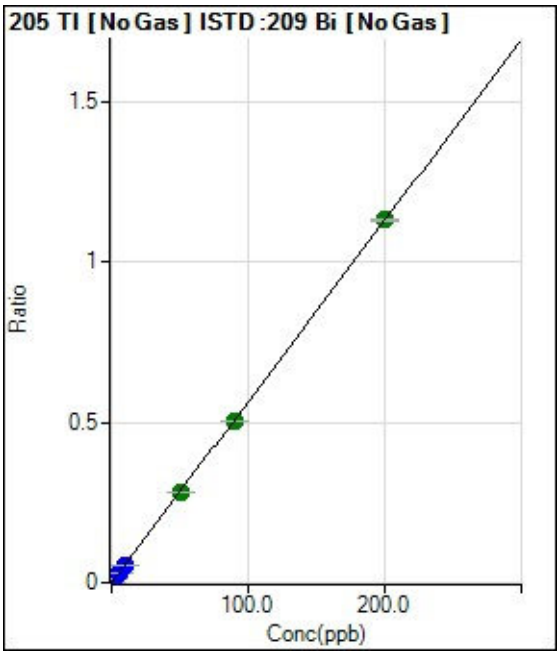


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.42	0.0000	P	17.9
2	☐	0.200	0.171	1675.16	0.0004	P	5.0
3	☐	2.000	1.905	17820.72	0.0046	P	1.3
4	☐	5.000	4.705	44108.80	0.0113	P	0.4
5	☐	10.000	9.495	88516.83	0.0229	P	1.2
6	☐	50.000	50.391	462053.74	0.1212	P	0.9
7	☐	90.000	90.237	818562.47	0.2170	P	0.5
8	☐	200.000	199.829	1755651.80	0.4806	A	0.5

y = 0.0024 * x + 2.1492E-005
R = 1.0000
DL = 0.0048
BEC = 0.008937

Weight: <None>
Min Conc: <None>

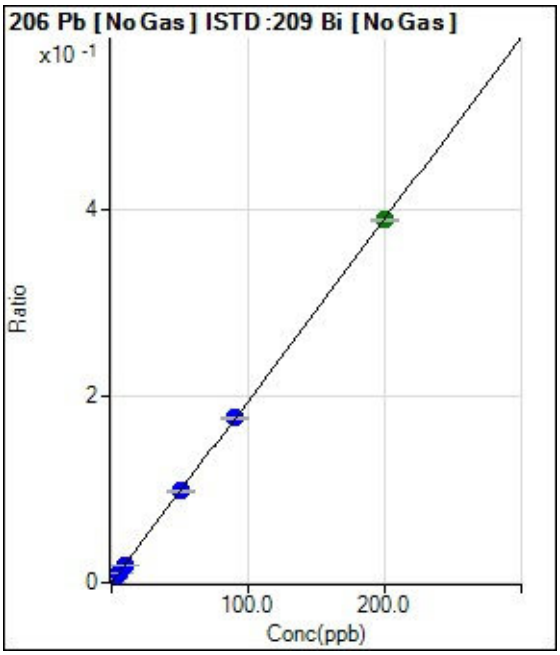
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.78	0.0000	P	4.7
2	☐	0.200	0.191	4278.41	0.0011	P	3.8
3	☐	2.000	1.954	42813.26	0.0111	P	2.6
4	☐	5.000	4.827	106093.84	0.0273	P	0.8
5	☐	10.000	9.690	211885.44	0.0547	P	0.9
6	☐	50.000	49.677	1068855.94	0.2804	A	0.6
7	☐	90.000	89.254	1899774.73	0.5037	A	0.8
8	☐	200.000	200.437	4132209.62	1.1311	A	0.4

y = 0.0056 * x + 3.0101E-005
R = 1.0000
DL = 0.0007593
BEC = 0.005334

Weight: <None>
Min Conc: <None>

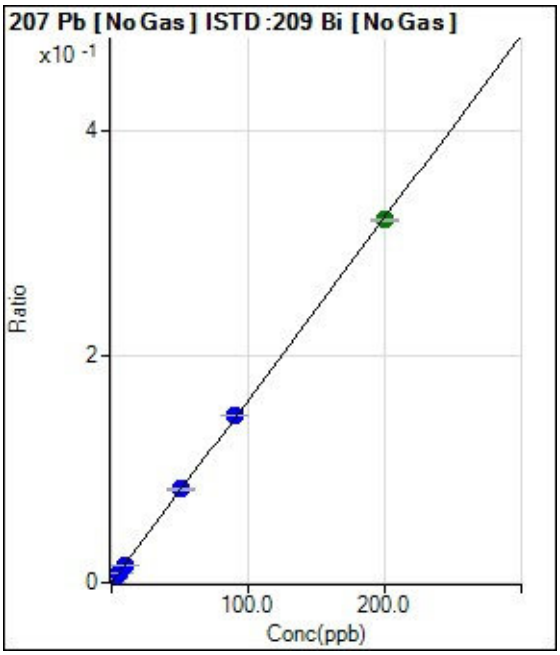


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.56	0.0001	P	40.7
2	☐	0.200	0.189	1641.78	0.0004	P	3.5
3	☐	2.000	1.924	14723.66	0.0038	P	1.8
4	☐	5.000	4.837	36868.07	0.0095	P	0.7
5	☐	10.000	9.640	72908.60	0.0188	P	0.8
6	☐	50.000	50.401	374284.60	0.0982	P	1.3
7	☐	90.000	90.706	666242.23	0.1766	P	0.7
8	☐	200.000	199.605	1419808.04	0.3886	A	0.3

y = 0.0019 * x + 5.7688E-005
R = 1.0000
DL = 0.03615
BEC = 0.02963

Weight: <None>
Min Conc: <None>

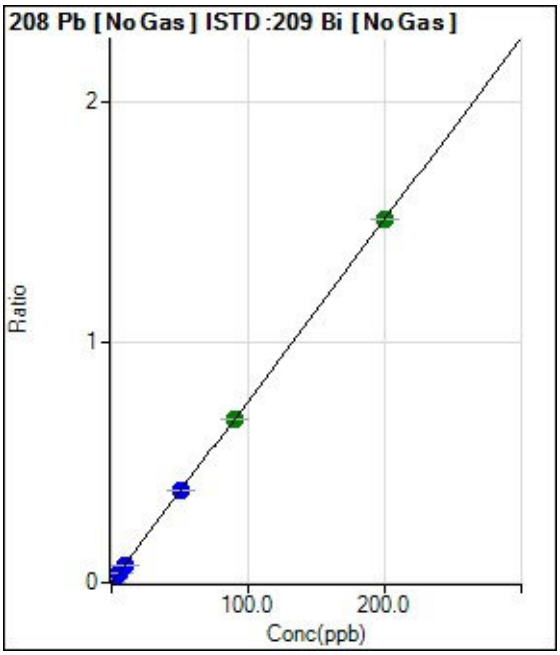
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.54	0.0000	P	13.4
2	☐	0.200	0.202	1454.90	0.0004	P	7.3
3	☐	2.000	1.974	12515.66	0.0032	P	0.5
4	☐	5.000	4.947	31233.82	0.0080	P	0.6
5	☐	10.000	9.775	61235.12	0.0158	P	1.8
6	☐	50.000	51.091	314249.17	0.0824	P	0.4
7	☐	90.000	92.034	559899.20	0.1484	P	0.1
8	☐	200.000	198.825	1171356.65	0.3206	A	0.7

y = 0.0016 * x + 4.9903E-005
R = 0.9999
DL = 0.0124
BEC = 0.03095

Weight: <None>
Min Conc: <None>

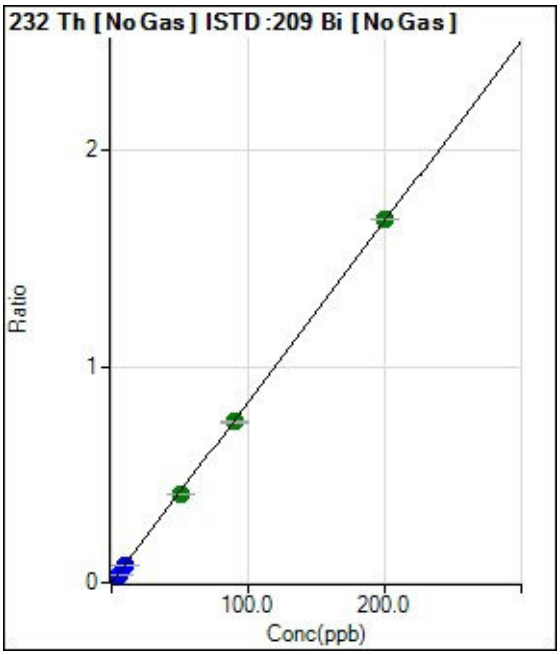


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	917.62	0.0002	P	22.8
2	☐	0.200	0.196	6627.45	0.0017	P	5.0
3	☐	2.000	1.948	57817.68	0.0149	P	0.3
4	☐	5.000	4.874	144048.67	0.0370	P	0.1
5	☐	10.000	9.747	285785.37	0.0738	P	1.4
6	☐	50.000	50.726	1460254.45	0.3830	P	0.5
7	☐	90.000	90.189	2567960.54	0.6808	A	0.3
8	☐	200.000	199.750	5507760.66	1.5077	A	0.1

y = 0.0075 * x + 2.3668E-004
R = 1.0000
DL = 0.02147
BEC = 0.03136

Weight: <None>
Min Conc: <None>

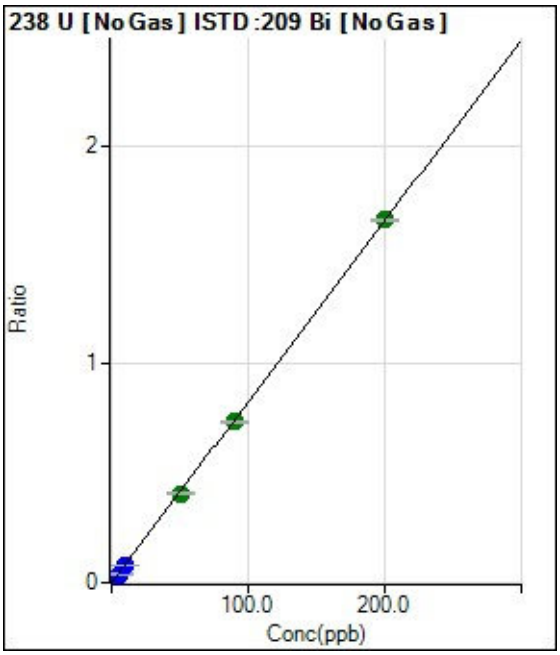
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1568.37	0.0004	P	3.8
2	☐	0.200	0.169	7015.80	0.0018	P	3.1
3	☐	2.000	1.757	58457.63	0.0151	P	1.7
4	☐	5.000	4.545	149518.95	0.0384	P	1.3
5	☐	10.000	9.228	300555.61	0.0776	P	0.8
6	☐	50.000	48.890	1560834.28	0.4094	A	0.7
7	☐	90.000	88.893	2806461.26	0.7441	A	0.6
8	☐	200.000	200.828	6139375.85	1.6806	A	0.1

y = 0.0084 * x + 4.0430E-004
R = 1.0000
DL = 0.005495
BEC = 0.04833

Weight: <None>
Min Conc: <None>

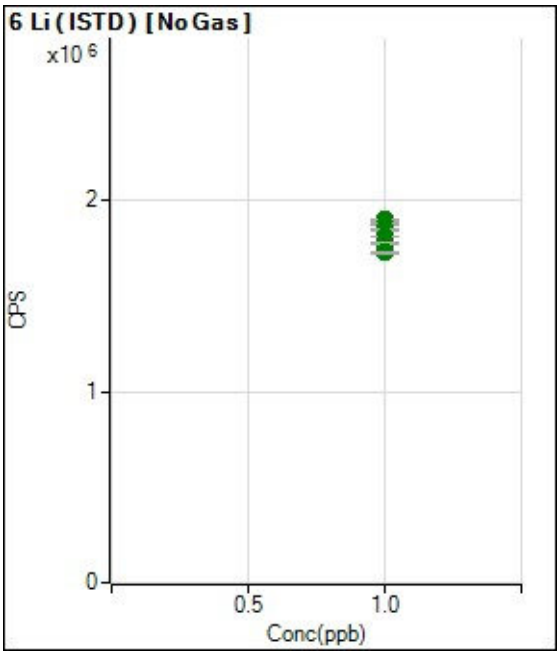


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283.63	0.0001	P	23.0
2	☐	0.200	0.188	6291.37	0.0016	P	4.7
3	☐	2.000	1.909	61488.88	0.0159	P	1.2
4	☐	5.000	4.752	153400.95	0.0394	P	2.2
5	☐	10.000	9.491	304741.28	0.0787	P	0.7
6	☐	50.000	49.214	1554142.38	0.4077	A	1.2
7	☐	90.000	89.011	2780838.76	0.7373	A	0.6
8	☐	200.000	200.674	6072109.62	1.6621	A	0.2

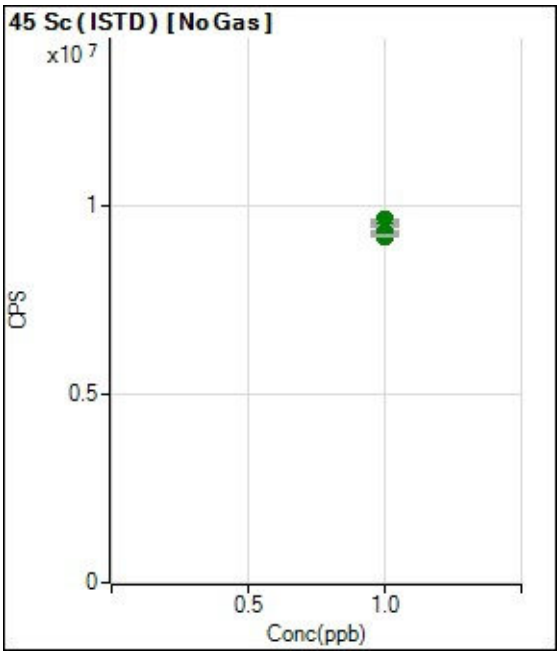
y = 0.0083 * x + 7.3062E-005
R = 1.0000
DL = 0.006095
BEC = 0.008821

Weight: <None>
Min Conc: <None>

Calibration for 016_ICV.d

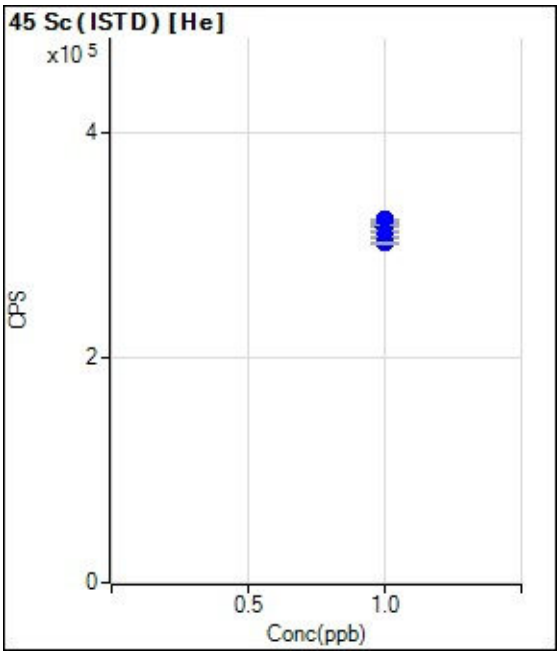


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1891944.38		A	0.5
2	☐	1.000		1896597.74		A	0.1
3	☐	1.000		1896000.39		A	0.8
4	☐	1.000		1870993.30		A	0.4
5	☐	1.000		1848400.68		A	0.6
6	☐	1.000		1809627.07		A	0.4
7	☐	1.000		1777955.99		A	0.4
8	☐	1.000		1725524.92		A	0.3

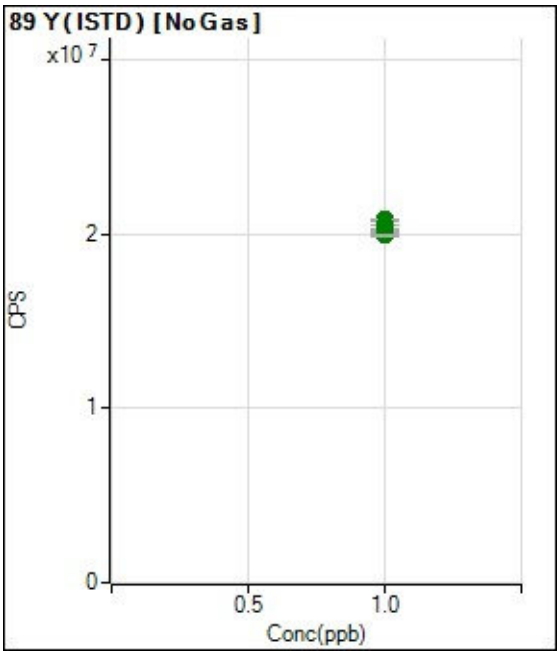


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9527111.72		A	0.3
2	☐	1.000		9533520.83		A	0.1
3	☐	1.000		9607246.22		A	0.7
4	☐	1.000		9557903.55		A	0.2
5	☐	1.000		9442200.76		A	0.6
6	☐	1.000		9279972.08		A	0.6
7	☐	1.000		9253484.13		A	0.6
8	☐	1.000		9178395.50		A	0.5

Calibration for 016_ICV.d

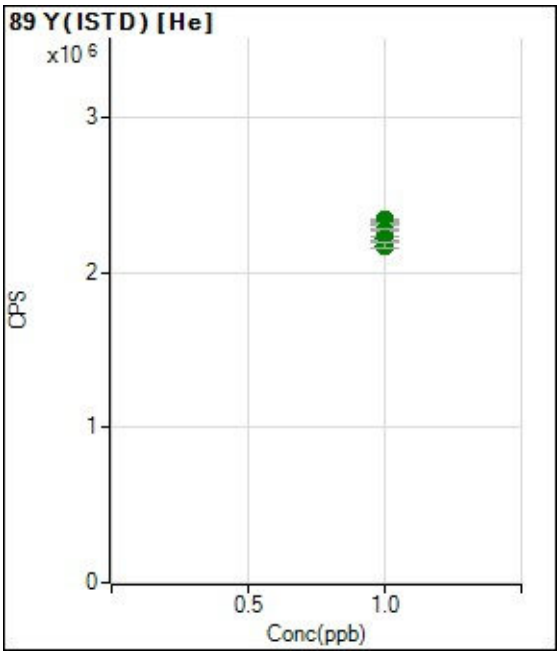


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		322628.47		P	0.3
2	☐	1.000		320240.40		P	0.4
3	☐	1.000		317856.12		P	0.9
4	☐	1.000		315620.51		P	1.4
5	☐	1.000		311626.71		P	0.6
6	☐	1.000		306992.19		P	0.6
7	☐	1.000		307394.16		P	0.2
8	☐	1.000		302072.18		P	0.8

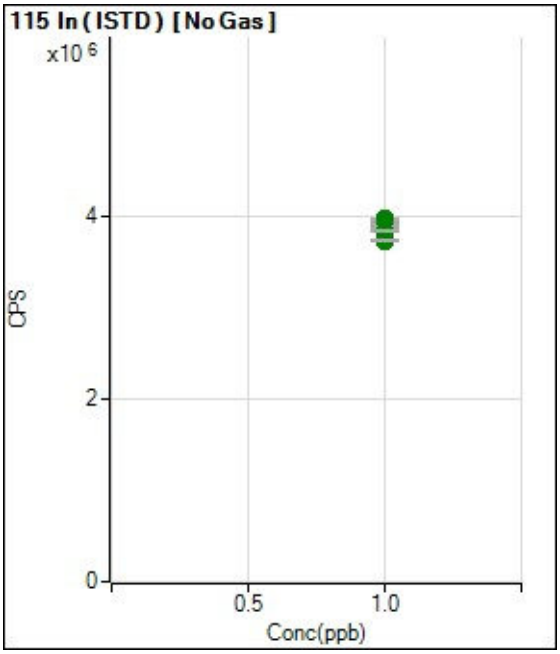


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		20780073.86		A	0.2
2	☐	1.000		20823455.58		A	0.6
3	☐	1.000		20815037.58		A	0.4
4	☐	1.000		20800440.07		A	0.4
5	☐	1.000		20530852.98		A	0.1
6	☐	1.000		20305215.67		A	0.3
7	☐	1.000		20137869.58		A	0.2
8	☐	1.000		19931387.68		A	0.5

Calibration for 016_ICV.d

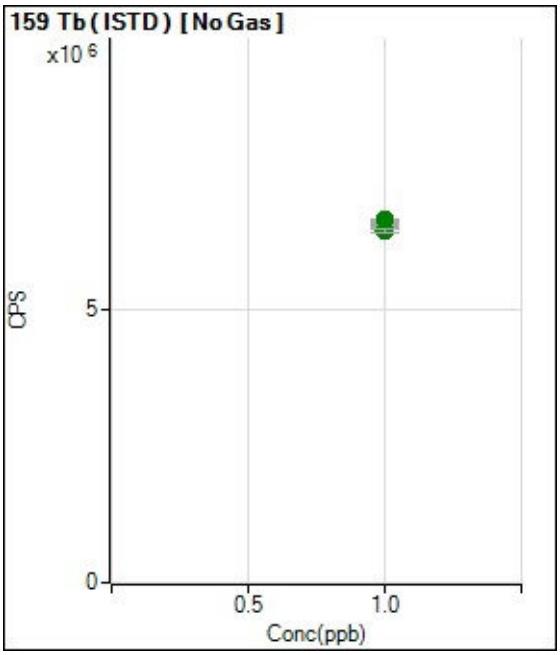


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2338398.40		A	0.4
2	☐	1.000		2334032.73		A	0.5
3	☐	1.000		2322583.63		A	0.5
4	☐	1.000		2308874.40		A	0.6
5	☐	1.000		2273794.89		A	0.3
6	☐	1.000		2221147.25		A	1.1
7	☐	1.000		2208295.70		A	0.4
8	☐	1.000		2173047.69		A	1.6

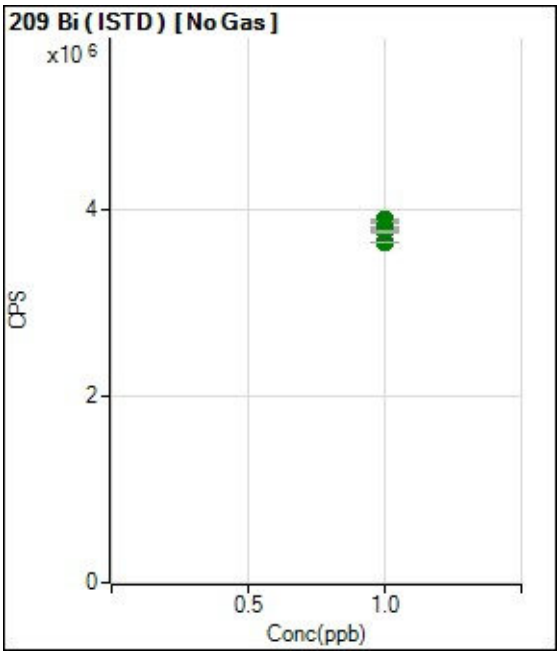


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3938591.75		A	0.6
2	☐	1.000		3952476.21		A	0.5
3	☐	1.000		3977728.95		A	0.1
4	☐	1.000		3965684.49		A	0.3
5	☐	1.000		3924721.34		A	0.4
6	☐	1.000		3892681.63		A	0.7
7	☐	1.000		3841745.67		A	0.5
8	☐	1.000		3741231.89		A	0.4

Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6605696.54		A	0.5
2	☐	1.000		6597181.15		A	0.3
3	☐	1.000		6647510.44		A	0.6
4	☐	1.000		6609924.31		A	0.6
5	☐	1.000		6605935.53		A	0.8
6	☐	1.000		6550982.04		A	0.4
7	☐	1.000		6529300.36		A	0.7
8	☐	1.000		6448405.29		A	1.4



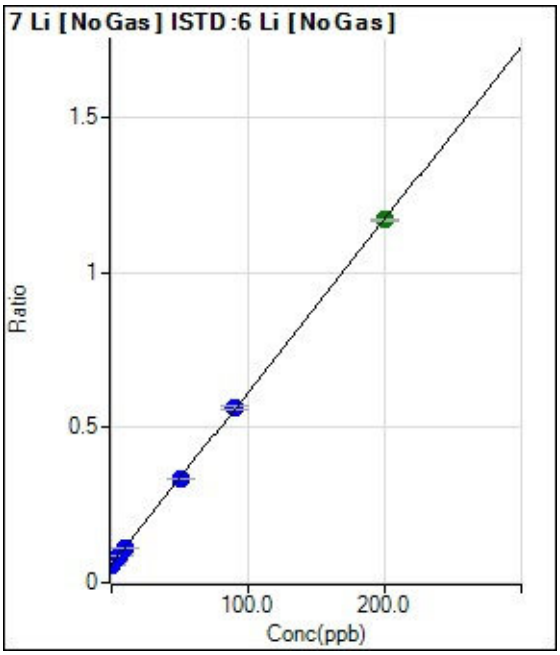
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3879471.23		A	0.4
2	☐	1.000		3865959.71		A	0.4
3	☐	1.000		3871365.26		A	0.2
4	☐	1.000		3890982.76		A	0.6
5	☐	1.000		3872905.13		A	0.3
6	☐	1.000		3812327.49		A	0.6
7	☐	1.000		3771719.43		A	0.5
8	☐	1.000		3653190.13		A	0.3

Calibration for 235_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b\
Analysis File: ICPMS3_201117.batch.bin
DA Date-Time: 2020-11-17 18:35:59
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	226CALB.d	std 1	2020-11-17 18:19:36
2	227CALS.d	std 2	2020-11-17 18:21:17
3	228CALS.d	std 3	2020-11-17 18:22:59
4	229CALS.d	std 4	2020-11-17 18:24:41
5	230CALS.d	std 5	2020-11-17 18:26:23
6	231CALS.d	std 6	2020-11-17 18:28:05
7	232CALS.d	std 7	2020-11-17 18:29:49
8	233CALS.d	std 8	2020-11-17 18:31:34

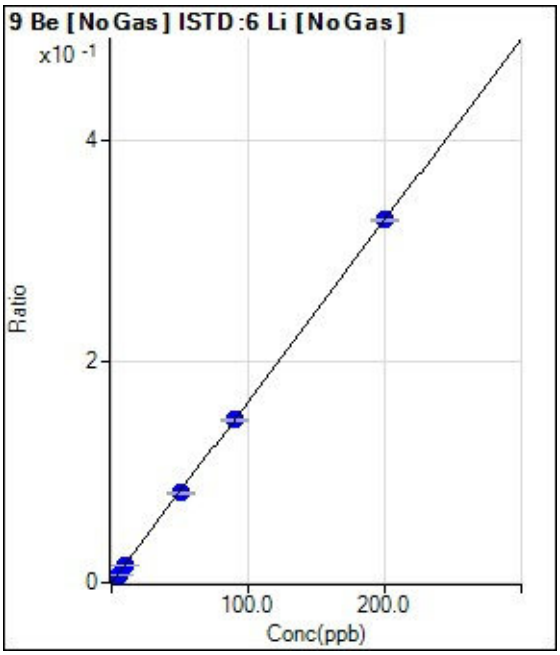
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80743.52	0.0582	P	0.5
2	☐	0.200	0.198	82693.24	0.0593	P	0.8
3	☐	2.000	1.908	95698.29	0.0688	P	1.4
4	☐	5.000	4.790	117334.18	0.0849	P	0.9
5	☐	10.000	9.472	152608.74	0.1109	P	0.9
6	☐	50.000	49.861	448228.16	0.3357	P	0.4
7	☐	90.000	90.885	742402.43	0.5639	P	1.4
8	☐	200.000	199.669	1515095.36	1.1692	A	0.2

y = 0.0056 * x + 0.0582
R = 1.0000
DL = 0.1509
BEC = 10.46

Weight: <None>
Min Conc: <None>

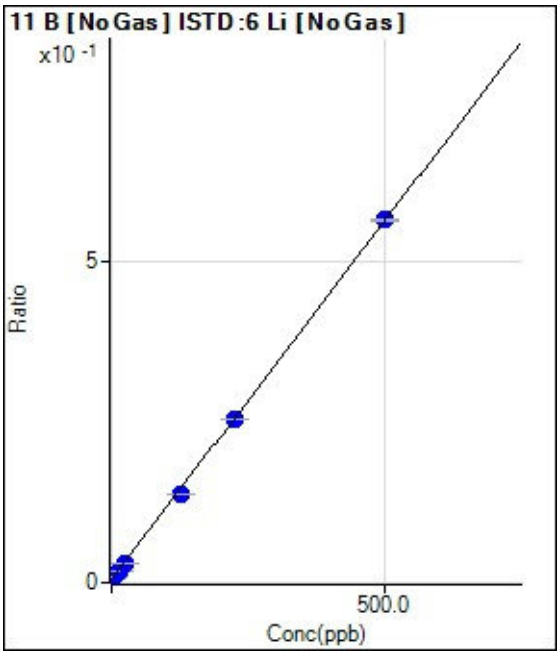


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.69	0.0000	P	43.6
2	☐	0.200	0.176	427.11	0.0003	P	7.3
3	☐	2.000	1.863	4264.98	0.0031	P	5.4
4	☐	5.000	4.692	10641.46	0.0077	P	2.5
5	☐	10.000	9.279	20913.29	0.0152	P	2.7
6	☐	50.000	49.395	107951.32	0.0808	P	0.8
7	☐	90.000	90.129	194170.69	0.1475	P	1.2
8	☐	200.000	200.138	424361.52	0.3275	P	0.2

y = 0.0016 * x + 1.9266E-005
R = 1.0000
DL = 0.01541
BEC = 0.01177

Weight: <None>
Min Conc: <None>

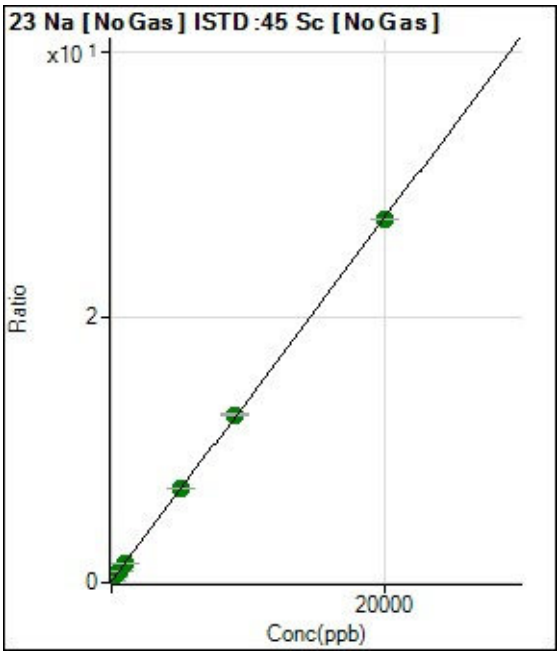
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6932.08	0.0050	P	5.7
2	☐	0.500	0.199	7275.94	0.0052	P	1.7
3	☐	5.000	4.123	13333.20	0.0096	P	1.5
4	☐	12.500	10.787	23520.11	0.0170	P	1.5
5	☐	25.000	22.589	41496.00	0.0302	P	0.6
6	☐	125.000	120.161	185421.25	0.1389	P	0.2
7	☐	225.000	223.951	335023.62	0.2545	P	0.3
8	☐	500.000	501.854	730904.50	0.5640	P	0.3

y = 0.0011 * x + 0.0050
R = 1.0000
DL = 0.7674
BEC = 4.487

Weight: <None>
Min Conc: <None>

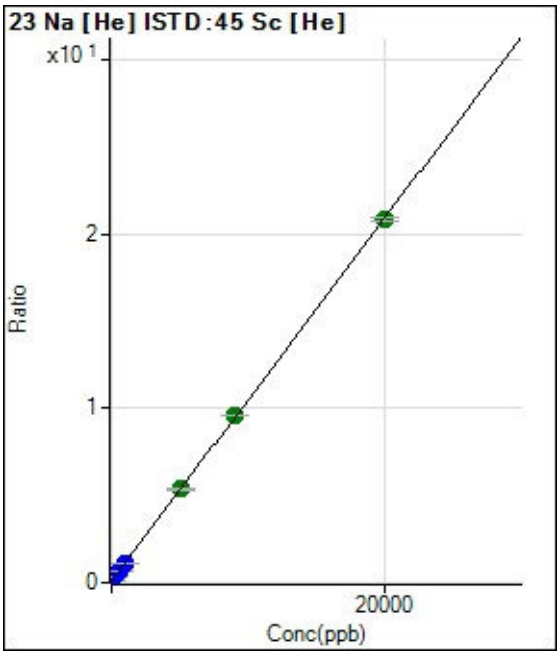


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	911450.21	0.1104	A	2.2
2	☐	20.000	19.824	1141572.23	0.1375	A	0.6
3	☐	200.000	202.911	3232311.21	0.3879	A	0.5
4	☐	500.000	507.233	6690175.15	0.8041	A	1.1
5	☐	1000.000	1004.041	12221629.44	1.4835	A	0.6
6	☐	5000.000	5121.242	58154701.30	7.1143	A	1.4
7	☐	9000.000	9179.009	103858246.07	12.6638	A	1.2
8	☐	20000.000	19888.724	223920613.34	27.3107	A	0.1

y = 0.0014 * x + 0.1104
R = 0.9999
DL = 5.354
BEC = 80.69

Weight: <None>
Min Conc: <None>

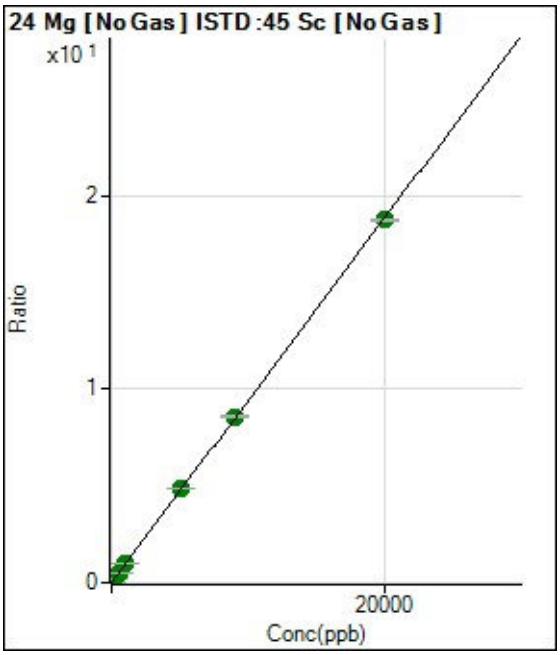
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25090.92	0.0932	P	5.1
2	☐	20.000	19.944	30742.40	0.1139	P	3.9
3	☐	200.000	208.699	82876.36	0.3104	P	0.5
4	☐	500.000	508.349	166537.53	0.6222	P	1.7
5	☐	1000.000	986.903	297658.99	1.1203	P	1.6
6	☐	5000.000	5087.993	1428106.75	5.3886	A	1.3
7	☐	9000.000	9124.902	2542182.88	9.5901	A	0.2
8	☐	20000.000	19922.155	5550930.33	20.8276	A	1.0

y = 0.0010 * x + 0.0932
R = 1.0000
DL = 13.78
BEC = 89.52

Weight: <None>
Min Conc: <None>

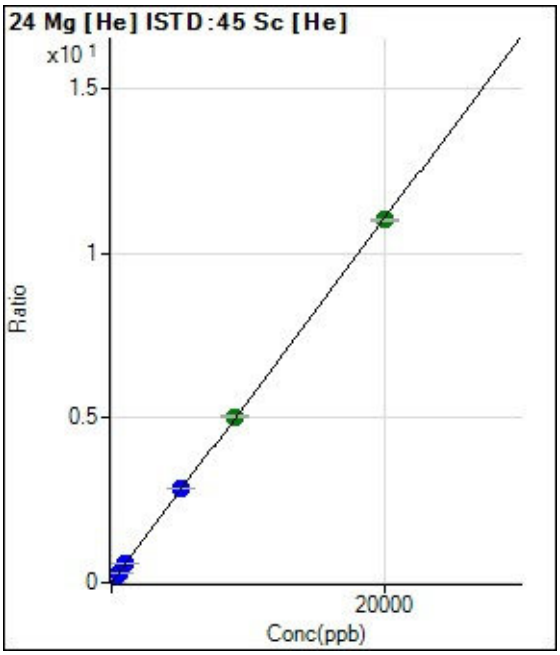


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15797.19	0.0019	P	4.1
2	☐	20.000	20.337	175110.38	0.0211	P	0.9
3	☐	200.000	205.310	1629098.21	0.1955	A	1.0
4	☐	500.000	512.053	4032881.19	0.4847	A	1.1
5	☐	1000.000	1016.704	7912788.42	0.9605	A	0.6
6	☐	5000.000	5166.876	39838064.41	4.8734	A	0.2
7	☐	9000.000	9121.887	70550512.28	8.6023	A	0.6
8	☐	20000.000	19902.242	153864424.38	18.7663	A	0.3

y = 9.4283E-004 * x + 0.0019
R = 0.9999
DL = 0.2473
BEC = 2.029

Weight: <None>
Min Conc: <None>

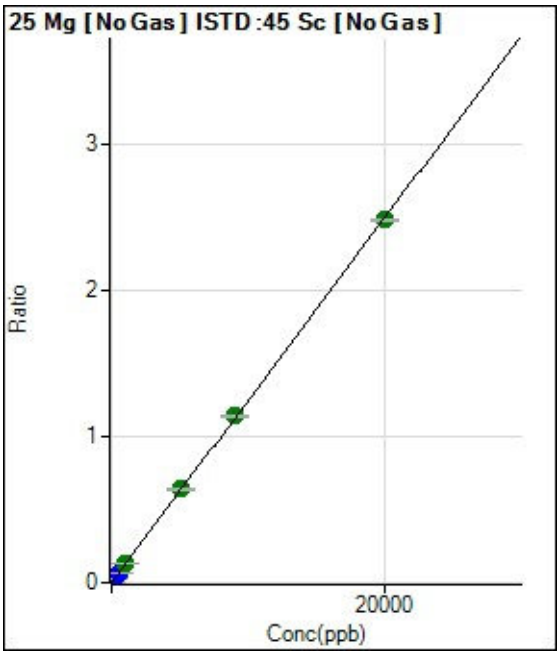
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.35	0.0009	P	18.5
2	☐	20.000	19.387	3147.24	0.0117	P	18.3
3	☐	200.000	205.893	30689.11	0.1149	P	4.2
4	☐	500.000	503.683	74884.51	0.2798	P	2.4
5	☐	1000.000	1011.867	149092.68	0.5611	P	1.3
6	☐	5000.000	5141.651	754701.87	2.8475	P	0.6
7	☐	9000.000	9095.159	1335020.60	5.0363	A	1.1
8	☐	20000.000	19921.022	2939701.62	11.0298	A	0.5

y = 5.5363E-004 * x + 9.4131E-004
R = 1.0000
DL = 0.9442
BEC = 1.7

Weight: <None>
Min Conc: <None>

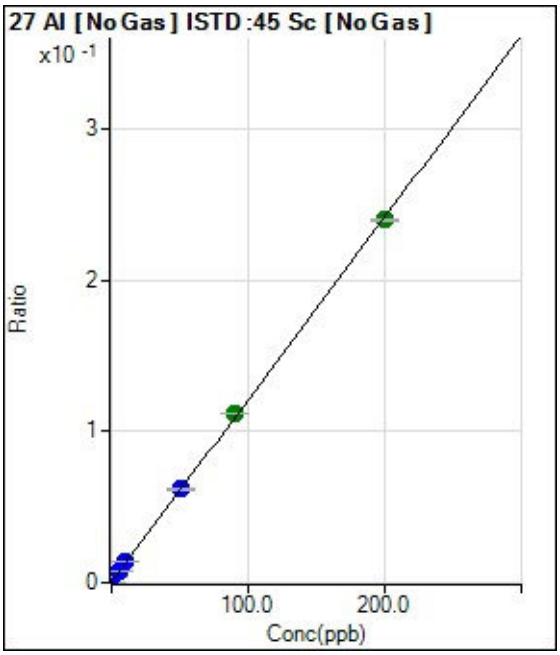


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2160.35	0.0003	P	11.6
2	☐	20.000	19.467	22352.66	0.0027	P	1.3
3	☐	200.000	203.047	213411.25	0.0256	P	2.1
4	☐	500.000	499.139	520627.36	0.0626	P	1.3
5	☐	1000.000	1011.027	1041937.77	0.1265	A	0.7
6	☐	5000.000	5127.476	5234484.29	0.6403	A	0.8
7	☐	9000.000	9143.223	9363086.53	1.1417	A	0.7
8	☐	20000.000	19903.121	20373458.86	2.4849	A	0.7

y = 1.2483E-004 * x + 2.6156E-004
R = 0.9999
DL = 0.7295
BEC = 2.095

Weight: <None>
Min Conc: <None>

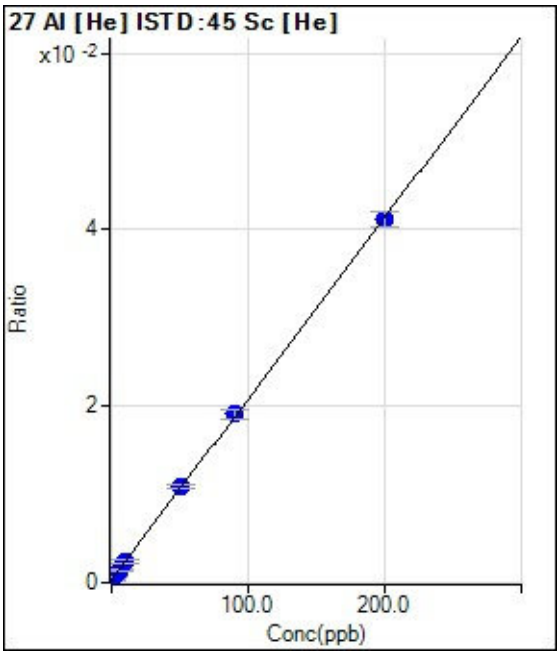
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3974.28	0.0005	P	7.3
2	☐			50763.26	0.0061	P	4.9
3	☐	2.000	3.898	43116.34	0.0052	P	48.3
4	☐	5.000	6.009	64231.12	0.0077	P	1.4
5	☐	10.000	10.745	110592.86	0.0134	P	0.9
6	☐	50.000	50.781	503957.57	0.0616	P	1.0
7	☐	90.000	92.331	916074.31	0.1117	A	0.7
8	☐	200.000	198.674	1966085.96	0.2398	A	0.3

y = 0.0012 * x + 4.8117E-004
R = 0.9999
DL = 0.0878
BEC = 0.3995

Weight: <None>
Min Conc: <None>

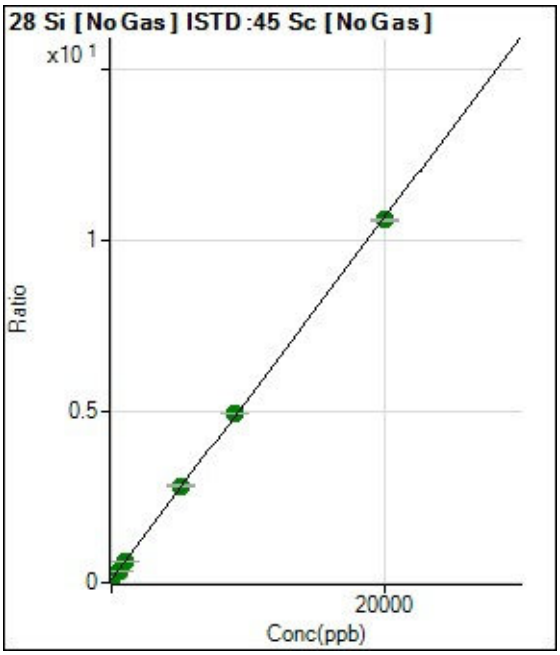


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.35	0.0003	P	104.5
2	☐			270.01	0.0010	P	7.8
3	☐	2.000	1.838	183.34	0.0007	P	18.8
4	☐	5.000	4.930	353.34	0.0013	P	16.9
5	☐	10.000	9.988	626.69	0.0024	P	14.2
6	☐	50.000	51.213	2867.02	0.0108	P	3.9
7	☐	90.000	91.873	5077.68	0.0192	P	5.6
8	☐	200.000	198.858	10957.81	0.0411	P	4.4

y = 2.0516E-004 * x + 3.0922E-004
R = 0.9999
DL = 4.724
BEC = 1.507

Weight: <None>
Min Conc: <None>

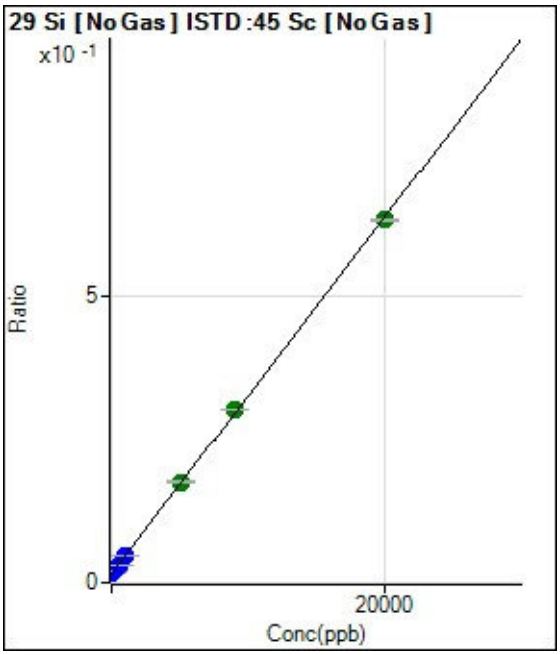
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	755728.23	0.0915	P	0.9
2	☐	20.000	16.722	833155.97	0.1003	A	0.6
3	☐	200.000	200.268	1643913.81	0.1973	A	1.6
4	☐	500.000	504.904	2980020.65	0.3582	A	0.8
5	☐	1000.000	1013.710	5164392.94	0.6269	A	0.1
6	☐	5000.000	5181.428	23117267.32	2.8280	A	0.7
7	☐	9000.000	9198.607	40593465.21	4.9496	A	0.5
8	☐	20000.000	19864.462	86769239.42	10.5827	A	0.8

y = 5.2814E-004 * x + 0.0915
R = 0.9999
DL = 4.84
BEC = 173.2

Weight: <None>
Min Conc: <None>

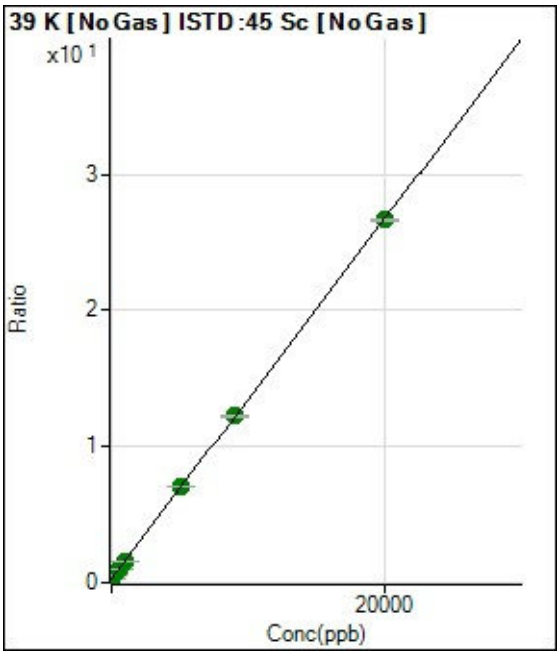


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	129200.63	0.0156	P	0.8
2	☐	20.000	11.513	132864.64	0.0160	P	0.9
3	☐	200.000	196.265	181143.19	0.0217	P	0.6
4	☐	500.000	496.427	258398.77	0.0311	P	0.6
5	☐	1000.000	1003.072	385445.71	0.0468	P	0.1
6	☐	5000.000	5162.937	1438274.26	0.1759	A	0.7
7	☐	9000.000	9204.346	2472147.10	0.3014	A	0.9
8	☐	20000.000	19867.292	5185996.22	0.6325	A	0.3

y = 3.1049E-005 * x + 0.0156
R = 0.9999
DL = 11.38
BEC = 503.8

Weight: <None>
Min Conc: <None>

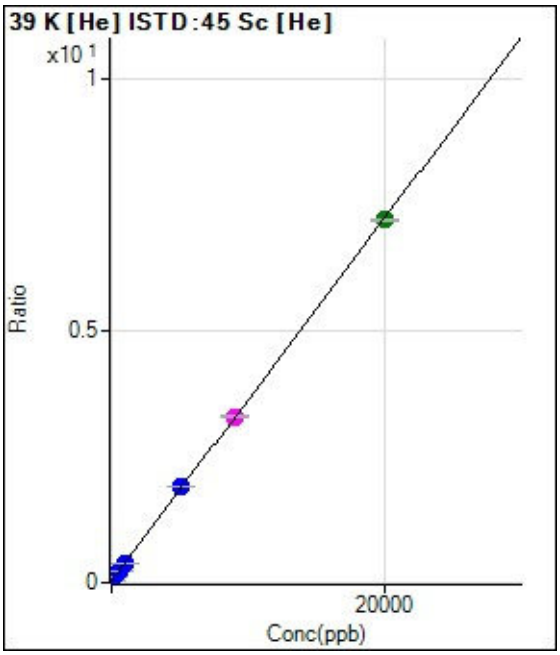
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2383771.89	0.2886	A	0.2
2	☐	20.000	19.480	2610276.47	0.3143	A	0.6
3	☐	200.000	199.095	4596106.29	0.5515	A	0.4
4	☐	500.000	499.048	7884513.22	0.9476	A	0.5
5	☐	1000.000	995.922	13212168.13	1.6037	A	0.3
6	☐	5000.000	5092.503	57332230.81	7.0133	A	0.5
7	☐	9000.000	9045.660	100332055.17	12.2335	A	0.4
8	☐	20000.000	19956.564	218436623.41	26.6415	A	0.4

y = 0.0013 * x + 0.2886
R = 1.0000
DL = 1.311
BEC = 218.6

Weight: <None>
Min Conc: <None>

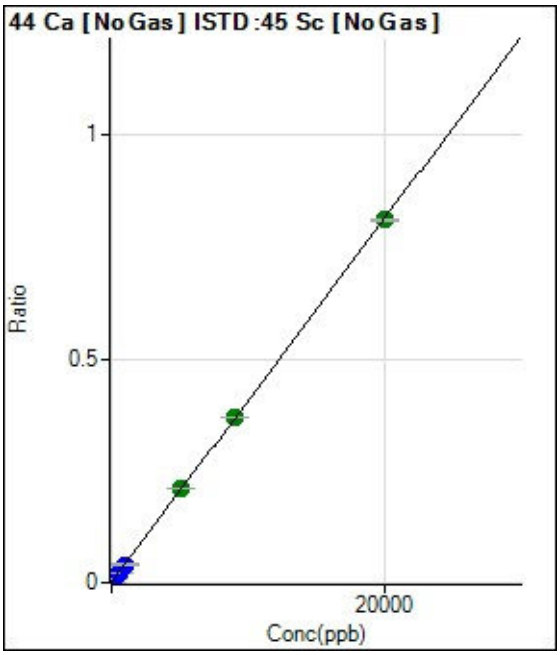


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9737.40	0.0362	P	3.2
2	☐	20.000	19.146	11619.12	0.0431	P	4.0
3	☐	200.000	204.727	29353.30	0.1099	P	5.9
4	☐	500.000	506.495	58513.50	0.2186	P	3.2
5	☐	1000.000	989.910	104358.37	0.3928	P	1.8
6	☐	5000.000	5222.033	508165.93	1.9174	P	0.8
7	☐	9000.000	9059.028	874662.67	3.2997	M	1.3
8	☐	20000.000	19918.225	1922100.44	7.2117	A	0.4

y = 3.6025E-004 * x + 0.0362
R = 0.9999
DL = 9.493
BEC = 100.4

Weight: <None>
Min Conc: <None>

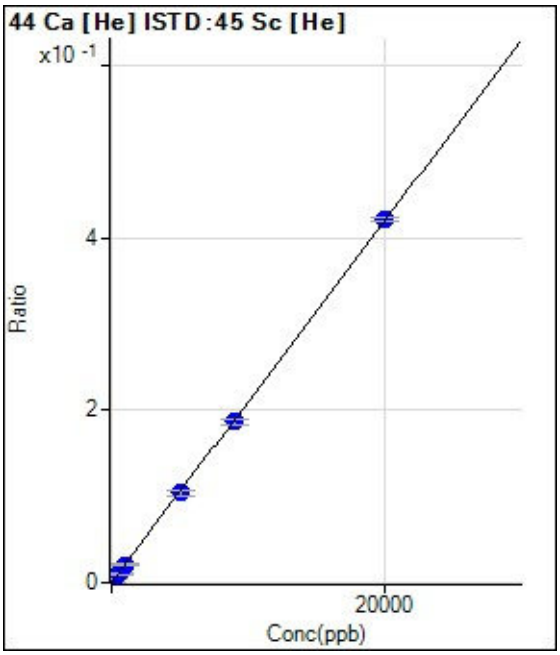
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6135.07	0.0007	P	13.8
2	☐	20.000	22.874	13888.22	0.0017	P	5.7
3	☐	200.000	196.752	72836.57	0.0087	P	0.3
4	☐	500.000	498.880	174896.71	0.0210	P	2.2
5	☐	1000.000	983.689	335508.41	0.0407	P	0.9
6	☐	5000.000	5125.653	1709129.56	0.2091	A	0.2
7	☐	9000.000	9097.484	3038735.58	0.3705	A	0.5
8	☐	20000.000	19925.592	6646489.69	0.8106	A	0.7

y = 4.0646E-005 * x + 7.4276E-004
R = 1.0000
DL = 7.579
BEC = 18.27

Weight: <None>
Min Conc: <None>

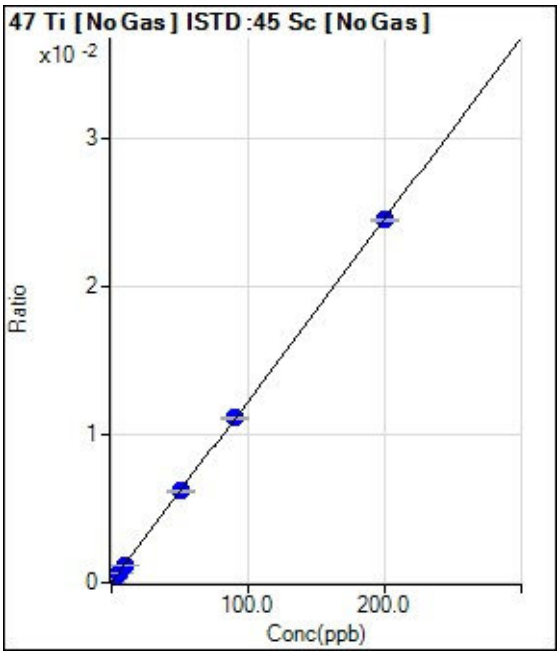


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0002	P	91.9
2	☐	20.000	25.786	213.35	0.0008	P	65.3
3	☐	200.000	212.246	1253.50	0.0047	P	10.9
4	☐	500.000	475.722	2733.81	0.0102	P	16.4
5	☐	1000.000	982.902	5534.93	0.0208	P	8.9
6	☐	5000.000	4942.576	27495.95	0.1038	P	4.7
7	☐	9000.000	8884.230	49384.56	0.1863	P	2.8
8	☐	20000.000	20067.786	112072.86	0.4205	P	1.1

y = 2.0942E-005 * x + 2.4832E-004
R = 1.0000
DL = 32.69
BEC = 11.86

Weight: <None>
Min Conc: <None>

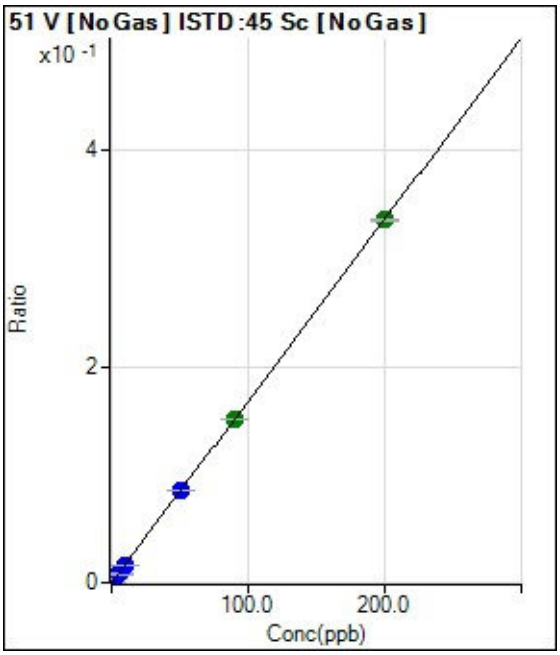
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.11	0.0000	P	23.8
2	☐	0.200	0.285	400.42	0.0000	P	21.9
3	☐	2.000	1.774	1922.10	0.0002	P	11.6
4	☐	5.000	5.001	5206.30	0.0006	P	3.2
5	☐	10.000	9.731	9926.98	0.0012	P	3.0
6	☐	50.000	50.518	50684.08	0.0062	P	2.5
7	☐	90.000	90.557	91060.91	0.0111	P	1.2
8	☐	200.000	199.635	200553.97	0.0245	P	0.3

y = 1.2246E-004 * x + 1.3327E-005
R = 1.0000
DL = 0.07783
BEC = 0.1088

Weight: <None>
Min Conc: <None>

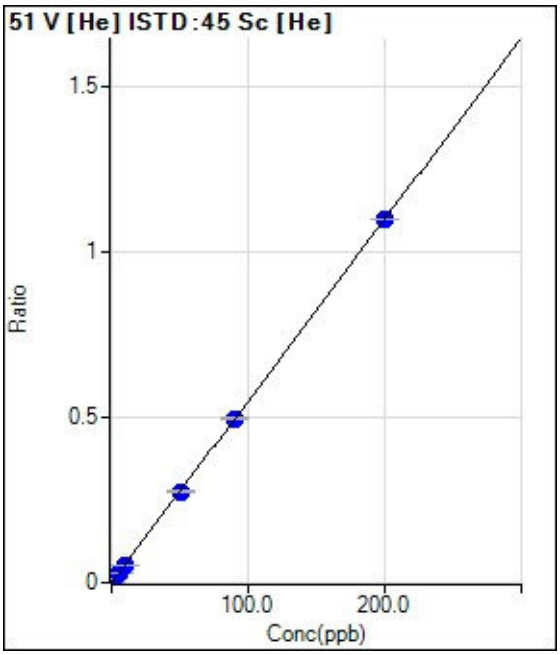


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.39	0.0000	P	621.4
2	☐	0.200	0.004	185.78	0.0000	P	919.2
3	☐	2.000	2.035	28627.79	0.0034	P	6.8
4	☐	5.000	4.768	66789.28	0.0080	P	1.5
5	☐	10.000	9.837	136279.76	0.0165	P	1.7
6	☐	50.000	50.747	697046.11	0.0853	P	0.5
7	☐	90.000	89.951	1239486.00	0.1511	A	0.6
8	☐	200.000	199.849	2752943.50	0.3358	A	0.5

y = 0.0017 * x + 1.6045E-005
R = 1.0000
DL = 0.178
BEC = 0.009551

Weight: <None>
Min Conc: <None>

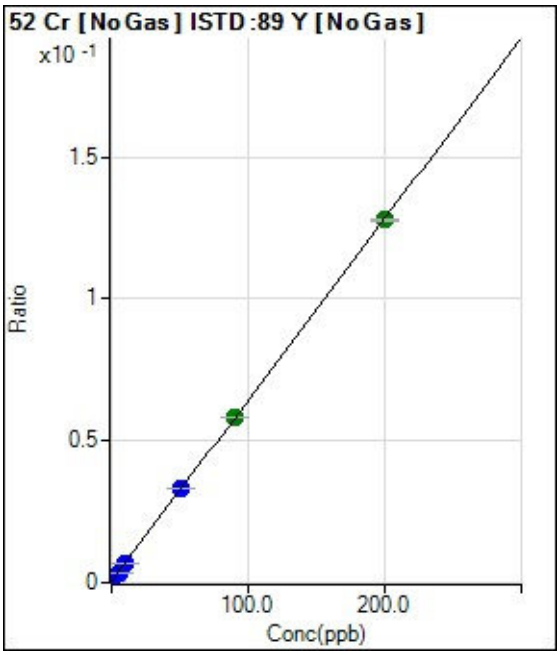
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0004	P	11.7
2	☐	0.200	0.171	350.36	0.0013	P	15.0
3	☐	2.000	1.965	2980.03	0.0112	P	5.5
4	☐	5.000	4.856	7239.28	0.0270	P	3.2
5	☐	10.000	9.692	14248.49	0.0536	P	1.3
6	☐	50.000	50.116	73097.38	0.2758	P	0.9
7	☐	90.000	90.411	131812.61	0.4973	P	0.8
8	☐	200.000	199.806	292779.31	1.0985	P	0.1

y = 0.0055 * x + 3.5930E-004
R = 1.0000
DL = 0.02285
BEC = 0.06537

Weight: <None>
Min Conc: <None>

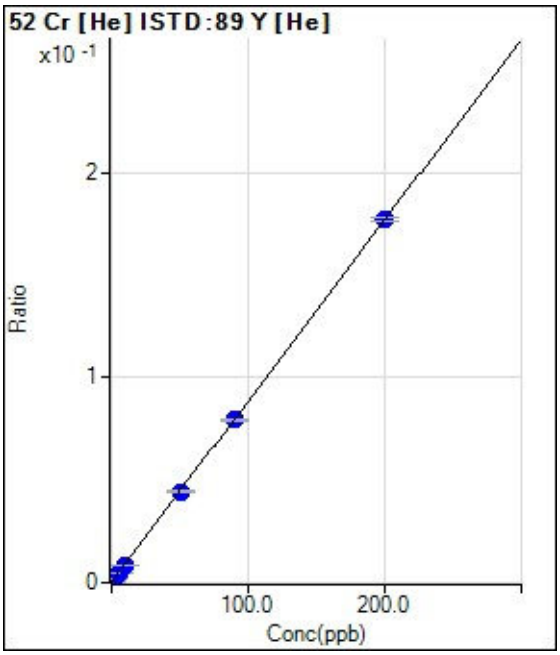


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10568.12	0.0005	P	1.8
2	☐	0.200	0.219	13346.70	0.0007	P	2.4
3	☐	2.000	1.986	35086.87	0.0018	P	2.9
4	☐	5.000	4.951	71648.29	0.0037	P	0.6
5	☐	10.000	9.906	131549.66	0.0069	P	0.3
6	☐	50.000	51.097	628058.23	0.0331	P	0.5
7	☐	90.000	90.376	1100190.17	0.0582	A	0.4
8	☐	200.000	199.563	2421396.87	0.1278	A	0.2

y = 6.3750E-004 * x + 5.4926E-004
R = 1.0000
DL = 0.04549
BEC = 0.8616

Weight: <None>
Min Conc: <None>

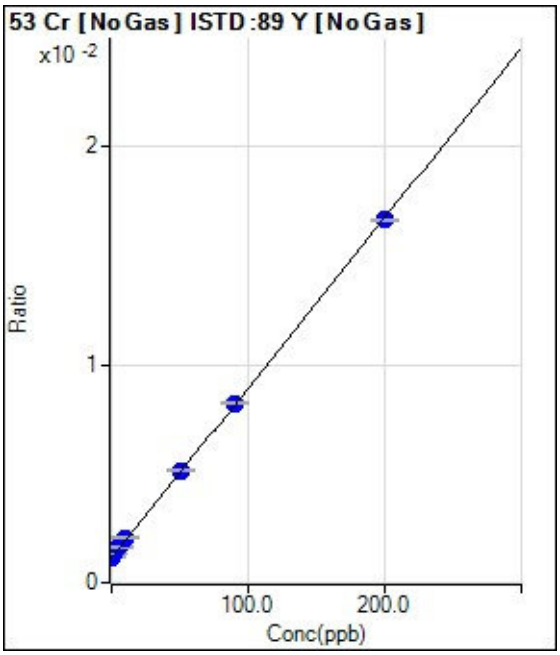
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	754.12	0.0004	P	6.9
2	☐	0.200	0.194	1124.52	0.0005	P	9.1
3	☐	2.000	1.825	4151.52	0.0020	P	6.7
4	☐	5.000	4.873	9739.99	0.0047	P	5.0
5	☐	10.000	9.447	18043.43	0.0087	P	1.3
6	☐	50.000	50.017	91246.17	0.0445	P	1.0
7	☐	90.000	89.494	161367.19	0.0793	P	0.6
8	☐	200.000	200.256	360959.80	0.1770	P	1.0

y = 8.8188E-004 * x + 3.5876E-004
R = 1.0000
DL = 0.08375
BEC = 0.4068

Weight: <None>
Min Conc: <None>

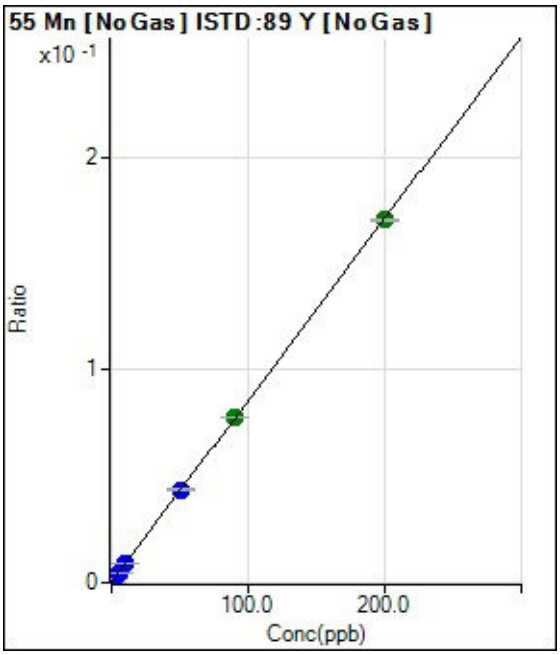


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21702.49	0.0011	P	1.0
2	☐	0.200	1.682	24399.74	0.0013	P	0.9
3	☐	2.000	2.690	25863.95	0.0013	P	2.0
4	☐	5.000	6.476	31588.39	0.0016	P	0.5
5	☐	10.000	11.983	39546.75	0.0021	P	1.4
6	☐	50.000	51.568	97740.73	0.0052	P	1.4
7	☐	90.000	91.251	156119.83	0.0083	P	1.5
8	☐	200.000	198.901	315703.64	0.0167	P	0.4

y = 7.8082E-005 * x + 0.0011
R = 0.9999
DL = 0.4495
BEC = 14.45

Weight: <None>
Min Conc: <None>

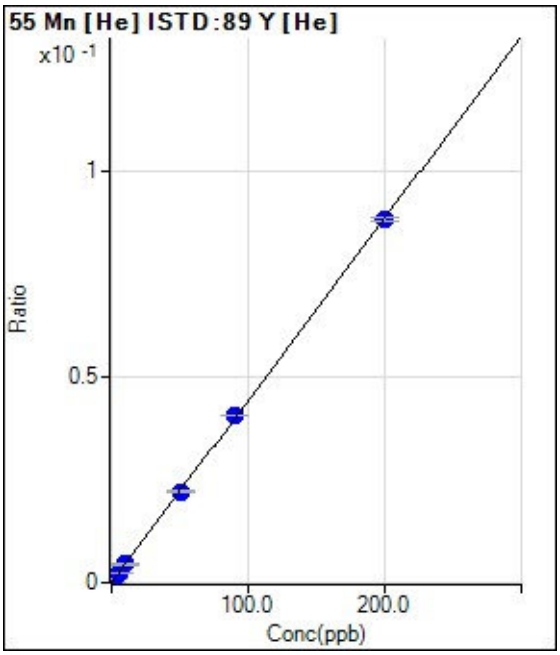
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4865.83	0.0003	P	2.8
2	☐	0.200	0.210	8377.75	0.0004	P	2.9
3	☐	2.000	2.051	38727.20	0.0020	P	0.9
4	☐	5.000	5.072	88573.89	0.0046	P	1.6
5	☐	10.000	9.951	167598.73	0.0087	P	1.3
6	☐	50.000	50.939	829064.53	0.0437	P	0.9
7	☐	90.000	90.823	1470889.59	0.0778	A	0.1
8	☐	200.000	199.395	3229525.37	0.1704	A	0.5

y = 8.5340E-004 * x + 2.5290E-004
R = 1.0000
DL = 0.02534
BEC = 0.2963

Weight: <None>
Min Conc: <None>

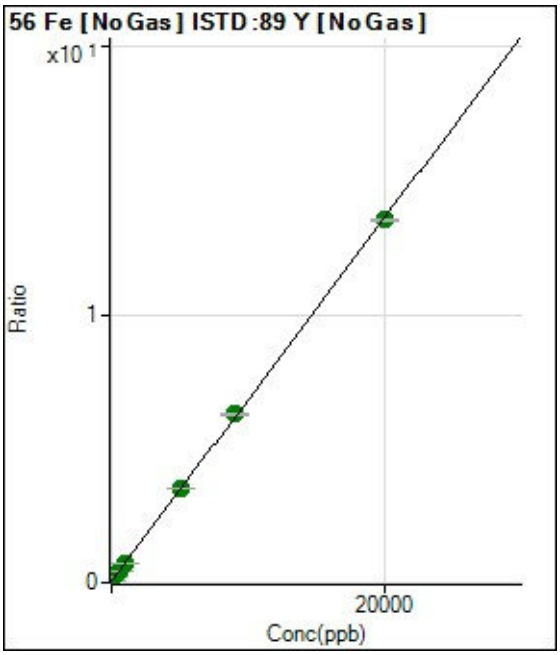


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0000	P	42.8
2	☐	0.200	0.227	310.32	0.0001	P	9.0
3	☐	2.000	2.009	1968.82	0.0009	P	5.6
4	☐	5.000	4.879	4605.46	0.0022	P	4.8
5	☐	10.000	9.976	9245.85	0.0045	P	5.0
6	☐	50.000	49.874	45313.70	0.0221	P	1.0
7	☐	90.000	91.674	82547.03	0.0406	P	0.7
8	☐	200.000	199.283	179718.69	0.0881	P	0.9

y = 4.4188E-004 * x + 4.5984E-005
R = 1.0000
DL = 0.1336
BEC = 0.1041

Weight: <None>
Min Conc: <None>

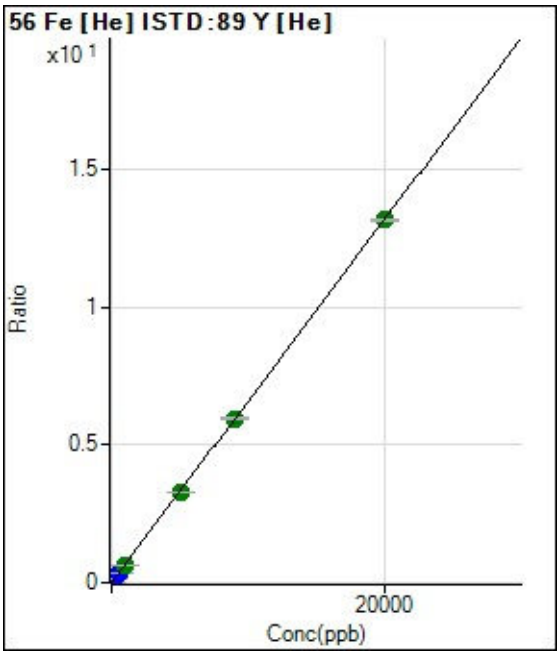
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1053666.40	0.0548	A	1.6
2	☐	20.000	19.134	1312515.59	0.0677	A	1.3
3	☐	200.000	197.513	3648667.66	0.1887	A	0.5
4	☐	500.000	504.083	7670321.79	0.3967	A	0.6
5	☐	1000.000	993.913	13969770.62	0.7290	A	1.1
6	☐	5000.000	5102.711	66669543.16	3.5160	A	0.3
7	☐	9000.000	9184.332	118877060.99	6.2847	A	0.5
8	☐	20000.000	19891.601	256747397.40	13.5477	A	0.4

y = 6.7832E-004 * x + 0.0548
R = 0.9999
DL = 3.953
BEC = 80.74

Weight: <None>
Min Conc: <None>

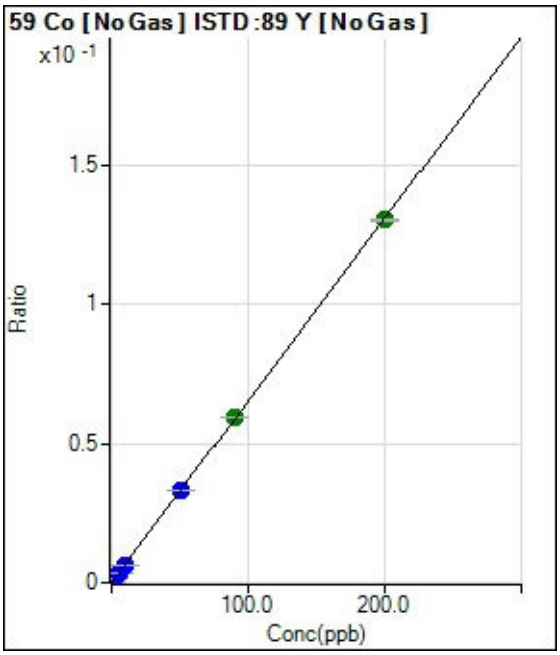


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7896.41	0.0038	P	11.0
2	☐	20.000	21.034	37338.32	0.0176	P	6.4
3	☐	200.000	205.770	293580.17	0.1392	P	1.9
4	☐	500.000	519.272	723010.22	0.3456	P	0.4
5	☐	1000.000	976.769	1342873.89	0.6468	A	0.4
6	☐	5000.000	4991.638	6750621.15	3.2900	A	0.5
7	☐	9000.000	9048.893	12132974.82	5.9610	A	0.5
8	☐	20000.000	19980.710	26839432.10	13.1579	A	0.5

y = 6.5834E-004 * x + 0.0038
R = 1.0000
DL = 1.881
BEC = 5.708

Weight: <None>
Min Conc: <None>

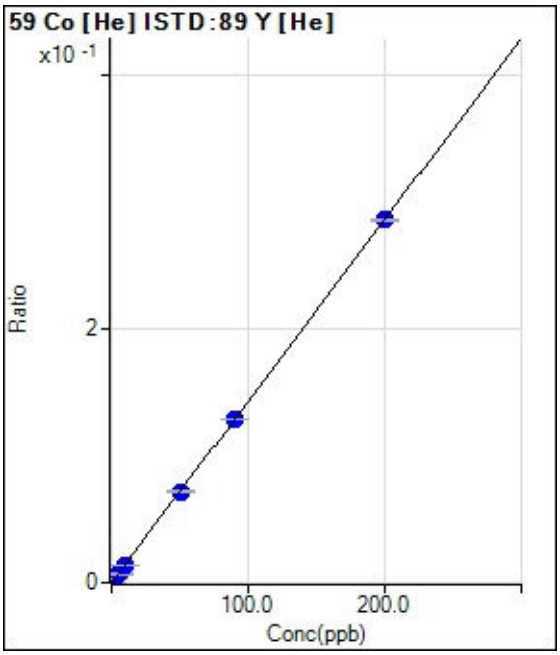
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	550.57	0.0000	P	18.8
2	☐	0.200	0.193	2993.37	0.0002	P	5.8
3	☐	2.000	2.018	26004.44	0.0013	P	2.4
4	☐	5.000	4.994	63544.48	0.0033	P	0.6
5	☐	10.000	9.896	124264.90	0.0065	P	1.9
6	☐	50.000	50.751	628319.15	0.0331	P	0.8
7	☐	90.000	90.887	1122063.76	0.0593	A	0.5
8	☐	200.000	199.418	2465964.93	0.1301	A	0.6

y = 6.5237E-004 * x + 2.8610E-005
R = 1.0000
DL = 0.02476
BEC = 0.04386

Weight: <None>
Min Conc: <None>

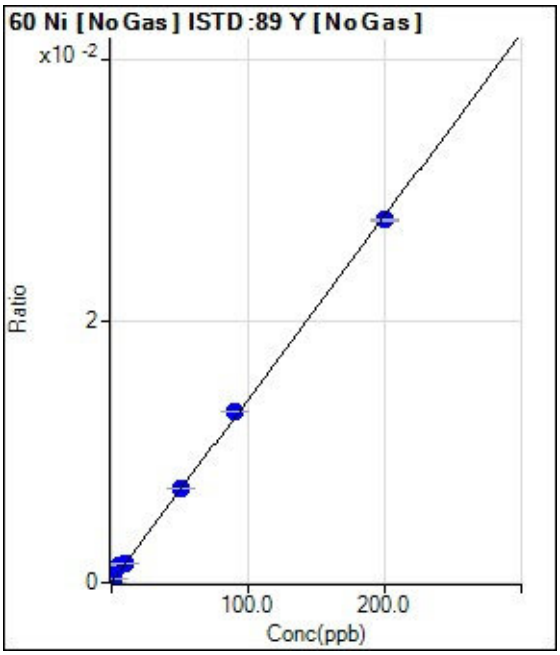


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.41	0.0000	P	39.6
2	☐	0.200	0.197	670.70	0.0003	P	27.1
3	☐	2.000	1.922	5860.57	0.0028	P	6.3
4	☐	5.000	4.795	14398.90	0.0069	P	2.8
5	☐	10.000	9.706	28849.57	0.0139	P	0.9
6	☐	50.000	50.122	146943.96	0.0716	P	1.0
7	☐	90.000	89.958	261553.65	0.1285	P	0.6
8	☐	200.000	200.009	582714.54	0.2857	P	0.3

y = 0.0014 * x + 3.4959E-005
R = 1.0000
DL = 0.02907
BEC = 0.02448

Weight: <None>
Min Conc: <None>

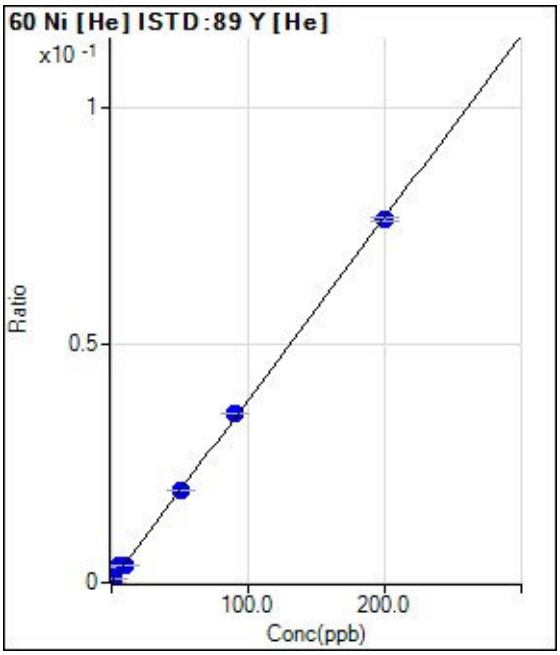
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.73	0.0000	P	5.6
2	☐	0.200	0.234	1021.07	0.0001	P	4.0
3	☐	2.000	2.114	6100.88	0.0003	P	2.6
4	☐	5.000	9.022	24787.53	0.0013	P	1.8
5	☐	10.000	10.002	27191.23	0.0014	P	1.5
6	☐	50.000	51.494	136944.22	0.0072	P	0.9
7	☐	90.000	93.421	247542.60	0.0131	P	0.7
8	☐	200.000	197.986	525187.07	0.0277	P	0.5

y = 1.3987E-004 * x + 1.9945E-005
R = 0.9996
DL = 0.02392
BEC = 0.1426

Weight: <None>
Min Conc: <None>

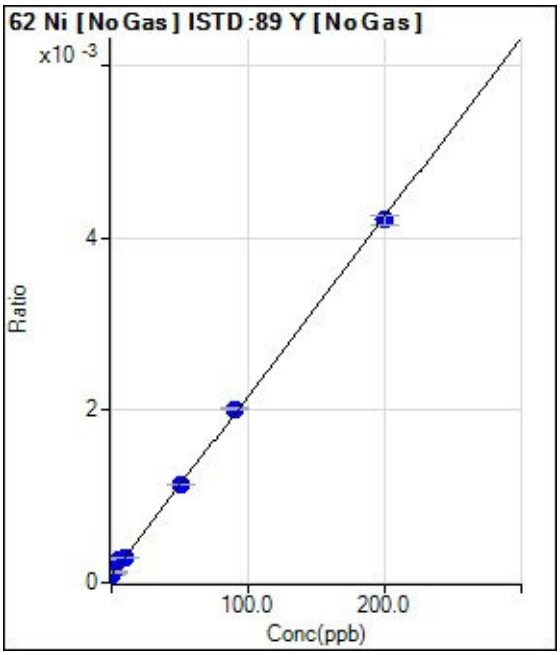


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.41	0.0000	P	42.0
2	☐	0.200	0.236	266.94	0.0001	P	28.1
3	☐	2.000	1.871	1588.38	0.0008	P	2.6
4	☐	5.000	8.953	7262.65	0.0035	P	3.9
5	☐	10.000	9.432	7589.83	0.0037	P	1.7
6	☐	50.000	50.730	40028.87	0.0195	P	0.6
7	☐	90.000	92.278	72165.85	0.0355	P	0.3
8	☐	200.000	198.723	155667.32	0.0763	P	1.1

y = 3.8385E-004 * x + 3.4959E-005
R = 0.9997
DL = 0.1147
BEC = 0.09107

Weight: <None>
Min Conc: <None>

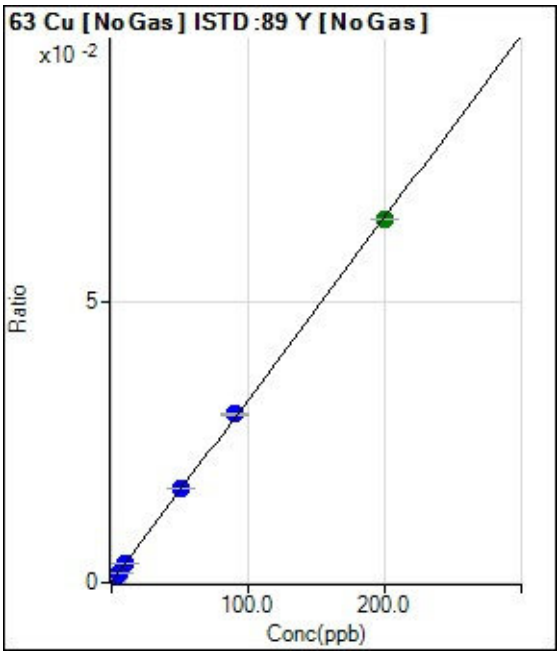
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1665.14	0.0001	P	8.4
2	☐	0.200	-0.013	1671.81	0.0001	P	5.6
3	☐	2.000	2.041	2492.77	0.0001	P	11.2
4	☐	5.000	8.825	5219.63	0.0003	P	1.5
5	☐	10.000	9.754	5543.42	0.0003	P	3.5
6	☐	50.000	50.804	21662.48	0.0011	P	0.5
7	☐	90.000	92.961	38185.17	0.0020	P	1.4
8	☐	200.000	198.383	79772.20	0.0042	P	2.6

y = 2.0784E-005 * x + 8.6537E-005
R = 0.9997
DL = 1.045
BEC = 4.164

Weight: <None>
Min Conc: <None>

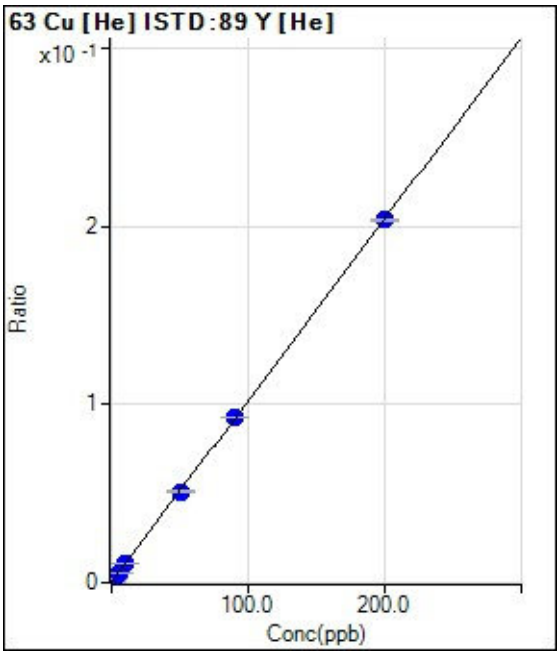


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2118.99	0.0001	P	4.1
2	☐	0.200	0.418	4752.33	0.0002	P	4.2
3	☐	2.000	2.045	14919.99	0.0008	P	4.6
4	☐	5.000	5.199	34655.63	0.0018	P	1.0
5	☐	10.000	10.280	65857.90	0.0034	P	1.7
6	☐	50.000	51.578	318531.40	0.0168	P	0.4
7	☐	90.000	92.021	565269.37	0.0299	P	0.8
8	☐	200.000	198.676	1220335.91	0.0644	A	0.2

y = 3.2356E-004 * x + 1.1014E-004
R = 0.9999
DL = 0.04196
BEC = 0.3404

Weight: <None>
Min Conc: <None>

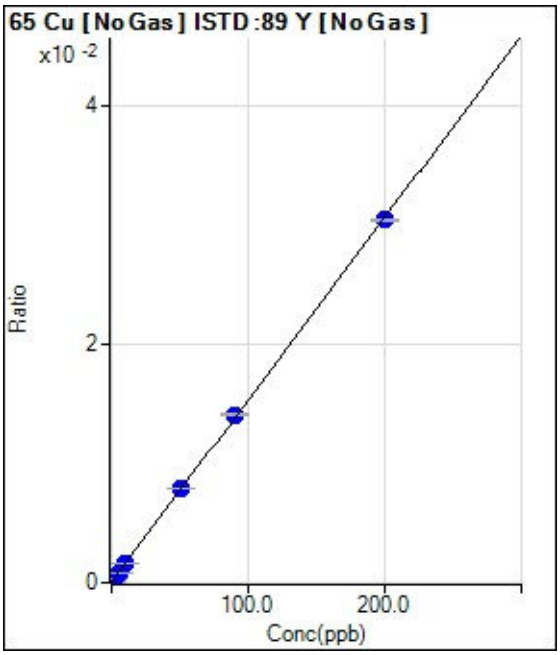
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	650.68	0.0003	P	6.0
2	☐	0.200	0.326	1361.45	0.0006	P	9.6
3	☐	2.000	1.965	4879.18	0.0023	P	3.0
4	☐	5.000	4.845	10985.58	0.0053	P	2.6
5	☐	10.000	10.062	21949.92	0.0106	P	1.0
6	☐	50.000	49.932	105131.76	0.0512	P	1.2
7	☐	90.000	90.941	189420.74	0.0931	P	0.9
8	☐	200.000	199.594	415885.61	0.2039	P	0.5

y = 0.0010 * x + 3.0966E-004
R = 1.0000
DL = 0.05433
BEC = 0.3036

Weight: <None>
Min Conc: <None>

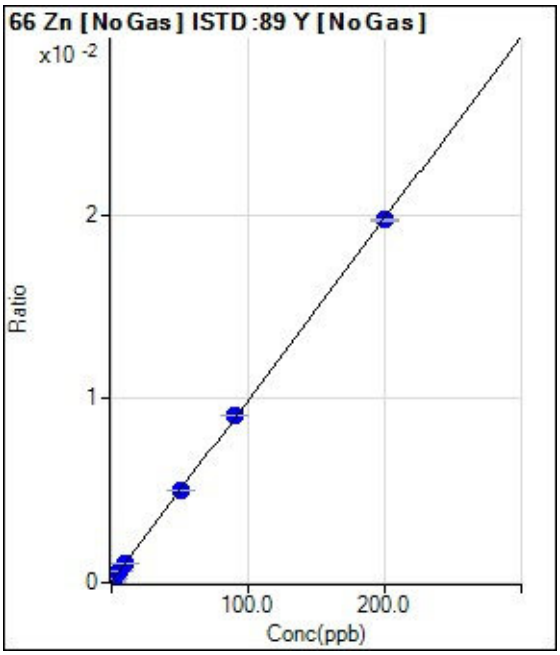


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1087.82	0.0001	P	7.5
2	☐	0.200	0.368	2185.74	0.0001	P	13.9
3	☐	2.000	2.071	7215.93	0.0004	P	1.7
4	☐	5.000	5.081	16119.21	0.0008	P	0.6
5	☐	10.000	10.518	31912.94	0.0017	P	2.6
6	☐	50.000	51.106	149283.82	0.0079	P	0.9
7	☐	90.000	91.817	266706.28	0.0141	P	1.2
8	☐	200.000	198.877	577513.93	0.0305	P	0.5

y = 1.5294E-004 * x + 5.6535E-005
R = 0.9999
DL = 0.08363
BEC = 0.3696

Weight: <None>
Min Conc: <None>

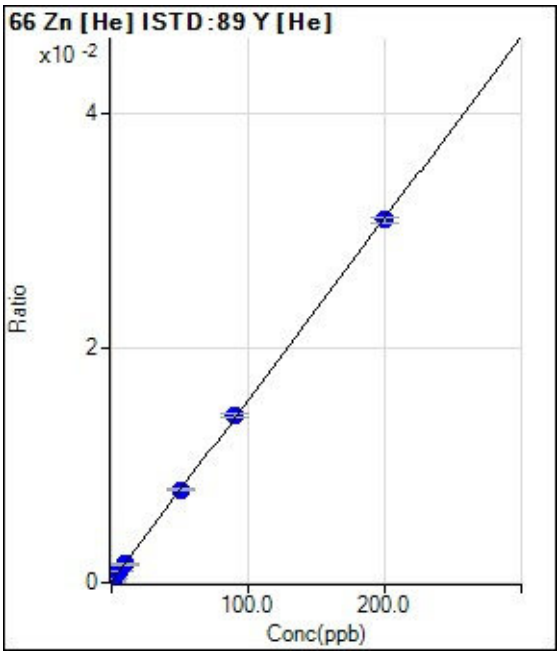
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	957.67	0.0000	P	5.8
2	☐	0.200	0.356	1645.11	0.0001	P	4.7
3	☐	2.000	2.019	4812.43	0.0002	P	5.5
4	☐	5.000	5.874	12167.76	0.0006	P	2.7
5	☐	10.000	9.740	19370.07	0.0010	P	2.1
6	☐	50.000	50.120	94709.03	0.0050	P	0.8
7	☐	90.000	91.678	172041.64	0.0091	P	0.4
8	☐	200.000	199.206	373417.25	0.0197	P	0.5

y = 9.8665E-005 * x + 4.9772E-005
R = 0.9999
DL = 0.08821
BEC = 0.5045

Weight: <None>
Min Conc: <None>

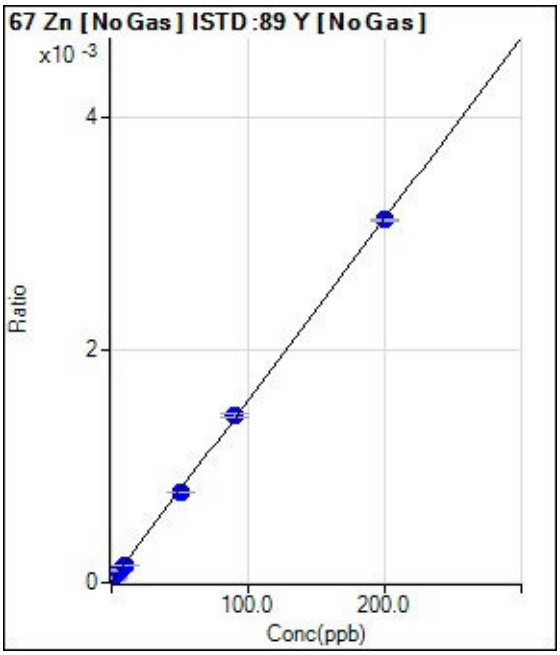


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.20	0.0001	P	23.9
2	☐	0.200	0.177	250.26	0.0001	P	10.4
3	☐	2.000	1.856	797.50	0.0004	P	16.0
4	☐	5.000	5.433	1952.12	0.0009	P	6.4
5	☐	10.000	9.560	3267.05	0.0016	P	3.9
6	☐	50.000	50.651	16306.33	0.0079	P	2.2
7	☐	90.000	91.543	29087.07	0.0143	P	1.5
8	☐	200.000	199.155	63203.30	0.0310	P	1.9

y = 1.5512E-004 * x + 9.0475E-005
R = 0.9999
DL = 0.4178
BEC = 0.5833

Weight: <None>
Min Conc: <None>

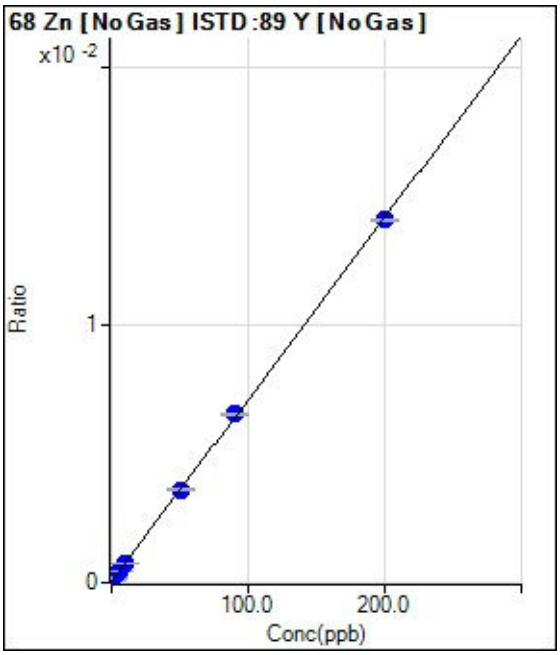
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.91	0.0000	P	25.8
2	☐	0.200	0.237	310.32	0.0000	P	16.6
3	☐	2.000	1.903	810.85	0.0000	P	9.3
4	☐	5.000	5.978	2038.90	0.0001	P	4.3
5	☐	10.000	8.956	2909.94	0.0002	P	4.6
6	☐	50.000	49.233	14776.30	0.0008	P	1.5
7	☐	90.000	91.748	27265.11	0.0014	P	2.7
8	☐	200.000	199.434	59110.71	0.0031	P	0.2

y = 1.5578E-005 * x + 1.2312E-005
R = 0.9999
DL = 0.6108
BEC = 0.7904

Weight: <None>
Min Conc: <None>

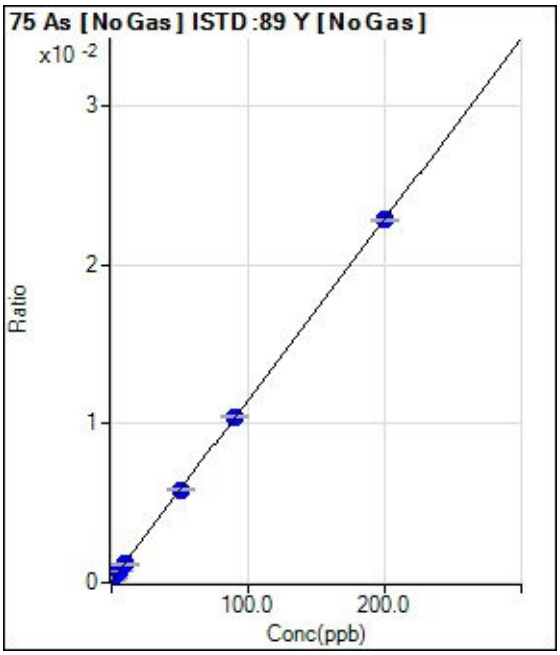


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	880.93	0.0000	P	7.3
2	☐	0.200	0.173	1124.52	0.0001	P	2.5
3	☐	2.000	2.003	3620.84	0.0002	P	7.4
4	☐	5.000	5.731	8718.33	0.0005	P	3.8
5	☐	10.000	9.978	14392.23	0.0008	P	3.3
6	☐	50.000	50.441	68467.13	0.0036	P	1.5
7	☐	90.000	92.231	124176.88	0.0066	P	1.1
8	☐	200.000	198.869	267248.79	0.0141	P	0.2

y = 7.0681E-005 * x + 4.5783E-005
R = 0.9999
DL = 0.1427
BEC = 0.6477

Weight: <None>
Min Conc: <None>

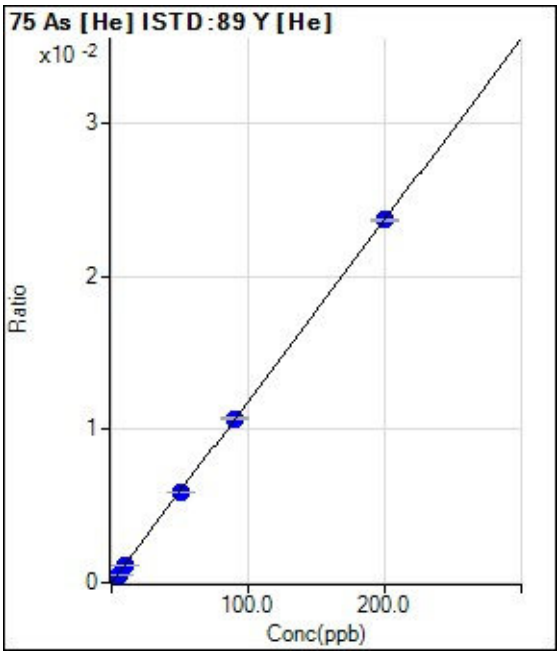
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2428.00	0.0001	P	13.8
2	☐	0.200	0.382	3287.46	0.0002	P	26.6
3	☐	2.000	1.645	6062.03	0.0003	P	12.7
4	☐	5.000	5.087	13630.63	0.0007	P	8.4
5	☐	10.000	9.056	22171.85	0.0012	P	4.9
6	☐	50.000	50.100	110509.31	0.0058	P	1.8
7	☐	90.000	90.792	197856.28	0.0105	P	0.9
8	☐	200.000	199.667	433071.14	0.0229	P	0.7

y = 1.1382E-004 * x + 1.2617E-004
R = 1.0000
DL = 0.4596
BEC = 1.109

Weight: <None>
Min Conc: <None>

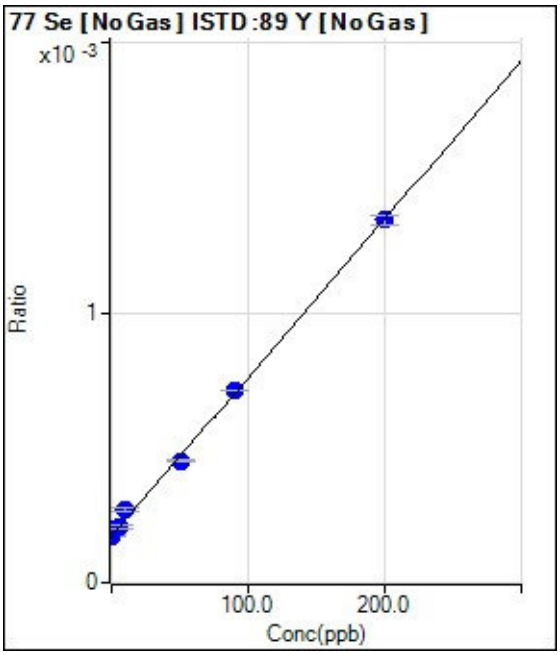


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	0.5
2	☐	0.200	0.234	62.22	0.0000	P	21.9
3	☐	2.000	1.884	474.46	0.0002	P	5.8
4	☐	5.000	4.577	1138.94	0.0005	P	2.9
5	☐	10.000	9.493	2341.33	0.0011	P	5.5
6	☐	50.000	49.343	12013.16	0.0059	P	0.2
7	☐	90.000	90.424	21835.39	0.0107	P	1.6
8	☐	200.000	200.011	48399.54	0.0237	P	0.6

y = 1.1862E-004 * x + 1.5845E-006
R = 1.0000
DL = 0.0001973
BEC = 0.01336

Weight: <None>
Min Conc: <None>

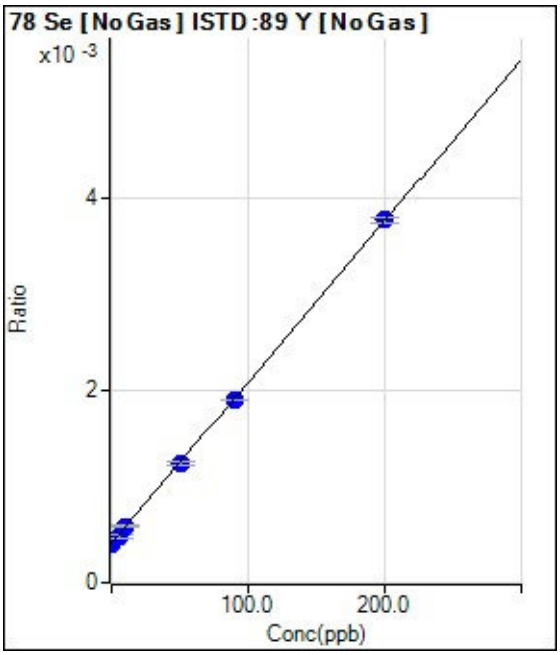
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3327.12	0.0002	P	2.9
2	☐	0.200	1.641	3537.40	0.0002	P	4.6
3	☐	2.000	4.485	3851.13	0.0002	P	5.0
4	☐	5.000	5.554	3974.65	0.0002	P	5.7
5	☐	10.000	16.114	5126.19	0.0003	P	5.3
6	☐	50.000	47.499	8564.76	0.0005	P	1.1
7	☐	90.000	91.790	13460.36	0.0007	P	0.8
8	☐	200.000	199.474	25459.65	0.0013	P	2.4

y = 5.8686E-006 * x + 1.7293E-004
R = 0.9994
DL = 2.592
BEC = 29.47

Weight: <None>
Min Conc: <None>

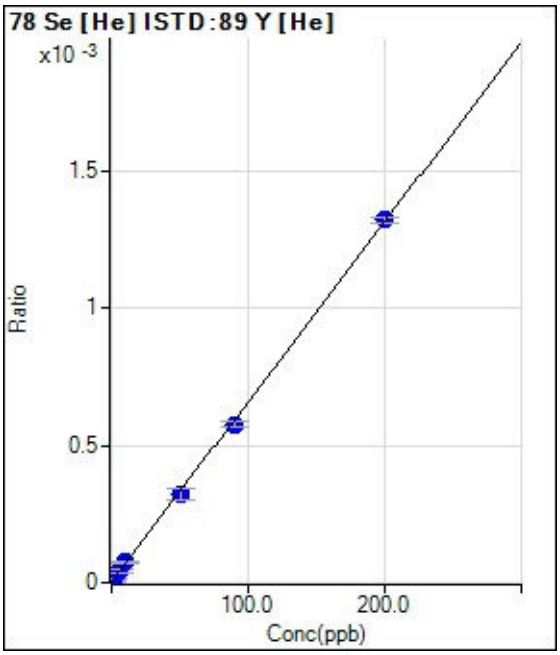


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7903.70	0.0004	P	3.3
2	☐	0.200	-0.343	7846.94	0.0004	P	3.9
3	☐	2.000	1.898	8558.11	0.0004	P	4.0
4	☐	5.000	4.201	9306.01	0.0005	P	6.9
5	☐	10.000	10.270	11179.33	0.0006	P	3.0
6	☐	50.000	49.498	23560.98	0.0012	P	3.1
7	☐	90.000	88.872	36020.90	0.0019	P	0.4
8	☐	200.000	200.641	71691.57	0.0038	P	1.8

y = 1.6806E-005 * x + 4.1077E-004
R = 1.0000
DL = 2.442
BEC = 24.44

Weight: <None>
Min Conc: <None>

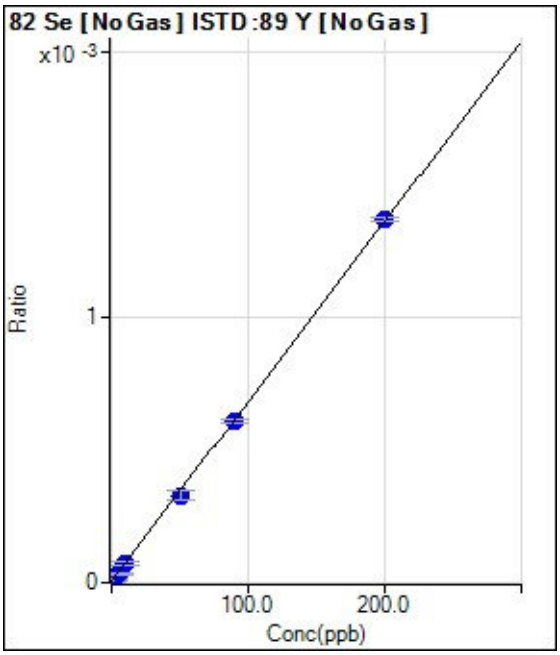
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.78	0.0000	P	65.9
2	☐	0.200	0.394	13.33	0.0000	P	43.8
3	☐	2.000	1.604	30.00	0.0000	P	10.7
4	☐	5.000	5.755	86.67	0.0000	P	30.9
5	☐	10.000	10.700	153.34	0.0001	P	4.6
6	☐	50.000	48.885	665.58	0.0003	P	12.9
7	☐	90.000	87.691	1177.84	0.0006	P	4.1
8	☐	200.000	201.268	2699.18	0.0013	P	1.6

y = 6.5563E-006 * x + 3.7083E-006
R = 0.9999
DL = 1.119
BEC = 0.5656

Weight: <None>
Min Conc: <None>

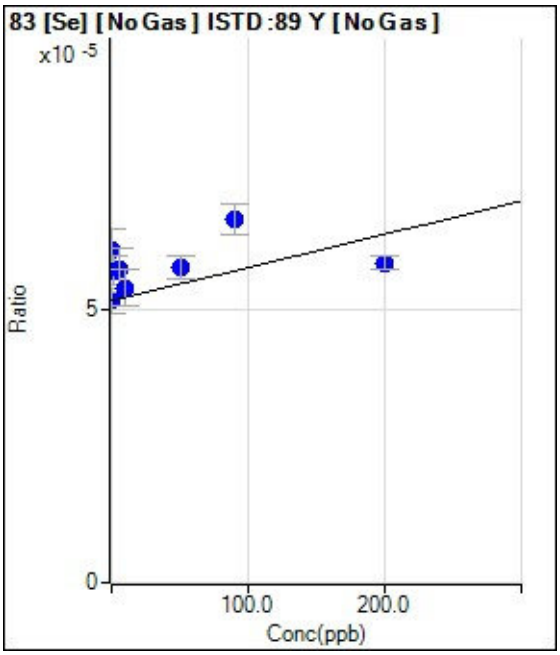


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101.17	0.0000	P	188.9
2	☐	0.200	0.036	106.14	0.0000	P	204.6
3	☐	2.000	0.880	216.98	0.0000	P	50.9
4	☐	5.000	4.454	684.14	0.0000	P	23.1
5	☐	10.000	10.041	1402.31	0.0001	P	15.5
6	☐	50.000	47.501	6191.70	0.0003	P	10.5
7	☐	90.000	89.184	11513.04	0.0006	P	2.5
8	☐	200.000	201.015	25873.17	0.0014	P	1.1

y = 6.7653E-006 * x + 5.2541E-006
R = 0.9999
DL = 4.402
BEC = 0.7766

Weight: <None>
Min Conc: <None>

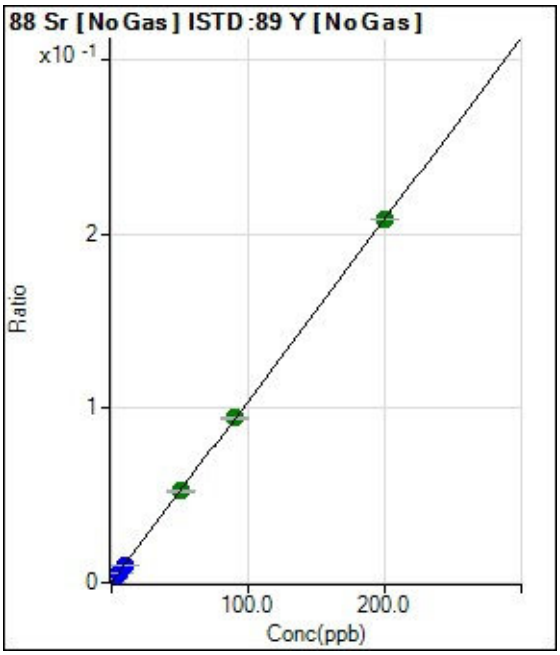
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	994.38	0.0001	P	8.8
2	☐	0.200	155.054	1184.59	0.0001	P	12.3
3	☐	2.000	89.855	1104.50	0.0001	P	9.4
4	☐	5.000	92.326	1107.84	0.0001	P	13.8
5	☐	10.000	37.477	1034.43	0.0001	P	12.4
6	☐	50.000	99.311	1094.49	0.0001	P	7.1
7	☐	90.000	243.139	1258.00	0.0001	P	8.4
8	☐	200.000	114.170	1111.18	0.0001	P	4.2

y = 6.0888E-008 * x + 5.1684E-005
R = 0.3760
DL = 223
BEC = 848.8

Weight: <None>
Min Conc: <None>

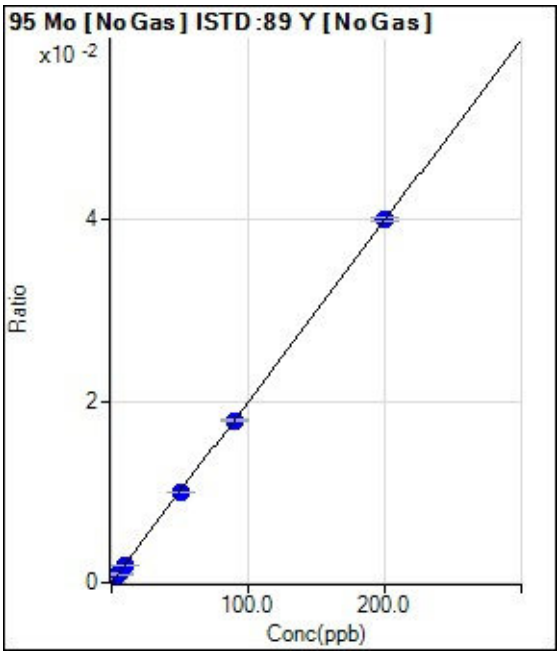


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2619.60	0.0001	P	4.8
2	☐	0.200	0.192	6521.55	0.0003	P	3.4
3	☐	2.000	1.954	42001.33	0.0022	P	0.4
4	☐	5.000	4.936	102108.31	0.0053	P	1.6
5	☐	10.000	9.706	196481.25	0.0103	P	0.5
6	☐	50.000	50.231	995305.02	0.0525	A	0.6
7	☐	90.000	90.469	1786197.87	0.0944	A	0.4
8	☐	200.000	199.748	3948205.82	0.2083	A	0.1

y = 0.0010 * x + 1.3614E-004
R = 1.0000
DL = 0.01862
BEC = 0.1306

Weight: <None>
Min Conc: <None>

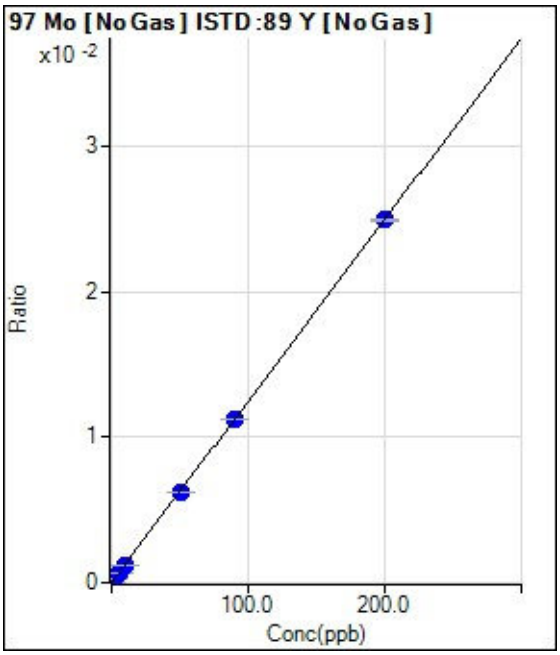
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.41	0.0000	P	11.3
2	☐	0.200	0.169	1054.45	0.0001	P	5.0
3	☐	2.000	1.828	7449.67	0.0004	P	1.2
4	☐	5.000	4.700	18524.95	0.0010	P	1.6
5	☐	10.000	9.519	36777.63	0.0019	P	2.6
6	☐	50.000	49.485	187515.02	0.0099	P	0.4
7	☐	90.000	89.581	338306.41	0.0179	P	0.2
8	☐	200.000	200.350	757593.87	0.0400	P	1.0

y = 1.9942E-004 * x + 2.0810E-005
R = 1.0000
DL = 0.03552
BEC = 0.1044

Weight: <None>
Min Conc: <None>

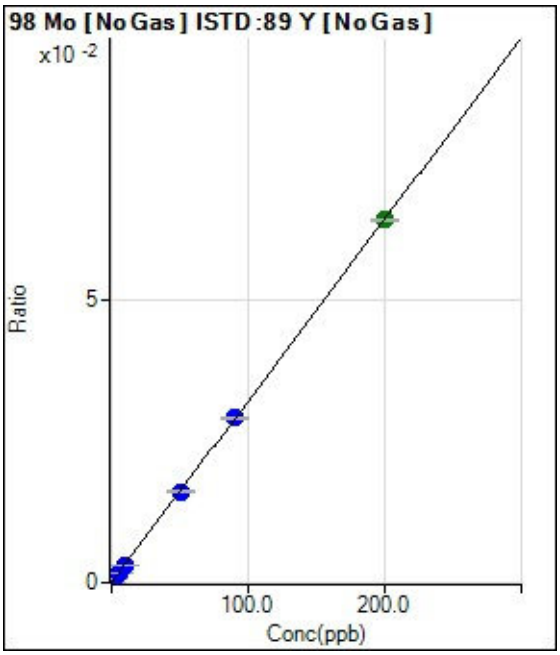


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.91	0.0000	P	23.4
2	☐	0.200	0.196	710.74	0.0000	P	20.6
3	☐	2.000	1.870	4739.00	0.0002	P	4.8
4	☐	5.000	4.911	12061.05	0.0006	P	1.6
5	☐	10.000	9.523	22959.56	0.0012	P	2.7
6	☐	50.000	49.882	117992.27	0.0062	P	1.4
7	☐	90.000	90.098	212424.98	0.0112	P	0.7
8	☐	200.000	200.013	472188.00	0.0249	P	0.7

y = 1.2451E-004 * x + 1.2315E-005
R = 1.0000
DL = 0.06936
BEC = 0.09891

Weight: <None>
Min Conc: <None>

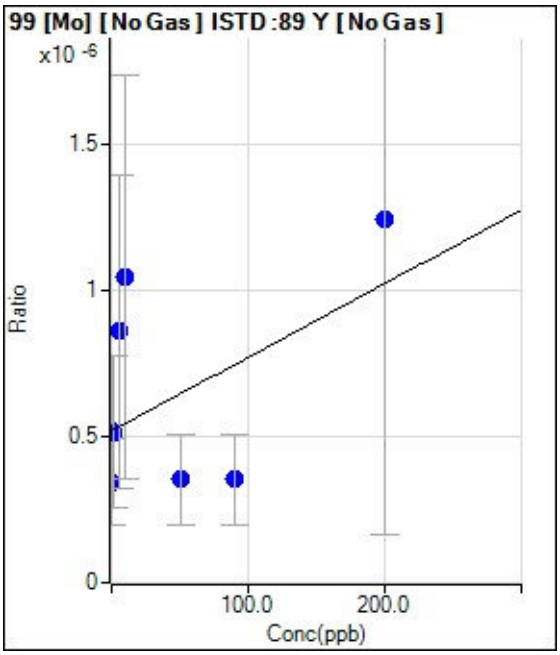
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	702.61	0.0000	P	11.8
2	☐	0.200	0.182	1841.03	0.0001	P	10.8
3	☐	2.000	1.860	12280.08	0.0006	P	2.0
4	☐	5.000	4.723	30098.62	0.0016	P	1.8
5	☐	10.000	9.492	59241.10	0.0031	P	1.3
6	☐	50.000	50.172	306848.03	0.0162	P	1.1
7	☐	90.000	90.503	551641.88	0.0292	P	0.6
8	☐	200.000	199.765	1219071.45	0.0643	A	0.5

y = 3.2183E-004 * x + 3.6513E-005
R = 1.0000
DL = 0.04011
BEC = 0.1135

Weight: <None>
Min Conc: <None>

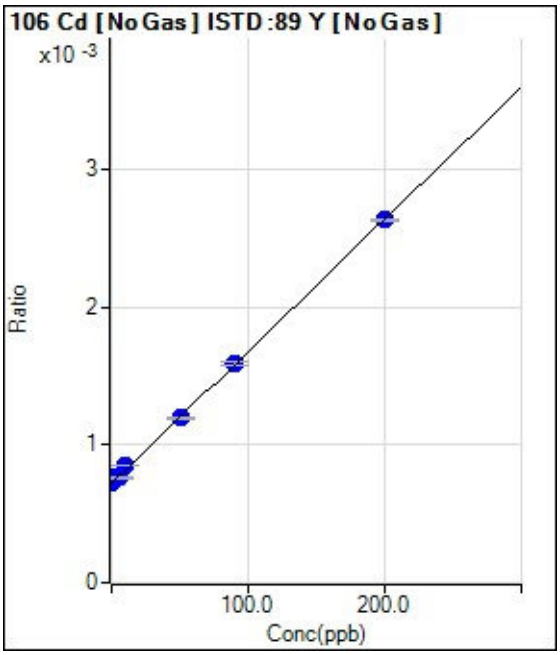


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.01	0.0000	P	100.0
2	☐	0.200	-69.628	6.67	0.0000	P	86.6
3	☐	2.000	-1.213	10.01	0.0000	P	99.6
4	☐	5.000	134.667	16.68	0.0000	P	124.6
5	☐	10.000	208.799	20.02	0.0000	P	132.3
6	☐	50.000	-66.386	6.67	0.0000	P	86.6
7	☐	90.000	-66.401	6.67	0.0000	P	86.6
8	☐	200.000	286.397	23.36	0.0000	P	173.2

y = 2.5221E-009 * x + 5.1992E-007
R = 0.4631
DL = 618.7
BEC = 206.1

Weight: <None>
Min Conc: <None>

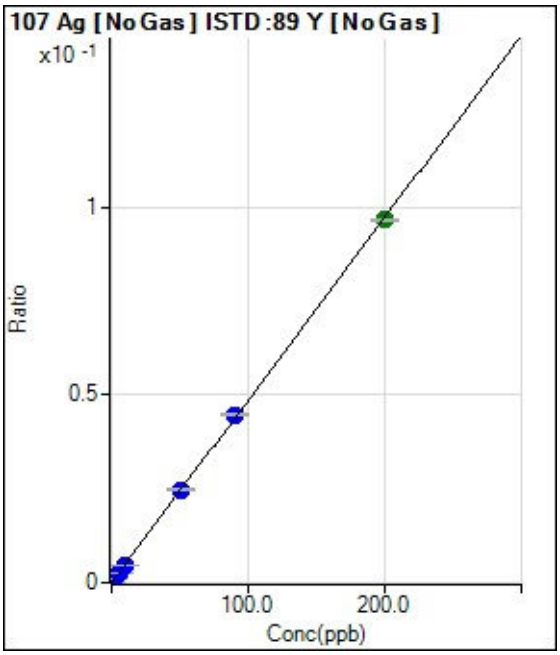
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13874.68	0.0007	P	1.4
2	☐	0.200	2.722	14479.29	0.0007	P	0.9
3	☐	2.000	4.722	14816.72	0.0008	P	1.9
4	☐	5.000	4.335	14749.88	0.0008	P	2.1
5	☐	10.000	13.940	16386.80	0.0009	P	0.6
6	☐	50.000	49.524	22695.71	0.0012	P	0.8
7	☐	90.000	91.253	30224.94	0.0016	P	1.8
8	☐	200.000	199.345	49964.26	0.0026	P	0.4

y = 9.6082E-006 * x + 7.2113E-004
R = 0.9997
DL = 3.257
BEC = 75.05

Weight: <None>
Min Conc: <None>

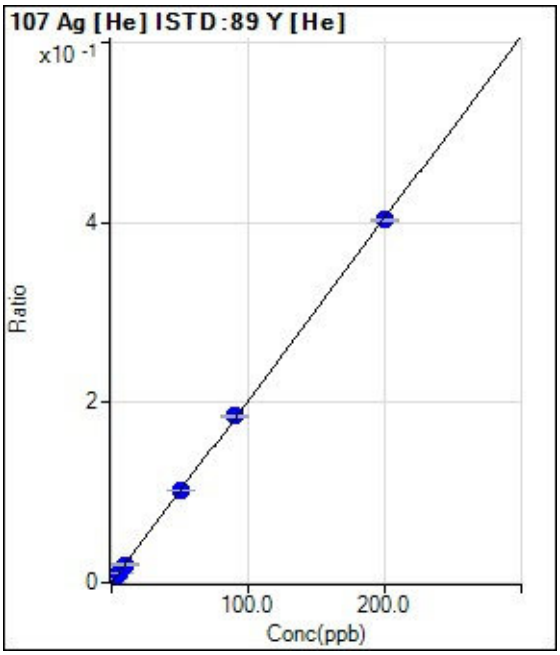


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	231.11	0.0000	P	20.6
2	☐	0.200	0.196	2074.62	0.0001	P	5.7
3	☐	2.000	2.017	19162.76	0.0010	P	2.4
4	☐	5.000	4.992	47089.90	0.0024	P	0.7
5	☐	10.000	9.895	92291.12	0.0048	P	0.4
6	☐	50.000	51.040	470061.34	0.0248	P	0.9
7	☐	90.000	91.892	844088.23	0.0446	P	0.7
8	☐	200.000	198.894	1830103.68	0.0966	A	0.2

y = 4.8547E-004 * x + 1.2009E-005
R = 0.9999
DL = 0.01527
BEC = 0.02474

Weight: <None>
Min Conc: <None>

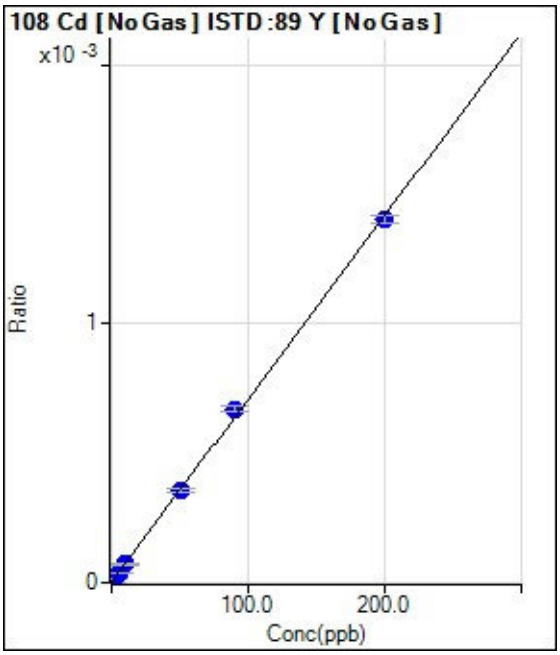
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.70	0.0000	P	15.9
2	☐	0.200	0.167	754.13	0.0004	P	12.6
3	☐	2.000	1.963	8404.53	0.0040	P	4.3
4	☐	5.000	4.898	20750.57	0.0099	P	3.5
5	☐	10.000	9.880	41506.81	0.0200	P	3.1
6	☐	50.000	50.310	208728.01	0.1017	P	0.6
7	☐	90.000	91.742	377524.70	0.1855	P	1.1
8	☐	200.000	199.148	821258.58	0.4026	P	0.4

y = 0.0020 * x + 1.7468E-005
R = 0.9999
DL = 0.00412
BEC = 0.008641

Weight: <None>
Min Conc: <None>

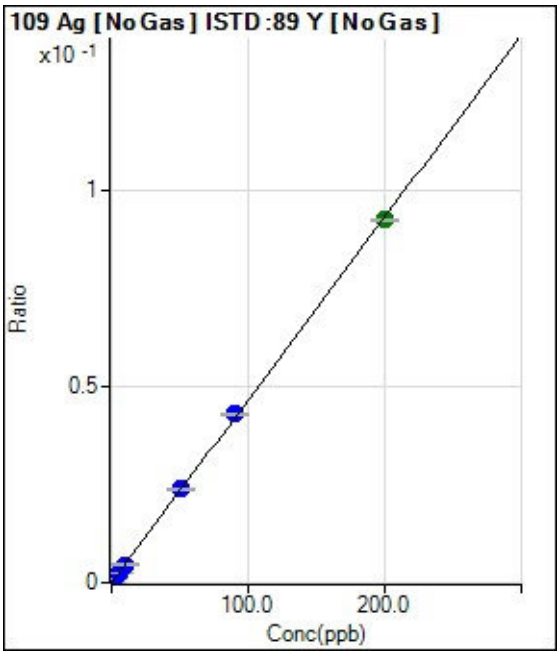


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.37	0.0000	P	96.4
2	☐	0.200	0.193	60.06	0.0000	P	16.3
3	☐	2.000	1.559	246.92	0.0000	P	8.0
4	☐	5.000	4.970	714.08	0.0000	P	8.8
5	☐	10.000	9.862	1371.47	0.0001	P	12.6
6	☐	50.000	50.553	6818.68	0.0004	P	4.4
7	☐	90.000	94.496	12685.63	0.0007	P	3.1
8	☐	200.000	197.851	26576.91	0.0014	P	2.2

y = 7.0796E-006 * x + 1.7344E-006
R = 0.9996
DL = 0.7085
BEC = 0.245

Weight: <None>
Min Conc: <None>

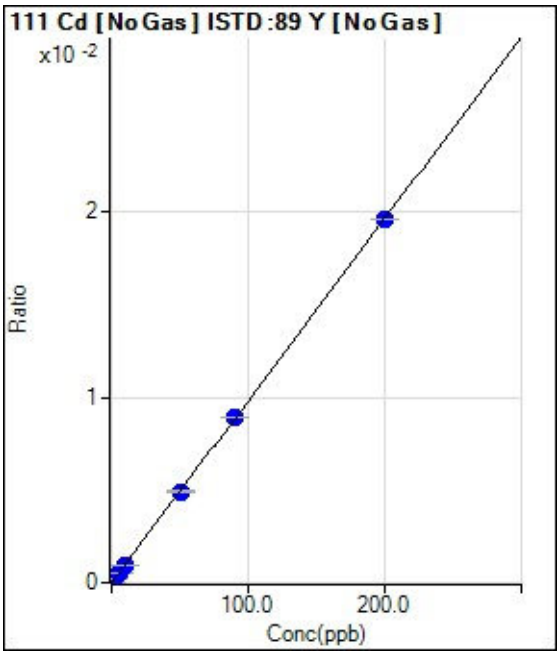
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.73	0.0000	P	31.1
2	☐	0.200	0.194	1811.97	0.0001	P	3.0
3	☐	2.000	1.953	17632.98	0.0009	P	4.7
4	☐	5.000	4.922	44348.65	0.0023	P	1.7
5	☐	10.000	9.884	88196.96	0.0046	P	2.6
6	☐	50.000	51.377	453323.34	0.0239	P	1.4
7	☐	90.000	92.165	811182.96	0.0429	P	0.6
8	☐	200.000	198.690	1751950.03	0.0924	A	0.5

y = 4.6527E-004 * x + 3.4672E-006
R = 0.9999
DL = 0.006944
BEC = 0.007452

Weight: <None>
Min Conc: <None>

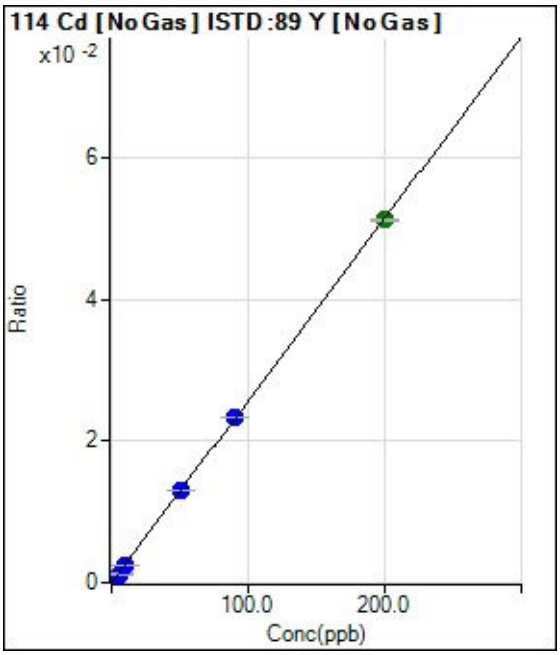


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-29.14	0.0000	P	-127.0
2	☐	0.200	0.190	332.23	0.0000	P	7.2
3	☐	2.000	1.983	3733.46	0.0002	P	3.9
4	☐	5.000	4.897	9262.09	0.0005	P	1.2
5	☐	10.000	9.674	18161.92	0.0009	P	2.1
6	☐	50.000	50.160	93299.92	0.0049	P	0.4
7	☐	90.000	91.080	169026.23	0.0089	P	0.5
8	☐	200.000	199.493	370953.46	0.0196	P	0.0

y = 9.8127E-005 * x - 1.5144E-006
R = 1.0000
DL = 0.05878
BEC = -0.01543

Weight: <None>
Min Conc: <None>

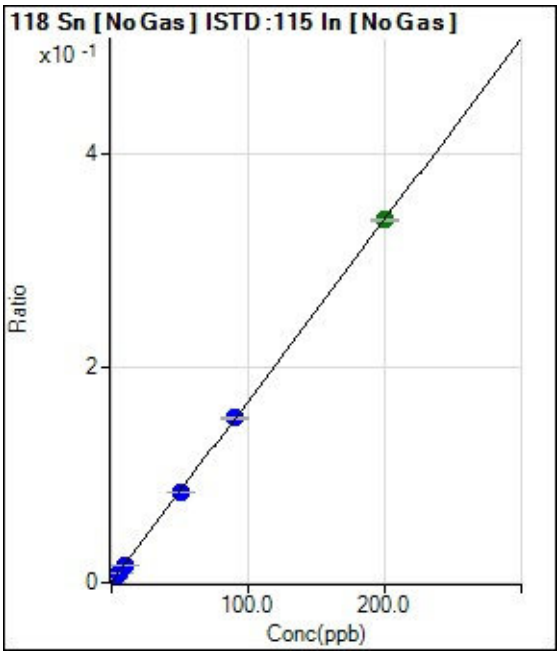
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.39	0.0000	P	65.7
2	☐	0.200	0.212	1111.18	0.0001	P	17.7
3	☐	2.000	1.943	9706.77	0.0005	P	4.5
4	☐	5.000	4.744	23625.05	0.0012	P	1.2
5	☐	10.000	9.719	47915.16	0.0025	P	1.6
6	☐	50.000	50.434	245804.33	0.0130	P	0.3
7	☐	90.000	91.108	442924.80	0.0234	P	0.3
8	☐	200.000	199.414	971226.75	0.0512	A	0.4

y = 2.5698E-004 * x + 2.7726E-006
R = 1.0000
DL = 0.02127
BEC = 0.01079

Weight: <None>
Min Conc: <None>

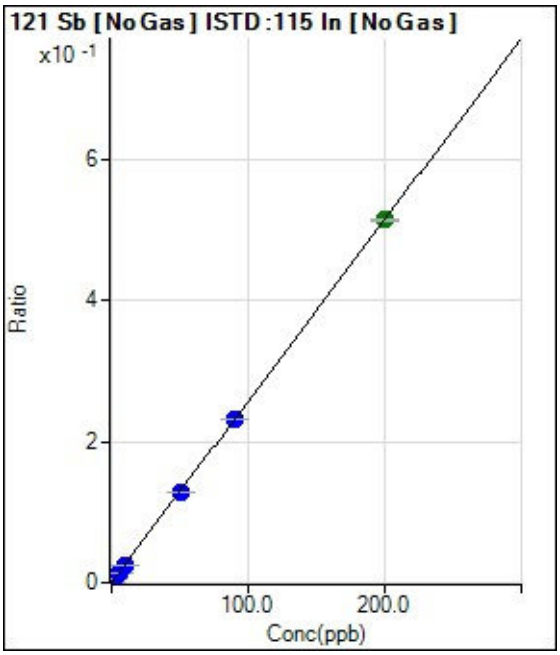


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1106.72	0.0003	P	2.7
2	☐	0.200	0.194	2311.33	0.0006	P	3.4
3	☐	2.000	1.911	12953.09	0.0035	P	1.1
4	☐	5.000	4.742	30536.49	0.0083	P	0.9
5	☐	10.000	9.527	59984.82	0.0164	P	0.9
6	☐	50.000	49.668	303893.81	0.0843	P	0.8
7	☐	90.000	90.555	547455.55	0.1534	P	0.5
8	☐	200.000	199.864	1193919.19	0.3381	A	0.7

y = 0.0017 * x + 3.0336E-004
R = 1.0000
DL = 0.01439
BEC = 0.1795

Weight: <None>
Min Conc: <None>

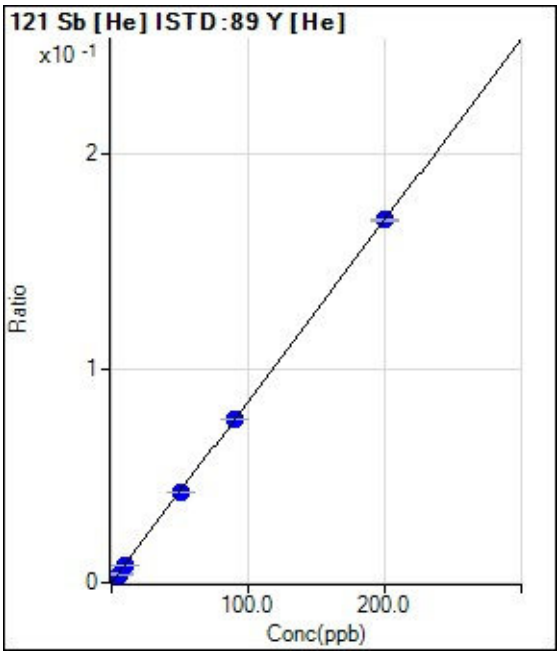
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	804.47	0.0002	P	17.5
2	☐	0.200	0.174	2445.79	0.0007	P	4.6
3	☐	2.000	1.883	18536.45	0.0051	P	0.9
4	☐	5.000	4.749	45579.89	0.0124	P	0.9
5	☐	10.000	9.397	89046.15	0.0244	P	0.3
6	☐	50.000	49.796	462083.70	0.1281	P	0.1
7	☐	90.000	90.126	827096.75	0.2317	P	0.7
8	☐	200.000	200.032	1814828.47	0.5140	A	0.9

y = 0.0026 * x + 2.2049E-004
R = 1.0000
DL = 0.04516
BEC = 0.08584

Weight: <None>
Min Conc: <None>

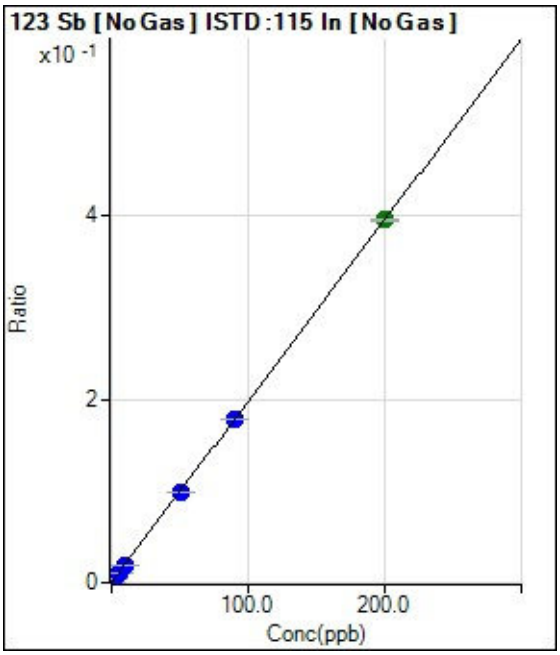


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0001	P	10.9
2	☐	0.200	0.218	580.03	0.0003	P	5.7
3	☐	2.000	1.908	3590.56	0.0017	P	4.6
4	☐	5.000	4.630	8379.47	0.0040	P	2.6
5	☐	10.000	9.399	16690.81	0.0080	P	1.3
6	☐	50.000	49.849	86708.19	0.0423	P	0.4
7	☐	90.000	89.899	154969.04	0.0761	P	0.2
8	☐	200.000	200.123	345501.93	0.1694	P	0.2

y = 8.4593E-004 * x + 8.8810E-005
R = 1.0000
DL = 0.03436
BEC = 0.105

Weight: <None>
Min Conc: <None>

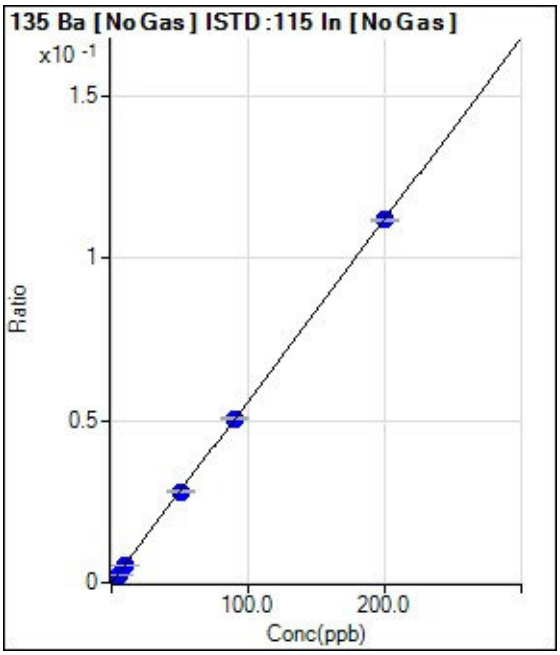
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1071.14	0.0003	P	19.0
2	☐	0.200	0.182	2385.98	0.0007	P	15.0
3	☐	2.000	1.872	14622.95	0.0040	P	0.6
4	☐	5.000	4.697	35122.31	0.0096	P	1.0
5	☐	10.000	9.438	69201.04	0.0189	P	1.1
6	☐	50.000	49.529	353757.39	0.0981	P	0.2
7	☐	90.000	90.093	636007.83	0.1782	P	0.7
8	☐	200.000	200.113	1396090.00	0.3954	A	0.7

y = 0.0020 * x + 2.9368E-004
R = 1.0000
DL = 0.08462
BEC = 0.1487

Weight: <None>
Min Conc: <None>

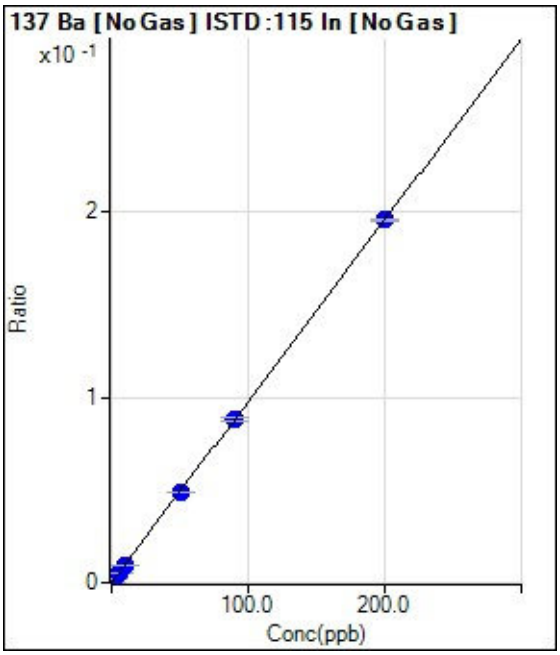


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.03	0.0000	P	99.9
2	☐	0.200	0.234	510.53	0.0001	P	2.4
3	☐	2.000	1.906	3941.28	0.0011	P	3.9
4	☐	5.000	4.608	9503.11	0.0026	P	5.0
5	☐	10.000	9.602	19684.84	0.0054	P	1.8
6	☐	50.000	50.064	101124.09	0.0280	P	1.0
7	☐	90.000	90.527	180949.45	0.0507	P	0.7
8	☐	200.000	199.777	394960.48	0.1119	P	0.7

y = 5.5989E-004 * x + 8.2174E-006
R = 1.0000
DL = 0.044
BEC = 0.01468

Weight: <None>
Min Conc: <None>

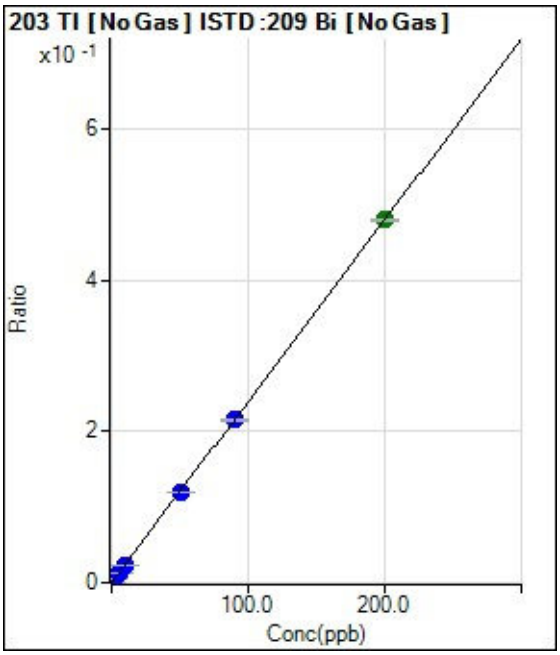
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.15	0.0000	P	26.0
2	☐	0.200	0.202	864.24	0.0002	P	10.3
3	☐	2.000	1.905	6975.64	0.0019	P	3.2
4	☐	5.000	4.972	18007.35	0.0049	P	4.0
5	☐	10.000	9.537	34272.87	0.0094	P	2.3
6	☐	50.000	49.462	174771.98	0.0485	P	0.5
7	☐	90.000	90.039	314761.22	0.0882	P	1.9
8	☐	200.000	200.142	691946.19	0.1960	P	0.4

y = 9.7896E-004 * x + 3.8434E-005
R = 1.0000
DL = 0.03066
BEC = 0.03926

Weight: <None>
Min Conc: <None>

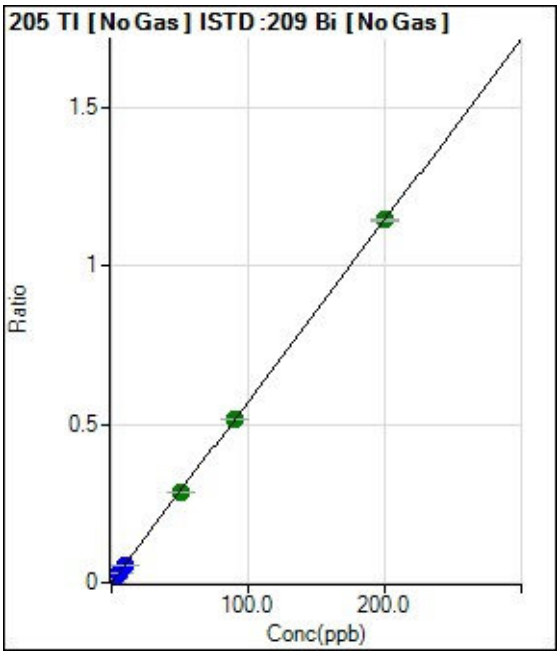


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.58	0.0001	P	30.1
2	☐	0.200	0.182	1801.96	0.0005	P	4.4
3	☐	2.000	1.871	16143.41	0.0046	P	2.1
4	☐	5.000	4.780	40740.66	0.0115	P	1.3
5	☐	10.000	9.528	80676.59	0.0229	P	0.7
6	☐	50.000	49.667	414446.88	0.1190	P	0.6
7	☐	90.000	89.790	741249.01	0.2151	P	1.0
8	☐	200.000	200.208	1617998.99	0.4795	A	0.9

y = 0.0024 * x + 6.8838E-005
R = 1.0000
DL = 0.02598
BEC = 0.02875

Weight: <None>
Min Conc: <None>

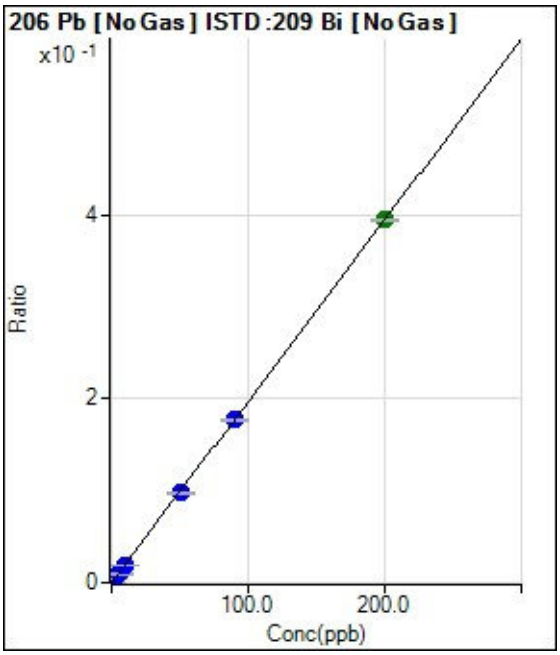
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	563.92	0.0002	P	21.8
2	☐	0.200	0.179	4228.35	0.0012	P	6.1
3	☐	2.000	1.894	39040.22	0.0110	P	2.0
4	☐	5.000	4.819	98192.00	0.0278	P	0.6
5	☐	10.000	9.624	194833.26	0.0553	P	1.3
6	☐	50.000	49.385	985410.88	0.2829	A	0.2
7	☐	90.000	90.006	1776774.85	0.5156	A	0.2
8	☐	200.000	200.175	3868423.12	1.1464	A	0.7

y = 0.0057 * x + 1.5937E-004
R = 1.0000
DL = 0.01819
BEC = 0.02783

Weight: <None>
Min Conc: <None>

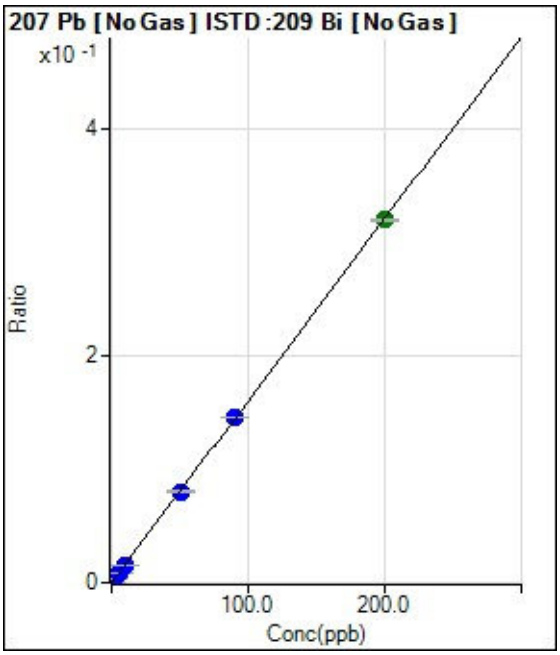


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.79	0.0000	P	25.3
2	☐	0.200	0.203	1555.01	0.0004	P	6.2
3	☐	2.000	1.810	12779.53	0.0036	P	1.1
4	☐	5.000	4.766	33344.78	0.0094	P	2.1
5	☐	10.000	9.498	66090.81	0.0187	P	1.7
6	☐	50.000	49.665	340876.95	0.0979	P	1.4
7	☐	90.000	89.826	609999.47	0.1770	P	0.8
8	☐	200.000	200.195	1330978.80	0.3944	A	0.4

y = 0.0020 * x + 3.5843E-005
R = 1.0000
DL = 0.01379
BEC = 0.01819

Weight: <None>
Min Conc: <None>

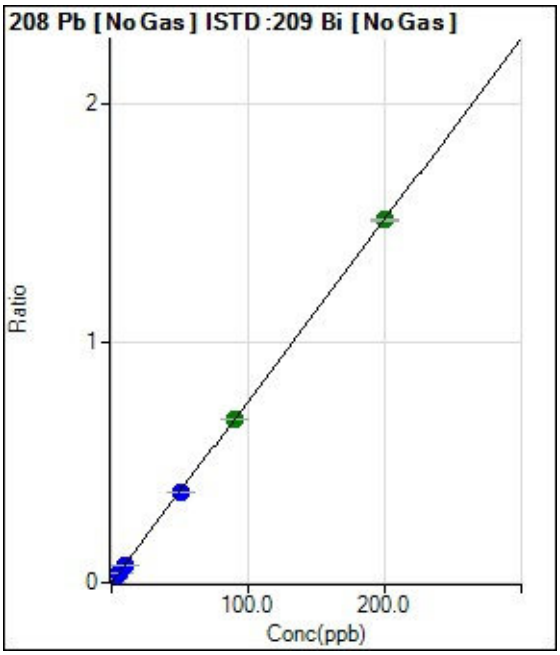
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.79	0.0000	P	35.9
2	☐	0.200	0.203	1288.05	0.0004	P	8.6
3	☐	2.000	1.927	11076.16	0.0031	P	2.3
4	☐	5.000	4.812	27397.79	0.0077	P	2.5
5	☐	10.000	9.680	54781.82	0.0155	P	1.5
6	☐	50.000	49.999	279010.38	0.0801	P	1.3
7	☐	90.000	91.191	503480.43	0.1461	P	0.4
8	☐	200.000	199.486	1078241.00	0.3195	A	0.7

y = 0.0016 * x + 3.5885E-005
R = 1.0000
DL = 0.02416
BEC = 0.02241

Weight: <None>
Min Conc: <None>

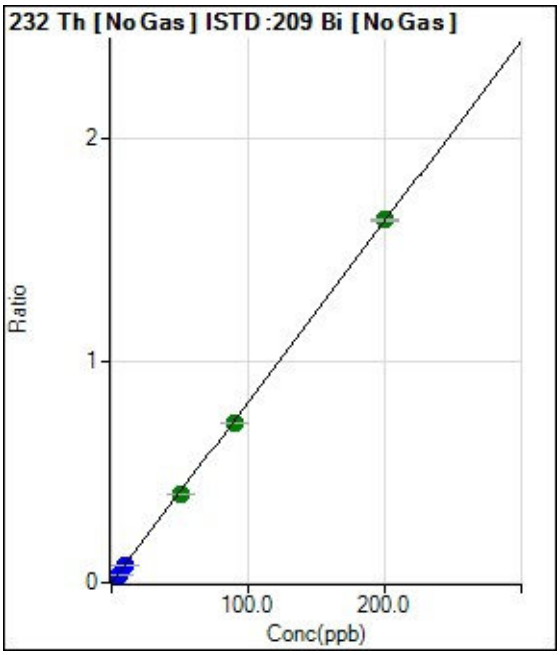


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	553.90	0.0002	P	7.8
2	☐	0.200	0.194	5806.43	0.0016	P	3.5
3	☐	2.000	1.897	51564.48	0.0145	P	1.4
4	☐	5.000	4.813	129631.56	0.0366	P	1.5
5	☐	10.000	9.641	258189.30	0.0732	P	1.0
6	☐	50.000	49.958	1319465.13	0.3789	P	1.2
7	☐	90.000	90.357	2361157.48	0.6851	A	0.4
8	☐	200.000	199.874	5113306.81	1.5153	A	0.5

y = 0.0076 * x + 1.5663E-004
R = 1.0000
DL = 0.004828
BEC = 0.02066

Weight: <None>
Min Conc: <None>

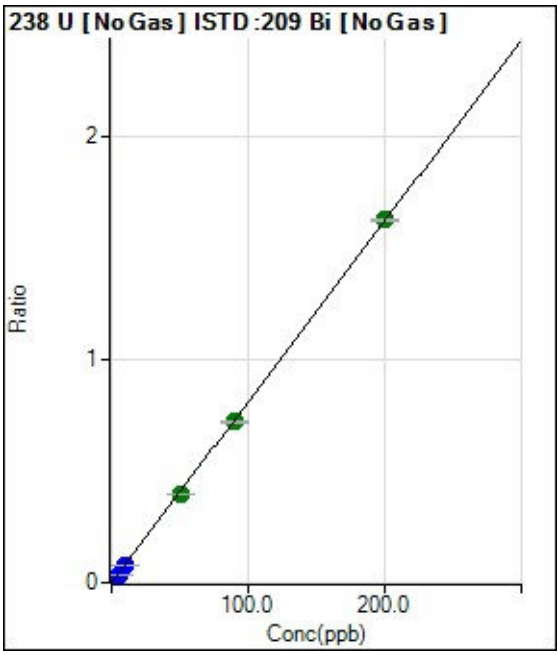
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3754.39	0.0011	P	9.6
2	☐	0.200	0.131	7573.34	0.0021	P	3.0
3	☐	2.000	1.665	51787.43	0.0146	P	0.7
4	☐	5.000	4.488	132867.75	0.0376	P	0.7
5	☐	10.000	9.141	265754.96	0.0754	P	0.2
6	☐	50.000	48.883	1387974.38	0.3985	A	1.4
7	☐	90.000	88.662	2488179.85	0.7220	A	0.3
8	☐	200.000	200.940	5516935.28	1.6349	A	0.6

y = 0.0081 * x + 0.0011
R = 1.0000
DL = 0.03763
BEC = 0.1305

Weight: <None>
Min Conc: <None>

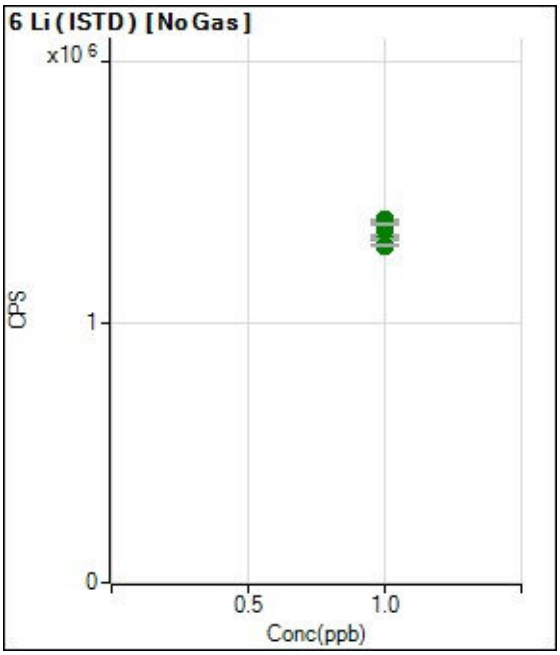


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	630.66	0.0002	P	15.7
2	☐	0.200	0.180	5820.64	0.0016	P	3.3
3	☐	2.000	1.841	53517.35	0.0151	P	1.1
4	☐	5.000	4.662	134151.84	0.0379	P	0.4
5	☐	10.000	9.427	269641.71	0.0765	P	0.8
6	☐	50.000	48.907	1379348.99	0.3961	A	0.9
7	☐	90.000	89.053	2484907.67	0.7210	A	1.0
8	☐	200.000	200.738	5483705.80	1.6251	A	0.6

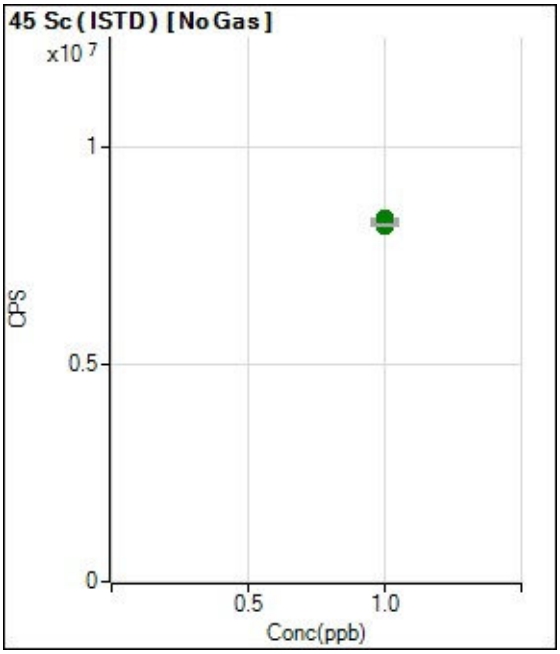
y = 0.0081 * x + 1.7824E-004
R = 1.0000
DL = 0.01037
BEC = 0.02202

Weight: <None>
Min Conc: <None>

Calibration for 235_ICV.d

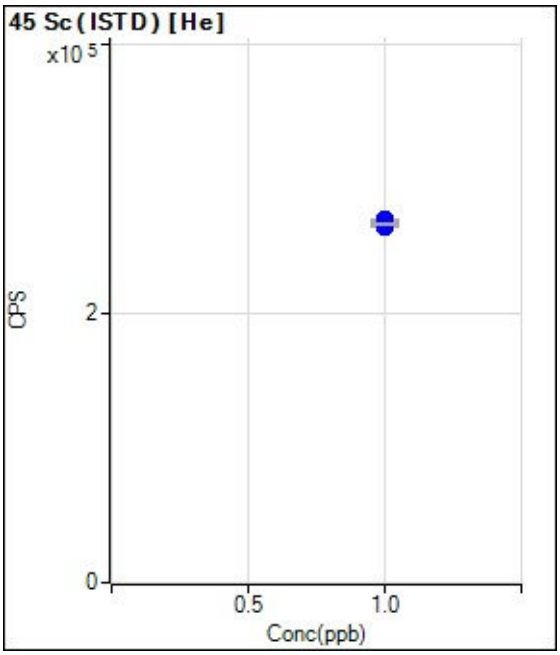


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1386716.65		A	0.4
2	☐	1.000		1393790.73		A	0.2
3	☐	1.000		1390064.19		A	0.2
4	☐	1.000		1382376.87		A	1.0
5	☐	1.000		1375770.88		A	0.4
6	☐	1.000		1335386.09		A	0.3
7	☐	1.000		1316571.96		A	0.8
8	☐	1.000		1295839.79		A	0.5

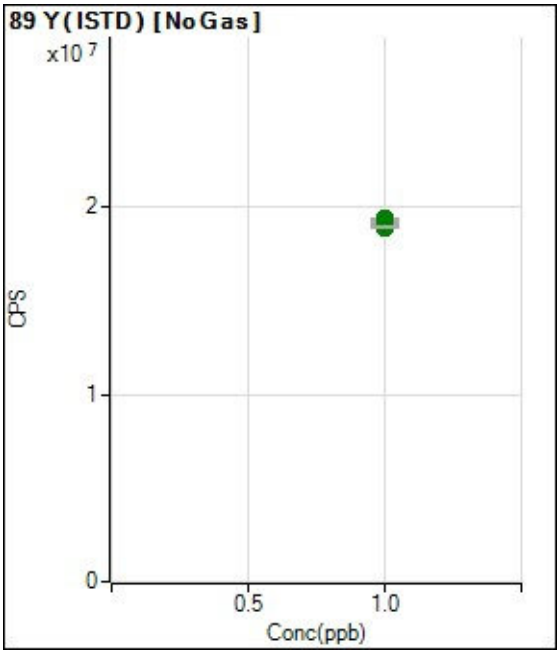


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8259775.00		A	0.3
2	☐	1.000		8304552.07		A	0.5
3	☐	1.000		8333781.09		A	0.3
4	☐	1.000		8320511.99		A	0.1
5	☐	1.000		8238371.93		A	0.2
6	☐	1.000		8174624.02		A	0.5
7	☐	1.000		8201374.93		A	0.3
8	☐	1.000		8199023.00		A	0.4

Calibration for 235_ICV.d

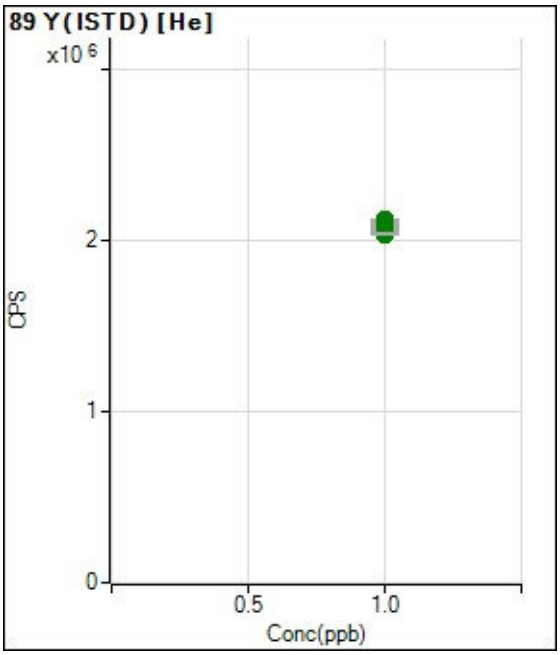


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		269258.03		P	0.6
2	☐	1.000		269810.17		P	0.7
3	☐	1.000		267019.60		P	0.3
4	☐	1.000		267651.00		P	0.3
5	☐	1.000		265695.63		P	0.1
6	☐	1.000		265035.00		P	0.6
7	☐	1.000		265081.66		P	0.5
8	☐	1.000		266522.99		P	0.6

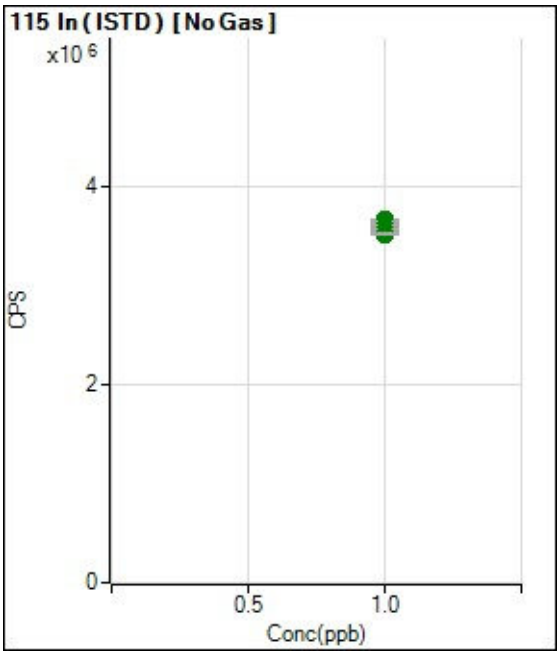


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		19240361.23		A	0.2
2	☐	1.000		19375391.68		A	0.5
3	☐	1.000		19331856.90		A	0.6
4	☐	1.000		19335958.08		A	0.5
5	☐	1.000		19164379.42		A	0.2
6	☐	1.000		18961482.35		A	0.4
7	☐	1.000		18915539.74		A	0.6
8	☐	1.000		18951262.55		A	0.7

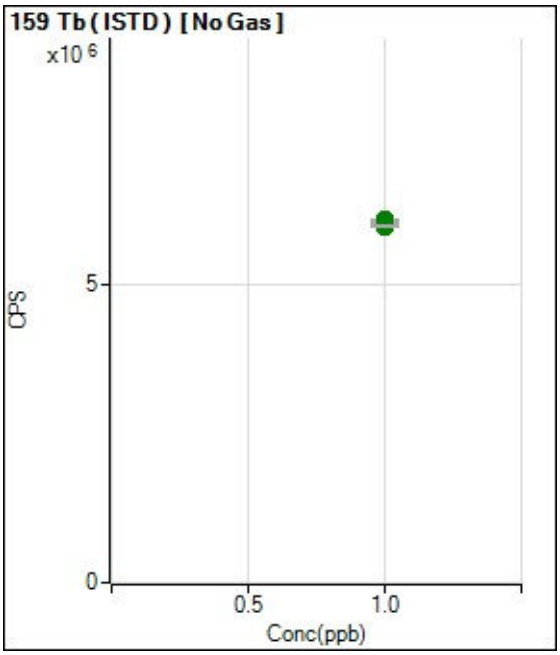
Calibration for 235_ICV.d



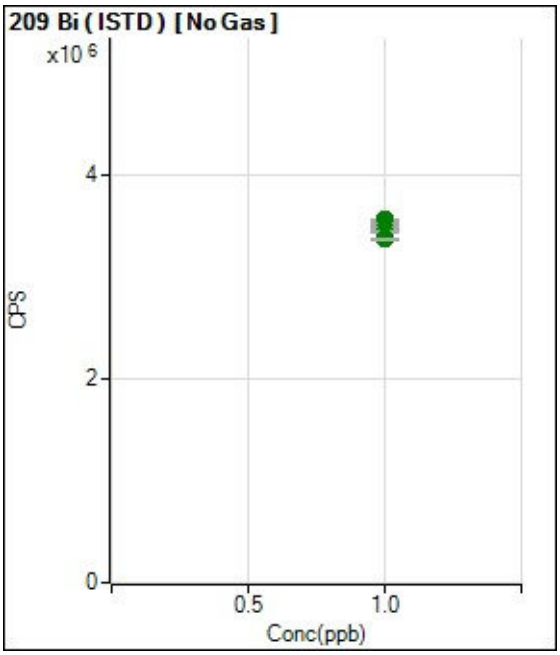
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2101614.74		A	0.5
2	☐	1.000		2120919.52		A	0.5
3	☐	1.000		2108715.75		A	0.5
4	☐	1.000		2091933.34		A	0.4
5	☐	1.000		2076183.37		A	0.7
6	☐	1.000		2051918.28		A	0.6
7	☐	1.000		2035393.00		A	0.4
8	☐	1.000		2039815.45		A	0.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3648069.84		A	0.3
2	☐	1.000		3660145.75		A	0.7
3	☐	1.000		3665373.61		A	0.2
4	☐	1.000		3670789.69		A	0.7
5	☐	1.000		3656071.85		A	0.3
6	☐	1.000		3606611.25		A	0.4
7	☐	1.000		3569539.89		A	0.5
8	☐	1.000		3530953.62		A	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6070344.52		A	0.4
2	☐	1.000		6086438.54		A	0.4
3	☐	1.000		6071083.59		A	0.4
4	☐	1.000		6069687.20		A	0.7
5	☐	1.000		6055445.46		A	0.8
6	☐	1.000		6035605.41		A	0.2
7	☐	1.000		5997840.98		A	0.8
8	☐	1.000		5981999.72		A	0.5



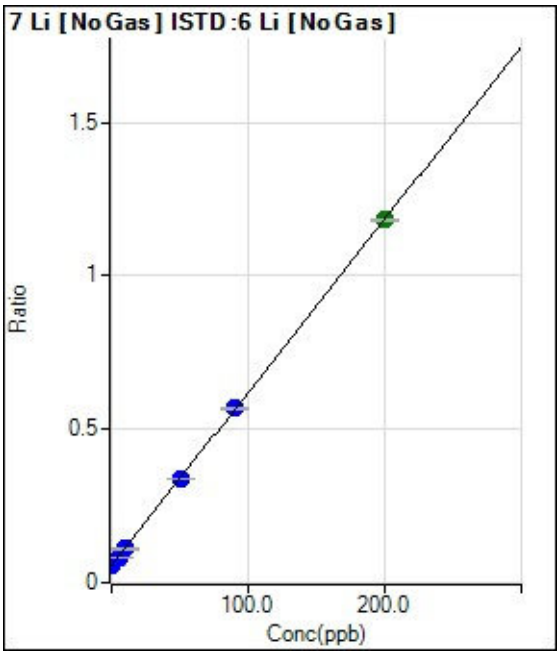
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3536724.17		A	0.4
2	☐	1.000		3563559.72		A	0.4
3	☐	1.000		3548023.89		A	0.3
4	☐	1.000		3537976.52		A	0.4
5	☐	1.000		3525289.72		A	0.3
6	☐	1.000		3482670.35		A	0.1
7	☐	1.000		3446372.99		A	0.7
8	☐	1.000		3374457.85		A	0.5

Calibration for 288_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b\
Analysis File: ICPMS3_201117.batch.bin
DA Date-Time: 2020-11-17 20:05:03
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	279CALB.d	std 1	2020-11-17 19:48:40
2	280CALS.d	std 2	2020-11-17 19:50:21
3	281CALS.d	std 3	2020-11-17 19:52:03
4	282CALS.d	std 4	2020-11-17 19:53:45
5	283CALS.d	std 5	2020-11-17 19:55:27
6	284CALS.d	std 6	2020-11-17 19:57:10
7	285CALS.d	std 7	2020-11-17 19:58:53
8	286CALS.d	std 8	2020-11-17 20:00:36

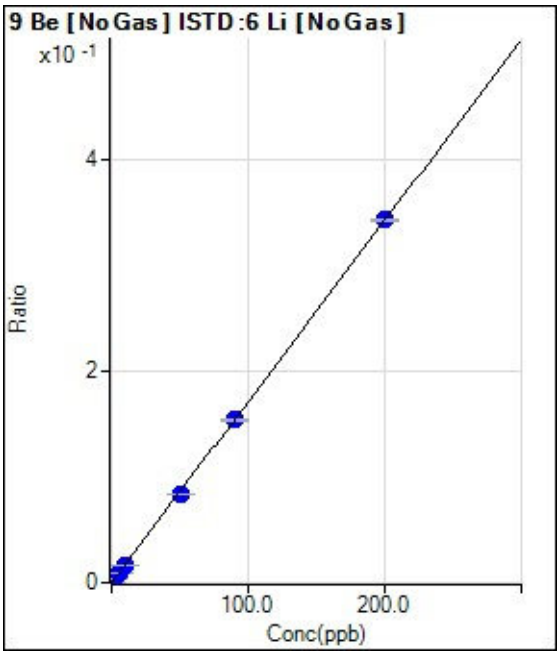
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56673.45	0.0567	P	1.2
2	☐	0.200	0.333	58931.50	0.0586	P	0.2
3	☐	2.000	2.098	68718.79	0.0685	P	0.7
4	☐	5.000	4.749	83606.23	0.0834	P	0.5
5	☐	10.000	9.524	110290.87	0.1103	P	1.6
6	☐	50.000	49.872	328734.52	0.3377	P	1.1
7	☐	90.000	90.616	543655.44	0.5672	P	1.0
8	☐	200.000	199.784	1113995.09	1.1822	A	0.5

y = 0.0056 * x + 0.0567
R = 1.0000
DL = 0.3673
BEC = 10.06

Weight: <None>
Min Conc: <None>

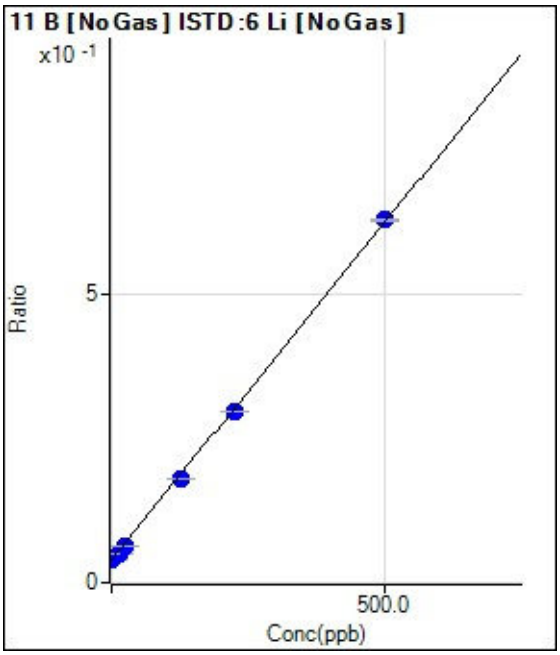


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.70	0.0000	P	31.3
2	☐	0.200	0.186	357.03	0.0004	P	9.0
3	☐	2.000	1.824	3163.58	0.0032	P	5.7
4	☐	5.000	4.872	8377.66	0.0084	P	2.7
5	☐	10.000	9.312	15938.44	0.0159	P	1.7
6	☐	50.000	48.830	81260.99	0.0835	P	0.4
7	☐	90.000	89.765	147032.17	0.1534	P	0.5
8	☐	200.000	200.438	322721.78	0.3425	P	0.2

y = 0.0017 * x + 3.6695E-005
R = 1.0000
DL = 0.02015
BEC = 0.02148

Weight: <None>
Min Conc: <None>

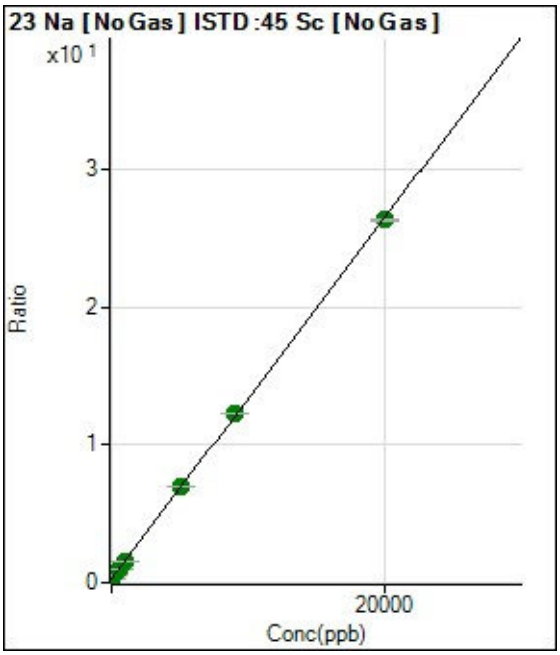
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39639.02	0.0396	P	2.2
2	☐	0.500	-0.574	39224.14	0.0390	P	1.2
3	☐	5.000	1.899	41994.82	0.0419	P	1.9
4	☐	12.500	8.308	49442.98	0.0493	P	1.6
5	☐	25.000	19.548	62430.39	0.0625	P	1.9
6	☐	125.000	120.378	175378.60	0.1801	P	0.2
7	☐	225.000	219.784	283850.63	0.2961	P	1.0
8	☐	500.000	503.912	591502.43	0.6277	P	0.6

y = 0.0012 * x + 0.0396
R = 0.9999
DL = 2.292
BEC = 33.97

Weight: <None>
Min Conc: <None>

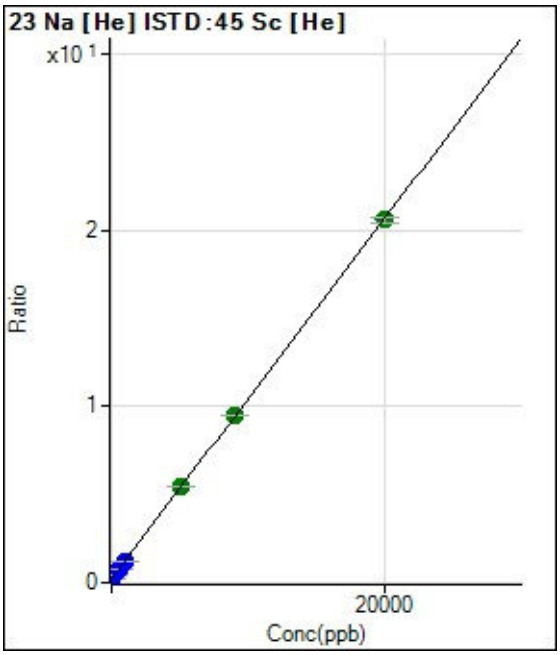


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1814390.86	0.2719	A	1.6
2	☐	20.000	16.570	1974056.62	0.2936	A	0.9
3	☐	200.000	194.484	3535744.87	0.5266	A	1.0
4	☐	500.000	493.852	6142245.71	0.9187	A	0.0
5	☐	1000.000	984.284	10378665.08	1.5611	A	1.1
6	☐	5000.000	5118.401	46001265.61	6.9755	A	0.4
7	☐	9000.000	9182.066	80578541.39	12.2977	A	0.7
8	☐	20000.000	19889.468	174476928.90	26.3212	A	0.6

y = 0.0013 * x + 0.2719
R = 0.9999
DL = 10.2
BEC = 207.6

Weight: <None>
Min Conc: <None>

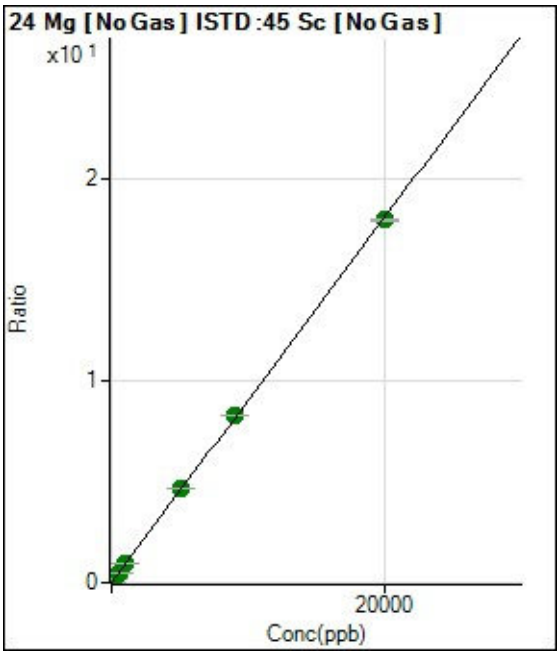
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45878.31	0.2203	P	3.3
2	☐	20.000	17.747	50052.24	0.2384	P	3.0
3	☐	200.000	208.794	90626.22	0.4335	P	6.4
4	☐	500.000	505.049	155681.87	0.7360	P	3.3
5	☐	1000.000	986.074	252451.92	1.2272	P	0.3
6	☐	5000.000	5113.866	1134978.26	5.4421	A	0.1
7	☐	9000.000	9094.981	1973267.68	9.5073	A	0.3
8	☐	20000.000	19929.276	4352808.48	20.5703	A	1.4

y = 0.0010 * x + 0.2203
R = 1.0000
DL = 21.43
BEC = 215.7

Weight: <None>
Min Conc: <None>

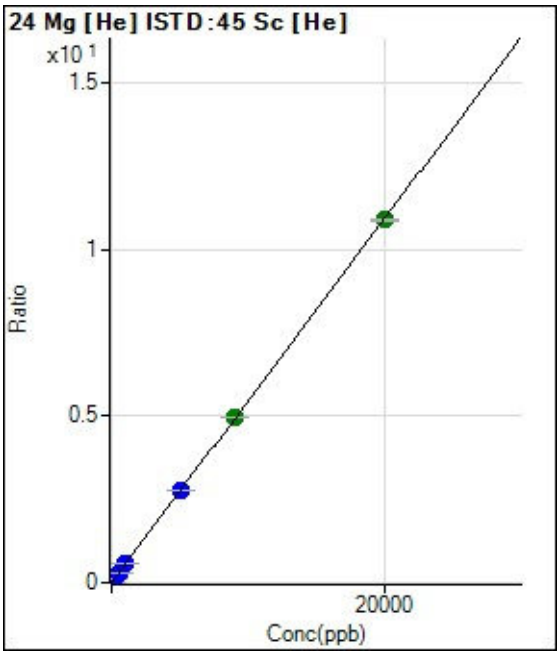


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27615.92	0.0041	P	2.1
2	☐	20.000	21.070	155761.65	0.0232	P	1.3
3	☐	200.000	205.406	1273186.31	0.1896	A	1.0
4	☐	500.000	509.587	3104365.79	0.4643	A	0.9
5	☐	1000.000	1007.341	6075878.87	0.9139	A	0.5
6	☐	5000.000	5174.153	30842533.71	4.6769	A	0.3
7	☐	9000.000	9188.356	54396509.19	8.3021	A	0.3
8	☐	20000.000	19871.040	118983011.56	17.9495	A	0.6

y = 9.0309E-004 * x + 0.0041
R = 0.9999
DL = 0.2931
BEC = 4.583

Weight: <None>
Min Conc: <None>

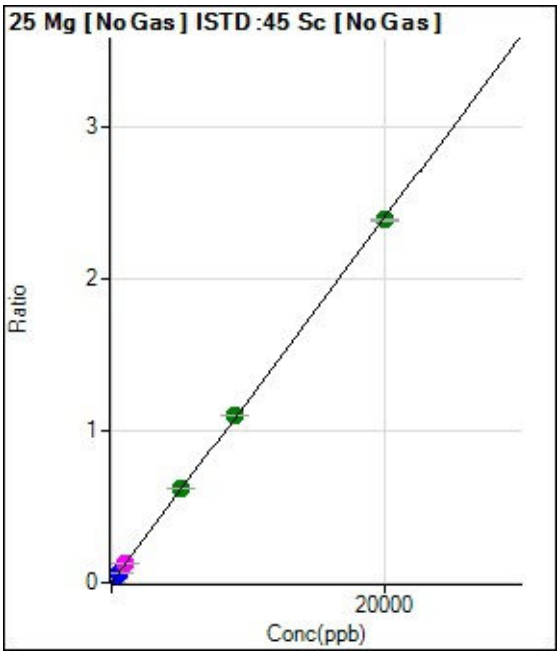
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.06	0.0029	P	7.6
2	☐	20.000	20.540	2960.52	0.0141	P	4.3
3	☐	200.000	197.131	23114.08	0.1105	P	3.5
4	☐	500.000	506.875	59168.30	0.2797	P	1.6
5	☐	1000.000	1011.560	114257.74	0.5554	P	0.8
6	☐	5000.000	5054.639	576346.31	2.7636	P	0.1
7	☐	9000.000	9104.495	1032656.31	4.9754	A	0.4
8	☐	20000.000	19938.596	2305172.31	10.8926	A	0.8

y = 5.4617E-004 * x + 0.0029
R = 1.0000
DL = 1.208
BEC = 5.279

Weight: <None>
Min Conc: <None>

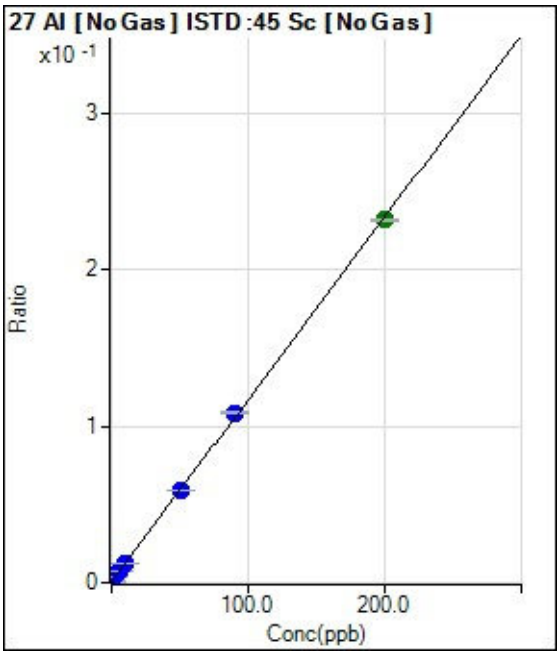


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3373.98	0.0005	P	5.8
2	☐	20.000	20.506	19935.79	0.0030	P	5.4
3	☐	200.000	203.945	167595.87	0.0250	P	4.2
4	☐	500.000	505.594	408776.27	0.0611	P	1.0
5	☐	1000.000	1004.386	804271.16	0.1210	M	1.2
6	☐	5000.000	5183.391	4102999.00	0.6222	A	0.6
7	☐	9000.000	9146.938	7191307.81	1.0975	A	0.4
8	☐	20000.000	19887.631	15814255.18	2.3857	A	0.5

y = 1.1993E-004 * x + 5.0567E-004
R = 0.9999
DL = 0.7345
BEC = 4.216

Weight: <None>
Min Conc: <None>

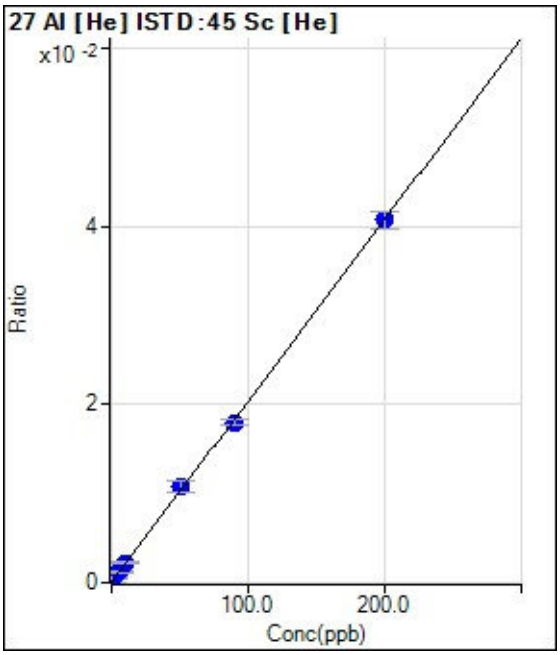
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3777.21	0.0006	P	23.1
2	☐			41424.28	0.0062	P	0.7
3	☐	2.000	2.547	23701.68	0.0035	P	7.2
4	☐	5.000	5.968	50212.72	0.0075	P	6.7
5	☐	10.000	10.406	84273.10	0.0127	P	1.5
6	☐	50.000	50.381	390368.47	0.0592	P	0.7
7	☐	90.000	92.764	711034.16	0.1085	P	1.1
8	☐	200.000	198.611	1535790.97	0.2317	A	0.5

y = 0.0012 * x + 5.6607E-004
R = 0.9999
DL = 0.3372
BEC = 0.4864

Weight: <None>
Min Conc: <None>

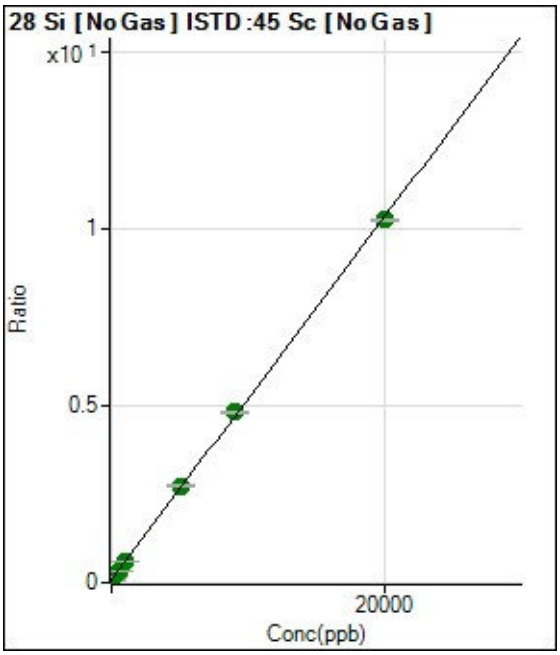


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.2
2	☐			173.34	0.0008	P	22.4
3	☐	2.000	2.739	123.33	0.0006	P	20.2
4	☐	5.000	5.805	256.67	0.0012	P	22.6
5	☐	10.000	10.592	450.02	0.0022	P	10.2
6	☐	50.000	53.120	2260.23	0.0108	P	11.2
7	☐	90.000	88.256	3733.91	0.0180	P	3.5
8	☐	200.000	199.947	8612.83	0.0407	P	4.6

y = 2.0348E-004 * x + 3.2400E-005
R = 0.9998
DL = 0.8274
BEC = 0.1592

Weight: <None>
Min Conc: <None>

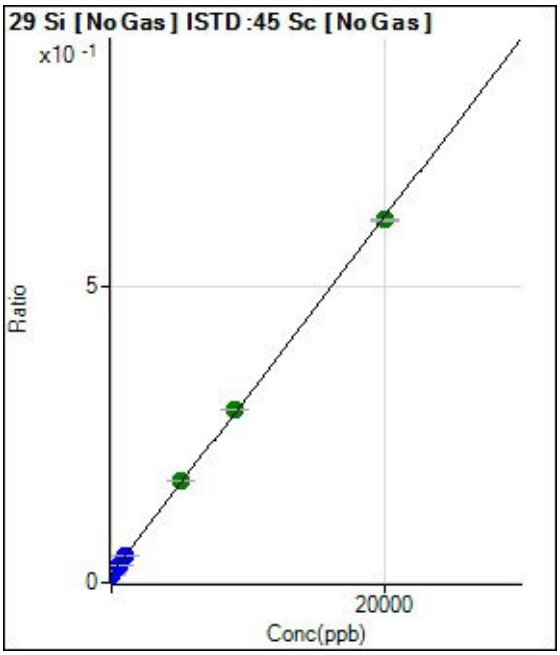
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540264.15	0.0810	P	0.7
2	☐	20.000	21.079	617079.43	0.0918	P	0.9
3	☐	200.000	198.516	1227319.59	0.1828	A	0.4
4	☐	500.000	507.354	2281303.08	0.3412	A	0.6
5	☐	1000.000	1011.074	3986718.81	0.5996	A	0.2
6	☐	5000.000	5192.840	18100868.40	2.7447	A	0.2
7	☐	9000.000	9241.419	31592082.15	4.8216	A	0.4
8	☐	20000.000	19842.428	68007908.05	10.2596	A	0.5

y = 5.1297E-004 * x + 0.0810
R = 0.9998
DL = 3.33
BEC = 157.8

Weight: <None>
Min Conc: <None>

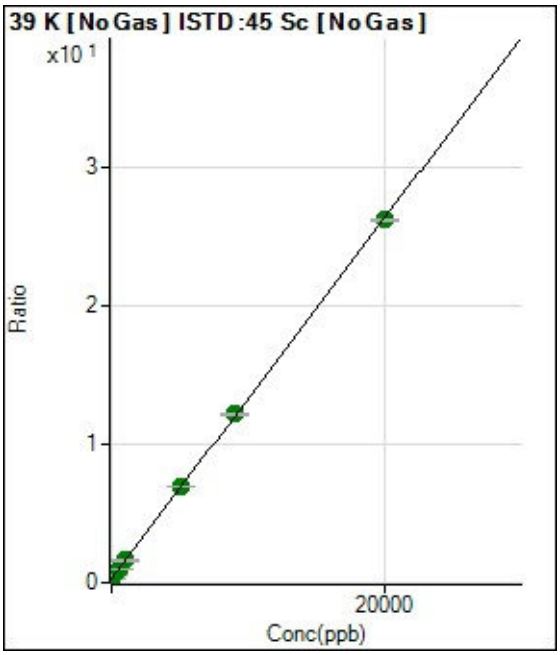


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96824.80	0.0145	P	0.7
2	☐	20.000	9.958	99580.07	0.0148	P	1.7
3	☐	200.000	196.094	137210.16	0.0204	P	1.0
4	☐	500.000	498.817	197795.26	0.0296	P	0.4
5	☐	1000.000	1005.135	298425.75	0.0449	P	0.3
6	☐	5000.000	5201.951	1132360.12	0.1717	A	0.4
7	☐	9000.000	9245.620	1925703.73	0.2939	A	0.2
8	☐	20000.000	19838.805	4070050.89	0.6140	A	0.2

y = 3.0218E-005 * x + 0.0145
R = 0.9998
DL = 10.52
BEC = 480.2

Weight: <None>
Min Conc: <None>

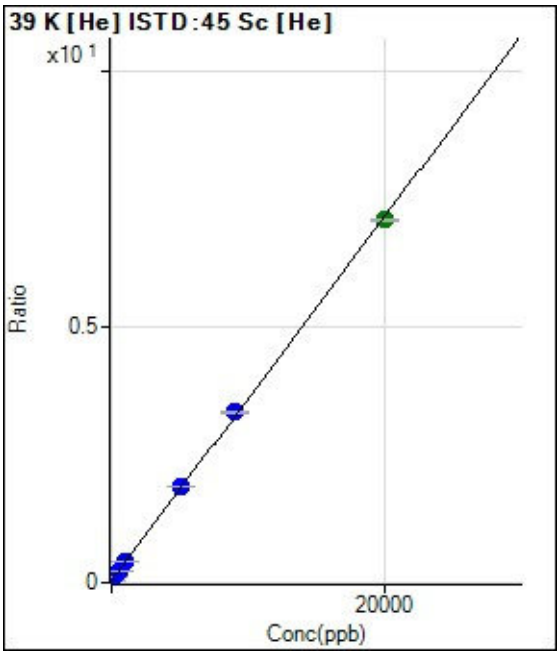
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1984331.85	0.2974	A	0.8
2	☐	20.000	20.462	2178318.67	0.3240	A	0.5
3	☐	200.000	201.949	3759011.09	0.5599	A	1.1
4	☐	500.000	504.017	6368281.16	0.9525	A	0.3
5	☐	1000.000	999.849	10618109.01	1.5970	A	0.8
6	☐	5000.000	5134.752	45976570.98	6.9718	A	0.6
7	☐	9000.000	9133.354	79735188.81	12.1693	A	0.6
8	☐	20000.000	19906.190	173490717.42	26.1723	A	0.7

y = 0.0013 * x + 0.2974
R = 0.9999
DL = 5.495
BEC = 228.8

Weight: <None>
Min Conc: <None>

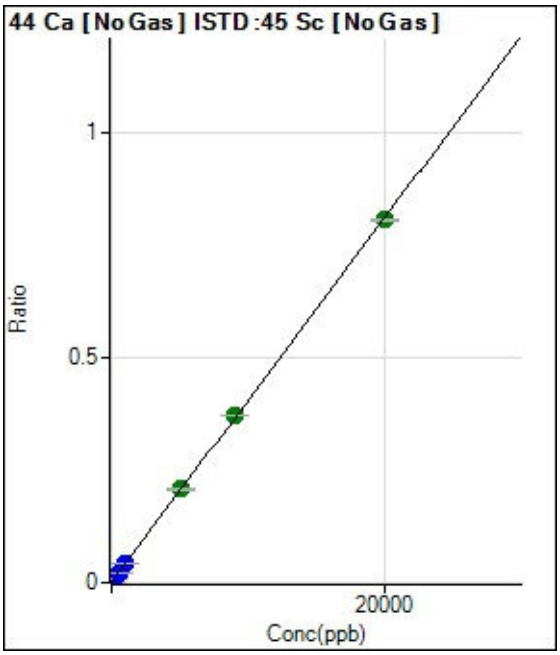


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8496.41	0.0408	P	8.7
2	☐	20.000	1.267	8656.86	0.0412	P	6.3
3	☐	200.000	192.321	22820.19	0.1091	P	2.1
4	☐	500.000	502.134	46374.40	0.2192	P	2.3
5	☐	1000.000	998.332	81376.68	0.3956	P	0.2
6	☐	5000.000	5170.947	391734.06	1.8784	P	0.6
7	☐	9000.000	9281.272	693031.69	3.3391	P	1.1
8	☐	20000.000	19830.816	1499963.89	7.0880	A	0.9

y = 3.5537E-004 * x + 0.0408
R = 0.9998
DL = 30.05
BEC = 114.8

Weight: <None>
Min Conc: <None>

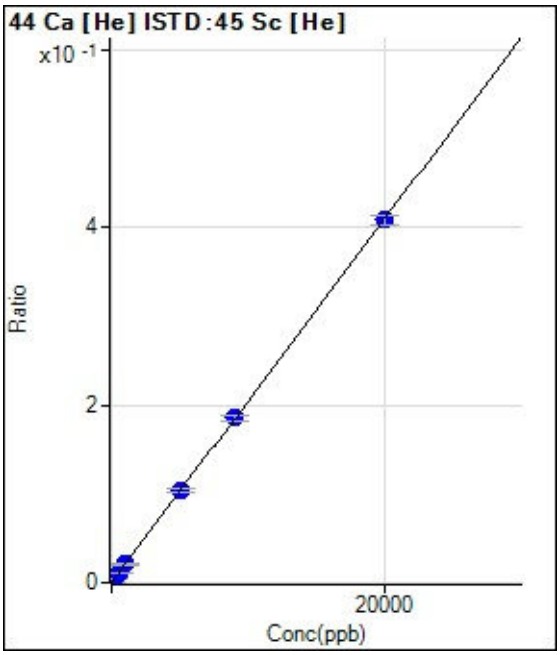
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6628.78	0.0010	P	8.3
2	☐	20.000	24.802	13434.24	0.0020	P	4.3
3	☐	200.000	201.066	61340.34	0.0091	P	4.9
4	☐	500.000	498.789	141690.72	0.0212	P	0.6
5	☐	1000.000	990.953	273423.70	0.0411	P	0.7
6	☐	5000.000	5133.228	1377437.43	0.2089	A	1.5
7	☐	9000.000	9158.636	2436762.57	0.3719	A	0.3
8	☐	20000.000	19895.774	5347450.96	0.8067	A	0.2

y = 4.0498E-005 * x + 9.9350E-004
R = 0.9999
DL = 6.074
BEC = 24.53

Weight: <None>
Min Conc: <None>

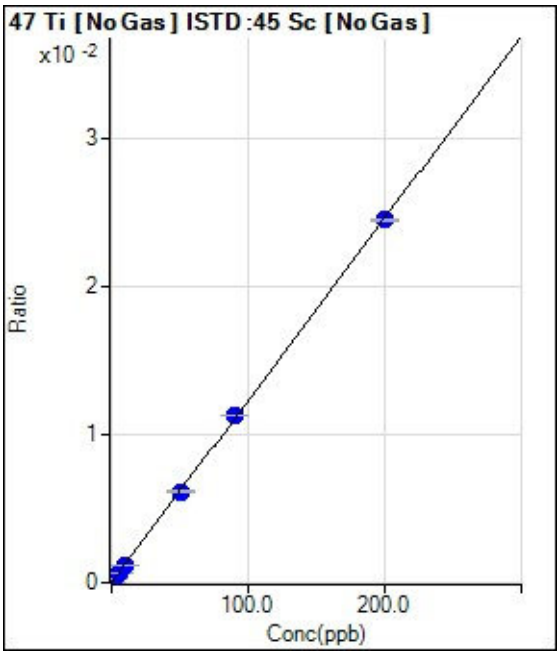


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.34	0.0003	P	43.7
2	☐	20.000	12.257	106.68	0.0005	P	57.0
3	☐	200.000	215.318	973.45	0.0047	P	13.6
4	☐	500.000	484.110	2147.01	0.0102	P	2.9
5	☐	1000.000	1008.923	4294.31	0.0209	P	8.9
6	☐	5000.000	5063.549	21631.78	0.1037	P	5.8
7	☐	9000.000	9056.722	38469.80	0.1853	P	3.1
8	☐	20000.000	19958.394	86368.23	0.4081	P	2.4

y = 2.0437E-005 * x + 2.5642E-004
R = 1.0000
DL = 16.43
BEC = 12.55

Weight: <None>
Min Conc: <None>

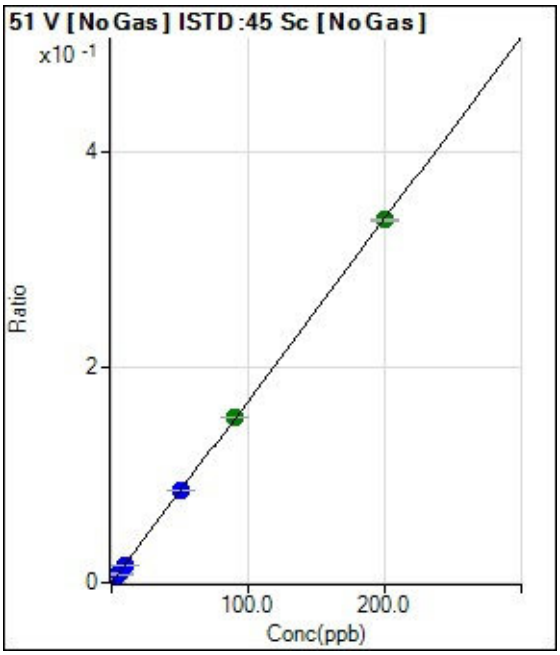
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.74	0.0000	P	27.1
2	☐	0.200	0.225	263.61	0.0000	P	6.0
3	☐	2.000	1.977	1711.85	0.0003	P	5.1
4	☐	5.000	4.839	4061.39	0.0006	P	1.4
5	☐	10.000	9.444	7810.14	0.0012	P	6.0
6	☐	50.000	49.973	40664.22	0.0062	P	0.4
7	☐	90.000	91.834	74180.11	0.0113	P	1.0
8	☐	200.000	199.213	162703.62	0.0245	P	0.7

y = 1.2316E-004 * x + 1.1501E-005
R = 0.9999
DL = 0.07593
BEC = 0.09338

Weight: <None>
Min Conc: <None>

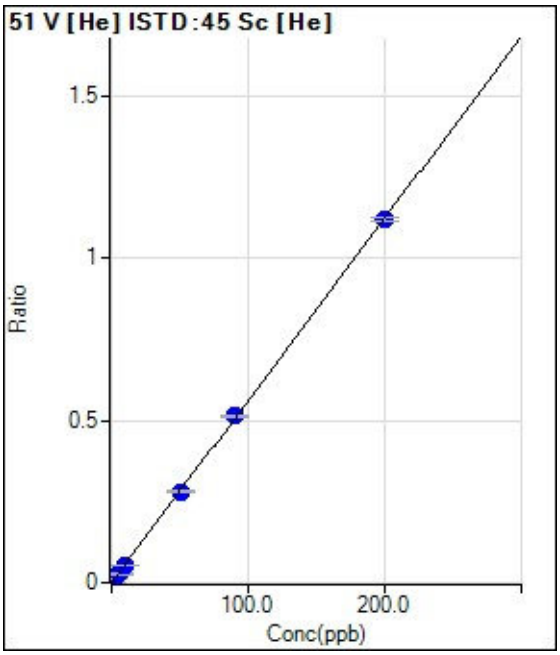


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	62.83	0.0000	P	1287.7
2	☐	0.200	0.209	2448.56	0.0004	P	80.1
3	☐	2.000	1.894	21582.25	0.0032	P	3.4
4	☐	5.000	4.850	54946.08	0.0082	P	4.1
5	☐	10.000	9.772	110032.95	0.0166	P	1.7
6	☐	50.000	50.950	568763.50	0.0862	P	0.9
7	☐	90.000	90.689	1005817.94	0.1535	A	0.5
8	☐	200.000	199.469	2238021.89	0.3376	A	0.2

y = 0.0017 * x + 9.3796E-006
R = 1.0000
DL = 0.2141
BEC = 0.005542

Weight: <None>
Min Conc: <None>

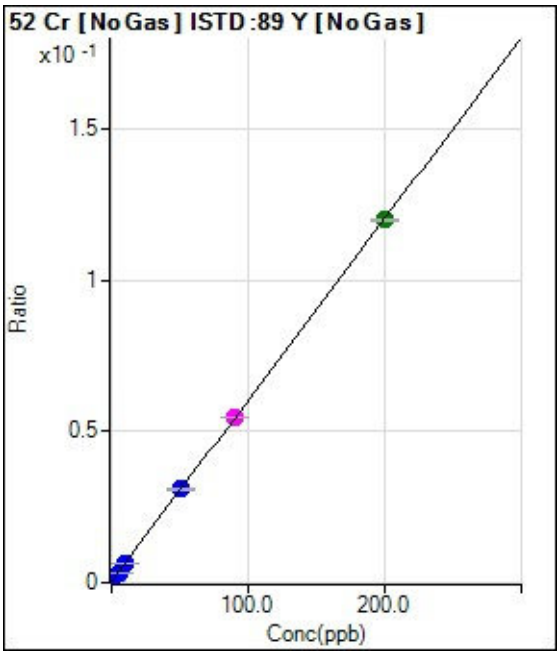
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0005	P	40.4
2	☐	0.200	0.198	330.34	0.0016	P	5.1
3	☐	2.000	2.069	2522.81	0.0121	P	6.8
4	☐	5.000	4.705	5676.95	0.0268	P	3.4
5	☐	10.000	9.712	11299.49	0.0549	P	3.5
6	☐	50.000	49.987	58536.56	0.2807	P	1.0
7	☐	90.000	91.645	106721.89	0.5142	P	0.8
8	☐	200.000	199.284	236494.82	1.1176	P	1.2

y = 0.0056 * x + 4.6617E-004
R = 1.0000
DL = 0.1007
BEC = 0.08316

Weight: <None>
Min Conc: <None>

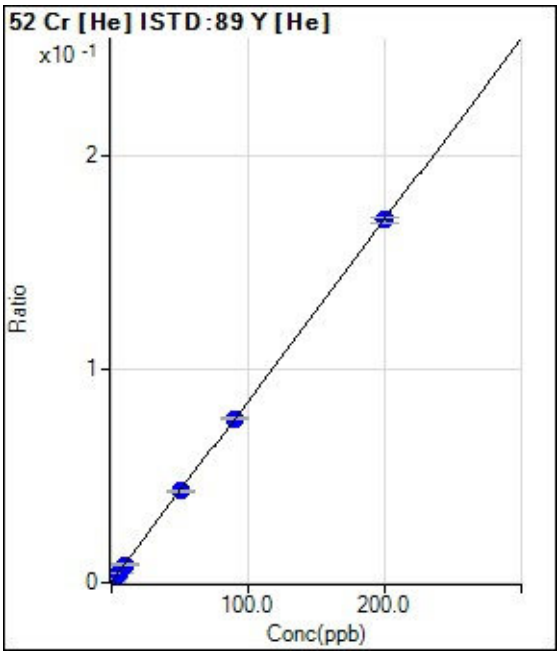


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8070.58	0.0005	P	7.2
2	☐	0.200	0.276	10925.46	0.0006	P	2.3
3	☐	2.000	2.058	29013.34	0.0017	P	0.9
4	☐	5.000	5.009	58553.21	0.0035	P	0.9
5	☐	10.000	9.877	107115.78	0.0064	P	0.1
6	☐	50.000	50.856	512670.20	0.0309	P	0.8
7	☐	90.000	90.585	903470.74	0.0547	M	0.3
8	☐	200.000	199.528	1975059.39	0.1199	A	0.8

y = 5.9844E-004 * x + 4.8064E-004
R = 1.0000
DL = 0.1725
BEC = 0.8032

Weight: <None>
Min Conc: <None>

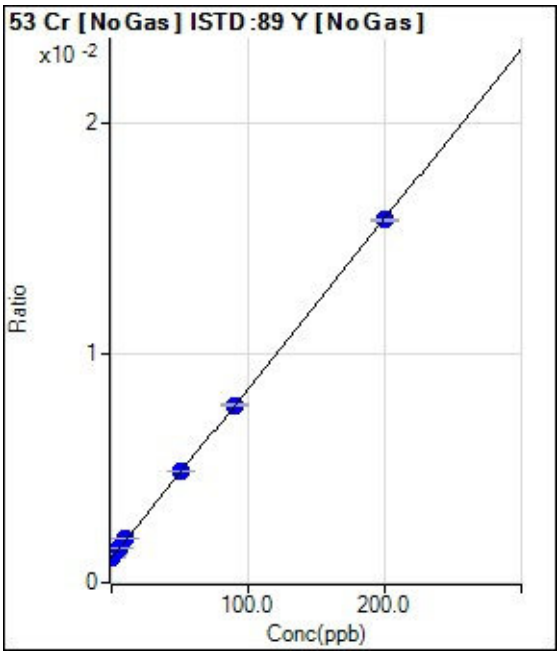
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	620.65	0.0004	P	8.6
2	☐	0.200	0.177	884.26	0.0005	P	2.9
3	☐	2.000	1.989	3580.77	0.0020	P	2.3
4	☐	5.000	4.614	7462.96	0.0043	P	7.0
5	☐	10.000	9.619	14636.05	0.0085	P	3.1
6	☐	50.000	50.153	73284.85	0.0428	P	1.5
7	☐	90.000	90.187	130411.28	0.0768	P	1.0
8	☐	200.000	199.907	291753.16	0.1697	P	1.7

y = 8.4718E-004 * x + 3.5312E-004
R = 1.0000
DL = 0.107
BEC = 0.4168

Weight: <None>
Min Conc: <None>

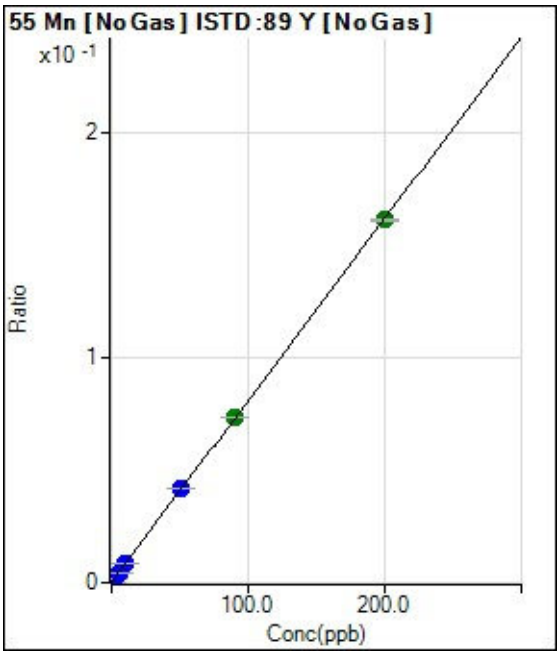


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17779.55	0.0011	P	2.0
2	☐	0.200	1.078	19259.72	0.0011	P	2.7
3	☐	2.000	2.959	21642.29	0.0013	P	0.8
4	☐	5.000	6.249	25596.43	0.0015	P	1.8
5	☐	10.000	11.667	32190.23	0.0019	P	1.0
6	☐	50.000	51.337	80465.81	0.0049	P	1.0
7	☐	90.000	90.364	127798.29	0.0077	P	1.2
8	☐	200.000	199.377	260174.45	0.0158	P	0.2

y = 7.3894E-005 * x + 0.0011
R = 1.0000
DL = 0.8474
BEC = 14.33

Weight: <None>
Min Conc: <None>

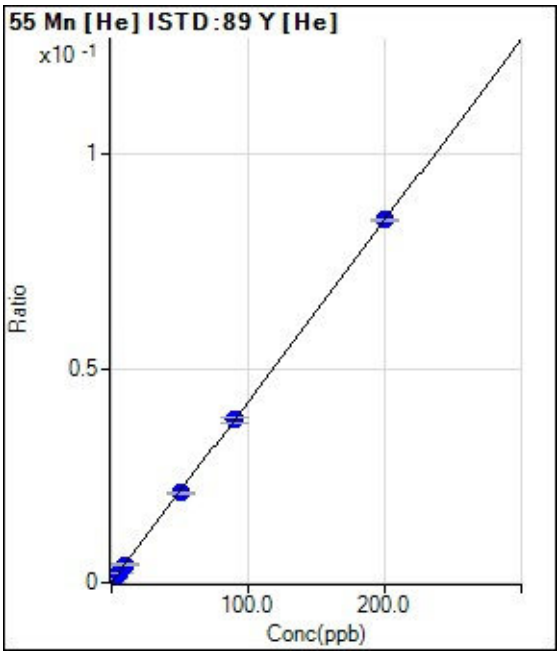
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4198.26	0.0003	P	4.8
2	☐	0.200	0.203	7008.92	0.0004	P	3.5
3	☐	2.000	1.985	31404.35	0.0019	P	1.2
4	☐	5.000	4.981	71926.70	0.0043	P	0.7
5	☐	10.000	10.006	139618.18	0.0083	P	1.2
6	☐	50.000	51.292	691060.44	0.0417	P	0.7
7	☐	90.000	90.483	1211238.72	0.0733	A	0.2
8	☐	200.000	199.460	2657791.34	0.1613	A	0.7

y = 8.0757E-004 * x + 2.5000E-004
R = 1.0000
DL = 0.04429
BEC = 0.3096

Weight: <None>
Min Conc: <None>

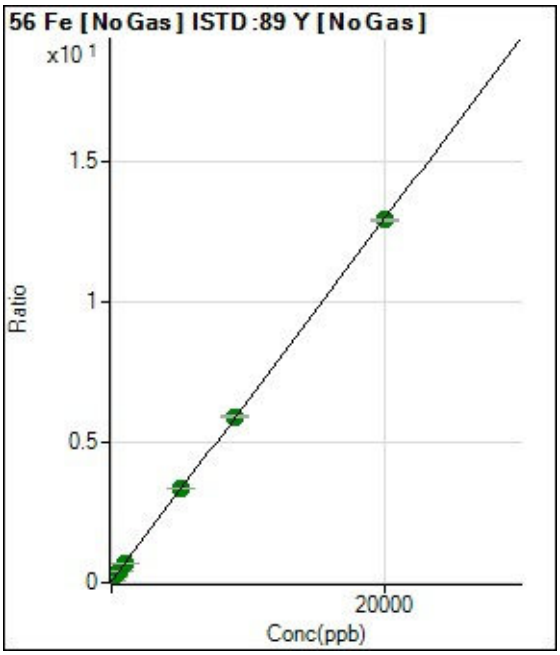


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.77	0.0001	P	20.2
2	☐	0.200	0.193	250.26	0.0001	P	22.0
3	☐	2.000	1.931	1541.66	0.0009	P	11.9
4	☐	5.000	5.063	3854.46	0.0022	P	7.2
5	☐	10.000	9.783	7229.22	0.0042	P	3.9
6	☐	50.000	49.408	35846.36	0.0210	P	2.2
7	☐	90.000	89.705	64563.00	0.0380	P	2.6
8	☐	200.000	200.291	145734.45	0.0848	P	0.6

y = 4.2289E-004 * x + 6.0843E-005
R = 1.0000
DL = 0.08737
BEC = 0.1439

Weight: <None>
Min Conc: <None>

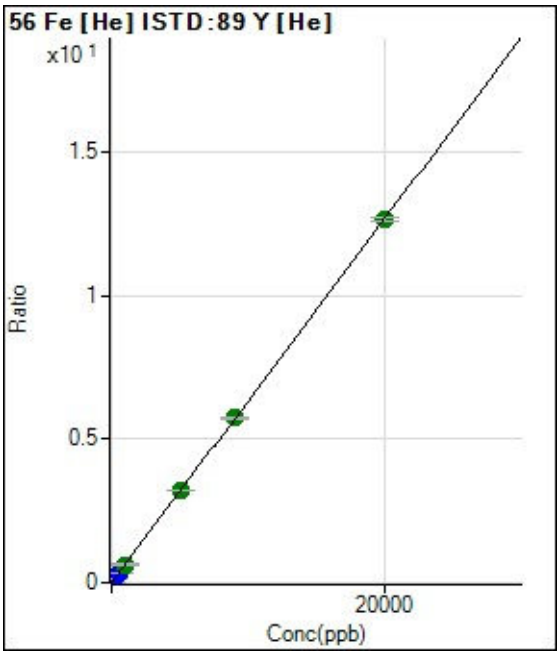
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	879396.99	0.0524	A	1.2
2	☐	20.000	18.961	1092771.61	0.0646	A	0.7
3	☐	200.000	199.071	3060817.32	0.1806	A	0.3
4	☐	500.000	504.650	6356061.86	0.3775	A	0.1
5	☐	1000.000	980.466	11465735.15	0.6841	A	0.7
6	☐	5000.000	5082.666	55180463.74	3.3275	A	0.3
7	☐	9000.000	9083.645	97558631.35	5.9056	A	0.6
8	☐	20000.000	19942.564	212568988.08	12.9027	A	0.6

y = 6.4437E-004 * x + 0.0524
R = 1.0000
DL = 2.956
BEC = 81.26

Weight: <None>
Min Conc: <None>

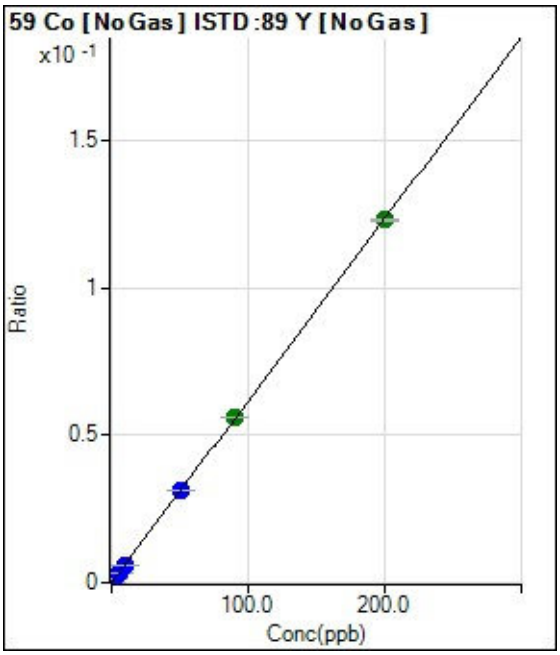


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6241.82	0.0036	P	13.7
2	☐	20.000	20.901	29488.06	0.0168	P	3.5
3	☐	200.000	206.913	236324.64	0.1345	P	1.1
4	☐	500.000	526.622	589686.82	0.3369	P	2.6
5	☐	1000.000	992.979	1088088.81	0.6321	A	1.9
6	☐	5000.000	5054.958	5479332.21	3.2031	A	1.1
7	☐	9000.000	9071.746	9761113.61	5.7455	A	1.4
8	☐	20000.000	19953.590	21719823.84	12.6332	A	0.9

y = 6.3295E-004 * x + 0.0036
R = 1.0000
DL = 2.303
BEC = 5.619

Weight: <None>
Min Conc: <None>

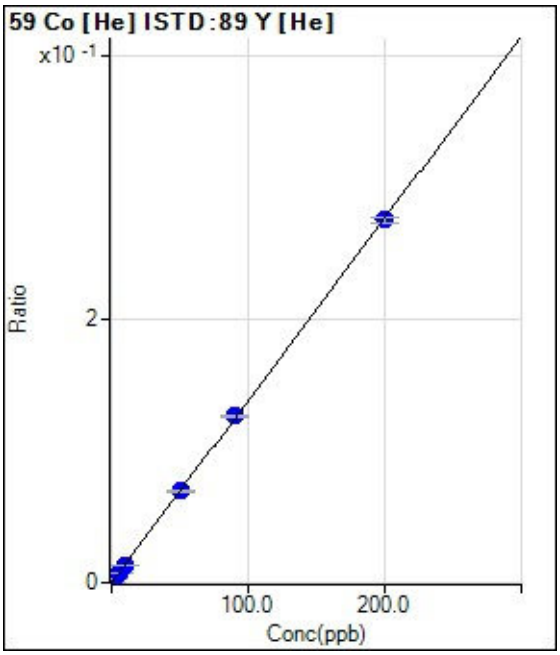
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.48	0.0000	P	4.3
2	☐	0.200	0.193	2476.08	0.0001	P	5.1
3	☐	2.000	1.961	20980.74	0.0012	P	4.2
4	☐	5.000	4.948	51880.57	0.0031	P	0.6
5	☐	10.000	9.866	102524.83	0.0061	P	0.3
6	☐	50.000	50.453	516933.42	0.0312	P	0.6
7	☐	90.000	90.774	926116.80	0.0561	A	0.5
8	☐	200.000	199.547	2029786.56	0.1232	A	0.6

y = 6.1729E-004 * x + 2.7417E-005
R = 1.0000
DL = 0.005732
BEC = 0.04441

Weight: <None>
Min Conc: <None>

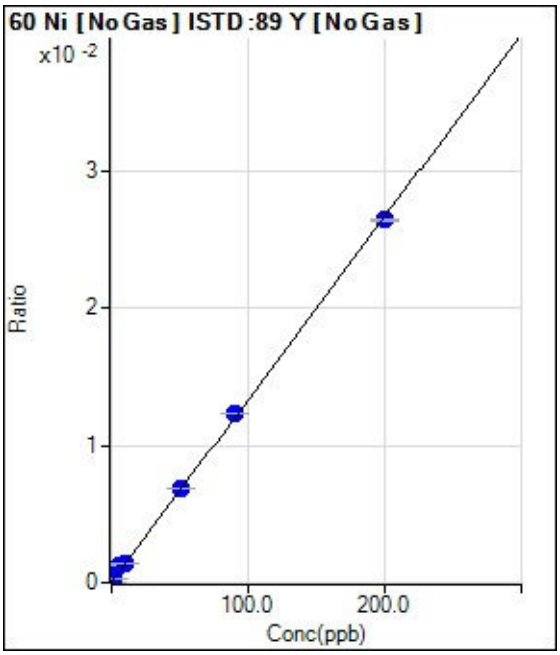


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.72	0.0000	P	73.9
2	☐	0.200	0.197	537.23	0.0003	P	16.6
3	☐	2.000	1.960	4825.76	0.0027	P	2.8
4	☐	5.000	4.912	11960.73	0.0068	P	4.7
5	☐	10.000	9.832	23490.61	0.0136	P	2.7
6	☐	50.000	50.344	119292.59	0.0697	P	1.1
7	☐	90.000	91.472	215222.34	0.1267	P	1.0
8	☐	200.000	199.263	474353.64	0.2759	P	1.4

y = 0.0014 * x + 3.2496E-005
R = 1.0000
DL = 0.052
BEC = 0.02347

Weight: <None>
Min Conc: <None>

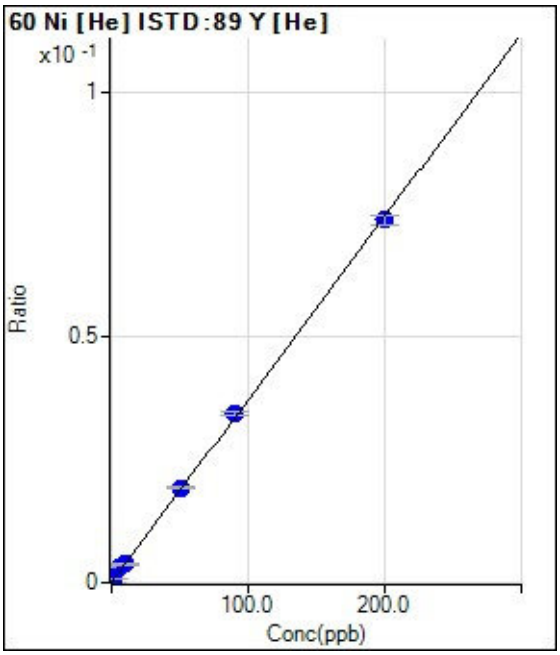
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	357.03	0.0000	P	21.9
2	☐	0.200	0.156	710.74	0.0000	P	30.5
3	☐	2.000	1.953	4759.02	0.0003	P	7.5
4	☐	5.000	8.843	20145.21	0.0012	P	1.1
5	☐	10.000	10.005	22641.64	0.0014	P	2.8
6	☐	50.000	51.181	113158.90	0.0068	P	0.8
7	☐	90.000	92.617	203704.19	0.0123	P	0.6
8	☐	200.000	198.431	434839.07	0.0264	P	0.7

y = 1.3291E-004 * x + 2.1264E-005
R = 0.9997
DL = 0.1052
BEC = 0.16

Weight: <None>
Min Conc: <None>

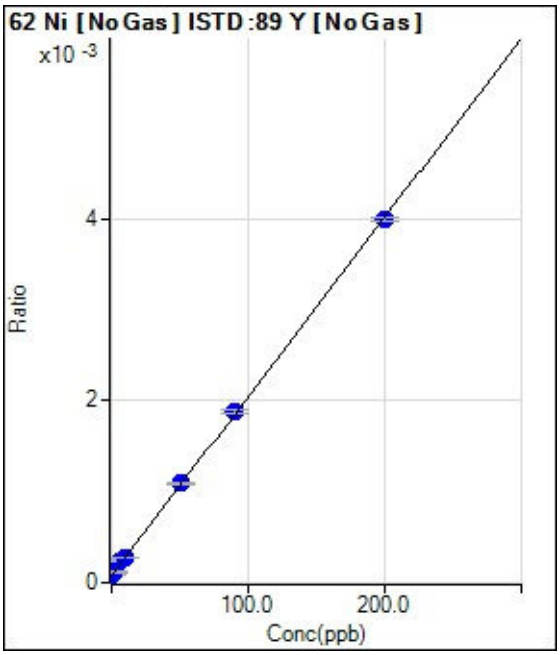


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.71	0.0000	P	25.2
2	☐	0.200	0.229	196.87	0.0001	P	30.5
3	☐	2.000	2.028	1374.80	0.0008	P	5.0
4	☐	5.000	8.750	5757.07	0.0033	P	4.1
5	☐	10.000	9.993	6461.44	0.0038	P	2.5
6	☐	50.000	51.934	33167.01	0.0194	P	2.4
7	☐	90.000	92.419	58580.89	0.0345	P	2.8
8	☐	200.000	198.334	127151.78	0.0740	P	2.5

y = 3.7283E-004 * x + 2.6616E-005
R = 0.9997
DL = 0.05397
BEC = 0.07139

Weight: <None>
Min Conc: <None>

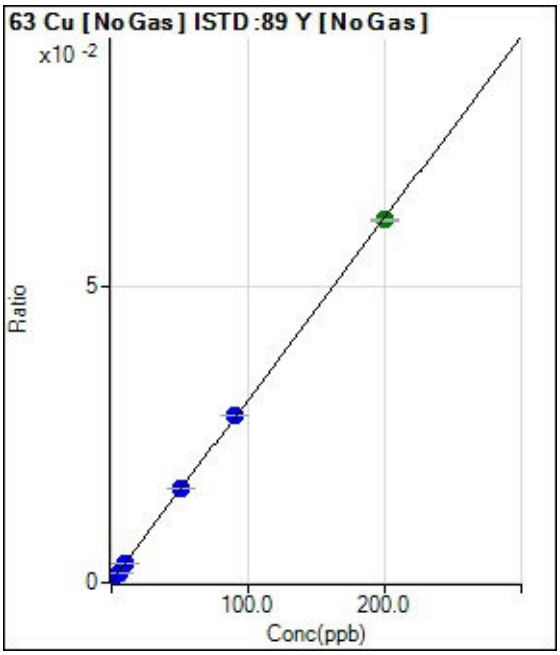
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1298.05	0.0001	P	6.1
2	☐	0.200	0.729	1551.67	0.0001	P	11.5
3	☐	2.000	1.854	1928.77	0.0001	P	6.4
4	☐	5.000	8.406	4088.11	0.0002	P	1.4
5	☐	10.000	9.928	4572.09	0.0003	P	4.2
6	☐	50.000	51.584	18127.12	0.0011	P	2.9
7	☐	90.000	91.765	31130.25	0.0019	P	2.2
8	☐	200.000	198.729	65747.21	0.0040	P	1.0

y = 1.9693E-005 * x + 7.7302E-005
R = 0.9998
DL = 0.7212
BEC = 3.925

Weight: <None>
Min Conc: <None>

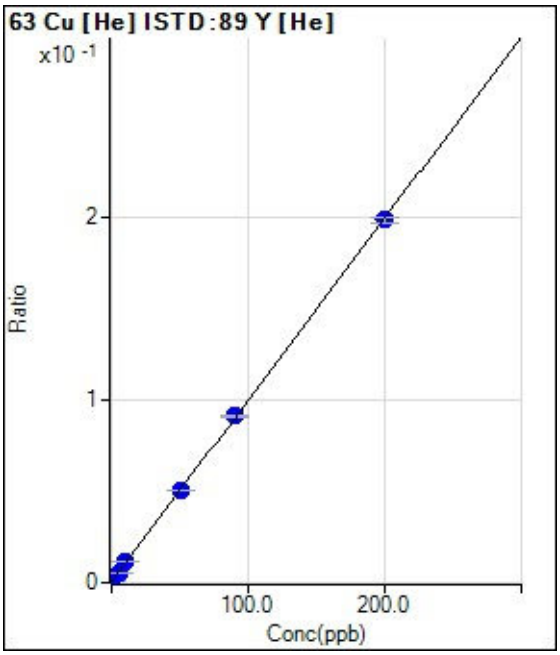


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3570.78	0.0002	P	8.2
2	☐	0.200	0.361	5473.36	0.0003	P	1.7
3	☐	2.000	2.043	14241.85	0.0008	P	1.6
4	☐	5.000	5.033	29615.49	0.0018	P	2.0
5	☐	10.000	10.300	56607.47	0.0034	P	1.6
6	☐	50.000	51.156	264211.97	0.0159	P	0.3
7	☐	90.000	91.518	468092.28	0.0283	P	0.8
8	☐	200.000	199.011	1010999.62	0.0614	A	0.6

y = 3.0729E-004 * x + 2.1261E-004
R = 0.9999
DL = 0.1692
BEC = 0.6919

Weight: <None>
Min Conc: <None>

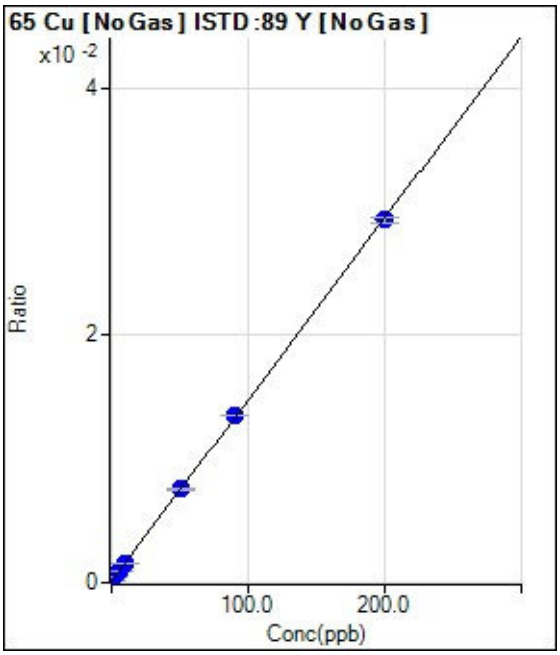
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	981.03	0.0006	P	4.9
2	☐	0.200	0.474	1808.63	0.0010	P	4.8
3	☐	2.000	2.193	4812.42	0.0027	P	7.7
4	☐	5.000	5.080	9820.21	0.0056	P	2.1
5	☐	10.000	10.789	19433.56	0.0113	P	2.9
6	☐	50.000	50.392	86664.13	0.0507	P	1.6
7	☐	90.000	91.329	155234.26	0.0914	P	0.8
8	☐	200.000	199.260	341563.44	0.1987	P	1.6

y = 9.9431E-004 * x + 5.5833E-004
R = 1.0000
DL = 0.0833
BEC = 0.5615

Weight: <None>
Min Conc: <None>

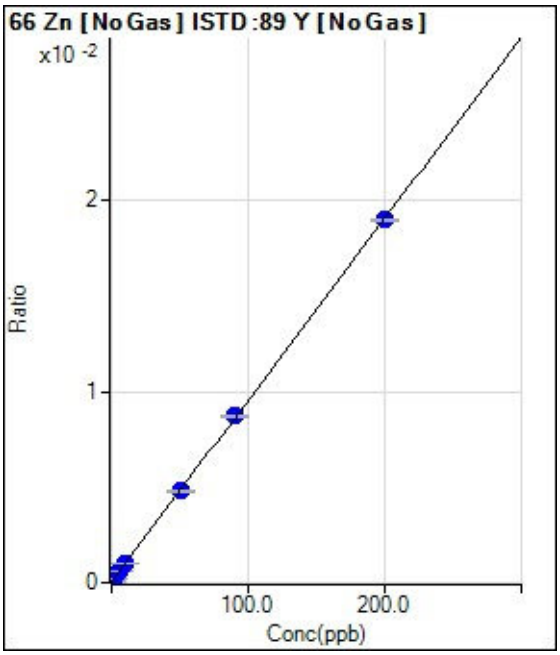


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1882.05	0.0001	P	6.4
2	☐	0.200	0.325	2703.02	0.0002	P	10.6
3	☐	2.000	2.107	7139.15	0.0004	P	5.0
4	☐	5.000	5.123	14549.19	0.0009	P	0.9
5	☐	10.000	10.066	26646.32	0.0016	P	1.1
6	☐	50.000	50.777	125489.49	0.0076	P	1.9
7	☐	90.000	91.467	223690.25	0.0135	P	0.1
8	☐	200.000	199.138	483482.65	0.0293	P	1.3

y = 1.4682E-004 * x + 1.1203E-004
R = 1.0000
DL = 0.1467
BEC = 0.7631

Weight: <None>
Min Conc: <None>

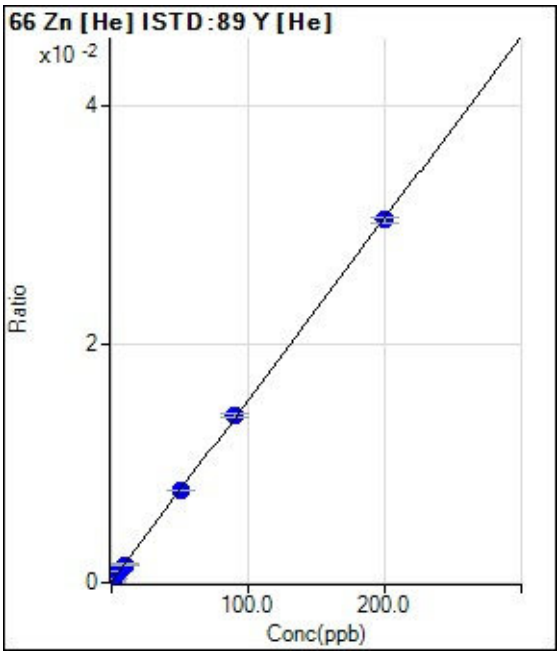
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	790.83	0.0000	P	9.7
2	☐	0.200	0.281	1247.99	0.0001	P	7.4
3	☐	2.000	1.995	4008.00	0.0002	P	5.5
4	☐	5.000	5.929	10270.97	0.0006	P	4.6
5	☐	10.000	9.856	16476.67	0.0010	P	1.4
6	☐	50.000	49.968	79474.04	0.0048	P	1.0
7	☐	90.000	91.242	143925.07	0.0087	P	0.5
8	☐	200.000	199.433	312835.65	0.0190	P	0.6

y = 9.4969E-005 * x + 4.7081E-005
R = 1.0000
DL = 0.1444
BEC = 0.4958

Weight: <None>
Min Conc: <None>

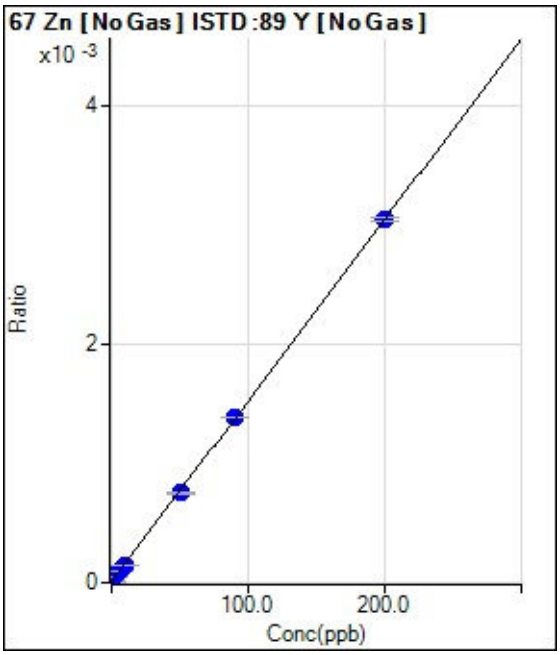


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.81	0.0001	P	21.4
2	☐	0.200	0.150	186.86	0.0001	P	34.3
3	☐	2.000	1.747	613.97	0.0003	P	9.4
4	☐	5.000	5.625	1645.11	0.0009	P	3.7
5	☐	10.000	9.484	2629.61	0.0015	P	6.0
6	☐	50.000	50.069	13183.09	0.0077	P	1.1
7	☐	90.000	91.919	23915.19	0.0141	P	2.2
8	☐	200.000	199.132	52262.74	0.0304	P	1.3

y = 1.5224E-004 * x + 8.3514E-005
R = 0.9999
DL = 0.3527
BEC = 0.5486

Weight: <None>
Min Conc: <None>

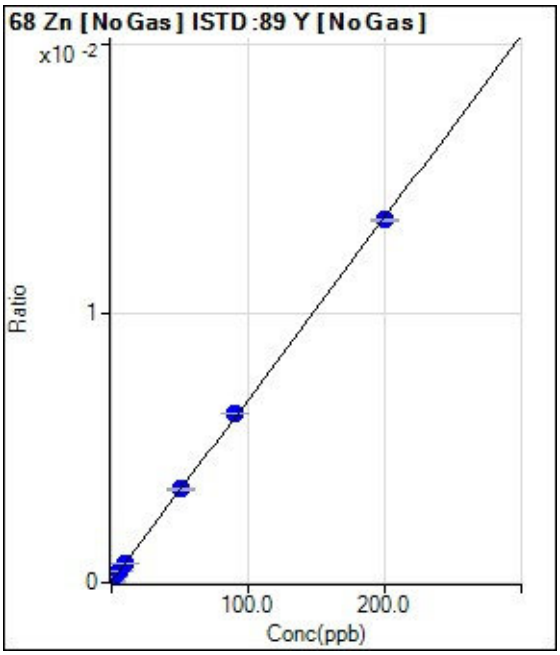
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.47	0.0000	P	36.7
2	☐	0.200	0.437	246.92	0.0000	P	26.6
3	☐	2.000	2.344	737.44	0.0000	P	7.0
4	☐	5.000	6.020	1671.80	0.0001	P	8.1
5	☐	10.000	9.122	2452.71	0.0001	P	5.2
6	☐	50.000	49.242	12521.87	0.0008	P	2.0
7	☐	90.000	90.555	22828.92	0.0014	P	0.1
8	☐	200.000	199.955	50119.36	0.0030	P	1.0

y = 1.5173E-005 * x + 7.9415E-006
R = 1.0000
DL = 0.5757
BEC = 0.5234

Weight: <None>
Min Conc: <None>

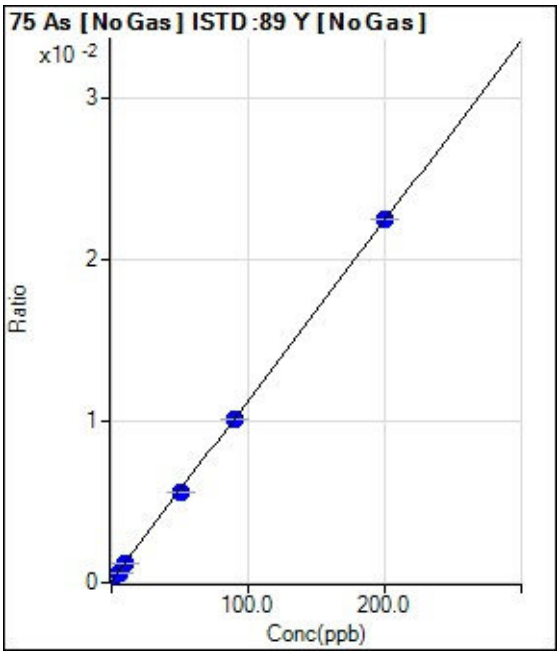


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	543.90	0.0000	P	19.9
2	☐	0.200	0.346	944.33	0.0001	P	9.0
3	☐	2.000	2.203	3076.81	0.0002	P	1.7
4	☐	5.000	5.866	7232.60	0.0004	P	1.1
5	☐	10.000	9.848	11720.28	0.0007	P	5.3
6	☐	50.000	50.748	57532.64	0.0035	P	0.6
7	☐	90.000	92.533	104063.43	0.0063	P	0.8
8	☐	200.000	198.657	222210.50	0.0135	P	0.6

y = 6.7726E-005 * x + 3.2365E-005
R = 0.9999
DL = 0.2851
BEC = 0.4779

Weight: <None>
Min Conc: <None>

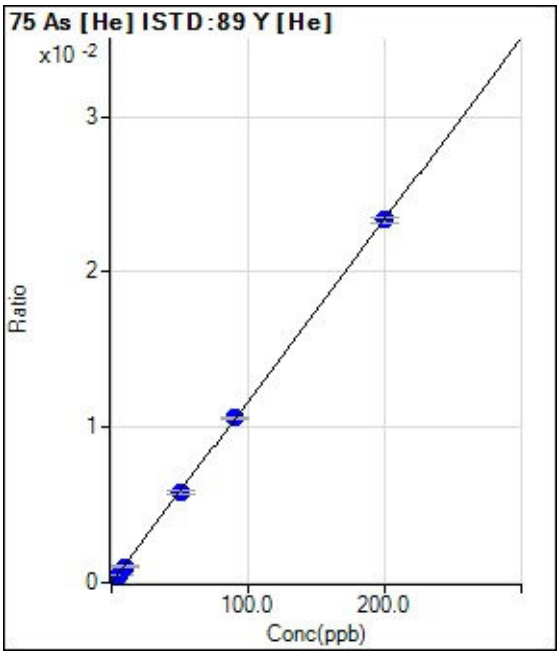
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2172.88	0.0001	P	30.9
2	☐	0.200	0.131	2435.55	0.0001	P	25.1
3	☐	2.000	1.693	5393.05	0.0003	P	15.1
4	☐	5.000	4.603	10820.45	0.0006	P	3.4
5	☐	10.000	9.156	19280.30	0.0012	P	1.8
6	☐	50.000	49.398	93487.58	0.0056	P	0.5
7	☐	90.000	89.752	167460.01	0.0101	P	0.8
8	☐	200.000	200.317	370121.28	0.0225	P	0.2

y = 1.1150E-004 * x + 1.2945E-004
R = 1.0000
DL = 1.075
BEC = 1.161

Weight: <None>
Min Conc: <None>

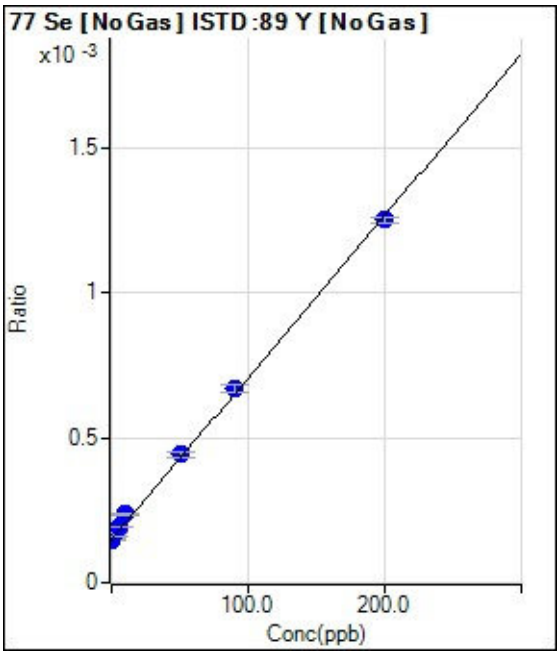


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	173.2
2	☐	0.200	0.238	51.11	0.0000	P	32.1
3	☐	2.000	2.018	416.68	0.0002	P	4.3
4	☐	5.000	4.555	934.48	0.0005	P	3.2
5	☐	10.000	8.900	1792.35	0.0010	P	6.8
6	☐	50.000	49.911	9982.63	0.0058	P	3.0
7	☐	90.000	90.604	17996.47	0.0106	P	1.6
8	☐	200.000	199.816	40159.43	0.0234	P	1.2

y = 1.1690E-004 * x + 1.2481E-006
R = 1.0000
DL = 0.05548
BEC = 0.01068

Weight: <None>
Min Conc: <None>

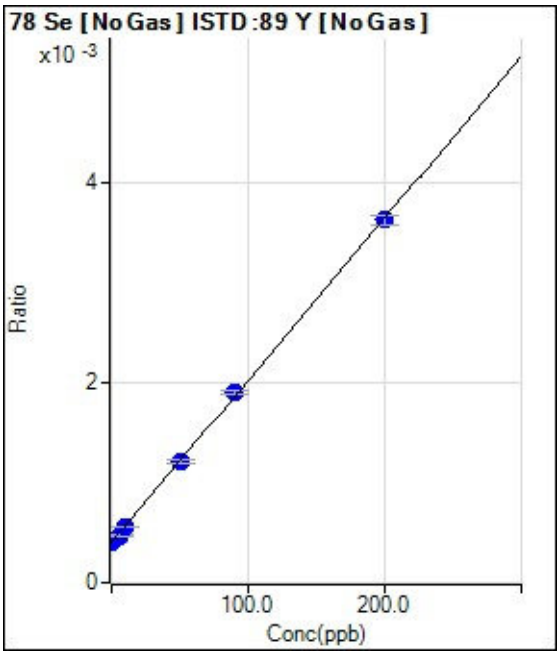
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2489.43	0.0001	P	4.0
2	☐	0.200	2.266	2723.06	0.0002	P	8.4
3	☐	2.000	3.262	2819.83	0.0002	P	8.1
4	☐	5.000	7.851	3233.69	0.0002	P	2.7
5	☐	10.000	15.666	3951.26	0.0002	P	4.0
6	☐	50.000	52.524	7326.14	0.0004	P	3.7
7	☐	90.000	93.368	11069.09	0.0007	P	3.7
8	☐	200.000	197.484	20626.63	0.0013	P	1.5

y = 5.5896E-006 * x + 1.4821E-004
R = 0.9996
DL = 3.214
BEC = 26.51

Weight: <None>
Min Conc: <None>

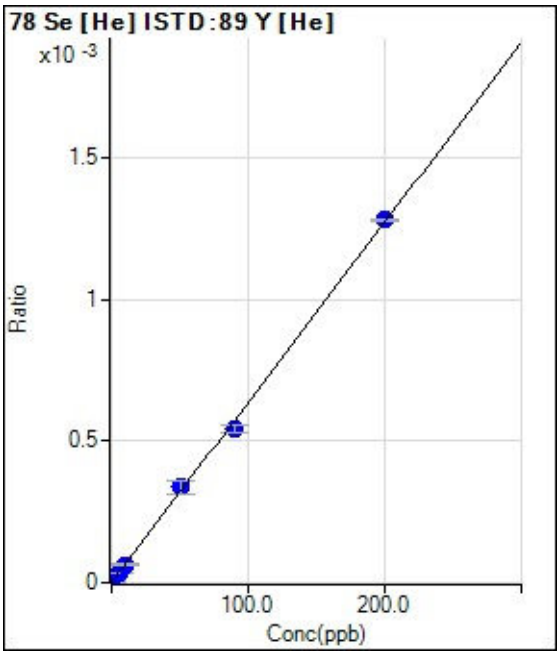


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6771.92	0.0004	P	2.3
2	☐	0.200	0.325	6912.16	0.0004	P	2.7
3	☐	2.000	1.013	7109.12	0.0004	P	5.2
4	☐	5.000	4.128	7910.37	0.0005	P	5.3
5	☐	10.000	9.332	9285.99	0.0006	P	1.9
6	☐	50.000	50.077	20112.02	0.0012	P	3.7
7	☐	90.000	92.351	31324.63	0.0019	P	2.5
8	☐	200.000	198.988	59654.72	0.0036	P	2.7

y = 1.6165E-005 * x + 4.0322E-004
R = 0.9999
DL = 1.696
BEC = 24.94

Weight: <None>
Min Conc: <None>

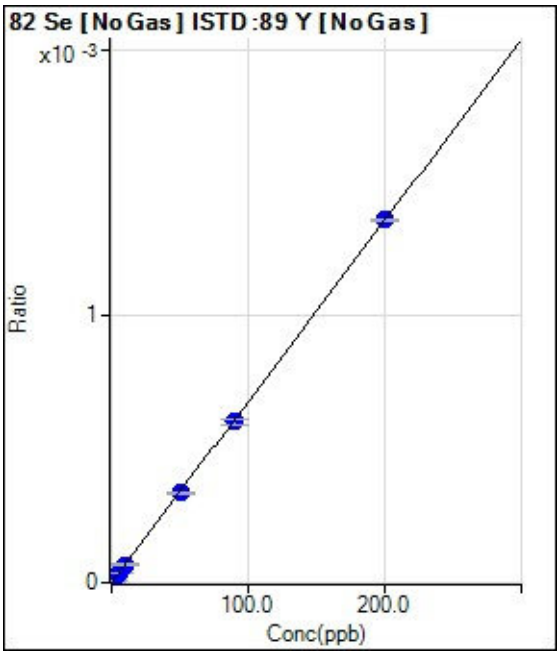
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	86.6
2	☐	0.200	0.199	4.44	0.0000	P	114.6
3	☐	2.000	3.383	40.00	0.0000	P	16.6
4	☐	5.000	5.196	60.00	0.0000	P	6.3
5	☐	10.000	9.538	106.67	0.0001	P	11.1
6	☐	50.000	52.854	576.68	0.0003	P	13.7
7	☐	90.000	85.289	923.37	0.0005	P	4.6
8	☐	200.000	201.411	2203.53	0.0013	P	0.9

y = 6.3558E-006 * x + 1.2612E-006
R = 0.9995
DL = 0.5157
BEC = 0.1984

Weight: <None>
Min Conc: <None>

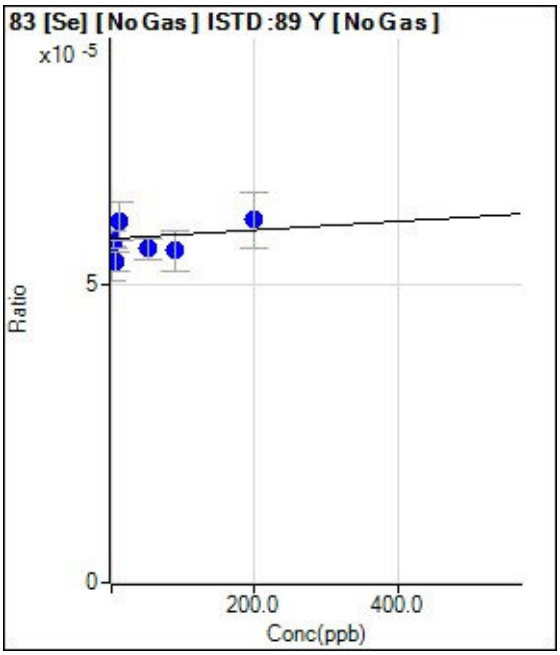


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-38.74	0.0000	P	-196.3
2	☐	0.200	0.443	11.79	0.0000	P	1339.2
3	☐	2.000	1.160	94.77	0.0000	P	53.0
4	☐	5.000	5.482	589.19	0.0000	P	8.3
5	☐	10.000	9.772	1075.43	0.0001	P	12.5
6	☐	50.000	49.805	5578.87	0.0003	P	2.0
7	☐	90.000	88.896	9949.59	0.0006	P	3.2
8	☐	200.000	200.553	22434.00	0.0014	P	0.5

y = 6.8009E-006 * x - 2.2949E-006
R = 1.0000
DL = 1.987
BEC = -0.3374

Weight: <None>
Min Conc: <None>

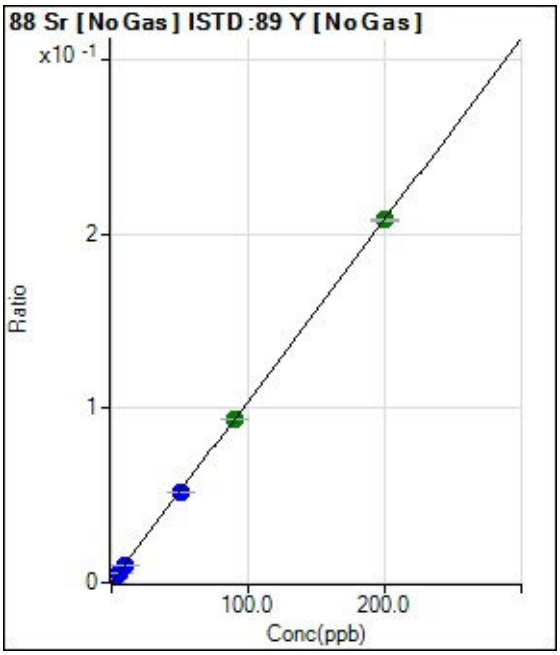
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	967.69	0.0001	P	4.8
2	☐	0.200	-497.084	914.29	0.0001	P	12.3
3	☐	2.000	-96.464	964.35	0.0001	P	2.8
4	☐	5.000	-536.574	904.28	0.0001	P	5.8
5	☐	10.000	403.756	1014.41	0.0001	P	10.3
6	☐	50.000	-230.763	927.65	0.0001	P	6.6
7	☐	90.000	-283.763	917.64	0.0001	P	12.7
8	☐	200.000	433.718	1001.05	0.0001	P	15.4

y = 7.2349E-009 * x + 5.7608E-005
R = 0.4779
DL = 1135
BEC = 7962

Weight: <None>
Min Conc: <None>

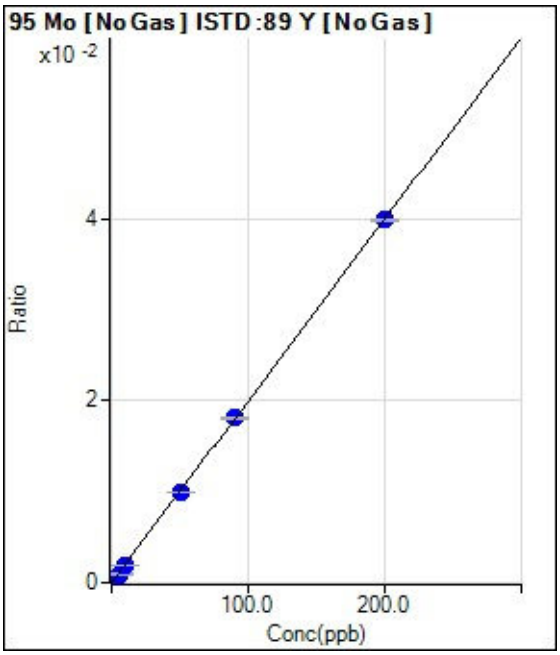


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1671.81	0.0001	P	16.3
2	☐	0.200	0.207	5326.48	0.0003	P	4.4
3	☐	2.000	1.980	36580.11	0.0022	P	2.0
4	☐	5.000	4.963	88566.35	0.0053	P	0.4
5	☐	10.000	9.659	170032.68	0.0101	P	1.4
6	☐	50.000	50.168	866910.98	0.0523	P	0.3
7	☐	90.000	90.214	1551615.37	0.0939	A	0.1
8	☐	200.000	199.880	3426600.04	0.2080	A	0.2

y = 0.0010 * x + 9.9506E-005
R = 1.0000
DL = 0.04665
BEC = 0.09568

Weight: <None>
Min Conc: <None>

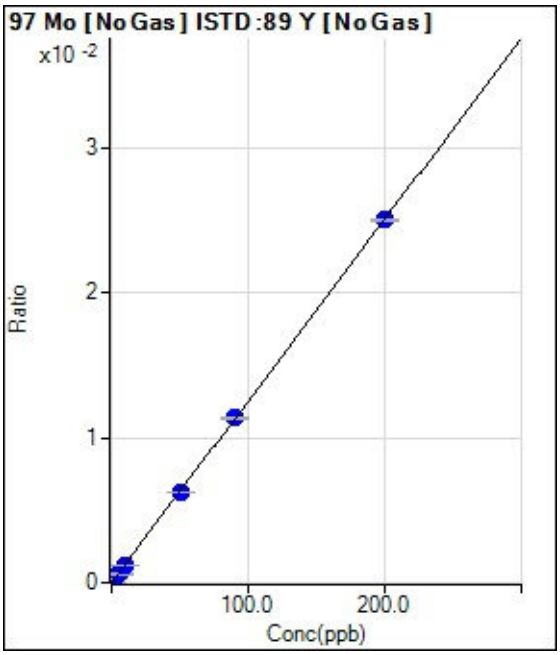
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	260.27	0.0000	P	3.4
2	☐	0.200	0.197	927.65	0.0001	P	13.4
3	☐	2.000	1.859	6541.57	0.0004	P	4.4
4	☐	5.000	4.685	15985.82	0.0009	P	3.2
5	☐	10.000	9.487	31957.02	0.0019	P	1.8
6	☐	50.000	49.697	164554.08	0.0099	P	0.8
7	☐	90.000	90.874	299526.16	0.0181	P	1.1
8	☐	200.000	199.718	656209.22	0.0398	P	0.4

y = 1.9936E-004 * x + 1.5495E-005
R = 1.0000
DL = 0.00784
BEC = 0.07772

Weight: <None>
Min Conc: <None>

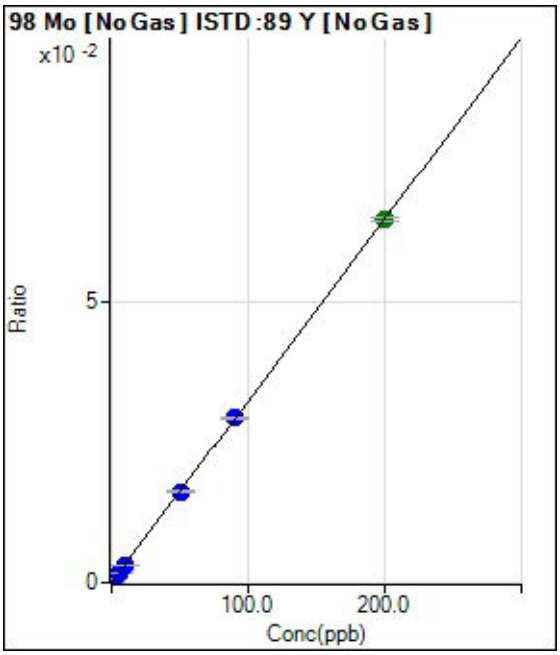


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.45	0.0000	P	41.7
2	☐	0.200	0.165	463.82	0.0000	P	1.7
3	☐	2.000	1.926	4204.93	0.0002	P	5.0
4	☐	5.000	4.782	10204.27	0.0006	P	6.3
5	☐	10.000	9.508	20088.88	0.0012	P	2.1
6	☐	50.000	49.645	103318.04	0.0062	P	0.8
7	☐	90.000	90.552	187635.29	0.0114	P	0.2
8	☐	200.000	199.871	412906.21	0.0251	P	0.3

y = 1.2536E-004 * x + 6.7566E-006
R = 1.0000
DL = 0.06742
BEC = 0.0539

Weight: <None>
Min Conc: <None>

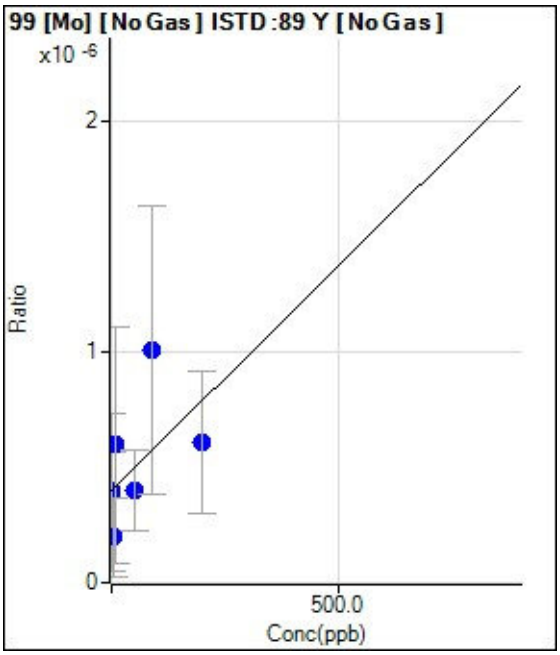
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	362.74	0.0000	P	34.8
2	☐	0.200	0.176	1330.44	0.0001	P	7.7
3	☐	2.000	1.892	10734.23	0.0006	P	2.3
4	☐	5.000	4.929	27201.41	0.0016	P	2.1
5	☐	10.000	9.488	51794.28	0.0031	P	1.4
6	☐	50.000	50.153	269363.44	0.0162	P	1.2
7	☐	90.000	90.524	484037.10	0.0293	P	1.6
8	☐	200.000	199.754	1064705.23	0.0646	A	1.1

y = 3.2344E-004 * x + 2.1609E-005
R = 1.0000
DL = 0.06983
BEC = 0.06681

Weight: <None>
Min Conc: <None>

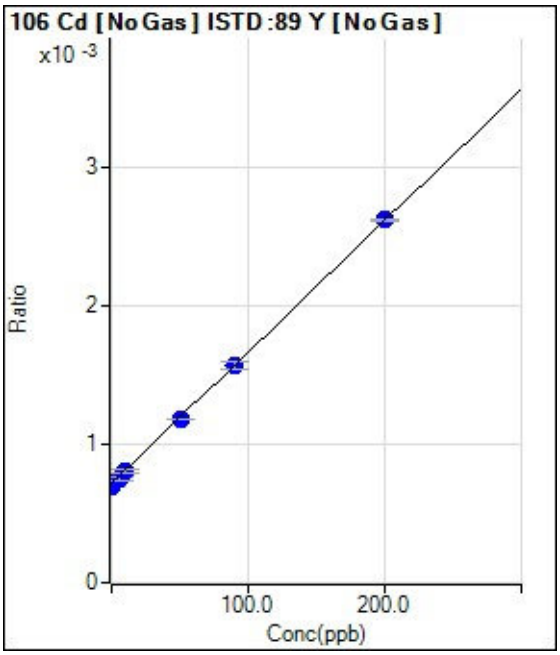


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	0.200	-2.459	6.67	0.0000	P	86.6
3	☐	2.000	-1.619	6.67	0.0000	P	173.2
4	☐	5.000	-102.545	3.34	0.0000	P	173.2
5	☐	10.000	101.959	10.01	0.0000	P	173.2
6	☐	50.000	2.079	6.67	0.0000	P	86.6
7	☐	90.000	313.678	16.68	0.0000	P	124.7
8	☐	200.000	109.455	10.01	0.0000	P	100.9

y = 1.9454E-009 * x + 3.9808E-007
R = 0.5185
DL = 531.7
BEC = 204.6

Weight: <None>
Min Conc: <None>

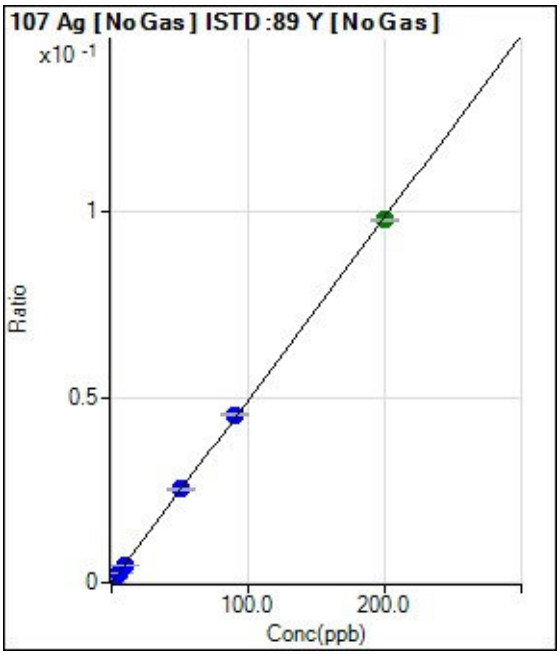
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12054.40	0.0007	P	3.2
2	☐	0.200	-2.315	11773.85	0.0007	P	2.4
3	☐	2.000	1.250	12361.64	0.0007	P	4.2
4	☐	5.000	3.566	12648.80	0.0008	P	3.4
5	☐	10.000	9.198	13487.23	0.0008	P	3.5
6	☐	50.000	48.796	19564.26	0.0012	P	0.2
7	☐	90.000	89.802	25904.80	0.0016	P	3.6
8	☐	200.000	200.476	43103.39	0.0026	P	0.4

y = 9.4702E-006 * x + 7.1765E-004
R = 0.9999
DL = 7.184
BEC = 75.78

Weight: <None>
Min Conc: <None>

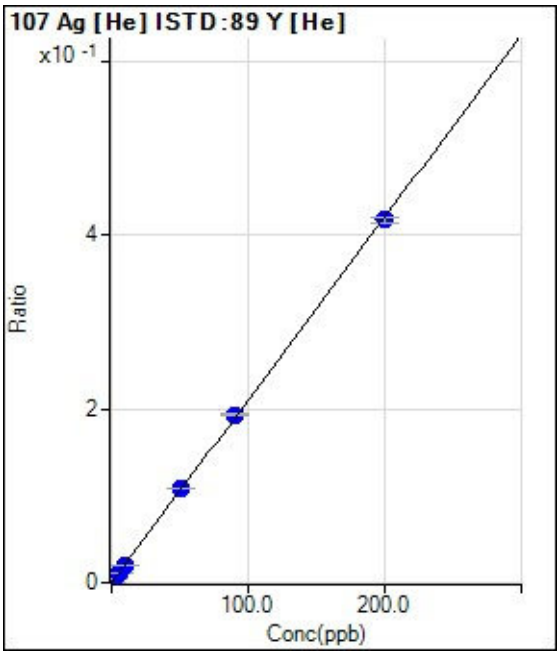


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.00	0.0000	P	14.1
2	☐	0.200	0.196	1859.03	0.0001	P	5.3
3	☐	2.000	2.000	16926.40	0.0010	P	1.9
4	☐	5.000	4.992	41638.47	0.0025	P	1.3
5	☐	10.000	9.851	81582.71	0.0049	P	0.8
6	☐	50.000	51.105	417890.56	0.0252	P	0.8
7	☐	90.000	92.039	749554.57	0.0454	P	1.0
8	☐	200.000	198.814	1614419.73	0.0980	A	0.7

y = 4.9283E-004 * x + 1.3104E-005
R = 0.9999
DL = 0.01124
BEC = 0.02659

Weight: <None>
Min Conc: <None>

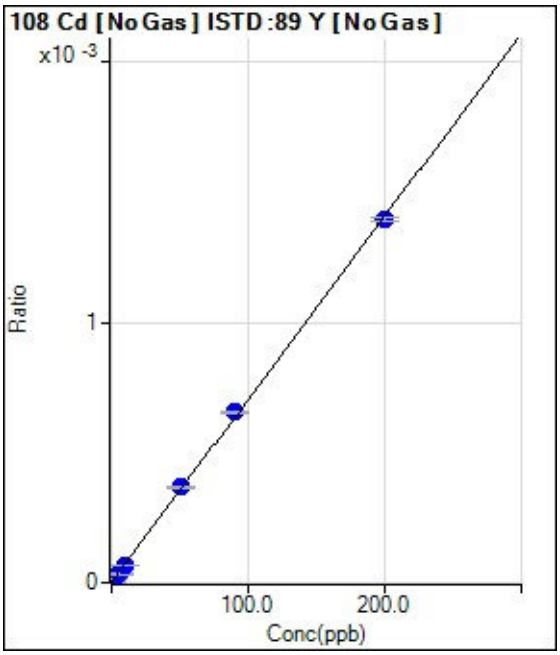
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.04	0.0000	P	25.0
2	☐	0.200	0.188	734.10	0.0004	P	5.5
3	☐	2.000	2.056	7633.30	0.0043	P	1.5
4	☐	5.000	4.898	18063.99	0.0103	P	1.3
5	☐	10.000	9.705	35168.68	0.0204	P	0.6
6	☐	50.000	51.504	185265.22	0.1083	P	0.4
7	☐	90.000	92.121	329067.45	0.1937	P	0.9
8	☐	200.000	198.686	718105.29	0.4177	P	1.6

y = 0.0021 * x + 2.2790E-005
R = 0.9999
DL = 0.008118
BEC = 0.01084

Weight: <None>
Min Conc: <None>

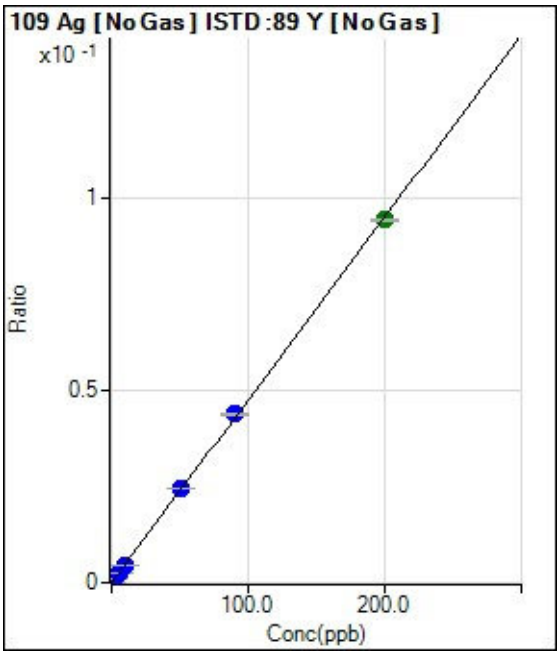


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.03	0.0000	P	66.4
2	☐	0.200	0.194	53.39	0.0000	P	46.7
3	☐	2.000	1.708	233.58	0.0000	P	17.6
4	☐	5.000	4.596	573.93	0.0000	P	8.2
5	☐	10.000	8.983	1087.82	0.0001	P	3.8
6	☐	50.000	51.899	6077.58	0.0004	P	1.6
7	☐	90.000	93.084	10835.43	0.0007	P	1.0
8	☐	200.000	198.201	22976.58	0.0014	P	1.1

y = 7.0274E-006 * x + 1.7841E-006
R = 0.9998
DL = 0.5057
BEC = 0.2539

Weight: <None>
Min Conc: <None>

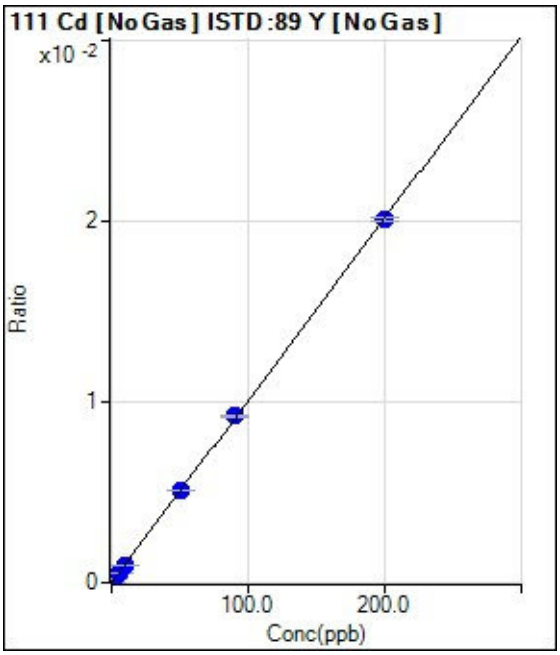
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.41	0.0000	P	74.9
2	☐	0.200	0.182	1534.99	0.0001	P	15.7
3	☐	2.000	2.019	16286.51	0.0010	P	3.5
4	☐	5.000	4.917	39297.91	0.0023	P	2.8
5	☐	10.000	9.879	78527.29	0.0047	P	1.4
6	☐	50.000	51.460	404436.01	0.0244	P	1.0
7	☐	90.000	92.179	721613.23	0.0437	P	1.1
8	☐	200.000	198.663	1550912.74	0.0941	A	0.5

y = 4.7384E-004 * x + 4.3601E-006
R = 0.9999
DL = 0.02067
BEC = 0.009202

Weight: <None>
Min Conc: <None>

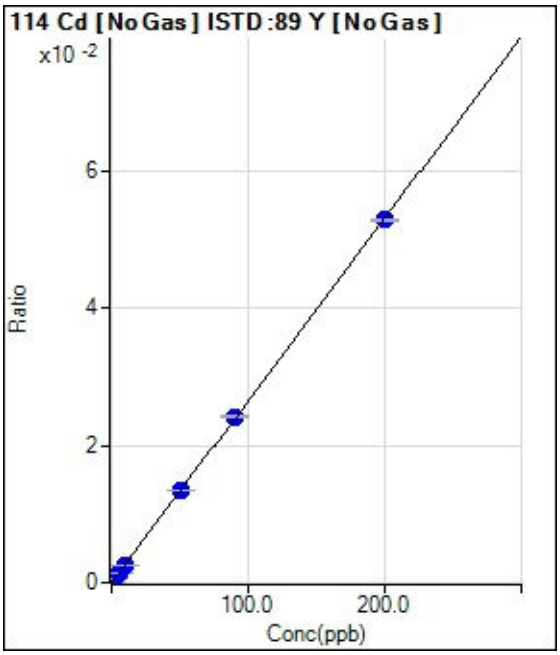


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-26.66	0.0000	P	-99.3
2	☐	0.200	0.192	299.39	0.0000	P	10.8
3	☐	2.000	1.953	3302.10	0.0002	P	1.9
4	☐	5.000	4.902	8276.09	0.0005	P	3.2
5	☐	10.000	9.803	16502.40	0.0010	P	1.3
6	☐	50.000	50.626	84444.87	0.0051	P	1.7
7	☐	90.000	91.363	151829.93	0.0092	P	1.4
8	☐	200.000	199.243	330228.78	0.0200	P	0.9

y = 1.0061E-004 * x - 1.5824E-006
R = 1.0000
DL = 0.04686
BEC = -0.01573

Weight: <None>
Min Conc: <None>

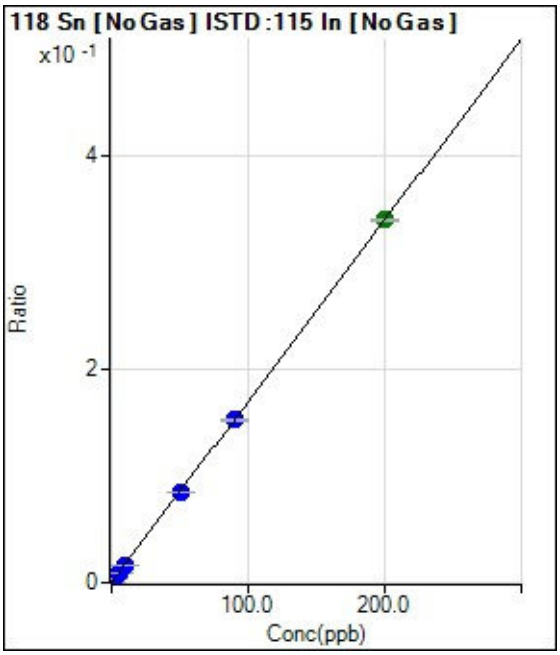
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.02	0.0000	P	99.7
2	☐	0.200	0.197	900.95	0.0001	P	7.1
3	☐	2.000	1.900	8548.14	0.0005	P	2.7
4	☐	5.000	4.808	21455.76	0.0013	P	1.6
5	☐	10.000	9.542	42373.91	0.0025	P	0.6
6	☐	50.000	50.435	221535.58	0.0134	P	0.8
7	☐	90.000	91.207	399076.43	0.0242	P	0.8
8	☐	200.000	199.377	869968.90	0.0528	P	0.7

y = 2.6485E-004 * x + 1.1915E-006
R = 1.0000
DL = 0.01345
BEC = 0.004499

Weight: <None>
Min Conc: <None>

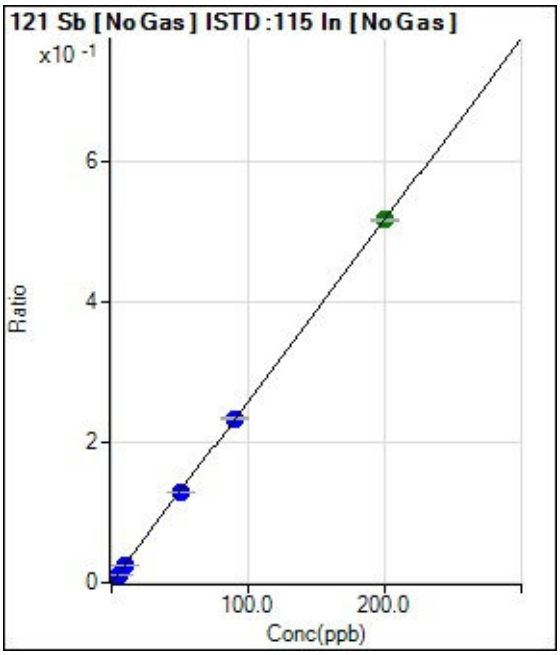


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	787.81	0.0002	P	4.9
2	☐	0.200	0.200	1912.37	0.0006	P	0.2
3	☐	2.000	1.899	11419.43	0.0035	P	0.9
4	☐	5.000	4.777	27596.65	0.0083	P	0.7
5	☐	10.000	9.443	53422.37	0.0163	P	1.2
6	☐	50.000	49.504	272847.54	0.0842	P	0.7
7	☐	90.000	89.747	489549.81	0.1524	P	0.8
8	☐	200.000	200.272	1071074.19	0.3399	A	0.3

y = 0.0017 * x + 2.3959E-004
R = 1.0000
DL = 0.0209
BEC = 0.1413

Weight: <None>
Min Conc: <None>

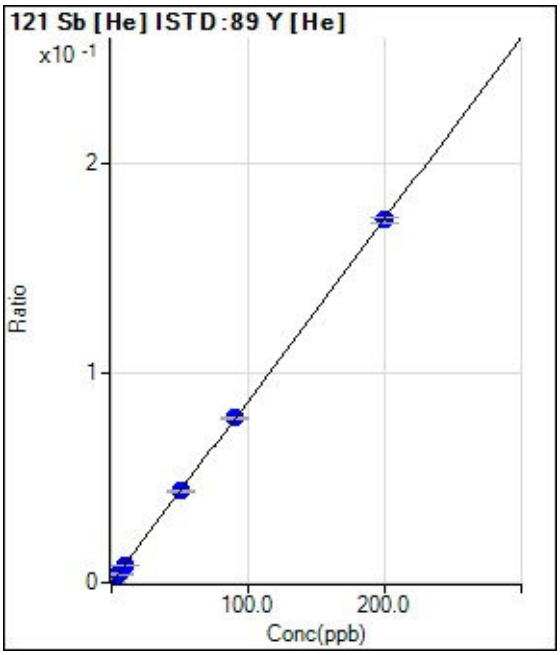
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	171.11	0.0001	P	18.0
2	☐	0.200	0.192	1815.69	0.0005	P	0.8
3	☐	2.000	1.913	16495.97	0.0050	P	1.7
4	☐	5.000	4.701	40382.96	0.0122	P	1.6
5	☐	10.000	9.428	80291.30	0.0244	P	0.4
6	☐	50.000	49.540	415298.66	0.1282	P	0.4
7	☐	90.000	90.257	749643.10	0.2334	P	0.9
8	☐	200.000	200.036	1630170.63	0.5173	A	0.2

y = 0.0026 * x + 5.2073E-005
R = 1.0000
DL = 0.01087
BEC = 0.02014

Weight: <None>
Min Conc: <None>

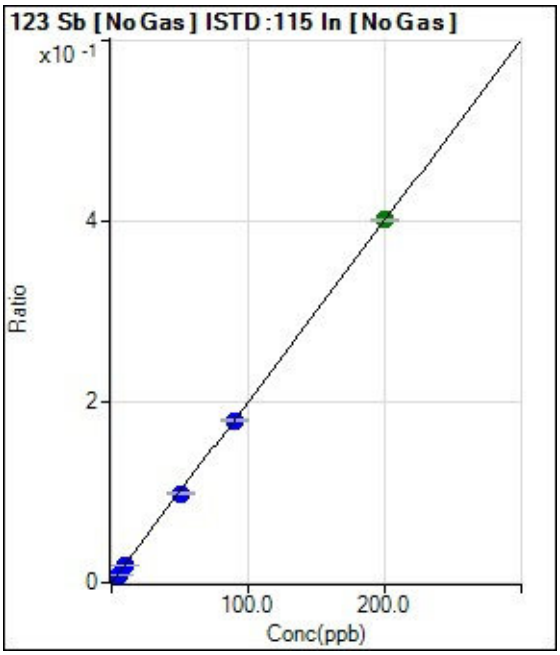


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	17.8
2	☐	0.200	0.168	290.01	0.0002	P	3.7
3	☐	2.000	1.932	2977.06	0.0017	P	7.5
4	☐	5.000	4.755	7252.15	0.0041	P	1.5
5	☐	10.000	9.612	14384.80	0.0084	P	1.3
6	☐	50.000	50.241	74564.41	0.0436	P	1.0
7	☐	90.000	90.769	133762.57	0.0787	P	1.3
8	☐	200.000	199.620	297648.73	0.1731	P	1.3

y = 8.6720E-004 * x + 1.8989E-005
R = 1.0000
DL = 0.01168
BEC = 0.0219

Weight: <None>
Min Conc: <None>

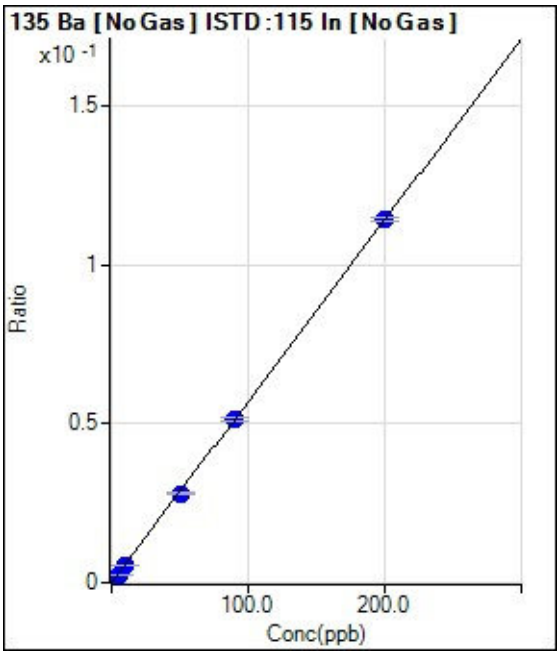
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.52	0.0002	P	18.7
2	☐	0.200	0.182	1705.18	0.0005	P	10.4
3	☐	2.000	1.917	13163.30	0.0040	P	2.1
4	☐	5.000	4.668	31419.24	0.0095	P	1.1
5	☐	10.000	9.334	61911.15	0.0188	P	0.9
6	☐	50.000	49.303	320333.96	0.0988	P	0.5
7	☐	90.000	89.544	576123.12	0.1794	P	0.9
8	☐	200.000	200.422	1264764.87	0.4014	A	0.4

y = 0.0020 * x + 1.5230E-004
R = 1.0000
DL = 0.04267
BEC = 0.07608

Weight: <None>
Min Conc: <None>

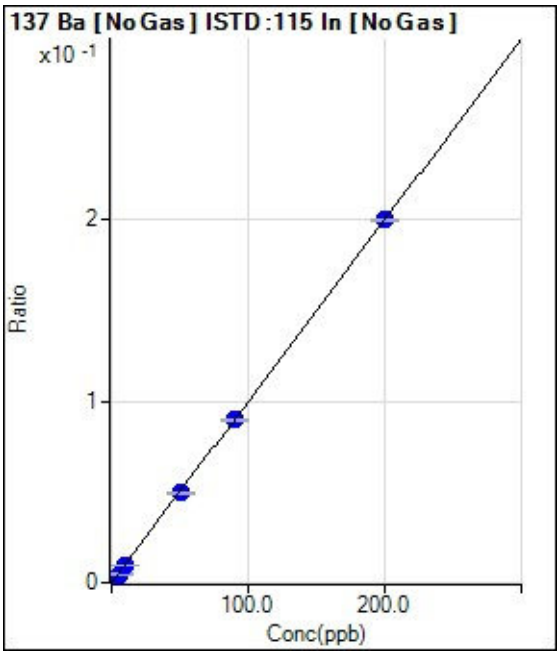


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.03	0.0000	P	88.3
2	☐	0.200	0.197	400.42	0.0001	P	10.7
3	☐	2.000	1.977	3751.02	0.0011	P	5.4
4	☐	5.000	4.700	8898.77	0.0027	P	2.2
5	☐	10.000	9.568	17963.97	0.0055	P	2.4
6	☐	50.000	49.298	91141.35	0.0281	P	0.6
7	☐	90.000	90.076	165001.25	0.0514	P	1.6
8	☐	200.000	200.170	359785.56	0.1142	P	1.1

y = 5.7031E-004 * x + 9.1552E-006
R = 1.0000
DL = 0.04251
BEC = 0.01605

Weight: <None>
Min Conc: <None>

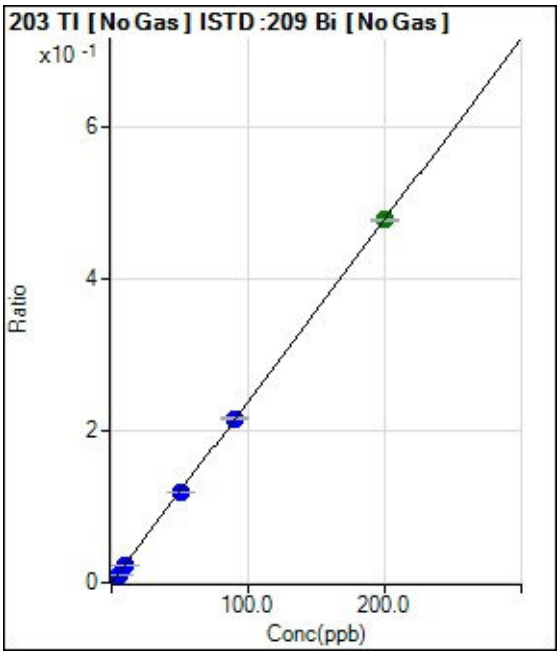
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.71	0.0000	P	65.9
2	☐	0.200	0.221	774.15	0.0002	P	9.5
3	☐	2.000	1.912	6338.00	0.0019	P	7.0
4	☐	5.000	4.751	15722.08	0.0048	P	1.5
5	☐	10.000	9.304	30543.27	0.0093	P	1.8
6	☐	50.000	49.518	160083.87	0.0494	P	1.7
7	☐	90.000	89.975	288205.79	0.0897	P	0.8
8	☐	200.000	200.173	629152.69	0.1997	P	0.4

y = 9.9733E-004 * x + 1.4229E-005
R = 1.0000
DL = 0.02819
BEC = 0.01427

Weight: <None>
Min Conc: <None>

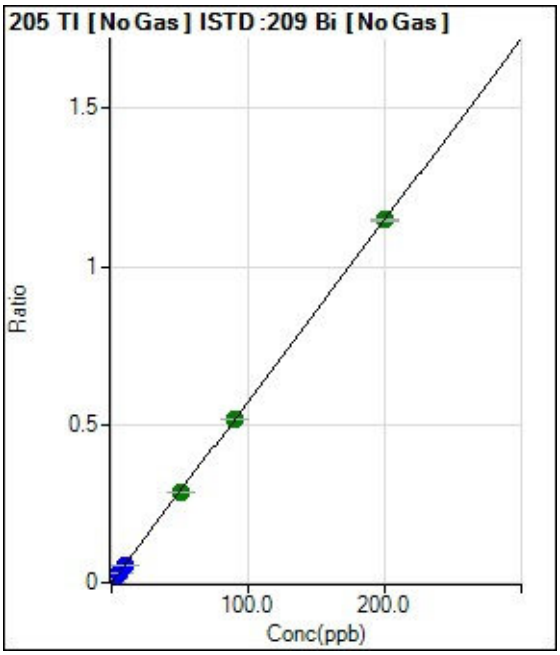


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.17	0.0000	P	21.5
2	☐	0.200	0.180	1678.49	0.0005	P	1.1
3	☐	2.000	1.858	15719.20	0.0045	P	3.7
4	☐	5.000	4.706	39368.30	0.0113	P	1.0
5	☐	10.000	9.533	79027.59	0.0229	P	1.2
6	☐	50.000	49.478	406058.57	0.1184	P	0.7
7	☐	90.000	90.417	727278.22	0.2163	P	0.6
8	☐	200.000	199.975	1580633.55	0.4784	A	0.6

y = 0.0024 * x + 4.8917E-005
R = 1.0000
DL = 0.01322
BEC = 0.02045

Weight: <None>
Min Conc: <None>

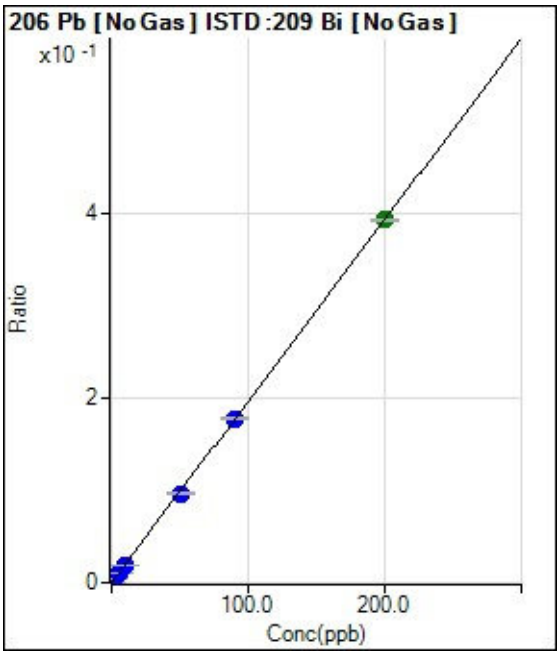
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.73	0.0001	P	19.1
2	☐	0.200	0.189	4174.94	0.0012	P	7.6
3	☐	2.000	1.886	38233.50	0.0109	P	2.5
4	☐	5.000	4.811	96483.41	0.0277	P	1.3
5	☐	10.000	9.645	191681.74	0.0554	P	0.4
6	☐	50.000	49.602	975992.56	0.2846	A	0.3
7	☐	90.000	90.102	1737669.18	0.5169	A	0.7
8	☐	200.000	200.077	3791784.71	1.1477	A	0.5

y = 0.0057 * x + 1.1029E-004
R = 1.0000
DL = 0.01101
BEC = 0.01923

Weight: <None>
Min Conc: <None>

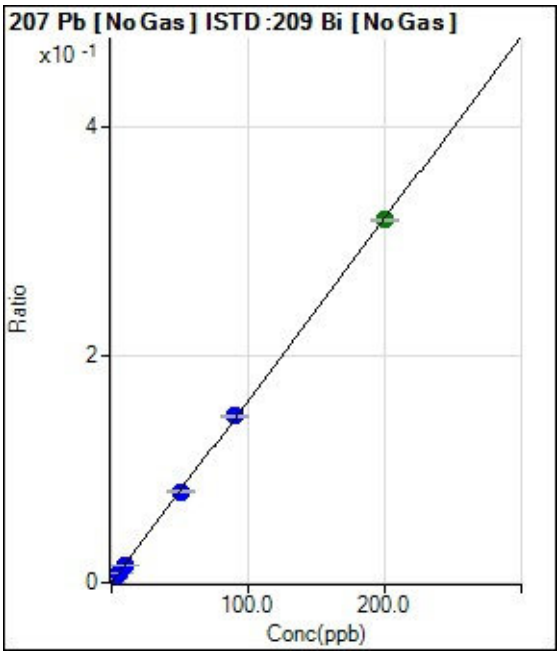


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.82	0.0000	P	32.1
2	☐	0.200	0.198	1508.30	0.0004	P	4.1
3	☐	2.000	1.944	13480.92	0.0039	P	1.7
4	☐	5.000	4.833	33137.43	0.0095	P	2.8
5	☐	10.000	9.603	65234.95	0.0189	P	1.9
6	☐	50.000	49.156	330544.68	0.0964	P	0.9
7	☐	90.000	90.392	595744.65	0.1772	P	0.7
8	☐	200.000	200.059	1295646.30	0.3922	A	0.7

y = 0.0020 * x + 4.2174E-005
R = 1.0000
DL = 0.02075
BEC = 0.02152

Weight: <None>
Min Conc: <None>

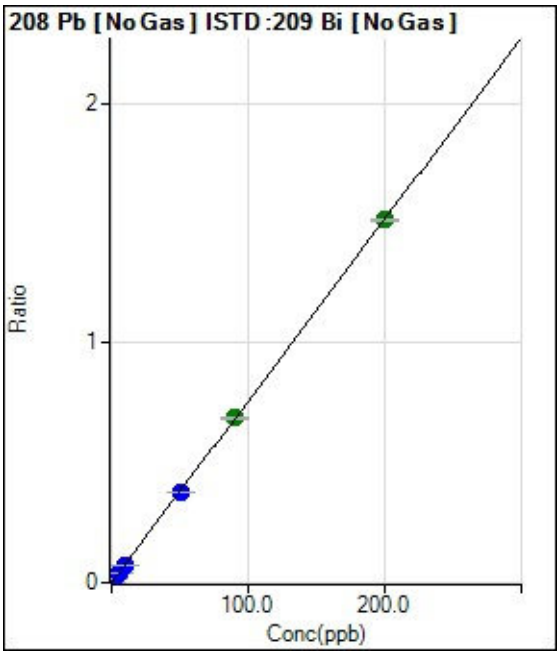
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.45	0.0000	P	5.4
2	☐	0.200	0.207	1271.37	0.0004	P	7.3
3	☐	2.000	1.923	10882.53	0.0031	P	0.8
4	☐	5.000	4.835	27056.61	0.0078	P	0.6
5	☐	10.000	9.771	54178.19	0.0157	P	0.7
6	☐	50.000	49.973	274334.17	0.0800	P	1.0
7	☐	90.000	91.647	493113.99	0.1467	P	1.5
8	☐	200.000	199.282	1053656.29	0.3189	A	0.9

y = 0.0016 * x + 3.2599E-005
R = 1.0000
DL = 0.003303
BEC = 0.02037

Weight: <None>
Min Conc: <None>

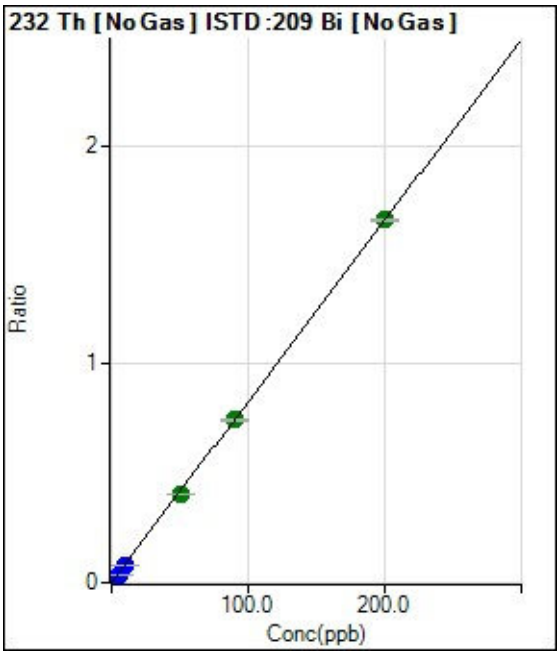


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	497.18	0.0001	P	11.9
2	☐	0.200	0.197	5716.32	0.0016	P	3.8
3	☐	2.000	1.934	51747.85	0.0148	P	1.3
4	☐	5.000	4.814	127452.31	0.0366	P	1.1
5	☐	10.000	9.655	253325.47	0.0733	P	0.9
6	☐	50.000	49.778	1293225.72	0.3771	P	0.7
7	☐	90.000	90.585	2306617.44	0.6862	A	0.7
8	☐	200.000	199.815	4999899.23	1.5134	A	0.8

y = 0.0076 * x + 1.4288E-004
R = 1.0000
DL = 0.006716
BEC = 0.01887

Weight: <None>
Min Conc: <None>

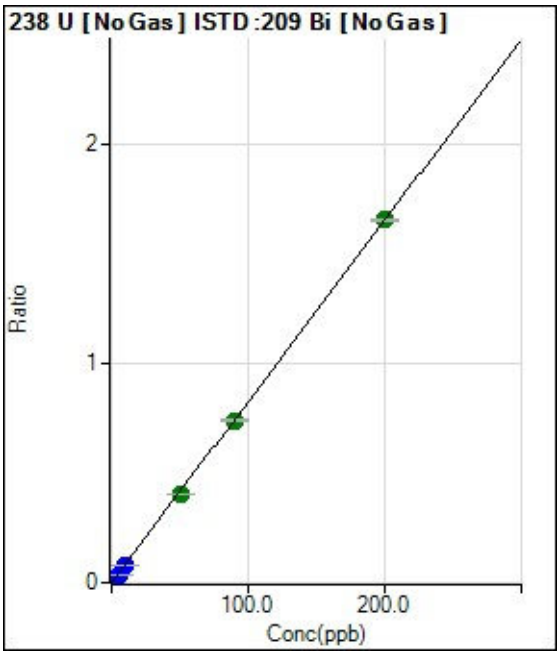
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3514.09	0.0010	P	3.2
2	☐	0.200	0.134	7433.14	0.0021	P	3.2
3	☐	2.000	1.660	51616.84	0.0148	P	1.8
4	☐	5.000	4.441	131595.58	0.0378	P	1.3
5	☐	10.000	9.113	264450.51	0.0765	P	0.2
6	☐	50.000	49.064	1396813.01	0.4073	A	0.1
7	☐	90.000	89.863	2505106.78	0.7452	A	0.4
8	☐	200.000	200.358	5485334.10	1.6603	A	0.3

y = 0.0083 * x + 0.0010
R = 1.0000
DL = 0.01159
BEC = 0.1219

Weight: <None>
Min Conc: <None>

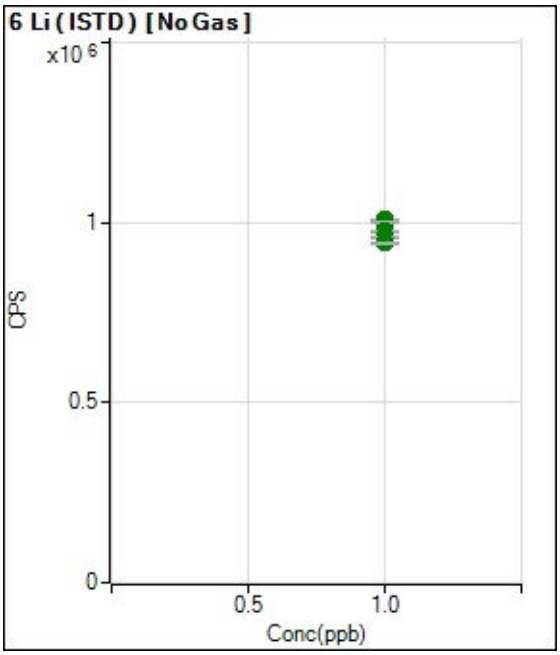


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.48	0.0001	P	9.7
2	☐	0.200	0.180	5670.40	0.0016	P	4.5
3	☐	2.000	1.867	54465.52	0.0156	P	1.2
4	☐	5.000	4.697	135704.01	0.0390	P	0.5
5	☐	10.000	9.418	269773.67	0.0780	P	1.4
6	☐	50.000	49.268	1397575.81	0.4076	A	0.2
7	☐	90.000	89.707	2494208.85	0.7420	A	0.6
8	☐	200.000	200.353	5474304.32	1.6569	A	0.3

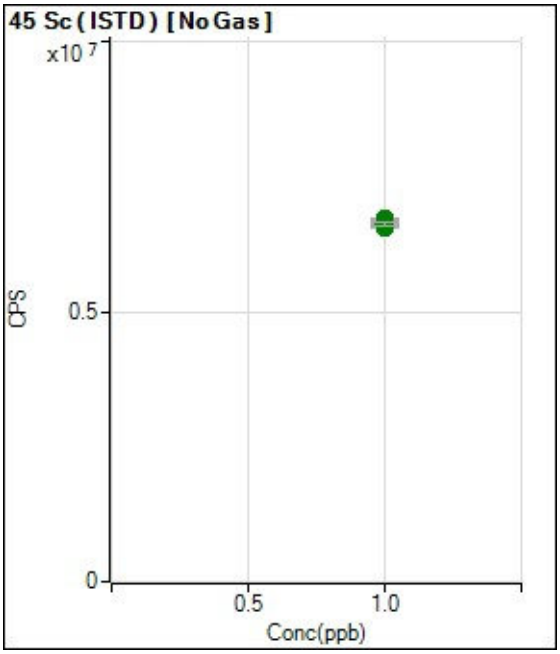
y = 0.0083 * x + 1.3233E-004
R = 1.0000
DL = 0.004678
BEC = 0.016

Weight: <None>
Min Conc: <None>

Calibration for 288_ICV.d

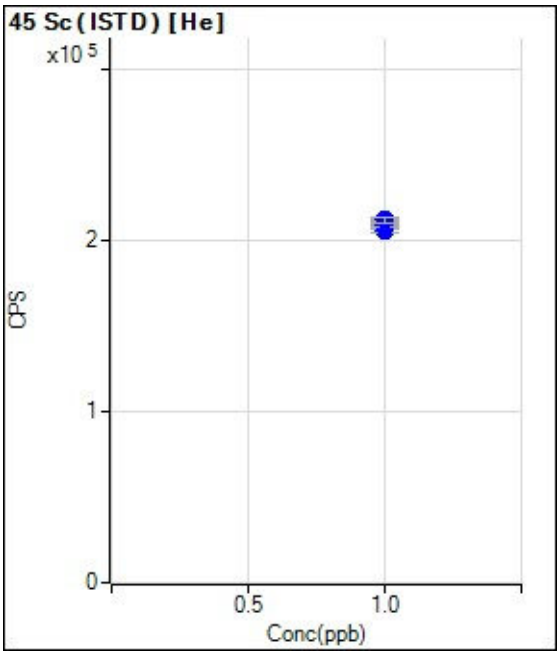


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		999812.08		A	0.4
2	☐	1.000		1006329.86		A	0.5
3	☐	1.000		1003099.51		A	0.1
4	☐	1.000		1002017.67		A	0.3
5	☐	1.000		999532.84		A	0.5
6	☐	1.000		973607.21		A	0.7
7	☐	1.000		958471.53		A	0.3
8	☐	1.000		942261.62		A	0.5

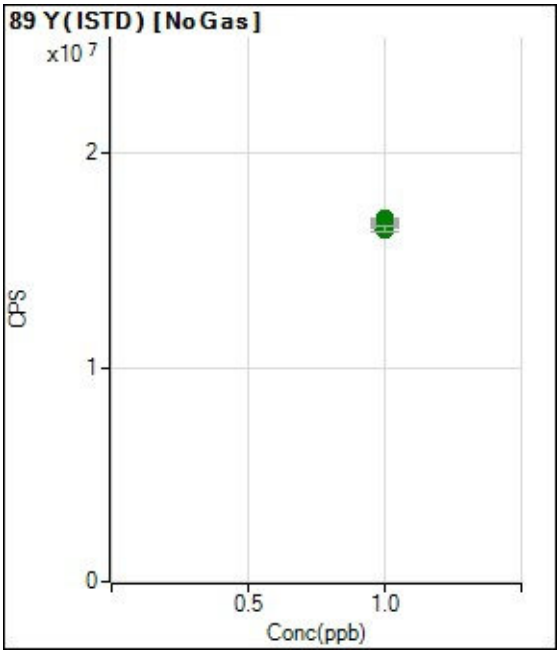


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6672228.28		A	0.1
2	☐	1.000		6723105.62		A	0.6
3	☐	1.000		6713899.33		A	0.5
4	☐	1.000		6685583.93		A	0.4
5	☐	1.000		6648685.57		A	0.4
6	☐	1.000		6594743.51		A	0.4
7	☐	1.000		6552219.11		A	0.3
8	☐	1.000		6628606.95		A	0.6

Calibration for 288_ICV.d

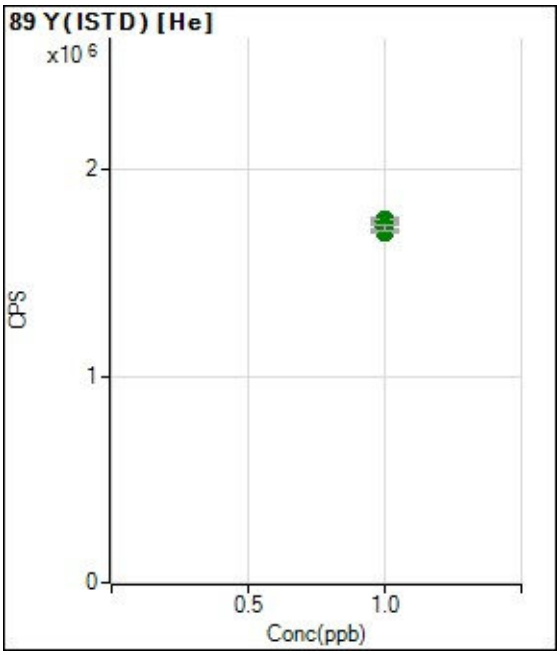


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		208216.69		P	1.4
2	☐	1.000		209962.60		P	0.8
3	☐	1.000		209095.12		P	0.3
4	☐	1.000		211528.42		P	0.1
5	☐	1.000		205723.56		P	1.3
6	☐	1.000		208553.70		P	0.7
7	☐	1.000		207552.13		P	0.3
8	☐	1.000		211641.33		P	1.8

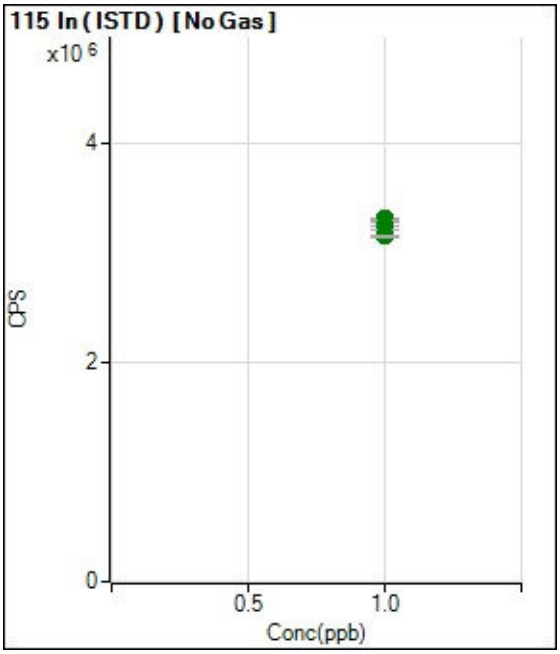


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16795472.17		A	0.5
2	☐	1.000		16921725.93		A	0.5
3	☐	1.000		16944673.04		A	0.5
4	☐	1.000		16835402.94		A	0.6
5	☐	1.000		16759366.48		A	0.2
6	☐	1.000		16583354.22		A	0.3
7	☐	1.000		16519755.62		A	0.3
8	☐	1.000		16475558.51		A	1.4

Calibration for 288_ICV.d

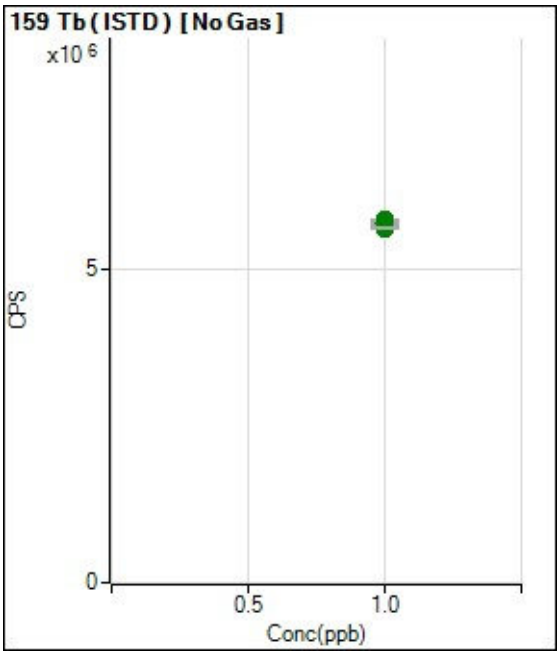


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1756395.88		A	1.3
2	☐	1.000		1756618.92		A	0.3
3	☐	1.000		1756786.95		A	0.1
4	☐	1.000		1750647.21		A	0.7
5	☐	1.000		1721788.04		A	1.5
6	☐	1.000		1710678.13		A	0.4
7	☐	1.000		1699030.75		A	0.8
8	☐	1.000		1719461.76		A	1.9

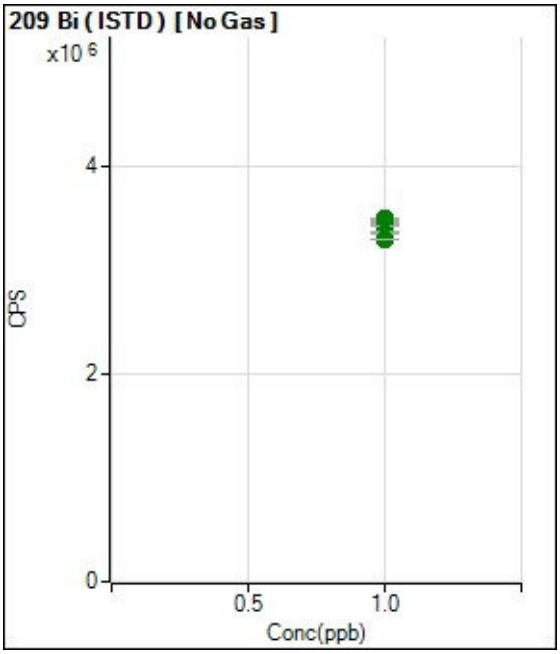


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3287717.66		A	0.4
2	☐	1.000		3302963.78		A	0.7
3	☐	1.000		3299328.52		A	0.3
4	☐	1.000		3308246.12		A	0.4
5	☐	1.000		3286375.14		A	0.5
6	☐	1.000		3240595.91		A	0.2
7	☐	1.000		3211248.63		A	0.4
8	☐	1.000		3151181.06		A	0.7

Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5716935.49		A	0.5
2	☐	1.000		5771643.53		A	0.6
3	☐	1.000		5767021.83		A	0.4
4	☐	1.000		5743843.02		A	0.4
5	☐	1.000		5723385.90		A	1.1
6	☐	1.000		5678935.40		A	0.3
7	☐	1.000		5642928.56		A	0.7
8	☐	1.000		5649497.43		A	0.8

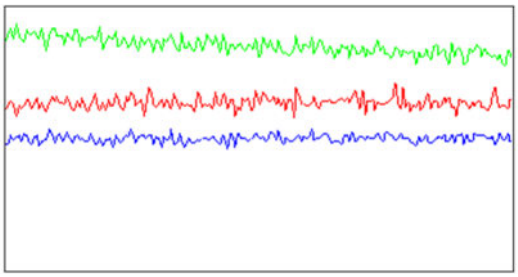


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3480441.04		A	0.3
2	☐	1.000		3501602.43		A	0.4
3	☐	1.000		3498591.25		A	0.3
4	☐	1.000		3482227.22		A	0.1
5	☐	1.000		3457793.40		A	0.7
6	☐	1.000		3429194.65		A	0.3
7	☐	1.000		3361628.06		A	0.5
8	☐	1.000		3303854.87		A	0.4

Performance Report

Operator Name	ALSHN ICPMS
Acq. Date-Time	2020-11-17 11:15:31
Instrument Name	G8421A JP17200678
Sample Introduction	ISIS
Nebulizer Type	MicroMist
Ion Lens Model	x-Lens
Tune Parameters	Standard Tune

Sensitivity



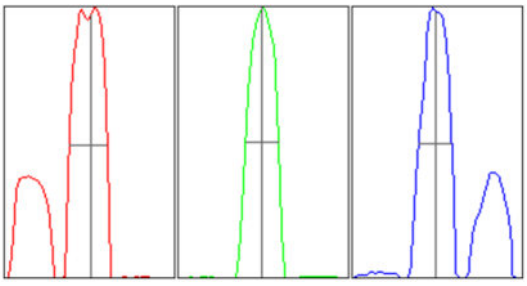
Mass	Range	Count	RSD%	Background
7	2000	1278	3.593	0.350
89	5000	4273	3.767	0.200
205	5000	2515	2.920	18.500

Sampling Period [sec]	0.311
Integration Time [sec]	0.1

Oxide/Doubly Charged Ratio

Oxide	156 / 140 1.251 %
Doubly Charged	70 / 140 2.982 %

Resolution/Axis



Mass	Peak Height	Axis	W-50%	W-10%
7	1281.37	7.05	0.68	0.78
89	4042.46	89.00	0.59	0.77
205	2438.48	205.00	0.59	0.77

Integration Time [sec]	0.1
Acquisition Time [sec]	22.74

Tune Parameters

Plasma Parameters

RF Power	1550 W	Option Gas	---	Makeup Gas	0.00 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Auxiliary Gas	0.90 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C	Plasma Gas	15.0 L/min
Nebulizer Gas	0.99 L/min				

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	14.2 V
Extract 2	-170.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-80 V	Cell Exit	-50 V		

Performance Report

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

QP Bias	-3.0 V

Hardware Settings

Torch

Torch H	0.1 mm	Torch H (Hot)	---	Torch H (Cool)	---
Torch V	-0.7 mm	Torch V (Hot)	---	Torch V (Cool)	---

Plasma Correction

Nebulizer Gas Offset	-0.06 L/min	Makeup Gas (Hot)	---	Makeup Gas (Cool)	---
		Sample Depth (Hot)	---		

Resolution/Axis

Mass Gain	126	Axis Gain	0.9992		
Mass Offset	125	Axis Offset	0.08		

EM

Discriminator	4.8 mV	Analog HV	3307 V	Pulse HV	1272 V

Performance Report

Meter

Name	Value	Unit
Nebulizer Gas	0.99	L/min
MU./Dil. Gas	0.00	L/min
Plasma Gas	15.02	L/min
Aux Gas	0.90	L/min
Ar Gas Tank Press	7.48E+2	kPa
+5V (Press Gage)	5.0	V
Ar AMFC Temp	25.4	°C
Nebulizer Gas(DP)	5.56E+0	kPa
MU./Dil. Gas(DP)	-4.63E-2	kPa
Aux Gas(DP)	1.31E+1	kPa
Plasma Gas(DP)	1.20E+1	kPa
Nebulizer Gas(BP)	3.02E+2	kPa
MU./Dil. Gas(BP)	-3.40E+0	kPa
Aux Gas(BP)	4.32E+1	kPa
Plasma Gas(BP)	3.41E+1	kPa
S/C Temp (H)	20.3	°C
S/C Temp (L)	1.9	°C
Peltier Voltage	3.1	V
IF/BK Press	2.69E+2	Pa
Analyzer Press	5.58E-5	Pa
IG HV	176	V
IG Emission	4.99	µA
TMP Revolution	100.0	%
TMP Rev (RAW)	101.0	%
TMP Current	3.22	A
PWR AMP Drain I	0.2	A
PWR AMP Bias	4.06	V
OctP RF (Avg)	203.7	V
OctP RF Set	4.0	V
OctP FET Bias Set	3.97	V
OctP RF(+)	190.5	V
OctP RF(-)	217.2	V
OctP Bias	-7.9	V
Cell Temp.	65.0	°C
Cell Heater Volt.	4.1	V
+U Voltage	174.4	V

Name	Value	Unit
-U Voltage	-180.5	V
V Voltage	783.9	V
QPRF Fader	0.5	V
Pickup Temp	55.0	°C
PWR Amp Temp	0.1	V
+600V	614.3	V
-120V	-133.4	V
-720V	-736.6	V
Prefilter Bias	-5.00	V
Pickup Heater I	0.10	A
QP PS +48V	47.5	V
QP PS +48V I	0.00	A
Analog HV	-3334	V
Pulse HV	1282	V
EM Gate	-47.1	V
Pulse Gate	284.7	V
EM Entrance	-0.1	V
EM HV Gain	-1985.2	V
Inner Pole	-300.1	V
Outer Pole	20.0	V
Analog -5V	-5.1	V
Analog +15V	14.6	V
Analog -15V	-14.4	V
Analog +5V	5.2	V
Shunt C Pos	1.6	V
Drain Volt.(max)	64.0	V
RF PS +48V	47.4	V
Forward Power	1549	W
Reflected Power	0	W
Plasma Freq.	27.10	MHz
Drain I 1	11.36	A
Drain I 2	10.33	A
Drain I 3	10.37	A
Drain I 4	10.52	A
Temp Sensor	2.8	V
Driver I	4.60	A

Name	Value	Unit
Igniter	0.0	V
Driver Voltage Set	6.6	V
Unbalance Current	0.13	A
PWM Threshold Set	0.1	V
Driver Voltage	5.3	V
PWM Threshold	0.1	V
Phase Detector	0.0	mV
He Gas	0.04	mL/min
He Gas Press	1.81E-1	kPa
ORS AMFC Temp	26.7	°C
Atmospheric Press	9.92E+1	kPa
Extract 1	0.0	V
Extract 2	-170.2	V
Omega Bias	-80.1	V
Omega Lens	9.0	V
Cell Entrance	-30.0	V
Cell Exit	-50.3	V
Deflect	14.2	V
Plate Bias	-35.1	V
HV+530V	521	V
HV+240V	237	V
HV-360V	-356	V
Inlet Temp	25.7	°C
Internal Temp	32.9	°C
+24V	23.4	V
Water Temp	21.2	°C
Water RF/WC/IF	1.58	L/min
ISIS 3 Pump Speed	0.0	%
Valve Position		
Tune/ISTD Valve		

Performance Report History

Sensitivity

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-17 11:15:31	1278	4273	2515
2020-11-16 13:44:07	1502	3059	2375
2020-11-16 13:09:13	1612	30454	2447
2020-11-13 11:20:44	1592	4157	2527
2020-11-12 14:37:14	1511	3607	2249
2020-11-12 13:53:08	1414	2984	1983
2020-11-12 12:32:41	931	2818	2004
2020-11-11 12:53:39	3414	5572	3330
2020-11-11 11:44:42	2763	5635	3242
2020-11-10 13:55:09	2971	9147	3735
2020-11-10 12:53:54	2632	5380	3447
2020-11-10 11:37:01	3049	7267	3473
2020-11-09 11:47:17	2520	4773	2882
2020-11-09 11:29:50	2615	11059	3065
2020-11-06 11:38:12	2354	4226	2795
2020-11-06 11:01:15	2571	5599	2896
2020-11-05 11:47:54	2413	5380	3110
2020-11-04 11:19:46	2310	5433	3223
2020-11-03 12:28:48	2819	5476	3321
2020-11-03 12:08:40	2411	8720	2893
2020-11-02 11:05:14	3543	37180	4248
2020-10-30 12:05:49	2406	6469	3233
2020-10-29 12:49:39	2719	6440	4108
2020-10-29 11:48:38	2674	6232	3641
2020-10-28 15:02:21	3490	7322	4645
2020-10-28 14:05:42	3278	7160	3912
2020-10-27 12:05:48	727	1703	1914
2020-10-27 11:35:55	722	2099	2000
2020-10-26 12:04:37	1203	16839	2202
2020-10-23 12:12:34	1315	2468	2006
2020-10-23 11:37:57	1324	3647	2052
2020-10-22 12:16:30	959	2448	2163
2020-10-21 13:24:11	1073	2520	1884
2020-10-21 12:27:39	1122	2716	2011
2020-10-20 11:47:10	1637	3688	2449
2020-10-19 11:53:52	1128	2675	1888
2020-10-19 11:39:21	1179	4811	1928
2020-10-18 09:36:10	1665	20856	1974
2020-10-16 12:04:16	1928	4436	2616
2020-10-15 12:04:01	1667	4055	2820
2020-10-14 12:01:53	1989	4573	3176

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-13 11:51:04	3074	6060	3832
2020-10-12 12:42:47	1484	3937	2762
2020-10-12 11:44:44	1746	4685	2448
2020-10-11 11:11:57	1796	4232	2388
2020-10-11 10:56:11	2094	4350	2402
2020-10-11 08:29:31	1939	4366	2390
2020-10-09 11:09:17	2309	4840	2851
2020-10-09 10:39:06	2498	5197	2889
2020-10-08 11:31:44	2281	6060	3333
2020-10-07 11:59:14	2012	4671	3330
2020-10-07 10:50:29	2119	5045	3372
2020-10-06 12:34:49	4071	7270	4025
2020-10-05 11:04:01	4647	9324	4922
2020-10-04 07:54:14	3927	67077	3990
2020-10-02 09:38:02	3301	7010	3890
2020-10-01 11:27:45	3428	7471	3998
2020-09-30 13:00:41	3691	8414	5069
2020-09-30 11:53:41	3488	7737	5379
2020-09-30 11:07:07	3555	8878	4820
2020-09-30 10:48:54	3682	11707	4994
2020-09-29 13:53:16	3262	8894	4481
2020-09-29 12:19:04	1966	6072	2077
2020-09-28 12:53:55	1731	2590	2754
2020-09-28 11:59:28	1492	2271	2305
2020-09-25 16:18:31	2585	3865	3214
2020-09-25 16:06:07	2605	4109	3244
2020-09-25 14:56:33	2519	3579	3129
2020-09-25 12:48:13	2533	3206	2532
2020-09-24 10:55:05	2087	3690	2707
2020-09-23 12:36:58	2231	3540	3006
2020-09-23 11:38:39	2196	3459	2555
2020-09-23 10:51:49	2108	3110	2362
2020-09-22 11:10:32	3440	4661	2948
2020-09-22 10:54:35	3690	6894	3279
2020-09-21 13:13:36	2058	3480	2639
2020-09-21 12:44:05	2485	4086	2622
2020-09-21 11:41:44	2836	4407	2790
2020-09-21 11:23:15	2719	5102	2900
2020-09-20 08:10:06	3189	5254	3302
2020-09-20 07:22:36	3383	5278	3143
2020-09-20 06:54:39	2995	6878	3376

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-18 11:40:25	3276	6815	3156
2020-09-18 11:29:16	3184	5773	2888
2020-09-18 11:06:40	3354	7920	3226
2020-09-17 15:29:32	3459	8016	3486
2020-09-16 20:54:26	3508	6510	3613
2020-09-16 19:16:27	3299	6829	3612
2020-09-16 17:59:29	3413	8566	3547
2020-09-16 11:19:13	2416	5647	3177
2020-09-15 16:24:15	3165	8407	4428
2020-09-15 16:09:17	3268	16881	4507
2020-09-15 14:28:15	3335	7860	4752
2020-09-15 13:19:00	2887	7602	5214
2020-09-15 11:28:27	3122	6972	4514
2020-09-15 09:52:18	2394	6064	4140
2020-09-14 12:35:34	2919	8029	4829
2020-09-14 10:47:40	2465	13982	4153
2020-09-14 10:18:12	2981	147428	4124
2020-09-11 10:57:10	4177	9295	5215
2020-09-10 11:27:38	4077	9423	4893
2020-09-09 11:12:49	4615	9919	5732
2020-09-09 10:40:25	4893	37172	5907
2020-09-04 11:48:35	3441	8270	4733
2020-09-03 16:21:25	4052	9316	5806
2020-09-01 11:42:55	4000	12068	5666
2020-08-31 11:13:32	4245	87845	5643
2020-08-28 11:16:24	3088	10564	4710
2020-08-27 13:51:21	4108	11229	6176
2020-08-26 12:03:40	709	2074	2014
2020-08-25 12:03:05	1056	2659	2933
2020-08-25 11:32:14	1104	18306	2909
2020-08-21 13:01:12	544	2306	2585
2020-08-21 12:07:01	484	9012	2232
2020-08-20 11:15:30	579	1923	2458
2020-08-20 10:49:50	476	1836	2364
2020-08-20 10:10:21	583	2361	2456
2020-08-19 11:28:46	454	1880	1981
2020-08-18 11:07:27	515	1987	2499
2020-08-18 09:49:58	615	2314	2495
2020-08-17 12:34:56	637	2325	2666
2020-08-17 11:28:15	642	17377	2443
2020-08-14 07:34:28	660	2479	2687

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-14 06:44:33	786	3289	2613
2020-08-13 09:37:45	558	2133	2410
2020-08-13 09:10:45	521	1962	2329
2020-08-13 08:48:39	496	1934	2288
2020-08-13 08:12:32	517	2418	2261
2020-08-13 07:26:07	652	2431	2391
2020-08-12 14:30:16	436	1985	2383
2020-08-12 13:28:46	430	1890	2337
2020-08-12 12:58:58	424	2141	2450
2020-08-12 12:32:10	423	1957	2334
2020-08-12 12:17:37	426	2078	2338
2020-08-12 11:28:35	396	1839	2187
2020-08-12 10:46:03	391	1783	2042
2020-08-12 10:01:12	402	1940	1946
2020-08-11 08:44:26	425	2072	2353
2020-08-11 07:53:34	450	2345	2270
2020-08-10 08:02:54	585	2329	2467
2020-08-10 07:18:05	680	19393	2348
2020-08-07 08:01:44	808	3281	3044
2020-08-06 15:31:02	706	2194	2639
2020-08-06 14:31:40	536	1812	1907
2020-08-05 11:00:59	818	2750	2903
2020-08-04 11:11:16	831	2836	2585
2020-08-03 11:52:42	844	2601	2537
2020-07-31 14:27:24	741	2213	2630
2020-07-28 07:30:44	1155	3696	3239
2020-07-27 13:58:30	1574	3907	4099
2020-07-27 12:42:07	1014	3778	2005
2020-07-27 11:55:01	839	2602	2096
2020-07-27 11:13:19	908	15206	2137
2020-07-24 12:42:53	2542	6017	3827
2020-07-24 12:14:18	2635	6571	3838
2020-07-24 12:00:19	2346	5435	3627
2020-07-24 11:13:53	2629	37625	3757
2020-07-24 11:05:21	2180	5918	3134
2020-07-21 12:40:51	168	989	667
2020-07-21 11:57:51	516	1894	1030
2020-07-20 12:40:12	1371	4507	2970
2020-07-20 11:37:51	1446	38757	3136
2020-07-17 11:48:52	1876	5563	3247
2020-07-16 18:15:26	1515	5146	3133

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-07-16 12:56:52	976	4431	2619
2020-07-16 12:30:29	1077	4360	2638
2020-07-15 12:44:11	1189	4329	3053
2020-07-15 12:10:56	1426	4997	3214
2020-07-14 11:48:58	1625	15999	3092
2020-07-14 11:11:56	1641	5261	3112
2020-07-13 12:32:05	2542	45774	3475
2020-07-10 12:07:31	2901	7213	4579
2020-07-09 11:10:24	8832	7204	3897
2020-07-08 12:38:35	3200	8957	4519
2020-07-07 11:49:59	3333	8506	4397
2020-07-06 13:18:03	3035	8959	5251
2020-07-06 11:44:36	672	12761	1235
2020-07-02 11:58:12	865	3063	2215
2020-07-02 11:17:30	1685	6809	2735
2020-07-01 13:38:18	2102	5052	3514
2020-07-01 12:51:19	2225	5177	3700
2020-07-01 12:27:56	2297	5659	3399
2020-07-01 11:46:22	2046	6438	3466
2020-06-30 13:54:10	2534	5477	3652
2020-06-30 13:18:33	3085	5788	3775
2020-06-30 12:13:58	2145	5434	3864
2020-06-29 12:28:14	2120	5553	4029
2020-06-29 11:42:42	2695	58980	4207
2020-06-27 11:13:24	2630	6982	4598
2020-06-26 12:29:21	2315	7936	4455
2020-06-25 11:42:24	3056	7116	4865
2020-06-24 11:38:27	3958	9538	5780
2020-06-23 12:16:39	3639	8920	5072
2020-06-22 12:41:53	4068	9166	5330
2020-06-22 12:03:52	3706	11025	4681

Background

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-17 11:15:31	0.350	0.200	18.500
2020-11-16 13:44:07	0.100	0.300	2.100
2020-11-16 13:09:13	0.100	0.150	3.500
2020-11-13 11:20:44	0.200	0.150	9.500

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-12 14:37:14	0.250	0.400	4.200
2020-11-12 13:53:08	0.200	0.100	6.400
2020-11-12 12:32:41	0.100	0.150	8.600
2020-11-11 12:53:39	0.550	0.400	5.150
2020-11-11 11:44:42	0.150	0.700	4.300
2020-11-10 13:55:09	0.350	0.350	7.650
2020-11-10 12:53:54	0.250	0.200	20.900
2020-11-10 11:37:01	0.350	0.550	20.400
2020-11-09 11:47:17	0.150	0.500	4.900
2020-11-09 11:29:50	0.400	0.450	4.200
2020-11-06 11:38:12	0.450	0.300	9.000
2020-11-06 11:01:15	0.400	0.200	8.200
2020-11-05 11:47:54	0.200	0.200	4.350
2020-11-04 11:19:46	0.250	0.450	11.950
2020-11-03 12:28:48	0.400	0.250	5.200
2020-11-03 12:08:40	0.200	0.300	6.050
2020-11-02 11:05:14	0.000	0.300	4.550
2020-10-30 12:05:49	0.300	0.500	16.050
2020-10-29 12:49:39	0.250	0.250	13.050
2020-10-29 11:48:38	0.650	0.200	16.950
2020-10-28 15:02:21	0.300	0.300	3.050
2020-10-28 14:05:42	0.250	0.200	7.100
2020-10-27 12:05:48	0.100	0.050	11.750
2020-10-27 11:35:55	0.050	0.100	8.250
2020-10-26 12:04:37	0.050	0.150	5.750
2020-10-23 12:12:34	0.050	0.050	4.650
2020-10-23 11:37:57	0.300	0.200	3.050
2020-10-22 12:16:30	0.150	0.050	8.450
2020-10-21 13:24:11	0.050	0.250	8.300
2020-10-21 12:27:39	0.200	0.200	17.800
2020-10-20 11:47:10	0.050	0.150	3.950
2020-10-19 11:53:52	0.200	0.100	16.800
2020-10-19 11:39:21	0.000	0.150	7.500
2020-10-18 09:36:10	0.200	0.150	4.850
2020-10-16 12:04:16	0.350	0.300	9.700
2020-10-15 12:04:01	0.100	0.050	16.500
2020-10-14 12:01:53	0.250	0.050	9.350
2020-10-13 11:51:04	0.100	0.050	17.000
2020-10-12 12:42:47	0.250	0.200	6.400
2020-10-12 11:44:44	0.200	0.150	10.100
2020-10-11 11:11:57	0.200	0.350	13.250

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-11 10:56:11	0.350	0.300	16.250
2020-10-11 08:29:31	0.300	0.200	38.550
2020-10-09 11:09:17	0.250	0.350	26.700
2020-10-09 10:39:06	0.250	0.100	23.800
2020-10-08 11:31:44	0.200	0.200	25.600
2020-10-07 11:59:14	0.150	0.350	27.550
2020-10-07 10:50:29	0.350	0.250	27.950
2020-10-06 12:34:49	0.350	0.200	22.950
2020-10-05 11:04:01	0.250	0.250	58.600
2020-10-04 07:54:14	0.200	0.400	56.750
2020-10-02 09:38:02	0.150	0.650	93.650
2020-10-01 11:27:45	0.250	0.350	55.900
2020-09-30 13:00:41	0.400	0.350	55.200
2020-09-30 11:53:41	0.300	0.250	16.350
2020-09-30 11:07:07	0.250	0.350	60.700
2020-09-30 10:48:54	0.600	0.300	20.300
2020-09-29 13:53:16	0.100	0.400	20.250
2020-09-29 12:19:04	0.250	0.400	14.700
2020-09-28 12:53:55	0.100	0.300	17.550
2020-09-28 11:59:28	0.100	0.150	12.600
2020-09-25 16:18:31	0.050	0.050	10.200
2020-09-25 16:06:07	0.050	0.300	10.250
2020-09-25 14:56:33	0.100	0.250	11.500
2020-09-25 12:48:13	0.100	0.200	37.000
2020-09-24 10:55:05	0.250	0.150	11.000
2020-09-23 12:36:58	0.150	0.200	24.350
2020-09-23 11:38:39	0.050	0.150	11.400
2020-09-23 10:51:49	0.050	0.300	15.050
2020-09-22 11:10:32	0.000	0.100	29.150
2020-09-22 10:54:35	0.200	0.200	22.400
2020-09-21 13:13:36	0.200	0.400	14.200
2020-09-21 12:44:05	0.100	0.200	13.500
2020-09-21 11:41:44	0.200	0.100	20.400
2020-09-21 11:23:15	0.050	0.500	21.150
2020-09-20 08:10:06	0.250	0.450	13.400
2020-09-20 07:22:36	0.250	0.400	13.750
2020-09-20 06:54:39	0.150	0.100	6.250
2020-09-18 11:40:25	0.150	0.200	7.600
2020-09-18 11:29:16	0.450	0.150	8.550
2020-09-18 11:06:40	0.100	0.350	10.000
2020-09-17 15:29:32	0.350	0.300	9.300

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-16 20:54:26	0.100	0.450	17.400
2020-09-16 19:16:27	0.100	0.200	7.050
2020-09-16 17:59:29	0.150	0.350	15.250
2020-09-16 11:19:13	0.250	0.550	10.850
2020-09-15 16:24:15	0.250	0.200	9.050
2020-09-15 16:09:17	0.150	0.250	15.750
2020-09-15 14:28:15	0.150	0.150	14.300
2020-09-15 13:19:00	0.100	0.100	14.150
2020-09-15 11:28:27	0.100	0.300	12.500
2020-09-15 09:52:18	0.100	0.050	4.350
2020-09-14 12:35:34	0.250	0.300	18.000
2020-09-14 10:47:40	0.150	0.350	8.550
2020-09-14 10:18:12	0.100	0.250	8.250
2020-09-11 10:57:10	0.200	0.300	20.200
2020-09-10 11:27:38	0.300	0.400	18.050
2020-09-09 11:12:49	0.350	0.250	16.700
2020-09-09 10:40:25	0.500	0.350	11.550
2020-09-04 11:48:35	0.250	0.050	93.750
2020-09-03 16:21:25	0.350	0.300	43.700
2020-09-01 11:42:55	0.300	0.450	45.100
2020-08-31 11:13:32	0.400	0.150	26.850
2020-08-28 11:16:24	0.250	0.550	12.400
2020-08-27 13:51:21	0.200	0.250	18.250
2020-08-26 12:03:40	0.000	0.100	10.750
2020-08-25 12:03:05	0.100	0.100	10.100
2020-08-25 11:32:14	0.050	0.050	21.750
2020-08-21 13:01:12	0.050	0.050	14.900
2020-08-21 12:07:01	0.050	0.150	16.500
2020-08-20 11:15:30	0.000	0.000	28.100
2020-08-20 10:49:50	0.050	0.000	22.300
2020-08-20 10:10:21	0.050	0.150	10.800
2020-08-19 11:28:46	0.050	0.000	7.550
2020-08-18 11:07:27	0.100	0.100	9.200
2020-08-18 09:49:58	0.050	0.100	8.650
2020-08-17 12:34:56	0.050	0.100	20.400
2020-08-17 11:28:15	0.050	0.000	12.450
2020-08-14 07:34:28	0.050	0.050	8.400
2020-08-14 06:44:33	0.100	0.150	6.700
2020-08-13 09:37:45	0.100	0.100	8.150
2020-08-13 09:10:45	0.050	0.000	5.000
2020-08-13 08:48:39	0.100	0.150	6.150

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-13 08:12:32	0.050	0.100	12.400
2020-08-13 07:26:07	0.050	0.050	12.700
2020-08-12 14:30:16	0.050	0.100	25.550
2020-08-12 13:28:46	0.050	0.050	4.550
2020-08-12 12:58:58	0.100	0.050	8.000
2020-08-12 12:32:10	0.100	0.200	15.800
2020-08-12 12:17:37	0.050	0.100	16.950
2020-08-12 11:28:35	0.000	0.050	16.900
2020-08-12 10:46:03	0.050	0.000	3.100
2020-08-12 10:01:12	0.000	0.000	8.200
2020-08-11 08:44:26	0.050	0.000	3.450
2020-08-11 07:53:34	0.050	0.100	5.100
2020-08-10 08:02:54	0.000	0.050	13.600
2020-08-10 07:18:05	0.000	0.100	18.700
2020-08-07 08:01:44	0.050	0.150	9.000
2020-08-06 15:31:02	0.050	0.100	10.550
2020-08-06 14:31:40	0.000	0.150	12.500
2020-08-05 11:00:59	0.000	0.100	9.350
2020-08-04 11:11:16	0.000	0.100	6.500
2020-08-03 11:52:42	0.000	0.050	4.750
2020-07-31 14:27:24	0.050	0.200	3.050
2020-07-28 07:30:44	0.050	0.050	4.800
2020-07-27 13:58:30	0.050	0.000	4.500
2020-07-27 12:42:07	0.000	0.350	6.000
2020-07-27 11:55:01	0.250	0.100	3.500
2020-07-27 11:13:19	0.000	0.150	4.000
2020-07-24 12:42:53	0.150	0.350	12.150
2020-07-24 12:14:18	0.050	0.150	12.100
2020-07-24 12:00:19	0.150	0.250	7.700
2020-07-24 11:13:53	0.200	0.200	12.000
2020-07-24 11:05:21	0.150	0.400	7.450
2020-07-21 12:40:51	0.250	0.150	22.450
2020-07-21 11:57:51	0.350	0.350	31.100
2020-07-20 12:40:12	0.050	0.300	11.200
2020-07-20 11:37:51	0.050	0.300	14.750
2020-07-17 11:48:52	0.400	0.200	5.150
2020-07-16 18:15:26	0.100	0.250	11.250
2020-07-16 12:56:52	0.250	0.150	8.100
2020-07-16 12:30:29	0.050	0.200	7.650
2020-07-15 12:44:11	0.350	0.400	9.450
2020-07-15 12:10:56	0.500	0.050	10.400

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-07-14 11:48:58	0.250	0.250	17.450
2020-07-14 11:11:56	0.100	0.400	17.000
2020-07-13 12:32:05	0.350	0.400	29.750
2020-07-10 12:07:31	0.150	0.150	11.350
2020-07-09 11:10:24	0.300	0.350	31.650
2020-07-08 12:38:35	0.150	0.400	29.700
2020-07-07 11:49:59	0.100	0.550	8.550
2020-07-06 13:18:03	0.250	0.250	22.550
2020-07-06 11:44:36	0.150	0.050	18.500
2020-07-02 11:58:12	0.250	0.300	4.850
2020-07-02 11:17:30	0.100	0.150	3.850
2020-07-01 13:38:18	0.050	0.200	18.250
2020-07-01 12:51:19	0.150	0.300	12.650
2020-07-01 12:27:56	0.250	0.050	18.900
2020-07-01 11:46:22	0.200	0.050	7.500
2020-06-30 13:54:10	0.250	0.350	12.050
2020-06-30 13:18:33	0.350	0.250	9.600
2020-06-30 12:13:58	0.100	0.150	23.850
2020-06-29 12:28:14	0.200	0.100	39.500
2020-06-29 11:42:42	0.100	0.350	44.450
2020-06-27 11:13:24	0.100	0.100	30.600
2020-06-26 12:29:21	0.200	0.300	58.300
2020-06-25 11:42:24	0.150	0.250	21.450
2020-06-24 11:38:27	0.300	0.450	12.650
2020-06-23 12:16:39	0.550	0.400	37.200
2020-06-22 12:41:53	0.600	0.300	31.050
2020-06-22 12:03:52	0.400	0.300	32.100

Tune Parameters

Created Date	Extract 1	Extract 2	Omega Bias
2020-11-17 11:15:31	0.0 V	-170.0 V	-80 V
2020-11-16 13:44:07	0.0 V	-145.0 V	-70 V
2020-11-16 13:09:13	0.0 V	-145.0 V	-70 V
2020-11-13 11:20:44	0.0 V	-155.0 V	-70 V
2020-11-12 14:37:14	0.0 V	-150.0 V	-70 V
2020-11-12 13:53:08	0.0 V	-145.0 V	-70 V
2020-11-12 12:32:41	0.0 V	-145.0 V	-70 V
2020-11-11 12:53:39	0.0 V	-170.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-11-11 11:44:42	0.0 V	-175.0 V	-70 V
2020-11-10 13:55:09	0.0 V	-200.0 V	-70 V
2020-11-10 12:53:54	0.0 V	-185.0 V	-70 V
2020-11-10 11:37:01	0.0 V	-180.0 V	-70 V
2020-11-09 11:47:17	0.0 V	-175.0 V	-70 V
2020-11-09 11:29:50	0.0 V	-175.0 V	-70 V
2020-11-06 11:38:12	0.0 V	-170.0 V	-70 V
2020-11-06 11:01:15	0.0 V	-170.0 V	-70 V
2020-11-05 11:47:54	0.0 V	-195.0 V	-70 V
2020-11-04 11:19:46	0.0 V	-190.0 V	-80 V
2020-11-03 12:28:48	0.0 V	-190.0 V	-80 V
2020-11-03 12:08:40	0.0 V	-190.0 V	-80 V
2020-11-02 11:05:14	0.0 V	-195.0 V	-80 V
2020-10-30 12:05:49	0.0 V	-195.0 V	-70 V
2020-10-29 12:49:39	0.0 V	-195.0 V	-70 V
2020-10-29 11:48:38	0.0 V	-180.0 V	-70 V
2020-10-28 15:02:21	0.0 V	-200.0 V	-70 V
2020-10-28 14:05:42	0.0 V	-180.0 V	-70 V
2020-10-27 12:05:48	0.0 V	-140.0 V	-70 V
2020-10-27 11:35:55	0.0 V	-140.0 V	-70 V
2020-10-26 12:04:37	0.0 V	-150.0 V	-70 V
2020-10-23 12:12:34	0.0 V	-145.0 V	-70 V
2020-10-23 11:37:57	0.0 V	-145.0 V	-70 V
2020-10-22 12:16:30	0.0 V	-140.0 V	-70 V
2020-10-21 13:24:11	0.0 V	-140.0 V	-70 V
2020-10-21 12:27:39	0.0 V	-140.0 V	-70 V
2020-10-20 11:47:10	0.0 V	-150.0 V	-70 V
2020-10-19 11:53:52	0.0 V	-145.0 V	-70 V
2020-10-19 11:39:21	0.0 V	-145.0 V	-70 V
2020-10-18 09:36:10	0.0 V	-150.0 V	-70 V
2020-10-16 12:04:16	0.0 V	-155.0 V	-70 V
2020-10-15 12:04:01	0.0 V	-155.0 V	-70 V
2020-10-14 12:01:53	0.0 V	-155.0 V	-70 V
2020-10-13 11:51:04	0.0 V	-180.0 V	-70 V
2020-10-12 12:42:47	0.0 V	-175.0 V	-70 V
2020-10-12 11:44:44	0.0 V	-170.0 V	-70 V
2020-10-11 11:11:57	0.0 V	-170.0 V	-70 V
2020-10-11 10:56:11	0.0 V	-170.0 V	-70 V
2020-10-11 08:29:31	0.0 V	-170.0 V	-70 V
2020-10-09 11:09:17	0.0 V	-170.0 V	-70 V
2020-10-09 10:39:06	0.0 V	-170.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-10-08 11:31:44	0.0 V	-175.0 V	-70 V
2020-10-07 11:59:14	0.0 V	-190.0 V	-80 V
2020-10-07 10:50:29	0.0 V	-190.0 V	-80 V
2020-10-06 12:34:49	0.0 V	-200.0 V	-80 V
2020-10-05 11:04:01	0.0 V	-200.0 V	-70 V
2020-10-04 07:54:14	0.0 V	-200.0 V	-70 V
2020-10-02 09:38:02	0.0 V	-200.0 V	-70 V
2020-10-01 11:27:45	0.0 V	-200.0 V	-80 V
2020-09-30 13:00:41	0.0 V	-200.0 V	-80 V
2020-09-30 11:53:41	0.0 V	-200.0 V	-70 V
2020-09-30 11:07:07	0.0 V	-190.0 V	-70 V
2020-09-30 10:48:54	0.0 V	-190.0 V	-70 V
2020-09-29 13:53:16	0.0 V	-195.0 V	-80 V
2020-09-29 12:19:04	0.0 V	-175.0 V	-80 V
2020-09-28 12:53:55	0.0 V	-140.0 V	-70 V
2020-09-28 11:59:28	0.0 V	-140.0 V	-70 V
2020-09-25 16:18:31	0.0 V	-160.0 V	-70 V
2020-09-25 16:06:07	0.0 V	-160.0 V	-70 V
2020-09-25 14:56:33	0.0 V	-160.0 V	-70 V
2020-09-25 12:48:13	0.0 V	-180.0 V	-80 V
2020-09-24 10:55:05	0.0 V	-190.0 V	-70 V
2020-09-23 12:36:58	0.0 V	-185.0 V	-70 V
2020-09-23 11:38:39	0.0 V	-185.0 V	-70 V
2020-09-23 10:51:49	0.0 V	-165.0 V	-70 V
2020-09-22 11:10:32	0.0 V	-150.0 V	-70 V
2020-09-22 10:54:35	0.0 V	-150.0 V	-70 V
2020-09-21 13:13:36	0.0 V	-200.0 V	-80 V
2020-09-21 12:44:05	0.0 V	-180.0 V	-70 V
2020-09-21 11:41:44	0.0 V	-170.0 V	-70 V
2020-09-21 11:23:15	0.0 V	-170.0 V	-70 V
2020-09-20 08:10:06	0.0 V	-160.0 V	-70 V
2020-09-20 07:22:36	0.0 V	-160.0 V	-70 V
2020-09-20 06:54:39	0.0 V	-160.0 V	-70 V
2020-09-18 11:40:25	0.0 V	-155.0 V	-70 V
2020-09-18 11:29:16	0.0 V	-155.0 V	-70 V
2020-09-18 11:06:40	0.0 V	-155.0 V	-70 V
2020-09-17 15:29:32	0.0 V	-185.0 V	-70 V
2020-09-16 20:54:26	0.0 V	-190.0 V	-70 V
2020-09-16 19:16:27	0.0 V	-195.0 V	-70 V
2020-09-16 17:59:29	0.0 V	-200.0 V	-70 V
2020-09-16 11:19:13	0.0 V	-165.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-09-15 16:24:15	0.0 V	-180.0 V	-70 V
2020-09-15 16:09:17	0.0 V	-180.0 V	-70 V
2020-09-15 14:28:15	0.0 V	-195.0 V	-70 V
2020-09-15 13:19:00	0.0 V	-195.0 V	-70 V
2020-09-15 11:28:27	0.0 V	-190.0 V	-70 V
2020-09-15 09:52:18	0.0 V	-175.0 V	-70 V
2020-09-14 12:35:34	0.0 V	-200.0 V	-70 V
2020-09-14 10:47:40	0.0 V	-175.0 V	-70 V
2020-09-14 10:18:12	0.0 V	-175.0 V	-70 V
2020-09-11 10:57:10	0.0 V	-200.0 V	-70 V
2020-09-10 11:27:38	0.0 V	-195.0 V	-70 V
2020-09-09 11:12:49	0.0 V	-195.0 V	-70 V
2020-09-09 10:40:25	0.0 V	-195.0 V	-70 V
2020-09-04 11:48:35	0.0 V	-190.0 V	-70 V
2020-09-03 16:21:25	0.0 V	-195.0 V	-70 V
2020-09-01 11:42:55	0.0 V	-185.0 V	-70 V
2020-08-31 11:13:32	0.0 V	-190.0 V	-70 V
2020-08-28 11:16:24	0.0 V	-190.0 V	-70 V
2020-08-27 13:51:21	0.0 V	-200.0 V	-70 V
2020-08-26 12:03:40	0.0 V	-140.0 V	-70 V
2020-08-25 12:03:05	0.0 V	-145.0 V	-70 V
2020-08-25 11:32:14	0.0 V	-145.0 V	-70 V
2020-08-21 13:01:12	0.0 V	-140.0 V	-70 V
2020-08-21 12:07:01	0.0 V	-145.0 V	-70 V
2020-08-20 11:15:30	0.0 V	-145.0 V	-70 V
2020-08-20 10:49:50	0.0 V	-145.0 V	-70 V
2020-08-20 10:10:21	0.0 V	-145.0 V	-70 V
2020-08-19 11:28:46	0.0 V	-140.0 V	-70 V
2020-08-18 11:07:27	0.0 V	-145.0 V	-70 V
2020-08-18 09:49:58	0.0 V	-145.0 V	-70 V
2020-08-17 12:34:56	0.0 V	-140.0 V	-70 V
2020-08-17 11:28:15	0.0 V	-140.0 V	-70 V
2020-08-14 07:34:28	0.0 V	-140.0 V	-70 V
2020-08-14 06:44:33	0.0 V	-140.0 V	-70 V
2020-08-13 09:37:45	0.0 V	-140.0 V	-70 V
2020-08-13 09:10:45	0.0 V	-140.0 V	-70 V
2020-08-13 08:48:39	0.0 V	-140.0 V	-70 V
2020-08-13 08:12:32	0.0 V	-140.0 V	-70 V
2020-08-13 07:26:07	0.0 V	-140.0 V	-70 V
2020-08-12 14:30:16	0.0 V	-140.0 V	-70 V
2020-08-12 13:28:46	0.0 V	-140.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-08-12 12:58:58	0.0 V	-140.0 V	-70 V
2020-08-12 12:32:10	0.0 V	-140.0 V	-70 V
2020-08-12 12:17:37	0.0 V	-140.0 V	-70 V
2020-08-12 11:28:35	0.0 V	-140.0 V	-70 V
2020-08-12 10:46:03	0.0 V	-140.0 V	-70 V
2020-08-12 10:01:12	0.0 V	-140.0 V	-70 V
2020-08-11 08:44:26	0.0 V	-140.0 V	-70 V
2020-08-11 07:53:34	0.0 V	-140.0 V	-70 V
2020-08-10 08:02:54	0.0 V	-140.0 V	-70 V
2020-08-10 07:18:05	0.0 V	-140.0 V	-70 V
2020-08-07 08:01:44	0.0 V	-150.0 V	-70 V
2020-08-06 15:31:02	0.0 V	-140.0 V	-70 V
2020-08-06 14:31:40	0.0 V	-140.0 V	-70 V
2020-08-05 11:00:59	0.0 V	-140.0 V	-70 V
2020-08-04 11:11:16	0.0 V	-140.0 V	-70 V
2020-08-03 11:52:42	0.0 V	-140.0 V	-70 V
2020-07-31 14:27:24	0.0 V	-140.0 V	-70 V
2020-07-28 07:30:44	0.0 V	-145.0 V	-70 V
2020-07-27 13:58:30	0.0 V	-160.0 V	-70 V
2020-07-27 12:42:07	0.0 V	-155.0 V	-70 V
2020-07-27 11:55:01	0.0 V	-150.0 V	-70 V
2020-07-27 11:13:19	0.0 V	-150.0 V	-70 V
2020-07-24 12:42:53	0.0 V	-160.0 V	-70 V
2020-07-24 12:14:18	0.0 V	-160.0 V	-70 V
2020-07-24 12:00:19	0.0 V	-165.0 V	-70 V
2020-07-24 11:13:53	0.0 V	-165.0 V	-70 V
2020-07-24 11:05:21	0.0 V	-165.0 V	-70 V
2020-07-21 12:40:51	0.0 V	-160.0 V	-70 V
2020-07-21 11:57:51	0.0 V	-155.0 V	-70 V
2020-07-20 12:40:12	0.0 V	-150.0 V	-70 V
2020-07-20 11:37:51	0.0 V	-155.0 V	-70 V
2020-07-17 11:48:52	0.0 V	-165.0 V	-70 V
2020-07-16 18:15:26	0.0 V	-160.0 V	-70 V
2020-07-16 12:56:52	0.0 V	-165.0 V	-70 V
2020-07-16 12:30:29	0.0 V	-165.0 V	-70 V
2020-07-15 12:44:11	0.0 V	-160.0 V	-70 V
2020-07-15 12:10:56	0.0 V	-160.0 V	-70 V
2020-07-14 11:48:58	0.0 V	-165.0 V	-70 V
2020-07-14 11:11:56	0.0 V	-165.0 V	-70 V
2020-07-13 12:32:05	0.0 V	-160.0 V	-70 V
2020-07-10 12:07:31	0.0 V	-180.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-07-09 11:10:24	0.0 V	-175.0 V	-70 V
2020-07-08 12:38:35	0.0 V	-200.0 V	-70 V
2020-07-07 11:49:59	0.0 V	-200.0 V	-70 V
2020-07-06 13:18:03	0.0 V	-200.0 V	-70 V
2020-07-06 11:44:36	0.0 V	-145.0 V	-70 V
2020-07-02 11:58:12	0.0 V	-155.0 V	-70 V
2020-07-02 11:17:30	0.0 V	-155.0 V	-70 V
2020-07-01 13:38:18	0.0 V	-160.0 V	-70 V
2020-07-01 12:51:19	0.0 V	-160.0 V	-70 V
2020-07-01 12:27:56	0.0 V	-165.0 V	-70 V
2020-07-01 11:46:22	0.0 V	-165.0 V	-70 V
2020-06-30 13:54:10	0.0 V	-175.0 V	-70 V
2020-06-30 13:18:33	0.0 V	-175.0 V	-70 V
2020-06-30 12:13:58	0.0 V	-175.0 V	-70 V
2020-06-29 12:28:14	0.0 V	-185.0 V	-70 V
2020-06-29 11:42:42	0.0 V	-185.0 V	-70 V
2020-06-27 11:13:24	0.0 V	-175.0 V	-70 V
2020-06-26 12:29:21	0.0 V	-160.0 V	-70 V
2020-06-25 11:42:24	0.0 V	-180.0 V	-70 V
2020-06-24 11:38:27	0.0 V	-195.0 V	-70 V
2020-06-23 12:16:39	0.0 V	-200.0 V	-70 V
2020-06-22 12:41:53	0.0 V	-195.0 V	-70 V
2020-06-22 12:03:52	0.0 V	-195.0 V	-70 V

US EPA Tune Check Report

Operator Name	ALSHN ICPMS
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq. Date-Time	2020-11-17 11:53:27
Report Comment	---
Instrument Name	G8421A JP17200678

[No Gas]

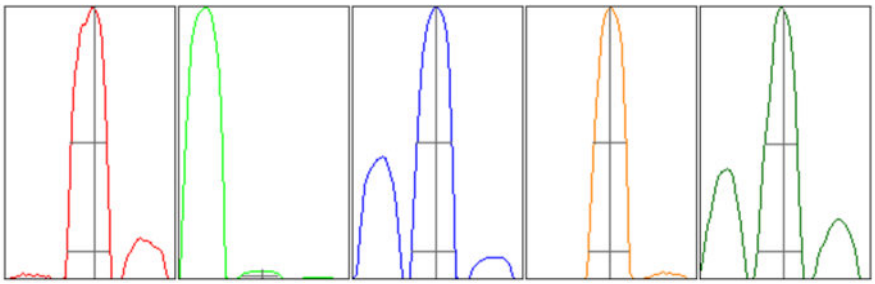
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
9	156	1561.95	1.487	5.000	
24	679	6791.19	1.589	5.000	
59	747	7467.36	1.310	5.000	
115	1246	12458.18	0.911	5.000	
208	687	6867.34	1.444	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	156	155	155	155	160
24	668	671	693	676	687
59	740	744	736	754	759
115	1252	1237	1234	1244	1262
208	704	682	685	684	679

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	259.48	9.10	8.90 - 9.10	
24	1116.87	24.00	23.90 - 24.10	
59	1242.74	59.00	58.90 - 59.10	
115	2261.73	115.00	114.90 - 115.10	
208	1244.49	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.64	0.766	0.900	
24	0.67	0.744	0.900	
59	0.62	0.768	0.900	
115	0.58	0.720	0.900	
208	0.58	0.786	0.900	

US EPA Tune Check Report

Integration Time [sec]	0.1
Acquisition Time [sec]	168.5
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	14.0 V
Extract 2	-170.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-80 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	126	Axis Gain	0.9992	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm

EM

Discriminator	4.8 mV	Analog HV	3307 V	Pulse HV	1272 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	173	1733.70	1.348	5.000	
89	149	1489.76	0.850	5.000	
205	435	4345.95	0.895	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	175	174	172	170	176
89	148	151	149	150	148
205	431	435	440	430	437

Integration Time [sec]	0.1

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

US EPA Tune Check Report

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	1.8 V
Extract 2	-170.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	126	Axis Gain	0.9992	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm		

EM

Discriminator	4.8 mV	Analog HV	3307 V	Pulse HV	1272 V

Calibration Blank Report

Sample Name std 1

File Name 007CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 12:06:04

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	104748.26	1.7
Be	9	6	No Gas	3.34	173.2
B	11	6	No Gas	1541.65	1.3
Na	23	45	No Gas	379053.15	18.0
Na	23	45	He	13100.43	3.5
Mg	24	45	No Gas	3827.45	7.0
Mg	24	45	He	133.35	45.8
Mg	25	45	No Gas	560.05	7.1
Al	27	45	No Gas	5748.91	10.7
Al	27	45	He	20.00	86.6
Si	28	45	No Gas	809423.62	0.7
Si	29	45	No Gas	155056.15	0.5
K	39	45	No Gas	2244400.12	0.5
K	39	45	He	9964.18	2.4
Ca	44	45	No Gas	8109.60	5.7
Ca	44	45	He	26.67	173.2
Ti	47	45	No Gas	180.18	14.7
V	51	45	No Gas	1359.62	35.3
V	51	45	He	140.14	14.3
Cr	52	89	No Gas	13820.98	2.4
Cr	52	89	He	1007.73	5.7
Cr	53	89	No Gas	29070.20	0.6
Mn	55	89	No Gas	5459.96	2.2
Mn	55	89	He	103.44	11.2
Fe	56	89	No Gas	1104216.82	1.6
Fe	56	89	He	14288.48	5.7
Co	59	89	No Gas	453.80	9.2
Co	59	89	He	96.76	15.8
Ni	60	89	No Gas	623.98	5.6
Ni	60	89	He	66.73	37.7
Ni	62	89	No Gas	1761.91	12.4
Cu	63	89	No Gas	4024.69	5.4
Cu	63	89	He	717.42	8.4
Cu	65	89	No Gas	1691.83	6.7
Zn	66	89	No Gas	2048.92	6.3

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	306.98	16.1
Zn	67	89	No Gas	316.99	9.1
Zn	68	89	No Gas	1668.46	5.4
As	75	89	No Gas	3690.27	23.2
As	75	89	He	6.67	50.0
Se	77	89	No Gas	4718.94	5.0
Se	78	89	No Gas	7473.01	4.4
Se	78	89	He	2.22	86.6
Se	82	89	No Gas	-75.95	-220.3
[Se]	83	89	No Gas	1765.24	4.3
Sr	88	89	No Gas	170.17	25.6
Mo	95	89	No Gas	1184.59	5.6
Mo	97	89	No Gas	780.82	8.9
Mo	98	89	No Gas	2117.80	3.4
[Mo]	99	89	No Gas	76.74	19.9
Cd	106	89	No Gas	15625.08	1.9
Ag	107	89	No Gas	212.22	7.9
Ag	107	89	He	70.07	37.8
Cd	108	89	No Gas	20.02	86.6
Ag	109	89	No Gas	66.73	31.2
Cd	111	89	No Gas	-18.15	-121.6
Cd	114	89	No Gas	46.71	12.4
Sn	118	115	No Gas	880.04	6.0
Sb	121	115	No Gas	125.56	12.6
Sb	121	89	He	46.67	24.7
Sb	123	115	No Gas	120.12	16.7
Ba	135	115	No Gas	13.35	86.6
Ba	137	115	No Gas	40.04	66.1
Tl	203	209	No Gas	83.42	18.3
Tl	205	209	No Gas	116.78	4.9
Pb	206	209	No Gas	223.56	40.4
Pb	207	209	No Gas	193.54	13.0
Pb	208	209	No Gas	917.62	22.5
Th	232	209	No Gas	1568.37	3.5
U	238	209	No Gas	283.63	23.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	1891944.38	0.5
Sc	45	No Gas	9527111.72	0.3
Sc	45	He	322628.47	0.3
Y	89	No Gas	20780073.86	0.2
Y	89	He	2338398.40	0.4
In	115	No Gas	3938591.75	0.6
Tb	159	No Gas	6605696.54	0.5
Bi	209	No Gas	3879471.23	0.4

Calibration Standard Report

Sample Name std 2

File Name 008CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 12:08:11

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	106105.09	0.7
Be	9	6	No Gas	640.67	19.0
B	11	6	No Gas	2402.66	4.4
Na	23	45	No Gas	636387.19	1.1
Na	23	45	He	21671.71	2.2
Mg	24	45	No Gas	205848.41	2.2
Mg	24	45	He	3574.06	7.5
Mg	25	45	No Gas	26974.56	2.0
Al	27	45	No Gas	66724.72	3.9
Al	27	45	He	430.01	24.2
Si	28	45	No Gas	916037.13	0.5
Si	29	45	No Gas	160017.52	0.7
K	39	45	No Gas	2526077.88	0.5
K	39	45	He	11258.65	5.5
Ca	44	45	No Gas	16878.46	8.9
Ca	44	45	He	133.34	75.5
Ti	47	45	No Gas	453.80	15.0
V	51	45	No Gas	2160.21	46.4
V	51	45	He	510.53	12.2
Cr	52	89	No Gas	17034.52	2.5
Cr	52	89	He	1508.28	3.3
Cr	53	89	No Gas	32487.88	1.2
Mn	55	89	No Gas	9325.98	4.3
Mn	55	89	He	333.68	9.6
Fe	56	89	No Gas	1394814.78	0.0
Fe	56	89	He	48007.40	2.7
Co	59	89	No Gas	3253.71	6.1
Co	59	89	He	704.07	10.5
Ni	60	89	No Gas	1438.21	6.7
Ni	60	89	He	276.95	14.6
Ni	62	89	No Gas	1885.39	8.0
Cu	63	89	No Gas	6878.71	4.1
Cu	63	89	He	1545.00	10.3
Cu	65	89	No Gas	3070.13	5.1
Zn	66	89	No Gas	2539.48	4.6

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	413.76	15.7
Zn	67	89	No Gas	440.46	8.2
Zn	68	89	No Gas	1992.17	3.3
As	75	89	No Gas	5072.80	16.3
As	75	89	He	68.89	23.9
Se	77	89	No Gas	4975.99	1.6
Se	78	89	No Gas	7619.89	3.0
Se	78	89	He	3.33	0.0
Se	82	89	No Gas	54.13	379.4
[Se]	83	89	No Gas	1771.93	6.7
Sr	88	89	No Gas	4431.91	4.6
Mo	95	89	No Gas	1518.30	13.5
Mo	97	89	No Gas	1011.07	14.0
Mo	98	89	No Gas	2804.32	0.2
[Mo]	99	89	No Gas	83.42	6.9
Cd	106	89	No Gas	15137.36	2.7
Ag	107	89	No Gas	2312.44	3.1
Ag	107	89	He	920.97	9.3
Cd	108	89	No Gas	73.41	15.7
Ag	109	89	No Gas	2122.33	3.4
Cd	111	89	No Gas	387.91	2.4
Cd	114	89	No Gas	1171.24	4.5
Sn	118	115	No Gas	2324.66	1.6
Sb	121	115	No Gas	2116.85	4.4
Sb	121	89	He	483.35	7.3
Sb	123	115	No Gas	1681.83	6.3
Ba	135	115	No Gas	397.07	10.5
Ba	137	115	No Gas	820.87	22.0
Tl	203	209	No Gas	1675.16	5.2
Tl	205	209	No Gas	4278.41	3.6
Pb	206	209	No Gas	1641.78	3.2
Pb	207	209	No Gas	1454.90	7.6
Pb	208	209	No Gas	6627.45	4.8
Th	232	209	No Gas	7015.80	2.9
U	238	209	No Gas	6291.37	4.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1896597.74	0.1	1891944.38	100.25	70	125	
Sc	45	No Gas	9533520.83	0.1	9527111.72	100.07	75	125	
Sc	45	He	320240.40	0.4	322628.47	99.26	75	125	
Y	89	No Gas	20823455.58	0.6	20780073.86	100.21	75	125	
Y	89	He	2334032.73	0.5	2338398.4	99.81	75	125	
In	115	No Gas	3952476.21	0.5	3938591.75	100.35	75	125	
Tb	159	No Gas	6597181.15	0.3	6605696.54	99.87	75	125	
Bi	209	No Gas	3865959.71	0.4	3879471.23	99.65	75	125	

Calibration Standard Report

Sample Name	std 3
File Name	009CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq Time	2020-11-17 12:10:04
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	126417.77	0.5
Be	9	6	No Gas	5650.22	4.5
B	11	6	No Gas	10985.44	4.0
Na	23	45	No Gas	3220623.64	1.4
Na	23	45	He	85237.38	2.3
Mg	24	45	No Gas	2000202.21	0.9
Mg	24	45	He	37425.88	2.4
Mg	25	45	No Gas	262502.01	0.4
Al	27	45	No Gas	40194.05	4.5
Al	27	45	He	213.34	53.3
Si	28	45	No Gas	1871205.85	0.3
Si	29	45	No Gas	217287.17	0.8
K	39	45	No Gas	4769574.09	0.0
K	39	45	He	35431.78	8.7
Ca	44	45	No Gas	86005.65	1.2
Ca	44	45	He	1573.55	10.6
Ti	47	45	No Gas	2385.97	4.4
V	51	45	No Gas	32522.71	2.4
V	51	45	He	3490.67	10.3
Cr	52	89	No Gas	43281.84	1.2
Cr	52	89	He	5092.80	4.0
Cr	53	89	No Gas	35729.08	1.1
Mn	55	89	No Gas	44359.66	2.1
Mn	55	89	He	2192.41	2.5
Fe	56	89	No Gas	4085670.79	0.8
Fe	56	89	He	356507.52	0.3
Co	59	89	No Gas	30180.38	0.8
Co	59	89	He	7139.13	2.9
Ni	60	89	No Gas	6922.14	2.6
Ni	60	89	He	1978.83	5.0
Ni	62	89	No Gas	2592.89	1.8
Cu	63	89	No Gas	18668.45	2.3
Cu	63	89	He	5636.92	4.4
Cu	65	89	No Gas	8808.47	4.5
Zn	66	89	No Gas	6511.57	5.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	1124.53	12.1
Zn	67	89	No Gas	967.69	3.2
Zn	68	89	No Gas	4789.05	5.1
As	75	89	No Gas	8691.14	12.6
As	75	89	He	521.12	8.1
Se	77	89	No Gas	5403.25	4.7
Se	78	89	No Gas	7766.85	1.2
Se	78	89	He	35.56	21.6
Se	82	89	No Gas	448.84	24.6
[Se]	83	89	No Gas	1668.47	4.7
Sr	88	89	No Gas	42623.65	1.4
Mo	95	89	No Gas	8785.19	1.7
Mo	97	89	No Gas	5570.16	3.6
Mo	98	89	No Gas	14281.39	2.5
[Mo]	99	89	No Gas	96.76	33.3
Cd	106	89	No Gas	15755.30	3.4
Ag	107	89	No Gas	21506.35	0.4
Ag	107	89	He	9780.23	3.0
Cd	108	89	No Gas	283.63	38.9
Ag	109	89	No Gas	20814.07	1.0
Cd	111	89	No Gas	4245.37	3.3
Cd	114	89	No Gas	10782.02	0.9
Sn	118	115	No Gas	13970.80	0.6
Sb	121	115	No Gas	20267.87	1.9
Sb	121	89	He	3687.25	3.8
Sb	123	115	No Gas	14913.59	2.1
Ba	135	115	No Gas	4518.73	2.8
Ba	137	115	No Gas	7329.50	5.9
Tl	203	209	No Gas	17820.72	1.4
Tl	205	209	No Gas	42813.26	2.4
Pb	206	209	No Gas	14723.66	1.5
Pb	207	209	No Gas	12515.66	0.7
Pb	208	209	No Gas	57817.68	0.5
Th	232	209	No Gas	58457.63	1.7
U	238	209	No Gas	61488.88	1.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1896000.39	0.8	1891944.38	100.21	70	125	
Sc	45	No Gas	9607246.22	0.7	9527111.72	100.84	75	125	
Sc	45	He	317856.12	0.9	322628.47	98.52	75	125	
Y	89	No Gas	20815037.58	0.4	20780073.86	100.17	75	125	
Y	89	He	2322583.63	0.5	2338398.4	99.32	75	125	
In	115	No Gas	3977728.95	0.1	3938591.75	100.99	75	125	
Tb	159	No Gas	6647510.44	0.6	6605696.54	100.63	75	125	
Bi	209	No Gas	3871365.26	0.2	3879471.23	99.79	75	125	

Calibration Standard Report

Sample Name std 4

File Name 010CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 12:11:57

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	154983.29	1.1
Be	9	6	No Gas	14432.02	4.8
B	11	6	No Gas	25014.14	0.2
Na	23	45	No Gas	7433446.00	0.6
Na	23	45	He	187119.13	0.9
Mg	24	45	No Gas	4890963.05	0.6
Mg	24	45	He	93489.62	1.8
Mg	25	45	No Gas	649767.41	0.4
Al	27	45	No Gas	74444.15	0.6
Al	27	45	He	463.35	6.6
Si	28	45	No Gas	3443051.18	0.2
Si	29	45	No Gas	309804.38	1.2
K	39	45	No Gas	8442668.00	0.2
K	39	45	He	67207.68	3.8
Ca	44	45	No Gas	200589.14	2.0
Ca	44	45	He	2893.87	8.1
Ti	47	45	No Gas	5947.34	1.8
V	51	45	No Gas	80094.86	0.6
V	51	45	He	8755.01	3.5
Cr	52	89	No Gas	85530.48	0.8
Cr	52	89	He	11536.59	6.9
Cr	53	89	No Gas	42160.64	0.7
Mn	55	89	No Gas	98695.50	1.7
Mn	55	89	He	5246.36	9.2
Fe	56	89	No Gas	8618245.24	1.5
Fe	56	89	He	857540.69	1.3
Co	59	89	No Gas	73803.06	2.5
Co	59	89	He	17221.57	2.1
Ni	60	89	No Gas	28338.07	2.9
Ni	60	89	He	8170.76	5.0
Ni	62	89	No Gas	5727.02	7.0
Cu	63	89	No Gas	41250.65	1.3
Cu	63	89	He	13216.51	2.4
Cu	65	89	No Gas	19035.93	0.9
Zn	66	89	No Gas	15664.91	2.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2649.62	7.1
Zn	67	89	No Gas	2496.10	10.8
Zn	68	89	No Gas	10825.30	2.9
As	75	89	No Gas	15094.68	3.0
As	75	89	He	1357.86	5.6
Se	77	89	No Gas	5880.58	1.7
Se	78	89	No Gas	8901.97	2.9
Se	78	89	He	84.45	16.0
Se	82	89	No Gas	622.45	13.2
[Se]	83	89	No Gas	1661.80	4.8
Sr	88	89	No Gas	108608.70	1.4
Mo	95	89	No Gas	21141.44	2.8
Mo	97	89	No Gas	13286.75	2.0
Mo	98	89	No Gas	33913.81	2.0
[Mo]	99	89	No Gas	70.07	37.8
Cd	106	89	No Gas	15975.84	1.6
Ag	107	89	No Gas	52708.82	0.8
Ag	107	89	He	23945.84	2.2
Cd	108	89	No Gas	727.43	8.4
Ag	109	89	No Gas	50218.84	2.1
Cd	111	89	No Gas	10329.73	2.2
Cd	114	89	No Gas	27195.51	1.7
Sn	118	115	No Gas	33755.39	0.5
Sb	121	115	No Gas	49490.65	1.8
Sb	121	89	He	9256.71	0.6
Sb	123	115	No Gas	38060.36	0.7
Ba	135	115	No Gas	10792.07	1.0
Ba	137	115	No Gas	18291.34	1.0
Tl	203	209	No Gas	44108.80	0.4
Tl	205	209	No Gas	106093.84	0.2
Pb	206	209	No Gas	36868.07	1.1
Pb	207	209	No Gas	31233.82	1.0
Pb	208	209	No Gas	144048.67	0.5
Th	232	209	No Gas	149518.95	0.9
U	238	209	No Gas	153400.95	1.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1870993.30	0.4	1891944.38	98.89	70	125	
Sc	45	No Gas	9557903.55	0.2	9527111.72	100.32	75	125	
Sc	45	He	315620.51	1.4	322628.47	97.83	75	125	
Y	89	No Gas	20800440.07	0.4	20780073.86	100.1	75	125	
Y	89	He	2308874.40	0.6	2338398.4	98.74	75	125	
In	115	No Gas	3965684.49	0.3	3938591.75	100.69	75	125	
Tb	159	No Gas	6609924.31	0.6	6605696.54	100.06	75	125	
Bi	209	No Gas	3890982.76	0.6	3879471.23	100.3	75	125	

Calibration Standard Report

Sample Name std 5

File Name 011CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 12:13:50

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	203569.08	0.3
Be	9	6	No Gas	28480.83	1.0
B	11	6	No Gas	48723.08	1.9
Na	23	45	No Gas	14290187.30	1.4
Na	23	45	He	355530.20	1.0
Mg	24	45	No Gas	9567529.86	0.7
Mg	24	45	He	184150.32	1.8
Mg	25	45	No Gas	1261925.14	0.7
Al	27	45	No Gas	130037.62	1.1
Al	27	45	He	740.03	8.2
Si	28	45	No Gas	5966735.08	0.0
Si	29	45	No Gas	456516.74	0.1
K	39	45	No Gas	14421722.29	0.1
K	39	45	He	120648.68	2.0
Ca	44	45	No Gas	384920.98	1.6
Ca	44	45	He	5481.47	8.6
Ti	47	45	No Gas	11359.56	4.5
V	51	45	No Gas	154961.88	2.4
V	51	45	He	16359.75	2.3
Cr	52	89	No Gas	154138.53	1.6
Cr	52	89	He	21358.33	2.1
Cr	53	89	No Gas	53048.93	2.3
Mn	55	89	No Gas	189107.64	1.3
Mn	55	89	He	10477.97	0.5
Fe	56	89	No Gas	15681005.04	0.4
Fe	56	89	He	1574303.83	0.6
Co	59	89	No Gas	143696.52	0.2
Co	59	89	He	33344.36	0.9
Ni	60	89	No Gas	31805.76	1.0
Ni	60	89	He	9312.60	4.1
Ni	62	89	No Gas	6204.40	5.2
Cu	63	89	No Gas	77533.99	1.0
Cu	63	89	He	25235.51	1.9
Cu	65	89	No Gas	36642.88	0.5
Zn	66	89	No Gas	23657.88	2.6

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	3854.48	4.4
Zn	67	89	No Gas	3617.50	7.4
Zn	68	89	No Gas	17181.60	1.4
As	75	89	No Gas	26358.68	3.9
As	75	89	He	2661.39	1.7
Se	77	89	No Gas	6832.03	4.0
Se	78	89	No Gas	10681.78	0.8
Se	78	89	He	125.55	3.1
Se	82	89	No Gas	1373.41	7.3
[Se]	83	89	No Gas	1658.46	2.1
Sr	88	89	No Gas	207543.19	0.7
Mo	95	89	No Gas	41238.40	3.1
Mo	97	89	No Gas	25102.36	7.0
Mo	98	89	No Gas	66139.16	1.6
[Mo]	99	89	No Gas	53.39	28.6
Cd	106	89	No Gas	16513.71	1.5
Ag	107	89	No Gas	102644.49	0.5
Ag	107	89	He	46049.54	1.1
Cd	108	89	No Gas	1561.69	8.6
Ag	109	89	No Gas	98432.74	1.1
Cd	111	89	No Gas	20313.76	3.4
Cd	114	89	No Gas	52872.39	0.6
Sn	118	115	No Gas	65575.85	0.3
Sb	121	115	No Gas	98000.41	0.7
Sb	121	89	He	18302.98	0.4
Sb	123	115	No Gas	75226.73	1.2
Ba	135	115	No Gas	20901.25	2.1
Ba	137	115	No Gas	36273.75	2.3
Tl	203	209	No Gas	88516.83	1.4
Tl	205	209	No Gas	211885.44	0.9
Pb	206	209	No Gas	72908.60	1.0
Pb	207	209	No Gas	61235.12	2.0
Pb	208	209	No Gas	285785.37	1.6
Th	232	209	No Gas	300555.61	0.5
U	238	209	No Gas	304741.28	0.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1848400.68	0.6	1891944.38	97.7	70	125	
Sc	45	No Gas	9442200.76	0.6	9527111.72	99.11	75	125	
Sc	45	He	311626.71	0.6	322628.47	96.59	75	125	
Y	89	No Gas	20530852.98	0.1	20780073.86	98.8	75	125	
Y	89	He	2273794.89	0.3	2338398.4	97.24	75	125	
In	115	No Gas	3924721.34	0.4	3938591.75	99.65	75	125	
Tb	159	No Gas	6605935.53	0.8	6605696.54	100	75	125	
Bi	209	No Gas	3872905.13	0.3	3879471.23	99.83	75	125	

Calibration Standard Report

Sample Name	std 6
File Name	012CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq Time	2020-11-17 12:15:43
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	619071.86	0.4
Be	9	6	No Gas	144365.23	1.1
B	11	6	No Gas	244296.02	0.4
Na	23	45	No Gas	70637970.33	1.0
Na	23	45	He	1731704.92	0.7
Mg	24	45	No Gas	48298974.28	0.5
Mg	24	45	He	920470.43	0.4
Mg	25	45	No Gas	6359564.07	0.5
Al	27	45	No Gas	601687.69	0.4
Al	27	45	He	3137.07	6.5
Si	28	45	No Gas	26926789.34	0.5
Si	29	45	No Gas	1694326.10	0.4
K	39	45	No Gas	62946539.06	0.5
K	39	45	He	577749.55	0.4
Ca	44	45	No Gas	1909779.14	0.9
Ca	44	45	He	31531.38	1.5
Ti	47	45	No Gas	57413.80	1.5
V	51	45	No Gas	800282.89	0.7
V	51	45	He	83311.22	0.8
Cr	52	89	No Gas	723656.42	0.3
Cr	52	89	He	107687.64	2.1
Cr	53	89	No Gas	119570.55	0.5
Mn	55	89	No Gas	920405.85	0.6
Mn	55	89	He	51923.80	1.9
Fe	56	89	No Gas	74841182.92	0.5
Fe	56	89	He	7853332.59	0.4
Co	59	89	No Gas	722969.30	0.3
Co	59	89	He	170385.12	0.5
Ni	60	89	No Gas	157618.63	0.9
Ni	60	89	He	45976.84	1.5
Ni	62	89	No Gas	24810.95	2.9
Cu	63	89	No Gas	367261.67	0.1
Cu	63	89	He	122552.93	0.4
Cu	65	89	No Gas	174967.39	0.2
Zn	66	89	No Gas	110089.49	1.3

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	18758.59	1.2
Zn	67	89	No Gas	17472.22	2.4
Zn	68	89	No Gas	79199.34	1.8
As	75	89	No Gas	123635.26	1.5
As	75	89	He	13534.61	0.3
Se	77	89	No Gas	11242.80	2.3
Se	78	89	No Gas	24403.41	1.6
Se	78	89	He	726.69	1.8
Se	82	89	No Gas	7159.14	4.5
[Se]	83	89	No Gas	1578.36	8.4
Sr	88	89	No Gas	1046769.14	1.2
Mo	95	89	No Gas	207618.03	0.5
Mo	97	89	No Gas	130442.67	0.6
Mo	98	89	No Gas	338785.64	1.7
[Mo]	99	89	No Gas	100.10	30.0
Cd	106	89	No Gas	24982.16	1.2
Ag	107	89	No Gas	526477.31	0.8
Ag	107	89	He	234336.41	1.1
Cd	108	89	No Gas	7790.26	0.5
Ag	109	89	No Gas	505600.83	0.3
Cd	111	89	No Gas	104350.82	0.9
Cd	114	89	No Gas	275532.71	1.1
Sn	118	115	No Gas	336096.67	0.4
Sb	121	115	No Gas	507073.92	0.2
Sb	121	89	He	94894.63	1.6
Sb	123	115	No Gas	391113.97	1.2
Ba	135	115	No Gas	108066.67	1.5
Ba	137	115	No Gas	186524.29	0.8
Tl	203	209	No Gas	462053.74	0.4
Tl	205	209	No Gas	1068855.94	1.2
Pb	206	209	No Gas	374284.60	1.4
Pb	207	209	No Gas	314249.17	0.7
Pb	208	209	No Gas	1460254.45	0.4
Th	232	209	No Gas	1560834.28	0.6
U	238	209	No Gas	1554142.38	0.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1809627.07	0.4	1891944.38	95.65	70	125	
Sc	45	No Gas	9279972.08	0.6	9527111.72	97.41	75	125	
Sc	45	He	306992.19	0.6	322628.47	95.15	75	125	
Y	89	No Gas	20305215.67	0.3	20780073.86	97.71	75	125	
Y	89	He	2221147.25	1.1	2338398.4	94.99	75	125	
In	115	No Gas	3892681.63	0.7	3938591.75	98.83	75	125	
Tb	159	No Gas	6550982.04	0.4	6605696.54	99.17	75	125	
Bi	209	No Gas	3812327.49	0.6	3879471.23	98.27	75	125	

Calibration Standard Report

Sample Name std 7

File Name 013CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 12:17:35

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	995673.91	0.9
Be	9	6	No Gas	258002.92	0.3
B	11	6	No Gas	440648.40	1.2
Na	23	45	No Gas	123535952.76	0.4
Na	23	45	He	3061164.85	0.8
Mg	24	45	No Gas	85268852.06	0.5
Mg	24	45	He	1639075.34	0.8
Mg	25	45	No Gas	11295975.66	0.5
Al	27	45	No Gas	1079667.33	1.7
Al	27	45	He	6521.64	2.3
Si	28	45	No Gas	47169859.96	0.2
Si	29	45	No Gas	2875065.80	0.1
K	39	45	No Gas	111299261.67	0.5
K	39	45	He	984007.80	0.6
Ca	44	45	No Gas	3375857.24	0.7
Ca	44	45	He	58394.47	3.5
Ti	47	45	No Gas	103654.40	0.4
V	51	45	No Gas	1390957.78	0.3
V	51	45	He	151832.60	0.5
Cr	52	89	No Gas	1251537.43	0.1
Cr	52	89	He	189374.98	0.2
Cr	53	89	No Gas	187450.30	0.9
Mn	55	89	No Gas	1630341.28	0.5
Mn	55	89	He	94448.39	0.9
Fe	56	89	No Gas	131844869.61	1.1
Fe	56	89	He	13996518.54	0.4
Co	59	89	No Gas	1268779.64	0.8
Co	59	89	He	304651.84	0.5
Ni	60	89	No Gas	283385.63	1.4
Ni	60	89	He	83967.48	0.7
Ni	62	89	No Gas	43456.15	1.2
Cu	63	89	No Gas	647412.08	0.1
Cu	63	89	He	218954.87	0.7
Cu	65	89	No Gas	305909.50	1.0
Zn	66	89	No Gas	195452.21	0.3

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	34344.61	1.2
Zn	67	89	No Gas	31514.95	2.2
Zn	68	89	No Gas	141501.80	0.5
As	75	89	No Gas	219861.79	0.7
As	75	89	He	24151.55	0.7
Se	77	89	No Gas	16386.60	1.5
Se	78	89	No Gas	38798.30	1.5
Se	78	89	He	1272.29	2.5
Se	82	89	No Gas	12765.20	3.4
[Se]	83	89	No Gas	1715.19	4.9
Sr	88	89	No Gas	1876534.66	0.5
Mo	95	89	No Gas	372996.06	0.2
Mo	97	89	No Gas	234466.61	0.2
Mo	98	89	No Gas	604946.50	0.6
[Mo]	99	89	No Gas	120.12	41.7
Cd	106	89	No Gas	33543.03	3.3
Ag	107	89	No Gas	935115.31	0.5
Ag	107	89	He	423886.30	0.4
Cd	108	89	No Gas	13463.84	1.8
Ag	109	89	No Gas	898000.45	0.4
Cd	111	89	No Gas	187945.47	0.7
Cd	114	89	No Gas	490261.54	1.0
Sn	118	115	No Gas	597551.80	0.9
Sb	121	115	No Gas	913381.28	0.5
Sb	121	89	He	169118.81	0.1
Sb	123	115	No Gas	702495.70	0.5
Ba	135	115	No Gas	193820.85	0.6
Ba	137	115	No Gas	336247.09	1.5
Tl	203	209	No Gas	818562.47	0.6
Tl	205	209	No Gas	1899774.73	0.4
Pb	206	209	No Gas	666242.23	0.6
Pb	207	209	No Gas	559899.20	0.4
Pb	208	209	No Gas	2567960.54	0.4
Th	232	209	No Gas	2806461.26	0.2
U	238	209	No Gas	2780838.76	0.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1777955.99	0.4	1891944.38	93.98	70	125	
Sc	45	No Gas	9253484.13	0.6	9527111.72	97.13	75	125	
Sc	45	He	307394.16	0.2	322628.47	95.28	75	125	
Y	89	No Gas	20137869.58	0.2	20780073.86	96.91	75	125	
Y	89	He	2208295.70	0.4	2338398.4	94.44	75	125	
In	115	No Gas	3841745.67	0.5	3938591.75	97.54	75	125	
Tb	159	No Gas	6529300.36	0.7	6605696.54	98.84	75	125	
Bi	209	No Gas	3771719.43	0.5	3879471.23	97.22	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	014CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq Time	2020-11-17 12:19:27
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	2037375.71	0.4
Be	9	6	No Gas	558949.76	0.5
B	11	6	No Gas	954860.07	0.5
Na	23	45	No Gas	270256789.37	1.1
Na	23	45	He	6597799.28	0.8
Mg	24	45	No Gas	184587843.92	0.5
Mg	24	45	He	3486970.68	0.8
Mg	25	45	No Gas	24272639.64	0.5
Al	27	45	No Gas	2298077.31	0.2
Al	27	45	He	13206.40	0.7
Si	28	45	No Gas	99185856.06	0.2
Si	29	45	No Gas	5922983.41	0.4
K	39	45	No Gas	239240476.43	0.8
K	39	45	He	2126492.31	0.9
Ca	44	45	No Gas	7363190.52	0.1
Ca	44	45	He	120317.81	2.5
Ti	47	45	No Gas	225148.98	0.3
V	51	45	No Gas	3057465.04	0.2
V	51	45	He	329598.88	1.4
Cr	52	89	No Gas	2714817.22	0.2
Cr	52	89	He	406620.45	0.8
Cr	53	89	No Gas	362223.45	1.5
Mn	55	89	No Gas	3557865.17	0.3
Mn	55	89	He	203087.32	2.0
Fe	56	89	No Gas	285092914.71	0.6
Fe	56	89	He	30364860.38	1.0
Co	59	89	No Gas	2752747.96	0.4
Co	59	89	He	654436.26	1.0
Ni	60	89	No Gas	590214.51	0.4
Ni	60	89	He	177252.63	1.3
Ni	62	89	No Gas	89458.38	0.6
Cu	63	89	No Gas	1355261.62	0.2
Cu	63	89	He	468761.18	1.8
Cu	65	89	No Gas	648986.68	0.6
Zn	66	89	No Gas	421367.40	0.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	71676.61	0.2
Zn	67	89	No Gas	66666.91	1.1
Zn	68	89	No Gas	300013.65	0.3
As	75	89	No Gas	471654.86	0.9
As	75	89	He	52256.16	1.4
Se	77	89	No Gas	29458.52	1.5
Se	78	89	No Gas	75975.79	1.4
Se	78	89	He	2753.64	4.0
Se	82	89	No Gas	27560.52	1.7
[Se]	83	89	No Gas	1755.23	4.3
Sr	88	89	No Gas	4105026.70	0.3
Mo	95	89	No Gas	811112.57	0.8
Mo	97	89	No Gas	514353.14	0.3
Mo	98	89	No Gas	1305049.44	0.4
[Mo]	99	89	No Gas	123.46	9.4
Cd	106	89	No Gas	53699.28	0.5
Ag	107	89	No Gas	1961564.30	0.2
Ag	107	89	He	902928.66	0.6
Cd	108	89	No Gas	28426.11	3.9
Ag	109	89	No Gas	1874601.27	0.4
Cd	111	89	No Gas	403683.74	0.7
Cd	114	89	No Gas	1041405.10	0.5
Sn	118	115	No Gas	1266505.19	0.6
Sb	121	115	No Gas	1933985.69	0.9
Sb	121	89	He	367329.15	0.7
Sb	123	115	No Gas	1486092.40	0.9
Ba	135	115	No Gas	413108.05	0.5
Ba	137	115	No Gas	719595.48	1.0
Tl	203	209	No Gas	1755651.80	0.7
Tl	205	209	No Gas	4132209.62	0.7
Pb	206	209	No Gas	1419808.04	0.4
Pb	207	209	No Gas	1171356.65	0.8
Pb	208	209	No Gas	5507760.66	0.3
Th	232	209	No Gas	6139375.85	0.2
U	238	209	No Gas	6072109.62	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1725524.92	0.3	1891944.38	91.2	70	125	
Sc	45	No Gas	9178395.50	0.5	9527111.72	96.34	75	125	
Sc	45	He	302072.18	0.8	322628.47	93.63	75	125	
Y	89	No Gas	19931387.68	0.5	20780073.86	95.92	75	125	
Y	89	He	2173047.69	1.6	2338398.4	92.93	75	125	
In	115	No Gas	3741231.89	0.4	3938591.75	94.99	75	125	
Tb	159	No Gas	6448405.29	1.4	6605696.54	97.62	75	125	
Bi	209	No Gas	3653190.13	0.3	3879471.23	94.17	75	125	

Calibration Blank Report

Sample Name std 1

File Name 226CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 18:19:36

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 226CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	80743.52	0.2
Be	9	6	No Gas	26.69	43.3
B	11	6	No Gas	6932.08	5.8
Na	23	45	No Gas	911450.21	2.0
Na	23	45	He	25090.92	5.7
Mg	24	45	No Gas	15797.19	3.8
Mg	24	45	He	253.35	18.2
Mg	25	45	No Gas	2160.35	11.6
Al	27	45	No Gas	3974.28	7.3
Al	27	45	He	83.35	104.9
Si	28	45	No Gas	755728.23	1.2
Si	29	45	No Gas	129200.63	1.0
K	39	45	No Gas	2383771.89	0.4
K	39	45	He	9737.40	3.5
Ca	44	45	No Gas	6135.07	13.8
Ca	44	45	He	66.67	91.7
Ti	47	45	No Gas	110.11	24.1
V	51	45	No Gas	133.39	616.7
V	51	45	He	96.76	11.9
Cr	52	89	No Gas	10568.12	1.8
Cr	52	89	He	754.12	7.3
Cr	53	89	No Gas	21702.49	1.1
Mn	55	89	No Gas	4865.83	2.8
Mn	55	89	He	96.76	43.1
Fe	56	89	No Gas	1053666.40	1.5
Fe	56	89	He	7896.41	10.7
Co	59	89	No Gas	550.57	19.0
Co	59	89	He	73.41	39.4
Ni	60	89	No Gas	383.73	5.4
Ni	60	89	He	73.41	41.7
Ni	62	89	No Gas	1665.14	8.5
Cu	63	89	No Gas	2118.99	4.0
Cu	63	89	He	650.68	5.5
Cu	65	89	No Gas	1087.82	7.7
Zn	66	89	No Gas	957.67	5.9

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	190.20	24.1
Zn	67	89	No Gas	236.91	25.8
Zn	68	89	No Gas	880.93	7.5
As	75	89	No Gas	2428.00	14.0
As	75	89	He	3.33	0.0
Se	77	89	No Gas	3327.12	2.9
Se	78	89	No Gas	7903.70	3.5
Se	78	89	He	7.78	65.5
Se	82	89	No Gas	101.17	188.8
[Se]	83	89	No Gas	994.38	8.7
Sr	88	89	No Gas	2619.60	4.9
Mo	95	89	No Gas	400.41	11.5
Mo	97	89	No Gas	236.91	23.3
Mo	98	89	No Gas	702.61	11.9
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	13874.68	1.4
Ag	107	89	No Gas	231.11	20.7
Ag	107	89	He	36.70	15.7
Cd	108	89	No Gas	33.37	96.4
Ag	109	89	No Gas	66.73	31.2
Cd	111	89	No Gas	-29.14	-127.0
Cd	114	89	No Gas	53.39	65.8
Sn	118	115	No Gas	1106.72	2.9
Sb	121	115	No Gas	804.47	17.7
Sb	121	89	He	186.67	11.2
Sb	123	115	No Gas	1071.14	18.8
Ba	135	115	No Gas	30.03	100.0
Ba	137	115	No Gas	140.15	25.8
Tl	203	209	No Gas	243.58	30.3
Tl	205	209	No Gas	563.92	22.1
Pb	206	209	No Gas	126.79	25.4
Pb	207	209	No Gas	126.79	35.6
Pb	208	209	No Gas	553.90	7.5
Th	232	209	No Gas	3754.39	10.0
U	238	209	No Gas	630.66	16.1

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	1386716.65	0.4
Sc	45	No Gas	8259775.00	0.3
Sc	45	He	269258.03	0.6
Y	89	No Gas	19240361.23	0.2
Y	89	He	2101614.74	0.5
In	115	No Gas	3648069.84	0.3
Tb	159	No Gas	6070344.52	0.4
Bi	209	No Gas	3536724.17	0.4

Calibration Standard Report

Sample Name std 2

File Name 227CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 18:21:17

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 226CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	82693.24	0.6
Be	9	6	No Gas	427.11	7.2
B	11	6	No Gas	7275.94	1.5
Na	23	45	No Gas	1141572.23	0.8
Na	23	45	He	30742.40	4.5
Mg	24	45	No Gas	175110.38	0.5
Mg	24	45	He	3147.24	17.6
Mg	25	45	No Gas	22352.66	1.0
Al	27	45	No Gas	50763.26	5.0
Al	27	45	He	270.01	7.4
Si	28	45	No Gas	833155.97	0.8
Si	29	45	No Gas	132864.64	0.4
K	39	45	No Gas	2610276.47	0.4
K	39	45	He	11619.12	4.5
Ca	44	45	No Gas	13888.22	5.5
Ca	44	45	He	213.35	65.8
Ti	47	45	No Gas	400.42	21.8
V	51	45	No Gas	185.78	933.2
V	51	45	He	350.36	15.1
Cr	52	89	No Gas	13346.70	1.9
Cr	52	89	He	1124.52	9.5
Cr	53	89	No Gas	24399.74	1.0
Mn	55	89	No Gas	8377.75	3.0
Mn	55	89	He	310.32	8.5
Fe	56	89	No Gas	1312515.59	1.1
Fe	56	89	He	37338.32	6.3
Co	59	89	No Gas	2993.37	5.5
Co	59	89	He	670.70	27.2
Ni	60	89	No Gas	1021.07	4.5
Ni	60	89	He	266.94	28.6
Ni	62	89	No Gas	1671.81	6.1
Cu	63	89	No Gas	4752.33	4.5
Cu	63	89	He	1361.45	9.9
Cu	65	89	No Gas	2185.74	13.5
Zn	66	89	No Gas	1645.11	4.6

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	250.26	10.6
Zn	67	89	No Gas	310.32	17.1
Zn	68	89	No Gas	1124.52	2.9
As	75	89	No Gas	3287.46	26.7
As	75	89	He	62.22	21.7
Se	77	89	No Gas	3537.40	4.9
Se	78	89	No Gas	7846.94	3.8
Se	78	89	He	13.33	43.3
Se	82	89	No Gas	106.14	204.5
[Se]	83	89	No Gas	1184.59	12.5
Sr	88	89	No Gas	6521.55	3.1
Mo	95	89	No Gas	1054.45	5.4
Mo	97	89	No Gas	710.74	21.0
Mo	98	89	No Gas	1841.03	10.3
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	14479.29	1.3
Ag	107	89	No Gas	2074.62	5.2
Ag	107	89	He	754.13	12.8
Cd	108	89	No Gas	60.06	16.7
Ag	109	89	No Gas	1811.97	2.9
Cd	111	89	No Gas	332.23	6.9
Cd	114	89	No Gas	1111.18	17.4
Sn	118	115	No Gas	2311.33	4.0
Sb	121	115	No Gas	2445.79	4.8
Sb	121	89	He	580.03	6.2
Sb	123	115	No Gas	2385.98	14.4
Ba	135	115	No Gas	510.53	2.0
Ba	137	115	No Gas	864.24	9.7
Tl	203	209	No Gas	1801.96	4.8
Tl	205	209	No Gas	4228.35	5.7
Pb	206	209	No Gas	1555.01	5.8
Pb	207	209	No Gas	1288.05	9.0
Pb	208	209	No Gas	5806.43	3.7
Th	232	209	No Gas	7573.34	3.4
U	238	209	No Gas	5820.64	3.8

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1393790.73	0.2	1386716.65	100.51	70	125	
Sc	45	No Gas	8304552.07	0.5	8259775	100.54	75	125	
Sc	45	He	269810.17	0.7	269258.03	100.21	75	125	
Y	89	No Gas	19375391.68	0.5	19240361.23	100.7	75	125	
Y	89	He	2120919.52	0.5	2101614.74	100.92	75	125	
In	115	No Gas	3660145.75	0.7	3648069.84	100.33	75	125	
Tb	159	No Gas	6086438.54	0.4	6070344.52	100.27	75	125	
Bi	209	No Gas	3563559.72	0.4	3536724.17	100.76	75	125	

Calibration Standard Report

Sample Name std 3

File Name 228CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 18:22:59

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 226CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	95698.29	1.6
Be	9	6	No Gas	4264.98	5.6
B	11	6	No Gas	13333.20	1.6
Na	23	45	No Gas	3232311.21	0.4
Na	23	45	He	82876.36	0.7
Mg	24	45	No Gas	1629098.21	0.8
Mg	24	45	He	30689.11	4.3
Mg	25	45	No Gas	213411.25	1.9
Al	27	45	No Gas	43116.34	48.1
Al	27	45	He	183.34	19.2
Si	28	45	No Gas	1643913.81	1.5
Si	29	45	No Gas	181143.19	0.8
K	39	45	No Gas	4596106.29	0.2
K	39	45	He	29353.30	6.2
Ca	44	45	No Gas	72836.57	0.5
Ca	44	45	He	1253.50	11.2
Ti	47	45	No Gas	1922.10	11.9
V	51	45	No Gas	28627.79	6.9
V	51	45	He	2980.03	5.4
Cr	52	89	No Gas	35086.87	2.6
Cr	52	89	He	4151.52	7.2
Cr	53	89	No Gas	25863.95	1.5
Mn	55	89	No Gas	38727.20	1.5
Mn	55	89	He	1968.82	5.6
Fe	56	89	No Gas	3648667.66	0.4
Fe	56	89	He	293580.17	1.7
Co	59	89	No Gas	26004.44	1.8
Co	59	89	He	5860.57	5.9
Ni	60	89	No Gas	6100.88	2.0
Ni	60	89	He	1588.38	2.5
Ni	62	89	No Gas	2492.77	11.1
Cu	63	89	No Gas	14919.99	5.1
Cu	63	89	He	4879.18	3.4
Cu	65	89	No Gas	7215.93	2.2
Zn	66	89	No Gas	4812.43	5.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	797.50	15.7
Zn	67	89	No Gas	810.85	8.6
Zn	68	89	No Gas	3620.84	6.8
As	75	89	No Gas	6062.03	13.3
As	75	89	He	474.46	5.7
Se	77	89	No Gas	3851.13	4.5
Se	78	89	No Gas	8558.11	4.3
Se	78	89	He	30.00	11.1
Se	82	89	No Gas	216.98	51.2
[Se]	83	89	No Gas	1104.50	8.8
Sr	88	89	No Gas	42001.33	0.8
Mo	95	89	No Gas	7449.67	0.9
Mo	97	89	No Gas	4739.00	5.1
Mo	98	89	No Gas	12280.08	2.4
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	14816.72	1.3
Ag	107	89	No Gas	19162.76	2.1
Ag	107	89	He	8404.53	3.9
Cd	108	89	No Gas	246.92	8.4
Ag	109	89	No Gas	17632.98	4.5
Cd	111	89	No Gas	3733.46	4.0
Cd	114	89	No Gas	9706.77	4.7
Sn	118	115	No Gas	12953.09	1.4
Sb	121	115	No Gas	18536.45	1.1
Sb	121	89	He	3590.56	4.8
Sb	123	115	No Gas	14622.95	0.5
Ba	135	115	No Gas	3941.28	4.1
Ba	137	115	No Gas	6975.64	3.4
Tl	203	209	No Gas	16143.41	1.9
Tl	205	209	No Gas	39040.22	2.3
Pb	206	209	No Gas	12779.53	1.2
Pb	207	209	No Gas	11076.16	2.6
Pb	208	209	No Gas	51564.48	1.3
Th	232	209	No Gas	51787.43	0.9
U	238	209	No Gas	53517.35	1.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1390064.19	0.2	1386716.65	100.24	70	125	
Sc	45	No Gas	8333781.09	0.3	8259775	100.9	75	125	
Sc	45	He	267019.60	0.3	269258.03	99.17	75	125	
Y	89	No Gas	19331856.90	0.6	19240361.23	100.48	75	125	
Y	89	He	2108715.75	0.5	2101614.74	100.34	75	125	
In	115	No Gas	3665373.61	0.2	3648069.84	100.47	75	125	
Tb	159	No Gas	6071083.59	0.4	6070344.52	100.01	75	125	
Bi	209	No Gas	3548023.89	0.3	3536724.17	100.32	75	125	

Calibration Standard Report

Sample Name std 4

File Name 229CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 18:24:41

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 226CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	117334.18	1.5
Be	9	6	No Gas	10641.46	3.3
B	11	6	No Gas	23520.11	1.6
Na	23	45	No Gas	6690175.15	1.1
Na	23	45	He	166537.53	1.4
Mg	24	45	No Gas	4032881.19	1.2
Mg	24	45	He	74884.51	2.2
Mg	25	45	No Gas	520627.36	1.4
Al	27	45	No Gas	64231.12	1.4
Al	27	45	He	353.34	16.6
Si	28	45	No Gas	2980020.65	0.9
Si	29	45	No Gas	258398.77	0.5
K	39	45	No Gas	7884513.22	0.5
K	39	45	He	58513.50	3.0
Ca	44	45	No Gas	174896.71	2.2
Ca	44	45	He	2733.81	16.6
Ti	47	45	No Gas	5206.30	3.2
V	51	45	No Gas	66789.28	1.5
V	51	45	He	7239.28	2.9
Cr	52	89	No Gas	71648.29	0.2
Cr	52	89	He	9739.99	4.8
Cr	53	89	No Gas	31588.39	0.9
Mn	55	89	No Gas	88573.89	1.1
Mn	55	89	He	4605.46	4.5
Fe	56	89	No Gas	7670321.79	0.2
Fe	56	89	He	723010.22	0.7
Co	59	89	No Gas	63544.48	0.3
Co	59	89	He	14398.90	2.6
Ni	60	89	No Gas	24787.53	2.2
Ni	60	89	He	7262.65	4.1
Ni	62	89	No Gas	5219.63	1.1
Cu	63	89	No Gas	34655.63	1.5
Cu	63	89	He	10985.58	2.4
Cu	65	89	No Gas	16119.21	0.6
Zn	66	89	No Gas	12167.76	2.7

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	1952.12	6.0
Zn	67	89	No Gas	2038.90	4.8
Zn	68	89	No Gas	8718.33	4.3
As	75	89	No Gas	13630.63	8.0
As	75	89	He	1138.94	2.6
Se	77	89	No Gas	3974.65	6.2
Se	78	89	No Gas	9306.01	6.5
Se	78	89	He	86.67	30.8
Se	82	89	No Gas	684.14	23.0
[Se]	83	89	No Gas	1107.84	13.6
Sr	88	89	No Gas	102108.31	1.1
Mo	95	89	No Gas	18524.95	1.3
Mo	97	89	No Gas	12061.05	1.1
Mo	98	89	No Gas	30098.62	1.7
[Mo]	99	89	No Gas	16.68	124.9
Cd	106	89	No Gas	14749.88	2.5
Ag	107	89	No Gas	47089.90	0.6
Ag	107	89	He	20750.57	3.7
Cd	108	89	No Gas	714.08	9.3
Ag	109	89	No Gas	44348.65	1.3
Cd	111	89	No Gas	9262.09	0.7
Cd	114	89	No Gas	23625.05	0.7
Sn	118	115	No Gas	30536.49	0.9
Sb	121	115	No Gas	45579.89	0.8
Sb	121	89	He	8379.47	2.7
Sb	123	115	No Gas	35122.31	1.0
Ba	135	115	No Gas	9503.11	5.7
Ba	137	115	No Gas	18007.35	3.6
Tl	203	209	No Gas	40740.66	1.6
Tl	205	209	No Gas	98192.00	1.0
Pb	206	209	No Gas	33344.78	1.7
Pb	207	209	No Gas	27397.79	2.8
Pb	208	209	No Gas	129631.56	1.1
Th	232	209	No Gas	132867.75	0.9
U	238	209	No Gas	134151.84	0.8

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1382376.87	1.0	1386716.65	99.69	70	125	
Sc	45	No Gas	8320511.99	0.1	8259775	100.74	75	125	
Sc	45	He	267651.00	0.3	269258.03	99.4	75	125	
Y	89	No Gas	19335958.08	0.5	19240361.23	100.5	75	125	
Y	89	He	2091933.34	0.4	2101614.74	99.54	75	125	
In	115	No Gas	3670789.69	0.7	3648069.84	100.62	75	125	
Tb	159	No Gas	6069687.20	0.7	6070344.52	99.99	75	125	
Bi	209	No Gas	3537976.52	0.4	3536724.17	100.04	75	125	

Calibration Standard Report

Sample Name std 5

File Name 230CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 18:26:23

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 226CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	152608.74	0.7
Be	9	6	No Gas	20913.29	2.5
B	11	6	No Gas	41496.00	0.4
Na	23	45	No Gas	12221629.44	0.5
Na	23	45	He	297658.99	1.6
Mg	24	45	No Gas	7912788.42	0.4
Mg	24	45	He	149092.68	1.3
Mg	25	45	No Gas	1041937.77	0.9
Al	27	45	No Gas	110592.86	1.2
Al	27	45	He	626.69	14.3
Si	28	45	No Gas	5164392.94	0.1
Si	29	45	No Gas	385445.71	0.1
K	39	45	No Gas	13212168.13	0.5
K	39	45	He	104358.37	1.7
Ca	44	45	No Gas	335508.41	0.7
Ca	44	45	He	5534.93	8.8
Ti	47	45	No Gas	9926.98	2.9
V	51	45	No Gas	136279.76	1.5
V	51	45	He	14248.49	1.4
Cr	52	89	No Gas	131549.66	0.5
Cr	52	89	He	18043.43	2.0
Cr	53	89	No Gas	39546.75	1.2
Mn	55	89	No Gas	167598.73	1.3
Mn	55	89	He	9245.85	4.4
Fe	56	89	No Gas	13969770.62	0.9
Fe	56	89	He	1342873.89	0.6
Co	59	89	No Gas	124264.90	1.7
Co	59	89	He	28849.57	0.5
Ni	60	89	No Gas	27191.23	1.4
Ni	60	89	He	7589.83	2.4
Ni	62	89	No Gas	5543.42	3.3
Cu	63	89	No Gas	65857.90	1.8
Cu	63	89	He	21949.92	1.2
Cu	65	89	No Gas	31912.94	2.8
Zn	66	89	No Gas	19370.07	2.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	3267.05	4.4
Zn	67	89	No Gas	2909.94	4.9
Zn	68	89	No Gas	14392.23	3.1
As	75	89	No Gas	22171.85	5.0
As	75	89	He	2341.33	5.6
Se	77	89	No Gas	5126.19	5.3
Se	78	89	No Gas	11179.33	2.8
Se	78	89	He	153.34	4.3
Se	82	89	No Gas	1402.31	15.3
[Se]	83	89	No Gas	1034.43	12.6
Sr	88	89	No Gas	196481.25	0.4
Mo	95	89	No Gas	36777.63	2.6
Mo	97	89	No Gas	22959.56	2.9
Mo	98	89	No Gas	59241.10	1.2
[Mo]	99	89	No Gas	20.02	132.3
Cd	106	89	No Gas	16386.80	0.5
Ag	107	89	No Gas	92291.12	0.4
Ag	107	89	He	41506.81	3.5
Cd	108	89	No Gas	1371.47	12.8
Ag	109	89	No Gas	88196.96	2.6
Cd	111	89	No Gas	18161.92	1.9
Cd	114	89	No Gas	47915.16	1.4
Sn	118	115	No Gas	59984.82	1.1
Sb	121	115	No Gas	89046.15	0.4
Sb	121	89	He	16690.81	1.3
Sb	123	115	No Gas	69201.04	1.4
Ba	135	115	No Gas	19684.84	2.0
Ba	137	115	No Gas	34272.87	2.3
Tl	203	209	No Gas	80676.59	1.0
Tl	205	209	No Gas	194833.26	1.4
Pb	206	209	No Gas	66090.81	1.4
Pb	207	209	No Gas	54781.82	1.6
Pb	208	209	No Gas	258189.30	1.0
Th	232	209	No Gas	265754.96	0.5
U	238	209	No Gas	269641.71	0.8

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1375770.88	0.4	1386716.65	99.21	70	125	
Sc	45	No Gas	8238371.93	0.2	8259775	99.74	75	125	
Sc	45	He	265695.63	0.1	269258.03	98.68	75	125	
Y	89	No Gas	19164379.42	0.2	19240361.23	99.61	75	125	
Y	89	He	2076183.37	0.7	2101614.74	98.79	75	125	
In	115	No Gas	3656071.85	0.3	3648069.84	100.22	75	125	
Tb	159	No Gas	6055445.46	0.8	6070344.52	99.75	75	125	
Bi	209	No Gas	3525289.72	0.3	3536724.17	99.68	75	125	

Calibration Standard Report

Sample Name std 6

File Name 231CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 18:28:05

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 226CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	448228.16	0.3
Be	9	6	No Gas	107951.32	0.9
B	11	6	No Gas	185421.25	0.4
Na	23	45	No Gas	58154701.30	1.0
Na	23	45	He	1428106.75	0.9
Mg	24	45	No Gas	39838064.41	0.6
Mg	24	45	He	754701.87	1.1
Mg	25	45	No Gas	5234484.29	0.5
Al	27	45	No Gas	503957.57	1.2
Al	27	45	He	2867.02	4.4
Si	28	45	No Gas	23117267.32	0.2
Si	29	45	No Gas	1438274.26	0.1
K	39	45	No Gas	57332230.81	1.0
K	39	45	He	508165.93	0.3
Ca	44	45	No Gas	1709129.56	0.3
Ca	44	45	He	27495.95	4.3
Ti	47	45	No Gas	50684.08	2.9
V	51	45	No Gas	697046.11	0.4
V	51	45	He	73097.38	1.2
Cr	52	89	No Gas	628058.23	0.1
Cr	52	89	He	91246.17	1.5
Cr	53	89	No Gas	97740.73	1.8
Mn	55	89	No Gas	829064.53	0.9
Mn	55	89	He	45313.70	0.7
Fe	56	89	No Gas	66669543.16	0.6
Fe	56	89	He	6750621.15	0.2
Co	59	89	No Gas	628319.15	0.7
Co	59	89	He	146943.96	0.4
Ni	60	89	No Gas	136944.22	0.7
Ni	60	89	He	40028.87	1.2
Ni	62	89	No Gas	21662.48	0.8
Cu	63	89	No Gas	318531.40	0.7
Cu	63	89	He	105131.76	0.7
Cu	65	89	No Gas	149283.82	1.4
Zn	66	89	No Gas	94709.03	0.9

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	16306.33	1.7
Zn	67	89	No Gas	14776.30	1.9
Zn	68	89	No Gas	68467.13	1.0
As	75	89	No Gas	110509.31	1.5
As	75	89	He	12013.16	0.4
Se	77	89	No Gas	8564.76	1.5
Se	78	89	No Gas	23560.98	2.9
Se	78	89	He	665.58	13.5
Se	82	89	No Gas	6191.70	10.2
[Se]	83	89	No Gas	1094.49	6.7
Sr	88	89	No Gas	995305.02	0.5
Mo	95	89	No Gas	187515.02	0.8
Mo	97	89	No Gas	117992.27	1.0
Mo	98	89	No Gas	306848.03	0.7
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	22695.71	0.5
Ag	107	89	No Gas	470061.34	1.0
Ag	107	89	He	208728.01	0.9
Cd	108	89	No Gas	6818.68	4.2
Ag	109	89	No Gas	453323.34	1.5
Cd	111	89	No Gas	93299.92	0.6
Cd	114	89	No Gas	245804.33	0.2
Sn	118	115	No Gas	303893.81	1.2
Sb	121	115	No Gas	462083.70	0.4
Sb	121	89	He	86708.19	0.3
Sb	123	115	No Gas	353757.39	0.6
Ba	135	115	No Gas	101124.09	1.2
Ba	137	115	No Gas	174771.98	0.1
Tl	203	209	No Gas	414446.88	0.4
Tl	205	209	No Gas	985410.88	0.3
Pb	206	209	No Gas	340876.95	1.3
Pb	207	209	No Gas	279010.38	1.2
Pb	208	209	No Gas	1319465.13	1.1
Th	232	209	No Gas	1387974.38	1.4
U	238	209	No Gas	1379348.99	0.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1335386.09	0.3	1386716.65	96.3	70	125	
Sc	45	No Gas	8174624.02	0.5	8259775	98.97	75	125	
Sc	45	He	265035.00	0.6	269258.03	98.43	75	125	
Y	89	No Gas	18961482.35	0.4	19240361.23	98.55	75	125	
Y	89	He	2051918.28	0.6	2101614.74	97.64	75	125	
In	115	No Gas	3606611.25	0.4	3648069.84	98.86	75	125	
Tb	159	No Gas	6035605.41	0.2	6070344.52	99.43	75	125	
Bi	209	No Gas	3482670.35	0.1	3536724.17	98.47	75	125	

Calibration Standard Report

Sample Name	std 7
File Name	232CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq Time	2020-11-17 18:29:49
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	226CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	742402.43	1.0
Be	9	6	No Gas	194170.69	1.1
B	11	6	No Gas	335023.62	0.5
Na	23	45	No Gas	103858246.07	0.9
Na	23	45	He	2542182.88	0.7
Mg	24	45	No Gas	70550512.28	0.7
Mg	24	45	He	1335020.60	1.2
Mg	25	45	No Gas	9363086.53	0.7
Al	27	45	No Gas	916074.31	0.6
Al	27	45	He	5077.68	5.1
Si	28	45	No Gas	40593465.21	0.4
Si	29	45	No Gas	2472147.10	0.9
K	39	45	No Gas	100332055.17	0.6
K	39	45	He	874662.67	0.9
Ca	44	45	No Gas	3038735.58	0.4
Ca	44	45	He	49384.56	2.7
Ti	47	45	No Gas	91060.91	1.3
V	51	45	No Gas	1239486.00	0.4
V	51	45	He	131812.61	0.4
Cr	52	89	No Gas	1100190.17	0.7
Cr	52	89	He	161367.19	0.4
Cr	53	89	No Gas	156119.83	2.0
Mn	55	89	No Gas	1470889.59	0.6
Mn	55	89	He	82547.03	1.1
Fe	56	89	No Gas	118877060.99	0.5
Fe	56	89	He	12132974.82	0.6
Co	59	89	No Gas	1122063.76	0.3
Co	59	89	He	261553.65	0.2
Ni	60	89	No Gas	247542.60	1.0
Ni	60	89	He	72165.85	0.2
Ni	62	89	No Gas	38185.17	1.9
Cu	63	89	No Gas	565269.37	0.7
Cu	63	89	He	189420.74	0.5
Cu	65	89	No Gas	266706.28	1.7
Zn	66	89	No Gas	172041.64	0.8

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	29087.07	1.5
Zn	67	89	No Gas	27265.11	2.2
Zn	68	89	No Gas	124176.88	1.4
As	75	89	No Gas	197856.28	1.3
As	75	89	He	21835.39	1.8
Se	77	89	No Gas	13460.36	0.9
Se	78	89	No Gas	36020.90	0.3
Se	78	89	He	1177.84	4.4
Se	82	89	No Gas	11513.04	3.0
[Se]	83	89	No Gas	1258.00	8.9
Sr	88	89	No Gas	1786197.87	0.1
Mo	95	89	No Gas	338306.41	0.6
Mo	97	89	No Gas	212424.98	1.1
Mo	98	89	No Gas	551641.88	1.1
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	30224.94	1.8
Ag	107	89	No Gas	844088.23	1.2
Ag	107	89	He	377524.70	1.0
Cd	108	89	No Gas	12685.63	2.5
Ag	109	89	No Gas	811182.96	0.7
Cd	111	89	No Gas	169026.23	0.8
Cd	114	89	No Gas	442924.80	0.7
Sn	118	115	No Gas	547455.55	0.5
Sb	121	115	No Gas	827096.75	0.9
Sb	121	89	He	154969.04	0.5
Sb	123	115	No Gas	636007.83	1.0
Ba	135	115	No Gas	180949.45	0.8
Ba	137	115	No Gas	314761.22	1.7
Tl	203	209	No Gas	741249.01	1.0
Tl	205	209	No Gas	1776774.85	0.6
Pb	206	209	No Gas	609999.47	1.0
Pb	207	209	No Gas	503480.43	1.1
Pb	208	209	No Gas	2361157.48	0.8
Th	232	209	No Gas	2488179.85	0.5
U	238	209	No Gas	2484907.67	1.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1316571.96	0.8	1386716.65	94.94	70	125	
Sc	45	No Gas	8201374.93	0.3	8259775	99.29	75	125	
Sc	45	He	265081.66	0.5	269258.03	98.45	75	125	
Y	89	No Gas	18915539.74	0.6	19240361.23	98.31	75	125	
Y	89	He	2035393.00	0.4	2101614.74	96.85	75	125	
In	115	No Gas	3569539.89	0.5	3648069.84	97.85	75	125	
Tb	159	No Gas	5997840.98	0.8	6070344.52	98.81	75	125	
Bi	209	No Gas	3446372.99	0.7	3536724.17	97.45	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	233CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq Time	2020-11-17 18:31:34
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	226CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1515095.36	0.3
Be	9	6	No Gas	424361.52	0.3
B	11	6	No Gas	730904.50	0.5
Na	23	45	No Gas	223920613.34	0.2
Na	23	45	He	5550930.33	0.8
Mg	24	45	No Gas	153864424.38	0.4
Mg	24	45	He	2939701.62	0.9
Mg	25	45	No Gas	20373458.86	0.8
Al	27	45	No Gas	1966085.96	0.6
Al	27	45	He	10957.81	4.9
Si	28	45	No Gas	86769239.42	1.2
Si	29	45	No Gas	5185996.22	0.7
K	39	45	No Gas	218436623.41	0.8
K	39	45	He	1922100.44	0.7
Ca	44	45	No Gas	6646489.69	1.0
Ca	44	45	He	112072.86	0.6
Ti	47	45	No Gas	200553.97	0.1
V	51	45	No Gas	2752943.50	0.9
V	51	45	He	292779.31	0.7
Cr	52	89	No Gas	2421396.87	0.7
Cr	52	89	He	360959.80	0.8
Cr	53	89	No Gas	315703.64	0.9
Mn	55	89	No Gas	3229525.37	0.2
Mn	55	89	He	179718.69	1.1
Fe	56	89	No Gas	256747397.40	0.9
Fe	56	89	He	26839432.10	0.6
Co	59	89	No Gas	2465964.93	0.8
Co	59	89	He	582714.54	0.6
Ni	60	89	No Gas	525187.07	1.1
Ni	60	89	He	155667.32	1.3
Ni	62	89	No Gas	79772.20	2.2
Cu	63	89	No Gas	1220335.91	0.6
Cu	63	89	He	415885.61	0.5
Cu	65	89	No Gas	577513.93	1.0
Zn	66	89	No Gas	373417.25	0.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	63203.30	2.3
Zn	67	89	No Gas	59110.71	0.8
Zn	68	89	No Gas	267248.79	0.4
As	75	89	No Gas	433071.14	1.1
As	75	89	He	48399.54	1.1
Se	77	89	No Gas	25459.65	1.9
Se	78	89	No Gas	71691.57	2.4
Se	78	89	He	2699.18	1.5
Se	82	89	No Gas	25873.17	1.8
[Se]	83	89	No Gas	1111.18	4.1
Sr	88	89	No Gas	3948205.82	0.8
Mo	95	89	No Gas	757593.87	1.5
Mo	97	89	No Gas	472188.00	1.3
Mo	98	89	No Gas	1219071.45	0.9
[Mo]	99	89	No Gas	23.36	173.2
Cd	106	89	No Gas	49964.26	0.6
Ag	107	89	No Gas	1830103.68	0.5
Ag	107	89	He	821258.58	0.8
Cd	108	89	No Gas	26576.91	2.1
Ag	109	89	No Gas	1751950.03	0.2
Cd	111	89	No Gas	370953.46	0.7
Cd	114	89	No Gas	971226.75	0.9
Sn	118	115	No Gas	1193919.19	0.5
Sb	121	115	No Gas	1814828.47	0.1
Sb	121	89	He	345501.93	0.7
Sb	123	115	No Gas	1396090.00	0.2
Ba	135	115	No Gas	394960.48	0.2
Ba	137	115	No Gas	691946.19	0.6
Tl	203	209	No Gas	1617998.99	0.4
Tl	205	209	No Gas	3868423.12	0.3
Pb	206	209	No Gas	1330978.80	0.1
Pb	207	209	No Gas	1078241.00	0.5
Pb	208	209	No Gas	5113306.81	0.2
Th	232	209	No Gas	5516935.28	0.6
U	238	209	No Gas	5483705.80	0.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1295839.79	0.5	1386716.65	93.45	70	125	
Sc	45	No Gas	8199023.00	0.4	8259775	99.26	75	125	
Sc	45	He	266522.99	0.6	269258.03	98.98	75	125	
Y	89	No Gas	18951262.55	0.7	19240361.23	98.5	75	125	
Y	89	He	2039815.45	0.6	2101614.74	97.06	75	125	
In	115	No Gas	3530953.62	0.8	3648069.84	96.79	75	125	
Tb	159	No Gas	5981999.72	0.5	6070344.52	98.54	75	125	
Bi	209	No Gas	3374457.85	0.5	3536724.17	95.41	75	125	

Calibration Blank Report

Sample Name std 1

File Name 279CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 19:48:40

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 279CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	56673.45	1.1
Be	9	6	No Gas	36.70	31.5
B	11	6	No Gas	39639.02	1.9
Na	23	45	No Gas	1814390.86	1.7
Na	23	45	He	45878.31	4.6
Mg	24	45	No Gas	27615.92	2.1
Mg	24	45	He	600.06	6.7
Mg	25	45	No Gas	3373.98	5.8
Al	27	45	No Gas	3777.21	23.2
Al	27	45	He	6.67	173.2
Si	28	45	No Gas	540264.15	0.6
Si	29	45	No Gas	96824.80	0.7
K	39	45	No Gas	1984331.85	0.8
K	39	45	He	8496.41	9.4
Ca	44	45	No Gas	6628.78	8.2
Ca	44	45	He	53.34	43.3
Ti	47	45	No Gas	76.74	27.2
V	51	45	No Gas	62.83	1282.9
V	51	45	He	96.76	39.2
Cr	52	89	No Gas	8070.58	6.6
Cr	52	89	He	620.65	9.8
Cr	53	89	No Gas	17779.55	1.9
Mn	55	89	No Gas	4198.26	4.3
Mn	55	89	He	106.77	19.5
Fe	56	89	No Gas	879396.99	0.7
Fe	56	89	He	6241.82	12.8
Co	59	89	No Gas	460.48	4.3
Co	59	89	He	56.72	73.5
Ni	60	89	No Gas	357.03	21.8
Ni	60	89	He	46.71	24.7
Ni	62	89	No Gas	1298.05	5.6
Cu	63	89	No Gas	3570.78	8.2
Cu	63	89	He	981.03	6.1
Cu	65	89	No Gas	1882.05	6.9
Zn	66	89	No Gas	790.83	9.9

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	146.81	21.9
Zn	67	89	No Gas	133.47	37.0
Zn	68	89	No Gas	543.90	20.3
As	75	89	No Gas	2172.88	30.6
As	75	89	He	2.22	173.2
Se	77	89	No Gas	2489.43	4.4
Se	78	89	No Gas	6771.92	2.0
Se	78	89	He	2.22	86.6
Se	82	89	No Gas	-38.74	-195.4
[Se]	83	89	No Gas	967.69	5.2
Sr	88	89	No Gas	1671.81	16.6
Mo	95	89	No Gas	260.27	3.8
Mo	97	89	No Gas	113.45	41.7
Mo	98	89	No Gas	362.74	34.7
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	12054.40	3.6
Ag	107	89	No Gas	220.00	13.6
Ag	107	89	He	40.04	25.0
Cd	108	89	No Gas	30.03	66.7
Ag	109	89	No Gas	73.41	75.1
Cd	111	89	No Gas	-26.66	-99.4
Cd	114	89	No Gas	20.02	100.0
Sn	118	115	No Gas	787.81	5.3
Sb	121	115	No Gas	171.11	17.6
Sb	121	89	He	33.33	17.3
Sb	123	115	No Gas	500.52	18.3
Ba	135	115	No Gas	30.03	88.2
Ba	137	115	No Gas	46.71	65.5
Tl	203	209	No Gas	170.17	21.2
Tl	205	209	No Gas	383.73	18.9
Pb	206	209	No Gas	146.82	32.2
Pb	207	209	No Gas	113.45	5.1
Pb	208	209	No Gas	497.18	11.6
Th	232	209	No Gas	3514.09	3.2
U	238	209	No Gas	460.48	9.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	999812.08	0.4
Sc	45	No Gas	6672228.28	0.1
Sc	45	He	208216.69	1.4
Y	89	No Gas	16795472.17	0.5
Y	89	He	1756395.88	1.3
In	115	No Gas	3287717.66	0.4
Tb	159	No Gas	5716935.49	0.5
Bi	209	No Gas	3480441.04	0.3

Calibration Standard Report

Sample Name std 2

File Name 280CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 19:50:21

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 279CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	58931.50	0.4
Be	9	6	No Gas	357.03	8.6
B	11	6	No Gas	39224.14	0.7
Na	23	45	No Gas	1974056.62	0.5
Na	23	45	He	50052.24	2.8
Mg	24	45	No Gas	155761.65	1.8
Mg	24	45	He	2960.52	4.1
Mg	25	45	No Gas	19935.79	5.6
Al	27	45	No Gas	41424.28	0.8
Al	27	45	He	173.34	21.8
Si	28	45	No Gas	617079.43	1.1
Si	29	45	No Gas	99580.07	1.2
K	39	45	No Gas	2178318.67	1.0
K	39	45	He	8656.86	5.7
Ca	44	45	No Gas	13434.24	4.8
Ca	44	45	He	106.68	57.3
Ti	47	45	No Gas	263.61	5.8
V	51	45	No Gas	2448.56	80.1
V	51	45	He	330.34	5.2
Cr	52	89	No Gas	10925.46	2.8
Cr	52	89	He	884.26	2.6
Cr	53	89	No Gas	19259.72	2.2
Mn	55	89	No Gas	7008.92	3.5
Mn	55	89	He	250.26	22.3
Fe	56	89	No Gas	1092771.61	0.4
Fe	56	89	He	29488.06	3.8
Co	59	89	No Gas	2476.08	5.2
Co	59	89	He	537.23	16.8
Ni	60	89	No Gas	710.74	30.5
Ni	60	89	He	196.87	30.7
Ni	62	89	No Gas	1551.67	12.1
Cu	63	89	No Gas	5473.36	2.2
Cu	63	89	He	1808.63	4.8
Cu	65	89	No Gas	2703.02	10.4
Zn	66	89	No Gas	1247.99	7.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	186.86	34.4
Zn	67	89	No Gas	246.92	27.0
Zn	68	89	No Gas	944.33	9.5
As	75	89	No Gas	2435.55	24.6
As	75	89	He	51.11	32.2
Se	77	89	No Gas	2723.06	8.9
Se	78	89	No Gas	6912.16	2.8
Se	78	89	He	4.44	114.6
Se	82	89	No Gas	11.79	1374.4
[Se]	83	89	No Gas	914.29	12.7
Sr	88	89	No Gas	5326.48	4.9
Mo	95	89	No Gas	927.65	13.1
Mo	97	89	No Gas	463.82	1.2
Mo	98	89	No Gas	1330.44	7.2
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	11773.85	2.9
Ag	107	89	No Gas	1859.03	5.0
Ag	107	89	He	734.10	5.7
Cd	108	89	No Gas	53.39	47.2
Ag	109	89	No Gas	1534.99	15.2
Cd	111	89	No Gas	299.39	10.2
Cd	114	89	No Gas	900.95	6.9
Sn	118	115	No Gas	1912.37	0.7
Sb	121	115	No Gas	1815.69	0.3
Sb	121	89	He	290.01	3.4
Sb	123	115	No Gas	1705.18	10.0
Ba	135	115	No Gas	400.42	10.0
Ba	137	115	No Gas	774.15	9.2
Tl	203	209	No Gas	1678.49	1.5
Tl	205	209	No Gas	4174.94	7.3
Pb	206	209	No Gas	1508.30	3.8
Pb	207	209	No Gas	1271.37	7.2
Pb	208	209	No Gas	5716.32	3.4
Th	232	209	No Gas	7433.14	2.8
U	238	209	No Gas	5670.40	4.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1006329.86	0.5	999812.08	100.65	70	125	
Sc	45	No Gas	6723105.62	0.6	6672228.28	100.76	75	125	
Sc	45	He	209962.60	0.8	208216.69	100.84	75	125	
Y	89	No Gas	16921725.93	0.5	16795472.17	100.75	75	125	
Y	89	He	1756618.92	0.3	1756395.88	100.01	75	125	
In	115	No Gas	3302963.78	0.7	3287717.66	100.46	75	125	
Tb	159	No Gas	5771643.53	0.6	5716935.49	100.96	75	125	
Bi	209	No Gas	3501602.43	0.4	3480441.04	100.61	75	125	

Calibration Standard Report

Sample Name std 3

File Name 281CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 19:52:03

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 279CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	68718.79	0.6
Be	9	6	No Gas	3163.58	5.8
B	11	6	No Gas	41994.82	1.8
Na	23	45	No Gas	3535744.87	0.6
Na	23	45	He	90626.22	6.0
Mg	24	45	No Gas	1273186.31	0.7
Mg	24	45	He	23114.08	3.3
Mg	25	45	No Gas	167595.87	3.8
Al	27	45	No Gas	23701.68	7.3
Al	27	45	He	123.33	20.4
Si	28	45	No Gas	1227319.59	0.1
Si	29	45	No Gas	137210.16	0.7
K	39	45	No Gas	3759011.09	0.6
K	39	45	He	22820.19	2.3
Ca	44	45	No Gas	61340.34	5.0
Ca	44	45	He	973.45	13.2
Ti	47	45	No Gas	1711.85	4.6
V	51	45	No Gas	21582.25	3.4
V	51	45	He	2522.81	6.6
Cr	52	89	No Gas	29013.34	0.5
Cr	52	89	He	3580.77	2.4
Cr	53	89	No Gas	21642.29	0.9
Mn	55	89	No Gas	31404.35	1.0
Mn	55	89	He	1541.66	12.0
Fe	56	89	No Gas	3060817.32	0.4
Fe	56	89	He	236324.64	1.0
Co	59	89	No Gas	20980.74	4.2
Co	59	89	He	4825.76	2.9
Ni	60	89	No Gas	4759.02	7.2
Ni	60	89	He	1374.80	5.0
Ni	62	89	No Gas	1928.77	6.9
Cu	63	89	No Gas	14241.85	1.9
Cu	63	89	He	4812.42	7.8
Cu	65	89	No Gas	7139.15	5.1
Zn	66	89	No Gas	4008.00	5.9

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	613.97	9.6
Zn	67	89	No Gas	737.44	7.5
Zn	68	89	No Gas	3076.81	2.1
As	75	89	No Gas	5393.05	15.4
As	75	89	He	416.68	4.2
Se	77	89	No Gas	2819.83	7.8
Se	78	89	No Gas	7109.12	4.9
Se	78	89	He	40.00	16.7
Se	82	89	No Gas	94.77	52.9
[Se]	83	89	No Gas	964.35	3.0
Sr	88	89	No Gas	36580.11	2.1
Mo	95	89	No Gas	6541.57	3.9
Mo	97	89	No Gas	4204.93	4.6
Mo	98	89	No Gas	10734.23	2.2
[Mo]	99	89	No Gas	6.67	173.2
Cd	106	89	No Gas	12361.64	4.4
Ag	107	89	No Gas	16926.40	2.1
Ag	107	89	He	7633.30	1.5
Cd	108	89	No Gas	233.58	17.3
Ag	109	89	No Gas	16286.51	3.3
Cd	111	89	No Gas	3302.10	2.2
Cd	114	89	No Gas	8548.14	2.7
Sn	118	115	No Gas	11419.43	1.1
Sb	121	115	No Gas	16495.97	2.0
Sb	121	89	He	2977.06	7.4
Sb	123	115	No Gas	13163.30	1.8
Ba	135	115	No Gas	3751.02	5.7
Ba	137	115	No Gas	6338.00	6.9
Tl	203	209	No Gas	15719.20	3.4
Tl	205	209	No Gas	38233.50	2.5
Pb	206	209	No Gas	13480.92	1.9
Pb	207	209	No Gas	10882.53	0.9
Pb	208	209	No Gas	51747.85	1.4
Th	232	209	No Gas	51616.84	1.6
U	238	209	No Gas	54465.52	1.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1003099.51	0.1	999812.08	100.33	70	125	
Sc	45	No Gas	6713899.33	0.5	6672228.28	100.62	75	125	
Sc	45	He	209095.12	0.3	208216.69	100.42	75	125	
Y	89	No Gas	16944673.04	0.5	16795472.17	100.89	75	125	
Y	89	He	1756786.95	0.1	1756395.88	100.02	75	125	
In	115	No Gas	3299328.52	0.3	3287717.66	100.35	75	125	
Tb	159	No Gas	5767021.83	0.4	5716935.49	100.88	75	125	
Bi	209	No Gas	3498591.25	0.3	3480441.04	100.52	75	125	

Calibration Standard Report

Sample Name std 4

File Name 282CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 19:53:45

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 279CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	83606.23	0.3
Be	9	6	No Gas	8377.66	2.7
B	11	6	No Gas	49442.98	1.4
Na	23	45	No Gas	6142245.71	0.4
Na	23	45	He	155681.87	3.3
Mg	24	45	No Gas	3104365.79	0.8
Mg	24	45	He	59168.30	1.6
Mg	25	45	No Gas	408776.27	0.9
Al	27	45	No Gas	50212.72	6.5
Al	27	45	He	256.67	22.5
Si	28	45	No Gas	2281303.08	0.4
Si	29	45	No Gas	197795.26	0.7
K	39	45	No Gas	6368281.16	0.2
K	39	45	He	46374.40	2.4
Ca	44	45	No Gas	141690.72	0.9
Ca	44	45	He	2147.01	2.8
Ti	47	45	No Gas	4061.39	1.7
V	51	45	No Gas	54946.08	4.3
V	51	45	He	5676.95	3.4
Cr	52	89	No Gas	58553.21	0.4
Cr	52	89	He	7462.96	7.6
Cr	53	89	No Gas	25596.43	1.8
Mn	55	89	No Gas	71926.70	1.1
Mn	55	89	He	3854.46	7.1
Fe	56	89	No Gas	6356061.86	0.5
Fe	56	89	He	589686.82	1.8
Co	59	89	No Gas	51880.57	0.5
Co	59	89	He	11960.73	4.2
Ni	60	89	No Gas	20145.21	0.7
Ni	60	89	He	5757.07	3.7
Ni	62	89	No Gas	4088.11	1.0
Cu	63	89	No Gas	29615.49	1.9
Cu	63	89	He	9820.21	1.8
Cu	65	89	No Gas	14549.19	1.4
Zn	66	89	No Gas	10270.97	4.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	1645.11	3.0
Zn	67	89	No Gas	1671.80	8.4
Zn	68	89	No Gas	7232.60	0.8
As	75	89	No Gas	10820.45	3.5
As	75	89	He	934.48	3.8
Se	77	89	No Gas	3233.69	2.4
Se	78	89	No Gas	7910.37	4.8
Se	78	89	He	60.00	5.5
Se	82	89	No Gas	589.19	8.8
[Se]	83	89	No Gas	904.28	5.2
Sr	88	89	No Gas	88566.35	0.8
Mo	95	89	No Gas	15985.82	3.4
Mo	97	89	No Gas	10204.27	5.7
Mo	98	89	No Gas	27201.41	1.6
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	12648.80	2.8
Ag	107	89	No Gas	41638.47	1.4
Ag	107	89	He	18063.99	0.9
Cd	108	89	No Gas	573.93	8.8
Ag	109	89	No Gas	39297.91	2.5
Cd	111	89	No Gas	8276.09	2.6
Cd	114	89	No Gas	21455.76	1.0
Sn	118	115	No Gas	27596.65	0.7
Sb	121	115	No Gas	40382.96	1.6
Sb	121	89	He	7252.15	1.1
Sb	123	115	No Gas	31419.24	1.5
Ba	135	115	No Gas	8898.77	2.2
Ba	137	115	No Gas	15722.08	1.1
Tl	203	209	No Gas	39368.30	1.1
Tl	205	209	No Gas	96483.41	1.2
Pb	206	209	No Gas	33137.43	2.9
Pb	207	209	No Gas	27056.61	0.6
Pb	208	209	No Gas	127452.31	1.2
Th	232	209	No Gas	131595.58	1.3
U	238	209	No Gas	135704.01	0.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1002017.67	0.3	999812.08	100.22	70	125	
Sc	45	No Gas	6685583.93	0.4	6672228.28	100.2	75	125	
Sc	45	He	211528.42	0.1	208216.69	101.59	75	125	
Y	89	No Gas	16835402.94	0.6	16795472.17	100.24	75	125	
Y	89	He	1750647.21	0.7	1756395.88	99.67	75	125	
In	115	No Gas	3308246.12	0.4	3287717.66	100.62	75	125	
Tb	159	No Gas	5743843.02	0.4	5716935.49	100.47	75	125	
Bi	209	No Gas	3482227.22	0.1	3480441.04	100.05	75	125	

Calibration Standard Report

Sample Name std 5

File Name 283CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 19:55:27

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 279CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	110290.87	1.6
Be	9	6	No Gas	15938.44	1.6
B	11	6	No Gas	62430.39	1.6
Na	23	45	No Gas	10378665.08	0.7
Na	23	45	He	252451.92	1.0
Mg	24	45	No Gas	6075878.87	0.2
Mg	24	45	He	114257.74	2.0
Mg	25	45	No Gas	804271.16	1.4
Al	27	45	No Gas	84273.10	1.3
Al	27	45	He	450.02	10.2
Si	28	45	No Gas	3986718.81	0.5
Si	29	45	No Gas	298425.75	0.1
K	39	45	No Gas	10618109.01	0.6
K	39	45	He	81376.68	1.2
Ca	44	45	No Gas	273423.70	0.7
Ca	44	45	He	4294.31	9.0
Ti	47	45	No Gas	7810.14	6.2
V	51	45	No Gas	110032.95	1.4
V	51	45	He	11299.49	4.7
Cr	52	89	No Gas	107115.78	0.2
Cr	52	89	He	14636.05	2.4
Cr	53	89	No Gas	32190.23	1.0
Mn	55	89	No Gas	139618.18	1.1
Mn	55	89	He	7229.22	4.8
Fe	56	89	No Gas	11465735.15	0.6
Fe	56	89	He	1088088.81	0.7
Co	59	89	No Gas	102524.83	0.2
Co	59	89	He	23490.61	2.2
Ni	60	89	No Gas	22641.64	2.8
Ni	60	89	He	6461.44	3.3
Ni	62	89	No Gas	4572.09	4.2
Cu	63	89	No Gas	56607.47	1.5
Cu	63	89	He	19433.56	3.4
Cu	65	89	No Gas	26646.32	1.0
Zn	66	89	No Gas	16476.67	1.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2629.61	6.1
Zn	67	89	No Gas	2452.71	5.1
Zn	68	89	No Gas	11720.28	5.4
As	75	89	No Gas	19280.30	2.0
As	75	89	He	1792.35	5.4
Se	77	89	No Gas	3951.26	4.0
Se	78	89	No Gas	9285.99	1.9
Se	78	89	He	106.67	12.5
Se	82	89	No Gas	1075.43	12.6
[Se]	83	89	No Gas	1014.41	10.3
Sr	88	89	No Gas	170032.68	1.3
Mo	95	89	No Gas	31957.02	1.8
Mo	97	89	No Gas	20088.88	2.1
Mo	98	89	No Gas	51794.28	1.4
[Mo]	99	89	No Gas	10.01	173.2
Cd	106	89	No Gas	13487.23	3.5
Ag	107	89	No Gas	81582.71	0.8
Ag	107	89	He	35168.68	1.6
Cd	108	89	No Gas	1087.82	3.7
Ag	109	89	No Gas	78527.29	1.3
Cd	111	89	No Gas	16502.40	1.2
Cd	114	89	No Gas	42373.91	0.5
Sn	118	115	No Gas	53422.37	1.6
Sb	121	115	No Gas	80291.30	0.9
Sb	121	89	He	14384.80	1.8
Sb	123	115	No Gas	61911.15	1.4
Ba	135	115	No Gas	17963.97	2.6
Ba	137	115	No Gas	30543.27	2.1
Tl	203	209	No Gas	79027.59	1.9
Tl	205	209	No Gas	191681.74	1.0
Pb	206	209	No Gas	65234.95	2.6
Pb	207	209	No Gas	54178.19	1.2
Pb	208	209	No Gas	253325.47	1.6
Th	232	209	No Gas	264450.51	0.7
U	238	209	No Gas	269773.67	2.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	999532.84	0.5	999812.08	99.97	70	125	
Sc	45	No Gas	6648685.57	0.4	6672228.28	99.65	75	125	
Sc	45	He	205723.56	1.3	208216.69	98.8	75	125	
Y	89	No Gas	16759366.48	0.2	16795472.17	99.79	75	125	
Y	89	He	1721788.04	1.5	1756395.88	98.03	75	125	
In	115	No Gas	3286375.14	0.5	3287717.66	99.96	75	125	
Tb	159	No Gas	5723385.90	1.1	5716935.49	100.11	75	125	
Bi	209	No Gas	3457793.40	0.7	3480441.04	99.35	75	125	

Calibration Standard Report

Sample Name std 6

File Name 284CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 19:57:10

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 279CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	328734.52	0.9
Be	9	6	No Gas	81260.99	0.5
B	11	6	No Gas	175378.60	0.5
Na	23	45	No Gas	46001265.61	0.1
Na	23	45	He	1134978.26	0.8
Mg	24	45	No Gas	30842533.71	0.2
Mg	24	45	He	576346.31	0.6
Mg	25	45	No Gas	4102999.00	0.3
Al	27	45	No Gas	390368.47	0.7
Al	27	45	He	2260.23	10.9
Si	28	45	No Gas	18100868.40	0.3
Si	29	45	No Gas	1132360.12	0.6
K	39	45	No Gas	45976570.98	0.4
K	39	45	He	391734.06	0.3
Ca	44	45	No Gas	1377437.43	1.1
Ca	44	45	He	21631.78	5.4
Ti	47	45	No Gas	40664.22	0.8
V	51	45	No Gas	568763.50	0.5
V	51	45	He	58536.56	1.3
Cr	52	89	No Gas	512670.20	0.9
Cr	52	89	He	73284.85	1.2
Cr	53	89	No Gas	80465.81	1.2
Mn	55	89	No Gas	691060.44	0.9
Mn	55	89	He	35846.36	2.1
Fe	56	89	No Gas	55180463.74	0.3
Fe	56	89	He	5479332.21	0.8
Co	59	89	No Gas	516933.42	0.7
Co	59	89	He	119292.59	0.7
Ni	60	89	No Gas	113158.90	0.6
Ni	60	89	He	33167.01	2.1
Ni	62	89	No Gas	18127.12	2.6
Cu	63	89	No Gas	264211.97	0.5
Cu	63	89	He	86664.13	1.2
Cu	65	89	No Gas	125489.49	2.2
Zn	66	89	No Gas	79474.04	0.8

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	13183.09	1.5
Zn	67	89	No Gas	12521.87	2.0
Zn	68	89	No Gas	57532.64	0.5
As	75	89	No Gas	93487.58	0.7
As	75	89	He	9982.63	2.8
Se	77	89	No Gas	7326.14	3.6
Se	78	89	No Gas	20112.02	3.9
Se	78	89	He	576.68	13.5
Se	82	89	No Gas	5578.87	1.8
[Se]	83	89	No Gas	927.65	6.6
Sr	88	89	No Gas	866910.98	0.4
Mo	95	89	No Gas	164554.08	0.8
Mo	97	89	No Gas	103318.04	0.9
Mo	98	89	No Gas	269363.44	1.3
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	19564.26	0.3
Ag	107	89	No Gas	417890.56	0.9
Ag	107	89	He	185265.22	0.7
Cd	108	89	No Gas	6077.58	1.3
Ag	109	89	No Gas	404436.01	1.2
Cd	111	89	No Gas	84444.87	2.0
Cd	114	89	No Gas	221535.58	0.8
Sn	118	115	No Gas	272847.54	0.8
Sb	121	115	No Gas	415298.66	0.6
Sb	121	89	He	74564.41	0.8
Sb	123	115	No Gas	320333.96	0.8
Ba	135	115	No Gas	91141.35	0.9
Ba	137	115	No Gas	160083.87	1.6
Tl	203	209	No Gas	406058.57	1.0
Tl	205	209	No Gas	975992.56	0.0
Pb	206	209	No Gas	330544.68	1.2
Pb	207	209	No Gas	274334.17	1.2
Pb	208	209	No Gas	1293225.72	1.0
Th	232	209	No Gas	1396813.01	0.3
U	238	209	No Gas	1397575.81	0.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	973607.21	0.7	999812.08	97.38	70	125	
Sc	45	No Gas	6594743.51	0.4	6672228.28	98.84	75	125	
Sc	45	He	208553.70	0.7	208216.69	100.16	75	125	
Y	89	No Gas	16583354.22	0.3	16795472.17	98.74	75	125	
Y	89	He	1710678.13	0.4	1756395.88	97.4	75	125	
In	115	No Gas	3240595.91	0.2	3287717.66	98.57	75	125	
Tb	159	No Gas	5678935.40	0.3	5716935.49	99.34	75	125	
Bi	209	No Gas	3429194.65	0.3	3480441.04	98.53	75	125	

Calibration Standard Report

Sample Name std 7

File Name 285CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b

Acq Time 2020-11-17 19:58:53

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 279CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	543655.44	1.3
Be	9	6	No Gas	147032.17	0.3
B	11	6	No Gas	283850.63	1.2
Na	23	45	No Gas	80578541.39	1.0
Na	23	45	He	1973267.68	0.6
Mg	24	45	No Gas	54396509.19	0.1
Mg	24	45	He	1032656.31	0.3
Mg	25	45	No Gas	7191307.81	0.6
Al	27	45	No Gas	711034.16	1.4
Al	27	45	He	3733.91	3.5
Si	28	45	No Gas	31592082.15	0.7
Si	29	45	No Gas	1925703.73	0.5
K	39	45	No Gas	79735188.81	0.3
K	39	45	He	693031.69	1.2
Ca	44	45	No Gas	2436762.57	0.6
Ca	44	45	He	38469.80	3.1
Ti	47	45	No Gas	74180.11	0.9
V	51	45	No Gas	1005817.94	0.3
V	51	45	He	106721.89	0.9
Cr	52	89	No Gas	903470.74	0.4
Cr	52	89	He	130411.28	1.1
Cr	53	89	No Gas	127798.29	1.4
Mn	55	89	No Gas	1211238.72	0.2
Mn	55	89	He	64563.00	3.3
Fe	56	89	No Gas	97558631.35	0.6
Fe	56	89	He	9761113.61	0.8
Co	59	89	No Gas	926116.80	0.3
Co	59	89	He	215222.34	0.4
Ni	60	89	No Gas	203704.19	0.9
Ni	60	89	He	58580.89	2.2
Ni	62	89	No Gas	31130.25	2.1
Cu	63	89	No Gas	468092.28	0.8
Cu	63	89	He	155234.26	0.9
Cu	65	89	No Gas	223690.25	0.2
Zn	66	89	No Gas	143925.07	0.7

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	23915.19	1.5
Zn	67	89	No Gas	22828.92	0.3
Zn	68	89	No Gas	104063.43	0.9
As	75	89	No Gas	167460.01	1.0
As	75	89	He	17996.47	1.3
Se	77	89	No Gas	11069.09	3.5
Se	78	89	No Gas	31324.63	2.8
Se	78	89	He	923.37	5.3
Se	82	89	No Gas	9949.59	3.2
[Se]	83	89	No Gas	917.64	12.6
Sr	88	89	No Gas	1551615.37	0.2
Mo	95	89	No Gas	299526.16	0.9
Mo	97	89	No Gas	187635.29	0.4
Mo	98	89	No Gas	484037.10	1.7
[Mo]	99	89	No Gas	16.68	124.9
Cd	106	89	No Gas	25904.80	3.6
Ag	107	89	No Gas	749554.57	1.1
Ag	107	89	He	329067.45	0.6
Cd	108	89	No Gas	10835.43	0.8
Ag	109	89	No Gas	721613.23	1.1
Cd	111	89	No Gas	151829.93	1.5
Cd	114	89	No Gas	399076.43	1.0
Sn	118	115	No Gas	489549.81	0.9
Sb	121	115	No Gas	749643.10	0.9
Sb	121	89	He	133762.57	0.5
Sb	123	115	No Gas	576123.12	1.1
Ba	135	115	No Gas	165001.25	1.8
Ba	137	115	No Gas	288205.79	0.8
Tl	203	209	No Gas	727278.22	1.0
Tl	205	209	No Gas	1737669.18	1.0
Pb	206	209	No Gas	595744.65	1.1
Pb	207	209	No Gas	493113.99	1.8
Pb	208	209	No Gas	2306617.44	1.0
Th	232	209	No Gas	2505106.78	0.7
U	238	209	No Gas	2494208.85	1.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	958471.53	0.3	999812.08	95.87	70	125	
Sc	45	No Gas	6552219.11	0.3	6672228.28	98.2	75	125	
Sc	45	He	207552.13	0.3	208216.69	99.68	75	125	
Y	89	No Gas	16519755.62	0.3	16795472.17	98.36	75	125	
Y	89	He	1699030.75	0.8	1756395.88	96.73	75	125	
In	115	No Gas	3211248.63	0.4	3287717.66	97.67	75	125	
Tb	159	No Gas	5642928.56	0.7	5716935.49	98.71	75	125	
Bi	209	No Gas	3361628.06	0.5	3480441.04	96.59	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	286CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq Time	2020-11-17 20:00:36
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	279CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1113995.09	1.0
Be	9	6	No Gas	322721.78	0.7
B	11	6	No Gas	591502.43	1.1
Na	23	45	No Gas	174476928.90	1.2
Na	23	45	He	4352808.48	0.5
Mg	24	45	No Gas	118983011.56	1.2
Mg	24	45	He	2305172.31	1.3
Mg	25	45	No Gas	15814255.18	1.1
Al	27	45	No Gas	1535790.97	0.9
Al	27	45	He	8612.83	2.9
Si	28	45	No Gas	68007908.05	1.1
Si	29	45	No Gas	4070050.89	0.8
K	39	45	No Gas	173490717.42	1.3
K	39	45	He	1499963.89	0.9
Ca	44	45	No Gas	5347450.96	0.6
Ca	44	45	He	86368.23	2.1
Ti	47	45	No Gas	162703.62	0.7
V	51	45	No Gas	2238021.89	0.7
V	51	45	He	236494.82	0.8
Cr	52	89	No Gas	1975059.39	0.7
Cr	52	89	He	291753.16	0.9
Cr	53	89	No Gas	260174.45	1.5
Mn	55	89	No Gas	2657791.34	0.7
Mn	55	89	He	145734.45	1.5
Fe	56	89	No Gas	212568988.08	0.8
Fe	56	89	He	21719823.84	1.1
Co	59	89	No Gas	2029786.56	0.8
Co	59	89	He	474353.64	0.6
Ni	60	89	No Gas	434839.07	0.7
Ni	60	89	He	127151.78	0.5
Ni	62	89	No Gas	65747.21	0.8
Cu	63	89	No Gas	1010999.62	0.8
Cu	63	89	He	341563.44	0.7
Cu	65	89	No Gas	483482.65	0.5
Zn	66	89	No Gas	312835.65	1.9

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	52262.74	0.8
Zn	67	89	No Gas	50119.36	2.2
Zn	68	89	No Gas	222210.50	1.9
As	75	89	No Gas	370121.28	1.4
As	75	89	He	40159.43	0.7
Se	77	89	No Gas	20626.63	1.3
Se	78	89	No Gas	59654.72	4.0
Se	78	89	He	2203.53	2.8
Se	82	89	No Gas	22434.00	1.5
[Se]	83	89	No Gas	1001.05	15.7
Sr	88	89	No Gas	3426600.04	1.4
Mo	95	89	No Gas	656209.22	1.1
Mo	97	89	No Gas	412906.21	1.2
Mo	98	89	No Gas	1064705.23	0.5
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	43103.39	1.5
Ag	107	89	No Gas	1614419.73	0.6
Ag	107	89	He	718105.29	0.6
Cd	108	89	No Gas	22976.58	1.6
Ag	109	89	No Gas	1550912.74	1.0
Cd	111	89	No Gas	330228.78	0.9
Cd	114	89	No Gas	869968.90	0.9
Sn	118	115	No Gas	1071074.19	0.6
Sb	121	115	No Gas	1630170.63	0.8
Sb	121	89	He	297648.73	1.2
Sb	123	115	No Gas	1264764.87	0.2
Ba	135	115	No Gas	359785.56	1.8
Ba	137	115	No Gas	629152.69	1.0
Tl	203	209	No Gas	1580633.55	0.3
Tl	205	209	No Gas	3791784.71	0.2
Pb	206	209	No Gas	1295646.30	0.4
Pb	207	209	No Gas	1053656.29	0.7
Pb	208	209	No Gas	4999899.23	0.6
Th	232	209	No Gas	5485334.10	0.7
U	238	209	No Gas	5474304.32	0.6

QC ISTD Table

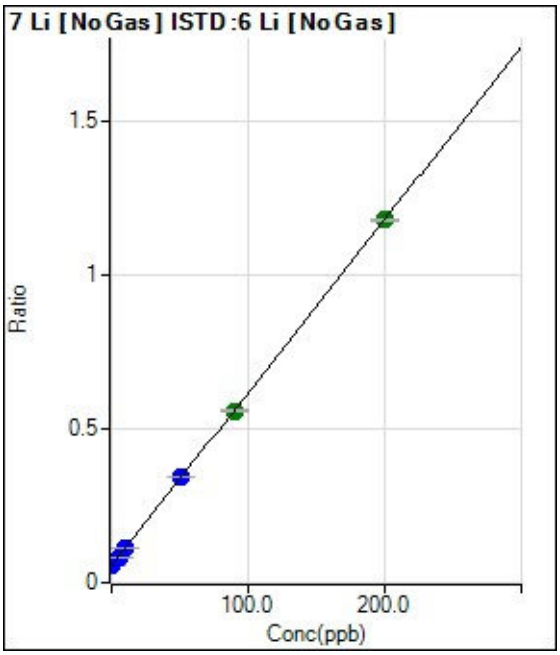
Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	942261.62	0.5	999812.08	94.24	70	125	
Sc	45	No Gas	6628606.95	0.6	6672228.28	99.35	75	125	
Sc	45	He	211641.33	1.8	208216.69	101.64	75	125	
Y	89	No Gas	16475558.51	1.4	16795472.17	98.1	75	125	
Y	89	He	1719461.76	1.9	1756395.88	97.9	75	125	
In	115	No Gas	3151181.06	0.7	3287717.66	95.85	75	125	
Tb	159	No Gas	5649497.43	0.8	5716935.49	98.82	75	125	
Bi	209	No Gas	3303854.87	0.4	3480441.04	94.93	75	125	

Calibration for 016_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b\
Analysis File: ICPMS3_201117.batch.bin
DA Date-Time: 2020-11-17 12:23:54
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	007CALB.d	std 1	2020-11-17 12:06:04
2	008CALS.d	std 2	2020-11-17 12:08:11
3	009CALS.d	std 3	2020-11-17 12:10:04
4	010CALS.d	std 4	2020-11-17 12:11:57
5	011CALS.d	std 5	2020-11-17 12:13:50
6	012CALS.d	std 6	2020-11-17 12:15:43
7	013CALS.d	std 7	2020-11-17 12:17:35
8	014CALS.d	std 8	2020-11-17 12:19:27

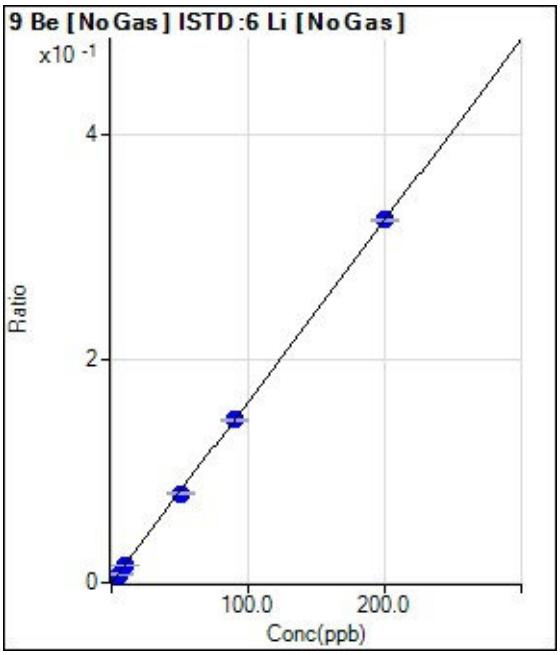
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	104748.26	0.0554	P	2.2
2	☐	0.200	0.102	106105.09	0.0559	P	0.8
3	☐	2.000	2.009	126417.77	0.0667	P	0.4
4	☐	5.000	4.880	154983.29	0.0828	P	1.3
5	☐	10.000	9.730	203569.08	0.1101	P	0.9
6	☐	50.000	50.941	619071.86	0.3421	P	0.1
7	☐	90.000	89.658	995673.91	0.5600	A	1.0
8	☐	200.000	199.935	2037375.71	1.1807	A	0.4

y = 0.0056 * x + 0.0554
R = 1.0000
DL = 0.6384
BEC = 9.837

Weight: <None>
Min Conc: <None>

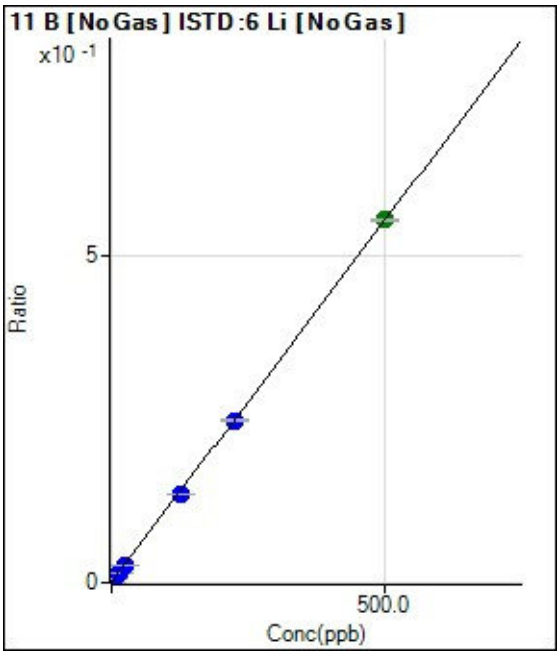


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.34	0.0000	P	173.2
2	☐	0.200	0.208	640.67	0.0003	P	19.1
3	☐	2.000	1.842	5650.22	0.0030	P	4.3
4	☐	5.000	4.769	14432.02	0.0077	P	4.6
5	☐	10.000	9.527	28480.83	0.0154	P	1.1
6	☐	50.000	49.334	144365.23	0.0798	P	1.5
7	☐	90.000	89.736	258002.92	0.1451	P	0.6
8	☐	200.000	200.316	558949.76	0.3239	P	0.7

y = 0.0016 * x + 1.7539E-006
R = 1.0000
DL = 0.005636
BEC = 0.001085

Weight: <None>
Min Conc: <None>

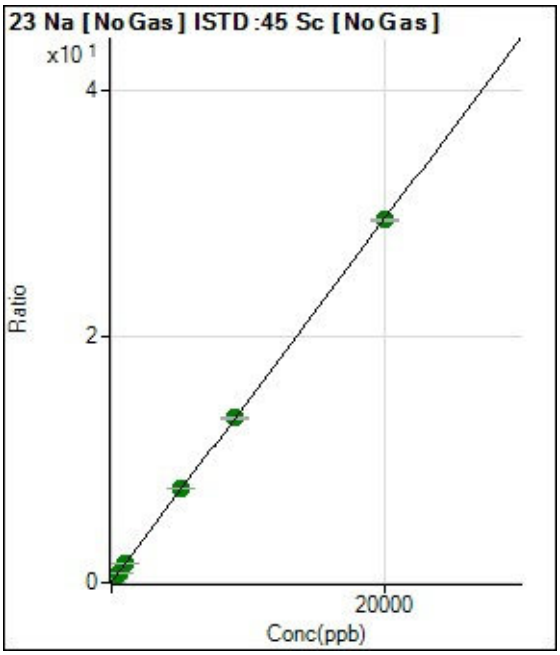
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1541.65	0.0008	P	1.7
2	☐	0.500	0.410	2402.66	0.0013	P	4.3
3	☐	5.000	4.518	10985.44	0.0058	P	3.9
4	☐	12.500	11.391	25014.14	0.0134	P	0.3
5	☐	25.000	23.177	48723.08	0.0264	P	1.9
6	☐	125.000	121.743	244296.02	0.1350	P	0.1
7	☐	225.000	224.124	440648.40	0.2478	P	1.2
8	☐	500.000	501.332	954860.07	0.5534	A	0.5

y = 0.0011 * x + 8.1489E-004
R = 1.0000
DL = 0.03756
BEC = 0.7393

Weight: <None>
Min Conc: <None>

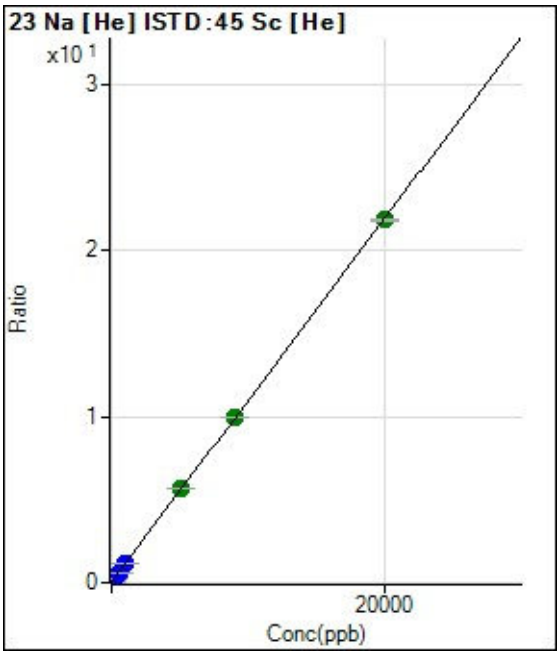


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	379053.15	0.0398	P	18.3
2	☐	20.000	18.287	636387.19	0.0668	P	1.1
3	☐	200.000	200.473	3220623.64	0.3353	A	2.0
4	☐	500.000	500.691	7433446.00	0.7777	A	0.5
5	☐	1000.000	999.901	14290187.30	1.5135	A	1.5
6	☐	5000.000	5137.777	70637970.33	7.6119	A	0.9
7	☐	9000.000	9031.503	123535952.76	13.3505	A	0.7
8	☐	20000.000	19951.364	270256789.37	29.4443	A	0.7

y = 0.0015 * x + 0.0398
R = 1.0000
DL = 14.82
BEC = 27.01

Weight: <None>
Min Conc: <None>

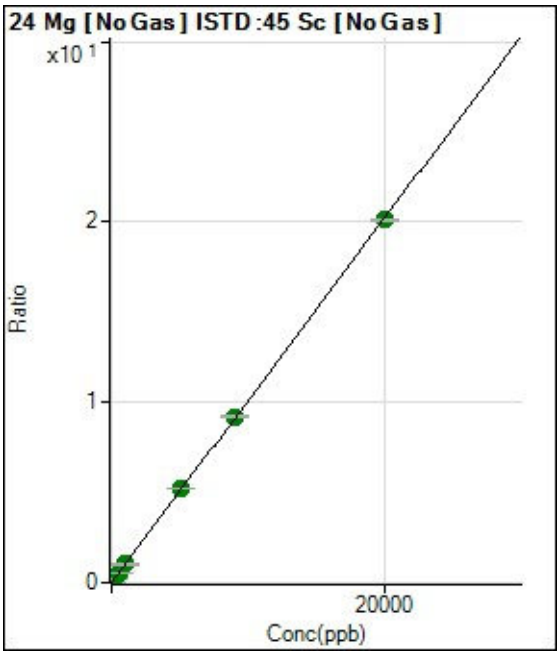
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13100.43	0.0406	P	3.2
2	☐	20.000	24.761	21671.71	0.0677	P	2.7
3	☐	200.000	208.141	85237.38	0.2682	P	2.9
4	☐	500.000	505.090	187119.13	0.5929	P	1.0
5	☐	1000.000	1006.264	355530.20	1.1409	P	1.3
6	☐	5000.000	5121.526	1731704.92	5.6409	A	0.2
7	☐	9000.000	9070.019	3061164.85	9.9584	A	0.7
8	☐	20000.000	19937.583	6597799.28	21.8418	A	0.2

y = 0.0011 * x + 0.0406
R = 1.0000
DL = 3.583
BEC = 37.13

Weight: <None>
Min Conc: <None>

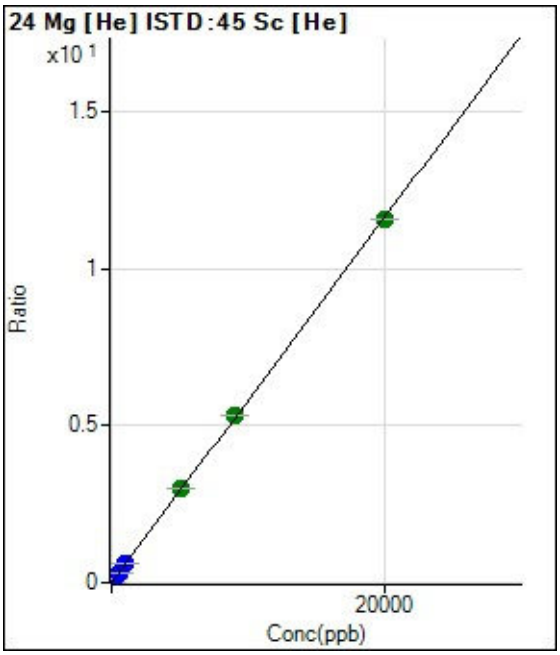


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3827.45	0.0004	P	7.1
2	☐	20.000	20.976	205848.41	0.0216	P	2.1
3	☐	200.000	205.706	2000202.21	0.2082	A	1.6
4	☐	500.000	506.146	4890963.05	0.5117	A	0.7
5	☐	1000.000	1002.640	9567529.86	1.0133	A	0.9
6	☐	5000.000	5151.567	48298974.28	5.2047	A	0.1
7	☐	9000.000	9121.301	85268852.06	9.2150	A	0.7
8	☐	20000.000	19907.179	184587843.92	20.1112	A	0.3

y = 0.0010 * x + 4.0176E-004
R = 0.9999
DL = 0.08427
BEC = 0.3977

Weight: <None>
Min Conc: <None>

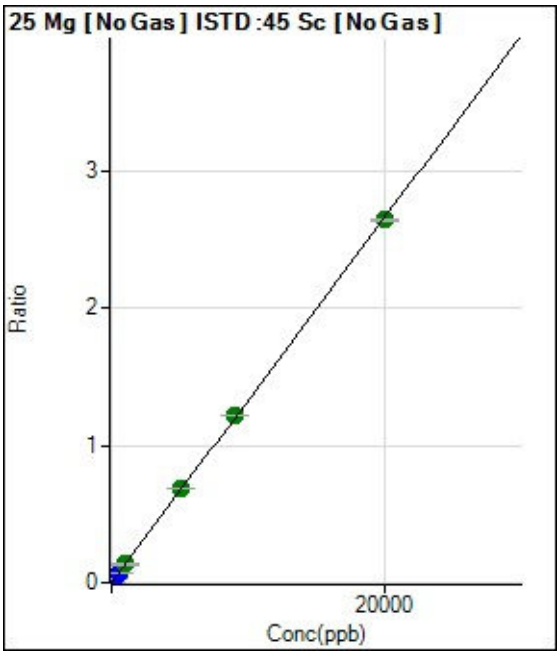
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.35	0.0004	P	46.2
2	☐	20.000	18.505	3574.06	0.0112	P	7.4
3	☐	200.000	202.036	37425.88	0.1177	P	2.0
4	☐	500.000	509.339	93489.62	0.2962	P	0.9
5	☐	1000.000	1016.837	184150.32	0.5909	P	1.6
6	☐	5000.000	5162.405	920470.43	2.9984	A	0.4
7	☐	9000.000	9181.009	1639075.34	5.3321	A	0.7
8	☐	20000.000	19876.851	3486970.68	11.5435	A	0.1

y = 5.8073E-004 * x + 4.1373E-004
R = 0.9999
DL = 0.9867
BEC = 0.7124

Weight: <None>
Min Conc: <None>

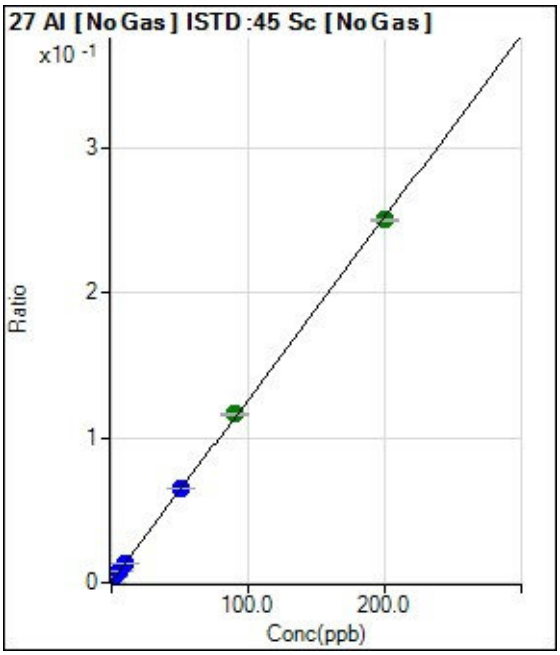


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.05	0.0001	P	7.3
2	☐	20.000	20.830	26974.56	0.0028	P	2.1
3	☐	200.000	204.982	262502.01	0.0273	P	0.3
4	☐	500.000	510.663	649767.41	0.0680	P	0.6
5	☐	1000.000	1004.380	1261925.14	0.1337	A	1.1
6	☐	5000.000	5151.923	6359564.07	0.6853	A	0.9
7	☐	9000.000	9177.280	11295975.66	1.2207	A	0.5
8	☐	20000.000	19881.707	24272639.64	2.6445	A	0.3

y = 1.3301E-004 * x + 5.8790E-005
R = 0.9999
DL = 0.09686
BEC = 0.442

Weight: <None>
Min Conc: <None>

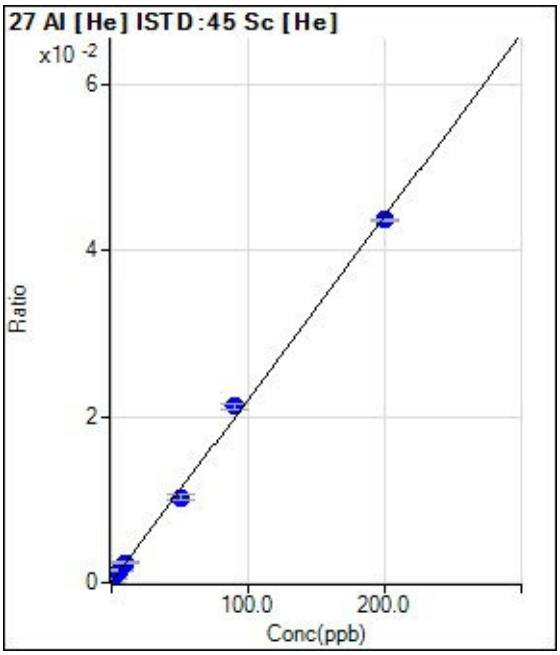
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5748.91	0.0006	P	10.4
2	☐			66724.72	0.0070	P	3.8
3	☐	2.000	2.848	40194.05	0.0042	P	5.1
4	☐	5.000	5.714	74444.15	0.0078	P	0.6
5	☐	10.000	10.473	130037.62	0.0138	P	1.5
6	☐	50.000	51.085	601687.69	0.0648	P	0.9
7	☐	90.000	92.305	1079667.33	0.1167	A	1.1
8	☐	200.000	198.641	2298077.31	0.2504	A	0.6

y = 0.0013 * x + 6.0332E-004
R = 0.9999
DL = 0.1497
BEC = 0.4798

Weight: <None>
Min Conc: <None>

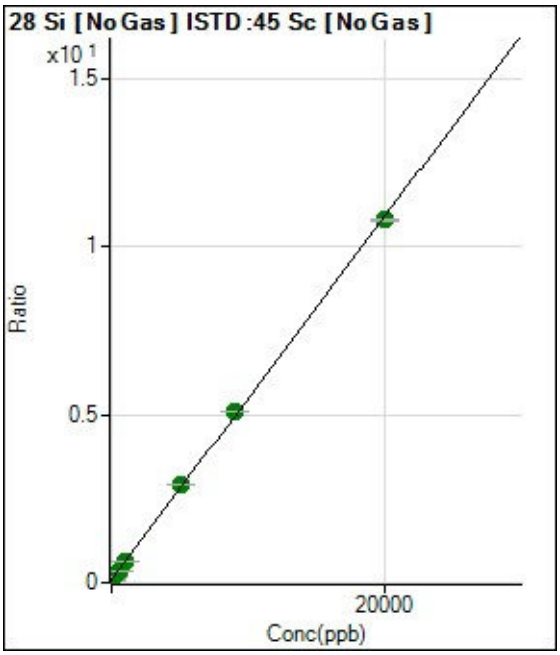


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0001	P	86.6
2	☐			430.01	0.0013	P	24.1
3	☐	2.000	2.774	213.34	0.0007	P	54.1
4	☐	5.000	6.388	463.35	0.0015	P	7.9
5	☐	10.000	10.495	740.03	0.0024	P	7.6
6	☐	50.000	46.120	3137.07	0.0102	P	7.0
7	☐	90.000	96.031	6521.64	0.0212	P	2.4
8	☐	200.000	198.189	13206.40	0.0437	P	0.7

y = 2.2029E-004 * x + 6.2064E-005
R = 0.9991
DL = 0.732
BEC = 0.2817

Weight: <None>
Min Conc: <None>

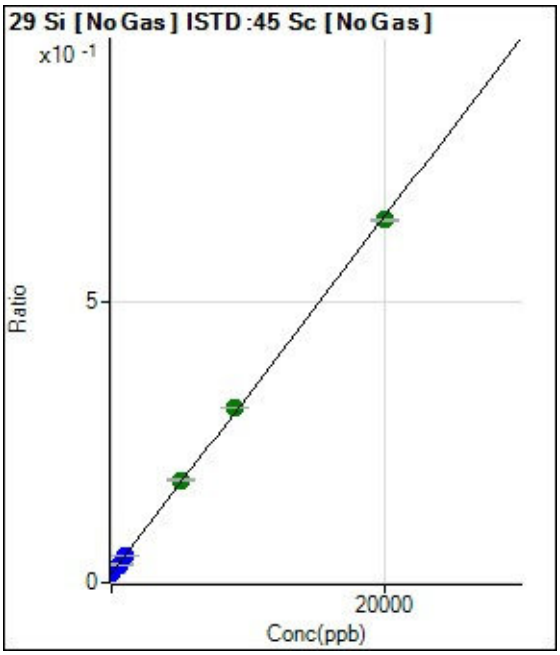
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	809423.62	0.0850	A	1.0
2	☐	20.000	20.570	916037.13	0.0961	A	0.5
3	☐	200.000	203.062	1871205.85	0.1948	A	0.6
4	☐	500.000	509.016	3443051.18	0.3602	A	0.3
5	☐	1000.000	1011.437	5966735.08	0.6319	A	0.6
6	☐	5000.000	5208.443	26926789.34	2.9016	A	0.5
7	☐	9000.000	9269.128	47169859.96	5.0976	A	0.4
8	☐	20000.000	19825.953	99185856.06	10.8066	A	0.5

y = 5.4079E-004 * x + 0.0850
R = 0.9998
DL = 4.621
BEC = 157.1

Weight: <None>
Min Conc: <None>

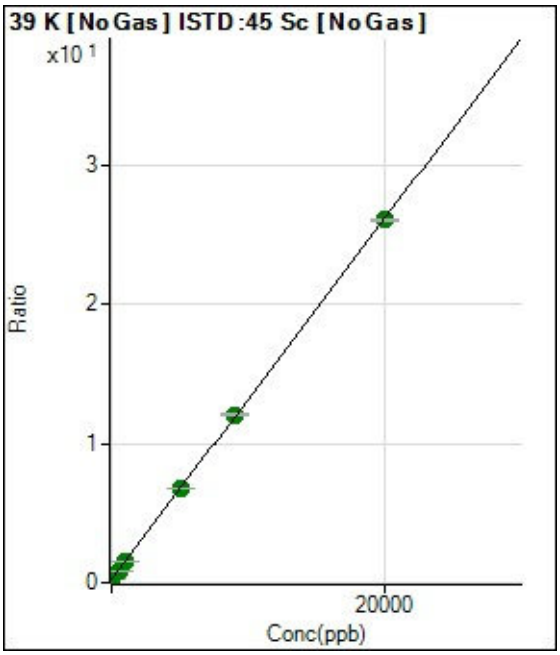


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155056.15	0.0163	P	0.9
2	☐	20.000	16.040	160017.52	0.0168	P	0.7
3	☐	200.000	199.810	217287.17	0.0226	P	1.5
4	☐	500.000	508.376	309804.38	0.0324	P	1.3
5	☐	1000.000	1010.370	456516.74	0.0483	P	0.5
6	☐	5000.000	5238.844	1694326.10	0.1826	A	0.5
7	☐	9000.000	9274.958	2875065.80	0.3107	A	0.5
8	☐	20000.000	19815.836	5922983.41	0.6453	A	0.4

y = 3.1745E-005 * x + 0.0163
R = 0.9998
DL = 13.14
BEC = 512.7

Weight: <None>
Min Conc: <None>

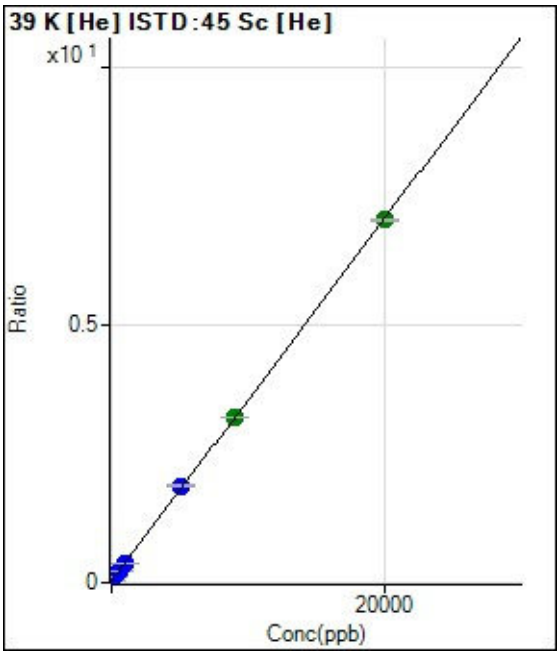
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2244400.12	0.2356	A	0.8
2	☐	20.000	22.683	2526077.88	0.2650	A	0.4
3	☐	200.000	201.394	4769574.09	0.4965	A	0.7
4	☐	500.000	500.024	8442668.00	0.8833	A	0.2
5	☐	1000.000	997.230	14421722.29	1.5274	A	0.6
6	☐	5000.000	5054.386	62946539.06	6.7831	A	0.2
7	☐	9000.000	9103.479	111299261.67	12.0283	A	1.0
8	☐	20000.000	19939.959	239240476.43	26.0659	A	0.9

y = 0.0013 * x + 0.2356
R = 1.0000
DL = 4.175
BEC = 181.9

Weight: <None>
Min Conc: <None>

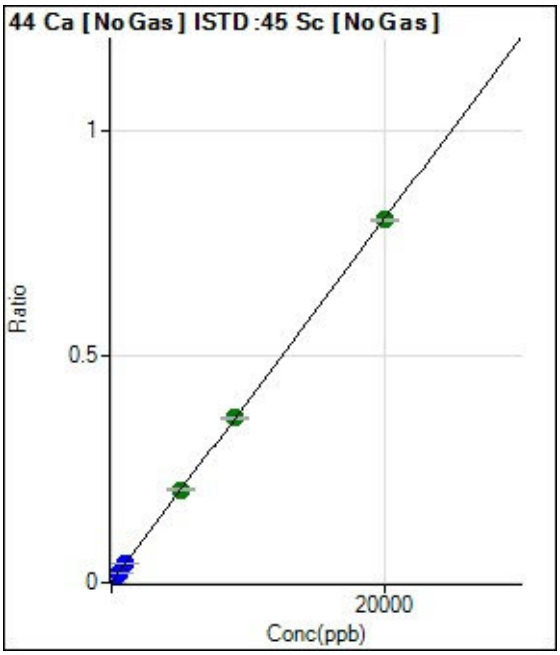


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9964.18	0.0309	P	2.1
2	☐	20.000	12.141	11258.65	0.0352	P	5.2
3	☐	200.000	229.163	35431.78	0.1115	P	8.8
4	☐	500.000	517.765	67207.68	0.2130	P	4.5
5	☐	1000.000	1012.880	120648.68	0.3871	P	1.5
6	☐	5000.000	5263.070	577749.55	1.8820	P	1.0
7	☐	9000.000	9013.347	984007.80	3.2011	A	0.4
8	☐	20000.000	19926.855	2126492.31	7.0397	A	0.3

y = 3.5173E-004 * x + 0.0309
R = 0.9999
DL = 5.578
BEC = 87.8

Weight: <None>
Min Conc: <None>

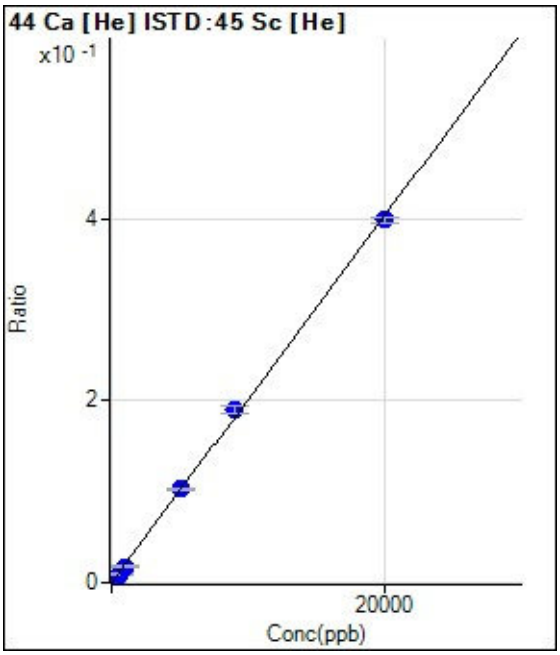
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8109.60	0.0009	P	5.8
2	☐	20.000	22.880	16878.46	0.0018	P	8.9
3	☐	200.000	201.642	86005.65	0.0090	P	0.7
4	☐	500.000	501.205	200589.14	0.0210	P	2.0
5	☐	1000.000	993.537	384920.98	0.0408	P	1.4
6	☐	5000.000	5101.387	1909779.14	0.2058	A	0.6
7	☐	9000.000	9060.006	3375857.24	0.3648	A	1.0
8	☐	20000.000	19947.924	7363190.52	0.8022	A	0.4

y = 4.0174E-005 * x + 8.5123E-004
R = 1.0000
DL = 3.66
BEC = 21.19

Weight: <None>
Min Conc: <None>

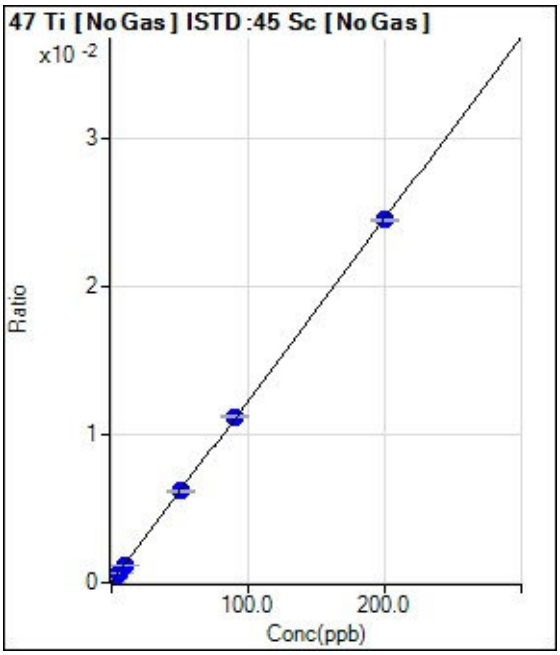


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	173.2
2	☐	20.000	16.572	133.34	0.0004	P	75.2
3	☐	200.000	242.053	1573.55	0.0050	P	11.4
4	☐	500.000	451.745	2893.87	0.0092	P	8.9
5	☐	1000.000	869.779	5481.47	0.0176	P	8.2
6	☐	5000.000	5099.880	31531.38	0.1027	P	1.9
7	☐	9000.000	9435.291	58394.47	0.1900	P	3.4
8	☐	20000.000	19786.449	120317.81	0.3983	P	1.8

y = 2.0125E-005 * x + 8.2470E-005
R = 0.9996
DL = 21.29
BEC = 4.098

Weight: <None>
Min Conc: <None>

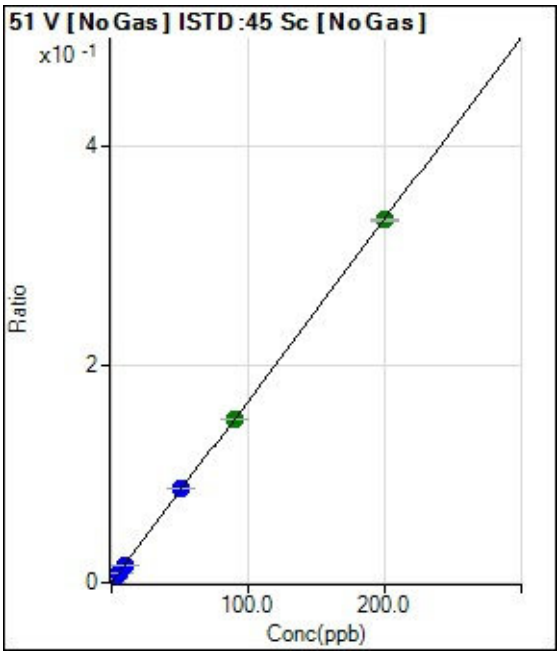
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.18	0.0000	P	15.0
2	☐	0.200	0.233	453.80	0.0000	P	15.1
3	☐	2.000	1.867	2385.97	0.0002	P	3.8
4	☐	5.000	4.911	5947.34	0.0006	P	1.9
5	☐	10.000	9.640	11359.56	0.0012	P	5.1
6	☐	50.000	50.203	57413.80	0.0062	P	1.2
7	☐	90.000	91.024	103654.40	0.0112	P	0.9
8	☐	200.000	199.510	225148.98	0.0245	P	0.4

y = 1.2286E-004 * x + 1.8919E-005
R = 1.0000
DL = 0.06929
BEC = 0.154

Weight: <None>
Min Conc: <None>

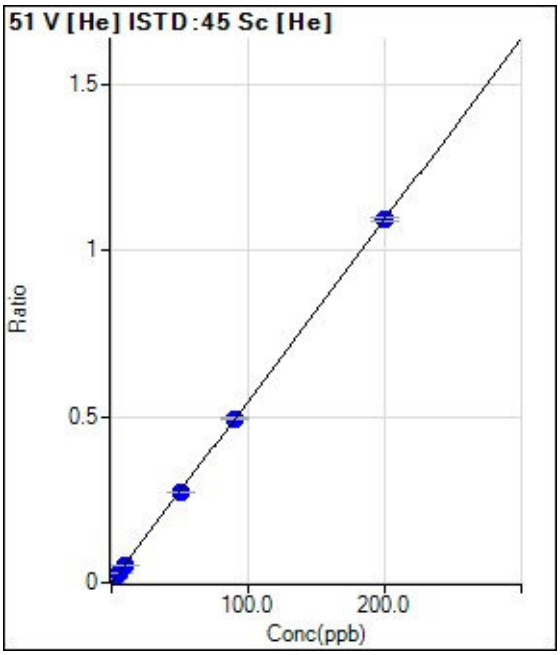


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1359.62	0.0001	P	35.0
2	☐	0.200	0.050	2160.21	0.0002	P	46.5
3	☐	2.000	1.944	32522.71	0.0034	P	1.8
4	☐	5.000	4.938	80094.86	0.0084	P	0.7
5	☐	10.000	9.753	154961.88	0.0164	P	3.0
6	☐	50.000	51.609	800282.89	0.0862	P	0.4
7	☐	90.000	90.022	1390957.78	0.1503	A	0.4
8	☐	200.000	199.602	3057465.04	0.3331	A	0.6

y = 0.0017 * x + 1.4260E-004
R = 1.0000
DL = 0.08965
BEC = 0.08548

Weight: <None>
Min Conc: <None>

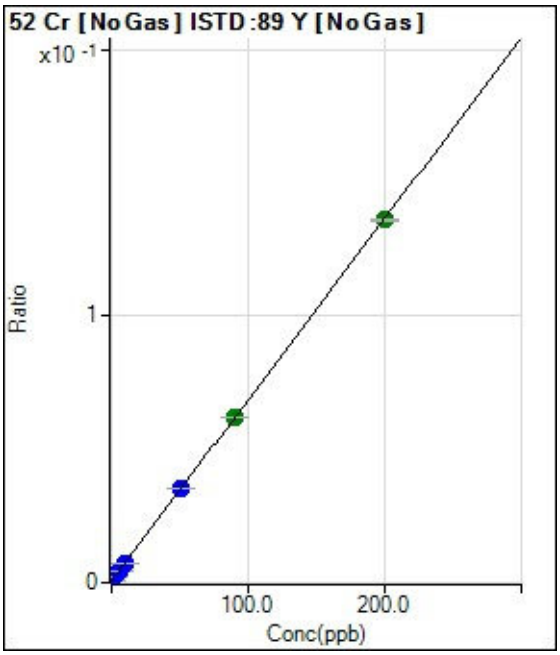
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.14	0.0004	P	14.0
2	☐	0.200	0.213	510.53	0.0016	P	12.7
3	☐	2.000	1.932	3490.67	0.0110	P	9.5
4	☐	5.000	5.005	8755.01	0.0277	P	3.2
5	☐	10.000	9.543	16359.75	0.0525	P	2.9
6	☐	50.000	49.661	83311.22	0.2714	P	0.9
7	☐	90.000	90.451	151832.60	0.4939	P	0.7
8	☐	200.000	199.905	329598.88	1.0911	P	1.0

y = 0.0055 * x + 4.3425E-004
R = 1.0000
DL = 0.03341
BEC = 0.07959

Weight: <None>
Min Conc: <None>

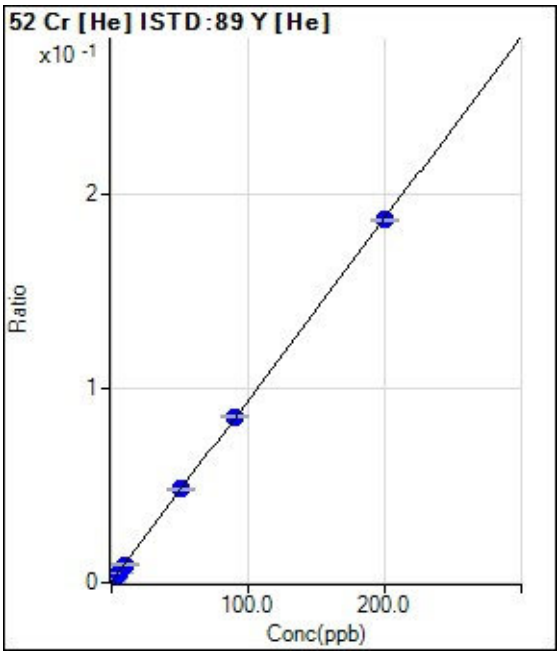


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13820.98	0.0007	P	2.6
2	☐	0.200	0.225	17034.52	0.0008	P	2.5
3	☐	2.000	2.081	43281.84	0.0021	P	1.2
4	☐	5.000	5.071	85530.48	0.0041	P	1.2
5	☐	10.000	10.067	154138.53	0.0075	P	1.6
6	☐	50.000	51.456	723656.42	0.0356	P	0.2
7	☐	90.000	90.459	1251537.43	0.0621	A	0.3
8	☐	200.000	199.424	2714817.22	0.1362	A	0.6

y = 6.7969E-004 * x + 6.6513E-004
R = 1.0000
DL = 0.0756
BEC = 0.9786

Weight: <None>
Min Conc: <None>

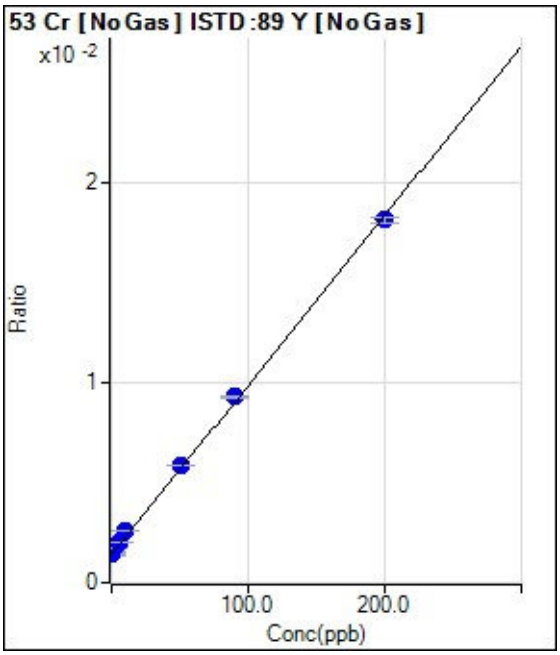
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1007.73	0.0004	P	6.1
2	☐	0.200	0.230	1508.28	0.0006	P	3.1
3	☐	2.000	1.880	5092.80	0.0022	P	4.2
4	☐	5.000	4.873	11536.59	0.0050	P	7.3
5	☐	10.000	9.564	21358.33	0.0094	P	2.2
6	☐	50.000	51.277	107687.64	0.0485	P	1.8
7	☐	90.000	91.052	189374.98	0.0858	P	0.3
8	☐	200.000	199.234	406620.45	0.1871	P	0.8

y = 9.3711E-004 * x + 4.3101E-004
R = 1.0000
DL = 0.08408
BEC = 0.4599

Weight: <None>
Min Conc: <None>

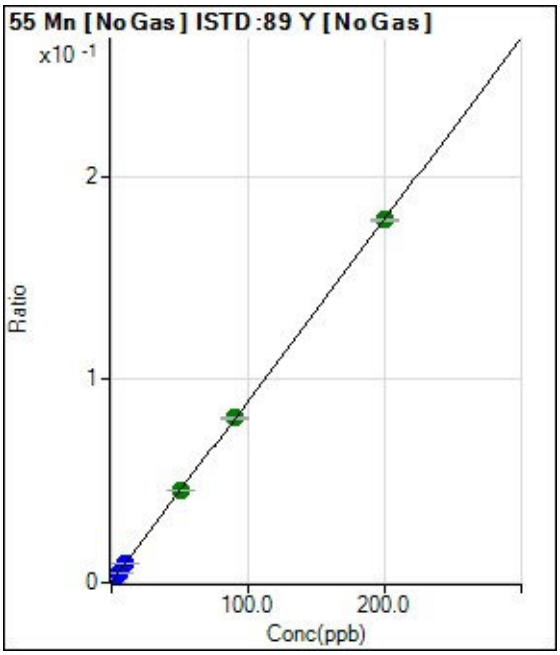


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29070.20	0.0014	P	0.4
2	☐	0.200	1.899	32487.88	0.0016	P	0.9
3	☐	2.000	3.740	35729.08	0.0017	P	0.8
4	☐	5.000	7.396	42160.64	0.0020	P	0.5
5	☐	10.000	13.956	53048.93	0.0026	P	2.2
6	☐	50.000	52.881	119570.55	0.0059	P	0.4
7	☐	90.000	93.157	187450.30	0.0093	P	0.7
8	☐	200.000	197.582	362223.45	0.0182	P	1.7

y = 8.4903E-005 * x + 0.0014
R = 0.9997
DL = 0.1808
BEC = 16.48

Weight: <None>
Min Conc: <None>

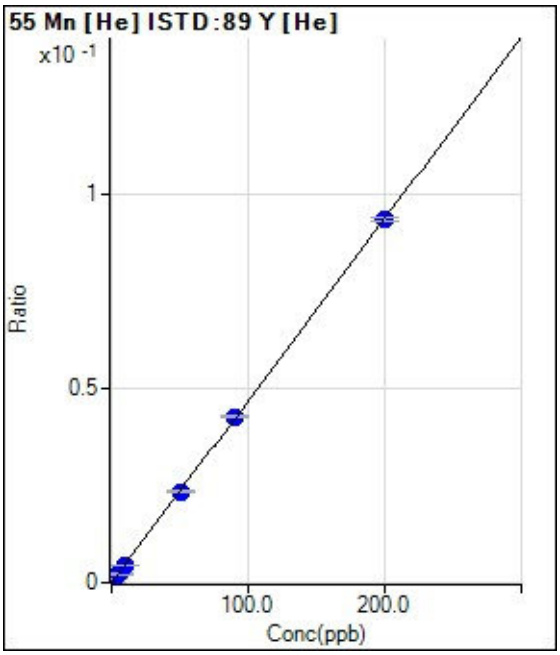
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5459.96	0.0003	P	2.4
2	☐	0.200	0.207	9325.98	0.0004	P	3.8
3	☐	2.000	2.093	44359.66	0.0021	P	1.8
4	☐	5.000	5.022	98695.50	0.0047	P	2.0
5	☐	10.000	10.025	189107.64	0.0092	P	1.2
6	☐	50.000	50.488	920405.85	0.0453	A	0.3
7	☐	90.000	90.405	1630341.28	0.0810	A	0.3
8	☐	200.000	199.693	3557865.17	0.1785	A	0.8

y = 8.9261E-004 * x + 2.6276E-004
R = 1.0000
DL = 0.02079
BEC = 0.2944

Weight: <None>
Min Conc: <None>

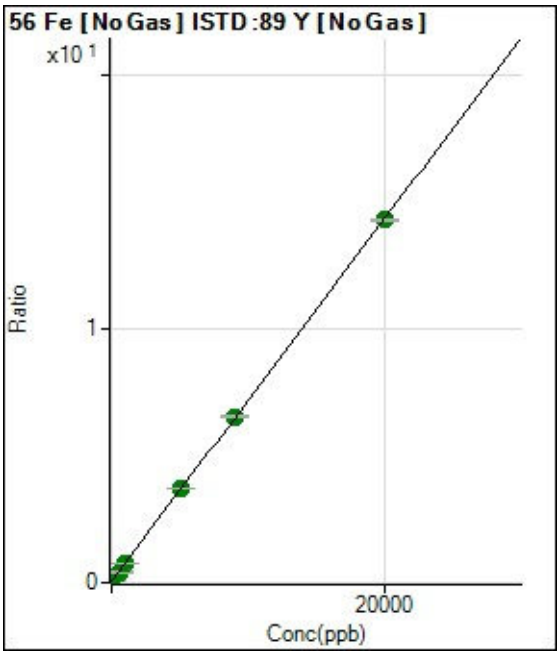


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.44	0.0000	P	11.1
2	☐	0.200	0.211	333.68	0.0001	P	10.1
3	☐	2.000	1.921	2192.41	0.0009	P	2.2
4	☐	5.000	4.757	5246.36	0.0023	P	8.6
5	☐	10.000	9.747	10477.97	0.0046	P	0.8
6	☐	50.000	49.839	51923.80	0.0234	P	2.6
7	☐	90.000	91.248	94448.39	0.0428	P	0.6
8	☐	200.000	199.498	203087.32	0.0935	P	1.1

y = 4.6823E-004 * x + 4.4232E-005
R = 1.0000
DL = 0.03146
BEC = 0.09446

Weight: <None>
Min Conc: <None>

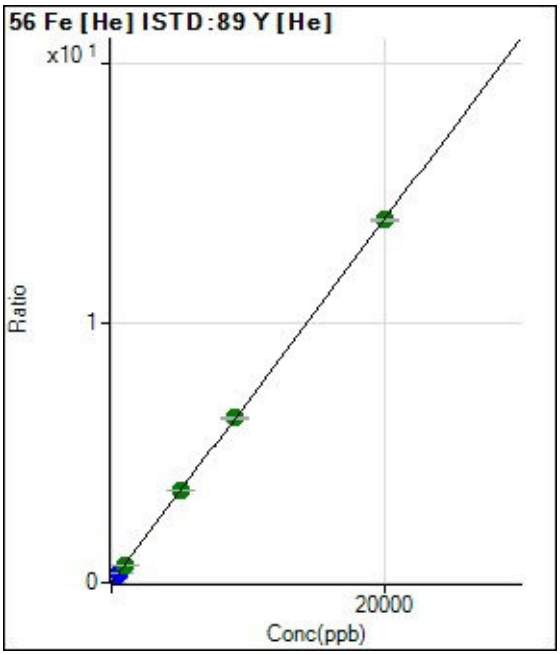
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1104216.82	0.0531	A	1.4
2	☐	20.000	19.376	1394814.78	0.0670	A	0.7
3	☐	200.000	200.299	4085670.79	0.1963	A	0.5
4	☐	500.000	505.401	8618245.24	0.4143	A	1.4
5	☐	1000.000	994.376	15681005.04	0.7638	A	0.3
6	☐	5000.000	5083.080	74841182.92	3.6858	A	0.3
7	☐	9000.000	9086.797	131844869.61	6.5471	A	1.0
8	☐	20000.000	19940.315	285092914.71	14.3037	A	0.2

y = 7.1466E-004 * x + 0.0531
R = 1.0000
DL = 3.184
BEC = 74.35

Weight: <None>
Min Conc: <None>

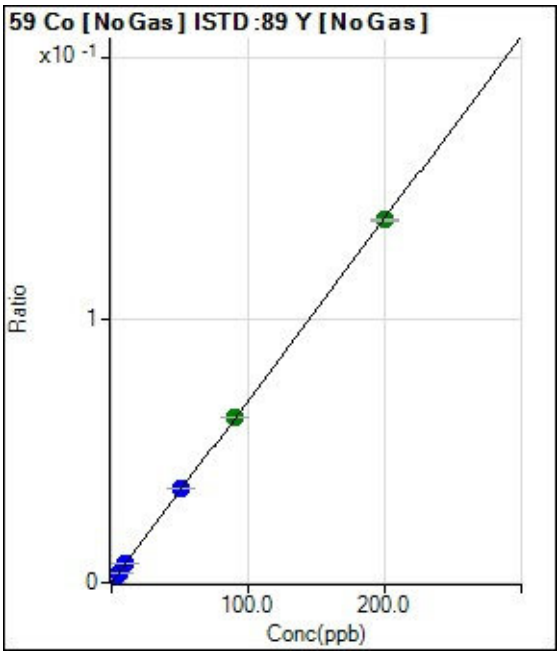


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14288.48	0.0061	P	6.0
2	☐	20.000	20.663	48007.40	0.0206	P	2.2
3	☐	200.000	210.676	356507.52	0.1535	P	0.7
4	☐	500.000	522.142	857540.69	0.3714	P	0.7
5	☐	1000.000	980.923	1574303.83	0.6924	A	0.3
6	☐	5000.000	5045.491	7853332.59	3.5359	A	1.0
7	☐	9000.000	9050.963	13996518.54	6.3382	A	0.2
8	☐	20000.000	19965.987	30364860.38	13.9743	A	0.6

y = 6.9960E-004 * x + 0.0061
R = 1.0000
DL = 1.585
BEC = 8.735

Weight: <None>
Min Conc: <None>

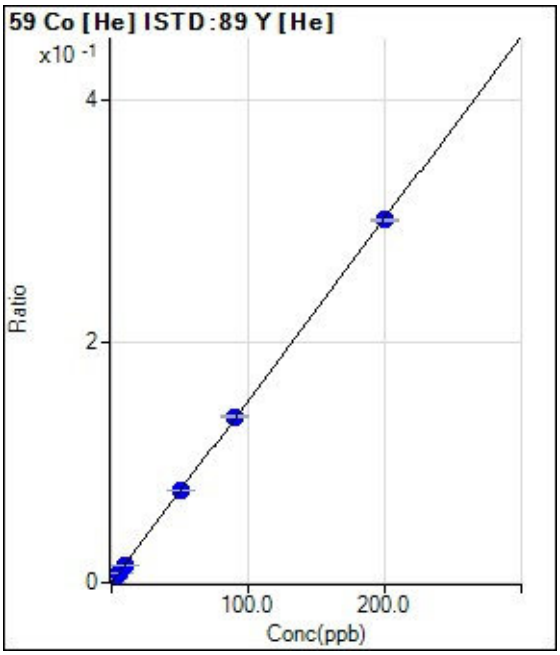
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.80	0.0000	P	9.0
2	☐	0.200	0.194	3253.71	0.0002	P	5.6
3	☐	2.000	2.061	30180.38	0.0014	P	0.9
4	☐	5.000	5.089	73803.06	0.0035	P	2.8
5	☐	10.000	10.068	143696.52	0.0070	P	0.3
6	☐	50.000	51.346	722969.30	0.0356	P	0.6
7	☐	90.000	90.882	1268779.64	0.0630	A	0.6
8	☐	200.000	199.260	2752747.96	0.1381	A	0.5

y = 6.9302E-004 * x + 2.1836E-005
R = 1.0000
DL = 0.008494
BEC = 0.03151

Weight: <None>
Min Conc: <None>

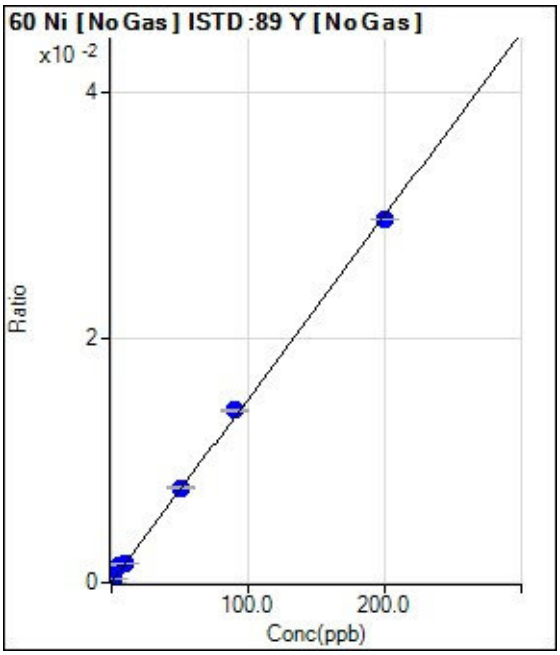


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0000	P	16.2
2	☐	0.200	0.172	704.07	0.0003	P	10.2
3	☐	2.000	2.007	7139.13	0.0031	P	3.2
4	☐	5.000	4.908	17221.57	0.0075	P	2.3
5	☐	10.000	9.677	33344.36	0.0147	P	1.1
6	☐	50.000	50.736	170385.12	0.0767	P	1.1
7	☐	90.000	91.262	304651.84	0.1380	P	0.7
8	☐	200.000	199.267	654436.26	0.3012	P	0.6

y = 0.0015 * x + 4.1397E-005
R = 1.0000
DL = 0.01328
BEC = 0.02739

Weight: <None>
Min Conc: <None>

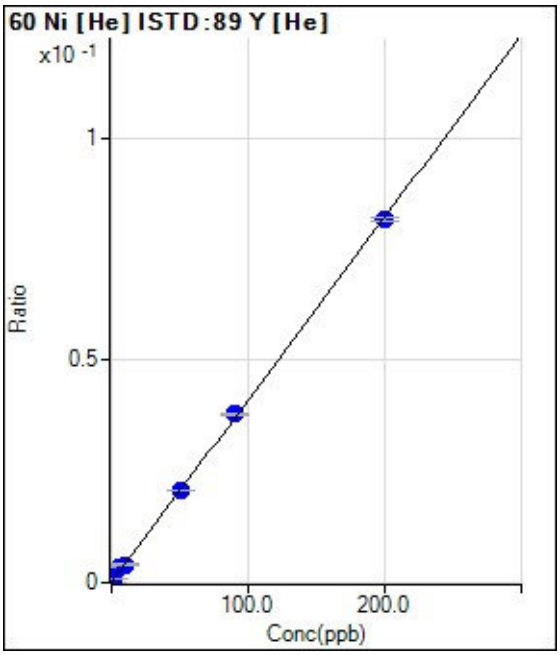
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	623.98	0.0000	P	5.7
2	☐	0.200	0.261	1438.21	0.0001	P	6.9
3	☐	2.000	2.022	6922.14	0.0003	P	2.5
4	☐	5.000	8.905	28338.07	0.0014	P	2.5
5	☐	10.000	10.154	31805.76	0.0015	P	1.0
6	☐	50.000	51.687	157618.63	0.0078	P	1.2
7	☐	90.000	93.861	283385.63	0.0141	P	1.2
8	☐	200.000	197.735	590214.51	0.0296	P	0.2

y = 1.4961E-004 * x + 3.0029E-005
R = 0.9996
DL = 0.03444
BEC = 0.2007

Weight: <None>
Min Conc: <None>

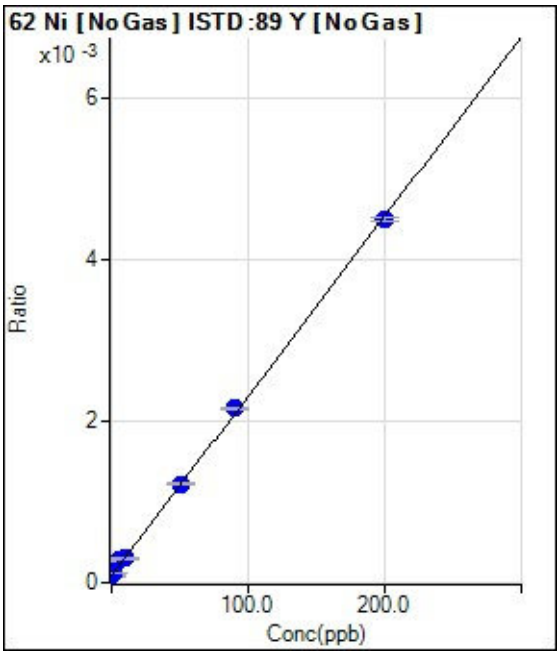


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.73	0.0000	P	37.9
2	☐	0.200	0.220	276.95	0.0001	P	15.1
3	☐	2.000	2.006	1978.83	0.0009	P	4.5
4	☐	5.000	8.551	8170.76	0.0035	P	4.4
5	☐	10.000	9.909	9312.60	0.0041	P	4.2
6	☐	50.000	50.364	45976.84	0.0207	P	1.6
7	☐	90.000	92.570	83967.48	0.0380	P	1.0
8	☐	200.000	198.668	177252.63	0.0816	P	0.9

y = 4.1045E-004 * x + 2.8543E-005
R = 0.9998
DL = 0.07904
BEC = 0.06954

Weight: <None>
Min Conc: <None>

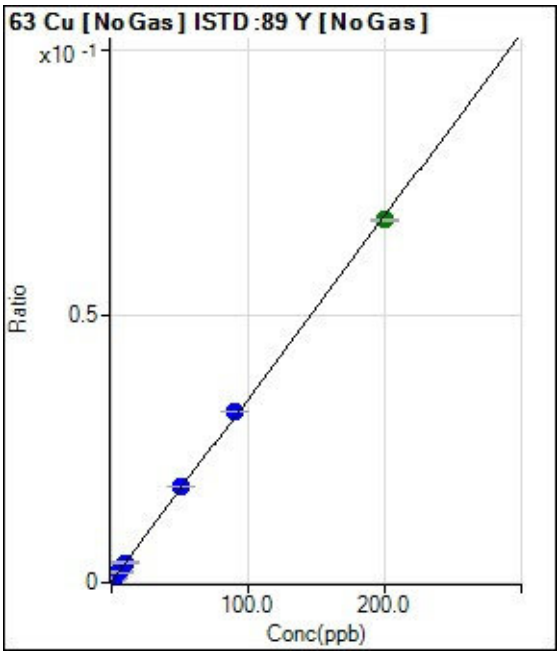
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1761.91	0.0001	P	12.6
2	☐	0.200	0.258	1885.39	0.0001	P	7.7
3	☐	2.000	1.789	2592.89	0.0001	P	1.5
4	☐	5.000	8.574	5727.02	0.0003	P	7.1
5	☐	10.000	9.782	6204.40	0.0003	P	5.2
6	☐	50.000	51.170	24810.95	0.0012	P	3.2
7	☐	90.000	93.284	43456.15	0.0022	P	1.0
8	☐	200.000	198.153	89458.38	0.0045	P	1.0

y = 2.2223E-005 * x + 8.4802E-005
R = 0.9997
DL = 1.438
BEC = 3.816

Weight: <None>
Min Conc: <None>

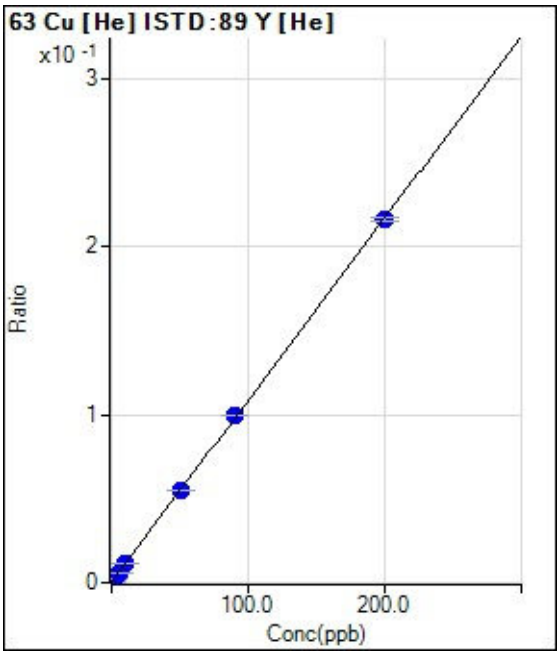


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4024.69	0.0002	P	5.6
2	☐	0.200	0.399	6878.71	0.0003	P	4.6
3	☐	2.000	2.053	18668.45	0.0009	P	2.4
4	☐	5.000	5.224	41250.65	0.0020	P	1.2
5	☐	10.000	10.459	77533.99	0.0038	P	0.9
6	☐	50.000	52.235	367261.67	0.0181	P	0.4
7	☐	90.000	93.284	647412.08	0.0321	P	0.2
8	☐	200.000	197.934	1355261.62	0.0680	A	0.7

y = 3.4256E-004 * x + 1.9369E-004
R = 0.9998
DL = 0.09466
BEC = 0.5654

Weight: <None>
Min Conc: <None>

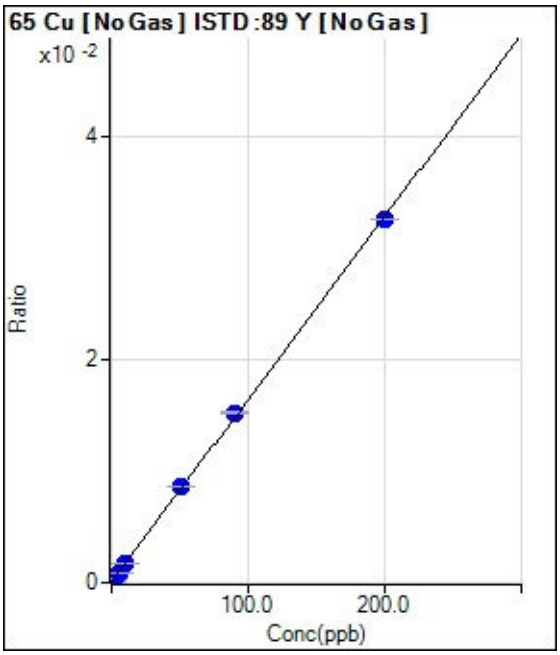
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	717.42	0.0003	P	8.6
2	☐	0.200	0.329	1545.00	0.0007	P	10.8
3	☐	2.000	1.961	5636.92	0.0024	P	4.8
4	☐	5.000	5.009	13216.51	0.0057	P	2.1
5	☐	10.000	9.979	25235.51	0.0111	P	2.0
6	☐	50.000	50.739	122552.93	0.0552	P	0.9
7	☐	90.000	91.399	218954.87	0.0992	P	0.4
8	☐	200.000	199.187	468761.18	0.2157	P	1.0

y = 0.0011 * x + 3.0683E-004
R = 1.0000
DL = 0.07305
BEC = 0.2837

Weight: <None>
Min Conc: <None>

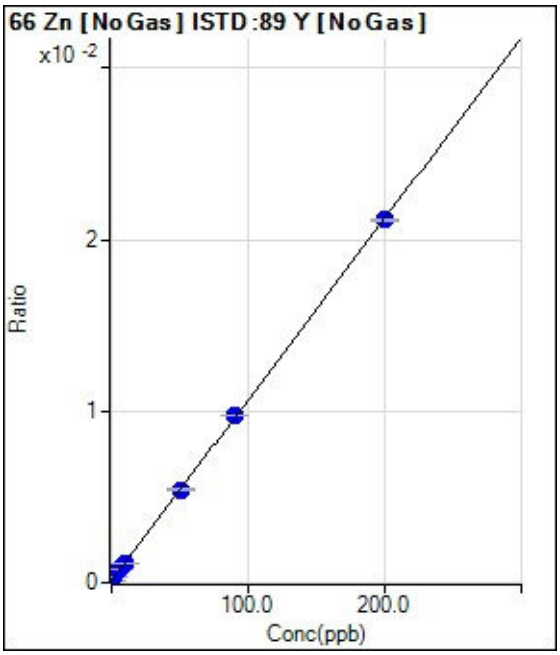


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1691.83	0.0001	P	6.7
2	☐	0.200	0.404	3070.13	0.0001	P	5.7
3	☐	2.000	2.088	8808.47	0.0004	P	4.9
4	☐	5.000	5.093	19035.93	0.0009	P	0.7
5	☐	10.000	10.405	36642.88	0.0018	P	0.5
6	☐	50.000	52.141	174967.39	0.0086	P	0.5
7	☐	90.000	92.299	305909.50	0.0152	P	1.2
8	☐	200.000	198.407	648986.68	0.0326	P	0.1

y = 1.6370E-004 * x + 8.1416E-005
R = 0.9999
DL = 0.09938
BEC = 0.4973

Weight: <None>
Min Conc: <None>

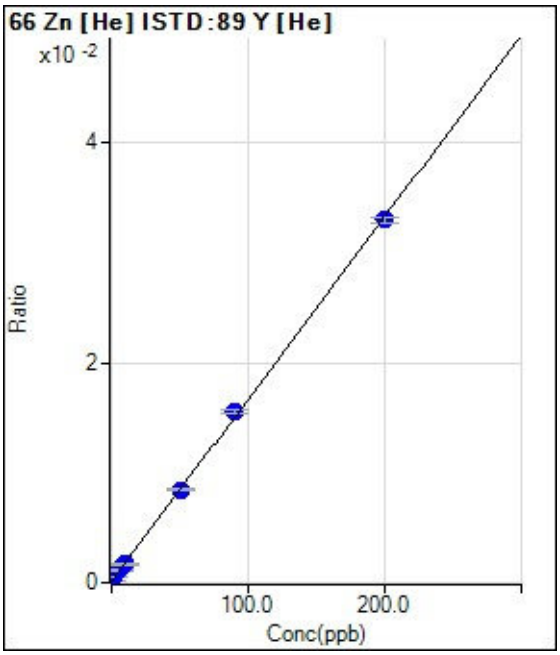
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2048.92	0.0001	P	6.1
2	☐	0.200	0.221	2539.48	0.0001	P	4.6
3	☐	2.000	2.030	6511.57	0.0003	P	4.8
4	☐	5.000	6.202	15664.91	0.0008	P	2.5
5	☐	10.000	9.985	23657.88	0.0012	P	2.6
6	☐	50.000	50.442	110089.49	0.0054	P	1.6
7	☐	90.000	91.034	195452.21	0.0097	P	0.1
8	☐	200.000	199.394	421367.40	0.0211	P	0.6

y = 1.0553E-004 * x + 9.8593E-005
R = 1.0000
DL = 0.171
BEC = 0.9342

Weight: <None>
Min Conc: <None>

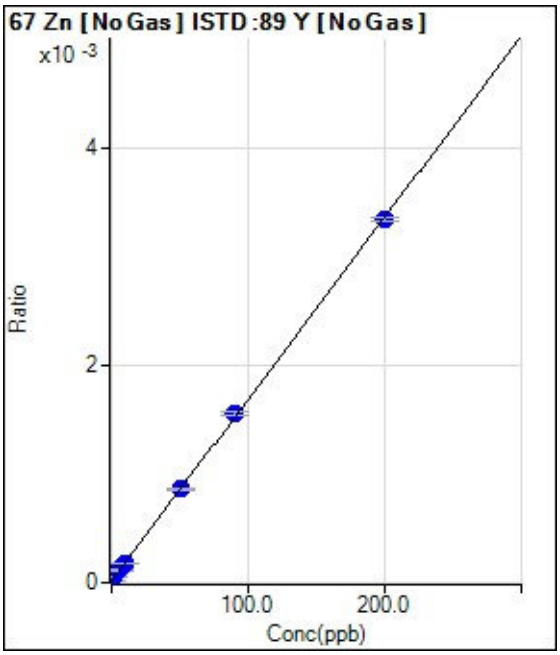


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	306.98	0.0001	P	16.4
2	☐	0.200	0.277	413.76	0.0002	P	15.2
3	☐	2.000	2.133	1124.53	0.0005	P	12.6
4	☐	5.000	6.141	2649.62	0.0011	P	7.6
5	☐	10.000	9.447	3854.48	0.0017	P	4.2
6	☐	50.000	50.233	18758.59	0.0084	P	1.7
7	☐	90.000	93.166	34344.61	0.0156	P	1.3
8	☐	200.000	198.515	71676.61	0.0330	P	1.8

y = 1.6553E-004 * x + 1.3133E-004
R = 0.9998
DL = 0.3904
BEC = 0.7934

Weight: <None>
Min Conc: <None>

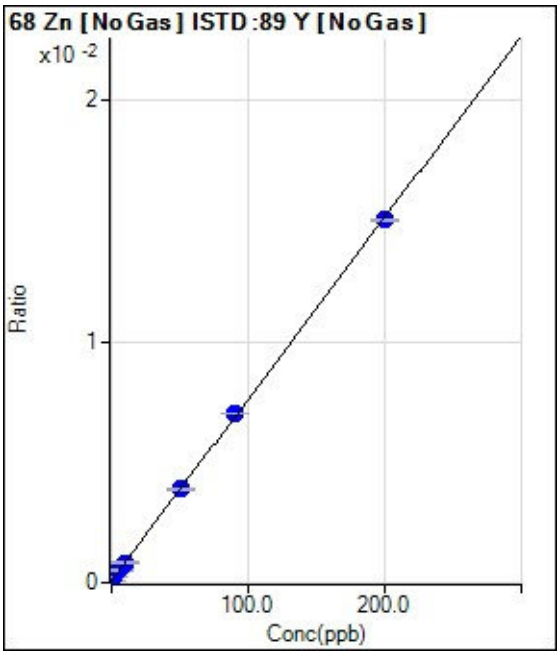
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	316.99	0.0000	P	8.9
2	☐	0.200	0.353	440.46	0.0000	P	8.8
3	☐	2.000	1.864	967.69	0.0000	P	2.8
4	☐	5.000	6.253	2496.10	0.0001	P	10.9
5	☐	10.000	9.608	3617.50	0.0002	P	7.5
6	☐	50.000	50.454	17472.22	0.0009	P	2.5
7	☐	90.000	92.503	31514.95	0.0016	P	2.0
8	☐	200.000	198.749	66666.91	0.0033	P	1.0

y = 1.6753E-005 * x + 1.5253E-005
R = 0.9999
DL = 0.244
BEC = 0.9105

Weight: <None>
Min Conc: <None>

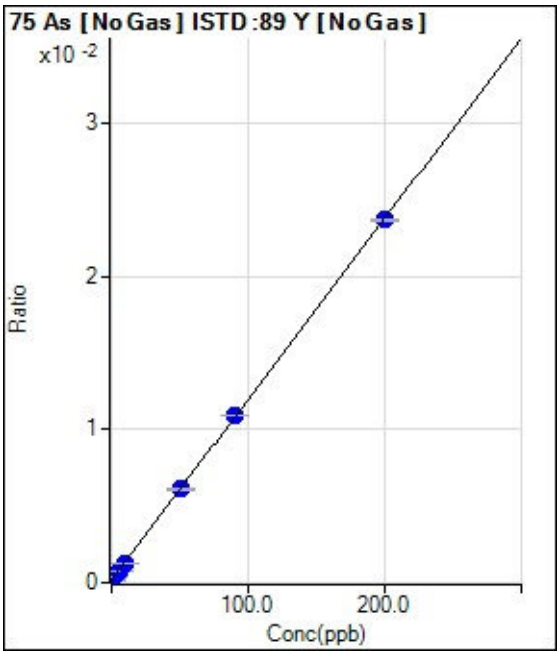


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1668.46	0.0001	P	5.5
2	☐	0.200	0.204	1992.17	0.0001	P	2.9
3	☐	2.000	1.989	4789.05	0.0002	P	5.2
4	☐	5.000	5.844	10825.30	0.0005	P	2.8
5	☐	10.000	10.045	17181.60	0.0008	P	1.5
6	☐	50.000	50.724	79199.34	0.0039	P	2.1
7	☐	90.000	92.231	141501.80	0.0070	P	0.7
8	☐	200.000	198.792	300013.65	0.0151	P	0.2

y = 7.5316E-005 * x + 8.0294E-005
R = 0.9999
DL = 0.1759
BEC = 1.066

Weight: <None>
Min Conc: <None>

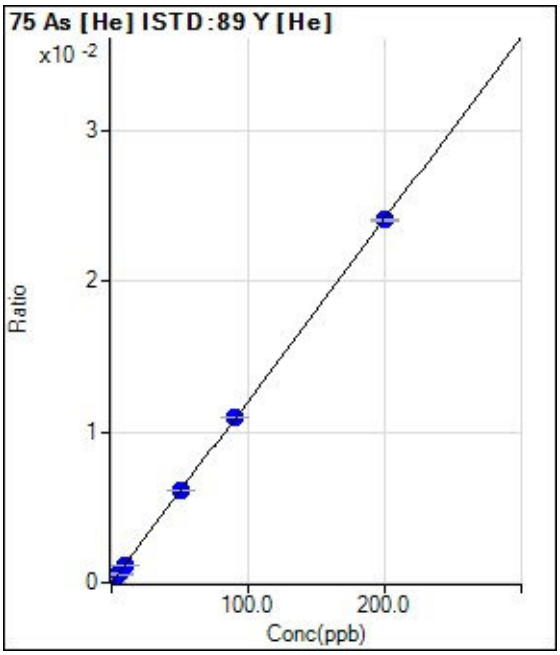
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3690.27	0.0002	P	23.3
2	☐	0.200	0.562	5072.80	0.0002	P	17.0
3	☐	2.000	2.039	8691.14	0.0004	P	12.9
4	☐	5.000	4.654	15094.68	0.0007	P	2.7
5	☐	10.000	9.394	26358.68	0.0013	P	4.0
6	☐	50.000	50.199	123635.26	0.0061	P	1.6
7	☐	90.000	91.205	219861.79	0.0109	P	0.5
8	☐	200.000	199.446	471654.86	0.0237	P	0.7

y = 1.1776E-004 * x + 1.7761E-004
R = 1.0000
DL = 1.054
BEC = 1.508

Weight: <None>
Min Conc: <None>

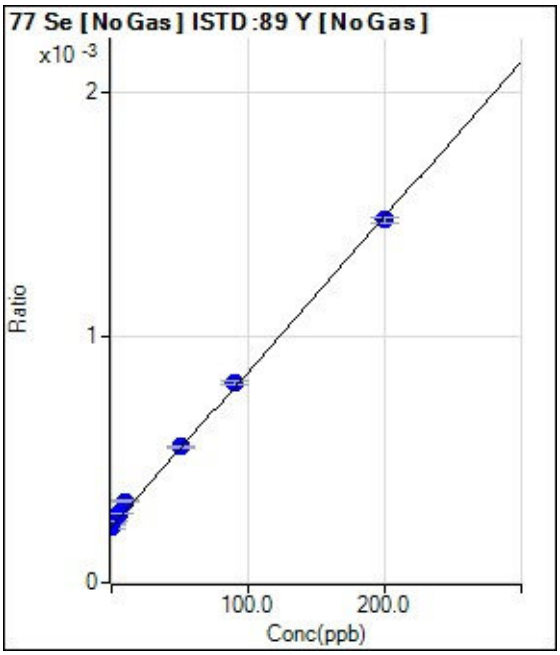


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	50.0
2	☐	0.200	0.222	68.89	0.0000	P	24.3
3	☐	2.000	1.839	521.12	0.0002	P	8.2
4	☐	5.000	4.857	1357.86	0.0006	P	5.6
5	☐	10.000	9.690	2661.39	0.0012	P	1.8
6	☐	50.000	50.549	13534.61	0.0061	P	0.7
7	☐	90.000	90.740	24151.55	0.0109	P	0.6
8	☐	200.000	199.550	52256.16	0.0240	P	0.3

y = 1.2050E-004 * x + 2.8499E-006
R = 1.0000
DL = 0.03551
BEC = 0.02365

Weight: <None>
Min Conc: <None>

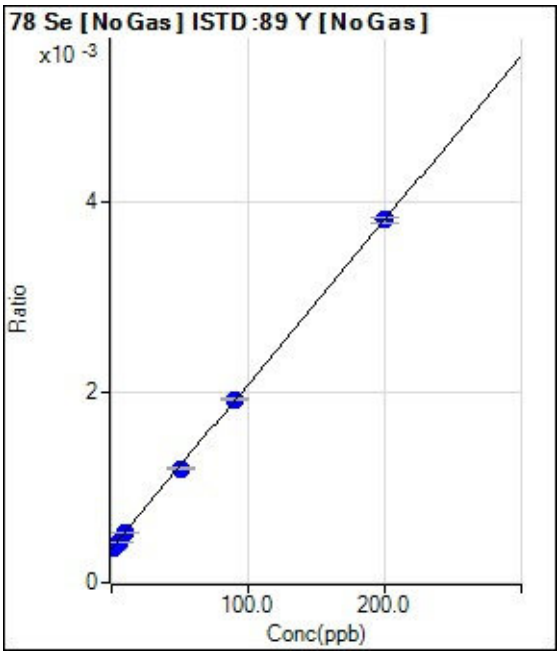
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4718.94	0.0002	P	4.9
2	☐	0.200	1.877	4975.99	0.0002	P	1.0
3	☐	2.000	5.137	5403.25	0.0003	P	4.3
4	☐	5.000	8.799	5880.58	0.0003	P	1.7
5	☐	10.000	16.716	6832.03	0.0003	P	3.9
6	☐	50.000	51.661	11242.80	0.0006	P	2.3
7	☐	90.000	92.788	16386.60	0.0008	P	1.3
8	☐	200.000	197.866	29458.52	0.0015	P	1.6

y = 6.3221E-006 * x + 2.2709E-004
R = 0.9995
DL = 5.305
BEC = 35.92

Weight: <None>
Min Conc: <None>

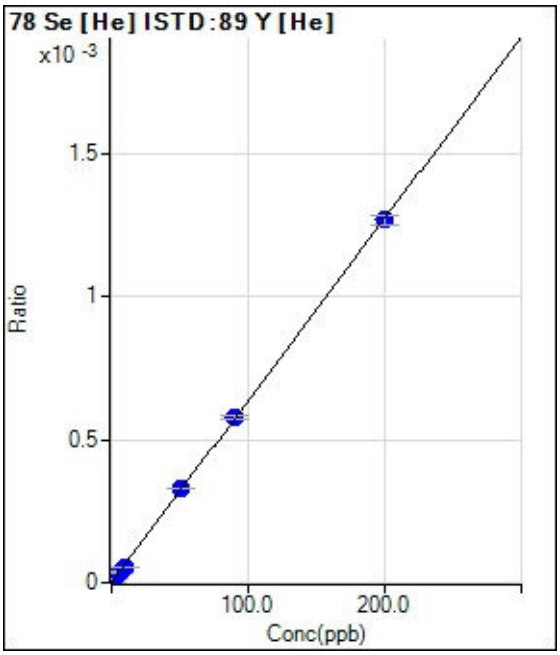


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7473.01	0.0004	P	4.2
2	☐	0.200	0.365	7619.89	0.0004	P	2.6
3	☐	2.000	0.785	7766.85	0.0004	P	1.5
4	☐	5.000	3.961	8901.97	0.0004	P	2.8
5	☐	10.000	9.309	10681.78	0.0005	P	0.7
6	☐	50.000	48.797	24403.41	0.0012	P	1.9
7	☐	90.000	90.787	38798.30	0.0019	P	1.6
8	☐	200.000	200.019	75975.79	0.0038	P	1.9

y = 1.7261E-005 * x + 3.5960E-004
R = 1.0000
DL = 2.602
BEC = 20.83

Weight: <None>
Min Conc: <None>

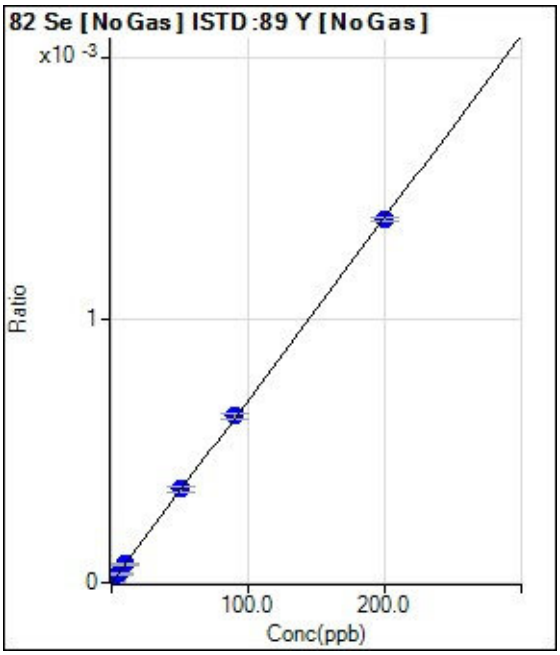
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	86.6
2	☐	0.200	0.075	3.33	0.0000	P	0.5
3	☐	2.000	2.264	35.56	0.0000	P	22.1
4	☐	5.000	5.609	84.45	0.0000	P	15.5
5	☐	10.000	8.549	125.55	0.0001	P	3.3
6	☐	50.000	51.388	726.69	0.0003	P	0.8
7	☐	90.000	90.618	1272.29	0.0006	P	2.8
8	☐	200.000	199.429	2753.64	0.0013	P	2.6

y = 6.3477E-006 * x + 9.5140E-007
R = 0.9999
DL = 0.3894
BEC = 0.1499

Weight: <None>
Min Conc: <None>

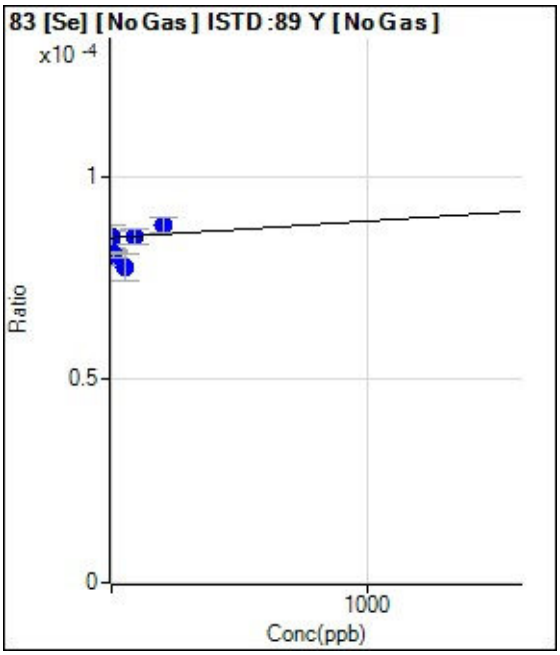


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-75.95	0.0000	P	-220.2
2	☐	0.200	0.902	54.13	0.0000	P	374.0
3	☐	2.000	3.622	448.84	0.0000	P	24.9
4	☐	5.000	4.821	622.45	0.0000	P	13.4
5	☐	10.000	10.128	1373.41	0.0001	P	7.4
6	☐	50.000	51.134	7159.14	0.0004	P	4.3
7	☐	90.000	91.518	12765.20	0.0006	P	3.4
8	☐	200.000	199.015	27560.52	0.0014	P	1.3

y = 6.9663E-006 * x - 3.6565E-006
R = 0.9999
DL = 3.467
BEC = -0.5249

Weight: <None>
Min Conc: <None>

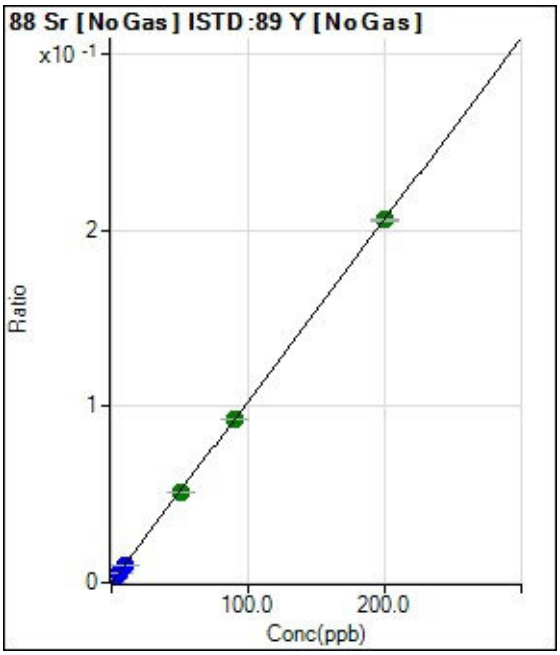
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1765.24	0.0001	P	4.3
2	☐	0.200	33.718	1771.93	0.0001	P	6.5
3	☐	2.000	-1167.126	1668.47	0.0001	P	4.4
4	☐	5.000	-1230.811	1661.80	0.0001	P	4.6
5	☐	10.000	-1014.432	1658.46	0.0001	P	2.1
6	☐	50.000	-1752.233	1578.36	0.0001	P	8.7
7	☐	90.000	54.058	1715.19	0.0001	P	4.9
8	☐	200.000	760.507	1755.23	0.0001	P	4.8

y = 4.1121E-009 * x + 8.4950E-005
R = 0.5708
DL = 2681
BEC = 2.066E+04

Weight: <None>
Min Conc: <None>

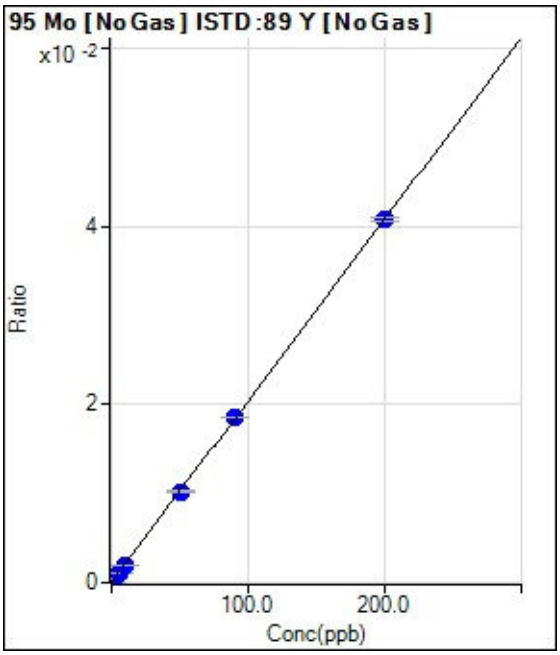


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.17	0.0000	P	25.5
2	☐	0.200	0.199	4431.91	0.0002	P	4.7
3	☐	2.000	1.979	42623.65	0.0020	P	1.6
4	☐	5.000	5.058	108608.70	0.0052	P	1.5
5	☐	10.000	9.800	207543.19	0.0101	P	0.6
6	☐	50.000	50.009	1046769.14	0.0516	A	0.9
7	☐	90.000	90.404	1876534.66	0.0932	A	0.3
8	☐	200.000	199.825	4105026.70	0.2060	A	0.2

y = 0.0010 * x + 8.1870E-006
R = 1.0000
DL = 0.006067
BEC = 0.007943

Weight: <None>
Min Conc: <None>

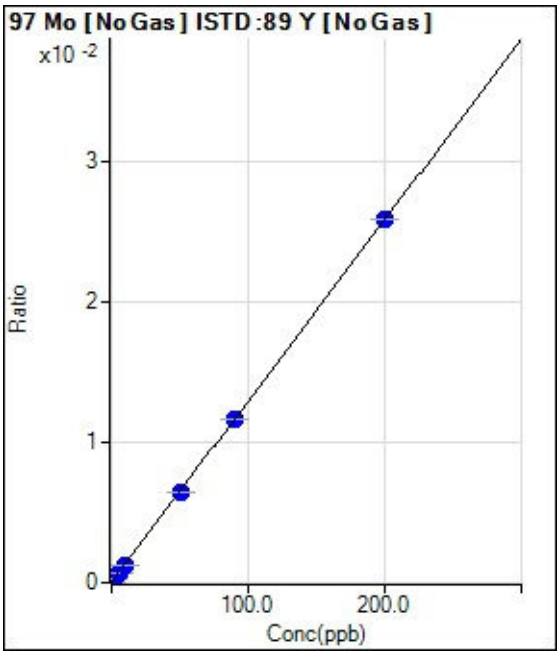
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1184.59	0.0001	P	5.4
2	☐	0.200	0.078	1518.30	0.0001	P	14.0
3	☐	2.000	1.794	8785.19	0.0004	P	1.9
4	☐	5.000	4.714	21141.44	0.0010	P	2.5
5	☐	10.000	9.590	41238.40	0.0020	P	3.1
6	☐	50.000	49.967	207618.03	0.0102	P	0.7
7	☐	90.000	90.740	372996.06	0.0185	P	0.1
8	☐	200.000	199.705	811112.57	0.0407	P	1.0

y = 2.0350E-004 * x + 5.7002E-005
R = 1.0000
DL = 0.04566
BEC = 0.2801

Weight: <None>
Min Conc: <None>

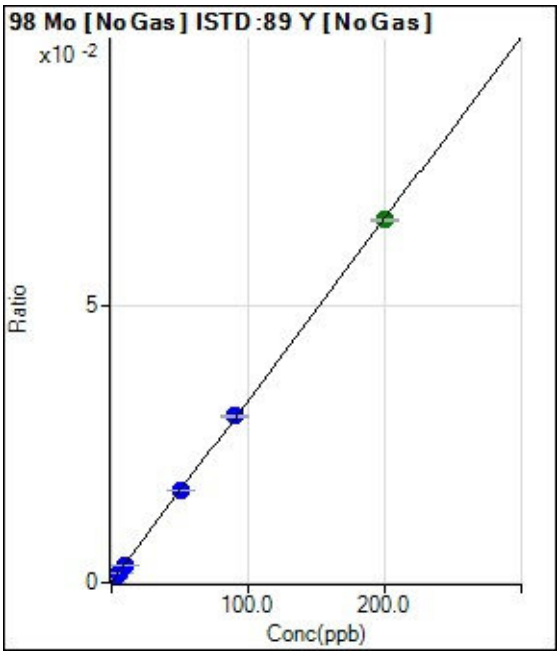


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	780.82	0.0000	P	8.7
2	☐	0.200	0.085	1011.07	0.0000	P	13.5
3	☐	2.000	1.786	5570.16	0.0003	P	3.6
4	☐	5.000	4.668	13286.75	0.0006	P	2.1
5	☐	10.000	9.202	25102.36	0.0012	P	7.0
6	☐	50.000	49.593	130442.67	0.0064	P	0.6
7	☐	90.000	90.119	234466.61	0.0116	P	0.4
8	☐	200.000	200.099	514353.14	0.0258	P	0.2

y = 1.2878E-004 * x + 3.7571E-005
R = 1.0000
DL = 0.07632
BEC = 0.2917

Weight: <None>
Min Conc: <None>

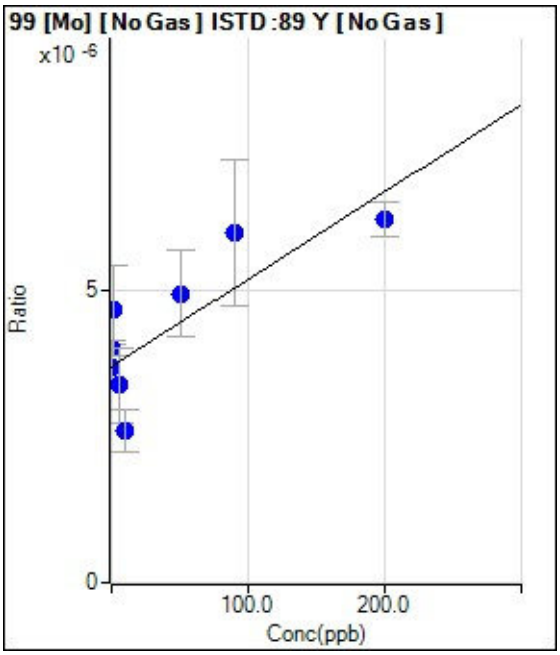
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2117.80	0.0001	P	3.2
2	☐	0.200	0.100	2804.32	0.0001	P	0.5
3	☐	2.000	1.781	14281.39	0.0007	P	2.8
4	☐	5.000	4.660	33913.81	0.0016	P	1.7
5	☐	10.000	9.511	66139.16	0.0032	P	1.7
6	☐	50.000	50.558	338785.64	0.0167	P	1.6
7	☐	90.000	91.276	604946.50	0.0300	P	0.4
8	☐	200.000	199.322	1305049.44	0.0655	A	0.8

y = 3.2800E-004 * x + 1.0191E-004
R = 1.0000
DL = 0.02995
BEC = 0.3107

Weight: <None>
Min Conc: <None>

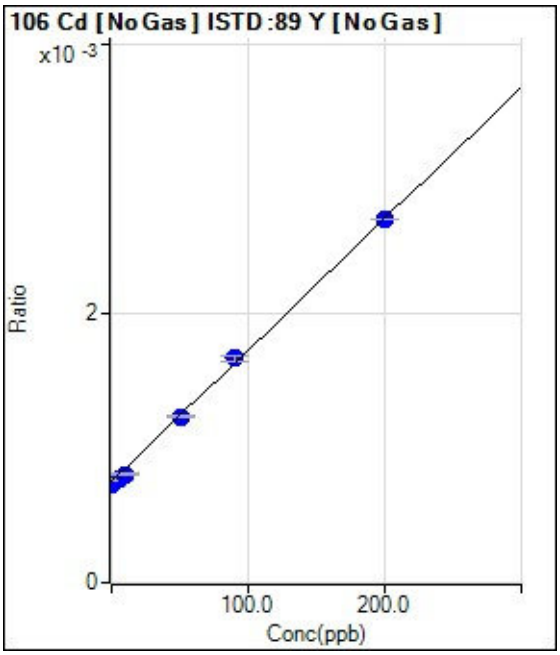


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.74	0.0000	P	19.8
2	☐	0.200	20.956	83.42	0.0000	P	6.4
3	☐	2.000	64.059	96.76	0.0000	P	33.2
4	☐	5.000	-21.866	70.07	0.0000	P	37.6
5	☐	10.000	-73.265	53.39	0.0000	P	28.6
6	☐	50.000	83.163	100.10	0.0000	P	30.2
7	☐	90.000	152.499	120.12	0.0000	P	41.7
8	☐	200.000	167.778	123.46	0.0000	P	9.4

y = 1.4912E-008 * x + 3.6925E-006
R = 0.8004
DL = 147.2
BEC = 247.6

Weight: <None>
Min Conc: <None>

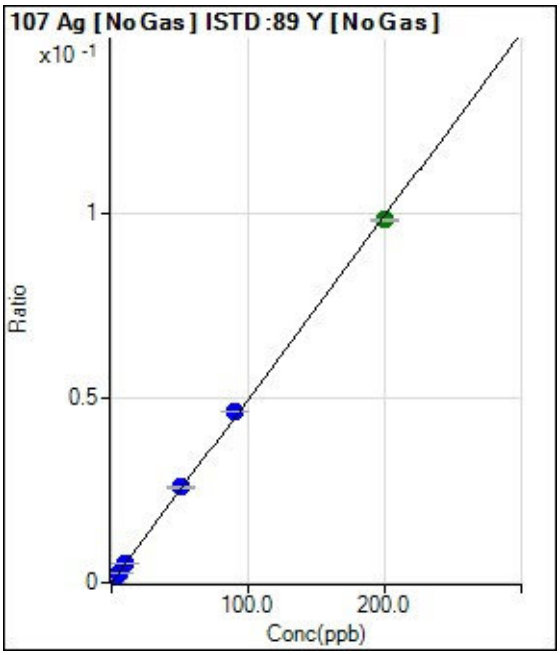
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15625.08	0.0008	P	1.8
2	☐	0.200	-2.565	15137.36	0.0007	P	2.1
3	☐	2.000	0.517	15755.30	0.0008	P	3.6
4	☐	5.000	1.654	15975.84	0.0008	P	1.8
5	☐	10.000	5.370	16513.71	0.0008	P	1.6
6	☐	50.000	49.006	24982.16	0.0012	P	1.1
7	☐	90.000	93.595	33543.03	0.0017	P	3.2
8	☐	200.000	198.963	53699.28	0.0027	P	0.1

y = 9.7621E-006 * x + 7.5192E-004
R = 0.9995
DL = 4.093
BEC = 77.02

Weight: <None>
Min Conc: <None>

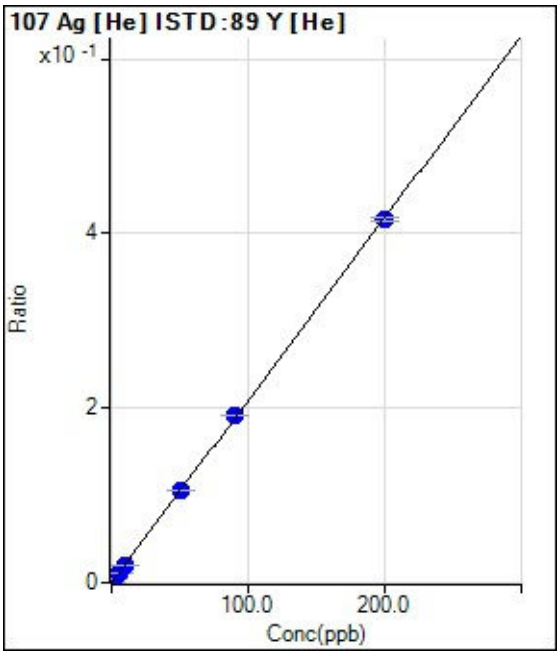


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	212.22	0.0000	P	7.8
2	☐	0.200	0.203	2312.44	0.0001	P	2.6
3	☐	2.000	2.058	21506.35	0.0010	P	0.5
4	☐	5.000	5.077	52708.82	0.0025	P	1.1
5	☐	10.000	10.036	102644.49	0.0050	P	0.5
6	☐	50.000	52.133	526477.31	0.0259	P	0.8
7	☐	90.000	93.382	935115.31	0.0464	P	0.3
8	☐	200.000	197.940	1961564.30	0.0984	A	0.4

y = 4.9715E-004 * x + 1.0212E-005
R = 0.9997
DL = 0.004829
BEC = 0.02054

Weight: <None>
Min Conc: <None>

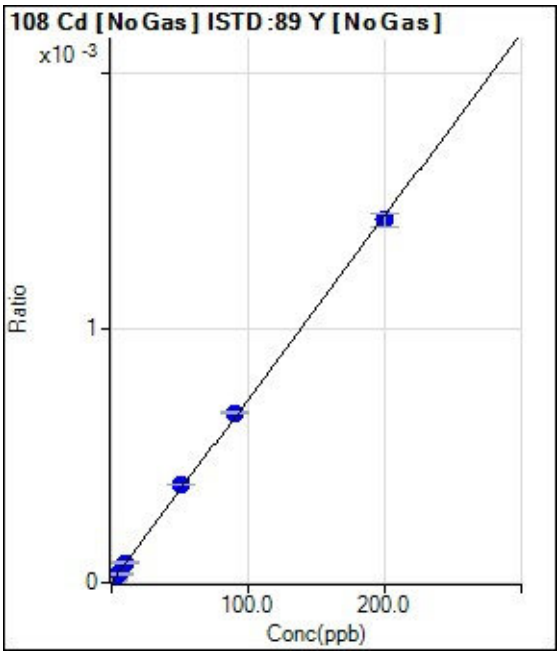
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.07	0.0000	P	37.6
2	☐	0.200	0.175	920.97	0.0004	P	8.9
3	☐	2.000	2.002	9780.23	0.0042	P	2.8
4	☐	5.000	4.954	23945.84	0.0104	P	2.8
5	☐	10.000	9.686	46049.54	0.0203	P	1.1
6	☐	50.000	50.519	234336.41	0.1055	P	1.0
7	☐	90.000	91.923	423886.30	0.1920	P	0.2
8	☐	200.000	199.022	902928.66	0.4156	P	1.0

y = 0.0021 * x + 2.9953E-005
R = 0.9999
DL = 0.0162
BEC = 0.01435

Weight: <None>
Min Conc: <None>

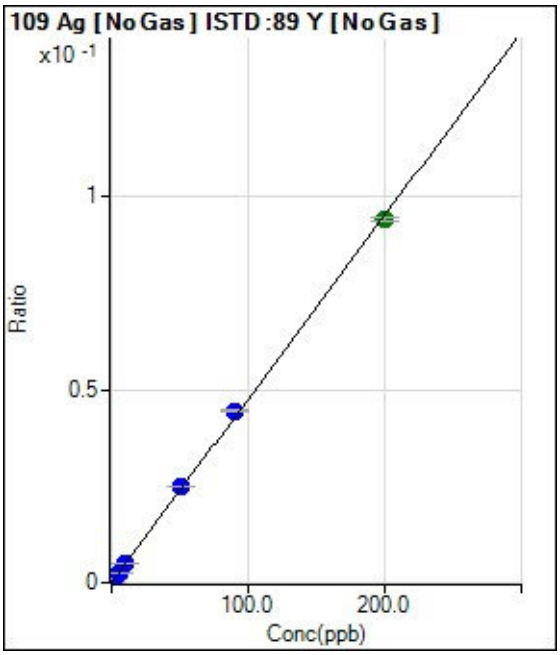


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.02	0.0000	P	86.6
2	☐	0.200	0.356	73.41	0.0000	P	15.8
3	☐	2.000	1.757	283.63	0.0000	P	38.5
4	☐	5.000	4.723	727.43	0.0000	P	8.1
5	☐	10.000	10.433	1561.69	0.0001	P	8.7
6	☐	50.000	53.158	7790.26	0.0004	P	0.6
7	☐	90.000	92.732	13463.84	0.0007	P	1.6
8	☐	200.000	197.969	28426.11	0.0014	P	3.9

y = 7.1993E-006 * x + 9.6344E-007
R = 0.9997
DL = 0.3477
BEC = 0.1338

Weight: <None>
Min Conc: <None>

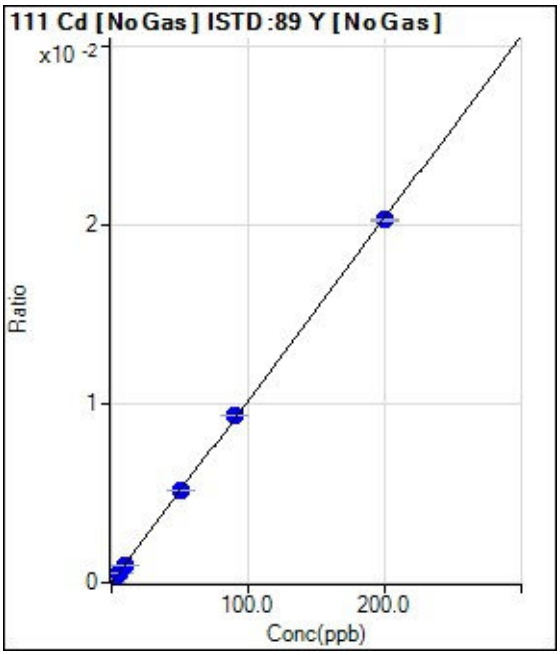
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.73	0.0000	P	31.2
2	☐	0.200	0.208	2122.33	0.0001	P	3.9
3	☐	2.000	2.095	20814.07	0.0010	P	1.3
4	☐	5.000	5.069	50218.84	0.0024	P	2.0
5	☐	10.000	10.072	98432.74	0.0048	P	1.1
6	☐	50.000	52.341	505600.83	0.0249	P	0.6
7	☐	90.000	93.740	898000.45	0.0446	P	0.2
8	☐	200.000	197.726	1874601.27	0.0941	A	0.9

y = 4.7567E-004 * x + 3.2111E-006
R = 0.9997
DL = 0.006318
BEC = 0.006751

Weight: <None>
Min Conc: <None>

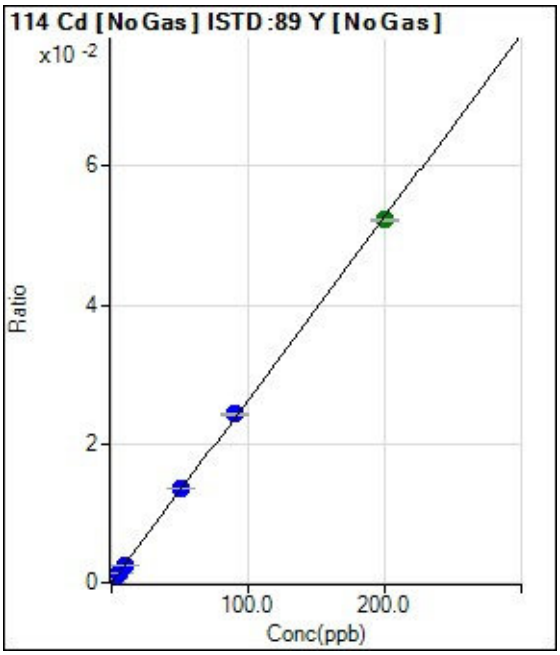


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-18.15	0.0000	P	-121.5
2	☐	0.200	0.192	387.91	0.0000	P	3.0
3	☐	2.000	2.014	4245.37	0.0002	P	3.6
4	☐	5.000	4.890	10329.73	0.0005	P	2.4
5	☐	10.000	9.734	20313.76	0.0010	P	3.3
6	☐	50.000	50.524	104350.82	0.0051	P	0.6
7	☐	90.000	91.750	187945.47	0.0093	P	0.9
8	☐	200.000	199.097	403683.74	0.0203	P	0.6

y = 1.0173E-004 * x - 8.7361E-007
R = 0.9999
DL = 0.03131
BEC = -0.008587

Weight: <None>
Min Conc: <None>

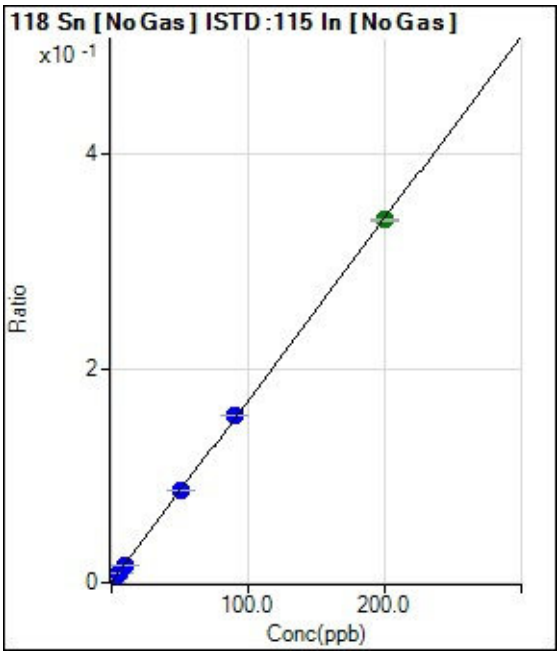
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.71	0.0000	P	12.2
2	☐	0.200	0.205	1171.24	0.0001	P	4.7
3	☐	2.000	1.959	10782.02	0.0005	P	0.7
4	☐	5.000	4.959	27195.51	0.0013	P	2.0
5	☐	10.000	9.776	52872.39	0.0026	P	0.7
6	☐	50.000	51.548	275532.71	0.0136	P	1.3
7	☐	90.000	92.487	490261.54	0.0243	P	1.0
8	☐	200.000	198.506	1041405.10	0.0522	A	0.4

y = 2.6320E-004 * x + 2.2477E-006
R = 0.9999
DL = 0.003129
BEC = 0.00854

Weight: <None>
Min Conc: <None>

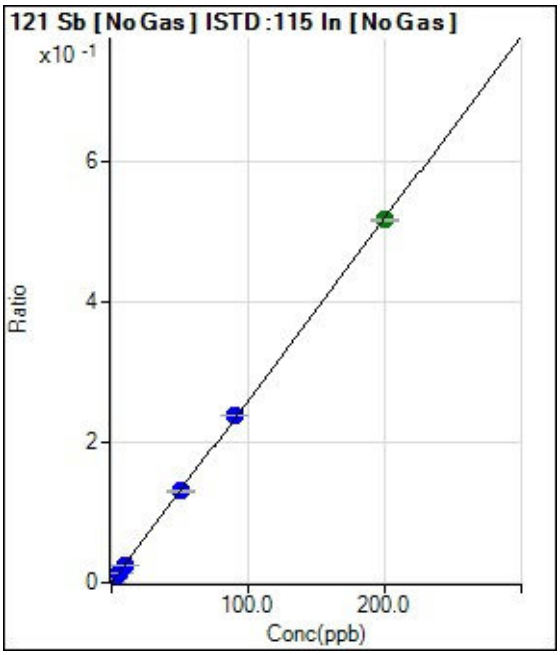


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	880.04	0.0002	P	5.4
2	☐	0.200	0.215	2324.66	0.0006	P	1.4
3	☐	2.000	1.936	13970.80	0.0035	P	0.7
4	☐	5.000	4.880	33755.39	0.0085	P	0.6
5	☐	10.000	9.706	65575.85	0.0167	P	0.2
6	☐	50.000	50.706	336096.67	0.0863	P	0.3
7	☐	90.000	91.449	597551.80	0.1555	P	0.4
8	☐	200.000	199.190	1266505.19	0.3385	A	0.5

y = 0.0017 * x + 2.2339E-004
R = 1.0000
DL = 0.02127
BEC = 0.1315

Weight: <None>
Min Conc: <None>

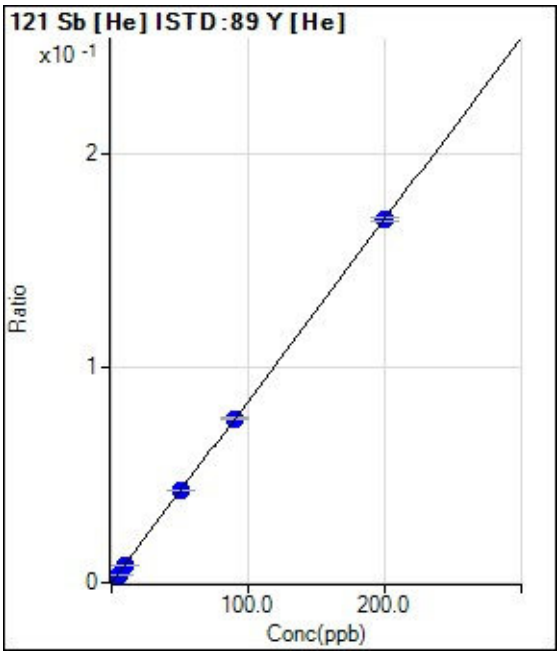
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125.56	0.0000	P	13.1
2	☐	0.200	0.194	2116.85	0.0005	P	3.9
3	☐	2.000	1.952	20267.87	0.0051	P	2.0
4	☐	5.000	4.798	49490.65	0.0125	P	1.5
5	☐	10.000	9.613	98000.41	0.0250	P	0.9
6	☐	50.000	50.199	507073.92	0.1303	P	0.4
7	☐	90.000	91.630	913381.28	0.2378	P	0.1
8	☐	200.000	199.241	1933985.69	0.5169	A	0.5

y = 0.0026 * x + 3.1892E-005
R = 1.0000
DL = 0.004819
BEC = 0.01229

Weight: <None>
Min Conc: <None>

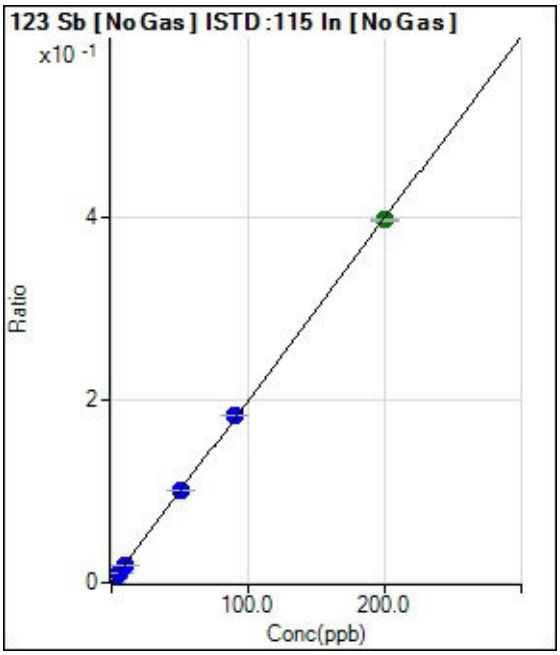


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	24.8
2	☐	0.200	0.221	483.35	0.0002	P	7.7
3	☐	2.000	1.852	3687.25	0.0016	P	4.3
4	☐	5.000	4.713	9256.71	0.0040	P	1.1
5	☐	10.000	9.487	18302.98	0.0080	P	0.3
6	☐	50.000	50.452	94894.63	0.0427	P	0.5
7	☐	90.000	90.460	169118.81	0.0766	P	0.4
8	☐	200.000	199.714	367329.15	0.1691	P	1.0

y = 8.4639E-004 * x + 1.9960E-005
R = 1.0000
DL = 0.01758
BEC = 0.02358

Weight: <None>
Min Conc: <None>

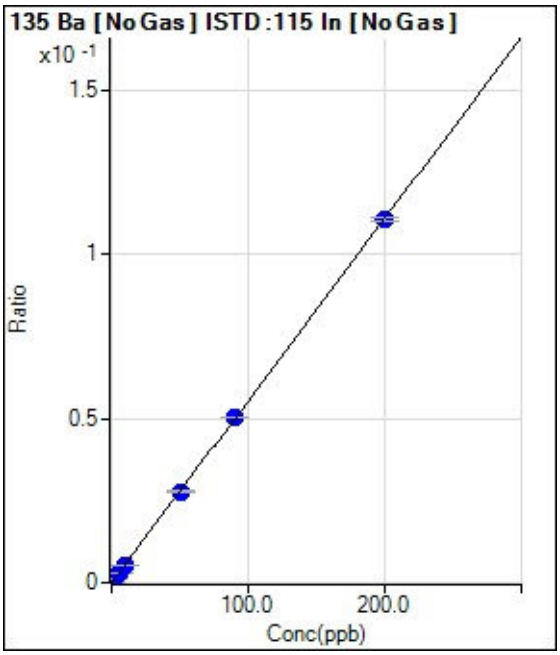
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.12	0.0000	P	17.1
2	☐	0.200	0.198	1681.83	0.0004	P	6.0
3	☐	2.000	1.865	14913.59	0.0037	P	2.0
4	☐	5.000	4.797	38060.36	0.0096	P	0.4
5	☐	10.000	9.597	75226.73	0.0192	P	1.4
6	☐	50.000	50.369	391113.97	0.1005	P	0.8
7	☐	90.000	91.684	702495.70	0.1829	P	0.7
8	☐	200.000	199.176	1486092.40	0.3972	A	0.6

y = 0.0020 * x + 3.0511E-005
R = 0.9999
DL = 0.007833
BEC = 0.0153

Weight: <None>
Min Conc: <None>

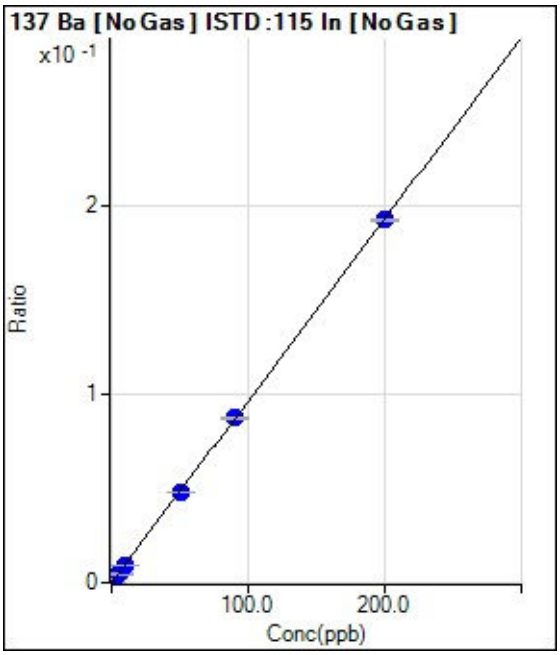


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.35	0.0000	P	86.6
2	☐	0.200	0.175	397.07	0.0001	P	10.0
3	☐	2.000	2.046	4518.73	0.0011	P	2.8
4	☐	5.000	4.910	10792.07	0.0027	P	1.3
5	☐	10.000	9.615	20901.25	0.0053	P	2.4
6	☐	50.000	50.145	108066.67	0.0278	P	1.3
7	☐	90.000	91.135	193820.85	0.0505	P	0.5
8	☐	200.000	199.474	413108.05	0.1104	P	0.9

y = 5.5356E-004 * x + 3.3904E-006
R = 1.0000
DL = 0.01591
BEC = 0.006125

Weight: <None>
Min Conc: <None>

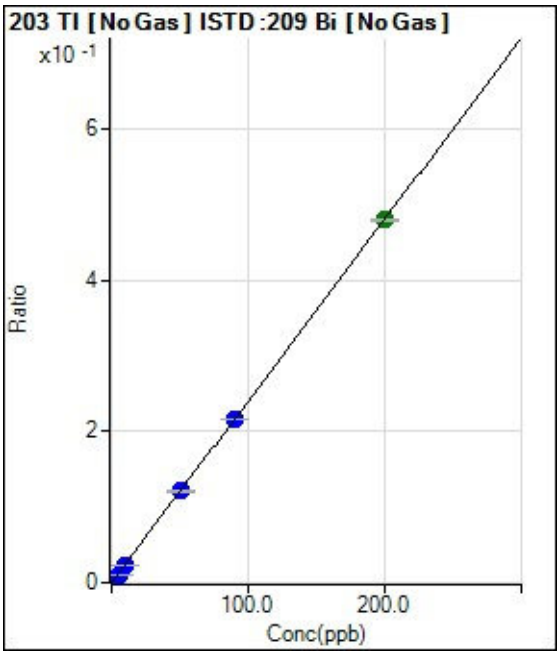
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.04	0.0000	P	66.1
2	☐	0.200	0.205	820.87	0.0002	P	22.2
3	☐	2.000	1.903	7329.50	0.0018	P	6.0
4	☐	5.000	4.779	18291.34	0.0046	P	1.3
5	☐	10.000	9.586	36273.75	0.0092	P	2.0
6	☐	50.000	49.742	186524.29	0.0479	P	0.4
7	☐	90.000	90.869	336247.09	0.0875	P	1.5
8	☐	200.000	199.701	719595.48	0.1923	P	0.7

y = 9.6309E-004 * x + 1.0167E-005
R = 1.0000
DL = 0.02092
BEC = 0.01056

Weight: <None>
Min Conc: <None>

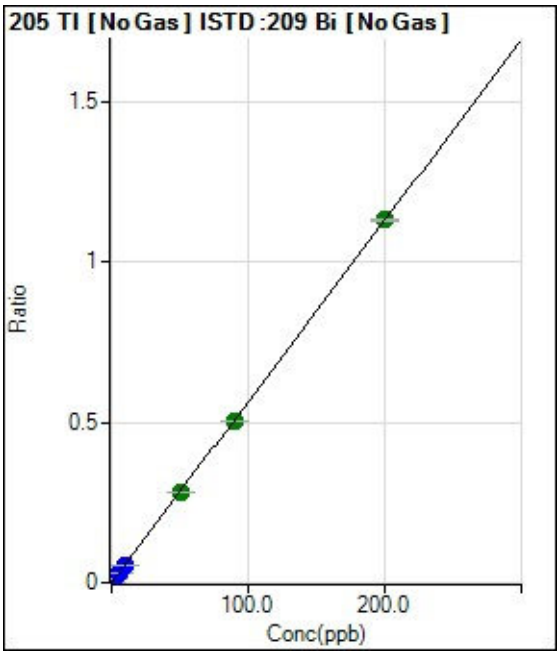


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.42	0.0000	P	17.9
2	☐	0.200	0.171	1675.16	0.0004	P	5.0
3	☐	2.000	1.905	17820.72	0.0046	P	1.3
4	☐	5.000	4.705	44108.80	0.0113	P	0.4
5	☐	10.000	9.495	88516.83	0.0229	P	1.2
6	☐	50.000	50.391	462053.74	0.1212	P	0.9
7	☐	90.000	90.237	818562.47	0.2170	P	0.5
8	☐	200.000	199.829	1755651.80	0.4806	A	0.5

y = 0.0024 * x + 2.1492E-005
R = 1.0000
DL = 0.0048
BEC = 0.008937

Weight: <None>
Min Conc: <None>

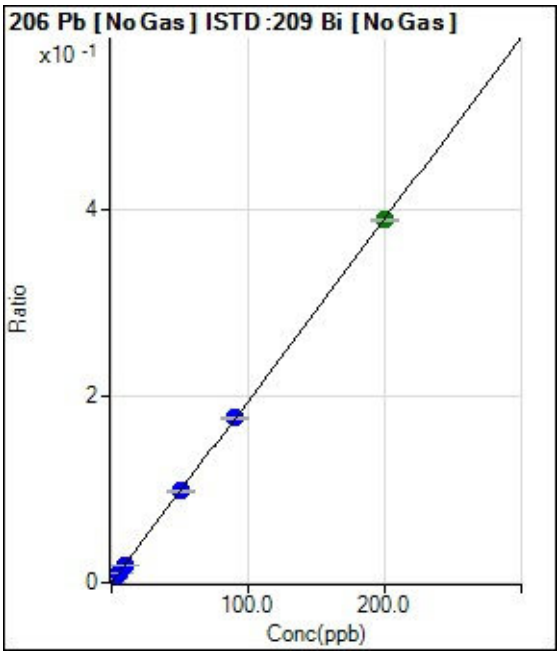
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.78	0.0000	P	4.7
2	☐	0.200	0.191	4278.41	0.0011	P	3.8
3	☐	2.000	1.954	42813.26	0.0111	P	2.6
4	☐	5.000	4.827	106093.84	0.0273	P	0.8
5	☐	10.000	9.690	211885.44	0.0547	P	0.9
6	☐	50.000	49.677	1068855.94	0.2804	A	0.6
7	☐	90.000	89.254	1899774.73	0.5037	A	0.8
8	☐	200.000	200.437	4132209.62	1.1311	A	0.4

y = 0.0056 * x + 3.0101E-005
R = 1.0000
DL = 0.0007593
BEC = 0.005334

Weight: <None>
Min Conc: <None>

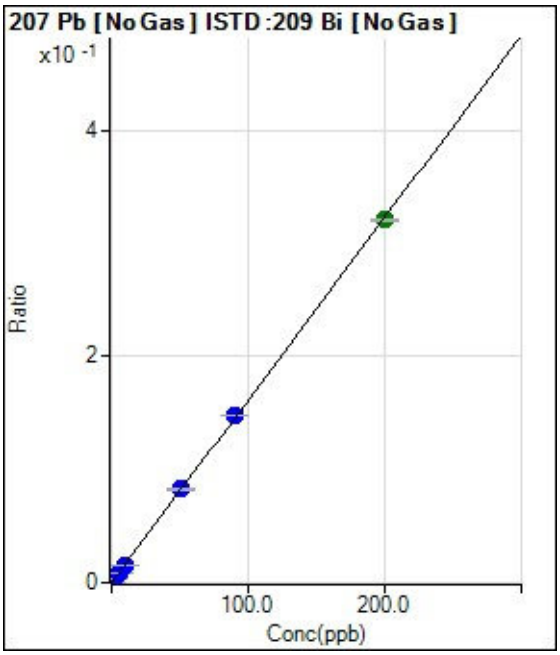


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.56	0.0001	P	40.7
2	☐	0.200	0.189	1641.78	0.0004	P	3.5
3	☐	2.000	1.924	14723.66	0.0038	P	1.8
4	☐	5.000	4.837	36868.07	0.0095	P	0.7
5	☐	10.000	9.640	72908.60	0.0188	P	0.8
6	☐	50.000	50.401	374284.60	0.0982	P	1.3
7	☐	90.000	90.706	666242.23	0.1766	P	0.7
8	☐	200.000	199.605	1419808.04	0.3886	A	0.3

y = 0.0019 * x + 5.7688E-005
R = 1.0000
DL = 0.03615
BEC = 0.02963

Weight: <None>
Min Conc: <None>

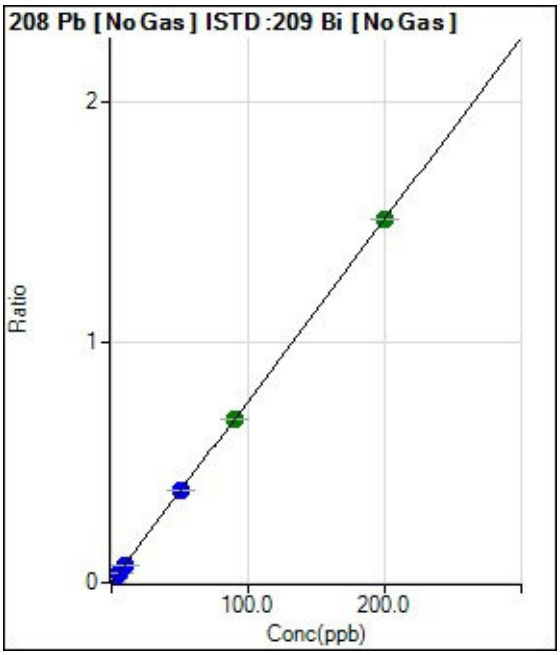
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.54	0.0000	P	13.4
2	☐	0.200	0.202	1454.90	0.0004	P	7.3
3	☐	2.000	1.974	12515.66	0.0032	P	0.5
4	☐	5.000	4.947	31233.82	0.0080	P	0.6
5	☐	10.000	9.775	61235.12	0.0158	P	1.8
6	☐	50.000	51.091	314249.17	0.0824	P	0.4
7	☐	90.000	92.034	559899.20	0.1484	P	0.1
8	☐	200.000	198.825	1171356.65	0.3206	A	0.7

y = 0.0016 * x + 4.9903E-005
R = 0.9999
DL = 0.0124
BEC = 0.03095

Weight: <None>
Min Conc: <None>

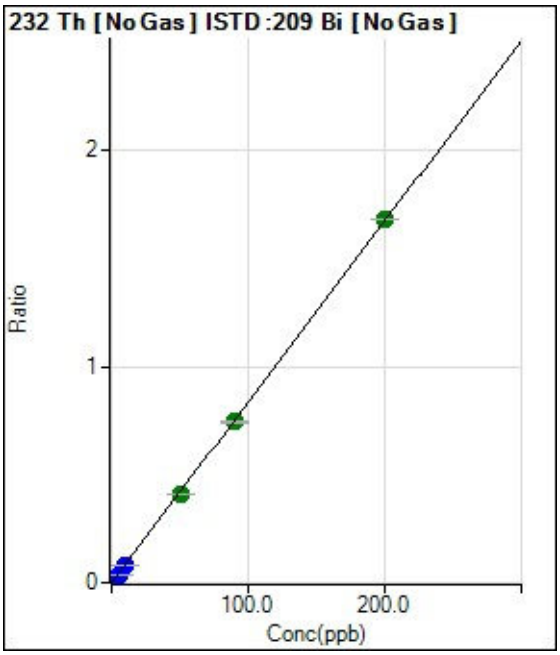


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	917.62	0.0002	P	22.8
2	☐	0.200	0.196	6627.45	0.0017	P	5.0
3	☐	2.000	1.948	57817.68	0.0149	P	0.3
4	☐	5.000	4.874	144048.67	0.0370	P	0.1
5	☐	10.000	9.747	285785.37	0.0738	P	1.4
6	☐	50.000	50.726	1460254.45	0.3830	P	0.5
7	☐	90.000	90.189	2567960.54	0.6808	A	0.3
8	☐	200.000	199.750	5507760.66	1.5077	A	0.1

y = 0.0075 * x + 2.3668E-004
R = 1.0000
DL = 0.02147
BEC = 0.03136

Weight: <None>
Min Conc: <None>

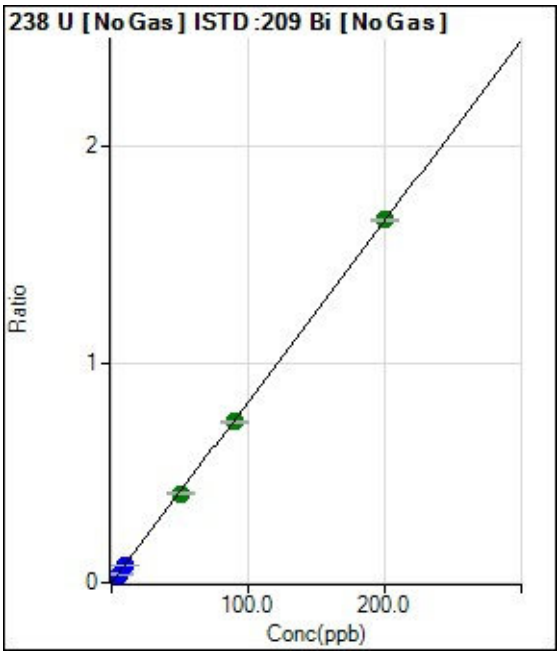
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1568.37	0.0004	P	3.8
2	☐	0.200	0.169	7015.80	0.0018	P	3.1
3	☐	2.000	1.757	58457.63	0.0151	P	1.7
4	☐	5.000	4.545	149518.95	0.0384	P	1.3
5	☐	10.000	9.228	300555.61	0.0776	P	0.8
6	☐	50.000	48.890	1560834.28	0.4094	A	0.7
7	☐	90.000	88.893	2806461.26	0.7441	A	0.6
8	☐	200.000	200.828	6139375.85	1.6806	A	0.1

y = 0.0084 * x + 4.0430E-004
R = 1.0000
DL = 0.005495
BEC = 0.04833

Weight: <None>
Min Conc: <None>

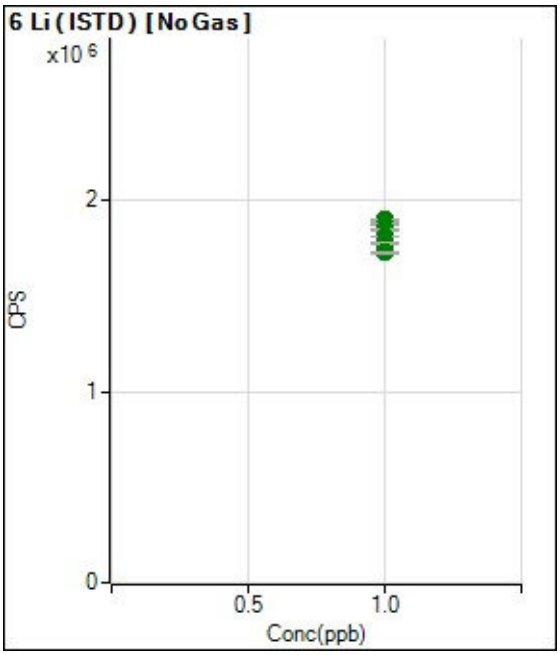


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283.63	0.0001	P	23.0
2	☐	0.200	0.188	6291.37	0.0016	P	4.7
3	☐	2.000	1.909	61488.88	0.0159	P	1.2
4	☐	5.000	4.752	153400.95	0.0394	P	2.2
5	☐	10.000	9.491	304741.28	0.0787	P	0.7
6	☐	50.000	49.214	1554142.38	0.4077	A	1.2
7	☐	90.000	89.011	2780838.76	0.7373	A	0.6
8	☐	200.000	200.674	6072109.62	1.6621	A	0.2

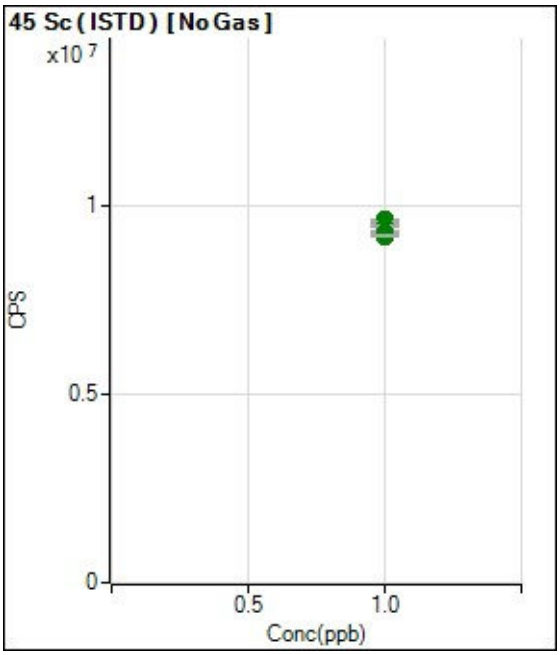
y = 0.0083 * x + 7.3062E-005
R = 1.0000
DL = 0.006095
BEC = 0.008821

Weight: <None>
Min Conc: <None>

Calibration for 016_ICV.d

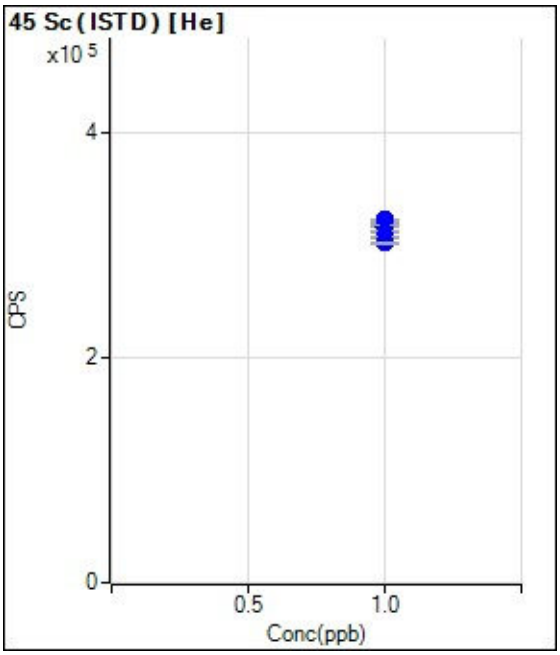


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1891944.38		A	0.5
2	☐	1.000		1896597.74		A	0.1
3	☐	1.000		1896000.39		A	0.8
4	☐	1.000		1870993.30		A	0.4
5	☐	1.000		1848400.68		A	0.6
6	☐	1.000		1809627.07		A	0.4
7	☐	1.000		1777955.99		A	0.4
8	☐	1.000		1725524.92		A	0.3

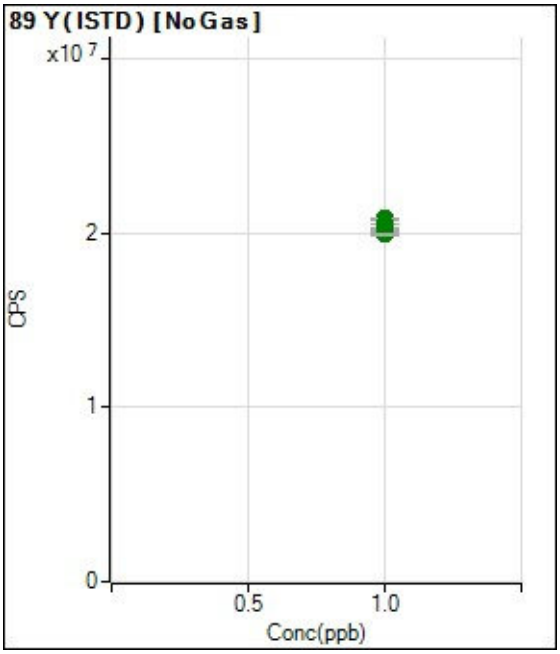


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9527111.72		A	0.3
2	☐	1.000		9533520.83		A	0.1
3	☐	1.000		9607246.22		A	0.7
4	☐	1.000		9557903.55		A	0.2
5	☐	1.000		9442200.76		A	0.6
6	☐	1.000		9279972.08		A	0.6
7	☐	1.000		9253484.13		A	0.6
8	☐	1.000		9178395.50		A	0.5

Calibration for 016_ICV.d

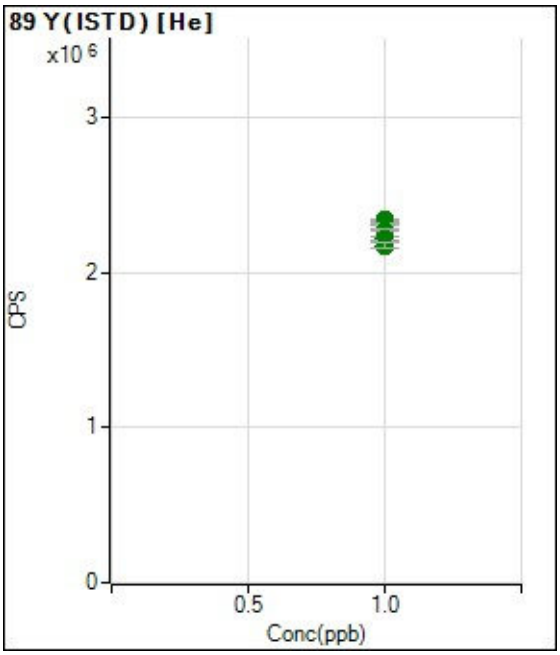


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		322628.47		P	0.3
2	☐	1.000		320240.40		P	0.4
3	☐	1.000		317856.12		P	0.9
4	☐	1.000		315620.51		P	1.4
5	☐	1.000		311626.71		P	0.6
6	☐	1.000		306992.19		P	0.6
7	☐	1.000		307394.16		P	0.2
8	☐	1.000		302072.18		P	0.8

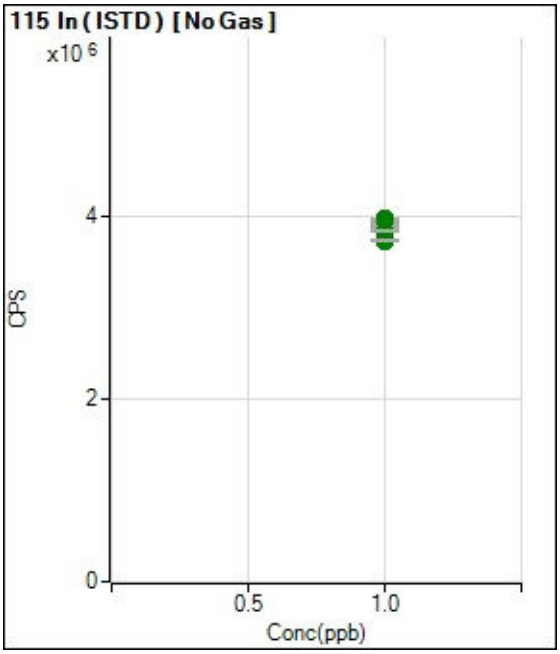


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		20780073.86		A	0.2
2	☐	1.000		20823455.58		A	0.6
3	☐	1.000		20815037.58		A	0.4
4	☐	1.000		20800440.07		A	0.4
5	☐	1.000		20530852.98		A	0.1
6	☐	1.000		20305215.67		A	0.3
7	☐	1.000		20137869.58		A	0.2
8	☐	1.000		19931387.68		A	0.5

Calibration for 016_ICV.d

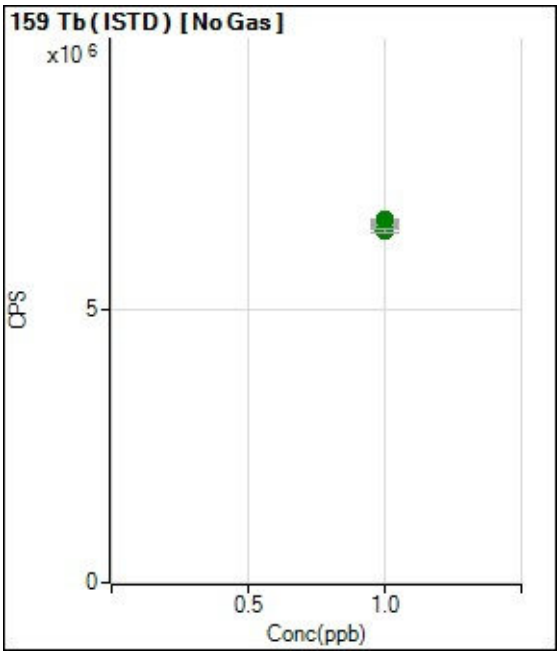


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2338398.40		A	0.4
2	☐	1.000		2334032.73		A	0.5
3	☐	1.000		2322583.63		A	0.5
4	☐	1.000		2308874.40		A	0.6
5	☐	1.000		2273794.89		A	0.3
6	☐	1.000		2221147.25		A	1.1
7	☐	1.000		2208295.70		A	0.4
8	☐	1.000		2173047.69		A	1.6

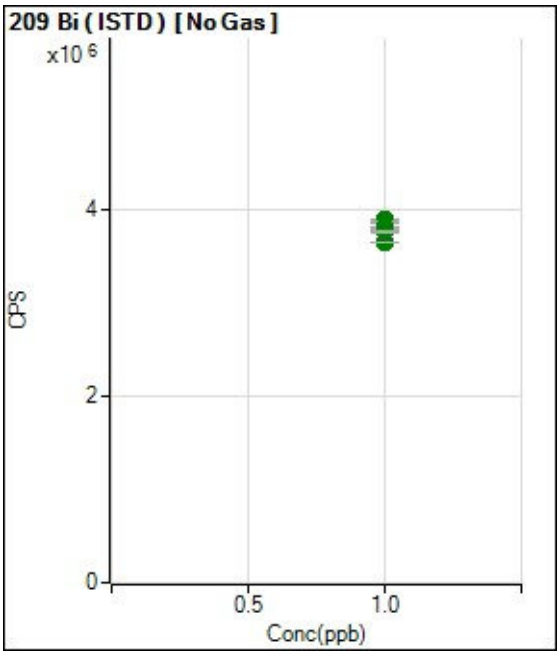


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3938591.75		A	0.6
2	☐	1.000		3952476.21		A	0.5
3	☐	1.000		3977728.95		A	0.1
4	☐	1.000		3965684.49		A	0.3
5	☐	1.000		3924721.34		A	0.4
6	☐	1.000		3892681.63		A	0.7
7	☐	1.000		3841745.67		A	0.5
8	☐	1.000		3741231.89		A	0.4

Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6605696.54		A	0.5
2	☐	1.000		6597181.15		A	0.3
3	☐	1.000		6647510.44		A	0.6
4	☐	1.000		6609924.31		A	0.6
5	☐	1.000		6605935.53		A	0.8
6	☐	1.000		6550982.04		A	0.4
7	☐	1.000		6529300.36		A	0.7
8	☐	1.000		6448405.29		A	1.4



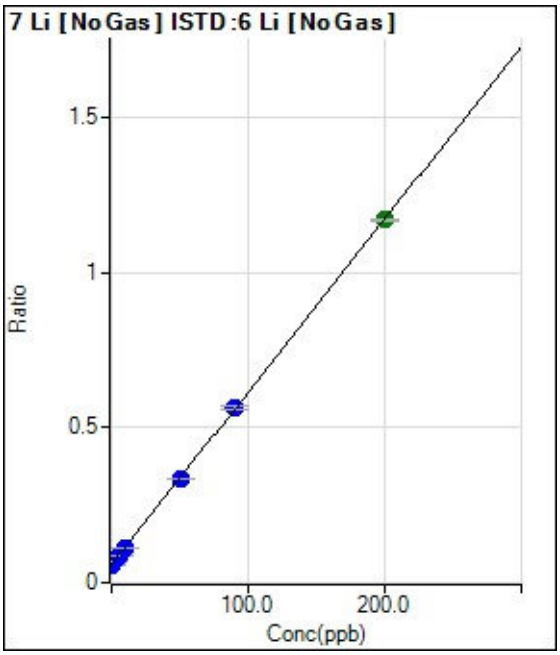
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3879471.23		A	0.4
2	☐	1.000		3865959.71		A	0.4
3	☐	1.000		3871365.26		A	0.2
4	☐	1.000		3890982.76		A	0.6
5	☐	1.000		3872905.13		A	0.3
6	☐	1.000		3812327.49		A	0.6
7	☐	1.000		3771719.43		A	0.5
8	☐	1.000		3653190.13		A	0.3

Calibration for 235_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b\
Analysis File: ICPMS3_201117.batch.bin
DA Date-Time: 2020-11-17 18:35:59
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	226CALB.d	std 1	2020-11-17 18:19:36
2	227CALS.d	std 2	2020-11-17 18:21:17
3	228CALS.d	std 3	2020-11-17 18:22:59
4	229CALS.d	std 4	2020-11-17 18:24:41
5	230CALS.d	std 5	2020-11-17 18:26:23
6	231CALS.d	std 6	2020-11-17 18:28:05
7	232CALS.d	std 7	2020-11-17 18:29:49
8	233CALS.d	std 8	2020-11-17 18:31:34

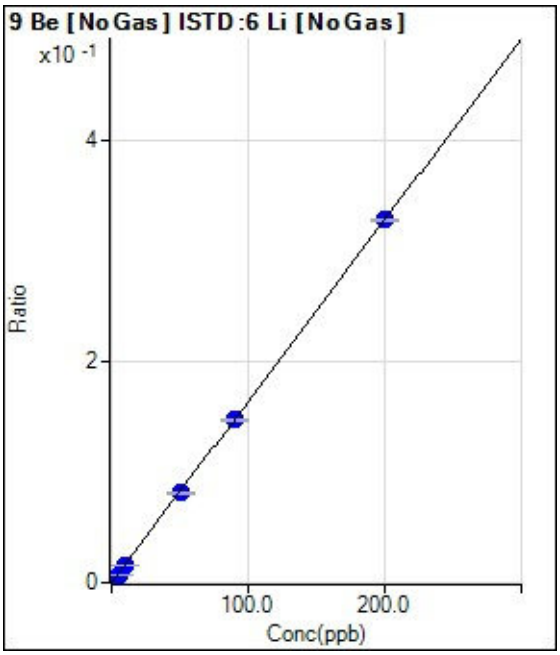
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80743.52	0.0582	P	0.5
2	☐	0.200	0.198	82693.24	0.0593	P	0.8
3	☐	2.000	1.908	95698.29	0.0688	P	1.4
4	☐	5.000	4.790	117334.18	0.0849	P	0.9
5	☐	10.000	9.472	152608.74	0.1109	P	0.9
6	☐	50.000	49.861	448228.16	0.3357	P	0.4
7	☐	90.000	90.885	742402.43	0.5639	P	1.4
8	☐	200.000	199.669	1515095.36	1.1692	A	0.2

y = 0.0056 * x + 0.0582
R = 1.0000
DL = 0.1509
BEC = 10.46

Weight: <None>
Min Conc: <None>

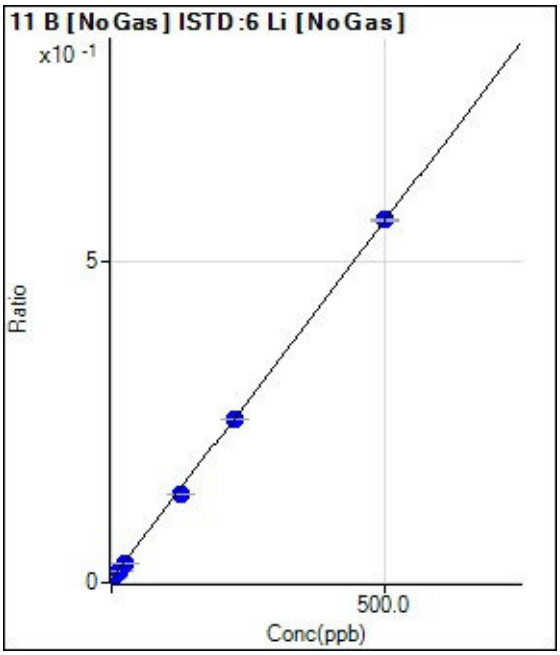


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.69	0.0000	P	43.6
2	☐	0.200	0.176	427.11	0.0003	P	7.3
3	☐	2.000	1.863	4264.98	0.0031	P	5.4
4	☐	5.000	4.692	10641.46	0.0077	P	2.5
5	☐	10.000	9.279	20913.29	0.0152	P	2.7
6	☐	50.000	49.395	107951.32	0.0808	P	0.8
7	☐	90.000	90.129	194170.69	0.1475	P	1.2
8	☐	200.000	200.138	424361.52	0.3275	P	0.2

y = 0.0016 * x + 1.9266E-005
R = 1.0000
DL = 0.01541
BEC = 0.01177

Weight: <None>
Min Conc: <None>

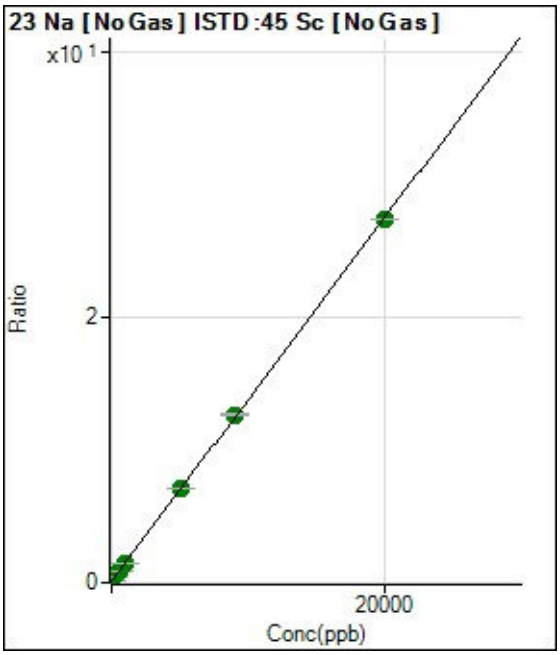
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6932.08	0.0050	P	5.7
2	☐	0.500	0.199	7275.94	0.0052	P	1.7
3	☐	5.000	4.123	13333.20	0.0096	P	1.5
4	☐	12.500	10.787	23520.11	0.0170	P	1.5
5	☐	25.000	22.589	41496.00	0.0302	P	0.6
6	☐	125.000	120.161	185421.25	0.1389	P	0.2
7	☐	225.000	223.951	335023.62	0.2545	P	0.3
8	☐	500.000	501.854	730904.50	0.5640	P	0.3

y = 0.0011 * x + 0.0050
R = 1.0000
DL = 0.7674
BEC = 4.487

Weight: <None>
Min Conc: <None>

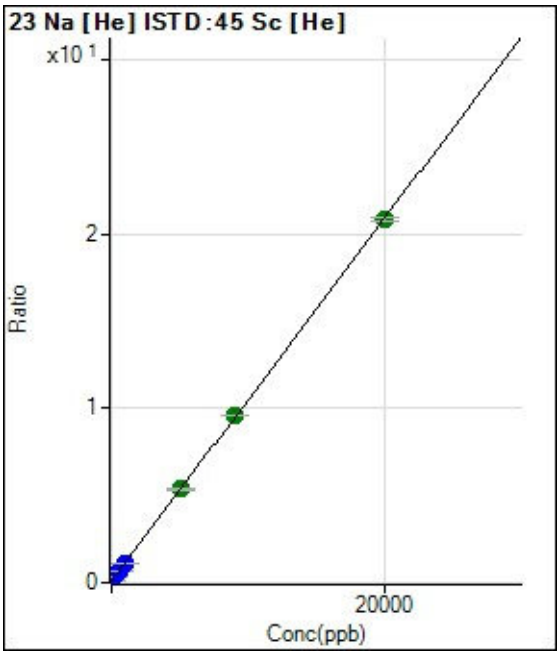


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	911450.21	0.1104	A	2.2
2	☐	20.000	19.824	1141572.23	0.1375	A	0.6
3	☐	200.000	202.911	3232311.21	0.3879	A	0.5
4	☐	500.000	507.233	6690175.15	0.8041	A	1.1
5	☐	1000.000	1004.041	12221629.44	1.4835	A	0.6
6	☐	5000.000	5121.242	58154701.30	7.1143	A	1.4
7	☐	9000.000	9179.009	103858246.07	12.6638	A	1.2
8	☐	20000.000	19888.724	223920613.34	27.3107	A	0.1

y = 0.0014 * x + 0.1104
R = 0.9999
DL = 5.354
BEC = 80.69

Weight: <None>
Min Conc: <None>

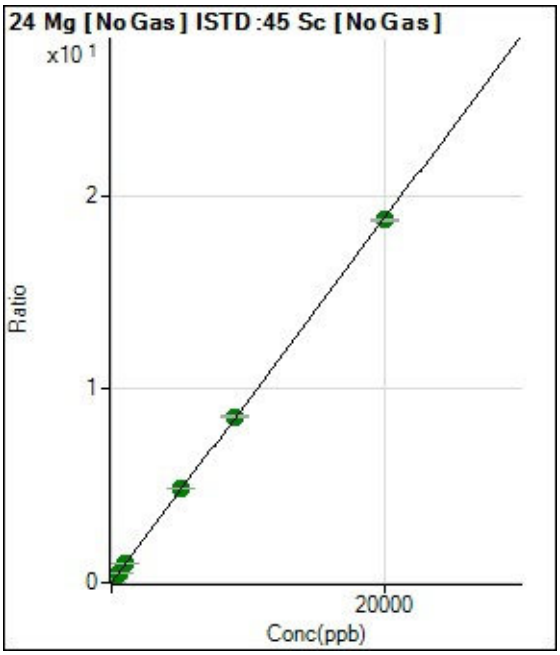
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25090.92	0.0932	P	5.1
2	☐	20.000	19.944	30742.40	0.1139	P	3.9
3	☐	200.000	208.699	82876.36	0.3104	P	0.5
4	☐	500.000	508.349	166537.53	0.6222	P	1.7
5	☐	1000.000	986.903	297658.99	1.1203	P	1.6
6	☐	5000.000	5087.993	1428106.75	5.3886	A	1.3
7	☐	9000.000	9124.902	2542182.88	9.5901	A	0.2
8	☐	20000.000	19922.155	5550930.33	20.8276	A	1.0

y = 0.0010 * x + 0.0932
R = 1.0000
DL = 13.78
BEC = 89.52

Weight: <None>
Min Conc: <None>

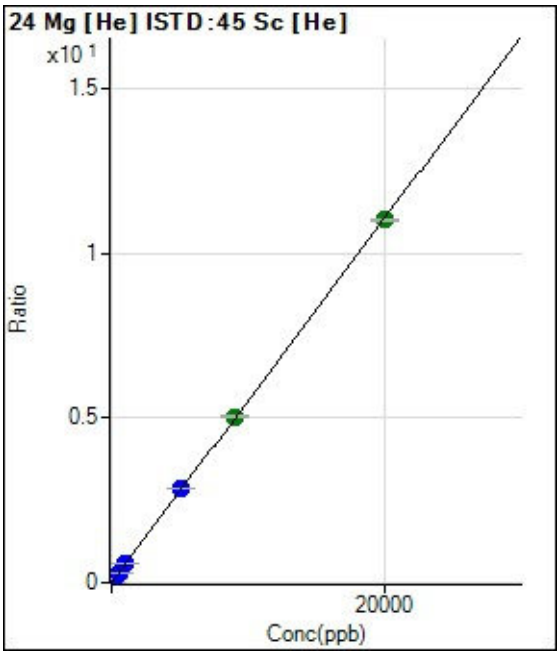


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15797.19	0.0019	P	4.1
2	☐	20.000	20.337	175110.38	0.0211	P	0.9
3	☐	200.000	205.310	1629098.21	0.1955	A	1.0
4	☐	500.000	512.053	4032881.19	0.4847	A	1.1
5	☐	1000.000	1016.704	7912788.42	0.9605	A	0.6
6	☐	5000.000	5166.876	39838064.41	4.8734	A	0.2
7	☐	9000.000	9121.887	70550512.28	8.6023	A	0.6
8	☐	20000.000	19902.242	153864424.38	18.7663	A	0.3

y = 9.4283E-004 * x + 0.0019
R = 0.9999
DL = 0.2473
BEC = 2.029

Weight: <None>
Min Conc: <None>

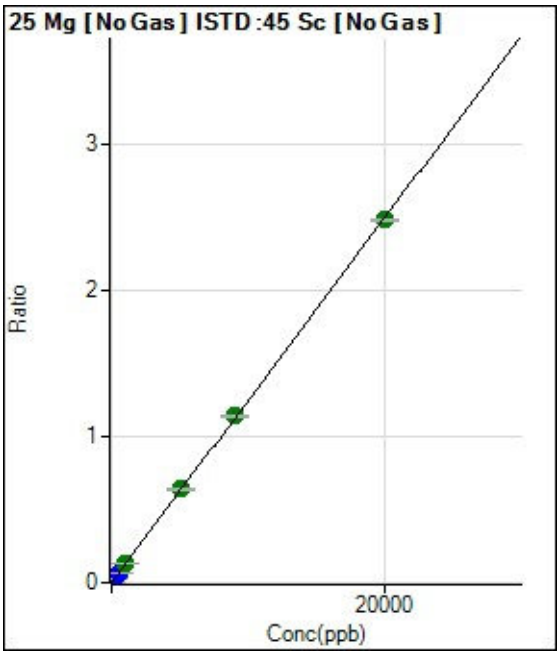
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.35	0.0009	P	18.5
2	☐	20.000	19.387	3147.24	0.0117	P	18.3
3	☐	200.000	205.893	30689.11	0.1149	P	4.2
4	☐	500.000	503.683	74884.51	0.2798	P	2.4
5	☐	1000.000	1011.867	149092.68	0.5611	P	1.3
6	☐	5000.000	5141.651	754701.87	2.8475	P	0.6
7	☐	9000.000	9095.159	1335020.60	5.0363	A	1.1
8	☐	20000.000	19921.022	2939701.62	11.0298	A	0.5

y = 5.5363E-004 * x + 9.4131E-004
R = 1.0000
DL = 0.9442
BEC = 1.7

Weight: <None>
Min Conc: <None>

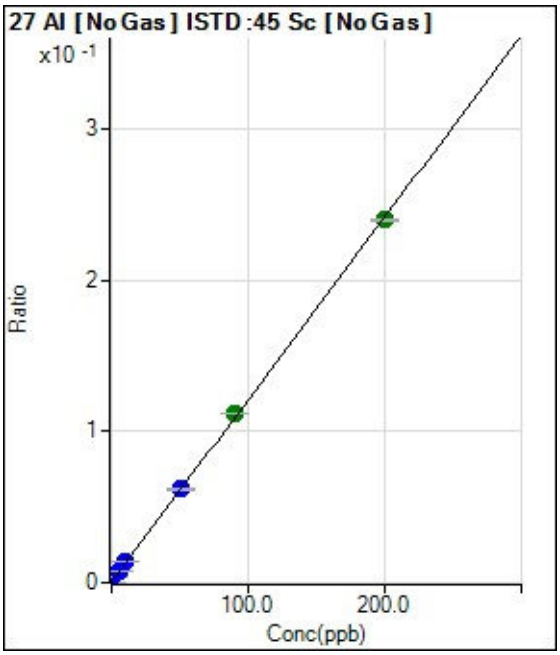


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2160.35	0.0003	P	11.6
2	☐	20.000	19.467	22352.66	0.0027	P	1.3
3	☐	200.000	203.047	213411.25	0.0256	P	2.1
4	☐	500.000	499.139	520627.36	0.0626	P	1.3
5	☐	1000.000	1011.027	1041937.77	0.1265	A	0.7
6	☐	5000.000	5127.476	5234484.29	0.6403	A	0.8
7	☐	9000.000	9143.223	9363086.53	1.1417	A	0.7
8	☐	20000.000	19903.121	20373458.86	2.4849	A	0.7

y = 1.2483E-004 * x + 2.6156E-004
R = 0.9999
DL = 0.7295
BEC = 2.095

Weight: <None>
Min Conc: <None>

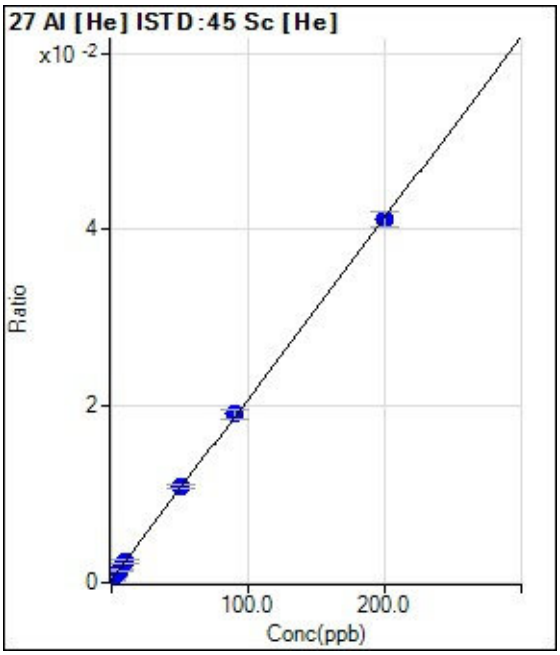
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3974.28	0.0005	P	7.3
2	☐			50763.26	0.0061	P	4.9
3	☐	2.000	3.898	43116.34	0.0052	P	48.3
4	☐	5.000	6.009	64231.12	0.0077	P	1.4
5	☐	10.000	10.745	110592.86	0.0134	P	0.9
6	☐	50.000	50.781	503957.57	0.0616	P	1.0
7	☐	90.000	92.331	916074.31	0.1117	A	0.7
8	☐	200.000	198.674	1966085.96	0.2398	A	0.3

y = 0.0012 * x + 4.8117E-004
R = 0.9999
DL = 0.0878
BEC = 0.3995

Weight: <None>
Min Conc: <None>

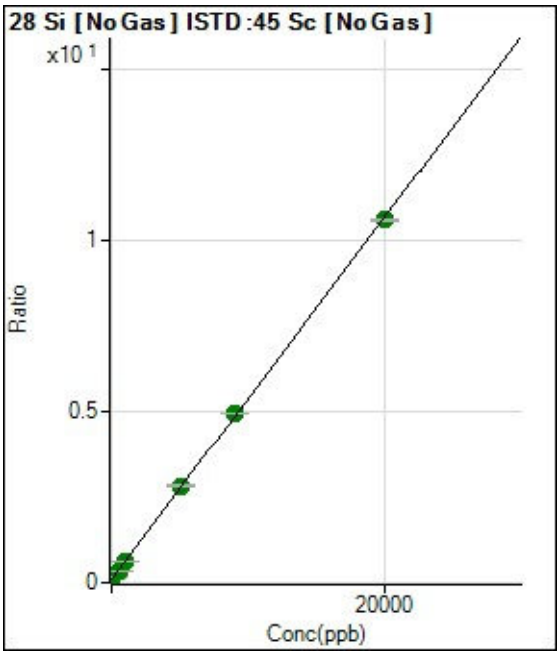


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.35	0.0003	P	104.5
2	☐			270.01	0.0010	P	7.8
3	☐	2.000	1.838	183.34	0.0007	P	18.8
4	☐	5.000	4.930	353.34	0.0013	P	16.9
5	☐	10.000	9.988	626.69	0.0024	P	14.2
6	☐	50.000	51.213	2867.02	0.0108	P	3.9
7	☐	90.000	91.873	5077.68	0.0192	P	5.6
8	☐	200.000	198.858	10957.81	0.0411	P	4.4

y = 2.0516E-004 * x + 3.0922E-004
R = 0.9999
DL = 4.724
BEC = 1.507

Weight: <None>
Min Conc: <None>

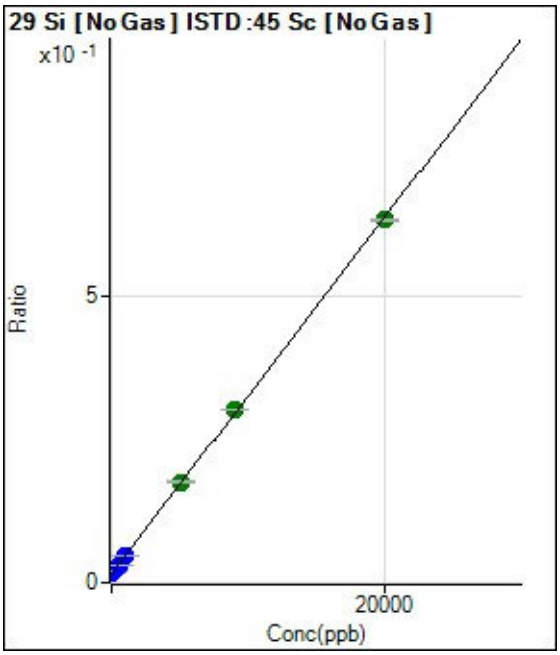
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	755728.23	0.0915	P	0.9
2	☐	20.000	16.722	833155.97	0.1003	A	0.6
3	☐	200.000	200.268	1643913.81	0.1973	A	1.6
4	☐	500.000	504.904	2980020.65	0.3582	A	0.8
5	☐	1000.000	1013.710	5164392.94	0.6269	A	0.1
6	☐	5000.000	5181.428	23117267.32	2.8280	A	0.7
7	☐	9000.000	9198.607	40593465.21	4.9496	A	0.5
8	☐	20000.000	19864.462	86769239.42	10.5827	A	0.8

y = 5.2814E-004 * x + 0.0915
R = 0.9999
DL = 4.84
BEC = 173.2

Weight: <None>
Min Conc: <None>

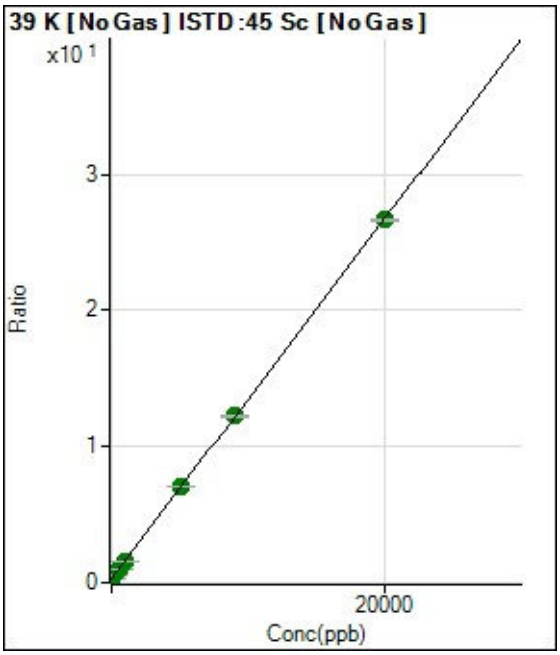


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	129200.63	0.0156	P	0.8
2	☐	20.000	11.513	132864.64	0.0160	P	0.9
3	☐	200.000	196.265	181143.19	0.0217	P	0.6
4	☐	500.000	496.427	258398.77	0.0311	P	0.6
5	☐	1000.000	1003.072	385445.71	0.0468	P	0.1
6	☐	5000.000	5162.937	1438274.26	0.1759	A	0.7
7	☐	9000.000	9204.346	2472147.10	0.3014	A	0.9
8	☐	20000.000	19867.292	5185996.22	0.6325	A	0.3

y = 3.1049E-005 * x + 0.0156
R = 0.9999
DL = 11.38
BEC = 503.8

Weight: <None>
Min Conc: <None>

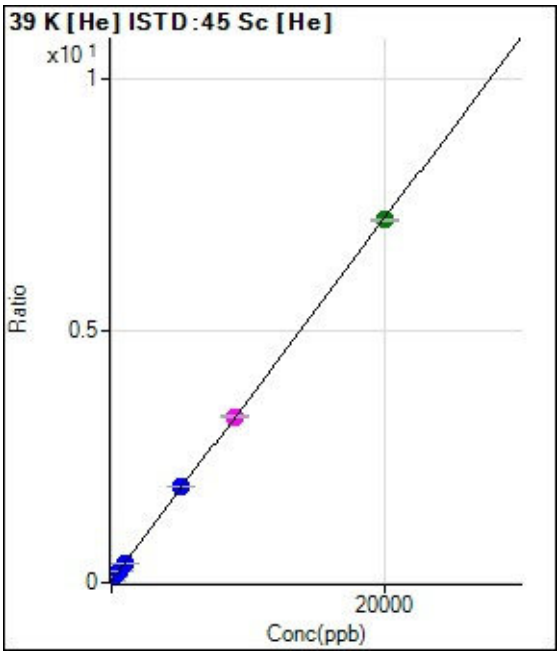
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2383771.89	0.2886	A	0.2
2	☐	20.000	19.480	2610276.47	0.3143	A	0.6
3	☐	200.000	199.095	4596106.29	0.5515	A	0.4
4	☐	500.000	499.048	7884513.22	0.9476	A	0.5
5	☐	1000.000	995.922	13212168.13	1.6037	A	0.3
6	☐	5000.000	5092.503	57332230.81	7.0133	A	0.5
7	☐	9000.000	9045.660	100332055.17	12.2335	A	0.4
8	☐	20000.000	19956.564	218436623.41	26.6415	A	0.4

y = 0.0013 * x + 0.2886
R = 1.0000
DL = 1.311
BEC = 218.6

Weight: <None>
Min Conc: <None>

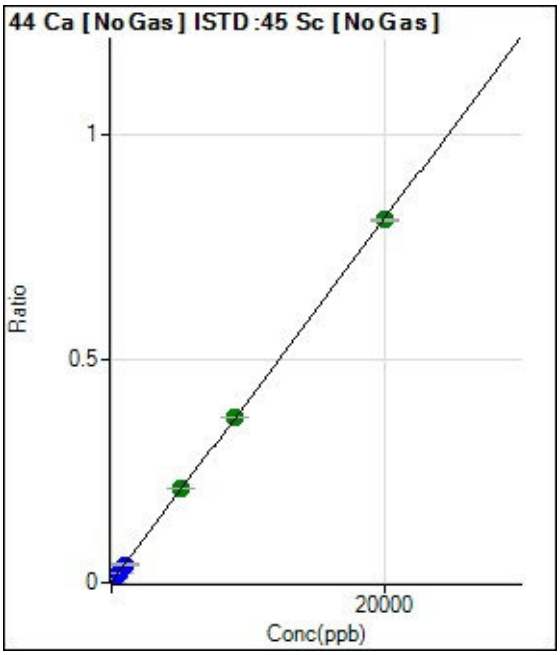


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9737.40	0.0362	P	3.2
2	☐	20.000	19.146	11619.12	0.0431	P	4.0
3	☐	200.000	204.727	29353.30	0.1099	P	5.9
4	☐	500.000	506.495	58513.50	0.2186	P	3.2
5	☐	1000.000	989.910	104358.37	0.3928	P	1.8
6	☐	5000.000	5222.033	508165.93	1.9174	P	0.8
7	☐	9000.000	9059.028	874662.67	3.2997	M	1.3
8	☐	20000.000	19918.225	1922100.44	7.2117	A	0.4

y = 3.6025E-004 * x + 0.0362
R = 0.9999
DL = 9.493
BEC = 100.4

Weight: <None>
Min Conc: <None>

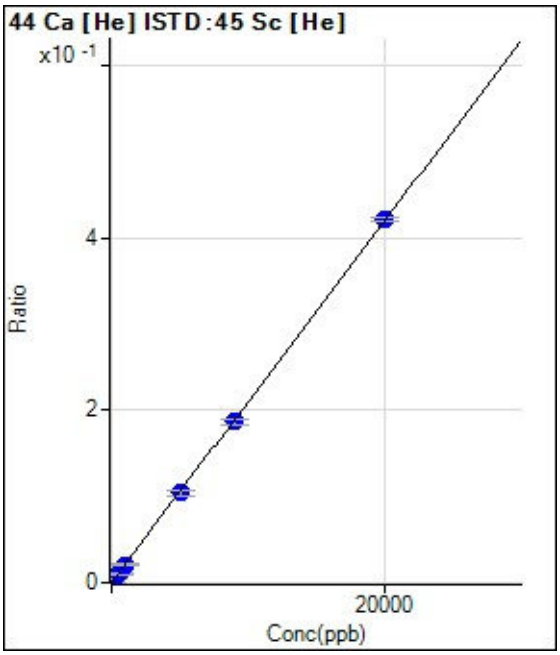
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6135.07	0.0007	P	13.8
2	☐	20.000	22.874	13888.22	0.0017	P	5.7
3	☐	200.000	196.752	72836.57	0.0087	P	0.3
4	☐	500.000	498.880	174896.71	0.0210	P	2.2
5	☐	1000.000	983.689	335508.41	0.0407	P	0.9
6	☐	5000.000	5125.653	1709129.56	0.2091	A	0.2
7	☐	9000.000	9097.484	3038735.58	0.3705	A	0.5
8	☐	20000.000	19925.592	6646489.69	0.8106	A	0.7

y = 4.0646E-005 * x + 7.4276E-004
R = 1.0000
DL = 7.579
BEC = 18.27

Weight: <None>
Min Conc: <None>

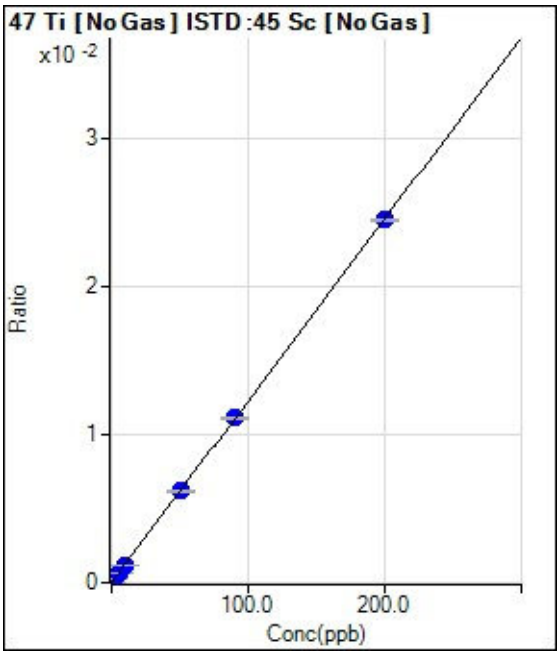


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0002	P	91.9
2	☐	20.000	25.786	213.35	0.0008	P	65.3
3	☐	200.000	212.246	1253.50	0.0047	P	10.9
4	☐	500.000	475.722	2733.81	0.0102	P	16.4
5	☐	1000.000	982.902	5534.93	0.0208	P	8.9
6	☐	5000.000	4942.576	27495.95	0.1038	P	4.7
7	☐	9000.000	8884.230	49384.56	0.1863	P	2.8
8	☐	20000.000	20067.786	112072.86	0.4205	P	1.1

y = 2.0942E-005 * x + 2.4832E-004
R = 1.0000
DL = 32.69
BEC = 11.86

Weight: <None>
Min Conc: <None>

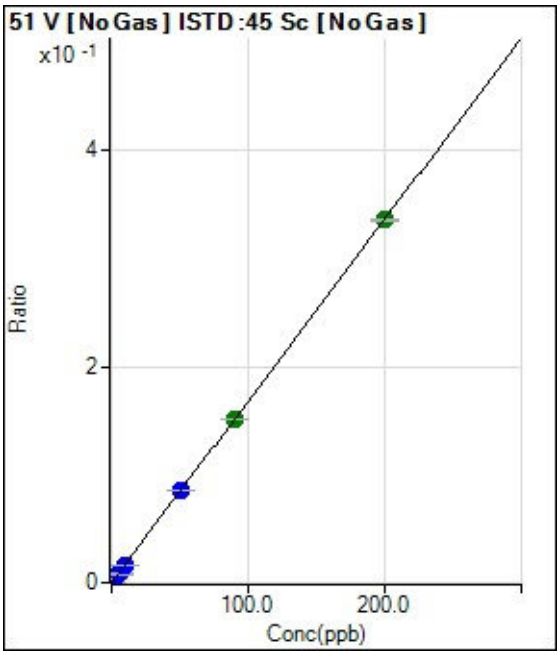
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.11	0.0000	P	23.8
2	☐	0.200	0.285	400.42	0.0000	P	21.9
3	☐	2.000	1.774	1922.10	0.0002	P	11.6
4	☐	5.000	5.001	5206.30	0.0006	P	3.2
5	☐	10.000	9.731	9926.98	0.0012	P	3.0
6	☐	50.000	50.518	50684.08	0.0062	P	2.5
7	☐	90.000	90.557	91060.91	0.0111	P	1.2
8	☐	200.000	199.635	200553.97	0.0245	P	0.3

y = 1.2246E-004 * x + 1.3327E-005
R = 1.0000
DL = 0.07783
BEC = 0.1088

Weight: <None>
Min Conc: <None>

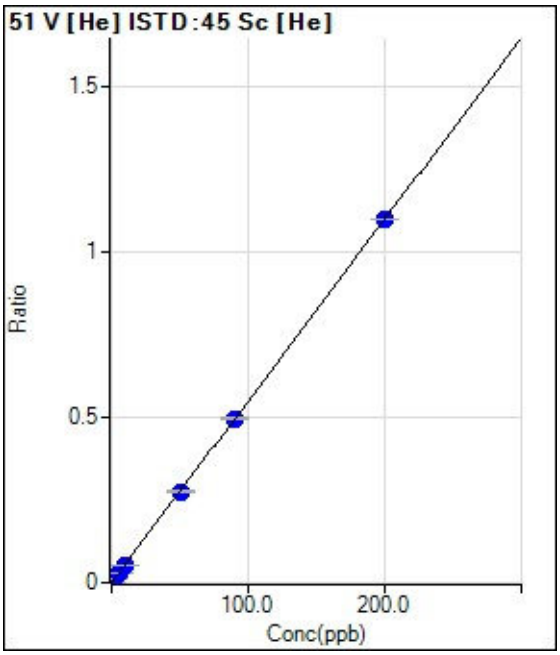


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.39	0.0000	P	621.4
2	☐	0.200	0.004	185.78	0.0000	P	919.2
3	☐	2.000	2.035	28627.79	0.0034	P	6.8
4	☐	5.000	4.768	66789.28	0.0080	P	1.5
5	☐	10.000	9.837	136279.76	0.0165	P	1.7
6	☐	50.000	50.747	697046.11	0.0853	P	0.5
7	☐	90.000	89.951	1239486.00	0.1511	A	0.6
8	☐	200.000	199.849	2752943.50	0.3358	A	0.5

y = 0.0017 * x + 1.6045E-005
R = 1.0000
DL = 0.178
BEC = 0.009551

Weight: <None>
Min Conc: <None>

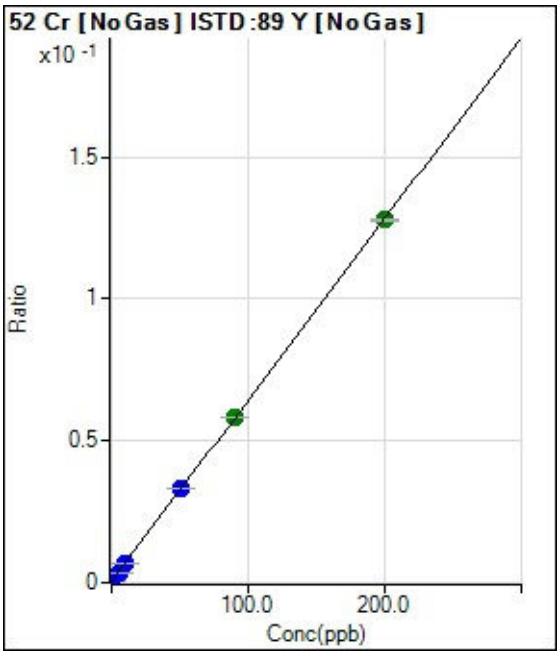
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0004	P	11.7
2	☐	0.200	0.171	350.36	0.0013	P	15.0
3	☐	2.000	1.965	2980.03	0.0112	P	5.5
4	☐	5.000	4.856	7239.28	0.0270	P	3.2
5	☐	10.000	9.692	14248.49	0.0536	P	1.3
6	☐	50.000	50.116	73097.38	0.2758	P	0.9
7	☐	90.000	90.411	131812.61	0.4973	P	0.8
8	☐	200.000	199.806	292779.31	1.0985	P	0.1

y = 0.0055 * x + 3.5930E-004
R = 1.0000
DL = 0.02285
BEC = 0.06537

Weight: <None>
Min Conc: <None>

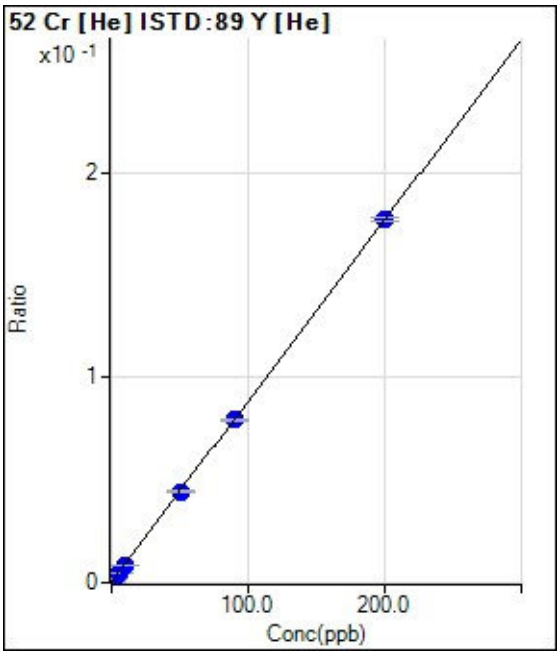


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10568.12	0.0005	P	1.8
2	☐	0.200	0.219	13346.70	0.0007	P	2.4
3	☐	2.000	1.986	35086.87	0.0018	P	2.9
4	☐	5.000	4.951	71648.29	0.0037	P	0.6
5	☐	10.000	9.906	131549.66	0.0069	P	0.3
6	☐	50.000	51.097	628058.23	0.0331	P	0.5
7	☐	90.000	90.376	1100190.17	0.0582	A	0.4
8	☐	200.000	199.563	2421396.87	0.1278	A	0.2

y = 6.3750E-004 * x + 5.4926E-004
R = 1.0000
DL = 0.04549
BEC = 0.8616

Weight: <None>
Min Conc: <None>

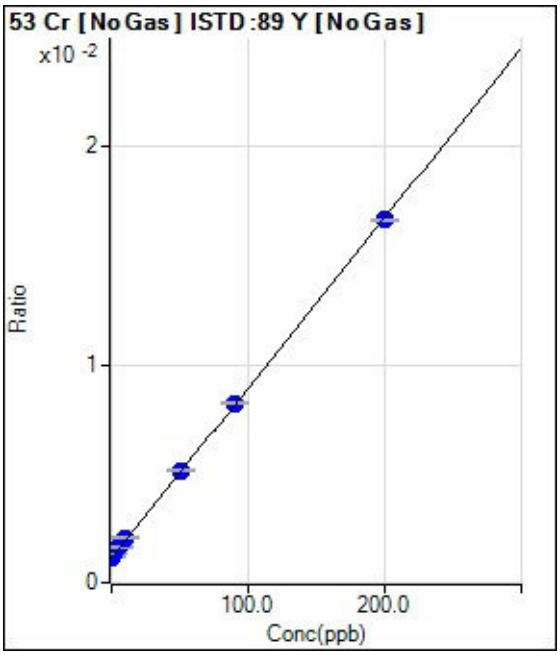
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	754.12	0.0004	P	6.9
2	☐	0.200	0.194	1124.52	0.0005	P	9.1
3	☐	2.000	1.825	4151.52	0.0020	P	6.7
4	☐	5.000	4.873	9739.99	0.0047	P	5.0
5	☐	10.000	9.447	18043.43	0.0087	P	1.3
6	☐	50.000	50.017	91246.17	0.0445	P	1.0
7	☐	90.000	89.494	161367.19	0.0793	P	0.6
8	☐	200.000	200.256	360959.80	0.1770	P	1.0

y = 8.8188E-004 * x + 3.5876E-004
R = 1.0000
DL = 0.08375
BEC = 0.4068

Weight: <None>
Min Conc: <None>

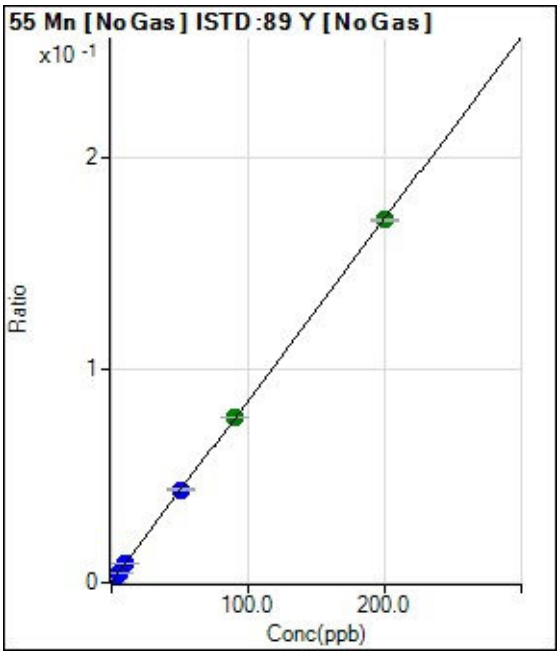


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21702.49	0.0011	P	1.0
2	☐	0.200	1.682	24399.74	0.0013	P	0.9
3	☐	2.000	2.690	25863.95	0.0013	P	2.0
4	☐	5.000	6.476	31588.39	0.0016	P	0.5
5	☐	10.000	11.983	39546.75	0.0021	P	1.4
6	☐	50.000	51.568	97740.73	0.0052	P	1.4
7	☐	90.000	91.251	156119.83	0.0083	P	1.5
8	☐	200.000	198.901	315703.64	0.0167	P	0.4

y = 7.8082E-005 * x + 0.0011
R = 0.9999
DL = 0.4495
BEC = 14.45

Weight: <None>
Min Conc: <None>

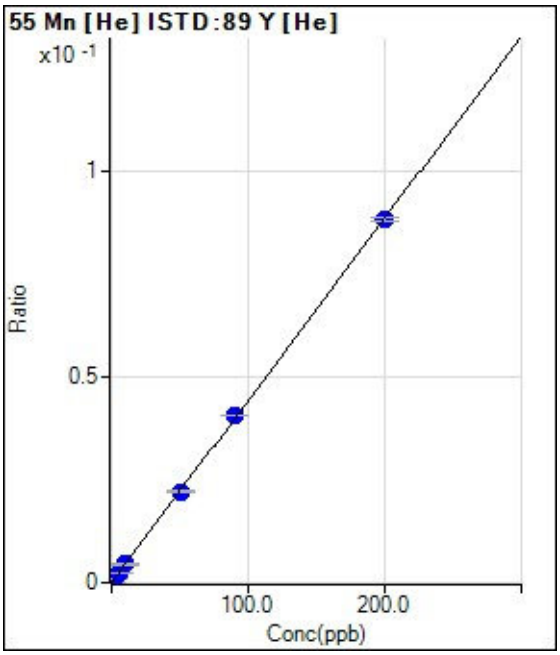
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4865.83	0.0003	P	2.8
2	☐	0.200	0.210	8377.75	0.0004	P	2.9
3	☐	2.000	2.051	38727.20	0.0020	P	0.9
4	☐	5.000	5.072	88573.89	0.0046	P	1.6
5	☐	10.000	9.951	167598.73	0.0087	P	1.3
6	☐	50.000	50.939	829064.53	0.0437	P	0.9
7	☐	90.000	90.823	1470889.59	0.0778	A	0.1
8	☐	200.000	199.395	3229525.37	0.1704	A	0.5

y = 8.5340E-004 * x + 2.5290E-004
R = 1.0000
DL = 0.02534
BEC = 0.2963

Weight: <None>
Min Conc: <None>

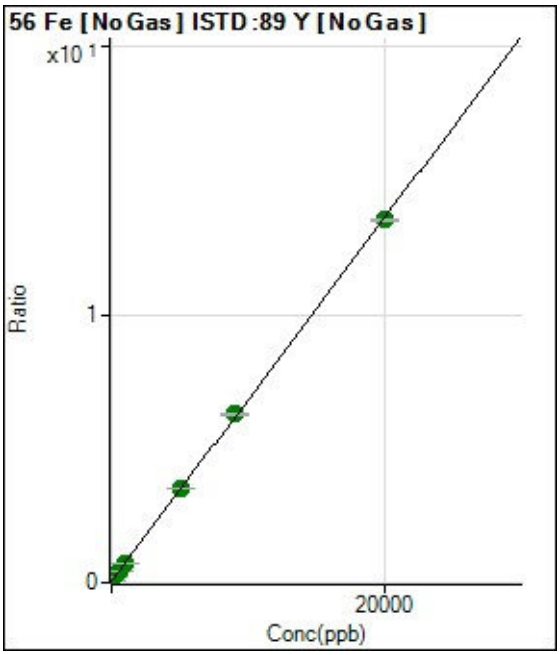


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0000	P	42.8
2	☐	0.200	0.227	310.32	0.0001	P	9.0
3	☐	2.000	2.009	1968.82	0.0009	P	5.6
4	☐	5.000	4.879	4605.46	0.0022	P	4.8
5	☐	10.000	9.976	9245.85	0.0045	P	5.0
6	☐	50.000	49.874	45313.70	0.0221	P	1.0
7	☐	90.000	91.674	82547.03	0.0406	P	0.7
8	☐	200.000	199.283	179718.69	0.0881	P	0.9

y = 4.4188E-004 * x + 4.5984E-005
R = 1.0000
DL = 0.1336
BEC = 0.1041

Weight: <None>
Min Conc: <None>

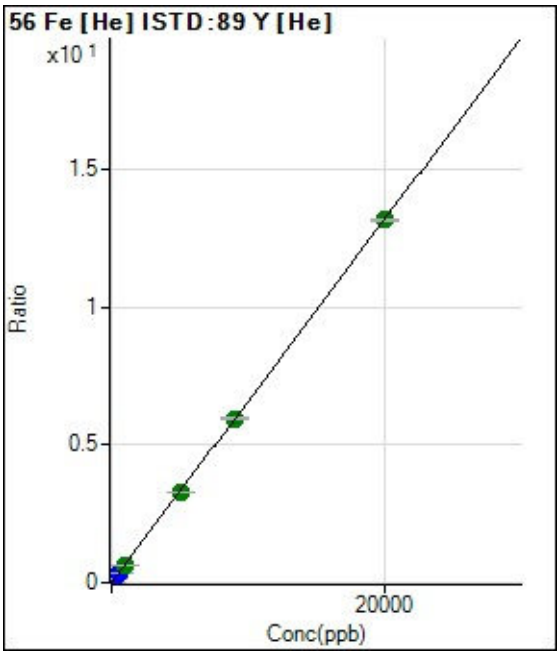
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1053666.40	0.0548	A	1.6
2	☐	20.000	19.134	1312515.59	0.0677	A	1.3
3	☐	200.000	197.513	3648667.66	0.1887	A	0.5
4	☐	500.000	504.083	7670321.79	0.3967	A	0.6
5	☐	1000.000	993.913	13969770.62	0.7290	A	1.1
6	☐	5000.000	5102.711	66669543.16	3.5160	A	0.3
7	☐	9000.000	9184.332	118877060.99	6.2847	A	0.5
8	☐	20000.000	19891.601	256747397.40	13.5477	A	0.4

y = 6.7832E-004 * x + 0.0548
R = 0.9999
DL = 3.953
BEC = 80.74

Weight: <None>
Min Conc: <None>

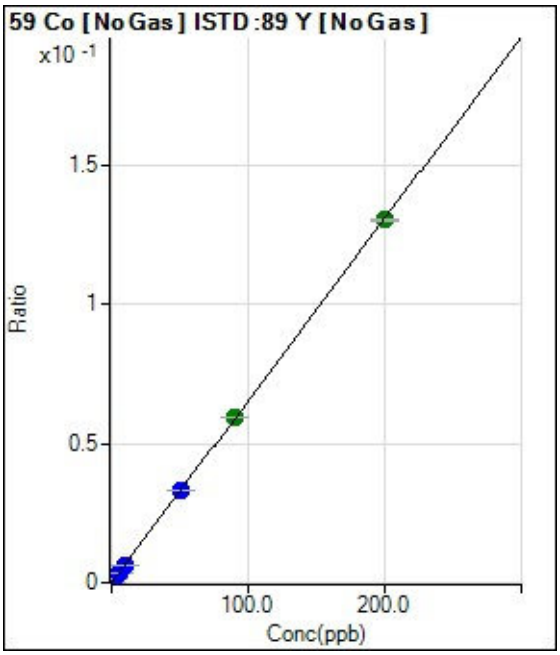


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7896.41	0.0038	P	11.0
2	☐	20.000	21.034	37338.32	0.0176	P	6.4
3	☐	200.000	205.770	293580.17	0.1392	P	1.9
4	☐	500.000	519.272	723010.22	0.3456	P	0.4
5	☐	1000.000	976.769	1342873.89	0.6468	A	0.4
6	☐	5000.000	4991.638	6750621.15	3.2900	A	0.5
7	☐	9000.000	9048.893	12132974.82	5.9610	A	0.5
8	☐	20000.000	19980.710	26839432.10	13.1579	A	0.5

y = 6.5834E-004 * x + 0.0038
R = 1.0000
DL = 1.881
BEC = 5.708

Weight: <None>
Min Conc: <None>

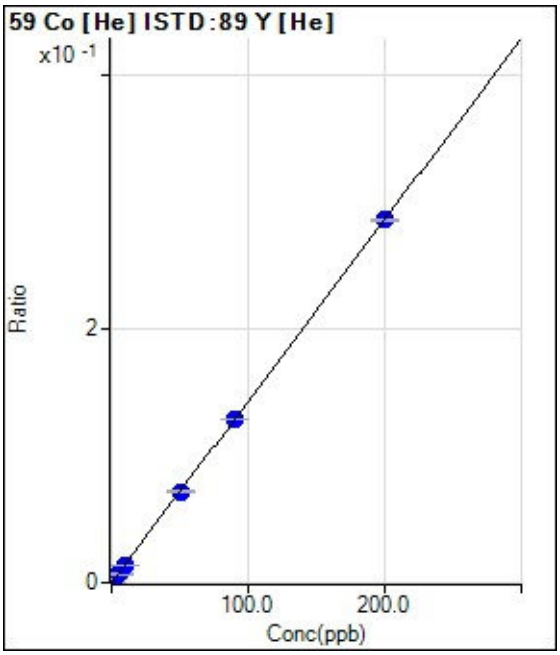
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	550.57	0.0000	P	18.8
2	☐	0.200	0.193	2993.37	0.0002	P	5.8
3	☐	2.000	2.018	26004.44	0.0013	P	2.4
4	☐	5.000	4.994	63544.48	0.0033	P	0.6
5	☐	10.000	9.896	124264.90	0.0065	P	1.9
6	☐	50.000	50.751	628319.15	0.0331	P	0.8
7	☐	90.000	90.887	1122063.76	0.0593	A	0.5
8	☐	200.000	199.418	2465964.93	0.1301	A	0.6

y = 6.5237E-004 * x + 2.8610E-005
R = 1.0000
DL = 0.02476
BEC = 0.04386

Weight: <None>
Min Conc: <None>

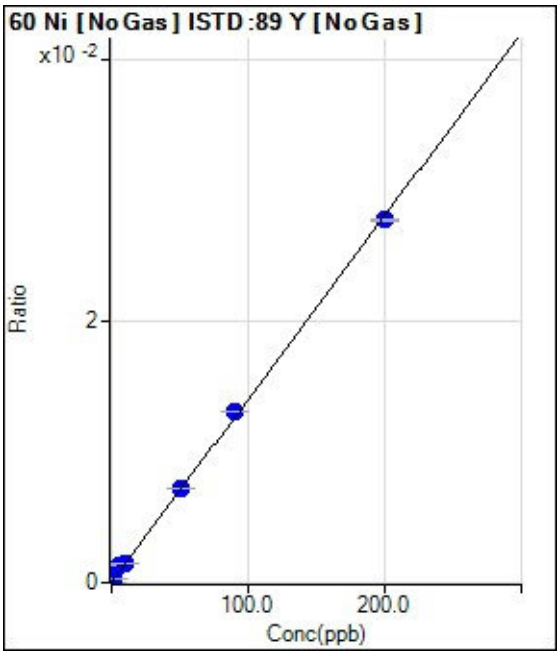


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.41	0.0000	P	39.6
2	☐	0.200	0.197	670.70	0.0003	P	27.1
3	☐	2.000	1.922	5860.57	0.0028	P	6.3
4	☐	5.000	4.795	14398.90	0.0069	P	2.8
5	☐	10.000	9.706	28849.57	0.0139	P	0.9
6	☐	50.000	50.122	146943.96	0.0716	P	1.0
7	☐	90.000	89.958	261553.65	0.1285	P	0.6
8	☐	200.000	200.009	582714.54	0.2857	P	0.3

y = 0.0014 * x + 3.4959E-005
R = 1.0000
DL = 0.02907
BEC = 0.02448

Weight: <None>
Min Conc: <None>

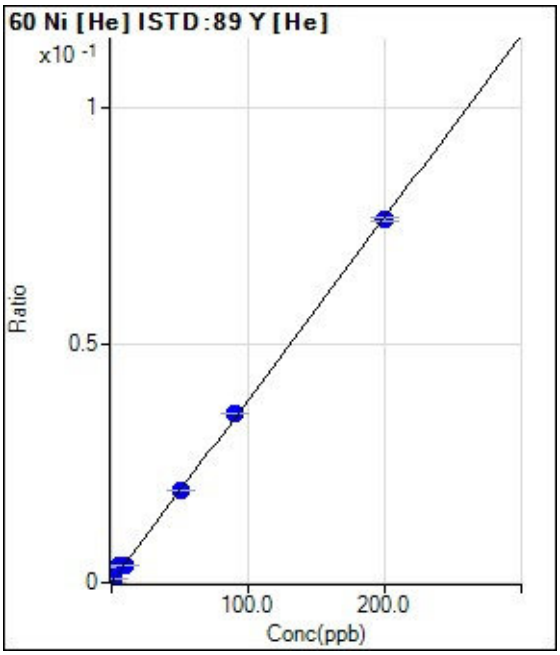
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.73	0.0000	P	5.6
2	☐	0.200	0.234	1021.07	0.0001	P	4.0
3	☐	2.000	2.114	6100.88	0.0003	P	2.6
4	☐	5.000	9.022	24787.53	0.0013	P	1.8
5	☐	10.000	10.002	27191.23	0.0014	P	1.5
6	☐	50.000	51.494	136944.22	0.0072	P	0.9
7	☐	90.000	93.421	247542.60	0.0131	P	0.7
8	☐	200.000	197.986	525187.07	0.0277	P	0.5

y = 1.3987E-004 * x + 1.9945E-005
R = 0.9996
DL = 0.02392
BEC = 0.1426

Weight: <None>
Min Conc: <None>

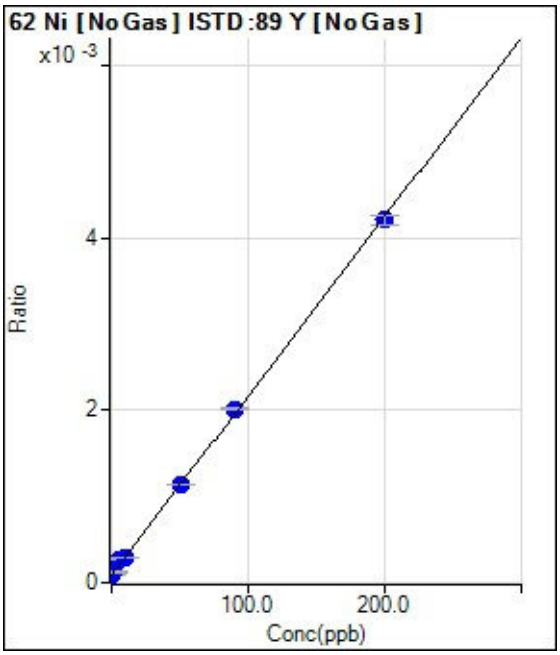


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.41	0.0000	P	42.0
2	☐	0.200	0.236	266.94	0.0001	P	28.1
3	☐	2.000	1.871	1588.38	0.0008	P	2.6
4	☐	5.000	8.953	7262.65	0.0035	P	3.9
5	☐	10.000	9.432	7589.83	0.0037	P	1.7
6	☐	50.000	50.730	40028.87	0.0195	P	0.6
7	☐	90.000	92.278	72165.85	0.0355	P	0.3
8	☐	200.000	198.723	155667.32	0.0763	P	1.1

y = 3.8385E-004 * x + 3.4959E-005
R = 0.9997
DL = 0.1147
BEC = 0.09107

Weight: <None>
Min Conc: <None>

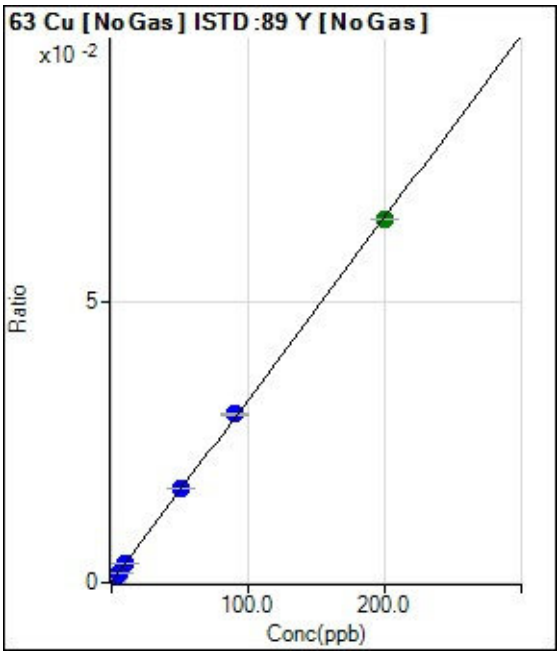
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1665.14	0.0001	P	8.4
2	☐	0.200	-0.013	1671.81	0.0001	P	5.6
3	☐	2.000	2.041	2492.77	0.0001	P	11.2
4	☐	5.000	8.825	5219.63	0.0003	P	1.5
5	☐	10.000	9.754	5543.42	0.0003	P	3.5
6	☐	50.000	50.804	21662.48	0.0011	P	0.5
7	☐	90.000	92.961	38185.17	0.0020	P	1.4
8	☐	200.000	198.383	79772.20	0.0042	P	2.6

y = 2.0784E-005 * x + 8.6537E-005
R = 0.9997
DL = 1.045
BEC = 4.164

Weight: <None>
Min Conc: <None>

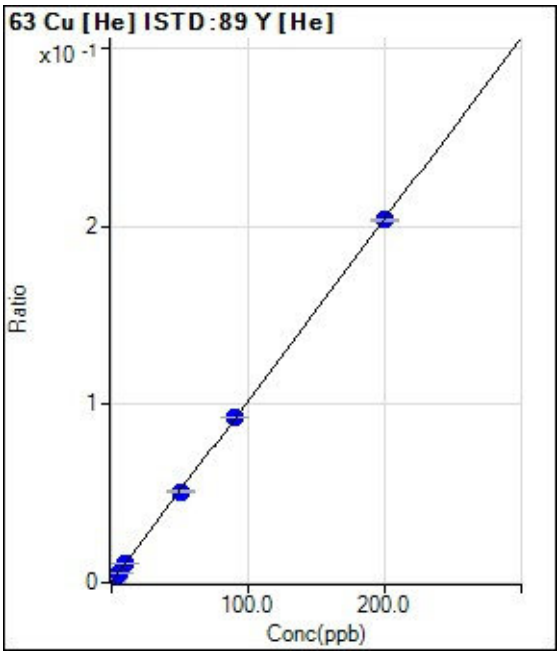


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2118.99	0.0001	P	4.1
2	☐	0.200	0.418	4752.33	0.0002	P	4.2
3	☐	2.000	2.045	14919.99	0.0008	P	4.6
4	☐	5.000	5.199	34655.63	0.0018	P	1.0
5	☐	10.000	10.280	65857.90	0.0034	P	1.7
6	☐	50.000	51.578	318531.40	0.0168	P	0.4
7	☐	90.000	92.021	565269.37	0.0299	P	0.8
8	☐	200.000	198.676	1220335.91	0.0644	A	0.2

y = 3.2356E-004 * x + 1.1014E-004
R = 0.9999
DL = 0.04196
BEC = 0.3404

Weight: <None>
Min Conc: <None>

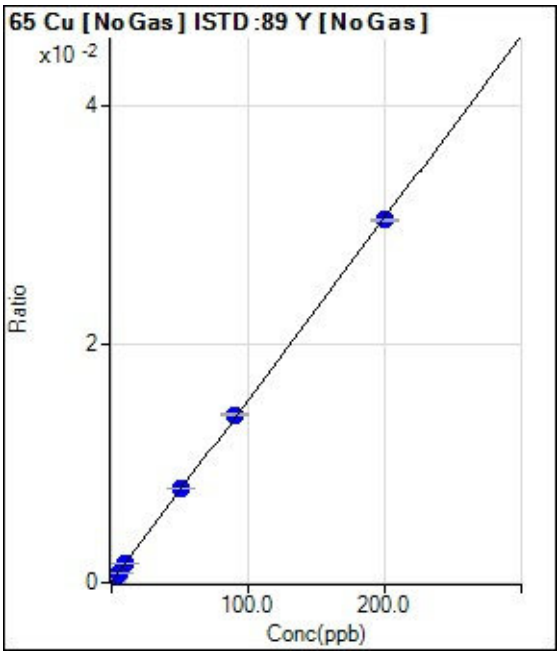
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	650.68	0.0003	P	6.0
2	☐	0.200	0.326	1361.45	0.0006	P	9.6
3	☐	2.000	1.965	4879.18	0.0023	P	3.0
4	☐	5.000	4.845	10985.58	0.0053	P	2.6
5	☐	10.000	10.062	21949.92	0.0106	P	1.0
6	☐	50.000	49.932	105131.76	0.0512	P	1.2
7	☐	90.000	90.941	189420.74	0.0931	P	0.9
8	☐	200.000	199.594	415885.61	0.2039	P	0.5

y = 0.0010 * x + 3.0966E-004
R = 1.0000
DL = 0.05433
BEC = 0.3036

Weight: <None>
Min Conc: <None>

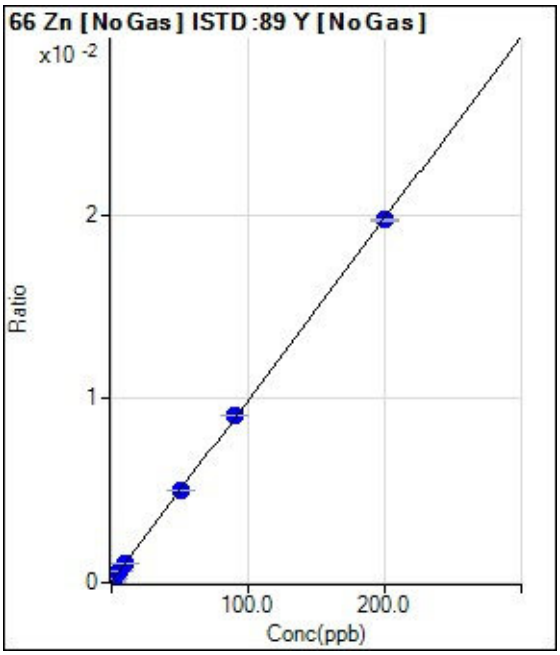


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1087.82	0.0001	P	7.5
2	☐	0.200	0.368	2185.74	0.0001	P	13.9
3	☐	2.000	2.071	7215.93	0.0004	P	1.7
4	☐	5.000	5.081	16119.21	0.0008	P	0.6
5	☐	10.000	10.518	31912.94	0.0017	P	2.6
6	☐	50.000	51.106	149283.82	0.0079	P	0.9
7	☐	90.000	91.817	266706.28	0.0141	P	1.2
8	☐	200.000	198.877	577513.93	0.0305	P	0.5

y = 1.5294E-004 * x + 5.6535E-005
R = 0.9999
DL = 0.08363
BEC = 0.3696

Weight: <None>
Min Conc: <None>

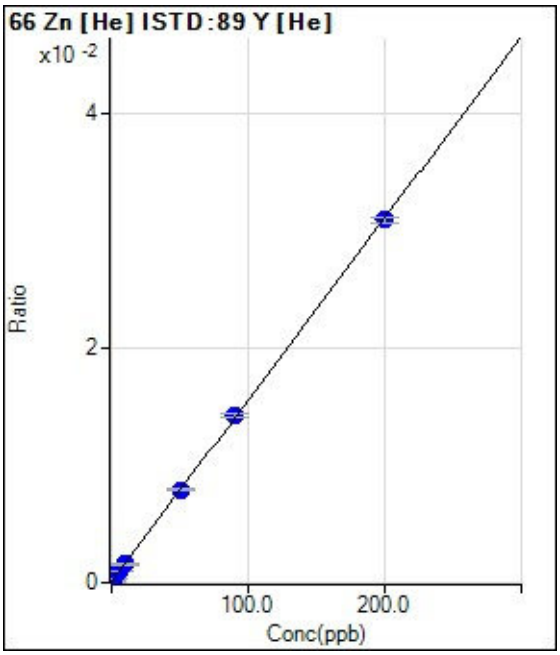
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	957.67	0.0000	P	5.8
2	☐	0.200	0.356	1645.11	0.0001	P	4.7
3	☐	2.000	2.019	4812.43	0.0002	P	5.5
4	☐	5.000	5.874	12167.76	0.0006	P	2.7
5	☐	10.000	9.740	19370.07	0.0010	P	2.1
6	☐	50.000	50.120	94709.03	0.0050	P	0.8
7	☐	90.000	91.678	172041.64	0.0091	P	0.4
8	☐	200.000	199.206	373417.25	0.0197	P	0.5

y = 9.8665E-005 * x + 4.9772E-005
R = 0.9999
DL = 0.08821
BEC = 0.5045

Weight: <None>
Min Conc: <None>

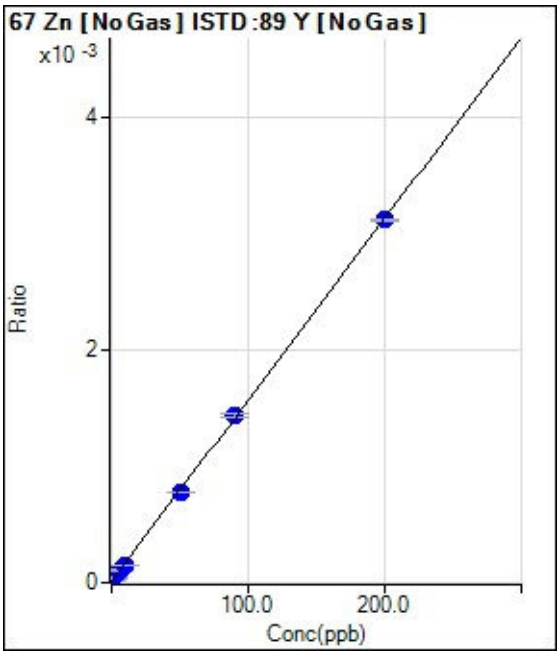


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.20	0.0001	P	23.9
2	☐	0.200	0.177	250.26	0.0001	P	10.4
3	☐	2.000	1.856	797.50	0.0004	P	16.0
4	☐	5.000	5.433	1952.12	0.0009	P	6.4
5	☐	10.000	9.560	3267.05	0.0016	P	3.9
6	☐	50.000	50.651	16306.33	0.0079	P	2.2
7	☐	90.000	91.543	29087.07	0.0143	P	1.5
8	☐	200.000	199.155	63203.30	0.0310	P	1.9

y = 1.5512E-004 * x + 9.0475E-005
R = 0.9999
DL = 0.4178
BEC = 0.5833

Weight: <None>
Min Conc: <None>

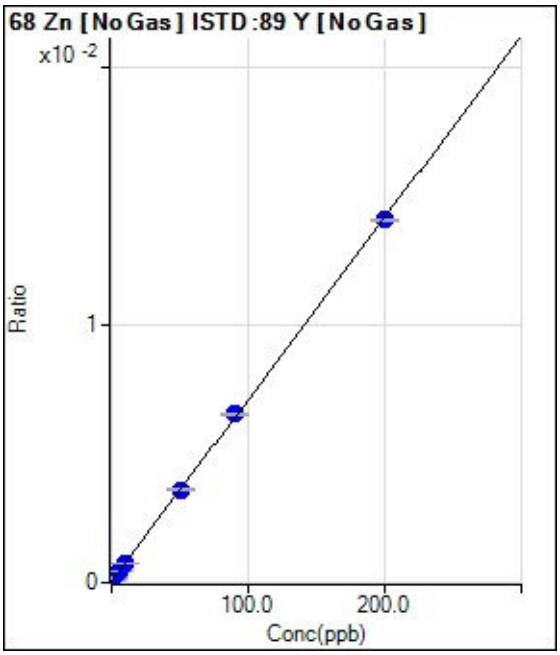
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.91	0.0000	P	25.8
2	☐	0.200	0.237	310.32	0.0000	P	16.6
3	☐	2.000	1.903	810.85	0.0000	P	9.3
4	☐	5.000	5.978	2038.90	0.0001	P	4.3
5	☐	10.000	8.956	2909.94	0.0002	P	4.6
6	☐	50.000	49.233	14776.30	0.0008	P	1.5
7	☐	90.000	91.748	27265.11	0.0014	P	2.7
8	☐	200.000	199.434	59110.71	0.0031	P	0.2

y = 1.5578E-005 * x + 1.2312E-005
R = 0.9999
DL = 0.6108
BEC = 0.7904

Weight: <None>
Min Conc: <None>

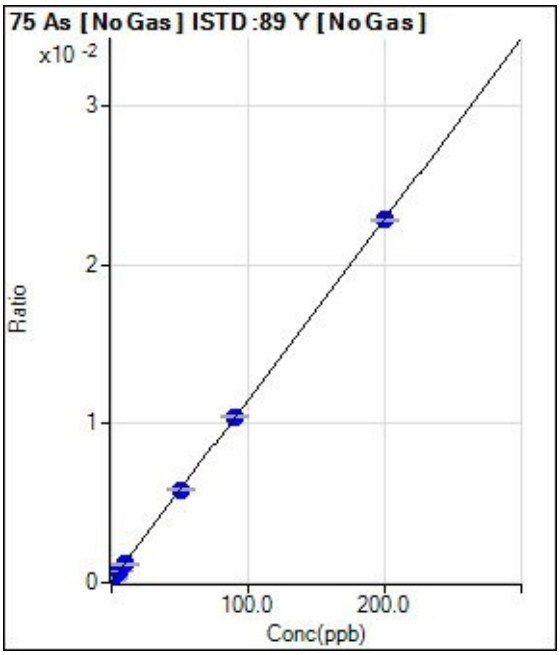


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	880.93	0.0000	P	7.3
2	☐	0.200	0.173	1124.52	0.0001	P	2.5
3	☐	2.000	2.003	3620.84	0.0002	P	7.4
4	☐	5.000	5.731	8718.33	0.0005	P	3.8
5	☐	10.000	9.978	14392.23	0.0008	P	3.3
6	☐	50.000	50.441	68467.13	0.0036	P	1.5
7	☐	90.000	92.231	124176.88	0.0066	P	1.1
8	☐	200.000	198.869	267248.79	0.0141	P	0.2

y = 7.0681E-005 * x + 4.5783E-005
R = 0.9999
DL = 0.1427
BEC = 0.6477

Weight: <None>
Min Conc: <None>

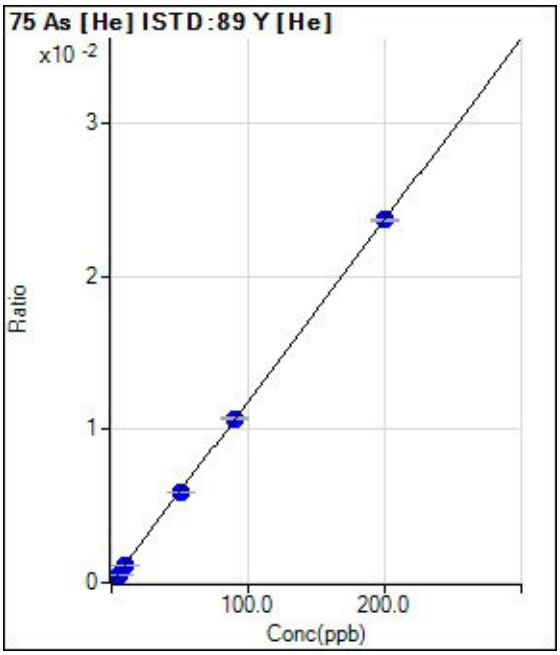
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2428.00	0.0001	P	13.8
2	☐	0.200	0.382	3287.46	0.0002	P	26.6
3	☐	2.000	1.645	6062.03	0.0003	P	12.7
4	☐	5.000	5.087	13630.63	0.0007	P	8.4
5	☐	10.000	9.056	22171.85	0.0012	P	4.9
6	☐	50.000	50.100	110509.31	0.0058	P	1.8
7	☐	90.000	90.792	197856.28	0.0105	P	0.9
8	☐	200.000	199.667	433071.14	0.0229	P	0.7

y = 1.1382E-004 * x + 1.2617E-004
R = 1.0000
DL = 0.4596
BEC = 1.109

Weight: <None>
Min Conc: <None>

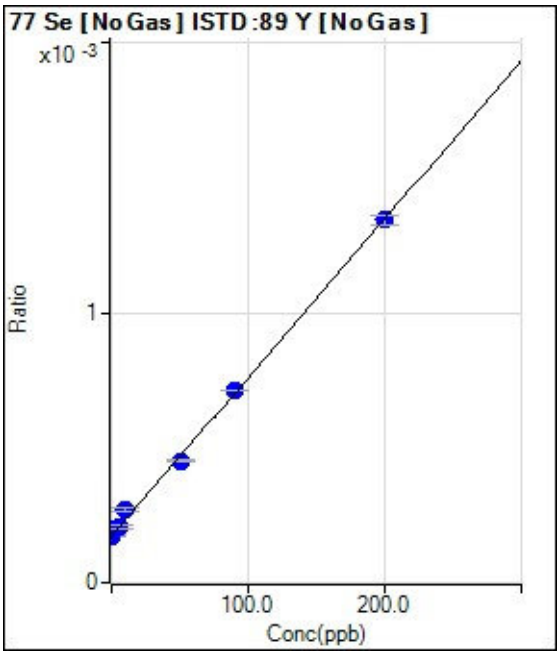


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	0.5
2	☐	0.200	0.234	62.22	0.0000	P	21.9
3	☐	2.000	1.884	474.46	0.0002	P	5.8
4	☐	5.000	4.577	1138.94	0.0005	P	2.9
5	☐	10.000	9.493	2341.33	0.0011	P	5.5
6	☐	50.000	49.343	12013.16	0.0059	P	0.2
7	☐	90.000	90.424	21835.39	0.0107	P	1.6
8	☐	200.000	200.011	48399.54	0.0237	P	0.6

y = 1.1862E-004 * x + 1.5845E-006
R = 1.0000
DL = 0.0001973
BEC = 0.01336

Weight: <None>
Min Conc: <None>

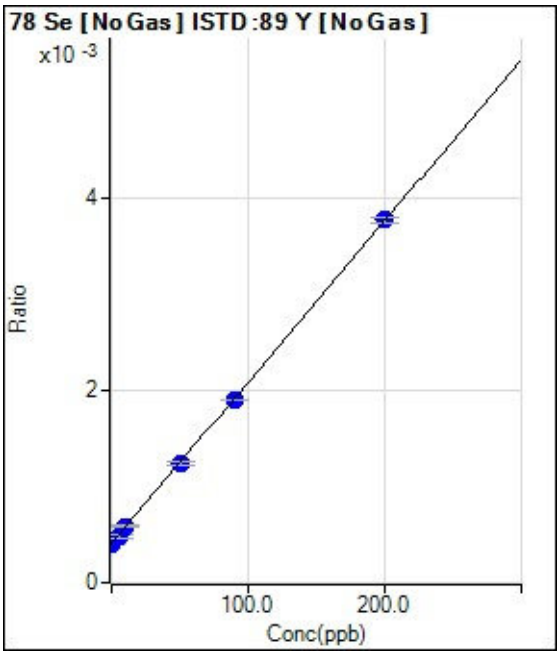
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3327.12	0.0002	P	2.9
2	☐	0.200	1.641	3537.40	0.0002	P	4.6
3	☐	2.000	4.485	3851.13	0.0002	P	5.0
4	☐	5.000	5.554	3974.65	0.0002	P	5.7
5	☐	10.000	16.114	5126.19	0.0003	P	5.3
6	☐	50.000	47.499	8564.76	0.0005	P	1.1
7	☐	90.000	91.790	13460.36	0.0007	P	0.8
8	☐	200.000	199.474	25459.65	0.0013	P	2.4

y = 5.8686E-006 * x + 1.7293E-004
R = 0.9994
DL = 2.592
BEC = 29.47

Weight: <None>
Min Conc: <None>

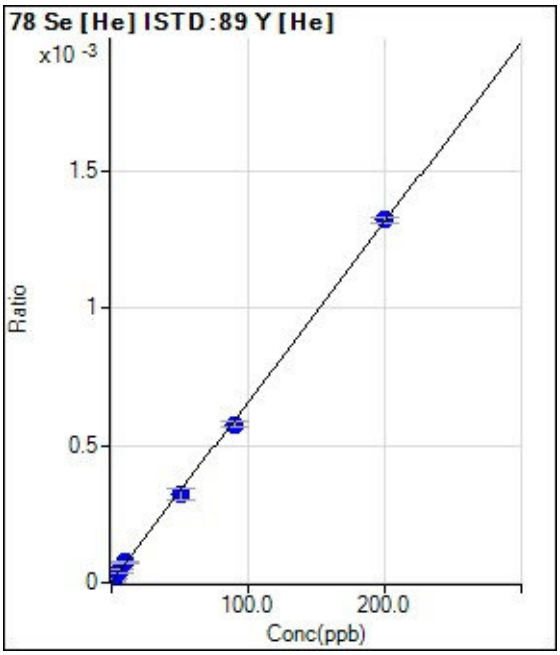


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7903.70	0.0004	P	3.3
2	☐	0.200	-0.343	7846.94	0.0004	P	3.9
3	☐	2.000	1.898	8558.11	0.0004	P	4.0
4	☐	5.000	4.201	9306.01	0.0005	P	6.9
5	☐	10.000	10.270	11179.33	0.0006	P	3.0
6	☐	50.000	49.498	23560.98	0.0012	P	3.1
7	☐	90.000	88.872	36020.90	0.0019	P	0.4
8	☐	200.000	200.641	71691.57	0.0038	P	1.8

y = 1.6806E-005 * x + 4.1077E-004
R = 1.0000
DL = 2.442
BEC = 24.44

Weight: <None>
Min Conc: <None>

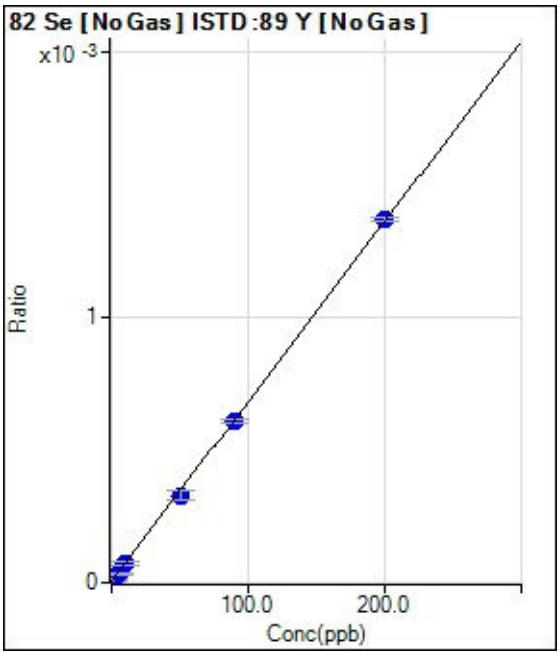
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.78	0.0000	P	65.9
2	☐	0.200	0.394	13.33	0.0000	P	43.8
3	☐	2.000	1.604	30.00	0.0000	P	10.7
4	☐	5.000	5.755	86.67	0.0000	P	30.9
5	☐	10.000	10.700	153.34	0.0001	P	4.6
6	☐	50.000	48.885	665.58	0.0003	P	12.9
7	☐	90.000	87.691	1177.84	0.0006	P	4.1
8	☐	200.000	201.268	2699.18	0.0013	P	1.6

y = 6.5563E-006 * x + 3.7083E-006
R = 0.9999
DL = 1.119
BEC = 0.5656

Weight: <None>
Min Conc: <None>

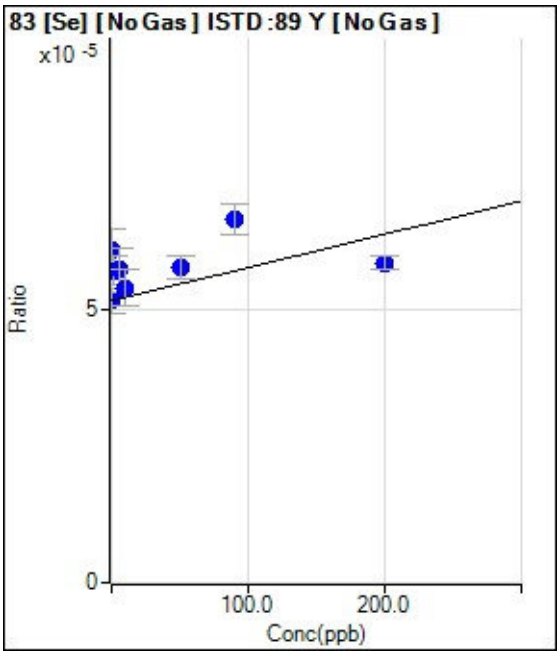


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101.17	0.0000	P	188.9
2	☐	0.200	0.036	106.14	0.0000	P	204.6
3	☐	2.000	0.880	216.98	0.0000	P	50.9
4	☐	5.000	4.454	684.14	0.0000	P	23.1
5	☐	10.000	10.041	1402.31	0.0001	P	15.5
6	☐	50.000	47.501	6191.70	0.0003	P	10.5
7	☐	90.000	89.184	11513.04	0.0006	P	2.5
8	☐	200.000	201.015	25873.17	0.0014	P	1.1

y = 6.7653E-006 * x + 5.2541E-006
R = 0.9999
DL = 4.402
BEC = 0.7766

Weight: <None>
Min Conc: <None>

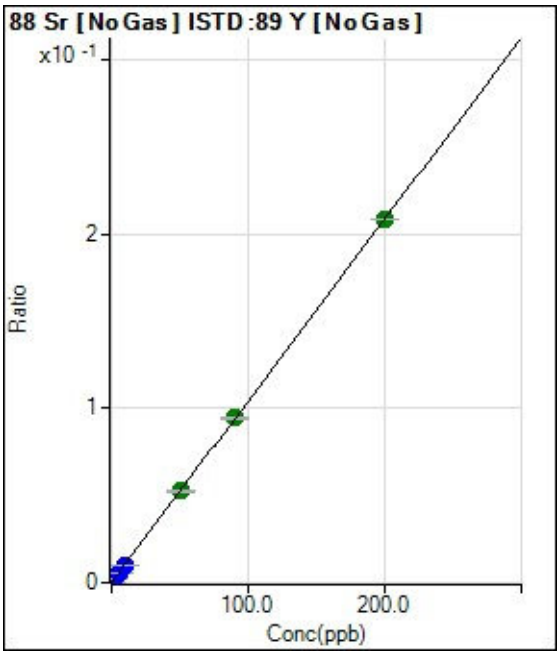
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	994.38	0.0001	P	8.8
2	☐	0.200	155.054	1184.59	0.0001	P	12.3
3	☐	2.000	89.855	1104.50	0.0001	P	9.4
4	☐	5.000	92.326	1107.84	0.0001	P	13.8
5	☐	10.000	37.477	1034.43	0.0001	P	12.4
6	☐	50.000	99.311	1094.49	0.0001	P	7.1
7	☐	90.000	243.139	1258.00	0.0001	P	8.4
8	☐	200.000	114.170	1111.18	0.0001	P	4.2

y = 6.0888E-008 * x + 5.1684E-005
R = 0.3760
DL = 223
BEC = 848.8

Weight: <None>
Min Conc: <None>

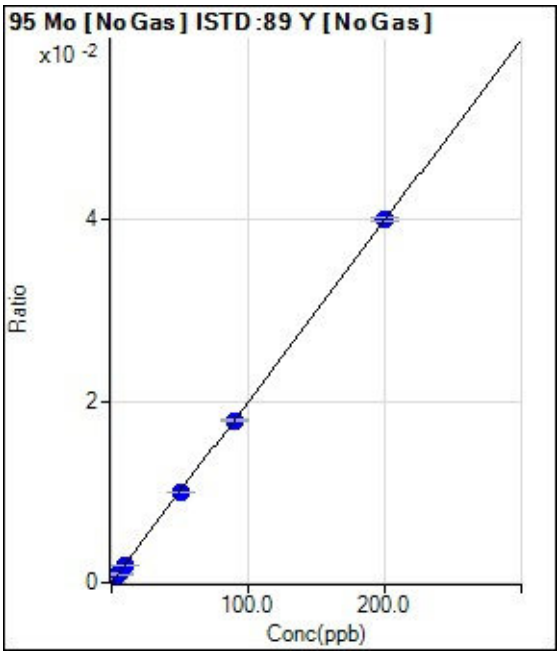


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2619.60	0.0001	P	4.8
2	☐	0.200	0.192	6521.55	0.0003	P	3.4
3	☐	2.000	1.954	42001.33	0.0022	P	0.4
4	☐	5.000	4.936	102108.31	0.0053	P	1.6
5	☐	10.000	9.706	196481.25	0.0103	P	0.5
6	☐	50.000	50.231	995305.02	0.0525	A	0.6
7	☐	90.000	90.469	1786197.87	0.0944	A	0.4
8	☐	200.000	199.748	3948205.82	0.2083	A	0.1

y = 0.0010 * x + 1.3614E-004
R = 1.0000
DL = 0.01862
BEC = 0.1306

Weight: <None>
Min Conc: <None>

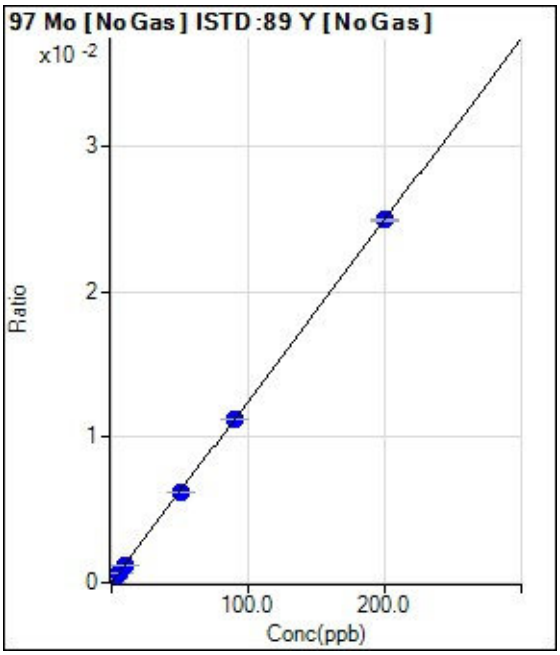
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.41	0.0000	P	11.3
2	☐	0.200	0.169	1054.45	0.0001	P	5.0
3	☐	2.000	1.828	7449.67	0.0004	P	1.2
4	☐	5.000	4.700	18524.95	0.0010	P	1.6
5	☐	10.000	9.519	36777.63	0.0019	P	2.6
6	☐	50.000	49.485	187515.02	0.0099	P	0.4
7	☐	90.000	89.581	338306.41	0.0179	P	0.2
8	☐	200.000	200.350	757593.87	0.0400	P	1.0

y = 1.9942E-004 * x + 2.0810E-005
R = 1.0000
DL = 0.03552
BEC = 0.1044

Weight: <None>
Min Conc: <None>

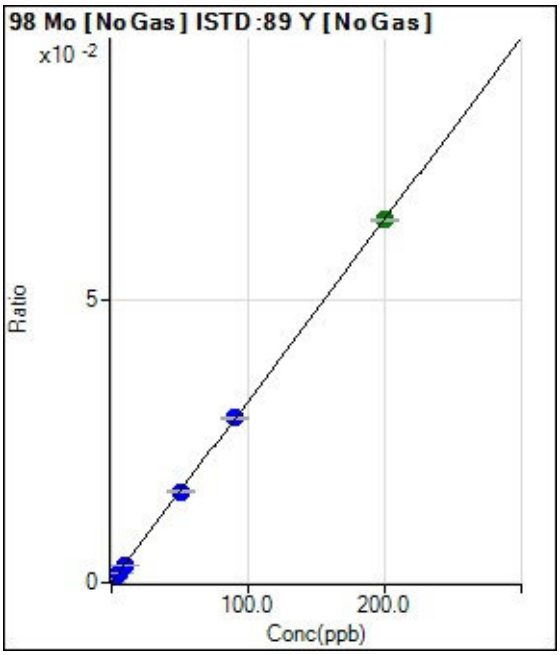


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.91	0.0000	P	23.4
2	☐	0.200	0.196	710.74	0.0000	P	20.6
3	☐	2.000	1.870	4739.00	0.0002	P	4.8
4	☐	5.000	4.911	12061.05	0.0006	P	1.6
5	☐	10.000	9.523	22959.56	0.0012	P	2.7
6	☐	50.000	49.882	117992.27	0.0062	P	1.4
7	☐	90.000	90.098	212424.98	0.0112	P	0.7
8	☐	200.000	200.013	472188.00	0.0249	P	0.7

y = 1.2451E-004 * x + 1.2315E-005
R = 1.0000
DL = 0.06936
BEC = 0.09891

Weight: <None>
Min Conc: <None>

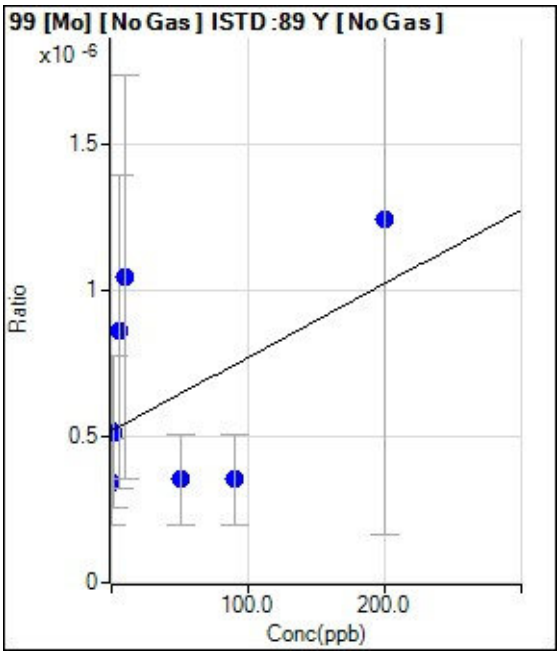
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	702.61	0.0000	P	11.8
2	☐	0.200	0.182	1841.03	0.0001	P	10.8
3	☐	2.000	1.860	12280.08	0.0006	P	2.0
4	☐	5.000	4.723	30098.62	0.0016	P	1.8
5	☐	10.000	9.492	59241.10	0.0031	P	1.3
6	☐	50.000	50.172	306848.03	0.0162	P	1.1
7	☐	90.000	90.503	551641.88	0.0292	P	0.6
8	☐	200.000	199.765	1219071.45	0.0643	A	0.5

y = 3.2183E-004 * x + 3.6513E-005
R = 1.0000
DL = 0.04011
BEC = 0.1135

Weight: <None>
Min Conc: <None>

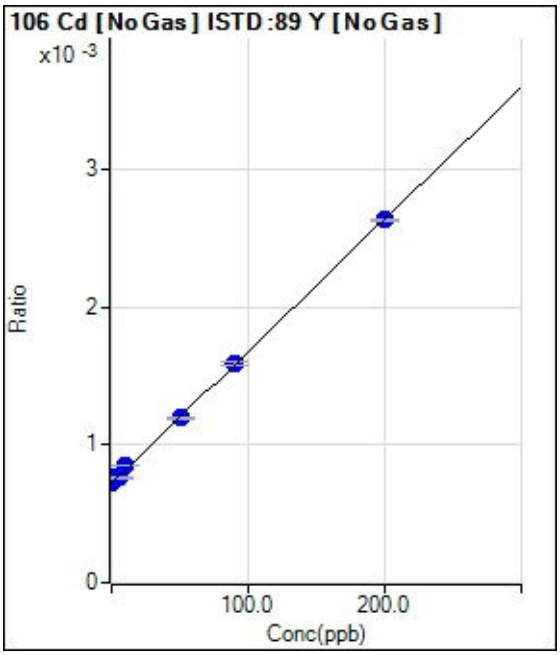


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.01	0.0000	P	100.0
2	☐	0.200	-69.628	6.67	0.0000	P	86.6
3	☐	2.000	-1.213	10.01	0.0000	P	99.6
4	☐	5.000	134.667	16.68	0.0000	P	124.6
5	☐	10.000	208.799	20.02	0.0000	P	132.3
6	☐	50.000	-66.386	6.67	0.0000	P	86.6
7	☐	90.000	-66.401	6.67	0.0000	P	86.6
8	☐	200.000	286.397	23.36	0.0000	P	173.2

y = 2.5221E-009 * x + 5.1992E-007
R = 0.4631
DL = 618.7
BEC = 206.1

Weight: <None>
Min Conc: <None>

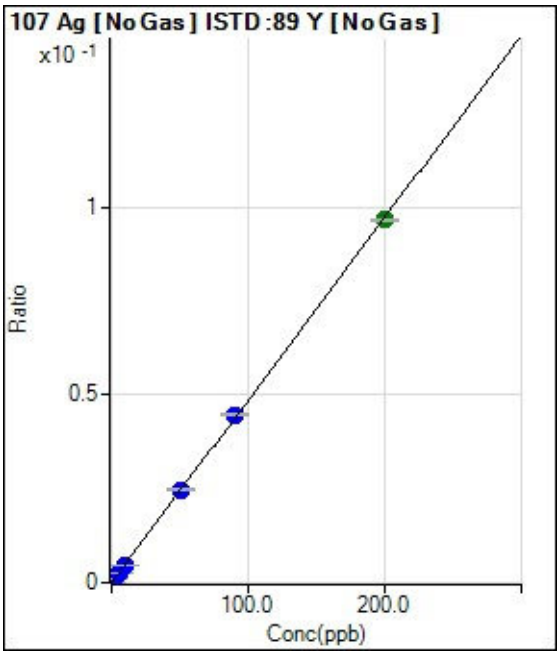
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13874.68	0.0007	P	1.4
2	☐	0.200	2.722	14479.29	0.0007	P	0.9
3	☐	2.000	4.722	14816.72	0.0008	P	1.9
4	☐	5.000	4.335	14749.88	0.0008	P	2.1
5	☐	10.000	13.940	16386.80	0.0009	P	0.6
6	☐	50.000	49.524	22695.71	0.0012	P	0.8
7	☐	90.000	91.253	30224.94	0.0016	P	1.8
8	☐	200.000	199.345	49964.26	0.0026	P	0.4

y = 9.6082E-006 * x + 7.2113E-004
R = 0.9997
DL = 3.257
BEC = 75.05

Weight: <None>
Min Conc: <None>

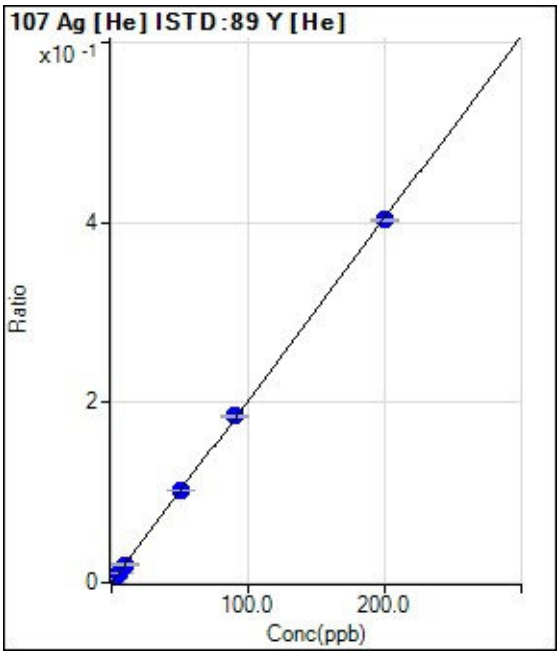


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	231.11	0.0000	P	20.6
2	☐	0.200	0.196	2074.62	0.0001	P	5.7
3	☐	2.000	2.017	19162.76	0.0010	P	2.4
4	☐	5.000	4.992	47089.90	0.0024	P	0.7
5	☐	10.000	9.895	92291.12	0.0048	P	0.4
6	☐	50.000	51.040	470061.34	0.0248	P	0.9
7	☐	90.000	91.892	844088.23	0.0446	P	0.7
8	☐	200.000	198.894	1830103.68	0.0966	A	0.2

y = 4.8547E-004 * x + 1.2009E-005
R = 0.9999
DL = 0.01527
BEC = 0.02474

Weight: <None>
Min Conc: <None>

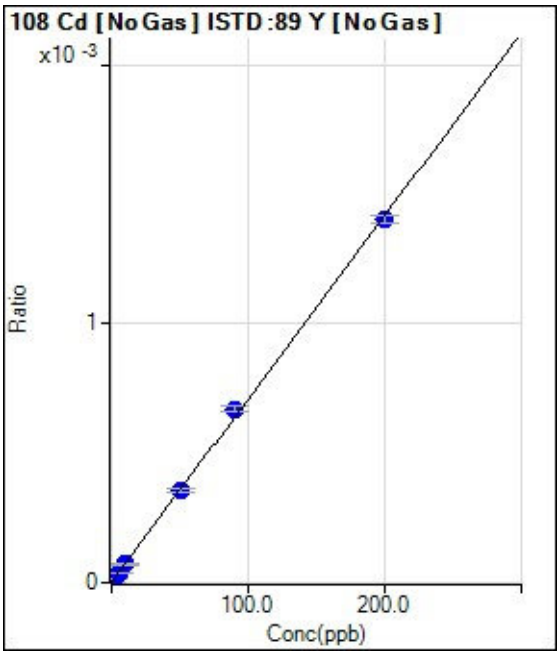
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.70	0.0000	P	15.9
2	☐	0.200	0.167	754.13	0.0004	P	12.6
3	☐	2.000	1.963	8404.53	0.0040	P	4.3
4	☐	5.000	4.898	20750.57	0.0099	P	3.5
5	☐	10.000	9.880	41506.81	0.0200	P	3.1
6	☐	50.000	50.310	208728.01	0.1017	P	0.6
7	☐	90.000	91.742	377524.70	0.1855	P	1.1
8	☐	200.000	199.148	821258.58	0.4026	P	0.4

y = 0.0020 * x + 1.7468E-005
R = 0.9999
DL = 0.00412
BEC = 0.008641

Weight: <None>
Min Conc: <None>

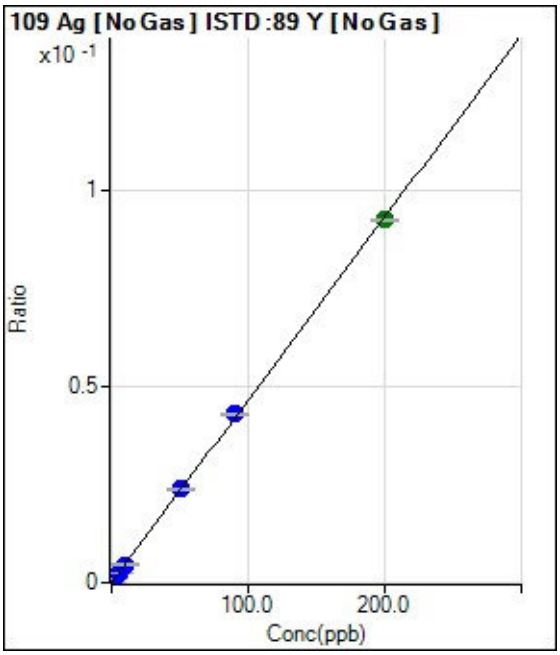


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.37	0.0000	P	96.4
2	☐	0.200	0.193	60.06	0.0000	P	16.3
3	☐	2.000	1.559	246.92	0.0000	P	8.0
4	☐	5.000	4.970	714.08	0.0000	P	8.8
5	☐	10.000	9.862	1371.47	0.0001	P	12.6
6	☐	50.000	50.553	6818.68	0.0004	P	4.4
7	☐	90.000	94.496	12685.63	0.0007	P	3.1
8	☐	200.000	197.851	26576.91	0.0014	P	2.2

y = 7.0796E-006 * x + 1.7344E-006
R = 0.9996
DL = 0.7085
BEC = 0.245

Weight: <None>
Min Conc: <None>

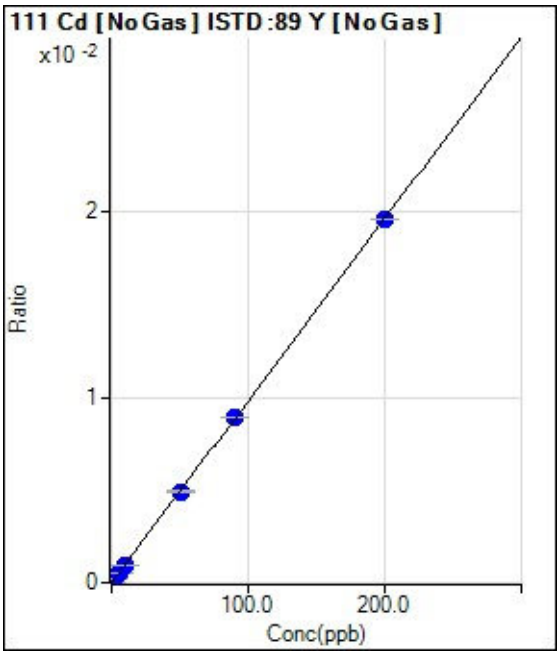
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.73	0.0000	P	31.1
2	☐	0.200	0.194	1811.97	0.0001	P	3.0
3	☐	2.000	1.953	17632.98	0.0009	P	4.7
4	☐	5.000	4.922	44348.65	0.0023	P	1.7
5	☐	10.000	9.884	88196.96	0.0046	P	2.6
6	☐	50.000	51.377	453323.34	0.0239	P	1.4
7	☐	90.000	92.165	811182.96	0.0429	P	0.6
8	☐	200.000	198.690	1751950.03	0.0924	A	0.5

y = 4.6527E-004 * x + 3.4672E-006
R = 0.9999
DL = 0.006944
BEC = 0.007452

Weight: <None>
Min Conc: <None>

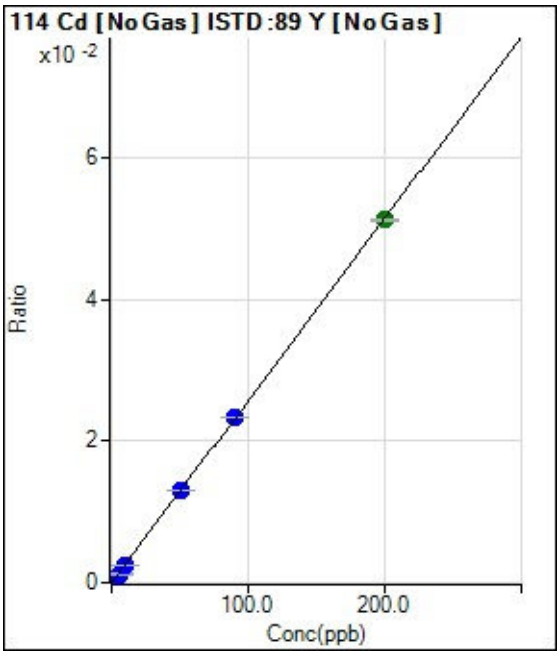


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-29.14	0.0000	P	-127.0
2	☐	0.200	0.190	332.23	0.0000	P	7.2
3	☐	2.000	1.983	3733.46	0.0002	P	3.9
4	☐	5.000	4.897	9262.09	0.0005	P	1.2
5	☐	10.000	9.674	18161.92	0.0009	P	2.1
6	☐	50.000	50.160	93299.92	0.0049	P	0.4
7	☐	90.000	91.080	169026.23	0.0089	P	0.5
8	☐	200.000	199.493	370953.46	0.0196	P	0.0

y = 9.8127E-005 * x - 1.5144E-006
R = 1.0000
DL = 0.05878
BEC = -0.01543

Weight: <None>
Min Conc: <None>

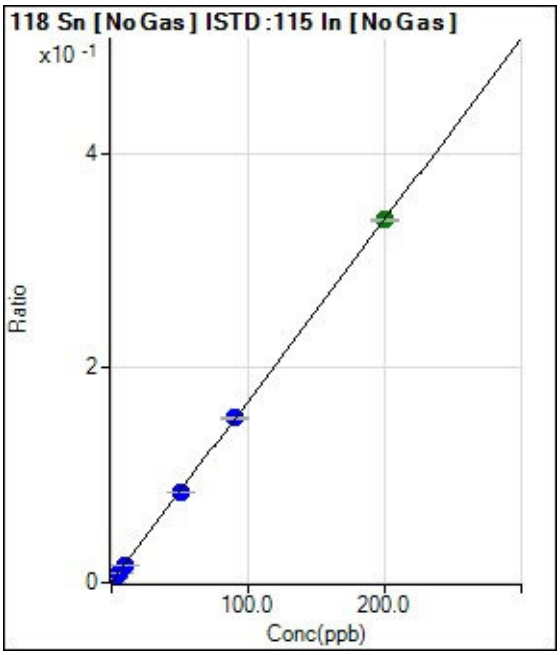
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.39	0.0000	P	65.7
2	☐	0.200	0.212	1111.18	0.0001	P	17.7
3	☐	2.000	1.943	9706.77	0.0005	P	4.5
4	☐	5.000	4.744	23625.05	0.0012	P	1.2
5	☐	10.000	9.719	47915.16	0.0025	P	1.6
6	☐	50.000	50.434	245804.33	0.0130	P	0.3
7	☐	90.000	91.108	442924.80	0.0234	P	0.3
8	☐	200.000	199.414	971226.75	0.0512	A	0.4

y = 2.5698E-004 * x + 2.7726E-006
R = 1.0000
DL = 0.02127
BEC = 0.01079

Weight: <None>
Min Conc: <None>

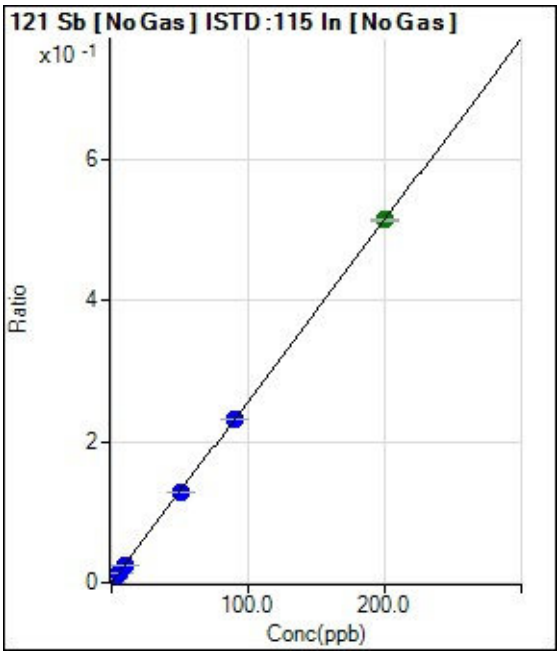


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1106.72	0.0003	P	2.7
2	☐	0.200	0.194	2311.33	0.0006	P	3.4
3	☐	2.000	1.911	12953.09	0.0035	P	1.1
4	☐	5.000	4.742	30536.49	0.0083	P	0.9
5	☐	10.000	9.527	59984.82	0.0164	P	0.9
6	☐	50.000	49.668	303893.81	0.0843	P	0.8
7	☐	90.000	90.555	547455.55	0.1534	P	0.5
8	☐	200.000	199.864	1193919.19	0.3381	A	0.7

y = 0.0017 * x + 3.0336E-004
R = 1.0000
DL = 0.01439
BEC = 0.1795

Weight: <None>
Min Conc: <None>

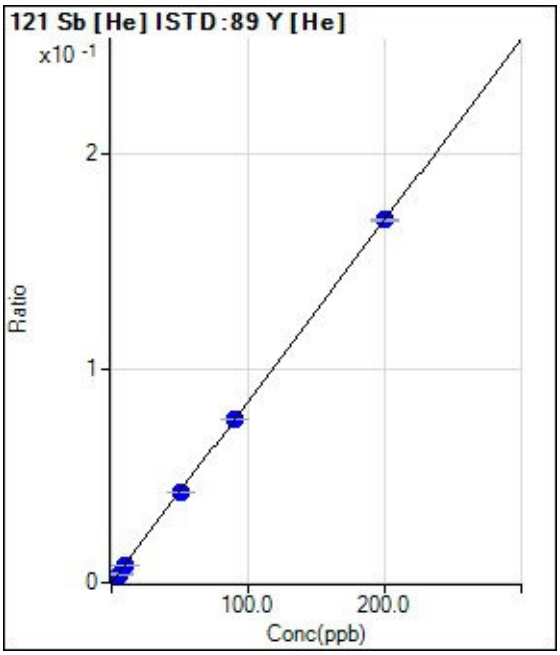
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	804.47	0.0002	P	17.5
2	☐	0.200	0.174	2445.79	0.0007	P	4.6
3	☐	2.000	1.883	18536.45	0.0051	P	0.9
4	☐	5.000	4.749	45579.89	0.0124	P	0.9
5	☐	10.000	9.397	89046.15	0.0244	P	0.3
6	☐	50.000	49.796	462083.70	0.1281	P	0.1
7	☐	90.000	90.126	827096.75	0.2317	P	0.7
8	☐	200.000	200.032	1814828.47	0.5140	A	0.9

y = 0.0026 * x + 2.2049E-004
R = 1.0000
DL = 0.04516
BEC = 0.08584

Weight: <None>
Min Conc: <None>

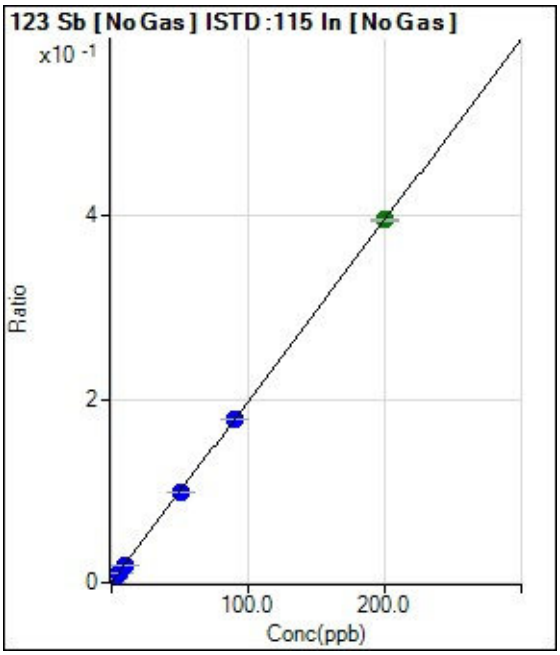


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0001	P	10.9
2	☐	0.200	0.218	580.03	0.0003	P	5.7
3	☐	2.000	1.908	3590.56	0.0017	P	4.6
4	☐	5.000	4.630	8379.47	0.0040	P	2.6
5	☐	10.000	9.399	16690.81	0.0080	P	1.3
6	☐	50.000	49.849	86708.19	0.0423	P	0.4
7	☐	90.000	89.899	154969.04	0.0761	P	0.2
8	☐	200.000	200.123	345501.93	0.1694	P	0.2

y = 8.4593E-004 * x + 8.8810E-005
R = 1.0000
DL = 0.03436
BEC = 0.105

Weight: <None>
Min Conc: <None>

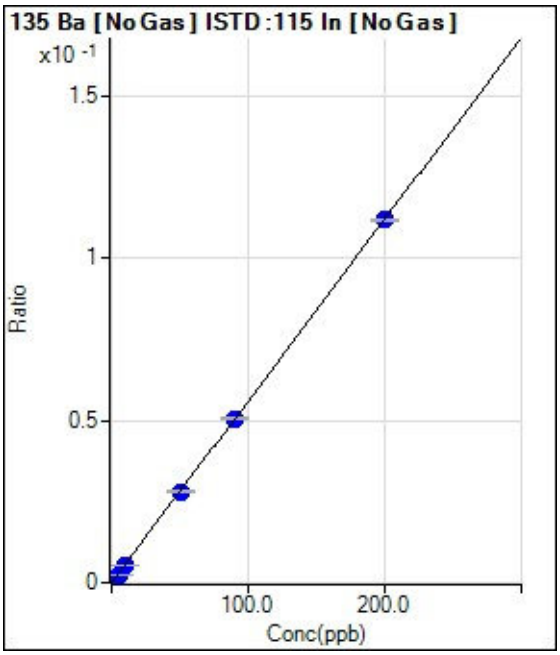
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1071.14	0.0003	P	19.0
2	☐	0.200	0.182	2385.98	0.0007	P	15.0
3	☐	2.000	1.872	14622.95	0.0040	P	0.6
4	☐	5.000	4.697	35122.31	0.0096	P	1.0
5	☐	10.000	9.438	69201.04	0.0189	P	1.1
6	☐	50.000	49.529	353757.39	0.0981	P	0.2
7	☐	90.000	90.093	636007.83	0.1782	P	0.7
8	☐	200.000	200.113	1396090.00	0.3954	A	0.7

y = 0.0020 * x + 2.9368E-004
R = 1.0000
DL = 0.08462
BEC = 0.1487

Weight: <None>
Min Conc: <None>

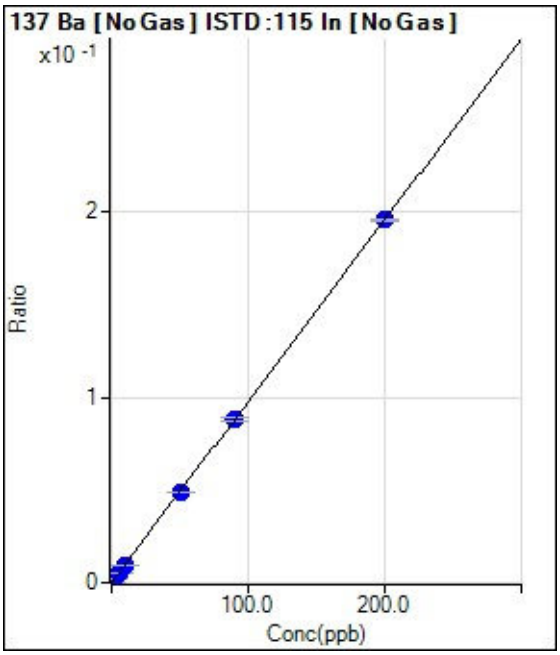


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.03	0.0000	P	99.9
2	☐	0.200	0.234	510.53	0.0001	P	2.4
3	☐	2.000	1.906	3941.28	0.0011	P	3.9
4	☐	5.000	4.608	9503.11	0.0026	P	5.0
5	☐	10.000	9.602	19684.84	0.0054	P	1.8
6	☐	50.000	50.064	101124.09	0.0280	P	1.0
7	☐	90.000	90.527	180949.45	0.0507	P	0.7
8	☐	200.000	199.777	394960.48	0.1119	P	0.7

y = 5.5989E-004 * x + 8.2174E-006
R = 1.0000
DL = 0.044
BEC = 0.01468

Weight: <None>
Min Conc: <None>

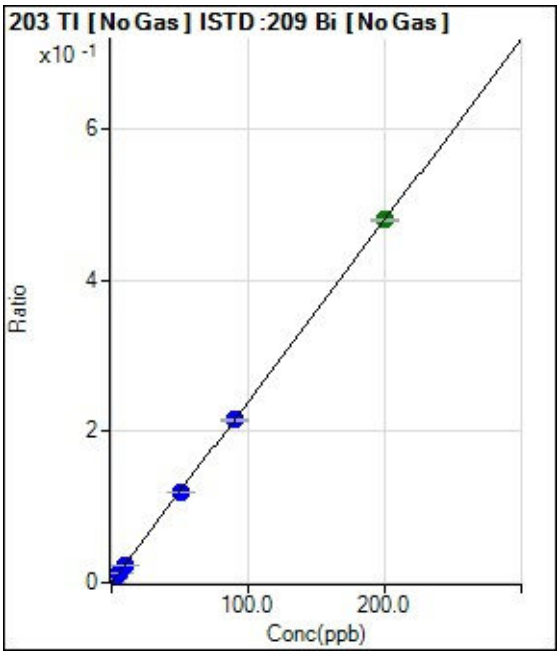
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.15	0.0000	P	26.0
2	☐	0.200	0.202	864.24	0.0002	P	10.3
3	☐	2.000	1.905	6975.64	0.0019	P	3.2
4	☐	5.000	4.972	18007.35	0.0049	P	4.0
5	☐	10.000	9.537	34272.87	0.0094	P	2.3
6	☐	50.000	49.462	174771.98	0.0485	P	0.5
7	☐	90.000	90.039	314761.22	0.0882	P	1.9
8	☐	200.000	200.142	691946.19	0.1960	P	0.4

y = 9.7896E-004 * x + 3.8434E-005
R = 1.0000
DL = 0.03066
BEC = 0.03926

Weight: <None>
Min Conc: <None>

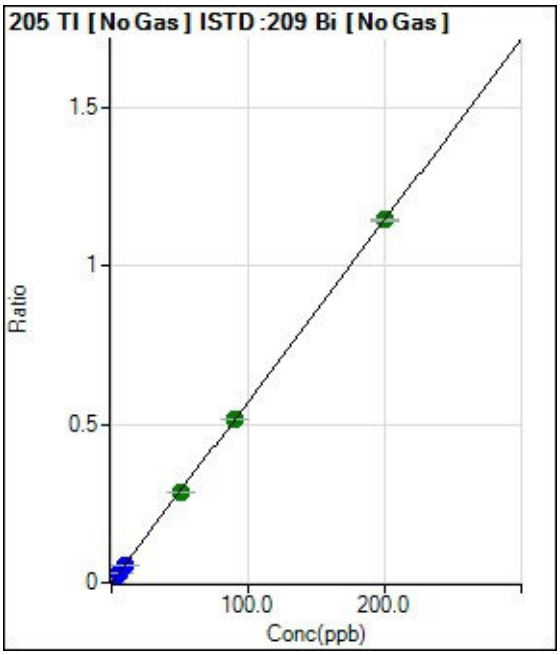


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.58	0.0001	P	30.1
2	☐	0.200	0.182	1801.96	0.0005	P	4.4
3	☐	2.000	1.871	16143.41	0.0046	P	2.1
4	☐	5.000	4.780	40740.66	0.0115	P	1.3
5	☐	10.000	9.528	80676.59	0.0229	P	0.7
6	☐	50.000	49.667	414446.88	0.1190	P	0.6
7	☐	90.000	89.790	741249.01	0.2151	P	1.0
8	☐	200.000	200.208	1617998.99	0.4795	A	0.9

y = 0.0024 * x + 6.8838E-005
R = 1.0000
DL = 0.02598
BEC = 0.02875

Weight: <None>
Min Conc: <None>

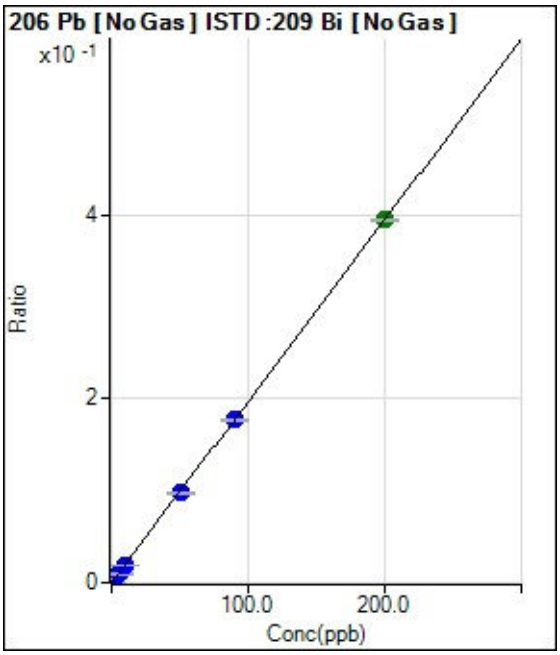
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	563.92	0.0002	P	21.8
2	☐	0.200	0.179	4228.35	0.0012	P	6.1
3	☐	2.000	1.894	39040.22	0.0110	P	2.0
4	☐	5.000	4.819	98192.00	0.0278	P	0.6
5	☐	10.000	9.624	194833.26	0.0553	P	1.3
6	☐	50.000	49.385	985410.88	0.2829	A	0.2
7	☐	90.000	90.006	1776774.85	0.5156	A	0.2
8	☐	200.000	200.175	3868423.12	1.1464	A	0.7

y = 0.0057 * x + 1.5937E-004
R = 1.0000
DL = 0.01819
BEC = 0.02783

Weight: <None>
Min Conc: <None>

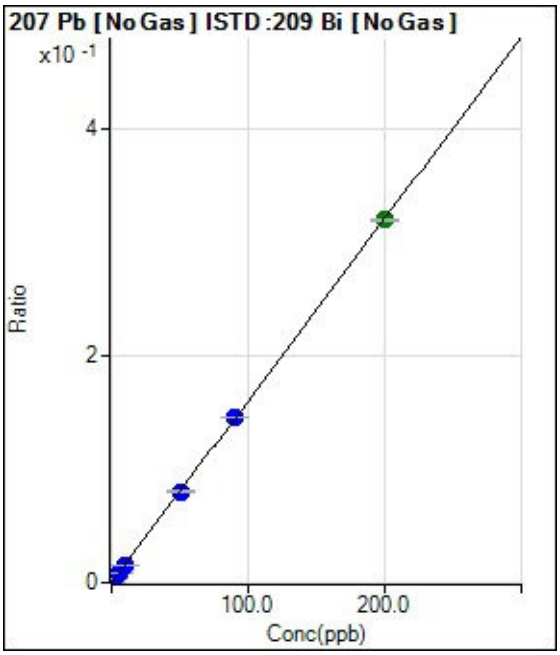


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.79	0.0000	P	25.3
2	☐	0.200	0.203	1555.01	0.0004	P	6.2
3	☐	2.000	1.810	12779.53	0.0036	P	1.1
4	☐	5.000	4.766	33344.78	0.0094	P	2.1
5	☐	10.000	9.498	66090.81	0.0187	P	1.7
6	☐	50.000	49.665	340876.95	0.0979	P	1.4
7	☐	90.000	89.826	609999.47	0.1770	P	0.8
8	☐	200.000	200.195	1330978.80	0.3944	A	0.4

y = 0.0020 * x + 3.5843E-005
R = 1.0000
DL = 0.01379
BEC = 0.01819

Weight: <None>
Min Conc: <None>

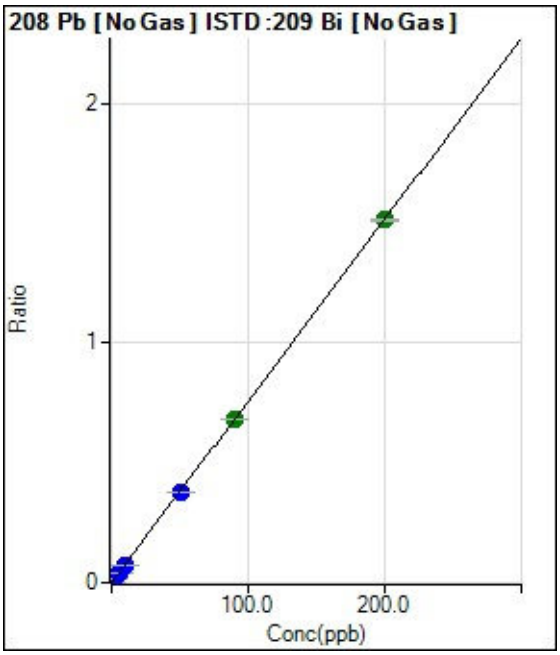
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.79	0.0000	P	35.9
2	☐	0.200	0.203	1288.05	0.0004	P	8.6
3	☐	2.000	1.927	11076.16	0.0031	P	2.3
4	☐	5.000	4.812	27397.79	0.0077	P	2.5
5	☐	10.000	9.680	54781.82	0.0155	P	1.5
6	☐	50.000	49.999	279010.38	0.0801	P	1.3
7	☐	90.000	91.191	503480.43	0.1461	P	0.4
8	☐	200.000	199.486	1078241.00	0.3195	A	0.7

y = 0.0016 * x + 3.5885E-005
R = 1.0000
DL = 0.02416
BEC = 0.02241

Weight: <None>
Min Conc: <None>

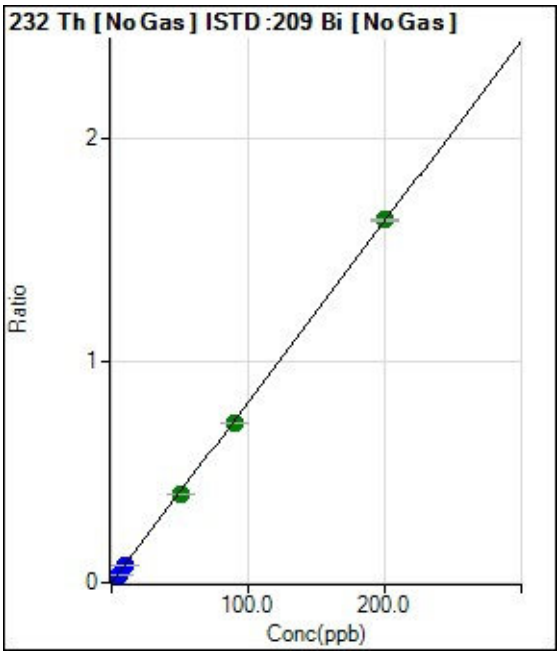


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	553.90	0.0002	P	7.8
2	☐	0.200	0.194	5806.43	0.0016	P	3.5
3	☐	2.000	1.897	51564.48	0.0145	P	1.4
4	☐	5.000	4.813	129631.56	0.0366	P	1.5
5	☐	10.000	9.641	258189.30	0.0732	P	1.0
6	☐	50.000	49.958	1319465.13	0.3789	P	1.2
7	☐	90.000	90.357	2361157.48	0.6851	A	0.4
8	☐	200.000	199.874	5113306.81	1.5153	A	0.5

y = 0.0076 * x + 1.5663E-004
R = 1.0000
DL = 0.004828
BEC = 0.02066

Weight: <None>
Min Conc: <None>

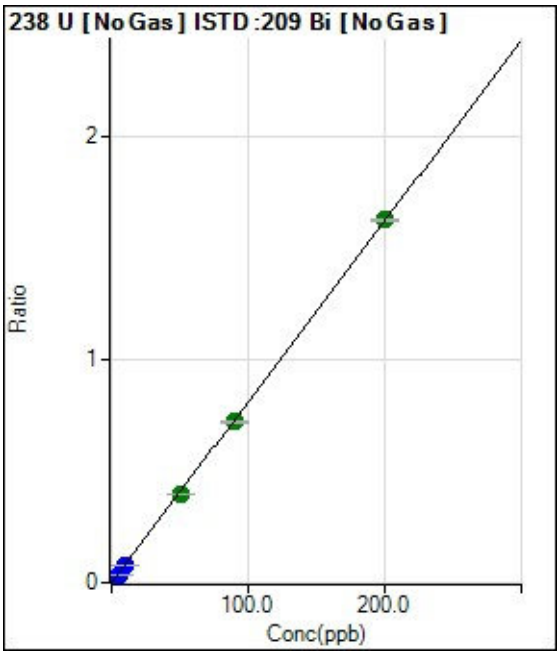
Calibration for 235_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3754.39	0.0011	P	9.6
2	☐	0.200	0.131	7573.34	0.0021	P	3.0
3	☐	2.000	1.665	51787.43	0.0146	P	0.7
4	☐	5.000	4.488	132867.75	0.0376	P	0.7
5	☐	10.000	9.141	265754.96	0.0754	P	0.2
6	☐	50.000	48.883	1387974.38	0.3985	A	1.4
7	☐	90.000	88.662	2488179.85	0.7220	A	0.3
8	☐	200.000	200.940	5516935.28	1.6349	A	0.6

y = 0.0081 * x + 0.0011
R = 1.0000
DL = 0.03763
BEC = 0.1305

Weight: <None>
Min Conc: <None>

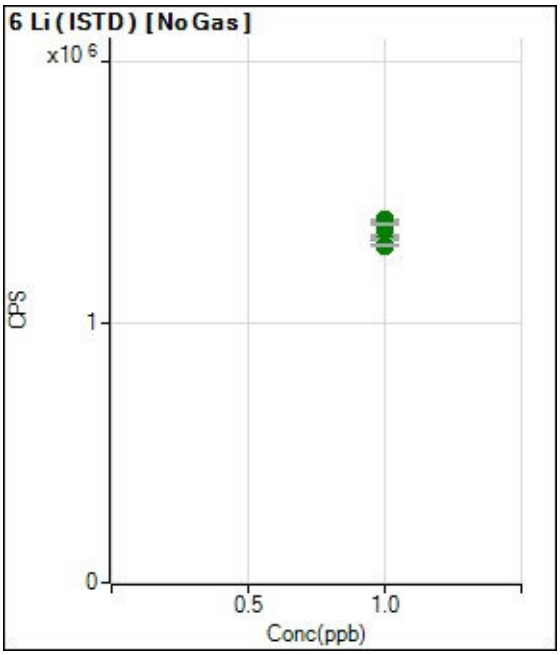


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	630.66	0.0002	P	15.7
2	☐	0.200	0.180	5820.64	0.0016	P	3.3
3	☐	2.000	1.841	53517.35	0.0151	P	1.1
4	☐	5.000	4.662	134151.84	0.0379	P	0.4
5	☐	10.000	9.427	269641.71	0.0765	P	0.8
6	☐	50.000	48.907	1379348.99	0.3961	A	0.9
7	☐	90.000	89.053	2484907.67	0.7210	A	1.0
8	☐	200.000	200.738	5483705.80	1.6251	A	0.6

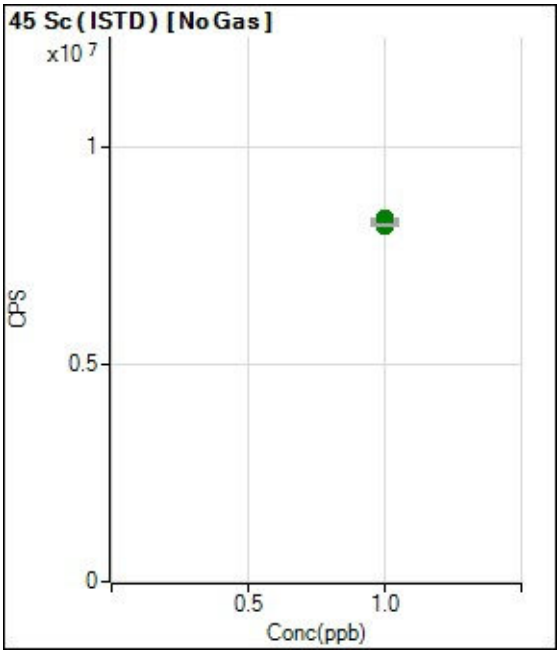
y = 0.0081 * x + 1.7824E-004
R = 1.0000
DL = 0.01037
BEC = 0.02202

Weight: <None>
Min Conc: <None>

Calibration for 235_ICV.d

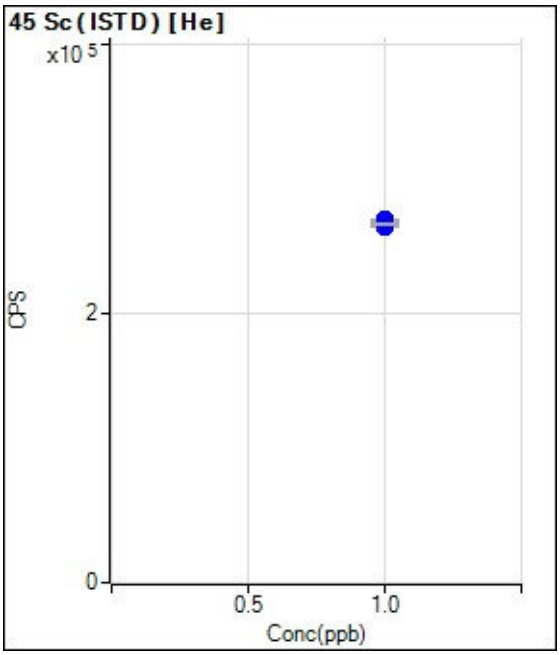


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1386716.65		A	0.4
2	☐	1.000		1393790.73		A	0.2
3	☐	1.000		1390064.19		A	0.2
4	☐	1.000		1382376.87		A	1.0
5	☐	1.000		1375770.88		A	0.4
6	☐	1.000		1335386.09		A	0.3
7	☐	1.000		1316571.96		A	0.8
8	☐	1.000		1295839.79		A	0.5

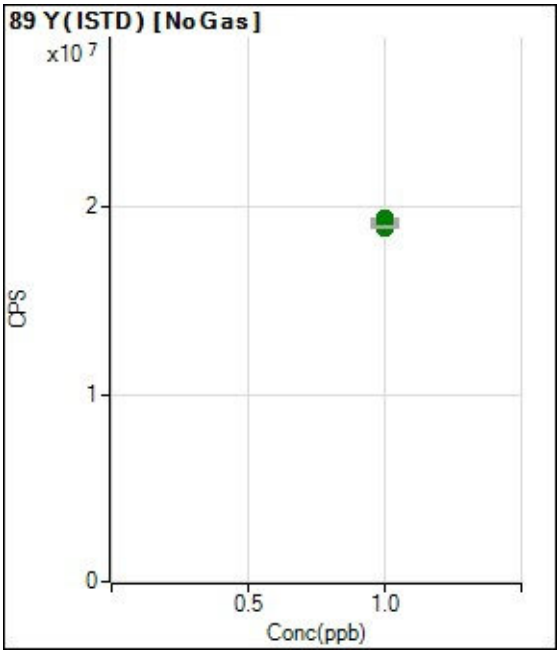


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8259775.00		A	0.3
2	☐	1.000		8304552.07		A	0.5
3	☐	1.000		8333781.09		A	0.3
4	☐	1.000		8320511.99		A	0.1
5	☐	1.000		8238371.93		A	0.2
6	☐	1.000		8174624.02		A	0.5
7	☐	1.000		8201374.93		A	0.3
8	☐	1.000		8199023.00		A	0.4

Calibration for 235_ICV.d

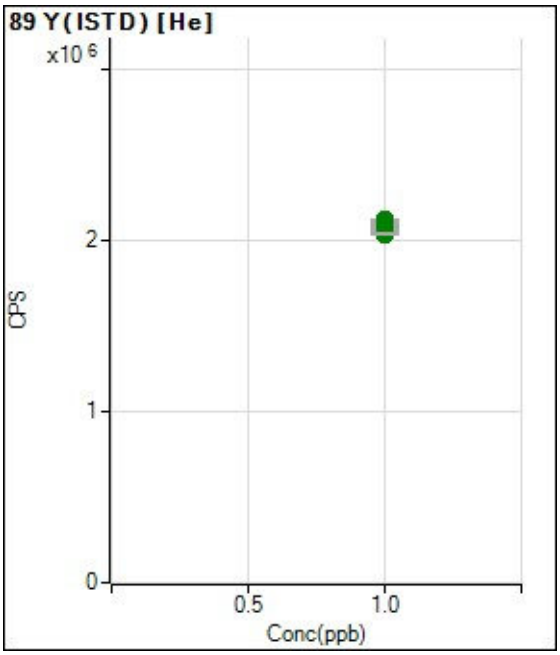


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		269258.03		P	0.6
2	☐	1.000		269810.17		P	0.7
3	☐	1.000		267019.60		P	0.3
4	☐	1.000		267651.00		P	0.3
5	☐	1.000		265695.63		P	0.1
6	☐	1.000		265035.00		P	0.6
7	☐	1.000		265081.66		P	0.5
8	☐	1.000		266522.99		P	0.6

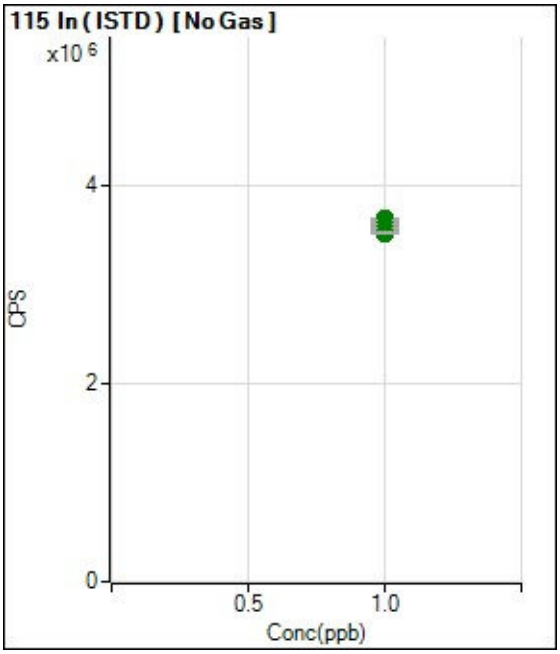


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		19240361.23		A	0.2
2	☐	1.000		19375391.68		A	0.5
3	☐	1.000		19331856.90		A	0.6
4	☐	1.000		19335958.08		A	0.5
5	☐	1.000		19164379.42		A	0.2
6	☐	1.000		18961482.35		A	0.4
7	☐	1.000		18915539.74		A	0.6
8	☐	1.000		18951262.55		A	0.7

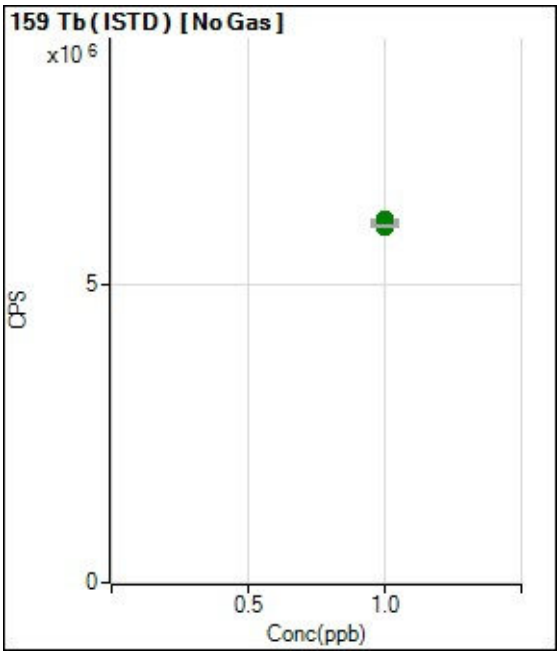
Calibration for 235_ICV.d



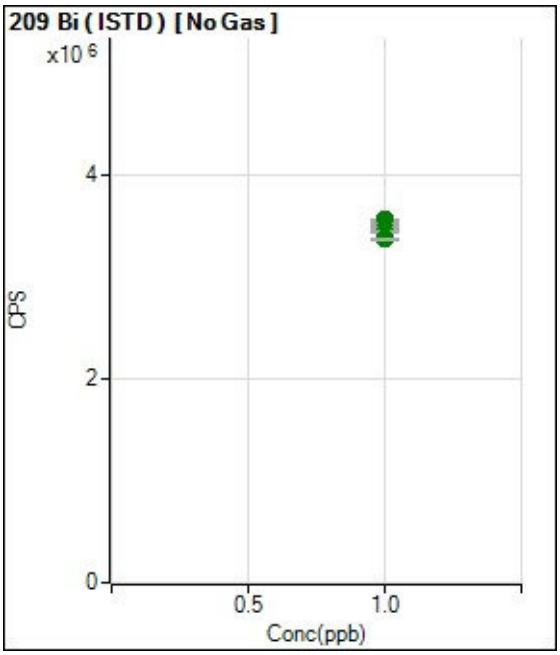
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2101614.74		A	0.5
2	☐	1.000		2120919.52		A	0.5
3	☐	1.000		2108715.75		A	0.5
4	☐	1.000		2091933.34		A	0.4
5	☐	1.000		2076183.37		A	0.7
6	☐	1.000		2051918.28		A	0.6
7	☐	1.000		2035393.00		A	0.4
8	☐	1.000		2039815.45		A	0.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3648069.84		A	0.3
2	☐	1.000		3660145.75		A	0.7
3	☐	1.000		3665373.61		A	0.2
4	☐	1.000		3670789.69		A	0.7
5	☐	1.000		3656071.85		A	0.3
6	☐	1.000		3606611.25		A	0.4
7	☐	1.000		3569539.89		A	0.5
8	☐	1.000		3530953.62		A	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6070344.52		A	0.4
2	☐	1.000		6086438.54		A	0.4
3	☐	1.000		6071083.59		A	0.4
4	☐	1.000		6069687.20		A	0.7
5	☐	1.000		6055445.46		A	0.8
6	☐	1.000		6035605.41		A	0.2
7	☐	1.000		5997840.98		A	0.8
8	☐	1.000		5981999.72		A	0.5



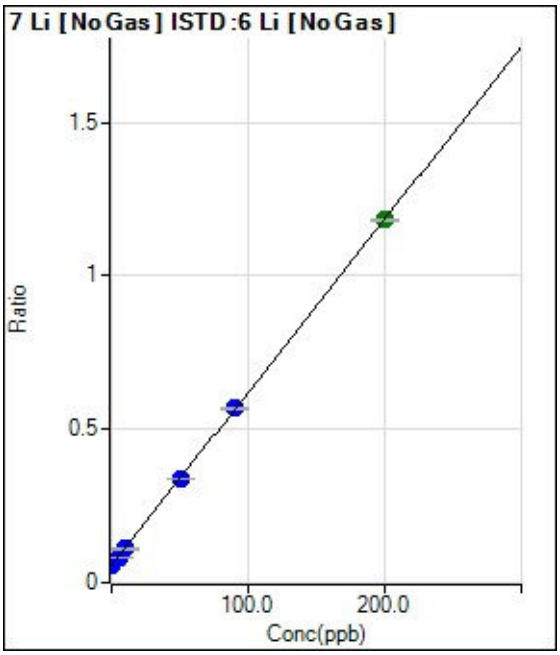
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3536724.17		A	0.4
2	☐	1.000		3563559.72		A	0.4
3	☐	1.000		3548023.89		A	0.3
4	☐	1.000		3537976.52		A	0.4
5	☐	1.000		3525289.72		A	0.3
6	☐	1.000		3482670.35		A	0.1
7	☐	1.000		3446372.99		A	0.7
8	☐	1.000		3374457.85		A	0.5

Calibration for 288_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b\
Analysis File: ICPMS3_201117.batch.bin
DA Date-Time: 2020-11-17 20:05:03
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	279CALB.d	std 1	2020-11-17 19:48:40
2	280CALS.d	std 2	2020-11-17 19:50:21
3	281CALS.d	std 3	2020-11-17 19:52:03
4	282CALS.d	std 4	2020-11-17 19:53:45
5	283CALS.d	std 5	2020-11-17 19:55:27
6	284CALS.d	std 6	2020-11-17 19:57:10
7	285CALS.d	std 7	2020-11-17 19:58:53
8	286CALS.d	std 8	2020-11-17 20:00:36

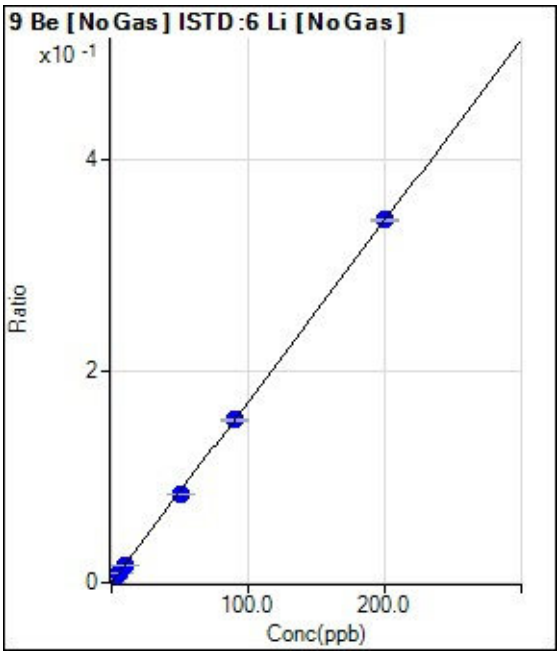
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56673.45	0.0567	P	1.2
2	☐	0.200	0.333	58931.50	0.0586	P	0.2
3	☐	2.000	2.098	68718.79	0.0685	P	0.7
4	☐	5.000	4.749	83606.23	0.0834	P	0.5
5	☐	10.000	9.524	110290.87	0.1103	P	1.6
6	☐	50.000	49.872	328734.52	0.3377	P	1.1
7	☐	90.000	90.616	543655.44	0.5672	P	1.0
8	☐	200.000	199.784	1113995.09	1.1822	A	0.5

y = 0.0056 * x + 0.0567
R = 1.0000
DL = 0.3673
BEC = 10.06

Weight: <None>
Min Conc: <None>

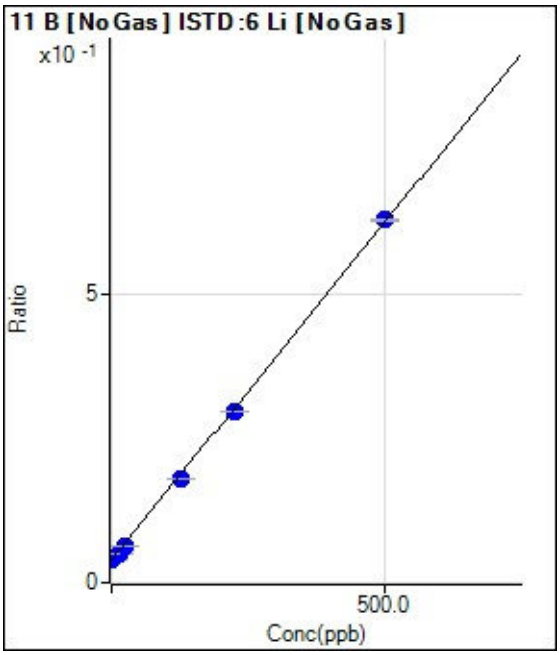


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.70	0.0000	P	31.3
2	☐	0.200	0.186	357.03	0.0004	P	9.0
3	☐	2.000	1.824	3163.58	0.0032	P	5.7
4	☐	5.000	4.872	8377.66	0.0084	P	2.7
5	☐	10.000	9.312	15938.44	0.0159	P	1.7
6	☐	50.000	48.830	81260.99	0.0835	P	0.4
7	☐	90.000	89.765	147032.17	0.1534	P	0.5
8	☐	200.000	200.438	322721.78	0.3425	P	0.2

y = 0.0017 * x + 3.6695E-005
R = 1.0000
DL = 0.02015
BEC = 0.02148

Weight: <None>
Min Conc: <None>

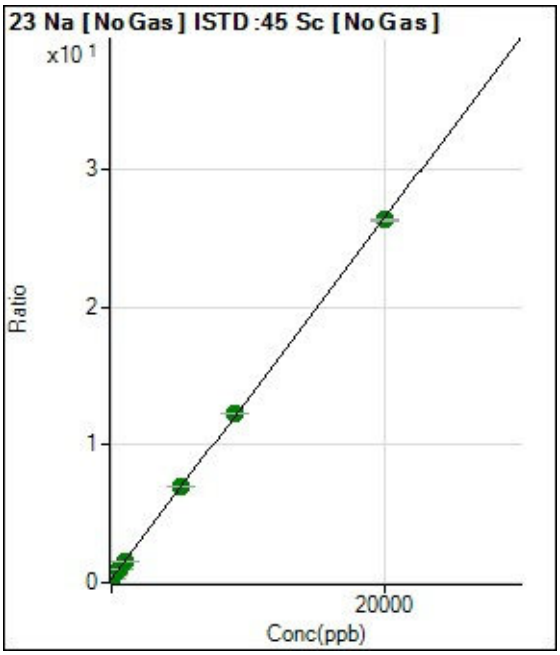
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39639.02	0.0396	P	2.2
2	☐	0.500	-0.574	39224.14	0.0390	P	1.2
3	☐	5.000	1.899	41994.82	0.0419	P	1.9
4	☐	12.500	8.308	49442.98	0.0493	P	1.6
5	☐	25.000	19.548	62430.39	0.0625	P	1.9
6	☐	125.000	120.378	175378.60	0.1801	P	0.2
7	☐	225.000	219.784	283850.63	0.2961	P	1.0
8	☐	500.000	503.912	591502.43	0.6277	P	0.6

y = 0.0012 * x + 0.0396
R = 0.9999
DL = 2.292
BEC = 33.97

Weight: <None>
Min Conc: <None>

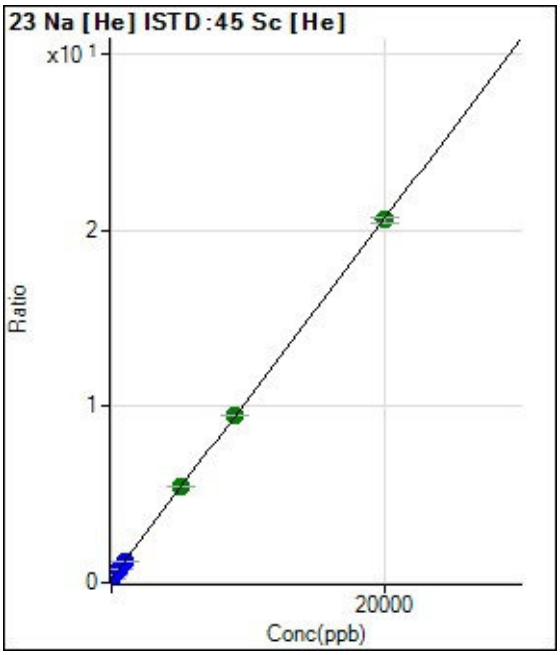


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1814390.86	0.2719	A	1.6
2	☐	20.000	16.570	1974056.62	0.2936	A	0.9
3	☐	200.000	194.484	3535744.87	0.5266	A	1.0
4	☐	500.000	493.852	6142245.71	0.9187	A	0.0
5	☐	1000.000	984.284	10378665.08	1.5611	A	1.1
6	☐	5000.000	5118.401	46001265.61	6.9755	A	0.4
7	☐	9000.000	9182.066	80578541.39	12.2977	A	0.7
8	☐	20000.000	19889.468	174476928.90	26.3212	A	0.6

y = 0.0013 * x + 0.2719
R = 0.9999
DL = 10.2
BEC = 207.6

Weight: <None>
Min Conc: <None>

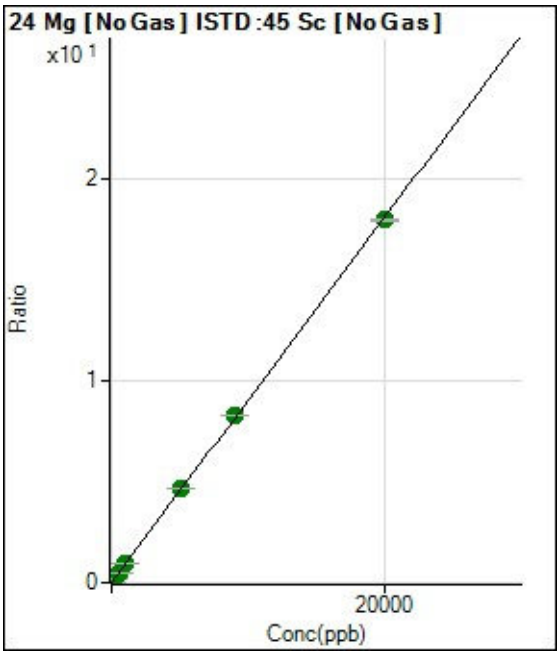
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45878.31	0.2203	P	3.3
2	☐	20.000	17.747	50052.24	0.2384	P	3.0
3	☐	200.000	208.794	90626.22	0.4335	P	6.4
4	☐	500.000	505.049	155681.87	0.7360	P	3.3
5	☐	1000.000	986.074	252451.92	1.2272	P	0.3
6	☐	5000.000	5113.866	1134978.26	5.4421	A	0.1
7	☐	9000.000	9094.981	1973267.68	9.5073	A	0.3
8	☐	20000.000	19929.276	4352808.48	20.5703	A	1.4

y = 0.0010 * x + 0.2203
R = 1.0000
DL = 21.43
BEC = 215.7

Weight: <None>
Min Conc: <None>

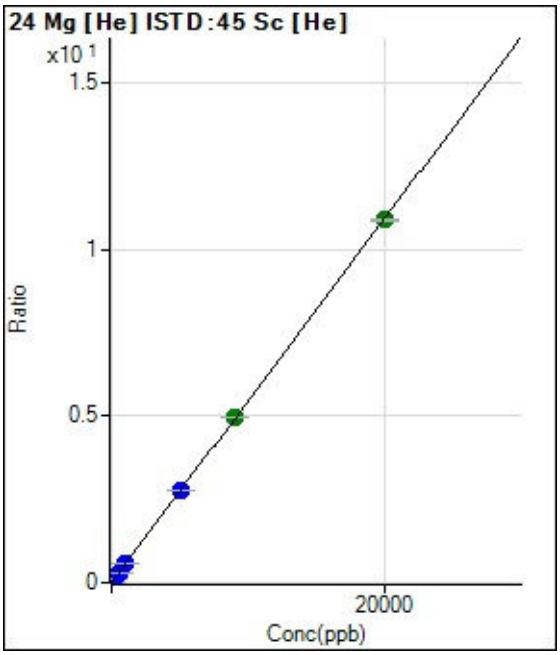


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27615.92	0.0041	P	2.1
2	☐	20.000	21.070	155761.65	0.0232	P	1.3
3	☐	200.000	205.406	1273186.31	0.1896	A	1.0
4	☐	500.000	509.587	3104365.79	0.4643	A	0.9
5	☐	1000.000	1007.341	6075878.87	0.9139	A	0.5
6	☐	5000.000	5174.153	30842533.71	4.6769	A	0.3
7	☐	9000.000	9188.356	54396509.19	8.3021	A	0.3
8	☐	20000.000	19871.040	118983011.56	17.9495	A	0.6

y = 9.0309E-004 * x + 0.0041
R = 0.9999
DL = 0.2931
BEC = 4.583

Weight: <None>
Min Conc: <None>

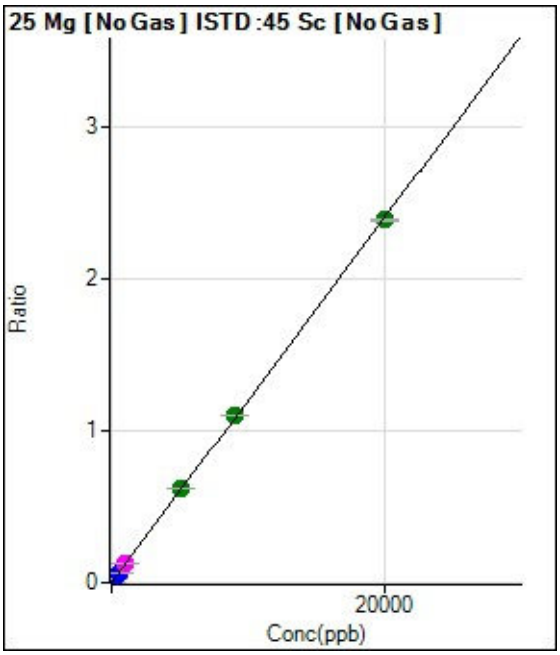
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.06	0.0029	P	7.6
2	☐	20.000	20.540	2960.52	0.0141	P	4.3
3	☐	200.000	197.131	23114.08	0.1105	P	3.5
4	☐	500.000	506.875	59168.30	0.2797	P	1.6
5	☐	1000.000	1011.560	114257.74	0.5554	P	0.8
6	☐	5000.000	5054.639	576346.31	2.7636	P	0.1
7	☐	9000.000	9104.495	1032656.31	4.9754	A	0.4
8	☐	20000.000	19938.596	2305172.31	10.8926	A	0.8

y = 5.4617E-004 * x + 0.0029
R = 1.0000
DL = 1.208
BEC = 5.279

Weight: <None>
Min Conc: <None>

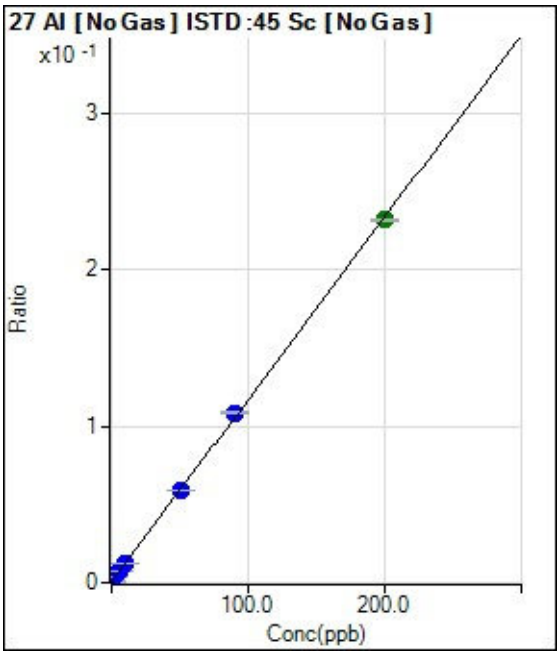


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3373.98	0.0005	P	5.8
2	☐	20.000	20.506	19935.79	0.0030	P	5.4
3	☐	200.000	203.945	167595.87	0.0250	P	4.2
4	☐	500.000	505.594	408776.27	0.0611	P	1.0
5	☐	1000.000	1004.386	804271.16	0.1210	M	1.2
6	☐	5000.000	5183.391	4102999.00	0.6222	A	0.6
7	☐	9000.000	9146.938	7191307.81	1.0975	A	0.4
8	☐	20000.000	19887.631	15814255.18	2.3857	A	0.5

y = 1.1993E-004 * x + 5.0567E-004
R = 0.9999
DL = 0.7345
BEC = 4.216

Weight: <None>
Min Conc: <None>

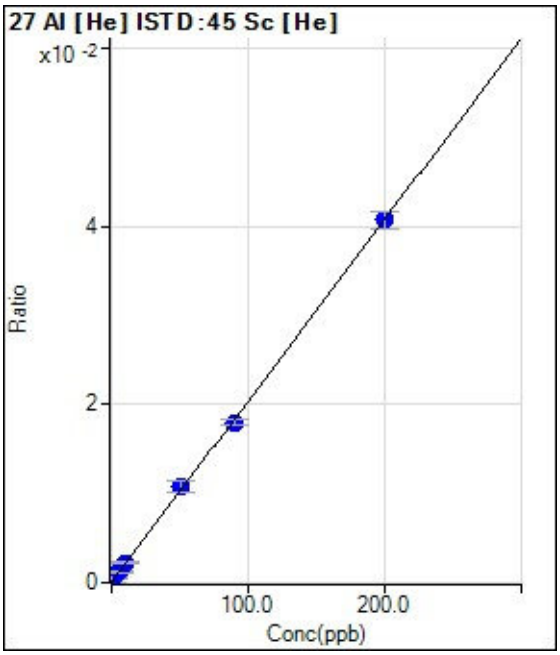
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3777.21	0.0006	P	23.1
2	☐			41424.28	0.0062	P	0.7
3	☐	2.000	2.547	23701.68	0.0035	P	7.2
4	☐	5.000	5.968	50212.72	0.0075	P	6.7
5	☐	10.000	10.406	84273.10	0.0127	P	1.5
6	☐	50.000	50.381	390368.47	0.0592	P	0.7
7	☐	90.000	92.764	711034.16	0.1085	P	1.1
8	☐	200.000	198.611	1535790.97	0.2317	A	0.5

y = 0.0012 * x + 5.6607E-004
R = 0.9999
DL = 0.3372
BEC = 0.4864

Weight: <None>
Min Conc: <None>

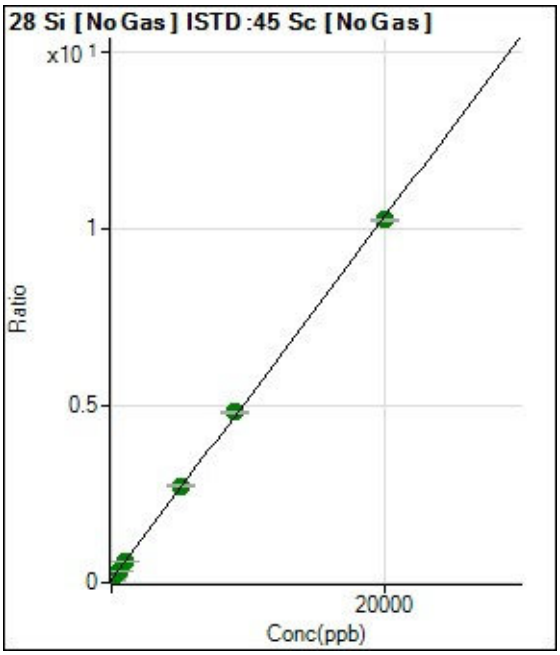


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.2
2	☐			173.34	0.0008	P	22.4
3	☐	2.000	2.739	123.33	0.0006	P	20.2
4	☐	5.000	5.805	256.67	0.0012	P	22.6
5	☐	10.000	10.592	450.02	0.0022	P	10.2
6	☐	50.000	53.120	2260.23	0.0108	P	11.2
7	☐	90.000	88.256	3733.91	0.0180	P	3.5
8	☐	200.000	199.947	8612.83	0.0407	P	4.6

y = 2.0348E-004 * x + 3.2400E-005
R = 0.9998
DL = 0.8274
BEC = 0.1592

Weight: <None>
Min Conc: <None>

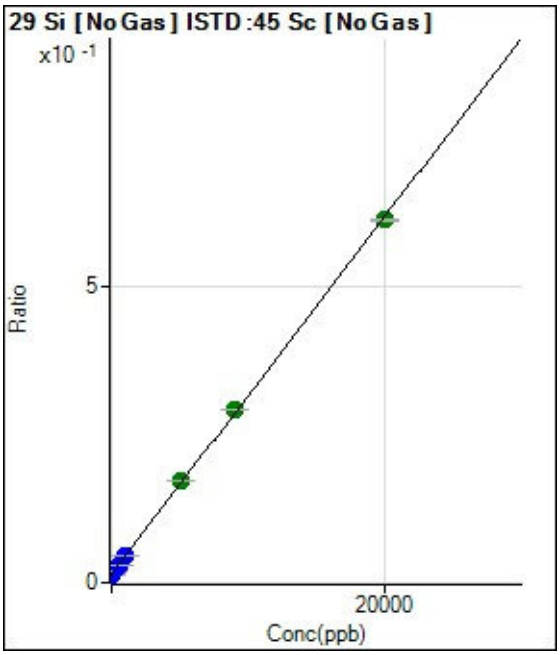
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540264.15	0.0810	P	0.7
2	☐	20.000	21.079	617079.43	0.0918	P	0.9
3	☐	200.000	198.516	1227319.59	0.1828	A	0.4
4	☐	500.000	507.354	2281303.08	0.3412	A	0.6
5	☐	1000.000	1011.074	3986718.81	0.5996	A	0.2
6	☐	5000.000	5192.840	18100868.40	2.7447	A	0.2
7	☐	9000.000	9241.419	31592082.15	4.8216	A	0.4
8	☐	20000.000	19842.428	68007908.05	10.2596	A	0.5

y = 5.1297E-004 * x + 0.0810
R = 0.9998
DL = 3.33
BEC = 157.8

Weight: <None>
Min Conc: <None>

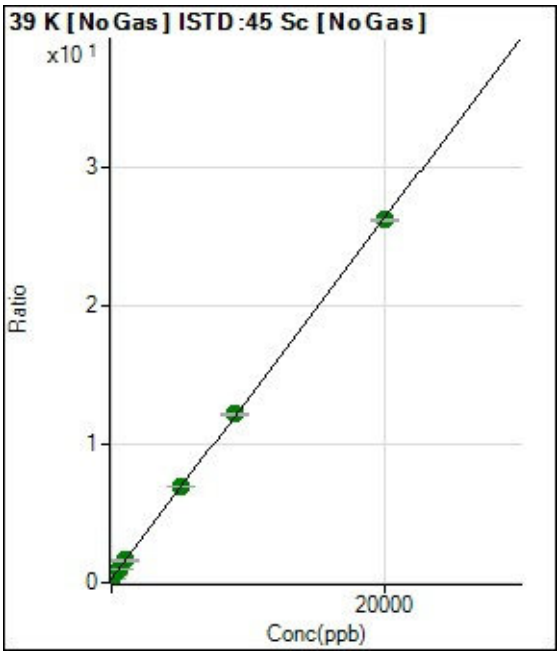


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96824.80	0.0145	P	0.7
2	☐	20.000	9.958	99580.07	0.0148	P	1.7
3	☐	200.000	196.094	137210.16	0.0204	P	1.0
4	☐	500.000	498.817	197795.26	0.0296	P	0.4
5	☐	1000.000	1005.135	298425.75	0.0449	P	0.3
6	☐	5000.000	5201.951	1132360.12	0.1717	A	0.4
7	☐	9000.000	9245.620	1925703.73	0.2939	A	0.2
8	☐	20000.000	19838.805	4070050.89	0.6140	A	0.2

y = 3.0218E-005 * x + 0.0145
R = 0.9998
DL = 10.52
BEC = 480.2

Weight: <None>
Min Conc: <None>

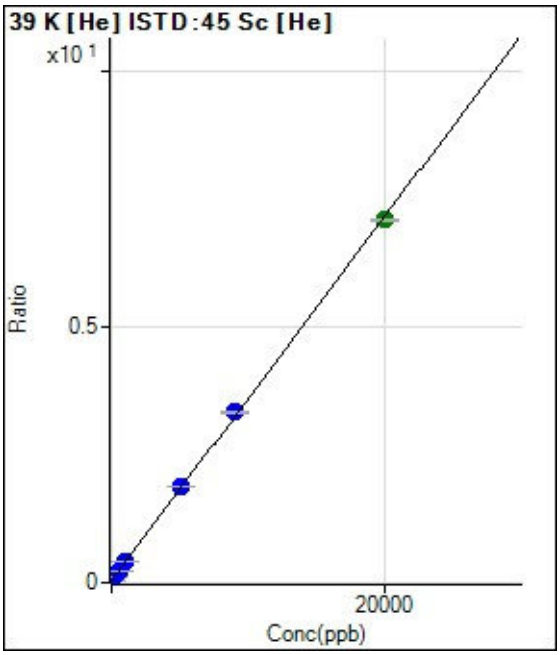
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1984331.85	0.2974	A	0.8
2	☐	20.000	20.462	2178318.67	0.3240	A	0.5
3	☐	200.000	201.949	3759011.09	0.5599	A	1.1
4	☐	500.000	504.017	6368281.16	0.9525	A	0.3
5	☐	1000.000	999.849	10618109.01	1.5970	A	0.8
6	☐	5000.000	5134.752	45976570.98	6.9718	A	0.6
7	☐	9000.000	9133.354	79735188.81	12.1693	A	0.6
8	☐	20000.000	19906.190	173490717.42	26.1723	A	0.7

y = 0.0013 * x + 0.2974
R = 0.9999
DL = 5.495
BEC = 228.8

Weight: <None>
Min Conc: <None>

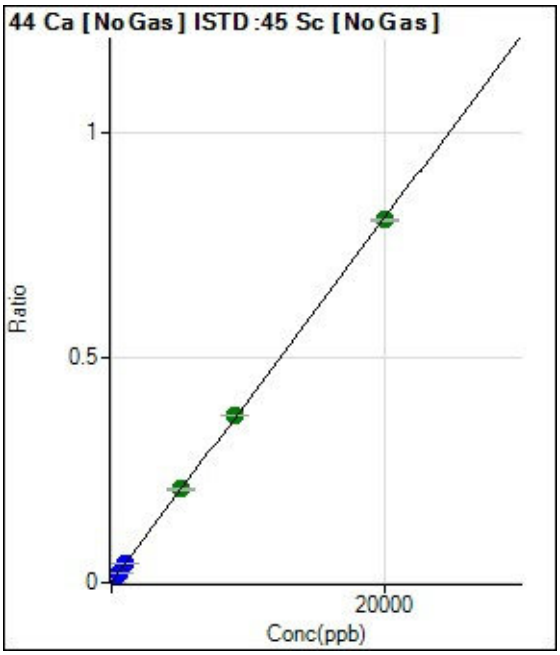


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8496.41	0.0408	P	8.7
2	☐	20.000	1.267	8656.86	0.0412	P	6.3
3	☐	200.000	192.321	22820.19	0.1091	P	2.1
4	☐	500.000	502.134	46374.40	0.2192	P	2.3
5	☐	1000.000	998.332	81376.68	0.3956	P	0.2
6	☐	5000.000	5170.947	391734.06	1.8784	P	0.6
7	☐	9000.000	9281.272	693031.69	3.3391	P	1.1
8	☐	20000.000	19830.816	1499963.89	7.0880	A	0.9

y = 3.5537E-004 * x + 0.0408
R = 0.9998
DL = 30.05
BEC = 114.8

Weight: <None>
Min Conc: <None>

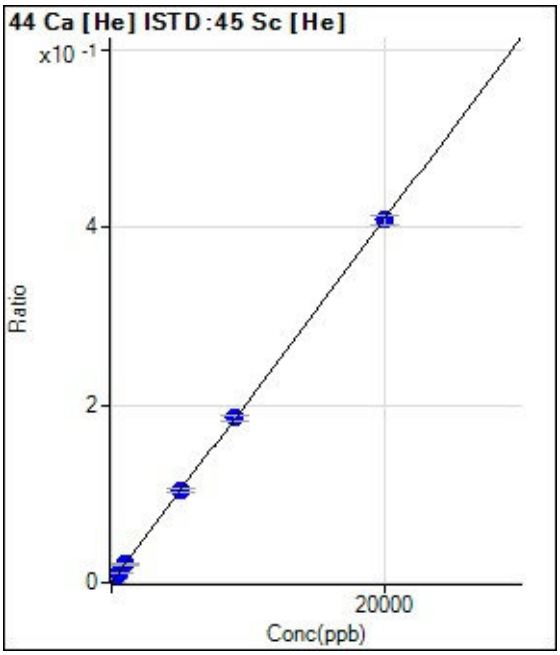
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6628.78	0.0010	P	8.3
2	☐	20.000	24.802	13434.24	0.0020	P	4.3
3	☐	200.000	201.066	61340.34	0.0091	P	4.9
4	☐	500.000	498.789	141690.72	0.0212	P	0.6
5	☐	1000.000	990.953	273423.70	0.0411	P	0.7
6	☐	5000.000	5133.228	1377437.43	0.2089	A	1.5
7	☐	9000.000	9158.636	2436762.57	0.3719	A	0.3
8	☐	20000.000	19895.774	5347450.96	0.8067	A	0.2

y = 4.0498E-005 * x + 9.9350E-004
R = 0.9999
DL = 6.074
BEC = 24.53

Weight: <None>
Min Conc: <None>

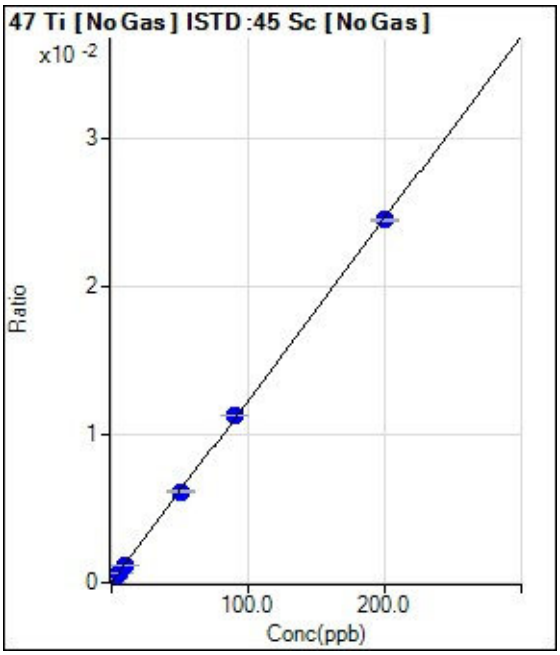


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.34	0.0003	P	43.7
2	☐	20.000	12.257	106.68	0.0005	P	57.0
3	☐	200.000	215.318	973.45	0.0047	P	13.6
4	☐	500.000	484.110	2147.01	0.0102	P	2.9
5	☐	1000.000	1008.923	4294.31	0.0209	P	8.9
6	☐	5000.000	5063.549	21631.78	0.1037	P	5.8
7	☐	9000.000	9056.722	38469.80	0.1853	P	3.1
8	☐	20000.000	19958.394	86368.23	0.4081	P	2.4

y = 2.0437E-005 * x + 2.5642E-004
R = 1.0000
DL = 16.43
BEC = 12.55

Weight: <None>
Min Conc: <None>

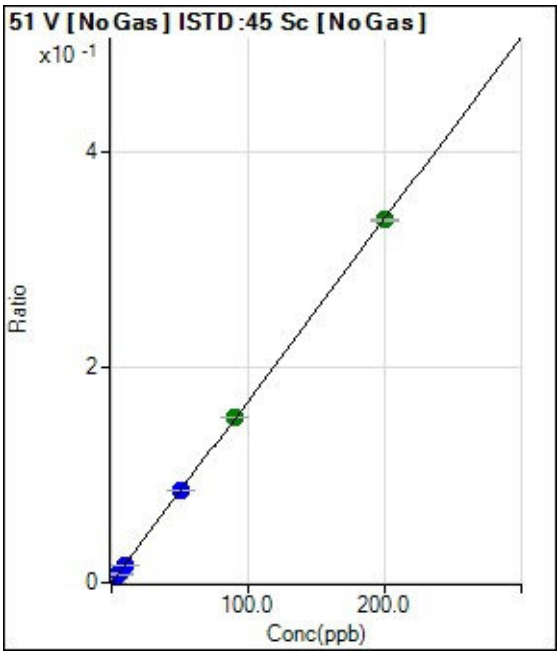
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.74	0.0000	P	27.1
2	☐	0.200	0.225	263.61	0.0000	P	6.0
3	☐	2.000	1.977	1711.85	0.0003	P	5.1
4	☐	5.000	4.839	4061.39	0.0006	P	1.4
5	☐	10.000	9.444	7810.14	0.0012	P	6.0
6	☐	50.000	49.973	40664.22	0.0062	P	0.4
7	☐	90.000	91.834	74180.11	0.0113	P	1.0
8	☐	200.000	199.213	162703.62	0.0245	P	0.7

y = 1.2316E-004 * x + 1.1501E-005
R = 0.9999
DL = 0.07593
BEC = 0.09338

Weight: <None>
Min Conc: <None>

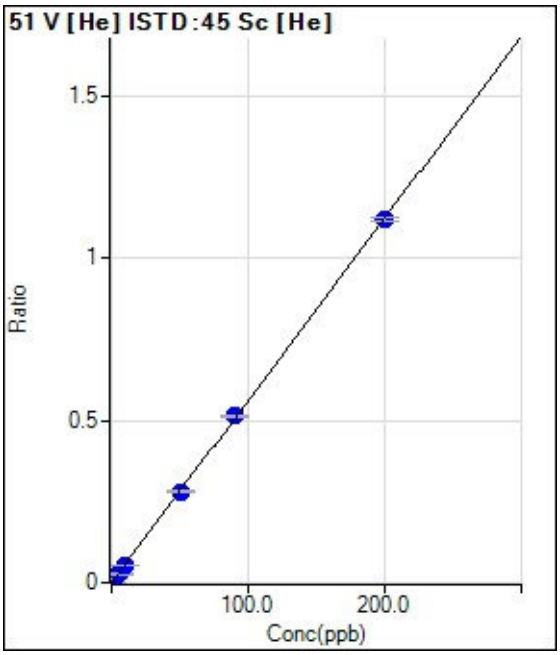


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	62.83	0.0000	P	1287.7
2	☐	0.200	0.209	2448.56	0.0004	P	80.1
3	☐	2.000	1.894	21582.25	0.0032	P	3.4
4	☐	5.000	4.850	54946.08	0.0082	P	4.1
5	☐	10.000	9.772	110032.95	0.0166	P	1.7
6	☐	50.000	50.950	568763.50	0.0862	P	0.9
7	☐	90.000	90.689	1005817.94	0.1535	A	0.5
8	☐	200.000	199.469	2238021.89	0.3376	A	0.2

y = 0.0017 * x + 9.3796E-006
R = 1.0000
DL = 0.2141
BEC = 0.005542

Weight: <None>
Min Conc: <None>

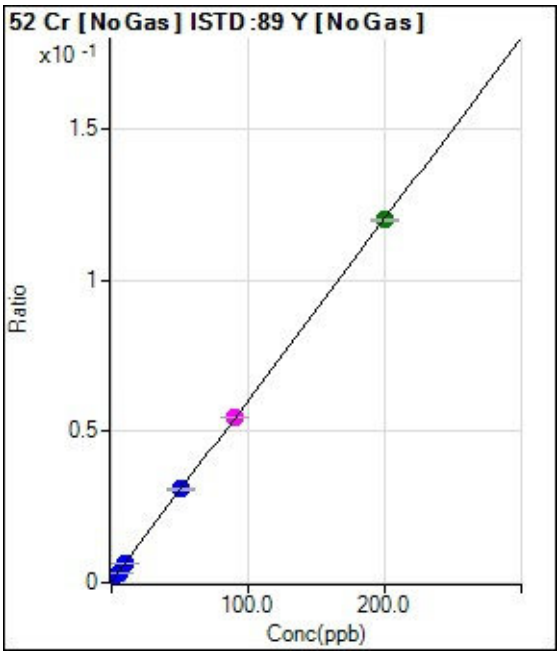
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0005	P	40.4
2	☐	0.200	0.198	330.34	0.0016	P	5.1
3	☐	2.000	2.069	2522.81	0.0121	P	6.8
4	☐	5.000	4.705	5676.95	0.0268	P	3.4
5	☐	10.000	9.712	11299.49	0.0549	P	3.5
6	☐	50.000	49.987	58536.56	0.2807	P	1.0
7	☐	90.000	91.645	106721.89	0.5142	P	0.8
8	☐	200.000	199.284	236494.82	1.1176	P	1.2

y = 0.0056 * x + 4.6617E-004
R = 1.0000
DL = 0.1007
BEC = 0.08316

Weight: <None>
Min Conc: <None>

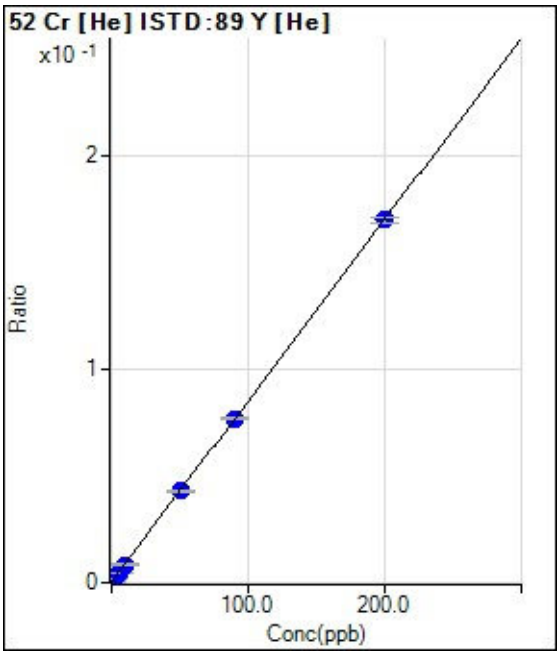


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8070.58	0.0005	P	7.2
2	☐	0.200	0.276	10925.46	0.0006	P	2.3
3	☐	2.000	2.058	29013.34	0.0017	P	0.9
4	☐	5.000	5.009	58553.21	0.0035	P	0.9
5	☐	10.000	9.877	107115.78	0.0064	P	0.1
6	☐	50.000	50.856	512670.20	0.0309	P	0.8
7	☐	90.000	90.585	903470.74	0.0547	M	0.3
8	☐	200.000	199.528	1975059.39	0.1199	A	0.8

y = 5.9844E-004 * x + 4.8064E-004
R = 1.0000
DL = 0.1725
BEC = 0.8032

Weight: <None>
Min Conc: <None>

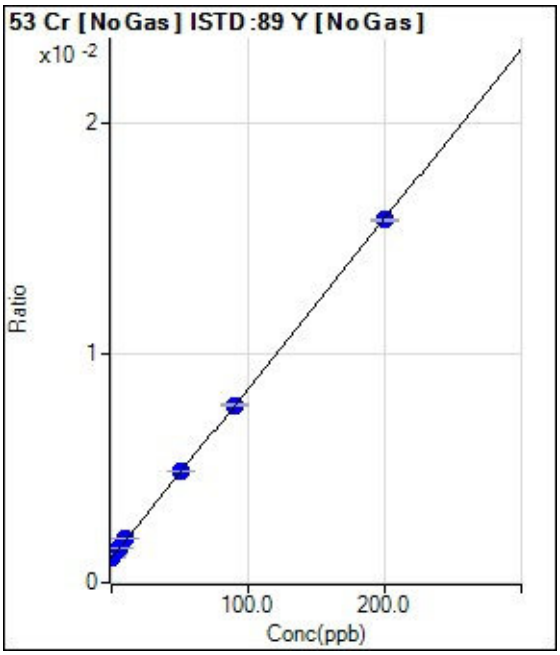
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	620.65	0.0004	P	8.6
2	☐	0.200	0.177	884.26	0.0005	P	2.9
3	☐	2.000	1.989	3580.77	0.0020	P	2.3
4	☐	5.000	4.614	7462.96	0.0043	P	7.0
5	☐	10.000	9.619	14636.05	0.0085	P	3.1
6	☐	50.000	50.153	73284.85	0.0428	P	1.5
7	☐	90.000	90.187	130411.28	0.0768	P	1.0
8	☐	200.000	199.907	291753.16	0.1697	P	1.7

y = 8.4718E-004 * x + 3.5312E-004
R = 1.0000
DL = 0.107
BEC = 0.4168

Weight: <None>
Min Conc: <None>

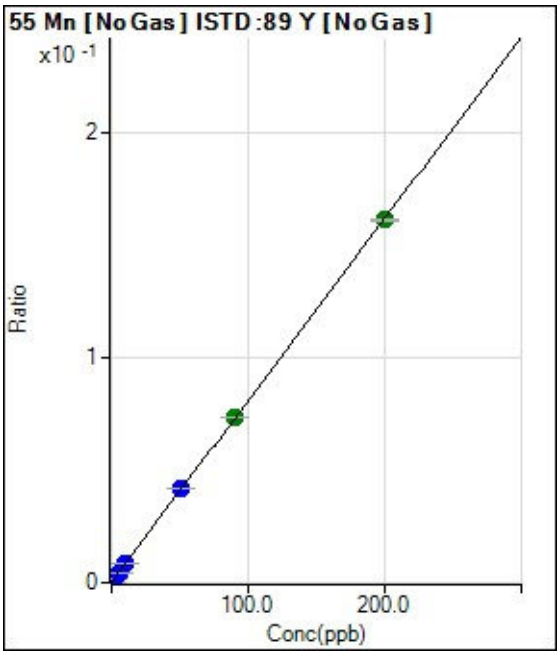


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17779.55	0.0011	P	2.0
2	☐	0.200	1.078	19259.72	0.0011	P	2.7
3	☐	2.000	2.959	21642.29	0.0013	P	0.8
4	☐	5.000	6.249	25596.43	0.0015	P	1.8
5	☐	10.000	11.667	32190.23	0.0019	P	1.0
6	☐	50.000	51.337	80465.81	0.0049	P	1.0
7	☐	90.000	90.364	127798.29	0.0077	P	1.2
8	☐	200.000	199.377	260174.45	0.0158	P	0.2

y = 7.3894E-005 * x + 0.0011
R = 1.0000
DL = 0.8474
BEC = 14.33

Weight: <None>
Min Conc: <None>

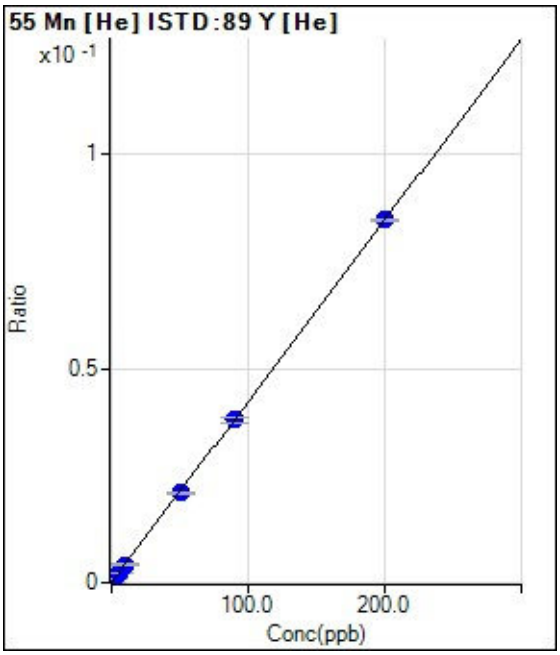
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4198.26	0.0003	P	4.8
2	☐	0.200	0.203	7008.92	0.0004	P	3.5
3	☐	2.000	1.985	31404.35	0.0019	P	1.2
4	☐	5.000	4.981	71926.70	0.0043	P	0.7
5	☐	10.000	10.006	139618.18	0.0083	P	1.2
6	☐	50.000	51.292	691060.44	0.0417	P	0.7
7	☐	90.000	90.483	1211238.72	0.0733	A	0.2
8	☐	200.000	199.460	2657791.34	0.1613	A	0.7

y = 8.0757E-004 * x + 2.5000E-004
R = 1.0000
DL = 0.04429
BEC = 0.3096

Weight: <None>
Min Conc: <None>

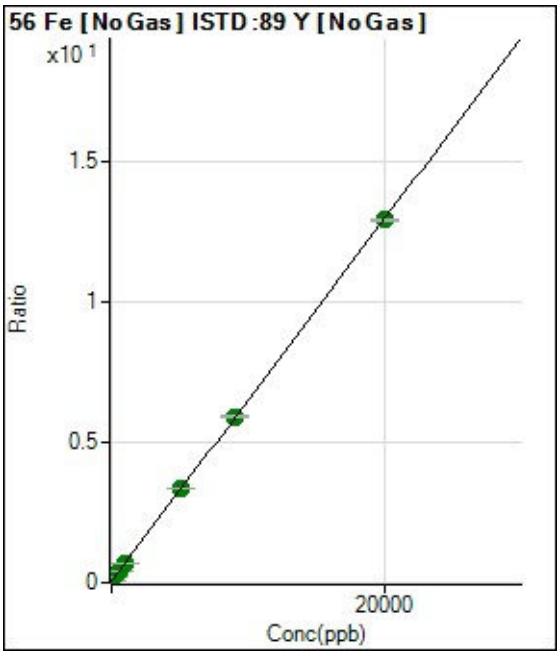


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.77	0.0001	P	20.2
2	☐	0.200	0.193	250.26	0.0001	P	22.0
3	☐	2.000	1.931	1541.66	0.0009	P	11.9
4	☐	5.000	5.063	3854.46	0.0022	P	7.2
5	☐	10.000	9.783	7229.22	0.0042	P	3.9
6	☐	50.000	49.408	35846.36	0.0210	P	2.2
7	☐	90.000	89.705	64563.00	0.0380	P	2.6
8	☐	200.000	200.291	145734.45	0.0848	P	0.6

y = 4.2289E-004 * x + 6.0843E-005
R = 1.0000
DL = 0.08737
BEC = 0.1439

Weight: <None>
Min Conc: <None>

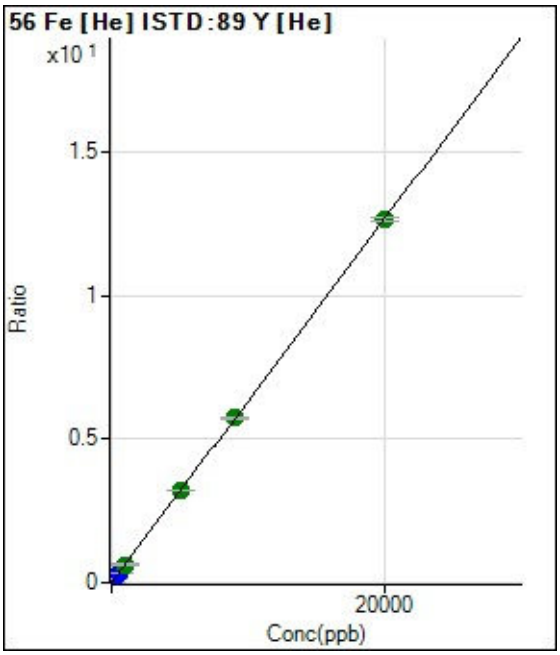
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	879396.99	0.0524	A	1.2
2	☐	20.000	18.961	1092771.61	0.0646	A	0.7
3	☐	200.000	199.071	3060817.32	0.1806	A	0.3
4	☐	500.000	504.650	6356061.86	0.3775	A	0.1
5	☐	1000.000	980.466	11465735.15	0.6841	A	0.7
6	☐	5000.000	5082.666	55180463.74	3.3275	A	0.3
7	☐	9000.000	9083.645	97558631.35	5.9056	A	0.6
8	☐	20000.000	19942.564	212568988.08	12.9027	A	0.6

y = 6.4437E-004 * x + 0.0524
R = 1.0000
DL = 2.956
BEC = 81.26

Weight: <None>
Min Conc: <None>

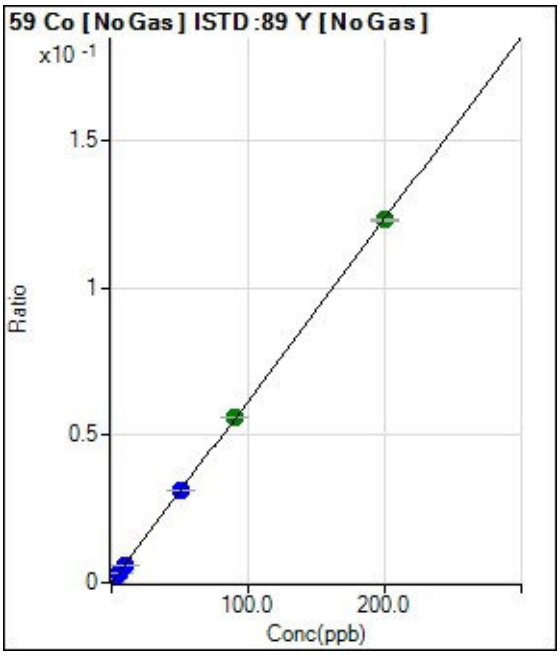


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6241.82	0.0036	P	13.7
2	☐	20.000	20.901	29488.06	0.0168	P	3.5
3	☐	200.000	206.913	236324.64	0.1345	P	1.1
4	☐	500.000	526.622	589686.82	0.3369	P	2.6
5	☐	1000.000	992.979	1088088.81	0.6321	A	1.9
6	☐	5000.000	5054.958	5479332.21	3.2031	A	1.1
7	☐	9000.000	9071.746	9761113.61	5.7455	A	1.4
8	☐	20000.000	19953.590	21719823.84	12.6332	A	0.9

y = 6.3295E-004 * x + 0.0036
R = 1.0000
DL = 2.303
BEC = 5.619

Weight: <None>
Min Conc: <None>

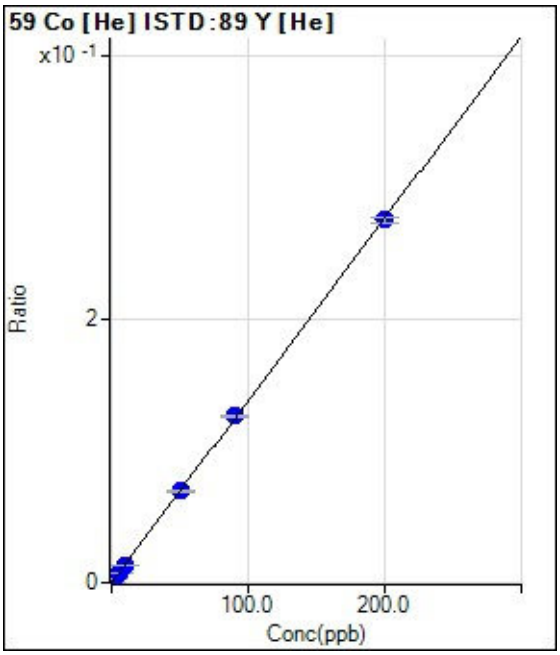
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.48	0.0000	P	4.3
2	☐	0.200	0.193	2476.08	0.0001	P	5.1
3	☐	2.000	1.961	20980.74	0.0012	P	4.2
4	☐	5.000	4.948	51880.57	0.0031	P	0.6
5	☐	10.000	9.866	102524.83	0.0061	P	0.3
6	☐	50.000	50.453	516933.42	0.0312	P	0.6
7	☐	90.000	90.774	926116.80	0.0561	A	0.5
8	☐	200.000	199.547	2029786.56	0.1232	A	0.6

y = 6.1729E-004 * x + 2.7417E-005
R = 1.0000
DL = 0.005732
BEC = 0.04441

Weight: <None>
Min Conc: <None>

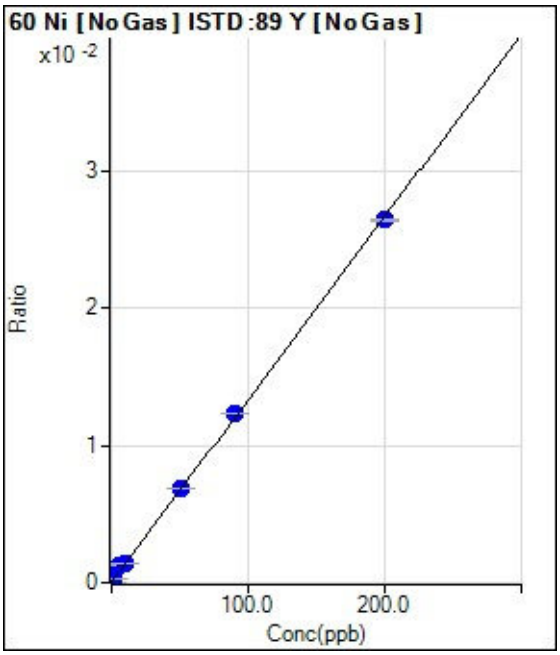


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.72	0.0000	P	73.9
2	☐	0.200	0.197	537.23	0.0003	P	16.6
3	☐	2.000	1.960	4825.76	0.0027	P	2.8
4	☐	5.000	4.912	11960.73	0.0068	P	4.7
5	☐	10.000	9.832	23490.61	0.0136	P	2.7
6	☐	50.000	50.344	119292.59	0.0697	P	1.1
7	☐	90.000	91.472	215222.34	0.1267	P	1.0
8	☐	200.000	199.263	474353.64	0.2759	P	1.4

y = 0.0014 * x + 3.2496E-005
R = 1.0000
DL = 0.052
BEC = 0.02347

Weight: <None>
Min Conc: <None>

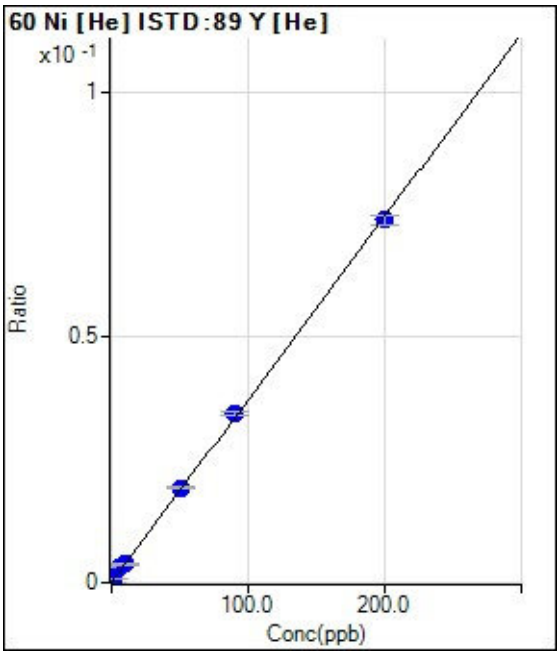
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	357.03	0.0000	P	21.9
2	☐	0.200	0.156	710.74	0.0000	P	30.5
3	☐	2.000	1.953	4759.02	0.0003	P	7.5
4	☐	5.000	8.843	20145.21	0.0012	P	1.1
5	☐	10.000	10.005	22641.64	0.0014	P	2.8
6	☐	50.000	51.181	113158.90	0.0068	P	0.8
7	☐	90.000	92.617	203704.19	0.0123	P	0.6
8	☐	200.000	198.431	434839.07	0.0264	P	0.7

y = 1.3291E-004 * x + 2.1264E-005
R = 0.9997
DL = 0.1052
BEC = 0.16

Weight: <None>
Min Conc: <None>

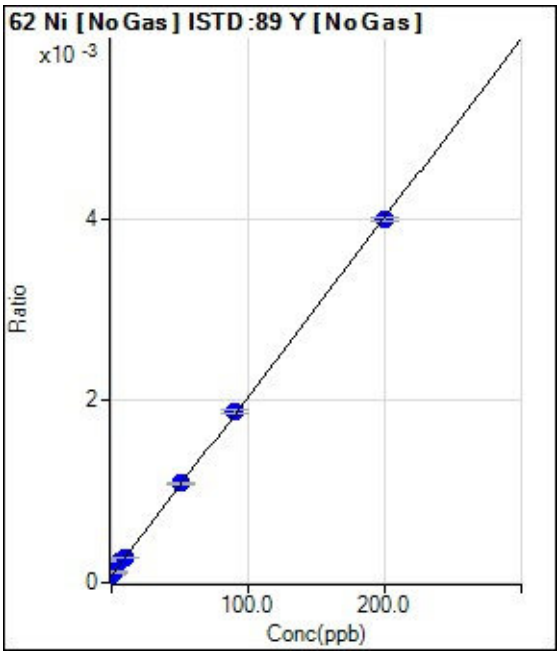


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.71	0.0000	P	25.2
2	☐	0.200	0.229	196.87	0.0001	P	30.5
3	☐	2.000	2.028	1374.80	0.0008	P	5.0
4	☐	5.000	8.750	5757.07	0.0033	P	4.1
5	☐	10.000	9.993	6461.44	0.0038	P	2.5
6	☐	50.000	51.934	33167.01	0.0194	P	2.4
7	☐	90.000	92.419	58580.89	0.0345	P	2.8
8	☐	200.000	198.334	127151.78	0.0740	P	2.5

y = 3.7283E-004 * x + 2.6616E-005
R = 0.9997
DL = 0.05397
BEC = 0.07139

Weight: <None>
Min Conc: <None>

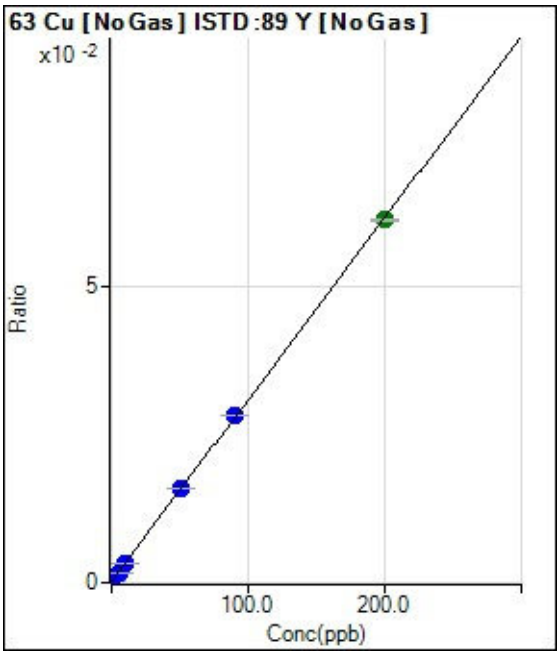
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1298.05	0.0001	P	6.1
2	☐	0.200	0.729	1551.67	0.0001	P	11.5
3	☐	2.000	1.854	1928.77	0.0001	P	6.4
4	☐	5.000	8.406	4088.11	0.0002	P	1.4
5	☐	10.000	9.928	4572.09	0.0003	P	4.2
6	☐	50.000	51.584	18127.12	0.0011	P	2.9
7	☐	90.000	91.765	31130.25	0.0019	P	2.2
8	☐	200.000	198.729	65747.21	0.0040	P	1.0

y = 1.9693E-005 * x + 7.7302E-005
R = 0.9998
DL = 0.7212
BEC = 3.925

Weight: <None>
Min Conc: <None>

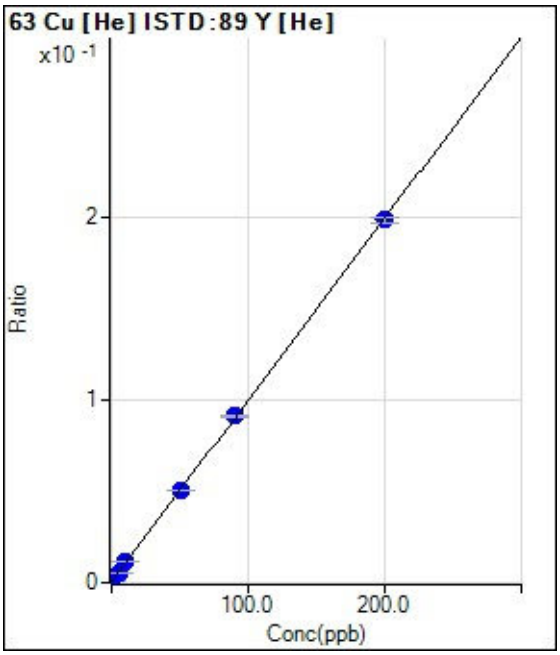


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3570.78	0.0002	P	8.2
2	☐	0.200	0.361	5473.36	0.0003	P	1.7
3	☐	2.000	2.043	14241.85	0.0008	P	1.6
4	☐	5.000	5.033	29615.49	0.0018	P	2.0
5	☐	10.000	10.300	56607.47	0.0034	P	1.6
6	☐	50.000	51.156	264211.97	0.0159	P	0.3
7	☐	90.000	91.518	468092.28	0.0283	P	0.8
8	☐	200.000	199.011	1010999.62	0.0614	A	0.6

y = 3.0729E-004 * x + 2.1261E-004
R = 0.9999
DL = 0.1692
BEC = 0.6919

Weight: <None>
Min Conc: <None>

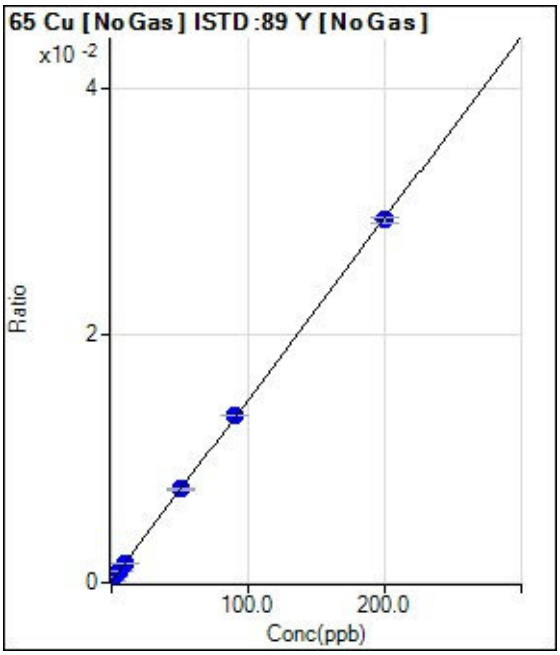
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	981.03	0.0006	P	4.9
2	☐	0.200	0.474	1808.63	0.0010	P	4.8
3	☐	2.000	2.193	4812.42	0.0027	P	7.7
4	☐	5.000	5.080	9820.21	0.0056	P	2.1
5	☐	10.000	10.789	19433.56	0.0113	P	2.9
6	☐	50.000	50.392	86664.13	0.0507	P	1.6
7	☐	90.000	91.329	155234.26	0.0914	P	0.8
8	☐	200.000	199.260	341563.44	0.1987	P	1.6

y = 9.9431E-004 * x + 5.5833E-004
R = 1.0000
DL = 0.0833
BEC = 0.5615

Weight: <None>
Min Conc: <None>

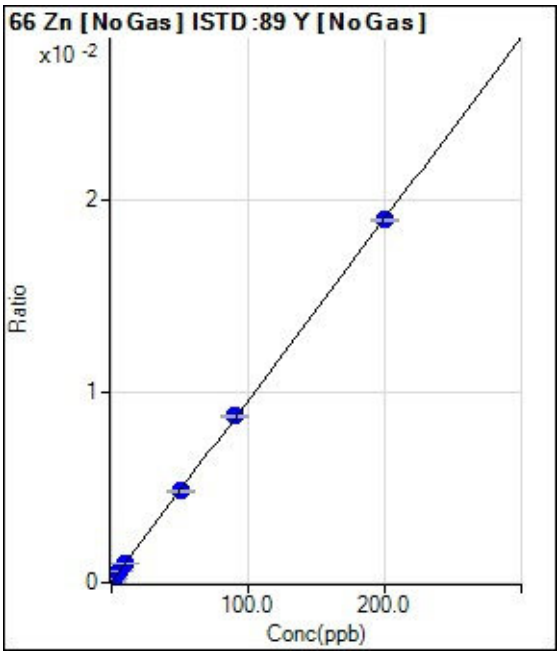


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1882.05	0.0001	P	6.4
2	☐	0.200	0.325	2703.02	0.0002	P	10.6
3	☐	2.000	2.107	7139.15	0.0004	P	5.0
4	☐	5.000	5.123	14549.19	0.0009	P	0.9
5	☐	10.000	10.066	26646.32	0.0016	P	1.1
6	☐	50.000	50.777	125489.49	0.0076	P	1.9
7	☐	90.000	91.467	223690.25	0.0135	P	0.1
8	☐	200.000	199.138	483482.65	0.0293	P	1.3

y = 1.4682E-004 * x + 1.1203E-004
R = 1.0000
DL = 0.1467
BEC = 0.7631

Weight: <None>
Min Conc: <None>

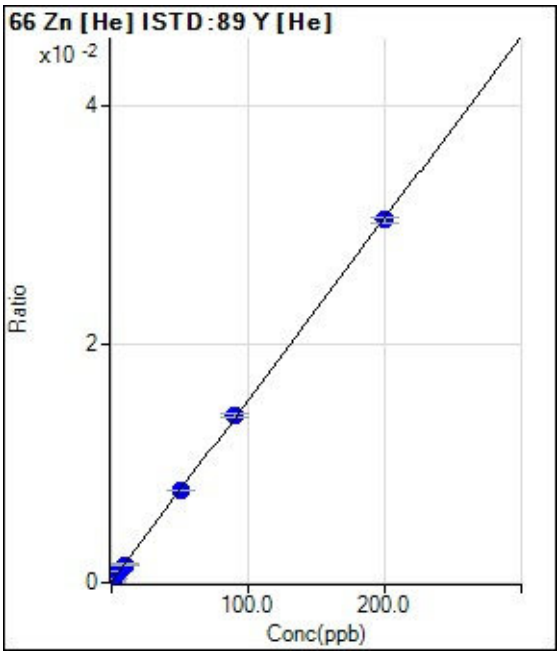
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	790.83	0.0000	P	9.7
2	☐	0.200	0.281	1247.99	0.0001	P	7.4
3	☐	2.000	1.995	4008.00	0.0002	P	5.5
4	☐	5.000	5.929	10270.97	0.0006	P	4.6
5	☐	10.000	9.856	16476.67	0.0010	P	1.4
6	☐	50.000	49.968	79474.04	0.0048	P	1.0
7	☐	90.000	91.242	143925.07	0.0087	P	0.5
8	☐	200.000	199.433	312835.65	0.0190	P	0.6

y = 9.4969E-005 * x + 4.7081E-005
R = 1.0000
DL = 0.1444
BEC = 0.4958

Weight: <None>
Min Conc: <None>

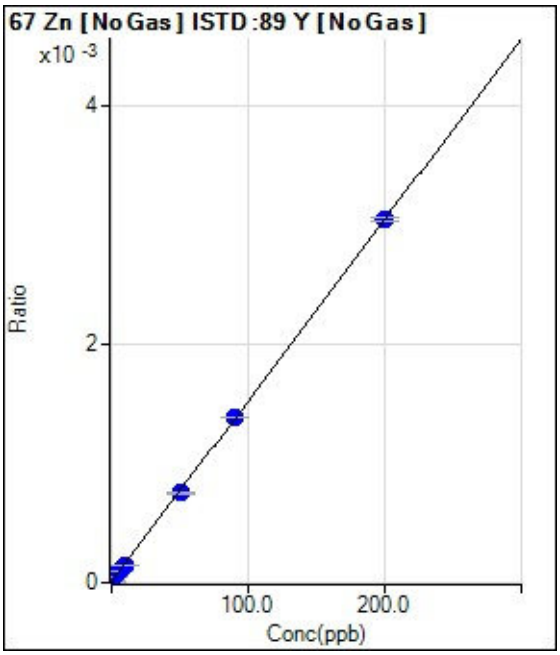


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.81	0.0001	P	21.4
2	☐	0.200	0.150	186.86	0.0001	P	34.3
3	☐	2.000	1.747	613.97	0.0003	P	9.4
4	☐	5.000	5.625	1645.11	0.0009	P	3.7
5	☐	10.000	9.484	2629.61	0.0015	P	6.0
6	☐	50.000	50.069	13183.09	0.0077	P	1.1
7	☐	90.000	91.919	23915.19	0.0141	P	2.2
8	☐	200.000	199.132	52262.74	0.0304	P	1.3

y = 1.5224E-004 * x + 8.3514E-005
R = 0.9999
DL = 0.3527
BEC = 0.5486

Weight: <None>
Min Conc: <None>

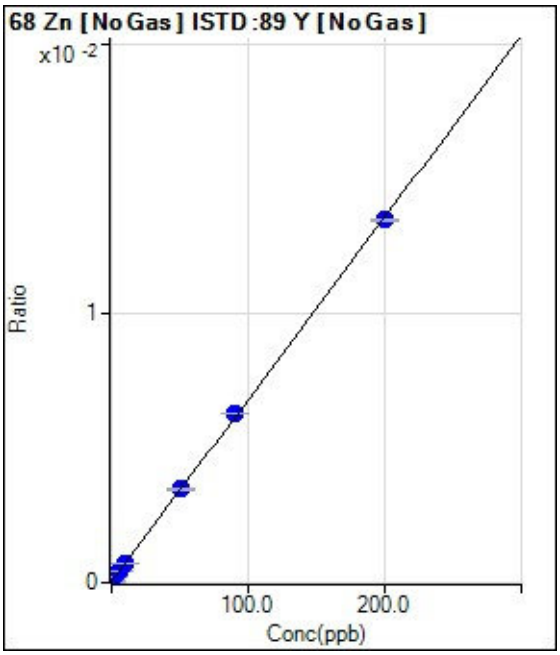
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.47	0.0000	P	36.7
2	☐	0.200	0.437	246.92	0.0000	P	26.6
3	☐	2.000	2.344	737.44	0.0000	P	7.0
4	☐	5.000	6.020	1671.80	0.0001	P	8.1
5	☐	10.000	9.122	2452.71	0.0001	P	5.2
6	☐	50.000	49.242	12521.87	0.0008	P	2.0
7	☐	90.000	90.555	22828.92	0.0014	P	0.1
8	☐	200.000	199.955	50119.36	0.0030	P	1.0

y = 1.5173E-005 * x + 7.9415E-006
R = 1.0000
DL = 0.5757
BEC = 0.5234

Weight: <None>
Min Conc: <None>

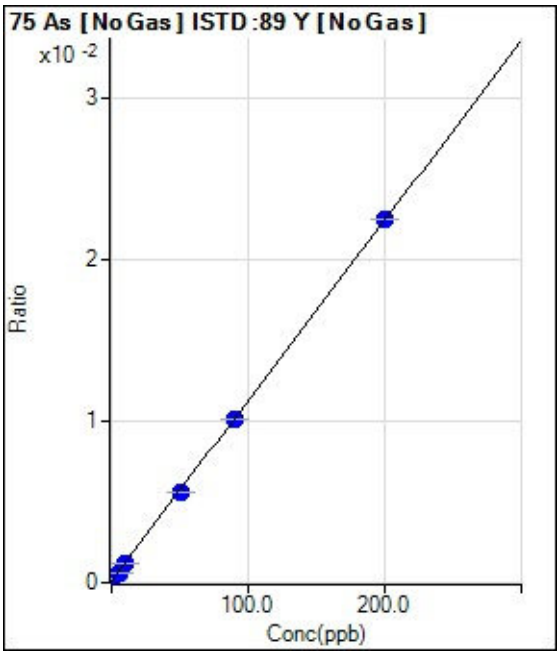


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	543.90	0.0000	P	19.9
2	☐	0.200	0.346	944.33	0.0001	P	9.0
3	☐	2.000	2.203	3076.81	0.0002	P	1.7
4	☐	5.000	5.866	7232.60	0.0004	P	1.1
5	☐	10.000	9.848	11720.28	0.0007	P	5.3
6	☐	50.000	50.748	57532.64	0.0035	P	0.6
7	☐	90.000	92.533	104063.43	0.0063	P	0.8
8	☐	200.000	198.657	222210.50	0.0135	P	0.6

y = 6.7726E-005 * x + 3.2365E-005
R = 0.9999
DL = 0.2851
BEC = 0.4779

Weight: <None>
Min Conc: <None>

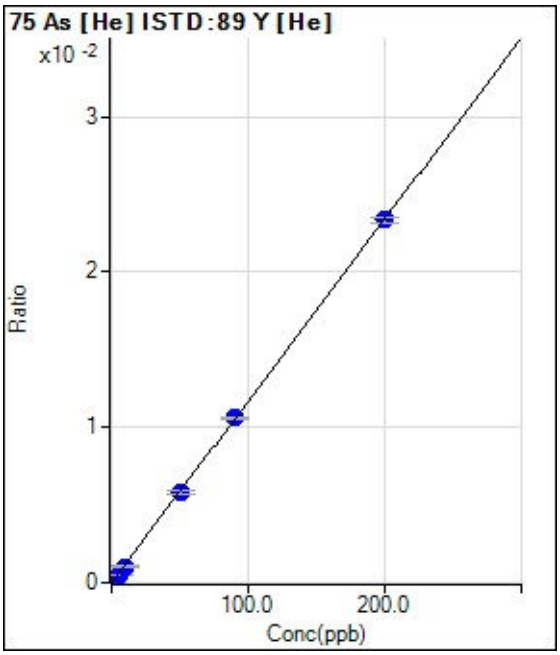
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2172.88	0.0001	P	30.9
2	☐	0.200	0.131	2435.55	0.0001	P	25.1
3	☐	2.000	1.693	5393.05	0.0003	P	15.1
4	☐	5.000	4.603	10820.45	0.0006	P	3.4
5	☐	10.000	9.156	19280.30	0.0012	P	1.8
6	☐	50.000	49.398	93487.58	0.0056	P	0.5
7	☐	90.000	89.752	167460.01	0.0101	P	0.8
8	☐	200.000	200.317	370121.28	0.0225	P	0.2

y = 1.1150E-004 * x + 1.2945E-004
R = 1.0000
DL = 1.075
BEC = 1.161

Weight: <None>
Min Conc: <None>

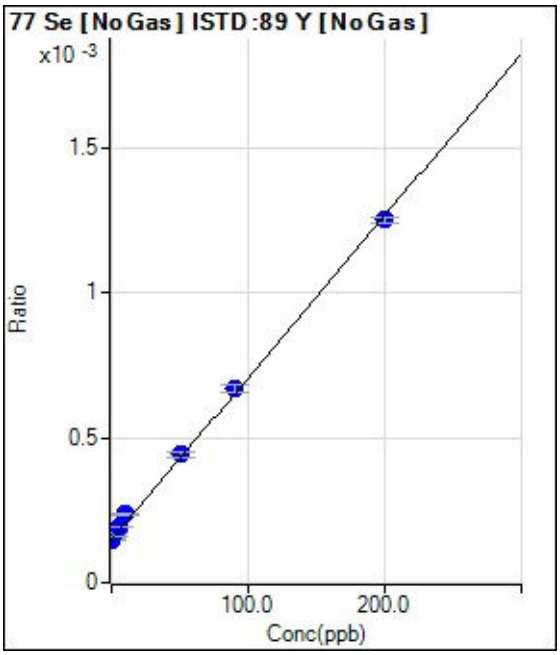


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	173.2
2	☐	0.200	0.238	51.11	0.0000	P	32.1
3	☐	2.000	2.018	416.68	0.0002	P	4.3
4	☐	5.000	4.555	934.48	0.0005	P	3.2
5	☐	10.000	8.900	1792.35	0.0010	P	6.8
6	☐	50.000	49.911	9982.63	0.0058	P	3.0
7	☐	90.000	90.604	17996.47	0.0106	P	1.6
8	☐	200.000	199.816	40159.43	0.0234	P	1.2

y = 1.1690E-004 * x + 1.2481E-006
R = 1.0000
DL = 0.05548
BEC = 0.01068

Weight: <None>
Min Conc: <None>

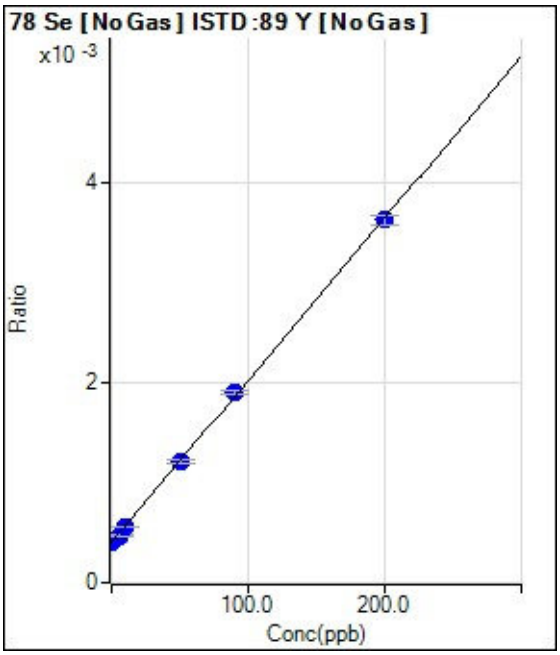
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2489.43	0.0001	P	4.0
2	☐	0.200	2.266	2723.06	0.0002	P	8.4
3	☐	2.000	3.262	2819.83	0.0002	P	8.1
4	☐	5.000	7.851	3233.69	0.0002	P	2.7
5	☐	10.000	15.666	3951.26	0.0002	P	4.0
6	☐	50.000	52.524	7326.14	0.0004	P	3.7
7	☐	90.000	93.368	11069.09	0.0007	P	3.7
8	☐	200.000	197.484	20626.63	0.0013	P	1.5

y = 5.5896E-006 * x + 1.4821E-004
R = 0.9996
DL = 3.214
BEC = 26.51

Weight: <None>
Min Conc: <None>

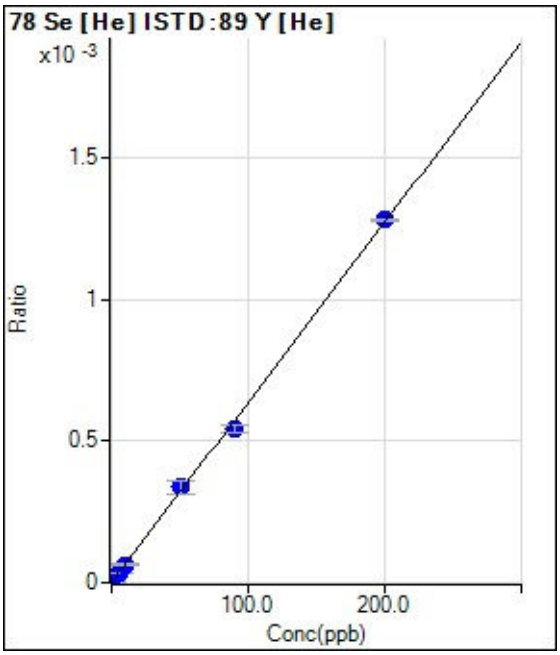


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6771.92	0.0004	P	2.3
2	☐	0.200	0.325	6912.16	0.0004	P	2.7
3	☐	2.000	1.013	7109.12	0.0004	P	5.2
4	☐	5.000	4.128	7910.37	0.0005	P	5.3
5	☐	10.000	9.332	9285.99	0.0006	P	1.9
6	☐	50.000	50.077	20112.02	0.0012	P	3.7
7	☐	90.000	92.351	31324.63	0.0019	P	2.5
8	☐	200.000	198.988	59654.72	0.0036	P	2.7

y = 1.6165E-005 * x + 4.0322E-004
R = 0.9999
DL = 1.696
BEC = 24.94

Weight: <None>
Min Conc: <None>

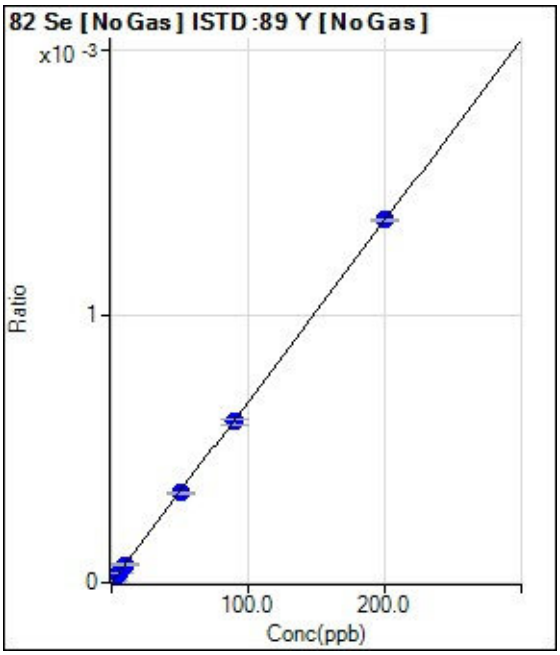
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	86.6
2	☐	0.200	0.199	4.44	0.0000	P	114.6
3	☐	2.000	3.383	40.00	0.0000	P	16.6
4	☐	5.000	5.196	60.00	0.0000	P	6.3
5	☐	10.000	9.538	106.67	0.0001	P	11.1
6	☐	50.000	52.854	576.68	0.0003	P	13.7
7	☐	90.000	85.289	923.37	0.0005	P	4.6
8	☐	200.000	201.411	2203.53	0.0013	P	0.9

y = 6.3558E-006 * x + 1.2612E-006
R = 0.9995
DL = 0.5157
BEC = 0.1984

Weight: <None>
Min Conc: <None>

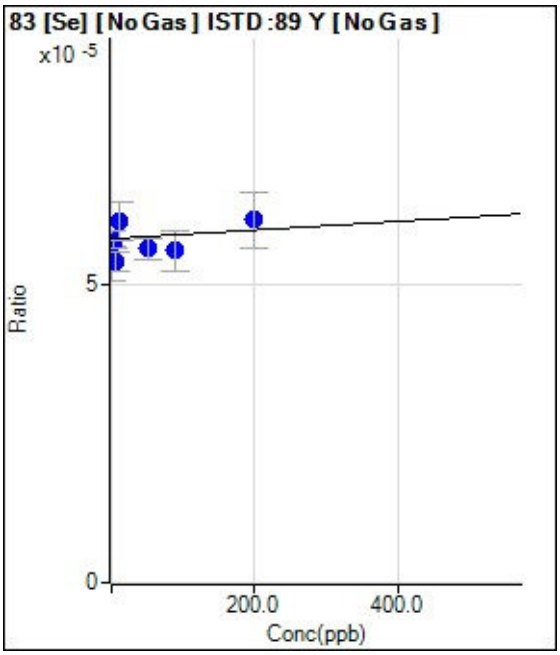


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-38.74	0.0000	P	-196.3
2	☐	0.200	0.443	11.79	0.0000	P	1339.2
3	☐	2.000	1.160	94.77	0.0000	P	53.0
4	☐	5.000	5.482	589.19	0.0000	P	8.3
5	☐	10.000	9.772	1075.43	0.0001	P	12.5
6	☐	50.000	49.805	5578.87	0.0003	P	2.0
7	☐	90.000	88.896	9949.59	0.0006	P	3.2
8	☐	200.000	200.553	22434.00	0.0014	P	0.5

y = 6.8009E-006 * x - 2.2949E-006
R = 1.0000
DL = 1.987
BEC = -0.3374

Weight: <None>
Min Conc: <None>

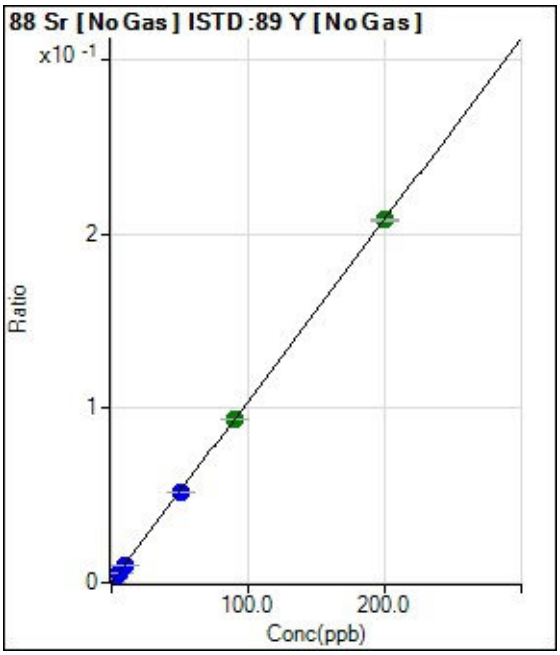
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	967.69	0.0001	P	4.8
2	☐	0.200	-497.084	914.29	0.0001	P	12.3
3	☐	2.000	-96.464	964.35	0.0001	P	2.8
4	☐	5.000	-536.574	904.28	0.0001	P	5.8
5	☐	10.000	403.756	1014.41	0.0001	P	10.3
6	☐	50.000	-230.763	927.65	0.0001	P	6.6
7	☐	90.000	-283.763	917.64	0.0001	P	12.7
8	☐	200.000	433.718	1001.05	0.0001	P	15.4

y = 7.2349E-009 * x + 5.7608E-005
R = 0.4779
DL = 1135
BEC = 7962

Weight: <None>
Min Conc: <None>

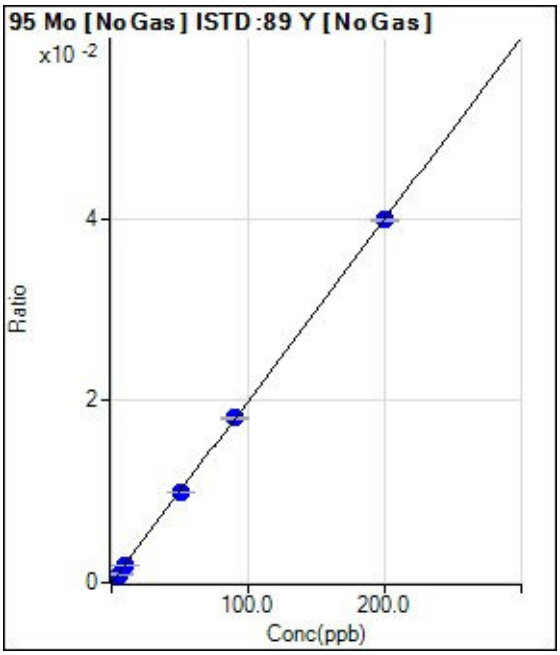


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1671.81	0.0001	P	16.3
2	☐	0.200	0.207	5326.48	0.0003	P	4.4
3	☐	2.000	1.980	36580.11	0.0022	P	2.0
4	☐	5.000	4.963	88566.35	0.0053	P	0.4
5	☐	10.000	9.659	170032.68	0.0101	P	1.4
6	☐	50.000	50.168	866910.98	0.0523	P	0.3
7	☐	90.000	90.214	1551615.37	0.0939	A	0.1
8	☐	200.000	199.880	3426600.04	0.2080	A	0.2

y = 0.0010 * x + 9.9506E-005
R = 1.0000
DL = 0.04665
BEC = 0.09568

Weight: <None>
Min Conc: <None>

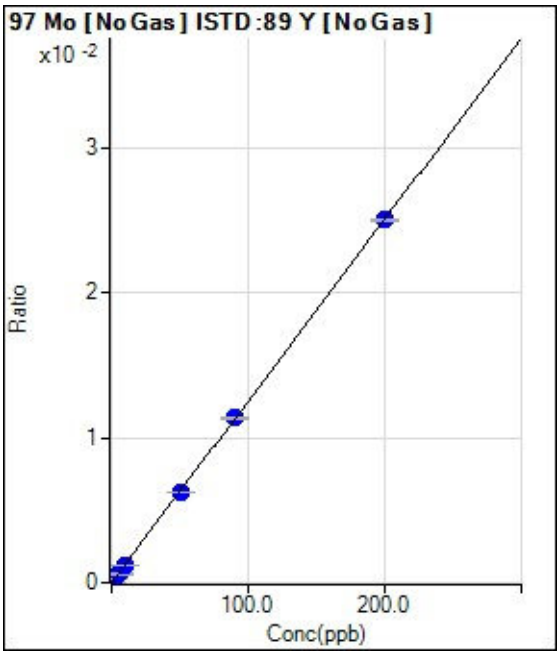
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	260.27	0.0000	P	3.4
2	☐	0.200	0.197	927.65	0.0001	P	13.4
3	☐	2.000	1.859	6541.57	0.0004	P	4.4
4	☐	5.000	4.685	15985.82	0.0009	P	3.2
5	☐	10.000	9.487	31957.02	0.0019	P	1.8
6	☐	50.000	49.697	164554.08	0.0099	P	0.8
7	☐	90.000	90.874	299526.16	0.0181	P	1.1
8	☐	200.000	199.718	656209.22	0.0398	P	0.4

y = 1.9936E-004 * x + 1.5495E-005
R = 1.0000
DL = 0.00784
BEC = 0.07772

Weight: <None>
Min Conc: <None>

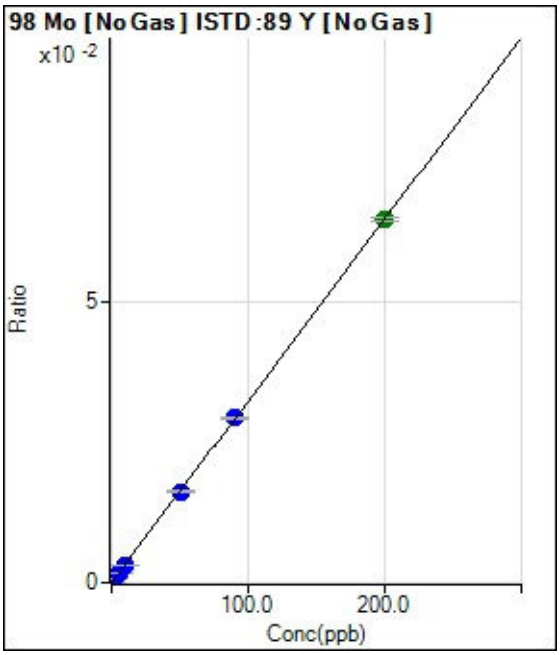


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.45	0.0000	P	41.7
2	☐	0.200	0.165	463.82	0.0000	P	1.7
3	☐	2.000	1.926	4204.93	0.0002	P	5.0
4	☐	5.000	4.782	10204.27	0.0006	P	6.3
5	☐	10.000	9.508	20088.88	0.0012	P	2.1
6	☐	50.000	49.645	103318.04	0.0062	P	0.8
7	☐	90.000	90.552	187635.29	0.0114	P	0.2
8	☐	200.000	199.871	412906.21	0.0251	P	0.3

y = 1.2536E-004 * x + 6.7566E-006
R = 1.0000
DL = 0.06742
BEC = 0.0539

Weight: <None>
Min Conc: <None>

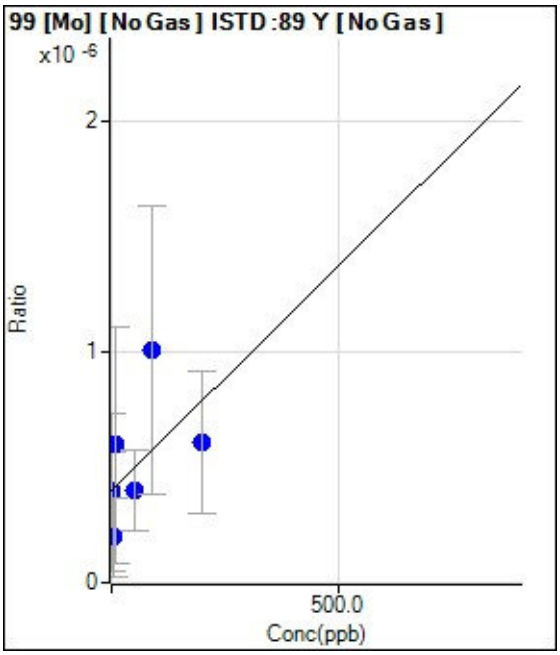
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	362.74	0.0000	P	34.8
2	☐	0.200	0.176	1330.44	0.0001	P	7.7
3	☐	2.000	1.892	10734.23	0.0006	P	2.3
4	☐	5.000	4.929	27201.41	0.0016	P	2.1
5	☐	10.000	9.488	51794.28	0.0031	P	1.4
6	☐	50.000	50.153	269363.44	0.0162	P	1.2
7	☐	90.000	90.524	484037.10	0.0293	P	1.6
8	☐	200.000	199.754	1064705.23	0.0646	A	1.1

y = 3.2344E-004 * x + 2.1609E-005
R = 1.0000
DL = 0.06983
BEC = 0.06681

Weight: <None>
Min Conc: <None>

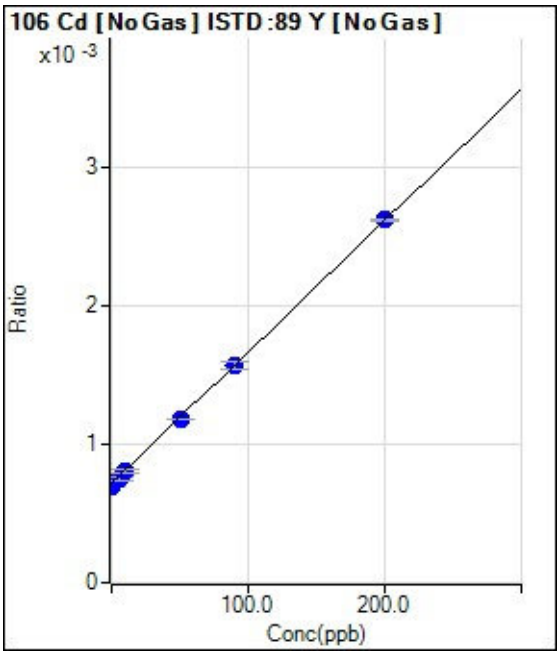


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	0.200	-2.459	6.67	0.0000	P	86.6
3	☐	2.000	-1.619	6.67	0.0000	P	173.2
4	☐	5.000	-102.545	3.34	0.0000	P	173.2
5	☐	10.000	101.959	10.01	0.0000	P	173.2
6	☐	50.000	2.079	6.67	0.0000	P	86.6
7	☐	90.000	313.678	16.68	0.0000	P	124.7
8	☐	200.000	109.455	10.01	0.0000	P	100.9

y = 1.9454E-009 * x + 3.9808E-007
R = 0.5185
DL = 531.7
BEC = 204.6

Weight: <None>
Min Conc: <None>

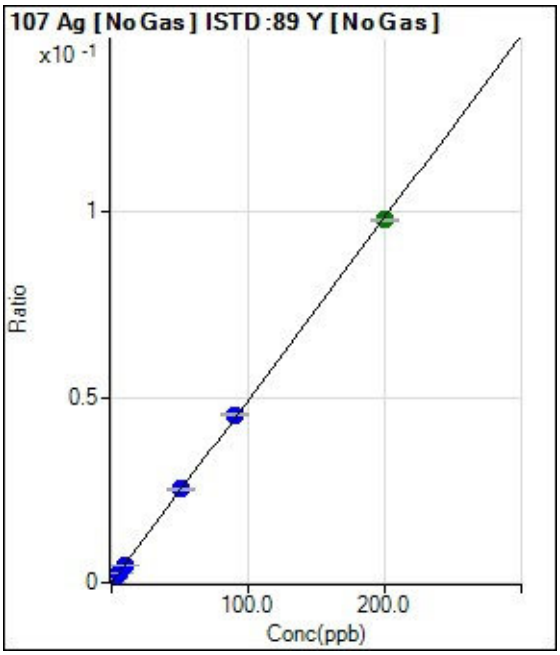
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12054.40	0.0007	P	3.2
2	☐	0.200	-2.315	11773.85	0.0007	P	2.4
3	☐	2.000	1.250	12361.64	0.0007	P	4.2
4	☐	5.000	3.566	12648.80	0.0008	P	3.4
5	☐	10.000	9.198	13487.23	0.0008	P	3.5
6	☐	50.000	48.796	19564.26	0.0012	P	0.2
7	☐	90.000	89.802	25904.80	0.0016	P	3.6
8	☐	200.000	200.476	43103.39	0.0026	P	0.4

y = 9.4702E-006 * x + 7.1765E-004
R = 0.9999
DL = 7.184
BEC = 75.78

Weight: <None>
Min Conc: <None>

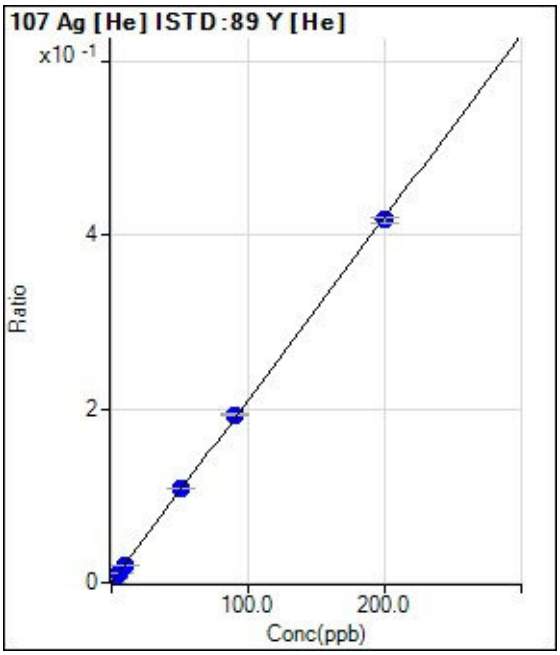


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.00	0.0000	P	14.1
2	☐	0.200	0.196	1859.03	0.0001	P	5.3
3	☐	2.000	2.000	16926.40	0.0010	P	1.9
4	☐	5.000	4.992	41638.47	0.0025	P	1.3
5	☐	10.000	9.851	81582.71	0.0049	P	0.8
6	☐	50.000	51.105	417890.56	0.0252	P	0.8
7	☐	90.000	92.039	749554.57	0.0454	P	1.0
8	☐	200.000	198.814	1614419.73	0.0980	A	0.7

y = 4.9283E-004 * x + 1.3104E-005
R = 0.9999
DL = 0.01124
BEC = 0.02659

Weight: <None>
Min Conc: <None>

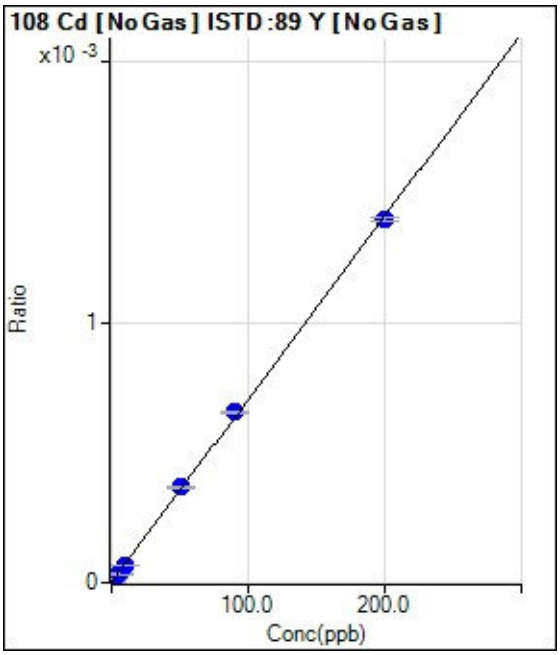
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.04	0.0000	P	25.0
2	☐	0.200	0.188	734.10	0.0004	P	5.5
3	☐	2.000	2.056	7633.30	0.0043	P	1.5
4	☐	5.000	4.898	18063.99	0.0103	P	1.3
5	☐	10.000	9.705	35168.68	0.0204	P	0.6
6	☐	50.000	51.504	185265.22	0.1083	P	0.4
7	☐	90.000	92.121	329067.45	0.1937	P	0.9
8	☐	200.000	198.686	718105.29	0.4177	P	1.6

y = 0.0021 * x + 2.2790E-005
R = 0.9999
DL = 0.008118
BEC = 0.01084

Weight: <None>
Min Conc: <None>

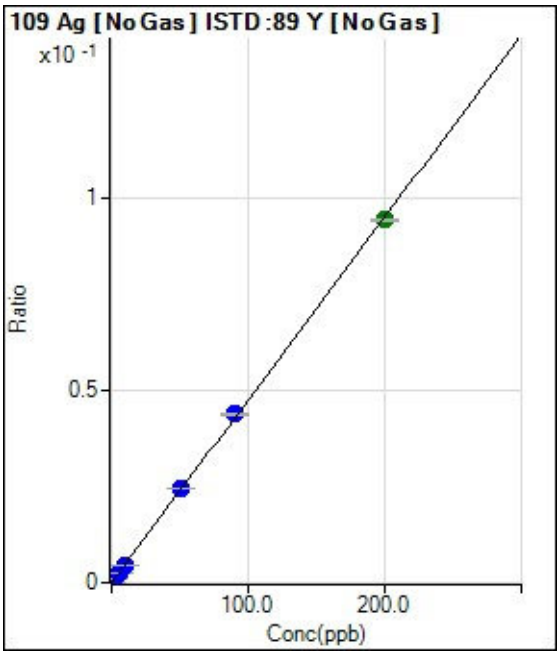


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.03	0.0000	P	66.4
2	☐	0.200	0.194	53.39	0.0000	P	46.7
3	☐	2.000	1.708	233.58	0.0000	P	17.6
4	☐	5.000	4.596	573.93	0.0000	P	8.2
5	☐	10.000	8.983	1087.82	0.0001	P	3.8
6	☐	50.000	51.899	6077.58	0.0004	P	1.6
7	☐	90.000	93.084	10835.43	0.0007	P	1.0
8	☐	200.000	198.201	22976.58	0.0014	P	1.1

y = 7.0274E-006 * x + 1.7841E-006
R = 0.9998
DL = 0.5057
BEC = 0.2539

Weight: <None>
Min Conc: <None>

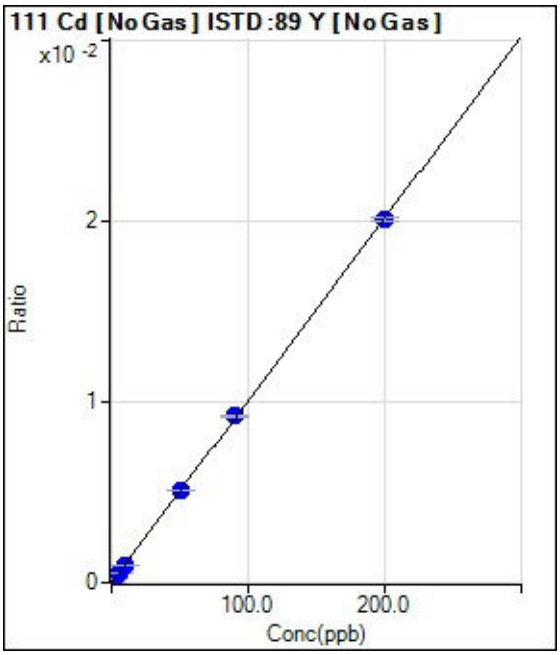
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.41	0.0000	P	74.9
2	☐	0.200	0.182	1534.99	0.0001	P	15.7
3	☐	2.000	2.019	16286.51	0.0010	P	3.5
4	☐	5.000	4.917	39297.91	0.0023	P	2.8
5	☐	10.000	9.879	78527.29	0.0047	P	1.4
6	☐	50.000	51.460	404436.01	0.0244	P	1.0
7	☐	90.000	92.179	721613.23	0.0437	P	1.1
8	☐	200.000	198.663	1550912.74	0.0941	A	0.5

y = 4.7384E-004 * x + 4.3601E-006
R = 0.9999
DL = 0.02067
BEC = 0.009202

Weight: <None>
Min Conc: <None>

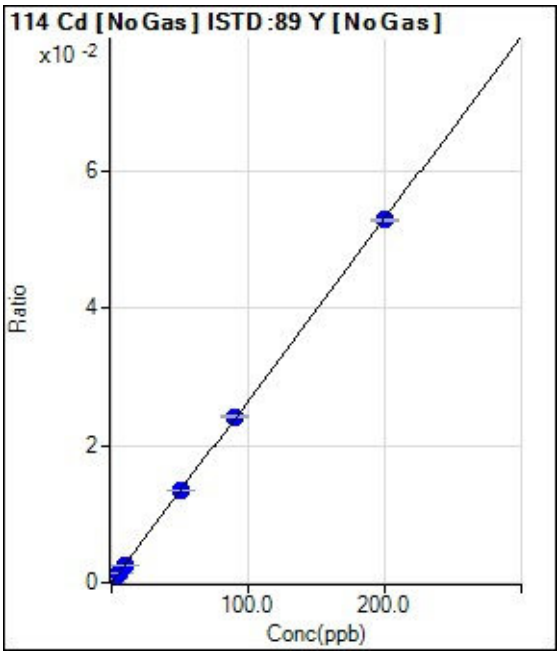


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-26.66	0.0000	P	-99.3
2	☐	0.200	0.192	299.39	0.0000	P	10.8
3	☐	2.000	1.953	3302.10	0.0002	P	1.9
4	☐	5.000	4.902	8276.09	0.0005	P	3.2
5	☐	10.000	9.803	16502.40	0.0010	P	1.3
6	☐	50.000	50.626	84444.87	0.0051	P	1.7
7	☐	90.000	91.363	151829.93	0.0092	P	1.4
8	☐	200.000	199.243	330228.78	0.0200	P	0.9

y = 1.0061E-004 * x - 1.5824E-006
R = 1.0000
DL = 0.04686
BEC = -0.01573

Weight: <None>
Min Conc: <None>

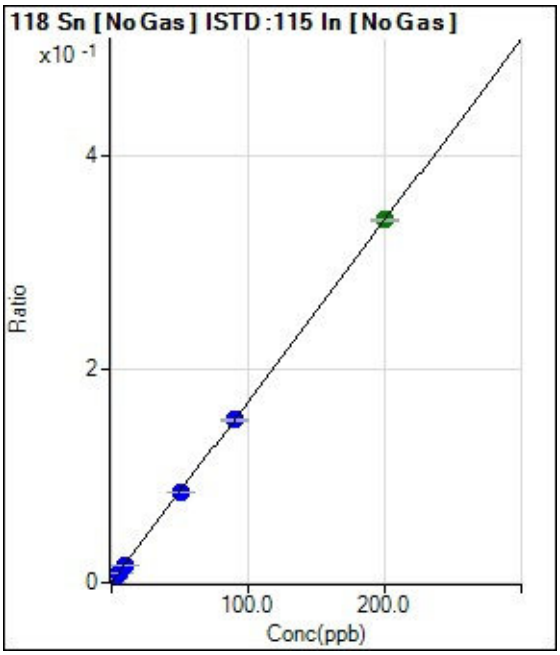
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.02	0.0000	P	99.7
2	☐	0.200	0.197	900.95	0.0001	P	7.1
3	☐	2.000	1.900	8548.14	0.0005	P	2.7
4	☐	5.000	4.808	21455.76	0.0013	P	1.6
5	☐	10.000	9.542	42373.91	0.0025	P	0.6
6	☐	50.000	50.435	221535.58	0.0134	P	0.8
7	☐	90.000	91.207	399076.43	0.0242	P	0.8
8	☐	200.000	199.377	869968.90	0.0528	P	0.7

y = 2.6485E-004 * x + 1.1915E-006
R = 1.0000
DL = 0.01345
BEC = 0.004499

Weight: <None>
Min Conc: <None>

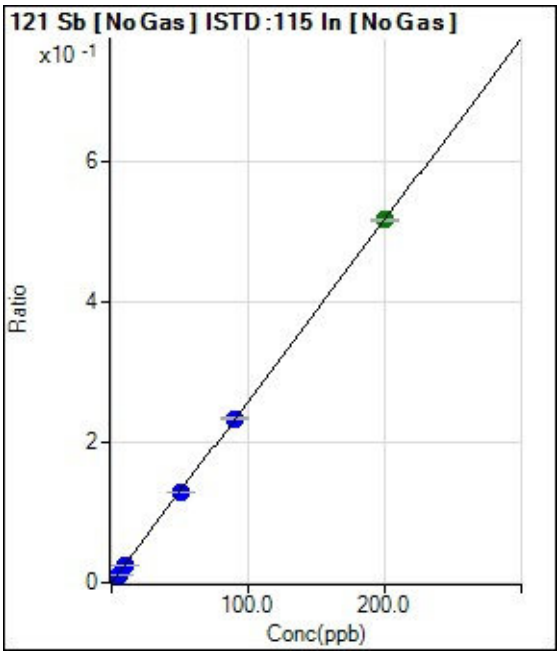


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	787.81	0.0002	P	4.9
2	☐	0.200	0.200	1912.37	0.0006	P	0.2
3	☐	2.000	1.899	11419.43	0.0035	P	0.9
4	☐	5.000	4.777	27596.65	0.0083	P	0.7
5	☐	10.000	9.443	53422.37	0.0163	P	1.2
6	☐	50.000	49.504	272847.54	0.0842	P	0.7
7	☐	90.000	89.747	489549.81	0.1524	P	0.8
8	☐	200.000	200.272	1071074.19	0.3399	A	0.3

y = 0.0017 * x + 2.3959E-004
R = 1.0000
DL = 0.0209
BEC = 0.1413

Weight: <None>
Min Conc: <None>

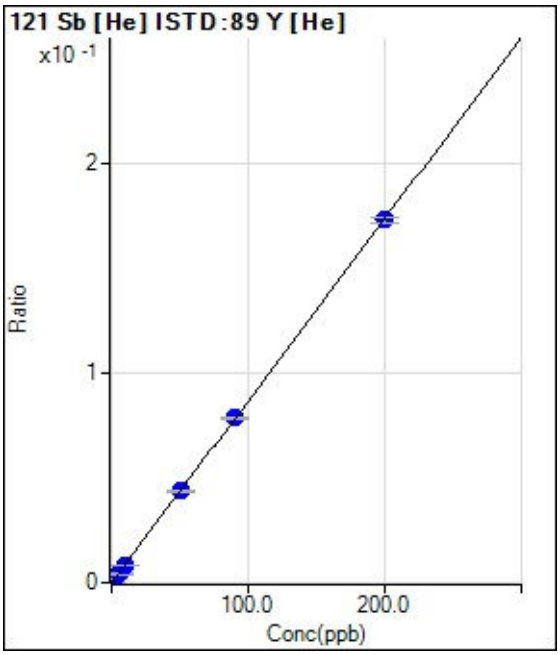
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	171.11	0.0001	P	18.0
2	☐	0.200	0.192	1815.69	0.0005	P	0.8
3	☐	2.000	1.913	16495.97	0.0050	P	1.7
4	☐	5.000	4.701	40382.96	0.0122	P	1.6
5	☐	10.000	9.428	80291.30	0.0244	P	0.4
6	☐	50.000	49.540	415298.66	0.1282	P	0.4
7	☐	90.000	90.257	749643.10	0.2334	P	0.9
8	☐	200.000	200.036	1630170.63	0.5173	A	0.2

y = 0.0026 * x + 5.2073E-005
R = 1.0000
DL = 0.01087
BEC = 0.02014

Weight: <None>
Min Conc: <None>

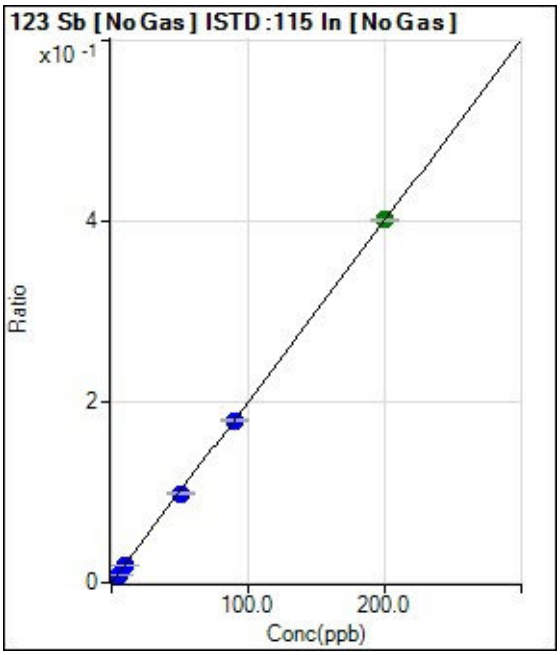


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	17.8
2	☐	0.200	0.168	290.01	0.0002	P	3.7
3	☐	2.000	1.932	2977.06	0.0017	P	7.5
4	☐	5.000	4.755	7252.15	0.0041	P	1.5
5	☐	10.000	9.612	14384.80	0.0084	P	1.3
6	☐	50.000	50.241	74564.41	0.0436	P	1.0
7	☐	90.000	90.769	133762.57	0.0787	P	1.3
8	☐	200.000	199.620	297648.73	0.1731	P	1.3

y = 8.6720E-004 * x + 1.8989E-005
R = 1.0000
DL = 0.01168
BEC = 0.0219

Weight: <None>
Min Conc: <None>

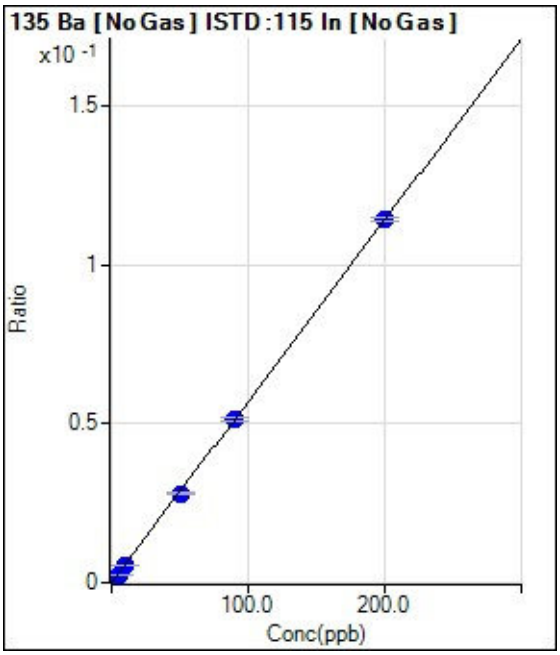
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.52	0.0002	P	18.7
2	☐	0.200	0.182	1705.18	0.0005	P	10.4
3	☐	2.000	1.917	13163.30	0.0040	P	2.1
4	☐	5.000	4.668	31419.24	0.0095	P	1.1
5	☐	10.000	9.334	61911.15	0.0188	P	0.9
6	☐	50.000	49.303	320333.96	0.0988	P	0.5
7	☐	90.000	89.544	576123.12	0.1794	P	0.9
8	☐	200.000	200.422	1264764.87	0.4014	A	0.4

y = 0.0020 * x + 1.5230E-004
R = 1.0000
DL = 0.04267
BEC = 0.07608

Weight: <None>
Min Conc: <None>

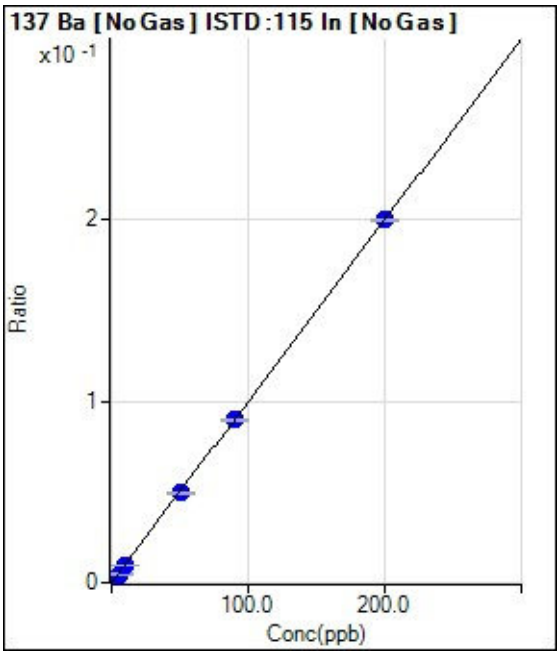


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.03	0.0000	P	88.3
2	☐	0.200	0.197	400.42	0.0001	P	10.7
3	☐	2.000	1.977	3751.02	0.0011	P	5.4
4	☐	5.000	4.700	8898.77	0.0027	P	2.2
5	☐	10.000	9.568	17963.97	0.0055	P	2.4
6	☐	50.000	49.298	91141.35	0.0281	P	0.6
7	☐	90.000	90.076	165001.25	0.0514	P	1.6
8	☐	200.000	200.170	359785.56	0.1142	P	1.1

y = 5.7031E-004 * x + 9.1552E-006
R = 1.0000
DL = 0.04251
BEC = 0.01605

Weight: <None>
Min Conc: <None>

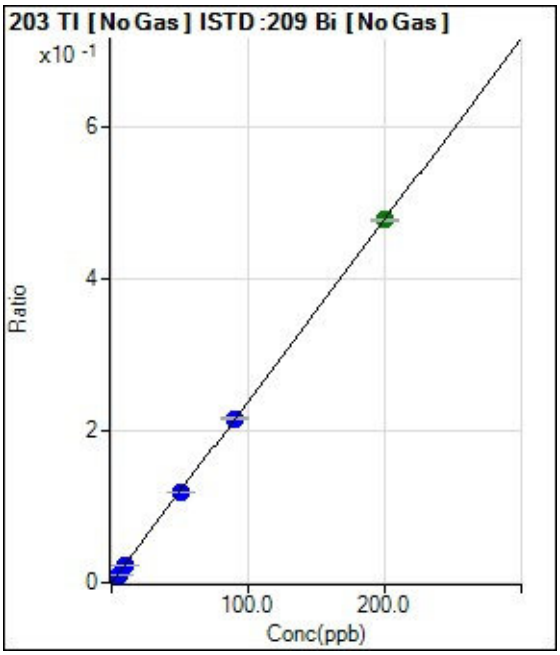
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.71	0.0000	P	65.9
2	☐	0.200	0.221	774.15	0.0002	P	9.5
3	☐	2.000	1.912	6338.00	0.0019	P	7.0
4	☐	5.000	4.751	15722.08	0.0048	P	1.5
5	☐	10.000	9.304	30543.27	0.0093	P	1.8
6	☐	50.000	49.518	160083.87	0.0494	P	1.7
7	☐	90.000	89.975	288205.79	0.0897	P	0.8
8	☐	200.000	200.173	629152.69	0.1997	P	0.4

y = 9.9733E-004 * x + 1.4229E-005
R = 1.0000
DL = 0.02819
BEC = 0.01427

Weight: <None>
Min Conc: <None>

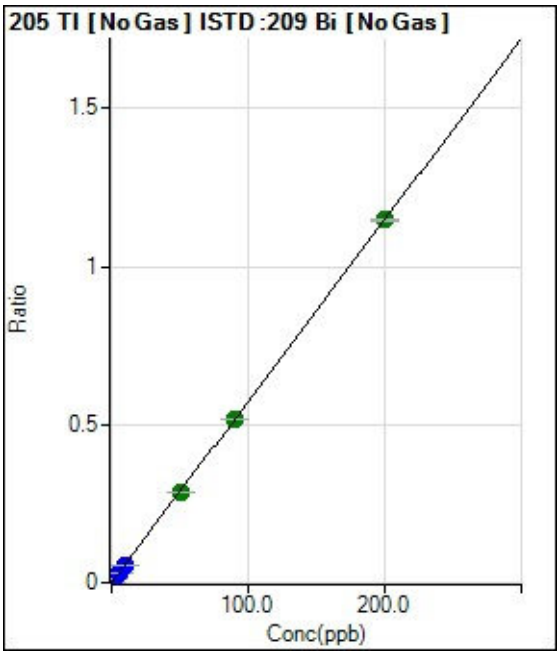


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.17	0.0000	P	21.5
2	☐	0.200	0.180	1678.49	0.0005	P	1.1
3	☐	2.000	1.858	15719.20	0.0045	P	3.7
4	☐	5.000	4.706	39368.30	0.0113	P	1.0
5	☐	10.000	9.533	79027.59	0.0229	P	1.2
6	☐	50.000	49.478	406058.57	0.1184	P	0.7
7	☐	90.000	90.417	727278.22	0.2163	P	0.6
8	☐	200.000	199.975	1580633.55	0.4784	A	0.6

y = 0.0024 * x + 4.8917E-005
R = 1.0000
DL = 0.01322
BEC = 0.02045

Weight: <None>
Min Conc: <None>

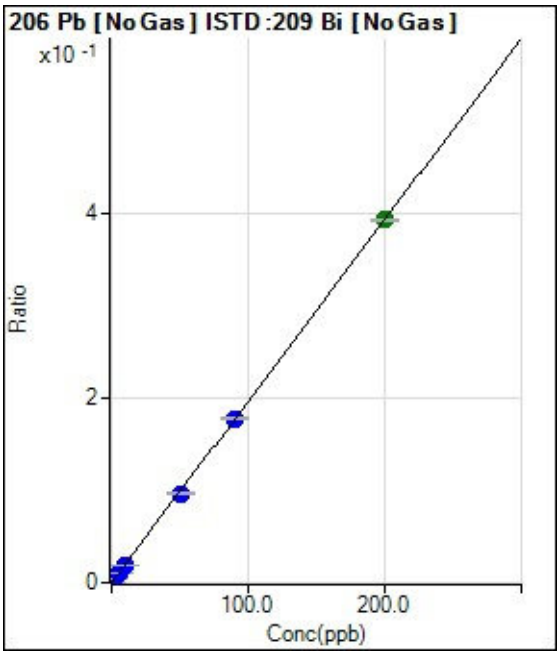
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.73	0.0001	P	19.1
2	☐	0.200	0.189	4174.94	0.0012	P	7.6
3	☐	2.000	1.886	38233.50	0.0109	P	2.5
4	☐	5.000	4.811	96483.41	0.0277	P	1.3
5	☐	10.000	9.645	191681.74	0.0554	P	0.4
6	☐	50.000	49.602	975992.56	0.2846	A	0.3
7	☐	90.000	90.102	1737669.18	0.5169	A	0.7
8	☐	200.000	200.077	3791784.71	1.1477	A	0.5

y = 0.0057 * x + 1.1029E-004
R = 1.0000
DL = 0.01101
BEC = 0.01923

Weight: <None>
Min Conc: <None>

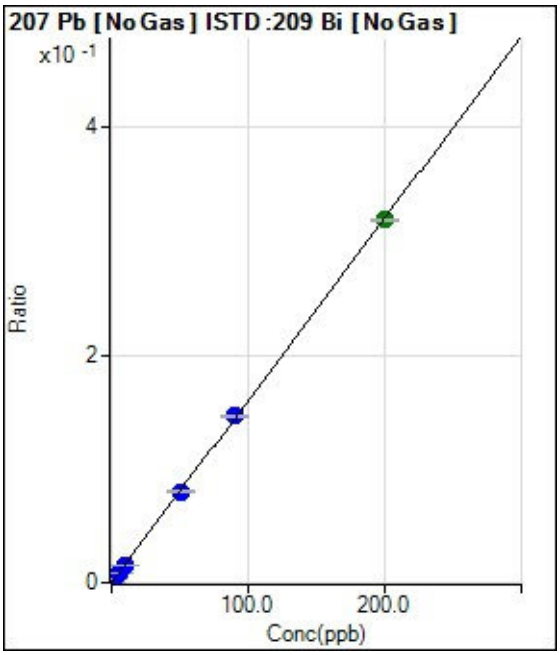


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.82	0.0000	P	32.1
2	☐	0.200	0.198	1508.30	0.0004	P	4.1
3	☐	2.000	1.944	13480.92	0.0039	P	1.7
4	☐	5.000	4.833	33137.43	0.0095	P	2.8
5	☐	10.000	9.603	65234.95	0.0189	P	1.9
6	☐	50.000	49.156	330544.68	0.0964	P	0.9
7	☐	90.000	90.392	595744.65	0.1772	P	0.7
8	☐	200.000	200.059	1295646.30	0.3922	A	0.7

y = 0.0020 * x + 4.2174E-005
R = 1.0000
DL = 0.02075
BEC = 0.02152

Weight: <None>
Min Conc: <None>

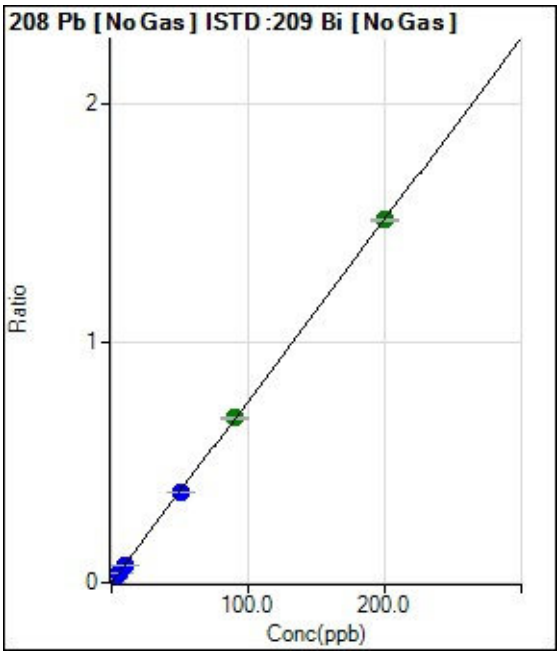
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.45	0.0000	P	5.4
2	☐	0.200	0.207	1271.37	0.0004	P	7.3
3	☐	2.000	1.923	10882.53	0.0031	P	0.8
4	☐	5.000	4.835	27056.61	0.0078	P	0.6
5	☐	10.000	9.771	54178.19	0.0157	P	0.7
6	☐	50.000	49.973	274334.17	0.0800	P	1.0
7	☐	90.000	91.647	493113.99	0.1467	P	1.5
8	☐	200.000	199.282	1053656.29	0.3189	A	0.9

y = 0.0016 * x + 3.2599E-005
R = 1.0000
DL = 0.003303
BEC = 0.02037

Weight: <None>
Min Conc: <None>

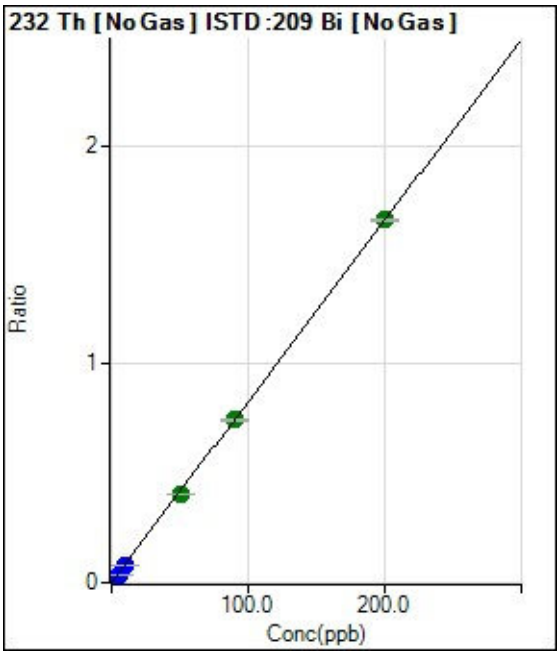


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	497.18	0.0001	P	11.9
2	☐	0.200	0.197	5716.32	0.0016	P	3.8
3	☐	2.000	1.934	51747.85	0.0148	P	1.3
4	☐	5.000	4.814	127452.31	0.0366	P	1.1
5	☐	10.000	9.655	253325.47	0.0733	P	0.9
6	☐	50.000	49.778	1293225.72	0.3771	P	0.7
7	☐	90.000	90.585	2306617.44	0.6862	A	0.7
8	☐	200.000	199.815	4999899.23	1.5134	A	0.8

y = 0.0076 * x + 1.4288E-004
R = 1.0000
DL = 0.006716
BEC = 0.01887

Weight: <None>
Min Conc: <None>

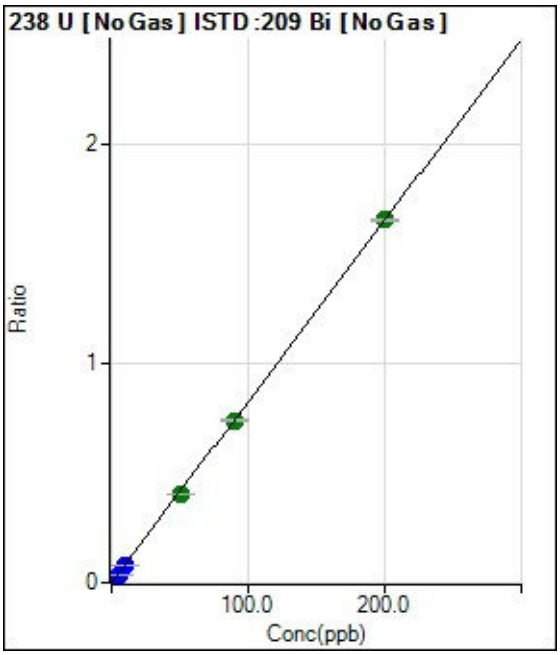
Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3514.09	0.0010	P	3.2
2	☐	0.200	0.134	7433.14	0.0021	P	3.2
3	☐	2.000	1.660	51616.84	0.0148	P	1.8
4	☐	5.000	4.441	131595.58	0.0378	P	1.3
5	☐	10.000	9.113	264450.51	0.0765	P	0.2
6	☐	50.000	49.064	1396813.01	0.4073	A	0.1
7	☐	90.000	89.863	2505106.78	0.7452	A	0.4
8	☐	200.000	200.358	5485334.10	1.6603	A	0.3

y = 0.0083 * x + 0.0010
R = 1.0000
DL = 0.01159
BEC = 0.1219

Weight: <None>
Min Conc: <None>

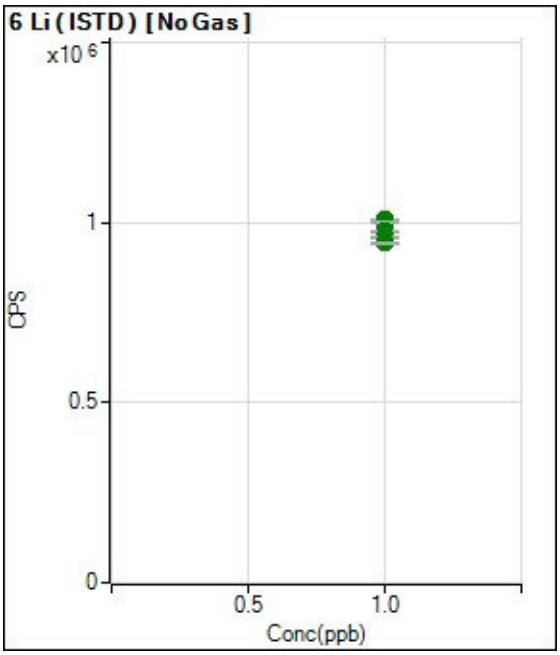


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.48	0.0001	P	9.7
2	☐	0.200	0.180	5670.40	0.0016	P	4.5
3	☐	2.000	1.867	54465.52	0.0156	P	1.2
4	☐	5.000	4.697	135704.01	0.0390	P	0.5
5	☐	10.000	9.418	269773.67	0.0780	P	1.4
6	☐	50.000	49.268	1397575.81	0.4076	A	0.2
7	☐	90.000	89.707	2494208.85	0.7420	A	0.6
8	☐	200.000	200.353	5474304.32	1.6569	A	0.3

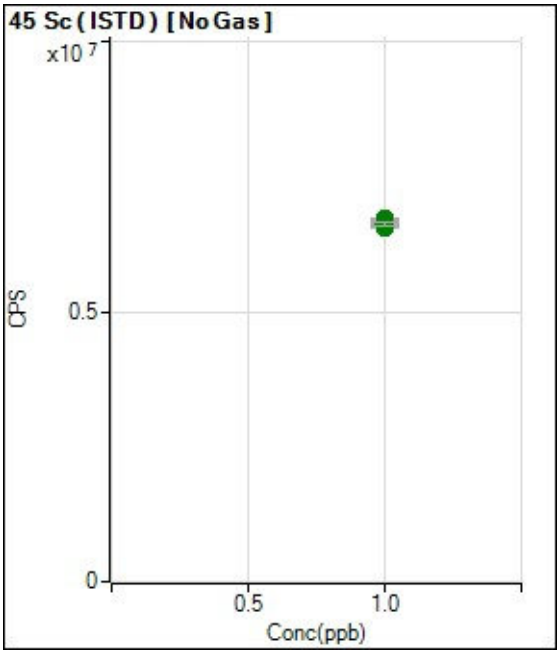
y = 0.0083 * x + 1.3233E-004
R = 1.0000
DL = 0.004678
BEC = 0.016

Weight: <None>
Min Conc: <None>

Calibration for 288_ICV.d

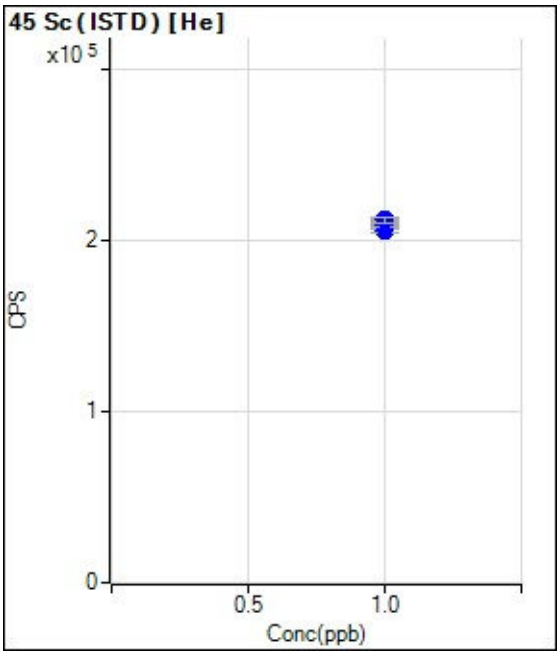


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		999812.08		A	0.4
2	☐	1.000		1006329.86		A	0.5
3	☐	1.000		1003099.51		A	0.1
4	☐	1.000		1002017.67		A	0.3
5	☐	1.000		999532.84		A	0.5
6	☐	1.000		973607.21		A	0.7
7	☐	1.000		958471.53		A	0.3
8	☐	1.000		942261.62		A	0.5

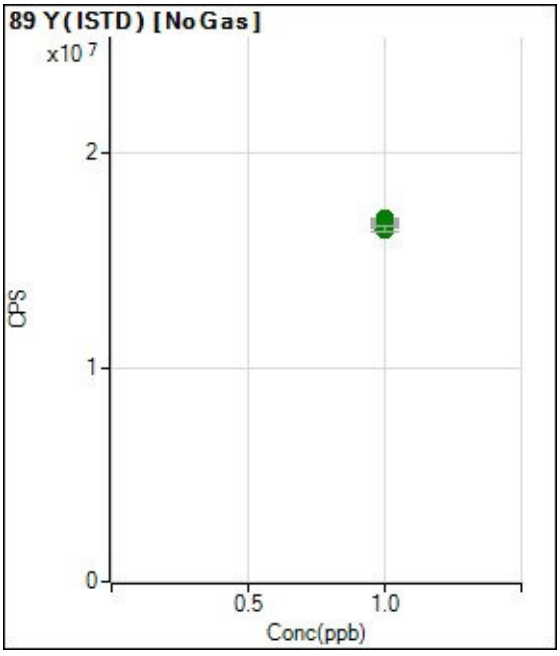


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6672228.28		A	0.1
2	☐	1.000		6723105.62		A	0.6
3	☐	1.000		6713899.33		A	0.5
4	☐	1.000		6685583.93		A	0.4
5	☐	1.000		6648685.57		A	0.4
6	☐	1.000		6594743.51		A	0.4
7	☐	1.000		6552219.11		A	0.3
8	☐	1.000		6628606.95		A	0.6

Calibration for 288_ICV.d

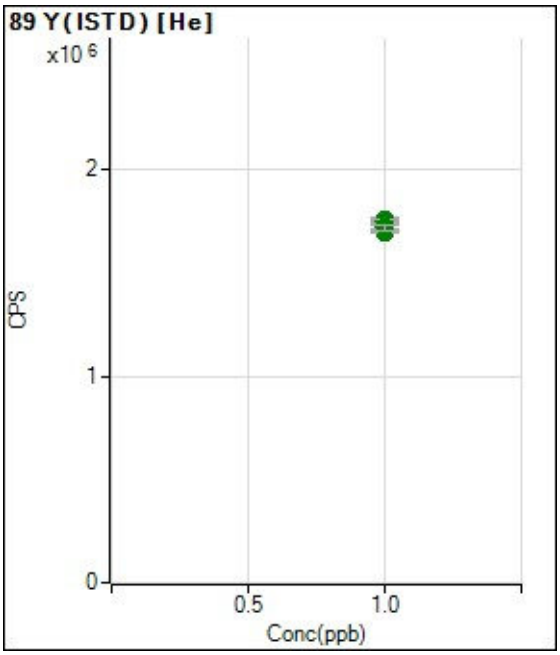


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		208216.69		P	1.4
2	☐	1.000		209962.60		P	0.8
3	☐	1.000		209095.12		P	0.3
4	☐	1.000		211528.42		P	0.1
5	☐	1.000		205723.56		P	1.3
6	☐	1.000		208553.70		P	0.7
7	☐	1.000		207552.13		P	0.3
8	☐	1.000		211641.33		P	1.8

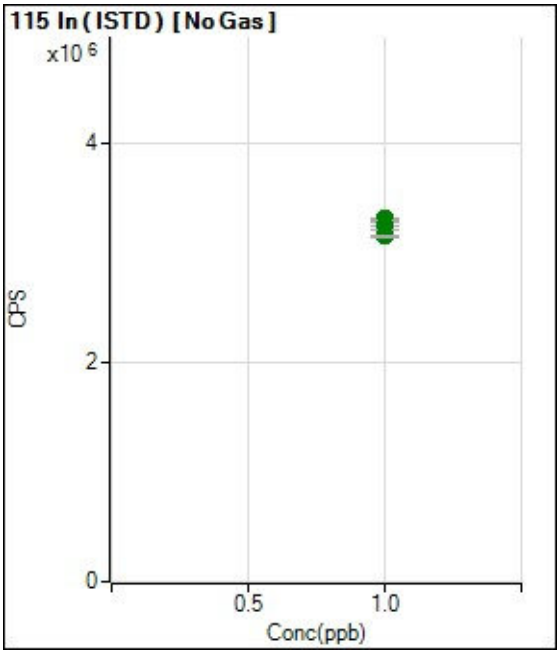


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16795472.17		A	0.5
2	☐	1.000		16921725.93		A	0.5
3	☐	1.000		16944673.04		A	0.5
4	☐	1.000		16835402.94		A	0.6
5	☐	1.000		16759366.48		A	0.2
6	☐	1.000		16583354.22		A	0.3
7	☐	1.000		16519755.62		A	0.3
8	☐	1.000		16475558.51		A	1.4

Calibration for 288_ICV.d

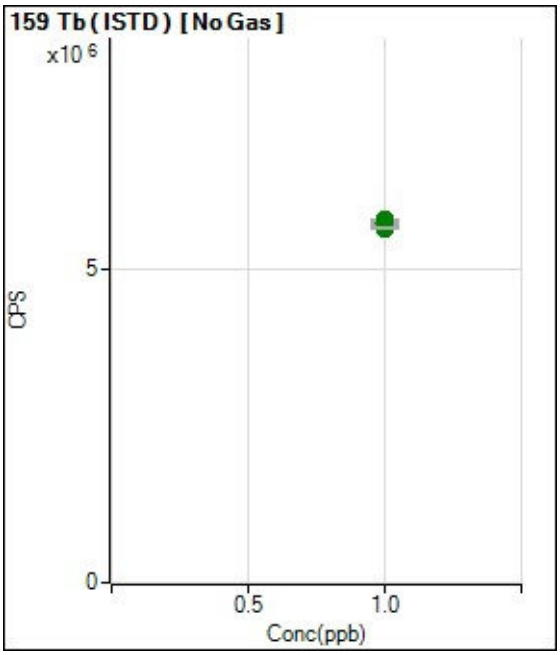


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1756395.88		A	1.3
2	☐	1.000		1756618.92		A	0.3
3	☐	1.000		1756786.95		A	0.1
4	☐	1.000		1750647.21		A	0.7
5	☐	1.000		1721788.04		A	1.5
6	☐	1.000		1710678.13		A	0.4
7	☐	1.000		1699030.75		A	0.8
8	☐	1.000		1719461.76		A	1.9

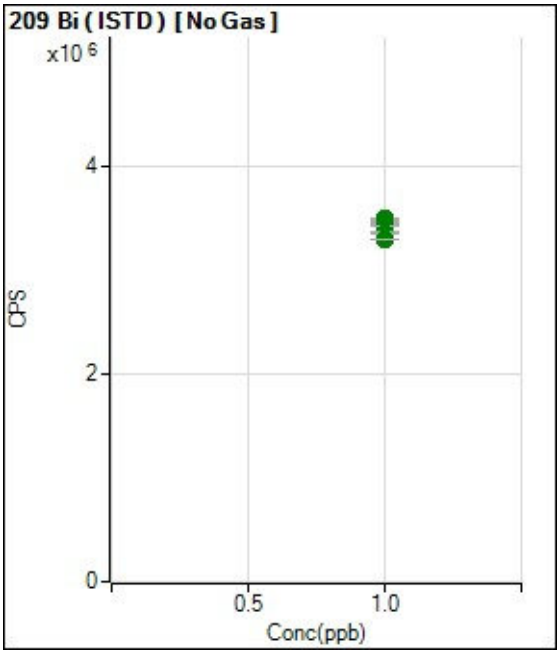


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3287717.66		A	0.4
2	☐	1.000		3302963.78		A	0.7
3	☐	1.000		3299328.52		A	0.3
4	☐	1.000		3308246.12		A	0.4
5	☐	1.000		3286375.14		A	0.5
6	☐	1.000		3240595.91		A	0.2
7	☐	1.000		3211248.63		A	0.4
8	☐	1.000		3151181.06		A	0.7

Calibration for 288_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5716935.49		A	0.5
2	☐	1.000		5771643.53		A	0.6
3	☐	1.000		5767021.83		A	0.4
4	☐	1.000		5743843.02		A	0.4
5	☐	1.000		5723385.90		A	1.1
6	☐	1.000		5678935.40		A	0.3
7	☐	1.000		5642928.56		A	0.7
8	☐	1.000		5649497.43		A	0.8

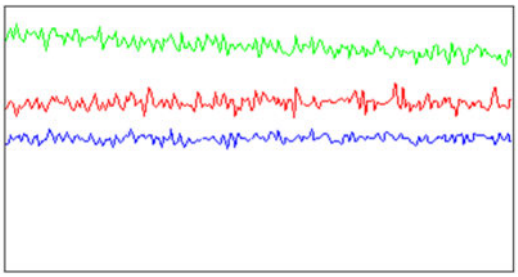


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3480441.04		A	0.3
2	☐	1.000		3501602.43		A	0.4
3	☐	1.000		3498591.25		A	0.3
4	☐	1.000		3482227.22		A	0.1
5	☐	1.000		3457793.40		A	0.7
6	☐	1.000		3429194.65		A	0.3
7	☐	1.000		3361628.06		A	0.5
8	☐	1.000		3303854.87		A	0.4

Performance Report

Operator Name	ALSHN ICPMS
Acq. Date-Time	2020-11-17 11:15:31
Instrument Name	G8421A JP17200678
Sample Introduction	ISIS
Nebulizer Type	MicroMist
Ion Lens Model	x-Lens
Tune Parameters	Standard Tune

Sensitivity



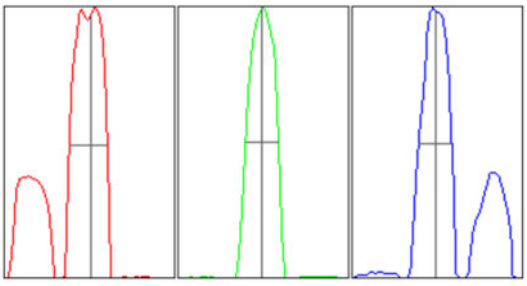
Mass	Range	Count	RSD%	Background
7	2000	1278	3.593	0.350
89	5000	4273	3.767	0.200
205	5000	2515	2.920	18.500

Sampling Period [sec]	0.311
Integration Time [sec]	0.1

Oxide/Doubly Charged Ratio

Oxide	156 / 140 1.251 %
Doubly Charged	70 / 140 2.982 %

Resolution/Axis



Mass	Peak Height	Axis	W-50%	W-10%
7	1281.37	7.05	0.68	0.78
89	4042.46	89.00	0.59	0.77
205	2438.48	205.00	0.59	0.77

Integration Time [sec]	0.1
Acquisition Time [sec]	22.74

Tune Parameters

Plasma Parameters

RF Power	1550 W	Option Gas	---	Makeup Gas	0.00 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Auxiliary Gas	0.90 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C	Plasma Gas	15.0 L/min
Nebulizer Gas	0.99 L/min				

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	14.2 V
Extract 2	-170.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-80 V	Cell Exit	-50 V		

Performance Report

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

QP Bias	-3.0 V

Hardware Settings

Torch

Torch H	0.1 mm	Torch H (Hot)	---	Torch H (Cool)	---
Torch V	-0.7 mm	Torch V (Hot)	---	Torch V (Cool)	---

Plasma Correction

Nebulizer Gas Offset	-0.06 L/min	Makeup Gas (Hot)	---	Makeup Gas (Cool)	---
		Sample Depth (Hot)	---		

Resolution/Axis

Mass Gain	126	Axis Gain	0.9992		
Mass Offset	125	Axis Offset	0.08		

EM

Discriminator	4.8 mV	Analog HV	3307 V	Pulse HV	1272 V

Performance Report

Meter

Name	Value	Unit
Nebulizer Gas	0.99	L/min
MU./Dil. Gas	0.00	L/min
Plasma Gas	15.02	L/min
Aux Gas	0.90	L/min
Ar Gas Tank Press	7.48E+2	kPa
+5V (Press Gage)	5.0	V
Ar AMFC Temp	25.4	°C
Nebulizer Gas(DP)	5.56E+0	kPa
MU./Dil. Gas(DP)	-4.63E-2	kPa
Aux Gas(DP)	1.31E+1	kPa
Plasma Gas(DP)	1.20E+1	kPa
Nebulizer Gas(BP)	3.02E+2	kPa
MU./Dil. Gas(BP)	-3.40E+0	kPa
Aux Gas(BP)	4.32E+1	kPa
Plasma Gas(BP)	3.41E+1	kPa
S/C Temp (H)	20.3	°C
S/C Temp (L)	1.9	°C
Peltier Voltage	3.1	V
IF/BK Press	2.69E+2	Pa
Analyzer Press	5.58E-5	Pa
IG HV	176	V
IG Emission	4.99	µA
TMP Revolution	100.0	%
TMP Rev (RAW)	101.0	%
TMP Current	3.22	A
PWR AMP Drain I	0.2	A
PWR AMP Bias	4.06	V
OctP RF (Avg)	203.7	V
OctP RF Set	4.0	V
OctP FET Bias Set	3.97	V
OctP RF(+)	190.5	V
OctP RF(-)	217.2	V
OctP Bias	-7.9	V
Cell Temp.	65.0	°C
Cell Heater Volt.	4.1	V
+U Voltage	174.4	V

Name	Value	Unit
-U Voltage	-180.5	V
V Voltage	783.9	V
QPRF Fader	0.5	V
Pickup Temp	55.0	°C
PWR Amp Temp	0.1	V
+600V	614.3	V
-120V	-133.4	V
-720V	-736.6	V
Prefilter Bias	-5.00	V
Pickup Heater I	0.10	A
QP PS +48V	47.5	V
QP PS +48V I	0.00	A
Analog HV	-3334	V
Pulse HV	1282	V
EM Gate	-47.1	V
Pulse Gate	284.7	V
EM Entrance	-0.1	V
EM HV Gain	-1985.2	V
Inner Pole	-300.1	V
Outer Pole	20.0	V
Analog -5V	-5.1	V
Analog +15V	14.6	V
Analog -15V	-14.4	V
Analog +5V	5.2	V
Shunt C Pos	1.6	V
Drain Volt.(max)	64.0	V
RF PS +48V	47.4	V
Forward Power	1549	W
Reflected Power	0	W
Plasma Freq.	27.10	MHz
Drain I 1	11.36	A
Drain I 2	10.33	A
Drain I 3	10.37	A
Drain I 4	10.52	A
Temp Sensor	2.8	V
Driver I	4.60	A

Name	Value	Unit
Igniter	0.0	V
Driver Voltage Set	6.6	V
Unbalance Current	0.13	A
PWM Threshold Set	0.1	V
Driver Voltage	5.3	V
PWM Threshold	0.1	V
Phase Detector	0.0	mV
He Gas	0.04	mL/min
He Gas Press	1.81E-1	kPa
ORS AMFC Temp	26.7	°C
Atmospheric Press	9.92E+1	kPa
Extract 1	0.0	V
Extract 2	-170.2	V
Omega Bias	-80.1	V
Omega Lens	9.0	V
Cell Entrance	-30.0	V
Cell Exit	-50.3	V
Deflect	14.2	V
Plate Bias	-35.1	V
HV+530V	521	V
HV+240V	237	V
HV-360V	-356	V
Inlet Temp	25.7	°C
Internal Temp	32.9	°C
+24V	23.4	V
Water Temp	21.2	°C
Water RF/WC/IF	1.58	L/min
ISIS 3 Pump Speed	0.0	%
Valve Position		
Tune/ISTD Valve		

Performance Report History

Sensitivity

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-17 11:15:31	1278	4273	2515
2020-11-16 13:44:07	1502	3059	2375
2020-11-16 13:09:13	1612	30454	2447
2020-11-13 11:20:44	1592	4157	2527
2020-11-12 14:37:14	1511	3607	2249
2020-11-12 13:53:08	1414	2984	1983
2020-11-12 12:32:41	931	2818	2004
2020-11-11 12:53:39	3414	5572	3330
2020-11-11 11:44:42	2763	5635	3242
2020-11-10 13:55:09	2971	9147	3735
2020-11-10 12:53:54	2632	5380	3447
2020-11-10 11:37:01	3049	7267	3473
2020-11-09 11:47:17	2520	4773	2882
2020-11-09 11:29:50	2615	11059	3065
2020-11-06 11:38:12	2354	4226	2795
2020-11-06 11:01:15	2571	5599	2896
2020-11-05 11:47:54	2413	5380	3110
2020-11-04 11:19:46	2310	5433	3223
2020-11-03 12:28:48	2819	5476	3321
2020-11-03 12:08:40	2411	8720	2893
2020-11-02 11:05:14	3543	37180	4248
2020-10-30 12:05:49	2406	6469	3233
2020-10-29 12:49:39	2719	6440	4108
2020-10-29 11:48:38	2674	6232	3641
2020-10-28 15:02:21	3490	7322	4645
2020-10-28 14:05:42	3278	7160	3912
2020-10-27 12:05:48	727	1703	1914
2020-10-27 11:35:55	722	2099	2000
2020-10-26 12:04:37	1203	16839	2202
2020-10-23 12:12:34	1315	2468	2006
2020-10-23 11:37:57	1324	3647	2052
2020-10-22 12:16:30	959	2448	2163
2020-10-21 13:24:11	1073	2520	1884
2020-10-21 12:27:39	1122	2716	2011
2020-10-20 11:47:10	1637	3688	2449
2020-10-19 11:53:52	1128	2675	1888
2020-10-19 11:39:21	1179	4811	1928
2020-10-18 09:36:10	1665	20856	1974
2020-10-16 12:04:16	1928	4436	2616
2020-10-15 12:04:01	1667	4055	2820
2020-10-14 12:01:53	1989	4573	3176

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-13 11:51:04	3074	6060	3832
2020-10-12 12:42:47	1484	3937	2762
2020-10-12 11:44:44	1746	4685	2448
2020-10-11 11:11:57	1796	4232	2388
2020-10-11 10:56:11	2094	4350	2402
2020-10-11 08:29:31	1939	4366	2390
2020-10-09 11:09:17	2309	4840	2851
2020-10-09 10:39:06	2498	5197	2889
2020-10-08 11:31:44	2281	6060	3333
2020-10-07 11:59:14	2012	4671	3330
2020-10-07 10:50:29	2119	5045	3372
2020-10-06 12:34:49	4071	7270	4025
2020-10-05 11:04:01	4647	9324	4922
2020-10-04 07:54:14	3927	67077	3990
2020-10-02 09:38:02	3301	7010	3890
2020-10-01 11:27:45	3428	7471	3998
2020-09-30 13:00:41	3691	8414	5069
2020-09-30 11:53:41	3488	7737	5379
2020-09-30 11:07:07	3555	8878	4820
2020-09-30 10:48:54	3682	11707	4994
2020-09-29 13:53:16	3262	8894	4481
2020-09-29 12:19:04	1966	6072	2077
2020-09-28 12:53:55	1731	2590	2754
2020-09-28 11:59:28	1492	2271	2305
2020-09-25 16:18:31	2585	3865	3214
2020-09-25 16:06:07	2605	4109	3244
2020-09-25 14:56:33	2519	3579	3129
2020-09-25 12:48:13	2533	3206	2532
2020-09-24 10:55:05	2087	3690	2707
2020-09-23 12:36:58	2231	3540	3006
2020-09-23 11:38:39	2196	3459	2555
2020-09-23 10:51:49	2108	3110	2362
2020-09-22 11:10:32	3440	4661	2948
2020-09-22 10:54:35	3690	6894	3279
2020-09-21 13:13:36	2058	3480	2639
2020-09-21 12:44:05	2485	4086	2622
2020-09-21 11:41:44	2836	4407	2790
2020-09-21 11:23:15	2719	5102	2900
2020-09-20 08:10:06	3189	5254	3302
2020-09-20 07:22:36	3383	5278	3143
2020-09-20 06:54:39	2995	6878	3376

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-18 11:40:25	3276	6815	3156
2020-09-18 11:29:16	3184	5773	2888
2020-09-18 11:06:40	3354	7920	3226
2020-09-17 15:29:32	3459	8016	3486
2020-09-16 20:54:26	3508	6510	3613
2020-09-16 19:16:27	3299	6829	3612
2020-09-16 17:59:29	3413	8566	3547
2020-09-16 11:19:13	2416	5647	3177
2020-09-15 16:24:15	3165	8407	4428
2020-09-15 16:09:17	3268	16881	4507
2020-09-15 14:28:15	3335	7860	4752
2020-09-15 13:19:00	2887	7602	5214
2020-09-15 11:28:27	3122	6972	4514
2020-09-15 09:52:18	2394	6064	4140
2020-09-14 12:35:34	2919	8029	4829
2020-09-14 10:47:40	2465	13982	4153
2020-09-14 10:18:12	2981	147428	4124
2020-09-11 10:57:10	4177	9295	5215
2020-09-10 11:27:38	4077	9423	4893
2020-09-09 11:12:49	4615	9919	5732
2020-09-09 10:40:25	4893	37172	5907
2020-09-04 11:48:35	3441	8270	4733
2020-09-03 16:21:25	4052	9316	5806
2020-09-01 11:42:55	4000	12068	5666
2020-08-31 11:13:32	4245	87845	5643
2020-08-28 11:16:24	3088	10564	4710
2020-08-27 13:51:21	4108	11229	6176
2020-08-26 12:03:40	709	2074	2014
2020-08-25 12:03:05	1056	2659	2933
2020-08-25 11:32:14	1104	18306	2909
2020-08-21 13:01:12	544	2306	2585
2020-08-21 12:07:01	484	9012	2232
2020-08-20 11:15:30	579	1923	2458
2020-08-20 10:49:50	476	1836	2364
2020-08-20 10:10:21	583	2361	2456
2020-08-19 11:28:46	454	1880	1981
2020-08-18 11:07:27	515	1987	2499
2020-08-18 09:49:58	615	2314	2495
2020-08-17 12:34:56	637	2325	2666
2020-08-17 11:28:15	642	17377	2443
2020-08-14 07:34:28	660	2479	2687

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-14 06:44:33	786	3289	2613
2020-08-13 09:37:45	558	2133	2410
2020-08-13 09:10:45	521	1962	2329
2020-08-13 08:48:39	496	1934	2288
2020-08-13 08:12:32	517	2418	2261
2020-08-13 07:26:07	652	2431	2391
2020-08-12 14:30:16	436	1985	2383
2020-08-12 13:28:46	430	1890	2337
2020-08-12 12:58:58	424	2141	2450
2020-08-12 12:32:10	423	1957	2334
2020-08-12 12:17:37	426	2078	2338
2020-08-12 11:28:35	396	1839	2187
2020-08-12 10:46:03	391	1783	2042
2020-08-12 10:01:12	402	1940	1946
2020-08-11 08:44:26	425	2072	2353
2020-08-11 07:53:34	450	2345	2270
2020-08-10 08:02:54	585	2329	2467
2020-08-10 07:18:05	680	19393	2348
2020-08-07 08:01:44	808	3281	3044
2020-08-06 15:31:02	706	2194	2639
2020-08-06 14:31:40	536	1812	1907
2020-08-05 11:00:59	818	2750	2903
2020-08-04 11:11:16	831	2836	2585
2020-08-03 11:52:42	844	2601	2537
2020-07-31 14:27:24	741	2213	2630
2020-07-28 07:30:44	1155	3696	3239
2020-07-27 13:58:30	1574	3907	4099
2020-07-27 12:42:07	1014	3778	2005
2020-07-27 11:55:01	839	2602	2096
2020-07-27 11:13:19	908	15206	2137
2020-07-24 12:42:53	2542	6017	3827
2020-07-24 12:14:18	2635	6571	3838
2020-07-24 12:00:19	2346	5435	3627
2020-07-24 11:13:53	2629	37625	3757
2020-07-24 11:05:21	2180	5918	3134
2020-07-21 12:40:51	168	989	667
2020-07-21 11:57:51	516	1894	1030
2020-07-20 12:40:12	1371	4507	2970
2020-07-20 11:37:51	1446	38757	3136
2020-07-17 11:48:52	1876	5563	3247
2020-07-16 18:15:26	1515	5146	3133

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-07-16 12:56:52	976	4431	2619
2020-07-16 12:30:29	1077	4360	2638
2020-07-15 12:44:11	1189	4329	3053
2020-07-15 12:10:56	1426	4997	3214
2020-07-14 11:48:58	1625	15999	3092
2020-07-14 11:11:56	1641	5261	3112
2020-07-13 12:32:05	2542	45774	3475
2020-07-10 12:07:31	2901	7213	4579
2020-07-09 11:10:24	8832	7204	3897
2020-07-08 12:38:35	3200	8957	4519
2020-07-07 11:49:59	3333	8506	4397
2020-07-06 13:18:03	3035	8959	5251
2020-07-06 11:44:36	672	12761	1235
2020-07-02 11:58:12	865	3063	2215
2020-07-02 11:17:30	1685	6809	2735
2020-07-01 13:38:18	2102	5052	3514
2020-07-01 12:51:19	2225	5177	3700
2020-07-01 12:27:56	2297	5659	3399
2020-07-01 11:46:22	2046	6438	3466
2020-06-30 13:54:10	2534	5477	3652
2020-06-30 13:18:33	3085	5788	3775
2020-06-30 12:13:58	2145	5434	3864
2020-06-29 12:28:14	2120	5553	4029
2020-06-29 11:42:42	2695	58980	4207
2020-06-27 11:13:24	2630	6982	4598
2020-06-26 12:29:21	2315	7936	4455
2020-06-25 11:42:24	3056	7116	4865
2020-06-24 11:38:27	3958	9538	5780
2020-06-23 12:16:39	3639	8920	5072
2020-06-22 12:41:53	4068	9166	5330
2020-06-22 12:03:52	3706	11025	4681

Background

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-17 11:15:31	0.350	0.200	18.500
2020-11-16 13:44:07	0.100	0.300	2.100
2020-11-16 13:09:13	0.100	0.150	3.500
2020-11-13 11:20:44	0.200	0.150	9.500

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-12 14:37:14	0.250	0.400	4.200
2020-11-12 13:53:08	0.200	0.100	6.400
2020-11-12 12:32:41	0.100	0.150	8.600
2020-11-11 12:53:39	0.550	0.400	5.150
2020-11-11 11:44:42	0.150	0.700	4.300
2020-11-10 13:55:09	0.350	0.350	7.650
2020-11-10 12:53:54	0.250	0.200	20.900
2020-11-10 11:37:01	0.350	0.550	20.400
2020-11-09 11:47:17	0.150	0.500	4.900
2020-11-09 11:29:50	0.400	0.450	4.200
2020-11-06 11:38:12	0.450	0.300	9.000
2020-11-06 11:01:15	0.400	0.200	8.200
2020-11-05 11:47:54	0.200	0.200	4.350
2020-11-04 11:19:46	0.250	0.450	11.950
2020-11-03 12:28:48	0.400	0.250	5.200
2020-11-03 12:08:40	0.200	0.300	6.050
2020-11-02 11:05:14	0.000	0.300	4.550
2020-10-30 12:05:49	0.300	0.500	16.050
2020-10-29 12:49:39	0.250	0.250	13.050
2020-10-29 11:48:38	0.650	0.200	16.950
2020-10-28 15:02:21	0.300	0.300	3.050
2020-10-28 14:05:42	0.250	0.200	7.100
2020-10-27 12:05:48	0.100	0.050	11.750
2020-10-27 11:35:55	0.050	0.100	8.250
2020-10-26 12:04:37	0.050	0.150	5.750
2020-10-23 12:12:34	0.050	0.050	4.650
2020-10-23 11:37:57	0.300	0.200	3.050
2020-10-22 12:16:30	0.150	0.050	8.450
2020-10-21 13:24:11	0.050	0.250	8.300
2020-10-21 12:27:39	0.200	0.200	17.800
2020-10-20 11:47:10	0.050	0.150	3.950
2020-10-19 11:53:52	0.200	0.100	16.800
2020-10-19 11:39:21	0.000	0.150	7.500
2020-10-18 09:36:10	0.200	0.150	4.850
2020-10-16 12:04:16	0.350	0.300	9.700
2020-10-15 12:04:01	0.100	0.050	16.500
2020-10-14 12:01:53	0.250	0.050	9.350
2020-10-13 11:51:04	0.100	0.050	17.000
2020-10-12 12:42:47	0.250	0.200	6.400
2020-10-12 11:44:44	0.200	0.150	10.100
2020-10-11 11:11:57	0.200	0.350	13.250

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-11 10:56:11	0.350	0.300	16.250
2020-10-11 08:29:31	0.300	0.200	38.550
2020-10-09 11:09:17	0.250	0.350	26.700
2020-10-09 10:39:06	0.250	0.100	23.800
2020-10-08 11:31:44	0.200	0.200	25.600
2020-10-07 11:59:14	0.150	0.350	27.550
2020-10-07 10:50:29	0.350	0.250	27.950
2020-10-06 12:34:49	0.350	0.200	22.950
2020-10-05 11:04:01	0.250	0.250	58.600
2020-10-04 07:54:14	0.200	0.400	56.750
2020-10-02 09:38:02	0.150	0.650	93.650
2020-10-01 11:27:45	0.250	0.350	55.900
2020-09-30 13:00:41	0.400	0.350	55.200
2020-09-30 11:53:41	0.300	0.250	16.350
2020-09-30 11:07:07	0.250	0.350	60.700
2020-09-30 10:48:54	0.600	0.300	20.300
2020-09-29 13:53:16	0.100	0.400	20.250
2020-09-29 12:19:04	0.250	0.400	14.700
2020-09-28 12:53:55	0.100	0.300	17.550
2020-09-28 11:59:28	0.100	0.150	12.600
2020-09-25 16:18:31	0.050	0.050	10.200
2020-09-25 16:06:07	0.050	0.300	10.250
2020-09-25 14:56:33	0.100	0.250	11.500
2020-09-25 12:48:13	0.100	0.200	37.000
2020-09-24 10:55:05	0.250	0.150	11.000
2020-09-23 12:36:58	0.150	0.200	24.350
2020-09-23 11:38:39	0.050	0.150	11.400
2020-09-23 10:51:49	0.050	0.300	15.050
2020-09-22 11:10:32	0.000	0.100	29.150
2020-09-22 10:54:35	0.200	0.200	22.400
2020-09-21 13:13:36	0.200	0.400	14.200
2020-09-21 12:44:05	0.100	0.200	13.500
2020-09-21 11:41:44	0.200	0.100	20.400
2020-09-21 11:23:15	0.050	0.500	21.150
2020-09-20 08:10:06	0.250	0.450	13.400
2020-09-20 07:22:36	0.250	0.400	13.750
2020-09-20 06:54:39	0.150	0.100	6.250
2020-09-18 11:40:25	0.150	0.200	7.600
2020-09-18 11:29:16	0.450	0.150	8.550
2020-09-18 11:06:40	0.100	0.350	10.000
2020-09-17 15:29:32	0.350	0.300	9.300

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-16 20:54:26	0.100	0.450	17.400
2020-09-16 19:16:27	0.100	0.200	7.050
2020-09-16 17:59:29	0.150	0.350	15.250
2020-09-16 11:19:13	0.250	0.550	10.850
2020-09-15 16:24:15	0.250	0.200	9.050
2020-09-15 16:09:17	0.150	0.250	15.750
2020-09-15 14:28:15	0.150	0.150	14.300
2020-09-15 13:19:00	0.100	0.100	14.150
2020-09-15 11:28:27	0.100	0.300	12.500
2020-09-15 09:52:18	0.100	0.050	4.350
2020-09-14 12:35:34	0.250	0.300	18.000
2020-09-14 10:47:40	0.150	0.350	8.550
2020-09-14 10:18:12	0.100	0.250	8.250
2020-09-11 10:57:10	0.200	0.300	20.200
2020-09-10 11:27:38	0.300	0.400	18.050
2020-09-09 11:12:49	0.350	0.250	16.700
2020-09-09 10:40:25	0.500	0.350	11.550
2020-09-04 11:48:35	0.250	0.050	93.750
2020-09-03 16:21:25	0.350	0.300	43.700
2020-09-01 11:42:55	0.300	0.450	45.100
2020-08-31 11:13:32	0.400	0.150	26.850
2020-08-28 11:16:24	0.250	0.550	12.400
2020-08-27 13:51:21	0.200	0.250	18.250
2020-08-26 12:03:40	0.000	0.100	10.750
2020-08-25 12:03:05	0.100	0.100	10.100
2020-08-25 11:32:14	0.050	0.050	21.750
2020-08-21 13:01:12	0.050	0.050	14.900
2020-08-21 12:07:01	0.050	0.150	16.500
2020-08-20 11:15:30	0.000	0.000	28.100
2020-08-20 10:49:50	0.050	0.000	22.300
2020-08-20 10:10:21	0.050	0.150	10.800
2020-08-19 11:28:46	0.050	0.000	7.550
2020-08-18 11:07:27	0.100	0.100	9.200
2020-08-18 09:49:58	0.050	0.100	8.650
2020-08-17 12:34:56	0.050	0.100	20.400
2020-08-17 11:28:15	0.050	0.000	12.450
2020-08-14 07:34:28	0.050	0.050	8.400
2020-08-14 06:44:33	0.100	0.150	6.700
2020-08-13 09:37:45	0.100	0.100	8.150
2020-08-13 09:10:45	0.050	0.000	5.000
2020-08-13 08:48:39	0.100	0.150	6.150

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-13 08:12:32	0.050	0.100	12.400
2020-08-13 07:26:07	0.050	0.050	12.700
2020-08-12 14:30:16	0.050	0.100	25.550
2020-08-12 13:28:46	0.050	0.050	4.550
2020-08-12 12:58:58	0.100	0.050	8.000
2020-08-12 12:32:10	0.100	0.200	15.800
2020-08-12 12:17:37	0.050	0.100	16.950
2020-08-12 11:28:35	0.000	0.050	16.900
2020-08-12 10:46:03	0.050	0.000	3.100
2020-08-12 10:01:12	0.000	0.000	8.200
2020-08-11 08:44:26	0.050	0.000	3.450
2020-08-11 07:53:34	0.050	0.100	5.100
2020-08-10 08:02:54	0.000	0.050	13.600
2020-08-10 07:18:05	0.000	0.100	18.700
2020-08-07 08:01:44	0.050	0.150	9.000
2020-08-06 15:31:02	0.050	0.100	10.550
2020-08-06 14:31:40	0.000	0.150	12.500
2020-08-05 11:00:59	0.000	0.100	9.350
2020-08-04 11:11:16	0.000	0.100	6.500
2020-08-03 11:52:42	0.000	0.050	4.750
2020-07-31 14:27:24	0.050	0.200	3.050
2020-07-28 07:30:44	0.050	0.050	4.800
2020-07-27 13:58:30	0.050	0.000	4.500
2020-07-27 12:42:07	0.000	0.350	6.000
2020-07-27 11:55:01	0.250	0.100	3.500
2020-07-27 11:13:19	0.000	0.150	4.000
2020-07-24 12:42:53	0.150	0.350	12.150
2020-07-24 12:14:18	0.050	0.150	12.100
2020-07-24 12:00:19	0.150	0.250	7.700
2020-07-24 11:13:53	0.200	0.200	12.000
2020-07-24 11:05:21	0.150	0.400	7.450
2020-07-21 12:40:51	0.250	0.150	22.450
2020-07-21 11:57:51	0.350	0.350	31.100
2020-07-20 12:40:12	0.050	0.300	11.200
2020-07-20 11:37:51	0.050	0.300	14.750
2020-07-17 11:48:52	0.400	0.200	5.150
2020-07-16 18:15:26	0.100	0.250	11.250
2020-07-16 12:56:52	0.250	0.150	8.100
2020-07-16 12:30:29	0.050	0.200	7.650
2020-07-15 12:44:11	0.350	0.400	9.450
2020-07-15 12:10:56	0.500	0.050	10.400

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-07-14 11:48:58	0.250	0.250	17.450
2020-07-14 11:11:56	0.100	0.400	17.000
2020-07-13 12:32:05	0.350	0.400	29.750
2020-07-10 12:07:31	0.150	0.150	11.350
2020-07-09 11:10:24	0.300	0.350	31.650
2020-07-08 12:38:35	0.150	0.400	29.700
2020-07-07 11:49:59	0.100	0.550	8.550
2020-07-06 13:18:03	0.250	0.250	22.550
2020-07-06 11:44:36	0.150	0.050	18.500
2020-07-02 11:58:12	0.250	0.300	4.850
2020-07-02 11:17:30	0.100	0.150	3.850
2020-07-01 13:38:18	0.050	0.200	18.250
2020-07-01 12:51:19	0.150	0.300	12.650
2020-07-01 12:27:56	0.250	0.050	18.900
2020-07-01 11:46:22	0.200	0.050	7.500
2020-06-30 13:54:10	0.250	0.350	12.050
2020-06-30 13:18:33	0.350	0.250	9.600
2020-06-30 12:13:58	0.100	0.150	23.850
2020-06-29 12:28:14	0.200	0.100	39.500
2020-06-29 11:42:42	0.100	0.350	44.450
2020-06-27 11:13:24	0.100	0.100	30.600
2020-06-26 12:29:21	0.200	0.300	58.300
2020-06-25 11:42:24	0.150	0.250	21.450
2020-06-24 11:38:27	0.300	0.450	12.650
2020-06-23 12:16:39	0.550	0.400	37.200
2020-06-22 12:41:53	0.600	0.300	31.050
2020-06-22 12:03:52	0.400	0.300	32.100

Tune Parameters

Created Date	Extract 1	Extract 2	Omega Bias
2020-11-17 11:15:31	0.0 V	-170.0 V	-80 V
2020-11-16 13:44:07	0.0 V	-145.0 V	-70 V
2020-11-16 13:09:13	0.0 V	-145.0 V	-70 V
2020-11-13 11:20:44	0.0 V	-155.0 V	-70 V
2020-11-12 14:37:14	0.0 V	-150.0 V	-70 V
2020-11-12 13:53:08	0.0 V	-145.0 V	-70 V
2020-11-12 12:32:41	0.0 V	-145.0 V	-70 V
2020-11-11 12:53:39	0.0 V	-170.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-11-11 11:44:42	0.0 V	-175.0 V	-70 V
2020-11-10 13:55:09	0.0 V	-200.0 V	-70 V
2020-11-10 12:53:54	0.0 V	-185.0 V	-70 V
2020-11-10 11:37:01	0.0 V	-180.0 V	-70 V
2020-11-09 11:47:17	0.0 V	-175.0 V	-70 V
2020-11-09 11:29:50	0.0 V	-175.0 V	-70 V
2020-11-06 11:38:12	0.0 V	-170.0 V	-70 V
2020-11-06 11:01:15	0.0 V	-170.0 V	-70 V
2020-11-05 11:47:54	0.0 V	-195.0 V	-70 V
2020-11-04 11:19:46	0.0 V	-190.0 V	-80 V
2020-11-03 12:28:48	0.0 V	-190.0 V	-80 V
2020-11-03 12:08:40	0.0 V	-190.0 V	-80 V
2020-11-02 11:05:14	0.0 V	-195.0 V	-80 V
2020-10-30 12:05:49	0.0 V	-195.0 V	-70 V
2020-10-29 12:49:39	0.0 V	-195.0 V	-70 V
2020-10-29 11:48:38	0.0 V	-180.0 V	-70 V
2020-10-28 15:02:21	0.0 V	-200.0 V	-70 V
2020-10-28 14:05:42	0.0 V	-180.0 V	-70 V
2020-10-27 12:05:48	0.0 V	-140.0 V	-70 V
2020-10-27 11:35:55	0.0 V	-140.0 V	-70 V
2020-10-26 12:04:37	0.0 V	-150.0 V	-70 V
2020-10-23 12:12:34	0.0 V	-145.0 V	-70 V
2020-10-23 11:37:57	0.0 V	-145.0 V	-70 V
2020-10-22 12:16:30	0.0 V	-140.0 V	-70 V
2020-10-21 13:24:11	0.0 V	-140.0 V	-70 V
2020-10-21 12:27:39	0.0 V	-140.0 V	-70 V
2020-10-20 11:47:10	0.0 V	-150.0 V	-70 V
2020-10-19 11:53:52	0.0 V	-145.0 V	-70 V
2020-10-19 11:39:21	0.0 V	-145.0 V	-70 V
2020-10-18 09:36:10	0.0 V	-150.0 V	-70 V
2020-10-16 12:04:16	0.0 V	-155.0 V	-70 V
2020-10-15 12:04:01	0.0 V	-155.0 V	-70 V
2020-10-14 12:01:53	0.0 V	-155.0 V	-70 V
2020-10-13 11:51:04	0.0 V	-180.0 V	-70 V
2020-10-12 12:42:47	0.0 V	-175.0 V	-70 V
2020-10-12 11:44:44	0.0 V	-170.0 V	-70 V
2020-10-11 11:11:57	0.0 V	-170.0 V	-70 V
2020-10-11 10:56:11	0.0 V	-170.0 V	-70 V
2020-10-11 08:29:31	0.0 V	-170.0 V	-70 V
2020-10-09 11:09:17	0.0 V	-170.0 V	-70 V
2020-10-09 10:39:06	0.0 V	-170.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-10-08 11:31:44	0.0 V	-175.0 V	-70 V
2020-10-07 11:59:14	0.0 V	-190.0 V	-80 V
2020-10-07 10:50:29	0.0 V	-190.0 V	-80 V
2020-10-06 12:34:49	0.0 V	-200.0 V	-80 V
2020-10-05 11:04:01	0.0 V	-200.0 V	-70 V
2020-10-04 07:54:14	0.0 V	-200.0 V	-70 V
2020-10-02 09:38:02	0.0 V	-200.0 V	-70 V
2020-10-01 11:27:45	0.0 V	-200.0 V	-80 V
2020-09-30 13:00:41	0.0 V	-200.0 V	-80 V
2020-09-30 11:53:41	0.0 V	-200.0 V	-70 V
2020-09-30 11:07:07	0.0 V	-190.0 V	-70 V
2020-09-30 10:48:54	0.0 V	-190.0 V	-70 V
2020-09-29 13:53:16	0.0 V	-195.0 V	-80 V
2020-09-29 12:19:04	0.0 V	-175.0 V	-80 V
2020-09-28 12:53:55	0.0 V	-140.0 V	-70 V
2020-09-28 11:59:28	0.0 V	-140.0 V	-70 V
2020-09-25 16:18:31	0.0 V	-160.0 V	-70 V
2020-09-25 16:06:07	0.0 V	-160.0 V	-70 V
2020-09-25 14:56:33	0.0 V	-160.0 V	-70 V
2020-09-25 12:48:13	0.0 V	-180.0 V	-80 V
2020-09-24 10:55:05	0.0 V	-190.0 V	-70 V
2020-09-23 12:36:58	0.0 V	-185.0 V	-70 V
2020-09-23 11:38:39	0.0 V	-185.0 V	-70 V
2020-09-23 10:51:49	0.0 V	-165.0 V	-70 V
2020-09-22 11:10:32	0.0 V	-150.0 V	-70 V
2020-09-22 10:54:35	0.0 V	-150.0 V	-70 V
2020-09-21 13:13:36	0.0 V	-200.0 V	-80 V
2020-09-21 12:44:05	0.0 V	-180.0 V	-70 V
2020-09-21 11:41:44	0.0 V	-170.0 V	-70 V
2020-09-21 11:23:15	0.0 V	-170.0 V	-70 V
2020-09-20 08:10:06	0.0 V	-160.0 V	-70 V
2020-09-20 07:22:36	0.0 V	-160.0 V	-70 V
2020-09-20 06:54:39	0.0 V	-160.0 V	-70 V
2020-09-18 11:40:25	0.0 V	-155.0 V	-70 V
2020-09-18 11:29:16	0.0 V	-155.0 V	-70 V
2020-09-18 11:06:40	0.0 V	-155.0 V	-70 V
2020-09-17 15:29:32	0.0 V	-185.0 V	-70 V
2020-09-16 20:54:26	0.0 V	-190.0 V	-70 V
2020-09-16 19:16:27	0.0 V	-195.0 V	-70 V
2020-09-16 17:59:29	0.0 V	-200.0 V	-70 V
2020-09-16 11:19:13	0.0 V	-165.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-09-15 16:24:15	0.0 V	-180.0 V	-70 V
2020-09-15 16:09:17	0.0 V	-180.0 V	-70 V
2020-09-15 14:28:15	0.0 V	-195.0 V	-70 V
2020-09-15 13:19:00	0.0 V	-195.0 V	-70 V
2020-09-15 11:28:27	0.0 V	-190.0 V	-70 V
2020-09-15 09:52:18	0.0 V	-175.0 V	-70 V
2020-09-14 12:35:34	0.0 V	-200.0 V	-70 V
2020-09-14 10:47:40	0.0 V	-175.0 V	-70 V
2020-09-14 10:18:12	0.0 V	-175.0 V	-70 V
2020-09-11 10:57:10	0.0 V	-200.0 V	-70 V
2020-09-10 11:27:38	0.0 V	-195.0 V	-70 V
2020-09-09 11:12:49	0.0 V	-195.0 V	-70 V
2020-09-09 10:40:25	0.0 V	-195.0 V	-70 V
2020-09-04 11:48:35	0.0 V	-190.0 V	-70 V
2020-09-03 16:21:25	0.0 V	-195.0 V	-70 V
2020-09-01 11:42:55	0.0 V	-185.0 V	-70 V
2020-08-31 11:13:32	0.0 V	-190.0 V	-70 V
2020-08-28 11:16:24	0.0 V	-190.0 V	-70 V
2020-08-27 13:51:21	0.0 V	-200.0 V	-70 V
2020-08-26 12:03:40	0.0 V	-140.0 V	-70 V
2020-08-25 12:03:05	0.0 V	-145.0 V	-70 V
2020-08-25 11:32:14	0.0 V	-145.0 V	-70 V
2020-08-21 13:01:12	0.0 V	-140.0 V	-70 V
2020-08-21 12:07:01	0.0 V	-145.0 V	-70 V
2020-08-20 11:15:30	0.0 V	-145.0 V	-70 V
2020-08-20 10:49:50	0.0 V	-145.0 V	-70 V
2020-08-20 10:10:21	0.0 V	-145.0 V	-70 V
2020-08-19 11:28:46	0.0 V	-140.0 V	-70 V
2020-08-18 11:07:27	0.0 V	-145.0 V	-70 V
2020-08-18 09:49:58	0.0 V	-145.0 V	-70 V
2020-08-17 12:34:56	0.0 V	-140.0 V	-70 V
2020-08-17 11:28:15	0.0 V	-140.0 V	-70 V
2020-08-14 07:34:28	0.0 V	-140.0 V	-70 V
2020-08-14 06:44:33	0.0 V	-140.0 V	-70 V
2020-08-13 09:37:45	0.0 V	-140.0 V	-70 V
2020-08-13 09:10:45	0.0 V	-140.0 V	-70 V
2020-08-13 08:48:39	0.0 V	-140.0 V	-70 V
2020-08-13 08:12:32	0.0 V	-140.0 V	-70 V
2020-08-13 07:26:07	0.0 V	-140.0 V	-70 V
2020-08-12 14:30:16	0.0 V	-140.0 V	-70 V
2020-08-12 13:28:46	0.0 V	-140.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-08-12 12:58:58	0.0 V	-140.0 V	-70 V
2020-08-12 12:32:10	0.0 V	-140.0 V	-70 V
2020-08-12 12:17:37	0.0 V	-140.0 V	-70 V
2020-08-12 11:28:35	0.0 V	-140.0 V	-70 V
2020-08-12 10:46:03	0.0 V	-140.0 V	-70 V
2020-08-12 10:01:12	0.0 V	-140.0 V	-70 V
2020-08-11 08:44:26	0.0 V	-140.0 V	-70 V
2020-08-11 07:53:34	0.0 V	-140.0 V	-70 V
2020-08-10 08:02:54	0.0 V	-140.0 V	-70 V
2020-08-10 07:18:05	0.0 V	-140.0 V	-70 V
2020-08-07 08:01:44	0.0 V	-150.0 V	-70 V
2020-08-06 15:31:02	0.0 V	-140.0 V	-70 V
2020-08-06 14:31:40	0.0 V	-140.0 V	-70 V
2020-08-05 11:00:59	0.0 V	-140.0 V	-70 V
2020-08-04 11:11:16	0.0 V	-140.0 V	-70 V
2020-08-03 11:52:42	0.0 V	-140.0 V	-70 V
2020-07-31 14:27:24	0.0 V	-140.0 V	-70 V
2020-07-28 07:30:44	0.0 V	-145.0 V	-70 V
2020-07-27 13:58:30	0.0 V	-160.0 V	-70 V
2020-07-27 12:42:07	0.0 V	-155.0 V	-70 V
2020-07-27 11:55:01	0.0 V	-150.0 V	-70 V
2020-07-27 11:13:19	0.0 V	-150.0 V	-70 V
2020-07-24 12:42:53	0.0 V	-160.0 V	-70 V
2020-07-24 12:14:18	0.0 V	-160.0 V	-70 V
2020-07-24 12:00:19	0.0 V	-165.0 V	-70 V
2020-07-24 11:13:53	0.0 V	-165.0 V	-70 V
2020-07-24 11:05:21	0.0 V	-165.0 V	-70 V
2020-07-21 12:40:51	0.0 V	-160.0 V	-70 V
2020-07-21 11:57:51	0.0 V	-155.0 V	-70 V
2020-07-20 12:40:12	0.0 V	-150.0 V	-70 V
2020-07-20 11:37:51	0.0 V	-155.0 V	-70 V
2020-07-17 11:48:52	0.0 V	-165.0 V	-70 V
2020-07-16 18:15:26	0.0 V	-160.0 V	-70 V
2020-07-16 12:56:52	0.0 V	-165.0 V	-70 V
2020-07-16 12:30:29	0.0 V	-165.0 V	-70 V
2020-07-15 12:44:11	0.0 V	-160.0 V	-70 V
2020-07-15 12:10:56	0.0 V	-160.0 V	-70 V
2020-07-14 11:48:58	0.0 V	-165.0 V	-70 V
2020-07-14 11:11:56	0.0 V	-165.0 V	-70 V
2020-07-13 12:32:05	0.0 V	-160.0 V	-70 V
2020-07-10 12:07:31	0.0 V	-180.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-07-09 11:10:24	0.0 V	-175.0 V	-70 V
2020-07-08 12:38:35	0.0 V	-200.0 V	-70 V
2020-07-07 11:49:59	0.0 V	-200.0 V	-70 V
2020-07-06 13:18:03	0.0 V	-200.0 V	-70 V
2020-07-06 11:44:36	0.0 V	-145.0 V	-70 V
2020-07-02 11:58:12	0.0 V	-155.0 V	-70 V
2020-07-02 11:17:30	0.0 V	-155.0 V	-70 V
2020-07-01 13:38:18	0.0 V	-160.0 V	-70 V
2020-07-01 12:51:19	0.0 V	-160.0 V	-70 V
2020-07-01 12:27:56	0.0 V	-165.0 V	-70 V
2020-07-01 11:46:22	0.0 V	-165.0 V	-70 V
2020-06-30 13:54:10	0.0 V	-175.0 V	-70 V
2020-06-30 13:18:33	0.0 V	-175.0 V	-70 V
2020-06-30 12:13:58	0.0 V	-175.0 V	-70 V
2020-06-29 12:28:14	0.0 V	-185.0 V	-70 V
2020-06-29 11:42:42	0.0 V	-185.0 V	-70 V
2020-06-27 11:13:24	0.0 V	-175.0 V	-70 V
2020-06-26 12:29:21	0.0 V	-160.0 V	-70 V
2020-06-25 11:42:24	0.0 V	-180.0 V	-70 V
2020-06-24 11:38:27	0.0 V	-195.0 V	-70 V
2020-06-23 12:16:39	0.0 V	-200.0 V	-70 V
2020-06-22 12:41:53	0.0 V	-195.0 V	-70 V
2020-06-22 12:03:52	0.0 V	-195.0 V	-70 V

US EPA Tune Check Report

Operator Name	ALSHN ICPMS
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\ICPMS3_201117.b
Acq. Date-Time	2020-11-17 11:53:27
Report Comment	---
Instrument Name	G8421A JP17200678

[No Gas]

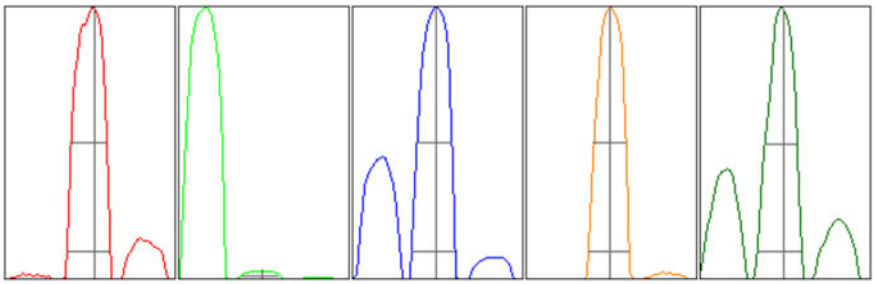
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
9	156	1561.95	1.487	5.000	
24	679	6791.19	1.589	5.000	
59	747	7467.36	1.310	5.000	
115	1246	12458.18	0.911	5.000	
208	687	6867.34	1.444	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	156	155	155	155	160
24	668	671	693	676	687
59	740	744	736	754	759
115	1252	1237	1234	1244	1262
208	704	682	685	684	679

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	259.48	9.10	8.90 - 9.10	
24	1116.87	24.00	23.90 - 24.10	
59	1242.74	59.00	58.90 - 59.10	
115	2261.73	115.00	114.90 - 115.10	
208	1244.49	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.64	0.766	0.900	
24	0.67	0.744	0.900	
59	0.62	0.768	0.900	
115	0.58	0.720	0.900	
208	0.58	0.786	0.900	

US EPA Tune Check Report

Integration Time [sec]	0.1
Acquisition Time [sec]	168.5
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	14.0 V
Extract 2	-170.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-80 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	126	Axis Gain	0.9992	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm

EM

Discriminator	4.8 mV	Analog HV	3307 V	Pulse HV	1272 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	173	1733.70	1.348	5.000	
89	149	1489.76	0.850	5.000	
205	435	4345.95	0.895	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	175	174	172	170	176
89	148	151	149	150	148
205	431	435	440	430	437

Integration Time [sec]	0.1

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

US EPA Tune Check Report

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	1.8 V
Extract 2	-170.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	126	Axis Gain	0.9992	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm		

EM

Discriminator	4.8 mV	Analog HV	3307 V	Pulse HV	1272 V

Calibration Summary

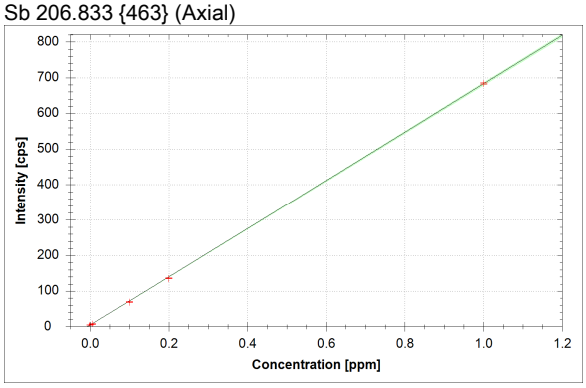
11/20/2020 11:36:51 AM

QTEGRA

LabBook: ICP2_201119C.imexp

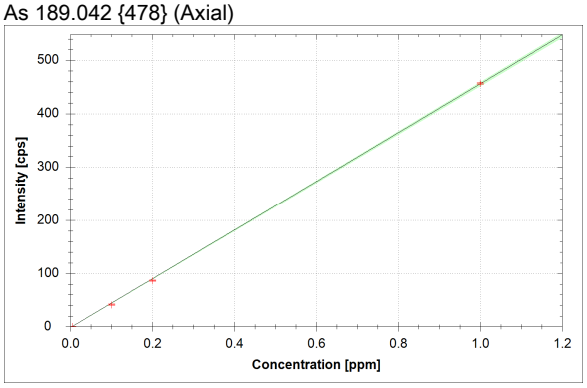
Calibration Graphs

Sb 206.833 {463} (Axial)



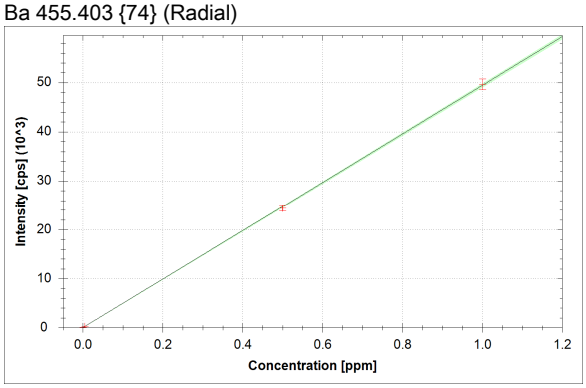
f(x) = 678.3993*x + 4.3934
R² = 0.9999
BEC = 0.006 ppm
LoD = 0.0014 ppm

As 189.042 {478} (Axial)



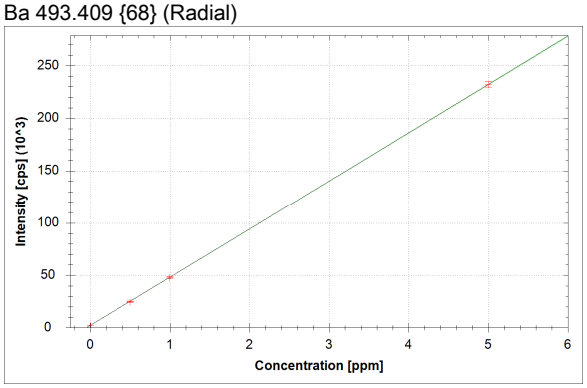
f(x) = 457.3675*x + -1.4999
R² = 0.9998
BEC = -0.003 ppm
LoD = 0.0018 ppm

Ba 455.403 {74} (Radial)



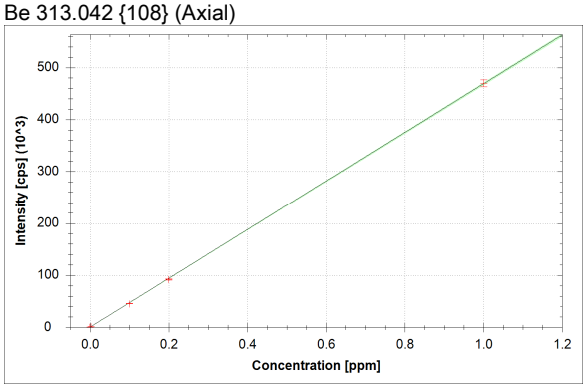
f(x) = 49413.6907*x + 30.5016
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0001 ppm

Ba 493.409 {68} (Radial)



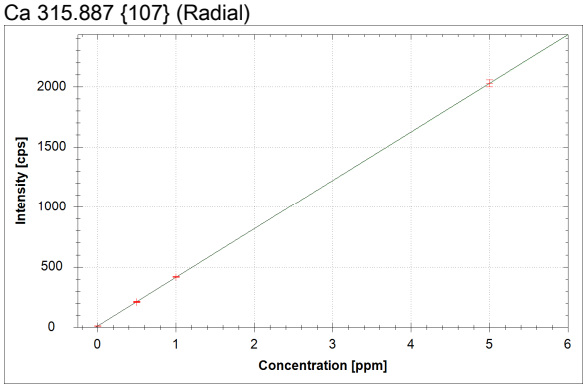
f(x) = 45984.8020*x + 2180.8482
R² = 1.0000
BEC = 0.047 ppm
LoD = 0.0009 ppm

Be 313.042 {108} (Axial)



f(x) = 468428.9147*x + 563.5211
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



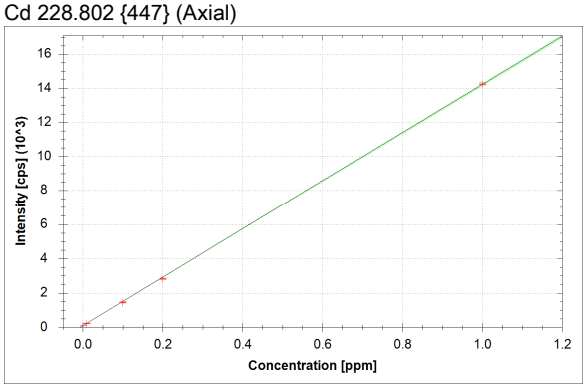
f(x) = 403.5923*x + 10.2033
R² = 1.0000
BEC = 0.025 ppm
LoD = 0.0066 ppm

Calibration Summary

11/20/2020 11:36:51 AM

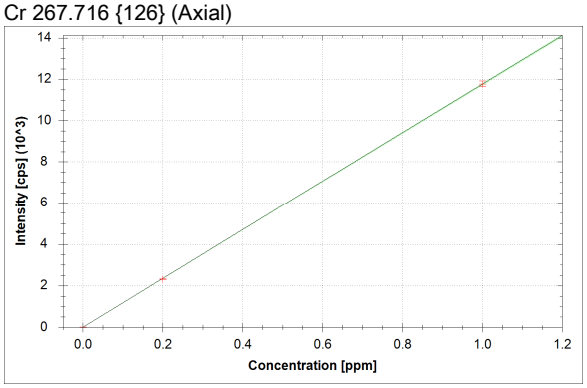
QTEGRA

Cd 228.802 {447} (Axial)



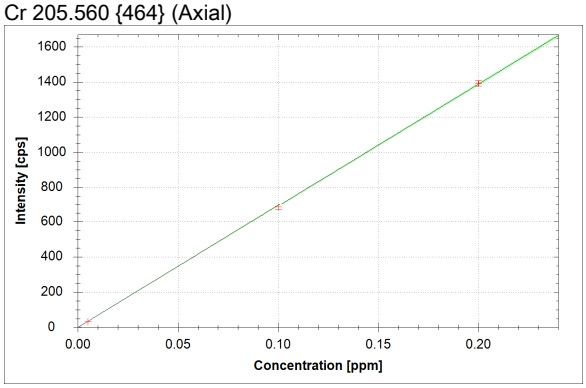
f(x) = 14123.6706*x + 100.5121
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0002 ppm

Cr 267.716 {126} (Axial)



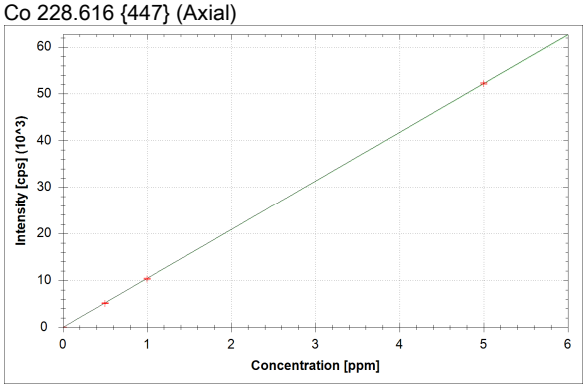
f(x) = 11757.1467*x + 4.5527
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0005 ppm

Cr 205.560 {464} (Axial)



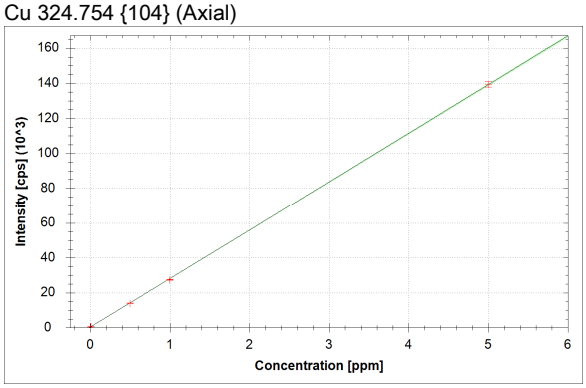
f(x) = 6937.8847*x + -0.0053
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Co 228.616 {447} (Axial)



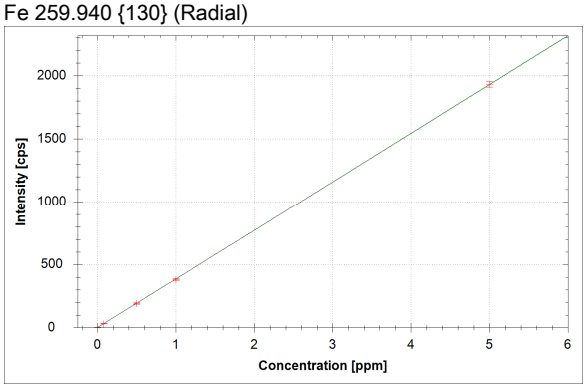
f(x) = 10443.1559*x + -1.5126
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Cu 324.754 {104} (Axial)



f(x) = 27771.8010*x + 353.9814
R² = 1.0000
BEC = 0.013 ppm
LoD = 0.0011 ppm

Fe 259.940 {130} (Radial)



f(x) = 385.8105*x + 1.5713
R² = 1.0000
BEC = 0.004 ppm
LoD = 0.0049 ppm

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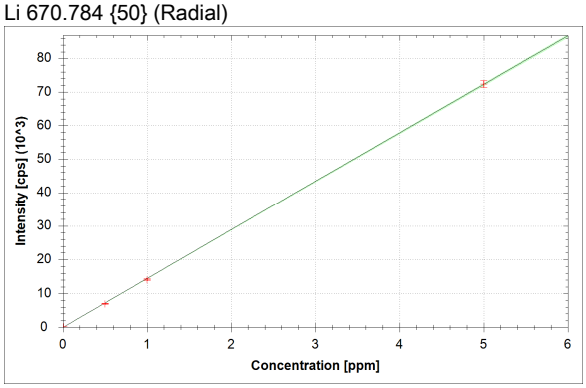
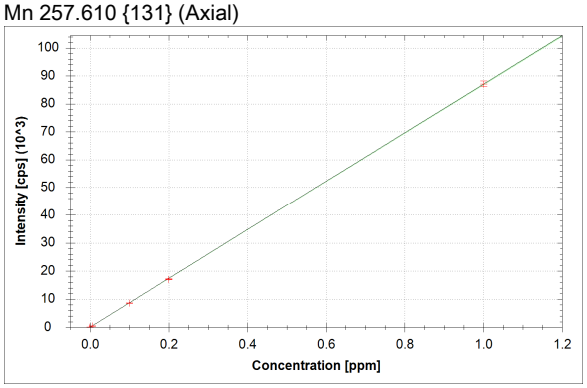
Li 670.784 {50} (Radial)



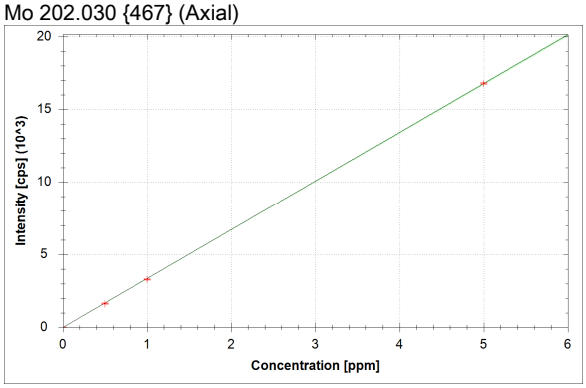
f(x) = 14457.5433*x + -1.0063
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0019 ppm

Mn 257.610 {131} (Axial)



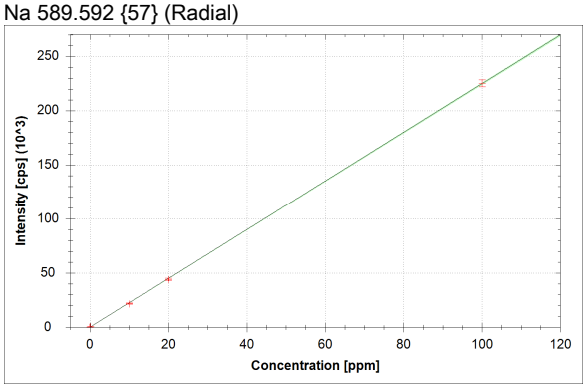
f(x) = 86999.6387*x + 32.6189
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0000 ppm

Mo 202.030 {467} (Axial)



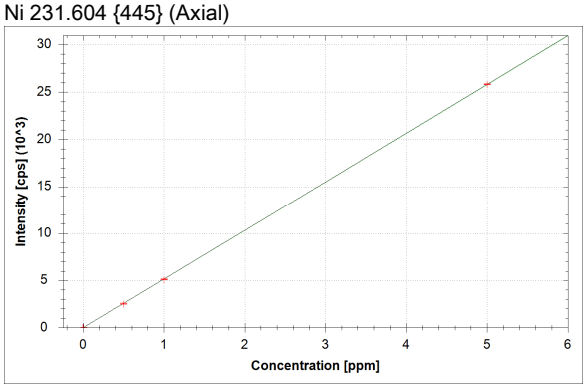
f(x) = 3356.9679*x + -0.6924
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Na 589.592 {57} (Radial)



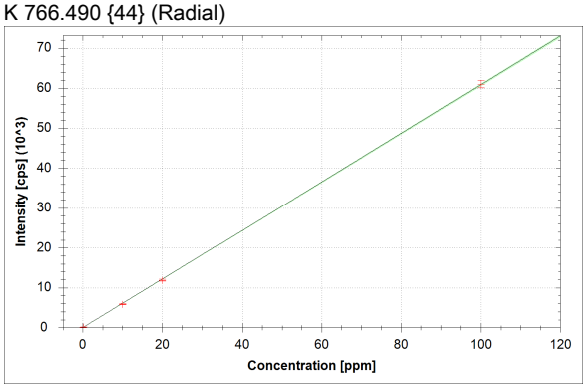
f(x) = 2248.1673*x + 168.4503
R² = 1.0000
BEC = 0.075 ppm
LoD = 0.0146 ppm

Ni 231.604 {445} (Axial)



f(x) = 5159.3238*x + 1.1245
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

K 766.490 {44} (Radial)



f(x) = 608.5989*x + 32.2547
R² = 0.9999
BEC = 0.053 ppm
LoD = 0.0187 ppm

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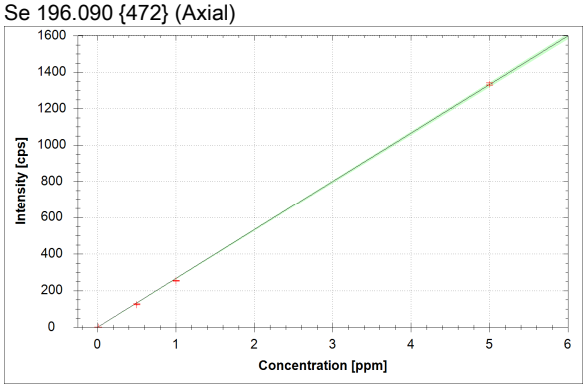
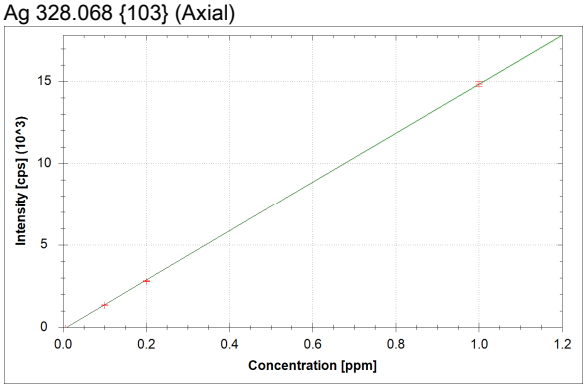
Se 196.090 {472} (Axial)



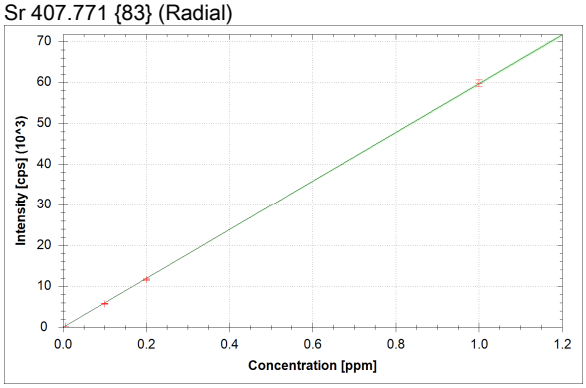
f(x) = 266.3053*x + 0.1544
R² = 0.9998
BEC = 0.001 ppm
LoD = 0.0065 ppm

Ag 328.068 {103} (Axial)



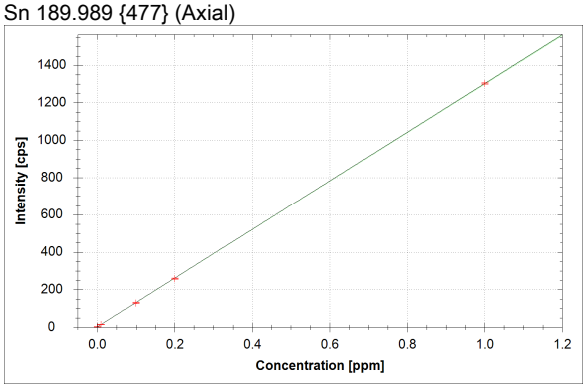
f(x) = 14963.9287*x + -131.8351
R² = 1.0000
BEC = -0.009 ppm
LoD = 0.0002 ppm

Sr 407.771 {83} (Radial)



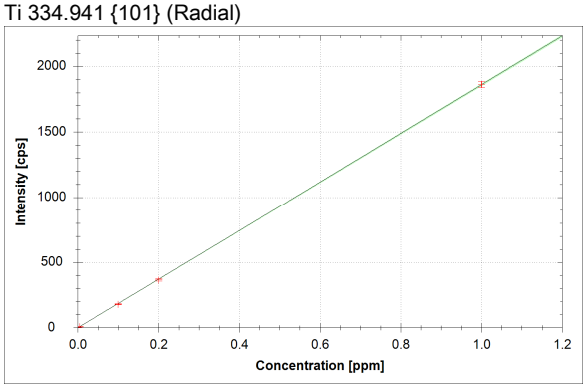
f(x) = 59704.2721*x + -10.9384
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Sn 189.989 {477} (Axial)



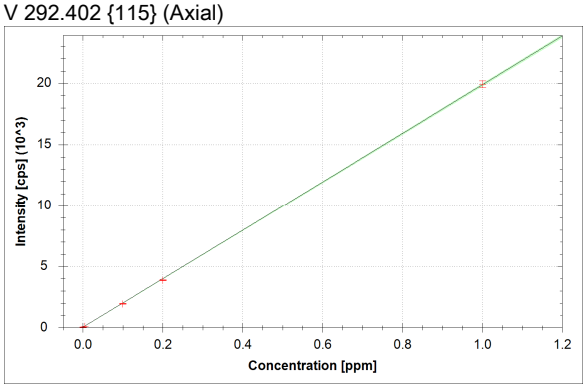
f(x) = 1300.2222*x + 2.4956
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0005 ppm

Ti 334.941 {101} (Radial)



f(x) = 1860.8576*x + -0.3284
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0026 ppm

V 292.402 {115} (Axial)



f(x) = 19840.4486*x + 39.7519
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0004 ppm

Calibration Summary

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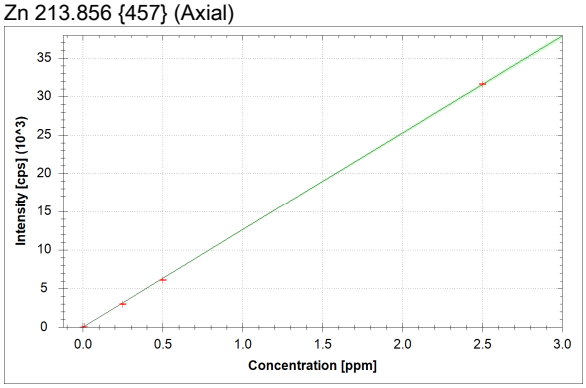
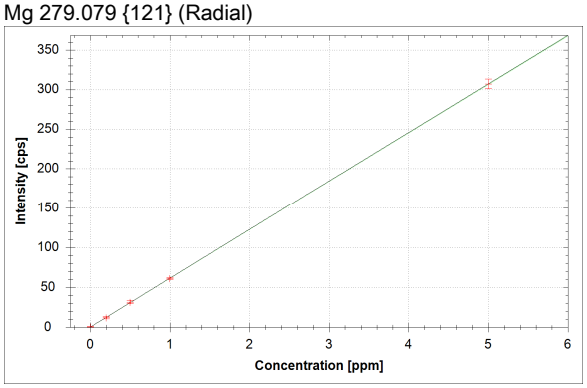
Zn 213.856 {457} (Axial)



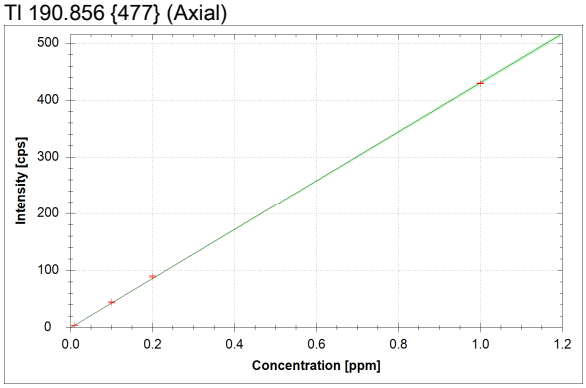
f(x) = 12618.7368*x + 20.4842
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



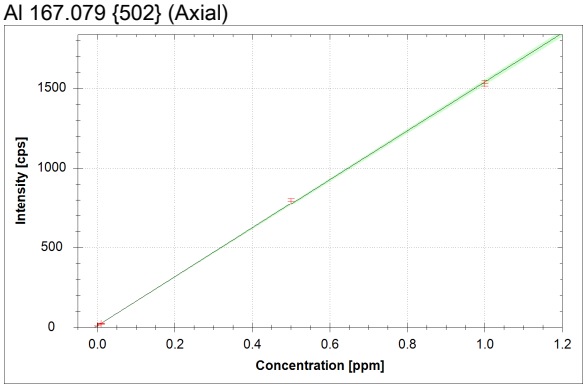
f(x) = 61.3568*x + 0.2945
R² = 1.0000
BEC = 0.005 ppm
LoD = 0.0201 ppm

Tl 190.856 {477} (Axial)



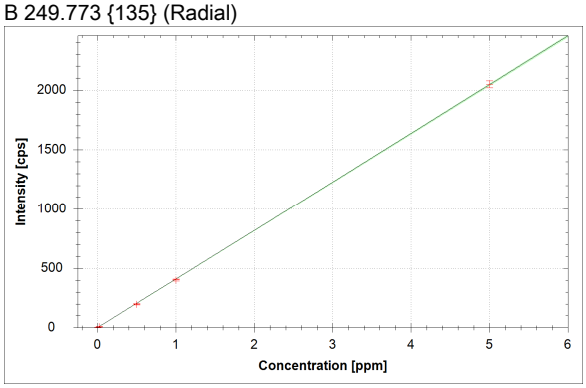
f(x) = 431.1846*x + -0.7854
R² = 0.9999
BEC = -0.002 ppm
LoD = 0.0042 ppm

Al 167.079 {502} (Axial)



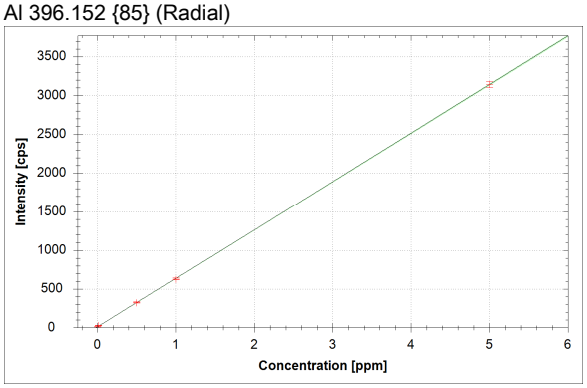
f(x) = 1528.6422*x + 10.0415
R² = 0.9998
BEC = 0.007 ppm
LoD = 0.0001 ppm

B 249.773 {135} (Radial)



f(x) = 408.8947*x + 0.7898
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0057 ppm

Al 396.152 {85} (Radial)



f(x) = 626.2209*x + 11.1230
R² = 1.0000
BEC = 0.018 ppm
LoD = 0.0137 ppm

Calibration Summary

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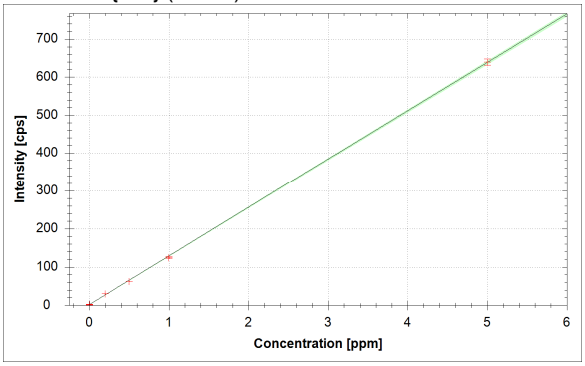
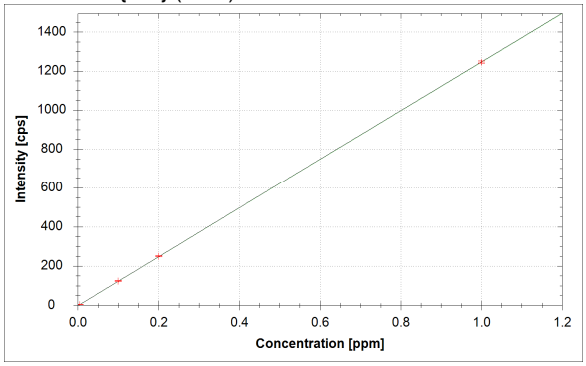
Si 251.611 {134} (Radial)



f(x) = 127.3127*x + 2.0009
R² = 0.9999
BEC = 0.016 ppm
LoD = 0.0229 ppm

Pb 220.353 {453} (Axial)



f(x) = 1249.1839*x + -2.4369
R² = 1.0000
BEC = -0.002 ppm
LoD = 0.0007 ppm

Calibration Summary

11/20/2020 11:36:51 AM

Standards

Standard: ICAL2
Analysis started at: 11/19/2020 12:00:53 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0043 ppm	23.4 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0043 ppm	21.1 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0048 ppm	4.4 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0018 ppm	2.5 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.4934 ppm	1.8 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0091 ppm	1.9 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0048 ppm	0.2 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0047 ppm	1.7 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0102 ppm	3.9 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0750 ppm	4.9 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0113 ppm	10.8 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0048 ppm	2.2 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0048 ppm	2.6 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1898 ppm	2.4 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0048 ppm	1.1 %	0.0050 ppm
K 766.490 {44} (Radial)	0.2544 ppm	4.6 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0068 ppm	14.4 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0049 ppm	5.5 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0046 ppm	3.6 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0096 ppm	2.1 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0038 ppm	9.8 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0044 ppm	3.6 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0092 ppm	2.1 %	0.0100 ppm
Sc 357.253 {94} (Axial)	100.6204 %	0.6 %	
Sc 188.060 {479} (Axial)	101.0651 %	0.2 %	
Mg 279.079 {121} (Radial)	0.1915 ppm	12.7 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0105 ppm	8.2 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0083 ppm	26.1 %	0.0100 ppm
Sc 227.318 {448} (Axial)	101.2448 %	0.2 %	
B 249.773 {135} (Radial)	0.0181 ppm	27.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0264 ppm	13.1 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2209 ppm	1.5 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0053 ppm	9.0 %	0.0050 ppm
Y 224.306 {450} (Axial)	101.6599 %	0.1 %	
Sc 361.384 {93} (Radial)	99.9512 %	0.4 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/19/2020 12:06:02 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0956 ppm	2.3 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0931 ppm	3.9 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4919 ppm	2.0 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4893 ppm	2.1 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0957 ppm	0.9 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.4990 ppm	1.8 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0953 ppm	2.5 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0986 ppm	2.3 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4898 ppm	2.4 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4896 ppm	0.8 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4940 ppm	2.6 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4797 ppm	2.2 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0987 ppm	1.0 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4835 ppm	2.2 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.6083 ppm	2.2 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4912 ppm	2.2 %	0.5000 ppm
K 766.490 {44} (Radial)	9.6404 ppm	2.3 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4672 ppm	2.6 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0985 ppm	0.6 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0960 ppm	2.0 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0977 ppm	2.5 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0960 ppm	1.5 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0962 ppm	0.9 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2361 ppm	2.4 %	0.2500 ppm
Sc 357.253 {94} (Axial)	97.9283 %	0.4 %	
Sc 188.060 {479} (Axial)	97.7314 %	0.5 %	
Mg 279.079 {121} (Radial)	0.5111 ppm	6.5 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1035 ppm	2.2 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5107 ppm	2.3 %	0.5000 ppm
Sc 227.318 {448} (Axial)	100.0374 %	0.5 %	
B 249.773 {135} (Radial)	0.4785 ppm	2.2 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.5009 ppm	1.9 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4762 ppm	0.7 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1005 ppm	2.8 %	0.1000 ppm
Y 224.306 {450} (Axial)	99.0431 %	0.6 %	
Sc 361.384 {93} (Radial)	98.8123 %	0.4 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/19/2020 12:11:01 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1934 ppm	1.0 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1921 ppm	1.3 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0041 ppm	2.2 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9897 ppm	2.1 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1947 ppm	1.0 %	0.2000 ppm
Ca 315.887 {107} (Radial)	1.0044 ppm	1.4 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1931 ppm	1.4 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1968 ppm	0.7 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.2007 ppm	1.2 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9890 ppm	1.2 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9731 ppm	0.9 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9849 ppm	2.1 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9732 ppm	2.3 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1965 ppm	1.0 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9796 ppm	1.3 %	1.0000 ppm
Na 589.592 {57} (Radial)	19.6215 ppm	2.4 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9909 ppm	1.2 %	1.0000 ppm
K 766.490 {44} (Radial)	19.5083 ppm	2.3 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9533 ppm	0.9 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1961 ppm	0.8 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1946 ppm	2.1 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1974 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1959 ppm	2.5 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1938 ppm	1.1 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4808 ppm	1.3 %	0.5000 ppm
Sc 357.253 {94} (Axial)	98.4489 %	0.3 %	
Sc 188.060 {479} (Axial)	95.3583 %	0.6 %	
Mg 279.079 {121} (Radial)	0.9933 ppm	2.6 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2081 ppm	1.3 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9947 ppm	1.2 %	1.0000 ppm
Sc 227.318 {448} (Axial)	100.0366 %	0.5 %	
B 249.773 {135} (Radial)	0.9786 ppm	2.2 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9856 ppm	2.1 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9633 ppm	2.6 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.2018 ppm	1.2 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.1953 %	0.5 %	
Sc 361.384 {93} (Radial)	99.4762 %	0.3 %	

Calibration Summary

11/20/2020 11:36:51 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/19/2020 12:15:58 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0018 ppm	0.5 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0023 ppm	0.5 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0031 ppm	1.1 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0015 ppm	1.4 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9999 ppm	1.5 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0019 ppm	0.4 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0006 ppm	1.2 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0032 ppm	0.3 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0064 ppm	1.2 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0037 ppm	1.1 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0074 ppm	1.5 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0008 ppm	1.2 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0057 ppm	0.3 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.1149 ppm	1.5 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0027 ppm	0.2 %	5.0000 ppm
K 766.490 {44} (Radial)	100.1342 ppm	1.5 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0126 ppm	0.6 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0009 ppm	1.0 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0015 ppm	1.4 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0008 ppm	0.3 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0012 ppm	1.3 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0016 ppm	1.4 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5052 ppm	0.4 %	2.5000 ppm
Sc 357.253 {94} (Axial)	92.5342 %	0.2 %	
Sc 188.060 {479} (Axial)	87.3739 %	0.2 %	
Mg 279.079 {121} (Radial)	5.0006 ppm	2.0 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9980 ppm	0.1 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	107.4510 %	0.2 %	
B 249.773 {135} (Radial)	5.0064 ppm	1.5 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0028 ppm	1.3 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0089 ppm	1.3 %	5.0000 ppm
Pb 220.353 {453} (Axial)	0.9996 ppm	0.5 %	1.0000 ppm
Y 224.306 {450} (Axial)	93.3924 %	0.1 %	
Sc 361.384 {93} (Radial)	96.8711 %	0.3 %	

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LabBook: ICP2_201119C.imexp

ICAL1

Sample type: BLK Analysis started at: 11/19/2020 11:55:45 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-127.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-9.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	3.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	-4.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/19/2020 12:00:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0043 ppm	23.4 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0043 ppm	21.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	238 cps	0.0048 ppm	4.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	841 cps	0.0018 ppm	2.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	199 cps	0.4934 ppm	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	128 cps	0.0091 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	33 cps	0.0048 ppm	0.2 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0047 ppm	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	284 cps	0.0102 ppm	3.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	29 cps	0.0750 ppm	4.9 %	0.0 ppm
Li 670.784 {50} (Radial)	163 cps	0.0113 ppm	10.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	419 cps	0.0048 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	16 cps	0.0048 ppm	2.6 %	0.0 ppm
Na 589.592 {57} (Radial)	427 cps	0.1898 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0048 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	155 cps	0.2544 ppm	4.6 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0068 ppm	14.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	74 cps	0.0049 ppm	5.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	272 cps	0.0046 ppm	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0096 ppm	2.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0038 ppm	9.8 %	0.0 ppm
V 292.402 {115} (Axial)	88 cps	0.0044 ppm	3.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	116 cps	0.0092 ppm	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6204 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		101.0651 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	12 cps	0.1915 ppm	12.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	5 cps	0.0105 ppm	8.2 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0083 ppm	26.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2448 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.0181 ppm	27.9 %	0.0 ppm
Al 396.152 {85} (Radial)	17 cps	0.0264 ppm	13.1 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.2209 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0053 ppm	9.0 %	0.0 ppm
Y 224.306 {450} (Axial)		101.6599 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.9512 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/19/2020 12:06:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	0.0956 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	43 cps	0.0931 ppm	3.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	24,305 cps	0.4919 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	22,500 cps	0.4893 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	44,844 cps	0.0957 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	201 cps	0.4990 ppm	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,345 cps	0.0953 ppm	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	684 cps	0.0986 ppm	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	5,115 cps	0.4898 ppm	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	13,597 cps	0.4896 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	191 cps	0.4940 ppm	2.6 %	0.0 ppm
Li 670.784 {50} (Radial)	6,935 cps	0.4797 ppm	2.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,586 cps	0.0987 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,623 cps	0.4835 ppm	2.2 %	0.0 ppm
Na 589.592 {57} (Radial)	21,601 cps	9.6083 ppm	2.2 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,534 cps	0.4912 ppm	2.2 %	0.0 ppm
K 766.490 {44} (Radial)	5,867 cps	9.6404 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	124 cps	0.4672 ppm	2.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,474 cps	0.0985 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,734 cps	0.0960 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	127 cps	0.0977 ppm	2.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	179 cps	0.0960 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,908 cps	0.0962 ppm	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,979 cps	0.2361 ppm	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9283 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.7314 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	31 cps	0.5111 ppm	6.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	45 cps	0.1035 ppm	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	781 cps	0.5107 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0374 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	196 cps	0.4785 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	314 cps	0.5009 ppm	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	61 cps	0.4762 ppm	0.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	126 cps	0.1005 ppm	2.8 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0431 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.8123 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/19/2020 12:11:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	131 cps	0.1934 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	88 cps	0.1921 ppm	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	49,615 cps	1.0041 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	45,510 cps	0.9897 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	91,187 cps	0.1947 ppm	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	405 cps	1.0044 ppm	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,728 cps	0.1931 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	2,314 cps	0.1968 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,392 cps	0.2007 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	10,329 cps	0.9890 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	27,025 cps	0.9731 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	380 cps	0.9849 ppm	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	14,070 cps	0.9732 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	17,099 cps	0.1965 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,288 cps	0.9796 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	44,112 cps	19.6215 ppm	2.4 %	0.5 ppm
Ni 231.604 {445} (Axial)	5,112 cps	0.9909 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	11,873 cps	19.5083 ppm	2.3 %	0.4 ppm
Se 196.090 {472} (Axial)	254 cps	0.9533 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,934 cps	0.1961 ppm	0.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,621 cps	0.1946 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	257 cps	0.1974 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	365 cps	0.1959 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	3,844 cps	0.1938 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,066 cps	0.4808 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4489 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.3583 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	61 cps	0.9933 ppm	2.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	90 cps	0.2081 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1,520 cps	0.9947 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0366 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	400 cps	0.9786 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	617 cps	0.9856 ppm	2.1 %	0.0 ppm
Si 251.611 {134} (Radial)	123 cps	0.9633 ppm	2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	252 cps	0.2018 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1953 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		99.4762 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/19/2020 12:15:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	680 cps	1.0018 ppm	0.5 %	0.0 ppm
As 189.042 {478} (Axial)	458 cps	1.0023 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	230,068 cps	5.0031 ppm	1.1 %	0.1 ppm
Be 313.042 {108} (Axial)	469,129 cps	1.0015 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,018 cps	4.9999 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	14,150 cps	1.0019 ppm	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	11,765 cps	1.0006 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	52,249 cps	5.0032 ppm	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	139,037 cps	5.0064 ppm	1.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,930 cps	5.0037 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	72,394 cps	5.0074 ppm	1.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	87,071 cps	1.0008 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	16,804 cps	5.0057 ppm	0.3 %	0.0 ppm
Na 589.592 {57} (Radial)	225,075 cps	100.1149 ppm	1.5 %	1.5 ppm
Ni 231.604 {445} (Axial)	25,811 cps	5.0027 ppm	0.2 %	0.0 ppm
K 766.490 {44} (Radial)	60,942 cps	100.1342 ppm	1.5 %	1.5 ppm
Se 196.090 {472} (Axial)	1,335 cps	5.0126 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	14,978 cps	1.0009 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	59,792 cps	1.0015 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,301 cps	1.0008 ppm	0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,863 cps	1.0012 ppm	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	19,873 cps	1.0016 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	31,613 cps	2.5052 ppm	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.5342 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		87.3739 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	307 cps	5.0006 ppm	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	430 cps	0.9980 ppm	0.1 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		107.4510 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	2,047 cps	5.0064 ppm	1.5 %	0.1 ppm
Al 396.152 {85} (Radial)	3,133 cps	5.0028 ppm	1.3 %	0.1 ppm
Si 251.611 {134} (Radial)	638 cps	5.0089 ppm	1.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,249 cps	0.9996 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		93.3924 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.8711 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/19/2020 12:46:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-107 cps	-0.1578 ppm	11.3 %	0.0 ppm
As 189.042 {478} (Axial)	-25 cps	-0.0547 ppm	3.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,080,935 cps	21.8752 ppm	3.4 %	0.7 ppm
Ba 493.409 {68} (Radial)	961,429 cps	20.9075 ppm	2.7 %	0.6 ppm
Be 313.042 {108} (Axial)	928,240 cps	1.9816 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	80,683 cps	199.9122 ppm	1.7 %	3.3 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	144.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	116,189 cps	9.8824 ppm	1.5 %	0.1 ppm
Cr 205.560 {464} (Axial)	62,741 cps	9.0433 ppm	15.7 %	1.4 ppm
Co 228.616 {447} (Axial)	107 cps	0.0103 ppm	23.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	581,014 cps	20.9210 ppm	1.8 %	0.4 ppm
Fe 259.940 {130} (Radial)	76,364 cps	197.9309 ppm	1.6 %	3.1 ppm
Li 670.784 {50} (Radial)	162,440 cps	11.2357 ppm	1.8 %	0.2 ppm
Mn 257.610 {131} (Axial)	828,391 cps	9.5218 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	-4 cps	-0.0011 ppm	18.4 %	0.0 ppm
Na 589.592 {57} (Radial)	-35 cps	-0.0157 ppm	54.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	-144 cps	-0.0280 ppm	9.6 %	0.0 ppm
K 766.490 {44} (Radial)	41 cps	0.0673 ppm	13.6 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0123 ppm	19.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	33,491 cps	2.2381 ppm	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	628,183 cps	10.5216 ppm	2.0 %	0.2 ppm
Sn 189.989 {477} (Axial)	-20 cps	-0.0155 ppm	19.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	18,563 cps	9.9753 ppm	1.5 %	0.2 ppm
V 292.402 {115} (Axial)	204,443 cps	10.3044 ppm	1.3 %	0.1 ppm
Zn 213.856 {457} (Axial)	-1,543 cps	-0.1222 ppm	4.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		86.4896 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		77.9251 %	3.0 %	2.3 %
Mg 279.079 {121} (Radial)	13,104 cps	213.5686 ppm	1.6 %	3.5 ppm
Tl 190.856 {477} (Axial)	-17 cps	-0.0404 ppm	17.6 %	0.0 ppm
Al 167.079 {502} (Axial)	24,727 cps	16.1758 ppm	6.1 %	1.0 ppm
Sc 227.318 {448} (Axial)		80.9287 %	2.4 %	1.9 %
B 249.773 {135} (Radial)	8,688 cps	21.2465 ppm	1.8 %	0.4 ppm
Al 396.152 {85} (Radial)	132,826 cps	212.1076 ppm	1.6 %	3.4 ppm
Si 251.611 {134} (Radial)	2,608 cps	20.4837 ppm	1.9 %	0.4 ppm
Pb 220.353 {453} (Axial)	4 cps	0.0032 ppm	124.3 %	0.0 ppm
Y 224.306 {450} (Axial)		87.1976 %	2.9 %	2.6 %
Sc 361.384 {93} (Radial)		91.1501 %	0.5 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/19/2020 12:52:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3,460 cps	5.1008 ppm	1.1 %	0.1 ppm
As 189.042 {478} (Axial)	2,163 cps	4.7290 ppm	1.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	152 cps	0.0031 ppm	19.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	955 cps	0.0208 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-108 cps	-0.0002 ppm	10.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	16 cps	0.0405 ppm	0.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	398 cps	0.0282 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	65.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	42 cps	0.0060 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	107,183 cps	10.2635 ppm	1.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	256 cps	0.0092 ppm	2.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	27 cps	0.0711 ppm	16.2 %	0.0 ppm
Li 670.784 {50} (Radial)	86 cps	0.0060 ppm	12.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	-288 cps	-0.0033 ppm	4.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	34,291 cps	10.2149 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	1 cps	0.0004 ppm	737.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	53,100 cps	10.2919 ppm	1.1 %	0.1 ppm
K 766.490 {44} (Radial)	62 cps	0.1015 ppm	15.0 %	0.0 ppm
Se 196.090 {472} (Axial)	1,264 cps	4.7475 ppm	1.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	-1 cps	0.0000 ppm	173.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	81 cps	0.0014 ppm	23.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	6,449 cps	4.9597 ppm	1.1 %	0.1 ppm
Ti 334.941 {101} (Radial)	14 cps	0.0075 ppm	12.0 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	372.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	60,008 cps	4.7555 ppm	1.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.3790 %	0.3 %	0.2 %
Sc 188.060 {479} (Axial)		92.8411 %	0.2 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	0.0002 ppm	5,980.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	2,372 cps	5.5001 ppm	0.9 %	0.1 ppm
Al 167.079 {502} (Axial)	11 cps	0.0073 ppm	29.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.3305 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	16 cps	0.0384 ppm	12.4 %	0.0 ppm
Al 396.152 {85} (Radial)	297 cps	0.4747 ppm	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	12 cps	0.0973 ppm	2.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	6,497 cps	5.2014 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		96.1350 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.0080 %	0.6 %	0.5 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/19/2020 12:20:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	690 cps	1.0166 ppm	101.663 %	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	457 cps	0.9994 ppm	99.939 %	0.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,383 cps	1.0803 ppm		1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	48,545 cps	1.0557 ppm	105.567 %	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	473,894 cps	1.0117 ppm	101.167 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,571 cps	6.3696 ppm	106.159 %	1.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	14,332 cps	1.0147 ppm	101.474 %	0.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	12,172 cps	1.0353 ppm	103.530 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	7,281 cps	1.0495 ppm		0.2 %	0.0 ppm
Co 228.616 {447} (Axial)	10,799 cps	1.0340 ppm	103.404 %	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	28,935 cps	1.0419 ppm	104.190 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	406 cps	1.0510 ppm	105.104 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	14,968 cps	1.0353 ppm	103.534 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	91,564 cps	1.0525 ppm	105.246 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,536 cps	1.0532 ppm	105.319 %	0.2 %	0.0 ppm
Na 589.592 {57} (Radial)	48,974 cps	21.7841 ppm	103.734 %	1.7 %	0.4 ppm
Ni 231.604 {445} (Axial)	5,363 cps	1.0394 ppm	103.941 %	0.2 %	0.0 ppm
K 766.490 {44} (Radial)	13,321 cps	21.8884 ppm	104.231 %	1.5 %	0.3 ppm
Se 196.090 {472} (Axial)	268 cps	1.0054 ppm	100.540 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	16,181 cps	1.0813 ppm	108.132 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	62,665 cps	1.0496 ppm	104.958 %	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,345 cps	1.0344 ppm		0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,915 cps	1.0292 ppm	102.918 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	20,910 cps	1.0539 ppm	105.391 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,686 cps	1.0053 ppm	100.531 %	0.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.1786 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.0731 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	64 cps	1.0471 ppm	104.715 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	460 cps	1.0666 ppm	106.660 %	0.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1,613 cps	1.0553 ppm		0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.7777 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	432 cps	1.0560 ppm	105.605 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	669 cps	1.0678 ppm	106.783 %	2.8 %	0.0 ppm
Si 251.611 {134} (Radial)	130 cps	1.0225 ppm		3.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,318 cps	1.0552 ppm	105.518 %	0.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9787 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.2123 %		0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/19/2020 12:25:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0004 ppm	137.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	39.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	30 cps	0.0006 ppm	42.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	677 cps	0.0147 ppm	3.9 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	7.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	-0.0011 ppm	446.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	24.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	58.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	293.5 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	301.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	49 cps	0.0018 ppm	12.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0025 ppm	57.9 %	0.0 ppm
Li 670.784 {50} (Radial)	73 cps	0.0050 ppm	12.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	5 cps	0.0001 ppm	35.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0004 ppm	31.7 %	0.0 ppm
Na 589.592 {57} (Radial)	2 cps	0.0010 ppm	288.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	57.7 %	0.0 ppm
K 766.490 {44} (Radial)	103 cps	0.1698 ppm	7.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0013 ppm	144.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0003 ppm	41.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0001 ppm	13.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	325.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0018 ppm	91.3 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0002 ppm	66.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	49.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.0429 %	0.7 %	0.6 %
Sc 188.060 {479} (Axial)		95.0531 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0002 ppm	5,025.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0006 ppm	81.0 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	16.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.9639 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	3 cps	0.0072 ppm	51.8 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0003 ppm	2,124.4 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0082 ppm	19.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	147.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.2876 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		94.2524 %	0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/19/2020 12:31:09 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0037 ppm	73.489 %	18.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0042 ppm	83.726 %	30.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	267 cps	0.0054 ppm		2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	957 cps	0.0208 ppm		2.9 %	0.0 ppm
Be 313.042 {108} (Axial)	866 cps	0.0018 ppm	92.402 %	0.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	197 cps	0.4874 ppm	97.481 %	3.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	123 cps	0.0087 ppm	87.415 %	3.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	55 cps	0.0047 ppm	93.637 %	4.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	32 cps	0.0047 ppm	93.077 %	3.2 %	0.0 ppm
Co 228.616 {447} (Axial)	48 cps	0.0046 ppm	91.423 %	4.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	324 cps	0.0117 ppm	116.682 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	32 cps	0.0827 ppm	103.374 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	205 cps	0.0142 ppm	142.016 %	3.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	431 cps	0.0050 ppm	99.183 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	16 cps	0.0048 ppm	95.330 %	3.3 %	0.0 ppm
Na 589.592 {57} (Radial)	441 cps	0.1963 ppm	98.145 %	2.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	24 cps	0.0047 ppm	93.935 %	3.0 %	0.0 ppm
K 766.490 {44} (Radial)	191 cps	0.3132 ppm	156.592 %	7.1 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0086 ppm	85.599 %	6.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	76 cps	0.0051 ppm	101.789 %	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	290 cps	0.0049 ppm	97.173 %	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	12 cps	0.0095 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	10 cps	0.0055 ppm	109.332 %	5.9 %	0.0 ppm
V 292.402 {115} (Axial)	88 cps	0.0044 ppm	88.672 %	7.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	113 cps	0.0089 ppm	89.181 %	3.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.7057 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		96.4828 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	12 cps	0.1938 ppm	96.917 %	6.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0100 ppm	99.828 %	18.2 %	0.0 ppm
Al 167.079 {502} (Axial)	10 cps	0.0062 ppm		5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2839 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	10 cps	0.0241 ppm	120.503 %	11.7 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0073 ppm		121.6 %	0.0 ppm
Si 251.611 {134} (Radial)	29 cps	0.2302 ppm		4.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0050 ppm	99.248 %	4.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.6094 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		94.8399 %		0.4 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/19/2020 12:36:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0031 ppm	62.693 %	34.9 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0042 ppm	84.232 %	20.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	259 cps	0.0052 ppm		5.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,016 cps	0.0221 ppm		0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	849 cps	0.0018 ppm	90.586 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	195 cps	0.4823 ppm	96.450 %	3.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	123 cps	0.0087 ppm	87.421 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	55 cps	0.0047 ppm	93.299 %	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	32 cps	0.0047 ppm	93.577 %	4.7 %	0.0 ppm
Co 228.616 {447} (Axial)	48 cps	0.0046 ppm	91.466 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	320 cps	0.0115 ppm	115.095 %	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	30 cps	0.0790 ppm	98.707 %	2.2 %	0.0 ppm
Li 670.784 {50} (Radial)	197 cps	0.0136 ppm	136.405 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	430 cps	0.0049 ppm	98.894 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	16 cps	0.0047 ppm	93.872 %	2.5 %	0.0 ppm
Na 589.592 {57} (Radial)	428 cps	0.1902 ppm	95.103 %	4.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0047 ppm	94.982 %	5.6 %	0.0 ppm
K 766.490 {44} (Radial)	179 cps	0.2942 ppm	147.081 %	4.5 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0056 ppm	55.942 %	23.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	77 cps	0.0052 ppm	103.493 %	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	285 cps	0.0048 ppm	95.625 %	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	12 cps	0.0093 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0042 ppm	84.465 %	27.3 %	0.0 ppm
V 292.402 {115} (Axial)	87 cps	0.0044 ppm	87.618 %	3.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	112 cps	0.0089 ppm	88.967 %	2.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5803 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.2940 %		0.6 %	0.6 %
Mg 279.079 {121} (Radial)	11 cps	0.1839 ppm	91.972 %	5.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0100 ppm	100.192 %	9.4 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0062 ppm		4.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.0764 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	8 cps	0.0188 ppm	93.948 %	15.0 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0068 ppm		26.6 %	0.0 ppm
Si 251.611 {134} (Radial)	29 cps	0.2254 ppm		3.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0045 ppm	90.434 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4277 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		94.2308 %		0.7 %	0.6 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/19/2020 12:41:31 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-15 cps	-0.0221 ppm		6.0 %	0.0 ppm
As 189.042 {478} (Axial)	-14 cps	-0.0306 ppm	0.000 %	3.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	33 cps	0.0007 ppm	0.000 %	4.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	820 cps	0.0178 ppm	0.000 %	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-1,207 cps	-0.0026 ppm	0.000 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	36,899 cps	91.4257 ppm	91.426 %	1.8 %	1.6 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.000 %	1,223.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	20 cps	0.0017 ppm	0.000 %	9.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	6 cps	0.0008 ppm	0.000 %	14.8 %	0.0 ppm
Co 228.616 {447} (Axial)	6 cps	0.0006 ppm	0.000 %	24.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	137 cps	0.0049 ppm	0.000 %	4.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	35,368 cps	91.6712 ppm	91.671 %	1.6 %	1.5 ppm
Li 670.784 {50} (Radial)	72 cps	0.0050 ppm		10.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	-547 cps	-0.0063 ppm	0.000 %	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,571 cps	1.9573 ppm	97.867 %	0.8 %	0.0 ppm
Na 589.592 {57} (Radial)	217,703 cps	96.8357 ppm	96.836 %	2.1 %	2.0 ppm
Ni 231.604 {445} (Axial)	-75 cps	-0.0146 ppm	0.000 %	2.9 %	0.0 ppm
K 766.490 {44} (Radial)	60,815 cps	99.9266 ppm	99.927 %	2.3 %	2.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0031 ppm	0.000 %	48.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0002 ppm	0.000 %	44.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	-115 cps	-0.0019 ppm		3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	-9 cps	-0.0071 ppm		10.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	3,417 cps	1.8362 ppm		1.8 %	0.0 ppm
V 292.402 {115} (Axial)	24 cps	0.0012 ppm	0.000 %	30.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	-192 cps	-0.0152 ppm	0.000 %	3.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		89.6226 %		0.4 %	0.3 %
Sc 188.060 {479} (Axial)		80.9042 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	5,807 cps	94.6363 ppm	94.636 %	1.7 %	1.6 ppm
Tl 190.856 {477} (Axial)	-4 cps	-0.0088 ppm	0.000 %	11.5 %	0.0 ppm
Al 167.079 {502} (Axial)	22,442 cps	14.6811 ppm		0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.0341 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	48 cps	0.1173 ppm		3.8 %	0.0 ppm
Al 396.152 {85} (Radial)	58,280 cps	93.0665 ppm	93.066 %	1.5 %	1.4 ppm
Si 251.611 {134} (Radial)	3 cps	0.0248 ppm	0.000 %	6.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	-2 cps	-0.0018 ppm	0.000 %	12.4 %	0.0 ppm
Y 224.306 {450} (Axial)		90.3487 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		93.5026 %		0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 9:31:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	356 cps	0.5251 ppm	105.012 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	230 cps	0.5018 ppm	100.370 %	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	127,579 cps	2.5818 ppm		3.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	114,122 cps	2.4817 ppm	99.269 %	3.7 %	0.1 ppm
Be 313.042 {108} (Axial)	223,332 cps	0.4768 ppm	95.354 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	921 cps	2.2817 ppm	91.270 %	3.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,199 cps	0.5097 ppm	101.935 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,493 cps	0.4672 ppm	93.446 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,485 cps	0.5022 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	26,145 cps	2.5036 ppm	100.143 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	71,733 cps	2.5830 ppm	103.318 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	950 cps	2.4628 ppm	98.511 %	3.6 %	0.1 ppm
Li 670.784 {50} (Radial)	36,875 cps	2.5506 ppm	102.023 %	3.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,514 cps	0.4772 ppm	95.436 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,601 cps	2.5621 ppm	102.483 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	109,447 cps	48.6826 ppm	97.365 %	3.3 %	1.6 ppm
Ni 231.604 {445} (Axial)	12,989 cps	2.5176 ppm	100.706 %	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	31,776 cps	52.2117 ppm	104.423 %	3.1 %	1.6 ppm
Se 196.090 {472} (Axial)	655 cps	2.4603 ppm	98.411 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,197 cps	0.4809 ppm	96.190 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,605 cps	0.4959 ppm	99.171 %	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	652 cps	0.5011 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	816 cps	0.4384 ppm	87.676 %	3.9 %	0.0 ppm
V 292.402 {115} (Axial)	9,939 cps	0.5009 ppm	100.184 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,773 cps	1.2500 ppm	100.000 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.2868 %		0.4 %	0.3 %
Sc 188.060 {479} (Axial)		86.1673 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	140 cps	2.2869 ppm	91.475 %	4.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	226 cps	0.5244 ppm	104.872 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,525 cps	2.3057 ppm		0.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.0507 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	983 cps	2.4036 ppm	96.145 %	3.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,478 cps	2.3600 ppm	94.399 %	4.0 %	0.1 ppm
Si 251.611 {134} (Radial)	300 cps	2.3599 ppm		3.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	633 cps	0.5068 ppm	101.361 %	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		89.2320 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.4928 %		0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 9:36:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	363 cps	0.5347 ppm	106.935 %	0.4 %	0.0 ppm
As 189.042 {478} (Axial)	233 cps	0.5098 ppm	101.959 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	131,897 cps	2.6692 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	117,693 cps	2.5594 ppm	102.375 %	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	225,721 cps	0.4819 ppm	96.374 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	948 cps	2.3480 ppm	93.919 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,355 cps	0.5207 ppm	104.145 %	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,556 cps	0.4726 ppm	94.520 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,556 cps	0.5126 ppm		0.5 %	0.0 ppm
Co 228.616 {447} (Axial)	26,687 cps	2.5555 ppm	102.219 %	0.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	72,031 cps	2.5937 ppm	103.746 %	2.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	987 cps	2.5581 ppm	102.323 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	37,977 cps	2.6268 ppm	105.072 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,915 cps	0.4818 ppm	96.356 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,784 cps	2.6167 ppm	104.667 %	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	112,550 cps	50.0632 ppm	100.126 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	13,271 cps	2.5722 ppm	102.889 %	0.4 %	0.0 ppm
K 766.490 {44} (Radial)	32,605 cps	53.5743 ppm	107.149 %	2.4 %	1.3 ppm
Se 196.090 {472} (Axial)	665 cps	2.4954 ppm	99.815 %	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,197 cps	0.4810 ppm	96.192 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,577 cps	0.5121 ppm	102.427 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	665 cps	0.5114 ppm		0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	843 cps	0.4528 ppm	90.558 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	10,079 cps	0.5080 ppm	101.601 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	16,098 cps	1.2757 ppm	102.057 %	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.9610 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		85.3821 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	145 cps	2.3613 ppm	94.452 %	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	230 cps	0.5328 ppm	106.558 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,609 cps	2.3612 ppm		0.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.2687 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	1,019 cps	2.4926 ppm	99.705 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	1,529 cps	2.4420 ppm	97.681 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	310 cps	2.4350 ppm		1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	646 cps	0.5175 ppm	103.506 %	0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		88.3377 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.5601 %		0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 10:38:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	347 cps	0.5114 ppm	102.272 %	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	225 cps	0.4924 ppm	98.482 %	0.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	127,403 cps	2.5783 ppm		4.3 %	0.1 ppm
Ba 493.409 {68} (Radial)	113,796 cps	2.4746 ppm	98.986 %	4.1 %	0.1 ppm
Be 313.042 {108} (Axial)	228,007 cps	0.4867 ppm	97.350 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	932 cps	2.3091 ppm	92.363 %	3.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,091 cps	0.5021 ppm	100.414 %	0.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,625 cps	0.4784 ppm	95.686 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,446 cps	0.4967 ppm		0.5 %	0.0 ppm
Co 228.616 {447} (Axial)	25,820 cps	2.4724 ppm	98.896 %	0.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	71,934 cps	2.5902 ppm	103.608 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	953 cps	2.4714 ppm	98.854 %	4.4 %	0.1 ppm
Li 670.784 {50} (Radial)	36,582 cps	2.5303 ppm	101.212 %	4.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	42,313 cps	0.4864 ppm	97.273 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,471 cps	2.5235 ppm	100.940 %	0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	109,258 cps	48.5986 ppm	97.197 %	4.3 %	2.1 ppm
Ni 231.604 {445} (Axial)	12,830 cps	2.4867 ppm	99.468 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	31,355 cps	51.5198 ppm	103.040 %	4.3 %	2.2 ppm
Se 196.090 {472} (Axial)	645 cps	2.4219 ppm	96.876 %	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,257 cps	0.4850 ppm	96.996 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,519 cps	0.4944 ppm	98.884 %	4.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	643 cps	0.4948 ppm		0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	823 cps	0.4425 ppm	88.495 %	4.5 %	0.0 ppm
V 292.402 {115} (Axial)	10,100 cps	0.5090 ppm	101.810 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,537 cps	1.2313 ppm	98.504 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.0977 %		0.6 %	0.5 %
Sc 188.060 {479} (Axial)		88.7109 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	142 cps	2.3179 ppm	92.715 %	3.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	222 cps	0.5152 ppm	103.043 %	0.2 %	0.0 ppm
Al 167.079 {502} (Axial)	3,509 cps	2.2955 ppm		0.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.7186 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	983 cps	2.4033 ppm	96.132 %	4.6 %	0.1 ppm
Al 396.152 {85} (Radial)	1,489 cps	2.3775 ppm	95.100 %	4.3 %	0.1 ppm
Si 251.611 {134} (Radial)	303 cps	2.3790 ppm		3.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	626 cps	0.5014 ppm	100.284 %	0.2 %	0.0 ppm
Y 224.306 {450} (Axial)		91.5596 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.0265 %		0.6 %	0.6 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 10:42:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	355 cps	0.5227 ppm	104.548 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	230 cps	0.5018 ppm	100.368 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	130,236 cps	2.6356 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	116,348 cps	2.5301 ppm	101.206 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	223,600 cps	0.4773 ppm	95.468 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	953 cps	2.3604 ppm	94.415 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,217 cps	0.5110 ppm	102.194 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,519 cps	0.4694 ppm	93.889 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,500 cps	0.5045 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	26,261 cps	2.5147 ppm	100.588 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	70,809 cps	2.5497 ppm	101.987 %	2.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	976 cps	2.5294 ppm	101.174 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	37,373 cps	2.5850 ppm	103.401 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	41,502 cps	0.4770 ppm	95.408 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,625 cps	2.5694 ppm	102.775 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	111,434 cps	49.5668 ppm	99.134 %	2.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	13,052 cps	2.5298 ppm	101.193 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	31,908 cps	52.4279 ppm	104.856 %	2.2 %	1.1 ppm
Se 196.090 {472} (Axial)	653 cps	2.4538 ppm	98.154 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,172 cps	0.4793 ppm	95.857 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,208 cps	0.5060 ppm	101.193 %	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	654 cps	0.5027 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	842 cps	0.4527 ppm	90.538 %	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	9,916 cps	0.4998 ppm	99.957 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,822 cps	1.2538 ppm	100.305 %	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.4064 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		86.8792 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	145 cps	2.3586 ppm	94.343 %	2.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	226 cps	0.5252 ppm	105.040 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,564 cps	2.3315 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.0347 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	1,006 cps	2.4613 ppm	98.452 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,527 cps	2.4378 ppm	97.514 %	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	308 cps	2.4158 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	637 cps	0.5096 ppm	101.930 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		90.0022 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		98.1663 %		0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 11:44:46 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	344 cps	0.5075 ppm	101.509 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	223 cps	0.4875 ppm	97.510 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	124,467 cps	2.5189 ppm		1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	111,089 cps	2.4158 ppm	96.631 %	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	215,153 cps	0.4593 ppm	91.861 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	910 cps	2.2537 ppm	90.148 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,019 cps	0.4970 ppm	99.395 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,299 cps	0.4507 ppm	90.144 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,407 cps	0.4911 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	25,557 cps	2.4472 ppm	97.888 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	67,881 cps	2.4442 ppm	97.769 %	2.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	927 cps	2.4027 ppm	96.109 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	35,752 cps	2.4729 ppm	98.916 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	39,965 cps	0.4594 ppm	91.875 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,390 cps	2.4992 ppm	99.967 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	106,604 cps	47.4182 ppm	94.836 %	2.4 %	1.1 ppm
Ni 231.604 {445} (Axial)	12,704 cps	2.4623 ppm	98.491 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	30,594 cps	50.2699 ppm	100.540 %	2.7 %	1.3 ppm
Se 196.090 {472} (Axial)	638 cps	2.3950 ppm	95.798 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,867 cps	0.4589 ppm	91.785 %	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,812 cps	0.4826 ppm	96.515 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	636 cps	0.4893 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	797 cps	0.4285 ppm	85.704 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	9,529 cps	0.4803 ppm	96.061 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,391 cps	1.2197 ppm	97.576 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.0756 %		0.4 %	0.3 %
Sc 188.060 {479} (Axial)		89.3572 %		0.8 %	0.7 %
Mg 279.079 {121} (Radial)	139 cps	2.2626 ppm	90.503 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	221 cps	0.5116 ppm	102.323 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,480 cps	2.2763 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.2703 %		0.8 %	0.8 %
B 249.773 {135} (Radial)	955 cps	2.3349 ppm	93.397 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,451 cps	2.3172 ppm	92.690 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	292 cps	2.2932 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	622 cps	0.4978 ppm	99.567 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0002 %		0.7 %	0.7 %
Sc 361.384 {93} (Radial)		98.9159 %		0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 11:49:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	354 cps	0.5216 ppm	104.327 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	229 cps	0.5011 ppm	100.228 %	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	129,916 cps	2.6292 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	115,650 cps	2.5150 ppm	100.598 %	3.1 %	0.1 ppm
Be 313.042 {108} (Axial)	224,895 cps	0.4801 ppm	96.021 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	936 cps	2.3181 ppm	92.726 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,206 cps	0.5102 ppm	102.041 %	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,546 cps	0.4718 ppm	94.350 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,505 cps	0.5052 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	26,244 cps	2.5130 ppm	100.520 %	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	70,986 cps	2.5561 ppm	102.242 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	965 cps	2.5001 ppm	100.003 %	3.2 %	0.1 ppm
Li 670.784 {50} (Radial)	37,408 cps	2.5874 ppm	103.497 %	3.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,759 cps	0.4800 ppm	95.998 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,623 cps	2.5686 ppm	102.746 %	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	111,650 cps	49.6626 ppm	99.325 %	3.1 %	1.6 ppm
Ni 231.604 {445} (Axial)	13,045 cps	2.5283 ppm	101.134 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	32,113 cps	52.7661 ppm	105.532 %	3.1 %	1.7 ppm
Se 196.090 {472} (Axial)	652 cps	2.4484 ppm	97.934 %	0.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,160 cps	0.4785 ppm	95.692 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,021 cps	0.5028 ppm	100.567 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	655 cps	0.5039 ppm		0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	835 cps	0.4485 ppm	89.705 %	3.3 %	0.0 ppm
V 292.402 {115} (Axial)	9,979 cps	0.5029 ppm	100.589 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,798 cps	1.2519 ppm	100.155 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3235 %		0.4 %	0.3 %
Sc 188.060 {479} (Axial)		87.9008 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	143 cps	2.3362 ppm	93.449 %	3.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	226 cps	0.5242 ppm	104.840 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,571 cps	2.3363 ppm		0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.0687 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	1,000 cps	2.4461 ppm	97.845 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,512 cps	2.4146 ppm	96.583 %	3.6 %	0.1 ppm
Si 251.611 {134} (Radial)	304 cps	2.3878 ppm		3.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	637 cps	0.5098 ppm	101.959 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		90.7746 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.8086 %		0.6 %	0.5 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 12:20:16 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	343 cps	0.5049 ppm	100.978 %	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	222 cps	0.4863 ppm	97.268 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	126,807 cps	2.5662 ppm		2.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	113,213 cps	2.4620 ppm	98.478 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	217,079 cps	0.4634 ppm	92.684 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	930 cps	2.3049 ppm	92.196 %	2.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,033 cps	0.4979 ppm	99.590 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,364 cps	0.4563 ppm	91.253 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,427 cps	0.4940 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	25,647 cps	2.4558 ppm	98.234 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	68,346 cps	2.4610 ppm	98.440 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	944 cps	2.4480 ppm	97.919 %	2.0 %	0.0 ppm
Li 670.784 {50} (Radial)	36,477 cps	2.5231 ppm	100.922 %	2.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	40,336 cps	0.4636 ppm	92.726 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,405 cps	2.5039 ppm	100.154 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	109,080 cps	48.5195 ppm	97.039 %	2.9 %	1.4 ppm
Ni 231.604 {445} (Axial)	12,750 cps	2.4712 ppm	98.849 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	31,212 cps	51.2849 ppm	102.570 %	3.0 %	1.5 ppm
Se 196.090 {472} (Axial)	639 cps	2.4010 ppm	96.041 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,921 cps	0.4625 ppm	92.502 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,334 cps	0.4913 ppm	98.265 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	637 cps	0.4899 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	818 cps	0.4394 ppm	87.877 %	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	9,604 cps	0.4840 ppm	96.810 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,415 cps	1.2216 ppm	97.727 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.9945 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		89.3040 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	141 cps	2.3002 ppm	92.009 %	1.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	221 cps	0.5131 ppm	102.612 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,488 cps	2.2820 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.5232 %		0.2 %	0.1 %
B 249.773 {135} (Radial)	971 cps	2.3735 ppm	94.942 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,477 cps	2.3588 ppm	94.353 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	298 cps	2.3426 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	622 cps	0.4981 ppm	99.623 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.4863 %		0.0 %	0.0 %
Sc 361.384 {93} (Radial)		98.9985 %		1.2 %	1.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 12:25:06 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	346 cps	0.5095 ppm	101.907 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	225 cps	0.4913 ppm	98.252 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	128,041 cps	2.5912 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	114,119 cps	2.4817 ppm	99.267 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	222,481 cps	0.4750 ppm	94.990 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	922 cps	2.2835 ppm	91.338 %	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,071 cps	0.5006 ppm	100.127 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,482 cps	0.4663 ppm	93.253 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,445 cps	0.4966 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	25,780 cps	2.4686 ppm	98.744 %	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	70,177 cps	2.5269 ppm	101.077 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	945 cps	2.4496 ppm	97.984 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	36,887 cps	2.5514 ppm	102.056 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,315 cps	0.4749 ppm	94.977 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,456 cps	2.5190 ppm	100.760 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	110,306 cps	49.0650 ppm	98.130 %	2.1 %	1.0 ppm
Ni 231.604 {445} (Axial)	12,808 cps	2.4825 ppm	99.300 %	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	31,601 cps	51.9247 ppm	103.849 %	2.3 %	1.2 ppm
Se 196.090 {472} (Axial)	642 cps	2.4113 ppm	96.453 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,071 cps	0.4726 ppm	94.512 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,590 cps	0.4956 ppm	99.121 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	643 cps	0.4942 ppm		0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	822 cps	0.4420 ppm	88.392 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	9,849 cps	0.4964 ppm	99.280 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,509 cps	1.2290 ppm	98.323 %	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.6695 %		0.3 %	0.2 %
Sc 188.060 {479} (Axial)		88.6347 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	139 cps	2.2657 ppm	90.628 %	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	222 cps	0.5149 ppm	102.981 %	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,504 cps	2.2921 ppm		0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.9710 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	981 cps	2.3987 ppm	95.949 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	1,481 cps	2.3649 ppm	94.597 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	299 cps	2.3487 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	625 cps	0.5003 ppm	100.069 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		92.1753 %		0.2 %	0.1 %
Sc 361.384 {93} (Radial)		98.2791 %		0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 1:07:42 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	342 cps	0.5047 ppm	100.949 %	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	225 cps	0.4927 ppm	98.550 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	129,757 cps	2.6259 ppm		2.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	115,307 cps	2.5075 ppm	100.300 %	2.4 %	0.1 ppm
Be 313.042 {108} (Axial)	225,277 cps	0.4809 ppm	96.184 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	948 cps	2.3501 ppm	94.003 %	2.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,070 cps	0.5006 ppm	100.114 %	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,572 cps	0.4739 ppm	94.787 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,511 cps	0.5060 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	26,109 cps	2.5002 ppm	100.006 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	69,900 cps	2.5169 ppm	100.677 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	933 cps	2.4185 ppm	96.739 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	37,261 cps	2.5773 ppm	103.092 %	2.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,879 cps	0.4814 ppm	96.273 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,427 cps	2.5103 ppm	100.413 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	114,053 cps	50.7315 ppm	101.463 %	2.6 %	1.3 ppm
Ni 231.604 {445} (Axial)	12,951 cps	2.5102 ppm	100.408 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	31,428 cps	51.6403 ppm	103.281 %	2.7 %	1.4 ppm
Se 196.090 {472} (Axial)	658 cps	2.4719 ppm	98.875 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,140 cps	0.4771 ppm	95.425 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,986 cps	0.5022 ppm	100.449 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	644 cps	0.4951 ppm		0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	870 cps	0.4673 ppm	93.460 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	9,839 cps	0.4959 ppm	99.178 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,650 cps	1.2403 ppm	99.220 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.9534 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		88.2794 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	140 cps	2.2859 ppm	91.435 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	221 cps	0.5131 ppm	102.628 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,526 cps	2.3067 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.4498 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	971 cps	2.3751 ppm	95.005 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,523 cps	2.4322 ppm	97.289 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	296 cps	2.3250 ppm		2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	631 cps	0.5050 ppm	101.009 %	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		93.0740 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.8965 %		0.5 %	0.5 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 2:18:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	345 cps	0.5084 ppm	101.684 %	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	226 cps	0.4946 ppm	98.911 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	127,807 cps	2.5865 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	112,786 cps	2.4527 ppm	98.107 %	2.5 %	0.1 ppm
Be 313.042 {108} (Axial)	221,432 cps	0.4727 ppm	94.543 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	932 cps	2.3104 ppm	92.418 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,106 cps	0.5031 ppm	100.630 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,459 cps	0.4643 ppm	92.861 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,534 cps	0.5093 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	26,195 cps	2.5083 ppm	100.332 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	69,530 cps	2.5036 ppm	100.145 %	2.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	951 cps	2.4654 ppm	98.616 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	36,557 cps	2.5286 ppm	101.144 %	2.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,266 cps	0.4743 ppm	94.865 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,473 cps	2.5241 ppm	100.964 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	111,584 cps	49.6335 ppm	99.267 %	2.7 %	1.3 ppm
Ni 231.604 {445} (Axial)	12,986 cps	2.5171 ppm	100.682 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	30,510 cps	50.1312 ppm	100.262 %	2.8 %	1.4 ppm
Se 196.090 {472} (Axial)	667 cps	2.5041 ppm	100.166 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,045 cps	0.4708 ppm	94.165 %	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,607 cps	0.4959 ppm	99.179 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	642 cps	0.4941 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	865 cps	0.4650 ppm	93.010 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	9,748 cps	0.4913 ppm	98.261 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,712 cps	1.2451 ppm	99.608 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.5105 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		86.0303 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	141 cps	2.2971 ppm	91.882 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	222 cps	0.5156 ppm	103.121 %	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	3,498 cps	2.2884 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1178 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	1,002 cps	2.4516 ppm	98.062 %	2.8 %	0.1 ppm
Al 396.152 {85} (Radial)	1,480 cps	2.3634 ppm	94.537 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	304 cps	2.3884 ppm		2.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	630 cps	0.5045 ppm	100.907 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0817 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.6977 %		0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 3:20:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	344 cps	0.5066 ppm	101.329 %	0.5 %	0.0 ppm
As 189.042 {478} (Axial)	224 cps	0.4897 ppm	97.945 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	128,891 cps	2.6084 ppm		2.3 %	0.1 ppm
Ba 493.409 {68} (Radial)	113,975 cps	2.4785 ppm	99.142 %	2.4 %	0.1 ppm
Be 313.042 {108} (Axial)	221,893 cps	0.4737 ppm	94.739 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	958 cps	2.3730 ppm	94.921 %	2.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,038 cps	0.4983 ppm	99.656 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,467 cps	0.4650 ppm	92.994 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,479 cps	0.5015 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	25,835 cps	2.4739 ppm	98.955 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	70,046 cps	2.5222 ppm	100.888 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	967 cps	2.5054 ppm	100.217 %	2.1 %	0.1 ppm
Li 670.784 {50} (Radial)	36,856 cps	2.5492 ppm	101.969 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,335 cps	0.4751 ppm	95.022 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,393 cps	2.5002 ppm	100.007 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	112,194 cps	49.9045 ppm	99.809 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	12,805 cps	2.4819 ppm	99.277 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	30,959 cps	50.8690 ppm	101.738 %	2.3 %	1.2 ppm
Se 196.090 {472} (Axial)	655 cps	2.4602 ppm	98.406 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,088 cps	0.4737 ppm	94.740 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,897 cps	0.5007 ppm	100.149 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	636 cps	0.4894 ppm		0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	864 cps	0.4642 ppm	92.830 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	9,767 cps	0.4923 ppm	98.460 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,514 cps	1.2294 ppm	98.352 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.5936 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		87.0241 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	143 cps	2.3251 ppm	93.005 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	221 cps	0.5117 ppm	102.331 %	0.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,463 cps	2.2652 ppm		0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.5185 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	1,016 cps	2.4839 ppm	99.357 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,489 cps	2.3780 ppm	95.120 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	310 cps	2.4314 ppm		2.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	623 cps	0.4990 ppm	99.804 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6435 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		98.9266 %		0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 4:24:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	354 cps	0.5215 ppm	104.293 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	231 cps	0.5053 ppm	101.054 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	136,685 cps	2.7661 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	121,272 cps	2.6372 ppm	105.489 %	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	232,943 cps	0.4973 ppm	99.457 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	998 cps	2.4720 ppm	98.878 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,256 cps	0.5138 ppm	102.754 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,730 cps	0.4874 ppm	97.473 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,575 cps	0.5152 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	26,622 cps	2.5492 ppm	101.969 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	73,585 cps	2.6496 ppm	105.985 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,062 cps	2.7518 ppm	110.070 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	39,182 cps	2.7102 ppm	108.407 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	43,335 cps	0.4981 ppm	99.622 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,662 cps	2.5803 ppm	103.213 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	118,418 cps	52.6731 ppm	105.346 %	2.1 %	1.1 ppm
Ni 231.604 {445} (Axial)	13,208 cps	2.5601 ppm	102.404 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	32,968 cps	54.1698 ppm	108.340 %	2.1 %	1.1 ppm
Se 196.090 {472} (Axial)	673 cps	2.5259 ppm	101.037 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,449 cps	0.4978 ppm	99.558 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	31,729 cps	0.5314 ppm	106.288 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	656 cps	0.5043 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	916 cps	0.4922 ppm	98.432 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	10,271 cps	0.5177 ppm	103.536 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,964 cps	1.2651 ppm	101.209 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.4511 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		84.4930 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	150 cps	2.4424 ppm	97.697 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	228 cps	0.5281 ppm	105.619 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,568 cps	2.3338 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.8974 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	1,066 cps	2.6059 ppm	104.238 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	1,593 cps	2.5439 ppm	101.756 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	325 cps	2.5562 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	643 cps	0.5146 ppm	102.912 %	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		89.5280 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.4672 %		0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 4:29:22 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	353 cps	0.5204 ppm	104.080 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	229 cps	0.5013 ppm	100.255 %	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	133,015 cps	2.6919 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	117,836 cps	2.5625 ppm	102.500 %	2.0 %	0.1 ppm
Be 313.042 {108} (Axial)	227,403 cps	0.4855 ppm	97.092 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	964 cps	2.3892 ppm	95.568 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,200 cps	0.5098 ppm	101.956 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,592 cps	0.4756 ppm	95.121 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,548 cps	0.5113 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	26,393 cps	2.5273 ppm	101.090 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	71,746 cps	2.5834 ppm	103.336 %	2.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	999 cps	2.5885 ppm	103.542 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	38,045 cps	2.6315 ppm	105.261 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	42,343 cps	0.4867 ppm	97.341 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,603 cps	2.5627 ppm	102.508 %	0.8 %	0.0 ppm
Na 589.592 {57} (Radial)	114,788 cps	51.0586 ppm	102.117 %	2.3 %	1.2 ppm
Ni 231.604 {445} (Axial)	13,094 cps	2.5379 ppm	101.516 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	32,076 cps	52.7042 ppm	105.408 %	2.4 %	1.3 ppm
Se 196.090 {472} (Axial)	666 cps	2.4996 ppm	99.983 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,231 cps	0.4832 ppm	96.649 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,806 cps	0.5160 ppm	103.195 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	652 cps	0.5011 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	884 cps	0.4752 ppm	95.045 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	10,043 cps	0.5062 ppm	101.239 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,850 cps	1.2561 ppm	100.484 %	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.0379 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		85.1997 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	146 cps	2.3775 ppm	95.102 %	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	226 cps	0.5243 ppm	104.858 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,544 cps	2.3184 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.5288 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	1,038 cps	2.5395 ppm	101.579 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,540 cps	2.4591 ppm	98.363 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	315 cps	2.4755 ppm		2.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	636 cps	0.5093 ppm	101.869 %	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		89.9862 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.7257 %		0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 5:19:46 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	350 cps	0.5166 ppm	103.328 %	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	228 cps	0.4981 ppm	99.627 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	129,251 cps	2.6157 ppm		3.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	114,549 cps	2.4910 ppm	99.640 %	3.2 %	0.1 ppm
Be 313.042 {108} (Axial)	223,443 cps	0.4770 ppm	95.401 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	939 cps	2.3255 ppm	93.019 %	3.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,182 cps	0.5085 ppm	101.695 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,506 cps	0.4683 ppm	93.669 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,544 cps	0.5108 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	26,345 cps	2.5227 ppm	100.909 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	70,780 cps	2.5486 ppm	101.945 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	965 cps	2.5015 ppm	100.060 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	36,963 cps	2.5567 ppm	102.267 %	3.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,634 cps	0.4786 ppm	95.711 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,584 cps	2.5572 ppm	102.287 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	112,316 cps	49.9589 ppm	99.918 %	3.5 %	1.7 ppm
Ni 231.604 {445} (Axial)	13,073 cps	2.5339 ppm	101.355 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	31,303 cps	51.4338 ppm	102.868 %	3.5 %	1.8 ppm
Se 196.090 {472} (Axial)	665 cps	2.4957 ppm	99.828 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,109 cps	0.4751 ppm	95.021 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,893 cps	0.5007 ppm	100.137 %	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	649 cps	0.4994 ppm		0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	858 cps	0.4610 ppm	92.196 %	3.4 %	0.0 ppm
V 292.402 {115} (Axial)	9,915 cps	0.4998 ppm	99.951 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,818 cps	1.2536 ppm	100.284 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3799 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		85.5290 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	142 cps	2.3065 ppm	92.260 %	4.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	225 cps	0.5223 ppm	104.469 %	0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,533 cps	2.3109 ppm		0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.7729 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	1,011 cps	2.4717 ppm	98.869 %	3.6 %	0.1 ppm
Al 396.152 {85} (Radial)	1,494 cps	2.3857 ppm	95.428 %	3.3 %	0.1 ppm
Si 251.611 {134} (Radial)	307 cps	2.4079 ppm		3.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	636 cps	0.5095 ppm	101.901 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		90.0117 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		99.2674 %		0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 6:21:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	355 cps	0.5229 ppm	104.589 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	230 cps	0.5022 ppm	100.439 %	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	128,502 cps	2.6005 ppm		3.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	113,875 cps	2.4764 ppm	99.055 %	3.7 %	0.1 ppm
Be 313.042 {108} (Axial)	224,942 cps	0.4802 ppm	96.041 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	931 cps	2.3078 ppm	92.312 %	3.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,233 cps	0.5122 ppm	102.430 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,535 cps	0.4707 ppm	94.148 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,547 cps	0.5113 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	26,427 cps	2.5305 ppm	101.221 %	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	71,592 cps	2.5779 ppm	103.115 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	959 cps	2.4849 ppm	99.394 %	3.9 %	0.1 ppm
Li 670.784 {50} (Radial)	36,795 cps	2.5450 ppm	101.801 %	3.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,884 cps	0.4814 ppm	96.286 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,647 cps	2.5758 ppm	103.033 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	111,226 cps	49.4740 ppm	98.948 %	3.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	13,119 cps	2.5427 ppm	101.710 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	31,348 cps	51.5091 ppm	103.018 %	3.3 %	1.7 ppm
Se 196.090 {472} (Axial)	665 cps	2.4979 ppm	99.917 %	0.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,192 cps	0.4806 ppm	96.126 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,715 cps	0.4977 ppm	99.541 %	3.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	655 cps	0.5036 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	847 cps	0.4550 ppm	91.008 %	4.6 %	0.0 ppm
V 292.402 {115} (Axial)	9,988 cps	0.5034 ppm	100.683 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,899 cps	1.2600 ppm	100.799 %	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.4142 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		85.5996 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	140 cps	2.2879 ppm	91.517 %	3.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	227 cps	0.5259 ppm	105.182 %	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,556 cps	2.3259 ppm		0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.4163 %		0.2 %	0.1 %
B 249.773 {135} (Radial)	1,000 cps	2.4452 ppm	97.807 %	3.6 %	0.1 ppm
Al 396.152 {85} (Radial)	1,479 cps	2.3622 ppm	94.486 %	4.0 %	0.1 ppm
Si 251.611 {134} (Radial)	304 cps	2.3868 ppm		4.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	637 cps	0.5100 ppm	102.002 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		89.5665 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		98.3753 %		0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

CCV

Sample type: QC Analysis started at: 11/19/2020 7:22:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	353 cps	0.5200 ppm	104.002 %	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	228 cps	0.4992 ppm	99.841 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	132,339 cps	2.6782 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	117,547 cps	2.5562 ppm	102.248 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	222,492 cps	0.4750 ppm	94.995 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	945 cps	2.3403 ppm	93.611 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,172 cps	0.5078 ppm	101.557 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,474 cps	0.4656 ppm	93.115 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,492 cps	0.5033 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	26,126 cps	2.5018 ppm	100.071 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	71,161 cps	2.5624 ppm	102.494 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,000 cps	2.5909 ppm	103.636 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	37,995 cps	2.6281 ppm	105.123 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	41,417 cps	0.4761 ppm	95.212 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,569 cps	2.5526 ppm	102.104 %	0.8 %	0.0 ppm
Na 589.592 {57} (Radial)	113,250 cps	50.3745 ppm	100.749 %	1.7 %	0.9 ppm
Ni 231.604 {445} (Axial)	12,980 cps	2.5158 ppm	100.630 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	32,284 cps	53.0470 ppm	106.094 %	1.7 %	0.9 ppm
Se 196.090 {472} (Axial)	657 cps	2.4655 ppm	98.619 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,117 cps	0.4756 ppm	95.122 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,631 cps	0.5131 ppm	102.610 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	649 cps	0.4989 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	857 cps	0.4604 ppm	92.070 %	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	9,937 cps	0.5009 ppm	100.172 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,738 cps	1.2472 ppm	99.773 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.5023 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		86.0563 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	144 cps	2.3406 ppm	93.623 %	3.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	225 cps	0.5221 ppm	104.421 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,514 cps	2.2985 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.3768 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	1,019 cps	2.4921 ppm	99.685 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,525 cps	2.4353 ppm	97.411 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	312 cps	2.4495 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	633 cps	0.5064 ppm	101.277 %	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		89.4655 %		0.1 %	0.0 %
Sc 361.384 {93} (Radial)		98.7051 %		0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 8:24:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	345 cps	0.5085 ppm	101.704 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	222 cps	0.4849 ppm	96.971 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	122,470 cps	2.4785 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	108,850 cps	2.3671 ppm	94.683 %	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	205,635 cps	0.4390 ppm	87.798 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	872 cps	2.1609 ppm	86.434 %	2.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,971 cps	0.4936 ppm	98.712 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,058 cps	0.4302 ppm	86.047 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,364 cps	0.4849 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	25,242 cps	2.4171 ppm	96.685 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	67,619 cps	2.4348 ppm	97.392 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	903 cps	2.3393 ppm	93.573 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	35,603 cps	2.4626 ppm	98.504 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	38,373 cps	0.4411 ppm	88.214 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,315 cps	2.4770 ppm	99.080 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	104,761 cps	46.5982 ppm	93.196 %	2.4 %	1.1 ppm
Ni 231.604 {445} (Axial)	12,525 cps	2.4276 ppm	97.102 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	30,028 cps	49.3398 ppm	98.680 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	637 cps	2.3922 ppm	95.687 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,720 cps	0.4490 ppm	89.810 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,366 cps	0.4751 ppm	95.022 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	627 cps	0.4820 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	778 cps	0.4179 ppm	83.582 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	9,236 cps	0.4655 ppm	93.098 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,255 cps	1.2089 ppm	96.712 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.7359 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		87.2648 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	132 cps	2.1435 ppm	85.739 %	1.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	219 cps	0.5076 ppm	101.522 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,376 cps	2.2084 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.9067 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	932 cps	2.2802 ppm	91.208 %	2.3 %	0.1 ppm
Al 396.152 {85} (Radial)	1,400 cps	2.2362 ppm	89.450 %	2.1 %	0.0 ppm
Si 251.611 {134} (Radial)	285 cps	2.2409 ppm		2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	611 cps	0.4892 ppm	97.840 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		90.3475 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.3133 %		0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 8:29:16 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	352 cps	0.5194 ppm	103.874 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	228 cps	0.4988 ppm	99.766 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	128,737 cps	2.6053 ppm		3.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	114,720 cps	2.4947 ppm	99.790 %	3.1 %	0.1 ppm
Be 313.042 {108} (Axial)	223,014 cps	0.4761 ppm	95.218 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	932 cps	2.3104 ppm	92.415 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,151 cps	0.5063 ppm	101.266 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,495 cps	0.4673 ppm	93.470 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,450 cps	0.4973 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	25,959 cps	2.4857 ppm	99.430 %	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	71,422 cps	2.5718 ppm	102.870 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	967 cps	2.5054 ppm	100.215 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	37,062 cps	2.5635 ppm	102.539 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,462 cps	0.4766 ppm	95.315 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,537 cps	2.5431 ppm	101.724 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	109,744 cps	48.8148 ppm	97.630 %	3.3 %	1.6 ppm
Ni 231.604 {445} (Axial)	12,896 cps	2.4996 ppm	99.983 %	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	31,691 cps	52.0727 ppm	104.145 %	3.5 %	1.8 ppm
Se 196.090 {472} (Axial)	650 cps	2.4394 ppm	97.574 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,178 cps	0.4797 ppm	95.942 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,881 cps	0.5005 ppm	100.096 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	646 cps	0.4972 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	829 cps	0.4457 ppm	89.138 %	3.2 %	0.0 ppm
V 292.402 {115} (Axial)	9,949 cps	0.5014 ppm	100.289 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,664 cps	1.2414 ppm	99.309 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0614 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		86.7395 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	143 cps	2.3328 ppm	93.311 %	3.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	225 cps	0.5220 ppm	104.397 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,509 cps	2.2957 ppm		0.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.5005 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	995 cps	2.4334 ppm	97.338 %	3.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,500 cps	2.3960 ppm	95.839 %	3.2 %	0.1 ppm
Si 251.611 {134} (Radial)	304 cps	2.3890 ppm		4.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	629 cps	0.5035 ppm	100.698 %	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		89.6702 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		97.7758 %		0.8 %	0.8 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 8:34:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0006 ppm	20.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	140.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	44 cps	0.0009 ppm	22.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,001 cps	0.0218 ppm	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	93 cps	0.0002 ppm	11.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0103 ppm	28.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	7.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	261.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	23.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	36.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	92 cps	0.0033 ppm	2.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0073 ppm	20.6 %	0.0 ppm
Li 670.784 {50} (Radial)	72 cps	0.0050 ppm	5.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	42.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0006 ppm	36.3 %	0.0 ppm
Na 589.592 {57} (Radial)	58 cps	0.0257 ppm	31.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	93.3 %	0.0 ppm
K 766.490 {44} (Radial)	89 cps	0.1455 ppm	15.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0013 ppm	64.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0011 ppm	26.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0002 ppm	26.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0004 ppm	37.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0010 ppm	114.0 %	0.0 ppm
V 292.402 {115} (Axial)	-10 cps	-0.0005 ppm	32.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	137.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.9637 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.9937 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0130 ppm	70.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	109.1 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0008 ppm	18.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.4351 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	6 cps	0.0136 ppm	8.1 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0029 ppm	252.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0027 ppm	267.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	242.9 %	0.0 ppm
Y 224.306 {450} (Axial)		93.3531 %	0.3 %	0.2 %
Sc 361.384 {93} (Radial)		98.7121 %	0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 9:40:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0003 ppm	329.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	176.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	49 cps	0.0010 ppm	18.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,046 cps	0.0227 ppm	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	93 cps	0.0002 ppm	9.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0054 ppm	107.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0003 ppm	22.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	668.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	715.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0001 ppm	34.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	94 cps	0.0034 ppm	7.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0035 ppm	99.9 %	0.0 ppm
Li 670.784 {50} (Radial)	65 cps	0.0045 ppm	14.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	63.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	7.0 %	0.0 ppm
Na 589.592 {57} (Radial)	51 cps	0.0227 ppm	46.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	60.3 %	0.0 ppm
K 766.490 {44} (Radial)	102 cps	0.1677 ppm	7.8 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0021 ppm	97.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	23.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	12 cps	0.0002 ppm	43.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	2,168.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0015 ppm	69.1 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	114.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	871.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.0448 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		92.6676 %	0.9 %	0.9 %
Mg 279.079 {121} (Radial)	0 cps	-0.0004 ppm	1,982.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0011 ppm	50.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0009 ppm	28.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.2569 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	5 cps	0.0127 ppm	9.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-3 cps	-0.0049 ppm	55.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0050 ppm	193.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	136.2 %	0.0 ppm
Y 224.306 {450} (Axial)		92.8226 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.3305 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:47:43 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0004 ppm	275.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	546.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	60 cps	0.0012 ppm	16.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	946 cps	0.0206 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	84 cps	0.0002 ppm	8.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	8 cps	0.0204 ppm	45.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	15.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0004 ppm	69.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	46.5 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	82.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	84 cps	0.0030 ppm	4.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0034 ppm	44.1 %	0.0 ppm
Li 670.784 {50} (Radial)	60 cps	0.0041 ppm	12.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	13.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0008 ppm	20.5 %	0.0 ppm
Na 589.592 {57} (Radial)	85 cps	0.0377 ppm	16.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	156.0 %	0.0 ppm
K 766.490 {44} (Radial)	87 cps	0.1426 ppm	12.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0003 ppm	558.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0011 ppm	18.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	16 cps	0.0003 ppm	30.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	149.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0016 ppm	40.4 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0005 ppm	16.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	339.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4259 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.6998 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0094 ppm	208.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	709.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0007 ppm	34.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.6158 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	6 cps	0.0139 ppm	2.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0039 ppm	158.8 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0113 ppm	66.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	136.2 %	0.0 ppm
Y 224.306 {450} (Axial)		95.2328 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.8405 %	0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:54:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	82.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	86.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	56 cps	0.0011 ppm	20.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	966 cps	0.0210 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	101 cps	0.0002 ppm	15.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0043 ppm	101.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	16.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	25.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	235.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	91.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	98 cps	0.0035 ppm	21.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0074 ppm	51.1 %	0.0 ppm
Li 670.784 {50} (Radial)	66 cps	0.0046 ppm	5.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	12.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	26.1 %	0.0 ppm
Na 589.592 {57} (Radial)	65 cps	0.0290 ppm	23.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0003 ppm	61.9 %	0.0 ppm
K 766.490 {44} (Radial)	98 cps	0.1616 ppm	15.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0009 ppm	155.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	19.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	13 cps	0.0002 ppm	6.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	37.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0014 ppm	100.7 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0002 ppm	82.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0000 ppm	73.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.8849 %	3.7 %	3.5 %
Sc 188.060 {479} (Axial)		94.2127 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0158 ppm	70.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	281.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0009 ppm	16.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.1100 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0115 ppm	7.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0008 ppm	636.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0057 ppm	64.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0004 ppm	37.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9497 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.2765 %	0.8 %	0.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 12:29:56 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0003 ppm	551.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	261.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	62 cps	0.0013 ppm	18.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	950 cps	0.0207 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	73 cps	0.0002 ppm	11.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	12 cps	0.0301 ppm	3.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	15.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	923.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	177.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	140.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	83 cps	0.0030 ppm	3.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0016 ppm	155.6 %	0.0 ppm
Li 670.784 {50} (Radial)	72 cps	0.0050 ppm	9.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	60.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0008 ppm	24.0 %	0.0 ppm
Na 589.592 {57} (Radial)	97 cps	0.0433 ppm	25.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	67.5 %	0.0 ppm
K 766.490 {44} (Radial)	88 cps	0.1452 ppm	11.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0017 ppm	12.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	18 cps	0.0012 ppm	25.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	21 cps	0.0004 ppm	11.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0005 ppm	29.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0009 ppm	123.7 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	26.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	430.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7626 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		95.9293 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0112 ppm	148.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0006 ppm	35.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	20.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.8199 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	6 cps	0.0136 ppm	9.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-5 cps	-0.0086 ppm	55.6 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0113 ppm	29.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	69.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3542 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		99.1382 %	0.6 %	0.6 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 1:12:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	56.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	181.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	66 cps	0.0013 ppm	29.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,012 cps	0.0220 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	71 cps	0.0002 ppm	8.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0069 ppm	58.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	103.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	115.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	552.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	70.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	75 cps	0.0027 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0037 ppm	21.3 %	0.0 ppm
Li 670.784 {50} (Radial)	77 cps	0.0053 ppm	17.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	53.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0006 ppm	40.4 %	0.0 ppm
Na 589.592 {57} (Radial)	48 cps	0.0215 ppm	37.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	140.9 %	0.0 ppm
K 766.490 {44} (Radial)	85 cps	0.1394 ppm	24.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0009 ppm	209.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0007 ppm	26.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0002 ppm	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	415.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0017 ppm	40.8 %	0.0 ppm
V 292.402 {115} (Axial)	-10 cps	-0.0005 ppm	27.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	46.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5627 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		93.8080 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0101 ppm	133.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0007 ppm	127.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0007 ppm	26.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.0437 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.0160 ppm	19.9 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0025 ppm	112.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0056 ppm	168.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	245.5 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6988 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.8117 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 2:23:42 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0002 ppm	826.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	229.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	47 cps	0.0009 ppm	18.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	986 cps	0.0214 ppm	3.4 %	0.0 ppm
Be 313.042 {108} (Axial)	67 cps	0.0001 ppm	11.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0045 ppm	156.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	635.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	185.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0001 ppm	38.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	76.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	70 cps	0.0025 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0047 ppm	78.2 %	0.0 ppm
Li 670.784 {50} (Radial)	61 cps	0.0042 ppm	7.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0000 ppm	61.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0006 ppm	12.4 %	0.0 ppm
Na 589.592 {57} (Radial)	37 cps	0.0166 ppm	63.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	69.6 %	0.0 ppm
K 766.490 {44} (Radial)	84 cps	0.1383 ppm	4.7 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0019 ppm	41.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0005 ppm	47.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	12 cps	0.0002 ppm	45.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	184.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0016 ppm	61.2 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	123.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	11.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.4989 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		91.5412 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	0.0039 ppm	588.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	281.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	5.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.8979 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0100 ppm	14.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0060 ppm	156.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0073 ppm	103.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0004 ppm	85.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8794 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.2700 %	0.7 %	0.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 3:25:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0005 ppm	164.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	423.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	57 cps	0.0011 ppm	26.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	960 cps	0.0209 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	79 cps	0.0002 ppm	5.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0129 ppm	67.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	134.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0001 ppm	105.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	98.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	114.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	82 cps	0.0030 ppm	12.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0040 ppm	71.4 %	0.0 ppm
Li 670.784 {50} (Radial)	68 cps	0.0047 ppm	10.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0000 ppm	82.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0005 ppm	22.5 %	0.0 ppm
Na 589.592 {57} (Radial)	53 cps	0.0234 ppm	67.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	53.3 %	0.0 ppm
K 766.490 {44} (Radial)	92 cps	0.1505 ppm	2.3 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0036 ppm	23.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	10.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13 cps	0.0002 ppm	40.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	172.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0004 ppm	238.1 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	69.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	-2 cps	-0.0002 ppm	36.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.5799 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		91.7151 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0124 ppm	122.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	15.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0009 ppm	43.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.3468 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0117 ppm	33.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-5 cps	-0.0081 ppm	83.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0064 ppm	38.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0006 ppm	18.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2220 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		97.7860 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 4:34:12 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0006 ppm	32.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	830.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	78 cps	0.0016 ppm	5.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,100 cps	0.0239 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	110 cps	0.0002 ppm	16.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	10 cps	0.0256 ppm	21.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	29.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	47.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	75.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	124.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	90 cps	0.0032 ppm	5.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	6 cps	0.0153 ppm	17.7 %	0.0 ppm
Li 670.784 {50} (Radial)	78 cps	0.0054 ppm	14.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	15 cps	0.0002 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	13.6 %	0.0 ppm
Na 589.592 {57} (Radial)	80 cps	0.0355 ppm	30.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	73.4 %	0.0 ppm
K 766.490 {44} (Radial)	98 cps	0.1605 ppm	12.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0012 ppm	295.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0009 ppm	20.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	21 cps	0.0003 ppm	18.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	54.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0020 ppm	63.0 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	10.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	0.0000 ppm	183.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.1636 %	0.4 %	0.3 %
Sc 188.060 {479} (Axial)		90.7480 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1 cps	0.0136 ppm	19.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	464.0 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0009 ppm	4.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		89.8244 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	7 cps	0.0173 ppm	29.1 %	0.0 ppm
Al 396.152 {85} (Radial)	-5 cps	-0.0087 ppm	54.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0106 ppm	34.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	722.6 %	0.0 ppm
Y 224.306 {450} (Axial)		92.9311 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.4432 %	0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 5:24:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0002 ppm	929.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	421.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	40 cps	0.0008 ppm	41.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,092 cps	0.0237 ppm	2.7 %	0.0 ppm
Be 313.042 {108} (Axial)	82 cps	0.0002 ppm	5.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0056 ppm	41.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	22.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0001 ppm	134.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0001 ppm	80.5 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	16.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	86 cps	0.0031 ppm	12.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0070 ppm	20.5 %	0.0 ppm
Li 670.784 {50} (Radial)	65 cps	0.0045 ppm	6.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	29.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	11.3 %	0.0 ppm
Na 589.592 {57} (Radial)	11 cps	0.0047 ppm	177.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	767.5 %	0.0 ppm
K 766.490 {44} (Radial)	75 cps	0.1238 ppm	9.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0015 ppm	49.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	12 cps	0.0008 ppm	51.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0001 ppm	31.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	110.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0011 ppm	106.8 %	0.0 ppm
V 292.402 {115} (Axial)	-12 cps	-0.0006 ppm	15.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	34.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.8496 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		90.9212 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	0 cps	-0.0025 ppm	467.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0014 ppm	27.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0007 ppm	40.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.2002 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	4 cps	0.0090 ppm	16.4 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0007 ppm	1,653.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0007 ppm	1,044.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	294.2 %	0.0 ppm
Y 224.306 {450} (Axial)		93.4410 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		95.8295 %	0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:25:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0002 ppm	532.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	383.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	42 cps	0.0009 ppm	30.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,047 cps	0.0228 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	83 cps	0.0002 ppm	4.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0046 ppm	180.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	45.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	127.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	130.4 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	529.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	83 cps	0.0030 ppm	3.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0090 ppm	21.0 %	0.0 ppm
Li 670.784 {50} (Radial)	59 cps	0.0040 ppm	21.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	56.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	28.1 %	0.0 ppm
Na 589.592 {57} (Radial)	56 cps	0.0248 ppm	45.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	241.4 %	0.0 ppm
K 766.490 {44} (Radial)	89 cps	0.1458 ppm	15.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0034 ppm	33.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	13 cps	0.0009 ppm	13.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0001 ppm	144.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	55.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0009 ppm	53.1 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0003 ppm	45.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	117.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3200 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		91.1567 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0106 ppm	47.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0012 ppm	110.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0008 ppm	10.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		89.7899 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	13 cps	0.0326 ppm	121.3 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0003 ppm	2,204.1 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0012 ppm	179.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0004 ppm	38.8 %	0.0 ppm
Y 224.306 {450} (Axial)		92.8468 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.4726 %	0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/19/2020 7:27:12 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0009 ppm	32.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0001 ppm	277.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	85 cps	0.0017 ppm	26.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,188 cps	0.0258 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	130 cps	0.0003 ppm	11.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0105 ppm	19.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0003 ppm	19.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	32.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0001 ppm	58.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	43.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	109 cps	0.0039 ppm	4.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0074 ppm	48.8 %	0.0 ppm
Li 670.784 {50} (Radial)	73 cps	0.0051 ppm	17.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0001 ppm	25.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0008 ppm	12.1 %	0.0 ppm
Na 589.592 {57} (Radial)	78 cps	0.0345 ppm	27.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0003 ppm	46.5 %	0.0 ppm
K 766.490 {44} (Radial)	86 cps	0.1412 ppm	9.9 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0022 ppm	100.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	30.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	17 cps	0.0003 ppm	22.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0004 ppm	84.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	71.7 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	52.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0000 ppm	93.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.0786 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		88.8828 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0152 ppm	118.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	688.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0011 ppm	14.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.0653 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	6 cps	0.0139 ppm	34.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0013 ppm	516.4 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0129 ppm	52.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0006 ppm	40.7 %	0.0 ppm
Y 224.306 {450} (Axial)		89.8445 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		94.2696 %	0.3 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

MBLK-168037

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:05:37 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	10,989.0 %	0.0 ppm
As 189.042 {478} (Axial)	-1 cps	-0.0015 ppm	78.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	3 cps	0.0001 ppm	355.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	941 cps	0.0205 ppm	2.8 %	0.0 ppm
Be 313.042 {108} (Axial)	69 cps	0.0001 ppm	3.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	26 cps	0.0646 ppm	8.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	23.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0001 ppm	161.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	14.9 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	40.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	77 cps	0.0028 ppm	4.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	7 cps	0.0190 ppm	20.7 %	0.0 ppm
Li 670.784 {50} (Radial)	45 cps	0.0031 ppm	21.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	47.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0002 ppm	36.7 %	0.0 ppm
Na 589.592 {57} (Radial)	307 cps	0.1365 ppm	14.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	129.1 %	0.0 ppm
K 766.490 {44} (Radial)	72 cps	0.1186 ppm	6.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0028 ppm	64.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0010 ppm	12.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	38 cps	0.0006 ppm	19.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	133.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	-0.0001 ppm	397.2 %	0.0 ppm
V 292.402 {115} (Axial)	-15 cps	-0.0007 ppm	13.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	62.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.5705 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		86.9238 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0358 ppm	51.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0013 ppm	30.4 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0077 ppm	0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.9537 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0022 ppm	88.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0020 ppm	257.1 %	0.0 ppm
Si 251.611 {134} (Radial)	3 cps	0.0259 ppm	3.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	115.9 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2884 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.6470 %	1.0 %	1.0 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LCS-168037

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:10:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	60 cps	0.0878 ppm	0.2 %	0.0 ppm
As 189.042 {478} (Axial)	37 cps	0.0814 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,675 cps	0.0946 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	5,033 cps	0.1095 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	37,112 cps	0.0792 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,312 cps	8.2062 ppm	1.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,206 cps	0.0854 ppm	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	948 cps	0.0806 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	608 cps	0.0876 ppm	0.3 %	0.0 ppm
Co 228.616 {447} (Axial)	901 cps	0.0863 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,553 cps	0.0919 ppm	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,442 cps	8.9214 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	1,402 cps	0.0969 ppm	1.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,229 cps	0.0831 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	300 cps	0.0895 ppm	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	20,031 cps	8.9101 ppm	1.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	440 cps	0.0854 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	5,789 cps	9.5126 ppm	1.8 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0778 ppm	2.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,308 cps	0.0874 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,413 cps	0.0907 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	111 cps	0.0857 ppm	0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	160 cps	0.0858 ppm	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,710 cps	0.0862 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,015 cps	0.0804 ppm	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3190 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		87.9666 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	511 cps	8.3362 ppm	1.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	39 cps	0.0896 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	156 cps	0.1024 ppm	0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.9395 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	186 cps	0.4538 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	52 cps	0.0832 ppm	15.1 %	0.0 ppm
Si 251.611 {134} (Radial)	1,066 cps	8.3697 ppm	1.9 %	0.2 ppm
Pb 220.353 {453} (Axial)	113 cps	0.0902 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.9951 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.2029 %	0.7 %	0.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

20111251-42A

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:36:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0083 ppm	10.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0005 ppm	115.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,891 cps	0.0585 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,479 cps	0.0757 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	141 cps	0.0003 ppm	9.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,625 cps	11.4604 ppm	2.0 %	0.2 ppm
Cd 228.802 {447} (Axial)	115 cps	0.0082 ppm	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0003 ppm	77.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	26.3 %	0.0 ppm
Co 228.616 {447} (Axial)	6 cps	0.0005 ppm	2.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	239 cps	0.0086 ppm	2.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0063 ppm	9.0 %	0.0 ppm
Li 670.784 {50} (Radial)	40 cps	0.0027 ppm	8.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,689 cps	0.0424 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	118.0 %	0.0 ppm
Na 589.592 {57} (Radial)	279,103 cps	124.1468 ppm	1.8 %	2.2 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0040 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	119 cps	0.1955 ppm	4.0 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0035 ppm	69.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	11.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,374 cps	0.0230 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0012 ppm	17.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0033 ppm	25.8 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0004 ppm	37.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	45,497 cps	3.6055 ppm	2.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		91.9049 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		83.7555 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	68 cps	1.1065 ppm	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0013 ppm	73.7 %	0.0 ppm
Al 167.079 {502} (Axial)	17 cps	0.0113 ppm	2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.3601 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0098 ppm	24.5 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0084 ppm	60.4 %	0.0 ppm
Si 251.611 {134} (Radial)	54 cps	0.4243 ppm	1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	6,691 cps	5.3559 ppm	2.1 %	0.1 ppm
Y 224.306 {450} (Axial)		90.0142 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.8537 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

20111251-42AMS

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:41:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	68 cps	0.0996 ppm	2.6 %	0.0 ppm
As 189.042 {478} (Axial)	40 cps	0.0865 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,716 cps	0.1561 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,748 cps	0.1685 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	40,633 cps	0.0867 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,115 cps	20.1067 ppm	3.0 %	0.6 ppm
Cd 228.802 {447} (Axial)	1,367 cps	0.0968 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,012 cps	0.0861 ppm	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	613 cps	0.0884 ppm	1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	907 cps	0.0868 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,852 cps	0.1027 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,532 cps	9.1558 ppm	3.0 %	0.3 ppm
Li 670.784 {50} (Radial)	1,445 cps	0.1000 ppm	3.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	11,352 cps	0.1305 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	308 cps	0.0917 ppm	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	298,717 cps	132.8713 ppm	2.2 %	2.9 ppm
Ni 231.604 {445} (Axial)	461 cps	0.0893 ppm	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	6,072 cps	9.9772 ppm	2.9 %	0.3 ppm
Se 196.090 {472} (Axial)	23 cps	0.0845 ppm	2.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,385 cps	0.0926 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,921 cps	0.1159 ppm	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	112 cps	0.0858 ppm	1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	0.0901 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,833 cps	0.0924 ppm	0.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	47,171 cps	3.7381 ppm	1.8 %	0.1 ppm
Sc 357.253 {94} (Axial)		89.8573 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		82.3263 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	601 cps	9.8017 ppm	3.2 %	0.3 ppm
Tl 190.856 {477} (Axial)	37 cps	0.0850 ppm	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	177 cps	0.1158 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		81.0459 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	193 cps	0.4730 ppm	3.4 %	0.0 ppm
Al 396.152 {85} (Radial)	60 cps	0.0965 ppm	12.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1,136 cps	8.9207 ppm	3.1 %	0.3 ppm
Pb 220.353 {453} (Axial)	6,830 cps	5.4678 ppm	1.8 %	0.1 ppm
Y 224.306 {450} (Axial)		88.8645 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		97.2598 %	0.7 %	0.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

20111251-42AMSD

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:46:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	0.0952 ppm	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	38 cps	0.0835 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,386 cps	0.1495 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,478 cps	0.1626 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	38,329 cps	0.0818 ppm	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,712 cps	19.1090 ppm	1.8 %	0.3 ppm
Cd 228.802 {447} (Axial)	1,309 cps	0.0927 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	951 cps	0.0809 ppm	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	589 cps	0.0849 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	870 cps	0.0834 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,725 cps	0.0981 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,375 cps	8.7468 ppm	1.7 %	0.1 ppm
Li 670.784 {50} (Radial)	1,377 cps	0.0952 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,814 cps	0.1243 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	294 cps	0.0875 ppm	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	286,558 cps	127.4627 ppm	1.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	443 cps	0.0858 ppm	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	5,826 cps	9.5721 ppm	2.0 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0795 ppm	0.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,307 cps	0.0874 ppm	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,623 cps	0.1109 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	108 cps	0.0832 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	161 cps	0.0863 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	1,743 cps	0.0879 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	45,397 cps	3.5976 ppm	1.5 %	0.1 ppm
Sc 357.253 {94} (Axial)		90.6072 %	0.2 %	0.1 %
Sc 188.060 {479} (Axial)		82.3057 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	568 cps	9.2504 ppm	1.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	35 cps	0.0819 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	169 cps	0.1103 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		81.2083 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	186 cps	0.4546 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	58 cps	0.0931 ppm	5.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1,089 cps	8.5514 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	6,580 cps	5.2676 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		89.1925 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.5475 %	0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-44A

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:51:33 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	10 cps	0.0150 ppm	4.2 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0047 ppm	12.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,448 cps	0.0293 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,248 cps	0.0489 ppm	2.9 %	0.0 ppm
Be 313.042 {108} (Axial)	115 cps	0.0002 ppm	4.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,764 cps	6.8496 ppm	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0007 ppm	7.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0006 ppm	27.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0005 ppm	8.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	43.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	181 cps	0.0065 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	66 cps	0.1700 ppm	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	53 cps	0.0037 ppm	3.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,289 cps	0.0493 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	89.3 %	0.0 ppm
Na 589.592 {57} (Radial)	272,277 cps	121.1106 ppm	2.3 %	2.8 ppm
Ni 231.604 {445} (Axial)	7 cps	0.0014 ppm	5.3 %	0.0 ppm
K 766.490 {44} (Radial)	218 cps	0.3576 ppm	1.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	128.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0009 ppm	18.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	609 cps	0.0102 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0016 ppm	38.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	12 cps	0.0066 ppm	17.0 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	431.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,153 cps	0.8046 ppm	0.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.8861 %	0.4 %	0.3 %
Sc 188.060 {479} (Axial)		82.0514 %	1.2 %	1.0 %
Mg 279.079 {121} (Radial)	118 cps	1.9184 ppm	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0015 ppm	51.7 %	0.0 ppm
Al 167.079 {502} (Axial)	244 cps	0.1599 ppm	1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		80.6020 %	1.2 %	1.0 %
B 249.773 {135} (Radial)	6 cps	0.0149 ppm	13.5 %	0.0 ppm
Al 396.152 {85} (Radial)	96 cps	0.1536 ppm	0.3 %	0.0 ppm
Si 251.611 {134} (Radial)	83 cps	0.6553 ppm	1.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	65 cps	0.0523 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		88.0752 %	0.9 %	0.8 %
Sc 361.384 {93} (Radial)		97.2674 %	0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

MBLK-168036

Sample type: UNKNOWN Analysis started at: 11/19/2020 9:56:38 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0004 ppm	283.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	674.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	12 cps	0.0002 ppm	32.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	841 cps	0.0183 ppm	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	59 cps	0.0001 ppm	17.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	13 cps	0.0331 ppm	25.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	3.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	82.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	80.2 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	44.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	74 cps	0.0027 ppm	9.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0045 ppm	10.7 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0026 ppm	31.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	3.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0002 ppm	108.6 %	0.0 ppm
Na 589.592 {57} (Radial)	175 cps	0.0777 ppm	22.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	182.1 %	0.0 ppm
K 766.490 {44} (Radial)	63 cps	0.1032 ppm	21.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0018 ppm	48.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0009 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0001 ppm	89.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	31.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0002 ppm	352.2 %	0.0 ppm
V 292.402 {115} (Axial)	-12 cps	-0.0006 ppm	66.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0001 ppm	158.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8106 %	1.1 %	1.1 %
Sc 188.060 {479} (Axial)		90.5566 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0154 ppm	166.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0017 ppm	27.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	148.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		88.3419 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	2 cps	0.0040 ppm	95.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-3 cps	-0.0055 ppm	91.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0112 ppm	46.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	390.8 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6807 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.4395 %	0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LCS-168036

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:01:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	60 cps	0.0890 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	38 cps	0.0827 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,663 cps	0.0944 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,988 cps	0.1085 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	38,027 cps	0.0812 ppm	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,337 cps	8.2674 ppm	0.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,223 cps	0.0866 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	977 cps	0.0831 ppm	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	608 cps	0.0877 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	905 cps	0.0866 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,592 cps	0.0933 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,469 cps	8.9909 ppm	1.0 %	0.1 ppm
Li 670.784 {50} (Radial)	1,378 cps	0.0953 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,377 cps	0.0848 ppm	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	304 cps	0.0904 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	19,820 cps	8.8163 ppm	1.1 %	0.1 ppm
Ni 231.604 {445} (Axial)	445 cps	0.0862 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	5,851 cps	9.6136 ppm	0.7 %	0.1 ppm
Se 196.090 {472} (Axial)	21 cps	0.0798 ppm	2.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,319 cps	0.0882 ppm	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,394 cps	0.0904 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	113 cps	0.0866 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	159 cps	0.0852 ppm	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	1,751 cps	0.0883 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,025 cps	0.0812 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.8633 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		89.4015 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	526 cps	8.5651 ppm	0.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	39 cps	0.0906 ppm	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	158 cps	0.1031 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.4011 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	187 cps	0.4570 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	52 cps	0.0823 ppm	3.6 %	0.0 ppm
Si 251.611 {134} (Radial)	1,048 cps	8.2345 ppm	1.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	114 cps	0.0915 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.5693 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		100.6138 %	0.5 %	0.5 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-02A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:06:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0083 ppm	3.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	43.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,086 cps	0.0624 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,637 cps	0.0791 ppm	4.1 %	0.0 ppm
Be 313.042 {108} (Axial)	123 cps	0.0003 ppm	5.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	11,698 cps	28.9841 ppm	2.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	30 cps	0.0021 ppm	4.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	52.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	11.3 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	7.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	167 cps	0.0060 ppm	5.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	8 cps	0.0208 ppm	12.8 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0029 ppm	15.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	11,140 cps	0.1281 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	201.9 %	0.0 ppm
Na 589.592 {57} (Radial)	282,378 cps	125.6038 ppm	1.6 %	2.0 ppm
Ni 231.604 {445} (Axial)	10 cps	0.0020 ppm	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	267 cps	0.4384 ppm	3.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0032 ppm	66.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	18 cps	0.0012 ppm	14.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,957 cps	0.0328 ppm	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	56.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	10 cps	0.0052 ppm	17.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	332.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,833 cps	1.2548 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.1790 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		83.1173 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	389 cps	6.3441 ppm	1.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0011 ppm	132.0 %	0.0 ppm
Al 167.079 {502} (Axial)	6 cps	0.0036 ppm	3.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		81.1030 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	5 cps	0.0123 ppm	30.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0014 ppm	423.5 %	0.0 ppm
Si 251.611 {134} (Radial)	50 cps	0.3920 ppm	2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	69 cps	0.0554 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		89.0385 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.2723 %	0.8 %	0.8 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-04A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:12:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.0121 ppm	3.7 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0020 ppm	42.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,249 cps	0.0455 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,849 cps	0.0620 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	104 cps	0.0002 ppm	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,439 cps	8.5207 ppm	2.1 %	0.2 ppm
Cd 228.802 {447} (Axial)	24 cps	0.0017 ppm	3.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	8 cps	0.0007 ppm	20.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0004 ppm	18.3 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	39.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	262 cps	0.0094 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.0264 ppm	7.7 %	0.0 ppm
Li 670.784 {50} (Radial)	43 cps	0.0030 ppm	9.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,451 cps	0.0627 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	895.5 %	0.0 ppm
Na 589.592 {57} (Radial)	278,052 cps	123.6795 ppm	1.2 %	1.5 ppm
Ni 231.604 {445} (Axial)	12 cps	0.0024 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	267 cps	0.4383 ppm	3.0 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0031 ppm	27.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0009 ppm	36.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	768 cps	0.0129 ppm	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	32.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0018 ppm	57.7 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	287.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	38,600 cps	3.0589 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.6550 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		84.4662 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	127 cps	2.0675 ppm	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	90.7 %	0.0 ppm
Al 167.079 {502} (Axial)	39 cps	0.0252 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.4532 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	11 cps	0.0260 ppm	3.8 %	0.0 ppm
Al 396.152 {85} (Radial)	13 cps	0.0206 ppm	14.4 %	0.0 ppm
Si 251.611 {134} (Radial)	94 cps	0.7374 ppm	2.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	124 cps	0.0994 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		89.7126 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		99.6897 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

20111251-06A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:17:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	9 cps	0.0136 ppm	12.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0014 ppm	18.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,583 cps	0.0523 ppm	1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,145 cps	0.0684 ppm	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	109 cps	0.0002 ppm	5.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,161 cps	15.2664 ppm	0.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	29 cps	0.0021 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0003 ppm	136.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	19.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	14.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	243 cps	0.0087 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.0254 ppm	2.0 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0025 ppm	17.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,178 cps	0.0825 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0002 ppm	19.1 %	0.0 ppm
Na 589.592 {57} (Radial)	283,180 cps	125.9605 ppm	1.1 %	1.4 ppm
Ni 231.604 {445} (Axial)	10 cps	0.0019 ppm	7.8 %	0.0 ppm
K 766.490 {44} (Radial)	116 cps	0.1911 ppm	6.9 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0045 ppm	70.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	34.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	915 cps	0.0153 ppm	0.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	20.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0038 ppm	13.5 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	85.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,970 cps	1.5825 ppm	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.6540 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		84.3052 %	1.1 %	0.9 %
Mg 279.079 {121} (Radial)	161 cps	2.6247 ppm	0.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	29.3 %	0.0 ppm
Al 167.079 {502} (Axial)	40 cps	0.0264 ppm	2.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.1943 %	1.0 %	0.8 %
B 249.773 {135} (Radial)	5 cps	0.0129 ppm	7.5 %	0.0 ppm
Al 396.152 {85} (Radial)	17 cps	0.0278 ppm	15.7 %	0.0 ppm
Si 251.611 {134} (Radial)	72 cps	0.5633 ppm	2.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	478 cps	0.3823 ppm	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		89.7443 %	0.8 %	0.7 %
Sc 361.384 {93} (Radial)		99.6542 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

20111251-08A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:22:31 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.0081 ppm	17.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0010 ppm	152.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,906 cps	0.0386 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,542 cps	0.0553 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	106 cps	0.0002 ppm	4.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,638 cps	11.4927 ppm	0.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	16 cps	0.0011 ppm	7.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0004 ppm	75.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	84.1 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	55.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	139 cps	0.0050 ppm	4.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.0261 ppm	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	49 cps	0.0034 ppm	27.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,909 cps	0.0794 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	58.5 %	0.0 ppm
Na 589.592 {57} (Radial)	283,146 cps	125.9453 ppm	1.1 %	1.3 ppm
Ni 231.604 {445} (Axial)	8 cps	0.0016 ppm	4.1 %	0.0 ppm
K 766.490 {44} (Radial)	135 cps	0.2217 ppm	2.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0017 ppm	69.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0012 ppm	29.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	987 cps	0.0165 ppm	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0015 ppm	26.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0031 ppm	44.1 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0001 ppm	171.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,707 cps	0.4523 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.6737 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		85.1069 %	0.2 %	0.1 %
Mg 279.079 {121} (Radial)	209 cps	3.4064 ppm	0.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	76.6 %	0.0 ppm
Al 167.079 {502} (Axial)	47 cps	0.0310 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.9946 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0103 ppm	15.7 %	0.0 ppm
Al 396.152 {85} (Radial)	14 cps	0.0222 ppm	13.7 %	0.0 ppm
Si 251.611 {134} (Radial)	54 cps	0.4225 ppm	0.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	46 cps	0.0365 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		90.3129 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.6878 %	0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-12A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:27:44 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0053 ppm	17.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	182.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,106 cps	0.0426 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,616 cps	0.0569 ppm	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	98 cps	0.0002 ppm	2.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	11,927 cps	29.5516 ppm	2.1 %	0.6 ppm
Cd 228.802 {447} (Axial)	44 cps	0.0031 ppm	5.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0006 ppm	33.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	85.6 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	15.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	152 cps	0.0055 ppm	2.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0071 ppm	71.4 %	0.0 ppm
Li 670.784 {50} (Radial)	48 cps	0.0033 ppm	8.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,997 cps	0.1264 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	87.9 %	0.0 ppm
Na 589.592 {57} (Radial)	264,482 cps	117.6436 ppm	2.2 %	2.6 ppm
Ni 231.604 {445} (Axial)	7 cps	0.0014 ppm	7.0 %	0.0 ppm
K 766.490 {44} (Radial)	147 cps	0.2422 ppm	3.7 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0050 ppm	25.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	22 cps	0.0014 ppm	11.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,550 cps	0.0260 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	38.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	9 cps	0.0051 ppm	10.8 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	37.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,682 cps	1.5598 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.6147 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		85.4064 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	148 cps	2.4154 ppm	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	75.4 %	0.0 ppm
Al 167.079 {502} (Axial)	28 cps	0.0180 ppm	3.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.2865 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	2 cps	0.0059 ppm	43.5 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0186 ppm	22.7 %	0.0 ppm
Si 251.611 {134} (Radial)	83 cps	0.6488 ppm	3.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	100 cps	0.0803 ppm	1.9 %	0.0 ppm
Y 224.306 {450} (Axial)		90.8211 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.3134 %	0.5 %	0.5 %

Simple Sample Report

11/20/2020 11:37:30 AM

20111251-14A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:32:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	9 cps	0.0138 ppm	4.1 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0012 ppm	74.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,948 cps	0.0597 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,486 cps	0.0758 ppm	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	107 cps	0.0002 ppm	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	10,661 cps	26.4160 ppm	2.3 %	0.6 ppm
Cd 228.802 {447} (Axial)	54 cps	0.0038 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	10 cps	0.0008 ppm	11.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0007 ppm	23.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	39.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	236 cps	0.0085 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	18 cps	0.0473 ppm	4.1 %	0.0 ppm
Li 670.784 {50} (Radial)	56 cps	0.0038 ppm	7.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,699 cps	0.1230 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0002 ppm	60.7 %	0.0 ppm
Na 589.592 {57} (Radial)	270,322 cps	120.2411 ppm	2.3 %	2.8 ppm
Ni 231.604 {445} (Axial)	17 cps	0.0033 ppm	7.2 %	0.0 ppm
K 766.490 {44} (Radial)	226 cps	0.3715 ppm	6.3 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0030 ppm	85.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	19 cps	0.0012 ppm	4.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,851 cps	0.0310 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	77.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	11 cps	0.0057 ppm	17.4 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	50.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	65,001 cps	5.1511 ppm	1.5 %	0.1 ppm
Sc 357.253 {94} (Axial)		92.7580 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		84.5722 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	129 cps	2.1100 ppm	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0012 ppm	18.9 %	0.0 ppm
Al 167.079 {502} (Axial)	108 cps	0.0708 ppm	2.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.6139 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	5 cps	0.0116 ppm	35.1 %	0.0 ppm
Al 396.152 {85} (Radial)	44 cps	0.0709 ppm	15.2 %	0.0 ppm
Si 251.611 {134} (Radial)	219 cps	1.7208 ppm	2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	752 cps	0.6016 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		90.5130 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		99.4114 %	0.1 %	0.1 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-16A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:52:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0082 ppm	4.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	122.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,291 cps	0.0666 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,811 cps	0.0829 ppm	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	102 cps	0.0002 ppm	6.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	17,869 cps	44.2742 ppm	1.8 %	0.8 ppm
Cd 228.802 {447} (Axial)	59 cps	0.0042 ppm	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	14 cps	0.0012 ppm	18.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0006 ppm	18.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	33.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	174 cps	0.0063 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0054 ppm	35.9 %	0.0 ppm
Li 670.784 {50} (Radial)	47 cps	0.0032 ppm	16.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,641 cps	0.0763 ppm	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0003 ppm	74.6 %	0.0 ppm
Na 589.592 {57} (Radial)	287,829 cps	128.0284 ppm	1.6 %	2.1 ppm
Ni 231.604 {445} (Axial)	15 cps	0.0030 ppm	6.9 %	0.0 ppm
K 766.490 {44} (Radial)	110 cps	0.1810 ppm	1.7 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0029 ppm	23.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0011 ppm	12.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,461 cps	0.0412 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	16.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	11 cps	0.0061 ppm	24.1 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0004 ppm	19.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	33,790 cps	2.6778 ppm	1.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		92.0017 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		83.4562 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	65 cps	1.0663 ppm	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0020 ppm	6.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0007 ppm	36.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		81.4197 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	5 cps	0.0117 ppm	34.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0005 ppm	1,179.5 %	0.0 ppm
Si 251.611 {134} (Radial)	44 cps	0.3487 ppm	1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	426 cps	0.3412 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		89.4193 %	0.5 %	0.4 %
Sc 361.384 {93} (Radial)		98.8163 %	0.6 %	0.6 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-18A

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:58:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0027 ppm	16.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	266.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	5,534 cps	0.1120 ppm	2.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	5,754 cps	0.1251 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	109 cps	0.0002 ppm	9.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,677 cps	11.5893 ppm	2.2 %	0.3 ppm
Cd 228.802 {447} (Axial)	350 cps	0.0248 ppm	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0004 ppm	33.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	62.3 %	0.0 ppm
Co 228.616 {447} (Axial)	24 cps	0.0023 ppm	5.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,423 cps	0.0873 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0029 ppm	99.0 %	0.0 ppm
Li 670.784 {50} (Radial)	53 cps	0.0037 ppm	4.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,897 cps	0.0218 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	-1 cps	-0.0002 ppm	21.8 %	0.0 ppm
Na 589.592 {57} (Radial)	275,260 cps	122.4374 ppm	2.5 %	3.0 ppm
Ni 231.604 {445} (Axial)	859 cps	0.1664 ppm	0.2 %	0.0 ppm
K 766.490 {44} (Radial)	80 cps	0.1314 ppm	20.4 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0047 ppm	22.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0009 ppm	13.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,196 cps	0.0200 ppm	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	24.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0036 ppm	25.4 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	112.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	495,624 cps	39.2768 ppm	0.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		91.9496 %	1.0 %	0.9 %
Sc 188.060 {479} (Axial)		84.1058 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	51 cps	0.8368 ppm	4.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	57.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0009 ppm	36.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.0079 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	6 cps	0.0153 ppm	12.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-3 cps	-0.0043 ppm	102.8 %	0.0 ppm
Si 251.611 {134} (Radial)	215 cps	1.6899 ppm	2.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,262 cps	1.0099 ppm	0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		89.7695 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		98.6038 %	0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-20A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:03:22 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0050 ppm	32.2 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0015 ppm	46.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,844 cps	0.0373 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,459 cps	0.0535 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	91 cps	0.0002 ppm	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,819 cps	14.4177 ppm	2.7 %	0.4 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0007 ppm	13.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0003 ppm	103.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	15.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	1,205.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	113 cps	0.0041 ppm	3.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0137 ppm	3.2 %	0.0 ppm
Li 670.784 {50} (Radial)	39 cps	0.0027 ppm	21.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,443 cps	0.0856 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	73.8 %	0.0 ppm
Na 589.592 {57} (Radial)	266,212 cps	118.4130 ppm	2.2 %	2.6 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0006 ppm	24.1 %	0.0 ppm
K 766.490 {44} (Radial)	148 cps	0.2427 ppm	6.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0033 ppm	66.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	19 cps	0.0012 ppm	26.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	726 cps	0.0122 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	24.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0036 ppm	27.5 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	46.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,256 cps	0.0995 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3032 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		84.2677 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	316 cps	5.1514 ppm	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0014 ppm	55.1 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0083 ppm	5.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.2175 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0121 ppm	16.3 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0042 ppm	126.8 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.2183 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	51 cps	0.0406 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		89.5097 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.9452 %	0.7 %	0.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-22A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:08:33 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0088 ppm	20.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	72.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,585 cps	0.0321 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,278 cps	0.0495 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	99 cps	0.0002 ppm	8.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,057 cps	17.4862 ppm	1.2 %	0.2 ppm
Cd 228.802 {447} (Axial)	45 cps	0.0032 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	138.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	120.8 %	0.0 ppm
Co 228.616 {447} (Axial)	8 cps	0.0008 ppm	4.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	298 cps	0.0107 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0075 ppm	18.2 %	0.0 ppm
Li 670.784 {50} (Radial)	43 cps	0.0030 ppm	13.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,846 cps	0.0672 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	101.2 %	0.0 ppm
Na 589.592 {57} (Radial)	270,359 cps	120.2573 ppm	1.0 %	1.2 ppm
Ni 231.604 {445} (Axial)	17 cps	0.0032 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	80 cps	0.1322 ppm	5.8 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0034 ppm	97.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0011 ppm	30.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	964 cps	0.0161 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	38.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0024 ppm	18.1 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	14.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	22,171 cps	1.7570 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.0065 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		85.1663 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	97 cps	1.5741 ppm	1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	82.8 %	0.0 ppm
Al 167.079 {502} (Axial)	14 cps	0.0093 ppm	5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.0349 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	2 cps	0.0058 ppm	4.2 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0098 ppm	4.9 %	0.0 ppm
Si 251.611 {134} (Radial)	26 cps	0.2026 ppm	6.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,877 cps	1.5026 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		90.5828 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.2398 %	0.6 %	0.6 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-24A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:13:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.0111 ppm	11.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	48.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,109 cps	0.0427 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,774 cps	0.0603 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	96 cps	0.0002 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,947 cps	22.1695 ppm	1.9 %	0.4 ppm
Cd 228.802 {447} (Axial)	69 cps	0.0049 ppm	2.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0004 ppm	23.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	53.2 %	0.0 ppm
Co 228.616 {447} (Axial)	11 cps	0.0011 ppm	5.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	421 cps	0.0152 ppm	2.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0112 ppm	13.1 %	0.0 ppm
Li 670.784 {50} (Radial)	45 cps	0.0031 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,224 cps	0.0830 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	216.1 %	0.0 ppm
Na 589.592 {57} (Radial)	271,685 cps	120.8471 ppm	0.9 %	1.1 ppm
Ni 231.604 {445} (Axial)	15 cps	0.0030 ppm	9.1 %	0.0 ppm
K 766.490 {44} (Radial)	80 cps	0.1314 ppm	12.9 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0046 ppm	15.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	19 cps	0.0013 ppm	27.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,167 cps	0.0195 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	13.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0041 ppm	13.9 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	22.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	30,621 cps	2.4266 ppm	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.2614 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		84.7681 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	95 cps	1.5469 ppm	2.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0011 ppm	20.5 %	0.0 ppm
Al 167.079 {502} (Axial)	10 cps	0.0067 ppm	4.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.6977 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	3 cps	0.0063 ppm	11.3 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0002 ppm	2,460.3 %	0.0 ppm
Si 251.611 {134} (Radial)	37 cps	0.2877 ppm	1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,216 cps	0.9738 ppm	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		90.5174 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		99.1257 %	0.2 %	0.2 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-26A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:18:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	10 cps	0.0140 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	463.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,591 cps	0.1536 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,657 cps	0.1665 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	84 cps	0.0002 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	52,984 cps	131.2810 ppm	1.4 %	1.9 ppm
Cd 228.802 {447} (Axial)	55 cps	0.0039 ppm	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0007 ppm	33.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	27.7 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	20.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	636 cps	0.0229 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0055 ppm	44.1 %	0.0 ppm
Li 670.784 {50} (Radial)	49 cps	0.0034 ppm	28.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,536 cps	0.3395 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	110.5 %	0.0 ppm
Na 589.592 {57} (Radial)	3,654 cps	1.6251 ppm	0.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	30 cps	0.0059 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	125 cps	0.2060 ppm	4.1 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0048 ppm	39.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0011 ppm	12.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,989 cps	0.1171 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0011 ppm	43.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	17 cps	0.0090 ppm	16.8 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	57.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	20,426 cps	1.6187 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.7756 %	0.6 %	0.5 %
Sc 188.060 {479} (Axial)		83.9804 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	195 cps	3.1730 ppm	1.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0014 ppm	43.3 %	0.0 ppm
Al 167.079 {502} (Axial)	8 cps	0.0052 ppm	5.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		81.8261 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	7 cps	0.0177 ppm	19.2 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0187 ppm	68.7 %	0.0 ppm
Si 251.611 {134} (Radial)	90 cps	0.7082 ppm	2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	163 cps	0.1308 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		89.2333 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		97.1460 %	0.5 %	0.5 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-28A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:24:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.0120 ppm	6.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	27,058.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,407 cps	0.0487 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,060 cps	0.0665 ppm	2.9 %	0.0 ppm
Be 313.042 {108} (Axial)	102 cps	0.0002 ppm	6.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,559 cps	16.2520 ppm	2.1 %	0.3 ppm
Cd 228.802 {447} (Axial)	44 cps	0.0031 ppm	4.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	21.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	36.3 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0005 ppm	3.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	215 cps	0.0077 ppm	2.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0362 ppm	9.1 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0028 ppm	26.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,108 cps	0.0587 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	128.4 %	0.0 ppm
Na 589.592 {57} (Radial)	278,564 cps	123.9069 ppm	1.1 %	1.3 ppm
Ni 231.604 {445} (Axial)	16 cps	0.0031 ppm	4.2 %	0.0 ppm
K 766.490 {44} (Radial)	95 cps	0.1561 ppm	4.4 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0036 ppm	30.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	14.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,146 cps	0.0192 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	71.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0040 ppm	37.3 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	126.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	25,883 cps	2.0512 ppm	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.0078 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		84.9138 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	124 cps	2.0184 ppm	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	1,092.3 %	0.0 ppm
Al 167.079 {502} (Axial)	65 cps	0.0426 ppm	3.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.6661 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	5 cps	0.0115 ppm	14.8 %	0.0 ppm
Al 396.152 {85} (Radial)	26 cps	0.0412 ppm	4.1 %	0.0 ppm
Si 251.611 {134} (Radial)	50 cps	0.3918 ppm	2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,102 cps	1.6825 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		90.3556 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		98.6255 %	1.3 %	1.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-32A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:29:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.0099 ppm	3.7 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0020 ppm	44.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,709 cps	0.0346 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,357 cps	0.0512 ppm	3.5 %	0.0 ppm
Be 313.042 {108} (Axial)	95 cps	0.0002 ppm	4.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,363 cps	13.2891 ppm	2.8 %	0.4 ppm
Cd 228.802 {447} (Axial)	22 cps	0.0016 ppm	2.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0007 ppm	24.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0007 ppm	11.8 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0002 ppm	29.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	185 cps	0.0067 ppm	2.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.0260 ppm	6.7 %	0.0 ppm
Li 670.784 {50} (Radial)	39 cps	0.0027 ppm	9.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,850 cps	0.0902 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	684.5 %	0.0 ppm
Na 589.592 {57} (Radial)	267,665 cps	119.0591 ppm	2.8 %	3.3 ppm
Ni 231.604 {445} (Axial)	11 cps	0.0021 ppm	15.1 %	0.0 ppm
K 766.490 {44} (Radial)	105 cps	0.1720 ppm	1.8 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0026 ppm	72.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0010 ppm	19.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	814 cps	0.0136 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	21.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0026 ppm	12.2 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0004 ppm	19.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	17,813 cps	1.4116 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.1831 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		86.0870 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	194 cps	3.1619 ppm	3.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	57.5 %	0.0 ppm
Al 167.079 {502} (Axial)	21 cps	0.0136 ppm	5.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.9418 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	3 cps	0.0082 ppm	13.1 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0067 ppm	114.8 %	0.0 ppm
Si 251.611 {134} (Radial)	43 cps	0.3392 ppm	5.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	106 cps	0.0845 ppm	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.1657 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.9305 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-34A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:34:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0093 ppm	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0001 ppm	1,649.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,226 cps	0.0248 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,920 cps	0.0418 ppm	4.1 %	0.0 ppm
Be 313.042 {108} (Axial)	110 cps	0.0002 ppm	10.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,183 cps	5.4101 ppm	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	21 cps	0.0015 ppm	9.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	55.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	34.6 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0007 ppm	5.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,066 cps	0.0384 ppm	4.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	8 cps	0.0202 ppm	9.2 %	0.0 ppm
Li 670.784 {50} (Radial)	42 cps	0.0029 ppm	14.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,558 cps	0.0409 ppm	3.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	157.6 %	0.0 ppm
Na 589.592 {57} (Radial)	266,367 cps	118.4816 ppm	2.1 %	2.5 ppm
Ni 231.604 {445} (Axial)	12 cps	0.0023 ppm	5.4 %	0.0 ppm
K 766.490 {44} (Radial)	69 cps	0.1138 ppm	6.5 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0023 ppm	64.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	18 cps	0.0012 ppm	24.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	519 cps	0.0087 ppm	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0005 ppm	123.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0016 ppm	37.1 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	68.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	38,084 cps	3.0181 ppm	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.2768 %	2.8 %	2.5 %
Sc 188.060 {479} (Axial)		85.5295 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	80 cps	1.2996 ppm	2.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0013 ppm	57.0 %	0.0 ppm
Al 167.079 {502} (Axial)	42 cps	0.0277 ppm	0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.1807 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	1 cps	0.0017 ppm	35.9 %	0.0 ppm
Al 396.152 {85} (Radial)	13 cps	0.0215 ppm	53.5 %	0.0 ppm
Si 251.611 {134} (Radial)	43 cps	0.3384 ppm	3.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	4,960 cps	3.9710 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2689 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.1072 %	1.7 %	1.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-38A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:39:37 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0087 ppm	10.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0007 ppm	143.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,045 cps	0.0616 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,550 cps	0.0772 ppm	0.2 %	0.0 ppm
Be 313.042 {108} (Axial)	93 cps	0.0002 ppm	4.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	10,079 cps	24.9737 ppm	0.7 %	0.2 ppm
Cd 228.802 {447} (Axial)	43 cps	0.0030 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0004 ppm	15.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	35.3 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0005 ppm	11.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	154 cps	0.0055 ppm	3.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0058 ppm	65.4 %	0.0 ppm
Li 670.784 {50} (Radial)	48 cps	0.0033 ppm	6.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,332 cps	0.0498 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	298.9 %	0.0 ppm
Na 589.592 {57} (Radial)	263,480 cps	117.1978 ppm	0.9 %	1.0 ppm
Ni 231.604 {445} (Axial)	12 cps	0.0023 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	91 cps	0.1489 ppm	14.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0025 ppm	113.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	19 cps	0.0013 ppm	34.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,793 cps	0.0300 ppm	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0011 ppm	22.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	9 cps	0.0046 ppm	1.1 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0004 ppm	64.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,718 cps	1.5626 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.2654 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		85.6257 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	58 cps	0.9454 ppm	1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	29.6 %	0.0 ppm
Al 167.079 {502} (Axial)	11 cps	0.0072 ppm	4.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.4341 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	2 cps	0.0045 ppm	42.7 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0072 ppm	26.4 %	0.0 ppm
Si 251.611 {134} (Radial)	39 cps	0.3067 ppm	3.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	9,154 cps	7.3276 ppm	1.6 %	0.1 ppm
Y 224.306 {450} (Axial)		90.9346 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		98.9206 %	0.8 %	0.8 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-40A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:59:39 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	10 cps	0.0147 ppm	7.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	409.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	5,218 cps	0.1056 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	5,457 cps	0.1187 ppm	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	86 cps	0.0002 ppm	5.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	38,856 cps	96.2756 ppm	0.8 %	0.8 ppm
Cd 228.802 {447} (Axial)	30 cps	0.0021 ppm	4.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0005 ppm	31.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	42.5 %	0.0 ppm
Co 228.616 {447} (Axial)	8 cps	0.0008 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	126 cps	0.0045 ppm	6.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0129 ppm	16.3 %	0.0 ppm
Li 670.784 {50} (Radial)	49 cps	0.0034 ppm	7.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	21,391 cps	0.2459 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0003 ppm	70.2 %	0.0 ppm
Na 589.592 {57} (Radial)	2,835 cps	1.2610 ppm	1.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	15 cps	0.0030 ppm	3.5 %	0.0 ppm
K 766.490 {44} (Radial)	229 cps	0.3759 ppm	2.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0030 ppm	50.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	10.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,972 cps	0.0833 ppm	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	48.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	18 cps	0.0097 ppm	7.5 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	137.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	21,778 cps	1.7259 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.9106 %	0.6 %	0.5 %
Sc 188.060 {479} (Axial)		86.4452 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	159 cps	2.5843 ppm	1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0015 ppm	58.8 %	0.0 ppm
Al 167.079 {502} (Axial)	44 cps	0.0289 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.4709 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	6 cps	0.0138 ppm	14.5 %	0.0 ppm
Al 396.152 {85} (Radial)	21 cps	0.0340 ppm	25.1 %	0.0 ppm
Si 251.611 {134} (Radial)	62 cps	0.4888 ppm	0.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,091 cps	0.8733 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3728 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.2925 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

20111584-02AMS

Sample type: UNKNOWN Analysis started at: 11/20/2020 12:10:02 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	62 cps	0.0914 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	39 cps	0.0850 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,729 cps	0.1564 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,766 cps	0.1689 ppm	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	39,358 cps	0.0840 ppm	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	20,316 cps	50.3370 ppm	1.6 %	0.8 ppm
Cd 228.802 {447} (Axial)	1,250 cps	0.0885 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	976 cps	0.0830 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	596 cps	0.0859 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	872 cps	0.0835 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,817 cps	0.1014 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,451 cps	8.9440 ppm	1.5 %	0.1 ppm
Li 670.784 {50} (Radial)	1,440 cps	0.0996 ppm	0.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	23,360 cps	0.2685 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	302 cps	0.0900 ppm	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	300,176 cps	133.5201 ppm	0.2 %	0.3 ppm
Ni 231.604 {445} (Axial)	442 cps	0.0857 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	6,206 cps	10.1970 ppm	1.7 %	0.2 ppm
Se 196.090 {472} (Axial)	22 cps	0.0815 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,349 cps	0.0902 ppm	0.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	8,244 cps	0.1381 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	110 cps	0.0842 ppm	2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	172 cps	0.0925 ppm	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,796 cps	0.0905 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,613 cps	0.3656 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.7339 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		83.8276 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	682 cps	11.1160 ppm	1.5 %	0.2 ppm
Tl 190.856 {477} (Axial)	36 cps	0.0834 ppm	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	188 cps	0.1230 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.0414 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	192 cps	0.4705 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	71 cps	0.1135 ppm	9.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1,176 cps	9.2388 ppm	1.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	132 cps	0.1055 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		90.1033 %	0.5 %	0.4 %
Sc 361.384 {93} (Radial)		97.3367 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111584-02AMSD

Sample type: UNKNOWN Analysis started at: 11/20/2020 12:15:10 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	59 cps	0.0869 ppm	0.4 %	0.0 ppm
As 189.042 {478} (Axial)	38 cps	0.0821 ppm	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,160 cps	0.1449 ppm	1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,152 cps	0.1555 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	36,979 cps	0.0789 ppm	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,849 cps	46.7038 ppm	1.0 %	0.5 ppm
Cd 228.802 {447} (Axial)	1,205 cps	0.0853 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	919 cps	0.0782 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	573 cps	0.0826 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	840 cps	0.0804 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,655 cps	0.0956 ppm	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,184 cps	8.2529 ppm	0.9 %	0.1 ppm
Li 670.784 {50} (Radial)	1,322 cps	0.0915 ppm	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,144 cps	0.2545 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	289 cps	0.0862 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	281,700 cps	125.3020 ppm	0.1 %	0.1 ppm
Ni 231.604 {445} (Axial)	426 cps	0.0825 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	5,770 cps	9.4802 ppm	1.4 %	0.1 ppm
Se 196.090 {472} (Axial)	21 cps	0.0787 ppm	2.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,279 cps	0.0855 ppm	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	7,610 cps	0.1275 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	105 cps	0.0809 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	157 cps	0.0843 ppm	0.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,676 cps	0.0845 ppm	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,492 cps	0.3560 ppm	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.8918 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		86.0067 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	631 cps	10.2793 ppm	1.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	34 cps	0.0786 ppm	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	172 cps	0.1122 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.2788 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	179 cps	0.4369 ppm	1.3 %	0.0 ppm
Al 396.152 {85} (Radial)	62 cps	0.0992 ppm	3.8 %	0.0 ppm
Si 251.611 {134} (Radial)	1,082 cps	8.5010 ppm	0.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	128 cps	0.1021 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		91.9129 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		99.7511 %	1.3 %	1.3 %

Calibration Summary

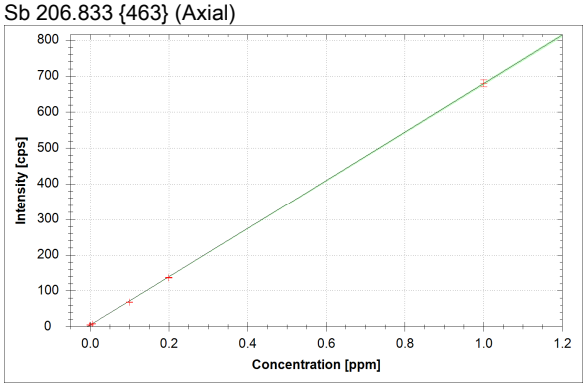
11/21/2020 11:25:34 AM

QTEGRA

LabBook: ICP2_201120A.imexp

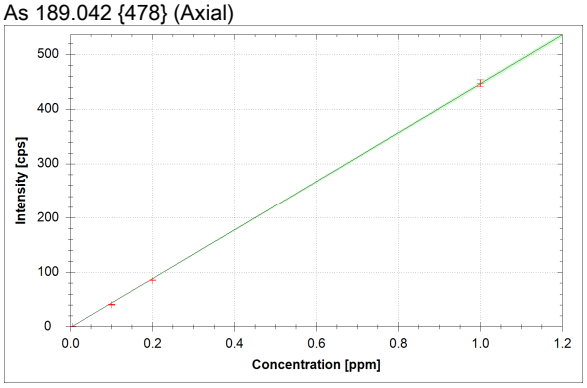
Calibration Graphs

Sb 206.833 {463} (Axial)



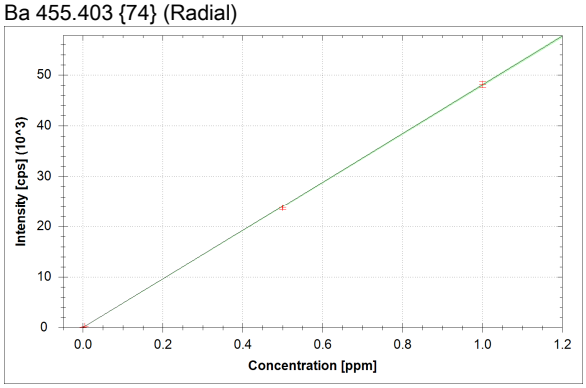
f(x) = 674.5113*x + 4.3271
R² = 0.9999
BEC = 0.006 ppm
LoD = 0.0025 ppm

As 189.042 {478} (Axial)



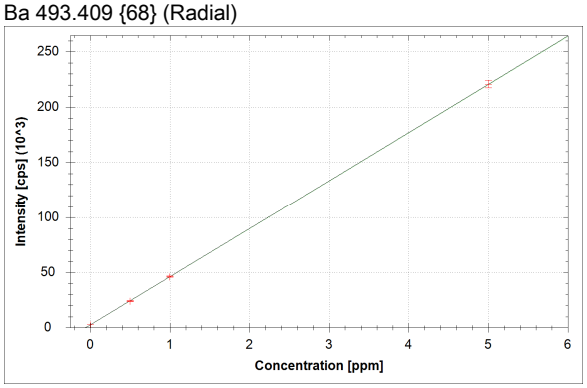
f(x) = 447.7280*x + -1.4796
R² = 0.9998
BEC = -0.003 ppm
LoD = 0.0018 ppm

Ba 455.403 {74} (Radial)



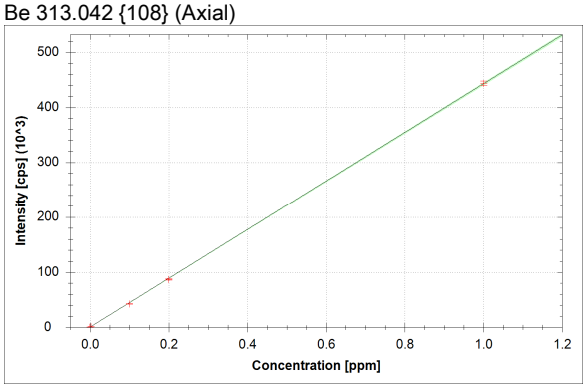
f(x) = 48011.2000*x + 40.5620
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



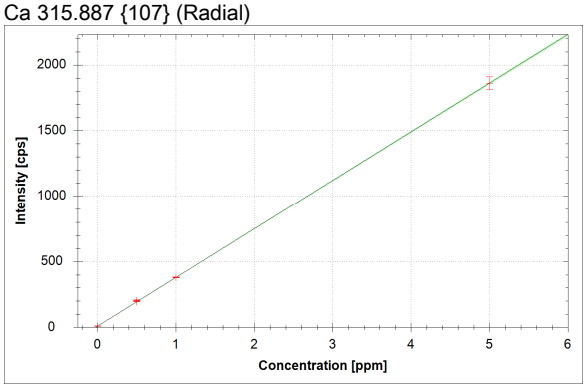
f(x) = 43595.3693*x + 2588.0899
R² = 1.0000
BEC = 0.059 ppm
LoD = 0.0029 ppm

Be 313.042 {108} (Axial)



f(x) = 442562.0652*x + 574.5072
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0001 ppm

Ca 315.887 {107} (Radial)



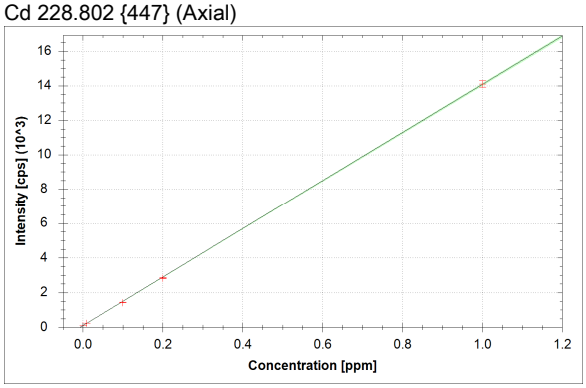
f(x) = 370.5007*x + 8.6971
R² = 0.9999
BEC = 0.023 ppm
LoD = 0.0164 ppm

Calibration Summary

11/21/2020 11:25:34 AM

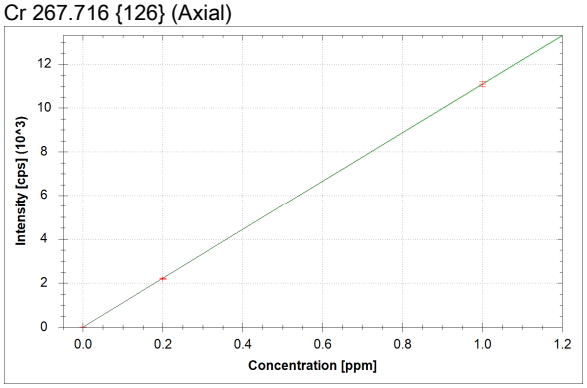
QTEGRA

Cd 228.802 {447} (Axial)



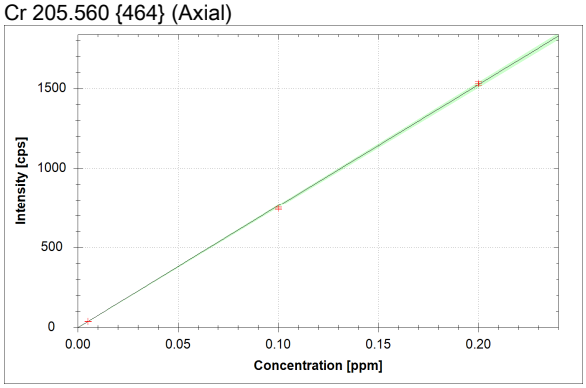
f(x) = 13974.9421*x + 101.9190
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0001 ppm

Cr 267.716 {126} (Axial)



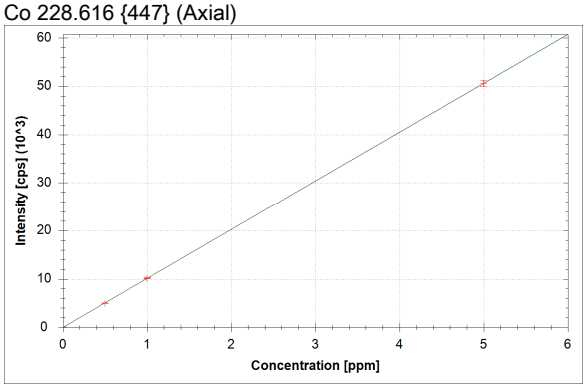
f(x) = 11079.8451*x + 7.2389
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0009 ppm

Cr 205.560 {464} (Axial)



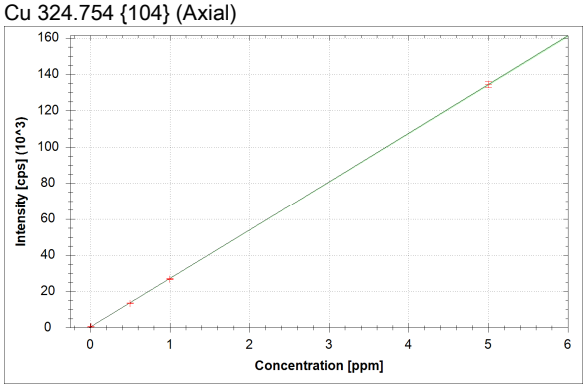
f(x) = 7626.9230*x + -1.5652
R² = 0.9998
BEC = 0.000 ppm
LoD = 0.0000 ppm

Co 228.616 {447} (Axial)



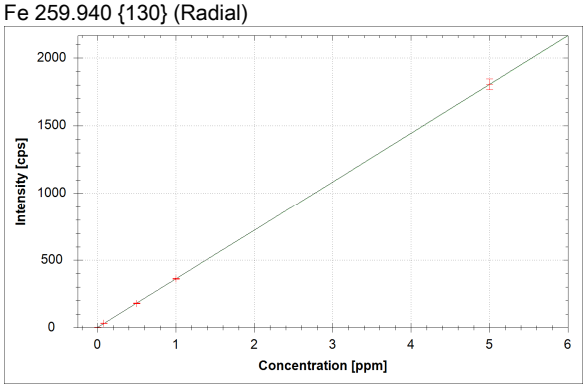
f(x) = 10121.7280*x + -1.0378
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0003 ppm

Cu 324.754 {104} (Axial)



f(x) = 26798.1235*x + 385.0119
R² = 1.0000
BEC = 0.014 ppm
LoD = 0.0003 ppm

Fe 259.940 {130} (Radial)



f(x) = 360.6988*x + 1.5041
R² = 1.0000
BEC = 0.004 ppm
LoD = 0.0097 ppm

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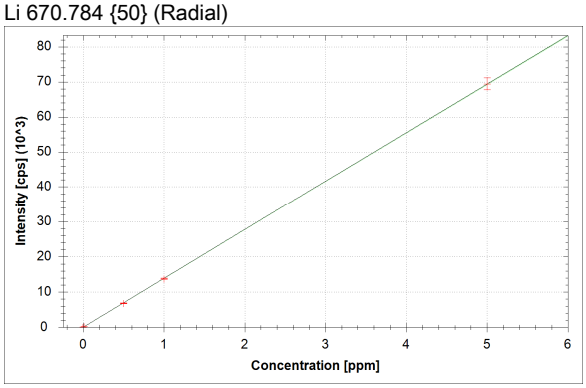
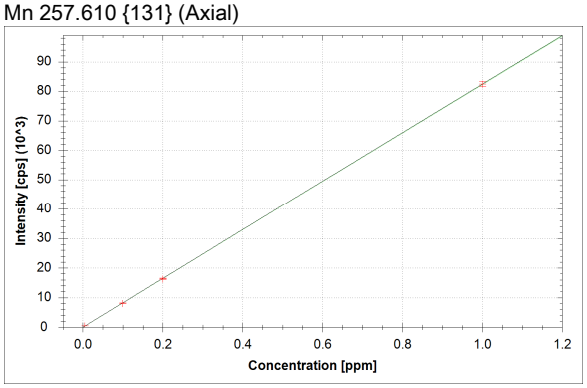
QTEGRA

Li 670.784 {50} (Radial)



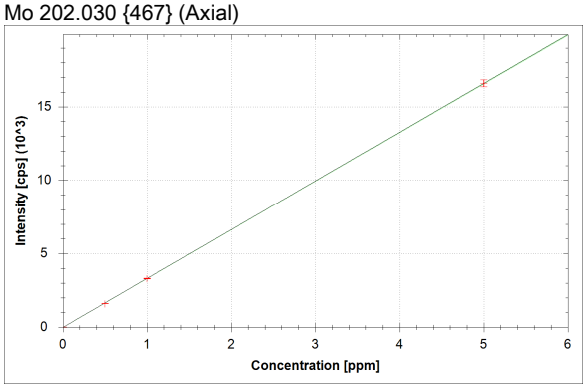
f(x) = 13863.4893*x + 18.1022
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0014 ppm

Mn 257.610 {131} (Axial)



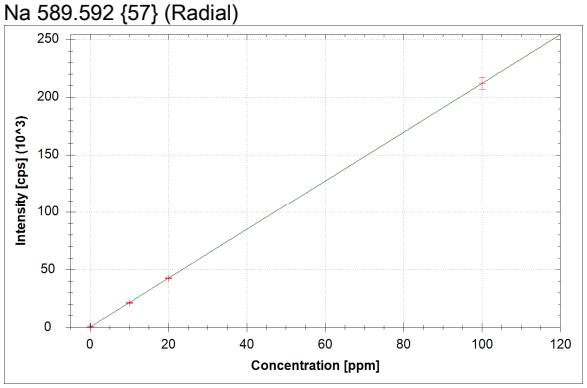
f(x) = 82370.4233*x + 22.4157
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Mo 202.030 {467} (Axial)



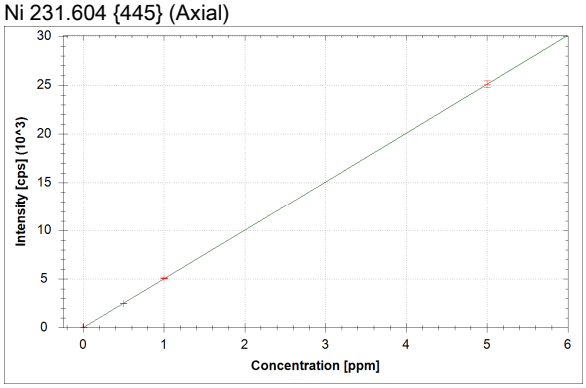
f(x) = 3319.0341*x + -0.6269
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Na 589.592 {57} (Radial)



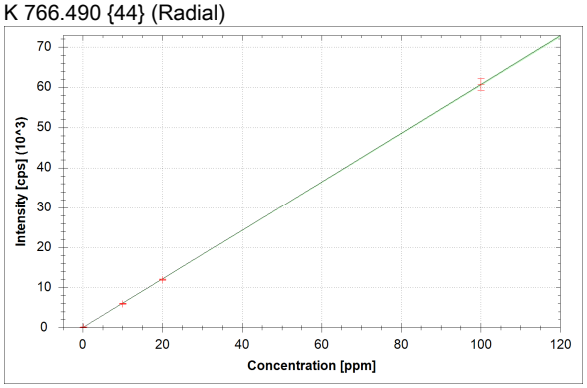
f(x) = 2117.2046*x + 153.4275
R² = 1.0000
BEC = 0.072 ppm
LoD = 0.0027 ppm

Ni 231.604 {445} (Axial)



f(x) = 5019.6073*x + 0.9243
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0003 ppm

K 766.490 {44} (Radial)



f(x) = 606.4670*x + 36.1007
R² = 1.0000
BEC = 0.060 ppm
LoD = 0.0323 ppm

Calibration Summary

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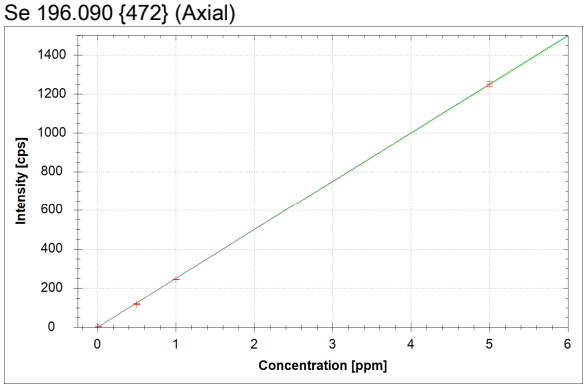
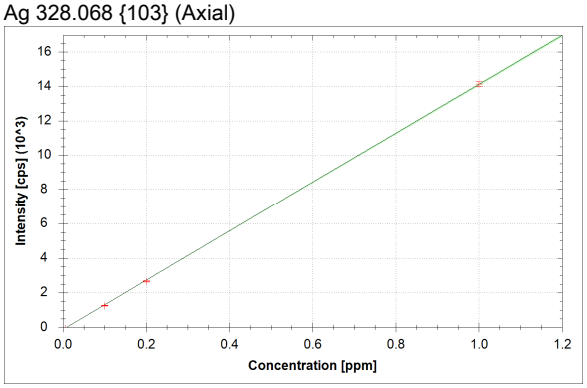
QTEGRA

Se 196.090 {472} (Axial)



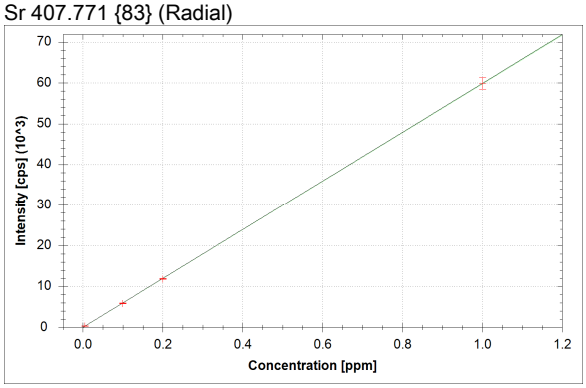
f(x) = 249.9050*x + 0.0577
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0021 ppm

Ag 328.068 {103} (Axial)



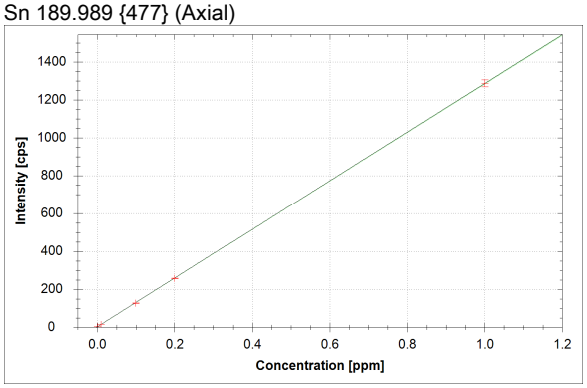
f(x) = 14241.3819*x + -123.9001
R² = 0.9999
BEC = -0.009 ppm
LoD = 0.0009 ppm

Sr 407.771 {83} (Radial)



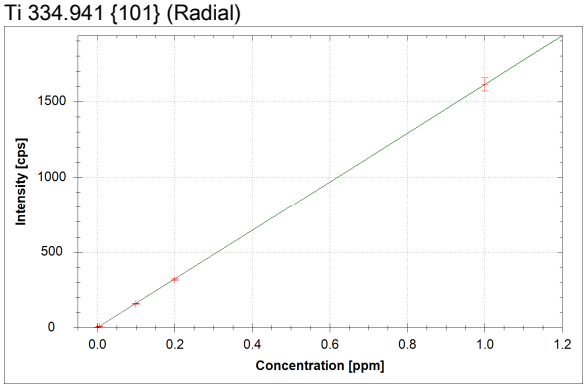
f(x) = 59852.4203*x + 1.1634
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Sn 189.989 {477} (Axial)



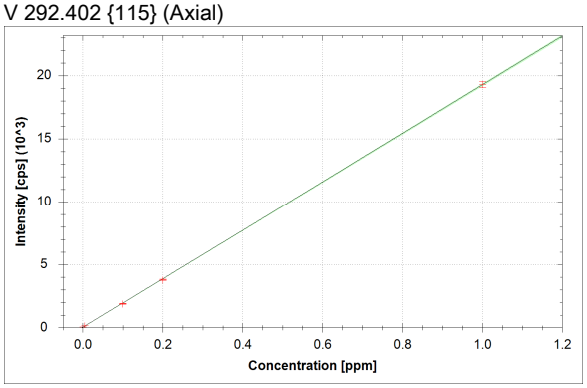
f(x) = 1284.1029*x + 3.0104
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0007 ppm

Ti 334.941 {101} (Radial)



f(x) = 1611.5093*x + 0.5005
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0013 ppm

V 292.402 {115} (Axial)



f(x) = 19238.0503*x + 40.1693
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0004 ppm

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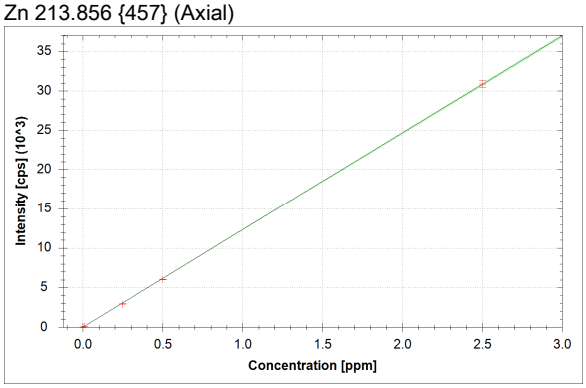
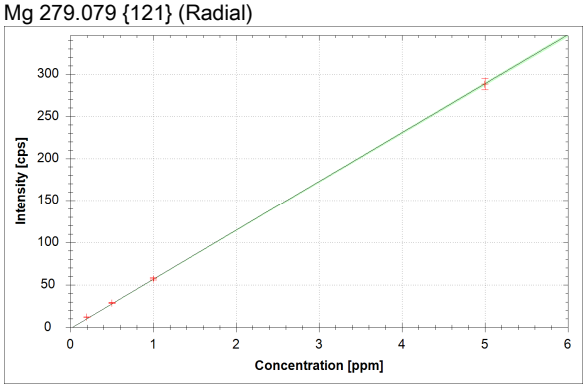
Zn 213.856 {457} (Axial)



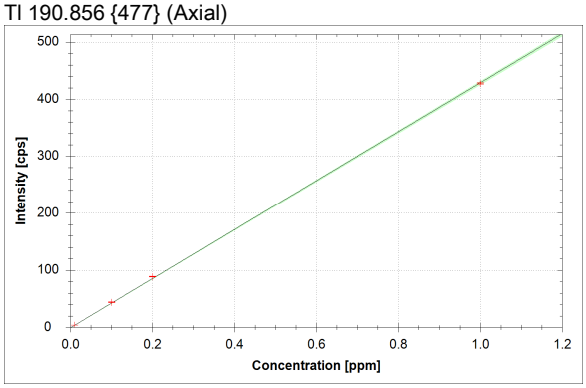
f(x) = 12320.9864*x + 20.5758
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0000 ppm

Mg 279.079 {121} (Radial)



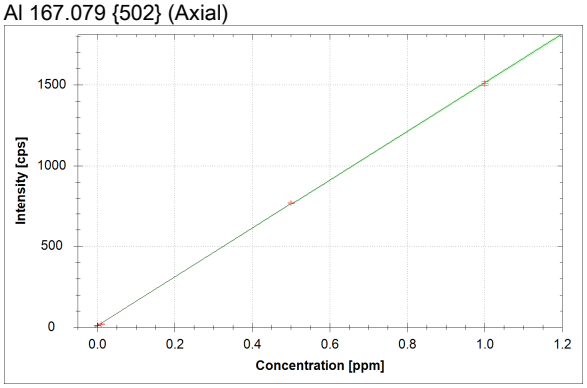
f(x) = 58.0137*x + -1.4724
R² = 0.9999
BEC = -0.025 ppm
LoD = 0.0405 ppm

Tl 190.856 {477} (Axial)



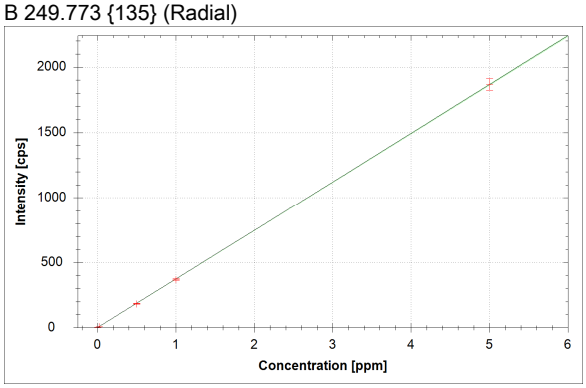
f(x) = 429.4656*x + -0.7929
R² = 0.9999
BEC = -0.002 ppm
LoD = 0.0011 ppm

Al 167.079 {502} (Axial)



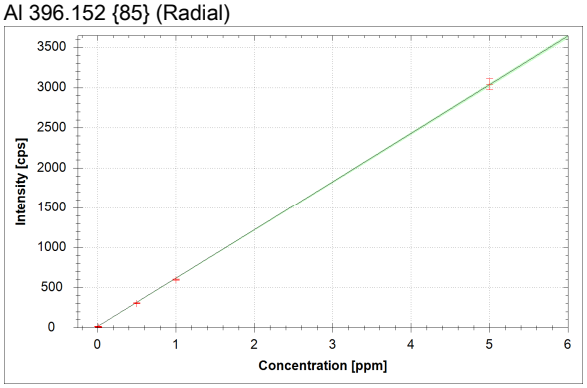
f(x) = 1503.2692*x + 10.0535
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0031 ppm

B 249.773 {135} (Radial)



f(x) = 373.0728*x + 0.9115
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0027 ppm

Al 396.152 {85} (Radial)



f(x) = 604.1280*x + 14.0003
R² = 0.9999
BEC = 0.023 ppm
LoD = 0.0159 ppm

Calibration Summary

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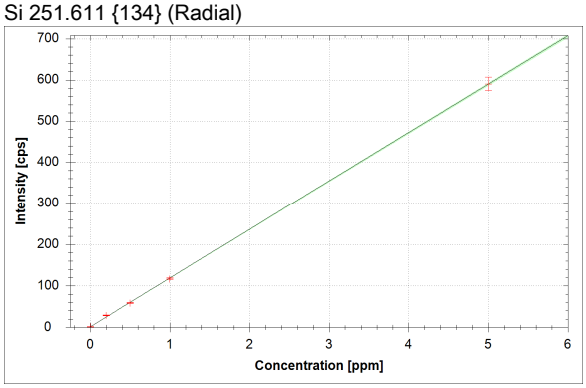
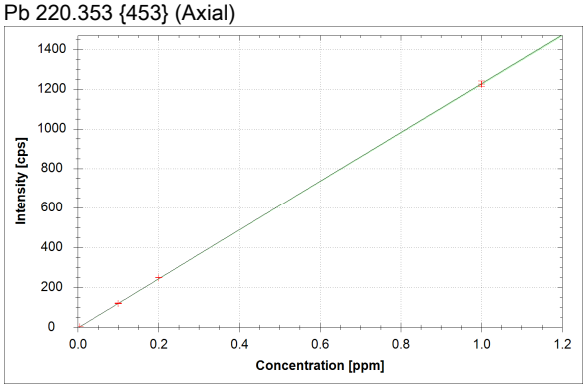
Si 251.611 {134} (Radial)



f(x) = 117.6384*x + 1.4409
R² = 0.9999
BEC = 0.012 ppm
LoD = 0.0102 ppm

Pb 220.353 {453} (Axial)



f(x) = 1230.7286*x + -3.3825
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0028 ppm

Calibration Summary

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Standards

Standard: ICAL2
Analysis started at: 11/20/2020 2:01:50 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0049 ppm	26.9 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0044 ppm	13.0 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0051 ppm	4.0 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0020 ppm	2.4 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.5345 ppm	2.2 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0097 ppm	0.8 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0051 ppm	1.0 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0049 ppm	1.6 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0106 ppm	2.4 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0851 ppm	1.2 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0121 ppm	3.9 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0052 ppm	1.3 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0051 ppm	3.0 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.2081 ppm	3.5 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0052 ppm	4.0 %	0.0050 ppm
K 766.490 {44} (Radial)	0.2637 ppm	5.4 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0078 ppm	32.2 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0055 ppm	4.5 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0051 ppm	1.9 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0099 ppm	3.1 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0049 ppm	9.8 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0048 ppm	2.2 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0097 ppm	1.0 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.5705 %	0.3 %	
Sc 188.060 {479} (Axial)	99.3769 %	0.5 %	
Mg 279.079 {121} (Radial)	0.2324 ppm	2.4 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0111 ppm	0.9 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0064 ppm	2.8 %	0.0100 ppm
Sc 227.318 {448} (Axial)	99.5474 %	0.4 %	
B 249.773 {135} (Radial)	0.0197 ppm	6.2 %	0.0200 ppm
Al 396.152 {85} (Radial)	-0.0059 ppm	174.1 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2297 ppm	3.0 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0058 ppm	3.2 %	0.0050 ppm
Y 224.306 {450} (Axial)	100.2932 %	0.4 %	
Sc 361.384 {93} (Radial)	96.9707 %	0.4 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/20/2020 2:07:00 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0947 ppm	1.0 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0924 ppm	1.7 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4951 ppm	1.9 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4923 ppm	1.9 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0949 ppm	0.9 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.5007 ppm	1.0 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0950 ppm	1.0 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0977 ppm	1.1 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4916 ppm	0.9 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4858 ppm	1.0 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4933 ppm	1.6 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4898 ppm	1.9 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0983 ppm	1.1 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4838 ppm	0.9 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.8480 ppm	2.1 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4944 ppm	0.9 %	0.5000 ppm
K 766.490 {44} (Radial)	9.6675 ppm	2.0 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4732 ppm	1.0 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0963 ppm	1.0 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0982 ppm	1.8 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0971 ppm	1.0 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0978 ppm	1.4 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0960 ppm	1.0 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2361 ppm	0.9 %	0.2500 ppm
Sc 357.253 {94} (Axial)	101.1354 %	0.4 %	
Sc 188.060 {479} (Axial)	99.4328 %	0.1 %	
Mg 279.079 {121} (Radial)	0.5224 ppm	1.4 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1037 ppm	1.1 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5054 ppm	1.0 %	0.5000 ppm
Sc 227.318 {448} (Axial)	101.2509 %	0.3 %	
B 249.773 {135} (Radial)	0.4873 ppm	2.1 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4782 ppm	2.4 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4890 ppm	1.6 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1005 ppm	1.5 %	0.1000 ppm
Y 224.306 {450} (Axial)	99.8480 %	0.1 %	
Sc 361.384 {93} (Radial)	100.4378 %	0.2 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/20/2020 2:11:58 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1958 ppm	0.8 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1931 ppm	0.5 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0025 ppm	1.3 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9989 ppm	1.2 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1953 ppm	1.5 %	0.2000 ppm
Ca 315.887 {107} (Radial)	0.9990 ppm	0.7 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1955 ppm	0.7 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1974 ppm	1.3 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.2011 ppm	0.7 %	0.2000 ppm
Co 228.616 {447} (Axial)	1.0050 ppm	0.7 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9819 ppm	1.4 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9974 ppm	0.8 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9881 ppm	1.4 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1976 ppm	1.5 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9939 ppm	0.8 %	1.0000 ppm
Na 589.592 {57} (Radial)	19.9278 ppm	1.4 %	20.0000 ppm
Ni 231.604 {445} (Axial)	1.0089 ppm	0.7 %	1.0000 ppm
K 766.490 {44} (Radial)	19.6769 ppm	1.5 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9761 ppm	0.6 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1950 ppm	1.6 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1978 ppm	1.1 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1985 ppm	0.7 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1980 ppm	2.1 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1952 ppm	1.8 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4874 ppm	0.6 %	0.5000 ppm
Sc 357.253 {94} (Axial)	99.6287 %	0.2 %	
Sc 188.060 {479} (Axial)	96.6061 %	0.2 %	
Mg 279.079 {121} (Radial)	1.0066 ppm	2.6 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2088 ppm	0.7 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9973 ppm	0.8 %	1.0000 ppm
Sc 227.318 {448} (Axial)	100.4816 %	0.1 %	
B 249.773 {135} (Radial)	0.9846 ppm	1.6 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9687 ppm	1.0 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9831 ppm	1.7 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.2048 ppm	0.5 %	0.2000 ppm
Y 224.306 {450} (Axial)	97.7227 %	0.1 %	
Sc 361.384 {93} (Radial)	99.7702 %	0.8 %	

Calibration Summary

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Standards

Standard: ICAL5
Analysis started at: 11/20/2020 2:16:55 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0014 ppm	1.4 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0021 ppm	1.3 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0010 ppm	1.5 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0014 ppm	0.8 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9967 ppm	2.6 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0014 ppm	1.3 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0005 ppm	1.0 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	4.9998 ppm	1.3 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0050 ppm	1.3 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0011 ppm	2.3 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0034 ppm	2.5 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0007 ppm	1.1 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0028 ppm	1.4 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.0296 ppm	2.4 %	100.0000 ppm
Ni 231.604 {445} (Axial)	4.9988 ppm	1.3 %	5.0000 ppm
K 766.490 {44} (Radial)	100.0977 ppm	2.3 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0075 ppm	0.9 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0014 ppm	1.1 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0006 ppm	2.4 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0006 ppm	1.4 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0006 ppm	2.7 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0014 ppm	1.3 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5039 ppm	1.3 %	2.5000 ppm
Sc 357.253 {94} (Axial)	95.5269 %	0.2 %	
Sc 188.060 {479} (Axial)	90.3801 %	0.1 %	
Mg 279.079 {121} (Radial)	4.9951 ppm	2.4 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9979 ppm	0.4 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	109.4700 %	0.1 %	
B 249.773 {135} (Radial)	5.0043 ppm	2.3 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0085 ppm	2.3 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0033 ppm	2.8 %	5.0000 ppm
Pb 220.353 {453} (Axial)	0.9990 ppm	1.2 %	1.0000 ppm
Y 224.306 {450} (Axial)	93.5823 %	0.1 %	
Sc 361.384 {93} (Radial)	99.2957 %	0.3 %	

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LabBook: ICP2_201120A.imexp

ICAL1

Sample type: BLK Analysis started at: 11/20/2020 1:56:39 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.8 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	3.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/20/2020 2:01:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0049 ppm	26.9 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0044 ppm	13.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	243 cps	0.0051 ppm	4.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	864 cps	0.0020 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	198 cps	0.5345 ppm	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	135 cps	0.0097 ppm	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	39 cps	0.0051 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0049 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	285 cps	0.0106 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	31 cps	0.0851 ppm	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	168 cps	0.0121 ppm	3.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	431 cps	0.0052 ppm	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	17 cps	0.0051 ppm	3.0 %	0.0 ppm
Na 589.592 {57} (Radial)	441 cps	0.2081 ppm	3.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0052 ppm	4.0 %	0.0 ppm
K 766.490 {44} (Radial)	160 cps	0.2637 ppm	5.4 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0078 ppm	32.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	78 cps	0.0055 ppm	4.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	307 cps	0.0051 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0099 ppm	3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0049 ppm	9.8 %	0.0 ppm
V 292.402 {115} (Axial)	92 cps	0.0048 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	120 cps	0.0097 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5705 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		99.3769 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	13 cps	0.2324 ppm	2.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	5 cps	0.0111 ppm	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	10 cps	0.0064 ppm	2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.5474 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.0197 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0059 ppm	174.1 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.2297 ppm	3.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0058 ppm	3.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.2932 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.9707 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/20/2020 2:07:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	64 cps	0.0947 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	41 cps	0.0924 ppm	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	23,768 cps	0.4951 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	21,461 cps	0.4923 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	41,980 cps	0.0949 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	186 cps	0.5007 ppm	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,328 cps	0.0950 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	745 cps	0.0977 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	4,976 cps	0.4916 ppm	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	13,019 cps	0.4858 ppm	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	178 cps	0.4933 ppm	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	6,790 cps	0.4898 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,096 cps	0.0983 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,606 cps	0.4838 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	20,850 cps	9.8480 ppm	2.1 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,482 cps	0.4944 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	5,863 cps	9.6675 ppm	2.0 %	0.2 ppm
Se 196.090 {472} (Axial)	118 cps	0.4732 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,371 cps	0.0963 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,878 cps	0.0982 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	125 cps	0.0971 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	158 cps	0.0978 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,848 cps	0.0960 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,909 cps	0.2361 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.1354 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		99.4328 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	30 cps	0.5224 ppm	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	45 cps	0.1037 ppm	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	760 cps	0.5054 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2509 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	182 cps	0.4873 ppm	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	289 cps	0.4782 ppm	2.4 %	0.0 ppm
Si 251.611 {134} (Radial)	58 cps	0.4890 ppm	1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	124 cps	0.1005 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		99.8480 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.4378 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/20/2020 2:11:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	132 cps	0.1958 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	86 cps	0.1931 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	48,130 cps	1.0025 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,547 cps	0.9989 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	86,444 cps	0.1953 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	370 cps	0.9990 ppm	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,732 cps	0.1955 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	2,187 cps	0.1974 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,534 cps	0.2011 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	10,173 cps	1.0050 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	26,312 cps	0.9819 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	360 cps	0.9974 ppm	0.8 %	0.0 ppm
Li 670.784 {50} (Radial)	13,698 cps	0.9881 ppm	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	16,275 cps	0.1976 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,299 cps	0.9939 ppm	0.8 %	0.0 ppm
Na 589.592 {57} (Radial)	42,191 cps	19.9278 ppm	1.4 %	0.3 ppm
Ni 231.604 {445} (Axial)	5,064 cps	1.0089 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	11,933 cps	19.6769 ppm	1.5 %	0.3 ppm
Se 196.090 {472} (Axial)	244 cps	0.9761 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,777 cps	0.1950 ppm	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,842 cps	0.1978 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	255 cps	0.1985 ppm	0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	319 cps	0.1980 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	3,755 cps	0.1952 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,005 cps	0.4874 ppm	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6287 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		96.6061 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	58 cps	1.0066 ppm	2.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	90 cps	0.2088 ppm	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1,499 cps	0.9973 ppm	0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4816 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	367 cps	0.9846 ppm	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	585 cps	0.9687 ppm	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	116 cps	0.9831 ppm	1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	252 cps	0.2048 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7227 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.7702 %	0.8 %	0.8 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/20/2020 2:16:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	675 cps	1.0014 ppm	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	449 cps	1.0021 ppm	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	218,020 cps	5.0010 ppm	1.5 %	0.1 ppm
Be 313.042 {108} (Axial)	443,203 cps	1.0014 ppm	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,851 cps	4.9967 ppm	2.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	13,995 cps	1.0014 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	11,086 cps	1.0005 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	50,607 cps	4.9998 ppm	1.3 %	0.1 ppm
Cu 324.754 {104} (Axial)	134,126 cps	5.0050 ppm	1.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,804 cps	5.0011 ppm	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	69,365 cps	5.0034 ppm	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	82,424 cps	1.0007 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	16,605 cps	5.0028 ppm	1.4 %	0.1 ppm
Na 589.592 {57} (Radial)	211,783 cps	100.0296 ppm	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	25,092 cps	4.9988 ppm	1.3 %	0.1 ppm
K 766.490 {44} (Radial)	60,706 cps	100.0977 ppm	2.3 %	2.3 ppm
Se 196.090 {472} (Axial)	1,251 cps	5.0075 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	14,261 cps	1.0014 ppm	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	59,889 cps	1.0006 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,285 cps	1.0006 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,613 cps	1.0006 ppm	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	19,264 cps	1.0014 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	30,851 cps	2.5039 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.5269 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		90.3801 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	290 cps	4.9951 ppm	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	429 cps	0.9979 ppm	0.4 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		109.4700 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1,867 cps	5.0043 ppm	2.3 %	0.1 ppm
Al 396.152 {85} (Radial)	3,026 cps	5.0085 ppm	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	589 cps	5.0033 ppm	2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,229 cps	0.9990 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		93.5823 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.2957 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/20/2020 2:47:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-126 cps	-0.1869 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	-25 cps	-0.0569 ppm	5.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	997,855 cps	20.7838 ppm	2.3 %	0.5 ppm
Ba 493.409 {68} (Radial)	908,801 cps	20.8463 ppm	3.7 %	0.8 ppm
Be 313.042 {108} (Axial)	872,518 cps	1.9715 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	72,439 cps	195.5178 ppm	3.1 %	6.0 ppm
Cd 228.802 {447} (Axial)	8 cps	0.0006 ppm	25.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	110,973 cps	10.0157 ppm	1.4 %	0.1 ppm
Cr 205.560 {464} (Axial)	78,840 cps	10.3371 ppm	0.5 %	0.1 ppm
Co 228.616 {447} (Axial)	130 cps	0.0128 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	576,104 cps	21.4979 ppm	1.2 %	0.3 ppm
Fe 259.940 {130} (Radial)	69,568 cps	192.8710 ppm	2.7 %	5.2 ppm
Li 670.784 {50} (Radial)	154,224 cps	11.1245 ppm	3.3 %	0.4 ppm
Mn 257.610 {131} (Axial)	784,342 cps	9.5221 ppm	1.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	-6 cps	-0.0017 ppm	9.0 %	0.0 ppm
Na 589.592 {57} (Radial)	19 cps	0.0092 ppm	140.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	-154 cps	-0.0307 ppm	0.3 %	0.0 ppm
K 766.490 {44} (Radial)	33 cps	0.0549 ppm	36.4 %	0.0 ppm
Se 196.090 {472} (Axial)	4 cps	0.0148 ppm	15.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	32,971 cps	2.3152 ppm	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	617,236 cps	10.3126 ppm	3.6 %	0.4 ppm
Sn 189.989 {477} (Axial)	-19 cps	-0.0147 ppm	3.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	16,149 cps	10.0208 ppm	3.0 %	0.3 ppm
V 292.402 {115} (Axial)	198,497 cps	10.3179 ppm	1.3 %	0.1 ppm
Zn 213.856 {457} (Axial)	-1,478 cps	-0.1200 ppm	2.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.0092 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		77.8136 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	11,906 cps	205.2279 ppm	3.1 %	6.4 ppm
Tl 190.856 {477} (Axial)	-16 cps	-0.0379 ppm	2.8 %	0.0 ppm
Al 167.079 {502} (Axial)	24,751 cps	16.4648 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		80.8086 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7,839 cps	21.0122 ppm	3.4 %	0.7 ppm
Al 396.152 {85} (Radial)	123,560 cps	204.5265 ppm	2.9 %	6.0 ppm
Si 251.611 {134} (Radial)	2,357 cps	20.0398 ppm	3.0 %	0.6 ppm
Pb 220.353 {453} (Axial)	11 cps	0.0087 ppm	12.5 %	0.0 ppm
Y 224.306 {450} (Axial)		85.7471 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		98.2913 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/20/2020 2:53:16 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3,437 cps	5.0948 ppm	1.2 %	0.1 ppm
As 189.042 {478} (Axial)	2,130 cps	4.7573 ppm	1.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	173 cps	0.0036 ppm	27.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	411 cps	0.0094 ppm	7.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-122 cps	-0.0003 ppm	13.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	27 cps	0.0731 ppm	13.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	424 cps	0.0304 ppm	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	72.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	8 cps	0.0011 ppm	10.8 %	0.0 ppm
Co 228.616 {447} (Axial)	104,657 cps	10.3399 ppm	1.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	255 cps	0.0095 ppm	3.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	31 cps	0.0853 ppm	20.5 %	0.0 ppm
Li 670.784 {50} (Radial)	71 cps	0.0051 ppm	9.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-120 cps	-0.0015 ppm	7.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	33,957 cps	10.2310 ppm	1.3 %	0.1 ppm
Na 589.592 {57} (Radial)	16 cps	0.0074 ppm	49.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	51,958 cps	10.3510 ppm	1.2 %	0.1 ppm
K 766.490 {44} (Radial)	39 cps	0.0641 ppm	11.1 %	0.0 ppm
Se 196.090 {472} (Axial)	1,206 cps	4.8261 ppm	1.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0005 ppm	69.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	118 cps	0.0020 ppm	26.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	6,389 cps	4.9756 ppm	1.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	14 cps	0.0087 ppm	11.7 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	159.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	58,858 cps	4.7770 ppm	1.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		102.4524 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		96.0465 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	4 cps	0.0729 ppm	28.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	2,365 cps	5.5075 ppm	1.0 %	0.1 ppm
Al 167.079 {502} (Axial)	13 cps	0.0089 ppm	30.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.4901 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	16 cps	0.0427 ppm	20.2 %	0.0 ppm
Al 396.152 {85} (Radial)	268 cps	0.4440 ppm	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	11 cps	0.0896 ppm	8.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	6,411 cps	5.2095 ppm	1.1 %	0.1 ppm
Y 224.306 {450} (Axial)		97.6761 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		102.1171 %	0.4 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/20/2020 2:21:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	662 cps	0.9820 ppm	98.202 %	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	431 cps	0.9628 ppm	96.277 %	3.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	49,425 cps	1.0294 ppm		1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	44,759 cps	1.0267 ppm	102.668 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	426,978 cps	0.9648 ppm	96.479 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,275 cps	6.1411 ppm	102.352 %	1.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	13,701 cps	0.9804 ppm	98.037 %	2.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	10,987 cps	0.9916 ppm	99.165 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	7,597 cps	0.9961 ppm		3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	10,076 cps	0.9955 ppm	99.551 %	2.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	27,175 cps	1.0141 ppm	101.406 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	366 cps	1.0153 ppm	101.531 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	14,342 cps	1.0345 ppm	103.455 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	83,030 cps	1.0080 ppm	100.801 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,361 cps	1.0125 ppm	101.252 %	2.9 %	0.0 ppm
Na 589.592 {57} (Radial)	44,994 cps	21.2517 ppm	101.198 %	2.0 %	0.4 ppm
Ni 231.604 {445} (Axial)	5,018 cps	0.9997 ppm	99.973 %	2.8 %	0.0 ppm
K 766.490 {44} (Radial)	13,027 cps	21.4804 ppm	102.288 %	1.7 %	0.4 ppm
Se 196.090 {472} (Axial)	244 cps	0.9776 ppm	97.761 %	2.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	14,918 cps	1.0475 ppm	104.753 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	60,883 cps	1.0172 ppm	101.722 %	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,282 cps	0.9985 ppm		3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,617 cps	1.0032 ppm	100.315 %	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	19,394 cps	1.0081 ppm	100.810 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,942 cps	0.9692 ppm	96.921 %	3.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5758 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.6307 %		1.7 %	1.6 %
Mg 279.079 {121} (Radial)	59 cps	1.0213 ppm	102.128 %	0.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	443 cps	1.0310 ppm	103.097 %	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1,482 cps	0.9860 ppm		3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.2244 %		1.6 %	1.5 %
B 249.773 {135} (Radial)	381 cps	1.0222 ppm	102.221 %	1.2 %	0.0 ppm
Al 396.152 {85} (Radial)	596 cps	0.9862 ppm	98.624 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	120 cps	1.0181 ppm		1.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,248 cps	1.0139 ppm	101.394 %	2.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9888 %		1.7 %	1.6 %
Sc 361.384 {93} (Radial)		99.3617 %		0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/20/2020 2:26:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0009 ppm	72.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	99.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	39 cps	0.0008 ppm	9.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	314 cps	0.0072 ppm	4.0 %	0.0 ppm
Be 313.042 {108} (Axial)	109 cps	0.0002 ppm	18.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	8 cps	0.0207 ppm	21.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	26.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	464.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	114.2 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	286.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	28 cps	0.0011 ppm	30.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0021 ppm	106.4 %	0.0 ppm
Li 670.784 {50} (Radial)	46 cps	0.0033 ppm	8.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	23 cps	0.0003 ppm	35.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0005 ppm	11.2 %	0.0 ppm
Na 589.592 {57} (Radial)	51 cps	0.0241 ppm	30.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	20.1 %	0.0 ppm
K 766.490 {44} (Radial)	78 cps	0.1290 ppm	16.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0009 ppm	145.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0005 ppm	25.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	29 cps	0.0005 ppm	22.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	161.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0023 ppm	22.3 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	3,763.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	243.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.4418 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		97.9155 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1 cps	0.0142 ppm	111.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	108.5 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0031 ppm	4.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.8096 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	2 cps	0.0067 ppm	36.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-6 cps	-0.0094 ppm	28.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0124 ppm	59.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0010 ppm	38.9 %	0.0 ppm
Y 224.306 {450} (Axial)		98.8848 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		98.8617 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/20/2020 2:42:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-16 cps	-0.0242 ppm		3.7 %	0.0 ppm
As 189.042 {478} (Axial)	-14 cps	-0.0319 ppm	0.000 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	19 cps	0.0004 ppm	0.000 %	18.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	394 cps	0.0090 ppm	0.000 %	11.6 %	0.0 ppm
Be 313.042 {108} (Axial)	-1,091 cps	-0.0025 ppm	0.000 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	34,606 cps	93.4029 ppm	93.403 %	1.8 %	1.7 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0004 ppm	0.000 %	22.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	13 cps	0.0012 ppm	0.000 %	14.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	-2 cps	-0.0003 ppm	0.000 %	58.0 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0007 ppm	0.000 %	16.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	138 cps	0.0051 ppm	0.000 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	33,873 cps	93.9092 ppm	93.909 %	1.6 %	1.5 ppm
Li 670.784 {50} (Radial)	37 cps	0.0027 ppm		26.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-453 cps	-0.0055 ppm	0.000 %	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,641 cps	2.0009 ppm	100.046 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	209,020 cps	98.7246 ppm	98.725 %	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	-75 cps	-0.0150 ppm	0.000 %	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	61,165 cps	100.8543 ppm	100.854 %	2.7 %	2.8 ppm
Se 196.090 {472} (Axial)	1 cps	0.0031 ppm	0.000 %	140.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	0.000 %	195.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	-92 cps	-0.0015 ppm		3.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	-9 cps	-0.0067 ppm		13.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	3,116 cps	1.9336 ppm		1.7 %	0.0 ppm
V 292.402 {115} (Axial)	11 cps	0.0006 ppm	0.000 %	36.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	-188 cps	-0.0152 ppm	0.000 %	3.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0309 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		81.3452 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	5,533 cps	95.3669 ppm	95.367 %	1.7 %	1.7 ppm
Tl 190.856 {477} (Axial)	-4 cps	-0.0082 ppm	0.000 %	11.9 %	0.0 ppm
Al 167.079 {502} (Axial)	21,725 cps	14.4519 ppm		0.5 %	0.1 ppm
Sc 227.318 {448} (Axial)		81.9498 %		0.5 %	0.4 %
B 249.773 {135} (Radial)	50 cps	0.1346 ppm		4.0 %	0.0 ppm
Al 396.152 {85} (Radial)	56,927 cps	94.2296 ppm	94.230 %	1.6 %	1.5 ppm
Si 251.611 {134} (Radial)	4 cps	0.0334 ppm	0.000 %	3.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	0.000 %	204.2 %	0.0 ppm
Y 224.306 {450} (Axial)		89.0060 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.2675 %		0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 10:44:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	332 cps	0.4920 ppm	98.406 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	214 cps	0.4770 ppm	95.395 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	108,946 cps	2.2692 ppm		2.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	98,677 cps	2.2635 ppm	90.539 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	201,901 cps	0.4562 ppm	91.242 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	811 cps	2.1882 ppm	87.529 %	2.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,835 cps	0.4891 ppm	97.816 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,021 cps	0.4531 ppm	90.624 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,913 cps	0.5130 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	24,306 cps	2.4014 ppm	96.055 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	63,225 cps	2.3593 ppm	94.372 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	846 cps	2.3466 ppm	93.862 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	31,519 cps	2.2735 ppm	90.941 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	37,134 cps	0.4508 ppm	90.164 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,141 cps	2.4529 ppm	98.114 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	92,530 cps	43.7037 ppm	87.407 %	2.6 %	1.1 ppm
Ni 231.604 {445} (Axial)	12,195 cps	2.4295 ppm	97.180 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	28,894 cps	47.6435 ppm	95.287 %	2.7 %	1.3 ppm
Se 196.090 {472} (Axial)	569 cps	2.2773 ppm	91.091 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,548 cps	0.4598 ppm	91.963 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	27,847 cps	0.4653 ppm	93.052 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	631 cps	0.4916 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	654 cps	0.4058 ppm	81.161 %	2.6 %	0.0 ppm
V 292.402 {115} (Axial)	9,006 cps	0.4681 ppm	93.626 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,788 cps	1.2002 ppm	96.019 %	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.3550 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.0066 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	135 cps	2.3349 ppm	93.394 %	1.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	216 cps	0.5021 ppm	100.421 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,413 cps	2.2703 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.4705 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	850 cps	2.2777 ppm	91.109 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,300 cps	2.1512 ppm	86.047 %	2.7 %	0.1 ppm
Si 251.611 {134} (Radial)	265 cps	2.2533 ppm		2.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	604 cps	0.4904 ppm	98.081 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		94.3598 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.3206 %		0.6 %	0.7 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 10:49:21 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	332 cps	0.4926 ppm	98.526 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	214 cps	0.4781 ppm	95.614 %	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	118,382 cps	2.4657 ppm		0.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	106,824 cps	2.4504 ppm	98.014 %	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	207,091 cps	0.4679 ppm	93.587 %	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	871 cps	2.3498 ppm	93.993 %	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,847 cps	0.4900 ppm	97.996 %	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,133 cps	0.4633 ppm	92.653 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,914 cps	0.5132 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	24,385 cps	2.4092 ppm	96.368 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	65,008 cps	2.4259 ppm	97.034 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	922 cps	2.5559 ppm	102.237 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	34,113 cps	2.4607 ppm	98.426 %	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	38,127 cps	0.4629 ppm	92.574 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,166 cps	2.4604 ppm	98.418 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	99,588 cps	47.0377 ppm	94.075 %	1.1 %	0.5 ppm
Ni 231.604 {445} (Axial)	12,236 cps	2.4376 ppm	97.504 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	30,804 cps	50.7928 ppm	101.586 %	1.3 %	0.7 ppm
Se 196.090 {472} (Axial)	572 cps	2.2883 ppm	91.532 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,672 cps	0.4685 ppm	93.695 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,233 cps	0.5051 ppm	101.024 %	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	633 cps	0.4926 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	709 cps	0.4397 ppm	87.942 %	0.5 %	0.0 ppm
V 292.402 {115} (Axial)	9,287 cps	0.4827 ppm	96.548 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,811 cps	1.2021 ppm	96.169 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.6630 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.6506 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	146 cps	2.5150 ppm	100.599 %	0.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	216 cps	0.5025 ppm	100.495 %	0.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,421 cps	2.2754 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.3096 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	920 cps	2.4657 ppm	98.627 %	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,415 cps	2.3421 ppm	93.683 %	0.5 %	0.0 ppm
Si 251.611 {134} (Radial)	290 cps	2.4615 ppm		0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	605 cps	0.4915 ppm	98.309 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.4216 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.9253 %		0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 11:50:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	326 cps	0.4835 ppm	96.698 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	210 cps	0.4698 ppm	93.963 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	111,858 cps	2.3298 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	101,198 cps	2.3213 ppm	92.852 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	196,574 cps	0.4442 ppm	88.835 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	844 cps	2.2791 ppm	91.166 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,711 cps	0.4802 ppm	96.047 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,885 cps	0.4409 ppm	88.178 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,829 cps	0.5020 ppm		1.9 %	0.0 ppm
Co 228.616 {447} (Axial)	23,922 cps	2.3634 ppm	94.538 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	61,406 cps	2.2914 ppm	91.656 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	870 cps	2.4119 ppm	96.474 %	1.3 %	0.0 ppm
Li 670.784 {50} (Radial)	32,292 cps	2.3293 ppm	93.172 %	1.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,238 cps	0.4399 ppm	87.988 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,992 cps	2.4080 ppm	96.319 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	94,946 cps	44.8452 ppm	89.690 %	1.9 %	0.9 ppm
Ni 231.604 {445} (Axial)	11,998 cps	2.3902 ppm	95.609 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	29,424 cps	48.5164 ppm	97.033 %	2.2 %	1.0 ppm
Se 196.090 {472} (Axial)	562 cps	2.2470 ppm	89.880 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,344 cps	0.4455 ppm	89.091 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,541 cps	0.4769 ppm	95.370 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	620 cps	0.4827 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	676 cps	0.4193 ppm	83.865 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	8,802 cps	0.4575 ppm	91.509 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,531 cps	1.1793 ppm	94.347 %	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.3278 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		97.4619 %		0.6 %	0.6 %
Mg 279.079 {121} (Radial)	138 cps	2.3800 ppm	95.201 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	213 cps	0.4958 ppm	99.163 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,366 cps	2.2391 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.0200 %		0.4 %	0.5 %
B 249.773 {135} (Radial)	872 cps	2.3360 ppm	93.441 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,347 cps	2.2289 ppm	89.155 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	276 cps	2.3423 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	596 cps	0.4839 ppm	96.776 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		95.5556 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.6615 %		1.1 %	1.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 11:55:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	328 cps	0.4869 ppm	97.384 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	211 cps	0.4715 ppm	94.302 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	111,734 cps	2.3272 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	100,983 cps	2.3164 ppm	92.655 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	202,219 cps	0.4569 ppm	91.386 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	830 cps	2.2390 ppm	89.560 %	3.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,751 cps	0.4831 ppm	96.616 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,022 cps	0.4533 ppm	90.660 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,863 cps	0.5064 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	24,049 cps	2.3760 ppm	95.041 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	63,077 cps	2.3538 ppm	94.152 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	866 cps	2.4010 ppm	96.039 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	32,247 cps	2.3260 ppm	93.041 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	37,217 cps	0.4518 ppm	90.366 %	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,049 cps	2.4251 ppm	97.005 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	94,827 cps	44.7887 ppm	89.577 %	2.9 %	1.3 ppm
Ni 231.604 {445} (Axial)	12,062 cps	2.4031 ppm	96.123 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	29,371 cps	48.4294 ppm	96.859 %	3.1 %	1.5 ppm
Se 196.090 {472} (Axial)	561 cps	2.2463 ppm	89.850 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,528 cps	0.4584 ppm	91.677 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,445 cps	0.4753 ppm	95.051 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	623 cps	0.4855 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	673 cps	0.4173 ppm	83.464 %	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	9,015 cps	0.4686 ppm	93.721 %	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,618 cps	1.1864 ppm	94.912 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.5501 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		97.3653 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	136 cps	2.3394 ppm	93.575 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	213 cps	0.4966 ppm	99.315 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	3,384 cps	2.2510 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.8604 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	869 cps	2.3288 ppm	93.152 %	2.8 %	0.1 ppm
Al 396.152 {85} (Radial)	1,336 cps	2.2116 ppm	88.464 %	3.1 %	0.1 ppm
Si 251.611 {134} (Radial)	274 cps	2.3291 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	596 cps	0.4842 ppm	96.841 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.7175 %		0.1 %	0.0 %
Sc 361.384 {93} (Radial)		103.4849 %		0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 12:58:16 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	333 cps	0.4935 ppm	98.693 %	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	213 cps	0.4767 ppm	95.337 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	106,107 cps	2.2100 ppm		2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	96,083 cps	2.2040 ppm	88.159 %	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	194,937 cps	0.4405 ppm	88.095 %	3.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	776 cps	2.0942 ppm	83.769 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,822 cps	0.4882 ppm	97.638 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,833 cps	0.4362 ppm	87.238 %	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,896 cps	0.5108 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	24,263 cps	2.3971 ppm	95.884 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	61,281 cps	2.2868 ppm	91.471 %	3.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	831 cps	2.3045 ppm	92.178 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	30,743 cps	2.2175 ppm	88.701 %	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	35,925 cps	0.4361 ppm	87.228 %	3.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,122 cps	2.4470 ppm	97.879 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	89,715 cps	42.3741 ppm	84.748 %	2.4 %	1.0 ppm
Ni 231.604 {445} (Axial)	12,165 cps	2.4236 ppm	96.943 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	28,025 cps	46.2107 ppm	92.421 %	2.6 %	1.2 ppm
Se 196.090 {472} (Axial)	568 cps	2.2714 ppm	90.856 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,343 cps	0.4454 ppm	89.079 %	3.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	27,072 cps	0.4523 ppm	90.461 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	631 cps	0.4912 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	630 cps	0.3912 ppm	78.235 %	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	8,723 cps	0.4534 ppm	90.681 %	3.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,762 cps	1.1981 ppm	95.848 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.9096 %		1.1 %	1.1 %
Sc 188.060 {479} (Axial)		95.9324 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	129 cps	2.2241 ppm	88.963 %	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	215 cps	0.5015 ppm	100.302 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,415 cps	2.2714 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2898 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	823 cps	2.2056 ppm	88.224 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,261 cps	2.0868 ppm	83.470 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	258 cps	2.1944 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	603 cps	0.4899 ppm	97.984 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.0635 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.8791 %		0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 1:03:07 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	332 cps	0.4923 ppm	98.461 %	0.2 %	0.0 ppm
As 189.042 {478} (Axial)	214 cps	0.4774 ppm	95.478 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	115,491 cps	2.4055 ppm		0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	104,386 cps	2.3944 ppm	95.778 %	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	203,990 cps	0.4609 ppm	92.186 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	856 cps	2.3093 ppm	92.372 %	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,843 cps	0.4897 ppm	97.933 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,059 cps	0.4566 ppm	91.319 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,921 cps	0.5140 ppm		0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	24,339 cps	2.4046 ppm	96.185 %	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	63,802 cps	2.3808 ppm	95.234 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	899 cps	2.4922 ppm	99.688 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	33,297 cps	2.4018 ppm	96.072 %	1.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,510 cps	0.4554 ppm	91.077 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,145 cps	2.4542 ppm	98.167 %	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	97,264 cps	45.9398 ppm	91.880 %	1.2 %	0.5 ppm
Ni 231.604 {445} (Axial)	12,200 cps	2.4304 ppm	97.217 %	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	30,139 cps	49.6961 ppm	99.392 %	1.4 %	0.7 ppm
Se 196.090 {472} (Axial)	568 cps	2.2718 ppm	90.872 %	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,601 cps	0.4635 ppm	92.701 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,485 cps	0.4926 ppm	98.527 %	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	634 cps	0.4936 ppm		0.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	694 cps	0.4310 ppm	86.191 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	9,101 cps	0.4731 ppm	94.611 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,805 cps	1.2016 ppm	96.128 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.4188 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		96.4956 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	143 cps	2.4583 ppm	98.333 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	216 cps	0.5030 ppm	100.590 %	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,436 cps	2.2856 ppm		0.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.0252 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	906 cps	2.4287 ppm	97.147 %	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,386 cps	2.2935 ppm	91.742 %	0.6 %	0.0 ppm
Si 251.611 {134} (Radial)	284 cps	2.4141 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	605 cps	0.4917 ppm	98.339 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6615 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.7573 %		0.0 %	0.0 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 2:05:18 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	318 cps	0.4717 ppm	94.349 %	3.3 %	0.0 ppm
As 189.042 {478} (Axial)	206 cps	0.4606 ppm	92.115 %	3.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	106,344 cps	2.2150 ppm		1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	95,361 cps	2.1874 ppm	87.496 %	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	203,074 cps	0.4589 ppm	91.772 %	12.4 %	0.1 ppm
Ca 315.887 {107} (Radial)	790 cps	2.1327 ppm	85.307 %	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,562 cps	0.4696 ppm	93.913 %	3.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,037 cps	0.4546 ppm	90.918 %	12.1 %	0.1 ppm
Cr 205.560 {464} (Axial)	3,737 cps	0.4900 ppm		3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	23,450 cps	2.3168 ppm	92.673 %	3.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	63,541 cps	2.3711 ppm	94.844 %	12.2 %	0.3 ppm
Fe 259.940 {130} (Radial)	839 cps	2.3269 ppm	93.076 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	30,668 cps	2.2122 ppm	88.487 %	1.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,543 cps	0.4558 ppm	91.155 %	12.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	7,813 cps	2.3539 ppm	94.155 %	3.3 %	0.1 ppm
Na 589.592 {57} (Radial)	89,627 cps	42.3327 ppm	84.665 %	2.1 %	0.9 ppm
Ni 231.604 {445} (Axial)	11,740 cps	2.3389 ppm	93.554 %	3.2 %	0.1 ppm
K 766.490 {44} (Radial)	27,772 cps	45.7928 ppm	91.586 %	2.5 %	1.1 ppm
Se 196.090 {472} (Axial)	550 cps	2.1992 ppm	87.966 %	2.8 %	0.1 ppm
Ag 328.068 {103} (Axial)	6,560 cps	0.4607 ppm	92.130 %	12.2 %	0.1 ppm
Sr 407.771 {83} (Radial)	27,032 cps	0.4516 ppm	90.328 %	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	608 cps	0.4737 ppm		3.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	643 cps	0.3989 ppm	79.782 %	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	9,082 cps	0.4721 ppm	94.419 %	12.2 %	0.1 ppm
Zn 213.856 {457} (Axial)	14,229 cps	1.1549 ppm	92.389 %	3.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7319 %		10.0 %	9.7 %
Sc 188.060 {479} (Axial)		98.8272 %		1.3 %	1.2 %
Mg 279.079 {121} (Radial)	130 cps	2.2409 ppm	89.636 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	208 cps	0.4837 ppm	96.745 %	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,309 cps	2.2010 ppm		3.0 %	0.1 ppm
Sc 227.318 {448} (Axial)		104.4111 %		1.0 %	1.0 %
B 249.773 {135} (Radial)	822 cps	2.2042 ppm	88.168 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,270 cps	2.1027 ppm	84.107 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	261 cps	2.2205 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	584 cps	0.4742 ppm	94.840 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		97.0316 %		1.2 %	1.1 %
Sc 361.384 {93} (Radial)		106.0565 %		0.3 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 2:10:08 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	320 cps	0.4743 ppm	94.855 %	2.6 %	0.0 ppm
As 189.042 {478} (Axial)	207 cps	0.4627 ppm	92.535 %	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	108,747 cps	2.2650 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	98,262 cps	2.2540 ppm	90.158 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	195,306 cps	0.4413 ppm	88.262 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	824 cps	2.2249 ppm	88.997 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,610 cps	0.4730 ppm	94.604 %	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,861 cps	0.4387 ppm	87.739 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,769 cps	0.4941 ppm		2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	23,668 cps	2.3383 ppm	93.532 %	2.5 %	0.1 ppm
Cu 324.754 {104} (Axial)	60,581 cps	2.2606 ppm	90.425 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	857 cps	2.3759 ppm	95.037 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	31,277 cps	2.2561 ppm	90.243 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,007 cps	0.4371 ppm	87.428 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,879 cps	2.3738 ppm	94.954 %	2.5 %	0.1 ppm
Na 589.592 {57} (Radial)	91,796 cps	43.3573 ppm	86.715 %	2.0 %	0.9 ppm
Ni 231.604 {445} (Axial)	11,862 cps	2.3631 ppm	94.526 %	2.5 %	0.1 ppm
K 766.490 {44} (Radial)	28,277 cps	46.6264 ppm	93.253 %	2.5 %	1.2 ppm
Se 196.090 {472} (Axial)	554 cps	2.2171 ppm	88.684 %	2.3 %	0.1 ppm
Ag 328.068 {103} (Axial)	6,271 cps	0.4404 ppm	88.070 %	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	27,677 cps	0.4624 ppm	92.485 %	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	614 cps	0.4784 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	667 cps	0.4140 ppm	82.803 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,693 cps	0.4519 ppm	90.377 %	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,347 cps	1.1645 ppm	93.158 %	2.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.2625 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		98.4854 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	136 cps	2.3473 ppm	93.891 %	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	209 cps	0.4878 ppm	97.553 %	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,351 cps	2.2293 ppm		2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		104.3010 %		0.4 %	0.5 %
B 249.773 {135} (Radial)	852 cps	2.2835 ppm	91.342 %	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,316 cps	2.1780 ppm	87.120 %	1.8 %	0.0 ppm
Si 251.611 {134} (Radial)	269 cps	2.2842 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	589 cps	0.4789 ppm	95.788 %	2.5 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9992 %		0.7 %	0.7 %
Sc 361.384 {93} (Radial)		103.8661 %		0.6 %	0.6 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 3:08:40 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	337 cps	0.5001 ppm	100.025 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	221 cps	0.4932 ppm	98.634 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	120,591 cps	2.5117 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	107,534 cps	2.4666 ppm	98.665 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	213,280 cps	0.4819 ppm	96.384 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	874 cps	2.3590 ppm	94.359 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,973 cps	0.4990 ppm	99.794 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,275 cps	0.4761 ppm	95.220 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,849 cps	0.5046 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	25,335 cps	2.5031 ppm	100.123 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	66,462 cps	2.4801 ppm	99.205 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	870 cps	2.4115 ppm	96.461 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	34,574 cps	2.4939 ppm	99.756 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	39,583 cps	0.4805 ppm	96.109 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,314 cps	2.5049 ppm	100.194 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	104,236 cps	49.2330 ppm	98.466 %	2.7 %	1.3 ppm
Ni 231.604 {445} (Axial)	12,602 cps	2.5105 ppm	100.420 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	30,106 cps	49.6417 ppm	99.283 %	3.0 %	1.5 ppm
Se 196.090 {472} (Axial)	622 cps	2.4892 ppm	99.567 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,857 cps	0.4815 ppm	96.300 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,601 cps	0.4946 ppm	98.912 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	639 cps	0.4974 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	763 cps	0.4737 ppm	94.731 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	9,422 cps	0.4898 ppm	97.954 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,256 cps	1.2382 ppm	99.059 %	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.1437 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.4361 %		0.1 %	0.0 %
Mg 279.079 {121} (Radial)	136 cps	2.3480 ppm	93.920 %	2.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	221 cps	0.5139 ppm	102.779 %	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,431 cps	2.2825 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2038 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	892 cps	2.3922 ppm	95.689 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,418 cps	2.3480 ppm	93.920 %	2.9 %	0.1 ppm
Si 251.611 {134} (Radial)	277 cps	2.3514 ppm		2.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	620 cps	0.5034 ppm	100.680 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		93.2295 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.6436 %		0.6 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 3:12:21 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	330 cps	0.4896 ppm	97.926 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	213 cps	0.4754 ppm	95.085 %	0.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	109,741 cps	2.2857 ppm		2.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	99,403 cps	2.2801 ppm	91.205 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	199,135 cps	0.4500 ppm	89.992 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	849 cps	2.2903 ppm	91.613 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,803 cps	0.4868 ppm	97.359 %	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,951 cps	0.4469 ppm	89.370 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,901 cps	0.5114 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	24,273 cps	2.3982 ppm	95.926 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	61,800 cps	2.3061 ppm	92.245 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	864 cps	2.3942 ppm	95.767 %	2.7 %	0.1 ppm
Li 670.784 {50} (Radial)	31,705 cps	2.2869 ppm	91.478 %	2.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	36,683 cps	0.4453 ppm	89.069 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,103 cps	2.4415 ppm	97.660 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	91,930 cps	43.4207 ppm	86.841 %	2.7 %	1.2 ppm
Ni 231.604 {445} (Axial)	12,182 cps	2.4269 ppm	97.075 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	28,865 cps	47.5954 ppm	95.191 %	3.1 %	1.5 ppm
Se 196.090 {472} (Axial)	563 cps	2.2516 ppm	90.063 %	0.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,439 cps	0.4521 ppm	90.429 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,071 cps	0.4690 ppm	93.802 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	634 cps	0.4938 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	664 cps	0.4119 ppm	82.374 %	2.6 %	0.0 ppm
V 292.402 {115} (Axial)	8,860 cps	0.4605 ppm	92.105 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,746 cps	1.1968 ppm	95.748 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.2234 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		97.8398 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	138 cps	2.3767 ppm	95.070 %	3.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	215 cps	0.5004 ppm	100.087 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,467 cps	2.3063 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.4321 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	857 cps	2.2960 ppm	91.840 %	3.3 %	0.1 ppm
Al 396.152 {85} (Radial)	1,335 cps	2.2099 ppm	88.398 %	2.7 %	0.1 ppm
Si 251.611 {134} (Radial)	270 cps	2.2986 ppm		3.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	606 cps	0.4920 ppm	98.403 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		95.3882 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		102.8558 %		0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 3:17:12 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	325 cps	0.4814 ppm	96.286 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	210 cps	0.4694 ppm	93.871 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	113,218 cps	2.3582 ppm		0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	102,441 cps	2.3498 ppm	93.993 %	0.5 %	0.0 ppm
Be 313.042 {108} (Axial)	201,739 cps	0.4558 ppm	91.169 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	859 cps	2.3196 ppm	92.785 %	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,708 cps	0.4800 ppm	95.997 %	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,015 cps	0.4526 ppm	90.516 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,847 cps	0.5044 ppm		1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	23,942 cps	2.3654 ppm	94.615 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,287 cps	2.3243 ppm	92.973 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	892 cps	2.4743 ppm	98.973 %	0.0 %	0.0 ppm
Li 670.784 {50} (Radial)	32,663 cps	2.3560 ppm	94.242 %	0.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,094 cps	0.4503 ppm	90.066 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,988 cps	2.4068 ppm	96.273 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	95,339 cps	45.0307 ppm	90.061 %	0.8 %	0.3 ppm
Ni 231.604 {445} (Axial)	12,020 cps	2.3947 ppm	95.787 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	29,774 cps	49.0940 ppm	98.188 %	1.3 %	0.6 ppm
Se 196.090 {472} (Axial)	555 cps	2.2197 ppm	88.786 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,486 cps	0.4554 ppm	91.086 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,934 cps	0.4834 ppm	96.685 %	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	625 cps	0.4871 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	693 cps	0.4301 ppm	86.021 %	0.3 %	0.0 ppm
V 292.402 {115} (Axial)	8,969 cps	0.4662 ppm	93.247 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,538 cps	1.1799 ppm	94.394 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2626 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		98.7783 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	143 cps	2.4567 ppm	98.267 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	212 cps	0.4938 ppm	98.762 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,421 cps	2.2757 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		104.2727 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	890 cps	2.3862 ppm	95.449 %	1.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,377 cps	2.2786 ppm	91.144 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	281 cps	2.3887 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	598 cps	0.4856 ppm	97.119 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6585 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.2041 %		0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 4:18:53 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	323 cps	0.4795 ppm	95.908 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	208 cps	0.4647 ppm	92.938 %	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	111,098 cps	2.3140 ppm		4.3 %	0.1 ppm
Ba 493.409 {68} (Radial)	100,594 cps	2.3074 ppm	92.298 %	4.2 %	0.1 ppm
Be 313.042 {108} (Axial)	203,395 cps	0.4596 ppm	91.917 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	865 cps	2.3360 ppm	93.439 %	3.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,646 cps	0.4755 ppm	95.106 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,044 cps	0.4552 ppm	91.050 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,815 cps	0.5001 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	23,664 cps	2.3380 ppm	93.518 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	63,508 cps	2.3699 ppm	94.794 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	890 cps	2.4678 ppm	98.710 %	3.6 %	0.1 ppm
Li 670.784 {50} (Radial)	32,183 cps	2.3215 ppm	92.858 %	4.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	37,411 cps	0.4542 ppm	90.836 %	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,923 cps	2.3871 ppm	95.486 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	93,688 cps	44.2510 ppm	88.502 %	4.3 %	1.9 ppm
Ni 231.604 {445} (Axial)	11,875 cps	2.3657 ppm	94.629 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	29,172 cps	48.1015 ppm	96.203 %	4.3 %	2.1 ppm
Se 196.090 {472} (Axial)	551 cps	2.2038 ppm	88.151 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,549 cps	0.4599 ppm	91.978 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,614 cps	0.4781 ppm	95.616 %	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	617 cps	0.4806 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	669 cps	0.4150 ppm	82.997 %	4.5 %	0.0 ppm
V 292.402 {115} (Axial)	9,075 cps	0.4717 ppm	94.345 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,395 cps	1.1683 ppm	93.464 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5223 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.7166 %		1.0 %	1.0 %
Mg 279.079 {121} (Radial)	139 cps	2.3930 ppm	95.718 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	210 cps	0.4881 ppm	97.625 %	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,357 cps	2.2332 ppm		2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.8264 %		0.8 %	0.9 %
B 249.773 {135} (Radial)	877 cps	2.3516 ppm	94.062 %	4.1 %	0.1 ppm
Al 396.152 {85} (Radial)	1,341 cps	2.2193 ppm	88.773 %	3.8 %	0.1 ppm
Si 251.611 {134} (Radial)	273 cps	2.3214 ppm		4.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	588 cps	0.4776 ppm	95.517 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4627 %		0.7 %	0.6 %
Sc 361.384 {93} (Radial)		102.1853 %		0.8 %	0.8 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 4:23:44 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	327 cps	0.4847 ppm	96.948 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	211 cps	0.4704 ppm	94.083 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	111,363 cps	2.3195 ppm		3.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	100,714 cps	2.3102 ppm	92.408 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	200,016 cps	0.4519 ppm	90.390 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	834 cps	2.2513 ppm	90.054 %	2.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,713 cps	0.4803 ppm	96.065 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,972 cps	0.4487 ppm	89.745 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,854 cps	0.5053 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	23,934 cps	2.3646 ppm	94.585 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,373 cps	2.3275 ppm	93.101 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	878 cps	2.4329 ppm	97.315 %	2.5 %	0.1 ppm
Li 670.784 {50} (Radial)	32,276 cps	2.3281 ppm	93.125 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	36,799 cps	0.4467 ppm	89.350 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,012 cps	2.4139 ppm	96.555 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	94,055 cps	44.4240 ppm	88.848 %	3.4 %	1.5 ppm
Ni 231.604 {445} (Axial)	12,009 cps	2.3925 ppm	95.700 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	29,387 cps	48.4566 ppm	96.913 %	3.7 %	1.8 ppm
Se 196.090 {472} (Axial)	558 cps	2.2348 ppm	89.391 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,451 cps	0.4530 ppm	90.599 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,524 cps	0.4766 ppm	95.316 %	3.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	624 cps	0.4858 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	669 cps	0.4149 ppm	82.986 %	3.3 %	0.0 ppm
V 292.402 {115} (Axial)	8,925 cps	0.4639 ppm	92.785 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,556 cps	1.1814 ppm	94.511 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.3447 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		97.9736 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	138 cps	2.3842 ppm	95.367 %	2.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	212 cps	0.4940 ppm	98.804 %	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,394 cps	2.2580 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.5559 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	878 cps	2.3532 ppm	94.128 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,348 cps	2.2313 ppm	89.253 %	2.6 %	0.1 ppm
Si 251.611 {134} (Radial)	273 cps	2.3193 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	595 cps	0.4836 ppm	96.713 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2311 %		0.0 %	0.0 %
Sc 361.384 {93} (Radial)		102.2443 %		1.2 %	1.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 5:26:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	309 cps	0.4582 ppm	91.631 %	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	200 cps	0.4458 ppm	89.155 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	104,069 cps	2.1676 ppm		2.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	94,149 cps	2.1596 ppm	86.384 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	189,562 cps	0.4283 ppm	85.666 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	813 cps	2.1935 ppm	87.740 %	2.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,374 cps	0.4561 ppm	91.214 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,710 cps	0.4251 ppm	85.023 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,668 cps	0.4809 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	22,729 cps	2.2456 ppm	89.822 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,784 cps	2.1936 ppm	87.743 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	829 cps	2.2991 ppm	91.966 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	30,086 cps	2.1702 ppm	86.806 %	3.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,842 cps	0.4230 ppm	84.599 %	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,598 cps	2.2892 ppm	91.570 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	88,214 cps	41.6653 ppm	83.331 %	3.2 %	1.4 ppm
Ni 231.604 {445} (Axial)	11,419 cps	2.2748 ppm	90.992 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	27,578 cps	45.4727 ppm	90.945 %	3.6 %	1.6 ppm
Se 196.090 {472} (Axial)	525 cps	2.0995 ppm	83.982 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,109 cps	0.4289 ppm	85.787 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,936 cps	0.4500 ppm	90.009 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	594 cps	0.4629 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	622 cps	0.3861 ppm	77.220 %	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,462 cps	0.4398 ppm	87.966 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,802 cps	1.1202 ppm	89.615 %	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.4398 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		102.7594 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	131 cps	2.2577 ppm	90.308 %	4.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	202 cps	0.4692 ppm	93.848 %	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,259 cps	2.1678 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		107.5814 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	813 cps	2.1782 ppm	87.127 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,259 cps	2.0834 ppm	83.334 %	2.8 %	0.1 ppm
Si 251.611 {134} (Radial)	256 cps	2.1761 ppm		3.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	569 cps	0.4623 ppm	92.451 %	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		99.8826 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		105.2925 %		1.0 %	1.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 5:31:24 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	312 cps	0.4631 ppm	92.617 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	202 cps	0.4504 ppm	90.078 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	104,434 cps	2.1752 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	94,182 cps	2.1604 ppm	86.415 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	191,039 cps	0.4317 ppm	86.333 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	792 cps	2.1380 ppm	85.519 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,436 cps	0.4606 ppm	92.112 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,764 cps	0.4300 ppm	85.994 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,708 cps	0.4862 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	22,990 cps	2.2714 ppm	90.856 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,783 cps	2.1935 ppm	87.741 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	826 cps	2.2891 ppm	91.562 %	2.5 %	0.1 ppm
Li 670.784 {50} (Radial)	30,130 cps	2.1733 ppm	86.932 %	2.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,110 cps	0.4263 ppm	85.250 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,677 cps	2.3132 ppm	92.526 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	88,596 cps	41.8459 ppm	83.692 %	3.0 %	1.2 ppm
Ni 231.604 {445} (Axial)	11,551 cps	2.3013 ppm	92.050 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	27,646 cps	45.5847 ppm	91.169 %	3.2 %	1.5 ppm
Se 196.090 {472} (Axial)	531 cps	2.1229 ppm	84.917 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,126 cps	0.4301 ppm	86.029 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,753 cps	0.4470 ppm	89.396 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	600 cps	0.4674 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	628 cps	0.3899 ppm	77.988 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	8,497 cps	0.4417 ppm	88.339 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,962 cps	1.1332 ppm	90.653 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.1212 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		101.8331 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	131 cps	2.2624 ppm	90.498 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	204 cps	0.4748 ppm	94.968 %	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	3,306 cps	2.1990 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		107.2294 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	819 cps	2.1940 ppm	87.761 %	3.0 %	0.1 ppm
Al 396.152 {85} (Radial)	1,266 cps	2.0953 ppm	83.812 %	2.1 %	0.0 ppm
Si 251.611 {134} (Radial)	258 cps	2.1942 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	575 cps	0.4671 ppm	93.428 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4977 %		0.0 %	0.0 %
Sc 361.384 {93} (Radial)		103.2366 %		0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 5:57:04 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	304 cps	0.4506 ppm	90.123 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	197 cps	0.4394 ppm	87.873 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	103,039 cps	2.1461 ppm		0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	93,019 cps	2.1337 ppm	85.347 %	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	183,793 cps	0.4153 ppm	83.059 %	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	788 cps	2.1275 ppm	85.098 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,298 cps	0.4506 ppm	90.126 %	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,580 cps	0.4134 ppm	82.672 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,623 cps	0.4751 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	22,446 cps	2.2176 ppm	88.704 %	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,542 cps	2.1099 ppm	84.398 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	819 cps	2.2693 ppm	90.770 %	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	29,576 cps	2.1334 ppm	85.336 %	1.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,792 cps	0.4102 ppm	82.049 %	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,497 cps	2.2588 ppm	90.350 %	2.1 %	0.0 ppm
Na 589.592 {57} (Radial)	86,822 cps	41.0080 ppm	82.016 %	1.4 %	0.6 ppm
Ni 231.604 {445} (Axial)	11,286 cps	2.2484 ppm	89.936 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	26,971 cps	44.4719 ppm	88.944 %	1.9 %	0.8 ppm
Se 196.090 {472} (Axial)	519 cps	2.0774 ppm	83.096 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,891 cps	0.4137 ppm	82.734 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,389 cps	0.4409 ppm	88.181 %	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	587 cps	0.4569 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	619 cps	0.3838 ppm	76.765 %	0.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,202 cps	0.4263 ppm	85.266 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,636 cps	1.1068 ppm	88.541 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.0697 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		103.4787 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	131 cps	2.2546 ppm	90.185 %	0.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	200 cps	0.4657 ppm	93.131 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,235 cps	2.1522 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		108.2196 %		0.2 %	0.3 %
B 249.773 {135} (Radial)	803 cps	2.1525 ppm	86.102 %	1.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,253 cps	2.0734 ppm	82.934 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	254 cps	2.1605 ppm		1.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	562 cps	0.4570 ppm	91.409 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0013 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.6821 %		0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 6:01:55 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	303 cps	0.4499 ppm	89.985 %	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	197 cps	0.4391 ppm	87.813 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	105,031 cps	2.1876 ppm		2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	95,201 cps	2.1838 ppm	87.350 %	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	192,168 cps	0.4342 ppm	86.843 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	805 cps	2.1714 ppm	86.856 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,295 cps	0.4505 ppm	90.091 %	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,784 cps	0.4318 ppm	86.355 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,630 cps	0.4759 ppm		0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	22,457 cps	2.2187 ppm	88.747 %	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,848 cps	2.1960 ppm	87.839 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	830 cps	2.3012 ppm	92.046 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	30,266 cps	2.1832 ppm	87.326 %	2.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	35,264 cps	0.4281 ppm	85.622 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	7,505 cps	2.2611 ppm	90.445 %	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	89,341 cps	42.1978 ppm	84.396 %	2.1 %	0.9 ppm
Ni 231.604 {445} (Axial)	11,291 cps	2.2494 ppm	89.975 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	28,003 cps	46.1733 ppm	92.347 %	2.3 %	1.1 ppm
Se 196.090 {472} (Axial)	516 cps	2.0658 ppm	82.632 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,159 cps	0.4325 ppm	86.501 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,958 cps	0.4504 ppm	90.082 %	2.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	590 cps	0.4594 ppm		0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	637 cps	0.3953 ppm	79.052 %	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	8,554 cps	0.4446 ppm	88.925 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,632 cps	1.1064 ppm	88.509 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.1977 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		104.6552 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	135 cps	2.3241 ppm	92.964 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	200 cps	0.4653 ppm	93.052 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,242 cps	2.1569 ppm		0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		109.6850 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	830 cps	2.2250 ppm	88.999 %	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,279 cps	2.1175 ppm	84.700 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	262 cps	2.2267 ppm		1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	562 cps	0.4569 ppm	91.375 %	0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		101.7323 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		104.7464 %		0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 4:14:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	350 cps	0.5186 ppm	103.716 %	2.4 %	0.0 ppm
As 189.042 {478} (Axial)	225 cps	0.5031 ppm	100.610 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	121,488 cps	2.5304 ppm		0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	109,716 cps	2.5167 ppm	100.667 %	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	210,099 cps	0.4747 ppm	94.946 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	882 cps	2.3813 ppm	95.253 %	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,165 cps	0.5127 ppm	102.537 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,203 cps	0.4695 ppm	93.910 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	4,017 cps	0.5267 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	25,664 cps	2.5356 ppm	101.423 %	2.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	66,690 cps	2.4886 ppm	99.545 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	912 cps	2.5279 ppm	101.114 %	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	35,056 cps	2.5287 ppm	101.147 %	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	38,867 cps	0.4719 ppm	94.372 %	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,528 cps	2.5693 ppm	102.771 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	103,041 cps	48.6685 ppm	97.337 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	12,797 cps	2.5493 ppm	101.972 %	2.0 %	0.1 ppm
K 766.490 {44} (Radial)	30,804 cps	50.7919 ppm	101.584 %	1.7 %	0.9 ppm
Se 196.090 {472} (Axial)	621 cps	2.4831 ppm	99.324 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,892 cps	0.4839 ppm	96.783 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,491 cps	0.5094 ppm	101.887 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	655 cps	0.5103 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	753 cps	0.4670 ppm	93.405 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	9,348 cps	0.4859 ppm	97.180 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,566 cps	1.2634 ppm	101.070 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.5271 %		0.6 %	0.5 %
Sc 188.060 {479} (Axial)		89.1778 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	141 cps	2.4304 ppm	97.215 %	2.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	226 cps	0.5262 ppm	105.236 %	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,502 cps	2.3294 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.2634 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	930 cps	2.4936 ppm	99.742 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	1,437 cps	2.3781 ppm	95.124 %	0.6 %	0.0 ppm
Si 251.611 {134} (Radial)	288 cps	2.4503 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	631 cps	0.5124 ppm	102.486 %	1.9 %	0.0 ppm
Y 224.306 {450} (Axial)		89.9106 %		0.7 %	0.6 %
Sc 361.384 {93} (Radial)		101.6093 %		0.2 %	0.2 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 5:15:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	345 cps	0.5118 ppm	102.357 %	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	222 cps	0.4953 ppm	99.063 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	117,174 cps	2.4405 ppm		3.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	105,616 cps	2.4226 ppm	96.906 %	3.2 %	0.1 ppm
Be 313.042 {108} (Axial)	209,290 cps	0.4729 ppm	94.581 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	841 cps	2.2688 ppm	90.750 %	4.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,055 cps	0.5048 ppm	100.963 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,174 cps	0.4670 ppm	93.392 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,981 cps	0.5219 ppm		0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	25,151 cps	2.4848 ppm	99.392 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	66,791 cps	2.4924 ppm	99.695 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	884 cps	2.4503 ppm	98.011 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	34,002 cps	2.4526 ppm	98.106 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	38,647 cps	0.4692 ppm	93.836 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,403 cps	2.5317 ppm	101.266 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	99,136 cps	46.8240 ppm	93.648 %	3.3 %	1.6 ppm
Ni 231.604 {445} (Axial)	12,578 cps	2.5058 ppm	100.234 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	30,329 cps	50.0087 ppm	100.017 %	3.3 %	1.6 ppm
Se 196.090 {472} (Axial)	603 cps	2.4115 ppm	96.460 %	0.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,833 cps	0.4798 ppm	95.963 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,668 cps	0.4957 ppm	99.138 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	644 cps	0.5011 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	705 cps	0.4372 ppm	87.446 %	3.6 %	0.0 ppm
V 292.402 {115} (Axial)	9,356 cps	0.4863 ppm	97.261 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,288 cps	1.2408 ppm	99.267 %	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.6720 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		90.9283 %		0.0 %	0.0 %
Mg 279.079 {121} (Radial)	136 cps	2.3386 ppm	93.542 %	2.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	222 cps	0.5176 ppm	103.525 %	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,444 cps	2.2909 ppm		0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2426 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	902 cps	2.4170 ppm	96.679 %	3.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,371 cps	2.2688 ppm	90.754 %	3.0 %	0.1 ppm
Si 251.611 {134} (Radial)	280 cps	2.3795 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	621 cps	0.5046 ppm	100.914 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		90.7890 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.0482 %		0.3 %	0.3 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 5:20:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	349 cps	0.5181 ppm	103.620 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	225 cps	0.5019 ppm	100.381 %	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	116,563 cps	2.4278 ppm		3.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	105,036 cps	2.4093 ppm	96.373 %	3.2 %	0.1 ppm
Be 313.042 {108} (Axial)	211,898 cps	0.4788 ppm	95.760 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	842 cps	2.2734 ppm	90.936 %	3.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,142 cps	0.5111 ppm	102.213 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,233 cps	0.4723 ppm	94.457 %	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	4,037 cps	0.5292 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	25,516 cps	2.5209 ppm	100.836 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	67,422 cps	2.5159 ppm	100.637 %	2.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	886 cps	2.4565 ppm	98.260 %	3.1 %	0.1 ppm
Li 670.784 {50} (Radial)	33,753 cps	2.4347 ppm	97.387 %	3.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	39,113 cps	0.4748 ppm	94.968 %	2.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,517 cps	2.5662 ppm	102.646 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	99,181 cps	46.8453 ppm	93.691 %	3.2 %	1.5 ppm
Ni 231.604 {445} (Axial)	12,761 cps	2.5422 ppm	101.689 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	30,408 cps	50.1404 ppm	100.281 %	3.2 %	1.6 ppm
Se 196.090 {472} (Axial)	610 cps	2.4404 ppm	97.618 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,909 cps	0.4851 ppm	97.029 %	2.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,467 cps	0.4923 ppm	98.466 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	654 cps	0.5093 ppm		0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	703 cps	0.4362 ppm	87.235 %	2.8 %	0.0 ppm
V 292.402 {115} (Axial)	9,481 cps	0.4928 ppm	98.560 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,499 cps	1.2580 ppm	100.638 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.2848 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		89.8676 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	136 cps	2.3515 ppm	94.060 %	3.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	225 cps	0.5237 ppm	104.737 %	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,495 cps	2.3252 ppm		0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.5983 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	906 cps	2.4276 ppm	97.104 %	3.2 %	0.1 ppm
Al 396.152 {85} (Radial)	1,374 cps	2.2737 ppm	90.947 %	3.3 %	0.1 ppm
Si 251.611 {134} (Radial)	281 cps	2.3845 ppm		4.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	628 cps	0.5104 ppm	102.087 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		90.3434 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.7330 %		0.1 %	0.1 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 6:22:31 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	338 cps	0.5008 ppm	100.159 %	3.2 %	0.0 ppm
As 189.042 {478} (Axial)	217 cps	0.4852 ppm	97.033 %	3.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	117,984 cps	2.4574 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	106,125 cps	2.4343 ppm	97.373 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	197,622 cps	0.4465 ppm	89.308 %	3.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	852 cps	2.2996 ppm	91.985 %	1.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,905 cps	0.4941 ppm	98.815 %	2.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,884 cps	0.4408 ppm	88.164 %	3.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,919 cps	0.5138 ppm		3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	24,575 cps	2.4279 ppm	97.117 %	2.9 %	0.1 ppm
Cu 324.754 {104} (Axial)	62,703 cps	2.3398 ppm	93.593 %	3.9 %	0.1 ppm
Fe 259.940 {130} (Radial)	901 cps	2.4980 ppm	99.919 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	34,121 cps	2.4612 ppm	98.448 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,450 cps	0.4425 ppm	88.502 %	3.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,225 cps	2.4782 ppm	99.129 %	3.0 %	0.1 ppm
Na 589.592 {57} (Radial)	99,666 cps	47.0741 ppm	94.148 %	1.8 %	0.8 ppm
Ni 231.604 {445} (Axial)	12,312 cps	2.4528 ppm	98.114 %	2.9 %	0.1 ppm
K 766.490 {44} (Radial)	30,946 cps	51.0268 ppm	102.054 %	2.1 %	1.1 ppm
Se 196.090 {472} (Axial)	583 cps	2.3321 ppm	93.283 %	2.8 %	0.1 ppm
Ag 328.068 {103} (Axial)	6,420 cps	0.4508 ppm	90.158 %	3.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,016 cps	0.5015 ppm	100.301 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	634 cps	0.4935 ppm		3.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	699 cps	0.4337 ppm	86.734 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	8,887 cps	0.4619 ppm	92.390 %	3.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,948 cps	1.2132 ppm	97.058 %	2.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.8875 %		3.6 %	3.6 %
Sc 188.060 {479} (Axial)		92.8791 %		1.3 %	1.2 %
Mg 279.079 {121} (Radial)	140 cps	2.4097 ppm	96.389 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	219 cps	0.5088 ppm	101.763 %	2.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,396 cps	2.2594 ppm		2.8 %	0.1 ppm
Sc 227.318 {448} (Axial)		98.7293 %		1.0 %	0.9 %
B 249.773 {135} (Radial)	909 cps	2.4370 ppm	97.480 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,388 cps	2.2972 ppm	91.887 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	286 cps	2.4309 ppm		1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	608 cps	0.4943 ppm	98.860 %	2.9 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0164 %		1.4 %	1.3 %
Sc 361.384 {93} (Radial)		101.5416 %		0.0 %	0.0 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 6:27:21 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	339 cps	0.5025 ppm	100.506 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	217 cps	0.4837 ppm	96.744 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	115,659 cps	2.4090 ppm		2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	104,195 cps	2.3901 ppm	95.602 %	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	203,521 cps	0.4599 ppm	91.974 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	837 cps	2.2603 ppm	90.411 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,913 cps	0.4947 ppm	98.930 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,013 cps	0.4524 ppm	90.487 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,929 cps	0.5151 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	24,658 cps	2.4361 ppm	97.444 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	64,389 cps	2.4027 ppm	96.109 %	2.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	887 cps	2.4591 ppm	98.363 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	33,417 cps	2.4104 ppm	96.416 %	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,540 cps	0.4557 ppm	91.149 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,248 cps	2.4850 ppm	99.400 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	97,685 cps	46.1385 ppm	92.277 %	2.2 %	1.0 ppm
Ni 231.604 {445} (Axial)	12,361 cps	2.4625 ppm	98.501 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	30,376 cps	50.0874 ppm	100.175 %	2.5 %	1.3 ppm
Se 196.090 {472} (Axial)	586 cps	2.3437 ppm	93.748 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,576 cps	0.4618 ppm	92.355 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,441 cps	0.4919 ppm	98.379 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	635 cps	0.4948 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	690 cps	0.4283 ppm	85.653 %	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	9,168 cps	0.4766 ppm	95.311 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,990 cps	1.2166 ppm	97.327 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.1381 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		92.5173 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	137 cps	2.3698 ppm	94.791 %	2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	219 cps	0.5089 ppm	101.789 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	3,408 cps	2.2673 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4763 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	893 cps	2.3938 ppm	95.751 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,362 cps	2.2539 ppm	90.154 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	280 cps	2.3775 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	610 cps	0.4958 ppm	99.150 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.9856 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.6444 %		0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 7:28:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	338 cps	0.5006 ppm	100.126 %	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	217 cps	0.4844 ppm	96.881 %	0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	120,345 cps	2.5066 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	107,910 cps	2.4753 ppm	99.011 %	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	210,318 cps	0.4752 ppm	95.045 %	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	874 cps	2.3578 ppm	94.313 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,929 cps	0.4958 ppm	99.165 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,195 cps	0.4689 ppm	93.777 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,953 cps	0.5183 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	24,703 cps	2.4406 ppm	97.622 %	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	66,534 cps	2.4828 ppm	99.311 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	937 cps	2.5967 ppm	103.868 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	34,800 cps	2.5102 ppm	100.408 %	2.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	38,776 cps	0.4708 ppm	94.151 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,267 cps	2.4909 ppm	99.636 %	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	101,832 cps	48.0973 ppm	96.195 %	2.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	12,380 cps	2.4664 ppm	98.657 %	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	31,558 cps	52.0351 ppm	104.070 %	1.9 %	1.0 ppm
Se 196.090 {472} (Axial)	580 cps	2.3200 ppm	92.801 %	0.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,775 cps	0.4757 ppm	95.149 %	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,645 cps	0.5120 ppm	102.401 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	639 cps	0.4972 ppm		0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	715 cps	0.4437 ppm	88.745 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	9,462 cps	0.4918 ppm	98.368 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,005 cps	1.2178 ppm	97.426 %	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7324 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.5373 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	144 cps	2.4876 ppm	99.503 %	1.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	219 cps	0.5088 ppm	101.766 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,438 cps	2.2873 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.3378 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	935 cps	2.5065 ppm	100.261 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,420 cps	2.3501 ppm	94.003 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	294 cps	2.4996 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	612 cps	0.4969 ppm	99.372 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.7890 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.4546 %		0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 7:33:09 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	337 cps	0.4997 ppm	99.933 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	216 cps	0.4825 ppm	96.509 %	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	112,306 cps	2.3392 ppm		1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	101,524 cps	2.3288 ppm	93.152 %	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	203,068 cps	0.4588 ppm	91.769 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	827 cps	2.2321 ppm	89.283 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,891 cps	0.4931 ppm	98.619 %	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,030 cps	0.4539 ppm	90.789 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,926 cps	0.5148 ppm		1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	24,511 cps	2.4216 ppm	96.864 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	63,997 cps	2.3881 ppm	95.525 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	869 cps	2.4089 ppm	96.356 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	32,522 cps	2.3459 ppm	93.835 %	1.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,403 cps	0.4541 ppm	90.817 %	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,212 cps	2.4743 ppm	98.971 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	95,232 cps	44.9802 ppm	89.960 %	1.8 %	0.8 ppm
Ni 231.604 {445} (Axial)	12,296 cps	2.4496 ppm	97.985 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	29,683 cps	48.9440 ppm	97.888 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	577 cps	2.3096 ppm	92.383 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,578 cps	0.4619 ppm	92.373 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,684 cps	0.4793 ppm	95.851 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	634 cps	0.4937 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	670 cps	0.4155 ppm	83.109 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	9,097 cps	0.4729 ppm	94.576 %	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,912 cps	1.2103 ppm	96.822 %	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.2492 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		94.0406 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	134 cps	2.3179 ppm	92.714 %	1.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	217 cps	0.5057 ppm	101.146 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,414 cps	2.2709 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.7014 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	877 cps	2.3516 ppm	94.062 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	1,333 cps	2.2068 ppm	88.272 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	273 cps	2.3217 ppm		1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	608 cps	0.4937 ppm	98.736 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.9571 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.1043 %		0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 8:33:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	337 cps	0.4994 ppm	99.885 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	215 cps	0.4811 ppm	96.211 %	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	117,196 cps	2.4410 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	105,629 cps	2.4229 ppm	96.918 %	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	206,970 cps	0.4677 ppm	93.533 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	861 cps	2.3227 ppm	92.910 %	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,888 cps	0.4929 ppm	98.580 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,118 cps	0.4619 ppm	92.389 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,944 cps	0.5171 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	24,459 cps	2.4165 ppm	96.660 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	65,337 cps	2.4381 ppm	97.525 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	920 cps	2.5498 ppm	101.991 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	33,860 cps	2.4424 ppm	97.695 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	38,124 cps	0.4628 ppm	92.568 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,208 cps	2.4731 ppm	98.926 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	98,703 cps	46.6193 ppm	93.239 %	1.6 %	0.7 ppm
Ni 231.604 {445} (Axial)	12,275 cps	2.4454 ppm	97.814 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	30,792 cps	50.7722 ppm	101.544 %	1.8 %	0.9 ppm
Se 196.090 {472} (Axial)	573 cps	2.2917 ppm	91.668 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,688 cps	0.4696 ppm	93.928 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,981 cps	0.5009 ppm	100.182 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	636 cps	0.4954 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	693 cps	0.4302 ppm	86.042 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	9,287 cps	0.4828 ppm	96.550 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,891 cps	1.2086 ppm	96.687 %	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.2731 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.9791 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	141 cps	2.4310 ppm	97.241 %	1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	218 cps	0.5065 ppm	101.294 %	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,421 cps	2.2754 ppm		0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.4246 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	906 cps	2.4279 ppm	97.117 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1,391 cps	2.3031 ppm	92.126 %	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	286 cps	2.4332 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	606 cps	0.4926 ppm	98.515 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		92.9999 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.8110 %		0.0 %	0.0 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 8:38:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	335 cps	0.4960 ppm	99.207 %	0.4 %	0.0 ppm
As 189.042 {478} (Axial)	215 cps	0.4796 ppm	95.914 %	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	116,454 cps	2.4256 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	104,831 cps	2.4046 ppm	96.186 %	2.3 %	0.1 ppm
Be 313.042 {108} (Axial)	203,822 cps	0.4606 ppm	92.110 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	853 cps	2.3018 ppm	92.073 %	2.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,875 cps	0.4919 ppm	98.385 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,044 cps	0.4552 ppm	91.044 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,931 cps	0.5154 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	24,435 cps	2.4141 ppm	96.566 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	64,309 cps	2.3997 ppm	95.990 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	904 cps	2.5069 ppm	100.276 %	2.0 %	0.0 ppm
Li 670.784 {50} (Radial)	33,640 cps	2.4265 ppm	97.061 %	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	37,508 cps	0.4554 ppm	91.072 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,194 cps	2.4687 ppm	98.749 %	0.8 %	0.0 ppm
Na 589.592 {57} (Radial)	98,078 cps	46.3244 ppm	92.649 %	2.7 %	1.3 ppm
Ni 231.604 {445} (Axial)	12,257 cps	2.4419 ppm	97.674 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	30,490 cps	50.2744 ppm	100.549 %	2.8 %	1.4 ppm
Se 196.090 {472} (Axial)	572 cps	2.2879 ppm	91.515 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,611 cps	0.4642 ppm	92.846 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,736 cps	0.4968 ppm	99.363 %	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	635 cps	0.4941 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	694 cps	0.4306 ppm	86.123 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	9,154 cps	0.4758 ppm	95.161 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,865 cps	1.2065 ppm	96.517 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.6562 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.6754 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	140 cps	2.4143 ppm	96.573 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	217 cps	0.5045 ppm	100.894 %	0.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,415 cps	2.2714 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.2362 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	903 cps	2.4192 ppm	96.768 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,386 cps	2.2943 ppm	91.774 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	285 cps	2.4258 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	606 cps	0.4927 ppm	98.534 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		93.2254 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.2238 %		0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 9:38:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	333 cps	0.4943 ppm	98.859 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	215 cps	0.4797 ppm	95.933 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	115,794 cps	2.4118 ppm		3.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	104,187 cps	2.3899 ppm	95.594 %	3.6 %	0.1 ppm
Be 313.042 {108} (Axial)	207,395 cps	0.4686 ppm	93.725 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	857 cps	2.3131 ppm	92.526 %	3.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,861 cps	0.4909 ppm	98.186 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,140 cps	0.4639 ppm	92.785 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,911 cps	0.5128 ppm		1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	24,496 cps	2.4201 ppm	96.805 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	64,926 cps	2.4228 ppm	96.912 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	908 cps	2.5186 ppm	100.744 %	3.0 %	0.1 ppm
Li 670.784 {50} (Radial)	33,421 cps	2.4107 ppm	96.429 %	3.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	38,223 cps	0.4640 ppm	92.808 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,184 cps	2.4659 ppm	98.634 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	98,225 cps	46.3939 ppm	92.788 %	3.9 %	1.8 ppm
Ni 231.604 {445} (Axial)	12,274 cps	2.4453 ppm	97.811 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	30,295 cps	49.9534 ppm	99.907 %	4.1 %	2.0 ppm
Se 196.090 {472} (Axial)	575 cps	2.3011 ppm	92.042 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,685 cps	0.4694 ppm	93.884 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,495 cps	0.4928 ppm	98.558 %	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	634 cps	0.4940 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	696 cps	0.4321 ppm	86.426 %	3.6 %	0.0 ppm
V 292.402 {115} (Axial)	9,288 cps	0.4828 ppm	96.563 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,865 cps	1.2065 ppm	96.520 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.5064 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.2754 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	141 cps	2.4224 ppm	96.896 %	3.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	217 cps	0.5048 ppm	100.969 %	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,429 cps	2.2814 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2371 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	900 cps	2.4134 ppm	96.537 %	3.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,382 cps	2.2870 ppm	91.481 %	3.4 %	0.1 ppm
Si 251.611 {134} (Radial)	285 cps	2.4195 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	607 cps	0.4934 ppm	98.675 %	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.5169 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.4447 %		0.9 %	0.9 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 9:43:46 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	331 cps	0.4904 ppm	98.082 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	213 cps	0.4757 ppm	95.142 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	111,388 cps	2.3200 ppm		1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	100,225 cps	2.2990 ppm	91.959 %	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	201,591 cps	0.4555 ppm	91.102 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	827 cps	2.2310 ppm	89.239 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,804 cps	0.4869 ppm	97.377 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,997 cps	0.4510 ppm	90.198 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,871 cps	0.5076 ppm		1.9 %	0.0 ppm
Co 228.616 {447} (Axial)	24,289 cps	2.3997 ppm	95.989 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	63,332 cps	2.3633 ppm	94.532 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	863 cps	2.3912 ppm	95.648 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	32,196 cps	2.3223 ppm	92.893 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,202 cps	0.4516 ppm	90.329 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,114 cps	2.4448 ppm	97.791 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	94,691 cps	44.7244 ppm	89.449 %	2.3 %	1.0 ppm
Ni 231.604 {445} (Axial)	12,168 cps	2.4242 ppm	96.966 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	29,256 cps	48.2393 ppm	96.479 %	2.5 %	1.2 ppm
Se 196.090 {472} (Axial)	570 cps	2.2823 ppm	91.293 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,499 cps	0.4563 ppm	91.265 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	28,349 cps	0.4737 ppm	94.731 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	627 cps	0.4883 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	671 cps	0.4162 ppm	83.242 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	9,027 cps	0.4692 ppm	93.846 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,745 cps	1.1967 ppm	95.739 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0885 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.9398 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	134 cps	2.3118 ppm	92.472 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	216 cps	0.5024 ppm	100.488 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,392 cps	2.2567 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0047 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	869 cps	2.3284 ppm	93.138 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	1,325 cps	2.1938 ppm	87.753 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	273 cps	2.3197 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	603 cps	0.4898 ppm	97.967 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.4334 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.6653 %		0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:54:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0001 ppm	767.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	65.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	55 cps	0.0011 ppm	21.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	382 cps	0.0088 ppm	4.2 %	0.0 ppm
Be 313.042 {108} (Axial)	68 cps	0.0002 ppm	4.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	7 cps	0.0184 ppm	38.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0007 ppm	4.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-4 cps	-0.0003 ppm	28.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	73.0 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	92.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	66 cps	0.0025 ppm	10.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0089 ppm	31.0 %	0.0 ppm
Li 670.784 {50} (Radial)	39 cps	0.0028 ppm	9.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0001 ppm	6.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	23.2 %	0.0 ppm
Na 589.592 {57} (Radial)	38 cps	0.0181 ppm	58.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	73.3 %	0.0 ppm
K 766.490 {44} (Radial)	66 cps	0.1089 ppm	21.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0009 ppm	115.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	22 cps	0.0016 ppm	6.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	22 cps	0.0004 ppm	23.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	31.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0009 ppm	84.4 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0004 ppm	24.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	245.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.3823 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		101.9864 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	2 cps	0.0319 ppm	62.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	71.8 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0032 ppm	5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.8104 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	4 cps	0.0097 ppm	29.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0072 ppm	103.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0117 ppm	66.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	74.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8998 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		102.6616 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 12:00:42 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	46.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0001 ppm	936.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	54 cps	0.0011 ppm	18.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	406 cps	0.0093 ppm	5.8 %	0.0 ppm
Be 313.042 {108} (Axial)	52 cps	0.0001 ppm	15.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0105 ppm	45.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0007 ppm	13.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	216.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	123.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	56.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	59 cps	0.0022 ppm	14.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0067 ppm	26.4 %	0.0 ppm
Li 670.784 {50} (Radial)	54 cps	0.0039 ppm	22.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	23.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	16.7 %	0.0 ppm
Na 589.592 {57} (Radial)	18 cps	0.0085 ppm	88.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	23.7 %	0.0 ppm
K 766.490 {44} (Radial)	94 cps	0.1547 ppm	22.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0007 ppm	204.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	20 cps	0.0014 ppm	9.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0003 ppm	12.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	282.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0005 ppm	56.6 %	0.0 ppm
V 292.402 {115} (Axial)	-11 cps	-0.0006 ppm	23.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	485.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.9209 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		101.9912 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0133 ppm	67.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	26.1 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0033 ppm	3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9356 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	5 cps	0.0131 ppm	27.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-6 cps	-0.0101 ppm	129.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0082 ppm	124.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0007 ppm	53.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7729 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.4309 %	0.2 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 1:07:57 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0005 ppm	66.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	266.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	55 cps	0.0011 ppm	31.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	340 cps	0.0078 ppm	10.9 %	0.0 ppm
Be 313.042 {108} (Axial)	58 cps	0.0001 ppm	21.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0106 ppm	89.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0006 ppm	14.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	327.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	21.0 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	341.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	56 cps	0.0021 ppm	18.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0084 ppm	11.0 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0026 ppm	21.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	59.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	26.2 %	0.0 ppm
Na 589.592 {57} (Radial)	32 cps	0.0151 ppm	22.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	69.0 %	0.0 ppm
K 766.490 {44} (Radial)	64 cps	0.1048 ppm	24.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0014 ppm	205.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	19 cps	0.0014 ppm	28.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	16 cps	0.0003 ppm	26.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	282.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0016 ppm	50.7 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	24.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	0.0000 ppm	95.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.5460 %	1.0 %	1.1 %
Sc 188.060 {479} (Axial)		102.9341 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1 cps	0.0149 ppm	20.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	176.1 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0034 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.5779 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	4 cps	0.0105 ppm	8.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-8 cps	-0.0135 ppm	19.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0046 ppm	204.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	4,656.5 %	0.0 ppm
Y 224.306 {450} (Axial)		98.5309 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.3934 %	0.3 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 2:14:57 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	172.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	1,221.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	47 cps	0.0010 ppm	42.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	332 cps	0.0076 ppm	3.3 %	0.0 ppm
Be 313.042 {108} (Axial)	49 cps	0.0001 ppm	13.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0121 ppm	32.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	8 cps	0.0006 ppm	21.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	329.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	253.5 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	62.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	57 cps	0.0021 ppm	9.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0067 ppm	47.1 %	0.0 ppm
Li 670.784 {50} (Radial)	56 cps	0.0041 ppm	6.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0001 ppm	17.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	30.1 %	0.0 ppm
Na 589.592 {57} (Radial)	121 cps	0.0570 ppm	8.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	65.8 %	0.0 ppm
K 766.490 {44} (Radial)	114 cps	0.1877 ppm	3.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0004 ppm	81.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0012 ppm	20.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	21 cps	0.0004 ppm	14.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0004 ppm	84.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0012 ppm	25.8 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	58.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	65.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.1079 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		105.1703 %	0.1 %	0.2 %
Mg 279.079 {121} (Radial)	2 cps	0.0313 ppm	78.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	218.6 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0032 ppm	5.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.1913 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0146 ppm	13.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-10 cps	-0.0167 ppm	25.5 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0131 ppm	48.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	68.6 %	0.0 ppm
Y 224.306 {450} (Axial)		101.1052 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.5414 %	0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 3:22:01 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	90.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	135.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	50 cps	0.0011 ppm	26.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	302 cps	0.0069 ppm	8.5 %	0.0 ppm
Be 313.042 {108} (Axial)	56 cps	0.0001 ppm	21.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0102 ppm	37.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	8 cps	0.0006 ppm	13.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	50.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	1,308.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	140.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	58 cps	0.0022 ppm	5.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0047 ppm	52.7 %	0.0 ppm
Li 670.784 {50} (Radial)	59 cps	0.0042 ppm	14.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	44.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	34.1 %	0.0 ppm
Na 589.592 {57} (Radial)	170 cps	0.0803 ppm	4.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	44.9 %	0.0 ppm
K 766.490 {44} (Radial)	116 cps	0.1914 ppm	16.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0002 ppm	779.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0012 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	16 cps	0.0003 ppm	12.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	85.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0002 ppm	345.7 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	31.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	96.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.2853 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		106.1030 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0218 ppm	78.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	129.3 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0033 ppm	8.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.7495 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	3 cps	0.0079 ppm	31.7 %	0.0 ppm
Al 396.152 {85} (Radial)	-5 cps	-0.0076 ppm	75.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0053 ppm	52.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	52.7 %	0.0 ppm
Y 224.306 {450} (Axial)		101.3717 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		101.6261 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 3:13:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0002 ppm	137.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	113.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	45 cps	0.0009 ppm	48.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	431 cps	0.0099 ppm	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	54 cps	0.0001 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	6 cps	0.0169 ppm	41.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	12.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	150.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	114.7 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	2,044.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	47 cps	0.0017 ppm	5.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0035 ppm	73.0 %	0.0 ppm
Li 670.784 {50} (Radial)	49 cps	0.0035 ppm	25.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	24.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0008 ppm	28.7 %	0.0 ppm
Na 589.592 {57} (Radial)	25 cps	0.0120 ppm	107.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	137.4 %	0.0 ppm
K 766.490 {44} (Radial)	67 cps	0.1108 ppm	10.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0002 ppm	721.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	13 cps	0.0009 ppm	19.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13 cps	0.0002 ppm	38.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	2,115.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0016 ppm	34.0 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	4.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	118.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.0917 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.4282 %	1.0 %	1.0 %
Mg 279.079 {121} (Radial)	1 cps	0.0225 ppm	68.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	104.4 %	0.0 ppm
Al 167.079 {502} (Axial)	-4 cps	-0.0028 ppm	5.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.5791 %	1.1 %	1.0 %
B 249.773 {135} (Radial)	7 cps	0.0189 ppm	15.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0060 ppm	109.7 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0008 ppm	302.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	882.7 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0292 %	1.0 %	0.9 %
Sc 361.384 {93} (Radial)		98.5516 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 4:28:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	3,327.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	372.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	41 cps	0.0008 ppm	18.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	309 cps	0.0071 ppm	6.0 %	0.0 ppm
Be 313.042 {108} (Axial)	46 cps	0.0001 ppm	18.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0097 ppm	70.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	8 cps	0.0006 ppm	15.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	28.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	67.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	91.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	57 cps	0.0021 ppm	9.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0091 ppm	11.9 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0030 ppm	4.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	5 cps	0.0001 ppm	56.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0011 ppm	27.5 %	0.0 ppm
Na 589.592 {57} (Radial)	74 cps	0.0350 ppm	32.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0003 ppm	17.4 %	0.0 ppm
K 766.490 {44} (Radial)	90 cps	0.1484 ppm	20.7 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0021 ppm	55.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	20 cps	0.0014 ppm	21.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	21 cps	0.0004 ppm	27.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	120.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	78.0 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	64.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	-2 cps	-0.0001 ppm	26.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		106.1220 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		105.8077 %	0.3 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0250 ppm	127.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	147.9 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0035 ppm	2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2588 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	7 cps	0.0200 ppm	18.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-6 cps	-0.0096 ppm	17.7 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0068 ppm	103.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0007 ppm	91.3 %	0.0 ppm
Y 224.306 {450} (Axial)		101.1173 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		102.2942 %	0.9 %	0.9 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 5:36:13 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0005 ppm	89.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	63.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	44 cps	0.0009 ppm	77.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	324 cps	0.0074 ppm	20.5 %	0.0 ppm
Be 313.042 {108} (Axial)	35 cps	0.0001 ppm	26.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0145 ppm	23.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0007 ppm	11.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	51.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	227.4 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	162.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	58 cps	0.0022 ppm	19.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0081 ppm	18.2 %	0.0 ppm
Li 670.784 {50} (Radial)	44 cps	0.0032 ppm	27.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	38.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0011 ppm	28.7 %	0.0 ppm
Na 589.592 {57} (Radial)	53 cps	0.0248 ppm	33.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0003 ppm	9.3 %	0.0 ppm
K 766.490 {44} (Radial)	85 cps	0.1399 ppm	23.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0011 ppm	131.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0011 ppm	27.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	24 cps	0.0004 ppm	11.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	501.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0009 ppm	13.9 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	23.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	-2 cps	-0.0001 ppm	9.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.6467 %	1.0 %	1.1 %
Sc 188.060 {479} (Axial)		110.0310 %	0.3 %	0.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0332 ppm	110.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0006 ppm	105.9 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0035 ppm	5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		105.2944 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	6 cps	0.0150 ppm	23.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-8 cps	-0.0125 ppm	60.8 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0156 ppm	77.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0004 ppm	15.7 %	0.0 ppm
Y 224.306 {450} (Axial)		104.1337 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.1733 %	2.1 %	2.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 6:06:46 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0008 ppm	89.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0011 ppm	25.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	41 cps	0.0008 ppm	2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	123 cps	0.0028 ppm	5.4 %	0.0 ppm
Be 313.042 {108} (Axial)	27 cps	0.0001 ppm	30.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0051 ppm	28.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0006 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	188.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	66.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	184.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	43 cps	0.0016 ppm	12.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0060 ppm	41.7 %	0.0 ppm
Li 670.784 {50} (Radial)	35 cps	0.0025 ppm	24.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	58.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	20.0 %	0.0 ppm
Na 589.592 {57} (Radial)	18 cps	0.0085 ppm	51.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	104.3 %	0.0 ppm
K 766.490 {44} (Radial)	50 cps	0.0831 ppm	20.1 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0024 ppm	108.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	18 cps	0.0013 ppm	5.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	13 cps	0.0002 ppm	36.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	641.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0010 ppm	27.1 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	26.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-2 cps	-0.0002 ppm	16.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.6389 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		110.6281 %	0.3 %	0.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0273 ppm	114.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	1,455.7 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0034 ppm	3.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		105.7006 %	0.2 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0106 ppm	27.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0069 ppm	114.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0044 ppm	220.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0011 ppm	32.9 %	0.0 ppm
Y 224.306 {450} (Axial)		104.7918 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.3828 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 4:19:12 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0009 ppm	93.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	425.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	34 cps	0.0007 ppm	24.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	477 cps	0.0109 ppm	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	64 cps	0.0001 ppm	15.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0058 ppm	83.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0004 ppm	7.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	221.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	36.0 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	627.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	58 cps	0.0022 ppm	13.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0049 ppm	57.2 %	0.0 ppm
Li 670.784 {50} (Radial)	50 cps	0.0036 ppm	16.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	39.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	37.0 %	0.0 ppm
Na 589.592 {57} (Radial)	38 cps	0.0180 ppm	64.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0003 ppm	25.6 %	0.0 ppm
K 766.490 {44} (Radial)	69 cps	0.1135 ppm	14.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0012 ppm	88.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0010 ppm	23.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13 cps	0.0002 ppm	38.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	100.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0005 ppm	262.0 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0004 ppm	12.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	393.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8415 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		95.8710 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	2 cps	0.0291 ppm	37.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0014 ppm	5.5 %	0.0 ppm
Al 167.079 {502} (Axial)	-4 cps	-0.0030 ppm	3.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.7792 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	4 cps	0.0096 ppm	42.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-9 cps	-0.0141 ppm	15.3 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0169 ppm	14.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	62.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.4716 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		99.7697 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 5:25:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0001 ppm	2,066.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	357.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	42 cps	0.0009 ppm	28.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	414 cps	0.0095 ppm	0.1 %	0.0 ppm
Be 313.042 {108} (Axial)	67 cps	0.0002 ppm	14.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0116 ppm	58.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	8 cps	0.0006 ppm	5.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	48.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	108.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	94.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	61 cps	0.0023 ppm	11.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0058 ppm	26.8 %	0.0 ppm
Li 670.784 {50} (Radial)	45 cps	0.0032 ppm	26.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	14.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	49.4 %	0.0 ppm
Na 589.592 {57} (Radial)	38 cps	0.0180 ppm	73.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0003 ppm	39.2 %	0.0 ppm
K 766.490 {44} (Radial)	77 cps	0.1272 ppm	17.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0002 ppm	1,384.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	13 cps	0.0009 ppm	25.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	17 cps	0.0003 ppm	28.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	180.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0011 ppm	41.4 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	59.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	236.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.3558 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		96.4889 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0248 ppm	29.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	24.5 %	0.0 ppm
Al 167.079 {502} (Axial)	-4 cps	-0.0029 ppm	5.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.5330 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0127 ppm	25.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-6 cps	-0.0093 ppm	100.9 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0150 ppm	14.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	453.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.3581 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.2587 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 6:32:10 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0004 ppm	327.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	201.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	41 cps	0.0009 ppm	38.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	433 cps	0.0099 ppm	4.3 %	0.0 ppm
Be 313.042 {108} (Axial)	56 cps	0.0001 ppm	22.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	-0.0007 ppm	595.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0007 ppm	19.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	1,913.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	645.1 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	137.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	62 cps	0.0023 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0045 ppm	83.0 %	0.0 ppm
Li 670.784 {50} (Radial)	44 cps	0.0031 ppm	17.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	85.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	28.0 %	0.0 ppm
Na 589.592 {57} (Radial)	21 cps	0.0098 ppm	85.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	50.3 %	0.0 ppm
K 766.490 {44} (Radial)	89 cps	0.1467 ppm	14.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	444.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0012 ppm	27.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0002 ppm	17.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	83.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0009 ppm	82.3 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0005 ppm	23.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	33.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.6671 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		100.3745 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	2 cps	0.0350 ppm	56.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,021.9 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0034 ppm	5.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7352 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0120 ppm	37.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0031 ppm	175.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0009 ppm	289.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0008 ppm	41.1 %	0.0 ppm
Y 224.306 {450} (Axial)		97.0088 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.8582 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:37:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0019 ppm	50.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0009 ppm	15.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	39 cps	0.0008 ppm	20.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	527 cps	0.0121 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	77 cps	0.0002 ppm	2.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0058 ppm	53.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0007 ppm	12.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	22.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	216.4 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	505.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	73 cps	0.0027 ppm	8.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0074 ppm	30.1 %	0.0 ppm
Li 670.784 {50} (Radial)	40 cps	0.0029 ppm	9.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	16.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	24.4 %	0.0 ppm
Na 589.592 {57} (Radial)	8 cps	0.0038 ppm	50.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	28.4 %	0.0 ppm
K 766.490 {44} (Radial)	77 cps	0.1266 ppm	12.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	264.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0012 ppm	17.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0002 ppm	38.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	360.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0012 ppm	43.4 %	0.0 ppm
V 292.402 {115} (Axial)	-10 cps	-0.0005 ppm	41.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	214.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.9390 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.7549 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	2 cps	0.0299 ppm	64.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	310.7 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0035 ppm	8.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.7172 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0099 ppm	38.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0064 ppm	46.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0055 ppm	118.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0005 ppm	102.2 %	0.0 ppm
Y 224.306 {450} (Axial)		95.1139 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.0813 %	0.7 %	0.7 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:43:12 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0008 ppm	177.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	167.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	40 cps	0.0008 ppm	36.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	347 cps	0.0080 ppm	12.5 %	0.0 ppm
Be 313.042 {108} (Axial)	60 cps	0.0001 ppm	6.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0046 ppm	83.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0007 ppm	10.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	16.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	35.4 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	328.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	64 cps	0.0024 ppm	5.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0060 ppm	27.0 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0028 ppm	6.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	8.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	42.1 %	0.0 ppm
Na 589.592 {57} (Radial)	2 cps	0.0009 ppm	863.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	38.5 %	0.0 ppm
K 766.490 {44} (Radial)	62 cps	0.1022 ppm	23.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0014 ppm	57.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	20 cps	0.0014 ppm	15.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0002 ppm	35.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	581.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0020 ppm	22.0 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0004 ppm	18.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	65.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.2083 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		102.1077 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	-0.0058 ppm	101.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	195.6 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0035 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.7274 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	5 cps	0.0122 ppm	34.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-6 cps	-0.0096 ppm	4.5 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0157 ppm	4.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0009 ppm	33.1 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8321 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.6427 %	0.6 %	0.6 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:48:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0008 ppm	53.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	202.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	49 cps	0.0010 ppm	14.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	380 cps	0.0087 ppm	11.0 %	0.0 ppm
Be 313.042 {108} (Axial)	61 cps	0.0001 ppm	33.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0053 ppm	74.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	8 cps	0.0006 ppm	5.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	151.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	237.2 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	41.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	60 cps	0.0022 ppm	8.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0084 ppm	35.3 %	0.0 ppm
Li 670.784 {50} (Radial)	37 cps	0.0027 ppm	29.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	35.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	39.7 %	0.0 ppm
Na 589.592 {57} (Radial)	-6 cps	-0.0027 ppm	210.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	262.1 %	0.0 ppm
K 766.490 {44} (Radial)	79 cps	0.1299 ppm	34.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0013 ppm	121.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0010 ppm	3.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	16 cps	0.0003 ppm	26.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	329.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0001 ppm	755.6 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	90.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	84.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.4869 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		100.3732 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0204 ppm	61.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	308.2 %	0.0 ppm
Al 167.079 {502} (Axial)	-5 cps	-0.0034 ppm	3.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.4172 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	5 cps	0.0126 ppm	19.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-7 cps	-0.0114 ppm	40.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0098 ppm	23.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0005 ppm	148.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.8971 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.3099 %	0.9 %	0.9 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/20/2020 3:18:40 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0049 ppm	98.572 %	5.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0044 ppm	87.611 %	4.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	251 cps	0.0052 ppm		2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	645 cps	0.0148 ppm		9.2 %	0.0 ppm
Be 313.042 {108} (Axial)	851 cps	0.0019 ppm	96.109 %	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	186 cps	0.5011 ppm	100.223 %	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	139 cps	0.0099 ppm	99.406 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	49 cps	0.0044 ppm	88.903 %	6.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	39 cps	0.0051 ppm	101.549 %	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	50 cps	0.0049 ppm	98.184 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	307 cps	0.0115 ppm	114.700 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	30 cps	0.0828 ppm	103.544 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	162 cps	0.0117 ppm	116.802 %	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	415 cps	0.0050 ppm	100.799 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	18 cps	0.0053 ppm	106.895 %	2.8 %	0.0 ppm
Na 589.592 {57} (Radial)	410 cps	0.1938 ppm	96.883 %	3.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0051 ppm	102.097 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	161 cps	0.2656 ppm	132.815 %	3.2 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0095 ppm	95.202 %	21.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	78 cps	0.0055 ppm	109.364 %	6.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	313 cps	0.0052 ppm	104.493 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	12 cps	0.0096 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0050 ppm	100.067 %	23.3 %	0.0 ppm
V 292.402 {115} (Axial)	84 cps	0.0044 ppm	87.634 %	6.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	118 cps	0.0096 ppm	96.139 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2438 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		96.0204 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	13 cps	0.2240 ppm	112.007 %	3.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0099 ppm	98.906 %	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0060 ppm		2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.2364 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	9 cps	0.0251 ppm	125.591 %	16.1 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0010 ppm		756.2 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.2309 ppm		2.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	8 cps	0.0062 ppm	124.432 %	4.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5408 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.7693 %		0.7 %	0.7 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/20/2020 3:23:51 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0061 ppm	122.946 %	27.0 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0039 ppm	77.394 %	15.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	247 cps	0.0051 ppm		5.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	684 cps	0.0157 ppm		2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	875 cps	0.0020 ppm	98.810 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	183 cps	0.4927 ppm	98.546 %	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	139 cps	0.0100 ppm	99.514 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	51 cps	0.0046 ppm	91.904 %	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	39 cps	0.0051 ppm	102.267 %	2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0049 ppm	97.531 %	2.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	316 cps	0.0118 ppm	117.970 %	2.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	30 cps	0.0830 ppm	103.778 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	172 cps	0.0124 ppm	124.133 %	4.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	422 cps	0.0051 ppm	102.380 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	17 cps	0.0052 ppm	103.858 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	419 cps	0.1979 ppm	98.938 %	1.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0051 ppm	101.177 %	3.9 %	0.0 ppm
K 766.490 {44} (Radial)	156 cps	0.2569 ppm	128.469 %	4.3 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0077 ppm	77.448 %	16.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	84 cps	0.0059 ppm	117.570 %	3.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	313 cps	0.0052 ppm	104.466 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0098 ppm		5.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0049 ppm	97.148 %	28.7 %	0.0 ppm
V 292.402 {115} (Axial)	91 cps	0.0047 ppm	94.803 %	3.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	119 cps	0.0096 ppm	96.262 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.3388 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.7496 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	12 cps	0.2046 ppm	102.304 %	7.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0104 ppm	104.401 %	4.0 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0060 ppm		3.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.7409 %		0.4 %	0.3 %
B 249.773 {135} (Radial)	10 cps	0.0267 ppm	133.696 %	10.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-5 cps	-0.0089 ppm		47.6 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.2295 ppm		4.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0060 ppm	120.656 %	4.8 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2345 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.9103 %		0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/20/2020 2:32:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0045 ppm	89.133 %	21.0 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0053 ppm	105.452 %	7.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	253 cps	0.0053 ppm		3.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	523 cps	0.0120 ppm		2.7 %	0.0 ppm
Be 313.042 {108} (Axial)	889 cps	0.0020 ppm	100.461 %	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	187 cps	0.5059 ppm	101.182 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	139 cps	0.0100 ppm	99.648 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	52 cps	0.0047 ppm	93.849 %	2.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	40 cps	0.0052 ppm	103.802 %	1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	50 cps	0.0049 ppm	98.703 %	2.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	309 cps	0.0115 ppm	115.491 %	3.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	30 cps	0.0818 ppm	102.232 %	3.5 %	0.0 ppm
Li 670.784 {50} (Radial)	179 cps	0.0129 ppm	128.958 %	6.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	434 cps	0.0053 ppm	105.429 %	3.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	17 cps	0.0052 ppm	104.501 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	437 cps	0.2063 ppm	103.165 %	2.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0051 ppm	101.821 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	178 cps	0.2942 ppm	147.114 %	12.2 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0073 ppm	73.291 %	20.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	80 cps	0.0056 ppm	112.456 %	3.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	312 cps	0.0052 ppm	104.375 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0102 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	10 cps	0.0059 ppm	118.545 %	11.9 %	0.0 ppm
V 292.402 {115} (Axial)	93 cps	0.0048 ppm	96.455 %	5.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	122 cps	0.0099 ppm	98.919 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.5600 %		1.3 %	1.3 %
Sc 188.060 {479} (Axial)		96.1087 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	12 cps	0.2131 ppm	106.535 %	2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0102 ppm	102.207 %	19.0 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0062 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.8440 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	9 cps	0.0251 ppm	125.608 %	19.9 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0018 ppm		252.5 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.2382 ppm		2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0056 ppm	111.827 %	9.9 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1521 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.7649 %		0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/20/2020 2:37:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0052 ppm	103.625 %	17.9 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0043 ppm	85.070 %	30.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	254 cps	0.0053 ppm		6.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	548 cps	0.0126 ppm		1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	879 cps	0.0020 ppm	99.313 %	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	187 cps	0.5051 ppm	101.028 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	137 cps	0.0098 ppm	98.233 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	55 cps	0.0050 ppm	99.300 %	4.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	39 cps	0.0051 ppm	102.557 %	1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0048 ppm	96.812 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	304 cps	0.0113 ppm	113.364 %	2.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	30 cps	0.0830 ppm	103.760 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	176 cps	0.0127 ppm	126.785 %	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	429 cps	0.0052 ppm	104.234 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	17 cps	0.0051 ppm	101.358 %	3.6 %	0.0 ppm
Na 589.592 {57} (Radial)	431 cps	0.2034 ppm	101.710 %	1.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0049 ppm	98.281 %	4.1 %	0.0 ppm
K 766.490 {44} (Radial)	163 cps	0.2680 ppm	133.982 %	5.0 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0081 ppm	81.240 %	39.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	80 cps	0.0056 ppm	112.911 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	306 cps	0.0051 ppm	102.351 %	0.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0099 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	9 cps	0.0056 ppm	112.069 %	10.8 %	0.0 ppm
V 292.402 {115} (Axial)	89 cps	0.0046 ppm	92.348 %	3.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	119 cps	0.0096 ppm	96.271 %	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.0583 %		1.2 %	1.2 %
Sc 188.060 {479} (Axial)		97.6310 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	13 cps	0.2205 ppm	110.226 %	9.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0103 ppm	102.691 %	3.6 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0060 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2552 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	9 cps	0.0239 ppm	119.574 %	11.1 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0036 ppm		97.6 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.2360 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	8 cps	0.0063 ppm	125.134 %	9.4 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1676 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.6984 %		0.6 %	0.6 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-42A

Sample type: UNKNOWN Analysis started at: 11/20/2020 4:29:32 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0193 ppm	52.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0087 ppm	78.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	273 cps	0.0568 ppm	4.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	642 cps	0.1472 ppm	3.6 %	0.0 ppm
Be 313.042 {108} (Axial)	43 cps	0.0010 ppm	11.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	458 cps	12.3545 ppm	1.6 %	0.2 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0122 ppm	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0008 ppm	158.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0010 ppm	80.0 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0005 ppm	118.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	60 cps	0.0225 ppm	12.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0010 ppm	1,799.4 %	0.0 ppm
Li 670.784 {50} (Radial)	4 cps	0.0032 ppm	102.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	365 cps	0.0443 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0010 ppm	56.9 %	0.0 ppm
Na 589.592 {57} (Radial)	27,233 cps	128.6290 ppm	2.0 %	2.6 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0037 ppm	35.2 %	0.0 ppm
K 766.490 {44} (Radial)	24 cps	0.3919 ppm	26.9 %	0.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0272 ppm	65.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0112 ppm	5.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	149 cps	0.0249 ppm	4.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0015 ppm	251.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0001 ppm	19,499.6 %	0.0 ppm
V 292.402 {115} (Axial)	-10 cps	-0.0051 ppm	37.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,577 cps	3.7149 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.4603 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.5195 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	8 cps	1.4238 ppm	0.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0192 ppm	9.1 %	0.0 ppm
Al 167.079 {502} (Axial)	-6 cps	-0.0373 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.4858 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1 cps	0.0304 ppm	138.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-8 cps	-0.1342 ppm	26.9 %	0.0 ppm
Si 251.611 {134} (Radial)	5 cps	0.4112 ppm	31.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	719 cps	5.8417 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0984 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.8542 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-42AMS

Sample type: UNKNOWN Analysis started at: 11/20/2020 4:34:41 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.0996 ppm	7.3 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0793 ppm	8.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	719 cps	0.1498 ppm	0.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	997 cps	0.2286 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	3,708 cps	0.0838 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	776 cps	20.9541 ppm	0.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	142 cps	0.1015 ppm	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	96 cps	0.0866 ppm	3.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	72 cps	0.0947 ppm	3.4 %	0.0 ppm
Co 228.616 {447} (Axial)	91 cps	0.0902 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	304 cps	0.1134 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	338 cps	9.3793 ppm	0.6 %	0.1 ppm
Li 670.784 {50} (Radial)	138 cps	0.0997 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,094 cps	0.1328 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	32 cps	0.0955 ppm	3.2 %	0.0 ppm
Na 589.592 {57} (Radial)	28,420 cps	134.2353 ppm	1.2 %	1.6 ppm
Ni 231.604 {445} (Axial)	48 cps	0.0955 ppm	2.3 %	0.0 ppm
K 766.490 {44} (Radial)	604 cps	9.9591 ppm	0.9 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0770 ppm	14.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	147 cps	0.1031 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	707 cps	0.1182 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0864 ppm	3.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	14 cps	0.0855 ppm	12.3 %	0.0 ppm
V 292.402 {115} (Axial)	164 cps	0.0852 ppm	3.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,698 cps	3.8131 ppm	2.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.7008 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		94.0320 %	1.0 %	0.9 %
Mg 279.079 {121} (Radial)	62 cps	10.6259 ppm	2.7 %	0.3 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0945 ppm	4.4 %	0.0 ppm
Al 167.079 {502} (Axial)	11 cps	0.0755 ppm	6.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.9931 %	1.0 %	0.9 %
B 249.773 {135} (Radial)	19 cps	0.5207 ppm	6.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0125 ppm	423.5 %	0.1 ppm
Si 251.611 {134} (Radial)	107 cps	9.0715 ppm	0.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	730 cps	5.9301 ppm	2.2 %	0.1 ppm
Y 224.306 {450} (Axial)		94.2347 %	0.6 %	0.5 %
Sc 361.384 {93} (Radial)		102.3969 %	0.6 %	0.6 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-42AMSD

Sample type: UNKNOWN Analysis started at: 11/20/2020 4:39:47 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.1021 ppm	8.9 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0813 ppm	4.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	683 cps	0.1424 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	997 cps	0.2286 ppm	2.7 %	0.0 ppm
Be 313.042 {108} (Axial)	3,489 cps	0.0788 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	734 cps	19.8230 ppm	0.9 %	0.2 ppm
Cd 228.802 {447} (Axial)	135 cps	0.0967 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	88 cps	0.0796 ppm	3.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	69 cps	0.0906 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	87 cps	0.0858 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	298 cps	0.1111 ppm	3.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	319 cps	8.8537 ppm	1.0 %	0.1 ppm
Li 670.784 {50} (Radial)	130 cps	0.0940 ppm	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,037 cps	0.1259 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	30 cps	0.0897 ppm	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	26,886 cps	126.9892 ppm	1.3 %	1.6 ppm
Ni 231.604 {445} (Axial)	45 cps	0.0897 ppm	3.7 %	0.0 ppm
K 766.490 {44} (Radial)	580 cps	9.5665 ppm	2.8 %	0.3 ppm
Se 196.090 {472} (Axial)	2 cps	0.0674 ppm	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	135 cps	0.0944 ppm	3.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	664 cps	0.1109 ppm	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0860 ppm	7.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	13 cps	0.0822 ppm	4.4 %	0.0 ppm
V 292.402 {115} (Axial)	151 cps	0.0785 ppm	4.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,467 cps	3.6256 ppm	1.5 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.4353 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.8911 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	58 cps	9.9311 ppm	2.3 %	0.2 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0789 ppm	16.8 %	0.0 ppm
Al 167.079 {502} (Axial)	69 cps	0.4562 ppm	3.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.7041 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	18 cps	0.4804 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	20 cps	0.3333 ppm	26.3 %	0.1 ppm
Si 251.611 {134} (Radial)	101 cps	8.5585 ppm	1.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	695 cps	5.6509 ppm	1.7 %	0.1 ppm
Y 224.306 {450} (Axial)		94.2785 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.9365 %	0.7 %	0.8 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-38A

Sample type: UNKNOWN Analysis started at: 11/20/2020 6:52:49 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0198 ppm	28.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0045 ppm	17.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	289 cps	0.0601 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	691 cps	0.1585 ppm	6.2 %	0.0 ppm
Be 313.042 {108} (Axial)	128 cps	0.0029 ppm	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,058 cps	28.5426 ppm	1.8 %	0.5 ppm
Cd 228.802 {447} (Axial)	18 cps	0.0126 ppm	8.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0020 ppm	125.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0044 ppm	9.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0009 ppm	31.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	78 cps	0.0291 ppm	8.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.2839 ppm	4.6 %	0.0 ppm
Li 670.784 {50} (Radial)	1 cps	0.0010 ppm	372.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,069 cps	0.1297 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0030 ppm	37.3 %	0.0 ppm
Na 589.592 {57} (Radial)	25,790 cps	121.8105 ppm	2.3 %	2.8 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0067 ppm	14.1 %	0.0 ppm
K 766.490 {44} (Radial)	54 cps	0.8861 ppm	22.1 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0050 ppm	485.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	22 cps	0.0157 ppm	11.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	215 cps	0.0359 ppm	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0017 ppm	266.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0107 ppm	154.1 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	33,913.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,533 cps	5.3026 ppm	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.9070 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		97.0227 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	16 cps	2.6857 ppm	4.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0056 ppm	105.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0141 ppm	13.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.0838 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	2 cps	0.0481 ppm	25.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0624 ppm	123.9 %	0.1 ppm
Si 251.611 {134} (Radial)	23 cps	1.9660 ppm	3.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	80 cps	0.6533 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.1103 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.9842 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

MBLK-168040

Sample type: UNKNOWN Analysis started at: 11/20/2020 6:57:59 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	94.5 %	0.0 ppm
As 189.042 {478} (Axial)	-1 cps	-0.0017 ppm	46.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	7,526.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	481 cps	0.0110 ppm	7.7 %	0.0 ppm
Be 313.042 {108} (Axial)	40 cps	0.0001 ppm	18.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	13 cps	0.0341 ppm	11.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	7 cps	0.0005 ppm	11.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	375.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0006 ppm	11.1 %	0.0 ppm
Co 228.616 {447} (Axial)	-2 cps	-0.0002 ppm	30.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	56 cps	0.0021 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	27 cps	0.0748 ppm	10.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-4 cps	-0.0003 ppm	62.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	40 cps	0.0005 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0002 ppm	50.7 %	0.0 ppm
Na 589.592 {57} (Radial)	-47 cps	-0.0222 ppm	26.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	6.9 %	0.0 ppm
K 766.490 {44} (Radial)	23 cps	0.0381 ppm	7.0 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0040 ppm	77.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	18 cps	0.0012 ppm	12.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	4 cps	0.0001 ppm	64.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	71.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	-0.0002 ppm	608.8 %	0.0 ppm
V 292.402 {115} (Axial)	-11 cps	-0.0006 ppm	33.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13 cps	0.0011 ppm	2.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.9249 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		95.2619 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	0.0078 ppm	158.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0020 ppm	24.9 %	0.0 ppm
Al 167.079 {502} (Axial)	-1 cps	-0.0006 ppm	25.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.5823 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1 cps	0.0027 ppm	92.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-3 cps	-0.0054 ppm	186.1 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0083 ppm	72.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	2 cps	0.0017 ppm	22.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.1543 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.1649 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LCS-168040

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:03:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	68 cps	0.1004 ppm	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	41 cps	0.0915 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,830 cps	0.1006 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,630 cps	0.1062 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	39,763 cps	0.0898 ppm	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,506 cps	9.4630 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,356 cps	0.0970 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,040 cps	0.0938 ppm	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	810 cps	0.1063 ppm	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	989 cps	0.0977 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,734 cps	0.1020 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,719 cps	10.3093 ppm	1.3 %	0.1 ppm
Li 670.784 {50} (Radial)	1,421 cps	0.1025 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,802 cps	0.0947 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	343 cps	0.1035 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	20,141 cps	9.5130 ppm	1.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	491 cps	0.0977 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	6,361 cps	10.4878 ppm	1.9 %	0.2 ppm
Se 196.090 {472} (Axial)	22 cps	0.0862 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,390 cps	0.0976 ppm	0.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,168 cps	0.1031 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	125 cps	0.0974 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	151 cps	0.0936 ppm	3.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,889 cps	0.0982 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,135 cps	0.0921 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.5990 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		92.7188 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	578 cps	9.9699 ppm	1.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	43 cps	0.0992 ppm	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	180 cps	0.1197 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		89.2159 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	191 cps	0.5110 ppm	1.1 %	0.0 ppm
Al 396.152 {85} (Radial)	58 cps	0.0955 ppm	2.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1,097 cps	9.3223 ppm	1.9 %	0.2 ppm
Pb 220.353 {453} (Axial)	128 cps	0.1038 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.1270 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.4327 %	0.5 %	0.6 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-01A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:08:10 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	17 cps	0.2516 ppm	9.3 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1410 ppm	7.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,611 cps	0.7522 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,633 cps	0.8334 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	217 cps	0.0049 ppm	7.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	22,824 cps	616.0439 ppm	0.4 %	2.2 ppm
Cd 228.802 {447} (Axial)	65 cps	0.0465 ppm	3.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	243 cps	0.2196 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	169 cps	0.2217 ppm	3.5 %	0.0 ppm
Co 228.616 {447} (Axial)	69 cps	0.0683 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,105 cps	0.7855 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	8,505 cps	235.7918 ppm	0.4 %	0.9 ppm
Li 670.784 {50} (Radial)	134 cps	0.0968 ppm	3.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	43,682 cps	5.3031 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	9 cps	0.0281 ppm	3.5 %	0.0 ppm
Na 589.592 {57} (Radial)	161 cps	0.7592 ppm	7.8 %	0.1 ppm
Ni 231.604 {445} (Axial)	78 cps	0.1547 ppm	2.4 %	0.0 ppm
K 766.490 {44} (Radial)	769 cps	12.6844 ppm	1.9 %	0.2 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0229 ppm	54.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	34 cps	0.0242 ppm	14.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,247 cps	0.3754 ppm	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	33 cps	0.2568 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	241 cps	1.4978 ppm	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	375 cps	0.1950 ppm	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,269 cps	12.3927 ppm	2.8 %	0.3 ppm
Sc 357.253 {94} (Axial)		98.3781 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.3918 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1,956 cps	337.1153 ppm	0.4 %	1.5 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0169 ppm	53.4 %	0.0 ppm
Al 167.079 {502} (Axial)	7,393 cps	49.1785 ppm	2.2 %	1.1 ppm
Sc 227.318 {448} (Axial)		88.8483 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	21 cps	0.5547 ppm	2.7 %	0.0 ppm
Al 396.152 {85} (Radial)	4,119 cps	68.1742 ppm	0.2 %	0.2 ppm
Si 251.611 {134} (Radial)	138 cps	11.7415 ppm	0.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	480 cps	3.9033 ppm	2.9 %	0.1 ppm
Y 224.306 {450} (Axial)		93.9959 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.4773 %	0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-03A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:13:11 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	19 cps	0.2770 ppm	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1232 ppm	4.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,485 cps	0.7258 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,520 cps	0.8075 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	204 cps	0.0046 ppm	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,615 cps	97.5654 ppm	1.4 %	1.4 ppm
Cd 228.802 {447} (Axial)	40 cps	0.0284 ppm	4.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	232 cps	0.2093 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	177 cps	0.2315 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0397 ppm	2.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,587 cps	0.9655 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,153 cps	142.8574 ppm	1.7 %	2.5 ppm
Li 670.784 {50} (Radial)	94 cps	0.0679 ppm	9.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	25,830 cps	3.1358 ppm	1.6 %	0.1 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0164 ppm	3.4 %	0.0 ppm
Na 589.592 {57} (Radial)	-15 cps	-0.0704 ppm	88.3 %	0.1 ppm
Ni 231.604 {445} (Axial)	52 cps	0.1029 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	456 cps	7.5211 ppm	0.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0234 ppm	59.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	37 cps	0.0259 ppm	10.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	832 cps	0.1390 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	44 cps	0.3393 ppm	1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	149 cps	0.9266 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	267 cps	0.1388 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	45,327 cps	36.7888 ppm	1.3 %	0.5 ppm
Sc 357.253 {94} (Axial)		100.9326 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		96.5709 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	270 cps	46.4891 ppm	2.2 %	1.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0135 ppm	31.4 %	0.0 ppm
Al 167.079 {502} (Axial)	6,757 cps	44.9480 ppm	1.3 %	0.6 ppm
Sc 227.318 {448} (Axial)		92.7983 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	12 cps	0.3253 ppm	4.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3,211 cps	53.1508 ppm	1.7 %	0.9 ppm
Si 251.611 {134} (Radial)	134 cps	11.3542 ppm	1.9 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,114 cps	9.0497 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		96.3942 %	0.9 %	0.8 %
Sc 361.384 {93} (Radial)		102.4511 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-05A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:18:14 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	26 cps	0.3828 ppm	4.1 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1457 ppm	8.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,499 cps	0.5204 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,567 cps	0.5887 ppm	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	248 cps	0.0056 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,947 cps	241.4890 ppm	0.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	36 cps	0.0255 ppm	4.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	140 cps	0.1264 ppm	3.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	95 cps	0.1248 ppm	3.7 %	0.0 ppm
Co 228.616 {447} (Axial)	33 cps	0.0327 ppm	6.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,327 cps	1.2415 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,771 cps	132.2660 ppm	0.6 %	0.8 ppm
Li 670.784 {50} (Radial)	62 cps	0.0449 ppm	4.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,894 cps	2.7794 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0167 ppm	9.1 %	0.0 ppm
Na 589.592 {57} (Radial)	85 cps	0.3993 ppm	6.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	46 cps	0.0920 ppm	3.5 %	0.0 ppm
K 766.490 {44} (Radial)	293 cps	4.8340 ppm	3.2 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0050 ppm	295.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	74 cps	0.0521 ppm	4.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	990 cps	0.1654 ppm	0.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	25 cps	0.1970 ppm	4.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	173 cps	1.0756 ppm	0.2 %	0.0 ppm
V 292.402 {115} (Axial)	260 cps	0.1352 ppm	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,683 cps	15.9748 ppm	4.2 %	0.7 ppm
Sc 357.253 {94} (Axial)		100.1482 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		95.2252 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	722 cps	124.3935 ppm	0.2 %	0.3 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0091 ppm	112.7 %	0.0 ppm
Al 167.079 {502} (Axial)	5,276 cps	35.0947 ppm	3.3 %	1.2 ppm
Sc 227.318 {448} (Axial)		91.4643 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	13 cps	0.3423 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	2,700 cps	44.6983 ppm	0.5 %	0.2 ppm
Si 251.611 {134} (Radial)	150 cps	12.7744 ppm	0.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,325 cps	10.7659 ppm	4.2 %	0.4 ppm
Y 224.306 {450} (Axial)		95.5291 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.3955 %	0.0 %	0.0 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-07A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:23:16 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	15 cps	0.2221 ppm	4.6 %	0.0 ppm
As 189.042 {478} (Axial)	5 cps	0.1017 ppm	7.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,451 cps	0.5105 ppm	0.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,503 cps	0.5742 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	137 cps	0.0031 ppm	8.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,428 cps	92.5166 ppm	0.5 %	0.4 ppm
Cd 228.802 {447} (Axial)	28 cps	0.0197 ppm	2.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	135 cps	0.1221 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	99 cps	0.1293 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	59 cps	0.0586 ppm	3.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,967 cps	0.7339 ppm	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,761 cps	104.2647 ppm	0.2 %	0.2 ppm
Li 670.784 {50} (Radial)	60 cps	0.0436 ppm	9.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,386 cps	4.0532 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0121 ppm	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	-34 cps	-0.1597 ppm	40.8 %	0.1 ppm
Ni 231.604 {445} (Axial)	58 cps	0.1152 ppm	3.2 %	0.0 ppm
K 766.490 {44} (Radial)	238 cps	3.9233 ppm	1.8 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0022 ppm	1,130.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0194 ppm	15.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	687 cps	0.1147 ppm	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	35 cps	0.2750 ppm	2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	122 cps	0.7561 ppm	0.2 %	0.0 ppm
V 292.402 {115} (Axial)	240 cps	0.1245 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,013 cps	6.5033 ppm	3.3 %	0.2 ppm
Sc 357.253 {94} (Axial)		102.5032 %	0.7 %	0.8 %
Sc 188.060 {479} (Axial)		97.9782 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	261 cps	45.0132 ppm	0.9 %	0.4 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0083 ppm	74.8 %	0.0 ppm
Al 167.079 {502} (Axial)	5,173 cps	34.4131 ppm	2.8 %	1.0 ppm
Sc 227.318 {448} (Axial)		94.2281 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	9 cps	0.2431 ppm	13.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2,620 cps	43.3736 ppm	0.3 %	0.1 ppm
Si 251.611 {134} (Radial)	155 cps	13.1684 ppm	0.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	653 cps	5.3031 ppm	3.4 %	0.2 ppm
Y 224.306 {450} (Axial)		97.1828 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.0048 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-09A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:43:10 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	19 cps	0.2757 ppm	5.7 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1520 ppm	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,351 cps	0.6980 ppm	1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,346 cps	0.7675 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	201 cps	0.0045 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,117 cps	165.0935 ppm	1.5 %	2.6 ppm
Cd 228.802 {447} (Axial)	31 cps	0.0223 ppm	2.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	173 cps	0.1559 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	121 cps	0.1580 ppm	4.3 %	0.0 ppm
Co 228.616 {447} (Axial)	35 cps	0.0349 ppm	6.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,827 cps	1.0549 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,647 cps	128.8270 ppm	1.3 %	1.7 ppm
Li 670.784 {50} (Radial)	107 cps	0.0768 ppm	16.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	30,247 cps	3.6720 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0148 ppm	5.3 %	0.0 ppm
Na 589.592 {57} (Radial)	45 cps	0.2141 ppm	44.4 %	0.1 ppm
Ni 231.604 {445} (Axial)	69 cps	0.1379 ppm	5.0 %	0.0 ppm
K 766.490 {44} (Radial)	427 cps	7.0439 ppm	2.6 %	0.2 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0219 ppm	94.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0200 ppm	10.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,083 cps	0.1809 ppm	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	32 cps	0.2467 ppm	5.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	171 cps	1.0609 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	306 cps	0.1590 ppm	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,956 cps	8.8923 ppm	4.6 %	0.4 ppm
Sc 357.253 {94} (Axial)		101.3607 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		96.8958 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	461 cps	79.4572 ppm	1.0 %	0.8 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0154 ppm	14.2 %	0.0 ppm
Al 167.079 {502} (Axial)	6,629 cps	44.0950 ppm	2.9 %	1.3 ppm
Sc 227.318 {448} (Axial)		93.0632 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	11 cps	0.2994 ppm	17.9 %	0.1 ppm
Al 396.152 {85} (Radial)	3,599 cps	59.5804 ppm	1.3 %	0.8 ppm
Si 251.611 {134} (Radial)	154 cps	13.1113 ppm	2.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	847 cps	6.8786 ppm	4.7 %	0.3 ppm
Y 224.306 {450} (Axial)		96.4567 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.6822 %	1.0 %	1.0 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-10A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:48:13 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	22 cps	0.3214 ppm	3.6 %	0.0 ppm
As 189.042 {478} (Axial)	8 cps	0.1787 ppm	7.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,258 cps	0.4703 ppm	3.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,433 cps	0.5580 ppm	3.1 %	0.0 ppm
Be 313.042 {108} (Axial)	162 cps	0.0037 ppm	4.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,075 cps	217.9361 ppm	2.3 %	5.0 ppm
Cd 228.802 {447} (Axial)	37 cps	0.0265 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	143 cps	0.1288 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	109 cps	0.1425 ppm	0.3 %	0.0 ppm
Co 228.616 {447} (Axial)	43 cps	0.0429 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,053 cps	0.7661 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,329 cps	120.0043 ppm	2.4 %	2.9 ppm
Li 670.784 {50} (Radial)	86 cps	0.0622 ppm	8.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	27,029 cps	3.2814 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0130 ppm	2.4 %	0.0 ppm
Na 589.592 {57} (Radial)	14 cps	0.0643 ppm	26.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	47 cps	0.0942 ppm	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	372 cps	6.1331 ppm	4.4 %	0.3 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0123 ppm	89.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	33 cps	0.0231 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	841 cps	0.1405 ppm	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	25 cps	0.1915 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	144 cps	0.8919 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	270 cps	0.1403 ppm	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,452 cps	10.9177 ppm	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0914 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		95.8930 %	0.2 %	0.1 %
Mg 279.079 {121} (Radial)	694 cps	119.6737 ppm	2.1 %	2.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0115 ppm	44.7 %	0.0 ppm
Al 167.079 {502} (Axial)	5,804 cps	38.6090 ppm	0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		92.0295 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	10 cps	0.2715 ppm	16.1 %	0.0 ppm
Al 396.152 {85} (Radial)	2,647 cps	43.8142 ppm	2.5 %	1.1 ppm
Si 251.611 {134} (Radial)	121 cps	10.3145 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	990 cps	8.0480 ppm	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9763 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.7537 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-11A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:53:15 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	10 cps	0.1531 ppm	9.0 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0931 ppm	3.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,939 cps	0.6122 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,085 cps	0.7076 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	398 cps	0.0090 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	21,638 cps	584.0239 ppm	1.7 %	10.2 ppm
Cd 228.802 {447} (Axial)	38 cps	0.0268 ppm	4.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	113 cps	0.1017 ppm	0.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	86 cps	0.1124 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	31 cps	0.0306 ppm	2.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	921 cps	0.3438 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,308 cps	91.6998 ppm	1.3 %	1.1 ppm
Li 670.784 {50} (Radial)	112 cps	0.0806 ppm	4.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	43,535 cps	5.2852 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0181 ppm	12.4 %	0.0 ppm
Na 589.592 {57} (Radial)	318 cps	1.5042 ppm	2.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0500 ppm	4.7 %	0.0 ppm
K 766.490 {44} (Radial)	364 cps	5.9976 ppm	1.4 %	0.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0251 ppm	147.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	27 cps	0.0189 ppm	9.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,566 cps	0.4287 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0746 ppm	4.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	220 cps	1.3640 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	199 cps	0.1036 ppm	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,051 cps	9.7809 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.0259 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		94.5641 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	1,420 cps	244.8029 ppm	1.9 %	4.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0029 ppm	316.2 %	0.0 ppm
Al 167.079 {502} (Axial)	7,602 cps	50.5707 ppm	1.0 %	0.5 ppm
Sc 227.318 {448} (Axial)		90.6194 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	9 cps	0.2512 ppm	7.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3,928 cps	65.0140 ppm	1.3 %	0.8 ppm
Si 251.611 {134} (Radial)	744 cps	63.2401 ppm	0.3 %	0.2 ppm
Pb 220.353 {453} (Axial)	386 cps	3.1334 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.7804 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		101.2930 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-13A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:58:16 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	50 cps	0.7372 ppm	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	11 cps	0.2432 ppm	4.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	5,577 cps	1.1616 ppm	0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	5,305 cps	1.2168 ppm	0.3 %	0.0 ppm
Be 313.042 {108} (Axial)	754 cps	0.0170 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	23,512 cps	634.6015 ppm	0.6 %	3.9 ppm
Cd 228.802 {447} (Axial)	72 cps	0.0519 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	164 cps	0.1476 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	122 cps	0.1604 ppm	0.2 %	0.0 ppm
Co 228.616 {447} (Axial)	31 cps	0.0307 ppm	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	14,267 cps	5.3237 ppm	1.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	4,447 cps	123.2889 ppm	0.4 %	0.5 ppm
Li 670.784 {50} (Radial)	168 cps	0.1214 ppm	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	65,728 cps	7.9796 ppm	1.2 %	0.1 ppm
Mo 202.030 {467} (Axial)	9 cps	0.0262 ppm	8.7 %	0.0 ppm
Na 589.592 {57} (Radial)	617 cps	2.9155 ppm	0.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	95 cps	0.1886 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	536 cps	8.8373 ppm	0.7 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0150 ppm	95.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	66 cps	0.0464 ppm	8.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,356 cps	0.7279 ppm	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	42 cps	0.3290 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	320 cps	1.9870 ppm	0.3 %	0.0 ppm
V 292.402 {115} (Axial)	287 cps	0.1490 ppm	4.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	119,180 cps	96.7292 ppm	0.4 %	0.4 ppm
Sc 357.253 {94} (Axial)		99.9392 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		93.0988 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1,160 cps	199.9983 ppm	0.4 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0008 ppm	110.3 %	0.0 ppm
Al 167.079 {502} (Axial)	11,516 cps	76.6050 ppm	0.3 %	0.2 ppm
Sc 227.318 {448} (Axial)		89.2247 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	13 cps	0.3502 ppm	8.8 %	0.0 ppm
Al 396.152 {85} (Radial)	7,335 cps	121.4162 ppm	0.4 %	0.5 ppm
Si 251.611 {134} (Radial)	1,484 cps	126.1743 ppm	1.3 %	1.7 ppm
Pb 220.353 {453} (Axial)	2,506 cps	20.3610 ppm	0.4 %	0.1 ppm
Y 224.306 {450} (Axial)		94.9758 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.1105 %	0.8 %	0.9 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-15A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:03:17 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	31 cps	0.4589 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	8 cps	0.1770 ppm	2.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,558 cps	0.7411 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,606 cps	0.8271 ppm	0.3 %	0.0 ppm
Be 313.042 {108} (Axial)	141 cps	0.0032 ppm	5.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	17,030 cps	459.6457 ppm	0.3 %	1.4 ppm
Cd 228.802 {447} (Axial)	52 cps	0.0375 ppm	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	198 cps	0.1791 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	150 cps	0.1968 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	48 cps	0.0470 ppm	2.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,227 cps	1.2043 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,419 cps	150.2314 ppm	0.5 %	0.7 ppm
Li 670.784 {50} (Radial)	73 cps	0.0529 ppm	3.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,773 cps	4.5857 ppm	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	7 cps	0.0211 ppm	4.2 %	0.0 ppm
Na 589.592 {57} (Radial)	78 cps	0.3693 ppm	10.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	70 cps	0.1386 ppm	0.3 %	0.0 ppm
K 766.490 {44} (Radial)	288 cps	4.7426 ppm	1.8 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0025 ppm	926.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	57 cps	0.0399 ppm	11.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,658 cps	0.2770 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	33 cps	0.2533 ppm	2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	1.0447 ppm	1.1 %	0.0 ppm
V 292.402 {115} (Axial)	239 cps	0.1244 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	29,531 cps	23.9684 ppm	0.6 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.9696 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		94.1636 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	1,050 cps	181.0296 ppm	0.6 %	1.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0073 ppm	81.8 %	0.0 ppm
Al 167.079 {502} (Axial)	4,818 cps	32.0479 ppm	0.5 %	0.2 ppm
Sc 227.318 {448} (Axial)		90.2995 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	11 cps	0.2966 ppm	6.5 %	0.0 ppm
Al 396.152 {85} (Radial)	2,124 cps	35.1575 ppm	0.8 %	0.3 ppm
Si 251.611 {134} (Radial)	178 cps	15.1094 ppm	1.1 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,596 cps	12.9700 ppm	0.7 %	0.1 ppm
Y 224.306 {450} (Axial)		95.0048 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.0702 %	1.3 %	1.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-17A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:08:19 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	262 cps	3.8843 ppm	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	17 cps	0.3707 ppm	3.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	6,293 cps	1.3108 ppm	3.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	6,032 cps	1.3836 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	456 cps	0.0103 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,339 cps	117.1027 ppm	2.9 %	3.3 ppm
Cd 228.802 {447} (Axial)	500 cps	0.3576 ppm	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	600 cps	0.5420 ppm	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	464 cps	0.6085 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	195 cps	0.1924 ppm	0.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	114,149 cps	42.5959 ppm	1.6 %	0.7 ppm
Fe 259.940 {130} (Radial)	12,860 cps	356.5214 ppm	3.1 %	11.0 ppm
Li 670.784 {50} (Radial)	80 cps	0.0577 ppm	16.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	50,232 cps	6.0983 ppm	1.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	10 cps	0.0309 ppm	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	41 cps	0.1944 ppm	13.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	3,842 cps	7.6535 ppm	0.3 %	0.0 ppm
K 766.490 {44} (Radial)	234 cps	3.8551 ppm	0.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0066 ppm	395.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	122 cps	0.0858 ppm	4.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,079 cps	0.1803 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	936 cps	7.2891 ppm	0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	228 cps	1.4175 ppm	3.6 %	0.1 ppm
V 292.402 {115} (Axial)	362 cps	0.1880 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	571,501 cps	463.8432 ppm	0.7 %	3.3 ppm
Sc 357.253 {94} (Axial)		100.7653 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.0894 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	315 cps	54.2392 ppm	3.2 %	1.7 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0180 ppm	10.3 %	0.0 ppm
Al 167.079 {502} (Axial)	13,222 cps	87.9578 ppm	0.1 %	0.1 ppm
Sc 227.318 {448} (Axial)		91.1602 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	32 cps	0.8589 ppm	5.4 %	0.0 ppm
Al 396.152 {85} (Radial)	8,680 cps	143.6712 ppm	3.1 %	4.5 ppm
Si 251.611 {134} (Radial)	366 cps	31.1118 ppm	2.3 %	0.7 ppm
Pb 220.353 {453} (Axial)	17,929 cps	145.6788 ppm	0.3 %	0.5 ppm
Y 224.306 {450} (Axial)		95.8803 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.1059 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-19A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:13:24 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	9 cps	0.1310 ppm	14.6 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1254 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,613 cps	0.5442 ppm	1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,719 cps	0.6237 ppm	0.4 %	0.0 ppm
Be 313.042 {108} (Axial)	162 cps	0.0037 ppm	5.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,848 cps	157.8466 ppm	1.1 %	1.8 ppm
Cd 228.802 {447} (Axial)	22 cps	0.0159 ppm	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	128 cps	0.1154 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	96 cps	0.1254 ppm	2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0374 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	808 cps	0.3016 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,303 cps	119.3054 ppm	0.7 %	0.9 ppm
Li 670.784 {50} (Radial)	97 cps	0.0702 ppm	10.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	27,997 cps	3.3989 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0111 ppm	11.4 %	0.0 ppm
Na 589.592 {57} (Radial)	-16 cps	-0.0775 ppm	58.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	36 cps	0.0725 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	369 cps	6.0801 ppm	3.7 %	0.2 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0230 ppm	109.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	21 cps	0.0150 ppm	30.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	678 cps	0.1132 ppm	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	9 cps	0.0698 ppm	3.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	122 cps	0.7598 ppm	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	263 cps	0.1369 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,337 cps	2.7085 ppm	2.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		101.1765 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		97.1308 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	488 cps	84.1288 ppm	0.9 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0112 ppm	42.6 %	0.0 ppm
Al 167.079 {502} (Axial)	5,610 cps	37.3177 ppm	1.4 %	0.5 ppm
Sc 227.318 {448} (Axial)		93.1835 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	10 cps	0.2569 ppm	4.1 %	0.0 ppm
Al 396.152 {85} (Radial)	2,640 cps	43.7001 ppm	0.9 %	0.4 ppm
Si 251.611 {134} (Radial)	165 cps	14.0319 ppm	0.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	659 cps	5.3551 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		96.5980 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		103.9933 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-21A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:18:28 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	37 cps	0.5417 ppm	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	8 cps	0.1714 ppm	8.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,333 cps	0.2776 ppm	0.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,578 cps	0.3619 ppm	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	84 cps	0.0019 ppm	10.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,502 cps	364.4302 ppm	0.5 %	1.8 ppm
Cd 228.802 {447} (Axial)	39 cps	0.0276 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	58 cps	0.0528 ppm	6.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	45 cps	0.0584 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	35 cps	0.0349 ppm	3.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,645 cps	0.6139 ppm	0.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,138 cps	87.0002 ppm	0.4 %	0.4 ppm
Li 670.784 {50} (Radial)	51 cps	0.0371 ppm	5.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	20,153 cps	2.4467 ppm	0.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0092 ppm	9.5 %	0.0 ppm
Na 589.592 {57} (Radial)	78 cps	0.3704 ppm	8.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	45 cps	0.0896 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	176 cps	2.9052 ppm	7.7 %	0.2 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0217 ppm	53.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	50 cps	0.0353 ppm	4.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,010 cps	0.1687 ppm	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0829 ppm	7.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	138 cps	0.8591 ppm	0.3 %	0.0 ppm
V 292.402 {115} (Axial)	149 cps	0.0772 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,859 cps	12.8717 ppm	1.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.3481 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.2792 %	0.9 %	0.9 %
Mg 279.079 {121} (Radial)	1,105 cps	190.4792 ppm	0.5 %	1.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	707.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,929 cps	19.4834 ppm	1.0 %	0.2 ppm
Sc 227.318 {448} (Axial)		91.4003 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	7 cps	0.1807 ppm	11.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1,272 cps	21.0585 ppm	0.6 %	0.1 ppm
Si 251.611 {134} (Radial)	106 cps	9.0096 ppm	1.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	2,028 cps	16.4744 ppm	1.0 %	0.2 ppm
Y 224.306 {450} (Axial)		95.4434 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.8591 %	0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-23A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:23:31 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	33 cps	0.4872 ppm	2.6 %	0.0 ppm
As 189.042 {478} (Axial)	8 cps	0.1703 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,031 cps	0.2148 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,303 cps	0.2990 ppm	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	83 cps	0.0019 ppm	12.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,044 cps	352.0758 ppm	1.5 %	5.4 ppm
Cd 228.802 {447} (Axial)	43 cps	0.0306 ppm	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	58 cps	0.0520 ppm	4.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	39 cps	0.0509 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	32 cps	0.0313 ppm	3.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,861 cps	0.6944 ppm	0.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,225 cps	89.4020 ppm	1.0 %	0.9 ppm
Li 670.784 {50} (Radial)	38 cps	0.0272 ppm	17.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	15,519 cps	1.8841 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0106 ppm	11.3 %	0.0 ppm
Na 589.592 {57} (Radial)	122 cps	0.5764 ppm	8.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	35 cps	0.0690 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	160 cps	2.6328 ppm	6.2 %	0.2 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0289 ppm	29.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	47 cps	0.0332 ppm	8.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	975 cps	0.1629 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	23 cps	0.1791 ppm	3.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	133 cps	0.8264 ppm	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	122 cps	0.0636 ppm	6.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,820 cps	15.2749 ppm	1.6 %	0.2 ppm
Sc 357.253 {94} (Axial)		100.3242 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.5569 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1,036 cps	178.5762 ppm	1.5 %	2.7 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0140 ppm	104.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,561 cps	17.0395 ppm	1.6 %	0.3 ppm
Sc 227.318 {448} (Axial)		91.6245 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	6 cps	0.1742 ppm	16.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,085 cps	17.9676 ppm	1.3 %	0.2 ppm
Si 251.611 {134} (Radial)	116 cps	9.8188 ppm	0.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,099 cps	8.9260 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		95.7274 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		102.8259 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-25A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:28:34 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	124 cps	1.8428 ppm	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	26 cps	0.5791 ppm	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	8,589 cps	1.7890 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	8,016 cps	1.8388 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	217 cps	0.0049 ppm	7.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	22,773 cps	614.6496 ppm	1.8 %	11.0 ppm
Cd 228.802 {447} (Axial)	84 cps	0.0598 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	218 cps	0.1971 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	164 cps	0.2145 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	58 cps	0.0576 ppm	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	15,435 cps	5.7598 ppm	1.6 %	0.1 ppm
Fe 259.940 {130} (Radial)	11,922 cps	330.5209 ppm	1.7 %	5.6 ppm
Li 670.784 {50} (Radial)	92 cps	0.0661 ppm	11.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	54,572 cps	6.6252 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	10 cps	0.0305 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	852 cps	4.0258 ppm	1.4 %	0.1 ppm
Ni 231.604 {445} (Axial)	96 cps	0.1915 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	294 cps	4.8457 ppm	5.2 %	0.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0465 ppm	13.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	30 cps	0.0208 ppm	5.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,304 cps	0.5521 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	349 cps	2.7145 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	200 cps	1.2417 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	320 cps	0.1664 ppm	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	44,146 cps	35.8295 ppm	0.8 %	0.3 ppm
Sc 357.253 {94} (Axial)		99.6638 %	1.1 %	1.0 %
Sc 188.060 {479} (Axial)		94.1882 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	611 cps	105.3512 ppm	1.5 %	1.6 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0182 ppm	39.6 %	0.0 ppm
Al 167.079 {502} (Axial)	7,020 cps	46.7015 ppm	0.7 %	0.3 ppm
Sc 227.318 {448} (Axial)		90.3700 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	23 cps	0.6241 ppm	4.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3,394 cps	56.1752 ppm	1.9 %	1.1 ppm
Si 251.611 {134} (Radial)	354 cps	30.0834 ppm	1.9 %	0.6 ppm
Pb 220.353 {453} (Axial)	3,918 cps	31.8371 ppm	0.8 %	0.2 ppm
Y 224.306 {450} (Axial)		94.8234 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		104.1270 %	0.1 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-27A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:48:24 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	37 cps	0.5447 ppm	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1407 ppm	3.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,700 cps	0.5624 ppm	1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,737 cps	0.6277 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	145 cps	0.0033 ppm	3.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	10,511 cps	283.6935 ppm	0.7 %	2.0 ppm
Cd 228.802 {447} (Axial)	46 cps	0.0332 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	97 cps	0.0871 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	70 cps	0.0916 ppm	2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	39 cps	0.0387 ppm	3.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,590 cps	1.3398 ppm	0.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,029 cps	111.6942 ppm	0.4 %	0.5 ppm
Li 670.784 {50} (Radial)	63 cps	0.0457 ppm	3.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	24,287 cps	2.9486 ppm	0.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0144 ppm	5.5 %	0.0 ppm
Na 589.592 {57} (Radial)	75 cps	0.3544 ppm	4.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	48 cps	0.0948 ppm	3.6 %	0.0 ppm
K 766.490 {44} (Radial)	308 cps	5.0770 ppm	2.4 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0061 ppm	384.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	68 cps	0.0478 ppm	8.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,077 cps	0.1800 ppm	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	90 cps	0.7029 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	170 cps	1.0566 ppm	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	235 cps	0.1224 ppm	0.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	28,549 cps	23.1711 ppm	1.4 %	0.3 ppm
Sc 357.253 {94} (Axial)		101.2755 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		96.4924 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	858 cps	147.8691 ppm	0.4 %	0.7 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0050 ppm	84.9 %	0.0 ppm
Al 167.079 {502} (Axial)	5,010 cps	33.3279 ppm	1.5 %	0.5 ppm
Sc 227.318 {448} (Axial)		92.6588 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	10 cps	0.2702 ppm	4.9 %	0.0 ppm
Al 396.152 {85} (Radial)	2,335 cps	38.6488 ppm	0.3 %	0.1 ppm
Si 251.611 {134} (Radial)	170 cps	14.4111 ppm	0.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	8,632 cps	70.1347 ppm	1.4 %	1.0 ppm
Y 224.306 {450} (Axial)		96.5725 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.0955 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-29A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:53:26 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	23 cps	0.3352 ppm	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	9 cps	0.1943 ppm	3.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,150 cps	0.4477 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,226 cps	0.5106 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	133 cps	0.0030 ppm	6.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,548 cps	365.6547 ppm	0.9 %	3.5 ppm
Cd 228.802 {447} (Axial)	49 cps	0.0353 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	89 cps	0.0807 ppm	2.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	64 cps	0.0842 ppm	2.9 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0397 ppm	3.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,773 cps	0.6616 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,089 cps	113.3557 ppm	0.9 %	1.0 ppm
Li 670.784 {50} (Radial)	60 cps	0.0435 ppm	3.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	23,847 cps	2.8951 ppm	0.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0109 ppm	12.1 %	0.0 ppm
Na 589.592 {57} (Radial)	114 cps	0.5403 ppm	10.9 %	0.1 ppm
Ni 231.604 {445} (Axial)	58 cps	0.1154 ppm	2.4 %	0.0 ppm
K 766.490 {44} (Radial)	261 cps	4.2961 ppm	7.4 %	0.3 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0318 ppm	61.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	54 cps	0.0379 ppm	5.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,182 cps	0.1975 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	17 cps	0.1341 ppm	3.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	184 cps	1.1398 ppm	0.1 %	0.0 ppm
V 292.402 {115} (Axial)	216 cps	0.1125 ppm	0.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	30,709 cps	24.9237 ppm	2.7 %	0.7 ppm
Sc 357.253 {94} (Axial)		100.1393 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		96.0792 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1,079 cps	185.9225 ppm	0.8 %	1.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0106 ppm	139.4 %	0.0 ppm
Al 167.079 {502} (Axial)	4,404 cps	29.2929 ppm	2.3 %	0.7 ppm
Sc 227.318 {448} (Axial)		92.1429 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	10 cps	0.2635 ppm	6.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2,054 cps	33.9932 ppm	1.0 %	0.3 ppm
Si 251.611 {134} (Radial)	158 cps	13.4071 ppm	0.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	2,113 cps	17.1668 ppm	2.7 %	0.5 ppm
Y 224.306 {450} (Axial)		96.2427 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.7788 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-30A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:58:28 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	27 cps	0.4043 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	5 cps	0.1205 ppm	12.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,976 cps	0.4116 ppm	4.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,183 cps	0.5008 ppm	5.6 %	0.0 ppm
Be 313.042 {108} (Axial)	122 cps	0.0028 ppm	3.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	10,396 cps	280.5873 ppm	4.1 %	11.5 ppm
Cd 228.802 {447} (Axial)	33 cps	0.0237 ppm	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	74 cps	0.0672 ppm	4.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	55 cps	0.0723 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	33 cps	0.0322 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,554 cps	0.5800 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,249 cps	90.0836 ppm	4.3 %	3.8 ppm
Li 670.784 {50} (Radial)	48 cps	0.0346 ppm	32.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	18,748 cps	2.2761 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0117 ppm	9.1 %	0.0 ppm
Na 589.592 {57} (Radial)	48 cps	0.2289 ppm	20.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	35 cps	0.0704 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	232 cps	3.8246 ppm	3.6 %	0.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0265 ppm	33.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	45 cps	0.0313 ppm	3.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	914 cps	0.1527 ppm	3.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	17 cps	0.1287 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	145 cps	0.9007 ppm	4.2 %	0.0 ppm
V 292.402 {115} (Axial)	183 cps	0.0953 ppm	4.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,035 cps	14.6380 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.2053 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.8300 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	862 cps	148.6629 ppm	4.0 %	5.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0075 ppm	31.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,737 cps	24.8618 ppm	0.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		93.0488 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.1884 ppm	24.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1,558 cps	25.7885 ppm	3.8 %	1.0 ppm
Si 251.611 {134} (Radial)	128 cps	10.8532 ppm	3.9 %	0.4 ppm
Pb 220.353 {453} (Axial)	2,197 cps	17.8518 ppm	0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1691 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.5902 %	1.9 %	1.9 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-31A

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:03:31 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	16 cps	0.2443 ppm	2.7 %	0.0 ppm
As 189.042 {478} (Axial)	14 cps	0.3074 ppm	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,659 cps	0.3456 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,805 cps	0.4140 ppm	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	94 cps	0.0021 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,602 cps	205.1854 ppm	1.3 %	2.6 ppm
Cd 228.802 {447} (Axial)	30 cps	0.0218 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	88 cps	0.0793 ppm	2.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	69 cps	0.0909 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0361 ppm	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,267 cps	0.4729 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,377 cps	93.6188 ppm	0.7 %	0.6 ppm
Li 670.784 {50} (Radial)	63 cps	0.0456 ppm	12.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	20,306 cps	2.4652 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0079 ppm	14.5 %	0.0 ppm
Na 589.592 {57} (Radial)	11 cps	0.0525 ppm	108.5 %	0.1 ppm
Ni 231.604 {445} (Axial)	46 cps	0.0922 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	217 cps	3.5747 ppm	1.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0166 ppm	97.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	24 cps	0.0165 ppm	15.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	672 cps	0.1122 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	18 cps	0.1393 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	119 cps	0.7368 ppm	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	177 cps	0.0919 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	17,471 cps	14.1801 ppm	0.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		102.3815 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		97.3410 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	657 cps	113.1763 ppm	1.0 %	1.2 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0118 ppm	21.5 %	0.0 ppm
Al 167.079 {502} (Axial)	4,278 cps	28.4562 ppm	0.5 %	0.1 ppm
Sc 227.318 {448} (Axial)		93.5583 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	8 cps	0.2169 ppm	12.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1,759 cps	29.1236 ppm	0.2 %	0.1 ppm
Si 251.611 {134} (Radial)	119 cps	10.1239 ppm	1.7 %	0.2 ppm
Pb 220.353 {453} (Axial)	934 cps	7.5887 ppm	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8233 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.9189 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-33A

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:08:34 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	32 cps	0.4804 ppm	2.4 %	0.0 ppm
As 189.042 {478} (Axial)	3 cps	0.0676 ppm	10.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	712 cps	0.1483 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	978 cps	0.2243 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	57 cps	0.0013 ppm	16.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,626 cps	205.8322 ppm	3.0 %	6.2 ppm
Cd 228.802 {447} (Axial)	20 cps	0.0142 ppm	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	59 cps	0.0534 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	46 cps	0.0608 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	26 cps	0.0256 ppm	4.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,861 cps	0.6944 ppm	0.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,673 cps	74.1190 ppm	2.5 %	1.8 ppm
Li 670.784 {50} (Radial)	47 cps	0.0337 ppm	23.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,484 cps	1.2728 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0076 ppm	21.6 %	0.0 ppm
Na 589.592 {57} (Radial)	34 cps	0.1606 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	27 cps	0.0528 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	131 cps	2.1627 ppm	8.5 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0065 ppm	165.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0200 ppm	14.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	585 cps	0.0978 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	6 cps	0.0474 ppm	7.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	122 cps	0.7543 ppm	4.0 %	0.0 ppm
V 292.402 {115} (Axial)	128 cps	0.0663 ppm	4.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	17,083 cps	13.8650 ppm	0.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		101.8834 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		97.5431 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	717 cps	123.6601 ppm	2.8 %	3.5 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0132 ppm	34.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,888 cps	19.2123 ppm	0.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		93.7739 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	5 cps	0.1411 ppm	6.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,122 cps	18.5739 ppm	2.7 %	0.5 ppm
Si 251.611 {134} (Radial)	99 cps	8.4396 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	2,596 cps	21.0960 ppm	0.6 %	0.1 ppm
Y 224.306 {450} (Axial)		97.3708 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.7436 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-35A

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:13:38 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	32 cps	0.4777 ppm	3.7 %	0.0 ppm
As 189.042 {478} (Axial)	3 cps	0.0729 ppm	17.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	726 cps	0.1512 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,002 cps	0.2298 ppm	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	53 cps	0.0012 ppm	5.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,067 cps	352.6853 ppm	0.5 %	1.8 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0122 ppm	8.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	54 cps	0.0483 ppm	3.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0472 ppm	3.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21 cps	0.0207 ppm	3.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,792 cps	1.0418 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,471 cps	68.5030 ppm	0.5 %	0.4 ppm
Li 670.784 {50} (Radial)	46 cps	0.0329 ppm	14.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,483 cps	1.6369 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0060 ppm	10.1 %	0.0 ppm
Na 589.592 {57} (Radial)	115 cps	0.5437 ppm	8.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	37 cps	0.0740 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	139 cps	2.2961 ppm	1.0 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0305 ppm	32.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0194 ppm	3.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	833 cps	0.1391 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	15 cps	0.1133 ppm	3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	143 cps	0.8858 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	119 cps	0.0616 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	34,968 cps	28.3812 ppm	3.6 %	1.0 ppm
Sc 357.253 {94} (Axial)		101.0325 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.8166 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1,228 cps	211.7287 ppm	0.3 %	0.6 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0172 ppm	29.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,330 cps	15.4996 ppm	3.1 %	0.5 ppm
Sc 227.318 {448} (Axial)		93.1319 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	7 cps	0.1754 ppm	12.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,061 cps	17.5565 ppm	0.6 %	0.1 ppm
Si 251.611 {134} (Radial)	140 cps	11.8660 ppm	0.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,368 cps	19.2375 ppm	3.7 %	0.7 ppm
Y 224.306 {450} (Axial)		97.2177 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.3125 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-35AMS

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:18:41 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	41 cps	0.6088 ppm	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1601 ppm	3.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,127 cps	0.2348 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,320 cps	0.3027 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	4,038 cps	0.0912 ppm	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,411 cps	334.9846 ppm	1.7 %	5.5 ppm
Cd 228.802 {447} (Axial)	151 cps	0.1084 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	162 cps	0.1466 ppm	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	121 cps	0.1581 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	120 cps	0.1189 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,362 cps	1.2547 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,870 cps	79.5772 ppm	1.4 %	1.1 ppm
Li 670.784 {50} (Radial)	179 cps	0.1288 ppm	4.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	15,379 cps	1.8671 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	35 cps	0.1066 ppm	2.8 %	0.0 ppm
Na 589.592 {57} (Radial)	2,174 cps	10.2666 ppm	1.2 %	0.1 ppm
Ni 231.604 {445} (Axial)	76 cps	0.1519 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	843 cps	13.9052 ppm	1.4 %	0.2 ppm
Se 196.090 {472} (Axial)	2 cps	0.0666 ppm	46.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	168 cps	0.1181 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,490 cps	0.2489 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	53 cps	0.4104 ppm	1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	198 cps	1.2267 ppm	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	328 cps	0.1707 ppm	3.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,914 cps	16.1624 ppm	0.8 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.8591 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.3230 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1,179 cps	203.2220 ppm	1.6 %	3.3 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0917 ppm	10.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,300 cps	21.9513 ppm	0.9 %	0.2 ppm
Sc 227.318 {448} (Axial)		92.7725 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	25 cps	0.6770 ppm	4.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,349 cps	22.3327 ppm	1.7 %	0.4 ppm
Si 251.611 {134} (Radial)	305 cps	25.9221 ppm	1.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	2,413 cps	19.6063 ppm	0.8 %	0.2 ppm
Y 224.306 {450} (Axial)		97.1537 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		103.4425 %	0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-35AMSD

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:23:42 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	43 cps	0.6363 ppm	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1645 ppm	5.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,213 cps	0.2527 ppm	0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,401 cps	0.3214 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	4,125 cps	0.0932 ppm	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,041 cps	351.9915 ppm	0.3 %	1.0 ppm
Cd 228.802 {447} (Axial)	147 cps	0.1049 ppm	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	169 cps	0.1523 ppm	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	119 cps	0.1561 ppm	4.0 %	0.0 ppm
Co 228.616 {447} (Axial)	116 cps	0.1149 ppm	3.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,496 cps	1.3044 ppm	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,905 cps	108.2578 ppm	0.1 %	0.1 ppm
Li 670.784 {50} (Radial)	199 cps	0.1436 ppm	4.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	15,769 cps	1.9144 ppm	0.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	34 cps	0.1015 ppm	3.6 %	0.0 ppm
Na 589.592 {57} (Radial)	2,320 cps	10.9577 ppm	0.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	73 cps	0.1461 ppm	3.8 %	0.0 ppm
K 766.490 {44} (Radial)	896 cps	14.7665 ppm	1.1 %	0.2 ppm
Se 196.090 {472} (Axial)	2 cps	0.0668 ppm	37.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	170 cps	0.1194 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,533 cps	0.2562 ppm	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	43 cps	0.3318 ppm	3.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	193 cps	1.1962 ppm	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	333 cps	0.1733 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	21,970 cps	17.8318 ppm	4.0 %	0.7 ppm
Sc 357.253 {94} (Axial)		100.4930 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		97.1483 %	1.9 %	1.8 %
Mg 279.079 {121} (Radial)	1,252 cps	215.8586 ppm	0.1 %	0.3 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0858 ppm	12.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,195 cps	21.2557 ppm	3.6 %	0.8 ppm
Sc 227.318 {448} (Axial)		93.4991 %	1.8 %	1.7 %
B 249.773 {135} (Radial)	28 cps	0.7539 ppm	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,447 cps	23.9552 ppm	0.4 %	0.1 ppm
Si 251.611 {134} (Radial)	304 cps	25.8268 ppm	0.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,419 cps	19.6575 ppm	4.0 %	0.8 ppm
Y 224.306 {450} (Axial)		97.7409 %	1.6 %	1.6 %
Sc 361.384 {93} (Radial)		102.8678 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

MBLK-168042

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:28:43 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0016 ppm	39.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0011 ppm	67.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	13 cps	0.0003 ppm	63.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	335 cps	0.0077 ppm	7.4 %	0.0 ppm
Be 313.042 {108} (Axial)	23 cps	0.0001 ppm	10.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	18 cps	0.0482 ppm	8.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0004 ppm	33.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0004 ppm	59.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	7 cps	0.0009 ppm	2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	-2 cps	-0.0002 ppm	48.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	62 cps	0.0023 ppm	7.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	17 cps	0.0484 ppm	4.4 %	0.0 ppm
Li 670.784 {50} (Radial)	4 cps	0.0003 ppm	153.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	33 cps	0.0004 ppm	5.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0002 ppm	48.9 %	0.0 ppm
Na 589.592 {57} (Radial)	-79 cps	-0.0374 ppm	7.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0007 ppm	7.7 %	0.0 ppm
K 766.490 {44} (Radial)	17 cps	0.0280 ppm	27.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0014 ppm	51.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	20 cps	0.0014 ppm	20.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0001 ppm	38.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	114.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	135.3 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0005 ppm	31.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	7 cps	0.0005 ppm	7.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.1850 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.6077 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	4 cps	0.0626 ppm	42.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	30.6 %	0.0 ppm
Al 167.079 {502} (Axial)	-1 cps	-0.0004 ppm	3.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.1746 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-1 cps	-0.0018 ppm	161.3 %	0.0 ppm
Al 396.152 {85} (Radial)	-5 cps	-0.0079 ppm	108.6 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0153 ppm	73.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0011 ppm	58.1 %	0.0 ppm
Y 224.306 {450} (Axial)		97.2876 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.7250 %	0.7 %	0.7 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LCS-168042

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:33:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	0.0963 ppm	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	39 cps	0.0880 ppm	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,577 cps	0.0953 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,300 cps	0.0986 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	37,820 cps	0.0855 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,355 cps	9.0558 ppm	0.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,302 cps	0.0931 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	997 cps	0.0900 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	777 cps	0.1019 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	952 cps	0.0940 ppm	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,589 cps	0.0966 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,534 cps	9.7980 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	1,340 cps	0.0966 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,432 cps	0.0902 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	328 cps	0.0987 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	19,145 cps	9.0426 ppm	1.5 %	0.1 ppm
Ni 231.604 {445} (Axial)	470 cps	0.0936 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	5,990 cps	9.8769 ppm	1.5 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0831 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,324 cps	0.0930 ppm	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,832 cps	0.0974 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	122 cps	0.0947 ppm	0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	145 cps	0.0898 ppm	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	1,796 cps	0.0934 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,078 cps	0.0875 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.5681 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.4793 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	552 cps	9.5080 ppm	0.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	41 cps	0.0952 ppm	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	169 cps	0.1124 ppm	1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.1252 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	181 cps	0.4862 ppm	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	52 cps	0.0855 ppm	6.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1,028 cps	8.7420 ppm	1.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	121 cps	0.0983 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9483 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		104.9835 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-36A

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:53:46 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	22 cps	0.3209 ppm	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0987 ppm	8.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	431 cps	0.0897 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	701 cps	0.1609 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	64 cps	0.0015 ppm	5.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,092 cps	488.3052 ppm	0.7 %	3.5 ppm
Cd 228.802 {447} (Axial)	21 cps	0.0147 ppm	3.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	38 cps	0.0345 ppm	10.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	27 cps	0.0351 ppm	4.8 %	0.0 ppm
Co 228.616 {447} (Axial)	18 cps	0.0182 ppm	7.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,125 cps	0.7928 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,727 cps	47.8843 ppm	0.5 %	0.3 ppm
Li 670.784 {50} (Radial)	38 cps	0.0277 ppm	27.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,428 cps	1.1446 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0056 ppm	29.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73 cps	0.3439 ppm	15.0 %	0.1 ppm
Ni 231.604 {445} (Axial)	64 cps	0.1279 ppm	3.1 %	0.0 ppm
K 766.490 {44} (Radial)	167 cps	2.7504 ppm	4.2 %	0.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0416 ppm	27.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	24 cps	0.0169 ppm	17.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	902 cps	0.1507 ppm	0.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0879 ppm	6.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	110 cps	0.6844 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	106 cps	0.0551 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,061 cps	8.1661 ppm	3.3 %	0.3 ppm
Sc 357.253 {94} (Axial)		98.7223 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.7694 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1,776 cps	306.1922 ppm	0.4 %	1.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0106 ppm	137.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1,830 cps	12.1763 ppm	3.1 %	0.4 ppm
Sc 227.318 {448} (Axial)		91.0267 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.1383 ppm	23.3 %	0.0 ppm
Al 396.152 {85} (Radial)	822 cps	13.6073 ppm	0.5 %	0.1 ppm
Si 251.611 {134} (Radial)	76 cps	6.4468 ppm	2.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	977 cps	7.9397 ppm	3.2 %	0.3 ppm
Y 224.306 {450} (Axial)		95.4462 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.9475 %	0.2 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-37A

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:58:50 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	56 cps	0.8299 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1480 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,100 cps	0.4373 ppm	0.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,172 cps	0.4981 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	132 cps	0.0030 ppm	6.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	14,694 cps	396.6008 ppm	0.2 %	0.8 ppm
Cd 228.802 {447} (Axial)	42 cps	0.0302 ppm	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	118 cps	0.1063 ppm	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	81 cps	0.1067 ppm	2.6 %	0.0 ppm
Co 228.616 {447} (Axial)	34 cps	0.0334 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,414 cps	0.9008 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,649 cps	128.8796 ppm	0.3 %	0.4 ppm
Li 670.784 {50} (Radial)	61 cps	0.0443 ppm	11.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	21,321 cps	2.5884 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0124 ppm	16.5 %	0.0 ppm
Na 589.592 {57} (Radial)	150 cps	0.7078 ppm	2.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	49 cps	0.0978 ppm	2.4 %	0.0 ppm
K 766.490 {44} (Radial)	228 cps	3.7594 ppm	2.6 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0108 ppm	69.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	49 cps	0.0343 ppm	5.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,357 cps	0.2267 ppm	0.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	26 cps	0.2035 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	164 cps	1.0161 ppm	0.5 %	0.0 ppm
V 292.402 {115} (Axial)	181 cps	0.0942 ppm	2.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,626 cps	21.6103 ppm	2.7 %	0.6 ppm
Sc 357.253 {94} (Axial)		100.7638 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		97.2118 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	1,172 cps	202.1016 ppm	0.4 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0017 ppm	45.1 %	0.0 ppm
Al 167.079 {502} (Axial)	3,768 cps	25.0641 ppm	2.4 %	0.6 ppm
Sc 227.318 {448} (Axial)		93.4416 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	11 cps	0.3024 ppm	20.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,824 cps	30.1882 ppm	0.5 %	0.1 ppm
Si 251.611 {134} (Radial)	168 cps	14.2521 ppm	1.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	5,051 cps	41.0432 ppm	2.6 %	1.1 ppm
Y 224.306 {450} (Axial)		96.9401 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.1777 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-39A

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:03:53 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.6720 ppm	3.0 %	0.0 ppm
As 189.042 {478} (Axial)	5 cps	0.1030 ppm	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,942 cps	0.8210 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,824 cps	0.8771 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	186 cps	0.0042 ppm	22.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,654 cps	503.4731 ppm	2.0 %	10.3 ppm
Cd 228.802 {447} (Axial)	31 cps	0.0220 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	123 cps	0.1111 ppm	5.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	91 cps	0.1191 ppm	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	39 cps	0.0390 ppm	3.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,708 cps	0.6374 ppm	7.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,608 cps	127.7422 ppm	2.0 %	2.5 ppm
Li 670.784 {50} (Radial)	80 cps	0.0577 ppm	16.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,372 cps	4.1729 ppm	5.8 %	0.2 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0184 ppm	3.0 %	0.0 ppm
Na 589.592 {57} (Radial)	61 cps	0.2877 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	50 cps	0.1005 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	383 cps	6.3221 ppm	1.5 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0146 ppm	139.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	38 cps	0.0267 ppm	24.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,332 cps	0.3896 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	26 cps	0.2054 ppm	2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	155 cps	0.9633 ppm	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	237 cps	0.1233 ppm	9.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	25,429 cps	20.6392 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.7143 %	4.6 %	4.5 %
Sc 188.060 {479} (Axial)		94.8243 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	668 cps	115.1616 ppm	1.9 %	2.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0094 ppm	55.7 %	0.0 ppm
Al 167.079 {502} (Axial)	4,934 cps	32.8209 ppm	0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		91.0449 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	13 cps	0.3442 ppm	11.5 %	0.0 ppm
Al 396.152 {85} (Radial)	2,110 cps	34.9335 ppm	1.8 %	0.6 ppm
Si 251.611 {134} (Radial)	170 cps	14.4504 ppm	1.7 %	0.2 ppm
Pb 220.353 {453} (Axial)	2,982 cps	24.2324 ppm	0.4 %	0.1 ppm
Y 224.306 {450} (Axial)		95.6300 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.2992 %	0.0 %	0.0 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-41A

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:08:56 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	63 cps	0.9337 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	12 cps	0.2670 ppm	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,082 cps	1.4751 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	6,694 cps	1.5355 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	217 cps	0.0049 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,409 cps	172.9787 ppm	1.5 %	2.7 ppm
Cd 228.802 {447} (Axial)	81 cps	0.0577 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	124 cps	0.1123 ppm	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	96 cps	0.1258 ppm	0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0481 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,575 cps	1.3341 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	7,522 cps	208.5531 ppm	1.8 %	3.8 ppm
Li 670.784 {50} (Radial)	68 cps	0.0492 ppm	8.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,701 cps	4.4556 ppm	1.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	8 cps	0.0252 ppm	3.1 %	0.0 ppm
Na 589.592 {57} (Radial)	165 cps	0.7790 ppm	5.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	66 cps	0.1320 ppm	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	311 cps	5.1289 ppm	6.0 %	0.3 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	998.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	117 cps	0.0825 ppm	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,416 cps	0.2366 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	38 cps	0.2939 ppm	0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	176 cps	1.0947 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	274 cps	0.1425 ppm	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	37,700 cps	30.5979 ppm	0.6 %	0.2 ppm
Sc 357.253 {94} (Axial)		101.5293 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.5057 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	501 cps	86.3079 ppm	1.3 %	1.2 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0179 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	5,949 cps	39.5753 ppm	0.8 %	0.3 ppm
Sc 227.318 {448} (Axial)		93.4601 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	17 cps	0.4663 ppm	4.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2,658 cps	43.9978 ppm	1.6 %	0.7 ppm
Si 251.611 {134} (Radial)	147 cps	12.4920 ppm	1.4 %	0.2 ppm
Pb 220.353 {453} (Axial)	8,959 cps	72.7956 ppm	0.5 %	0.4 ppm
Y 224.306 {450} (Axial)		96.8532 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.4140 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-43A

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:14:00 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	175 cps	2.5903 ppm	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	35 cps	0.7853 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,524 cps	0.5257 ppm	4.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,496 cps	0.5726 ppm	5.5 %	0.0 ppm
Be 313.042 {108} (Axial)	132 cps	0.0030 ppm	7.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,558 cps	69.0529 ppm	4.1 %	2.8 ppm
Cd 228.802 {447} (Axial)	46 cps	0.0329 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	113 cps	0.1016 ppm	2.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	86 cps	0.1134 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0365 ppm	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	6,324 cps	2.3597 ppm	0.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,793 cps	160.6095 ppm	3.9 %	6.3 ppm
Li 670.784 {50} (Radial)	61 cps	0.0440 ppm	25.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	21,139 cps	2.5663 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0126 ppm	7.0 %	0.0 ppm
Na 589.592 {57} (Radial)	-20 cps	-0.0930 ppm	44.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	113 cps	0.2249 ppm	0.3 %	0.0 ppm
K 766.490 {44} (Radial)	281 cps	4.6288 ppm	7.7 %	0.4 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0170 ppm	45.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	32 cps	0.0222 ppm	16.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	585 cps	0.0978 ppm	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	162 cps	1.2586 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	107 cps	0.6663 ppm	5.1 %	0.0 ppm
V 292.402 {115} (Axial)	218 cps	0.1132 ppm	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	29,582 cps	24.0091 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		104.4625 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		100.4327 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	187 cps	32.1523 ppm	3.7 %	1.2 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0258 ppm	33.3 %	0.0 ppm
Al 167.079 {502} (Axial)	5,029 cps	33.4548 ppm	0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.2513 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	11 cps	0.2995 ppm	12.4 %	0.0 ppm
Al 396.152 {85} (Radial)	2,220 cps	36.7516 ppm	4.2 %	1.6 ppm
Si 251.611 {134} (Radial)	171 cps	14.5131 ppm	4.4 %	0.6 ppm
Pb 220.353 {453} (Axial)	1,656 cps	13.4587 ppm	0.4 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5041 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		106.3874 %	2.0 %	2.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-43AMS

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:19:02 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	37 cps	0.5521 ppm	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	40 cps	0.9003 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,961 cps	0.6168 ppm	4.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,933 cps	0.6727 ppm	4.2 %	0.0 ppm
Be 313.042 {108} (Axial)	3,991 cps	0.0902 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,634 cps	71.0858 ppm	4.2 %	3.0 ppm
Cd 228.802 {447} (Axial)	173 cps	0.1237 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	232 cps	0.2094 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	182 cps	0.2382 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	140 cps	0.1381 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,220 cps	0.8285 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	6,180 cps	171.3312 ppm	3.9 %	6.6 ppm
Li 670.784 {50} (Radial)	240 cps	0.1728 ppm	4.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,779 cps	2.7655 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	36 cps	0.1092 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	1,929 cps	9.1091 ppm	4.2 %	0.4 ppm
Ni 231.604 {445} (Axial)	90 cps	0.1794 ppm	2.1 %	0.0 ppm
K 766.490 {44} (Radial)	1,051 cps	17.3332 ppm	5.8 %	1.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0788 ppm	39.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	169 cps	0.1187 ppm	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,213 cps	0.2027 ppm	3.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	49 cps	0.3813 ppm	0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	1.0443 ppm	4.3 %	0.0 ppm
V 292.402 {115} (Axial)	486 cps	0.2526 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,212 cps	10.7229 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		104.7795 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		100.0997 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	239 cps	41.1686 ppm	4.1 %	1.7 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0838 ppm	8.3 %	0.0 ppm
Al 167.079 {502} (Axial)	7,215 cps	47.9982 ppm	0.8 %	0.4 ppm
Sc 227.318 {448} (Axial)		95.9988 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	30 cps	0.8024 ppm	6.5 %	0.1 ppm
Al 396.152 {85} (Radial)	3,264 cps	54.0212 ppm	4.1 %	2.2 ppm
Si 251.611 {134} (Radial)	265 cps	22.5167 ppm	3.9 %	0.9 ppm
Pb 220.353 {453} (Axial)	740 cps	6.0096 ppm	1.0 %	0.1 ppm
Y 224.306 {450} (Axial)		98.7759 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		105.3476 %	0.7 %	0.8 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-43AMSD

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:24:04 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	102 cps	1.5192 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.7236 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,962 cps	0.6169 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,865 cps	0.6571 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	4,085 cps	0.0923 ppm	6.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,712 cps	73.2002 ppm	2.3 %	1.7 ppm
Cd 228.802 {447} (Axial)	168 cps	0.1206 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	234 cps	0.2111 ppm	7.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	178 cps	0.2332 ppm	0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	137 cps	0.1356 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,919 cps	1.8356 ppm	6.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	5,902 cps	163.6385 ppm	2.3 %	3.8 ppm
Li 670.784 {50} (Radial)	229 cps	0.1649 ppm	4.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,223 cps	2.6980 ppm	6.0 %	0.2 ppm
Mo 202.030 {467} (Axial)	36 cps	0.1090 ppm	2.8 %	0.0 ppm
Na 589.592 {57} (Radial)	1,961 cps	9.2612 ppm	3.3 %	0.3 ppm
Ni 231.604 {445} (Axial)	122 cps	0.2423 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	1,073 cps	17.6868 ppm	3.4 %	0.6 ppm
Se 196.090 {472} (Axial)	2 cps	0.0938 ppm	5.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	168 cps	0.1183 ppm	3.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,203 cps	0.2010 ppm	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	96 cps	0.7509 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	165 cps	1.0260 ppm	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	480 cps	0.2493 ppm	6.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,317 cps	11.6201 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		101.6542 %	4.9 %	5.0 %
Sc 188.060 {479} (Axial)		100.5987 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	246 cps	42.3617 ppm	2.0 %	0.8 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0782 ppm	12.6 %	0.0 ppm
Al 167.079 {502} (Axial)	6,956 cps	46.2703 ppm	0.9 %	0.4 ppm
Sc 227.318 {448} (Axial)		96.4322 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	31 cps	0.8181 ppm	6.6 %	0.1 ppm
Al 396.152 {85} (Radial)	3,245 cps	53.7108 ppm	2.4 %	1.3 ppm
Si 251.611 {134} (Radial)	272 cps	23.1008 ppm	2.3 %	0.5 ppm
Pb 220.353 {453} (Axial)	914 cps	7.4290 ppm	1.1 %	0.1 ppm
Y 224.306 {450} (Axial)		99.5262 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		106.7535 %	0.9 %	0.9 %

Calibration Summary

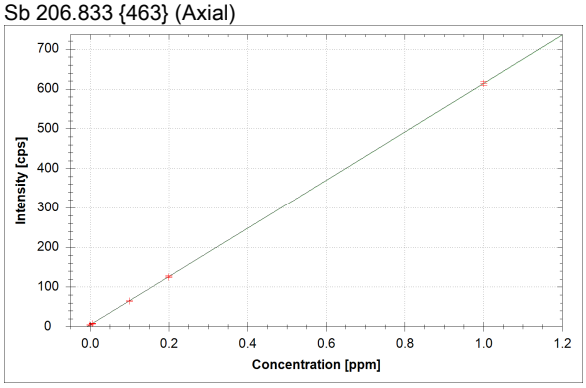
11/23/2020 6:47:52 PM

QTEGRA

LabBook: ICP2_201121B.imexp

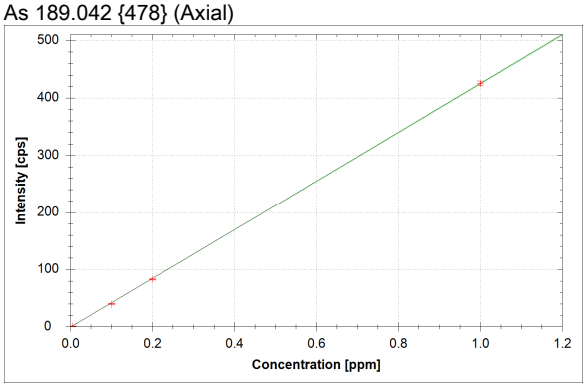
Calibration Graphs

Sb 206.833 {463} (Axial)



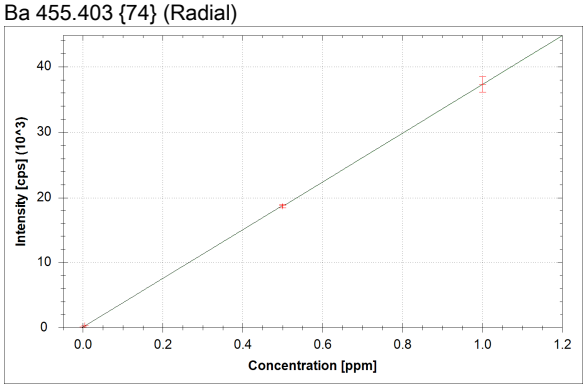
f(x) = 609.3654*x + 4.3553
R² = 1.0000
BEC = 0.007 ppm
LoD = 0.0026 ppm

As 189.042 {478} (Axial)



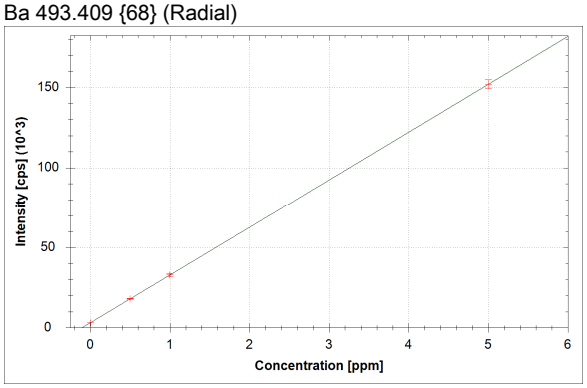
f(x) = 425.6732*x + -0.8224
R² = 1.0000
BEC = -0.002 ppm
LoD = 0.0049 ppm

Ba 455.403 {74} (Radial)



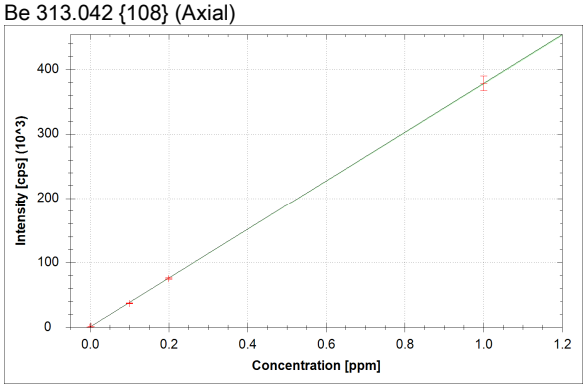
f(x) = 37203.5658*x + 93.3419
R² = 1.0000
BEC = 0.003 ppm
LoD = 0.0008 ppm

Ba 493.409 {68} (Radial)



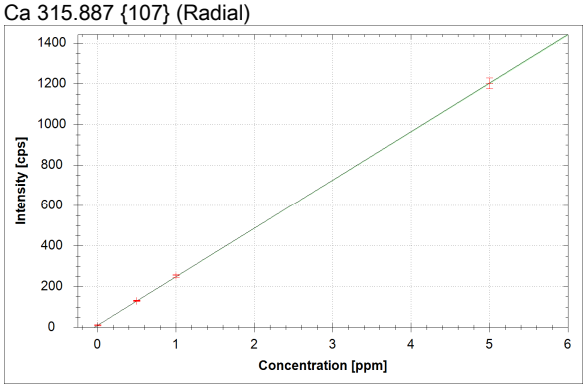
f(x) = 29758.5638*x + 3096.8186
R² = 1.0000
BEC = 0.104 ppm
LoD = 0.0019 ppm

Be 313.042 {108} (Axial)



f(x) = 377447.4565*x + 671.1392
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



f(x) = 238.7647*x + 9.3984
R² = 1.0000
BEC = 0.039 ppm
LoD = 0.0407 ppm

Calibration Summary

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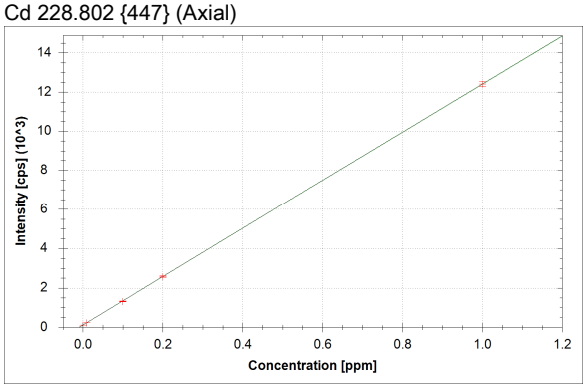
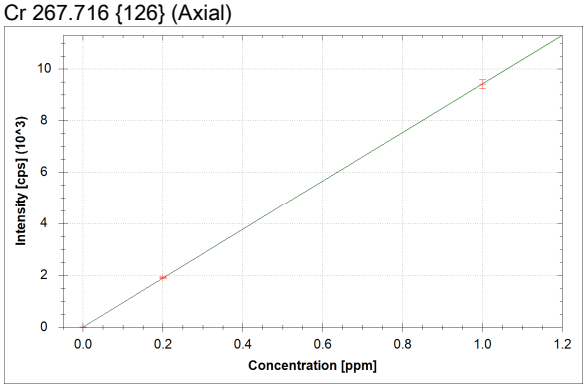
QTEGRA

Cd 228.802 {447} (Axial)



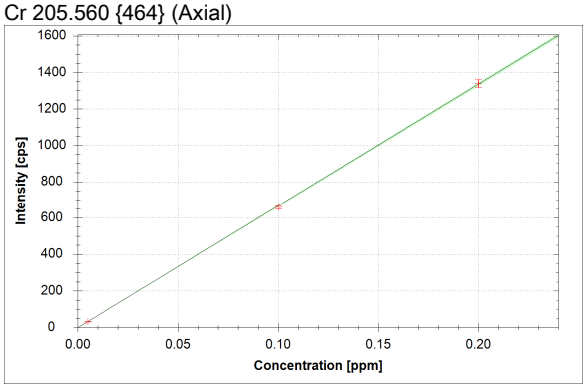
f(x) = 12286.7380*x + 117.6239
R² = 1.0000
BEC = 0.010 ppm
LoD = 0.0006 ppm

Cr 267.716 {126} (Axial)



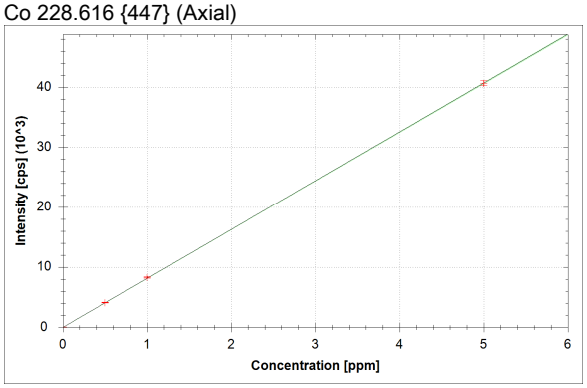
f(x) = 9414.0801*x + 5.3241
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0003 ppm

Cr 205.560 {464} (Axial)



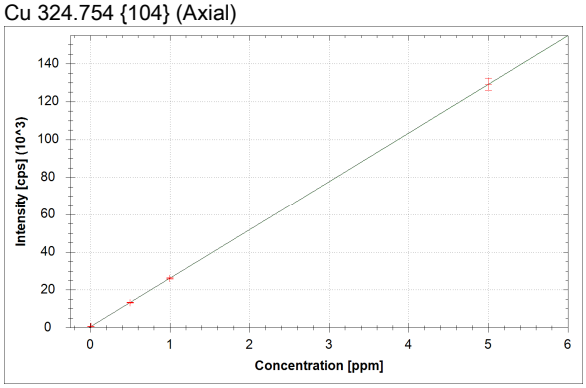
f(x) = 6684.8708*x + -1.4490
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Co 228.616 {447} (Axial)



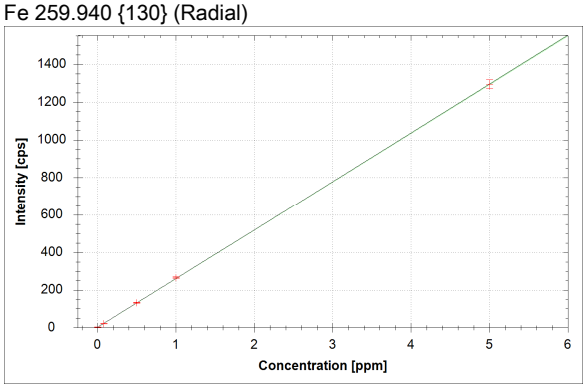
f(x) = 8138.6579*x + -2.5657
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0005 ppm

Cu 324.754 {104} (Axial)



f(x) = 25725.0630*x + 468.7535
R² = 1.0000
BEC = 0.018 ppm
LoD = 0.0005 ppm

Fe 259.940 {130} (Radial)



f(x) = 258.5427*x + 2.1064
R² = 1.0000
BEC = 0.008 ppm
LoD = 0.0080 ppm

Calibration Summary

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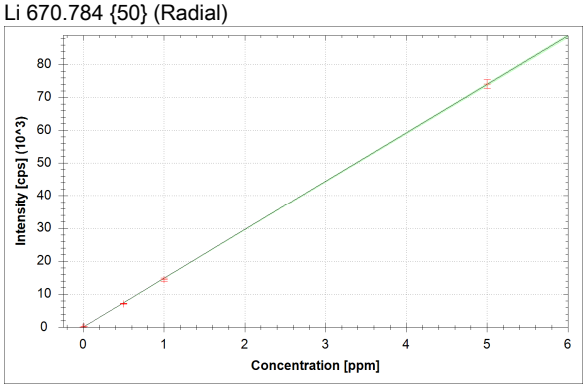
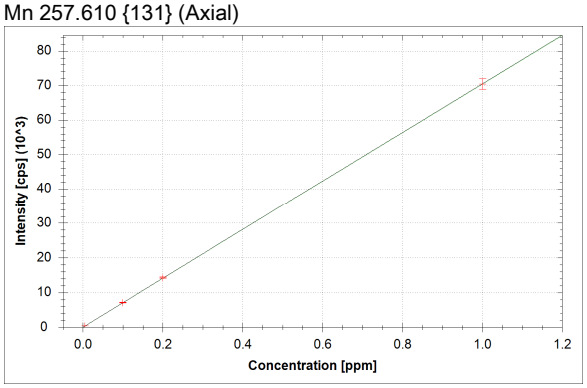
Li 670.784 {50} (Radial)



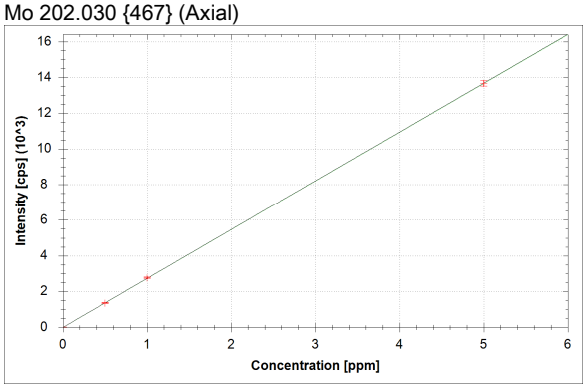
f(x) = 14780.0692*x + 37.0730
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0006 ppm

Mn 257.610 {131} (Axial)



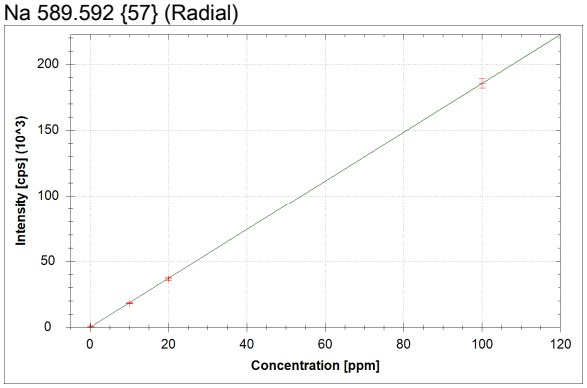
f(x) = 70439.5783*x + 18.6248
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Mo 202.030 {467} (Axial)



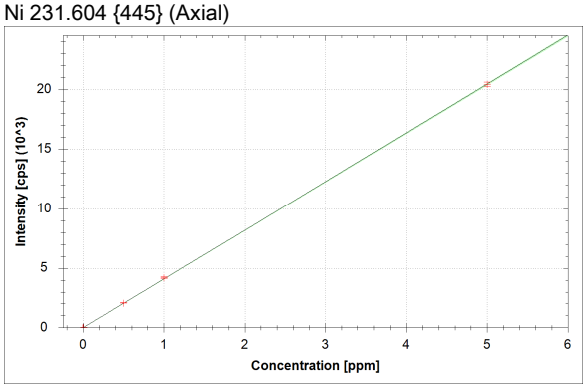
f(x) = 2736.0247*x + -0.3959
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Na 589.592 {57} (Radial)



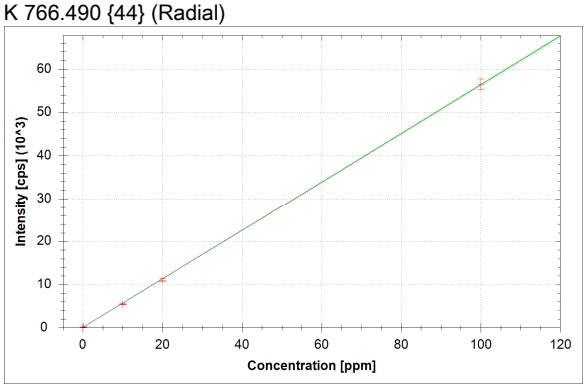
f(x) = 1854.5268*x + 27.2796
R² = 1.0000
BEC = 0.015 ppm
LoD = 0.0099 ppm

Ni 231.604 {445} (Axial)



f(x) = 4090.4380*x + 1.6945
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

K 766.490 {44} (Radial)



f(x) = 563.2199*x + 64.4640
R² = 0.9999
BEC = 0.114 ppm
LoD = 0.0568 ppm

Calibration Summary

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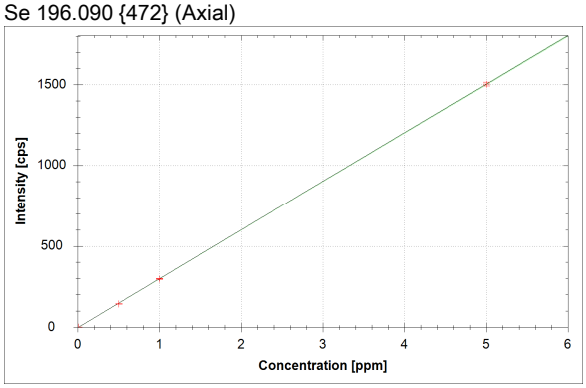
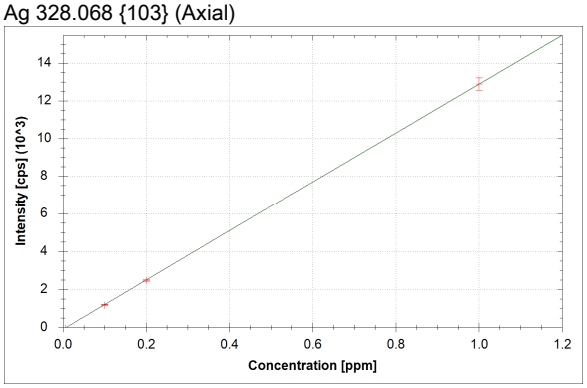
Se 196.090 {472} (Axial)



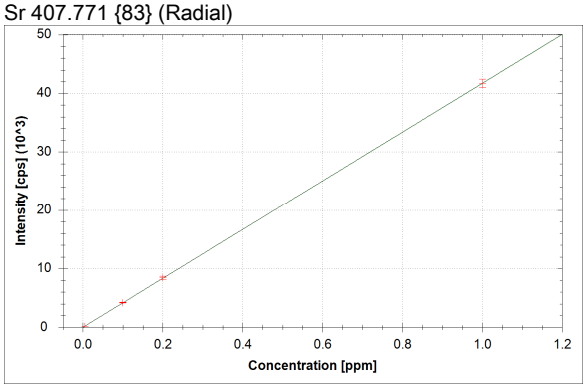
f(x) = 301.0442*x + -1.7116
R² = 1.0000
BEC = -0.006 ppm
LoD = 0.0040 ppm

Ag 328.068 {103} (Axial)



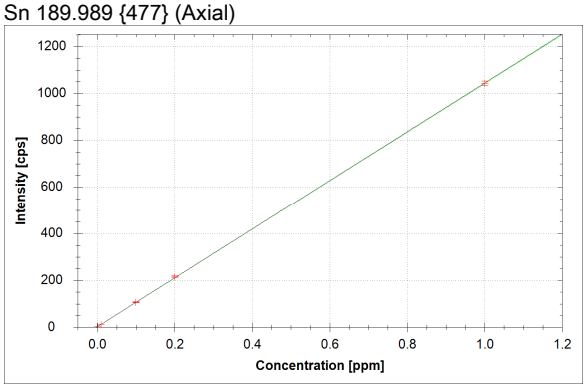
f(x) = 12987.7253*x + -104.2359
R² = 1.0000
BEC = -0.008 ppm
LoD = 0.0008 ppm

Sr 407.771 {83} (Radial)



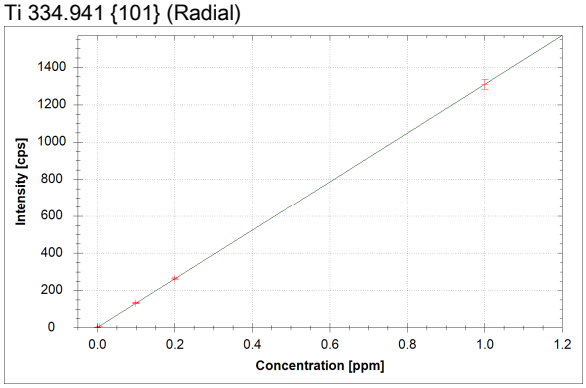
f(x) = 41710.4152*x + 3.7707
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0003 ppm

Sn 189.989 {477} (Axial)



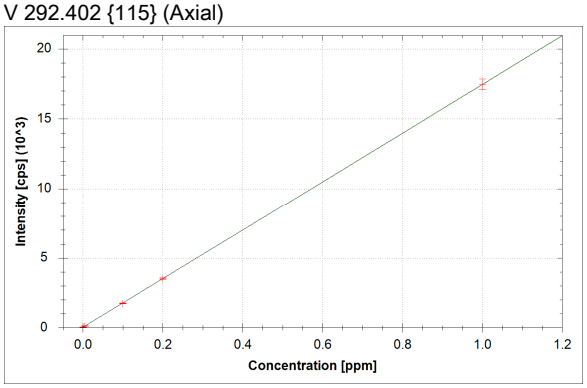
f(x) = 1041.4815*x + 2.6002
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0014 ppm

Ti 334.941 {101} (Radial)



f(x) = 1308.0845*x + 0.4411
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0029 ppm

V 292.402 {115} (Axial)



f(x) = 17430.6012*x + 31.9214
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0007 ppm

Calibration Summary

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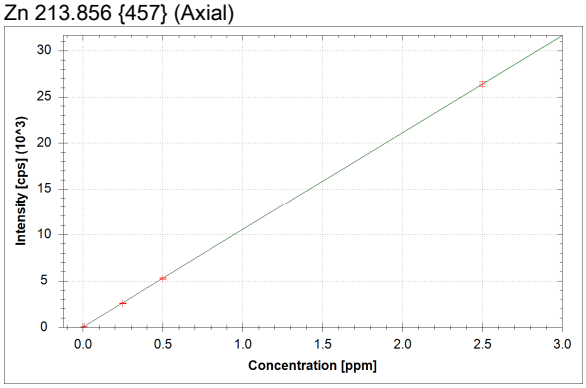
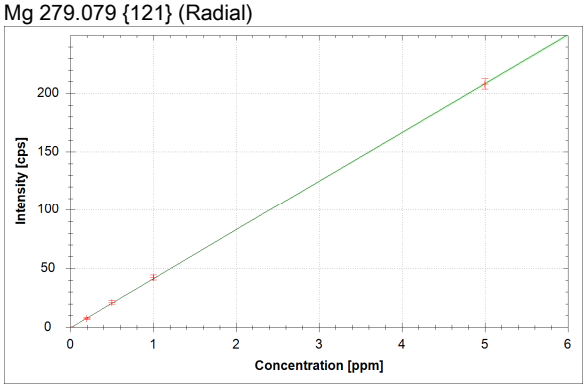
Zn 213.856 {457} (Axial)



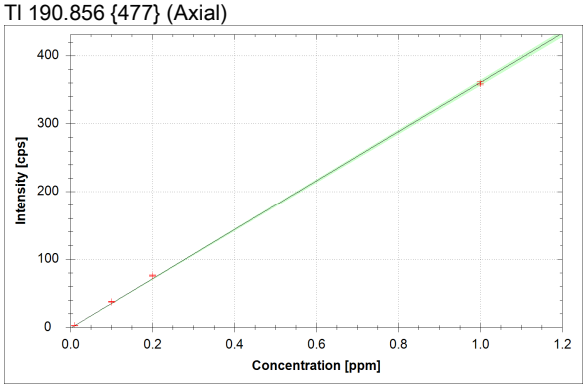
f(x) = 10542.5060*x + 17.9989
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0001 ppm

Mg 279.079 {121} (Radial)



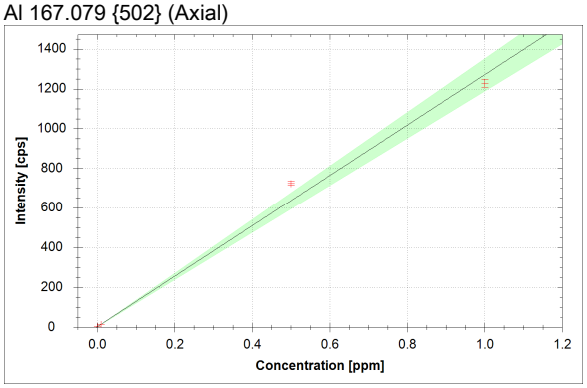
f(x) = 41.7725*x + -0.5112
R² = 0.9999
BEC = -0.012 ppm
LoD = 0.0850 ppm

Tl 190.856 {477} (Axial)



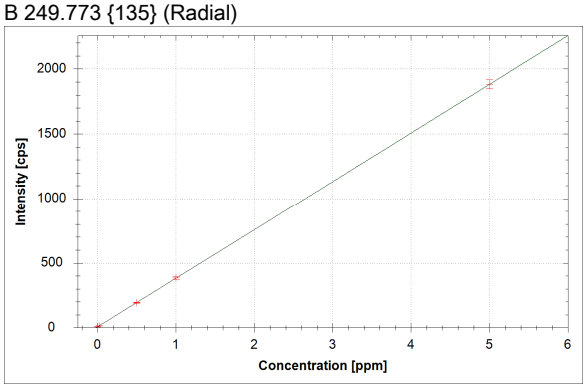
f(x) = 361.5895*x + -1.2500
R² = 0.9997
BEC = -0.003 ppm
LoD = 0.0017 ppm

Al 167.079 {502} (Axial)



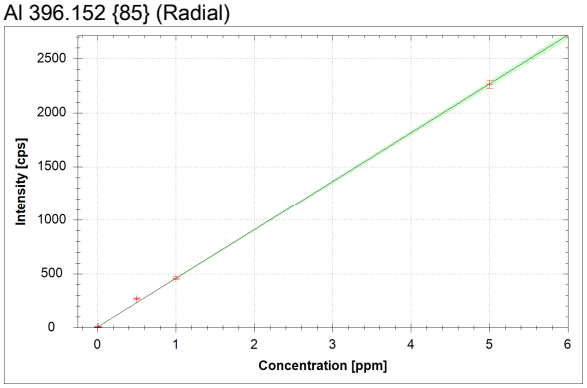
f(x) = 1267.8962*x + 3.0972
R² = 0.9912
BEC = 0.002 ppm
LoD = 0.0006 ppm

B 249.773 {135} (Radial)



f(x) = 374.9059*x + 6.6567
R² = 1.0000
BEC = 0.018 ppm
LoD = 0.0035 ppm

Al 396.152 {85} (Radial)



f(x) = 452.0124*x + 6.4137
R² = 0.9997
BEC = 0.014 ppm
LoD = 0.0323 ppm

Calibration Summary

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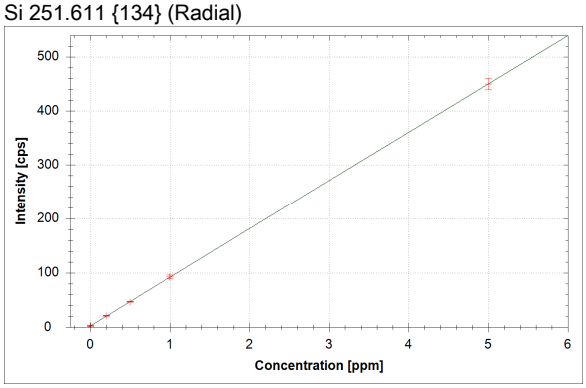
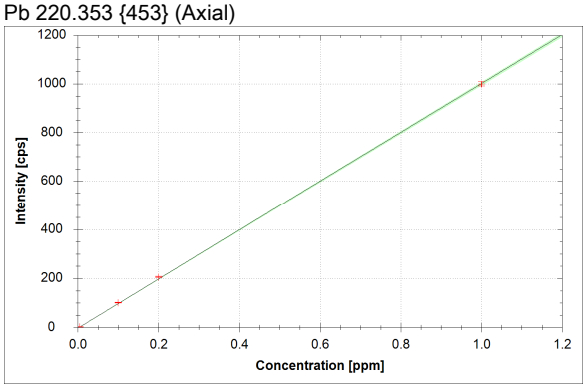
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 89.4479*x + 2.5539
R² = 1.0000
BEC = 0.029 ppm
LoD = 0.0316 ppm

Pb 220.353 {453} (Axial)



f(x) = 1004.8622*x + -3.3208
R² = 0.9999
BEC = -0.003 ppm
LoD = 0.0027 ppm

Calibration Summary

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QTEGRA

Standards

Standard: ICAL2
Analysis started at: 11/21/2020 2:48:55 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0053 ppm	21.5 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0043 ppm	23.3 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0047 ppm	10.2 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	1.1 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.5053 ppm	1.4 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0096 ppm	1.8 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0048 ppm	3.8 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0050 ppm	1.3 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0099 ppm	0.2 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0759 ppm	5.5 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0086 ppm	3.8 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0050 ppm	1.4 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0050 ppm	2.5 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1845 ppm	10.4 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0050 ppm	1.4 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1646 ppm	9.9 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0099 ppm	27.3 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0046 ppm	11.2 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0048 ppm	1.8 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0099 ppm	2.8 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0043 ppm	7.5 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0046 ppm	6.0 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0096 ppm	0.8 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.7994 %	0.2 %	
Sc 188.060 {479} (Axial)	100.9915 %	0.5 %	
Mg 279.079 {121} (Radial)	0.1902 ppm	13.7 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0103 ppm	7.9 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0092 ppm	3.0 %	0.0100 ppm
Sc 227.318 {448} (Axial)	101.0893 %	0.5 %	
B 249.773 {135} (Radial)	0.0175 ppm	4.2 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0057 ppm	86.7 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2052 ppm	3.6 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0057 ppm	13.5 %	0.0050 ppm
Y 224.306 {450} (Axial)	100.9870 %	0.1 %	
Sc 361.384 {93} (Radial)	99.8177 %	0.3 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/21/2020 2:54:07 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0986 ppm	0.8 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0957 ppm	2.6 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4993 ppm	2.0 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4977 ppm	2.3 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0965 ppm	1.8 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.5038 ppm	2.6 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0978 ppm	1.7 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0987 ppm	1.4 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.5049 ppm	1.4 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4952 ppm	1.9 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.5016 ppm	2.3 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4784 ppm	2.1 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.1002 ppm	1.8 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4977 ppm	1.4 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.8053 ppm	2.3 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.5079 ppm	1.4 %	0.5000 ppm
K 766.490 {44} (Radial)	9.4998 ppm	2.0 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4829 ppm	0.7 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0986 ppm	1.8 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.1006 ppm	1.7 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.1009 ppm	1.5 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.1000 ppm	1.9 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0978 ppm	1.3 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2438 ppm	1.5 %	0.2500 ppm
Sc 357.253 {94} (Axial)	99.7731 %	0.4 %	
Sc 188.060 {479} (Axial)	98.8794 %	0.5 %	
Mg 279.079 {121} (Radial)	0.5159 ppm	6.8 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1066 ppm	2.2 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5683 ppm	1.5 %	0.5000 ppm
Sc 227.318 {448} (Axial)	99.6790 %	0.5 %	
B 249.773 {135} (Radial)	0.4940 ppm	2.6 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.5748 ppm	3.0 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4984 ppm	1.5 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1042 ppm	1.4 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.8220 %	0.3 %	
Sc 361.384 {93} (Radial)	101.3403 %	0.2 %	

Calibration Summary

11/23/2020 6:47:52 PM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/21/2020 2:59:07 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1988 ppm	1.9 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1966 ppm	1.6 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0004 ppm	3.1 %	1.0000 ppm
Ba 493.409 {68} (Radial)	1.0031 ppm	3.0 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1986 ppm	1.7 %	0.2000 ppm
Ca 315.887 {107} (Radial)	1.0169 ppm	2.9 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1993 ppm	1.5 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.2017 ppm	1.4 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.2007 ppm	1.7 %	0.2000 ppm
Co 228.616 {447} (Axial)	1.0198 ppm	1.6 %	1.0000 ppm
Cu 324.754 {104} (Axial)	1.0002 ppm	1.6 %	1.0000 ppm
Fe 259.940 {130} (Radial)	1.0174 ppm	2.2 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9692 ppm	3.3 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.2019 ppm	1.7 %	0.2000 ppm
Mo 202.030 {467} (Axial)	1.0095 ppm	1.7 %	1.0000 ppm
Na 589.592 {57} (Radial)	19.8129 ppm	3.2 %	20.0000 ppm
Ni 231.604 {445} (Axial)	1.0247 ppm	1.6 %	1.0000 ppm
K 766.490 {44} (Radial)	19.3298 ppm	3.4 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9901 ppm	1.4 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1984 ppm	1.7 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.2015 ppm	3.2 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.2046 ppm	1.5 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.2008 ppm	2.7 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1996 ppm	1.4 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4964 ppm	1.5 %	0.5000 ppm
Sc 357.253 {94} (Axial)	98.7135 %	0.3 %	
Sc 188.060 {479} (Axial)	96.5306 %	0.7 %	
Mg 279.079 {121} (Radial)	1.0273 ppm	5.0 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2123 ppm	1.8 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9659 ppm	1.5 %	1.0000 ppm
Sc 227.318 {448} (Axial)	98.6252 %	0.6 %	
B 249.773 {135} (Radial)	1.0037 ppm	2.9 %	1.0000 ppm
Al 396.152 {85} (Radial)	1.0021 ppm	2.9 %	1.0000 ppm
Si 251.611 {134} (Radial)	1.0036 ppm	4.1 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.2079 ppm	1.3 %	0.2000 ppm
Y 224.306 {450} (Axial)	97.7335 %	0.5 %	
Sc 361.384 {93} (Radial)	100.6616 %	0.1 %	

Calibration Summary

11/23/2020 6:47:52 PM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/21/2020 3:04:05 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0004 ppm	0.8 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0011 ppm	0.8 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	4.9996 ppm	1.9 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0006 ppm	2.9 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9957 ppm	2.2 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0004 ppm	1.0 %	1.0000 ppm
Cr 267.716 {126} (Axial)	0.9997 ppm	1.9 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	4.9956 ppm	1.0 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0004 ppm	2.5 %	5.0000 ppm
Fe 259.940 {130} (Radial)	4.9964 ppm	1.8 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0083 ppm	1.8 %	5.0000 ppm
Mn 257.610 {131} (Axial)	0.9996 ppm	2.3 %	1.0000 ppm
Mo 202.030 {467} (Axial)	4.9983 ppm	1.1 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.0569 ppm	2.0 %	100.0000 ppm
Ni 231.604 {445} (Axial)	4.9943 ppm	1.0 %	5.0000 ppm
K 766.490 {44} (Radial)	100.1841 ppm	2.2 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0037 ppm	0.8 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0005 ppm	2.5 %	1.0000 ppm
Sr 407.771 {83} (Radial)	0.9996 ppm	1.7 %	1.0000 ppm
Sn 189.989 {477} (Axial)	0.9990 ppm	0.9 %	1.0000 ppm
Ti 334.941 {101} (Radial)	0.9999 ppm	2.1 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0003 ppm	2.2 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5013 ppm	0.9 %	2.5000 ppm
Sc 357.253 {94} (Axial)	93.4051 %	0.5 %	
Sc 188.060 {479} (Axial)	88.7197 %	0.0 %	
Mg 279.079 {121} (Radial)	4.9934 ppm	2.1 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9969 ppm	0.7 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	98.8620 %	0.1 %	
B 249.773 {135} (Radial)	4.9999 ppm	1.8 %	5.0000 ppm
Al 396.152 {85} (Radial)	4.9921 ppm	1.7 %	5.0000 ppm
Si 251.611 {134} (Radial)	4.9992 ppm	2.4 %	5.0000 ppm
Pb 220.353 {453} (Axial)	0.9980 ppm	0.8 %	1.0000 ppm
Y 224.306 {450} (Axial)	93.9561 %	0.1 %	
Sc 361.384 {93} (Radial)	99.8421 %	0.4 %	

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

LabBook: ICP2_201121B.imexp

ICAL1

Sample type: BLK Analysis started at: 11/21/2020 2:43:42 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-2.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/21/2020 2:48:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0053 ppm	21.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0043 ppm	23.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	174 cps	0.0047 ppm	10.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	708 cps	0.0019 ppm	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	121 cps	0.5053 ppm	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	117 cps	0.0096 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	32 cps	0.0048 ppm	3.8 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0050 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	256 cps	0.0099 ppm	0.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	20 cps	0.0759 ppm	5.5 %	0.0 ppm
Li 670.784 {50} (Radial)	127 cps	0.0086 ppm	3.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	349 cps	0.0050 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	14 cps	0.0050 ppm	2.5 %	0.0 ppm
Na 589.592 {57} (Radial)	342 cps	0.1845 ppm	10.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0050 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	93 cps	0.1646 ppm	9.9 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0099 ppm	27.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	59 cps	0.0046 ppm	11.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	200 cps	0.0048 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0099 ppm	2.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0043 ppm	7.5 %	0.0 ppm
V 292.402 {115} (Axial)	80 cps	0.0046 ppm	6.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	101 cps	0.0096 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7994 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		100.9915 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	8 cps	0.1902 ppm	13.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0103 ppm	7.9 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0092 ppm	3.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0893 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	7 cps	0.0175 ppm	4.2 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0057 ppm	86.7 %	0.0 ppm
Si 251.611 {134} (Radial)	18 cps	0.2052 ppm	3.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0057 ppm	13.5 %	0.0 ppm
Y 224.306 {450} (Axial)		100.9870 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.8177 %	0.3 %	0.3 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/21/2020 2:54:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	60 cps	0.0986 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	41 cps	0.0957 ppm	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	18,575 cps	0.4993 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	14,811 cps	0.4977 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	36,433 cps	0.0965 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	120 cps	0.5038 ppm	2.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,201 cps	0.0978 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	660 cps	0.0987 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4,109 cps	0.5049 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	12,740 cps	0.4952 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	130 cps	0.5016 ppm	2.3 %	0.0 ppm
Li 670.784 {50} (Radial)	7,071 cps	0.4784 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,058 cps	0.1002 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,362 cps	0.4977 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	18,184 cps	9.8053 ppm	2.3 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,078 cps	0.5079 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	5,350 cps	9.4998 ppm	2.0 %	0.2 ppm
Se 196.090 {472} (Axial)	145 cps	0.4829 ppm	0.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,280 cps	0.0986 ppm	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,197 cps	0.1006 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	105 cps	0.1009 ppm	1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	131 cps	0.1000 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	1,704 cps	0.0978 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,570 cps	0.2438 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7731 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		98.8794 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	22 cps	0.5159 ppm	6.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	39 cps	0.1066 ppm	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	721 cps	0.5683 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.6790 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	185 cps	0.4940 ppm	2.6 %	0.0 ppm
Al 396.152 {85} (Radial)	260 cps	0.5748 ppm	3.0 %	0.0 ppm
Si 251.611 {134} (Radial)	45 cps	0.4984 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	105 cps	0.1042 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		98.8220 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.3403 %	0.2 %	0.2 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/21/2020 2:59:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	121 cps	0.1988 ppm	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	84 cps	0.1966 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	37,217 cps	1.0004 ppm	3.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	29,849 cps	1.0031 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	74,952 cps	0.1986 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	243 cps	1.0169 ppm	2.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,448 cps	0.1993 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,899 cps	0.2017 ppm	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,341 cps	0.2007 ppm	1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	8,300 cps	1.0198 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	25,731 cps	1.0002 ppm	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	263 cps	1.0174 ppm	2.2 %	0.0 ppm
Li 670.784 {50} (Radial)	14,325 cps	0.9692 ppm	3.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,223 cps	0.2019 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,762 cps	1.0095 ppm	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	36,744 cps	19.8129 ppm	3.2 %	0.6 ppm
Ni 231.604 {445} (Axial)	4,192 cps	1.0247 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	10,887 cps	19.3298 ppm	3.4 %	0.6 ppm
Se 196.090 {472} (Axial)	298 cps	0.9901 ppm	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,576 cps	0.1984 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	8,405 cps	0.2015 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	213 cps	0.2046 ppm	1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	263 cps	0.2008 ppm	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	3,478 cps	0.1996 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,233 cps	0.4964 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7135 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.5306 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	43 cps	1.0273 ppm	5.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	77 cps	0.2123 ppm	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1,225 cps	0.9659 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.6252 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	376 cps	1.0037 ppm	2.9 %	0.0 ppm
Al 396.152 {85} (Radial)	453 cps	1.0021 ppm	2.9 %	0.0 ppm
Si 251.611 {134} (Radial)	90 cps	1.0036 ppm	4.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	209 cps	0.2079 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7335 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.6616 %	0.1 %	0.1 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/21/2020 3:04:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	610 cps	1.0004 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	426 cps	1.0011 ppm	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	148,781 cps	4.9996 ppm	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	377,686 cps	1.0006 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,193 cps	4.9957 ppm	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	12,291 cps	1.0004 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,411 cps	0.9997 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	40,657 cps	4.9956 ppm	1.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	128,636 cps	5.0004 ppm	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,292 cps	4.9964 ppm	1.8 %	0.1 ppm
Li 670.784 {50} (Radial)	74,023 cps	5.0083 ppm	1.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	70,411 cps	0.9996 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	13,676 cps	4.9983 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	185,558 cps	100.0569 ppm	2.0 %	2.0 ppm
Ni 231.604 {445} (Axial)	20,429 cps	4.9943 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	56,426 cps	100.1841 ppm	2.2 %	2.3 ppm
Se 196.090 {472} (Axial)	1,506 cps	5.0037 ppm	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	12,994 cps	1.0005 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	41,695 cps	0.9996 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,040 cps	0.9990 ppm	0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,308 cps	0.9999 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	17,436 cps	1.0003 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,370 cps	2.5013 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.4051 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		88.7197 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	209 cps	4.9934 ppm	2.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	360 cps	0.9969 ppm	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		98.8620 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1,874 cps	4.9999 ppm	1.8 %	0.1 ppm
Al 396.152 {85} (Radial)	2,256 cps	4.9921 ppm	1.7 %	0.1 ppm
Si 251.611 {134} (Radial)	447 cps	4.9992 ppm	2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,003 cps	0.9980 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		93.9561 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.8421 %	0.4 %	0.4 %

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QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/21/2020 3:39:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-85 cps	-0.1398 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	-16 cps	-0.0366 ppm	7.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	768,260 cps	20.6502 ppm	3.1 %	0.6 ppm
Ba 493.409 {68} (Radial)	622,915 cps	20.9323 ppm	2.2 %	0.5 ppm
Be 313.042 {108} (Axial)	737,134 cps	1.9529 ppm	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	48,753 cps	204.1895 ppm	2.4 %	4.8 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	173.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	92,961 cps	9.8747 ppm	0.5 %	0.1 ppm
Cr 205.560 {464} (Axial)	62,296 cps	9.3189 ppm	2.0 %	0.2 ppm
Co 228.616 {447} (Axial)	100 cps	0.0123 ppm	4.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	522,067 cps	20.2941 ppm	0.9 %	0.2 ppm
Fe 259.940 {130} (Radial)	51,468 cps	199.0683 ppm	2.4 %	4.8 ppm
Li 670.784 {50} (Radial)	158,754 cps	10.7411 ppm	2.6 %	0.3 ppm
Mn 257.610 {131} (Axial)	658,057 cps	9.3422 ppm	0.6 %	0.1 ppm
Mo 202.030 {467} (Axial)	-5 cps	-0.0017 ppm	12.4 %	0.0 ppm
Na 589.592 {57} (Radial)	-20 cps	-0.0106 ppm	87.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	-131 cps	-0.0319 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	12 cps	0.0217 ppm	92.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0045 ppm	80.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	28,799 cps	2.2174 ppm	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	426,310 cps	10.2207 ppm	2.5 %	0.3 ppm
Sn 189.989 {477} (Axial)	-9 cps	-0.0087 ppm	2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	13,379 cps	10.2281 ppm	2.5 %	0.3 ppm
V 292.402 {115} (Axial)	172,625 cps	9.9036 ppm	0.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1,238 cps	-0.1174 ppm	2.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.7073 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		79.6651 %	0.9 %	0.7 %
Mg 279.079 {121} (Radial)	9,023 cps	216.0056 ppm	2.5 %	5.3 ppm
Tl 190.856 {477} (Axial)	-8 cps	-0.0229 ppm	8.4 %	0.0 ppm
Al 167.079 {502} (Axial)	21,269 cps	16.7749 ppm	0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		80.8360 %	1.1 %	0.9 %
B 249.773 {135} (Radial)	7,937 cps	21.1704 ppm	2.6 %	0.5 ppm
Al 396.152 {85} (Radial)	95,227 cps	210.6735 ppm	2.5 %	5.3 ppm
Si 251.611 {134} (Radial)	1,846 cps	20.6402 ppm	2.5 %	0.5 ppm
Pb 220.353 {453} (Axial)	4 cps	0.0044 ppm	24.7 %	0.0 ppm
Y 224.306 {450} (Axial)		89.0419 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.6011 %	0.3 %	0.3 %

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QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/21/2020 3:45:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,997 cps	4.9177 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	1,960 cps	4.6056 ppm	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	268 cps	0.0072 ppm	22.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0068 ppm	27.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-58 cps	-0.0002 ppm	32.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	19 cps	0.0815 ppm	28.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	339 cps	0.0276 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0009 ppm	54.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	161.1 %	0.0 ppm
Co 228.616 {447} (Axial)	82,044 cps	10.0808 ppm	1.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	228 cps	0.0088 ppm	7.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	39 cps	0.1520 ppm	21.7 %	0.0 ppm
Li 670.784 {50} (Radial)	78 cps	0.0053 ppm	33.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	-93 cps	-0.0013 ppm	23.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	26,958 cps	9.8530 ppm	1.0 %	0.1 ppm
Na 589.592 {57} (Radial)	6 cps	0.0035 ppm	126.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	41,015 cps	10.0271 ppm	0.9 %	0.1 ppm
K 766.490 {44} (Radial)	38 cps	0.0668 ppm	18.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1,407 cps	4.6735 ppm	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	731.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	148 cps	0.0035 ppm	24.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,097 cps	4.8938 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	21 cps	0.0160 ppm	14.6 %	0.0 ppm
V 292.402 {115} (Axial)	23 cps	0.0013 ppm	16.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	49,658 cps	4.7103 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.5194 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		99.5995 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	3 cps	0.0720 ppm	34.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,927 cps	5.3279 ppm	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	17 cps	0.0137 ppm	35.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0812 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	17 cps	0.0443 ppm	11.8 %	0.0 ppm
Al 396.152 {85} (Radial)	203 cps	0.4481 ppm	6.1 %	0.0 ppm
Si 251.611 {134} (Radial)	8 cps	0.0875 ppm	10.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,172 cps	5.1473 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1268 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5904 %	0.3 %	0.3 %

Simple Sample Report

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QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/21/2020 3:09:03 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	615 cps	1.0099 ppm	100.990 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	420 cps	0.9856 ppm	98.557 %	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	40,117 cps	1.0783 ppm		1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	32,292 cps	1.0851 ppm	108.515 %	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	369,251 cps	0.9783 ppm	97.828 %	3.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,591 cps	6.6635 ppm	111.059 %	1.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	12,458 cps	1.0139 ppm	101.390 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,565 cps	1.0160 ppm	101.602 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	6,746 cps	1.0091 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	8,369 cps	1.0283 ppm	102.827 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	26,085 cps	1.0140 ppm	101.399 %	2.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	285 cps	1.1011 ppm	110.114 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	15,674 cps	1.0605 ppm	106.046 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	72,220 cps	1.0253 ppm	102.528 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,858 cps	1.0446 ppm	104.465 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	41,118 cps	22.1716 ppm	105.579 %	0.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	4,229 cps	1.0339 ppm	103.393 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	12,358 cps	21.9425 ppm	104.488 %	0.8 %	0.2 ppm
Se 196.090 {472} (Axial)	301 cps	0.9994 ppm	99.936 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	13,650 cps	1.0510 ppm	105.096 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	45,147 cps	1.0824 ppm	108.240 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,085 cps	1.0413 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,409 cps	1.0768 ppm	107.677 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	17,752 cps	1.0185 ppm	101.847 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,576 cps	1.0032 ppm	100.317 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7111 %		1.4 %	1.4 %
Sc 188.060 {479} (Axial)		94.3989 %		0.9 %	0.9 %
Mg 279.079 {121} (Radial)	48 cps	1.1380 ppm	113.801 %	3.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	386 cps	1.0667 ppm	106.667 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	1,238 cps	0.9767 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.4091 %		0.9 %	0.9 %
B 249.773 {135} (Radial)	409 cps	1.0918 ppm	109.179 %	1.3 %	0.0 ppm
Al 396.152 {85} (Radial)	498 cps	1.1021 ppm	110.207 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	99 cps	1.1109 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,056 cps	1.0510 ppm	105.095 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5846 %		0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.8595 %		1.2 %	1.2 %

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QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/21/2020 3:14:04 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	608 cps	0.9981 ppm	99.807 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	413 cps	0.9697 ppm	96.970 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	38,992 cps	1.0481 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	31,362 cps	1.0539 ppm	105.388 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	373,177 cps	0.9887 ppm	98.869 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,541 cps	6.4534 ppm	107.557 %	1.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	12,280 cps	0.9995 ppm	99.947 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,624 cps	1.0223 ppm	102.232 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	6,651 cps	0.9950 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	8,243 cps	1.0128 ppm	101.276 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	26,062 cps	1.0131 ppm	101.309 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	272 cps	1.0538 ppm	105.377 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	15,255 cps	1.0322 ppm	103.215 %	1.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	72,494 cps	1.0292 ppm	102.916 %	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,815 cps	1.0287 ppm	102.868 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	40,077 cps	21.6101 ppm	102.905 %	1.7 %	0.4 ppm
Ni 231.604 {445} (Axial)	4,164 cps	1.0181 ppm	101.806 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	12,083 cps	21.4529 ppm	102.157 %	1.6 %	0.3 ppm
Se 196.090 {472} (Axial)	297 cps	0.9875 ppm	98.750 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	13,722 cps	1.0565 ppm	105.650 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	43,953 cps	1.0538 ppm	105.377 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,068 cps	1.0259 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,367 cps	1.0447 ppm	104.473 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	17,773 cps	1.0197 ppm	101.966 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,419 cps	0.9883 ppm	98.830 %	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8873 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.7838 %		1.0 %	1.0 %
Mg 279.079 {121} (Radial)	44 cps	1.0528 ppm	105.282 %	3.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	382 cps	1.0557 ppm	105.569 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1,217 cps	0.9602 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.5877 %		1.0 %	0.9 %
B 249.773 {135} (Radial)	399 cps	1.0635 ppm	106.355 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	480 cps	1.0627 ppm	106.273 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	96 cps	1.0787 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,041 cps	1.0356 ppm	103.563 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		97.4327 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.5422 %		0.2 %	0.2 %

Simple Sample Report

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QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/21/2020 3:19:03 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0009 ppm	27.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	297.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	20 cps	0.0005 ppm	64.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	37 cps	0.0012 ppm	62.6 %	0.0 ppm
Be 313.042 {108} (Axial)	76 cps	0.0002 ppm	24.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0027 ppm	80.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	42.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	111.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	300.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	99.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	13 cps	0.0005 ppm	58.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0007 ppm	191.8 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0015 ppm	5.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	21.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0006 ppm	36.5 %	0.0 ppm
Na 589.592 {57} (Radial)	44 cps	0.0239 ppm	41.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1,811.1 %	0.0 ppm
K 766.490 {44} (Radial)	48 cps	0.0844 ppm	48.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0013 ppm	174.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0006 ppm	49.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0003 ppm	42.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	52.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0037 ppm	21.4 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	286.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	40.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.8037 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		100.8844 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	1 cps	0.0161 ppm	231.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	169.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	410.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7585 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	10,402.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0018 ppm	62.6 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0137 ppm	90.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	210.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.7307 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.8397 %	0.1 %	0.1 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/21/2020 3:29:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0050 ppm	100.359 %	8.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0048 ppm	95.342 %	21.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	178 cps	0.0048 ppm		1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	149 cps	0.0050 ppm		22.4 %	0.0 ppm
Be 313.042 {108} (Axial)	699 cps	0.0019 ppm	92.662 %	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	119 cps	0.4976 ppm	99.513 %	2.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	120 cps	0.0097 ppm	97.381 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	45 cps	0.0048 ppm	95.547 %	4.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	33 cps	0.0050 ppm	99.629 %	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0050 ppm	100.841 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	251 cps	0.0098 ppm	97.592 %	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	19 cps	0.0752 ppm	94.020 %	4.3 %	0.0 ppm
Li 670.784 {50} (Radial)	132 cps	0.0090 ppm	89.648 %	7.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	350 cps	0.0050 ppm	99.432 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	14 cps	0.0051 ppm	102.663 %	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	367 cps	0.1977 ppm	98.846 %	1.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0051 ppm	102.337 %	4.8 %	0.0 ppm
K 766.490 {44} (Radial)	130 cps	0.2313 ppm	115.667 %	1.8 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0098 ppm	98.406 %	13.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	66 cps	0.0051 ppm	101.445 %	8.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	204 cps	0.0049 ppm	97.652 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0101 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0046 ppm	92.101 %	41.3 %	0.0 ppm
V 292.402 {115} (Axial)	81 cps	0.0046 ppm	92.865 %	10.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	102 cps	0.0096 ppm	96.292 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.0008 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		100.7436 %		1.5 %	1.5 %
Mg 279.079 {121} (Radial)	9 cps	0.2214 ppm	110.711 %	8.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0111 ppm	111.307 %	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0093 ppm		2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7521 %		1.4 %	1.4 %
B 249.773 {135} (Radial)	5 cps	0.0138 ppm	69.054 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0127 ppm		71.3 %	0.0 ppm
Si 251.611 {134} (Radial)	19 cps	0.2146 ppm		5.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0059 ppm	118.156 %	11.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5897 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.2909 %		0.4 %	0.4 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/21/2020 3:24:16 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0049 ppm	97.327 %	14.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0049 ppm	97.241 %	17.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	202 cps	0.0054 ppm		5.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	184 cps	0.0062 ppm		30.5 %	0.0 ppm
Be 313.042 {108} (Axial)	751 cps	0.0020 ppm	99.507 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	128 cps	0.5349 ppm	106.988 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	120 cps	0.0098 ppm	97.764 %	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	46 cps	0.0049 ppm	98.223 %	3.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	33 cps	0.0049 ppm	98.056 %	2.4 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0051 ppm	101.261 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	265 cps	0.0103 ppm	102.946 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	21 cps	0.0811 ppm	101.344 %	6.7 %	0.0 ppm
Li 670.784 {50} (Radial)	149 cps	0.0101 ppm	100.749 %	7.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	365 cps	0.0052 ppm	103.736 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	15 cps	0.0054 ppm	107.180 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	391 cps	0.2110 ppm	105.522 %	2.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0049 ppm	98.114 %	4.7 %	0.0 ppm
K 766.490 {44} (Radial)	144 cps	0.2554 ppm	127.675 %	11.2 %	0.0 ppm
Se 196.090 {472} (Axial)	4 cps	0.0117 ppm	116.870 %	15.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	70 cps	0.0054 ppm	108.235 %	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	217 cps	0.0052 ppm	104.165 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0101 ppm		3.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	9 cps	0.0071 ppm	142.157 %	8.8 %	0.0 ppm
V 292.402 {115} (Axial)	87 cps	0.0050 ppm	99.881 %	4.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	101 cps	0.0096 ppm	95.968 %	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0500 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		100.6365 %		1.2 %	1.2 %
Mg 279.079 {121} (Radial)	10 cps	0.2433 ppm	121.670 %	13.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0105 ppm	105.190 %	2.9 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0092 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7168 %		1.3 %	1.3 %
B 249.773 {135} (Radial)	7 cps	0.0187 ppm	93.683 %	24.8 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0126 ppm		83.5 %	0.0 ppm
Si 251.611 {134} (Radial)	20 cps	0.2238 ppm		3.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0061 ppm	122.026 %	7.4 %	0.0 ppm
Y 224.306 {450} (Axial)		100.8433 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.2372 %		0.4 %	0.4 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/21/2020 3:34:39 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-12 cps	-0.0203 ppm		5.3 %	0.0 ppm
As 189.042 {478} (Axial)	-10 cps	-0.0235 ppm	0.000 %	9.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	27 cps	0.0007 ppm	0.000 %	13.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	122 cps	0.0041 ppm	0.000 %	10.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-924 cps	-0.0024 ppm	0.000 %	3.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	24,152 cps	101.1528 ppm	101.153 %	0.7 %	0.7 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	0.000 %	20.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	12 cps	0.0013 ppm	0.000 %	15.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	-2 cps	-0.0002 ppm	0.000 %	62.3 %	0.0 ppm
Co 228.616 {447} (Axial)	10 cps	0.0012 ppm	0.000 %	7.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	96 cps	0.0037 ppm	0.000 %	6.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	25,924 cps	100.2702 ppm	100.270 %	0.6 %	0.6 ppm
Li 670.784 {50} (Radial)	37 cps	0.0025 ppm		39.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-380 cps	-0.0054 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,545 cps	2.0267 ppm	101.336 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	193,412 cps	104.2917 ppm	104.292 %	0.8 %	0.8 ppm
Ni 231.604 {445} (Axial)	-66 cps	-0.0161 ppm	0.000 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	59,275 cps	105.2428 ppm	105.243 %	1.2 %	1.3 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0020 ppm	0.000 %	96.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0001 ppm	0.000 %	98.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	-65 cps	-0.0016 ppm		3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	-6 cps	-0.0055 ppm		5.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	2,708 cps	2.0704 ppm		0.4 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	0.000 %	80.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-101 cps	-0.0096 ppm	0.000 %	0.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.5055 %		0.6 %	0.5 %
Sc 188.060 {479} (Axial)		82.4865 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	4,365 cps	104.4865 ppm	104.486 %	0.7 %	0.8 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0056 ppm	0.000 %	7.0 %	0.0 ppm
Al 167.079 {502} (Axial)	18,830 cps	14.8516 ppm		0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		82.6238 %		0.4 %	0.3 %
B 249.773 {135} (Radial)	-23 cps	-0.0611 ppm		2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	45,975 cps	101.7128 ppm	101.713 %	0.5 %	0.5 ppm
Si 251.611 {134} (Radial)	1 cps	0.0088 ppm	0.000 %	43.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	-2 cps	-0.0021 ppm	0.000 %	25.3 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2484 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.3722 %		0.7 %	0.7 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 11:14:38 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	276 cps	0.4523 ppm	90.469 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	195 cps	0.4571 ppm	91.430 %	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	87,985 cps	2.3649 ppm		3.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	71,409 cps	2.3996 ppm	95.985 %	3.9 %	0.1 ppm
Be 313.042 {108} (Axial)	178,549 cps	0.4730 ppm	94.609 %	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	594 cps	2.4881 ppm	99.523 %	3.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,638 cps	0.4588 ppm	91.770 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,468 cps	0.4746 ppm	94.916 %	2.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,057 cps	0.4572 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	19,335 cps	2.3757 ppm	95.028 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,874 cps	2.2886 ppm	91.543 %	2.7 %	0.1 ppm
Fe 259.940 {130} (Radial)	629 cps	2.4346 ppm	97.386 %	3.6 %	0.1 ppm
Li 670.784 {50} (Radial)	35,242 cps	2.3844 ppm	95.376 %	4.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,330 cps	0.4732 ppm	94.633 %	2.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,374 cps	2.3297 ppm	93.188 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	90,475 cps	48.7861 ppm	97.572 %	4.0 %	2.0 ppm
Ni 231.604 {445} (Axial)	9,681 cps	2.3668 ppm	94.670 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	26,102 cps	46.3435 ppm	92.687 %	4.5 %	2.1 ppm
Se 196.090 {472} (Axial)	681 cps	2.2614 ppm	90.457 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,014 cps	0.4630 ppm	92.609 %	3.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,845 cps	0.4758 ppm	95.157 %	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	495 cps	0.4750 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	648 cps	0.4957 ppm	99.136 %	3.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,086 cps	0.4639 ppm	92.777 %	2.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,223 cps	1.1594 ppm	92.753 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.9798 %		1.1 %	1.2 %
Sc 188.060 {479} (Axial)		97.0466 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	102 cps	2.4336 ppm	97.344 %	4.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	173 cps	0.4778 ppm	95.553 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,697 cps	2.1268 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.9781 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	889 cps	2.3720 ppm	94.879 %	4.0 %	0.1 ppm
Al 396.152 {85} (Radial)	1,106 cps	2.4461 ppm	97.844 %	3.8 %	0.1 ppm
Si 251.611 {134} (Radial)	214 cps	2.3920 ppm		3.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	478 cps	0.4752 ppm	95.044 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		102.5646 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.3086 %		1.5 %	1.5 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/22/2020 12:16:28 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	274 cps	0.4500 ppm	89.998 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.4544 ppm	90.875 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	84,981 cps	2.2842 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	69,148 cps	2.3236 ppm	92.946 %	3.3 %	0.1 ppm
Be 313.042 {108} (Axial)	175,993 cps	0.4663 ppm	93.254 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	575 cps	2.4069 ppm	96.276 %	3.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,576 cps	0.4538 ppm	90.762 %	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,384 cps	0.4656 ppm	93.128 %	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,015 cps	0.4511 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	19,125 cps	2.3499 ppm	93.996 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,506 cps	2.2743 ppm	90.972 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	605 cps	2.3399 ppm	93.594 %	3.0 %	0.1 ppm
Li 670.784 {50} (Radial)	34,277 cps	2.3191 ppm	92.766 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,853 cps	0.4664 ppm	93.281 %	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,312 cps	2.3070 ppm	92.278 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	88,182 cps	47.5497 ppm	95.099 %	3.3 %	1.6 ppm
Ni 231.604 {445} (Axial)	9,563 cps	2.3380 ppm	93.520 %	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	25,349 cps	45.0072 ppm	90.014 %	3.4 %	1.5 ppm
Se 196.090 {472} (Axial)	675 cps	2.2427 ppm	89.709 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,979 cps	0.4603 ppm	92.065 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,177 cps	0.4598 ppm	91.953 %	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	488 cps	0.4688 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	630 cps	0.4819 ppm	96.376 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,979 cps	0.4578 ppm	91.556 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,096 cps	1.1474 ppm	91.790 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.2477 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.6928 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	99 cps	2.3599 ppm	94.396 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	171 cps	0.4736 ppm	94.716 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,654 cps	2.0936 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.3129 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	858 cps	2.2877 ppm	91.510 %	3.3 %	0.1 ppm
Al 396.152 {85} (Radial)	1,062 cps	2.3484 ppm	93.938 %	3.1 %	0.1 ppm
Si 251.611 {134} (Radial)	206 cps	2.3071 ppm		3.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	471 cps	0.4686 ppm	93.715 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		102.5998 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.8507 %		0.3 %	0.3 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/22/2020 12:21:23 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	273 cps	0.4476 ppm	89.520 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.4522 ppm	90.443 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	89,811 cps	2.4140 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	73,465 cps	2.4687 ppm	98.748 %	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	180,100 cps	0.4772 ppm	95.430 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	610 cps	2.5560 ppm	102.238 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,561 cps	0.4526 ppm	90.528 %	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,493 cps	0.4772 ppm	95.446 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,004 cps	0.4493 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	19,107 cps	2.3477 ppm	93.909 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,670 cps	2.3195 ppm	92.781 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	644 cps	2.4904 ppm	99.615 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	36,217 cps	2.4504 ppm	98.015 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,614 cps	0.4772 ppm	95.440 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,299 cps	2.3023 ppm	92.093 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	92,927 cps	50.1082 ppm	100.216 %	1.5 %	0.8 ppm
Ni 231.604 {445} (Axial)	9,558 cps	2.3366 ppm	93.465 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	26,651 cps	47.3189 ppm	94.638 %	1.4 %	0.6 ppm
Se 196.090 {472} (Axial)	672 cps	2.2337 ppm	89.350 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,088 cps	0.4687 ppm	93.749 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	20,261 cps	0.4857 ppm	97.149 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	488 cps	0.4685 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	668 cps	0.5107 ppm	102.141 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,151 cps	0.4676 ppm	93.528 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,065 cps	1.1445 ppm	91.556 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.9470 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		96.6962 %		0.8 %	0.8 %
Mg 279.079 {121} (Radial)	104 cps	2.4929 ppm	99.716 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	170 cps	0.4705 ppm	94.103 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,649 cps	2.0895 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.5108 %		0.7 %	0.7 %
B 249.773 {135} (Radial)	907 cps	2.4201 ppm	96.803 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1,137 cps	2.5156 ppm	100.625 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	219 cps	2.4455 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	470 cps	0.4679 ppm	93.583 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		103.2683 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		98.5429 %		1.5 %	1.4 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/22/2020 1:23:16 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	273 cps	0.4476 ppm	89.519 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.4509 ppm	90.190 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	87,855 cps	2.3615 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	71,845 cps	2.4143 ppm	96.570 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	176,475 cps	0.4675 ppm	93.510 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	587 cps	2.4577 ppm	98.309 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,530 cps	0.4501 ppm	90.020 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,397 cps	0.4670 ppm	93.406 %	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,980 cps	0.4457 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	19,042 cps	2.3397 ppm	93.587 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,056 cps	2.2957 ppm	91.827 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	622 cps	2.4050 ppm	96.198 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	35,811 cps	2.4229 ppm	96.916 %	1.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,970 cps	0.4681 ppm	93.612 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,279 cps	2.2948 ppm	91.792 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	91,600 cps	49.3927 ppm	98.785 %	1.8 %	0.9 ppm
Ni 231.604 {445} (Axial)	9,510 cps	2.3249 ppm	92.997 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	25,981 cps	46.1302 ppm	92.260 %	2.0 %	0.9 ppm
Se 196.090 {472} (Axial)	670 cps	2.2253 ppm	89.012 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,998 cps	0.4618 ppm	92.365 %	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,808 cps	0.4749 ppm	94.980 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	483 cps	0.4642 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	657 cps	0.5022 ppm	100.438 %	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	7,993 cps	0.4586 ppm	91.711 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,014 cps	1.1396 ppm	91.166 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.2116 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.2984 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	100 cps	2.4032 ppm	96.129 %	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	170 cps	0.4696 ppm	93.915 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,617 cps	2.0640 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0532 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	880 cps	2.3466 ppm	93.863 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,100 cps	2.4341 ppm	97.363 %	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	212 cps	2.3672 ppm		2.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	467 cps	0.4650 ppm	92.995 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		102.7365 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.3197 %		0.1 %	0.1 %

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/22/2020 1:28:10 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	273 cps	0.4473 ppm	89.458 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.4516 ppm	90.319 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	88,990 cps	2.3920 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	72,807 cps	2.4466 ppm	97.864 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	178,445 cps	0.4728 ppm	94.553 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	598 cps	2.5061 ppm	100.243 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,550 cps	0.4517 ppm	90.336 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,446 cps	0.4722 ppm	94.446 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,992 cps	0.4476 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	19,116 cps	2.3488 ppm	93.951 %	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,576 cps	2.3159 ppm	92.636 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	630 cps	2.4372 ppm	97.489 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	36,265 cps	2.4536 ppm	98.144 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,321 cps	0.4730 ppm	94.608 %	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,299 cps	2.3023 ppm	92.091 %	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	93,060 cps	50.1797 ppm	100.359 %	1.6 %	0.8 ppm
Ni 231.604 {445} (Axial)	9,548 cps	2.3343 ppm	93.371 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	26,409 cps	46.8893 ppm	93.779 %	1.7 %	0.8 ppm
Se 196.090 {472} (Axial)	671 cps	2.2296 ppm	89.183 %	0.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,040 cps	0.4651 ppm	93.013 %	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	20,052 cps	0.4807 ppm	96.150 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	486 cps	0.4671 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	668 cps	0.5107 ppm	102.143 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,088 cps	0.4640 ppm	92.806 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,054 cps	1.1434 ppm	91.469 %	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.3398 %		0.8 %	0.9 %
Sc 188.060 {479} (Axial)		96.2713 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	103 cps	2.4769 ppm	99.078 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	170 cps	0.4694 ppm	93.874 %	0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,632 cps	2.0760 ppm		0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0599 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	897 cps	2.3933 ppm	95.734 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,122 cps	2.4813 ppm	99.253 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	216 cps	2.4124 ppm		1.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	468 cps	0.4658 ppm	93.161 %	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		103.2167 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.8099 %		0.6 %	0.6 %

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/22/2020 1:53:53 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	270 cps	0.4439 ppm	88.776 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.4469 ppm	89.378 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	84,552 cps	2.2727 ppm		2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	69,224 cps	2.3262 ppm	93.047 %	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	172,641 cps	0.4574 ppm	91.478 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	571 cps	2.3911 ppm	95.644 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,483 cps	0.4463 ppm	89.251 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,304 cps	0.4572 ppm	91.436 %	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,942 cps	0.4400 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	18,881 cps	2.3199 ppm	92.797 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,158 cps	2.2607 ppm	90.430 %	2.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	598 cps	2.3128 ppm	92.511 %	2.2 %	0.1 ppm
Li 670.784 {50} (Radial)	34,639 cps	2.3436 ppm	93.744 %	2.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,312 cps	0.4587 ppm	91.744 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,216 cps	2.2719 ppm	90.875 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	89,015 cps	47.9985 ppm	95.997 %	2.1 %	1.0 ppm
Ni 231.604 {445} (Axial)	9,421 cps	2.3031 ppm	92.123 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	25,046 cps	44.4693 ppm	88.939 %	2.5 %	1.1 ppm
Se 196.090 {472} (Axial)	664 cps	2.2048 ppm	88.190 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,894 cps	0.4538 ppm	90.759 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,060 cps	0.4570 ppm	91.393 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	477 cps	0.4580 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	636 cps	0.4860 ppm	97.202 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,820 cps	0.4486 ppm	89.728 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,911 cps	1.1298 ppm	90.387 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.4110 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		95.9490 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	96 cps	2.3049 ppm	92.197 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	168 cps	0.4654 ppm	93.084 %	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,585 cps	2.0386 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.5825 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	851 cps	2.2709 ppm	90.834 %	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,061 cps	2.3467 ppm	93.869 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	206 cps	2.3004 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	462 cps	0.4601 ppm	92.028 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		103.2328 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.3420 %		0.6 %	0.6 %

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/22/2020 1:58:49 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	269 cps	0.4421 ppm	88.422 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.4471 ppm	89.418 %	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	86,662 cps	2.3294 ppm		0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	70,788 cps	2.3787 ppm	95.150 %	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	176,976 cps	0.4689 ppm	93.775 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	587 cps	2.4564 ppm	98.256 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,471 cps	0.4453 ppm	89.053 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,413 cps	0.4688 ppm	93.763 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,934 cps	0.4389 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	18,873 cps	2.3189 ppm	92.756 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,243 cps	2.3029 ppm	92.117 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	620 cps	2.3969 ppm	95.878 %	0.9 %	0.0 ppm
Li 670.784 {50} (Radial)	35,550 cps	2.4053 ppm	96.212 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,149 cps	0.4706 ppm	94.120 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,204 cps	2.2676 ppm	90.706 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	91,742 cps	49.4691 ppm	98.938 %	1.2 %	0.6 ppm
Ni 231.604 {445} (Axial)	9,421 cps	2.3031 ppm	92.123 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	25,670 cps	45.5765 ppm	91.153 %	1.6 %	0.7 ppm
Se 196.090 {472} (Axial)	659 cps	2.1885 ppm	87.542 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,993 cps	0.4614 ppm	92.287 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,566 cps	0.4691 ppm	93.821 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	479 cps	0.4597 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	659 cps	0.5039 ppm	100.775 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	8,036 cps	0.4610 ppm	92.209 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,888 cps	1.1276 ppm	90.207 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.3361 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.9901 %		0.8 %	0.7 %
Mg 279.079 {121} (Radial)	100 cps	2.3849 ppm	95.397 %	0.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	167 cps	0.4627 ppm	92.550 %	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,586 cps	2.0396 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.8321 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	880 cps	2.3465 ppm	93.859 %	0.9 %	0.0 ppm
Al 396.152 {85} (Radial)	1,090 cps	2.4106 ppm	96.425 %	0.7 %	0.0 ppm
Si 251.611 {134} (Radial)	213 cps	2.3777 ppm		1.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	462 cps	0.4599 ppm	91.978 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		104.0128 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.5888 %		0.8 %	0.9 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 4:00:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	299 cps	0.4908 ppm	98.151 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	207 cps	0.4867 ppm	97.347 %	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	92,009 cps	2.4731 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	74,155 cps	2.4919 ppm	99.676 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	186,288 cps	0.4935 ppm	98.709 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	598 cps	2.5029 ppm	100.116 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,041 cps	0.4917 ppm	98.335 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,636 cps	0.4924 ppm	98.481 %	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,279 cps	0.4905 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,269 cps	2.4905 ppm	99.619 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,897 cps	2.4450 ppm	97.799 %	2.8 %	0.1 ppm
Fe 259.940 {130} (Radial)	638 cps	2.4691 ppm	98.765 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	36,096 cps	2.4422 ppm	97.687 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,549 cps	0.4905 ppm	98.096 %	2.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,767 cps	2.4732 ppm	98.928 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	91,693 cps	49.4427 ppm	98.885 %	1.6 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,187 cps	2.4904 ppm	99.615 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	27,436 cps	48.7133 ppm	97.427 %	1.9 %	0.9 ppm
Se 196.090 {472} (Axial)	738 cps	2.4512 ppm	98.050 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,424 cps	0.4946 ppm	98.922 %	2.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	20,664 cps	0.4954 ppm	99.083 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	525 cps	0.5039 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	647 cps	0.4944 ppm	98.882 %	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	8,502 cps	0.4878 ppm	97.556 %	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,949 cps	1.2283 ppm	98.263 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.6529 %		1.1 %	1.1 %
Sc 188.060 {479} (Axial)		93.6354 %		0.6 %	0.6 %
Mg 279.079 {121} (Radial)	105 cps	2.5064 ppm	100.257 %	3.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	186 cps	0.5131 ppm	102.629 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,799 cps	2.2073 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4843 %		0.6 %	0.5 %
B 249.773 {135} (Radial)	920 cps	2.4536 ppm	98.142 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,125 cps	2.4892 ppm	99.568 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	218 cps	2.4378 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	505 cps	0.5021 ppm	100.425 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5218 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.3630 %		0.3 %	0.3 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 5:02:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	301 cps	0.4935 ppm	98.698 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	208 cps	0.4883 ppm	97.654 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	93,803 cps	2.5213 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	75,335 cps	2.5315 ppm	101.261 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	185,897 cps	0.4925 ppm	98.502 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	604 cps	2.5294 ppm	101.177 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,049 cps	0.4924 ppm	98.471 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,646 cps	0.4935 ppm	98.705 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,293 cps	0.4926 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,239 cps	2.4868 ppm	99.472 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	63,114 cps	2.4534 ppm	98.136 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	684 cps	2.6437 ppm	105.747 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	36,681 cps	2.4818 ppm	99.271 %	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,460 cps	0.4892 ppm	97.842 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,781 cps	2.4786 ppm	99.143 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	92,646 cps	49.9566 ppm	99.913 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,182 cps	2.4893 ppm	99.570 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	27,687 cps	49.1580 ppm	98.316 %	1.7 %	0.9 ppm
Se 196.090 {472} (Axial)	741 cps	2.4607 ppm	98.427 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,420 cps	0.4943 ppm	98.865 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	21,070 cps	0.5051 ppm	101.029 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	525 cps	0.5045 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	657 cps	0.5024 ppm	100.475 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,491 cps	0.4871 ppm	97.428 %	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,957 cps	1.2290 ppm	98.324 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7357 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		93.0307 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	107 cps	2.5676 ppm	102.705 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	185 cps	0.5112 ppm	102.249 %	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,796 cps	2.2055 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.0148 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	956 cps	2.5512 ppm	102.047 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	1,136 cps	2.5139 ppm	100.556 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	227 cps	2.5325 ppm		1.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	504 cps	0.5016 ppm	100.313 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8150 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.9048 %		0.2 %	0.2 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 6:05:03 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	296 cps	0.4856 ppm	97.127 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	205 cps	0.4816 ppm	96.321 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	87,451 cps	2.3506 ppm		2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	70,211 cps	2.3594 ppm	94.374 %	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	176,598 cps	0.4679 ppm	93.575 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	573 cps	2.3980 ppm	95.919 %	2.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,952 cps	0.4844 ppm	96.877 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,413 cps	0.4687 ppm	93.745 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,217 cps	0.4812 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	19,919 cps	2.4474 ppm	97.896 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	60,958 cps	2.3696 ppm	94.783 %	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	619 cps	2.3954 ppm	95.818 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	34,342 cps	2.3235 ppm	92.941 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,885 cps	0.4669 ppm	93.372 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,668 cps	2.4373 ppm	97.491 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	86,642 cps	46.7192 ppm	93.438 %	2.7 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,010 cps	2.4472 ppm	97.887 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	25,780 cps	45.7719 ppm	91.544 %	2.9 %	1.3 ppm
Se 196.090 {472} (Axial)	731 cps	2.4286 ppm	97.145 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,133 cps	0.4722 ppm	94.438 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,686 cps	0.4720 ppm	94.393 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	514 cps	0.4933 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	615 cps	0.4700 ppm	93.993 %	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	8,144 cps	0.4672 ppm	93.444 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,751 cps	1.2095 ppm	96.762 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8291 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		92.6414 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	100 cps	2.3853 ppm	95.412 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5055 ppm	101.104 %	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,736 cps	2.1579 ppm		2.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		97.5308 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	892 cps	2.3800 ppm	95.199 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	1,065 cps	2.3551 ppm	94.206 %	1.2 %	0.0 ppm
Si 251.611 {134} (Radial)	212 cps	2.3668 ppm		1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	495 cps	0.4921 ppm	98.429 %	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		95.7748 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.4678 %		0.4 %	0.5 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 7:07:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	290 cps	0.4760 ppm	95.194 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	202 cps	0.4755 ppm	95.102 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	93,009 cps	2.5000 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	74,301 cps	2.4968 ppm	99.871 %	2.4 %	0.1 ppm
Be 313.042 {108} (Axial)	187,635 cps	0.4971 ppm	99.423 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	618 cps	2.5887 ppm	103.548 %	2.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,895 cps	0.4798 ppm	95.963 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,676 cps	0.4967 ppm	99.341 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,233 cps	0.4837 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	19,880 cps	2.4427 ppm	97.706 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,521 cps	2.4304 ppm	97.214 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	668 cps	2.5820 ppm	103.279 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	36,096 cps	2.4422 ppm	97.687 %	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,782 cps	0.4938 ppm	98.758 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,638 cps	2.4261 ppm	97.046 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	91,611 cps	49.3983 ppm	98.797 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,012 cps	2.4477 ppm	97.908 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	27,339 cps	48.5412 ppm	97.082 %	2.7 %	1.3 ppm
Se 196.090 {472} (Axial)	717 cps	2.3813 ppm	95.252 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,367 cps	0.4902 ppm	98.049 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	20,948 cps	0.5022 ppm	100.444 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	519 cps	0.4981 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	657 cps	0.5023 ppm	100.460 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,572 cps	0.4918 ppm	98.351 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,674 cps	1.2022 ppm	96.173 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8322 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.0523 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	108 cps	2.5798 ppm	103.191 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.4995 ppm	99.897 %	0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,791 cps	2.2011 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0225 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	946 cps	2.5228 ppm	100.912 %	2.4 %	0.1 ppm
Al 396.152 {85} (Radial)	1,136 cps	2.5134 ppm	100.538 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	226 cps	2.5249 ppm		2.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	495 cps	0.4928 ppm	98.552 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4509 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.7153 %		0.2 %	0.2 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 8:08:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	284 cps	0.4663 ppm	93.258 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	200 cps	0.4700 ppm	94.005 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	86,235 cps	2.3179 ppm		3.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	69,293 cps	2.3285 ppm	93.140 %	3.7 %	0.1 ppm
Be 313.042 {108} (Axial)	182,381 cps	0.4832 ppm	96.639 %	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	585 cps	2.4504 ppm	98.017 %	3.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,804 cps	0.4724 ppm	94.471 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,559 cps	0.4843 ppm	96.862 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,166 cps	0.4735 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	19,717 cps	2.4226 ppm	96.905 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,027 cps	2.3334 ppm	93.337 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	622 cps	2.4060 ppm	96.238 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	33,732 cps	2.2822 ppm	91.289 %	3.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,910 cps	0.4814 ppm	96.281 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,542 cps	2.3909 ppm	95.636 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	86,764 cps	46.7849 ppm	93.570 %	3.8 %	1.8 ppm
Ni 231.604 {445} (Axial)	9,906 cps	2.4217 ppm	96.869 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	25,656 cps	45.5518 ppm	91.104 %	3.8 %	1.8 ppm
Se 196.090 {472} (Axial)	703 cps	2.3357 ppm	93.429 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,164 cps	0.4746 ppm	94.913 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,444 cps	0.4662 ppm	93.232 %	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	510 cps	0.4898 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	623 cps	0.4761 ppm	95.212 %	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,281 cps	0.4751 ppm	95.014 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,529 cps	1.1884 ppm	95.073 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.2178 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		96.6940 %		0.9 %	0.9 %
Mg 279.079 {121} (Radial)	102 cps	2.4428 ppm	97.711 %	3.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	178 cps	0.4928 ppm	98.559 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,770 cps	2.1845 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.4523 %		1.0 %	1.0 %
B 249.773 {135} (Radial)	879 cps	2.3453 ppm	93.812 %	3.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,073 cps	2.3742 ppm	94.968 %	3.6 %	0.1 ppm
Si 251.611 {134} (Radial)	210 cps	2.3440 ppm		4.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	491 cps	0.4887 ppm	97.747 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.4359 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.8009 %		1.7 %	1.8 %

Simple Sample Report

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QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 9:10:33 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	276 cps	0.4527 ppm	90.537 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	195 cps	0.4577 ppm	91.534 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	85,827 cps	2.3070 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	69,593 cps	2.3386 ppm	93.543 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	181,587 cps	0.4811 ppm	96.219 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	588 cps	2.4617 ppm	98.470 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,640 cps	0.4590 ppm	91.809 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,548 cps	0.4831 ppm	96.612 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,049 cps	0.4562 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	19,285 cps	2.3696 ppm	94.784 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,516 cps	2.3135 ppm	92.541 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	616 cps	2.3813 ppm	95.250 %	2.7 %	0.1 ppm
Li 670.784 {50} (Radial)	34,118 cps	2.3084 ppm	92.335 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,842 cps	0.4804 ppm	96.089 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,358 cps	2.3239 ppm	92.957 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	88,354 cps	47.6423 ppm	95.285 %	2.6 %	1.3 ppm
Ni 231.604 {445} (Axial)	9,656 cps	2.3607 ppm	94.427 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	25,583 cps	45.4235 ppm	90.847 %	2.8 %	1.3 ppm
Se 196.090 {472} (Axial)	681 cps	2.2627 ppm	90.508 %	0.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,123 cps	0.4715 ppm	94.294 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,367 cps	0.4643 ppm	92.865 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	496 cps	0.4758 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	632 cps	0.4831 ppm	96.628 %	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,213 cps	0.4712 ppm	94.236 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,202 cps	1.1574 ppm	92.589 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5631 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		97.3122 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	102 cps	2.4361 ppm	97.442 %	4.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	174 cps	0.4799 ppm	95.989 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,690 cps	2.1214 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.1577 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	875 cps	2.3333 ppm	93.331 %	2.8 %	0.1 ppm
Al 396.152 {85} (Radial)	1,070 cps	2.3675 ppm	94.700 %	3.5 %	0.1 ppm
Si 251.611 {134} (Radial)	210 cps	2.3523 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	478 cps	0.4755 ppm	95.092 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		102.8825 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5948 %		0.4 %	0.4 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 10:12:35 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	275 cps	0.4507 ppm	90.141 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.4544 ppm	90.872 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	87,023 cps	2.3391 ppm		2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	70,541 cps	2.3705 ppm	94.818 %	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	177,139 cps	0.4693 ppm	93.861 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	590 cps	2.4714 ppm	98.856 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,595 cps	0.4554 ppm	91.077 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,422 cps	0.4697 ppm	93.948 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,027 cps	0.4528 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	19,094 cps	2.3461 ppm	93.843 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,535 cps	2.2754 ppm	91.016 %	2.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	622 cps	2.4053 ppm	96.213 %	2.1 %	0.1 ppm
Li 670.784 {50} (Radial)	34,574 cps	2.3392 ppm	93.569 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,996 cps	0.4684 ppm	93.687 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,313 cps	2.3075 ppm	92.301 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	88,964 cps	47.9711 ppm	95.942 %	2.4 %	1.1 ppm
Ni 231.604 {445} (Axial)	9,573 cps	2.3402 ppm	93.609 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	25,813 cps	45.8305 ppm	91.661 %	2.9 %	1.3 ppm
Se 196.090 {472} (Axial)	680 cps	2.2586 ppm	90.342 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,984 cps	0.4608 ppm	92.151 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,616 cps	0.4703 ppm	94.057 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	490 cps	0.4702 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	637 cps	0.4870 ppm	97.406 %	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	8,026 cps	0.4604 ppm	92.086 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,098 cps	1.1476 ppm	91.804 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6105 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		97.0618 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	104 cps	2.4990 ppm	99.960 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	172 cps	0.4759 ppm	95.176 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,662 cps	2.0998 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.8913 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	881 cps	2.3511 ppm	94.046 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,087 cps	2.4052 ppm	96.210 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	212 cps	2.3753 ppm		2.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	474 cps	0.4717 ppm	94.350 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		102.4944 %		0.5 %	0.6 %
Sc 361.384 {93} (Radial)		100.6192 %		1.4 %	1.4 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 11:19:31 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0003 ppm	478.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0010 ppm	42.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	44 cps	0.0012 ppm	8.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	-143 cps	-0.0048 ppm	16.4 %	0.0 ppm
Be 313.042 {108} (Axial)	-23 cps	-0.0001 ppm	20.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0101 ppm	39.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	-5 cps	-0.0004 ppm	21.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	76,135.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	530.6 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	6.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	-24 cps	-0.0009 ppm	11.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0039 ppm	163.0 %	0.0 ppm
Li 670.784 {50} (Radial)	-1 cps	-0.0001 ppm	1,085.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	9.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	32.2 %	0.0 ppm
Na 589.592 {57} (Radial)	137 cps	0.0741 ppm	15.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	119.8 %	0.0 ppm
K 766.490 {44} (Radial)	55 cps	0.0973 ppm	17.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0016 ppm	67.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	-9 cps	-0.0007 ppm	41.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0002 ppm	66.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0005 ppm	54.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	327.4 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	624.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	45.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.0155 %	1.0 %	1.1 %
Sc 188.060 {479} (Axial)		105.0233 %	0.4 %	0.5 %
Mg 279.079 {121} (Radial)	1 cps	0.0194 ppm	211.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	76.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	120.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		105.0252 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	0 cps	-0.0008 ppm	165.1 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0097 ppm	116.8 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0024 ppm	475.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0005 ppm	142.9 %	0.0 ppm
Y 224.306 {450} (Axial)		106.7290 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.4018 %	0.3 %	0.3 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/22/2020 12:26:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	1,388.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	71.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	38 cps	0.0010 ppm	12.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	-111 cps	-0.0037 ppm	19.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-5 cps	0.0000 ppm	146.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	-1 cps	-0.0053 ppm	120.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	-6 cps	-0.0005 ppm	31.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	389.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	133.1 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	57.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	-16 cps	-0.0006 ppm	35.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0015 ppm	149.5 %	0.0 ppm
Li 670.784 {50} (Radial)	13 cps	0.0009 ppm	48.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	42.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	18.0 %	0.0 ppm
Na 589.592 {57} (Radial)	122 cps	0.0655 ppm	12.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	93.1 %	0.0 ppm
K 766.490 {44} (Radial)	53 cps	0.0941 ppm	21.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	263.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-9 cps	-0.0007 ppm	36.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0001 ppm	53.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	102.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0017 ppm	87.7 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	0.0000 ppm	578.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	243.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.7088 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		105.1065 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	-0.0008 ppm	1,578.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	484.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0001 ppm	222.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		105.1532 %	0.2 %	0.3 %
B 249.773 {135} (Radial)	0 cps	-0.0002 ppm	648.4 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0063 ppm	261.7 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0010 ppm	982.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	55.5 %	0.0 ppm
Y 224.306 {450} (Axial)		107.7680 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		99.8047 %	0.4 %	0.4 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/22/2020 1:33:03 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0005 ppm	89.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	45.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	34 cps	0.0009 ppm	23.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	-71 cps	-0.0024 ppm	90.6 %	0.0 ppm
Be 313.042 {108} (Axial)	-30 cps	-0.0001 ppm	20.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0067 ppm	179.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	-6 cps	-0.0005 ppm	8.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	112.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	38.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	66.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	-29 cps	-0.0011 ppm	28.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0004 ppm	1,222.7 %	0.0 ppm
Li 670.784 {50} (Radial)	31 cps	0.0021 ppm	56.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	71.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	29.1 %	0.0 ppm
Na 589.592 {57} (Radial)	116 cps	0.0625 ppm	17.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	49.1 %	0.0 ppm
K 766.490 {44} (Radial)	41 cps	0.0731 ppm	26.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0001 ppm	1,500.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	-10 cps	-0.0007 ppm	16.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	4 cps	0.0001 ppm	90.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	231.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0020 ppm	56.4 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	354.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	138.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		106.6714 %	2.7 %	2.9 %
Sc 188.060 {479} (Axial)		103.3676 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	0.0032 ppm	1,434.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	102.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	3,136.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.3969 %	0.6 %	0.7 %
B 249.773 {135} (Radial)	-2 cps	-0.0053 ppm	42.1 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0058 ppm	27.3 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0102 ppm	60.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0012 ppm	16.1 %	0.0 ppm
Y 224.306 {450} (Axial)		107.1667 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.1369 %	1.5 %	1.5 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/22/2020 2:03:42 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0006 ppm	75.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	249.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	47 cps	0.0013 ppm	18.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	-150 cps	-0.0050 ppm	13.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-12 cps	0.0000 ppm	370.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0092 ppm	35.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	-8 cps	-0.0006 ppm	15.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	317.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	49.1 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	39.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	-8 cps	-0.0003 ppm	414.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0023 ppm	172.1 %	0.0 ppm
Li 670.784 {50} (Radial)	3 cps	0.0002 ppm	244.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	58.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	30.8 %	0.0 ppm
Na 589.592 {57} (Radial)	117 cps	0.0631 ppm	17.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	219.7 %	0.0 ppm
K 766.490 {44} (Radial)	46 cps	0.0814 ppm	18.2 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0019 ppm	30.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	-15 cps	-0.0011 ppm	43.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0001 ppm	63.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0003 ppm	113.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0016 ppm	10.1 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	307.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	148.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.2328 %	6.0 %	6.2 %
Sc 188.060 {479} (Axial)		103.6164 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0068 ppm	214.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	1,837.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	179.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.7915 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-1 cps	-0.0017 ppm	77.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0056 ppm	153.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0010 ppm	646.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	159.7 %	0.0 ppm
Y 224.306 {450} (Axial)		108.0495 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.9677 %	0.2 %	0.2 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 4:05:46 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0008 ppm	178.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	94.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	45 cps	0.0012 ppm	38.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	49 cps	0.0016 ppm	60.9 %	0.0 ppm
Be 313.042 {108} (Axial)	30 cps	0.0001 ppm	66.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0029 ppm	147.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	125.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	93.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	786.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	57.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	10 cps	0.0004 ppm	52.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0047 ppm	40.4 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0028 ppm	35.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	56.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	34.8 %	0.0 ppm
Na 589.592 {57} (Radial)	78 cps	0.0423 ppm	9.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	78.9 %	0.0 ppm
K 766.490 {44} (Radial)	56 cps	0.0987 ppm	4.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0003 ppm	214.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0002 ppm	152.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	34.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0005 ppm	10.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0010 ppm	149.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,596.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	25.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6733 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		101.5880 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	1 cps	0.0172 ppm	36.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	1,962.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	2,608.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.4961 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	4 cps	0.0099 ppm	17.6 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0102 ppm	46.1 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0034 ppm	310.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	399.4 %	0.0 ppm
Y 224.306 {450} (Axial)		100.6599 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.0336 %	0.5 %	0.5 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/21/2020 5:07:25 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0006 ppm	167.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	10,375.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	43 cps	0.0012 ppm	46.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	17 cps	0.0006 ppm	220.3 %	0.0 ppm
Be 313.042 {108} (Axial)	44 cps	0.0001 ppm	14.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	-1 cps	-0.0054 ppm	56.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	30.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	1,574.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	335.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	48.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	18 cps	0.0007 ppm	43.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0083 ppm	76.5 %	0.0 ppm
Li 670.784 {50} (Radial)	29 cps	0.0020 ppm	28.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	5 cps	0.0001 ppm	43.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0009 ppm	36.8 %	0.0 ppm
Na 589.592 {57} (Radial)	66 cps	0.0357 ppm	17.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	86.8 %	0.0 ppm
K 766.490 {44} (Radial)	46 cps	0.0812 ppm	32.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	158.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	0.0000 ppm	542.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0002 ppm	43.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	91.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0004 ppm	185.6 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	96.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	42.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.8168 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		102.5322 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1 cps	0.0133 ppm	162.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	87.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	212.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.6502 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	0 cps	-0.0007 ppm	634.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0045 ppm	123.1 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0042 ppm	171.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0010 ppm	46.8 %	0.0 ppm
Y 224.306 {450} (Axial)		101.8327 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.9724 %	1.1 %	1.1 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

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Sample type: UNKNOWN Analysis started at: 11/21/2020 6:09:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0004 ppm	166.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	24.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	40 cps	0.0011 ppm	21.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	-26 cps	-0.0009 ppm	32.3 %	0.0 ppm
Be 313.042 {108} (Axial)	20 cps	0.0001 ppm	43.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0139 ppm	11.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	167.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	684.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	26.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	56.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	10 cps	0.0004 ppm	60.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0017 ppm	155.4 %	0.0 ppm
Li 670.784 {50} (Radial)	22 cps	0.0015 ppm	90.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	27.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	30.8 %	0.0 ppm
Na 589.592 {57} (Radial)	248 cps	0.1336 ppm	13.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	35.8 %	0.0 ppm
K 766.490 {44} (Radial)	52 cps	0.0918 ppm	21.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	76.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0001 ppm	291.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0002 ppm	54.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	1,439.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0025 ppm	47.4 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	942.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	73.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.5999 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		102.8201 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	0.0084 ppm	62.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	450.0 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	258.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.9048 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-2 cps	-0.0043 ppm	5.0 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0060 ppm	123.1 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0020 ppm	708.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	1,139.0 %	0.0 ppm
Y 224.306 {450} (Axial)		102.4945 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.1177 %	0.2 %	0.2 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

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Sample type: UNKNOWN Analysis started at: 11/21/2020 7:11:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0008 ppm	232.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	164.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	53 cps	0.0014 ppm	31.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	-33 cps	-0.0011 ppm	55.8 %	0.0 ppm
Be 313.042 {108} (Axial)	12 cps	0.0000 ppm	155.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0034 ppm	243.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	155.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	29,960.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	186.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	47.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	8 cps	0.0003 ppm	74.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0029 ppm	172.6 %	0.0 ppm
Li 670.784 {50} (Radial)	5 cps	0.0004 ppm	387.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	5 cps	0.0001 ppm	77.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	42.8 %	0.0 ppm
Na 589.592 {57} (Radial)	169 cps	0.0909 ppm	15.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	95.7 %	0.0 ppm
K 766.490 {44} (Radial)	50 cps	0.0890 ppm	25.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0011 ppm	284.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0001 ppm	124.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0002 ppm	37.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	3,014.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0008 ppm	25.4 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	640.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	1,147.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.2753 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		103.7687 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0201 ppm	80.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	185.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0001 ppm	202.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.7750 %	0.6 %	0.7 %
B 249.773 {135} (Radial)	-1 cps	-0.0014 ppm	115.4 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0093 ppm	72.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0023 ppm	275.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0005 ppm	64.2 %	0.0 ppm
Y 224.306 {450} (Axial)		103.3241 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.9027 %	0.6 %	0.6 %

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QTEGRA

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Sample type: UNKNOWN Analysis started at: 11/21/2020 8:13:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	6,228.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	169.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	42 cps	0.0011 ppm	21.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	-122 cps	-0.0041 ppm	15.2 %	0.0 ppm
Be 313.042 {108} (Axial)	2 cps	0.0000 ppm	692.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0099 ppm	115.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	-6 cps	-0.0005 ppm	61.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	54.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	209.0 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0001 ppm	249.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	-11 cps	-0.0004 ppm	10.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0068 ppm	88.6 %	0.0 ppm
Li 670.784 {50} (Radial)	7 cps	0.0004 ppm	182.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	48.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	51.4 %	0.0 ppm
Na 589.592 {57} (Radial)	143 cps	0.0769 ppm	3.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	218.2 %	0.0 ppm
K 766.490 {44} (Radial)	39 cps	0.0700 ppm	25.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0005 ppm	320.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	-5 cps	-0.0004 ppm	67.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0002 ppm	50.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	251.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0020 ppm	77.5 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	501.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	907.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.9071 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		104.6381 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0289 ppm	148.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	710.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	217.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		104.5461 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-1 cps	-0.0032 ppm	79.1 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0088 ppm	124.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0005 ppm	1,892.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	95.4 %	0.0 ppm
Y 224.306 {450} (Axial)		105.1077 %	1.0 %	1.0 %
Sc 361.384 {93} (Radial)		99.5617 %	0.3 %	0.3 %

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11/23/2020 6:48:32 PM

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Sample type: UNKNOWN Analysis started at: 11/21/2020 9:15:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	124.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	261.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	50 cps	0.0013 ppm	18.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	-147 cps	-0.0049 ppm	19.4 %	0.0 ppm
Be 313.042 {108} (Axial)	-24 cps	-0.0001 ppm	21.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0022 ppm	405.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	-4 cps	-0.0003 ppm	28.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	149.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	168.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	52.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	-15 cps	-0.0006 ppm	23.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0012 ppm	194.8 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0014 ppm	12.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	79.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	18.6 %	0.0 ppm
Na 589.592 {57} (Radial)	135 cps	0.0729 ppm	17.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	30.8 %	0.0 ppm
K 766.490 {44} (Radial)	51 cps	0.0912 ppm	23.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0007 ppm	61.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-7 cps	-0.0005 ppm	64.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	4 cps	0.0001 ppm	112.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	76.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0024 ppm	30.7 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	87.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	223.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.2835 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		104.5409 %	0.9 %	1.0 %
Mg 279.079 {121} (Radial)	2 cps	0.0384 ppm	92.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	263.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	242.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		104.3889 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	-3 cps	-0.0075 ppm	23.1 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0045 ppm	28.4 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0079 ppm	32.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	30.8 %	0.0 ppm
Y 224.306 {450} (Axial)		105.7428 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		99.3508 %	0.4 %	0.4 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

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Sample type: UNKNOWN Analysis started at: 11/21/2020 10:17:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0005 ppm	191.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	843.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	40 cps	0.0011 ppm	1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	-131 cps	-0.0044 ppm	4.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-20 cps	-0.0001 ppm	48.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0018 ppm	665.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	26.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	274.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	72.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	67.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	-7 cps	-0.0003 ppm	106.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0033 ppm	132.7 %	0.0 ppm
Li 670.784 {50} (Radial)	16 cps	0.0011 ppm	56.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	5 cps	0.0001 ppm	41.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	22.7 %	0.0 ppm
Na 589.592 {57} (Radial)	131 cps	0.0706 ppm	14.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	60.1 %	0.0 ppm
K 766.490 {44} (Radial)	41 cps	0.0723 ppm	9.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0009 ppm	179.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	-7 cps	-0.0005 ppm	40.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0002 ppm	40.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	149.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0018 ppm	91.5 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	91.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	80.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.9697 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		105.9738 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1 cps	0.0214 ppm	90.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	274.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0001 ppm	23.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		105.8595 %	0.1 %	0.2 %
B 249.773 {135} (Radial)	-2 cps	-0.0053 ppm	42.2 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0073 ppm	156.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0022 ppm	512.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0012 ppm	97.2 %	0.0 ppm
Y 224.306 {450} (Axial)		107.0180 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.7541 %	0.1 %	0.1 %

Simple Sample Report

11/23/2020 6:48:32 PM

20111251-17A

Sample type: UNKNOWN Analysis started at: 11/21/2020 7:27:39 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	22 cps	3.6272 ppm	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.3803 ppm	19.0 %	0.1 ppm
Ba 455.403 {74} (Radial)	493 cps	1.3250 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	321 cps	1.0773 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	11 cps	0.0029 ppm	36.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	326 cps	136.6885 ppm	2.3 %	3.1 ppm
Cd 228.802 {447} (Axial)	39 cps	0.3193 ppm	3.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	53 cps	0.5612 ppm	3.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	38 cps	0.5681 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	16 cps	0.1914 ppm	6.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,502 cps	40.8225 ppm	1.8 %	0.7 ppm
Fe 259.940 {130} (Radial)	955 cps	369.2297 ppm	2.7 %	9.9 ppm
Li 670.784 {50} (Radial)	11 cps	0.0712 ppm	144.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	4,566 cps	6.4823 ppm	1.9 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0360 ppm	18.6 %	0.0 ppm
Na 589.592 {57} (Radial)	532 cps	28.6743 ppm	9.2 %	2.6 ppm
Ni 231.604 {445} (Axial)	316 cps	7.7240 ppm	1.0 %	0.1 ppm
K 766.490 {44} (Radial)	74 cps	13.1335 ppm	9.7 %	1.3 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	5,048.4 %	0.1 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0579 ppm	54.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	76 cps	0.1819 ppm	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	76 cps	7.2833 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	21 cps	1.6335 ppm	6.5 %	0.1 ppm
V 292.402 {115} (Axial)	28 cps	0.1618 ppm	4.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	96,790 cps	918.0959 ppm	0.7 %	6.2 ppm
Sc 357.253 {94} (Axial)		103.3311 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		102.8636 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	25 cps	59.4906 ppm	5.8 %	3.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0679 ppm	77.0 %	0.1 ppm
Al 167.079 {502} (Axial)	1,908 cps	150.5009 ppm	0.9 %	1.4 ppm
Sc 227.318 {448} (Axial)		102.7745 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	-2 cps	-0.5166 ppm	77.1 %	0.4 ppm
Al 396.152 {85} (Radial)	711 cps	157.4028 ppm	3.1 %	4.8 ppm
Si 251.611 {134} (Radial)	28 cps	31.5182 ppm	3.8 %	1.2 ppm
Pb 220.353 {453} (Axial)	1,542 cps	153.4891 ppm	1.0 %	1.5 ppm
Y 224.306 {450} (Axial)		103.8321 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.5016 %	0.5 %	0.5 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

20111251-27A

Sample type: UNKNOWN Analysis started at: 11/21/2020 7:32:45 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.4995 ppm	7.8 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.2086 ppm	22.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	196 cps	0.5263 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	120 cps	0.4020 ppm	44.5 %	0.2 ppm
Be 313.042 {108} (Axial)	-22 cps	-0.0058 ppm	12.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	689 cps	288.6422 ppm	3.7 %	10.6 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0071 ppm	183.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0645 ppm	80.2 %	0.1 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0807 ppm	6.0 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0329 ppm	26.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	294 cps	1.1444 ppm	3.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	269 cps	104.0715 ppm	3.2 %	3.3 ppm
Li 670.784 {50} (Radial)	-3 cps	-0.0196 ppm	215.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	2,046 cps	2.9040 ppm	1.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0026 ppm	654.6 %	0.0 ppm
Na 589.592 {57} (Radial)	195 cps	10.5131 ppm	3.8 %	0.4 ppm
Ni 231.604 {445} (Axial)	4 cps	0.1004 ppm	8.4 %	0.0 ppm
K 766.490 {44} (Radial)	52 cps	9.2646 ppm	12.8 %	1.2 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0245 ppm	691.9 %	0.2 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0306 ppm	50.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	62 cps	0.1494 ppm	4.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	7 cps	0.6338 ppm	5.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	16 cps	1.2131 ppm	5.4 %	0.1 ppm
V 292.402 {115} (Axial)	18 cps	0.1050 ppm	26.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,308 cps	21.8927 ppm	0.9 %	0.2 ppm
Sc 357.253 {94} (Axial)		103.7559 %	0.9 %	1.0 %
Sc 188.060 {479} (Axial)		102.4082 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	60 cps	144.4910 ppm	4.8 %	6.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0248 ppm	258.3 %	0.1 ppm
Al 167.079 {502} (Axial)	457 cps	36.0271 ppm	1.0 %	0.4 ppm
Sc 227.318 {448} (Axial)		102.3878 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-3 cps	-0.7201 ppm	34.2 %	0.2 ppm
Al 396.152 {85} (Radial)	177 cps	39.0628 ppm	1.1 %	0.4 ppm
Si 251.611 {134} (Radial)	13 cps	14.4468 ppm	5.1 %	0.7 ppm
Pb 220.353 {453} (Axial)	690 cps	68.6355 ppm	0.7 %	0.5 ppm
Y 224.306 {450} (Axial)		103.9313 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.1201 %	1.2 %	1.2 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

20111251-41A

Sample type: UNKNOWN Analysis started at: 11/21/2020 7:37:53 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.8936 ppm	7.1 %	0.1 ppm
As 189.042 {478} (Axial)	1 cps	0.2322 ppm	6.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	526 cps	1.4127 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	292 cps	0.9799 ppm	14.3 %	0.1 ppm
Be 313.042 {108} (Axial)	-10 cps	-0.0027 ppm	143.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	439 cps	183.6943 ppm	1.7 %	3.2 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0432 ppm	60.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	10 cps	0.1042 ppm	43.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	7 cps	0.1095 ppm	7.1 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0322 ppm	30.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	307 cps	1.1921 ppm	6.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	521 cps	201.3968 ppm	1.7 %	3.4 ppm
Li 670.784 {50} (Radial)	-4 cps	-0.0265 ppm	101.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,231 cps	4.5864 ppm	3.0 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0206 ppm	18.7 %	0.0 ppm
Na 589.592 {57} (Radial)	147 cps	7.9064 ppm	5.0 %	0.4 ppm
Ni 231.604 {445} (Axial)	6 cps	0.1427 ppm	6.8 %	0.0 ppm
K 766.490 {44} (Radial)	46 cps	8.1794 ppm	10.8 %	0.9 ppm
Se 196.090 {472} (Axial)	0 cps	0.0265 ppm	283.9 %	0.1 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0410 ppm	75.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	89 cps	0.2138 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	3 cps	0.2805 ppm	22.5 %	0.1 ppm
Ti 334.941 {101} (Radial)	15 cps	1.1786 ppm	4.9 %	0.1 ppm
V 292.402 {115} (Axial)	18 cps	0.1060 ppm	15.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,012 cps	28.5677 ppm	0.9 %	0.2 ppm
Sc 357.253 {94} (Axial)		101.8463 %	2.1 %	2.1 %
Sc 188.060 {479} (Axial)		102.7314 %	1.0 %	1.0 %
Mg 279.079 {121} (Radial)	36 cps	87.1085 ppm	2.0 %	1.7 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0352 ppm	314.3 %	0.1 ppm
Al 167.079 {502} (Axial)	549 cps	43.2866 ppm	0.7 %	0.3 ppm
Sc 227.318 {448} (Axial)		102.6655 %	1.0 %	1.0 %
B 249.773 {135} (Radial)	-4 cps	-1.0821 ppm	13.4 %	0.1 ppm
Al 396.152 {85} (Radial)	203 cps	44.9583 ppm	1.6 %	0.7 ppm
Si 251.611 {134} (Radial)	11 cps	12.1830 ppm	10.7 %	1.3 ppm
Pb 220.353 {453} (Axial)	700 cps	69.6913 ppm	0.9 %	0.6 ppm
Y 224.306 {450} (Axial)		103.9939 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		100.6748 %	0.3 %	0.3 %

Simple Sample Report

11/23/2020 6:48:32 PM

20111251-43ASD

Sample type: UNKNOWN Analysis started at: 11/21/2020 7:43:01 PM

Standard DF: 50

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	28 cps	2.3281 ppm	4.3 %	0.1 ppm
As 189.042 {478} (Axial)	6 cps	0.7621 ppm	9.4 %	0.1 ppm
Ba 455.403 {74} (Radial)	372 cps	0.4993 ppm	4.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	129 cps	0.2161 ppm	20.9 %	0.0 ppm
Be 313.042 {108} (Axial)	-18 cps	-0.0024 ppm	41.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	346 cps	72.4990 ppm	3.9 %	2.8 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0192 ppm	30.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	20 cps	0.1074 ppm	3.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	14 cps	0.1028 ppm	2.8 %	0.0 ppm
Co 228.616 {447} (Axial)	6 cps	0.0367 ppm	9.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,118 cps	2.1736 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	789 cps	152.6216 ppm	2.6 %	4.0 ppm
Li 670.784 {50} (Radial)	-17 cps	-0.0564 ppm	65.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,722 cps	2.6417 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0069 ppm	120.5 %	0.0 ppm
Na 589.592 {57} (Radial)	115 cps	3.1066 ppm	7.0 %	0.2 ppm
Ni 231.604 {445} (Axial)	18 cps	0.2190 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	60 cps	5.2978 ppm	19.0 %	1.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0283 ppm	58.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0043 ppm	294.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	75 cps	0.0900 ppm	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	25 cps	1.2063 ppm	2.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	17 cps	0.6557 ppm	5.3 %	0.0 ppm
V 292.402 {115} (Axial)	38 cps	0.1083 ppm	11.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,853 cps	23.0165 ppm	0.9 %	0.2 ppm
Sc 357.253 {94} (Axial)		104.0032 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		103.2342 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	26 cps	30.9823 ppm	5.4 %	1.7 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0219 ppm	217.8 %	0.0 ppm
Al 167.079 {502} (Axial)	904 cps	35.6435 ppm	1.0 %	0.4 ppm
Sc 227.318 {448} (Axial)		103.1973 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	-4 cps	-0.5409 ppm	25.2 %	0.1 ppm
Al 396.152 {85} (Radial)	334 cps	36.9766 ppm	4.5 %	1.7 ppm
Si 251.611 {134} (Radial)	26 cps	14.6709 ppm	1.8 %	0.3 ppm
Pb 220.353 {453} (Axial)	264 cps	13.1204 ppm	0.9 %	0.1 ppm
Y 224.306 {450} (Axial)		105.0876 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.7732 %	0.7 %	0.7 %

Simple Sample Report

11/23/2020 6:48:32 PM

20111251-43APDS

Sample type: UNKNOWN Analysis started at: 11/21/2020 7:48:09 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	200 cps	3.2781 ppm	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	72 cps	1.6913 ppm	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	5,886 cps	1.5820 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,582 cps	1.5396 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	37,282 cps	0.9877 ppm	0.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,465 cps	186.9946 ppm	1.2 %	2.2 ppm
Cd 228.802 {447} (Axial)	1,178 cps	0.9591 ppm	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,071 cps	1.1379 ppm	0.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	705 cps	1.0551 ppm	0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	817 cps	1.0037 ppm	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	8,509 cps	3.3078 ppm	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	7,020 cps	271.5163 ppm	0.8 %	2.2 ppm
Li 670.784 {50} (Radial)	1,531 cps	1.0361 ppm	0.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	26,583 cps	3.7739 ppm	0.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	274 cps	1.0005 ppm	0.3 %	0.0 ppm
Na 589.592 {57} (Radial)	19,283 cps	103.9764 ppm	1.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	484 cps	1.1823 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	6,019 cps	106.8726 ppm	1.1 %	1.2 ppm
Se 196.090 {472} (Axial)	27 cps	0.9101 ppm	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,352 cps	1.0407 ppm	0.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,798 cps	1.1503 ppm	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	229 cps	2.1977 ppm	0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	106 cps	0.8112 ppm	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	1,993 cps	1.1432 ppm	0.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,135 cps	24.7899 ppm	0.6 %	0.2 ppm
Sc 357.253 {94} (Axial)		100.5800 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		97.7660 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	603 cps	144.4326 ppm	1.5 %	2.2 ppm
Tl 190.856 {477} (Axial)	35 cps	0.9658 ppm	0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	4,140 cps	32.6527 ppm	0.5 %	0.2 ppm
Sc 227.318 {448} (Axial)		97.6989 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	193 cps	5.1576 ppm	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	1,857 cps	41.0803 ppm	1.1 %	0.4 ppm
Si 251.611 {134} (Radial)	148 cps	16.5335 ppm	1.9 %	0.3 ppm
Pb 220.353 {453} (Axial)	1,406 cps	13.9947 ppm	0.7 %	0.1 ppm
Y 224.306 {450} (Axial)		101.8693 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.1546 %	0.2 %	0.2 %

Sample Prep and Screen Data

ALS Enviromental - Holland Laboratory
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ALS Group, USA

PREP BATCH REPORT

Batch ID: **168040** Prep Code: **MP_6010_S**

Start Date: **11/19/2020 1:54:54 PM** End Date: **11/19/2020 3:33:08 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-01A	Soil		0.743		0	50	67.2948
20111251-03A	Soil		0.756		0	50	66.1376
20111251-05A	Soil		0.662		0	50	75.5287
20111251-07A	Soil		0.616		0	50	81.1688
20111251-09A	Soil		0.757		0	50	66.0502
20111251-10A	Soil		0.781		0	50	64.0205
20111251-11A	Soil		0.681		0	50	73.4214
20111251-13A	Soil		0.673		0	50	74.2942
20111251-15A	Soil		0.744		0	50	67.2043
20111251-17A	Soil		0.74		0	50	67.5676
20111251-19A	Soil		0.741		0	50	67.4764
20111251-21A	Soil		0.714		0	50	70.028
20111251-23A	Soil		0.648		0	50	77.1605
20111251-25A	Soil		0.689		0	50	72.5689
20111251-27A	Soil		0.716		0	50	69.8324
20111251-29A	Soil		0.785		0	50	63.6943
20111251-30A	Soil		0.66		0	50	75.7576
20111251-31A	Soil		0.757		0	50	66.0502
20111251-33A	Soil		0.727		0	50	68.7758
20111251-35A	Soil		0.659		0	50	75.8725
20111251-35AMS	Soil		0.649		0	50	77.0416
20111251-35AMS	Soil		0.652		0	50	76.6871
LCS-168040			1		0	50	50
MBLK-168040			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3081-248-4; HCl:3214-4-4;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168040** Prep Code: **MP_6010_S**

Start Date: **11/19/2020 1:54:54 PM** End Date: **11/19/2020 3:33:08 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	1 g
FinSampVol:	50 mL
OriginalFac:	50
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3081-248-4; HCl:3214-4-4;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168036** Prep Code: **MP_3015A_6010**

Start Date: **11/19/2020 12:49:17 PM** End Date: **11/19/2020 1:52:50 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-04A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-06A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-08A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-12A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-14A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-16A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-18A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-20A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-22A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-24A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-26A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-28A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168036** Prep Code: **MP_3015A_6010**

Start Date: **11/19/2020 12:49:17 PM** End Date: **11/19/2020 1:52:50 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-32A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-34A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-38A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-40A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111584-02A	Tclp Extract			2.5	0	27.5	11
20111584-02AMS	Tclp Extract			2.5	0	27.5	11
20111584-02AMS	Tclp Extract			2.5	0	27.5	11
LCS-168036				25	0	27.5	1.1
MBLK-168036				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

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PREP BATCH REPORT

Batch ID: **168036** Prep Code: **MP_3015A_6010**

Start Date: **11/19/2020 12:49:17 PM** End Date: **11/19/2020 1:52:50 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168042** Prep Code: **MP_6010_S**

Start Date: **11/19/2020 2:47:48 PM** End Date: **11/19/2020 3:33:04 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-36A	Soil		0.644		0	50	77.6398
20111251-37A	Soil		0.691		0	50	72.3589
20111251-39A	Soil		0.678		0	50	73.7463
20111251-41A	Soil		0.694		0	50	72.0461
20111251-43A	Soil		0.671		0	50	74.5156
20111251-43AMS	Soil		0.694		0	50	72.0461
20111251-43AMS	Soil		0.664		0	50	75.3012
20111715-01A	Solid		0.634		0	50	78.8644
20111716-01A	Liquid		0.719		0	50	69.541
LCS-168042			1		0	50	50
MBLK-168042			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3081-248-4; HCl:3214-4-4;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168042** Prep Code: **MP_6010_S**

Start Date: **11/19/2020 2:47:48 PM** End Date: **11/19/2020 3:33:04 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	1 g
FinSampVol:	50 mL
OriginalFac:	50
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3081-248-4; HCl:3214-4-4;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168037** Prep Code: **MP_3015A_6010**

Start Date: **11/19/2020 12:49:24 PM** End Date: **11/19/2020 1:58:42 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111085-04A	Tclp Extract			2.5	0	27.5	11
	1800 mL of Extraction Fluid #1 were added to 2000 mL volumetric flask. Four 40 mL vial were combined into another container, and 100 mL of those combined vials were pipetted into the 2000 mL flask. The flask was diluted to the mark and inverted about three times. Prep by AL.The prep HoldTime was exceeded by 43974 days.						
20111251-42A	Tclp Extract			2.5	0	27.5	11
20111251-42AMS	Tclp Extract			2.5	0	27.5	11
20111251-42AMS	Tclp Extract			2.5	0	27.5	11
20111251-44A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111464-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/18 @ 10:40 AM						
LCS-168037				25	0	27.5	1.1
MBLK-168037				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168037** Prep Code: **MP_3015A_6010**

Start Date: **11/19/2020 12:49:24 PM** End Date: **11/19/2020 1:58:42 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

General Chemistry

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.5**	% of sample	0.10	1	11/18/20 13:32	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/18/20 13:32	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-10		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.4**	% of sample	0.10	1	11/18/20 13:32	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.4**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.2**	% of sample	0.10	1	11/18/20 13:32	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**8.4**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 13:32	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.0**	% of sample	0.10	1	11/18/20 13:32	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**4.5**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-25		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**19**	% of sample	0.10	1	11/18/20 13:32	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-27		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 14:54	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-29		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-30		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-31		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-33		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.4**	% of sample	0.10	1	11/18/20 14:54	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-35		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.7**	% of sample	0.10	1	11/18/20 14:54	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-36		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.0**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-37		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-39		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-41		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 14:54	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-43		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 14:54	NA	

Moisture

Analyst:	KT			Date/Time In:	11/18/20 1:32 PM				Temp In Deg C:	104			
Review By:				Date/Time Out:	11/19/20 8:21 AM				Temp Out Deg C:	104.5			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_201118B				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	11			
WO	**Btl. #**	**SampType**	**Dish ID**	**Pan Wt**	**Tare Wt***	**Wet Wt**	**1st Wt**	**2nd Wt**	**3rd Wt**	**Final Wt****	**% Solid**	**%Moisture**	**Analyte**
WBLKS		MBLK	BLK	1.094	0	0.0000				1.0948	0.08	0.08	Moisture
LCS		LCS	LCS	1.0967	0	9.8363				10.9332	100.00	100.00	Moisture
20111582-16A	1	SAMP	B1	1.0968	0	9.6558				9.9991	92.20	7.80	Moisture
20111582-16A DUP	1	DUP	B2	1.0935	0	9.6304				9.991	92.39	7.61	Moisture
20111582-15A	1	SAMP	B3	1.1008	0	6.8521				7.4198	92.22	7.78	Moisture
20111584-01A	1	SAMP	B4	1.1079	0	6.2633				6.4327	85.02	14.98	Moisture
20111359-01A	1	SAMP	B5	1.11	0	5.2079				2.0323	17.71	82.29	Moisture
20111607-01A	1	SAMP	B6	1.0981	0	5.4109				5.3733	79.01	20.99	Moisture
20111251-01A	1	SAMP	B7	1.0876	0	5.4811				5.8984	87.77	12.23	Moisture
20111251-03A	1	SAMP	B8	1.1132	0	5.4319				5.8787	87.73	12.27	Moisture
20111251-05A	1	SAMP	B9	1.1066	0	6.5859				7.0691	90.53	9.47	Moisture
20111251-07A	1	SAMP	B10	1.1	0	5.4554				5.8378	86.85	13.15	Moisture
20111251-09A	1	SAMP	B11	1.0955	0	7.0855				7.3232	87.89	12.11	Moisture
20111353-01A	1	SAMP	B12	1.1063	0	7.4421				8.5476	99.99	0.01	Moisture
20111353-01A DUP	1	DUP	B13	1.1039	0	7.4426				8.5456	99.99	0.01	Moisture
20111251-10A	1	SAMP	B14	1.0914	0	6.2477				6.7544	90.64	9.36	Moisture
20111251-11A	1	SAMP	B15	1.0975	0	5.7615				6.4925	93.64	6.36	Moisture
20111251-13A	1	SAMP	B16	1.1061	0	6.3381				6.8603	90.79	9.21	Moisture
20111251-15A	1	SAMP	B17	1.0959	0	7.2704				7.7587	91.64	8.36	Moisture
20111251-17A	1	SAMP	B18	1.0975	0	6.5443				6.6035	84.13	15.87	Moisture
20111251-19A	1	SAMP	B19	1.1065	0	5.6605				6.1283	88.72	11.28	Moisture
20111251-21A	1	SAMP	B20	1.0834	0	6.4519				7.2159	95.05	4.95	Moisture
20111251-23A	1	SAMP	B21	1.0925	0	5.9659				6.7889	95.48	4.52	Moisture
20111251-25A	1	SAMP	B22	1.0909	0	5.5825				5.6064	80.89	19.11	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/19/2020 12:32	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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Moisture

Analyst:	KT			Date/Time In:	11/18/20 2:54 PM				Temp In Deg C:	104.5			
Review By:				Date/Time Out:	11/19/20 8:27 AM				Temp Out Deg C:	105.7			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_201118C				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	11			

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.0944	0	0.0000				1.0945	0.01	0.01	Moisture
LCS		LCS	LCS	1.0985	0	9.7566				10.8542	99.99	99.99	Moisture
20111251-27A	1	SAMP	E1	1.096	0	6.7669				7.0693	88.27	11.73	Moisture
20111251-27A DUP	1	DUP	E2	1.1105	0	6.7646				7.0831	88.29	11.71	Moisture
20111251-29A	1	SAMP	E3	1.1048	0	5.8316				6.3226	89.47	10.53	Moisture
20111251-30A	1	SAMP	E4	1.0957	0	6.139				6.5642	89.08	10.92	Moisture
20111251-31A	1	SAMP	E5	1.1038	0	5.9033				6.3814	89.40	10.60	Moisture
20111251-33A	1	SAMP	E6	1.0897	0	5.7311				6.454	93.60	6.40	Moisture
20111251-35A	1	SAMP	E7	1.0948	0	6.6434				7.3598	94.30	5.70	Moisture
20111251-36A	1	SAMP	E8	1.091	0	7.1274				7.792	94.02	5.98	Moisture
20111251-37A	1	SAMP	E9	1.0829	0	5.7272				6.1959	89.28	10.72	Moisture
20111251-39A	1	SAMP	E10	1.0752	0	6.4868				6.5156	83.87	16.13	Moisture
20111251-41A	1	SAMP	E11	1.108	0	6.4599				6.8152	88.35	11.65	Moisture
20111251-43A	1	SAMP	E12	1.0792	0	9.6511				9.232	84.48	15.52	Moisture
20111251-43A DUP	1	DUP	E13	1.0897	0	9.6994				9.2818	84.46	15.54	Moisture
20111403-01B	1	SAMP	E14	1.0853	0	9.3143				8.4932	79.53	20.47	Moisture
20111403-02B	1	SAMP	E15	1.086	0	6.931				6.5333	78.59	21.41	Moisture
20111403-03B	1	SAMP	E16	1.0853	0	8.1056				7.5578	79.85	20.15	Moisture
20111403-04B	1	SAMP	E17	1.0888	0	8.1236				7.5284	79.27	20.73	Moisture
20111403-05B	1	SAMP	E18	1.0766	0	7.493				6.4996	72.37	27.63	Moisture
20111403-06B	1	SAMP	E19	1.0889	0	7.3085				6.8603	78.97	21.03	Moisture
20111403-07B	1	SAMP	E20	1.0933	0	6.9204				6.7686	82.01	17.99	Moisture
20111403-08B	1	SAMP	E21	1.1064	0	6.3638				6.3187	81.91	18.09	Moisture
20111403-09B	1	SAMP	E22	1.0938	0	7.3549				6.8511	78.28	21.72	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/19/2020 13:11	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

Copyright ALS Environmental, 2019

24-Nov-2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Re: **IDA001** Work Order: **20111251**

Dear Ray,

ALS Environmental received 44 samples on 13-Nov-2020 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 68.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

ALS Group, USA

Date: 24-Nov-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111251**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111251-01	IDA001:DU-A1:S000010	Soil	DU-A1	11/9/2020 11:08	11/13/2020 09:00	☐
20111251-02	IDA001:DU-A1:S000010	Tclp Extract	DU-A1	11/9/2020 11:08	11/13/2020 09:00	☐
20111251-03	IDA001:DU-B1:S000010	Soil	DU-B1	11/9/2020 11:22	11/13/2020 09:00	☐
20111251-04	IDA001:DU-B1:S000010	Tclp Extract	DU-B1	11/9/2020 11:22	11/13/2020 09:00	☐
20111251-05	IDA001:DU-E1:S000010	Soil	DU-E1	11/10/2020 08:20	11/13/2020 09:00	☐
20111251-06	IDA001:DU-E1:S000010	Tclp Extract	DU-E1	11/10/2020 08:20	11/13/2020 09:00	☐
20111251-07	IDA001:DU-A2:S000010	Soil	DU-A2	11/9/2020 16:01	11/13/2020 09:00	☐
20111251-08	IDA001:DU-A2:S000010	Tclp Extract	DU-A2	11/9/2020 16:01	11/13/2020 09:00	☐
20111251-09	IDA001:DU-A2-TE:S000010	Soil	DU-A2-TE	11/9/2020 16:30	11/13/2020 09:00	☐
20111251-10	IDA001:DU-A2-TS:S000010	Soil	DU-A2-TS	11/9/2020 16:11	11/13/2020 09:00	☐
20111251-11	IDA001:DU-B2:S000010	Soil	DU-B2	11/10/2020 12:40	11/13/2020 09:00	☐
20111251-12	IDA001:DU-B2:S000010	Tclp Extract	DU-B2	11/10/2020 12:40	11/13/2020 09:00	☐
20111251-13	IDA001:DU-C2:S000010	Soil	DU-C2	11/10/2020 11:47	11/13/2020 09:00	☐
20111251-14	IDA001:DU-C2:S000010	Tclp Extract	DU-C2	11/10/2020 11:47	11/13/2020 09:00	☐
20111251-15	IDA001:DU-D2:S000010	Soil	DU-D2	11/10/2020 11:13	11/13/2020 09:00	☐
20111251-16	IDA001:DU-D2:S000010	Tclp Extract	DU-D2	11/10/2020 11:13	11/13/2020 09:00	☐
20111251-17	IDA001:DU-E2:S000010	Soil	DU-E2	11/10/2020 10:48	11/13/2020 09:00	☐
20111251-18	IDA001:DU-E2:S000010	Tclp Extract	DU-E2	11/10/2020 10:48	11/13/2020 09:00	☐
20111251-19	IDA001:DU-A3:S000010	Soil	DU-A3	11/10/2020 13:12	11/13/2020 09:00	☐
20111251-20	IDA001:DU-A3:S000010	Tclp Extract	DU-A3	11/10/2020 13:12	11/13/2020 09:00	☐
20111251-21	IDA001:DU-B3:S000010	Soil	DU-B3	11/10/2020 14:10	11/13/2020 09:00	☐
20111251-22	IDA001:DU-B3:S000010	Tclp Extract	DU-B3	11/10/2020 14:10	11/13/2020 09:00	☐
20111251-23	IDA001:DU-C3:S000010	Soil	DU-C3	11/10/2020 14:45	11/13/2020 09:00	☐
20111251-24	IDA001:DU-C3:S000010	Tclp Extract	DU-C3	11/10/2020 14:45	11/13/2020 09:00	☐
20111251-25	IDA001:DU-D3:S000010	Soil	DU-D3	11/11/2020 07:50	11/13/2020 09:00	☐
20111251-26	IDA001:DU-D3:S000010	Tclp Extract	DU-D3	11/11/2020 07:50	11/13/2020 09:00	☐
20111251-27	IDA001:DU-E3:S000010	Soil	DU-E3	11/11/2020 08:35	11/13/2020 09:00	☐
20111251-28	IDA001:DU-E3:S000010	Tclp Extract	DU-E3	11/11/2020 08:35	11/13/2020 09:00	☐
20111251-29	IDA001:DU-E3-TE:S000010	Soil	DU-E3-TE	11/11/2020 09:05	11/13/2020 09:00	☐
20111251-30	IDA001:DU-E3-TS:S000010	Soil	DU-E3-TS	11/11/2020 09:40	11/13/2020 09:00	☐
20111251-31	IDA001:DU-A4:S000010	Soil	DU-A4	11/11/2020 10:50	11/13/2020 09:00	☐
20111251-32	IDA001:DU-A4:S000010	Tclp Extract	DU-A4	11/11/2020 10:50	11/13/2020 09:00	☐
20111251-33	IDA001:DU-B4:S000010	Soil	DU-B4	11/11/2020 11:20	11/13/2020 09:00	☐
20111251-34	IDA001:DU-B4:S000010	Tclp Extract	DU-B4	11/11/2020 11:20	11/13/2020 09:00	☐
20111251-35	IDA001:DU-B4-TE:S000010	Soil	DU-B4-TE	11/11/2020 12:00	11/13/2020 09:00	☐
20111251-36	IDA001:DU-B4-TS:S000010	Soil	DU-B4-TS	11/11/2020 12:40	11/13/2020 09:00	☐
20111251-37	IDA001:DU-C4:S000010	Soil	DU-C4	11/11/2020 13:20	11/13/2020 09:00	☐
20111251-38	IDA001:DU-C4:S000010	Tclp Extract	DU-C4	11/11/2020 13:20	11/13/2020 09:00	☐
20111251-39	IDA001:DU-D4:S000010	Soil	DU-D4	11/11/2020 13:50	11/13/2020 09:00	☐

Client: Hull & Associates
Project: IDA001
Work Order: **20111251**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111251-40	IDA001:DU-D4:S000010	Tclp Extract	DU-D4	11/11/2020 13:50	11/13/2020 09:00	☐
20111251-41	IDA001:DU-E4:S000010	Soil	DU-E4	11/11/2020 14:41	11/13/2020 09:00	☐
20111251-42	IDA001:DU-E4:S000010	Tclp Extract	DU-E4	11/11/2020 14:41	11/13/2020 09:00	☐
20111251-43	IDA001:DU-A5:S000010	Soil	DU-A5	11/11/2020 15:30	11/13/2020 09:00	☐
20111251-44	IDA001:DU-A5:S000010	Tclp Extract	DU-A5	11/11/2020 15:30	11/13/2020 09:00	☐

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111251**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

Client: Hull & Associates
Project: IDA001
Work Order: 20111251

Case Narrative

Samples for the above noted Work Order were received on 11/13/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168040, Method SW6010D, Sample 20111251-35AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168042, Method SW6010D, Sample 20111251-43AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168037, Method SW6010D, Sample 20111251-42AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168040, Method SW6010D, Sample 20111251-35AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168042, Method SW6010D, Sample 20111251-43AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Wet Chemistry:

No other deviations or anomalies were noted.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A1:S000010
Collection Date: 11/9/2020 11:08 AM

Work Order: 20111251
Lab ID: 20111251-01
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**11**		**1.0**	**3.8**	**mg/Kg-dry**	10	11/20/2020 19:08
Lead	**300**		**3.1**	**3.8**	**mg/Kg-dry**	10	11/20/2020 19:08
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A1:S000010
Collection Date: 11/9/2020 11:08 AM

Work Order: 20111251
Lab ID: 20111251-02
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 22:06
Lead	**0.61**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:06

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B1:S000010
Collection Date: 11/9/2020 11:22 AM

Work Order: 20111251
Lab ID: 20111251-03
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**9.3**		**0.98**	**3.8**	**mg/Kg-dry**	10	11/20/2020 19:13
Lead	**680**		**3.0**	**3.8**	**mg/Kg-dry**	10	11/20/2020 19:13
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B1:S000010
Collection Date: 11/9/2020 11:22 AM

Work Order: 20111251
Lab ID: 20111251-04
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	**0.022**	J	**0.016**	**0.050**	**mg/L**	1	11/19/2020 22:12
Lead	**1.1**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E1:S000010
Collection Date: 11/10/2020 08:20 AM

Work Order: 20111251
Lab ID: 20111251-05
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**12**		**1.1**	**4.2**	**mg/Kg-dry**	10	11/20/2020 19:18
Lead	**900**		**3.3**	**4.2**	**mg/Kg-dry**	10	11/20/2020 19:18
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**9.5**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E1:S000010
Collection Date: 11/10/2020 08:20 AM

Work Order: 20111251
Lab ID: 20111251-06
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 22:17
Lead	**4.2**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A2:S000010
Collection Date: 11/9/2020 04:01 PM

Work Order: 20111251
Lab ID: 20111251-07
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**9.5**		**1.2**	**4.7**	**mg/Kg-dry**	10	11/20/2020 19:23
Lead	**500**		**3.7**	**4.7**	**mg/Kg-dry**	10	11/20/2020 19:23
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**13**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A2:S000010
Collection Date: 11/9/2020 04:01 PM

Work Order: 20111251
Lab ID: 20111251-08
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 22:22
Lead	**0.40**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A2-TE:S000010
Collection Date: 11/9/2020 04:30 PM

Work Order: 20111251
Lab ID: 20111251-09
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**11**		**0.98**	**3.8**	**mg/Kg-dry**	10	11/20/2020 19:43
Lead	**520**		**3.0**	**3.8**	**mg/Kg-dry**	10	11/20/2020 19:43
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A2-TS:S000010
Collection Date: 11/9/2020 04:11 PM

Work Order: 20111251
Lab ID: 20111251-10
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**13**		**0.92**	**3.5**	**mg/Kg-dry**	10	11/20/2020 19:48
Lead	**570**		**2.8**	**3.5**	**mg/Kg-dry**	10	11/20/2020 19:48
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**9.4**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B2:S000010
Collection Date: 11/10/2020 12:40 PM

Work Order: 20111251
Lab ID: 20111251-11
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**7.3**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/20/2020 19:53
Lead	**250**		**3.1**	**3.9**	**mg/Kg-dry**	10	11/20/2020 19:53
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**6.4**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B2:S000010
Collection Date: 11/10/2020 12:40 PM

Work Order: 20111251
Lab ID: 20111251-12
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 22:27
Lead	**0.88**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:27

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C2:S000010
Collection Date: 11/10/2020 11:47 AM

Work Order: 20111251
Lab ID: 20111251-13
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**20**		**1.1**	**4.1**	**mg/Kg-dry**	10	11/20/2020 19:58
Lead	**1,700**		**3.3**	**4.1**	**mg/Kg-dry**	10	11/20/2020 19:58
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**9.2**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C2:S000010
Collection Date: 11/10/2020 11:47 AM

Work Order: 20111251
Lab ID: 20111251-14
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 22:32
Lead	**6.6**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D2:S000010
Collection Date: 11/10/2020 11:13 AM

Work Order: 20111251
Lab ID: 20111251-15
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**13**		**0.95**	**3.7**	**mg/Kg-dry**	10	11/20/2020 20:03
Lead	**950**		**2.9**	**3.7**	**mg/Kg-dry**	10	11/20/2020 20:03
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**8.4**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D2:S000010
Collection Date: 11/10/2020 11:13 AM

Work Order: 20111251
Lab ID: 20111251-16
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 22:52
Lead	**3.8**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:52

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E2:S000010
Collection Date: 11/10/2020 10:48 AM

Work Order: 20111251
Lab ID: 20111251-17
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**30**		**1.0**	**4.0**	**mg/Kg-dry**	10	11/20/2020 20:08
Lead	**12,000**		**32**	**40**	**mg/Kg-dry**	100	11/21/2020 19:27
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E2:S000010
Collection Date: 11/10/2020 10:48 AM

Work Order: 20111251
Lab ID: 20111251-18
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 22:58
Lead	**11**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 22:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A3:S000010
Collection Date: 11/10/2020 01:12 PM

Work Order: 20111251
Lab ID: 20111251-19
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**9.5**		**0.99**	**3.8**	**mg/Kg-dry**	10	11/20/2020 20:13
Lead	**410**		**3.0**	**3.8**	**mg/Kg-dry**	10	11/20/2020 20:13
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A3:S000010
Collection Date: 11/10/2020 01:12 PM

Work Order: 20111251
Lab ID: 20111251-20
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	**0.017**	J	**0.016**	**0.050**	**mg/L**	1	11/19/2020 23:03
Lead	**0.45**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B3:S000010
Collection Date: 11/10/2020 02:10 PM

Work Order: 20111251
Lab ID: 20111251-21
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**13**		**0.96**	**3.7**	**mg/Kg-dry**	10	11/20/2020 20:18
Lead	**1,200**		**2.9**	**3.7**	**mg/Kg-dry**	10	11/20/2020 20:18
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**5.0**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B3:S000010
Collection Date: 11/10/2020 02:10 PM

Work Order: 20111251
Lab ID: 20111251-22
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 23:08
Lead	**17**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C3:S000010
Collection Date: 11/10/2020 02:45 PM

Work Order: 20111251
Lab ID: 20111251-23
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**14**		**1.1**	**4.0**	**mg/Kg-dry**	10	11/20/2020 20:23
Lead	**720**		**3.2**	**4.0**	**mg/Kg-dry**	10	11/20/2020 20:23
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**4.5**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C3:S000010
Collection Date: 11/10/2020 02:45 PM

Work Order: 20111251
Lab ID: 20111251-24
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 23:13
Lead	**11**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:13

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D3:S000010
Collection Date: 11/11/2020 07:50 AM

Work Order: 20111251
Lab ID: 20111251-25
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**52**		**1.2**	**4.5**	**mg/Kg-dry**	10	11/20/2020 20:28
Lead	**2,900**		**3.6**	**4.5**	**mg/Kg-dry**	10	11/20/2020 20:28
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**19**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 13:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D3:S000010
Collection Date: 11/11/2020 07:50 AM

Work Order: 20111251
Lab ID: 20111251-26
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 23:18
Lead	**1.4**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E3:S000010
Collection Date: 11/11/2020 08:35 AM

Work Order: 20111251
Lab ID: 20111251-27
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**11**		**1.0**	**4.0**	**mg/Kg-dry**	10	11/20/2020 20:48
Lead	**5,400**		**32**	**40**	**mg/Kg-dry**	100	11/21/2020 19:32
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E3:S000010
Collection Date: 11/11/2020 08:35 AM

Work Order: 20111251
Lab ID: 20111251-28
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 23:24
Lead	**19**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E3-TE:S000010
Collection Date: 11/11/2020 09:05 AM

Work Order: 20111251
Lab ID: 20111251-29
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**14**		**0.93**	**3.6**	**mg/Kg-dry**	10	11/20/2020 20:53
Lead	**1,200**		**2.8**	**3.6**	**mg/Kg-dry**	10	11/20/2020 20:53
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E3-TS:S000010
Collection Date: 11/11/2020 09:40 AM

Work Order: 20111251
Lab ID: 20111251-30
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**10**		**1.1**	**4.3**	**mg/Kg-dry**	10	11/20/2020 20:58
Lead	**1,500**		**3.4**	**4.3**	**mg/Kg-dry**	10	11/20/2020 20:58
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A4:S000010
Collection Date: 11/11/2020 10:50 AM

Work Order: 20111251
Lab ID: 20111251-31
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**23**		**0.96**	**3.7**	**mg/Kg-dry**	10	11/20/2020 21:03
Lead	**560**		**3.0**	**3.7**	**mg/Kg-dry**	10	11/20/2020 21:03
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A4:S000010
Collection Date: 11/11/2020 10:50 AM

Work Order: 20111251
Lab ID: 20111251-32
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	**0.022**	J	**0.016**	**0.050**	**mg/L**	1	11/19/2020 23:29
Lead	**0.93**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B4:S000010
Collection Date: 11/11/2020 11:20 AM

Work Order: 20111251
Lab ID: 20111251-33
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**5.0**		**0.96**	**3.7**	**mg/Kg-dry**	10	11/20/2020 21:08
Lead	**1,600**		**2.9**	**3.7**	**mg/Kg-dry**	10	11/20/2020 21:08
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**6.4**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B4:S000010
Collection Date: 11/11/2020 11:20 AM

Work Order: 20111251
Lab ID: 20111251-34
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 23:34
Lead	**44**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B4-TE:S000010
Collection Date: 11/11/2020 12:00 PM

Work Order: 20111251
Lab ID: 20111251-35
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**5.9**		**1.0**	**4.0**	**mg/Kg-dry**	10	11/20/2020 21:13
Lead	**1,500**		**3.2**	**4.0**	**mg/Kg-dry**	10	11/20/2020 21:13
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**5.7**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B4-TS:S000010
Collection Date: 11/11/2020 12:40 PM

Work Order: 20111251
Lab ID: 20111251-36
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**8.2**		**1.1**	**4.1**	**mg/Kg-dry**	10	11/20/2020 21:53
Lead	**660**		**3.3**	**4.1**	**mg/Kg-dry**	10	11/20/2020 21:53
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**6.0**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C4:S000010
Collection Date: 11/11/2020 01:20 PM

Work Order: 20111251
Lab ID: 20111251-37
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**12**		**1.1**	**4.1**	**mg/Kg-dry**	10	11/20/2020 21:58
Lead	**3,300**		**3.2**	**4.1**	**mg/Kg-dry**	10	11/20/2020 21:58
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C4:S000010
Collection Date: 11/11/2020 01:20 PM

Work Order: 20111251
Lab ID: 20111251-38
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 23:39
Lead	**7.2**		**0.13**	**0.50**	**mg/L**	10	11/20/2020 18:52

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D4:S000010
Collection Date: 11/11/2020 01:50 PM

Work Order: 20111251
Lab ID: 20111251-39
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**9.1**		**1.1**	**4.4**	**mg/Kg-dry**	10	11/20/2020 22:03
Lead	**2,100**		**3.5**	**4.4**	**mg/Kg-dry**	10	11/20/2020 22:03
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D4:S000010
Collection Date: 11/11/2020 01:50 PM

Work Order: 20111251
Lab ID: 20111251-40
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 23:59
Lead	**9.6**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 23:59

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E4:S000010
Collection Date: 11/11/2020 02:41 PM

Work Order: 20111251
Lab ID: 20111251-41
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**22**		**1.1**	**4.1**	**mg/Kg-dry**	10	11/20/2020 22:08
Lead	**5,700**		**33**	**41**	**mg/Kg-dry**	100	11/21/2020 19:37
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E4:S000010
Collection Date: 11/11/2020 02:41 PM

Work Order: 20111251
Lab ID: 20111251-42
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	U		0.016	0.050	mg/L	1	11/19/2020 18:36
Lead	**64**		**0.13**	**0.50**	**mg/L**	10	11/20/2020 16:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A5:S000010
Collection Date: 11/11/2020 03:30 PM

Work Order: 20111251
Lab ID: 20111251-43
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/19/20		Analyst: **ABL**
Arsenic	**69**		**1.1**	**4.4**	**mg/Kg-dry**	10	11/20/2020 22:14
Lead	**1,200**		**3.5**	**4.4**	**mg/Kg-dry**	10	11/20/2020 22:14
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/18/2020 14:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A5:S000010
Collection Date: 11/11/2020 03:30 PM

Work Order: 20111251
Lab ID: 20111251-44
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/19/20		Analyst: **DSC**
Arsenic	**0.052**		**0.016**	**0.050**	**mg/L**	1	11/19/2020 18:51
Lead	**0.58**		**0.013**	**0.050**	**mg/L**	1	11/19/2020 18:51

Note: See Qualifiers page for a list of qualifiers and their definitions.

QC BATCH REPORT

Batch ID: **168036** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168036-168036** Units: **mg/L** Analysis Date: **11/19/2020 09:56 PM**

Client ID: Run ID: **ICP2_201119A** SeqNo: **6917332** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168036-168036** Units: **mg/L** Analysis Date: **11/19/2020 10:01 PM**

Client ID: Run ID: **ICP2_201119A** SeqNo: **6917335** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09101	0.0050	0.1	0	91	80-120	0			
Lead	0.1006	0.0050	0.1	0	101	80-120	0			

MS Sample ID: **20111584-02AMS** Units: **mg/L** Analysis Date: **11/20/2020 12:10 AM**

Client ID: Run ID: **ICP2_201119A** SeqNo: **6917379** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.935	0.050	1	-0.002717	93.8	75-125	0			
Lead	1.16	0.050	1	0.2176	94.2	75-125	0			

MSD Sample ID: **20111584-02AMSD** Units: **mg/L** Analysis Date: **11/20/2020 12:15 AM**

Client ID: Run ID: **ICP2_201119A** SeqNo: **6917380** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.9031	0.050	1	-0.002717	90.6	75-125	0.935	3.47	20	
Lead	1.123	0.050	1	0.2176	90.5	75-125	1.16	3.24	20	

The following samples were analyzed in this batch:

20111251-02A	20111251-04A	20111251-06A
20111251-08A	20111251-12A	20111251-14A
20111251-16A	20111251-18A	20111251-20A
20111251-22A	20111251-24A	20111251-26A
20111251-28A	20111251-32A	20111251-34A
20111251-38A	20111251-40A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111251
Project: IDA001

QC BATCH REPORT

Batch ID: **168037** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168037-168037** Units: **mg/L** Analysis Date: **11/19/2020 06:05 PM**
Client ID: Run ID: **ICP2_201119A** SeqNo: **6917236** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168037-168037** Units: **mg/L** Analysis Date: **11/19/2020 06:10 PM**
Client ID: Run ID: **ICP2_201119A** SeqNo: **6917242** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.08954	0.0050	0.1	0	89.5	80-120	0			
Lead	0.09922	0.0050	0.1	0	99.2	80-120	0			

MS Sample ID: **20111251-42AMS** Units: **mg/L** Analysis Date: **11/19/2020 06:41 PM**
Client ID: **IDA001:DU-E4:S000010** Run ID: **ICP2_201119A** SeqNo: **6917248** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.9515	0.050	1	-0.005643	95.7	75-125	0			

MS Sample ID: **20111251-42AMS** Units: **mg/L** Analysis Date: **11/20/2020 04:34 PM**
Client ID: **IDA001:DU-E4:S000010** Run ID: **ICP2_201120A** SeqNo: **6920328** Prep Date: **11/19/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	65.23	0.50	1	64.26	97.2	75-125	0			O

MSD Sample ID: **20111251-42AMSD** Units: **mg/L** Analysis Date: **11/19/2020 06:46 PM**
Client ID: **IDA001:DU-E4:S000010** Run ID: **ICP2_201119A** SeqNo: **6917249** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.9185	0.050	1	-0.005643	92.4	75-125	0.9515	3.53	20	

MSD Sample ID: **20111251-42AMSD** Units: **mg/L** Analysis Date: **11/20/2020 04:39 PM**
Client ID: **IDA001:DU-E4:S000010** Run ID: **ICP2_201120A** SeqNo: **6920329** Prep Date: **11/19/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	62.16	0.50	1	64.26	-210	75-125	65.23	4.82	20	SO

The following samples were analyzed in this batch: 20111251-42A 20111251-44A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111251
Project: IDA001

QC BATCH REPORT

Batch ID: **168040** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168040-168040** Units: **mg/Kg** Analysis Date: **11/20/2020 06:57 PM**
Client ID: Run ID: **ICP2_201120A** SeqNo: **6920356** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Lead	U	0.25								

LCS Sample ID: **LCS-168040-168040** Units: **mg/Kg** Analysis Date: **11/20/2020 07:03 PM**
Client ID: Run ID: **ICP2_201120A** SeqNo: **6920357** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.575	0.25	5	0	91.5	80-120	0			
Lead	5.189	0.25	5	0	104	80-120	0			

MS Sample ID: **20111251-35AMS** Units: **mg/Kg** Analysis Date: **11/20/2020 09:18 PM**
Client ID: **IDA001:DU-B4-TE:S000010** Run ID: **ICP2_201120A** SeqNo: **6920384** Prep Date: **11/19/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.33	3.9	7.704	5.531	88.2	75-125	0			
Lead	1510	3.9	7.704	1460	661	75-125	0			SO

MSD Sample ID: **20111251-35AMSD** Units: **mg/Kg** Analysis Date: **11/20/2020 09:23 PM**
Client ID: **IDA001:DU-B4-TE:S000010** Run ID: **ICP2_201120A** SeqNo: **6920385** Prep Date: **11/19/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.65	3.8	7.669	5.531	92.9	75-125	12.33	2.62	20	
Lead	1507	3.8	7.669	1460	624	75-125	1510	0.2	20	SO

The following samples were analyzed in this batch:

20111251-01A	20111251-03A	20111251-05A
20111251-07A	20111251-09A	20111251-10A
20111251-11A	20111251-13A	20111251-15A
20111251-17A	20111251-19A	20111251-21A
20111251-23A	20111251-25A	20111251-27A
20111251-29A	20111251-30A	20111251-31A
20111251-33A	20111251-35A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111251
Project: IDA001

QC BATCH REPORT

Batch ID: **168042** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168042-168042** Units: **mg/Kg** Analysis Date: **11/20/2020 09:28 PM**
Client ID: Run ID: **ICP2_201120A** SeqNo: **6920386** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Lead	U	0.25								

LCS Sample ID: **LCS-168042-168042** Units: **mg/Kg** Analysis Date: **11/20/2020 09:33 PM**
Client ID: Run ID: **ICP2_201120A** SeqNo: **6920387** Prep Date: **11/19/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.4	0.25	5	0	88	80-120	0			
Lead	4.915	0.25	5	0	98.3	80-120	0			

MS Sample ID: **20111251-43AMS** Units: **mg/Kg** Analysis Date: **11/20/2020 10:19 PM**
Client ID: **IDA001:DU-A5:S000010** Run ID: **ICP2_201120A** SeqNo: **6920396** Prep Date: **11/19/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	64.84	3.6	7.205	58.49	88.1	75-125	0			O
Lead	433	3.6	7.205	1003	-7910	75-125	0			SO

MSD Sample ID: **20111251-43AMSD** Units: **mg/Kg** Analysis Date: **11/20/2020 10:24 PM**
Client ID: **IDA001:DU-A5:S000010** Run ID: **ICP2_201120A** SeqNo: **6920397** Prep Date: **11/19/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	54.52	3.8	7.53	58.49	-52.8	75-125	64.84	17.3	20	SO
Lead	559.4	3.8	7.53	1003	-5890	75-125	433	25.5	20	SRO

The following samples were analyzed in this batch:

20111251-36A	20111251-37A	20111251-39A
20111251-41A	20111251-43A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111251
Project: IDA001

QC BATCH REPORT

Batch ID: **R303054** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R303054** Units: **% of sample** Analysis Date: **11/18/2020 01:32 PM**
Client ID: Run ID: **MOIST_201118B** SeqNo: **6914041** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R303054** Units: **% of sample** Analysis Date: **11/18/2020 01:32 PM**
Client ID: Run ID: **MOIST_201118B** SeqNo: **6914040** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20111353-01A DUP** Units: **% of sample** Analysis Date: **11/18/2020 01:32 PM**
Client ID: Run ID: **MOIST_201118B** SeqNo: **6914034** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10	0	0	0	0-0	0.01	0	10	

DUP Sample ID: **20111582-16A DUP** Units: **% of sample** Analysis Date: **11/18/2020 01:32 PM**
Client ID: Run ID: **MOIST_201118B** SeqNo: **6914038** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	7.61	0.10	0	0	0	0-0	7.8	2.47	10	

The following samples were analyzed in this batch:

20111251-01A	20111251-03A	20111251-05A
20111251-07A	20111251-09A	20111251-10A
20111251-11A	20111251-13A	20111251-15A
20111251-17A	20111251-19A	20111251-21A
20111251-23A	20111251-25A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111251
Project: IDA001

QC BATCH REPORT

Batch ID: **R303061** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R303061** Units: **% of sample** Analysis Date: **11/18/2020 02:54 PM**
Client ID: Run ID: **MOIST_201118C** SeqNo: **6914171** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R303061** Units: **% of sample** Analysis Date: **11/18/2020 02:54 PM**
Client ID: Run ID: **MOIST_201118C** SeqNo: **6914170** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.10	100	0	100	98-102	0			

DUP Sample ID: **20111251-27A DUP** Units: **% of sample** Analysis Date: **11/18/2020 02:54 PM**
Client ID: **IDA001:DU-E3:S000010** Run ID: **MOIST_201118C** SeqNo: **6914147** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.71	0.10	0	0	0	0-0	11.73	0.171	10	

DUP Sample ID: **20111251-43A DUP** Units: **% of sample** Analysis Date: **11/18/2020 02:54 PM**
Client ID: **IDA001:DU-A5:S000010** Run ID: **MOIST_201118C** SeqNo: **6914160** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.54	0.10	0	0	0	0-0	15.52	0.129	10	

The following samples were analyzed in this batch:

20111251-27A	20111251-29A	20111251-30A
20111251-31A	20111251-33A	20111251-35A
20111251-36A	20111251-37A	20111251-39A
20111251-41A	20111251-43A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

20111251

DATA ADMIN PAGE 1 OF 3

LANCE TURLEY NO. 374

REPORT TO: RAY KENNEDY

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

Client: IDA

Site: USS LEAD OU-1, ZONE 1

Project #: IDA0001 Phase: DU SAMPLING

Samplers: TIM LAS / JEREMY GARNER

Purchase Order # IDA0001_DUS_RIKO1

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD					COMMENTS
IDA0001 : DU-A1 : S000010	1	COMPOSITE	11/09/20 / 1108	N	X	X	X	X					
IDA0001 : DU-B1 : S000010	1	COMPOSITE	11/09/20 / 1122	N	X	X	X	X					
IDA0001 : DU-E1 : S000010	1	COMPOSITE	11/10/20 / 0820	N	X	X	X	X					
IDA0001 : DU-A2 : S000010	1	COMPOSITE	11/09/20 / 1601	N	X	X	X	X					
IDA0001 : DU-A2-TE : S000010	1	COMPOSITE	11/09/20 / 1630	N	X	X	X	X					
IDA0001 : DU-A2-TS : S000010	1	COMPOSITE	11/09/20 / 1611	N	X	X	X	X					
IDA0001 : DU-B2 : S000010	1	COMPOSITE	11/10/20 / 1240	N	X	X	X	X					
IDA0001 : DU-C2 : S000010	1	COMPOSITE	11/10/20 / 1147	N	X	X	X	X					
IDA0001 : DU-D2 : S000010	1	COMPOSITE	11/10/20 / 1113	N	X	X	X	X					
IDA0001 : DU-E2 : S000010	1	COMPOSITE	11/10/20 / 1048	N	X	X	X	X					
IDA0001 : DU-A3 : S000010	1	COMPOSITE	11/10/20 / 1312	N	X	X	X	X					
IDA0001 : DU-B3 : S000010	1	COMPOSITE	11/10/20 / 1410	N	X	X	X	X					

RELINQUISHED BY: DATE: 11 NOV 20 TIME: 1730

RECEIVED BY: FEDEX DATE: 11 NOV 20 TIME: 1730

RELINQUISHED BY: DATE: TIME:

RECEIVED BY: DATE: TIME:

RELINQUISHED BY: FEDEX DATE: 11/13/20 TIME: 0900

RECEIVED BY: DATE: TIME:

COOLER TEMPERATURE AS RECEIVED: IR1 4.0°C, 5.2°C, 5.0°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI.

Method of Delivery: FEDEX

Airbill Number:

Regulatory Program: CERCLA

Required Limits:

NOTES: SAMPLES TO BE COMPOSITED/SIEVED/HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

CK

20111251

DATA ADMIN PAGE 2 OF 3

LANCE TURLEY NO. 375

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: RAYMOND KENNEDY

Client: IDA

Site: VSS LEAD DU-1; ZONE 1

Project #: IDA0001 Phase: DU SAMPLING

Samplers: Tim Leis / JEREMY CONNER

Purchase Order # IDA001_DUS_RLK01

SAMPLE MATRIX	PRESERVATIVES	METALS
AA-AMBIENT AIR C-ASBESTOS D-SEDIMENT G-GROUNDWATER IA-INDOOR AIR L-LEACHATE P-PRODUCT S-SOIL SG-SOIL GAS SS-SUBSLAB VAPOR W-WATER X-CONCRETE	A-Cool only, <4 deg. C B-HNO_3 pH<2 C-H_2SO_4 pH<2 D-NaOH pH>12 E-ZnAcetate + NaOH, pH>9 F-$Na_2S_2O_3$ (0.008%) G-HCL pH <2 H-EDTA I-5ml 1:1 HCL J-none K-Stored in dark L-NH_4Cl M-Methanol S-Sodium	N - Not filtered F45u- filtered with 0.45 micron F5u- filtered with 5 micron

ANALYSES

PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP-ARSENIC	TCLP-LEAD					COMMENTS
IDA0001 : DU-C3 : S0000010	1	COMPOSITE	11/10/20/1445	N	X	X	X	X					
IDA0001 : DU-D3 : S0000010	1	COMPOSITE	11/10/20/0750	N	X	X	X	X					
IDA0001 : DU-E3 : S0000010	1	COMPOSITE	11/11/20/0835	N	X	X	X	X					
IDA0001 : DU-E3-TE : S0000010	1	COMPOSITE	11/11/20/0905	N	X	X	X	X					
IDA0001 : DU-E3-TS : S0000010	1	COMPOSITE	11/11/20/0940	N	X	X	X	X					
IDA0001 : DU-A4 : S0000010	1	COMPOSITE	11/11/20/1050	N	X	X	X	X					
IDA0001 : DU-B4 : S0000010	1	COMPOSITE	11/11/20/1120	N	X	X	X	X					
IDA0001 : DU-B4-TE : S0000010	1	COMPOSITE	11/11/20/1200	N	X	X	X	X					
IDA0001 : DU-B4-TS : S0000010	1	COMPOSITE	11/11/20/1240	N	X	X	X	X					
IDA0001 : DU-C4 : S0000010	1	COMPOSITE	11/11/20/1320	N	X	X	X	X					
IDA0001 : DU-D4 : S0000010	1	COMPOSITE	11/11/20/1350	N	X	X	X	X					
IDA0001 : DU-E4 : S0000010	1	COMPOSITE	11/11/20/1441	N	X	X	X	X					

RELINQUISHED BY:	DATE: 11 NOV 20	RECEIVED BY: FEDEX	DATE: 11 NOV 20	Deliver To: ALS - HOLLAND, MI
	TIME: 1730		TIME: 1730	Method of Delivery: FEDEX
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:	Airbill Number:
	TIME:		TIME:	Regulatory Program: CERCLA
RELINQUISHED BY: FEDEX	DATE: 11/13/20	RECEIVED BY:	DATE:	Required Limits:
	TIME: 0900		TIME:	

9969 9975

COOLER TEMPERATURE AS RECEIVED: 1 @ 4.0 °C; 5.2 5.0 °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

20111251

PAGE 3 OF 3

HULL

CHAIN OF CUSTODY RECORD

NO. 376

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: DATA ADMIN
LANCE TOLLEY
RAYMOND KENNEDY

Client: IDA
Site: US LEAD OU-1 ; ZONE 1
Project #: IDA0001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA0001_DUS_RUL01

SAMPLE MATRIX	PRESERVATIVES	METALS
AA-AMBIENT AIR C-ASBESTOS D-SEDIMENT G-GROUNDWATER IA-INDOOR AIR L-LEACHATE P-PRODUCT S-SOIL SG-SOIL GAS SS-SUBSLAB VAPOR W-WATER X-CONCRETE	A-Cool only, <4 deg. C B-HNO_3 pH<2 C-H_2SO_4 pH<2 D-NaOH pH>12 E-ZnAcetate + NaOH, pH>9 F-$Na_2S_2O_3$ (0.008%) G-HCL pH <2 H-EDTA I-5ml 1:1 HCL J-none K-Stored in dark L-NH_4Cl M-Methanol S-Sodium	N - Not filtered F45u- filtered with 0.45 micron F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010 J	LEAD 6010 J	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA0001 : DU-A5 : S0000110	1	COMPOSITE	11/11/20 / 1530	N	X	X	X	X	
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						

RELINQUISHED BY: DATE: 11 NOV 20 TIME: 1730
RECEIVED BY: FEDEX DATE: 11 NOV 20 TIME: 1730

RELINQUISHED BY: DATE: TIME:
RECEIVED BY: DATE: TIME:

RELINQUISHED BY: FEDEX DATE: 11/13/20 TIME: 0900
RECEIVED BY: DATE: TIME:

960
975

COOLER TEMPERATURE AS RECEIVED: IR1 4.0 °C 5.2 °C 5.0 °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

Deliver To: ALS - HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

20111251

DATA ADMIN PAGE 1 OF 3

HULL

CHAIN OF CUSTODY RECORD

LANCE TURLEY NO. 374

REPORT TO: RAY KENNEDY

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

Client: IDA
Site: USS LEAD OU-1; ZONE 1
Project #: IDA0001 Phase: DU SAMPLING
Samplers: TIM LOAS / JEREMY GARNER
Purchase Order # IDA001_DOS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
FSu- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010	LEAD 6010	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA0001 : DU-A1 : S0000010	1	COMPOSITE	11/09/20 / 1108	N	X	X	X	X	
IDA0001 : DU-B1 : S0000010	1	COMPOSITE	11/09/20 / 1122	N	X	X	X	X	
IDA0001 : DU-E1 : S0000010	1	COMPOSITE	11/10/20 / 0820	N	X	X	X	X	
IDA0001 : DU-A2 : S0000010	1	COMPOSITE	11/09/20 / 1601	N	X	X	X	X	
IDA0001 : DU-A2-TE : S0000010	1	COMPOSITE	11/09/20 / 1630	N	X	X	X	X	DO NOT RUN TCLP ON THESE TWO SAMPLES DU-A2-TE AND DU-A2-TS
IDA0001 : DU-A2-TS : S0000010	1	COMPOSITE	11/09/20 / 1611	N	X	X	X	X	
IDA0001 : DU-B2 : S0000010	1	COMPOSITE	11/10/20 / 1240	N	X	X	X	X	
IDA0001 : DU-C2 : S0000010	1	COMPOSITE	11/10/20 / 1147	N	X	X	X	X	
IDA0001 : DU-D2 : S0000010	1	COMPOSITE	11/10/20 / 1113	N	X	X	X	X	
IDA0001 : DU-E2 : S0000010	1	COMPOSITE	11/10/20 / 1048	N	X	X	X	X	
IDA0001 : DU-A3 : S0000010	1	COMPOSITE	11/10/20 / 1312	N	X	X	X	X	
IDA0001 : DU-B3 : S0000010	1	COMPOSITE	11/10/20 / 1410	N	X	X	X	X	

RELINQUISHED BY:	DATE: 11 NOV 20	RECEIVED BY: FEDEX	DATE: 11 NOV 20
	TIME: 1730		TIME: 1730
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

COOLER TEMPERATURE AS RECEIVED °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE CONSOLIDATED/SEIVED/HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

HULL

CHAIN OF CUSTODY RECORD

DATA ADMIN PAGE 2 OF 3

LANCE TURLEY NO. 375

REPORT TO: RAYMOND KENNEDY

Dublin, OH — 6397 Emerald Pkwy, Suite 200, Dublin, OH 43016, P (614) 793-8777

Newark, OH — 59 Grant St, Newark, OH 43055, P (740) 344-5451

Mason, OH — 4770 Duke Dr, Suite 300, Mason, OH 45040, P (513) 459-9677

Bedford, OH — 4 Hemisphere Way, Bedford, OH 44146, P (440) 232-9945

Toledo, OH — 218 S. Erie St, Toledo, OH 43604, P (419) 385-2018

St. Clairsville, OH — 146 W. Main St, 2nd Floor, St. Clairsville, OH 43950, P (800) 241-7173

Pittsburgh, PA — 350 Mercantile Dr, Suite 307, Pittsburgh, PA 15205, P (412) 446-2315

Client: IDA

Site: WS LEAD DU-1, ZONE 1

Project #: IDA001 Phase: DU INVESTIGATION

Samplers: Travis / Jeremy Conner

Purchase Order #: IDA001 DUS_RUK01

SAMPLE MATRIX: A-AMBIENT AIR; C-ASBESTOS; D-SEDIMENT; G-GRD.WATER; H-INDOOR AIR; L-LEACHATE; P-PRODUCT; S-SOIL; SG-SOIL GAS; SS-SUBSLAB VAPOR; W-WATER; X-CONCRETE

PRESERVATIVES: A-Cool only, <4 deg. C; B-HNO_3 pH<2; C-H_2SO_4 pH<2; D-NaOH pH>12; E-ZnAcetate + NaOH, pH>9; F-$Na_2S_2O_3$ (0.008%); G-HCL pH <2; H-EDTA; I-5ml 1:1 HCL; J-none; K-Stored in dark; L-NH4Cl; M-Methanol; S-Sodium

METALS: N - Not filtered; F45u- filtered with 0.45 micron; F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C3 : S0000010	1	COMPOSITE	11/10/20 / 1445	N	X	X	X	X	
IDA001 : DU-D3 : S0000010	1	COMPOSITE	11/10/20 / 0750	N	X	X	X	X	
IDA001 : DU-E3 : S0000010	1	COMPOSITE	11/11/20 / 0835	N	X	X	X	X	
IDA001 : DU-E3-TE : S0000010	1	COMPOSITE	11/11/20 / 0905	N	X	X	X	X	DO NOT RUN TCLP ON THESE TWO SAMPLES DU-E3-TE AND DU-E3-TS
IDA001 : DU-E3-TS : S0000010	1	COMPOSITE	11/11/20 / 0910	N	X	X	X	X	
IDA001 : DU-MW2 : S0000010	1	COMPOSITE	11/11/20 / 1050	N	X	X	X	X	
IDA001 : DU-B4 : S0000010	1	COMPOSITE	11/11/20 / 1120	N	X	X	X	X	
IDA001 : DU-B4-TE : S0000010	1	COMPOSITE	11/11/20 / 1200	N	X	X	X	X	DO NOT RUN TCLP ON THESE TWO SAMPLES DU-B4-TE AND DU-B4-TS
IDA001 : DU-B4-TS : S0000010	1	COMPOSITE	11/11/20 / 1240	N	X	X	X	X	
IDA001 : DU-C4 : S0000010	1	COMPOSITE	11/11/20 / 1320	N	X	X	X	X	
IDA001 : DU-D4 : S0000010	1	COMPOSITE	11/11/20 / 1350	N	X	X	X	X	
IDA001 : DU-E4 : S0000010	1	COMPOSITE	11/11/20 / 1441	N	X	X	X	X	

RELINQUISHED BY:	DATE: 11/20/20	RECEIVED BY: FEDEX	DATE: 11/20/20	Deliver To: MLS - HOLLAND, MI
RELINQUISHED BY:	TIME: 1730	RECEIVED BY:	TIME: 1730	Method of Delivery: FEDEX
	DATE:		DATE:	Airbill Number:
RELINQUISHED BY:	TIME:	RECEIVED BY:	TIME:	Regulatory Program: CERCLA
	DATE:		DATE:	Required Limits:
COOLER TEMPERATURE AS RECEIVED °C	TIME:		TIME:	

DISTRIBUTION: WHITE - LAB USE (MUST BE RETURNED WITH REPORT); YELLOW - LAB USE; PINK - RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB (PRIOR TO ANALYSIS)

TURN AROUND TIME: STD DAYS

HULL

CHAIN OF CUSTODY RECORD

PAGE 2 OF 3

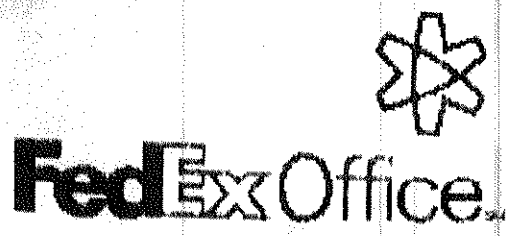
NO 376

Buffalo, NY	Newark, NJ	Morgan, NY	Portland, ME	Toledo, OH	Wilmington, DE	Pittsburgh, PA

REPORT TO

ANALYSES

PRESERVATIVES										



FedEx Office

Address: 17952 HALSTED ST
HOMEWOOD
IL 60430

Location: JOTKN
Device ID: -BTC01

FedEx Express Package(s) - Dropped Off
166879254269 46.95 lb (S)

FedEx Express Package(s) - Dropped Off
166879254247 46.65 lb (S)

FedEx Express Package(s) - Dropped Off
166879254258 47.55 lb (S)

Total Pieces: 3

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

Nov 11, 2020 5:47:40 PM

********** WE LISTEN **********
Tell us how we're doing
& receive a discount on your next order!
fedex.com/welisten or 800-398-0242
Redemption Code: _____

*** Thank you ***

MI-US

49424

RETURNS MON-FRI
STANDARD OVERNIGHT

TRK# 0221 1668 7925 4247

FedEx Express

RMA:

(616) 399-6070
INV:
PO:
REF:
DEPT:

HOLLAND MI 494249263

TO ALS ENVIRONMENTAL
ALS ENVIRONMENTAL
3352 128TH AVENUE

ORIGIN ID:GRRA (814) 793-8777
JEREMY CONNOR
HULL & ASSOCIATES
6397 EMERALD PARKWAY
SUITE 200
DUBLIN, OH 43016
UNITED STATES US

SHIP DATE: 04NOV20
ACTWGT: 40.00 LB MAN
CAD: 0122071/CAFE3311

SVCE: STANDARD OVERNIGHT MASTER 1668 7925 4247
TRK: 1668 7925 4247

Ref:
Dep:

Date: 04NOV20
Wgt: 40.00 LBS

DV:

0.00 TOTAL:

SHIPPING: 0.00
SPECIAL: 0.00
HANDLING: 0.00
0.00

0297-435 RRDW2 EXP 08/21

Custody Seal
http://www.alsglobal.com

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263 Name: TIM LOLS
Phone: 616-399-6070
Attn: Sample Receiving Date: 11-11-2020

HULL

RETURNS MON-FRI
STANDARD OVERNIGHT

TRK# 0221 1668 7925 4258

49424

MI-US

FedEx Express

RMA:

DEPT:

HOLLAND MI 494249263

(616) 399-6070
INV:
PO:
REF:

TO ALS ENVIRONMENTAL
ALS ENVIRONMENTAL
3352 128TH AVENUE

ORIGIN ID:GRRA (614) 793-8777
JEREMY CONNOR
HULL & ASSOCIATES
6397 EMERALD PARKWAY
SUITE 200
DUBLIN, OH 43016
UNITED STATES US

SHIP DATE: 04NOV20
ACTWGT: 40.00 LB MAN
CAD: 0122071/CAFE3311

SVCE: STANDARD OVERNIGHT Master 1668 7925 4247
TRK: 1668 7925 4258

Ref:
Dep:

Date: 04NOV20
Wgt: 40.00 LBS

DV:

SHIPPING: 0.00
SPECIAL: 0.00
HANDLING: 0.00
TOTAL: 0.00

0.00

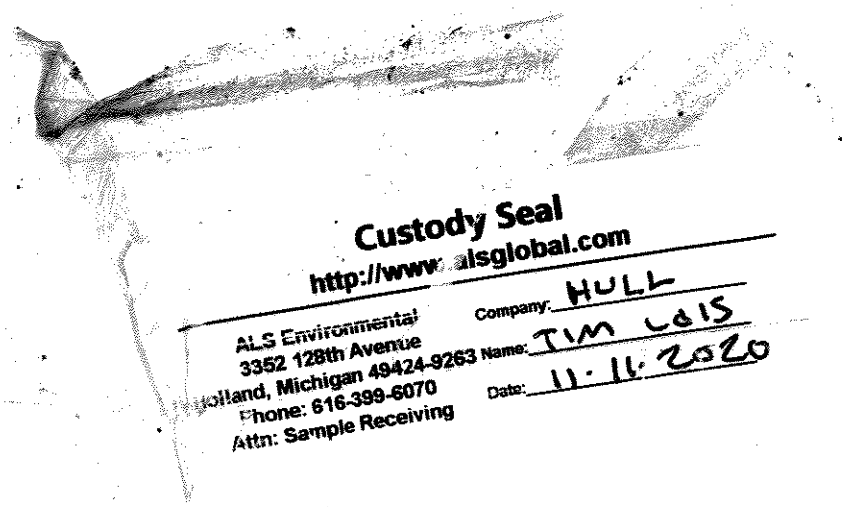
0550/8815/2535

0297-435 RRDW2 EXP 08/21

Custody Seal
http://www.alsglobal.com

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263 Name:
Phone: 616-399-6070
Attn: Sample Receiving

Company: HULL
Date: 11.11.2020


Custody Seal
http://www.alsglobal.com
ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263
Phone: 616-399-6070
Attn: Sample Receiving
Company: HULL
Name: TIM LOIS
Date: 11.11.2020

ALS Group, USA

Sample Receipt Checklist

Client Name: **HULL&ASSOC-DUBLIN** Date/Time Received: **13-Nov-20 09:00**

Work Order: **20111251** Received by: **DS**

Checklist completed by Bill Carey (eSignature) 13-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 13-Nov-20 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	4.0, 5.2, 5.0 C		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/13/2020 2:53:27 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

January 06, 2021

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Work Order: **20111574**

Re: **IDA001**

Dear Ray,

ALS Environmental received 60 sample(s) on Nov 17, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 857.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Bill Carey
/S/ Bill Carey

Bill Carey
Project Manager

ALS Environmental
ALS Group USA, Corp
3352 128th Avenue
Holland, MI 49424
T : +1 616 399-6070
F : +1 616 399-6185
www.alsglobal.com

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IDA001:DU-C5:S000010 - Metals 72
IDA001:DU-D5:S000010 - Metals 73
IDA001:DU-D5:S000010 - Metals 75
IDA001:DU-D5-TE:S000010 - Metals 76
IDA001:DU-D5-TS:S000010 - Metals 78
IDA001:DU-E9:S000010 - Metals 80
IDA001:DU-E9:S000010 - Metals 82
IDA001:DU-E9-TE:S000010 - Metals 83
IDA001:DU-E9-TS:S000010 - Metals 85
IDA001:DU-D9:S000010 - Metals 87
IDA001:DU-D9:S000010 - Metals 89
IDA001:DU-C9:S000010 - Metals 90
IDA001:DU-C9:S000010 - Metals 92
IDA001:DU-B9:S000010 - Metals 93
IDA001:DU-B9:S000010 - Metals 95
IDA001:DU-A9:S000010 - Metals 96
IDA001:DU-A9:S000010 - Metals 98
IDA001:DU-A8:S000010 - Metals 99
IDA001:DU-A8:S000010 - Metals 101
IDA001:DU-A8-TE:S000010 - Metals 102
IDA001:DU-A8-TS:S000010 - Metals 104
IDA001:DU-B8:S000010 - Metals 106
IDA001:DU-B8:S000010 - Metals 108
IDA001:DU-C8:S000010 - Metals 109
IDA001:DU-C8:S000010 - Metals 111
IDA001:DU-D8:S000010 - Metals 112
IDA001:DU-D8:S000010 - Metals 114
IDA001:DU-E8:S000010 - Metals 115
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IDA001:DU-D7:S000010 - Metals 121
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IDA001:DU-C7:S000010 - Metals 126
IDA001:DU-B7:S000010 - Metals 127
IDA001:DU-B7:S000010 - Metals 129
IDA001:DU-A7:S000010 - Metals 130
IDA001:DU-A7:S000010 - Metals 132
IDA001:DU-A6:S000010 - Metals 133
IDA001:DU-A6:S000010 - Metals 135
IDA001:DU-B6:S000010 - Metals 136
IDA001:DU-B6:S000010 - Metals 138
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IDA001:DU-E7:S000010 - GenChem 767
IDA001:DU-D7:S000010 - GenChem 768
IDA001:DU-C7:S000010 - GenChem 769
IDA001:DU-B7:S000010 - GenChem 770
IDA001:DU-A7:S000010 - GenChem 771
IDA001:DU-A6:S000010 - GenChem 772
IDA001:DU-B6:S000010 - GenChem 773
IDA001:DU-C6:S000010 - GenChem 774
IDA001:DU-C6-TE:S000010 - GenChem 775
IDA001:DU-C6-TS:S000010 - GenChem 776
IDA001:DU-D6:S000010 - GenChem 777
IDA001:DU-E6:S000010 - GenChem 778
SW3550C - SW3550C - MOIST_201125A 779
SW3550C - SW3550C - MOIST_201125B 780
20111574 (HULL) IDA001 781

Narrative Documents

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www.alsglobal.com

Client:	Hull & Associates
Project:	IDA001
Work Order:	20111574

Case Narrative

Samples for the above noted Work Order were received on 11/17/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168176, Method SW6010D, Sample 20111574-33AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Batch 168177, Method SW6010D, Sample 20111574-59AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168176, Method SW6010D, Sample 20111574-33AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Batch 168177, Method SW6010D, Sample 20111574-59AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Wet Chemistry:
No other deviations or anomalies were noted.Batch 168177, Method ICP_6010_S, Sample 20111574-59AMS: 1
Batch 168177, Method ICP_6010_S, Sample 20111574-59AMSD: 1

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-C1:S000010			Lab ID: 20111574-01			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	8.5		1.1	4.4	mg/Kg-dry	SW6010D
Lead	190		3.5	4.4	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	15		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-C1:S000010			Lab ID: 20111574-02			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.023	J	0.016	0.050	mg/L	SW6010D
Lead	0.11		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-D1:S000010			Lab ID: 20111574-03			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	25		1.0	3.8	mg/Kg-dry	SW6010D
Lead	1,000		3.1	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	4.9		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D1:S000010			Lab ID: 20111574-04			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.040	J	0.016	0.050	mg/L	SW6010D
Lead	25		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E5:S000010			Lab ID: 20111574-05			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	43		1.2	4.7	mg/Kg-dry	SW6010D
Lead	7,300		37	47	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	15		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E5:S000010			Lab ID: 20111574-06			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	16		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B5:S000010			Lab ID: 20111574-07			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	24		1.1	4.1	mg/Kg-dry	SW6010D
Lead	2,500		3.3	4.1	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	7.3		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-B5:S000010			Lab ID: 20111574-08			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.021	J	0.016	0.050	mg/L	SW6010D
Lead	26		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-C5:S000010			Lab ID: 20111574-09			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	25		1.2	4.6	mg/Kg-dry	SW6010D
Lead	3,400		3.7	4.6	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	15		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-C5:S000010			Lab ID: 20111574-10			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	32		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-D5:S000010			Lab ID: 20111574-11			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	15		0.99	3.8	mg/Kg-dry	SW6010D
Lead	4,500		31	38	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D5:S000010			Lab ID: 20111574-12			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	2.2		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-D5-TE:S000010			Lab ID: 20111574-13			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	11		0.99	3.8	mg/Kg-dry	SW6010D
Lead	2,300		3.0	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	14		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D5-TS:S000010			Lab ID: 20111574-14			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	9.5		1.1	4.2	mg/Kg-dry	SW6010D
Lead	970		3.4	4.2	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	17		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E9:S000010			Lab ID: 20111574-15			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	450		1.0	3.8	mg/Kg-dry	SW6010D

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-E9:S000010			Lab ID: 20111574-15			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	10,000		31	38	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E9:S000010			Lab ID: 20111574-16			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.26		0.016	0.050	mg/L	SW6010D
Lead	69		0.13	0.50	mg/L	SW6010D

CLIENT ID: IDA001:DU-E9-TE:S000010			Lab ID: 20111574-17			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	570		1.0	4.0	mg/Kg-dry	SW6010D
Lead	8,400		32	40	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E9-TS:S000010			Lab ID: 20111574-18			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	1,000		1.0	3.9	mg/Kg-dry	SW6010D
Lead	14,000		31	39	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D9:S000010			Lab ID: 20111574-19			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	34		1.1	4.4	mg/Kg-dry	SW6010D
Lead	1,100		3.5	4.4	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D9:S000010			Lab ID: 20111574-20			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.025	J	0.016	0.050	mg/L	SW6010D
Lead	1.6		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-C9:S000010			Lab ID: 20111574-21			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	32		1.2	4.6	mg/Kg-dry	SW6010D
Lead	770		3.7	4.6	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	17		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-C9:S000010			Lab ID: 20111574-22			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.024	J	0.016	0.050	mg/L	SW6010D
Lead	0.63		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B9:S000010			Lab ID: 20111574-23			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	280		0.95	3.6	mg/Kg-dry	SW6010D
Lead	4,700		29	36	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B9:S000010			Lab ID: 20111574-24			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.10		0.016	0.050	mg/L	SW6010D
Lead	39		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-A9:S000010			Lab ID: 20111574-25			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	180		0.95	3.6	mg/Kg-dry	SW6010D
Lead	8,900		29	36	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	13		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A9:S000010			Lab ID: 20111574-26			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.074		0.016	0.050	mg/L	SW6010D
Lead	30		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-A8:S000010			Lab ID: 20111574-27			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	56		1.2	4.5	mg/Kg-dry	SW6010D
Lead	2,300		3.6	4.5	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A8:S000010			Lab ID: 20111574-28			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.058		0.016	0.050	mg/L	SW6010D
Lead	7.2		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-A8-TE:S000010			Lab ID: 20111574-29			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	42		0.95	3.7	mg/Kg-dry	SW6010D
Lead	1,700		2.9	3.7	mg/Kg-dry	SW6010D

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-A8-TE:S000010			Lab ID: 20111574-29			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A8-TS:S000010			Lab ID: 20111574-30			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	46		1.1	4.4	mg/Kg-dry	SW6010D
Lead	1,400		3.5	4.4	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	18		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B8:S000010			Lab ID: 20111574-31			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	20		0.99	3.8	mg/Kg-dry	SW6010D
Lead	550		3.1	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	9.9		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B8:S000010			Lab ID: 20111574-32			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.53		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-C8:S000010			Lab ID: 20111574-33			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	28		0.90	3.5	mg/Kg-dry	SW6010D
Lead	940		2.8	3.5	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	5.8		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-C8:S000010			Lab ID: 20111574-34			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.044	J	0.016	0.050	mg/L	SW6010D
Lead	9.9		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-D8:S000010			Lab ID: 20111574-35			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	70		1.1	4.4	mg/Kg-dry	SW6010D
Lead	2,300		3.5	4.4	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	7.9		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-D8:S000010			Lab ID: 20111574-36			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.038	J	0.016	0.050	mg/L	SW6010D
Lead	29		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E8:S000010			Lab ID: 20111574-37			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	19		1.0	3.9	mg/Kg-dry	SW6010D
Lead	840		3.1	3.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	15		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E8:S000010			Lab ID: 20111574-38			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	1.5		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E7:S000010			Lab ID: 20111574-39			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	9.1		1.2	4.7	mg/Kg-dry	SW6010D
Lead	650		3.7	4.7	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	20		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E7:S000010			Lab ID: 20111574-40			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	6.7		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-D7:S000010			Lab ID: 20111574-41			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	42		1.0	4.0	mg/Kg-dry	SW6010D
Lead	1,800		3.2	4.0	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	15		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D7:S000010			Lab ID: 20111574-42			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	2.6		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-C7:S000010			Lab ID: 20111574-43			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	15		1.1	4.3	mg/Kg-dry	SW6010D
Lead	830		3.4	4.3	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-C7:S000010			Lab ID: 20111574-44			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	8.9		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B7:S000010			Lab ID: 20111574-45			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	97		1.1	4.3	mg/Kg-dry	SW6010D
Lead	3,100		3.5	4.3	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	26		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B7:S000010			Lab ID: 20111574-46			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	23		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-A7:S000010			Lab ID: 20111574-47			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	19		1.1	4.1	mg/Kg-dry	SW6010D
Lead	700		3.3	4.1	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	17		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A7:S000010			Lab ID: 20111574-48			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.023	J	0.016	0.050	mg/L	SW6010D
Lead	1.1		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-A6:S000010			Lab ID: 20111574-49			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	64		1.0	3.9	mg/Kg-dry	SW6010D
Lead	1,300		3.1	3.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	17		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-A6:S000010			Lab ID: 20111574-50			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.042	J	0.016	0.050	mg/L	SW6010D
Lead	3.6		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-B6:S000010			Lab ID: 20111574-51			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	87		0.96	3.7	mg/Kg-dry	SW6010D
Lead	12,000		30	37	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-B6:S000010			Lab ID: 20111574-51			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-B6:S000010			Lab ID: 20111574-52			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.031	J	0.016	0.050	mg/L	SW6010D
Lead	53		0.13	0.50	mg/L	SW6010D

CLIENT ID: IDA001:DU-C6:S000010			Lab ID: 20111574-53			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	180		1.2	4.6	mg/Kg-dry	SW6010D
Lead	1,500		3.6	4.6	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	13		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-C6:S000010			Lab ID: 20111574-54			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	0.017	J	0.016	0.050	mg/L	SW6010D
Lead	8.2		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-C6-TE:S000010			Lab ID: 20111574-55			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	24		1.1	4.1	mg/Kg-dry	SW6010D
Lead	1,400		3.3	4.1	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-C6-TS:S000010			Lab ID: 20111574-56			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	32		1.0	3.9	mg/Kg-dry	SW6010D
Lead	10,000		31	39	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	17		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-D6:S000010			Lab ID: 20111574-57			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	20		1.2	4.7	mg/Kg-dry	SW6010D
Lead	1,900		3.7	4.7	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-D6:S000010			Lab ID: 20111574-58			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	2.3		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-E6:S000010			Lab ID: 20111574-59			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	4.9		1.0	3.9	mg/Kg-dry	SW6010D
Lead	240		3.1	3.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	9.5		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-E6:S000010			Lab ID: 20111574-60			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	1.3		0.013	0.050	mg/L	SW6010D

Sample Receipt Information

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

ALS Group, USA

Date: 06-Jan-21

Client: Hull & Associates
Project: IDA001
Work Order: **20111574**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111574-01	IDA001:DU-C1:S000010	Soil	DU-C1	11/13/2020 14:35	11/17/2020 09:30	☐
20111574-02	IDA001:DU-C1:S000010	Tclp Extract	DU-C1	11/13/2020 14:35	11/17/2020 09:30	☐
20111574-03	IDA001:DU-D1:S000010	Soil	DU-D1	11/13/2020 13:55	11/17/2020 09:30	☐
20111574-04	IDA001:DU-D1:S000010	Tclp Extract	DU-D1	11/13/2020 13:55	11/17/2020 09:30	☐
20111574-05	IDA001:DU-E5:S000010	Soil	DU-E5	11/12/2020 14:50	11/17/2020 09:30	☐
20111574-06	IDA001:DU-E5:S000010	Tclp Extract	DU-E5	11/12/2020 14:50	11/17/2020 09:30	☐
20111574-07	IDA001:DU-B5:S000010	Soil	DU-B5	11/12/2020 08:20	11/17/2020 09:30	☐
20111574-08	IDA001:DU-B5:S000010	Tclp Extract	DU-B5	11/12/2020 08:20	11/17/2020 09:30	☐
20111574-09	IDA001:DU-C5:S000010	Soil	DU-C5	11/12/2020 08:58	11/17/2020 09:30	☐
20111574-10	IDA001:DU-C5:S000010	Tclp Extract	DU-C5	11/12/2020 08:58	11/17/2020 09:30	☐
20111574-11	IDA001:DU-D5:S000010	Soil	DU-D5	11/12/2020 09:48	11/17/2020 09:30	☐
20111574-12	IDA001:DU-D5:S000010	Tclp Extract	DU-D5	11/12/2020 09:48	11/17/2020 09:30	☐
20111574-13	IDA001:DU-D5-TE:S000010	Soil	DU-D5-TE	11/12/2020 11:12	11/17/2020 09:30	☐
20111574-14	IDA001:DU-D5-TS:S000010	Soil	DU-D5-TS	11/12/2020 10:34	11/17/2020 09:30	☐
20111574-15	IDA001:DU-E9:S000010	Soil	DU-E9	11/14/2020 09:07	11/17/2020 09:30	☐
20111574-16	IDA001:DU-E9:S000010	Tclp Extract	DU-E9	11/14/2020 09:07	11/17/2020 09:30	☐
20111574-17	IDA001:DU-E9-TE:S000010	Soil	DU-E9-TE	11/14/2020 09:49	11/17/2020 09:30	☐
20111574-18	IDA001:DU-E9-TS:S000010	Soil	DU-E9-TS	11/14/2020 10:28	11/17/2020 09:30	☐
20111574-19	IDA001:DU-D9:S000010	Soil	DU-D9	11/14/2020 11:01	11/17/2020 09:30	☐
20111574-20	IDA001:DU-D9:S000010	Tclp Extract	DU-D9	11/14/2020 11:01	11/17/2020 09:30	☐
20111574-21	IDA001:DU-C9:S000010	Soil	DU-C9	11/14/2020 11:32	11/17/2020 09:30	☐
20111574-22	IDA001:DU-C9:S000010	Tclp Extract	DU-C9	11/14/2020 11:32	11/17/2020 09:30	☐
20111574-23	IDA001:DU-B9:S000010	Soil	DU-B9	11/14/2020 12:19	11/17/2020 09:30	☐
20111574-24	IDA001:DU-B9:S000010	Tclp Extract	DU-B9	11/14/2020 12:19	11/17/2020 09:30	☐
20111574-25	IDA001:DU-A9:S000010	Soil	DU-A9	11/14/2020 12:51	11/17/2020 09:30	☐
20111574-26	IDA001:DU-A9:S000010	Tclp Extract	DU-A9	11/14/2020 12:51	11/17/2020 09:30	☐
20111574-27	IDA001:DU-A8:S000010	Soil	DU-A8:	11/14/2020 13:30	11/17/2020 09:30	☐
20111574-28	IDA001:DU-A8:S000010	Tclp Extract	DU-A8:	11/14/2020 13:30	11/17/2020 09:30	☐
20111574-29	IDA001:DU-A8-TE:S000010	Soil	DU-A8-TE	11/14/2020 14:00	11/17/2020 09:30	☐
20111574-30	IDA001:DU-A8-TS:S000010	Soil	DU-A8-TS	11/14/2020 14:30	11/17/2020 09:30	☐
20111574-31	IDA001:DU-B8:S000010	Soil	DU-B8	11/14/2020 15:00	11/17/2020 09:30	☐
20111574-32	IDA001:DU-B8:S000010	Tclp Extract	DU-B8	11/14/2020 15:00	11/17/2020 09:30	☐
20111574-33	IDA001:DU-C8:S000010	Soil	DU-C8	11/14/2020 15:30	11/17/2020 09:30	☐
20111574-34	IDA001:DU-C8:S000010	Tclp Extract	DU-C8	11/14/2020 15:30	11/17/2020 09:30	☐
20111574-35	IDA001:DU-D8:S000010	Soil	DU-D8	11/14/2020 16:00	11/17/2020 09:30	☐
20111574-36	IDA001:DU-D8:S000010	Tclp Extract	DU-D8	11/14/2020 16:00	11/17/2020 09:30	☐
20111574-37	IDA001:DU-E8:S000010	Soil	DU-E8	11/15/2020 07:42	11/17/2020 09:30	☐
20111574-38	IDA001:DU-E8:S000010	Tclp Extract	DU-E8	11/15/2020 07:42	11/17/2020 09:30	☐
20111574-39	IDA001:DU-E7:S000010	Soil	DU-E7	11/15/2020 08:08	11/17/2020 09:30	☐

Client: Hull & Associates
Project: IDA001
Work Order: **20111574**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111574-40	IDA001:DU-E7:S000010	Tclp Extract	DU-E7	11/15/2020 08:08	11/17/2020 09:30	☐
20111574-41	IDA001:DU-D7:S000010	Soil	DU-D7	11/15/2020 08:34	11/17/2020 09:30	☐
20111574-42	IDA001:DU-D7:S000010	Tclp Extract	DU-D7	11/15/2020 08:34	11/17/2020 09:30	☐
20111574-43	IDA001:DU-C7:S000010	Soil	DU-C7	11/15/2020 09:07	11/17/2020 09:30	☐
20111574-44	IDA001:DU-C7:S000010	Tclp Extract	DU-C7	11/15/2020 09:07	11/17/2020 09:30	☐
20111574-45	IDA001:DU-B7:S000010	Soil	DU-B7	11/15/2020 09:39	11/17/2020 09:30	☐
20111574-46	IDA001:DU-B7:S000010	Tclp Extract	DU-B7	11/15/2020 09:39	11/17/2020 09:30	☐
20111574-47	IDA001:DU-A7:S000010	Soil	DU-A7	11/15/2020 10:20	11/17/2020 09:30	☐
20111574-48	IDA001:DU-A7:S000010	Tclp Extract	DU-A7	11/15/2020 10:20	11/17/2020 09:30	☐
20111574-49	IDA001:DU-A6:S000010	Soil	DU-A6	11/15/2020 11:40	11/17/2020 09:30	☐
20111574-50	IDA001:DU-A6:S000010	Tclp Extract	DU-A6	11/15/2020 11:40	11/17/2020 09:30	☐
20111574-51	IDA001:DU-B6:S000010	Soil	DU-B6	11/15/2020 12:10	11/17/2020 09:30	☐
20111574-52	IDA001:DU-B6:S000010	Tclp Extract	DU-B6	11/15/2020 12:10	11/17/2020 09:30	☐
20111574-53	IDA001:DU-C6:S000010	Soil	DU-C6	11/15/2020 12:35	11/17/2020 09:30	☐
20111574-54	IDA001:DU-C6:S000010	Tclp Extract	DU-C6	11/15/2020 12:35	11/17/2020 09:30	☐
20111574-55	IDA001:DU-C6-TE:S000010	Soil	DU-C6-TE	11/15/2020 12:55	11/17/2020 09:30	☐
20111574-56	IDA001:DU-C6-TS:S000010	Soil	DU-C6-TS	11/15/2020 13:20	11/17/2020 09:30	☐
20111574-57	IDA001:DU-D6:S000010	Soil	DU-D6	11/15/2020 13:50	11/17/2020 09:30	☐
20111574-58	IDA001:DU-D6:S000010	Tclp Extract	DU-D6	11/15/2020 13:50	11/17/2020 09:30	☐
20111574-59	IDA001:DU-E6:S000010	Soil	DU-E6	11/15/2020 14:10	11/17/2020 09:30	☐
20111574-60	IDA001:DU-E6:S000010	Tclp Extract	DU-E6	11/15/2020 14:10	11/17/2020 09:30	☐

20111574

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK PAGE 1 OF 3
DATA ADMIN
LANCE TORLEY
NO. 377

REPORT TO: RAYMOND KENNEDY

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 448-0315

Client: IDA
Site: USS LEAD OU-1 ; ZONE 1
Project #: IDA0001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA0001 – DUS – RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB
VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC (COLOD)	LEAD (COLOD)	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA0001 : DU-C1 : S0000010	1	COMPOSITE	11/13/20/1435	2	X	X	X	X	
IDA0001 : DU-D1 : S0000010	1	COMPOSITE	11/13/20/1355	2	X	X	X	X	
IDA0001 : DU-E5 : S0000010	1	COMPOSITE	11/12/20/1450	2	X	X	X	X	
IDA0001 : DU-B5 : S0000010	1	COMPOSITE	11/12/20/0820	2	X	X	X	X	
IDA0001 : DU-C5 : S0000010	1	COMPOSITE	11/12/20/0858	2	X	X	X	X	
IDA0001 : DU-D5 : S0000010	1	COMPOSITE	11/12/20/0948	2	X	X	X	X	
IDA0001 : DU-D5-TE : S0000010	1	COMPOSITE	11/12/20/1112	2	X	X			
IDA0001 : DU-D5-TS : S0000010	1	COMPOSITE	11/12/20/1034	2	X	X			
IDA0001 : DU-E9 : S0000010	1	COMPOSITE	11/14/20/0907	2	X	X	X	X	
IDA0001 : DU-E9-TE : S0000010	1	COMPOSITE	11/14/20/0949	2	X	X			
IDA0001 : DU-E9-TS : S0000010	1	COMPOSITE	11/14/20/1028	2	X	X			
IDA0001 : DU-D9 : S0000010	1	COMPOSITE	11/14/20/1101	2	X	X	X	X	

RELINQUISHED BY: DATE: 16 NOV 20 TIME: 1500
RECEIVED BY: FEDEX DATE: 16 NOV 20 TIME: 1900

RELINQUISHED BY: DATE: TIME:
RECEIVED BY: DATE: TIME:

RELINQUISHED BY: FEDEX DATE: 11/17/20 TIME: 0930
RECEIVED BY: DATE: TIME:

339 857

COOLER TEMPERATURE AS RECEIVED: IR1 4.6°C °C
5.8°C 0.0°C 5.8°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

20111574

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH — 6397 Emerald Pkwy, Suite 200, Dublin, OH 43016, P: (614) 793-8777
Newark, OH — 59 Grant St., Newark, OH 43055, P: (740) 344-5451
Mason, OH — 4770 Duke Dr., Suite 300, Mason, OH 45040, P: (513) 459-9677
Bedford, OH — 4 Hemisphere Way, Bedford, OH 44146, P: (440) 232-9945
Toledo, OH — 219 S. Erie St., Toledo, OH 43604, P: (419) 385-2018
St. Clairsville, OH — 146 W. Main St., 2nd Floor, St. Clairsville, OH 43950, P: (800) 241-7173
Pittsburgh, PA — 300 Merchant Ln., Suite 307, Pittsburgh, PA 15205, P: (412) 446-0315

TERRIE BARANEK
DATA ADMIN
LANCE TURLEY

NO. 378

REPORT TO: RAYMOND KENNEDY

Client: IDA
Site: USSLEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOUS / JEREMY CONNER
Purchase Order # IDA001_DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES — PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010 D	LEAD 6010 D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C9 : S000010	1	COMPOSITE	11/14/20 / 1132	N	X	X	X	X	
IDA001 : DU-B9 : S000010	1	COMPOSITE	11/14/20 / 1219	N	X	X	X	X	
IDA001 : DU-A9 : S000010	1	COMPOSITE	11/14/20 / 1251	N	X	X	X	X	
IDA001 : DU-A8 : S000010	1	COMPOSITE	11/14/20 / 1330	N	X	X	X	X	
IDA001 : DU-A8-TE : S000010	1	COMPOSITE	11/14/20 / 1400	N	X	X			
IDA001 : DU-A8-TS : S000010	1	COMPOSITE	11/14/20 / 1430	N	X	X			
IDA001 : DU-B8 : S000010	1	COMPOSITE	11/14/20 / 1500	N	X	X	X	X	
IDA001 : DU-C8 : S000010	1	COMPOSITE	11/14/20 / 1530	N	X	X	X	X	
IDA001 : DU-D8 : S000010	1	COMPOSITE	11/14/20 / 1600	N	X	X	X	X	
IDA001 : DU-E8 : S000010	1	COMPOSITE	11/15/20 / 0742	N	X	X	X	X	
IDA001 : DU-E7 : S000010	1	COMPOSITE	11/15/20 / 0808	N	X	X	X	X	
IDA001 : DU-D7 : S000010	1	COMPOSITE	11/15/20 / 0834	N	X	X	X	X	

RELINQUISHED BY: DATE: 16 NOV 20 TIME: 1500
RECEIVED BY: FEDEX DATE: 16 NOV 20 TIME: 1500
RELINQUISHED BY: DATE: TIME:
RECEIVED BY: DATE: TIME:
RELINQUISHED BY: FED EX 7738 8857 DATE: 11/17/20 TIME: 0930
RECEIVED BY: DATE: TIME:

COOLER TEMPERATURE: IR
AS RECEIVED: 4.6 °C °C
5.8 °C
6.0 °C 5.8 °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

20111574

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK
DATA ADMIN
LANCE TURLEY

NO. 379

REPORT TO: RAYMOND KENNEDY

Dublin, OH [X]	Newark, OH [ ]	Mason, OH [ ]	Bedford, OH [ ]	Toledo, OH [ ]	St. Clairsville, OH [ ]	Pittsburgh, PA [ ]
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

Client: IDA
Site: USS LEAD OU-1, ZONE 1
Project #: IDA00' Phase: DU SAMPLING
Samplers: Tim Lois / JEREMY CONNER
Purchase Order # IDA001 — DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C7 : S000010	1	COMPOSITE	11/15/20 / 0907	N	X	X	X	X	
IDA001 : DU-B7 : S000010	1	COMPOSITE	11/15/20 / 0939	N	X	X	X	X	
IDA001 : DU-A7 : S000010	1	COMPOSITE	11/15/20 / 1020	N	X	X	X	X	
IDA001 : DU-A6 : S000010	1	COMPOSITE	11/15/20 / 1140	N	X	X	X	X	
IDA001 : DU-B6 : S000010	1	COMPOSITE	11/15/20 / 1210	N	X	X	X	X	
IDA001 : DU-C6 : S000010	1	COMPOSITE	11/15/20 / 1235	N	X	X	X	X	
IDA001 : DU-CL-TE : S000010	1	COMPOSITE	11/15/20 / 1255	N	X	X			
IDA001 : DU-C6-T5 : S000010	1	COMPOSITE	11/15/20 / 1320	N	X	X			
IDA001 : DU-D6 : S000010	1	COMPOSITE	11/15/20 / 1350	N	X	X	X	X	
IDA001 : DU-E6 : S000010	1	COMPOSITE	11/15/20 / 1410	N	X	X	X	X	
: :			/						
: :			/						

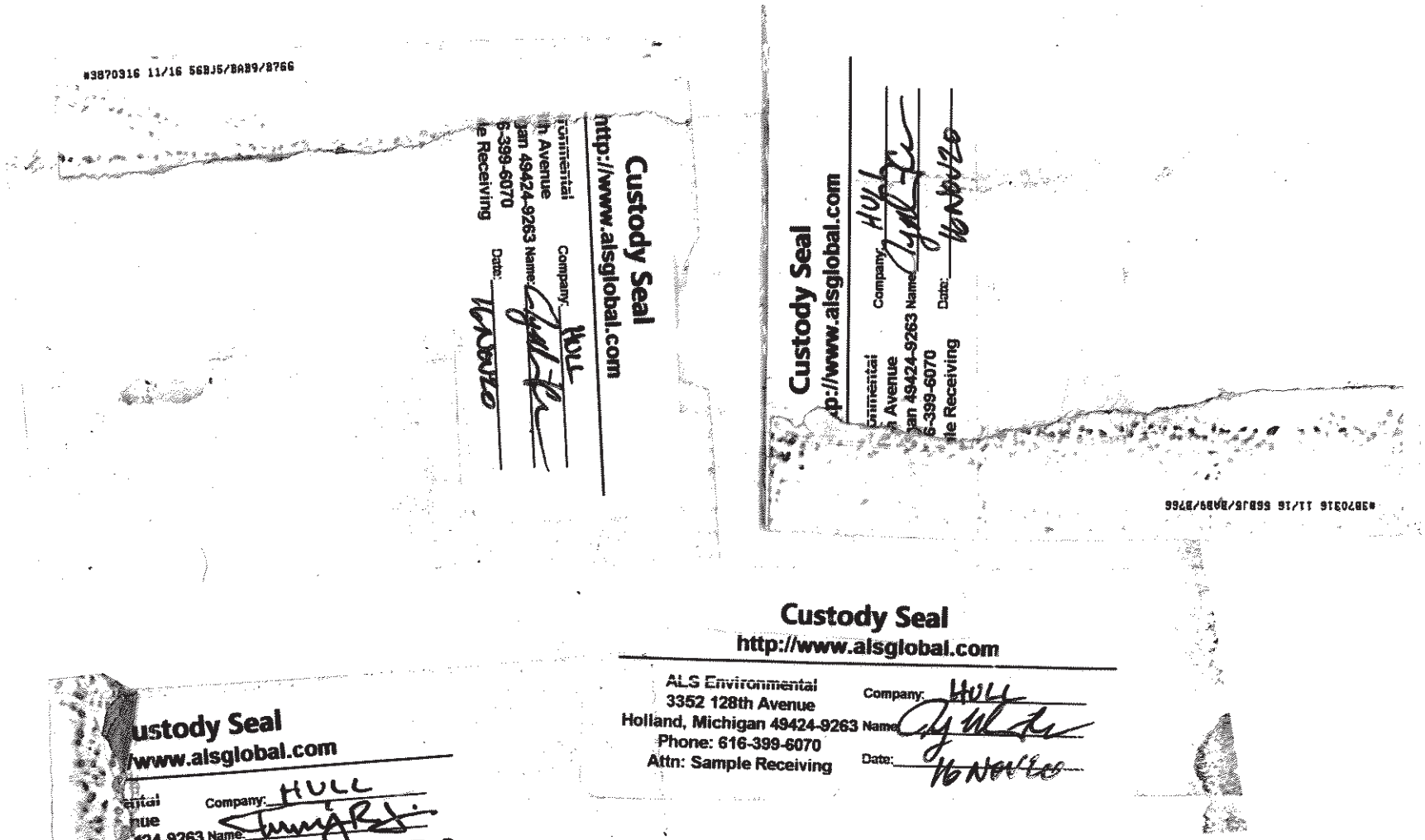
RELINQUISHED BY:	DATE: 16 NOV 20	RECEIVED BY: FEDEX	DATE: 16 NOV 20	Deliver To: ALS-HOLAND, MI
RELINQUISHED BY:	TIME: 1500	RECEIVED BY:	TIME: 1500	Method of Delivery: FEDEX
	DATE:		DATE:	Airbill Number:
	TIME:		TIME:	Regulatory Program: CERCLA
RELINQUISHED BY: FEDEX	DATE: 11/17/20	RECEIVED BY:	DATE:	Required Limits:
8628 8857	TIME: 0930		TIME:	

COOLER TEMPERATURE AS RECEIVED: IR1 °C
4.6°C 5.8°C 5.8°C 10.0°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS


#3870316 11/16 56BJ5/BA89/8766
Custody Seal
http://www.alsglobal.com
Company: HULL
Date: 16 Nov 20
Custody Seal
http://www.alsglobal.com
Company: HULL
Date: 16 Nov 20
Custody Seal
http://www.alsglobal.com
ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263
Phone: 616-399-6070
Attn: Sample Receiving
Company: HULL
Date: 16 Nov 20
Custody Seal
/www.alsglobal.com
Company: HULL
Date: 11.16.2020

ALS Group, USA

Sample Receipt Checklist

Client Name: ***HULL&ASSOC-DUBLIN*** Date/Time Received: ***17-Nov-20 09:30***

Work Order: ***20111574*** Received by: ***DS***

Checklist completed by Diane Shaw (eSignature) 17-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 17-Nov-20 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	4.6/4.6, 5.8/5.8, 6.0/6.0, 5.8/5.8 c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/17/2020 2:32:13 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Miscellaneous Forms

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111574**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

Analyst Summary report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-C1:S000010 **Date Collected:** 11/13/2020
Lab Code: 20111574-01A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-C1:S000010 **Date Collected:** 11/13/2020
Lab Code: 20111574-02A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-D1:S000010 **Date Collected:** 11/13/2020
Lab Code: 20111574-03A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D1:S000010 **Date Collected:** 11/13/2020
Lab Code: 20111574-04A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-E5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-05A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-E5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-06A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-B5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-07A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-B5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-08A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-C5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-09A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-C5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-10A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-D5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-11A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D5:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-12A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-D5-TE:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-13A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D5-TS:S000010 **Date Collected:** 11/12/2020
Lab Code: 20111574-14A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-E9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-15A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-E9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-16A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-E9-TE:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-17A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-E9-TS:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-18A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-19A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-20A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-C9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-21A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-C9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-22A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-B9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-23A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-B9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-24A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-A9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-25A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-A9:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-26A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-A8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-27A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-A8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-28A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-A8-TE:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-29A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-A8-TS:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-30A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-B8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-31A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-B8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-32A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-C8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-33A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-C8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-34A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-D8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-35A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D8:S000010 **Date Collected:** 11/14/2020
Lab Code: 20111574-36A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-E8:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-37A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-E8:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-38A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-E7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-39A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-E7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-40A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-D7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-41A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-42A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-C7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-43A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-C7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-44A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-B7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-45A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-B7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-46A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-A7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-47A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-A7:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-48A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-A6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-49A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-A6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-50A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-B6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-51A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-B6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-52A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-C6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-53A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-C6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-54A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-C6-TE:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-55A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-C6-TS:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-56A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Sample Name: IDA001:DU-D6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-57A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-D6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-58A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-E6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-59A **Date Received:** 11/17/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		AJS

Sample Name: IDA001:DU-E6:S000010 **Date Collected:** 11/15/2020
Lab Code: 20111574-60A **Date Received:** 11/17/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Results

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Metals

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
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www.alsglobal.com

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Dry
Lab Code:	20111574-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.5**	mg/Kg-dry	4.4	10	11/25/20 21:34	11/23/20 16:25	
Lead	SW6010D	**190**	mg/Kg-dry	4.4	10	11/25/20 21:34	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.023 J**	mg/L	0.050	1	11/25/20 13:38	11/23/20 13:04	
Lead	SW6010D	**0.11**	mg/L	0.050	1	11/25/20 13:38	11/23/20 13:04	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Dry
Lab Code:	20111574-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	3.8	10	11/25/20 21:40	11/23/20 16:25	
Lead	SW6010D	**1,000**	mg/Kg-dry	3.8	10	11/25/20 21:40	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.040 J**	mg/L	0.050	1	11/25/20 14:04	11/23/20 13:04	
Lead	SW6010D	**25**	mg/L	0.050	1	11/25/20 14:04	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Dry
Lab Code:	20111574-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**43**	mg/Kg-dry	4.7	10	11/25/20 21:45	11/23/20 16:25	
Lead	SW6010D	**7,300**	mg/Kg-dry	47	100	11/29/20 20:50	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:09	11/23/20 13:04	
Lead	SW6010D	**16**	mg/L	0.050	1	11/25/20 14:09	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Dry
Lab Code:	20111574-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**24**	mg/Kg-dry	4.1	10	11/25/20 21:50	11/23/20 16:25	
Lead	SW6010D	**2,500**	mg/Kg-dry	4.1	10	11/25/20 21:50	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.021 J**	mg/L	0.050	1	11/25/20 14:14	11/23/20 13:04	
Lead	SW6010D	**26**	mg/L	0.050	1	11/25/20 14:14	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Dry
Lab Code:	20111574-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	4.6	10	11/25/20 21:55	11/23/20 16:25	
Lead	SW6010D	**3,400**	mg/Kg-dry	4.6	10	11/25/20 21:55	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:19	11/23/20 13:04	
Lead	SW6010D	**32**	mg/L	0.050	1	11/25/20 14:19	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Dry
Lab Code:	20111574-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**15**	mg/Kg-dry	3.8	10	11/25/20 22:00	11/23/20 16:25	
Lead	SW6010D	**4,500**	mg/Kg-dry	38	100	11/29/20 20:55	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:24	11/23/20 13:04	
Lead	SW6010D	**2.2**	mg/L	0.050	1	11/25/20 14:24	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	3.8	10	11/25/20 22:05	11/23/20 16:25	
Lead	SW6010D	**2,300**	mg/Kg-dry	3.8	10	11/25/20 22:05	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	4.2	10	11/25/20 22:10	11/23/20 16:25	
Lead	SW6010D	**970**	mg/Kg-dry	4.2	10	11/25/20 22:10	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Dry
Lab Code:	20111574-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**450**	mg/Kg-dry	3.8	10	11/25/20 22:25	11/23/20 16:25	
Lead	SW6010D	**10,000**	mg/Kg-dry	38	100	11/29/20 21:00	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.26**	mg/L	0.050	1	11/25/20 14:29	11/23/20 13:04	
Lead	SW6010D	**69**	mg/L	0.50	10	11/26/20 03:09	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**570**	mg/Kg-dry	4.0	10	11/25/20 22:30	11/23/20 16:25	
Lead	SW6010D	**8,400**	mg/Kg-dry	40	100	11/29/20 21:05	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**1,000**	mg/Kg-dry	3.9	10	11/25/20 22:35	11/23/20 16:25	
Lead	SW6010D	**14,000**	mg/Kg-dry	39	100	11/29/20 21:10	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Dry
Lab Code:	20111574-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**34**	mg/Kg-dry	4.4	10	11/25/20 22:40	11/23/20 16:25	
Lead	SW6010D	**1,100**	mg/Kg-dry	4.4	10	11/25/20 22:40	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.025 J**	mg/L	0.050	1	11/25/20 14:34	11/23/20 13:04	
Lead	SW6010D	**1.6**	mg/L	0.050	1	11/25/20 14:34	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Dry
Lab Code:	20111574-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**32**	mg/Kg-dry	4.6	10	11/25/20 22:45	11/23/20 16:25	
Lead	SW6010D	**770**	mg/Kg-dry	4.6	10	11/25/20 22:45	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.024 J**	mg/L	0.050	1	11/25/20 14:39	11/23/20 13:04	
Lead	SW6010D	**0.63**	mg/L	0.050	1	11/25/20 14:39	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Dry
Lab Code:	20111574-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**280**	mg/Kg-dry	3.6	10	11/25/20 22:50	11/23/20 16:25	
Lead	SW6010D	**4,700**	mg/Kg-dry	36	100	11/29/20 21:15	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.10**	mg/L	0.050	1	11/25/20 14:45	11/23/20 13:04	
Lead	SW6010D	**39**	mg/L	0.050	1	11/25/20 14:45	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Dry
Lab Code:	20111574-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**180**	mg/Kg-dry	3.6	10	11/25/20 22:56	11/23/20 16:25	
Lead	SW6010D	**8,900**	mg/Kg-dry	36	100	11/29/20 21:21	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-26		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.074**	mg/L	0.050	1	11/25/20 14:50	11/23/20 13:04	
Lead	SW6010D	**30**	mg/L	0.050	1	11/25/20 14:50	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Dry
Lab Code:	20111574-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**56**	mg/Kg-dry	4.5	10	11/25/20 23:01	11/23/20 16:25	
Lead	SW6010D	**2,300**	mg/Kg-dry	4.5	10	11/25/20 23:01	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-28		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.058**	mg/L	0.050	1	11/25/20 15:05	11/23/20 13:04	
Lead	SW6010D	**7.2**	mg/L	0.050	1	11/25/20 15:05	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**42**	mg/Kg-dry	3.7	10	11/25/20 23:06	11/23/20 16:25	
Lead	SW6010D	**1,700**	mg/Kg-dry	3.7	10	11/25/20 23:06	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**46**	mg/Kg-dry	4.4	10	11/25/20 23:11	11/23/20 16:25	
Lead	SW6010D	**1,400**	mg/Kg-dry	4.4	10	11/25/20 23:11	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Dry
Lab Code:	20111574-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	3.8	10	11/25/20 23:31	11/23/20 16:25	
Lead	SW6010D	**550**	mg/Kg-dry	3.8	10	11/25/20 23:31	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-32		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:10	11/23/20 13:04	
Lead	SW6010D	**0.53**	mg/L	0.050	1	11/25/20 15:10	11/23/20 13:04	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Dry
Lab Code:	20111574-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**28**	mg/Kg-dry	3.5	10	11/25/20 23:36	11/23/20 16:25	
Lead	SW6010D	**940**	mg/Kg-dry	3.5	10	11/25/20 23:36	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-34		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.044 J**	mg/L	0.050	1	11/25/20 15:15	11/23/20 13:04	
Lead	SW6010D	**9.9**	mg/L	0.050	1	11/25/20 15:15	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Dry
Lab Code:	20111574-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**70**	mg/Kg-dry	4.4	10	11/26/20 00:42	11/23/20 16:26	
Lead	SW6010D	**2,300**	mg/Kg-dry	4.4	10	11/26/20 00:42	11/23/20 16:26	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.038 J**	mg/L	0.050	1	11/25/20 15:20	11/23/20 13:04	
Lead	SW6010D	**29**	mg/L	0.050	1	11/25/20 15:20	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Dry
Lab Code:	20111574-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**19**	mg/Kg-dry	3.9	10	11/26/20 00:47	11/23/20 16:26	
Lead	SW6010D	**840**	mg/Kg-dry	3.9	10	11/26/20 00:47	11/23/20 16:26	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-38		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:26	11/23/20 13:04	
Lead	SW6010D	**1.5**	mg/L	0.050	1	11/25/20 15:26	11/23/20 13:04	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Dry
Lab Code:	20111574-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.1**	mg/Kg-dry	4.7	10	11/26/20 00:52	11/23/20 16:26	
Lead	SW6010D	**650**	mg/Kg-dry	4.7	10	11/26/20 00:52	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-40		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:31	11/23/20 13:04	
Lead	SW6010D	**6.7**	mg/L	0.050	1	11/25/20 15:31	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Dry
Lab Code:	20111574-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**42**	mg/Kg-dry	4.0	10	11/26/20 00:57	11/23/20 16:26	
Lead	SW6010D	**1,800**	mg/Kg-dry	4.0	10	11/26/20 00:57	11/23/20 16:26	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-42		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:36	11/23/20 13:04	
Lead	SW6010D	**2.6**	mg/L	0.050	1	11/25/20 15:36	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Dry
Lab Code:	20111574-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**15**	mg/Kg-dry	4.3	10	11/26/20 01:02	11/23/20 16:26	
Lead	SW6010D	**830**	mg/Kg-dry	4.3	10	11/26/20 01:02	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-44		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:41	11/23/20 13:04	
Lead	SW6010D	**8.9**	mg/L	0.050	1	11/25/20 15:41	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Dry
Lab Code:	20111574-45		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**97**	mg/Kg-dry	4.3	10	11/26/20 01:07	11/23/20 16:26	
Lead	SW6010D	**3,100**	mg/Kg-dry	4.3	10	11/26/20 01:07	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-45		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-46		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:46	11/23/20 13:04	
Lead	SW6010D	**23**	mg/L	0.050	1	11/25/20 15:46	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Dry
Lab Code:	20111574-47		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**19**	mg/Kg-dry	4.1	10	11/26/20 01:12	11/23/20 16:26	
Lead	SW6010D	**700**	mg/Kg-dry	4.1	10	11/26/20 01:12	11/23/20 16:26	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-47		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-48		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.023 J**	mg/L	0.050	1	11/25/20 12:16	11/23/20 14:06	
Lead	SW6010D	**1.1**	mg/L	0.050	1	11/25/20 12:16	11/23/20 14:06	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Dry
Lab Code:	20111574-49		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**64**	mg/Kg-dry	3.9	10	11/26/20 01:17	11/23/20 16:26	
Lead	SW6010D	**1,300**	mg/Kg-dry	3.9	10	11/26/20 01:17	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-49		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-50		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.042 J**	mg/L	0.050	1	11/25/20 12:32	11/23/20 14:06	
Lead	SW6010D	**3.6**	mg/L	0.050	1	11/25/20 12:32	11/23/20 14:06	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Dry
Lab Code:	20111574-51		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**87**	mg/Kg-dry	3.7	10	11/26/20 01:37	11/23/20 16:26	
Lead	SW6010D	**12,000**	mg/Kg-dry	37	100	11/29/20 22:21	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-51		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-52		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.031 J**	mg/L	0.050	1	11/25/20 12:37	11/23/20 14:06	
Lead	SW6010D	**53**	mg/L	0.50	10	11/26/20 03:04	11/23/20 14:06	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Dry
Lab Code:	20111574-53		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**180**	mg/Kg-dry	4.6	10	11/26/20 01:42	11/23/20 16:26	
Lead	SW6010D	**1,500**	mg/Kg-dry	4.6	10	11/26/20 01:42	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-53		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-54		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.017 J**	mg/L	0.050	1	11/25/20 12:42	11/23/20 14:06	
Lead	SW6010D	**8.2**	mg/L	0.050	1	11/25/20 12:42	11/23/20 14:06	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-55		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**24**	mg/Kg-dry	4.1	10	11/26/20 01:48	11/23/20 16:26	
Lead	SW6010D	**1,400**	mg/Kg-dry	4.1	10	11/26/20 01:48	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-55		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-56		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**32**	mg/Kg-dry	3.9	10	11/26/20 01:53	11/23/20 16:26	
Lead	SW6010D	**10,000**	mg/Kg-dry	39	100	11/29/20 22:26	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-56		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Dry
Lab Code:	20111574-57		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	4.7	10	11/26/20 01:58	11/23/20 16:26	
Lead	SW6010D	**1,900**	mg/Kg-dry	4.7	10	11/26/20 01:58	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-57		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-58		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 12:47	11/23/20 14:06	
Lead	SW6010D	**2.3**	mg/L	0.050	1	11/25/20 12:47	11/23/20 14:06	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Dry
Lab Code:	20111574-59		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**4.9**	mg/Kg-dry	3.9	10	11/26/20 02:03	11/23/20 16:26	
Lead	SW6010D	**240**	mg/Kg-dry	3.9	10	11/26/20 02:03	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-59		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-60		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 13:02	11/23/20 14:06	
Lead	SW6010D	**1.3**	mg/L	0.050	1	11/25/20 13:02	11/23/20 14:06	

General Chemistry

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**4.9**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**7.3**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**14**	% of sample	0.10	1	11/25/20 12:21	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-14		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-18		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-25		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-27		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-29		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-30		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-31		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.9**	% of sample	0.10	1	11/25/20 12:21	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-33		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.8**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-35		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**7.9**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-37		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-39		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**20**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-41		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-43		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-45		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**26**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-47		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-49		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-51		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-53		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-55		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-56		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-57		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-59		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.5**	% of sample	0.10	1	11/25/20 13:45	NA	

QC Summary Forms

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Metals

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3352 128th Avenue, Holland, MI 49424
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Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/25/20 08:57						
Aluminum	SW6010D	ICP2_201125A	1.035	1	103	90-110
Antimony	SW6010D	ICP2_201125A	0.9729	1	97.3	90-110
Arsenic	SW6010D	ICP2_201125A	0.9543	1	95.4	90-110
Barium	SW6010D	ICP2_201125A	1.029	1	103	90-110
Beryllium	SW6010D	ICP2_201125A	0.9785	1	97.9	90-110
Cadmium	SW6010D	ICP2_201125A	0.9721	1	97.2	90-110
Calcium	SW6010D	ICP2_201125A	6.265	6	104	90-110
Cobalt	SW6010D	ICP2_201125A	0.9866	1	98.7	90-110
Copper	SW6010D	ICP2_201125A	1.006	1	101	90-110
Iron	SW6010D	ICP2_201125A	1.049	1	105	90-110
Lead	SW6010D	ICP2_201125A	1.012	1	101	90-110
Magnesium	SW6010D	ICP2_201125A	1.046	1	105	90-110
Manganese	SW6010D	ICP2_201125A	1.008	1	101	90-110
Nickel	SW6010D	ICP2_201125A	0.9919	1	99.2	90-110
Potassium	SW6010D	ICP2_201125A	20.96	21	99.8	90-110
Selenium	SW6010D	ICP2_201125A	0.9656	1	96.6	90-110
Silver	SW6010D	ICP2_201125A	1.042	1	104	90-110
Sodium	SW6010D	ICP2_201125A	21.16	21	101	90-110
Thallium	SW6010D	ICP2_201125A	1.026	1	103	90-110
Vanadium	SW6010D	ICP2_201125A	1.005	1	101	90-110
Zinc	SW6010D	ICP2_201125A	0.9639	1	96.4	90-110
CCV 11/25/20 09:43						
Aluminum	SW6010D	ICP2_201125A	2.473	2.5	98.9	90-110
Antimony	SW6010D	ICP2_201125A	0.4942	0.5	98.8	90-110
Arsenic	SW6010D	ICP2_201125A	0.4894	0.5	97.9	90-110
Barium	SW6010D	ICP2_201125A	2.479	2.5	99.1	90-110
Beryllium	SW6010D	ICP2_201125A	0.4942	0.5	98.8	90-110
Cadmium	SW6010D	ICP2_201125A	0.4908	0.5	98.2	90-110
Calcium	SW6010D	ICP2_201125A	2.435	2.5	97.4	90-110
Cobalt	SW6010D	ICP2_201125A	2.476	2.5	99.0	90-110
Copper	SW6010D	ICP2_201125A	2.45	2.5	98.0	90-110
Iron	SW6010D	ICP2_201125A	2.49	2.5	99.6	90-110
Lead	SW6010D	ICP2_201125A	0.4988	0.5	99.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.407	2.5	96.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4854	0.5	97.1	90-110
Nickel	SW6010D	ICP2_201125A	2.48	2.5	99.2	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 09:43						
Potassium	SW6010D	ICP2_201125A	49.24	50	98.5	90-110
Selenium	SW6010D	ICP2_201125A	2.452	2.5	98.1	90-110
Silver	SW6010D	ICP2_201125A	0.4895	0.5	97.9	90-110
Sodium	SW6010D	ICP2_201125A	49.57	50	99.1	90-110
Thallium	SW6010D	ICP2_201125A	0.508	0.5	102	90-110
Vanadium	SW6010D	ICP2_201125A	0.4882	0.5	97.6	90-110
Zinc	SW6010D	ICP2_201125A	1.222	1.25	97.7	90-110
CCV 11/25/20 10:50						
Aluminum	SW6010D	ICP2_201125A	2.525	2.5	101	90-110
Antimony	SW6010D	ICP2_201125A	0.4782	0.5	95.6	90-110
Arsenic	SW6010D	ICP2_201125A	0.4788	0.5	95.8	90-110
Barium	SW6010D	ICP2_201125A	2.531	2.5	101	90-110
Beryllium	SW6010D	ICP2_201125A	0.505	0.5	101	90-110
Cadmium	SW6010D	ICP2_201125A	0.4808	0.5	96.2	90-110
Calcium	SW6010D	ICP2_201125A	2.585	2.5	103	90-110
Cobalt	SW6010D	ICP2_201125A	2.446	2.5	97.8	90-110
Copper	SW6010D	ICP2_201125A	2.448	2.5	97.9	90-110
Iron	SW6010D	ICP2_201125A	2.595	2.5	104	90-110
Lead	SW6010D	ICP2_201125A	0.4944	0.5	98.9	90-110
Magnesium	SW6010D	ICP2_201125A	2.537	2.5	101	90-110
Manganese	SW6010D	ICP2_201125A	0.4948	0.5	99.0	90-110
Nickel	SW6010D	ICP2_201125A	2.456	2.5	98.2	90-110
Potassium	SW6010D	ICP2_201125A	50.98	50	102	90-110
Selenium	SW6010D	ICP2_201125A	2.374	2.5	94.9	90-110
Silver	SW6010D	ICP2_201125A	0.49	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201125A	50.42	50	101	90-110
Thallium	SW6010D	ICP2_201125A	0.4992	0.5	99.8	90-110
Vanadium	SW6010D	ICP2_201125A	0.4983	0.5	99.7	90-110
Zinc	SW6010D	ICP2_201125A	1.202	1.25	96.2	90-110
CCV 11/25/20 11:51						
Aluminum	SW6010D	ICP2_201125A	2.441	2.5	97.6	90-110
Antimony	SW6010D	ICP2_201125A	0.4738	0.5	94.8	90-110
Arsenic	SW6010D	ICP2_201125A	0.4804	0.5	96.1	90-110
Barium	SW6010D	ICP2_201125A	2.44	2.5	97.6	90-110
Beryllium	SW6010D	ICP2_201125A	0.5121	0.5	102	90-110
Cadmium	SW6010D	ICP2_201125A	0.4802	0.5	96.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 11:51						
Calcium	SW6010D	ICP2_201125A	2.518	2.5	101	90-110
Cobalt	SW6010D	ICP2_201125A	2.463	2.5	98.5	90-110
Copper	SW6010D	ICP2_201125A	2.395	2.5	95.8	90-110
Iron	SW6010D	ICP2_201125A	2.585	2.5	103	90-110
Lead	SW6010D	ICP2_201125A	0.4982	0.5	99.6	90-110
Magnesium	SW6010D	ICP2_201125A	2.543	2.5	102	90-110
Manganese	SW6010D	ICP2_201125A	0.5002	0.5	100	90-110
Nickel	SW6010D	ICP2_201125A	2.475	2.5	99.0	90-110
Potassium	SW6010D	ICP2_201125A	49.92	50	99.8	90-110
Selenium	SW6010D	ICP2_201125A	2.369	2.5	94.7	90-110
Silver	SW6010D	ICP2_201125A	0.4893	0.5	97.9	90-110
Sodium	SW6010D	ICP2_201125A	48.99	50	98.0	90-110
Thallium	SW6010D	ICP2_201125A	0.5	0.5	100	90-110
Vanadium	SW6010D	ICP2_201125A	0.4996	0.5	99.9	90-110
Zinc	SW6010D	ICP2_201125A	1.206	1.25	96.5	90-110
CCV 11/25/20 12:52						
Aluminum	SW6010D	ICP2_201125A	2.49	2.5	99.6	90-110
Antimony	SW6010D	ICP2_201125A	0.4711	0.5	94.2	90-110
Arsenic	SW6010D	ICP2_201125A	0.4752	0.5	95.0	90-110
Barium	SW6010D	ICP2_201125A	2.505	2.5	100	90-110
Beryllium	SW6010D	ICP2_201125A	0.5027	0.5	101	90-110
Cadmium	SW6010D	ICP2_201125A	0.4751	0.5	95.0	90-110
Calcium	SW6010D	ICP2_201125A	2.543	2.5	102	90-110
Cobalt	SW6010D	ICP2_201125A	2.432	2.5	97.3	90-110
Copper	SW6010D	ICP2_201125A	2.377	2.5	95.1	90-110
Iron	SW6010D	ICP2_201125A	2.565	2.5	103	90-110
Lead	SW6010D	ICP2_201125A	0.489	0.5	97.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.554	2.5	102	90-110
Manganese	SW6010D	ICP2_201125A	0.4908	0.5	98.2	90-110
Nickel	SW6010D	ICP2_201125A	2.441	2.5	97.7	90-110
Potassium	SW6010D	ICP2_201125A	50.28	50	101	90-110
Selenium	SW6010D	ICP2_201125A	2.372	2.5	94.9	90-110
Silver	SW6010D	ICP2_201125A	0.4808	0.5	96.2	90-110
Sodium	SW6010D	ICP2_201125A	50.12	50	100	90-110
Thallium	SW6010D	ICP2_201125A	0.4943	0.5	98.9	90-110
Vanadium	SW6010D	ICP2_201125A	0.491	0.5	98.2	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 12:52						
Zinc	SW6010D	ICP2_201125A	1.191	1.25	95.3	90-110
CCV 11/25/20 13:53						
Aluminum	SW6010D	ICP2_201125A	2.444	2.5	97.8	90-110
Antimony	SW6010D	ICP2_201125A	0.4727	0.5	94.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4724	0.5	94.5	90-110
Barium	SW6010D	ICP2_201125A	2.486	2.5	99.5	90-110
Beryllium	SW6010D	ICP2_201125A	0.49	0.5	98.0	90-110
Cadmium	SW6010D	ICP2_201125A	0.4705	0.5	94.1	90-110
Calcium	SW6010D	ICP2_201125A	2.413	2.5	96.5	90-110
Cobalt	SW6010D	ICP2_201125A	2.398	2.5	95.9	90-110
Copper	SW6010D	ICP2_201125A	2.378	2.5	95.1	90-110
Iron	SW6010D	ICP2_201125A	2.486	2.5	99.4	90-110
Lead	SW6010D	ICP2_201125A	0.4809	0.5	96.2	90-110
Magnesium	SW6010D	ICP2_201125A	2.413	2.5	96.5	90-110
Manganese	SW6010D	ICP2_201125A	0.4796	0.5	95.9	90-110
Nickel	SW6010D	ICP2_201125A	2.406	2.5	96.2	90-110
Potassium	SW6010D	ICP2_201125A	49.84	50	99.7	90-110
Selenium	SW6010D	ICP2_201125A	2.367	2.5	94.7	90-110
Silver	SW6010D	ICP2_201125A	0.4741	0.5	94.8	90-110
Sodium	SW6010D	ICP2_201125A	49.57	50	99.1	90-110
Thallium	SW6010D	ICP2_201125A	0.4908	0.5	98.2	90-110
Vanadium	SW6010D	ICP2_201125A	0.4833	0.5	96.7	90-110
Zinc	SW6010D	ICP2_201125A	1.177	1.25	94.1	90-110
CCV 11/25/20 14:55						
Aluminum	SW6010D	ICP2_201125A	2.474	2.5	99.0	90-110
Antimony	SW6010D	ICP2_201125A	0.495	0.5	99.0	90-110
Arsenic	SW6010D	ICP2_201125A	0.4903	0.5	98.1	90-110
Barium	SW6010D	ICP2_201125A	2.579	2.5	103	90-110
Beryllium	SW6010D	ICP2_201125A	0.4986	0.5	99.7	90-110
Cadmium	SW6010D	ICP2_201125A	0.4876	0.5	97.5	90-110
Calcium	SW6010D	ICP2_201125A	2.371	2.5	94.9	90-110
Cobalt	SW6010D	ICP2_201125A	2.481	2.5	99.2	90-110
Copper	SW6010D	ICP2_201125A	2.469	2.5	98.8	90-110
Iron	SW6010D	ICP2_201125A	2.402	2.5	96.1	90-110
Lead	SW6010D	ICP2_201125A	0.495	0.5	99.0	90-110
Magnesium	SW6010D	ICP2_201125A	2.317	2.5	92.7	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 14:55						
Manganese	SW6010D	ICP2_201125A	0.4877	0.5	97.5	90-110
Nickel	SW6010D	ICP2_201125A	2.485	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201125A	52.04	50	104	90-110
Selenium	SW6010D	ICP2_201125A	2.467	2.5	98.7	90-110
Silver	SW6010D	ICP2_201125A	0.4878	0.5	97.6	90-110
Sodium	SW6010D	ICP2_201125A	51.18	50	102	90-110
Thallium	SW6010D	ICP2_201125A	0.5099	0.5	102	90-110
Vanadium	SW6010D	ICP2_201125A	0.4941	0.5	98.8	90-110
Zinc	SW6010D	ICP2_201125A	1.217	1.25	97.4	90-110
CCV 11/25/20 15:56						
Aluminum	SW6010D	ICP2_201125A	2.405	2.5	96.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4831	0.5	96.6	90-110
Arsenic	SW6010D	ICP2_201125A	0.4823	0.5	96.5	90-110
Barium	SW6010D	ICP2_201125A	2.496	2.5	99.8	90-110
Beryllium	SW6010D	ICP2_201125A	0.4868	0.5	97.4	90-110
Cadmium	SW6010D	ICP2_201125A	0.4792	0.5	95.8	90-110
Calcium	SW6010D	ICP2_201125A	2.358	2.5	94.3	90-110
Cobalt	SW6010D	ICP2_201125A	2.448	2.5	97.9	90-110
Copper	SW6010D	ICP2_201125A	2.388	2.5	95.5	90-110
Iron	SW6010D	ICP2_201125A	2.391	2.5	95.6	90-110
Lead	SW6010D	ICP2_201125A	0.4903	0.5	98.1	90-110
Magnesium	SW6010D	ICP2_201125A	2.322	2.5	92.9	90-110
Manganese	SW6010D	ICP2_201125A	0.4765	0.5	95.3	90-110
Nickel	SW6010D	ICP2_201125A	2.455	2.5	98.2	90-110
Potassium	SW6010D	ICP2_201125A	50.32	50	101	90-110
Selenium	SW6010D	ICP2_201125A	2.428	2.5	97.1	90-110
Silver	SW6010D	ICP2_201125A	0.4741	0.5	94.8	90-110
Sodium	SW6010D	ICP2_201125A	50.02	50	100	90-110
Thallium	SW6010D	ICP2_201125A	0.4984	0.5	99.7	90-110
Vanadium	SW6010D	ICP2_201125A	0.4807	0.5	96.1	90-110
Zinc	SW6010D	ICP2_201125A	1.199	1.25	95.9	90-110
CCV 11/25/20 17:06						
Aluminum	SW6010D	ICP2_201125A	2.478	2.5	99.1	90-110
Antimony	SW6010D	ICP2_201125A	0.4926	0.5	98.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4899	0.5	98.0	90-110
Barium	SW6010D	ICP2_201125A	2.569	2.5	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 17:06						
Beryllium	SW6010D	ICP2_201125A	0.4965	0.5	99.3	90-110
Cadmium	SW6010D	ICP2_201125A	0.4859	0.5	97.2	90-110
Calcium	SW6010D	ICP2_201125A	2.378	2.5	95.1	90-110
Cobalt	SW6010D	ICP2_201125A	2.476	2.5	99.1	90-110
Copper	SW6010D	ICP2_201125A	2.472	2.5	98.9	90-110
Iron	SW6010D	ICP2_201125A	2.53	2.5	101	90-110
Lead	SW6010D	ICP2_201125A	0.4935	0.5	98.7	90-110
Magnesium	SW6010D	ICP2_201125A	2.369	2.5	94.8	90-110
Manganese	SW6010D	ICP2_201125A	0.4859	0.5	97.2	90-110
Nickel	SW6010D	ICP2_201125A	2.479	2.5	99.2	90-110
Potassium	SW6010D	ICP2_201125A	51.7	50	103	90-110
Selenium	SW6010D	ICP2_201125A	2.457	2.5	98.3	90-110
Silver	SW6010D	ICP2_201125A	0.4899	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201125A	51.04	50	102	90-110
Thallium	SW6010D	ICP2_201125A	0.5073	0.5	101	90-110
Vanadium	SW6010D	ICP2_201125A	0.4913	0.5	98.3	90-110
Zinc	SW6010D	ICP2_201125A	1.214	1.25	97.1	90-110
CCV 11/25/20 18:08						
Aluminum	SW6010D	ICP2_201125A	2.456	2.5	98.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4913	0.5	98.3	90-110
Arsenic	SW6010D	ICP2_201125A	0.488	0.5	97.6	90-110
Barium	SW6010D	ICP2_201125A	2.56	2.5	102	90-110
Beryllium	SW6010D	ICP2_201125A	0.5058	0.5	101	90-110
Cadmium	SW6010D	ICP2_201125A	0.485	0.5	97.0	90-110
Calcium	SW6010D	ICP2_201125A	2.388	2.5	95.5	90-110
Cobalt	SW6010D	ICP2_201125A	2.473	2.5	98.9	90-110
Copper	SW6010D	ICP2_201125A	2.487	2.5	99.5	90-110
Iron	SW6010D	ICP2_201125A	2.431	2.5	97.3	90-110
Lead	SW6010D	ICP2_201125A	0.4937	0.5	98.7	90-110
Magnesium	SW6010D	ICP2_201125A	2.357	2.5	94.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4937	0.5	98.7	90-110
Nickel	SW6010D	ICP2_201125A	2.476	2.5	99.0	90-110
Potassium	SW6010D	ICP2_201125A	51.75	50	104	90-110
Selenium	SW6010D	ICP2_201125A	2.444	2.5	97.7	90-110
Silver	SW6010D	ICP2_201125A	0.4978	0.5	99.6	90-110
Sodium	SW6010D	ICP2_201125A	50.57	50	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 18:08						
Thallium	SW6010D	ICP2_201125A	0.5064	0.5	101	90-110
Vanadium	SW6010D	ICP2_201125A	0.4962	0.5	99.2	90-110
Zinc	SW6010D	ICP2_201125A	1.212	1.25	97.0	90-110
CCV 11/25/20 19:09						
Aluminum	SW6010D	ICP2_201125A	2.501	2.5	100	90-110
Antimony	SW6010D	ICP2_201125A	0.4686	0.5	93.7	90-110
Arsenic	SW6010D	ICP2_201125A	0.4731	0.5	94.6	90-110
Barium	SW6010D	ICP2_201125A	2.565	2.5	103	90-110
Beryllium	SW6010D	ICP2_201125A	0.4945	0.5	98.9	90-110
Cadmium	SW6010D	ICP2_201125A	0.4674	0.5	93.5	90-110
Calcium	SW6010D	ICP2_201125A	2.468	2.5	98.7	90-110
Cobalt	SW6010D	ICP2_201125A	2.394	2.5	95.7	90-110
Copper	SW6010D	ICP2_201125A	2.399	2.5	96.0	90-110
Iron	SW6010D	ICP2_201125A	2.541	2.5	102	90-110
Lead	SW6010D	ICP2_201125A	0.4788	0.5	95.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.479	2.5	99.2	90-110
Manganese	SW6010D	ICP2_201125A	0.484	0.5	96.8	90-110
Nickel	SW6010D	ICP2_201125A	2.403	2.5	96.1	90-110
Potassium	SW6010D	ICP2_201125A	51.45	50	103	90-110
Selenium	SW6010D	ICP2_201125A	2.371	2.5	94.8	90-110
Silver	SW6010D	ICP2_201125A	0.479	0.5	95.8	90-110
Sodium	SW6010D	ICP2_201125A	51.59	50	103	90-110
Thallium	SW6010D	ICP2_201125A	0.4888	0.5	97.8	90-110
Vanadium	SW6010D	ICP2_201125A	0.4858	0.5	97.2	90-110
Zinc	SW6010D	ICP2_201125A	1.172	1.25	93.8	90-110
CCV 11/25/20 20:13						
Aluminum	SW6010D	ICP2_201125A	2.389	2.5	95.5	90-110
Antimony	SW6010D	ICP2_201125A	0.4633	0.5	92.7	90-110
Arsenic	SW6010D	ICP2_201125A	0.4654	0.5	93.1	90-110
Barium	SW6010D	ICP2_201125A	2.451	2.5	98.1	90-110
Beryllium	SW6010D	ICP2_201125A	0.4819	0.5	96.4	90-110
Cadmium	SW6010D	ICP2_201125A	0.4621	0.5	92.4	90-110
Calcium	SW6010D	ICP2_201125A	2.359	2.5	94.4	90-110
Cobalt	SW6010D	ICP2_201125A	2.367	2.5	94.7	90-110
Copper	SW6010D	ICP2_201125A	2.353	2.5	94.1	90-110
Iron	SW6010D	ICP2_201125A	2.39	2.5	95.6	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 20:13						
Lead	SW6010D	ICP2_201125A	0.474	0.5	94.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.339	2.5	93.6	90-110
Manganese	SW6010D	ICP2_201125A	0.4729	0.5	94.6	90-110
Nickel	SW6010D	ICP2_201125A	2.374	2.5	95.0	90-110
Potassium	SW6010D	ICP2_201125A	49.47	50	98.9	90-110
Selenium	SW6010D	ICP2_201125A	2.349	2.5	93.9	90-110
Silver	SW6010D	ICP2_201125A	0.4713	0.5	94.3	90-110
Sodium	SW6010D	ICP2_201125A	49.58	50	99.2	90-110
Thallium	SW6010D	ICP2_201125A	0.4837	0.5	96.7	90-110
Vanadium	SW6010D	ICP2_201125A	0.4737	0.5	94.7	90-110
Zinc	SW6010D	ICP2_201125A	1.159	1.25	92.7	90-110
CCV 11/25/20 21:14						
Aluminum	SW6010D	ICP2_201125A	2.345	2.5	93.8	90-110
Antimony	SW6010D	ICP2_201125A	0.463	0.5	92.6	90-110
Arsenic	SW6010D	ICP2_201125A	0.4624	0.5	92.5	90-110
Barium	SW6010D	ICP2_201125A	2.434	2.5	97.4	90-110
Beryllium	SW6010D	ICP2_201125A	0.4654	0.5	93.1	90-110
Cadmium	SW6010D	ICP2_201125A	0.4571	0.5	91.4	90-110
Calcium	SW6010D	ICP2_201125A	2.271	2.5	90.8	90-110
Cobalt	SW6010D	ICP2_201125A	2.336	2.5	93.4	90-110
Copper	SW6010D	ICP2_201125A	2.325	2.5	93.0	90-110
Iron	SW6010D	ICP2_201125A	2.314	2.5	92.5	90-110
Lead	SW6010D	ICP2_201125A	0.4653	0.5	93.1	90-110
Magnesium	SW6010D	ICP2_201125A	2.251	2.5	90.1	90-110
Manganese	SW6010D	ICP2_201125A	0.4572	0.5	91.4	90-110
Nickel	SW6010D	ICP2_201125A	2.34	2.5	93.6	90-110
Potassium	SW6010D	ICP2_201125A	48.83	50	97.7	90-110
Selenium	SW6010D	ICP2_201125A	2.342	2.5	93.7	90-110
Silver	SW6010D	ICP2_201125A	0.4584	0.5	91.7	90-110
Sodium	SW6010D	ICP2_201125A	49.05	50	98.1	90-110
Thallium	SW6010D	ICP2_201125A	0.4777	0.5	95.5	90-110
Vanadium	SW6010D	ICP2_201125A	0.4611	0.5	92.2	90-110
Zinc	SW6010D	ICP2_201125A	1.145	1.25	91.6	90-110
CCV 11/25/20 22:15						
Aluminum	SW6010D	ICP2_201125A	2.431	2.5	97.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4704	0.5	94.1	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 22:15						
Arsenic	SW6010D	ICP2_201125A	0.4698	0.5	94.0	90-110
Barium	SW6010D	ICP2_201125A	2.507	2.5	100	90-110
Beryllium	SW6010D	ICP2_201125A	0.4773	0.5	95.5	90-110
Cadmium	SW6010D	ICP2_201125A	0.4649	0.5	93.0	90-110
Calcium	SW6010D	ICP2_201125A	2.358	2.5	94.3	90-110
Cobalt	SW6010D	ICP2_201125A	2.371	2.5	94.9	90-110
Copper	SW6010D	ICP2_201125A	2.397	2.5	95.9	90-110
Iron	SW6010D	ICP2_201125A	2.457	2.5	98.3	90-110
Lead	SW6010D	ICP2_201125A	0.472	0.5	94.4	90-110
Magnesium	SW6010D	ICP2_201125A	2.318	2.5	92.7	90-110
Manganese	SW6010D	ICP2_201125A	0.4686	0.5	93.7	90-110
Nickel	SW6010D	ICP2_201125A	2.375	2.5	95.0	90-110
Potassium	SW6010D	ICP2_201125A	50.18	50	100	90-110
Selenium	SW6010D	ICP2_201125A	2.375	2.5	95.0	90-110
Silver	SW6010D	ICP2_201125A	0.4717	0.5	94.3	90-110
Sodium	SW6010D	ICP2_201125A	50.3	50	101	90-110
Thallium	SW6010D	ICP2_201125A	0.4854	0.5	97.1	90-110
Vanadium	SW6010D	ICP2_201125A	0.4737	0.5	94.7	90-110
Zinc	SW6010D	ICP2_201125A	1.162	1.25	92.9	90-110
CCV 11/25/20 23:21						
Aluminum	SW6010D	ICP2_201125A	2.367	2.5	94.7	90-110
Antimony	SW6010D	ICP2_201125A	0.4686	0.5	93.7	90-110
Arsenic	SW6010D	ICP2_201125A	0.4688	0.5	93.8	90-110
Barium	SW6010D	ICP2_201125A	2.433	2.5	97.3	90-110
Beryllium	SW6010D	ICP2_201125A	0.4748	0.5	95.0	90-110
Cadmium	SW6010D	ICP2_201125A	0.4642	0.5	92.8	90-110
Calcium	SW6010D	ICP2_201125A	2.288	2.5	91.5	90-110
Cobalt	SW6010D	ICP2_201125A	2.368	2.5	94.7	90-110
Copper	SW6010D	ICP2_201125A	2.363	2.5	94.5	90-110
Iron	SW6010D	ICP2_201125A	2.335	2.5	93.4	90-110
Lead	SW6010D	ICP2_201125A	0.4715	0.5	94.3	90-110
Magnesium	SW6010D	ICP2_201125A	2.257	2.5	90.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4661	0.5	93.2	90-110
Nickel	SW6010D	ICP2_201125A	2.373	2.5	94.9	90-110
Potassium	SW6010D	ICP2_201125A	48.7	50	97.4	90-110
Selenium	SW6010D	ICP2_201125A	2.377	2.5	95.1	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 23:21						
Silver	SW6010D	ICP2_201125A	0.4677	0.5	93.5	90-110
Sodium	SW6010D	ICP2_201125A	48.84	50	97.7	90-110
Thallium	SW6010D	ICP2_201125A	0.4845	0.5	96.9	90-110
Vanadium	SW6010D	ICP2_201125A	0.4692	0.5	93.8	90-110
Zinc	SW6010D	ICP2_201125A	1.161	1.25	92.9	90-110
CCV 11/26/20 00:21						
Aluminum	SW6010D	ICP2_201125A	2.368	2.5	94.7	90-110
Antimony	SW6010D	ICP2_201125A	0.4596	0.5	91.9	90-110
Arsenic	SW6010D	ICP2_201125A	0.4604	0.5	92.1	90-110
Barium	SW6010D	ICP2_201125A	2.407	2.5	96.3	90-110
Beryllium	SW6010D	ICP2_201125A	0.4813	0.5	96.3	90-110
Cadmium	SW6010D	ICP2_201125A	0.4575	0.5	91.5	90-110
Calcium	SW6010D	ICP2_201125A	2.324	2.5	93.0	90-110
Cobalt	SW6010D	ICP2_201125A	2.335	2.5	93.4	90-110
Copper	SW6010D	ICP2_201125A	2.391	2.5	95.7	90-110
Iron	SW6010D	ICP2_201125A	2.472	2.5	98.9	90-110
Lead	SW6010D	ICP2_201125A	0.4699	0.5	94.0	90-110
Magnesium	SW6010D	ICP2_201125A	2.279	2.5	91.2	90-110
Manganese	SW6010D	ICP2_201125A	0.473	0.5	94.6	90-110
Nickel	SW6010D	ICP2_201125A	2.339	2.5	93.6	90-110
Potassium	SW6010D	ICP2_201125A	47.98	50	96.0	90-110
Selenium	SW6010D	ICP2_201125A	2.337	2.5	93.5	90-110
Silver	SW6010D	ICP2_201125A	0.4729	0.5	94.6	90-110
Sodium	SW6010D	ICP2_201125A	48.77	50	97.5	90-110
Thallium	SW6010D	ICP2_201125A	0.4768	0.5	95.4	90-110
Vanadium	SW6010D	ICP2_201125A	0.4754	0.5	95.1	90-110
Zinc	SW6010D	ICP2_201125A	1.143	1.25	91.4	90-110
CCV 11/26/20 01:22						
Aluminum	SW6010D	ICP2_201125A	2.346	2.5	93.8	90-110
Antimony	SW6010D	ICP2_201125A	0.4576	0.5	91.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4597	0.5	91.9	90-110
Barium	SW6010D	ICP2_201125A	2.405	2.5	96.2	90-110
Beryllium	SW6010D	ICP2_201125A	0.46	0.5	92.0	90-110
Cadmium	SW6010D	ICP2_201125A	0.4535	0.5	90.7	90-110
Calcium	SW6010D	ICP2_201125A	2.274	2.5	91.0	90-110
Cobalt	SW6010D	ICP2_201125A	2.319	2.5	92.8	90-110

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/26/20 01:22						
Copper	SW6010D	ICP2_201125A	2.292	2.5	91.7	90-110
Iron	SW6010D	ICP2_201125A	2.342	2.5	93.7	90-110
Lead	SW6010D	ICP2_201125A	0.463	0.5	92.6	90-110
Magnesium	SW6010D	ICP2_201125A	2.258	2.5	90.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4521	0.5	90.4	90-110
Nickel	SW6010D	ICP2_201125A	2.323	2.5	92.9	90-110
Potassium	SW6010D	ICP2_201125A	47.53	50	95.1	90-110
Selenium	SW6010D	ICP2_201125A	2.331	2.5	93.3	90-110
Silver	SW6010D	ICP2_201125A	0.4523	0.5	90.5	90-110
Sodium	SW6010D	ICP2_201125A	48.67	50	97.3	90-110
Thallium	SW6010D	ICP2_201125A	0.4749	0.5	95.0	90-110
Vanadium	SW6010D	ICP2_201125A	0.4547	0.5	90.9	90-110
Zinc	SW6010D	ICP2_201125A	1.135	1.25	90.8	90-110
CCV 11/26/20 02:28						
Aluminum	SW6010D	ICP2_201125A	2.332	2.5	93.3	90-110
Antimony	SW6010D	ICP2_201125A	0.4573	0.5	91.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4589	0.5	91.8	90-110
Barium	SW6010D	ICP2_201125A	2.404	2.5	96.1	90-110
Beryllium	SW6010D	ICP2_201125A	0.4581	0.5	91.6	90-110
Cadmium	SW6010D	ICP2_201125A	0.4517	0.5	90.3	90-110
Calcium	SW6010D	ICP2_201125A	3.1	2.5	124 *	90-110
Cobalt	SW6010D	ICP2_201125A	2.308	2.5	92.3	90-110
Copper	SW6010D	ICP2_201125A	2.3	2.5	92.0	90-110
Iron	SW6010D	ICP2_201125A	2.335	2.5	93.4	90-110
Lead	SW6010D	ICP2_201125A	0.4588	0.5	91.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.275	2.5	91.0	90-110
Manganese	SW6010D	ICP2_201125A	0.4504	0.5	90.1	90-110
Nickel	SW6010D	ICP2_201125A	2.311	2.5	92.4	90-110
Potassium	SW6010D	ICP2_201125A	47.83	50	95.7	90-110
Selenium	SW6010D	ICP2_201125A	2.317	2.5	92.7	90-110
Silver	SW6010D	ICP2_201125A	0.4517	0.5	90.3	90-110
Sodium	SW6010D	ICP2_201125A	48.1	50	96.2	90-110
Thallium	SW6010D	ICP2_201125A	0.4712	0.5	94.2	90-110
Vanadium	SW6010D	ICP2_201125A	0.4547	0.5	90.9	90-110
Zinc	SW6010D	ICP2_201125A	1.13	1.25	90.4	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/26/20 03:19						
Aluminum	SW6010D	ICP2_201125A	2.381	2.5	95.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4554	0.5	91.1	90-110
Arsenic	SW6010D	ICP2_201125A	0.4575	0.5	91.5	90-110
Barium	SW6010D	ICP2_201125A	2.469	2.5	98.8	90-110
Beryllium	SW6010D	ICP2_201125A	0.478	0.5	95.6	90-110
Cadmium	SW6010D	ICP2_201125A	0.4509	0.5	90.2	90-110
Calcium	SW6010D	ICP2_201125A	2.316	2.5	92.7	90-110
Cobalt	SW6010D	ICP2_201125A	2.308	2.5	92.3	90-110
Copper	SW6010D	ICP2_201125A	2.38	2.5	95.2	90-110
Iron	SW6010D	ICP2_201125A	2.348	2.5	93.9	90-110
Lead	SW6010D	ICP2_201125A	0.4591	0.5	91.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.224	2.5	89.0 *	90-110
Manganese	SW6010D	ICP2_201125A	0.4693	0.5	93.9	90-110
Nickel	SW6010D	ICP2_201125A	2.314	2.5	92.6	90-110
Potassium	SW6010D	ICP2_201125A	49.18	50	98.4	90-110
Selenium	SW6010D	ICP2_201125A	2.311	2.5	92.4	90-110
Silver	SW6010D	ICP2_201125A	0.4653	0.5	93.1	90-110
Sodium	SW6010D	ICP2_201125A	49.77	50	99.5	90-110
Thallium	SW6010D	ICP2_201125A	0.4716	0.5	94.3	90-110
Vanadium	SW6010D	ICP2_201125A	0.4756	0.5	95.1	90-110
Zinc	SW6010D	ICP2_201125A	1.129	1.25	90.3	90-110
ICV 11/29/20 18:53						
Aluminum	SW6010D	ICP2_201129B	0.9675	1	96.7	90-110
Antimony	SW6010D	ICP2_201129B	0.9757	1	97.6	90-110
Arsenic	SW6010D	ICP2_201129B	0.9571	1	95.7	90-110
Barium	SW6010D	ICP2_201129B	0.9454	1	94.5	90-110
Beryllium	SW6010D	ICP2_201129B	0.9291	1	92.9	90-110
Boron	SW6010D	ICP2_201129B	0.9699	1	97.0	90-110
Cadmium	SW6010D	ICP2_201129B	0.9745	1	97.5	90-110
Calcium	SW6010D	ICP2_201129B	5.831	6	97.2	90-110
Chromium	SW6010D	ICP2_201129B	0.9488	1	94.9	90-110
Cobalt	SW6010D	ICP2_201129B	0.9842	1	98.4	90-110
Copper	SW6010D	ICP2_201129B	0.9523	1	95.2	90-110
Iron	SW6010D	ICP2_201129B	0.9657	1	96.6	90-110
Lead	SW6010D	ICP2_201129B	1.003	1	100	90-110
Lithium	SW6010D	ICP2_201129B	0.9397	1	94.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/29/20 18:53						
Magnesium	SW6010D	ICP2_201129B	1.01	1	101	90-110
Manganese	SW6010D	ICP2_201129B	0.9622	1	96.2	90-110
Molybdenum	SW6010D	ICP2_201129B	0.9998	1	100.0	90-110
Nickel	SW6010D	ICP2_201129B	0.9893	1	98.9	90-110
Potassium	SW6010D	ICP2_201129B	19.42	21	92.5	90-110
Selenium	SW6010D	ICP2_201129B	0.9675	1	96.8	90-110
Silicon	SW6010D	ICP2_201129B	1.139	1	114 *	90-110
Silver	SW6010D	ICP2_201129B	0.9994	1	99.9	90-110
Sodium	SW6010D	ICP2_201129B	19.51	21	92.9	90-110
Strontium	SW6010D	ICP2_201129B	0.9512	1	95.1	90-110
Thallium	SW6010D	ICP2_201129B	1.023	1	102	90-110
Tin	SW6010D	ICP2_201129B	0.9935	1	99.4	90-110
Titanium	SW6010D	ICP2_201129B	0.942	1	94.2	90-110
Vanadium	SW6010D	ICP2_201129B	0.9547	1	95.5	90-110
Zinc	SW6010D	ICP2_201129B	0.9652	1	96.5	90-110
CCV 11/29/20 19:40						
Aluminum	SW6010D	ICP2_201129B	2.409	2.5	96.4	90-110
Antimony	SW6010D	ICP2_201129B	0.492	0.5	98.4	90-110
Arsenic	SW6010D	ICP2_201129B	0.4906	0.5	98.1	90-110
Barium	SW6010D	ICP2_201129B	2.383	2.5	95.3	90-110
Beryllium	SW6010D	ICP2_201129B	0.4962	0.5	99.2	90-110
Boron	SW6010D	ICP2_201129B	2.381	2.5	95.2	90-110
Cadmium	SW6010D	ICP2_201129B	0.4928	0.5	98.6	90-110
Calcium	SW6010D	ICP2_201129B	2.426	2.5	97.0	90-110
Chromium	SW6010D	ICP2_201129B	0.4923	0.5	98.5	90-110
Cobalt	SW6010D	ICP2_201129B	2.489	2.5	99.5	90-110
Copper	SW6010D	ICP2_201129B	2.444	2.5	97.8	90-110
Iron	SW6010D	ICP2_201129B	2.411	2.5	96.4	90-110
Lead	SW6010D	ICP2_201129B	0.5012	0.5	100	90-110
Lithium	SW6010D	ICP2_201129B	2.344	2.5	93.7	90-110
Magnesium	SW6010D	ICP2_201129B	2.441	2.5	97.6	90-110
Manganese	SW6010D	ICP2_201129B	0.4926	0.5	98.5	90-110
Molybdenum	SW6010D	ICP2_201129B	2.476	2.5	99.0	90-110
Nickel	SW6010D	ICP2_201129B	2.491	2.5	99.7	90-110
Potassium	SW6010D	ICP2_201129B	46.79	50	93.6	90-110
Selenium	SW6010D	ICP2_201129B	2.469	2.5	98.7	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 19:40						
Silicon	SW6010D	ICP2_201129B	2.383	2.5	95.3	90-110
Silver	SW6010D	ICP2_201129B	0.4948	0.5	99.0	90-110
Sodium	SW6010D	ICP2_201129B	47.56	50	95.1	90-110
Strontium	SW6010D	ICP2_201129B	0.4797	0.5	95.9	90-110
Thallium	SW6010D	ICP2_201129B	0.5053	0.5	101	90-110
Tin	SW6010D	ICP2_201129B	0.5032	0.5	101	90-110
Titanium	SW6010D	ICP2_201129B	0.4828	0.5	96.6	90-110
Vanadium	SW6010D	ICP2_201129B	0.4914	0.5	98.3	90-110
Zinc	SW6010D	ICP2_201129B	1.229	1.25	98.3	90-110
CCV 11/29/20 20:40						
Aluminum	SW6010D	ICP2_201129B	2.403	2.5	96.1	90-110
Antimony	SW6010D	ICP2_201129B	0.4995	0.5	99.9	90-110
Arsenic	SW6010D	ICP2_201129B	0.499	0.5	99.8	90-110
Barium	SW6010D	ICP2_201129B	2.369	2.5	94.8	90-110
Beryllium	SW6010D	ICP2_201129B	0.4874	0.5	97.5	90-110
Boron	SW6010D	ICP2_201129B	2.354	2.5	94.2	90-110
Cadmium	SW6010D	ICP2_201129B	0.5018	0.5	100	90-110
Calcium	SW6010D	ICP2_201129B	2.449	2.5	98.0	90-110
Chromium	SW6010D	ICP2_201129B	0.4859	0.5	97.2	90-110
Cobalt	SW6010D	ICP2_201129B	2.523	2.5	101	90-110
Copper	SW6010D	ICP2_201129B	2.43	2.5	97.2	90-110
Iron	SW6010D	ICP2_201129B	2.406	2.5	96.3	90-110
Lead	SW6010D	ICP2_201129B	0.5089	0.5	102	90-110
Lithium	SW6010D	ICP2_201129B	2.349	2.5	93.9	90-110
Magnesium	SW6010D	ICP2_201129B	2.434	2.5	97.4	90-110
Manganese	SW6010D	ICP2_201129B	0.4848	0.5	97.0	90-110
Molybdenum	SW6010D	ICP2_201129B	2.509	2.5	100	90-110
Nickel	SW6010D	ICP2_201129B	2.526	2.5	101	90-110
Potassium	SW6010D	ICP2_201129B	46.55	50	93.1	90-110
Selenium	SW6010D	ICP2_201129B	2.526	2.5	101	90-110
Silicon	SW6010D	ICP2_201129B	2.39	2.5	95.6	90-110
Silver	SW6010D	ICP2_201129B	0.4937	0.5	98.7	90-110
Sodium	SW6010D	ICP2_201129B	47.34	50	94.7	90-110
Strontium	SW6010D	ICP2_201129B	0.4749	0.5	95.0	90-110
Thallium	SW6010D	ICP2_201129B	0.5132	0.5	103	90-110
Tin	SW6010D	ICP2_201129B	0.5095	0.5	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 20:40						
Titanium	SW6010D	ICP2_201129B	0.4833	0.5	96.7	90-110
Vanadium	SW6010D	ICP2_201129B	0.4825	0.5	96.5	90-110
Zinc	SW6010D	ICP2_201129B	1.251	1.25	100	90-110
CCV 11/29/20 21:46						
Aluminum	SW6010D	ICP2_201129B	2.45	2.5	98.0	90-110
Antimony	SW6010D	ICP2_201129B	0.5107	0.5	102	90-110
Arsenic	SW6010D	ICP2_201129B	0.5097	0.5	102	90-110
Barium	SW6010D	ICP2_201129B	2.43	2.5	97.2	90-110
Beryllium	SW6010D	ICP2_201129B	0.494	0.5	98.8	90-110
Boron	SW6010D	ICP2_201129B	2.437	2.5	97.5	90-110
Cadmium	SW6010D	ICP2_201129B	0.5123	0.5	102	90-110
Calcium	SW6010D	ICP2_201129B	2.458	2.5	98.3	90-110
Chromium	SW6010D	ICP2_201129B	0.4922	0.5	98.4	90-110
Cobalt	SW6010D	ICP2_201129B	2.58	2.5	103	90-110
Copper	SW6010D	ICP2_201129B	2.463	2.5	98.5	90-110
Iron	SW6010D	ICP2_201129B	2.444	2.5	97.7	90-110
Lead	SW6010D	ICP2_201129B	0.5212	0.5	104	90-110
Lithium	SW6010D	ICP2_201129B	2.433	2.5	97.3	90-110
Magnesium	SW6010D	ICP2_201129B	2.468	2.5	98.7	90-110
Manganese	SW6010D	ICP2_201129B	0.4915	0.5	98.3	90-110
Molybdenum	SW6010D	ICP2_201129B	2.562	2.5	102	90-110
Nickel	SW6010D	ICP2_201129B	2.581	2.5	103	90-110
Potassium	SW6010D	ICP2_201129B	48.06	50	96.1	90-110
Selenium	SW6010D	ICP2_201129B	2.583	2.5	103	90-110
Silicon	SW6010D	ICP2_201129B	2.439	2.5	97.6	90-110
Silver	SW6010D	ICP2_201129B	0.4993	0.5	99.9	90-110
Sodium	SW6010D	ICP2_201129B	49.07	50	98.1	90-110
Strontium	SW6010D	ICP2_201129B	0.489	0.5	97.8	90-110
Thallium	SW6010D	ICP2_201129B	0.5254	0.5	105	90-110
Tin	SW6010D	ICP2_201129B	0.522	0.5	104	90-110
Titanium	SW6010D	ICP2_201129B	0.4964	0.5	99.3	90-110
Vanadium	SW6010D	ICP2_201129B	0.4886	0.5	97.7	90-110
Zinc	SW6010D	ICP2_201129B	1.277	1.25	102	90-110
CCV 11/29/20 22:46						
Aluminum	SW6010D	ICP2_201129B	2.58	2.5	103	90-110
Antimony	SW6010D	ICP2_201129B	0.5304	0.5	106	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 22:46						
Arsenic	SW6010D	ICP2_201129B	0.5283	0.5	106	90-110
Barium	SW6010D	ICP2_201129B	2.557	2.5	102	90-110
Beryllium	SW6010D	ICP2_201129B	0.5285	0.5	106	90-110
Boron	SW6010D	ICP2_201129B	2.564	2.5	103	90-110
Cadmium	SW6010D	ICP2_201129B	0.5311	0.5	106	90-110
Calcium	SW6010D	ICP2_201129B	2.586	2.5	103	90-110
Chromium	SW6010D	ICP2_201129B	0.5256	0.5	105	90-110
Cobalt	SW6010D	ICP2_201129B	2.673	2.5	107	90-110
Copper	SW6010D	ICP2_201129B	2.63	2.5	105	90-110
Iron	SW6010D	ICP2_201129B	2.576	2.5	103	90-110
Lead	SW6010D	ICP2_201129B	0.5395	0.5	108	90-110
Lithium	SW6010D	ICP2_201129B	2.568	2.5	103	90-110
Magnesium	SW6010D	ICP2_201129B	2.535	2.5	101	90-110
Manganese	SW6010D	ICP2_201129B	0.5251	0.5	105	90-110
Molybdenum	SW6010D	ICP2_201129B	2.657	2.5	106	90-110
Nickel	SW6010D	ICP2_201129B	2.675	2.5	107	90-110
Potassium	SW6010D	ICP2_201129B	50.77	50	102	90-110
Selenium	SW6010D	ICP2_201129B	2.679	2.5	107	90-110
Silicon	SW6010D	ICP2_201129B	2.555	2.5	102	90-110
Silver	SW6010D	ICP2_201129B	0.5331	0.5	107	90-110
Sodium	SW6010D	ICP2_201129B	51.61	50	103	90-110
Strontium	SW6010D	ICP2_201129B	0.5133	0.5	103	90-110
Thallium	SW6010D	ICP2_201129B	0.5438	0.5	109	90-110
Tin	SW6010D	ICP2_201129B	0.5417	0.5	108	90-110
Titanium	SW6010D	ICP2_201129B	0.52	0.5	104	90-110
Vanadium	SW6010D	ICP2_201129B	0.523	0.5	105	90-110
Zinc	SW6010D	ICP2_201129B	1.324	1.25	106	90-110
CCV 11/29/20 23:47						
Aluminum	SW6010D	ICP2_201129B	2.715	2.5	109	90-110
Antimony	SW6010D	ICP2_201129B	0.5634	0.5	113 *	90-110
Arsenic	SW6010D	ICP2_201129B	0.5635	0.5	113 *	90-110
Barium	SW6010D	ICP2_201129B	2.667	2.5	107	90-110
Beryllium	SW6010D	ICP2_201129B	0.5464	0.5	109	90-110
Boron	SW6010D	ICP2_201129B	2.675	2.5	107	90-110
Cadmium	SW6010D	ICP2_201129B	0.5655	0.5	113 *	90-110
Calcium	SW6010D	ICP2_201129B	2.714	2.5	109	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 23:47						
Chromium	SW6010D	ICP2_201129B	0.543	0.5	109	90-110
Cobalt	SW6010D	ICP2_201129B	2.845	2.5	114 *	90-110
Copper	SW6010D	ICP2_201129B	2.712	2.5	108	90-110
Iron	SW6010D	ICP2_201129B	2.746	2.5	110	90-110
Lead	SW6010D	ICP2_201129B	0.5733	0.5	115 *	90-110
Lithium	SW6010D	ICP2_201129B	2.678	2.5	107	90-110
Magnesium	SW6010D	ICP2_201129B	2.716	2.5	109	90-110
Manganese	SW6010D	ICP2_201129B	0.5437	0.5	109	90-110
Molybdenum	SW6010D	ICP2_201129B	2.827	2.5	113 *	90-110
Nickel	SW6010D	ICP2_201129B	2.847	2.5	114 *	90-110
Potassium	SW6010D	ICP2_201129B	52.75	50	106	90-110
Selenium	SW6010D	ICP2_201129B	2.84	2.5	114 *	90-110
Silicon	SW6010D	ICP2_201129B	2.698	2.5	108	90-110
Silver	SW6010D	ICP2_201129B	0.5478	0.5	110	90-110
Sodium	SW6010D	ICP2_201129B	53.84	50	108	90-110
Strontium	SW6010D	ICP2_201129B	0.5366	0.5	107	90-110
Thallium	SW6010D	ICP2_201129B	0.5814	0.5	116 *	90-110
Tin	SW6010D	ICP2_201129B	0.5759	0.5	115 *	90-110
Titanium	SW6010D	ICP2_201129B	0.5423	0.5	108	90-110
Vanadium	SW6010D	ICP2_201129B	0.5422	0.5	108	90-110
Zinc	SW6010D	ICP2_201129B	1.41	1.25	113 *	90-110
CCV 11/30/20 00:52						
Aluminum	SW6010D	ICP2_201129B	3.911	2.5	156 *	90-110
Antimony	SW6010D	ICP2_201129B	0.8631	0.5	173 *	90-110
Arsenic	SW6010D	ICP2_201129B	0.8538	0.5	171 *	90-110
Barium	SW6010D	ICP2_201129B	3.895	2.5	156 *	90-110
Beryllium	SW6010D	ICP2_201129B	0.9336	0.5	187 *	90-110
Boron	SW6010D	ICP2_201129B	3.887	2.5	155 *	90-110
Cadmium	SW6010D	ICP2_201129B	0.8569	0.5	171 *	90-110
Calcium	SW6010D	ICP2_201129B	3.963	2.5	159 *	90-110
Chromium	SW6010D	ICP2_201129B	0.9233	0.5	185 *	90-110
Cobalt	SW6010D	ICP2_201129B	4.314	2.5	173 *	90-110
Copper	SW6010D	ICP2_201129B	4.546	2.5	182 *	90-110
Iron	SW6010D	ICP2_201129B	3.9	2.5	156 *	90-110
Lead	SW6010D	ICP2_201129B	0.8695	0.5	174 *	90-110
Lithium	SW6010D	ICP2_201129B	3.861	2.5	154 *	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 00:52						
Magnesium	SW6010D	ICP2_201129B	3.951	2.5	158 *	90-110
Manganese	SW6010D	ICP2_201129B	0.9188	0.5	184 *	90-110
Molybdenum	SW6010D	ICP2_201129B	4.283	2.5	171 *	90-110
Nickel	SW6010D	ICP2_201129B	4.317	2.5	173 *	90-110
Potassium	SW6010D	ICP2_201129B	76.98	50	154 *	90-110
Selenium	SW6010D	ICP2_201129B	4.317	2.5	173 *	90-110
Silicon	SW6010D	ICP2_201129B	3.918	2.5	157 *	90-110
Silver	SW6010D	ICP2_201129B	0.9275	0.5	186 *	90-110
Sodium	SW6010D	ICP2_201129B	78	50	156 *	90-110
Strontium	SW6010D	ICP2_201129B	0.775	0.5	155 *	90-110
Thallium	SW6010D	ICP2_201129B	0.8744	0.5	175 *	90-110
Tin	SW6010D	ICP2_201129B	0.8782	0.5	176 *	90-110
Titanium	SW6010D	ICP2_201129B	0.7842	0.5	157 *	90-110
Vanadium	SW6010D	ICP2_201129B	0.9124	0.5	182 *	90-110
Zinc	SW6010D	ICP2_201129B	2.142	1.25	171 *	90-110
CCV 11/30/20 01:57						
Aluminum	SW6010D	ICP2_201129B	6.347	2.5	254 *	90-110
Antimony	SW6010D	ICP2_201129B	1.372	0.5	274 *	90-110
Arsenic	SW6010D	ICP2_201129B	1.364	0.5	273 *	90-110
Barium	SW6010D	ICP2_201129B	6.329	2.5	253 *	90-110
Beryllium	SW6010D	ICP2_201129B	1.213	0.5	243 *	90-110
Boron	SW6010D	ICP2_201129B	6.294	2.5	252 *	90-110
Cadmium	SW6010D	ICP2_201129B	1.371	0.5	274 *	90-110
Calcium	SW6010D	ICP2_201129B	6.478	2.5	259 *	90-110
Chromium	SW6010D	ICP2_201129B	1.193	0.5	239 *	90-110
Cobalt	SW6010D	ICP2_201129B	6.907	2.5	276 *	90-110
Copper	SW6010D	ICP2_201129B	5.857	2.5	234 *	90-110
Iron	SW6010D	ICP2_201129B	6.455	2.5	258 *	90-110
Lead	SW6010D	ICP2_201129B	1.386	0.5	277 *	90-110
Lithium	SW6010D	ICP2_201129B	6.285	2.5	251 *	90-110
Magnesium	SW6010D	ICP2_201129B	6.445	2.5	258 *	90-110
Manganese	SW6010D	ICP2_201129B	1.191	0.5	238 *	90-110
Molybdenum	SW6010D	ICP2_201129B	6.844	2.5	274 *	90-110
Nickel	SW6010D	ICP2_201129B	6.911	2.5	276 *	90-110
Potassium	SW6010D	ICP2_201129B	124.1	50	248 *	90-110
Selenium	SW6010D	ICP2_201129B	6.921	2.5	277 *	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 01:57						
Silicon	SW6010D	ICP2_201129B	6.421	2.5	257 *	90-110
Silver	SW6010D	ICP2_201129B	1.194	0.5	239 *	90-110
Sodium	SW6010D	ICP2_201129B	126.7	50	253 *	90-110
Strontium	SW6010D	ICP2_201129B	1.255	0.5	251 *	90-110
Thallium	SW6010D	ICP2_201129B	1.399	0.5	280 *	90-110
Tin	SW6010D	ICP2_201129B	1.407	0.5	281 *	90-110
Titanium	SW6010D	ICP2_201129B	1.286	0.5	257 *	90-110
Vanadium	SW6010D	ICP2_201129B	1.182	0.5	236 *	90-110
Zinc	SW6010D	ICP2_201129B	3.424	1.25	274 *	90-110
CCV 11/30/20 03:01						
Aluminum	SW6010D	ICP2_201129B	7.637	2.5	305 *	90-110
Antimony	SW6010D	ICP2_201129B	1.666	0.5	333 *	90-110
Arsenic	SW6010D	ICP2_201129B	1.658	0.5	332 *	90-110
Barium	SW6010D	ICP2_201129B	7.653	2.5	306 *	90-110
Beryllium	SW6010D	ICP2_201129B	1.373	0.5	275 *	90-110
Boron	SW6010D	ICP2_201129B	7.537	2.5	301 *	90-110
Cadmium	SW6010D	ICP2_201129B	1.662	0.5	332 *	90-110
Calcium	SW6010D	ICP2_201129B	7.741	2.5	310 *	90-110
Chromium	SW6010D	ICP2_201129B	1.35	0.5	270 *	90-110
Cobalt	SW6010D	ICP2_201129B	8.373	2.5	335 *	90-110
Copper	SW6010D	ICP2_201129B	6.65	2.5	266 *	90-110
Iron	SW6010D	ICP2_201129B	7.614	2.5	305 *	90-110
Lead	SW6010D	ICP2_201129B	1.68	0.5	336 *	90-110
Lithium	SW6010D	ICP2_201129B	7.584	2.5	303 *	90-110
Magnesium	SW6010D	ICP2_201129B	7.689	2.5	308 *	90-110
Manganese	SW6010D	ICP2_201129B	1.344	0.5	269 *	90-110
Molybdenum	SW6010D	ICP2_201129B	8.295	2.5	332 *	90-110
Nickel	SW6010D	ICP2_201129B	8.375	2.5	335 *	90-110
Potassium	SW6010D	ICP2_201129B	148.4	50	297 *	90-110
Selenium	SW6010D	ICP2_201129B	8.473	2.5	339 *	90-110
Silicon	SW6010D	ICP2_201129B	7.559	2.5	302 *	90-110
Silver	SW6010D	ICP2_201129B	1.359	0.5	272 *	90-110
Sodium	SW6010D	ICP2_201129B	151.8	50	304 *	90-110
Strontium	SW6010D	ICP2_201129B	1.509	0.5	302 *	90-110
Thallium	SW6010D	ICP2_201129B	1.687	0.5	337 *	90-110
Tin	SW6010D	ICP2_201129B	1.701	0.5	340 *	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 03:01						
Titanium	SW6010D	ICP2_201129B	1.546	0.5	309 *	90-110
Vanadium	SW6010D	ICP2_201129B	1.334	0.5	267 *	90-110
Zinc	SW6010D	ICP2_201129B	4.159	1.25	333 *	90-110
ICV 11/30/20 14:50						
Aluminum	SW6010D	ICP2_201130B	0.9886	1	98.9	90-110
CCV 11/30/20 15:37						
Aluminum	SW6010D	ICP2_201130B	2.498	2.5	99.9	90-110
CCV 11/30/20 16:39						
Aluminum	SW6010D	ICP2_201130B	2.461	2.5	98.4	90-110
CCV 11/30/20 17:40						
Aluminum	SW6010D	ICP2_201130B	2.522	2.5	101	90-110
CCV 11/30/20 18:41						
Aluminum	SW6010D	ICP2_201130B	2.542	2.5	102	90-110
CCV 11/30/20 19:42						
Aluminum	SW6010D	ICP2_201130B	2.596	2.5	104	90-110
CCV 11/30/20 20:44						
Aluminum	SW6010D	ICP2_201130B	2.523	2.5	101	90-110
CCV 11/30/20 21:50						
Aluminum	SW6010D	ICP2_201130B	0	2.5	0.0408 *	90-110
CCV 11/30/20 22:51						
Aluminum	SW6010D	ICP2_201130B	2.564	2.5	103	90-110
CCV 11/30/20 23:52						
Aluminum	SW6010D	ICP2_201130B	2.657	2.5	106	90-110
CCV 12/01/20 00:53						
Aluminum	SW6010D	ICP2_201130B	2.562	2.5	102	90-110
CCV 12/01/20 01:55						
Aluminum	SW6010D	ICP2_201130B	2.624	2.5	105	90-110
CCV 12/01/20 02:57						
Aluminum	SW6010D	ICP2_201130B	2.342	2.5	93.7	90-110
CCV 12/01/20 03:12						
Aluminum	SW6010D	ICP2_201130B	2.402	2.5	96.1	90-110
ICV 12/01/20 11:49						
Potassium	SW6010D	ICP2_201201B	20.98	21	99.9	90-110
CCV 12/01/20 12:35						
Potassium	SW6010D	ICP2_201201B	49.92	50	99.8	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 13:41						
Potassium	SW6010D	ICP2_201201B	47.22	50	94.4	90-110
CCV 12/01/20 14:53						
Potassium	SW6010D	ICP2_201201B	50.41	50	101	90-110
CCV 12/01/20 16:00						
Potassium	SW6010D	ICP2_201201B	51.28	50	103	90-110
CCV 12/01/20 17:07						
Potassium	SW6010D	ICP2_201201B	53.19	50	106	90-110
CCV 12/01/20 18:10						
Potassium	SW6010D	ICP2_201201B	53.71	50	107	90-110
CCV 12/01/20 19:17						
Potassium	SW6010D	ICP2_201201B	55.19	50	110 *	90-110
CCV 12/01/20 20:25						
Potassium	SW6010D	ICP2_201201B	54.49	50	109	90-110
CCV 12/01/20 21:31						
Potassium	SW6010D	ICP2_201201B	56.75	50	113 *	90-110
CCV 12/01/20 22:42						
Potassium	SW6010D	ICP2_201201B	55.77	50	112 *	90-110
CCV 12/01/20 23:50						
Potassium	SW6010D	ICP2_201201B	55.62	50	111 *	90-110
CCV 12/02/20 00:46						
Potassium	SW6010D	ICP2_201201B	55.12	50	110 *	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Aluminum	SW6010D	ICP2_201125A	0.0117	0.01	117	80-120	11/25/20 09:07
Antimony	SW6010D	ICP2_201125A	0.00441	0.005	88.2	80-120	11/25/20 09:07
Arsenic	SW6010D	ICP2_201125A	0.00517	0.005	103	80-120	11/25/20 09:07
Barium	SW6010D	ICP2_201125A	0.00538	0.005	108	80-120	11/25/20 09:07
Beryllium	SW6010D	ICP2_201125A	0.00199	0.002	99.5	80-120	11/25/20 09:07
Cadmium	SW6010D	ICP2_201125A	0.00958	0.01	95.8	80-120	11/25/20 09:07
Calcium	SW6010D	ICP2_201125A	0.5072	0.5	101	80-120	11/25/20 09:07
Cobalt	SW6010D	ICP2_201125A	0.00486	0.005	97.2	80-120	11/25/20 09:07
Copper	SW6010D	ICP2_201125A	0.0104	0.01	104	80-120	11/25/20 09:07
Iron	SW6010D	ICP2_201125A	0.0842	0.08	105	80-120	11/25/20 09:07
Lead	SW6010D	ICP2_201125A	0.00538	0.005	108	80-120	11/25/20 09:07
Magnesium	SW6010D	ICP2_201125A	0.252	0.2	126 *	80-120	11/25/20 09:07
Manganese	SW6010D	ICP2_201125A	0.00505	0.005	101	80-120	11/25/20 09:07
Nickel	SW6010D	ICP2_201125A	0.00496	0.005	99.2	80-120	11/25/20 09:07
Potassium	SW6010D	ICP2_201125A	0	0.2	79.3 *	80-120	11/25/20 09:07
Selenium	SW6010D	ICP2_201125A	0.0109	0.01	109	80-120	11/25/20 09:07
Silver	SW6010D	ICP2_201125A	0.00547	0.005	109	80-120	11/25/20 09:07
Sodium	SW6010D	ICP2_201125A	0	0.2	101	80-120	11/25/20 09:07
Thallium	SW6010D	ICP2_201125A	0.0103	0.01	103	80-120	11/25/20 09:07
Vanadium	SW6010D	ICP2_201125A	0.00491	0.005	98.2	80-120	11/25/20 09:07
Zinc	SW6010D	ICP2_201125A	0.009795	0.01	97.9	80-120	11/25/20 09:07
LLICV							
Aluminum	SW6010D	ICP2_201129B	0.0119	0.01	119	80-120	11/29/20 19:09
Antimony	SW6010D	ICP2_201129B	0.0023	0.005	46.0 *	80-120	11/29/20 19:09
Arsenic	SW6010D	ICP2_201129B	0.00593	0.005	119	80-120	11/29/20 19:09
Barium	SW6010D	ICP2_201129B	0.00458	0.005	91.6	80-120	11/29/20 19:09
Beryllium	SW6010D	ICP2_201129B	0.00178	0.002	89.0	80-120	11/29/20 19:09
Boron	SW6010D	ICP2_201129B	0.0143	0.02	71.5 *	80-120	11/29/20 19:09
Cadmium	SW6010D	ICP2_201129B	0.0097	0.01	97.0	80-120	11/29/20 19:09
Calcium	SW6010D	ICP2_201129B	0.4967	0.5	99.3	80-120	11/29/20 19:09
Chromium	SW6010D	ICP2_201129B	0.00492	0.005	98.4	80-120	11/29/20 19:09
Cobalt	SW6010D	ICP2_201129B	0.0048	0.005	96.0	80-120	11/29/20 19:09
Copper	SW6010D	ICP2_201129B	0.009	0.01	90.0	80-120	11/29/20 19:09
Iron	SW6010D	ICP2_201129B	0	0.08	98.6	80-120	11/29/20 19:09
Lead	SW6010D	ICP2_201129B	0.00515	0.005	103	80-120	11/29/20 19:09
Lithium	SW6010D	ICP2_201129B	0	0.01	41.4 *	80-120	11/29/20 19:09

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Magnesium	SW6010D	ICP2_201129B	0.202	0.2	101	80-120	11/29/20 19:09
Manganese	SW6010D	ICP2_201129B	0.00509	0.005	102	80-120	11/29/20 19:09
Molybdenum	SW6010D	ICP2_201129B	0.00496	0.005	99.2	80-120	11/29/20 19:09
Nickel	SW6010D	ICP2_201129B	0.00475	0.005	95.0	80-120	11/29/20 19:09
Potassium	SW6010D	ICP2_201129B	0	0.2	65.8 *	80-120	11/29/20 19:09
Selenium	SW6010D	ICP2_201129B	0.00767	0.01	76.7 *	80-120	11/29/20 19:09
Silicon	SW6010D	ICP2_201129B	0.2295	0.2	115	80-120	11/29/20 19:09
Silver	SW6010D	ICP2_201129B	0.00578	0.005	116	80-120	11/29/20 19:09
Sodium	SW6010D	ICP2_201129B	0	0.2	99.3	80-120	11/29/20 19:09
Strontium	SW6010D	ICP2_201129B	0.00478	0.005	95.6	80-120	11/29/20 19:09
Thallium	SW6010D	ICP2_201129B	0.0106	0.01	106	80-120	11/29/20 19:09
Tin	SW6010D	ICP2_201129B	0.011	0.01	110	80-120	11/29/20 19:09
Titanium	SW6010D	ICP2_201129B	0.00422	0.005	84.4	80-120	11/29/20 19:09
Vanadium	SW6010D	ICP2_201129B	0.00445	0.005	89.0	80-120	11/29/20 19:09
Zinc	SW6010D	ICP2_201129B	0.00971	0.01	97.1	80-120	11/29/20 19:09
LLICV							
Aluminum	SW6010D	ICP2_201130B	0.011	0.01	110	80-120	11/30/20 15:05
LLICV							
Potassium	SW6010D	ICP2_201201B	0.1937	0.2	96.9	80-120	12/01/20 12:03

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/25/20 09:02				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 09:48				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 09:48				
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 10:55				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 11:56				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 11:56				
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 12:57				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 12:57				
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 13:58				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 15:00				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 15:00				
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 16:01				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00377	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 17:11				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 17:11				
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00541	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 18:13				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 18:13				
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 19:14				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 20:18				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 20:18				
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 21:19				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00377	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 22:20				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 22:20				
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 23:26				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 23:26				
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/26/20 00:26				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0.00204	J
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00339	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/26/20 01:32				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/26/20 01:32				
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/26/20 02:38				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/26/20 03:24				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
ICB 11/29/20 18:58				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/29/20 18:58				
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.000599	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0.00567	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 19:45				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0.00767	J
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00109	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 19:45				
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 20:45				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.000996	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 20:45				
Titanium	SW6010D	ICP2_201129B	0.00351	J
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 21:51				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00106	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 22:51				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 22:51				
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.000973	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 23:57				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.00229	J
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0.000224	J
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 23:57				
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.0012	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/30/20 01:02				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.00773	C
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0.00478	J
Beryllium	SW6010D	ICP2_201129B	0.00122	J
Boron	SW6010D	ICP2_201129B	0.0127	J
Cadmium	SW6010D	ICP2_201129B	0.000819	J
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0.000654	J
Copper	SW6010D	ICP2_201129B	0.00691	J
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 01:02				
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00235	J
Nickel	SW6010D	ICP2_201129B	0.000901	J
Potassium	SW6010D	ICP2_201129B	0.2086	C
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0.00256	J
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0.00389	J
Vanadium	SW6010D	ICP2_201129B	0.00211	J
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/30/20 02:06				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.0141	C
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0.0067	C
Beryllium	SW6010D	ICP2_201129B	0.00224	C
Boron	SW6010D	ICP2_201129B	0.00723	J
Cadmium	SW6010D	ICP2_201129B	0.00114	J
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0.0137	C
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00299	J
Nickel	SW6010D	ICP2_201129B	0.000814	J
Potassium	SW6010D	ICP2_201129B	0.3684	C
Selenium	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 02:06				
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0.00481	J
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0.0118	C
Vanadium	SW6010D	ICP2_201129B	0.0032	J
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/30/20 03:10				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.0222	C
Arsenic	SW6010D	ICP2_201129B	0	C
Barium	SW6010D	ICP2_201129B	0.0086	C
Beryllium	SW6010D	ICP2_201129B	0.00249	C
Boron	SW6010D	ICP2_201129B	0.0386	C
Cadmium	SW6010D	ICP2_201129B	0.00167	J
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0.000647	J
Copper	SW6010D	ICP2_201129B	0.015	C
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	C
Lithium	SW6010D	ICP2_201129B	0.009	J
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00433	J
Nickel	SW6010D	ICP2_201129B	0.0012	J
Potassium	SW6010D	ICP2_201129B	0.6402	C
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0.00349	J
Sodium	SW6010D	ICP2_201129B	0.2667	J
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 03:10				
Titanium	SW6010D	ICP2_201129B	0.00959	C
Vanadium	SW6010D	ICP2_201129B	0.00459	J
Zinc	SW6010D	ICP2_201129B	0	
ICB 11/30/20 14:55				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 15:41				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 16:44				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 17:44				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 18:46				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 19:47				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 20:49				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 21:55				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 22:56				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 23:57				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 00:58				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 02:00				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:02				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:17				
Aluminum	SW6010D	ICP2_201130B	0	
ICB 12/01/20 11:54				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 12:40				
Potassium	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 13:46				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 14:58				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 16:04				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 17:12				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 18:15				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 19:22				
Potassium	SW6010D	ICP2_201201B	0.2058	C
CCB 12/01/20 20:35				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 21:41				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 22:47				
Potassium	SW6010D	ICP2_201201B	0.7633	C
CCB 12/01/20 23:55				
Potassium	SW6010D	ICP2_201201B	0.2528	C
CCB 12/02/20 00:51				
Potassium	SW6010D	ICP2_201201B	0.189	J

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168173	**Basis:**	Wet
Lab Code:	MBLK-168173		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 13:28	11/23/20 13:04	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 13:28	11/23/20 13:04	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168174	**Basis:**	Wet
Lab Code:	MBLK-168174		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 12:06	11/23/20 14:06	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 12:06	11/23/20 14:06	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168176	**Basis:**	Wet
Lab Code:	MBLK-168176		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/25/20 21:24	11/23/20 16:25	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/25/20 21:24	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168177	**Basis:**	Wet
Lab Code:	MBLK-168177		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/26/20 00:31	11/23/20 16:26	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/26/20 00:31	11/23/20 16:26	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201125A	95.18	100	95.2	80-120	11/25/20 09:17
Antimony	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Arsenic	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Barium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Beryllium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Cadmium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Calcium	SW6010D	ICP2_201125A	94.07	100	94.1	80-120	11/25/20 09:17
Cobalt	SW6010D	ICP2_201125A	0.00085 J	-	-	-	11/25/20 09:17
Copper	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Iron	SW6010D	ICP2_201125A	95.54	100	95.5	80-120	11/25/20 09:17
Lead	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Magnesium	SW6010D	ICP2_201125A	96.63	100	96.6	80-120	11/25/20 09:17
Manganese	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Molybdenum	SW6010D	ICP2_201125A	1.933	2	96.7	80-120	11/25/20 09:17
Nickel	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Potassium	SW6010D	ICP2_201125A	101.6 E	100	102	80-120	11/25/20 09:17
Selenium	SW6010D	ICP2_201125A	0.00616 J	-	-	-	11/25/20 09:17
Silver	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Sodium	SW6010D	ICP2_201125A	99.56 E	100	99.6	80-120	11/25/20 09:17
Thallium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Titanium	SW6010D	ICP2_201125A	1.926	2	96.3	80-120	11/25/20 09:17
Vanadium	SW6010D	ICP2_201125A	0.00209 J	-	-	-	11/25/20 09:17
Zinc	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201129B	89.53	100	89.5	80-120	11/29/20 19:14
Antimony	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Arsenic	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Barium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Beryllium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Boron	SW6010D	ICP2_201129B	0.09086	-	-	-	11/29/20 19:14
Cadmium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Calcium	SW6010D	ICP2_201129B	90.46	100	90.5	80-120	11/29/20 19:14
Chromium	SW6010D	ICP2_201129B	0.00105 J	-	-	-	11/29/20 19:14
Cobalt	SW6010D	ICP2_201129B	0.00135 J	-	-	-	11/29/20 19:14
Copper	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Iron	SW6010D	ICP2_201129B	90.76	100	90.8	80-120	11/29/20 19:14
Lead	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Lithium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Magnesium	SW6010D	ICP2_201129B	92.9	100	92.9	80-120	11/29/20 19:14
Manganese	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Molybdenum	SW6010D	ICP2_201129B	1.971	2	98.5	80-120	11/29/20 19:14
Nickel	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Potassium	SW6010D	ICP2_201129B	93.17 E	100	93.2	80-120	11/29/20 19:14
Selenium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Silicon	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Silver	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Sodium	SW6010D	ICP2_201129B	92.59 E	100	92.6	80-120	11/29/20 19:14
Strontium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Thallium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Tin	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Titanium	SW6010D	ICP2_201129B	1.857	2	92.8	80-120	11/29/20 19:14
Vanadium	SW6010D	ICP2_201129B	0.00221 J	-	-	-	11/29/20 19:14
Zinc	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201130B	92.13	100	92.1	80-120	11/30/20 15:10
Calcium	SW6010D	ICP2_201130B	92.22	100	92.2	80-120	11/30/20 15:10
Iron	SW6010D	ICP2_201130B	93.09	100	93.1	80-120	11/30/20 15:10
Magnesium	SW6010D	ICP2_201130B	95.39	100	95.4	80-120	11/30/20 15:10
Molybdenum	SW6010D	ICP2_201130B	1.92	2	96.0	80-120	11/30/20 15:10
Potassium	SW6010D	ICP2_201130B	96.41 E	100	96.4	80-120	11/30/20 15:10
Sodium	SW6010D	ICP2_201130B	94.44 E	100	94.4	80-120	11/30/20 15:10
Titanium	SW6010D	ICP2_201130B	1.896	2	94.8	80-120	11/30/20 15:10

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201201B	95.19	100	95.2	80-120	12/01/20 12:09
Calcium	SW6010D	ICP2_201201B	96.29	100	96.3	80-120	12/01/20 12:09
Iron	SW6010D	ICP2_201201B	97.13	100	97.1	80-120	12/01/20 12:09
Magnesium	SW6010D	ICP2_201201B	98.84	100	98.8	80-120	12/01/20 12:09
Molybdenum	SW6010D	ICP2_201201B	1.94	2	97.0	80-120	12/01/20 12:09
Potassium	SW6010D	ICP2_201201B	100.6 E	100	101	80-120	12/01/20 12:09
Sodium	SW6010D	ICP2_201201B	98.75 E	100	98.7	80-120	12/01/20 12:09
Titanium	SW6010D	ICP2_201201B	1.972	2	98.6	80-120	12/01/20 12:09

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-C1:S000010	**Units:**	mg/L
Lab Code:	IDA001:DU-C1:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

20111574-02AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.0231	0.9108	1	88.8	75-125
Lead	0.1122	1.026	1	91.4	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-C8:S000010	**Units:**	mg/Kg
Lab Code:	IDA001:DU-C8:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

20111574-33AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	25.98	25.32 SO	6.378	-10.4 *	75-125
Lead	887.6	1120 SO	6.378	3650 *	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-A7:S000010	**Units:**	mg/L
Lab Code:	IDA001:DU-A7:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

20111574-48AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.02343	0.924	1	90.1	75-125
Lead	1.126	2.042	1	91.6	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/26/2020
		Date Extracted:	11/23/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-E6:S000010	**Units:**	mg/Kg
Lab Code:	IDA001:DU-E6:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

20111574-59AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.466	12.17	6.748	114	75-125
Lead	217.4	493.3 SO	6.748	4090 *	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-02A	**Units:**	mg/L
Lab Code:	IDA001:DU-C1:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111574-02AMS			Duplicate Matrix Spike 20111574-02AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	0.0231	0.9108	1	88.8	0.9317	1	90.9	75-125	2.27	20
Lead	0.1122	1.026	1	91.4	1.055	1	94.3	75-125	2.75	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-33A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-C8:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike			Duplicate Matrix Spike					
		20111574-33AMS			20111574-33AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	25.98	25.32 SO	6.378	-10.4 *	42.62 SRO	6.418	259 *	75-125	50.9*	20
Lead	887.6	1120 SO	6.378	3650 *	715 SRO	6.418	-2690 *	75-125	44.2*	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-48A	**Units:**	mg/L
Lab Code:	IDA001:DU-A7:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111574-48AMS			Duplicate Matrix Spike 20111574-48AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	0.02343	0.9240	1	90.1	0.9438	1	92.0	75-125	2.12	20
Lead	1.126	2.042	1	91.6	2.043	1	91.7	75-125	0.0436	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/26/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-59A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-E6:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111574-59AMS			Duplicate Matrix Spike 20111574-59AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	4.466	12.17	6.748	114	10.67	6.973	89.0	75-125	13.1	20
Lead	217.4	493.3 SO	6.748	4090 *	272 SRO	6.973	783 *	75-125	57.8*	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

POST SPIKE SAMPLE RECOVERY

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
20111574-59APDSA								
Arsenic	SW6010D	ICP2_201129B	4.466	75.93	70.32	102	80-120	11/29/20 22:56
Lead	SW6010D	ICP2_201129B	217.4	330.8	70.32	161 *	80-120	11/29/20 22:56

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Water	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168173

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.08613	0.1	86.1	80-120
Lead	0.09482	0.1	94.8	80-120

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Water	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168174

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.08624	0.1	86.2	80-120
Lead	0.09724	0.1	97.2	80-120

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Soil	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168176

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.24	5	84.8	80-120
Lead	4.785	5	95.7	80-120

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/26/2020
Sample Matrix:	Soil	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168177

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.26	5	85.2	80-120
Lead	4.875	5	97.5	80-120

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP SERIAL DILUTIONS

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
20111574-59ASD							
Arsenic	SW6010D	ICP2_201129B	4.466	6.083 J	0	10	11/29/20 22:41
Lead	SW6010D	ICP2_201129B	217.4	242.6 R	11.6	10	11/29/20 22:41

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Detection Limits

Instrument: ICP2 **Matrix:** Soil

Analyte	Units	MRL	MDL	Method
Arsenic	mg/Kg-dry	0.25	0.065	SW6010D
Lead	mg/Kg-dry	0.25	0.20	SW6010D
Miscellaneous		0	0	MISC

Instrument: ICP2 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.0016	SW6010D
Lead	mg/L	0.0050	0.0013	SW6010D

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201119B
Analysis Method: MISC **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
	IDA001:DU-C1:S000010	20111574-01	11/19/2020	00:00	
	IDA001:DU-D1:S000010	20111574-03	11/19/2020	00:00	
	IDA001:DU-E5:S000010	20111574-05	11/19/2020	00:00	
	IDA001:DU-B5:S000010	20111574-07	11/19/2020	00:00	
	IDA001:DU-C5:S000010	20111574-09	11/19/2020	00:00	
	IDA001:DU-D5:S000010	20111574-11	11/19/2020	00:00	
	IDA001:DU-D5-TE:S000010	20111574-13	11/19/2020	00:00	
	IDA001:DU-D5-TS:S000010	20111574-14	11/19/2020	00:00	
	IDA001:DU-E9:S000010	20111574-15	11/19/2020	00:00	
	IDA001:DU-E9-TE:S000010	20111574-17	11/19/2020	00:00	
	IDA001:DU-E9-TS:S000010	20111574-18	11/19/2020	00:00	
	IDA001:DU-D9:S000010	20111574-19	11/19/2020	00:00	
	IDA001:DU-C9:S000010	20111574-21	11/19/2020	00:00	
	IDA001:DU-B9:S000010	20111574-23	11/19/2020	00:00	
	IDA001:DU-A9:S000010	20111574-25	11/19/2020	00:00	
	IDA001:DU-A8:S000010	20111574-27	11/19/2020	00:00	
	IDA001:DU-A8-TE:S000010	20111574-29	11/19/2020	00:00	
	IDA001:DU-A8-TS:S000010	20111574-30	11/19/2020	00:00	
	IDA001:DU-B8:S000010	20111574-31	11/19/2020	00:00	
	IDA001:DU-C8:S000010	20111574-33	11/19/2020	00:00	
	IDA001:DU-D8:S000010	20111574-35	11/19/2020	00:00	
	IDA001:DU-E8:S000010	20111574-37	11/19/2020	00:00	
	IDA001:DU-E7:S000010	20111574-39	11/19/2020	00:00	
	IDA001:DU-D7:S000010	20111574-41	11/19/2020	00:00	
	IDA001:DU-C7:S000010	20111574-43	11/19/2020	00:00	
	IDA001:DU-B7:S000010	20111574-45	11/19/2020	00:00	
	IDA001:DU-A7:S000010	20111574-47	11/19/2020	00:00	
	IDA001:DU-A6:S000010	20111574-49	11/19/2020	00:00	
	IDA001:DU-B6:S000010	20111574-51	11/19/2020	00:00	
	IDA001:DU-C6:S000010	20111574-53	11/19/2020	00:00	
	IDA001:DU-C6-TE:S000010	20111574-55	11/19/2020	00:00	
	IDA001:DU-C6-TS:S000010	20111574-56	11/19/2020	00:00	
	IDA001:DU-D6:S000010	20111574-57	11/19/2020	00:00	
	IDA001:DU-E6:S000010	20111574-59	11/19/2020	00:00	

Analysis Lot:ICP2_201125A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/25/2020	08:31	
2	ICAL2	ICAL2	11/25/2020	08:37	
3	ICAL3	ICAL3	11/25/2020	08:42	
4	ICAL4	ICAL4	11/25/2020	08:47	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201125A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
5	ICAL5	ICAL5	11/25/2020	08:52	
8	ICVLL	ICVLL	11/25/2020	09:07	
10	ICSA	ICSA	11/25/2020	09:17	
11	LDR1	LDR1	11/25/2020	09:22	
12	LDR2	LDR2	11/25/2020	09:28	
15	CCV	CCV	11/25/2020	09:43	
16	CCB	CCB	11/25/2020	09:48	
27	CCV	CCV	11/25/2020	10:50	
28	CCB	CCB	11/25/2020	10:55	
39	CCV	CCV	11/25/2020	11:51	
40	CCB	CCB	11/25/2020	11:56	
42	MBLK-168174	MBLK-168174	11/25/2020	12:06	
43	LCS-168174	LCS-168174	11/25/2020	12:11	
44	IDA001:DU-A7:S000010	20111574-48	11/25/2020	12:16	
45	20111574-48AMS	20111574-48AMS	11/25/2020	12:22	
46	20111574-48AMSD	20111574-48AMSD	11/25/2020	12:27	
47	IDA001:DU-A6:S000010	20111574-50	11/25/2020	12:32	
48	IDA001:DU-B6:S000010	20111574-52	11/25/2020	12:37	
49	IDA001:DU-C6:S000010	20111574-54	11/25/2020	12:42	
50	IDA001:DU-D6:S000010	20111574-58	11/25/2020	12:47	
51	CCV	CCV	11/25/2020	12:52	
52	CCB	CCB	11/25/2020	12:57	
53	IDA001:DU-E6:S000010	20111574-60	11/25/2020	13:02	
58	MBLK-168173	MBLK-168173	11/25/2020	13:28	
59	LCS-168173	LCS-168173	11/25/2020	13:33	
60	IDA001:DU-C1:S000010	20111574-02	11/25/2020	13:38	
61	20111574-02AMS	20111574-02AMS	11/25/2020	13:43	
62	20111574-02AMSD	20111574-02AMSD	11/25/2020	13:48	
63	CCV	CCV	11/25/2020	13:53	
64	CCB	CCB	11/25/2020	13:58	
65	IDA001:DU-D1:S000010	20111574-04	11/25/2020	14:04	
66	IDA001:DU-E5:S000010	20111574-06	11/25/2020	14:09	
67	IDA001:DU-B5:S000010	20111574-08	11/25/2020	14:14	
68	IDA001:DU-C5:S000010	20111574-10	11/25/2020	14:19	
69	IDA001:DU-D5:S000010	20111574-12	11/25/2020	14:24	
70	IDA001:DU-E9:S000010	20111574-16	11/25/2020	14:29	
71	IDA001:DU-D9:S000010	20111574-20	11/25/2020	14:34	
72	IDA001:DU-C9:S000010	20111574-22	11/25/2020	14:39	
73	IDA001:DU-B9:S000010	20111574-24	11/25/2020	14:45	
74	IDA001:DU-A9:S000010	20111574-26	11/25/2020	14:50	
75	CCV	CCV	11/25/2020	14:55	
76	CCB	CCB	11/25/2020	15:00	
77	IDA001:DU-A8:S000010	20111574-28	11/25/2020	15:05	
78	IDA001:DU-B8:S000010	20111574-32	11/25/2020	15:10	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201125A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
79	IDA001:DU-C8:S000010	20111574-34	11/25/2020	15:15	
80	IDA001:DU-D8:S000010	20111574-36	11/25/2020	15:20	
81	IDA001:DU-E8:S000010	20111574-38	11/25/2020	15:26	
82	IDA001:DU-E7:S000010	20111574-40	11/25/2020	15:31	
83	IDA001:DU-D7:S000010	20111574-42	11/25/2020	15:36	
84	IDA001:DU-C7:S000010	20111574-44	11/25/2020	15:41	
85	IDA001:DU-B7:S000010	20111574-46	11/25/2020	15:46	
87	CCV	CCV	11/25/2020	15:56	
88	CCB	CCB	11/25/2020	16:01	
99	CCV	CCV	11/25/2020	17:06	
100	CCB	CCB	11/25/2020	17:11	
111	CCV	CCV	11/25/2020	18:08	
112	CCB	CCB	11/25/2020	18:13	
123	CCV	CCV	11/25/2020	19:09	
124	CCB	CCB	11/25/2020	19:14	
135	CCV	CCV	11/25/2020	20:13	
136	CCB	CCB	11/25/2020	20:18	
147	CCV	CCV	11/25/2020	21:14	
148	CCB	CCB	11/25/2020	21:19	
149	MBLK-168176	MBLK-168176	11/25/2020	21:24	
150	LCS-168176	LCS-168176	11/25/2020	21:29	
151	IDA001:DU-C1:S000010	20111574-01	11/25/2020	21:34	
152	IDA001:DU-D1:S000010	20111574-03	11/25/2020	21:40	
153	IDA001:DU-E5:S000010	20111574-05	11/25/2020	21:45	
154	IDA001:DU-B5:S000010	20111574-07	11/25/2020	21:50	
155	IDA001:DU-C5:S000010	20111574-09	11/25/2020	21:55	
156	IDA001:DU-D5:S000010	20111574-11	11/25/2020	22:00	
157	IDA001:DU-D5-TE:S000010	20111574-13	11/25/2020	22:05	
158	IDA001:DU-D5-TS:S000010	20111574-14	11/25/2020	22:10	
159	CCV	CCV	11/25/2020	22:15	
160	CCB	CCB	11/25/2020	22:20	
161	IDA001:DU-E9:S000010	20111574-15	11/25/2020	22:25	
162	IDA001:DU-E9-TE:S000010	20111574-17	11/25/2020	22:30	
163	IDA001:DU-E9-TS:S000010	20111574-18	11/25/2020	22:35	
164	IDA001:DU-D9:S000010	20111574-19	11/25/2020	22:40	
165	IDA001:DU-C9:S000010	20111574-21	11/25/2020	22:45	
166	IDA001:DU-B9:S000010	20111574-23	11/25/2020	22:50	
167	IDA001:DU-A9:S000010	20111574-25	11/25/2020	22:56	
168	IDA001:DU-A8:S000010	20111574-27	11/25/2020	23:01	
169	IDA001:DU-A8-TE:S000010	20111574-29	11/25/2020	23:06	
170	IDA001:DU-A8-TS:S000010	20111574-30	11/25/2020	23:11	
172	CCV	CCV	11/25/2020	23:21	
173	CCB	CCB	11/25/2020	23:26	
174	IDA001:DU-B8:S000010	20111574-31	11/25/2020	23:31	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201125A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
175	IDA001:DU-C8:S000010	20111574-33	11/25/2020	23:36	
176	20111574-33AMS	20111574-33AMS	11/25/2020	23:41	
177	20111574-33AMSD	20111574-33AMSD	11/25/2020	23:46	
184	CCV	CCV	11/26/2020	00:21	
185	CCB	CCB	11/26/2020	00:26	
186	MBLK-168177	MBLK-168177	11/26/2020	00:31	
187	LCS-168177	LCS-168177	11/26/2020	00:37	
188	IDA001:DU-D8:S000010	20111574-35	11/26/2020	00:42	
189	IDA001:DU-E8:S000010	20111574-37	11/26/2020	00:47	
190	IDA001:DU-E7:S000010	20111574-39	11/26/2020	00:52	
191	IDA001:DU-D7:S000010	20111574-41	11/26/2020	00:57	
192	IDA001:DU-C7:S000010	20111574-43	11/26/2020	01:02	
193	IDA001:DU-B7:S000010	20111574-45	11/26/2020	01:07	
194	IDA001:DU-A7:S000010	20111574-47	11/26/2020	01:12	
195	IDA001:DU-A6:S000010	20111574-49	11/26/2020	01:17	
196	CCV	CCV	11/26/2020	01:22	
198	CCB	CCB	11/26/2020	01:32	
199	IDA001:DU-B6:S000010	20111574-51	11/26/2020	01:37	
200	IDA001:DU-C6:S000010	20111574-53	11/26/2020	01:42	
201	IDA001:DU-C6-TE:S000010	20111574-55	11/26/2020	01:48	
202	IDA001:DU-C6-TS:S000010	20111574-56	11/26/2020	01:53	
203	IDA001:DU-D6:S000010	20111574-57	11/26/2020	01:58	
204	IDA001:DU-E6:S000010	20111574-59	11/26/2020	02:03	
205	20111574-59AMS	20111574-59AMS	11/26/2020	02:08	
206	20111574-59AMSD	20111574-59AMSD	11/26/2020	02:13	
209	CCV	CCV	11/26/2020	02:28	
211	CCB	CCB	11/26/2020	02:38	
216	IDA001:DU-B6:S000010	20111574-52	11/26/2020	03:04	
217	IDA001:DU-E9:S000010	20111574-16	11/26/2020	03:09	
219	CCV	CCV	11/26/2020	03:19	
220	CCB	CCB	11/26/2020	03:24	

Analysis Lot:ICP2_201129B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/29/2020	18:28	
2	ICAL2	ICAL2	11/29/2020	18:33	
3	ICAL3	ICAL3	11/29/2020	18:39	
4	ICAL4	ICAL4	11/29/2020	18:43	
5	ICAL5	ICAL5	11/29/2020	18:48	
9	ICVLL	ICVLL	11/29/2020	19:09	
10	ICSA	ICSA	11/29/2020	19:14	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201129B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
11	LDR1	LDR1	11/29/2020	19:19	
12	LDR2	LDR2	11/29/2020	19:24	
15	CCV	CCV	11/29/2020	19:40	
16	CCB	CCB	11/29/2020	19:45	
27	CCV	CCV	11/29/2020	20:40	
28	CCB	CCB	11/29/2020	20:45	
29	IDA001:DU-E5:S000010	20111574-05	11/29/2020	20:50	
30	IDA001:DU-D5:S000010	20111574-11	11/29/2020	20:55	
31	IDA001:DU-E9:S000010	20111574-15	11/29/2020	21:00	
32	IDA001:DU-E9-TE:S000010	20111574-17	11/29/2020	21:05	
33	IDA001:DU-E9-TS:S000010	20111574-18	11/29/2020	21:10	
34	IDA001:DU-B9:S000010	20111574-23	11/29/2020	21:15	
35	IDA001:DU-A9:S000010	20111574-25	11/29/2020	21:21	
40	CCV	CCV	11/29/2020	21:46	
41	CCB	CCB	11/29/2020	21:51	
47	IDA001:DU-B6:S000010	20111574-51	11/29/2020	22:21	
48	IDA001:DU-C6-TS:S000010	20111574-56	11/29/2020	22:26	
51	20111574-59ASD	20111574-59ASD	11/29/2020	22:41	
52	CCV	CCV	11/29/2020	22:46	
53	CCB	CCB	11/29/2020	22:51	
54	20111574-59APDS	20111574-59APDS	11/29/2020	22:56	
64	CCV	CCV	11/29/2020	23:47	
66	CCB	CCB	11/29/2020	23:57	
77	CCV	CCV	11/30/2020	00:52	
79	CCB	CCB	11/30/2020	01:02	
90	CCV	CCV	11/30/2020	01:57	
92	CCB	CCB	11/30/2020	02:06	
103	CCV	CCV	11/30/2020	03:01	
105	CCB	CCB	11/30/2020	03:10	

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/30/2020	14:25	
2	ICAL2	ICAL2	11/30/2020	14:30	
3	ICAL3	ICAL3	11/30/2020	14:35	
4	ICAL4	ICAL4	11/30/2020	14:40	
5	ICAL5	ICAL5	11/30/2020	14:45	
9	ICVLL	ICVLL	11/30/2020	15:05	
10	ICSA	ICSA	11/30/2020	15:10	
11	LDR1	LDR1	11/30/2020	15:15	
15	CCV	CCV	11/30/2020	15:37	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
16	CCB	CCB	11/30/2020	15:41	
25	CCV	CCV	11/30/2020	16:39	
26	CCB	CCB	11/30/2020	16:44	
37	CCV	CCV	11/30/2020	17:40	
38	CCB	CCB	11/30/2020	17:44	
49	CCV	CCV	11/30/2020	18:41	
50	CCB	CCB	11/30/2020	18:46	
61	CCV	CCV	11/30/2020	19:42	
62	CCB	CCB	11/30/2020	19:47	
73	CCV	CCV	11/30/2020	20:44	
74	CCB	CCB	11/30/2020	20:49	
86	CCV	CCV	11/30/2020	21:50	
87	CCB	CCB	11/30/2020	21:55	
98	CCV	CCV	11/30/2020	22:51	
99	CCB	CCB	11/30/2020	22:56	
110	CCV	CCV	11/30/2020	23:52	
111	CCB	CCB	11/30/2020	23:57	
122	CCV	CCV	12/01/2020	00:53	
123	CCB	CCB	12/01/2020	00:58	
134	CCV	CCV	12/01/2020	01:55	
135	CCB	CCB	12/01/2020	02:00	
146	CCV	CCV	12/01/2020	02:57	
147	CCB	CCB	12/01/2020	03:02	
149	CCV	CCV	12/01/2020	03:12	
150	CCB	CCB	12/01/2020	03:17	

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	12/01/2020	11:24	
2	ICAL2	ICAL2	12/01/2020	11:29	
3	ICAL3	ICAL3	12/01/2020	11:34	
4	ICAL4	ICAL4	12/01/2020	11:39	
5	ICAL5	ICAL5	12/01/2020	11:44	
9	ICVLL	ICVLL	12/01/2020	12:03	
10	ICSA	ICSA	12/01/2020	12:09	
15	CCV	CCV	12/01/2020	12:35	
16	CCB	CCB	12/01/2020	12:40	
28	CCV	CCV	12/01/2020	13:41	
29	CCB	CCB	12/01/2020	13:46	
40	CCV	CCV	12/01/2020	14:53	
41	CCB	CCB	12/01/2020	14:58	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
53	CCV	CCV	12/01/2020	16:00	
54	CCB	CCB	12/01/2020	16:04	
66	CCV	CCV	12/01/2020	17:07	
67	CCB	CCB	12/01/2020	17:12	
78	CCV	CCV	12/01/2020	18:10	
79	CCB	CCB	12/01/2020	18:15	
91	CCV	CCV	12/01/2020	19:17	
92	CCB	CCB	12/01/2020	19:22	
103	CCV	CCV	12/01/2020	20:25	
105	CCB	CCB	12/01/2020	20:35	
116	CCV	CCV	12/01/2020	21:31	
118	CCB	CCB	12/01/2020	21:41	
130	CCV	CCV	12/01/2020	22:42	
131	CCB	CCB	12/01/2020	22:47	
143	CCV	CCV	12/01/2020	23:50	
144	CCB	CCB	12/01/2020	23:55	
154	CCV	CCV	12/02/2020	00:46	
155	CCB	CCB	12/02/2020	00:51	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201125A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
ICAL1	1	11/25/20 08:31			X														X							
ICAL2	1	11/25/20 08:37			X														X							
ICAL3	1	11/25/20 08:42			X														X							
ICAL4	1	11/25/20 08:47			X														X							
ICAL5	1	11/25/20 08:52			X														X							
ICV/QCS	1	11/25/20 08:57			X														X							
ICB	1	11/25/20 09:02			X														X							
ICSA	1	11/25/20 09:17			X														X							
CCV	1	11/25/20 09:43			X														X							
CCB	1	11/25/20 09:48			X														X							
ZZZZZZ	100	11/25/20 10:09															X									
ZZZZZZ	100	11/25/20 10:14															X				X					
ZZZZZZ	10	11/25/20 10:24						X									X				X					
ZZZZZZ	1	11/25/20 10:29																			X					
ZZZZZZ	1	11/25/20 10:34																			X					
ZZZZZZ	1	11/25/20 10:40																			X					
ZZZZZZ	1	11/25/20 10:45																			X					
CCV	1	11/25/20 10:50			X														X							
CCB	1	11/25/20 10:55			X														X							
ZZZZZZ	1	11/25/20 11:00																			X					
ZZZZZZ	10	11/25/20 11:15						X																		
ZZZZZZ	1	11/25/20 11:31	X		X	X			X		X								X		X					
ZZZZZZ	1	11/25/20 11:46	X		X	X			X		X								X		X					
CCV	1	11/25/20 11:51			X														X							
CCB	1	11/25/20 11:56			X														X							
ZZZZZZ	1	11/25/20 12:01	X		X	X			X		X								X		X					
MBLK-168174	1	11/25/20 12:06			X														X							
LCS-168174	1	11/25/20 12:11			X														X							
IDA001:DU-A7:S000010	1	11/25/20 12:16			X														X							
20111574-48AMS	1	11/25/20 12:22			X														X							
20111574-48AMSD	1	11/25/20 12:27			X														X							
IDA001:DU-A6:S000010	1	11/25/20 12:32			X														X							
IDA001:DU-B6:S000010	1	11/25/20 12:37			X																					
IDA001:DU-C6:S000010	1	11/25/20 12:42			X														X							

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201125A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-D6:S000010	1	11/25/20 12:47			X														X							
CCV	1	11/25/20 12:52			X														X							
CCB	1	11/25/20 12:57			X														X							
IDA001:DU-E6:S000010	1	11/25/20 13:02			X														X							
ZZZZZZ	1	11/25/20 13:07		X	X								X													
ZZZZZZ	1	11/25/20 13:13		X	X								X													
ZZZZZZ	1	11/25/20 13:18		X	X								X													
ZZZZZZ	1	11/25/20 13:23		X	X								X													
MBLK-168173	1	11/25/20 13:28			X														X							
LCS-168173	1	11/25/20 13:33			X														X							
IDA001:DU-C1:S000010	1	11/25/20 13:38			X														X							
20111574-02AMS	1	11/25/20 13:43			X														X							
20111574-02AMSD	1	11/25/20 13:48			X														X							
CCV	1	11/25/20 13:53			X														X							
CCB	1	11/25/20 13:58			X														X							
IDA001:DU-D1:S000010	1	11/25/20 14:04			X														X							
IDA001:DU-E5:S000010	1	11/25/20 14:09			X														X							
IDA001:DU-B5:S000010	1	11/25/20 14:14			X														X							
IDA001:DU-C5:S000010	1	11/25/20 14:19			X														X							
IDA001:DU-D5:S000010	1	11/25/20 14:24			X														X							
IDA001:DU-E9:S000010	1	11/25/20 14:29			X																					
IDA001:DU-D9:S000010	1	11/25/20 14:34			X														X							
IDA001:DU-C9:S000010	1	11/25/20 14:39			X														X							
IDA001:DU-B9:S000010	1	11/25/20 14:45			X														X							
IDA001:DU-A9:S000010	1	11/25/20 14:50			X														X							
CCV	1	11/25/20 14:55			X														X							
CCB	1	11/25/20 15:00			X														X							
IDA001:DU-A8:S000010	1	11/25/20 15:05			X														X							

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201125A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-B8:S000010	1	11/25/20 15:10			X														X							
IDA001:DU-C8:S000010	1	11/25/20 15:15			X														X							
IDA001:DU-D8:S000010	1	11/25/20 15:20			X														X							
IDA001:DU-E8:S000010	1	11/25/20 15:26			X														X							
IDA001:DU-E7:S000010	1	11/25/20 15:31			X														X							
IDA001:DU-D7:S000010	1	11/25/20 15:36			X														X							
IDA001:DU-C7:S000010	1	11/25/20 15:41			X														X							
IDA001:DU-B7:S000010	1	11/25/20 15:46			X														X							
CCV	1	11/25/20 15:56			X														X							
CCB	1	11/25/20 16:01			X														X							
ZZZZZZ	1	11/25/20 16:19											X			X										
ZZZZZZ	1	11/25/20 16:24											X			X										
ZZZZZZ	1	11/25/20 16:30											X			X										
ZZZZZZ	1	11/25/20 16:45											X			X										
ZZZZZZ	1	11/25/20 17:01																	X							
CCV	1	11/25/20 17:06			X														X							
CCB	1	11/25/20 17:11			X														X							
ZZZZZZ	1	11/25/20 17:16																	X							
ZZZZZZ	1	11/25/20 17:21																	X							
ZZZZZZ	1	11/25/20 17:27																	X							
ZZZZZZ	1	11/25/20 17:32																	X							
ZZZZZZ	1	11/25/20 17:37																	X							
ZZZZZZ	1	11/25/20 17:42																	X							
ZZZZZZ	1	11/25/20 17:47																	X							
ZZZZZZ	1	11/25/20 17:52																	X							
ZZZZZZ	1	11/25/20 17:57																	X							
ZZZZZZ	1	11/25/20 18:03																	X							
CCV	1	11/25/20 18:08			X														X							
CCB	1	11/25/20 18:13			X														X							
ZZZZZZ	1	11/25/20 18:18																	X							
ZZZZZZ	1	11/25/20 18:23																	X							
ZZZZZZ	1	11/25/20 18:28																	X							
ZZZZZZ	1	11/25/20 18:33																	X							

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201125A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
ZZZZZZ	10	11/25/20 18:38				X		X					X	X	X	X	X					X	X			
ZZZZZZ	1	11/25/20 18:54																	X							
ZZZZZZ	1	11/25/20 18:59																	X							
ZZZZZZ	1	11/25/20 19:04																	X							
CCV	1	11/25/20 19:09			X														X							
CCB	1	11/25/20 19:14			X														X							
ZZZZZZ	1	11/25/20 19:19																	X							
ZZZZZZ	1	11/25/20 19:24																	X							
ZZZZZZ	1	11/25/20 19:32																	X							
ZZZZZZ	1	11/25/20 19:37																	X							
ZZZZZZ	1	11/25/20 19:42																	X							
ZZZZZZ	1	11/25/20 19:47																	X							
ZZZZZZ	1	11/25/20 19:52																	X							
ZZZZZZ	1	11/25/20 19:58																	X							
ZZZZZZ	1	11/25/20 20:03																	X							
ZZZZZZ	1	11/25/20 20:08																	X							
CCV	1	11/25/20 20:13			X														X							
CCB	1	11/25/20 20:18			X														X							
ZZZZZZ	1	11/25/20 20:23																	X							
ZZZZZZ	1	11/25/20 20:28																	X							
ZZZZZZ	1	11/25/20 20:33																	X							
ZZZZZZ	1	11/25/20 20:49																	X							
ZZZZZZ	1	11/25/20 21:04																	X							
ZZZZZZ	1	11/25/20 21:09																	X							
CCV	1	11/25/20 21:14			X														X							
CCB	1	11/25/20 21:19			X														X							
MBLK-168176	1	11/25/20 21:24			X														X							
LCS-168176	1	11/25/20 21:29			X														X							
IDA001:DU-C1:S000010	10	11/25/20 21:34			X														X							
IDA001:DU-D1:S000010	10	11/25/20 21:40			X														X							
IDA001:DU-E5:S000010	10	11/25/20 21:45			X																					
IDA001:DU-B5:S000010	10	11/25/20 21:50			X														X							
IDA001:DU-C5:S000010	10	11/25/20 21:55			X														X							
IDA001:DU-D5:S000010	10	11/25/20 22:00			X																					

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201125A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-D5-TE:S000010	10	11/25/20 22:05			X														X							
IDA001:DU-D5-TS:S000010	10	11/25/20 22:10			X														X							
CCV	1	11/25/20 22:15			X														X							
CCB	1	11/25/20 22:20			X														X							
IDA001:DU-E9:S000010	10	11/25/20 22:25			X																					
IDA001:DU-E9-TE:S000010	10	11/25/20 22:30			X																					
IDA001:DU-E9-TS:S000010	10	11/25/20 22:35			X																					
IDA001:DU-D9:S000010	10	11/25/20 22:40			X														X							
IDA001:DU-C9:S000010	10	11/25/20 22:45			X														X							
IDA001:DU-B9:S000010	10	11/25/20 22:50			X																					
IDA001:DU-A9:S000010	10	11/25/20 22:56			X																					
IDA001:DU-A8:S000010	10	11/25/20 23:01			X														X							
IDA001:DU-A8-TE:S000010	10	11/25/20 23:06			X														X							
IDA001:DU-A8-TS:S000010	10	11/25/20 23:11			X														X							
CCV	1	11/25/20 23:21			X														X							
CCB	1	11/25/20 23:26			X														X							
IDA001:DU-B8:S000010	10	11/25/20 23:31			X														X							
IDA001:DU-C8:S000010	10	11/25/20 23:36			X														X							
20111574-33AMS	10	11/25/20 23:41			X														X							
20111574-33AMSD	10	11/25/20 23:46			X														X							
ZZZZZZ	1	11/26/20 00:01	X		X	X			X		X										X					
ZZZZZZ	1	11/26/20 00:16	X		X	X			X		X								X		X					
CCV	1	11/26/20 00:21			X														X							
CCB	1	11/26/20 00:26			X														X							
MBLK-168177	1	11/26/20 00:31			X														X							
LCS-168177	1	11/26/20 00:37			X														X							
IDA001:DU-D8:S000010	10	11/26/20 00:42			X														X							
IDA001:DU-E8:S000010	10	11/26/20 00:47			X														X							

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201125A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-E7:S000010	10	11/26/20 00:52			X														X							
IDA001:DU-D7:S000010	10	11/26/20 00:57			X														X							
IDA001:DU-C7:S000010	10	11/26/20 01:02			X														X							
IDA001:DU-B7:S000010	10	11/26/20 01:07			X														X							
IDA001:DU-A7:S000010	10	11/26/20 01:12			X														X							
IDA001:DU-A6:S000010	10	11/26/20 01:17			X														X							
CCV	1	11/26/20 01:22			X														X							
CCB	1	11/26/20 01:32			X														X							
IDA001:DU-B6:S000010	10	11/26/20 01:37			X																					
IDA001:DU-C6:S000010	10	11/26/20 01:42			X														X							
IDA001:DU-C6-TE:S000010	10	11/26/20 01:48			X														X							
IDA001:DU-C6-TS:S000010	10	11/26/20 01:53			X																					
IDA001:DU-D6:S000010	10	11/26/20 01:58			X														X							
IDA001:DU-E6:S000010	10	11/26/20 02:03			X														X							
20111574-59AMS	10	11/26/20 02:08			X														X							
20111574-59AMSD	10	11/26/20 02:13			X														X							
ZZZZZZ	1	11/26/20 02:18	X		X	X	X		X	X		X	X	X		X	X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:23	X		X	X	X		X	X		X	X	X		X	X	X	X	X	X			X	X	X
CCV	1	11/26/20 02:28			X														X							
CCB	1	11/26/20 02:38			X														X							
ZZZZZZ	1	11/26/20 02:43	X		X	X	X		X	X		X	X	X		X	X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:49	X		X	X	X		X	X		X	X	X			X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:54	X		X	X	X		X	X		X	X	X			X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:59	X		X	X	X		X	X		X	X	X			X	X	X	X	X			X	X	X
IDA001:DU-B6:S000010	10	11/26/20 03:04																	X							
IDA001:DU-E9:S000010	10	11/26/20 03:09																	X							
CCV	1	11/26/20 03:19			X														X							
CCB	1	11/26/20 03:24			X														X							

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201129B**

Sample	Dilution Factor	Date/Time	AL	AS	CA	CR	CU	FE	MG	MN	PB	ZN
ICAL1	1	11/29/20 18:28		X							X	
ICAL2	1	11/29/20 18:33		X							X	
ICAL3	1	11/29/20 18:39		X							X	
ICAL4	1	11/29/20 18:43		X							X	
ICAL5	1	11/29/20 18:48		X							X	
ICV/QCS	1	11/29/20 18:53		X							X	
ICB	1	11/29/20 18:58		X							X	
ICSA	1	11/29/20 19:14		X							X	
CCV	1	11/29/20 19:40		X							X	
CCB	1	11/29/20 19:45		X							X	
CCV	1	11/29/20 20:40		X							X	
CCB	1	11/29/20 20:45		X							X	
IDA001:DU-E5:S000010	100	11/29/20 20:50									X	
IDA001:DU-D5:S000010	100	11/29/20 20:55									X	
IDA001:DU-E9:S000010	100	11/29/20 21:00									X	
IDA001:DU-E9-TE:S000010	100	11/29/20 21:05									X	
IDA001:DU-E9-TS:S000010	100	11/29/20 21:10									X	
IDA001:DU-B9:S000010	100	11/29/20 21:15									X	
IDA001:DU-A9:S000010	100	11/29/20 21:21									X	
ZZZZZZ	100	11/29/20 21:26									X	
CCV	1	11/29/20 21:46		X							X	
CCB	1	11/29/20 21:51		X							X	
ZZZZZZ	10	11/29/20 21:56					X					X
IDA001:DU-B6:S000010	100	11/29/20 22:21									X	
IDA001:DU-C6-TS:S000010	100	11/29/20 22:26									X	
20111574-59ASD	50	11/29/20 22:41		X							X	
CCV	1	11/29/20 22:46		X							X	
CCB	1	11/29/20 22:51		X							X	
20111574-59APDS	10	11/29/20 22:56		X							X	
ZZZZZZ	100	11/29/20 23:01	X		X	X			X			
ZZZZZZ	100	11/29/20 23:06	X		X	X			X			
ZZZZZZ	100	11/29/20 23:11	X		X	X			X			

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201129B**

Sample	Dilution Factor	Date/Time	AL	AS	CA	CR	CU	FE	MG	MN	PB	ZN
ZZZZZZ	100	11/29/20 23:16	X		X	X			X	X		
ZZZZZZ	100	11/29/20 23:21	X		X	X			X	X		
ZZZZZZ	100	11/29/20 23:26	X		X	X			X	X		
CCV	1	11/29/20 23:47		X							X	
CCB	1	11/29/20 23:57		X							X	
ZZZZZZ	1	11/30/20 00:12									X	
ZZZZZZ	1	11/30/20 00:37									X	
ZZZZZZ	1	11/30/20 00:42									X	
ZZZZZZ	1	11/30/20 00:47									X	
CCV	1	11/30/20 00:52		X							X	
CCB	1	11/30/20 01:02		X							X	
ZZZZZZ	1	11/30/20 01:07									X	
ZZZZZZ	1	11/30/20 01:12									X	
ZZZZZZ	1	11/30/20 01:17									X	
ZZZZZZ	1	11/30/20 01:22									X	
ZZZZZZ	1	11/30/20 01:27									X	
ZZZZZZ	1	11/30/20 01:32									X	
ZZZZZZ	1	11/30/20 01:37									X	
CCV	1	11/30/20 01:57		X							X	
CCB	1	11/30/20 02:06		X							X	
ZZZZZZ	1	11/30/20 02:21						X				
CCV	1	11/30/20 03:01		X							X	
CCB	1	11/30/20 03:10		X							X	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 13:16	X																			
ZZZZZZ	1	12/01/20 13:21	X																			
ZZZZZZ	100	12/01/20 13:26															X					
ZZZZZZ	1	12/01/20 13:31	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
ZZZZZZ	1	12/01/20 14:03	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	12/01/20 14:18	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	10	12/01/20 14:24			X												X					
ZZZZZZ	10	12/01/20 14:29			X												X					
ZZZZZZ	10	12/01/20 14:34			X												X					
ZZZZZZ	10	12/01/20 14:38			X												X					
ZZZZZZ	10	12/01/20 14:43			X												X					
ZZZZZZ	10	12/01/20 14:48			X												X					
ZZZZZZ	10	12/01/20 15:04			X												X					
ZZZZZZ	100	12/01/20 15:09															X					
ZZZZZZ	100	12/01/20 15:14															X					
ZZZZZZ	10	12/01/20 15:19															X					
ZZZZZZ	100	12/01/20 15:24								X												
ZZZZZZ	1	12/01/20 15:39										X										
ZZZZZZ	1	12/01/20 16:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:30										X					X					
ZZZZZZ	1	12/01/20 16:46										X										
ZZZZZZ	1	12/01/20 16:51										X					X					
ZZZZZZ	1	12/01/20 16:57										X										
ZZZZZZ	1	12/01/20 17:17										X					X					
ZZZZZZ	1	12/01/20 17:22										X										
ZZZZZZ	1	12/01/20 17:28										X					X					
ZZZZZZ	1	12/01/20 17:33										X										
ZZZZZZ	1	12/01/20 17:38															X					
ZZZZZZ	1	12/01/20 17:43															X					
ZZZZZZ	1	12/01/20 17:48															X					
ZZZZZZ	1	12/01/20 17:54															X					
ZZZZZZ	1	12/01/20 17:59															X					
ZZZZZZ	1	12/01/20 18:04															X					
ZZZZZZ	1	12/01/20 18:20	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:25	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:30	X		X	X		X		X							X		X			

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 18:35	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:41	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:46	X					X		X						X	X					
ZZZZZZ	1	12/01/20 19:01	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:07	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:50	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:55	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:00	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:05	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:20	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
ZZZZZZ	1	12/01/20 20:51						X									X					
ZZZZZZ	1	12/01/20 20:56						X									X					
ZZZZZZ	1	12/01/20 21:01						X									X					
ZZZZZZ	1	12/01/20 21:06						X									X					
ZZZZZZ	1	12/01/20 21:11						X									X					
ZZZZZZ	1	12/01/20 21:16						X									X					
ZZZZZZ	1	12/01/20 21:21						X									X					
ZZZZZZ	1	12/01/20 21:26						X									X					
ZZZZZZ	1	12/01/20 21:46						X									X					
ZZZZZZ	1	12/01/20 21:51						X									X					
ZZZZZZ	1	12/01/20 22:16			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:22			X												X					
ZZZZZZ	1	12/01/20 22:27			X	X	X	X								X	X	X	X	X		
ZZZZZZ	1	12/01/20 22:32			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:53			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:58			X	X		X									X		X			
ZZZZZZ	10	12/01/20 23:08				X						X			X							
ZZZZZZ	10	12/01/20 23:13				X						X										
ZZZZZZ	10	12/01/20 23:19				X						X			X							
ZZZZZZ	10	12/01/20 23:24				X						X			X							
ZZZZZZ	10	12/01/20 23:29				X						X			X							
ZZZZZZ	10	12/01/20 23:34				X						X			X							
ZZZZZZ	10	12/01/20 23:40				X						X										
ZZZZZZ	1	12/02/20 00:00	X		X	X		X									X		X			

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168176
Analytical Method: SW6010D **Extraction Date:** 11/23/20 16:25

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-C1:S000010	20111574-01A	11/13/20	11/17/20	0.673 g	50 mL	85
IDA001:DU-D1:S000010	20111574-03A	11/13/20	11/17/20	0.684 g	50 mL	95.1
IDA001:DU-E5:S000010	20111574-05A	11/12/20	11/17/20	0.624 g	50 mL	85
IDA001:DU-B5:S000010	20111574-07A	11/12/20	11/17/20	0.656 g	50 mL	92.7
IDA001:DU-C5:S000010	20111574-09A	11/12/20	11/17/20	0.633 g	50 mL	85
IDA001:DU-D5:S000010	20111574-11A	11/12/20	11/17/20	0.781 g	50 mL	84
IDA001:DU-D5-TE:S000010	20111574-13A	11/12/20	11/17/20	0.762 g	50 mL	86
IDA001:DU-D5-TS:S000010	20111574-14A	11/12/20	11/17/20	0.716 g	50 mL	83
IDA001:DU-E9:S000010	20111574-15A	11/14/20	11/17/20	0.729 g	50 mL	89
IDA001:DU-E9-TE:S000010	20111574-17A	11/14/20	11/17/20	0.701 g	50 mL	89
IDA001:DU-E9-TS:S000010	20111574-18A	11/14/20	11/17/20	0.722 g	50 mL	89
IDA001:DU-D9:S000010	20111574-19A	11/14/20	11/17/20	0.653 g	50 mL	88
IDA001:DU-C9:S000010	20111574-21A	11/14/20	11/17/20	0.646 g	50 mL	83
IDA001:DU-B9:S000010	20111574-23A	11/14/20	11/17/20	0.774 g	50 mL	89
IDA001:DU-A9:S000010	20111574-25A	11/14/20	11/17/20	0.793 g	50 mL	87
IDA001:DU-A8:S000010	20111574-27A	11/14/20	11/17/20	0.63 g	50 mL	88
IDA001:DU-A8-TE:S000010	20111574-29A	11/14/20	11/17/20	0.767 g	50 mL	89
IDA001:DU-A8-TS:S000010	20111574-30A	11/14/20	11/17/20	0.695 g	50 mL	82
IDA001:DU-B8:S000010	20111574-31A	11/14/20	11/17/20	0.726 g	50 mL	90.1
IDA001:DU-C8:S000010	20111574-33A	11/14/20	11/17/20	0.764 g	50 mL	94.2
Matrix Spike	20111574-33AMS	NA	NA	0.784 g	50 mL	0
Duplicate Matrix Spike	20111574-33AMSD	NA	NA	0.779 g	50 mL	0
LCS-168176	LCS-168176	NA	NA	1 g	50 mL	0
MBLK-168176	MBLK-168176	NA	NA	1 g	50 mL	0

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168173
Analytical Method: SW6010D **Extraction Date:** 11/23/20 13:04

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-C1:S000010	20111574-02A	11/13/20	11/17/20	2.5 mL	27.5 mL	0
Matrix Spike	20111574-02AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111574-02AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-D1:S000010	20111574-04A	11/13/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E5:S000010	20111574-06A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B5:S000010	20111574-08A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C5:S000010	20111574-10A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D5:S000010	20111574-12A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E9:S000010	20111574-16A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D9:S000010	20111574-20A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C9:S000010	20111574-22A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B9:S000010	20111574-24A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-A9:S000010	20111574-26A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-A8:S000010	20111574-28A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B8:S000010	20111574-32A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C8:S000010	20111574-34A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D8:S000010	20111574-36A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E8:S000010	20111574-38A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E7:S000010	20111574-40A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D7:S000010	20111574-42A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C7:S000010	20111574-44A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B7:S000010	20111574-46A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
LCS-168173	LCS-168173	NA	NA	25 mL	27.5 mL	0
MBLK-168173	MBLK-168173	NA	NA	25 mL	27.5 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168177
Analytical Method: SW6010D **Extraction Date:** 11/23/20 16:26

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-D8:S000010	20111574-35A	11/14/20	11/17/20	0.615 g	50 mL	92.1
IDA001:DU-E8:S000010	20111574-37A	11/15/20	11/17/20	0.747 g	50 mL	85
IDA001:DU-E7:S000010	20111574-39A	11/15/20	11/17/20	0.669 g	50 mL	80
IDA001:DU-D7:S000010	20111574-41A	11/15/20	11/17/20	0.745 g	50 mL	85
IDA001:DU-C7:S000010	20111574-43A	11/15/20	11/17/20	0.661 g	50 mL	88
IDA001:DU-B7:S000010	20111574-45A	11/15/20	11/17/20	0.784 g	50 mL	74
IDA001:DU-A7:S000010	20111574-47A	11/15/20	11/17/20	0.728 g	50 mL	83
IDA001:DU-A6:S000010	20111574-49A	11/15/20	11/17/20	0.765 g	50 mL	83
IDA001:DU-B6:S000010	20111574-51A	11/15/20	11/17/20	0.758 g	50 mL	89
IDA001:DU-C6:S000010	20111574-53A	11/15/20	11/17/20	0.632 g	50 mL	87
IDA001:DU-C6-TE:S000010	20111574-55A	11/15/20	11/17/20	0.694 g	50 mL	88
IDA001:DU-C6-TS:S000010	20111574-56A	11/15/20	11/17/20	0.778 g	50 mL	83
IDA001:DU-D6:S000010	20111574-57A	11/15/20	11/17/20	0.635 g	50 mL	84
IDA001:DU-E6:S000010	20111574-59A	11/15/20	11/17/20	0.711 g	50 mL	90.5
Matrix Spike	20111574-59AMS	NA	NA	0.741 g	50 mL	0
Duplicate Matrix Spike	20111574-59AMSD	NA	NA	0.717 g	50 mL	0
LCS-168177	LCS-168177	NA	NA	1 g	50 mL	0
MBLK-168177	MBLK-168177	NA	NA	1 g	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168174
Analytical Method: SW6010D **Extraction Date:** 11/23/20 14:06

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-A7:S000010	20111574-48A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
Matrix Spike	20111574-48AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111574-48AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-A6:S000010	20111574-50A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B6:S000010	20111574-52A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C6:S000010	20111574-54A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D6:S000010	20111574-58A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E6:S000010	20111574-60A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
LCS-168174	LCS-168174	NA	NA	25 mL	27.5 mL	0
MBLK-168174	MBLK-168174	NA	NA	25 mL	27.5 mL	0

General Chemistry

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Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	WBLKS	**Basis:**	Wet
Lab Code:	WBLKS		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/25/20 13:45	NA	
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/25/20 12:21	NA	

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/25/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111574-33A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-C8:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111574-33A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	5.84	5.98	2.37	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/25/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111574-53A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-C6:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111574-53A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	13.11	19.7 R	40.2 *	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/25/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111997-04A DUP	**Units:**	% of sample
Lab Code:	BatchQC	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111997-04A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	13.89	13.27	4.57	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201125A

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	100	100	100	98-102

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201125B

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	99.98	100	100.0	98-102

Raw Data

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Metals

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Dry
Lab Code:	20111574-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.5**	mg/Kg-dry	4.4	10	11/25/20 21:34	11/23/20 16:25	
Lead	SW6010D	**190**	mg/Kg-dry	4.4	10	11/25/20 21:34	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.023 J**	mg/L	0.050	1	11/25/20 13:38	11/23/20 13:04	
Lead	SW6010D	**0.11**	mg/L	0.050	1	11/25/20 13:38	11/23/20 13:04	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Dry
Lab Code:	20111574-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	3.8	10	11/25/20 21:40	11/23/20 16:25	
Lead	SW6010D	**1,000**	mg/Kg-dry	3.8	10	11/25/20 21:40	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.040 J**	mg/L	0.050	1	11/25/20 14:04	11/23/20 13:04	
Lead	SW6010D	**25**	mg/L	0.050	1	11/25/20 14:04	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Dry
Lab Code:	20111574-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**43**	mg/Kg-dry	4.7	10	11/25/20 21:45	11/23/20 16:25	
Lead	SW6010D	**7,300**	mg/Kg-dry	47	100	11/29/20 20:50	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:09	11/23/20 13:04	
Lead	SW6010D	**16**	mg/L	0.050	1	11/25/20 14:09	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Dry
Lab Code:	20111574-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**24**	mg/Kg-dry	4.1	10	11/25/20 21:50	11/23/20 16:25	
Lead	SW6010D	**2,500**	mg/Kg-dry	4.1	10	11/25/20 21:50	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.021 J**	mg/L	0.050	1	11/25/20 14:14	11/23/20 13:04	
Lead	SW6010D	**26**	mg/L	0.050	1	11/25/20 14:14	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Dry
Lab Code:	20111574-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	4.6	10	11/25/20 21:55	11/23/20 16:25	
Lead	SW6010D	**3,400**	mg/Kg-dry	4.6	10	11/25/20 21:55	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:19	11/23/20 13:04	
Lead	SW6010D	**32**	mg/L	0.050	1	11/25/20 14:19	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Dry
Lab Code:	20111574-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**15**	mg/Kg-dry	3.8	10	11/25/20 22:00	11/23/20 16:25	
Lead	SW6010D	**4,500**	mg/Kg-dry	38	100	11/29/20 20:55	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:24	11/23/20 13:04	
Lead	SW6010D	**2.2**	mg/L	0.050	1	11/25/20 14:24	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	3.8	10	11/25/20 22:05	11/23/20 16:25	
Lead	SW6010D	**2,300**	mg/Kg-dry	3.8	10	11/25/20 22:05	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	4.2	10	11/25/20 22:10	11/23/20 16:25	
Lead	SW6010D	**970**	mg/Kg-dry	4.2	10	11/25/20 22:10	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Dry
Lab Code:	20111574-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**450**	mg/Kg-dry	3.8	10	11/25/20 22:25	11/23/20 16:25	
Lead	SW6010D	**10,000**	mg/Kg-dry	38	100	11/29/20 21:00	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.26**	mg/L	0.050	1	11/25/20 14:29	11/23/20 13:04	
Lead	SW6010D	**69**	mg/L	0.50	10	11/26/20 03:09	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**570**	mg/Kg-dry	4.0	10	11/25/20 22:30	11/23/20 16:25	
Lead	SW6010D	**8,400**	mg/Kg-dry	40	100	11/29/20 21:05	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**1,000**	mg/Kg-dry	3.9	10	11/25/20 22:35	11/23/20 16:25	
Lead	SW6010D	**14,000**	mg/Kg-dry	39	100	11/29/20 21:10	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Dry
Lab Code:	20111574-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**34**	mg/Kg-dry	4.4	10	11/25/20 22:40	11/23/20 16:25	
Lead	SW6010D	**1,100**	mg/Kg-dry	4.4	10	11/25/20 22:40	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.025 J**	mg/L	0.050	1	11/25/20 14:34	11/23/20 13:04	
Lead	SW6010D	**1.6**	mg/L	0.050	1	11/25/20 14:34	11/23/20 13:04	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Dry
Lab Code:	20111574-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**32**	mg/Kg-dry	4.6	10	11/25/20 22:45	11/23/20 16:25	
Lead	SW6010D	**770**	mg/Kg-dry	4.6	10	11/25/20 22:45	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.024 J**	mg/L	0.050	1	11/25/20 14:39	11/23/20 13:04	
Lead	SW6010D	**0.63**	mg/L	0.050	1	11/25/20 14:39	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Dry
Lab Code:	20111574-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**280**	mg/Kg-dry	3.6	10	11/25/20 22:50	11/23/20 16:25	
Lead	SW6010D	**4,700**	mg/Kg-dry	36	100	11/29/20 21:15	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.10**	mg/L	0.050	1	11/25/20 14:45	11/23/20 13:04	
Lead	SW6010D	**39**	mg/L	0.050	1	11/25/20 14:45	11/23/20 13:04	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Dry
Lab Code:	20111574-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**180**	mg/Kg-dry	3.6	10	11/25/20 22:56	11/23/20 16:25	
Lead	SW6010D	**8,900**	mg/Kg-dry	36	100	11/29/20 21:21	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-26		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.074**	mg/L	0.050	1	11/25/20 14:50	11/23/20 13:04	
Lead	SW6010D	**30**	mg/L	0.050	1	11/25/20 14:50	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Dry
Lab Code:	20111574-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**56**	mg/Kg-dry	4.5	10	11/25/20 23:01	11/23/20 16:25	
Lead	SW6010D	**2,300**	mg/Kg-dry	4.5	10	11/25/20 23:01	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-28		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.058**	mg/L	0.050	1	11/25/20 15:05	11/23/20 13:04	
Lead	SW6010D	**7.2**	mg/L	0.050	1	11/25/20 15:05	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**42**	mg/Kg-dry	3.7	10	11/25/20 23:06	11/23/20 16:25	
Lead	SW6010D	**1,700**	mg/Kg-dry	3.7	10	11/25/20 23:06	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**46**	mg/Kg-dry	4.4	10	11/25/20 23:11	11/23/20 16:25	
Lead	SW6010D	**1,400**	mg/Kg-dry	4.4	10	11/25/20 23:11	11/23/20 16:25	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Dry
Lab Code:	20111574-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	3.8	10	11/25/20 23:31	11/23/20 16:25	
Lead	SW6010D	**550**	mg/Kg-dry	3.8	10	11/25/20 23:31	11/23/20 16:25	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-32		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:10	11/23/20 13:04	
Lead	SW6010D	**0.53**	mg/L	0.050	1	11/25/20 15:10	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Dry
Lab Code:	20111574-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**28**	mg/Kg-dry	3.5	10	11/25/20 23:36	11/23/20 16:25	
Lead	SW6010D	**940**	mg/Kg-dry	3.5	10	11/25/20 23:36	11/23/20 16:25	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-34		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.044 J**	mg/L	0.050	1	11/25/20 15:15	11/23/20 13:04	
Lead	SW6010D	**9.9**	mg/L	0.050	1	11/25/20 15:15	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Dry
Lab Code:	20111574-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**70**	mg/Kg-dry	4.4	10	11/26/20 00:42	11/23/20 16:26	
Lead	SW6010D	**2,300**	mg/Kg-dry	4.4	10	11/26/20 00:42	11/23/20 16:26	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.038 J**	mg/L	0.050	1	11/25/20 15:20	11/23/20 13:04	
Lead	SW6010D	**29**	mg/L	0.050	1	11/25/20 15:20	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Dry
Lab Code:	20111574-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**19**	mg/Kg-dry	3.9	10	11/26/20 00:47	11/23/20 16:26	
Lead	SW6010D	**840**	mg/Kg-dry	3.9	10	11/26/20 00:47	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-38		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:26	11/23/20 13:04	
Lead	SW6010D	**1.5**	mg/L	0.050	1	11/25/20 15:26	11/23/20 13:04	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Dry
Lab Code:	20111574-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.1**	mg/Kg-dry	4.7	10	11/26/20 00:52	11/23/20 16:26	
Lead	SW6010D	**650**	mg/Kg-dry	4.7	10	11/26/20 00:52	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-40		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:31	11/23/20 13:04	
Lead	SW6010D	**6.7**	mg/L	0.050	1	11/25/20 15:31	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Dry
Lab Code:	20111574-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**42**	mg/Kg-dry	4.0	10	11/26/20 00:57	11/23/20 16:26	
Lead	SW6010D	**1,800**	mg/Kg-dry	4.0	10	11/26/20 00:57	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-42		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:36	11/23/20 13:04	
Lead	SW6010D	**2.6**	mg/L	0.050	1	11/25/20 15:36	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Dry
Lab Code:	20111574-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**15**	mg/Kg-dry	4.3	10	11/26/20 01:02	11/23/20 16:26	
Lead	SW6010D	**830**	mg/Kg-dry	4.3	10	11/26/20 01:02	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-44		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:41	11/23/20 13:04	
Lead	SW6010D	**8.9**	mg/L	0.050	1	11/25/20 15:41	11/23/20 13:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Dry
Lab Code:	20111574-45		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**97**	mg/Kg-dry	4.3	10	11/26/20 01:07	11/23/20 16:26	
Lead	SW6010D	**3,100**	mg/Kg-dry	4.3	10	11/26/20 01:07	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-45		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-46		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:46	11/23/20 13:04	
Lead	SW6010D	**23**	mg/L	0.050	1	11/25/20 15:46	11/23/20 13:04	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Dry
Lab Code:	20111574-47		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**19**	mg/Kg-dry	4.1	10	11/26/20 01:12	11/23/20 16:26	
Lead	SW6010D	**700**	mg/Kg-dry	4.1	10	11/26/20 01:12	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-47		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-48		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.023 J**	mg/L	0.050	1	11/25/20 12:16	11/23/20 14:06	
Lead	SW6010D	**1.1**	mg/L	0.050	1	11/25/20 12:16	11/23/20 14:06	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Dry
Lab Code:	20111574-49		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**64**	mg/Kg-dry	3.9	10	11/26/20 01:17	11/23/20 16:26	
Lead	SW6010D	**1,300**	mg/Kg-dry	3.9	10	11/26/20 01:17	11/23/20 16:26	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-49		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-50		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.042 J**	mg/L	0.050	1	11/25/20 12:32	11/23/20 14:06	
Lead	SW6010D	**3.6**	mg/L	0.050	1	11/25/20 12:32	11/23/20 14:06	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Dry
Lab Code:	20111574-51		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**87**	mg/Kg-dry	3.7	10	11/26/20 01:37	11/23/20 16:26	
Lead	SW6010D	**12,000**	mg/Kg-dry	37	100	11/29/20 22:21	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-51		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-52		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.031 J**	mg/L	0.050	1	11/25/20 12:37	11/23/20 14:06	
Lead	SW6010D	**53**	mg/L	0.50	10	11/26/20 03:04	11/23/20 14:06	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Dry
Lab Code:	20111574-53		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**180**	mg/Kg-dry	4.6	10	11/26/20 01:42	11/23/20 16:26	
Lead	SW6010D	**1,500**	mg/Kg-dry	4.6	10	11/26/20 01:42	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-53		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-54		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.017 J**	mg/L	0.050	1	11/25/20 12:42	11/23/20 14:06	
Lead	SW6010D	**8.2**	mg/L	0.050	1	11/25/20 12:42	11/23/20 14:06	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-55		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**24**	mg/Kg-dry	4.1	10	11/26/20 01:48	11/23/20 16:26	
Lead	SW6010D	**1,400**	mg/Kg-dry	4.1	10	11/26/20 01:48	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-55		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-56		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**32**	mg/Kg-dry	3.9	10	11/26/20 01:53	11/23/20 16:26	
Lead	SW6010D	**10,000**	mg/Kg-dry	39	100	11/29/20 22:26	11/23/20 16:26	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-56		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Dry
Lab Code:	20111574-57		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	4.7	10	11/26/20 01:58	11/23/20 16:26	
Lead	SW6010D	**1,900**	mg/Kg-dry	4.7	10	11/26/20 01:58	11/23/20 16:26	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-57		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-58		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 12:47	11/23/20 14:06	
Lead	SW6010D	**2.3**	mg/L	0.050	1	11/25/20 12:47	11/23/20 14:06	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Dry
Lab Code:	20111574-59		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**4.9**	mg/Kg-dry	3.9	10	11/26/20 02:03	11/23/20 16:26	
Lead	SW6010D	**240**	mg/Kg-dry	3.9	10	11/26/20 02:03	11/23/20 16:26	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-59		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/19/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-60		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 13:02	11/23/20 14:06	
Lead	SW6010D	**1.3**	mg/L	0.050	1	11/25/20 13:02	11/23/20 14:06	

Calibration Summary

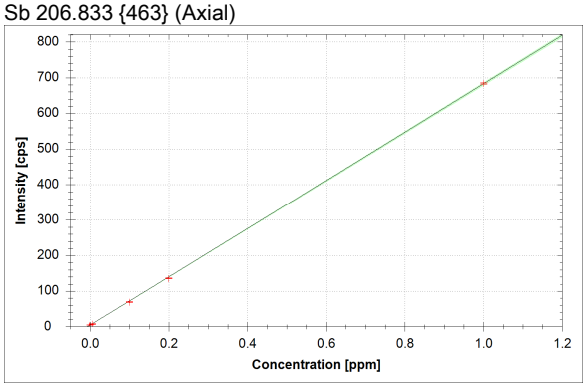
11/20/2020 11:36:51 AM

QTEGRA

LabBook: ICP2_201119C.imexp

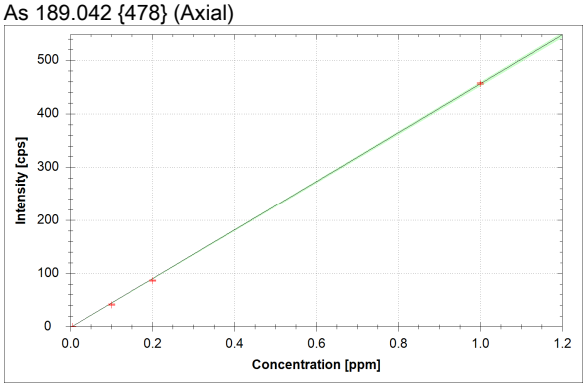
Calibration Graphs

Sb 206.833 {463} (Axial)



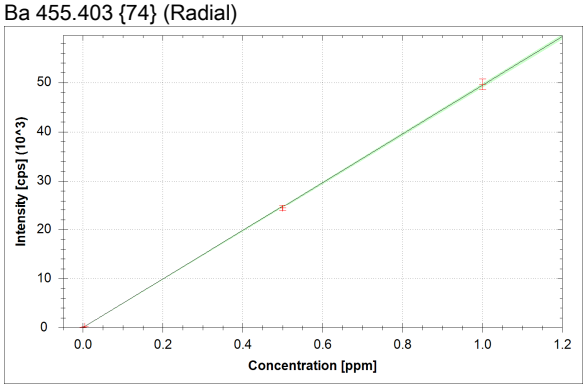
f(x) = 678.3993*x + 4.3934
R² = 0.9999
BEC = 0.006 ppm
LoD = 0.0014 ppm

As 189.042 {478} (Axial)



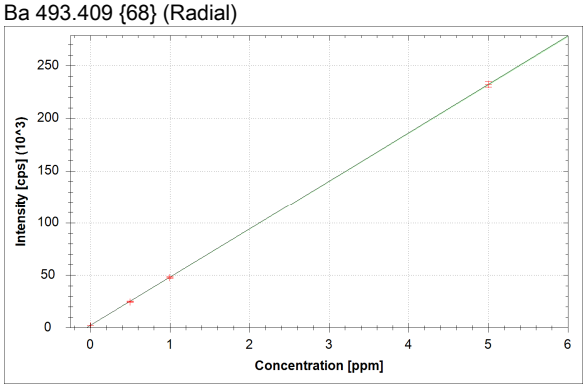
f(x) = 457.3675*x + -1.4999
R² = 0.9998
BEC = -0.003 ppm
LoD = 0.0018 ppm

Ba 455.403 {74} (Radial)



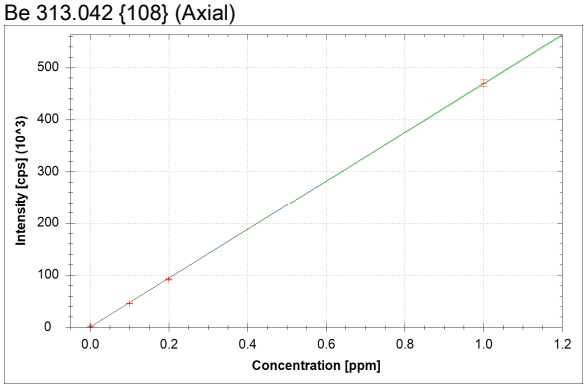
f(x) = 49413.6907*x + 30.5016
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0001 ppm

Ba 493.409 {68} (Radial)



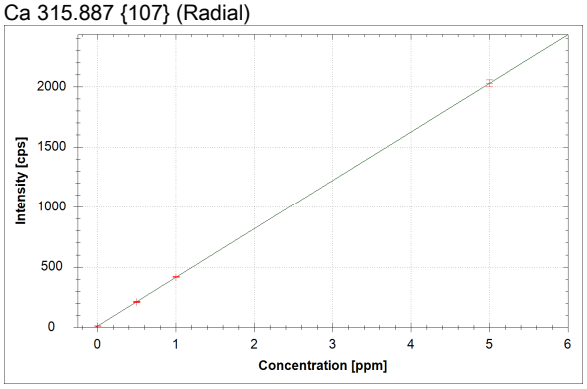
f(x) = 45984.8020*x + 2180.8482
R² = 1.0000
BEC = 0.047 ppm
LoD = 0.0009 ppm

Be 313.042 {108} (Axial)



f(x) = 468428.9147*x + 563.5211
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



f(x) = 403.5923*x + 10.2033
R² = 1.0000
BEC = 0.025 ppm
LoD = 0.0066 ppm

Calibration Summary

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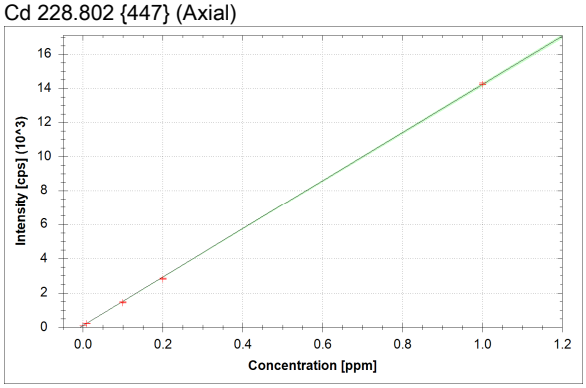
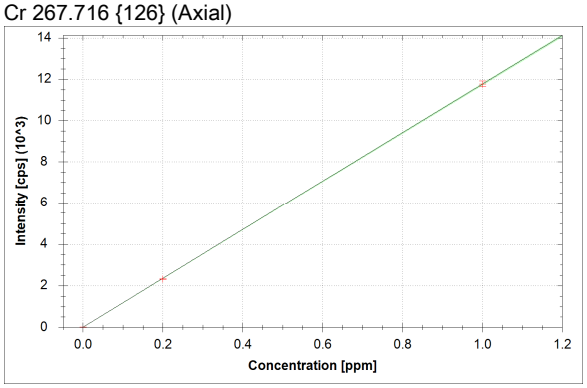
QTEGRA

Cd 228.802 {447} (Axial)



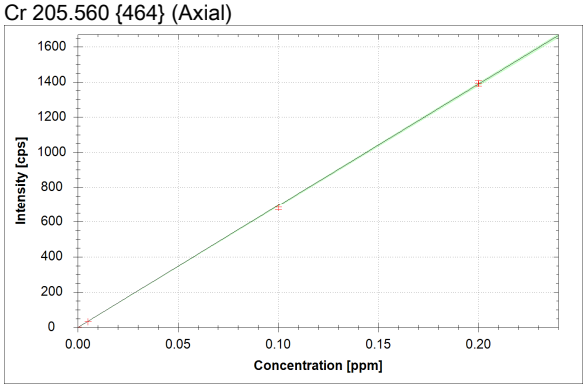
f(x) = 14123.6706*x + 100.5121
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0002 ppm

Cr 267.716 {126} (Axial)



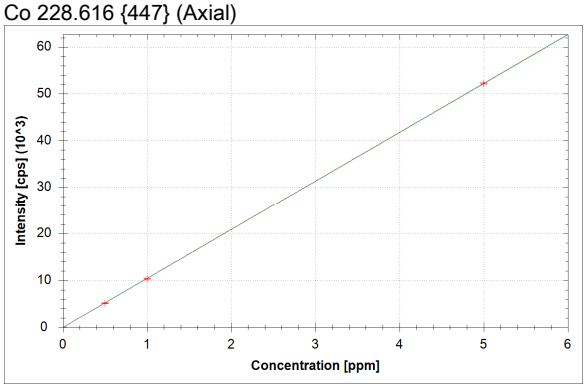
f(x) = 11757.1467*x + 4.5527
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0005 ppm

Cr 205.560 {464} (Axial)



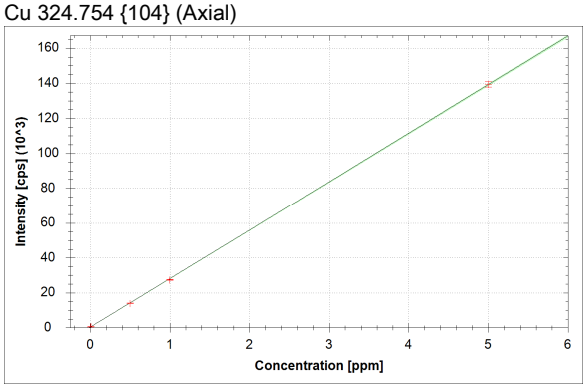
f(x) = 6937.8847*x + -0.0053
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Co 228.616 {447} (Axial)



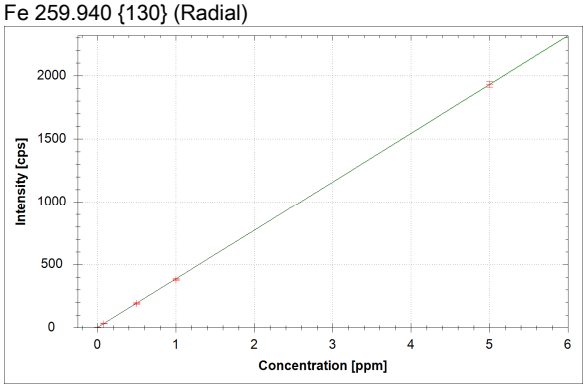
f(x) = 10443.1559*x + -1.5126
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Cu 324.754 {104} (Axial)



f(x) = 27771.8010*x + 353.9814
R² = 1.0000
BEC = 0.013 ppm
LoD = 0.0011 ppm

Fe 259.940 {130} (Radial)



f(x) = 385.8105*x + 1.5713
R² = 1.0000
BEC = 0.004 ppm
LoD = 0.0049 ppm

Calibration Summary

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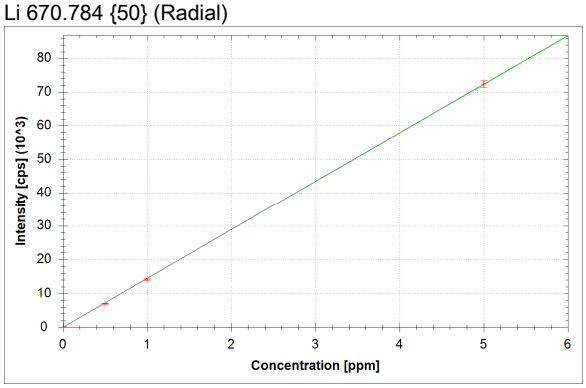
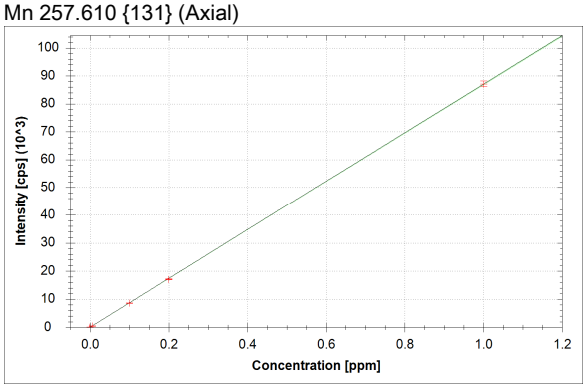
QTEGRA

Li 670.784 {50} (Radial)



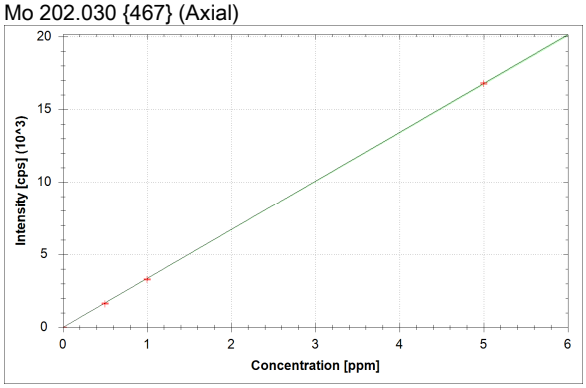
f(x) = 14457.5433*x + -1.0063
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0019 ppm

Mn 257.610 {131} (Axial)



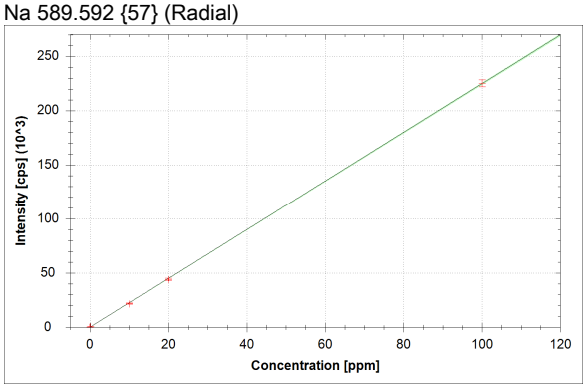
f(x) = 86999.6387*x + 32.6189
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0000 ppm

Mo 202.030 {467} (Axial)



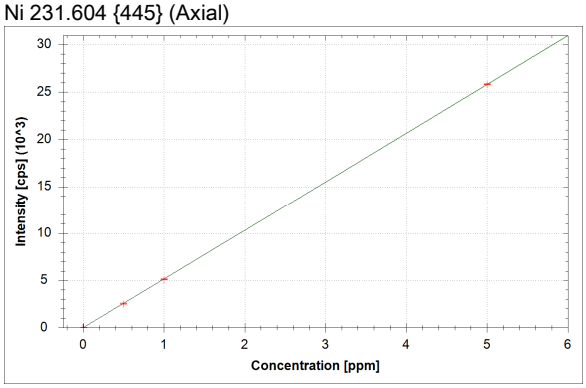
f(x) = 3356.9679*x + -0.6924
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Na 589.592 {57} (Radial)



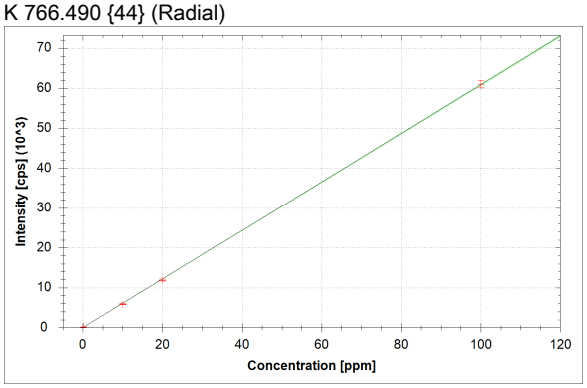
f(x) = 2248.1673*x + 168.4503
R² = 1.0000
BEC = 0.075 ppm
LoD = 0.0146 ppm

Ni 231.604 {445} (Axial)



f(x) = 5159.3238*x + 1.1245
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

K 766.490 {44} (Radial)



f(x) = 608.5989*x + 32.2547
R² = 0.9999
BEC = 0.053 ppm
LoD = 0.0187 ppm

Calibration Summary

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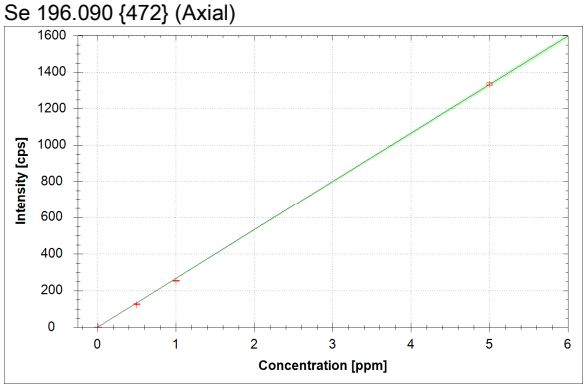
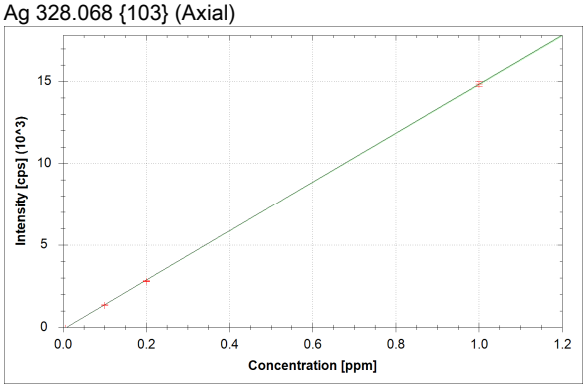
QTEGRA

Se 196.090 {472} (Axial)



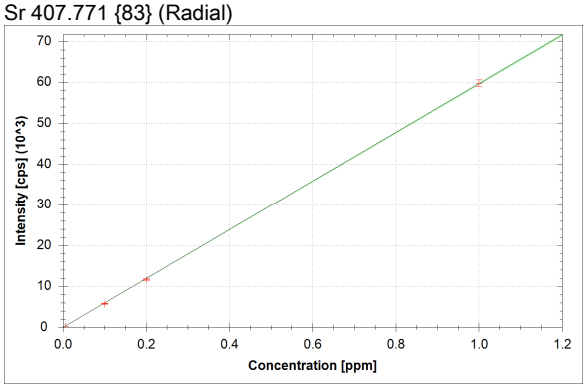
f(x) = 266.3053*x + 0.1544
R² = 0.9998
BEC = 0.001 ppm
LoD = 0.0065 ppm

Ag 328.068 {103} (Axial)



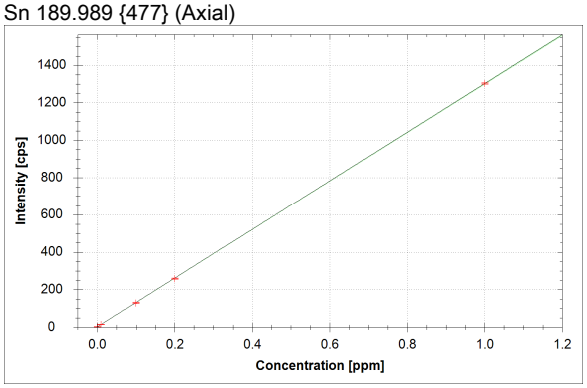
f(x) = 14963.9287*x + -131.8351
R² = 1.0000
BEC = -0.009 ppm
LoD = 0.0002 ppm

Sr 407.771 {83} (Radial)



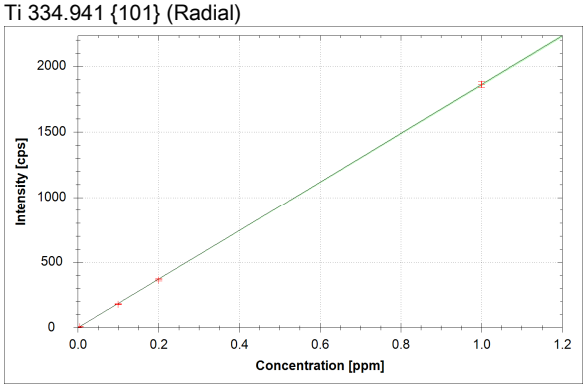
f(x) = 59704.2721*x + -10.9384
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Sn 189.989 {477} (Axial)



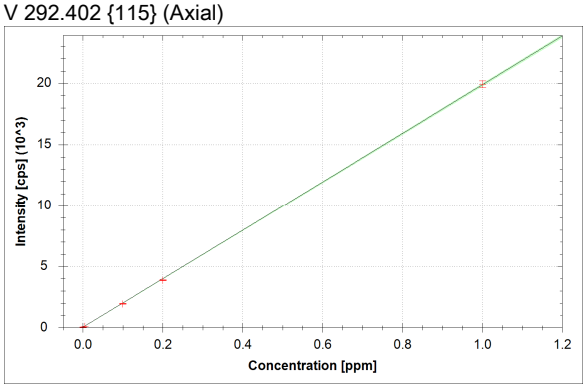
f(x) = 1300.2222*x + 2.4956
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0005 ppm

Ti 334.941 {101} (Radial)



f(x) = 1860.8576*x + -0.3284
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0026 ppm

V 292.402 {115} (Axial)



f(x) = 19840.4486*x + 39.7519
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0004 ppm

Calibration Summary

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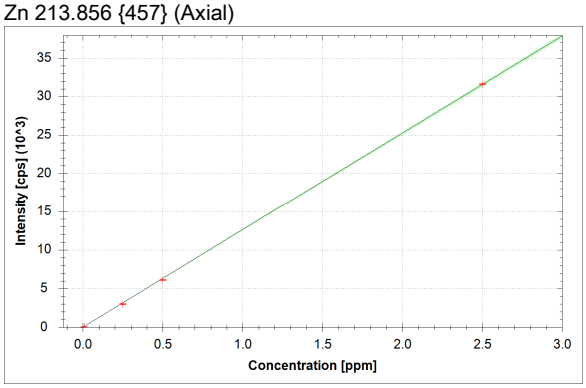
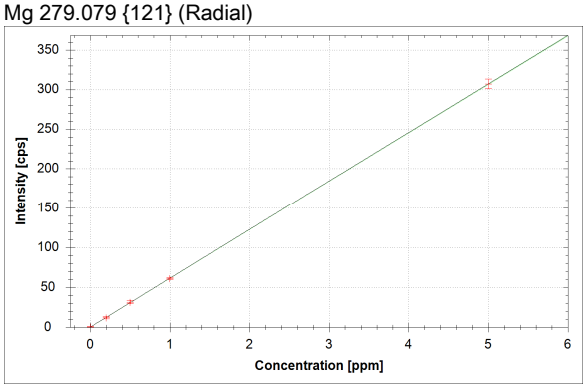
Zn 213.856 {457} (Axial)



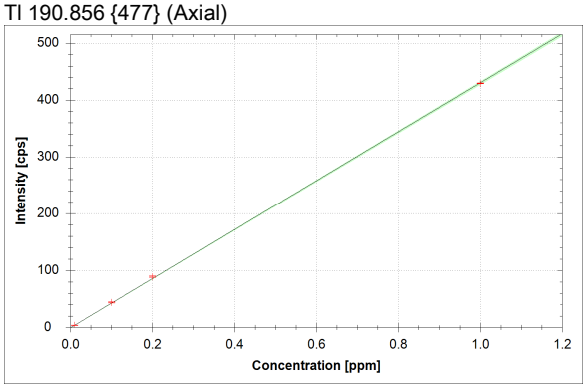
f(x) = 12618.7368*x + 20.4842
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



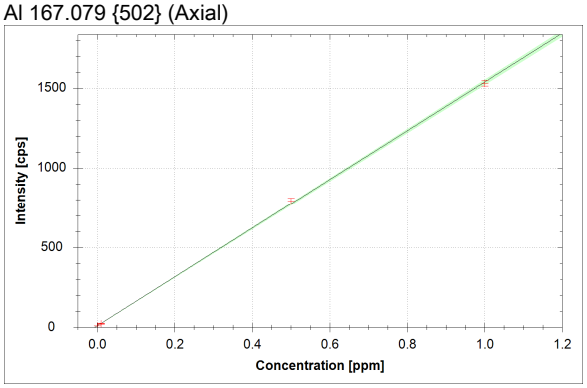
f(x) = 61.3568*x + 0.2945
R² = 1.0000
BEC = 0.005 ppm
LoD = 0.0201 ppm

Tl 190.856 {477} (Axial)



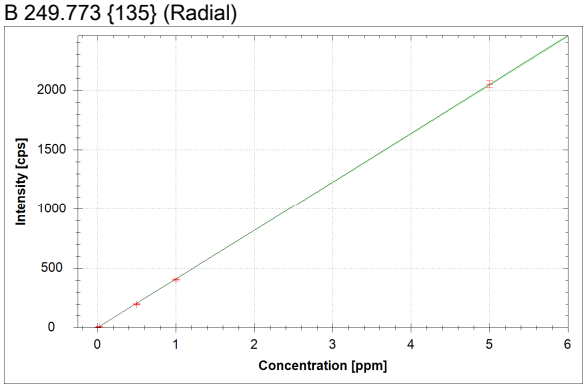
f(x) = 431.1846*x + -0.7854
R² = 0.9999
BEC = -0.002 ppm
LoD = 0.0042 ppm

Al 167.079 {502} (Axial)



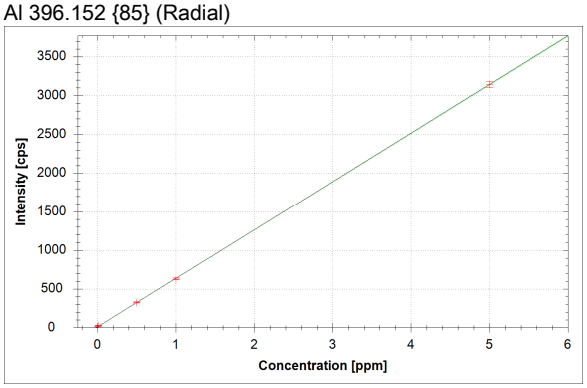
f(x) = 1528.6422*x + 10.0415
R² = 0.9998
BEC = 0.007 ppm
LoD = 0.0001 ppm

B 249.773 {135} (Radial)



f(x) = 408.8947*x + 0.7898
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0057 ppm

Al 396.152 {85} (Radial)



f(x) = 626.2209*x + 11.1230
R² = 1.0000
BEC = 0.018 ppm
LoD = 0.0137 ppm

Calibration Summary

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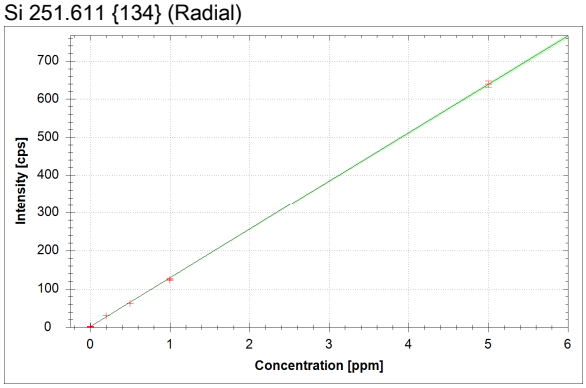
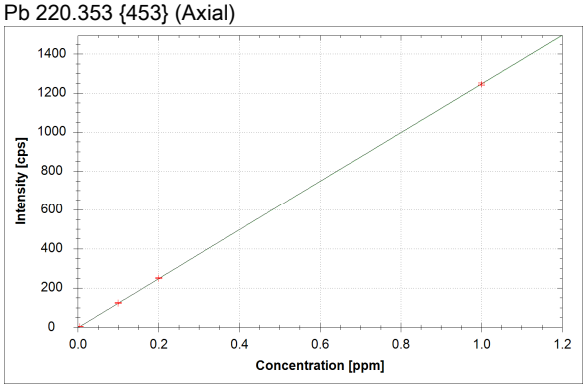
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 127.3127*x + 2.0009
R² = 0.9999
BEC = 0.016 ppm
LoD = 0.0229 ppm

Pb 220.353 {453} (Axial)



f(x) = 1249.1839*x + -2.4369
R² = 1.0000
BEC = -0.002 ppm
LoD = 0.0007 ppm

Calibration Summary

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Standards

Standard: ICAL2
Analysis started at: 11/19/2020 12:00:53 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0043 ppm	23.4 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0043 ppm	21.1 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0048 ppm	4.4 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0018 ppm	2.5 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.4934 ppm	1.8 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0091 ppm	1.9 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0048 ppm	0.2 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0047 ppm	1.7 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0102 ppm	3.9 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0750 ppm	4.9 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0113 ppm	10.8 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0048 ppm	2.2 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0048 ppm	2.6 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1898 ppm	2.4 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0048 ppm	1.1 %	0.0050 ppm
K 766.490 {44} (Radial)	0.2544 ppm	4.6 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0068 ppm	14.4 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0049 ppm	5.5 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0046 ppm	3.6 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0096 ppm	2.1 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0038 ppm	9.8 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0044 ppm	3.6 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0092 ppm	2.1 %	0.0100 ppm
Sc 357.253 {94} (Axial)	100.6204 %	0.6 %	
Sc 188.060 {479} (Axial)	101.0651 %	0.2 %	
Mg 279.079 {121} (Radial)	0.1915 ppm	12.7 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0105 ppm	8.2 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0083 ppm	26.1 %	0.0100 ppm
Sc 227.318 {448} (Axial)	101.2448 %	0.2 %	
B 249.773 {135} (Radial)	0.0181 ppm	27.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0264 ppm	13.1 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2209 ppm	1.5 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0053 ppm	9.0 %	0.0050 ppm
Y 224.306 {450} (Axial)	101.6599 %	0.1 %	
Sc 361.384 {93} (Radial)	99.9512 %	0.4 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/19/2020 12:06:02 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0956 ppm	2.3 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0931 ppm	3.9 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4919 ppm	2.0 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4893 ppm	2.1 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0957 ppm	0.9 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.4990 ppm	1.8 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0953 ppm	2.5 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0986 ppm	2.3 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4898 ppm	2.4 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4896 ppm	0.8 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4940 ppm	2.6 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4797 ppm	2.2 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0987 ppm	1.0 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4835 ppm	2.2 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.6083 ppm	2.2 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4912 ppm	2.2 %	0.5000 ppm
K 766.490 {44} (Radial)	9.6404 ppm	2.3 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4672 ppm	2.6 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0985 ppm	0.6 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0960 ppm	2.0 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0977 ppm	2.5 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0960 ppm	1.5 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0962 ppm	0.9 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2361 ppm	2.4 %	0.2500 ppm
Sc 357.253 {94} (Axial)	97.9283 %	0.4 %	
Sc 188.060 {479} (Axial)	97.7314 %	0.5 %	
Mg 279.079 {121} (Radial)	0.5111 ppm	6.5 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1035 ppm	2.2 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5107 ppm	2.3 %	0.5000 ppm
Sc 227.318 {448} (Axial)	100.0374 %	0.5 %	
B 249.773 {135} (Radial)	0.4785 ppm	2.2 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.5009 ppm	1.9 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4762 ppm	0.7 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1005 ppm	2.8 %	0.1000 ppm
Y 224.306 {450} (Axial)	99.0431 %	0.6 %	
Sc 361.384 {93} (Radial)	98.8123 %	0.4 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/19/2020 12:11:01 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1934 ppm	1.0 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1921 ppm	1.3 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0041 ppm	2.2 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9897 ppm	2.1 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1947 ppm	1.0 %	0.2000 ppm
Ca 315.887 {107} (Radial)	1.0044 ppm	1.4 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1931 ppm	1.4 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1968 ppm	0.7 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.2007 ppm	1.2 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9890 ppm	1.2 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9731 ppm	0.9 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9849 ppm	2.1 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9732 ppm	2.3 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1965 ppm	1.0 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9796 ppm	1.3 %	1.0000 ppm
Na 589.592 {57} (Radial)	19.6215 ppm	2.4 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9909 ppm	1.2 %	1.0000 ppm
K 766.490 {44} (Radial)	19.5083 ppm	2.3 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9533 ppm	0.9 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1961 ppm	0.8 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1946 ppm	2.1 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1974 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1959 ppm	2.5 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1938 ppm	1.1 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4808 ppm	1.3 %	0.5000 ppm
Sc 357.253 {94} (Axial)	98.4489 %	0.3 %	
Sc 188.060 {479} (Axial)	95.3583 %	0.6 %	
Mg 279.079 {121} (Radial)	0.9933 ppm	2.6 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2081 ppm	1.3 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9947 ppm	1.2 %	1.0000 ppm
Sc 227.318 {448} (Axial)	100.0366 %	0.5 %	
B 249.773 {135} (Radial)	0.9786 ppm	2.2 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9856 ppm	2.1 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9633 ppm	2.6 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.2018 ppm	1.2 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.1953 %	0.5 %	
Sc 361.384 {93} (Radial)	99.4762 %	0.3 %	

Calibration Summary

11/20/2020 11:36:51 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/19/2020 12:15:58 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0018 ppm	0.5 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0023 ppm	0.5 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0031 ppm	1.1 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0015 ppm	1.4 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9999 ppm	1.5 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0019 ppm	0.4 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0006 ppm	1.2 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0032 ppm	0.3 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0064 ppm	1.2 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0037 ppm	1.1 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0074 ppm	1.5 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0008 ppm	1.2 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0057 ppm	0.3 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.1149 ppm	1.5 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0027 ppm	0.2 %	5.0000 ppm
K 766.490 {44} (Radial)	100.1342 ppm	1.5 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0126 ppm	0.6 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0009 ppm	1.0 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0015 ppm	1.4 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0008 ppm	0.3 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0012 ppm	1.3 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0016 ppm	1.4 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5052 ppm	0.4 %	2.5000 ppm
Sc 357.253 {94} (Axial)	92.5342 %	0.2 %	
Sc 188.060 {479} (Axial)	87.3739 %	0.2 %	
Mg 279.079 {121} (Radial)	5.0006 ppm	2.0 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9980 ppm	0.1 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	107.4510 %	0.2 %	
B 249.773 {135} (Radial)	5.0064 ppm	1.5 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0028 ppm	1.3 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0089 ppm	1.3 %	5.0000 ppm
Pb 220.353 {453} (Axial)	0.9996 ppm	0.5 %	1.0000 ppm
Y 224.306 {450} (Axial)	93.3924 %	0.1 %	
Sc 361.384 {93} (Radial)	96.8711 %	0.3 %	

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LabBook: ICP2_201119C.imexp

ICAL1

Sample type: BLK Analysis started at: 11/19/2020 11:55:45 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-127.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-9.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	3.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	-4.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/19/2020 12:00:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0043 ppm	23.4 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0043 ppm	21.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	238 cps	0.0048 ppm	4.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	841 cps	0.0018 ppm	2.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	199 cps	0.4934 ppm	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	128 cps	0.0091 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	33 cps	0.0048 ppm	0.2 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0047 ppm	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	284 cps	0.0102 ppm	3.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	29 cps	0.0750 ppm	4.9 %	0.0 ppm
Li 670.784 {50} (Radial)	163 cps	0.0113 ppm	10.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	419 cps	0.0048 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	16 cps	0.0048 ppm	2.6 %	0.0 ppm
Na 589.592 {57} (Radial)	427 cps	0.1898 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0048 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	155 cps	0.2544 ppm	4.6 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0068 ppm	14.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	74 cps	0.0049 ppm	5.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	272 cps	0.0046 ppm	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0096 ppm	2.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0038 ppm	9.8 %	0.0 ppm
V 292.402 {115} (Axial)	88 cps	0.0044 ppm	3.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	116 cps	0.0092 ppm	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6204 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		101.0651 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	12 cps	0.1915 ppm	12.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	5 cps	0.0105 ppm	8.2 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0083 ppm	26.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2448 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.0181 ppm	27.9 %	0.0 ppm
Al 396.152 {85} (Radial)	17 cps	0.0264 ppm	13.1 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.2209 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0053 ppm	9.0 %	0.0 ppm
Y 224.306 {450} (Axial)		101.6599 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.9512 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/19/2020 12:06:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	0.0956 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	43 cps	0.0931 ppm	3.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	24,305 cps	0.4919 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	22,500 cps	0.4893 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	44,844 cps	0.0957 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	201 cps	0.4990 ppm	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,345 cps	0.0953 ppm	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	684 cps	0.0986 ppm	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	5,115 cps	0.4898 ppm	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	13,597 cps	0.4896 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	191 cps	0.4940 ppm	2.6 %	0.0 ppm
Li 670.784 {50} (Radial)	6,935 cps	0.4797 ppm	2.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,586 cps	0.0987 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,623 cps	0.4835 ppm	2.2 %	0.0 ppm
Na 589.592 {57} (Radial)	21,601 cps	9.6083 ppm	2.2 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,534 cps	0.4912 ppm	2.2 %	0.0 ppm
K 766.490 {44} (Radial)	5,867 cps	9.6404 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	124 cps	0.4672 ppm	2.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,474 cps	0.0985 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,734 cps	0.0960 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	127 cps	0.0977 ppm	2.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	179 cps	0.0960 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,908 cps	0.0962 ppm	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,979 cps	0.2361 ppm	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9283 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.7314 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	31 cps	0.5111 ppm	6.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	45 cps	0.1035 ppm	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	781 cps	0.5107 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0374 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	196 cps	0.4785 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	314 cps	0.5009 ppm	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	61 cps	0.4762 ppm	0.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	126 cps	0.1005 ppm	2.8 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0431 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.8123 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/19/2020 12:11:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	131 cps	0.1934 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	88 cps	0.1921 ppm	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	49,615 cps	1.0041 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	45,510 cps	0.9897 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	91,187 cps	0.1947 ppm	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	405 cps	1.0044 ppm	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,728 cps	0.1931 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	2,314 cps	0.1968 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,392 cps	0.2007 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	10,329 cps	0.9890 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	27,025 cps	0.9731 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	380 cps	0.9849 ppm	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	14,070 cps	0.9732 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	17,099 cps	0.1965 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,288 cps	0.9796 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	44,112 cps	19.6215 ppm	2.4 %	0.5 ppm
Ni 231.604 {445} (Axial)	5,112 cps	0.9909 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	11,873 cps	19.5083 ppm	2.3 %	0.4 ppm
Se 196.090 {472} (Axial)	254 cps	0.9533 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,934 cps	0.1961 ppm	0.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,621 cps	0.1946 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	257 cps	0.1974 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	365 cps	0.1959 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	3,844 cps	0.1938 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,066 cps	0.4808 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4489 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.3583 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	61 cps	0.9933 ppm	2.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	90 cps	0.2081 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1,520 cps	0.9947 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0366 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	400 cps	0.9786 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	617 cps	0.9856 ppm	2.1 %	0.0 ppm
Si 251.611 {134} (Radial)	123 cps	0.9633 ppm	2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	252 cps	0.2018 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1953 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		99.4762 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/19/2020 12:15:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	680 cps	1.0018 ppm	0.5 %	0.0 ppm
As 189.042 {478} (Axial)	458 cps	1.0023 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	230,068 cps	5.0031 ppm	1.1 %	0.1 ppm
Be 313.042 {108} (Axial)	469,129 cps	1.0015 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,018 cps	4.9999 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	14,150 cps	1.0019 ppm	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	11,765 cps	1.0006 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	52,249 cps	5.0032 ppm	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	139,037 cps	5.0064 ppm	1.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,930 cps	5.0037 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	72,394 cps	5.0074 ppm	1.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	87,071 cps	1.0008 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	16,804 cps	5.0057 ppm	0.3 %	0.0 ppm
Na 589.592 {57} (Radial)	225,075 cps	100.1149 ppm	1.5 %	1.5 ppm
Ni 231.604 {445} (Axial)	25,811 cps	5.0027 ppm	0.2 %	0.0 ppm
K 766.490 {44} (Radial)	60,942 cps	100.1342 ppm	1.5 %	1.5 ppm
Se 196.090 {472} (Axial)	1,335 cps	5.0126 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	14,978 cps	1.0009 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	59,792 cps	1.0015 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,301 cps	1.0008 ppm	0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,863 cps	1.0012 ppm	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	19,873 cps	1.0016 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	31,613 cps	2.5052 ppm	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.5342 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		87.3739 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	307 cps	5.0006 ppm	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	430 cps	0.9980 ppm	0.1 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		107.4510 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	2,047 cps	5.0064 ppm	1.5 %	0.1 ppm
Al 396.152 {85} (Radial)	3,133 cps	5.0028 ppm	1.3 %	0.1 ppm
Si 251.611 {134} (Radial)	638 cps	5.0089 ppm	1.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,249 cps	0.9996 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		93.3924 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.8711 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/19/2020 12:46:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-107 cps	-0.1578 ppm	11.3 %	0.0 ppm
As 189.042 {478} (Axial)	-25 cps	-0.0547 ppm	3.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,080,935 cps	21.8752 ppm	3.4 %	0.7 ppm
Ba 493.409 {68} (Radial)	961,429 cps	20.9075 ppm	2.7 %	0.6 ppm
Be 313.042 {108} (Axial)	928,240 cps	1.9816 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	80,683 cps	199.9122 ppm	1.7 %	3.3 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	144.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	116,189 cps	9.8824 ppm	1.5 %	0.1 ppm
Cr 205.560 {464} (Axial)	62,741 cps	9.0433 ppm	15.7 %	1.4 ppm
Co 228.616 {447} (Axial)	107 cps	0.0103 ppm	23.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	581,014 cps	20.9210 ppm	1.8 %	0.4 ppm
Fe 259.940 {130} (Radial)	76,364 cps	197.9309 ppm	1.6 %	3.1 ppm
Li 670.784 {50} (Radial)	162,440 cps	11.2357 ppm	1.8 %	0.2 ppm
Mn 257.610 {131} (Axial)	828,391 cps	9.5218 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	-4 cps	-0.0011 ppm	18.4 %	0.0 ppm
Na 589.592 {57} (Radial)	-35 cps	-0.0157 ppm	54.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	-144 cps	-0.0280 ppm	9.6 %	0.0 ppm
K 766.490 {44} (Radial)	41 cps	0.0673 ppm	13.6 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0123 ppm	19.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	33,491 cps	2.2381 ppm	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	628,183 cps	10.5216 ppm	2.0 %	0.2 ppm
Sn 189.989 {477} (Axial)	-20 cps	-0.0155 ppm	19.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	18,563 cps	9.9753 ppm	1.5 %	0.2 ppm
V 292.402 {115} (Axial)	204,443 cps	10.3044 ppm	1.3 %	0.1 ppm
Zn 213.856 {457} (Axial)	-1,543 cps	-0.1222 ppm	4.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		86.4896 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		77.9251 %	3.0 %	2.3 %
Mg 279.079 {121} (Radial)	13,104 cps	213.5686 ppm	1.6 %	3.5 ppm
Tl 190.856 {477} (Axial)	-17 cps	-0.0404 ppm	17.6 %	0.0 ppm
Al 167.079 {502} (Axial)	24,727 cps	16.1758 ppm	6.1 %	1.0 ppm
Sc 227.318 {448} (Axial)		80.9287 %	2.4 %	1.9 %
B 249.773 {135} (Radial)	8,688 cps	21.2465 ppm	1.8 %	0.4 ppm
Al 396.152 {85} (Radial)	132,826 cps	212.1076 ppm	1.6 %	3.4 ppm
Si 251.611 {134} (Radial)	2,608 cps	20.4837 ppm	1.9 %	0.4 ppm
Pb 220.353 {453} (Axial)	4 cps	0.0032 ppm	124.3 %	0.0 ppm
Y 224.306 {450} (Axial)		87.1976 %	2.9 %	2.6 %
Sc 361.384 {93} (Radial)		91.1501 %	0.5 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/19/2020 12:52:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3,460 cps	5.1008 ppm	1.1 %	0.1 ppm
As 189.042 {478} (Axial)	2,163 cps	4.7290 ppm	1.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	152 cps	0.0031 ppm	19.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	955 cps	0.0208 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-108 cps	-0.0002 ppm	10.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	16 cps	0.0405 ppm	0.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	398 cps	0.0282 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	65.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	42 cps	0.0060 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	107,183 cps	10.2635 ppm	1.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	256 cps	0.0092 ppm	2.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	27 cps	0.0711 ppm	16.2 %	0.0 ppm
Li 670.784 {50} (Radial)	86 cps	0.0060 ppm	12.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	-288 cps	-0.0033 ppm	4.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	34,291 cps	10.2149 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	1 cps	0.0004 ppm	737.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	53,100 cps	10.2919 ppm	1.1 %	0.1 ppm
K 766.490 {44} (Radial)	62 cps	0.1015 ppm	15.0 %	0.0 ppm
Se 196.090 {472} (Axial)	1,264 cps	4.7475 ppm	1.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	-1 cps	0.0000 ppm	173.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	81 cps	0.0014 ppm	23.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	6,449 cps	4.9597 ppm	1.1 %	0.1 ppm
Ti 334.941 {101} (Radial)	14 cps	0.0075 ppm	12.0 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	372.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	60,008 cps	4.7555 ppm	1.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.3790 %	0.3 %	0.2 %
Sc 188.060 {479} (Axial)		92.8411 %	0.2 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	0.0002 ppm	5,980.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	2,372 cps	5.5001 ppm	0.9 %	0.1 ppm
Al 167.079 {502} (Axial)	11 cps	0.0073 ppm	29.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.3305 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	16 cps	0.0384 ppm	12.4 %	0.0 ppm
Al 396.152 {85} (Radial)	297 cps	0.4747 ppm	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	12 cps	0.0973 ppm	2.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	6,497 cps	5.2014 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		96.1350 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.0080 %	0.6 %	0.5 %

Calibration Summary

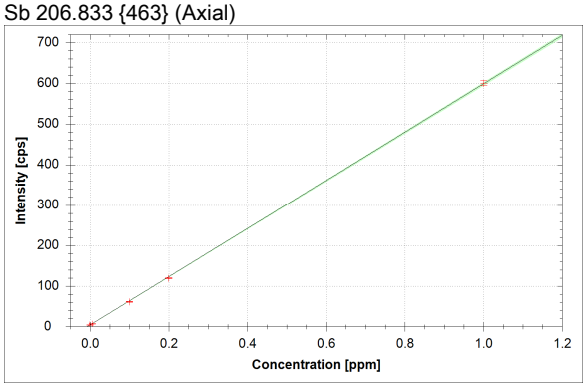
11/29/2020 10:55:31 AM

QTEGRA

LabBook: ICP2_201125A.imexp

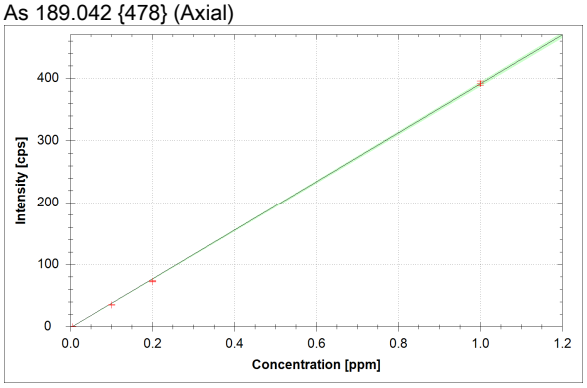
Calibration Graphs

Sb 206.833 {463} (Axial)



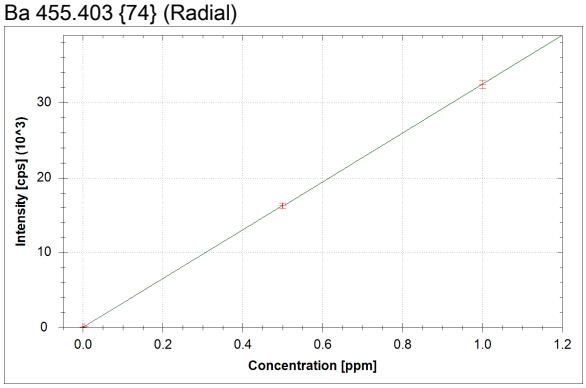
f(x) = 594.6076*x + 4.3973
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0022 ppm

As 189.042 {478} (Axial)



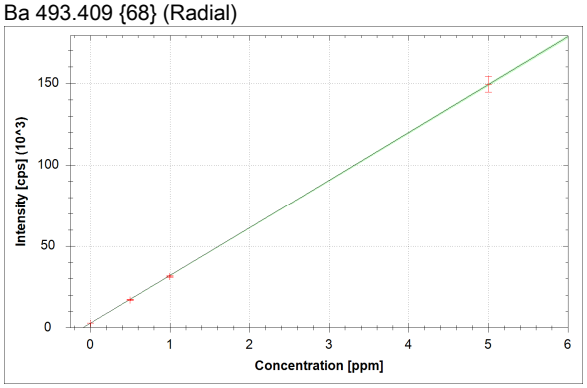
f(x) = 392.7329*x + -1.7770
R² = 0.9998
BEC = -0.005 ppm
LoD = 0.0007 ppm

Ba 455.403 {74} (Radial)



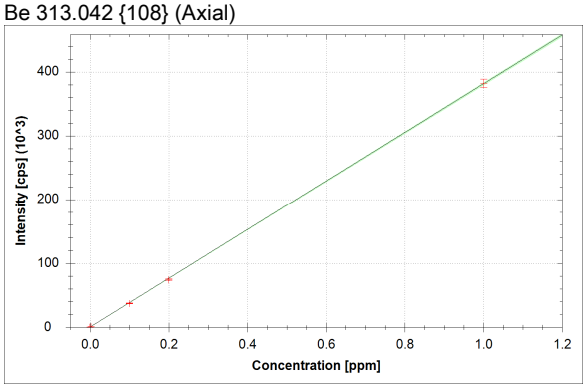
f(x) = 32399.9454*x + 39.5630
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



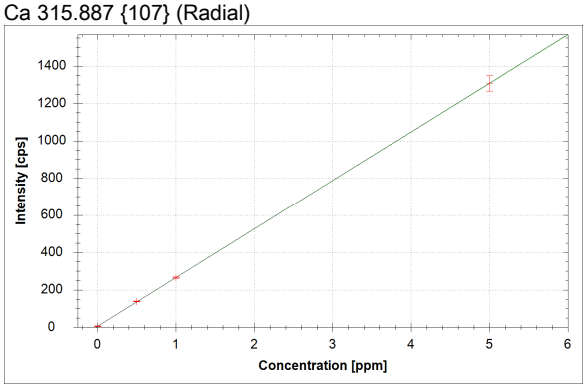
f(x) = 29283.6575*x + 2710.0596
R² = 0.9999
BEC = 0.093 ppm
LoD = 0.0002 ppm

Be 313.042 {108} (Axial)



f(x) = 380940.5571*x + 577.1443
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



f(x) = 260.4909*x + 5.3247
R² = 1.0000
BEC = 0.020 ppm
LoD = 0.0302 ppm

Calibration Summary

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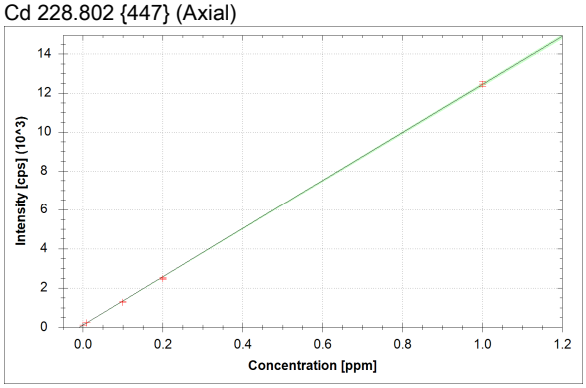
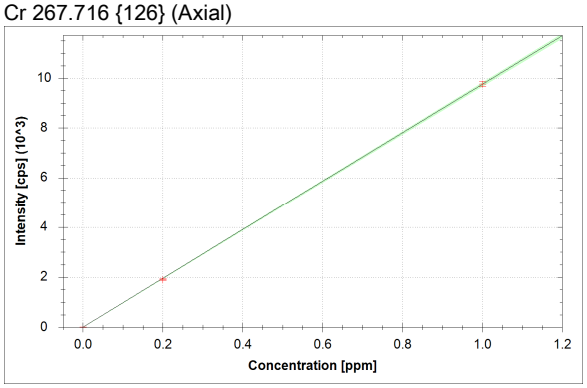
Cd 228.802 {447} (Axial)



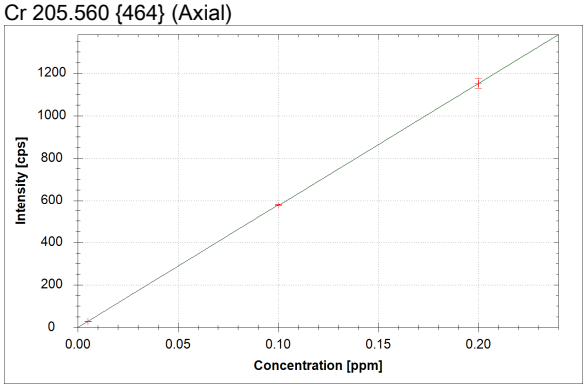
f(x) = 12324.0064*x + 109.3172
R² = 0.9999
BEC = 0.009 ppm
LoD = 0.0002 ppm

Cr 267.716 {126} (Axial)



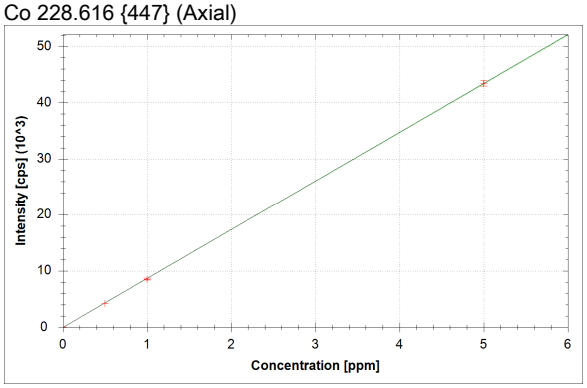
f(x) = 9747.3492*x + 6.2307
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0003 ppm

Cr 205.560 {464} (Axial)



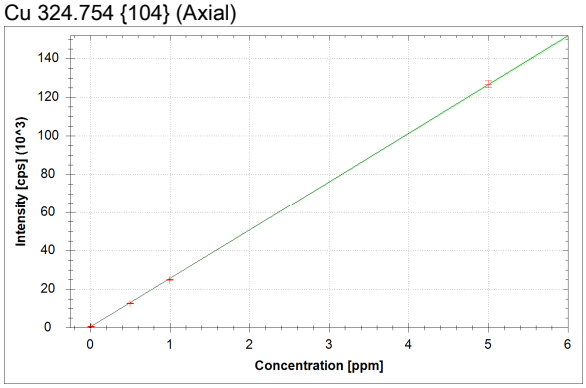
f(x) = 5757.6764*x + -0.4043
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Co 228.616 {447} (Axial)



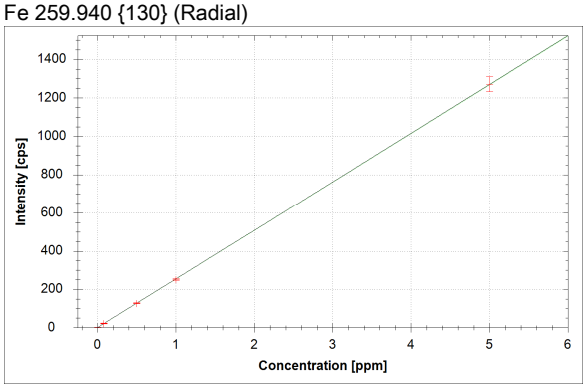
f(x) = 8681.9929*x + -2.1380
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Cu 324.754 {104} (Axial)



f(x) = 25216.2415*x + 390.8473
R² = 0.9999
BEC = 0.015 ppm
LoD = 0.0002 ppm

Fe 259.940 {130} (Radial)



f(x) = 253.7195*x + 0.8098
R² = 1.0000
BEC = 0.003 ppm
LoD = 0.0076 ppm

Calibration Summary

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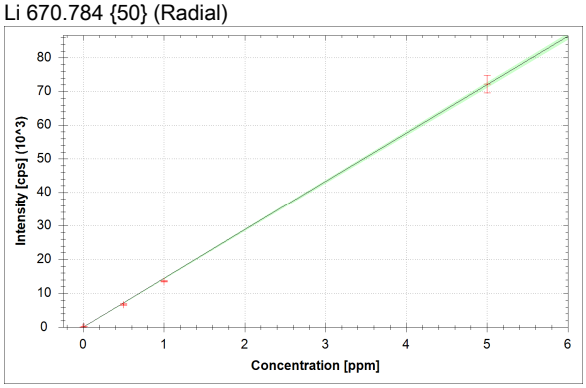
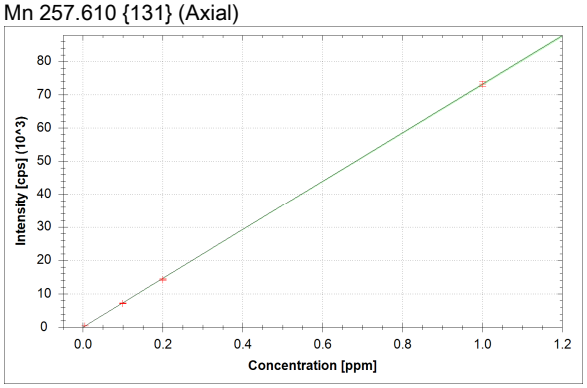
QTEGRA

Li 670.784 {50} (Radial)



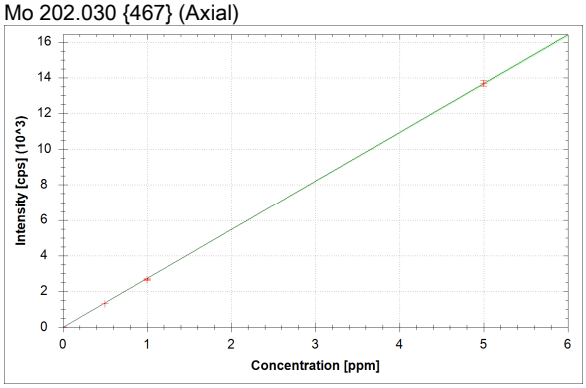
f(x) = 14389.5612*x + 32.4710
R² = 0.9997
BEC = 0.002 ppm
LoD = 0.0008 ppm

Mn 257.610 {131} (Axial)



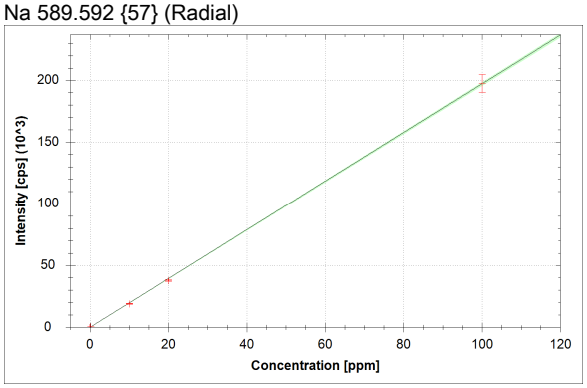
f(x) = 73112.1719*x + 23.3379
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0000 ppm

Mo 202.030 {467} (Axial)



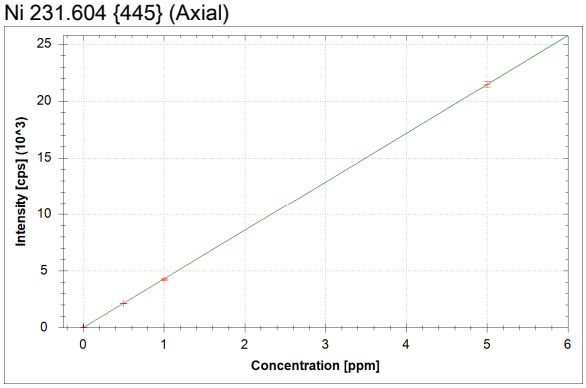
f(x) = 2733.2136*x + -0.6134
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0004 ppm

Na 589.592 {57} (Radial)



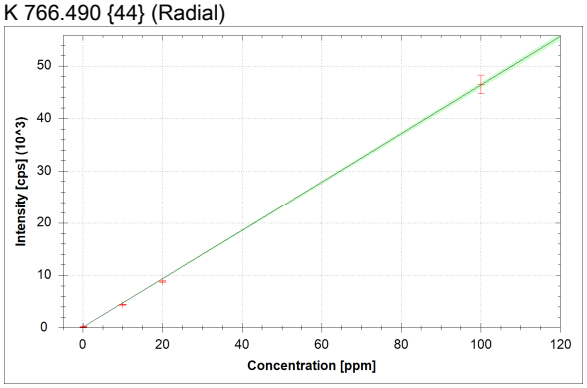
f(x) = 1971.4711*x + 18.8903
R² = 0.9999
BEC = 0.010 ppm
LoD = 0.0123 ppm

Ni 231.604 {445} (Axial)



f(x) = 4292.1688*x + 1.0553
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

K 766.490 {44} (Radial)



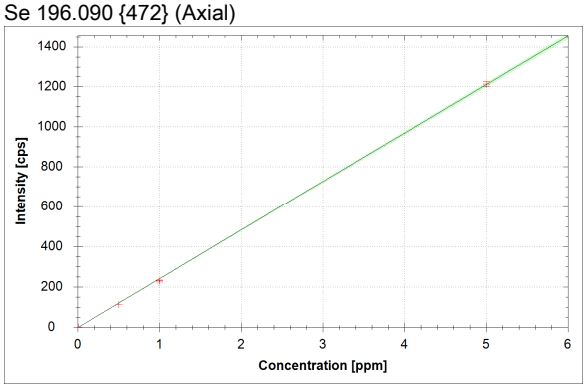
f(x) = 462.6280*x + 89.4765
R² = 0.9997
BEC = 0.193 ppm
LoD = 0.0641 ppm

Calibration Summary

11/29/2020 10:55:31 AM

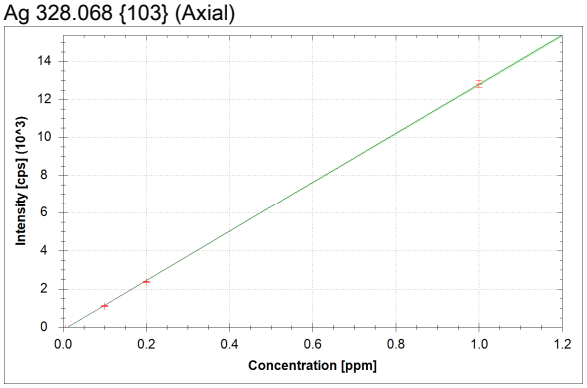
QTEGRA

Se 196.090 {472} (Axial)



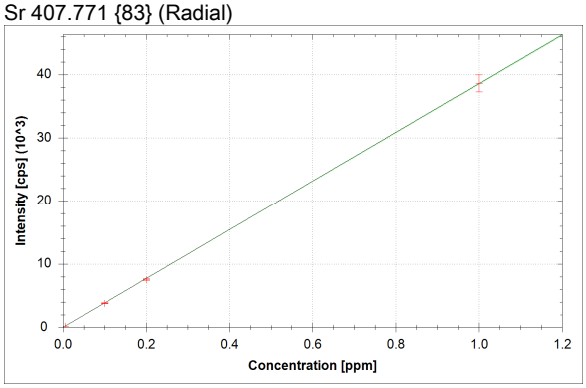
f(x) = 242.3500*x + -0.9515
R² = 0.9998
BEC = -0.004 ppm
LoD = 0.0070 ppm

Ag 328.068 {103} (Axial)



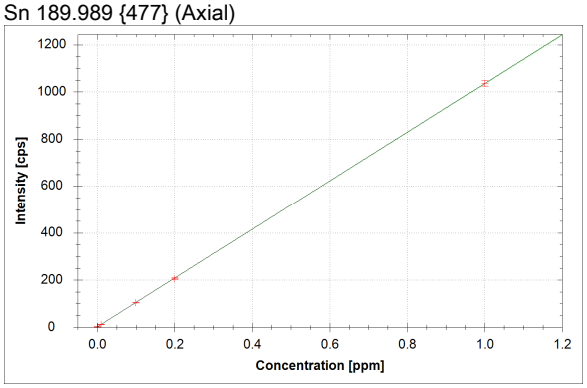
f(x) = 12929.3970*x + -141.3725
R² = 0.9999
BEC = -0.011 ppm
LoD = 0.0009 ppm

Sr 407.771 {83} (Radial)



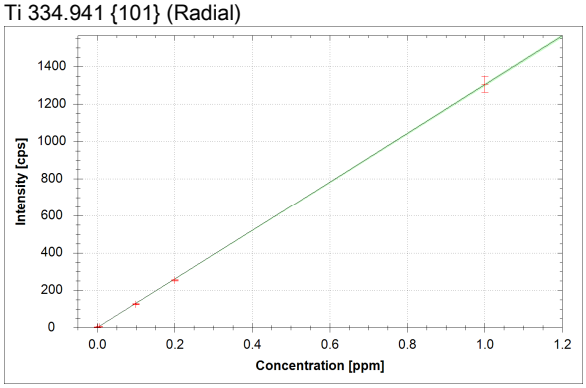
f(x) = 38605.3160*x + -9.6914
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Sn 189.989 {477} (Axial)



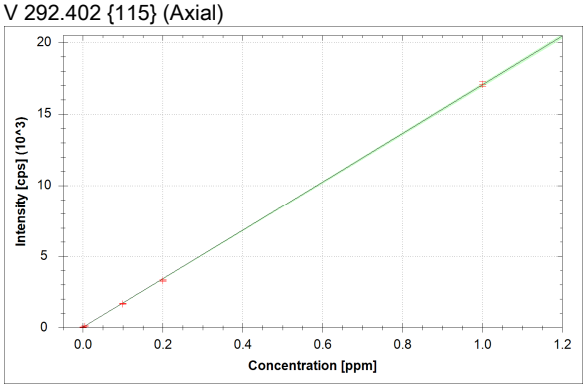
f(x) = 1033.1789*x + 2.4173
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0020 ppm

Ti 334.941 {101} (Radial)



f(x) = 1302.4999*x + 0.6632
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0045 ppm

V 292.402 {115} (Axial)



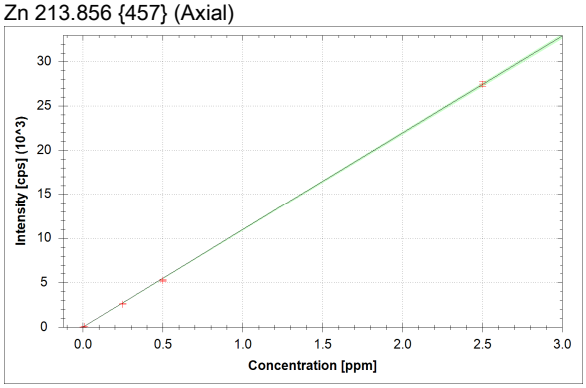
f(x) = 17008.4854*x + 30.4255
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0013 ppm

Calibration Summary

11/29/2020 10:55:31 AM

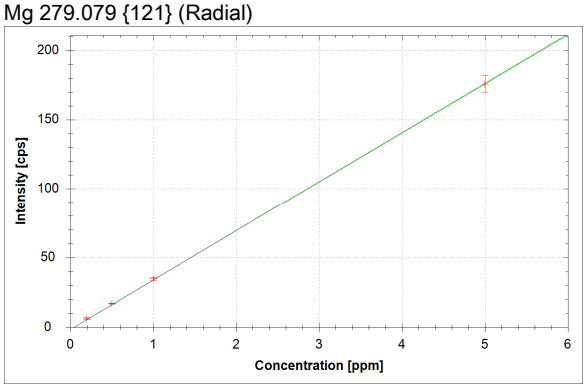
QTEGRA

Zn 213.856 {457} (Axial)



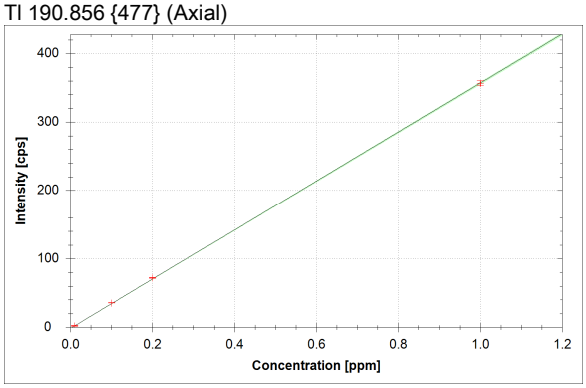
f(x) = 10961.6745*x + 17.5829
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



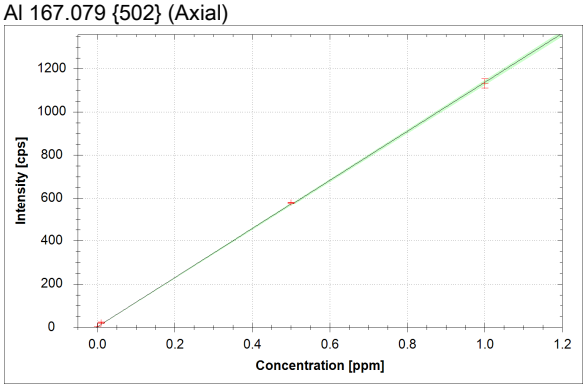
f(x) = 35.5094*x + -1.5752
R² = 0.9999
BEC = -0.044 ppm
LoD = 0.0176 ppm

Tl 190.856 {477} (Axial)



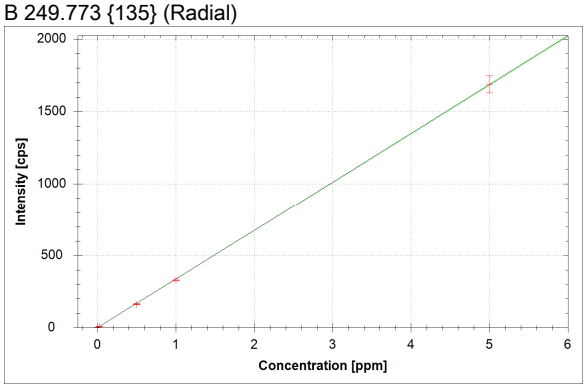
f(x) = 358.4384*x + -1.4922
R² = 0.9999
BEC = -0.004 ppm
LoD = 0.0033 ppm

Al 167.079 {502} (Axial)



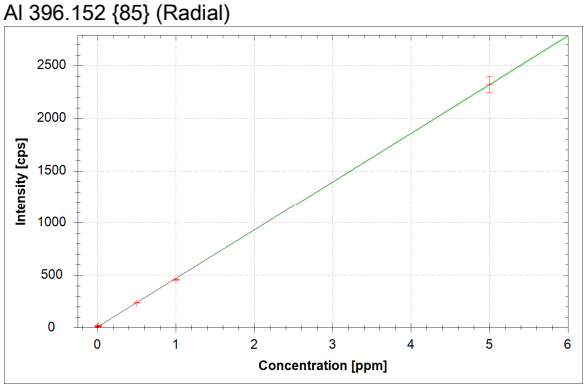
f(x) = 1133.8666*x + 2.6086
R² = 0.9998
BEC = 0.002 ppm
LoD = 0.0011 ppm

B 249.773 {135} (Radial)



f(x) = 337.0380*x + 0.3133
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0041 ppm

Al 396.152 {85} (Radial)



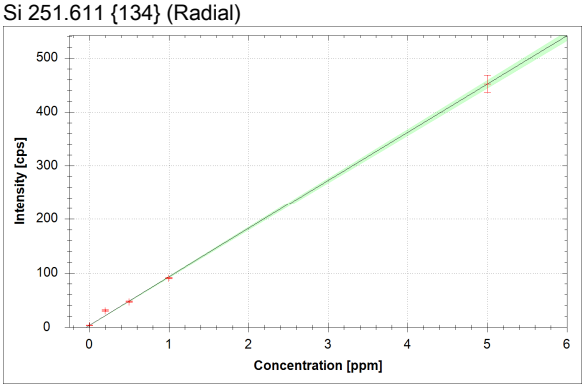
f(x) = 462.1906*x + 7.5803
R² = 0.9999
BEC = 0.016 ppm
LoD = 0.0189 ppm

Calibration Summary

11/29/2020 10:55:31 AM

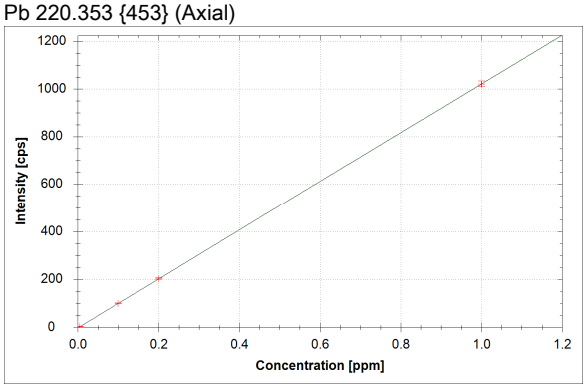
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 89.5858*x + 3.5460
R² = 0.9993
BEC = 0.040 ppm
LoD = 0.0152 ppm

Pb 220.353 {453} (Axial)



f(x) = 1024.3159*x + -2.7912
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0007 ppm

Calibration Summary

11/29/2020 10:55:31 AM

Standards

Standard: ICAL2
Analysis started at: 11/25/2020 8:37:03 AM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0040 ppm	18.7 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0042 ppm	28.2 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0053 ppm	2.9 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0020 ppm	1.7 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.5101 ppm	1.6 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0095 ppm	1.0 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0049 ppm	3.0 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0048 ppm	1.8 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0098 ppm	3.1 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0801 ppm	9.0 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0091 ppm	4.5 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0051 ppm	2.2 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0047 ppm	3.0 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1937 ppm	2.1 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0050 ppm	1.8 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1285 ppm	25.4 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0123 ppm	5.3 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0053 ppm	1.1 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0049 ppm	1.6 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0094 ppm	3.5 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0030 ppm	22.7 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0049 ppm	2.3 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0100 ppm	1.2 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.7871 %	0.3 %	
Sc 188.060 {479} (Axial)	99.1282 %	0.5 %	
Mg 279.079 {121} (Radial)	0.2186 ppm	7.2 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0102 ppm	15.4 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0165 ppm	17.9 %	0.0100 ppm
Sc 227.318 {448} (Axial)	99.3500 %	0.4 %	
B 249.773 {135} (Radial)	0.0213 ppm	16.2 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0262 ppm	37.1 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.3045 ppm	6.5 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0061 ppm	6.1 %	0.0050 ppm
Y 224.306 {450} (Axial)	99.5003 %	0.3 %	
Sc 361.384 {93} (Radial)	100.5930 %	0.1 %	

Calibration Summary

11/29/2020 10:55:31 AM

QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/25/2020 8:42:15 AM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0954 ppm	1.8 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0935 ppm	0.6 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.5016 ppm	2.5 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4860 ppm	2.5 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0962 ppm	1.7 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.5115 ppm	0.4 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0953 ppm	0.6 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0997 ppm	0.6 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4903 ppm	0.6 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4869 ppm	1.5 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4965 ppm	2.2 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4639 ppm	2.8 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0983 ppm	1.6 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4815 ppm	0.6 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.5651 ppm	2.8 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4935 ppm	0.5 %	0.5000 ppm
K 766.490 {44} (Radial)	9.2509 ppm	3.0 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4704 ppm	0.2 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0972 ppm	1.7 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0986 ppm	2.5 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0982 ppm	1.4 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0966 ppm	2.5 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0960 ppm	1.6 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2366 ppm	0.5 %	0.2500 ppm
Sc 357.253 {94} (Axial)	99.1403 %	0.3 %	
Sc 188.060 {479} (Axial)	97.3955 %	0.5 %	
Mg 279.079 {121} (Radial)	0.5177 ppm	1.6 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1036 ppm	1.0 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5077 ppm	0.4 %	0.5000 ppm
Sc 227.318 {448} (Axial)	98.8580 %	0.5 %	
B 249.773 {135} (Radial)	0.4840 ppm	2.8 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4941 ppm	0.5 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4859 ppm	2.9 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1006 ppm	1.0 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.1768 %	0.3 %	
Sc 361.384 {93} (Radial)	101.3503 %	0.2 %	

Calibration Summary

11/29/2020 10:55:31 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/25/2020 8:47:15 AM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1930 ppm	1.5 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1906 ppm	1.5 %	0.2000 ppm
Ba 455.403 {74} (Radial)	0.9992 ppm	1.8 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9762 ppm	1.7 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1941 ppm	1.6 %	0.2000 ppm
Ca 315.887 {107} (Radial)	0.9982 ppm	1.6 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1924 ppm	1.8 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1940 ppm	1.5 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.2001 ppm	2.1 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9828 ppm	2.0 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9666 ppm	1.3 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9874 ppm	2.3 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9407 ppm	1.9 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1947 ppm	1.5 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9724 ppm	2.0 %	1.0000 ppm
Na 589.592 {57} (Radial)	19.2408 ppm	2.1 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9879 ppm	2.0 %	1.0000 ppm
K 766.490 {44} (Radial)	18.8160 ppm	2.5 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9532 ppm	2.1 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1935 ppm	1.5 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1958 ppm	1.8 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1972 ppm	2.0 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1944 ppm	1.7 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1919 ppm	1.5 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4796 ppm	1.9 %	0.5000 ppm
Sc 357.253 {94} (Axial)	97.8102 %	0.1 %	
Sc 188.060 {479} (Axial)	94.4971 %	0.9 %	
Mg 279.079 {121} (Radial)	1.0250 ppm	3.1 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2053 ppm	1.2 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9961 ppm	1.9 %	1.0000 ppm
Sc 227.318 {448} (Axial)	97.2519 %	0.8 %	
B 249.773 {135} (Radial)	0.9754 ppm	2.2 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9680 ppm	1.6 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9710 ppm	1.8 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.2008 ppm	2.2 %	0.2000 ppm
Y 224.306 {450} (Axial)	96.4431 %	0.5 %	
Sc 361.384 {93} (Radial)	100.5283 %	0.2 %	

Calibration Summary

11/29/2020 10:55:31 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/25/2020 8:52:12 AM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0019 ppm	1.1 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0025 ppm	0.9 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0062 ppm	3.3 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0016 ppm	1.7 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9982 ppm	3.2 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0020 ppm	1.1 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0012 ppm	1.1 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0044 ppm	1.1 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0080 ppm	1.4 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0029 ppm	3.1 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0155 ppm	3.6 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0012 ppm	1.1 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0074 ppm	1.1 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.1953 ppm	3.6 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0031 ppm	1.1 %	5.0000 ppm
K 766.490 {44} (Radial)	100.3118 ppm	3.8 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0123 ppm	1.0 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0016 ppm	1.5 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0010 ppm	3.5 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0007 ppm	1.2 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0015 ppm	3.3 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0020 ppm	1.0 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5054 ppm	1.1 %	2.5000 ppm
Sc 357.253 {94} (Axial)	94.2200 %	0.9 %	
Sc 188.060 {479} (Axial)	86.4623 %	0.2 %	
Mg 279.079 {121} (Radial)	4.9925 ppm	3.5 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9986 ppm	1.0 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	100.9557 %	0.3 %	
B 249.773 {135} (Radial)	5.0065 ppm	3.5 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0070 ppm	3.4 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0030 ppm	3.5 %	5.0000 ppm
Pb 220.353 {453} (Axial)	0.9998 ppm	1.2 %	1.0000 ppm
Y 224.306 {450} (Axial)	92.3973 %	0.1 %	
Sc 361.384 {93} (Radial)	100.9367 %	0.4 %	

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LabBook: ICP2_201125A.imexp

ICAL1

Sample type: BLK Analysis started at: 11/25/2020 8:31:51 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.8 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/25/2020 8:37:03 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0040 ppm	18.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0042 ppm	28.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	170 cps	0.0053 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	744 cps	0.0020 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	133 cps	0.5101 ppm	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	118 cps	0.0095 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	28 cps	0.0049 ppm	3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0048 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	247 cps	0.0098 ppm	3.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	20 cps	0.0801 ppm	9.0 %	0.0 ppm
Li 670.784 {50} (Radial)	130 cps	0.0091 ppm	4.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	370 cps	0.0051 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0047 ppm	3.0 %	0.0 ppm
Na 589.592 {57} (Radial)	382 cps	0.1937 ppm	2.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	22 cps	0.0050 ppm	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	59 cps	0.1285 ppm	25.4 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0123 ppm	5.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	69 cps	0.0053 ppm	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	189 cps	0.0049 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0094 ppm	3.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0030 ppm	22.7 %	0.0 ppm
V 292.402 {115} (Axial)	83 cps	0.0049 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	109 cps	0.0100 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7871 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		99.1282 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	8 cps	0.2186 ppm	7.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0102 ppm	15.4 %	0.0 ppm
Al 167.079 {502} (Axial)	19 cps	0.0165 ppm	17.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.3500 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.0213 ppm	16.2 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0262 ppm	37.1 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.3045 ppm	6.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0061 ppm	6.1 %	0.0 ppm
Y 224.306 {450} (Axial)		99.5003 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5930 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/25/2020 8:42:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	57 cps	0.0954 ppm	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	37 cps	0.0935 ppm	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	16,252 cps	0.5016 ppm	2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	14,231 cps	0.4860 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	36,654 cps	0.0962 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	133 cps	0.5115 ppm	0.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,174 cps	0.0953 ppm	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	574 cps	0.0997 ppm	0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	4,257 cps	0.4903 ppm	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	12,278 cps	0.4869 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	126 cps	0.4965 ppm	2.2 %	0.0 ppm
Li 670.784 {50} (Radial)	6,676 cps	0.4639 ppm	2.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,187 cps	0.0983 ppm	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,316 cps	0.4815 ppm	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	18,857 cps	9.5651 ppm	2.8 %	0.3 ppm
Ni 231.604 {445} (Axial)	2,118 cps	0.4935 ppm	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	4,280 cps	9.2509 ppm	3.0 %	0.3 ppm
Se 196.090 {472} (Axial)	114 cps	0.4704 ppm	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,257 cps	0.0972 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,805 cps	0.0986 ppm	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	101 cps	0.0982 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	126 cps	0.0966 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,633 cps	0.0960 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,594 cps	0.2366 ppm	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.1403 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		97.3955 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	18 cps	0.5177 ppm	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	37 cps	0.1036 ppm	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	576 cps	0.5077 ppm	0.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8580 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	163 cps	0.4840 ppm	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	228 cps	0.4941 ppm	0.5 %	0.0 ppm
Si 251.611 {134} (Radial)	44 cps	0.4859 ppm	2.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	103 cps	0.1006 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1768 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.3503 %	0.2 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/25/2020 8:47:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	115 cps	0.1930 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	75 cps	0.1906 ppm	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	32,374 cps	0.9992 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	28,585 cps	0.9762 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	73,945 cps	0.1941 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	260 cps	0.9982 ppm	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,372 cps	0.1924 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,891 cps	0.1940 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,152 cps	0.2001 ppm	2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	8,533 cps	0.9828 ppm	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	24,373 cps	0.9666 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	251 cps	0.9874 ppm	2.3 %	0.0 ppm
Li 670.784 {50} (Radial)	13,537 cps	0.9407 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,237 cps	0.1947 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,658 cps	0.9724 ppm	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	37,933 cps	19.2408 ppm	2.1 %	0.4 ppm
Ni 231.604 {445} (Axial)	4,240 cps	0.9879 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	8,705 cps	18.8160 ppm	2.5 %	0.5 ppm
Se 196.090 {472} (Axial)	231 cps	0.9532 ppm	2.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,502 cps	0.1935 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	7,560 cps	0.1958 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	204 cps	0.1972 ppm	2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	253 cps	0.1944 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	3,263 cps	0.1919 ppm	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,257 cps	0.4796 ppm	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8102 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		94.4971 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	36 cps	1.0250 ppm	3.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	74 cps	0.2053 ppm	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	1,129 cps	0.9961 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2519 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	329 cps	0.9754 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	447 cps	0.9680 ppm	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	87 cps	0.9710 ppm	1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	206 cps	0.2008 ppm	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4431 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.5283 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/25/2020 8:52:12 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	596 cps	1.0019 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	394 cps	1.0025 ppm	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	146,599 cps	5.0062 ppm	3.3 %	0.2 ppm
Be 313.042 {108} (Axial)	381,533 cps	1.0016 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,302 cps	4.9982 ppm	3.2 %	0.2 ppm
Cd 228.802 {447} (Axial)	12,348 cps	1.0020 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,759 cps	1.0012 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	43,448 cps	5.0044 ppm	1.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	126,283 cps	5.0080 ppm	1.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,269 cps	5.0029 ppm	3.1 %	0.2 ppm
Li 670.784 {50} (Radial)	72,170 cps	5.0155 ppm	3.6 %	0.2 ppm
Mn 257.610 {131} (Axial)	73,202 cps	1.0012 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	13,686 cps	5.0074 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	197,532 cps	100.1953 ppm	3.6 %	3.6 ppm
Ni 231.604 {445} (Axial)	21,474 cps	5.0031 ppm	1.1 %	0.1 ppm
K 766.490 {44} (Radial)	46,407 cps	100.3118 ppm	3.8 %	3.8 ppm
Se 196.090 {472} (Axial)	1,215 cps	5.0123 ppm	1.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	12,950 cps	1.0016 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	38,643 cps	1.0010 ppm	3.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,034 cps	1.0007 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,304 cps	1.0015 ppm	3.3 %	0.0 ppm
V 292.402 {115} (Axial)	17,043 cps	1.0020 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	27,464 cps	2.5054 ppm	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.2200 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		86.4623 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	177 cps	4.9925 ppm	3.5 %	0.2 ppm
Tl 190.856 {477} (Axial)	358 cps	0.9986 ppm	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		100.9557 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1,687 cps	5.0065 ppm	3.5 %	0.2 ppm
Al 396.152 {85} (Radial)	2,314 cps	5.0070 ppm	3.4 %	0.2 ppm
Si 251.611 {134} (Radial)	448 cps	5.0030 ppm	3.5 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,024 cps	0.9998 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		92.3973 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.9367 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:22:46 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-105 cps	-0.1772 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	-21 cps	-0.0526 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	686,974 cps	21.2029 ppm	3.7 %	0.8 ppm
Ba 493.409 {68} (Radial)	616,752 cps	21.0613 ppm	3.2 %	0.7 ppm
Be 313.042 {108} (Axial)	767,280 cps	2.0142 ppm	5.5 %	0.1 ppm
Ca 315.887 {107} (Radial)	51,842 cps	199.0184 ppm	2.1 %	4.3 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	30.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	95,926 cps	9.8412 ppm	5.3 %	0.5 ppm
Cr 205.560 {464} (Axial)	56,468 cps	9.8074 ppm	1.4 %	0.1 ppm
Co 228.616 {447} (Axial)	102 cps	0.0118 ppm	2.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	527,825 cps	20.9319 ppm	5.7 %	1.2 ppm
Fe 259.940 {130} (Radial)	50,496 cps	199.0218 ppm	1.8 %	3.6 ppm
Li 670.784 {50} (Radial)	155,845 cps	10.8304 ppm	2.0 %	0.2 ppm
Mn 257.610 {131} (Axial)	710,315 cps	9.7154 ppm	8.9 %	0.9 ppm
Mo 202.030 {467} (Axial)	-5 cps	-0.0018 ppm	12.1 %	0.0 ppm
Na 589.592 {57} (Radial)	85 cps	0.0430 ppm	43.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	-119 cps	-0.0277 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	-49 cps	-0.1057 ppm	46.6 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0134 ppm	22.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	29,367 cps	2.2713 ppm	5.1 %	0.1 ppm
Sr 407.771 {83} (Radial)	397,128 cps	10.2869 ppm	3.0 %	0.3 ppm
Sn 189.989 {477} (Axial)	-24 cps	-0.0229 ppm	4.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	13,178 cps	10.1171 ppm	1.8 %	0.2 ppm
V 292.402 {115} (Axial)	172,576 cps	10.1465 ppm	5.3 %	0.5 ppm
Zn 213.856 {457} (Axial)	-1,177 cps	-0.1073 ppm	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		87.0403 %	6.2 %	5.4 %
Sc 188.060 {479} (Axial)		75.5139 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	7,436 cps	209.4112 ppm	2.1 %	4.3 ppm
Tl 190.856 {477} (Axial)	-18 cps	-0.0500 ppm	4.0 %	0.0 ppm
Al 167.079 {502} (Axial)	20,150 cps	17.7707 ppm	0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		78.1132 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	7,241 cps	21.4834 ppm	2.2 %	0.5 ppm
Al 396.152 {85} (Radial)	96,652 cps	209.1165 ppm	1.8 %	3.7 ppm
Si 251.611 {134} (Radial)	1,865 cps	20.8183 ppm	1.9 %	0.4 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0007 ppm	290.8 %	0.0 ppm
Y 224.306 {450} (Axial)		84.9853 %	0.3 %	0.2 %
Sc 361.384 {93} (Radial)		97.5354 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:28:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,968 cps	4.9915 ppm	1.1 %	0.1 ppm
As 189.042 {478} (Axial)	1,829 cps	4.6568 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	229 cps	0.0071 ppm	25.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	383 cps	0.0131 ppm	16.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-38 cps	-0.0001 ppm	94.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	23 cps	0.0895 ppm	33.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	262 cps	0.0212 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	8 cps	0.0009 ppm	116.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	32 cps	0.0055 ppm	3.5 %	0.0 ppm
Co 228.616 {447} (Axial)	87,274 cps	10.0523 ppm	1.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	227 cps	0.0090 ppm	8.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	44 cps	0.1745 ppm	23.6 %	0.0 ppm
Li 670.784 {50} (Radial)	50 cps	0.0035 ppm	44.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-183 cps	-0.0025 ppm	15.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	27,052 cps	9.8974 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	40 cps	0.0205 ppm	34.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	42,962 cps	10.0093 ppm	1.0 %	0.1 ppm
K 766.490 {44} (Radial)	-22 cps	-0.0485 ppm	32.2 %	0.0 ppm
Se 196.090 {472} (Axial)	1,133 cps	4.6743 ppm	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-7 cps	-0.0005 ppm	45.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	131 cps	0.0034 ppm	28.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,050 cps	4.8880 ppm	1.2 %	0.1 ppm
Ti 334.941 {101} (Radial)	24 cps	0.0183 ppm	23.2 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0010 ppm	24.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	51,561 cps	4.7038 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8515 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		95.9409 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	3 cps	0.0946 ppm	4.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,916 cps	5.3443 ppm	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	16 cps	0.0141 ppm	26.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.2042 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	21 cps	0.0619 ppm	7.0 %	0.0 ppm
Al 396.152 {85} (Radial)	206 cps	0.4449 ppm	3.6 %	0.0 ppm
Si 251.611 {134} (Radial)	7 cps	0.0806 ppm	17.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,270 cps	5.1451 ppm	1.0 %	0.1 ppm
Y 224.306 {450} (Axial)		97.0972 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		101.1327 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/25/2020 8:57:10 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	578 cps	0.9729 ppm	97.285 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	375 cps	0.9543 ppm	95.429 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	34,198 cps	1.0555 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	30,143 cps	1.0294 ppm	102.936 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	372,762 cps	0.9785 ppm	97.853 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,632 cps	6.2654 ppm	104.423 %	1.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,980 cps	0.9721 ppm	97.206 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,667 cps	0.9917 ppm	99.171 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,793 cps	1.0061 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	8,566 cps	0.9866 ppm	98.662 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	25,365 cps	1.0059 ppm	100.590 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	266 cps	1.0489 ppm	104.890 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	14,547 cps	1.0110 ppm	101.097 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	73,695 cps	1.0080 ppm	100.798 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,742 cps	1.0033 ppm	100.333 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	41,714 cps	21.1588 ppm	100.756 %	1.4 %	0.3 ppm
Ni 231.604 {445} (Axial)	4,258 cps	0.9919 ppm	99.192 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	9,698 cps	20.9620 ppm	99.819 %	1.6 %	0.3 ppm
Se 196.090 {472} (Axial)	234 cps	0.9656 ppm	96.559 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	13,468 cps	1.0417 ppm	104.168 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	39,842 cps	1.0320 ppm	103.203 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,028 cps	0.9950 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,335 cps	1.0249 ppm	102.490 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	17,094 cps	1.0050 ppm	100.503 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,566 cps	0.9639 ppm	96.391 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.1861 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		92.8985 %		0.6 %	0.6 %
Mg 279.079 {121} (Radial)	37 cps	1.0463 ppm	104.629 %	3.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	368 cps	1.0264 ppm	102.644 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1,134 cps	0.9999 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.4551 %		0.7 %	0.6 %
B 249.773 {135} (Radial)	354 cps	1.0496 ppm	104.964 %	1.2 %	0.0 ppm
Al 396.152 {85} (Radial)	478 cps	1.0346 ppm	103.457 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	103 cps	1.1506 ppm		2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,037 cps	1.0120 ppm	101.204 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		96.1963 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.8956 %		0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:02:09 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0005 ppm	241.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	2,256.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	23 cps	0.0007 ppm	21.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	132 cps	0.0045 ppm	29.9 %	0.0 ppm
Be 313.042 {108} (Axial)	71 cps	0.0002 ppm	17.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0169 ppm	41.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	43.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	56.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	206.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	75.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	13 cps	0.0005 ppm	6.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0067 ppm	56.6 %	0.0 ppm
Li 670.784 {50} (Radial)	2 cps	0.0001 ppm	492.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	25.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	36.2 %	0.0 ppm
Na 589.592 {57} (Radial)	72 cps	0.0366 ppm	18.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	26.7 %	0.0 ppm
K 766.490 {44} (Radial)	13 cps	0.0288 ppm	21.1 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0024 ppm	38.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0003 ppm	88.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0004 ppm	56.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	95.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0032 ppm	23.5 %	0.0 ppm
V 292.402 {115} (Axial)	6 cps	0.0004 ppm	44.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	179.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7625 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.7616 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	1 cps	0.0180 ppm	17.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	53.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	385.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.5662 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	4 cps	0.0115 ppm	13.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0049 ppm	243.6 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0111 ppm	15.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	633.7 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1714 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		99.4354 %	0.9 %	0.9 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/25/2020 9:07:21 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0044 ppm	88.104 %	18.6 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0052 ppm	103.341 %	9.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	174 cps	0.0054 ppm		5.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	302 cps	0.0103 ppm		7.3 %	0.0 ppm
Be 313.042 {108} (Axial)	758 cps	0.0020 ppm	99.442 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	132 cps	0.5072 ppm	101.431 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	118 cps	0.0096 ppm	95.808 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0048 ppm	96.880 %	3.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	29 cps	0.0050 ppm	100.146 %	3.4 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0049 ppm	97.279 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	262 cps	0.0104 ppm	103.868 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	21 cps	0.0842 ppm	105.284 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	119 cps	0.0082 ppm	82.460 %	6.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	369 cps	0.0050 ppm	100.932 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	14 cps	0.0051 ppm	101.971 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	400 cps	0.2027 ppm	101.346 %	0.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0050 ppm	99.127 %	4.4 %	0.0 ppm
K 766.490 {44} (Radial)	73 cps	0.1585 ppm	79.253 %	3.0 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0109 ppm	108.625 %	20.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	71 cps	0.0055 ppm	109.458 %	7.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	196 cps	0.0051 ppm	101.376 %	4.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0102 ppm		4.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0052 ppm	103.283 %	25.5 %	0.0 ppm
V 292.402 {115} (Axial)	83 cps	0.0049 ppm	98.127 %	2.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	107 cps	0.0098 ppm	97.948 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4503 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		97.5597 %		1.2 %	1.2 %
Mg 279.079 {121} (Radial)	9 cps	0.2520 ppm	126.004 %	5.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0103 ppm	103.038 %	18.0 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0117 ppm		3.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.4866 %		1.3 %	1.3 %
B 249.773 {135} (Radial)	10 cps	0.0291 ppm	145.301 %	18.4 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0131 ppm		59.2 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.3082 ppm		8.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0054 ppm	107.517 %	5.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.9212 %		0.6 %	0.6 %
Sc 361.384 {93} (Radial)		99.3701 %		0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/25/2020 9:12:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0036 ppm	72.652 %	7.3 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0044 ppm	87.985 %	13.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	165 cps	0.0051 ppm		4.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	233 cps	0.0080 ppm		2.9 %	0.0 ppm
Be 313.042 {108} (Axial)	730 cps	0.0019 ppm	95.750 %	4.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	131 cps	0.5011 ppm	100.229 %	3.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	116 cps	0.0094 ppm	94.155 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	44 cps	0.0045 ppm	90.364 %	5.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0049 ppm	98.334 %	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0049 ppm	97.716 %	3.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	251 cps	0.0100 ppm	99.561 %	4.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	21 cps	0.0819 ppm	102.437 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	110 cps	0.0077 ppm	76.726 %	2.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	363 cps	0.0050 ppm	99.164 %	3.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0049 ppm	97.658 %	2.3 %	0.0 ppm
Na 589.592 {57} (Radial)	385 cps	0.1954 ppm	97.698 %	1.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0050 ppm	99.481 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	64 cps	0.1378 ppm	68.920 %	16.8 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0117 ppm	116.825 %	25.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	69 cps	0.0053 ppm	106.629 %	8.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	187 cps	0.0049 ppm	97.080 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0096 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0039 ppm	77.957 %	12.8 %	0.0 ppm
V 292.402 {115} (Axial)	84 cps	0.0050 ppm	99.203 %	3.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	102 cps	0.0093 ppm	93.369 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.4629 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		97.2291 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	9 cps	0.2454 ppm	122.675 %	15.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0114 ppm	113.847 %	9.4 %	0.0 ppm
Al 167.079 {502} (Axial)	11 cps	0.0100 ppm		3.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.1992 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	8 cps	0.0236 ppm	118.214 %	15.2 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0042 ppm		130.8 %	0.0 ppm
Si 251.611 {134} (Radial)	22 cps	0.2457 ppm		8.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0055 ppm	109.225 %	11.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1951 %		0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.3339 %		0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/25/2020 9:17:45 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-12 cps	-0.0208 ppm		7.9 %	0.0 ppm
As 189.042 {478} (Axial)	-11 cps	-0.0281 ppm	0.000 %	3.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	19 cps	0.0006 ppm	0.000 %	27.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	229 cps	0.0078 ppm	0.000 %	6.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-1,033 cps	-0.0027 ppm	0.000 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	24,504 cps	94.0702 ppm	94.070 %	2.0 %	1.9 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.000 %	578.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	13 cps	0.0013 ppm	0.000 %	26.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0006 ppm	0.000 %	10.1 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0008 ppm	0.000 %	10.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	83 cps	0.0033 ppm	0.000 %	9.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	24,240 cps	95.5402 ppm	95.540 %	1.6 %	1.6 ppm
Li 670.784 {50} (Radial)	1 cps	0.0000 ppm		1,006.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	-369 cps	-0.0050 ppm	0.000 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,284 cps	1.9331 ppm	96.657 %	2.1 %	0.0 ppm
Na 589.592 {57} (Radial)	196,287 cps	99.5636 ppm	99.564 %	2.3 %	2.3 ppm
Ni 231.604 {445} (Axial)	-57 cps	-0.0132 ppm	0.000 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	46,982 cps	101.5538 ppm	101.554 %	2.5 %	2.6 ppm
Se 196.090 {472} (Axial)	1 cps	0.0062 ppm	0.000 %	63.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0004 ppm	0.000 %	128.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	-76 cps	-0.0020 ppm		9.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	-8 cps	-0.0081 ppm		3.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2,508 cps	1.9257 ppm		2.1 %	0.0 ppm
V 292.402 {115} (Axial)	35 cps	0.0021 ppm	0.000 %	8.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-110 cps	-0.0100 ppm	0.000 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0567 %		0.7 %	0.6 %
Sc 188.060 {479} (Axial)		79.2263 %		0.6 %	0.4 %
Mg 279.079 {121} (Radial)	3,431 cps	96.6321 ppm	96.632 %	2.1 %	2.1 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0082 ppm	0.000 %	8.8 %	0.0 ppm
Al 167.079 {502} (Axial)	17,658 cps	15.5732 ppm		0.8 %	0.1 ppm
Sc 227.318 {448} (Axial)		80.0141 %		0.6 %	0.5 %
B 249.773 {135} (Radial)	26 cps	0.0779 ppm		2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	43,991 cps	95.1791 ppm	95.179 %	1.7 %	1.6 ppm
Si 251.611 {134} (Radial)	4 cps	0.0467 ppm	0.000 %	35.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	0.000 %	111.2 %	0.0 ppm
Y 224.306 {450} (Axial)		88.5599 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.4214 %		0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 6:08:16 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	292 cps	0.4913 ppm	98.258 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.4880 ppm	97.590 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	84,388 cps	2.6046 ppm		3.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	74,975 cps	2.5603 ppm	102.412 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	192,690 cps	0.5058 ppm	101.165 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	622 cps	2.3884 ppm	95.538 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,978 cps	0.4850 ppm	97.009 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,782 cps	0.4906 ppm	98.127 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,935 cps	0.5098 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	21,472 cps	2.4732 ppm	98.928 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,723 cps	2.4874 ppm	99.497 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	617 cps	2.4313 ppm	97.250 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	36,803 cps	2.5576 ppm	102.304 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	36,095 cps	0.4937 ppm	98.738 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,827 cps	2.4979 ppm	99.917 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	99,697 cps	50.5700 ppm	101.140 %	3.3 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,628 cps	2.4762 ppm	99.049 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	23,943 cps	51.7546 ppm	103.509 %	3.0 %	1.6 ppm
Se 196.090 {472} (Axial)	592 cps	2.4437 ppm	97.748 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,437 cps	0.4978 ppm	99.566 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,471 cps	0.5044 ppm	100.875 %	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	518 cps	0.5011 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	632 cps	0.4856 ppm	97.115 %	4.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,439 cps	0.4962 ppm	99.234 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,285 cps	1.2120 ppm	96.957 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.2594 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		88.7046 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	84 cps	2.3572 ppm	94.288 %	6.4 %	0.2 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5064 ppm	101.287 %	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,682 cps	2.3657 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1178 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	816 cps	2.4209 ppm	96.837 %	3.4 %	0.1 ppm
Al 396.152 {85} (Radial)	1,135 cps	2.4556 ppm	98.224 %	2.7 %	0.1 ppm
Si 251.611 {134} (Radial)	215 cps	2.4019 ppm		4.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	506 cps	0.4937 ppm	98.733 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		92.8696 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.9096 %		0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 7:09:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	279 cps	0.4686 ppm	93.714 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	186 cps	0.4731 ppm	94.626 %	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	85,552 cps	2.6405 ppm		0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	75,126 cps	2.5655 ppm	102.618 %	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	188,367 cps	0.4945 ppm	98.896 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	643 cps	2.4679 ppm	98.714 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,760 cps	0.4674 ppm	93.482 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,687 cps	0.4808 ppm	96.161 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,852 cps	0.4953 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.3937 ppm	95.746 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,493 cps	2.3990 ppm	95.958 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	645 cps	2.5409 ppm	101.635 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	37,103 cps	2.5785 ppm	103.138 %	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	35,385 cps	0.4840 ppm	96.798 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,569 cps	2.4032 ppm	96.130 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	101,702 cps	51.5868 ppm	103.174 %	1.2 %	0.6 ppm
Ni 231.604 {445} (Axial)	10,313 cps	2.4028 ppm	96.111 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	23,803 cps	51.4526 ppm	102.905 %	1.6 %	0.8 ppm
Se 196.090 {472} (Axial)	575 cps	2.3707 ppm	94.830 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,193 cps	0.4790 ppm	95.803 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,834 cps	0.5138 ppm	102.753 %	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	500 cps	0.4843 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	653 cps	0.5015 ppm	100.297 %	1.1 %	0.0 ppm
V 292.402 {115} (Axial)	8,263 cps	0.4858 ppm	97.161 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,848 cps	1.1721 ppm	93.769 %	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.5787 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.0195 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	88 cps	2.4790 ppm	99.159 %	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.4888 ppm	97.759 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,622 cps	2.3121 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.1454 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	837 cps	2.4823 ppm	99.293 %	1.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,156 cps	2.5012 ppm	100.046 %	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	223 cps	2.4904 ppm		1.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	490 cps	0.4788 ppm	95.764 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9252 %		0.6 %	0.5 %
Sc 361.384 {93} (Radial)		100.0935 %		0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 8:13:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	275 cps	0.4633 ppm	92.661 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4654 ppm	93.075 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	81,740 cps	2.5228 ppm		3.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	71,788 cps	2.4515 ppm	98.059 %	3.1 %	0.1 ppm
Be 313.042 {108} (Axial)	183,574 cps	0.4819 ppm	96.379 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	614 cps	2.3589 ppm	94.357 %	3.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,695 cps	0.4621 ppm	92.417 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,561 cps	0.4679 ppm	93.580 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,821 cps	0.4900 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,547 cps	2.3666 ppm	94.666 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,342 cps	2.3533 ppm	94.132 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	606 cps	2.3897 ppm	95.589 %	3.0 %	0.1 ppm
Li 670.784 {50} (Radial)	35,461 cps	2.4643 ppm	98.574 %	3.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,577 cps	0.4729 ppm	94.587 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,486 cps	2.3730 ppm	94.918 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	97,747 cps	49.5807 ppm	99.161 %	3.5 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,191 cps	2.3743 ppm	94.971 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	22,886 cps	49.4695 ppm	98.939 %	3.6 %	1.8 ppm
Se 196.090 {472} (Axial)	569 cps	2.3486 ppm	93.945 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,094 cps	0.4713 ppm	94.259 %	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,948 cps	0.4908 ppm	98.163 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	495 cps	0.4796 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	624 cps	0.4789 ppm	95.770 %	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,057 cps	0.4737 ppm	94.740 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,704 cps	1.1590 ppm	92.717 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.0002 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		92.4718 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	83 cps	2.3393 ppm	93.572 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	173 cps	0.4837 ppm	96.731 %	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,598 cps	2.2910 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4945 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	800 cps	2.3745 ppm	94.978 %	3.2 %	0.1 ppm
Al 396.152 {85} (Radial)	1,104 cps	2.3886 ppm	95.542 %	2.9 %	0.1 ppm
Si 251.611 {134} (Radial)	212 cps	2.3635 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	486 cps	0.4740 ppm	94.808 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9570 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.8845 %		0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 9:14:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	275 cps	0.4630 ppm	92.608 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	182 cps	0.4624 ppm	92.490 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	81,119 cps	2.5037 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	71,286 cps	2.4343 ppm	97.374 %	2.3 %	0.1 ppm
Be 313.042 {108} (Axial)	177,276 cps	0.4654 ppm	93.073 %	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	591 cps	2.2705 ppm	90.822 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,633 cps	0.4571 ppm	91.412 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,408 cps	0.4523 ppm	90.455 %	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,789 cps	0.4843 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,279 cps	2.3357 ppm	93.429 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,629 cps	2.3250 ppm	93.001 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	587 cps	2.3136 ppm	92.542 %	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	35,383 cps	2.4590 ppm	98.359 %	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,426 cps	0.4572 ppm	91.437 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,417 cps	2.3477 ppm	93.910 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	96,708 cps	49.0537 ppm	98.107 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,044 cps	2.3401 ppm	93.605 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	22,591 cps	48.8324 ppm	97.665 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	568 cps	2.3424 ppm	93.697 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,927 cps	0.4584 ppm	91.690 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,759 cps	0.4859 ppm	97.183 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	484 cps	0.4687 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	619 cps	0.4752 ppm	95.047 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,842 cps	0.4611 ppm	92.215 %	0.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,547 cps	1.1446 ppm	91.568 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7270 %		1.2 %	1.2 %
Sc 188.060 {479} (Axial)		91.7594 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	80 cps	2.2515 ppm	90.059 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	171 cps	0.4777 ppm	95.542 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,526 cps	2.2274 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.6847 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	787 cps	2.3338 ppm	93.353 %	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,084 cps	2.3449 ppm	93.795 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	207 cps	2.3136 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	477 cps	0.4653 ppm	93.069 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		95.7861 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		103.4519 %		0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 9:43:56 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	294 cps	0.4942 ppm	98.849 %	2.6 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.4894 ppm	97.878 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	82,576 cps	2.5487 ppm		1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	72,583 cps	2.4786 ppm	99.144 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	188,255 cps	0.4942 ppm	98.837 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	634 cps	2.4355 ppm	97.418 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,048 cps	0.4908 ppm	98.151 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,709 cps	0.4831 ppm	96.626 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,917 cps	0.5066 ppm		2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	21,495 cps	2.4758 ppm	99.033 %	2.4 %	0.1 ppm
Cu 324.754 {104} (Axial)	61,787 cps	2.4503 ppm	98.012 %	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	632 cps	2.4900 ppm	99.602 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	35,482 cps	2.4658 ppm	98.634 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,489 cps	0.4854 ppm	97.081 %	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,762 cps	2.4739 ppm	98.957 %	2.5 %	0.1 ppm
Na 589.592 {57} (Radial)	97,730 cps	49.5720 ppm	99.144 %	2.3 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,647 cps	2.4805 ppm	99.218 %	2.4 %	0.1 ppm
K 766.490 {44} (Radial)	22,778 cps	49.2351 ppm	98.470 %	2.7 %	1.3 ppm
Se 196.090 {472} (Axial)	594 cps	2.4523 ppm	98.093 %	2.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	6,329 cps	0.4895 ppm	97.893 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,185 cps	0.4970 ppm	99.392 %	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	517 cps	0.5004 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	638 cps	0.4900 ppm	97.991 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,304 cps	0.4882 ppm	97.649 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,393 cps	1.2218 ppm	97.747 %	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.7637 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		88.7424 %		0.8 %	0.7 %
Mg 279.079 {121} (Radial)	85 cps	2.4074 ppm	96.297 %	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5080 ppm	101.609 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,647 cps	2.3342 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.6971 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	834 cps	2.4750 ppm	99.000 %	2.1 %	0.1 ppm
Al 396.152 {85} (Radial)	1,143 cps	2.4731 ppm	98.924 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	219 cps	2.4441 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	511 cps	0.4988 ppm	99.756 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		93.1589 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		100.7171 %		0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 10:15:43 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	280 cps	0.4704 ppm	94.079 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.4698 ppm	93.959 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	83,441 cps	2.5753 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	73,406 cps	2.5067 ppm	100.268 %	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	181,820 cps	0.4773 ppm	95.458 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	614 cps	2.3582 ppm	94.328 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,729 cps	0.4649 ppm	92.978 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,509 cps	0.4626 ppm	92.522 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,829 cps	0.4913 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,588 cps	2.3713 ppm	94.854 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,450 cps	2.3973 ppm	95.890 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	623 cps	2.4569 ppm	98.276 %	0.2 %	0.0 ppm
Li 670.784 {50} (Radial)	36,542 cps	2.5395 ppm	101.578 %	1.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,260 cps	0.4686 ppm	93.719 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,527 cps	2.3881 ppm	95.526 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	99,172 cps	50.3033 ppm	100.607 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,194 cps	2.3749 ppm	94.998 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	23,214 cps	50.1790 ppm	100.358 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	575 cps	2.3746 ppm	94.984 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,099 cps	0.4717 ppm	94.341 %	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,268 cps	0.4991 ppm	99.822 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	492 cps	0.4759 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	634 cps	0.4865 ppm	97.292 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	8,058 cps	0.4737 ppm	94.747 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,734 cps	1.1617 ppm	92.933 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.0247 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		90.2724 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	82 cps	2.3185 ppm	92.738 %	1.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.4854 ppm	97.084 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,560 cps	2.2579 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.3070 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	816 cps	2.4217 ppm	96.867 %	1.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,124 cps	2.4308 ppm	97.234 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	214 cps	2.3915 ppm		2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	483 cps	0.4720 ppm	94.397 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6056 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.6250 %		0.7 %	0.7 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 11:16:17 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	276 cps	0.4649 ppm	92.976 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4656 ppm	93.115 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	80,636 cps	2.4888 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	70,940 cps	2.4225 ppm	96.901 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	176,748 cps	0.4640 ppm	92.795 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	596 cps	2.2880 ppm	91.519 %	3.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,668 cps	0.4600 ppm	91.990 %	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,406 cps	0.4520 ppm	90.398 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,792 cps	0.4849 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,345 cps	2.3433 ppm	93.733 %	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,427 cps	2.3170 ppm	92.681 %	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	602 cps	2.3733 ppm	94.934 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	35,163 cps	2.4436 ppm	97.745 %	2.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,306 cps	0.4555 ppm	91.108 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,443 cps	2.3572 ppm	94.287 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	95,548 cps	48.4653 ppm	96.931 %	2.7 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,073 cps	2.3468 ppm	93.871 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	22,274 cps	48.1460 ppm	96.292 %	3.1 %	1.5 ppm
Se 196.090 {472} (Axial)	571 cps	2.3561 ppm	94.242 %	2.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,900 cps	0.4563 ppm	91.265 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,625 cps	0.4825 ppm	96.491 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	487 cps	0.4716 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	619 cps	0.4753 ppm	95.066 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,820 cps	0.4598 ppm	91.950 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,599 cps	1.1494 ppm	91.950 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7019 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		90.6131 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	79 cps	2.2161 ppm	88.642 %	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	172 cps	0.4809 ppm	96.186 %	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,537 cps	2.2375 ppm		2.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.5702 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	787 cps	2.3362 ppm	93.450 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,087 cps	2.3528 ppm	94.112 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	206 cps	2.3000 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	479 cps	0.4678 ppm	93.567 %	2.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.5779 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.3290 %		1.1 %	1.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 11:21:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	279 cps	0.4686 ppm	93.723 %	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4688 ppm	93.752 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	81,028 cps	2.5009 ppm		2.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	71,244 cps	2.4329 ppm	97.316 %	2.8 %	0.1 ppm
Be 313.042 {108} (Axial)	180,867 cps	0.4748 ppm	94.958 %	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	596 cps	2.2883 ppm	91.531 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,721 cps	0.4642 ppm	92.847 %	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,499 cps	0.4615 ppm	92.302 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,828 cps	0.4911 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,563 cps	2.3684 ppm	94.737 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,580 cps	2.3628 ppm	94.510 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	592 cps	2.3346 ppm	93.384 %	3.1 %	0.1 ppm
Li 670.784 {50} (Radial)	35,443 cps	2.4631 ppm	98.525 %	3.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,079 cps	0.4661 ppm	93.225 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,515 cps	2.3836 ppm	95.345 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	96,278 cps	48.8356 ppm	97.671 %	3.0 %	1.5 ppm
Ni 231.604 {445} (Axial)	10,184 cps	2.3728 ppm	94.910 %	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	22,531 cps	48.7016 ppm	97.403 %	3.3 %	1.6 ppm
Se 196.090 {472} (Axial)	576 cps	2.3767 ppm	95.070 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,047 cps	0.4677 ppm	93.532 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,689 cps	0.4841 ppm	96.823 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	492 cps	0.4763 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	624 cps	0.4791 ppm	95.818 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,980 cps	0.4692 ppm	93.839 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,726 cps	1.1609 ppm	92.874 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.1410 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		90.6529 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	80 cps	2.2572 ppm	90.287 %	3.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	174 cps	0.4845 ppm	96.903 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,563 cps	2.2603 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7317 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	796 cps	2.3623 ppm	94.491 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	1,094 cps	2.3673 ppm	94.692 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	207 cps	2.3137 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	483 cps	0.4715 ppm	94.296 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.7504 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.5679 %		0.6 %	0.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 12:21:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	273 cps	0.4596 ppm	91.920 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4604 ppm	92.089 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	80,354 cps	2.4801 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	70,477 cps	2.4067 ppm	96.268 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	183,346 cps	0.4813 ppm	96.260 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	605 cps	2.3240 ppm	92.962 %	2.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,638 cps	0.4575 ppm	91.496 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,574 cps	0.4692 ppm	93.843 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,788 cps	0.4843 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,273 cps	2.3350 ppm	93.400 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,302 cps	2.3914 ppm	95.656 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	627 cps	2.4724 ppm	98.894 %	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	34,970 cps	2.4302 ppm	97.210 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,583 cps	0.4730 ppm	94.602 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,406 cps	2.3436 ppm	93.745 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	96,156 cps	48.7738 ppm	97.548 %	2.5 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,040 cps	2.3391 ppm	93.563 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	22,198 cps	47.9825 ppm	95.965 %	3.1 %	1.5 ppm
Se 196.090 {472} (Axial)	566 cps	2.3372 ppm	93.487 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,114 cps	0.4729 ppm	94.573 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,651 cps	0.4831 ppm	96.626 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	488 cps	0.4726 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	628 cps	0.4824 ppm	96.472 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	8,086 cps	0.4754 ppm	95.086 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,529 cps	1.1430 ppm	91.437 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.3047 %		3.2 %	3.0 %
Sc 188.060 {479} (Axial)		92.3005 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	81 cps	2.2794 ppm	91.176 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	171 cps	0.4768 ppm	95.360 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,547 cps	2.2467 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3998 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	786 cps	2.3325 ppm	93.299 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,094 cps	2.3680 ppm	94.722 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	209 cps	2.3283 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	481 cps	0.4699 ppm	93.974 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.8589 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.4095 %		0.3 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 1:22:44 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	272 cps	0.4576 ppm	91.523 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4597 ppm	91.942 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	80,348 cps	2.4799 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	70,418 cps	2.4047 ppm	96.188 %	2.5 %	0.1 ppm
Be 313.042 {108} (Axial)	175,241 cps	0.4600 ppm	92.005 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	592 cps	2.2744 ppm	90.974 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,589 cps	0.4535 ppm	90.697 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,365 cps	0.4478 ppm	89.553 %	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,771 cps	0.4814 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,135 cps	2.3192 ppm	92.768 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,799 cps	2.2921 ppm	91.685 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	594 cps	2.3423 ppm	93.692 %	2.0 %	0.0 ppm
Li 670.784 {50} (Radial)	34,870 cps	2.4233 ppm	96.931 %	2.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,055 cps	0.4521 ppm	90.424 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,366 cps	2.3292 ppm	93.169 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	95,951 cps	48.6699 ppm	97.340 %	3.0 %	1.5 ppm
Ni 231.604 {445} (Axial)	9,972 cps	2.3232 ppm	92.930 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	21,989 cps	47.5297 ppm	95.059 %	3.4 %	1.6 ppm
Se 196.090 {472} (Axial)	565 cps	2.3313 ppm	93.254 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,849 cps	0.4523 ppm	90.469 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,625 cps	0.4825 ppm	96.492 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	481 cps	0.4659 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	620 cps	0.4764 ppm	95.276 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,734 cps	0.4547 ppm	90.946 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,446 cps	1.1354 ppm	90.830 %	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.6760 %		0.8 %	0.8 %
Sc 188.060 {479} (Axial)		92.3686 %		0.0 %	0.0 %
Mg 279.079 {121} (Radial)	80 cps	2.2585 ppm	90.340 %	2.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	170 cps	0.4749 ppm	94.984 %	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,516 cps	2.2193 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3025 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	780 cps	2.3133 ppm	92.532 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	1,084 cps	2.3461 ppm	93.842 %	2.4 %	0.1 ppm
Si 251.611 {134} (Radial)	203 cps	2.2678 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	474 cps	0.4630 ppm	92.591 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5800 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.4167 %		0.6 %	0.7 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 1:27:39 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	271 cps	0.4562 ppm	91.248 %	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	180 cps	0.4571 ppm	91.426 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	78,028 cps	2.4083 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	68,545 cps	2.3407 ppm	93.629 %	2.9 %	0.1 ppm
Be 313.042 {108} (Axial)	187,494 cps	0.4922 ppm	98.438 %	10.8 %	0.1 ppm
Ca 315.887 {107} (Radial)	575 cps	2.2072 ppm	88.286 %	3.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,579 cps	0.4527 ppm	90.543 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,670 cps	0.4791 ppm	95.825 %	10.7 %	0.1 ppm
Cr 205.560 {464} (Axial)	2,766 cps	0.4804 ppm		2.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,093 cps	2.3144 ppm	92.575 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	61,796 cps	2.4506 ppm	98.025 %	11.0 %	0.3 ppm
Fe 259.940 {130} (Radial)	567 cps	2.2346 ppm	89.385 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	33,966 cps	2.3605 ppm	94.418 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,334 cps	0.4833 ppm	96.658 %	10.7 %	0.1 ppm
Mo 202.030 {467} (Axial)	6,349 cps	2.3230 ppm	92.920 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	93,440 cps	47.3960 ppm	94.792 %	3.4 %	1.6 ppm
Ni 231.604 {445} (Axial)	9,958 cps	2.3199 ppm	92.798 %	2.3 %	0.1 ppm
K 766.490 {44} (Radial)	21,427 cps	46.3149 ppm	92.630 %	3.6 %	1.7 ppm
Se 196.090 {472} (Axial)	563 cps	2.3241 ppm	92.964 %	2.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,252 cps	0.4836 ppm	96.712 %	10.7 %	0.1 ppm
Sr 407.771 {83} (Radial)	18,066 cps	0.4680 ppm	93.594 %	3.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	480 cps	0.4651 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	605 cps	0.4642 ppm	92.834 %	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,278 cps	0.4867 ppm	97.336 %	10.9 %	0.1 ppm
Zn 213.856 {457} (Axial)	12,423 cps	1.1333 ppm	90.665 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.2205 %		9.0 %	8.4 %
Sc 188.060 {479} (Axial)		92.7650 %		0.7 %	0.7 %
Mg 279.079 {121} (Radial)	77 cps	2.1709 ppm	86.837 %	3.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	169 cps	0.4728 ppm	94.555 %	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,517 cps	2.2197 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.7517 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	758 cps	2.2487 ppm	89.946 %	3.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,050 cps	2.2723 ppm	90.892 %	2.9 %	0.1 ppm
Si 251.611 {134} (Radial)	199 cps	2.2244 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	473 cps	0.4620 ppm	92.404 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9796 %		0.5 %	0.5 %
Sc 361.384 {93} (Radial)		104.3571 %		0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 2:28:50 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	272 cps	0.4573 ppm	91.466 %	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	180 cps	0.4589 ppm	91.783 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	80,079 cps	2.4716 ppm		2.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	70,384 cps	2.4035 ppm	96.141 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	174,501 cps	0.4581 ppm	91.616 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	808 cps	3.1001 ppm	124.002 %	7.2 %	0.2 ppm
Cd 228.802 {447} (Axial)	5,567 cps	0.4517 ppm	90.349 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,332 cps	0.4445 ppm	88.895 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,753 cps	0.4781 ppm		1.9 %	0.0 ppm
Co 228.616 {447} (Axial)	20,036 cps	2.3077 ppm	92.309 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,002 cps	2.3002 ppm	92.008 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	592 cps	2.3347 ppm	93.387 %	2.0 %	0.0 ppm
Li 670.784 {50} (Radial)	34,817 cps	2.4196 ppm	96.784 %	2.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,929 cps	0.4504 ppm	90.079 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,364 cps	2.3283 ppm	93.131 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	94,834 cps	48.1030 ppm	96.206 %	2.9 %	1.4 ppm
Ni 231.604 {445} (Axial)	9,919 cps	2.3110 ppm	92.439 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	22,128 cps	47.8311 ppm	95.662 %	2.9 %	1.4 ppm
Se 196.090 {472} (Axial)	561 cps	2.3166 ppm	92.663 %	1.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,841 cps	0.4517 ppm	90.346 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,503 cps	0.4793 ppm	95.858 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	479 cps	0.4640 ppm		2.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	617 cps	0.4736 ppm	94.728 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	7,734 cps	0.4547 ppm	90.946 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,390 cps	1.1303 ppm	90.427 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6280 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		91.6156 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	81 cps	2.2754 ppm	91.017 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	169 cps	0.4712 ppm	94.234 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,500 cps	2.2049 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.5441 %		0.1 %	0.0 %
B 249.773 {135} (Radial)	770 cps	2.2857 ppm	91.426 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,078 cps	2.3316 ppm	93.265 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	238 cps	2.6527 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	470 cps	0.4588 ppm	91.753 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5111 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.0117 %		1.6 %	1.7 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 2:33:44 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	267 cps	0.4486 ppm	89.713 %	2.5 %	0.0 ppm
As 189.042 {478} (Axial)	176 cps	0.4482 ppm	89.635 %	3.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	77,906 cps	2.4045 ppm		0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	68,442 cps	2.3372 ppm	93.488 %	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	167,520 cps	0.4398 ppm	87.951 %	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	584 cps	2.2401 ppm	89.603 %	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,459 cps	0.4429 ppm	88.588 %	2.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,174 cps	0.4282 ppm	85.635 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,690 cps	0.4672 ppm		2.6 %	0.0 ppm
Co 228.616 {447} (Axial)	19,638 cps	2.2620 ppm	90.479 %	2.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,895 cps	2.2166 ppm	88.665 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	561 cps	2.2096 ppm	88.385 %	0.8 %	0.0 ppm
Li 670.784 {50} (Radial)	33,793 cps	2.3484 ppm	93.937 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	31,608 cps	0.4323 ppm	86.465 %	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,234 cps	2.2807 ppm	91.227 %	2.7 %	0.1 ppm
Na 589.592 {57} (Radial)	91,593 cps	46.4592 ppm	92.918 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	9,719 cps	2.2644 ppm	90.575 %	2.6 %	0.1 ppm
K 766.490 {44} (Radial)	21,273 cps	45.9824 ppm	91.965 %	2.1 %	1.0 ppm
Se 196.090 {472} (Axial)	552 cps	2.2757 ppm	91.029 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,614 cps	0.4342 ppm	86.846 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	17,981 cps	0.4658 ppm	93.154 %	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	469 cps	0.4540 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	593 cps	0.4551 ppm	91.023 %	0.3 %	0.0 ppm
V 292.402 {115} (Axial)	7,436 cps	0.4372 ppm	87.441 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,138 cps	1.1073 ppm	88.583 %	2.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.4781 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		92.0275 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	76 cps	2.1343 ppm	85.370 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	166 cps	0.4626 ppm	92.521 %	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,445 cps	2.1561 ppm		2.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		98.0098 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	743 cps	2.2049 ppm	88.197 %	1.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,039 cps	2.2472 ppm	89.887 %	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	205 cps	2.2908 ppm		1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	462 cps	0.4506 ppm	90.114 %	2.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.0873 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		106.2203 %		0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 3:14:59 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	268 cps	0.4508 ppm	90.163 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	179 cps	0.4548 ppm	90.950 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	78,456 cps	2.4215 ppm		1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	68,794 cps	2.3492 ppm	93.969 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	179,105 cps	0.4702 ppm	94.033 %	6.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	578 cps	2.2206 ppm	88.826 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,533 cps	0.4489 ppm	89.788 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,455 cps	0.4570 ppm	91.407 %	6.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,748 cps	0.4772 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	19,960 cps	2.2991 ppm	91.962 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,068 cps	2.3425 ppm	93.698 %	6.5 %	0.2 ppm
Fe 259.940 {130} (Radial)	569 cps	2.2427 ppm	89.708 %	0.9 %	0.0 ppm
Li 670.784 {50} (Radial)	34,011 cps	2.3636 ppm	94.544 %	2.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,814 cps	0.4625 ppm	92.500 %	6.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,324 cps	2.3139 ppm	92.558 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	92,707 cps	47.0245 ppm	94.049 %	2.1 %	1.0 ppm
Ni 231.604 {445} (Axial)	9,895 cps	2.3054 ppm	92.217 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	21,546 cps	46.5736 ppm	93.147 %	2.5 %	1.1 ppm
Se 196.090 {472} (Axial)	558 cps	2.3040 ppm	92.161 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,922 cps	0.4580 ppm	91.601 %	6.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,119 cps	0.4693 ppm	93.867 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	476 cps	0.4610 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	598 cps	0.4592 ppm	91.843 %	1.1 %	0.0 ppm
V 292.402 {115} (Axial)	7,956 cps	0.4678 ppm	93.557 %	6.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,330 cps	1.1248 ppm	89.985 %	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.8161 %		4.8 %	4.6 %
Sc 188.060 {479} (Axial)		92.3982 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	77 cps	2.1581 ppm	86.325 %	4.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	168 cps	0.4693 ppm	93.864 %	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,497 cps	2.2025 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4229 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	746 cps	2.2132 ppm	88.529 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,049 cps	2.2689 ppm	90.757 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	210 cps	2.3481 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	469 cps	0.4583 ppm	91.663 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.0677 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.6887 %		0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 3:19:54 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	271 cps	0.4554 ppm	91.071 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	180 cps	0.4575 ppm	91.502 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	82,734 cps	2.5535 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	72,316 cps	2.4695 ppm	98.779 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	182,099 cps	0.4780 ppm	95.605 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	603 cps	2.3163 ppm	92.654 %	2.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,557 cps	0.4509 ppm	90.181 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,516 cps	0.4633 ppm	92.659 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,756 cps	0.4786 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,035 cps	2.3077 ppm	92.308 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,021 cps	2.3803 ppm	95.211 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	596 cps	2.3477 ppm	93.908 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	35,903 cps	2.4950 ppm	99.802 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,313 cps	0.4693 ppm	93.864 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,358 cps	2.3262 ppm	93.049 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	98,116 cps	49.7677 ppm	99.535 %	2.6 %	1.3 ppm
Ni 231.604 {445} (Axial)	9,933 cps	2.3143 ppm	92.572 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	22,751 cps	49.1768 ppm	98.354 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	560 cps	2.3107 ppm	92.428 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,017 cps	0.4653 ppm	93.070 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,123 cps	0.4953 ppm	99.067 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	479 cps	0.4635 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	627 cps	0.4814 ppm	96.281 %	3.4 %	0.0 ppm
V 292.402 {115} (Axial)	8,090 cps	0.4756 ppm	95.127 %	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,371 cps	1.1286 ppm	90.286 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0178 %		1.5 %	1.5 %
Sc 188.060 {479} (Axial)		92.5489 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	79 cps	2.2242 ppm	88.967 %	3.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	169 cps	0.4716 ppm	94.320 %	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,505 cps	2.2096 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.6151 %		0.4 %	0.3 %
B 249.773 {135} (Radial)	789 cps	2.3419 ppm	93.678 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,100 cps	2.3810 ppm	95.241 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	217 cps	2.4244 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	470 cps	0.4591 ppm	91.817 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.2779 %		0.4 %	0.3 %
Sc 361.384 {93} (Radial)		103.2969 %		0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 10:50:25 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	284 cps	0.4782 ppm	95.640 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	188 cps	0.4788 ppm	95.756 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	84,521 cps	2.6087 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	74,125 cps	2.5313 ppm	101.251 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	192,394 cps	0.5050 ppm	101.010 %	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	673 cps	2.5853 ppm	103.414 %	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,925 cps	0.4808 ppm	96.154 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,799 cps	0.4924 ppm	98.474 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,885 cps	0.5010 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	21,236 cps	2.4460 ppm	97.841 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	61,735 cps	2.4482 ppm	97.928 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	658 cps	2.5951 ppm	103.805 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	36,168 cps	2.5135 ppm	100.538 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,176 cps	0.4948 ppm	98.962 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,687 cps	2.4464 ppm	97.857 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	99,392 cps	50.4154 ppm	100.831 %	1.8 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,542 cps	2.4561 ppm	98.245 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	23,586 cps	50.9827 ppm	101.965 %	2.2 %	1.1 ppm
Se 196.090 {472} (Axial)	575 cps	2.3737 ppm	94.948 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,335 cps	0.4900 ppm	98.000 %	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,716 cps	0.5107 ppm	102.140 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	516 cps	0.4996 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	648 cps	0.4973 ppm	99.466 %	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	8,475 cps	0.4983 ppm	99.661 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,179 cps	1.2023 ppm	96.183 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.7818 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		91.0904 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	90 cps	2.5367 ppm	101.467 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	179 cps	0.4992 ppm	99.840 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,677 cps	2.3611 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.7980 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	857 cps	2.5425 ppm	101.699 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,167 cps	2.5254 ppm	101.017 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	228 cps	2.5441 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	506 cps	0.4944 ppm	98.879 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.7232 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		98.8590 %		0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 11:51:31 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	282 cps	0.4738 ppm	94.755 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.4804 ppm	96.072 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	81,482 cps	2.5149 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	71,451 cps	2.4400 ppm	97.599 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	195,079 cps	0.5121 ppm	102.420 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	656 cps	2.5176 ppm	100.702 %	2.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,918 cps	0.4802 ppm	96.038 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,873 cps	0.4999 ppm	99.978 %	2.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,910 cps	0.5054 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,385 cps	2.4632 ppm	98.526 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,391 cps	2.3949 ppm	95.798 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	656 cps	2.5854 ppm	103.415 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	34,774 cps	2.4166 ppm	96.664 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,573 cps	0.5002 ppm	100.047 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,708 cps	2.4541 ppm	98.165 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	96,578 cps	48.9880 ppm	97.976 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,623 cps	2.4750 ppm	99.001 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	23,094 cps	49.9190 ppm	99.838 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	574 cps	2.3687 ppm	94.750 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,326 cps	0.4893 ppm	97.862 %	2.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,022 cps	0.4927 ppm	98.547 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	522 cps	0.5051 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	633 cps	0.4860 ppm	97.202 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	8,497 cps	0.4996 ppm	99.912 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,223 cps	1.2063 ppm	96.505 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.7384 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		91.6053 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	90 cps	2.5427 ppm	101.708 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5000 ppm	100.003 %	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,739 cps	2.4160 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.2948 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	835 cps	2.4772 ppm	99.086 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,128 cps	2.4407 ppm	97.628 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	224 cps	2.5053 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	510 cps	0.4982 ppm	99.642 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9849 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.4103 %		0.6 %	0.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 12:52:42 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	280 cps	0.4711 ppm	94.229 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.4752 ppm	95.038 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	83,957 cps	2.5913 ppm		4.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	73,349 cps	2.5048 ppm	100.192 %	4.2 %	0.1 ppm
Be 313.042 {108} (Axial)	191,505 cps	0.5027 ppm	100.543 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	662 cps	2.5428 ppm	101.713 %	4.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,855 cps	0.4751 ppm	95.024 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,773 cps	0.4896 ppm	97.924 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,885 cps	0.5010 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,113 cps	2.4319 ppm	97.275 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,933 cps	2.3768 ppm	95.071 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	651 cps	2.5646 ppm	102.582 %	3.7 %	0.1 ppm
Li 670.784 {50} (Radial)	35,792 cps	2.4874 ppm	99.495 %	4.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,887 cps	0.4908 ppm	98.170 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,641 cps	2.4298 ppm	97.192 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	98,819 cps	50.1248 ppm	100.250 %	4.4 %	2.2 ppm
Ni 231.604 {445} (Axial)	10,478 cps	2.4413 ppm	97.651 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	23,260 cps	50.2776 ppm	100.555 %	4.6 %	2.3 ppm
Se 196.090 {472} (Axial)	575 cps	2.3716 ppm	94.865 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,217 cps	0.4808 ppm	96.169 %	0.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,552 cps	0.5065 ppm	101.292 %	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4945 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	653 cps	0.5013 ppm	100.259 %	4.6 %	0.0 ppm
V 292.402 {115} (Axial)	8,352 cps	0.4910 ppm	98.207 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,055 cps	1.1910 ppm	95.276 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.3017 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		92.1769 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	91 cps	2.5544 ppm	102.174 %	4.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	177 cps	0.4943 ppm	98.864 %	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,675 cps	2.3593 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.7271 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	846 cps	2.5108 ppm	100.433 %	4.0 %	0.1 ppm
Al 396.152 {85} (Radial)	1,151 cps	2.4900 ppm	99.599 %	4.4 %	0.1 ppm
Si 251.611 {134} (Radial)	226 cps	2.5278 ppm		4.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	501 cps	0.4890 ppm	97.791 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		96.1014 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.1901 %		1.5 %	1.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 1:53:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	281 cps	0.4727 ppm	94.548 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	186 cps	0.4724 ppm	94.475 %	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	83,077 cps	2.5641 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	72,807 cps	2.4863 ppm	99.451 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	186,680 cps	0.4901 ppm	98.010 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	629 cps	2.4131 ppm	96.523 %	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,799 cps	0.4705 ppm	94.103 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,638 cps	0.4758 ppm	95.160 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,844 cps	0.4939 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,820 cps	2.3980 ppm	95.921 %	2.4 %	0.1 ppm
Cu 324.754 {104} (Axial)	59,953 cps	2.3775 ppm	95.102 %	2.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	631 cps	2.4861 ppm	99.445 %	1.3 %	0.0 ppm
Li 670.784 {50} (Radial)	35,589 cps	2.4732 ppm	98.929 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	35,067 cps	0.4796 ppm	95.927 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,591 cps	2.4113 ppm	96.452 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	97,726 cps	49.5703 ppm	99.141 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,327 cps	2.4061 ppm	96.245 %	2.3 %	0.1 ppm
K 766.490 {44} (Radial)	23,058 cps	49.8411 ppm	99.682 %	1.7 %	0.8 ppm
Se 196.090 {472} (Axial)	574 cps	2.3673 ppm	94.692 %	2.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,130 cps	0.4741 ppm	94.818 %	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,291 cps	0.4997 ppm	99.942 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4862 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	631 cps	0.4843 ppm	96.869 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,220 cps	0.4833 ppm	96.660 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,897 cps	1.1766 ppm	94.124 %	2.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.4402 %		1.2 %	1.2 %
Sc 188.060 {479} (Axial)		90.8049 %		1.5 %	1.4 %
Mg 279.079 {121} (Radial)	86 cps	2.4129 ppm	96.514 %	2.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	176 cps	0.4908 ppm	98.168 %	2.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,606 cps	2.2984 ppm		2.2 %	0.1 ppm
Sc 227.318 {448} (Axial)		97.1718 %		1.2 %	1.2 %
B 249.773 {135} (Radial)	823 cps	2.4413 ppm	97.651 %	1.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,130 cps	2.4439 ppm	97.757 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	219 cps	2.4485 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	493 cps	0.4809 ppm	96.185 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.4938 %		1.0 %	1.0 %
Sc 361.384 {93} (Radial)		102.2923 %		0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 2:55:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	294 cps	0.4950 ppm	99.003 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.4903 ppm	98.051 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	85,527 cps	2.6397 ppm		2.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	75,527 cps	2.5792 ppm	103.166 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	189,939 cps	0.4986 ppm	99.721 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	618 cps	2.3713 ppm	94.852 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,009 cps	0.4876 ppm	97.522 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,696 cps	0.4818 ppm	96.358 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,941 cps	0.5109 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	21,541 cps	2.4811 ppm	99.245 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,270 cps	2.4694 ppm	98.777 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	609 cps	2.4016 ppm	96.062 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	37,170 cps	2.5831 ppm	103.325 %	2.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,659 cps	0.4877 ppm	97.545 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,848 cps	2.5056 ppm	100.223 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	100,904 cps	51.1823 ppm	102.365 %	3.0 %	1.5 ppm
Ni 231.604 {445} (Axial)	10,667 cps	2.4853 ppm	99.413 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	24,077 cps	52.0448 ppm	104.090 %	3.2 %	1.7 ppm
Se 196.090 {472} (Axial)	598 cps	2.4672 ppm	98.688 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,307 cps	0.4878 ppm	97.564 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,747 cps	0.5115 ppm	102.301 %	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	517 cps	0.5002 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	628 cps	0.4819 ppm	96.372 %	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,404 cps	0.4941 ppm	98.823 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,344 cps	1.2174 ppm	97.390 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.9663 %		0.8 %	0.8 %
Sc 188.060 {479} (Axial)		87.7440 %		1.5 %	1.3 %
Mg 279.079 {121} (Radial)	82 cps	2.3166 ppm	92.663 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5099 ppm	101.973 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,661 cps	2.3472 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.1034 %		1.3 %	1.3 %
B 249.773 {135} (Radial)	813 cps	2.4135 ppm	96.540 %	2.8 %	0.1 ppm
Al 396.152 {85} (Radial)	1,143 cps	2.4740 ppm	98.959 %	2.0 %	0.1 ppm
Si 251.611 {134} (Radial)	215 cps	2.4018 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	507 cps	0.4950 ppm	99.001 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0030 %		0.9 %	0.8 %
Sc 361.384 {93} (Radial)		100.7492 %		0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 3:56:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	287 cps	0.4831 ppm	96.613 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.4823 ppm	96.458 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	83,090 cps	2.5645 ppm		1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	73,091 cps	2.4960 ppm	99.838 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	185,434 cps	0.4868 ppm	97.356 %	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	614 cps	2.3579 ppm	94.316 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,906 cps	0.4792 ppm	95.842 %	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,582 cps	0.4701 ppm	94.021 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,910 cps	0.5055 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,251 cps	2.4477 ppm	97.910 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,223 cps	2.3883 ppm	95.530 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	607 cps	2.3910 ppm	95.639 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	36,100 cps	2.5088 ppm	100.351 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,839 cps	0.4765 ppm	95.303 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,727 cps	2.4613 ppm	98.450 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	98,603 cps	50.0151 ppm	100.030 %	1.8 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,539 cps	2.4555 ppm	98.218 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	23,279 cps	50.3182 ppm	100.636 %	2.1 %	1.1 ppm
Se 196.090 {472} (Axial)	588 cps	2.4280 ppm	97.121 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,130 cps	0.4741 ppm	94.827 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,215 cps	0.4977 ppm	99.548 %	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	510 cps	0.4939 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	622 cps	0.4773 ppm	95.451 %	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	8,176 cps	0.4807 ppm	96.146 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,144 cps	1.1991 ppm	95.927 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.8432 %		0.6 %	0.5 %
Sc 188.060 {479} (Axial)		89.8812 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	82 cps	2.3220 ppm	92.879 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.4984 ppm	99.680 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,652 cps	2.3389 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.1261 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	805 cps	2.3890 ppm	95.559 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,112 cps	2.4051 ppm	96.203 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	213 cps	2.3743 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	502 cps	0.4903 ppm	98.067 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.8398 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.7100 %		0.7 %	0.7 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 5:06:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	293 cps	0.4926 ppm	98.520 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.4899 ppm	97.983 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	85,056 cps	2.6252 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	75,226 cps	2.5689 ppm	102.754 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	189,120 cps	0.4965 ppm	99.291 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	619 cps	2.3780 ppm	95.119 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,988 cps	0.4859 ppm	97.174 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,681 cps	0.4802 ppm	96.042 %	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,934 cps	0.5096 ppm		1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	21,500 cps	2.4763 ppm	99.054 %	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,325 cps	2.4716 ppm	98.865 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	642 cps	2.5302 ppm	101.206 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	37,106 cps	2.5787 ppm	103.148 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,527 cps	0.4859 ppm	97.185 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,831 cps	2.4992 ppm	99.969 %	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	100,633 cps	51.0448 ppm	102.090 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,641 cps	2.4792 ppm	99.166 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	23,919 cps	51.7018 ppm	103.404 %	2.4 %	1.2 ppm
Se 196.090 {472} (Axial)	595 cps	2.4567 ppm	98.268 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,334 cps	0.4899 ppm	97.978 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,659 cps	0.5092 ppm	101.844 %	2.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	518 cps	0.5009 ppm		1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	636 cps	0.4885 ppm	97.698 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,357 cps	0.4913 ppm	98.266 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,303 cps	1.2136 ppm	97.091 %	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.1732 %		1.6 %	1.5 %
Sc 188.060 {479} (Axial)		88.2308 %		0.0 %	0.0 %
Mg 279.079 {121} (Radial)	84 cps	2.3693 ppm	94.771 %	1.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5073 ppm	101.458 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,678 cps	2.3619 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.4148 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	819 cps	2.4315 ppm	97.258 %	2.1 %	0.1 ppm
Al 396.152 {85} (Radial)	1,145 cps	2.4781 ppm	99.123 %	2.0 %	0.1 ppm
Si 251.611 {134} (Radial)	216 cps	2.4106 ppm		1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	506 cps	0.4935 ppm	98.708 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		92.3290 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		100.4088 %		0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 5:11:27 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0003 ppm	233.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	122.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	49 cps	0.0015 ppm	8.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	197 cps	0.0067 ppm	14.9 %	0.0 ppm
Be 313.042 {108} (Axial)	38 cps	0.0001 ppm	30.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0109 ppm	36.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	574.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	82.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	353.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	53.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	9 cps	0.0003 ppm	65.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0160 ppm	3.2 %	0.0 ppm
Li 670.784 {50} (Radial)	3 cps	0.0002 ppm	269.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	57.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	38.3 %	0.0 ppm
Na 589.592 {57} (Radial)	272 cps	0.1379 ppm	8.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	75.8 %	0.0 ppm
K 766.490 {44} (Radial)	-2 cps	-0.0039 ppm	861.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0054 ppm	17.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0001 ppm	231.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	19.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	151.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0002 ppm	90.4 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	877.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	7,396.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.2507 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.7280 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0509 ppm	54.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	219.6 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0002 ppm	98.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.8622 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	4 cps	0.0111 ppm	26.8 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0088 ppm	62.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0224 ppm	46.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	19.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.5689 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.0293 %	1.2 %	1.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 6:13:08 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	1,387.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	1,903.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	36 cps	0.0011 ppm	14.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	143 cps	0.0049 ppm	18.6 %	0.0 ppm
Be 313.042 {108} (Axial)	21 cps	0.0001 ppm	19.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0144 ppm	42.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	249.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	111.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	629.7 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	37.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	13 cps	0.0005 ppm	11.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0110 ppm	17.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26 cps	0.0018 ppm	22.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	13.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	42.6 %	0.0 ppm
Na 589.592 {57} (Radial)	164 cps	0.0831 ppm	8.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	48.5 %	0.0 ppm
K 766.490 {44} (Radial)	3 cps	0.0056 ppm	280.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	208.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	1,883.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0002 ppm	50.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	401.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0004 ppm	445.0 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	143.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	153.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6055 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.2022 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	2 cps	0.0566 ppm	43.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	141.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0004 ppm	47.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.3812 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	3 cps	0.0093 ppm	57.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0079 ppm	40.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0039 ppm	95.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	192.5 %	0.0 ppm
Y 224.306 {450} (Axial)		96.8667 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.9754 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 7:14:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0008 ppm	64.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	56.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	33 cps	0.0010 ppm	21.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	213 cps	0.0073 ppm	22.9 %	0.0 ppm
Be 313.042 {108} (Axial)	23 cps	0.0001 ppm	129.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0032 ppm	307.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0001 ppm	33.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	1,612.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	107.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	16.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	22 cps	0.0009 ppm	104.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0172 ppm	35.6 %	0.0 ppm
Li 670.784 {50} (Radial)	-2 cps	-0.0001 ppm	491.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	35.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	22.3 %	0.0 ppm
Na 589.592 {57} (Radial)	172 cps	0.0875 ppm	5.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	355.4 %	0.0 ppm
K 766.490 {44} (Radial)	-24 cps	-0.0510 ppm	33.2 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0028 ppm	15.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0002 ppm	415.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0002 ppm	16.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	818.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0021 ppm	67.4 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	0.0000 ppm	891.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	100.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0103 %	5.6 %	5.5 %
Sc 188.060 {479} (Axial)		98.9629 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	-0.0039 ppm	549.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0011 ppm	20.6 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0002 ppm	91.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9678 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	3 cps	0.0102 ppm	14.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0016 ppm	386.6 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0102 ppm	81.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	108.1 %	0.0 ppm
Y 224.306 {450} (Axial)		99.2808 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.3311 %	1.1 %	1.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 8:18:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0001 ppm	560.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	271.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	40 cps	0.0012 ppm	29.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	122 cps	0.0042 ppm	13.6 %	0.0 ppm
Be 313.042 {108} (Axial)	2 cps	0.0000 ppm	525.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0147 ppm	39.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0003 ppm	15.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-4 cps	-0.0004 ppm	41.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	132.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	11.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	2,400.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0125 ppm	25.2 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	2,382.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	18.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	21.7 %	0.0 ppm
Na 589.592 {57} (Radial)	165 cps	0.0839 ppm	13.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	87.0 %	0.0 ppm
K 766.490 {44} (Radial)	-24 cps	-0.0525 ppm	30.3 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0030 ppm	76.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0001 ppm	72.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0002 ppm	15.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0003 ppm	136.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0021 ppm	34.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,372.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	87.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.0020 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		99.9459 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	-0.0007 ppm	3,474.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	66.8 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0003 ppm	69.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8971 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	2 cps	0.0067 ppm	29.4 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0014 ppm	602.5 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0190 ppm	40.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	190.9 %	0.0 ppm
Y 224.306 {450} (Axial)		99.9101 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.3972 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:19:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0013 ppm	75.7 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0016 ppm	37.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	34 cps	0.0010 ppm	43.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	225 cps	0.0077 ppm	17.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-1 cps	0.0000 ppm	706.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0049 ppm	214.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	46.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	78.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	1,082.7 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	34.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	-3 cps	-0.0001 ppm	197.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0140 ppm	11.7 %	0.0 ppm
Li 670.784 {50} (Radial)	2 cps	0.0002 ppm	410.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	33.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0006 ppm	69.7 %	0.0 ppm
Na 589.592 {57} (Radial)	188 cps	0.0953 ppm	9.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1,172.2 %	0.0 ppm
K 766.490 {44} (Radial)	-21 cps	-0.0462 ppm	29.4 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0038 ppm	33.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	503.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0002 ppm	98.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	113.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0012 ppm	121.8 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	78.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	29.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.3756 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		99.5719 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0347 ppm	55.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0013 ppm	91.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0003 ppm	78.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4753 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	3 cps	0.0090 ppm	61.0 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0070 ppm	117.5 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0161 ppm	101.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0007 ppm	18.9 %	0.0 ppm
Y 224.306 {450} (Axial)		99.7745 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.4241 %	1.2 %	1.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:48:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0004 ppm	366.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	53.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	43 cps	0.0013 ppm	40.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	300 cps	0.0103 ppm	7.9 %	0.0 ppm
Be 313.042 {108} (Axial)	55 cps	0.0001 ppm	16.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0152 ppm	28.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	16.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	120.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0001 ppm	194.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	75.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	28 cps	0.0011 ppm	31.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0108 ppm	48.7 %	0.0 ppm
Li 670.784 {50} (Radial)	8 cps	0.0006 ppm	225.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	28.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	33.7 %	0.0 ppm
Na 589.592 {57} (Radial)	100 cps	0.0507 ppm	22.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	261.1 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0004 ppm	3,860.4 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0023 ppm	131.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0006 ppm	78.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0002 ppm	22.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	199.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0020 ppm	64.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	0.0000 ppm	151.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	85.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.1112 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		96.6317 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0211 ppm	134.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	141.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	144.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.3758 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	6 cps	0.0168 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0017 ppm	994.7 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0164 ppm	69.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	1,693.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.0838 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.5805 %	1.3 %	1.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:20:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0009 ppm	155.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	234.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	22 cps	0.0007 ppm	49.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	157 cps	0.0053 ppm	13.1 %	0.0 ppm
Be 313.042 {108} (Axial)	16 cps	0.0000 ppm	43.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0074 ppm	154.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	52.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	68.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	1,260.1 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	43.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	8 cps	0.0003 ppm	65.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0136 ppm	41.2 %	0.0 ppm
Li 670.784 {50} (Radial)	10 cps	0.0007 ppm	99.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	46.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	46.0 %	0.0 ppm
Na 589.592 {57} (Radial)	99 cps	0.0501 ppm	25.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	349.0 %	0.0 ppm
K 766.490 {44} (Radial)	-1 cps	-0.0012 ppm	1,335.4 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0029 ppm	29.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0001 ppm	257.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0001 ppm	30.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	196.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	355.2 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	229.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	58.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6856 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.9077 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1 cps	0.0202 ppm	214.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0009 ppm	40.4 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0004 ppm	17.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.9048 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	3 cps	0.0101 ppm	45.1 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0023 ppm	430.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0118 ppm	77.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0007 ppm	80.5 %	0.0 ppm
Y 224.306 {450} (Axial)		98.3083 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.6282 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:26:04 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0011 ppm	78.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	69.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	38 cps	0.0012 ppm	19.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	169 cps	0.0058 ppm	18.5 %	0.0 ppm
Be 313.042 {108} (Axial)	9 cps	0.0000 ppm	96.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0038 ppm	94.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	42.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	720.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	157.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	37.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	7 cps	0.0003 ppm	66.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0112 ppm	30.2 %	0.0 ppm
Li 670.784 {50} (Radial)	30 cps	0.0021 ppm	21.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	125.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	34.7 %	0.0 ppm
Na 589.592 {57} (Radial)	93 cps	0.0470 ppm	18.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	638.2 %	0.0 ppm
K 766.490 {44} (Radial)	14 cps	0.0312 ppm	65.6 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0025 ppm	39.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	1,277.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0002 ppm	86.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	90.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0014 ppm	36.4 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,218.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	350.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.3833 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		98.6428 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	0 cps	-0.0139 ppm	61.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	142.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0004 ppm	21.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.6569 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	4 cps	0.0113 ppm	22.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-3 cps	-0.0055 ppm	268.6 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0173 ppm	52.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0005 ppm	91.5 %	0.0 ppm
Y 224.306 {450} (Axial)		98.9519 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.2324 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:26:40 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0005 ppm	197.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	130.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	43 cps	0.0013 ppm	31.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	145 cps	0.0050 ppm	28.0 %	0.0 ppm
Be 313.042 {108} (Axial)	17 cps	0.0000 ppm	163.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0085 ppm	86.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	9.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	48.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	66.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	33.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	17 cps	0.0007 ppm	102.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	7 cps	0.0290 ppm	32.9 %	0.0 ppm
Li 670.784 {50} (Radial)	17 cps	0.0012 ppm	58.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	43.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	52.5 %	0.0 ppm
Na 589.592 {57} (Radial)	70 cps	0.0353 ppm	28.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	110.9 %	0.0 ppm
K 766.490 {44} (Radial)	-9 cps	-0.0193 ppm	42.9 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0034 ppm	17.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	-7 cps	-0.0005 ppm	175.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	34.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0018 ppm	23.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	63.5 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	111.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	44.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.3259 %	5.1 %	5.1 %
Sc 188.060 {479} (Axial)		100.0934 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0418 ppm	6.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	680.0 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	48.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0608 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	5 cps	0.0140 ppm	27.9 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0010 ppm	984.7 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0174 ppm	43.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	2 cps	0.0020 ppm	18.4 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5916 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.9796 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:32:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0002 ppm	374.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	35.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	37 cps	0.0011 ppm	12.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	156 cps	0.0053 ppm	8.7 %	0.0 ppm
Be 313.042 {108} (Axial)	3 cps	0.0000 ppm	303.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0077 ppm	184.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0001 ppm	51.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	61.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	436.6 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	47.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	1 cps	0.0001 ppm	464.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0065 ppm	30.7 %	0.0 ppm
Li 670.784 {50} (Radial)	20 cps	0.0014 ppm	72.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	5 cps	0.0001 ppm	26.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	30.8 %	0.0 ppm
Na 589.592 {57} (Radial)	101 cps	0.0511 ppm	15.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1,689.4 %	0.0 ppm
K 766.490 {44} (Radial)	-22 cps	-0.0476 ppm	73.3 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0029 ppm	94.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	118.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	41.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	93.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	143.5 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	116.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	201.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.8659 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		100.2438 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0392 ppm	61.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	132.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0004 ppm	30.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2327 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0142 ppm	31.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0054 ppm	102.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0201 ppm	15.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	95.6 %	0.0 ppm
Y 224.306 {450} (Axial)		100.3405 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.6976 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:38:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0001 ppm	368.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	75.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	40 cps	0.0012 ppm	20.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	128 cps	0.0044 ppm	10.6 %	0.0 ppm
Be 313.042 {108} (Axial)	10 cps	0.0000 ppm	109.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	8 cps	0.0289 ppm	13.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0001 ppm	10.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	75.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	486.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	28.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	4 cps	0.0002 ppm	145.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0101 ppm	26.4 %	0.0 ppm
Li 670.784 {50} (Radial)	13 cps	0.0009 ppm	35.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	21.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	27.5 %	0.0 ppm
Na 589.592 {57} (Radial)	130 cps	0.0661 ppm	14.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	214.0 %	0.0 ppm
K 766.490 {44} (Radial)	-6 cps	-0.0130 ppm	258.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	100.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0001 ppm	233.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	10 cps	0.0003 ppm	27.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	73.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0015 ppm	33.1 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	39.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	118.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.1996 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.9769 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0295 ppm	118.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0006 ppm	138.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0001 ppm	171.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.0596 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	4 cps	0.0110 ppm	18.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0023 ppm	378.7 %	0.0 ppm
Si 251.611 {134} (Radial)	4 cps	0.0439 ppm	23.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0009 ppm	49.5 %	0.0 ppm
Y 224.306 {450} (Axial)		100.2621 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		104.9002 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/26/2020 3:24:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	156.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0010 ppm	64.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	42 cps	0.0013 ppm	34.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	133 cps	0.0045 ppm	5.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	106,489.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0183 ppm	20.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	42.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	212.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	124.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	46.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	661.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0063 ppm	71.3 %	0.0 ppm
Li 670.784 {50} (Radial)	-10 cps	-0.0007 ppm	136.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	9.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	33.9 %	0.0 ppm
Na 589.592 {57} (Radial)	145 cps	0.0734 ppm	14.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	2,517.3 %	0.0 ppm
K 766.490 {44} (Radial)	-21 cps	-0.0445 ppm	38.6 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0031 ppm	35.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	45.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	11.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	177.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0026 ppm	49.6 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	241.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	85.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.8554 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		100.2604 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0422 ppm	37.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0007 ppm	81.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	887.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.3341 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0116 ppm	2.5 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0068 ppm	66.0 %	0.0 ppm
Si 251.611 {134} (Radial)	5 cps	0.0582 ppm	6.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	87.3 %	0.0 ppm
Y 224.306 {450} (Axial)		101.4142 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		104.3506 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:55:19 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0004 ppm	146.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	116.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	37 cps	0.0012 ppm	29.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	293 cps	0.0100 ppm	26.0 %	0.0 ppm
Be 313.042 {108} (Axial)	31 cps	0.0001 ppm	32.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0208 ppm	20.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0001 ppm	31.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	654.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	452.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	51.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	23 cps	0.0009 ppm	20.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0068 ppm	27.3 %	0.0 ppm
Li 670.784 {50} (Radial)	-11 cps	-0.0008 ppm	131.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	14.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	76.5 %	0.0 ppm
Na 589.592 {57} (Radial)	197 cps	0.0997 ppm	12.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	318.4 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	-0.0009 ppm	572.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0016 ppm	96.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	515.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	50.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	207.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0005 ppm	190.9 %	0.0 ppm
V 292.402 {115} (Axial)	5 cps	0.0003 ppm	99.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	71.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.7714 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		97.9252 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	1 cps	0.0226 ppm	62.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	13.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0003 ppm	38.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.3762 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	5 cps	0.0141 ppm	18.9 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0034 ppm	136.0 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0210 ppm	77.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	351.7 %	0.0 ppm
Y 224.306 {450} (Axial)		98.6328 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.8841 %	1.3 %	1.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:56:25 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0010 ppm	239.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	244.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	49 cps	0.0015 ppm	22.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	277 cps	0.0095 ppm	8.0 %	0.0 ppm
Be 313.042 {108} (Axial)	18 cps	0.0000 ppm	23.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	6 cps	0.0234 ppm	19.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0003 ppm	64.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	271.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	590.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	32.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	15 cps	0.0006 ppm	46.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0198 ppm	25.9 %	0.0 ppm
Li 670.784 {50} (Radial)	-10 cps	-0.0007 ppm	160.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	24.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	42.3 %	0.0 ppm
Na 589.592 {57} (Radial)	237 cps	0.1203 ppm	4.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	266.3 %	0.0 ppm
K 766.490 {44} (Radial)	-15 cps	-0.0320 ppm	32.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0017 ppm	42.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0001 ppm	196.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0002 ppm	25.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	4,197.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0006 ppm	328.1 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	69.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-2 cps	-0.0002 ppm	41.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.1393 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.8301 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0399 ppm	21.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	9,942.0 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0003 ppm	65.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.0925 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	5 cps	0.0153 ppm	30.3 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0044 ppm	60.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0138 ppm	16.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	68.4 %	0.0 ppm
Y 224.306 {450} (Axial)		99.2056 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		94.3033 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:57:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0006 ppm	81.3 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0013 ppm	73.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	48 cps	0.0015 ppm	19.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	192 cps	0.0066 ppm	5.5 %	0.0 ppm
Be 313.042 {108} (Axial)	3 cps	0.0000 ppm	492.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0167 ppm	32.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	45.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	221.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	98.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	49.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	8 cps	0.0003 ppm	53.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0043 ppm	116.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-13 cps	-0.0009 ppm	42.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	33.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	37.0 %	0.0 ppm
Na 589.592 {57} (Radial)	245 cps	0.1242 ppm	5.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	304.3 %	0.0 ppm
K 766.490 {44} (Radial)	2 cps	0.0048 ppm	991.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0020 ppm	120.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	61.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0002 ppm	29.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	35.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	98.9 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	199.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0001 ppm	56.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6659 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		99.0580 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	0.0092 ppm	218.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	58.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0003 ppm	29.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.2753 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	4 cps	0.0111 ppm	26.4 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0048 ppm	140.6 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0214 ppm	15.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	105.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.9619 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.3411 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:58:48 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0008 ppm	160.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	203.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0009 ppm	21.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	206 cps	0.0070 ppm	15.8 %	0.0 ppm
Be 313.042 {108} (Axial)	-6 cps	0.0000 ppm	278.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0109 ppm	11.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	7,563.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	214.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	342.0 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	65.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	3 cps	0.0001 ppm	191.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0108 ppm	6.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-21 cps	-0.0015 ppm	5.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	55.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	31.4 %	0.0 ppm
Na 589.592 {57} (Radial)	199 cps	0.1009 ppm	13.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	188.7 %	0.0 ppm
K 766.490 {44} (Radial)	-15 cps	-0.0321 ppm	52.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	73.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0004 ppm	87.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0002 ppm	26.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	295.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0005 ppm	207.3 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	228.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	16.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.4034 %	1.8 %	1.9 %
Sc 188.060 {479} (Axial)		98.0945 %	0.9 %	0.9 %
Mg 279.079 {121} (Radial)	2 cps	0.0627 ppm	26.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	56.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0004 ppm	34.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.3511 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	3 cps	0.0088 ppm	35.7 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0018 ppm	375.9 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0131 ppm	82.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0007 ppm	74.7 %	0.0 ppm
Y 224.306 {450} (Axial)		98.9645 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		101.7527 %	1.3 %	1.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:00:15 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0001 ppm	530.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	24.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	44 cps	0.0014 ppm	30.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	343 cps	0.0117 ppm	6.8 %	0.0 ppm
Be 313.042 {108} (Axial)	35 cps	0.0001 ppm	24.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0066 ppm	108.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	65.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	348.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	423.6 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	35.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	21 cps	0.0008 ppm	8.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0066 ppm	59.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-12 cps	-0.0008 ppm	76.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0000 ppm	114.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	30.1 %	0.0 ppm
Na 589.592 {57} (Radial)	277 cps	0.1405 ppm	7.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	141.3 %	0.0 ppm
K 766.490 {44} (Radial)	-14 cps	-0.0304 ppm	74.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0011 ppm	124.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	55.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	59.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	128.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0008 ppm	119.9 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	300.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	52.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.2343 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.0300 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0331 ppm	93.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,382.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0002 ppm	138.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.1233 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0109 ppm	53.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0014 ppm	303.6 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0058 ppm	108.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	159.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6919 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		99.1955 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/25/2020 4:01:48 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0006 ppm	62.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	56.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	42 cps	0.0013 ppm	13.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	288 cps	0.0098 ppm	3.4 %	0.0 ppm
Be 313.042 {108} (Axial)	16 cps	0.0000 ppm	62.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0123 ppm	52.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	37.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	248.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	170.3 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	44.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	9 cps	0.0004 ppm	76.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0049 ppm	20.6 %	0.0 ppm
Li 670.784 {50} (Radial)	-8 cps	-0.0006 ppm	94.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	54.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0006 ppm	48.7 %	0.0 ppm
Na 589.592 {57} (Radial)	233 cps	0.1181 ppm	6.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	84.7 %	0.0 ppm
K 766.490 {44} (Radial)	-7 cps	-0.0146 ppm	70.0 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0038 ppm	15.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	113.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0003 ppm	30.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	193.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	220.6 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	107.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	47.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8928 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		97.0200 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	2 cps	0.0464 ppm	52.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	9,725.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	-0.0002 ppm	83.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.1120 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	3 cps	0.0100 ppm	22.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0011 ppm	214.3 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0086 ppm	67.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0009 ppm	35.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1895 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.0028 %	0.8 %	0.8 %

Simple Sample Report

11/29/2020 10:56:15 AM

MBLK-168174

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:06:44 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	24.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	259.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	13 cps	0.0004 ppm	39.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	219 cps	0.0075 ppm	17.4 %	0.0 ppm
Be 313.042 {108} (Axial)	-28 cps	-0.0001 ppm	28.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	7 cps	0.0281 ppm	15.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	49.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	148.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	282.8 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	128.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	-6 cps	-0.0002 ppm	105.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0201 ppm	6.3 %	0.0 ppm
Li 670.784 {50} (Radial)	-31 cps	-0.0022 ppm	29.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	23 cps	0.0003 ppm	12.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	32.4 %	0.0 ppm
Na 589.592 {57} (Radial)	325 cps	0.1649 ppm	10.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	102.0 %	0.0 ppm
K 766.490 {44} (Radial)	-12 cps	-0.0266 ppm	158.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	21.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	57.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	2,166.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	69.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0004 ppm	429.5 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	150.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	43.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.4570 %	1.8 %	1.8 %
Sc 188.060 {479} (Axial)		96.4762 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0212 ppm	137.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	123.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0013 ppm	5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.9068 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	2 cps	0.0069 ppm	36.1 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0050 ppm	80.9 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0126 ppm	5.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	120.6 %	0.0 ppm
Y 224.306 {450} (Axial)		98.9662 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		98.9142 %	0.9 %	0.9 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168174

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:11:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	49 cps	0.0821 ppm	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	31 cps	0.0784 ppm	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,976 cps	0.0918 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,781 cps	0.0950 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,428 cps	0.0825 ppm	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,286 cps	8.7776 ppm	1.9 %	0.2 ppm
Cd 228.802 {447} (Axial)	991 cps	0.0804 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	816 cps	0.0837 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	497 cps	0.0863 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	724 cps	0.0833 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,113 cps	0.0838 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,276 cps	8.9710 ppm	1.5 %	0.1 ppm
Li 670.784 {50} (Radial)	1,206 cps	0.0838 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,217 cps	0.0850 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	232 cps	0.0849 ppm	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	17,131 cps	8.6896 ppm	2.1 %	0.2 ppm
Ni 231.604 {445} (Axial)	356 cps	0.0828 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	4,053 cps	8.7600 ppm	2.2 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0808 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,102 cps	0.0852 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,430 cps	0.0889 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	86 cps	0.0834 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	118 cps	0.0905 ppm	4.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,441 cps	0.0847 ppm	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	861 cps	0.0786 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5910 %	2.2 %	2.2 %
Sc 188.060 {479} (Axial)		94.2549 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	314 cps	8.8380 ppm	1.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	31 cps	0.0863 ppm	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	131 cps	0.1154 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.9077 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	157 cps	0.4652 ppm	2.3 %	0.0 ppm
Al 396.152 {85} (Radial)	48 cps	0.1028 ppm	5.9 %	0.0 ppm
Si 251.611 {134} (Radial)	759 cps	8.4692 ppm	2.3 %	0.2 ppm
Pb 220.353 {453} (Axial)	91 cps	0.0884 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7870 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.5241 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-48A

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:16:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.0140 ppm	7.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0021 ppm	15.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,558 cps	0.0481 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,489 cps	0.0509 ppm	6.2 %	0.0 ppm
Be 313.042 {108} (Axial)	26 cps	0.0001 ppm	16.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,209 cps	19.9975 ppm	3.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0007 ppm	9.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0007 ppm	62.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0005 ppm	8.1 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	75.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	78 cps	0.0031 ppm	2.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	8 cps	0.0335 ppm	3.2 %	0.0 ppm
Li 670.784 {50} (Radial)	-18 cps	-0.0012 ppm	59.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,920 cps	0.0947 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	32.1 %	0.0 ppm
Na 589.592 {57} (Radial)	249,636 cps	126.6244 ppm	2.9 %	3.7 ppm
Ni 231.604 {445} (Axial)	9 cps	0.0020 ppm	3.2 %	0.0 ppm
K 766.490 {44} (Radial)	73 cps	0.1569 ppm	13.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0020 ppm	7.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	99.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	888 cps	0.0230 ppm	3.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	100.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0018 ppm	16.5 %	0.0 ppm
V 292.402 {115} (Axial)	3 cps	0.0002 ppm	98.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,409 cps	1.0408 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.0648 %	1.6 %	1.5 %
Sc 188.060 {479} (Axial)		88.5516 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	89 cps	2.5072 ppm	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0006 ppm	114.8 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0082 ppm	0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		88.0296 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0114 ppm	27.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0070 ppm	64.3 %	0.0 ppm
Si 251.611 {134} (Radial)	42 cps	0.4736 ppm	3.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	105 cps	0.1023 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8566 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.1944 %	1.3 %	1.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-48AMS

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:22:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	58 cps	0.0968 ppm	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0840 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,339 cps	0.1339 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,870 cps	0.1322 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	32,308 cps	0.0848 ppm	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,165 cps	27.5075 ppm	1.3 %	0.4 ppm
Cd 228.802 {447} (Axial)	1,026 cps	0.0833 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	815 cps	0.0836 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	499 cps	0.0867 ppm	1.9 %	0.0 ppm
Co 228.616 {447} (Axial)	722 cps	0.0831 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,187 cps	0.0867 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,215 cps	8.7318 ppm	1.3 %	0.1 ppm
Li 670.784 {50} (Radial)	1,242 cps	0.0863 ppm	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,756 cps	0.1745 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	236 cps	0.0862 ppm	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	250,187 cps	126.9039 ppm	1.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	362 cps	0.0843 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	4,300 cps	9.2944 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0830 ppm	4.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,113 cps	0.0861 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,192 cps	0.1086 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	87 cps	0.0842 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	118 cps	0.0907 ppm	3.1 %	0.0 ppm
V 292.402 {115} (Axial)	1,458 cps	0.0857 ppm	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,121 cps	1.1058 ppm	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6686 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		86.4536 %	1.0 %	0.9 %
Mg 279.079 {121} (Radial)	387 cps	10.8932 ppm	1.4 %	0.2 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0825 ppm	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	136 cps	0.1196 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.0925 %	1.2 %	1.0 %
B 249.773 {135} (Radial)	152 cps	0.4522 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	48 cps	0.1030 ppm	4.1 %	0.0 ppm
Si 251.611 {134} (Radial)	782 cps	8.7293 ppm	1.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	190 cps	0.1856 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.4878 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		99.4806 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-48AMSD

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:27:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	58 cps	0.0982 ppm	2.5 %	0.0 ppm
As 189.042 {478} (Axial)	34 cps	0.0858 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,326 cps	0.1335 ppm	2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,886 cps	0.1327 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	32,523 cps	0.0854 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,173 cps	27.5369 ppm	2.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	1,034 cps	0.0839 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	832 cps	0.0854 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	508 cps	0.0883 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	727 cps	0.0837 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,178 cps	0.0864 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,231 cps	8.7941 ppm	2.4 %	0.2 ppm
Li 670.784 {50} (Radial)	1,240 cps	0.0861 ppm	2.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,822 cps	0.1754 ppm	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	237 cps	0.0866 ppm	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	247,879 cps	125.7332 ppm	2.8 %	3.6 ppm
Ni 231.604 {445} (Axial)	368 cps	0.0856 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	4,290 cps	9.2737 ppm	3.2 %	0.3 ppm
Se 196.090 {472} (Axial)	20 cps	0.0844 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,117 cps	0.0864 ppm	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,185 cps	0.1084 ppm	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	88 cps	0.0851 ppm	0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	118 cps	0.0909 ppm	4.1 %	0.0 ppm
V 292.402 {115} (Axial)	1,468 cps	0.0863 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,135 cps	1.1071 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.1598 %	1.6 %	1.5 %
Sc 188.060 {479} (Axial)		87.1700 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	390 cps	10.9880 ppm	1.5 %	0.2 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0825 ppm	0.2 %	0.0 ppm
Al 167.079 {502} (Axial)	135 cps	0.1190 ppm	0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.7654 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	153 cps	0.4529 ppm	3.1 %	0.0 ppm
Al 396.152 {85} (Radial)	54 cps	0.1170 ppm	5.0 %	0.0 ppm
Si 251.611 {134} (Radial)	781 cps	8.7223 ppm	2.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	190 cps	0.1857 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.1562 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.7589 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-50A

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:32:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	12 cps	0.0198 ppm	5.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0038 ppm	8.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,663 cps	0.0513 ppm	3.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,561 cps	0.0533 ppm	4.8 %	0.0 ppm
Be 313.042 {108} (Axial)	31 cps	0.0001 ppm	18.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,071 cps	15.6291 ppm	3.4 %	0.5 ppm
Cd 228.802 {447} (Axial)	28 cps	0.0023 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	160.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	68.6 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0008 ppm	14.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	254 cps	0.0101 ppm	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.0377 ppm	4.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-24 cps	-0.0017 ppm	34.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,837 cps	0.1345 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	281.8 %	0.0 ppm
Na 589.592 {57} (Radial)	235,453 cps	119.4302 ppm	3.2 %	3.8 ppm
Ni 231.604 {445} (Axial)	29 cps	0.0068 ppm	2.4 %	0.0 ppm
K 766.490 {44} (Radial)	23 cps	0.0506 ppm	44.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0007 ppm	378.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0002 ppm	33.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	664 cps	0.0172 ppm	3.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0014 ppm	50.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	747.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	398.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	52,258 cps	4.7674 ppm	1.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		94.6042 %	0.3 %	0.2 %
Sc 188.060 {479} (Axial)		88.4151 %	2.0 %	1.7 %
Mg 279.079 {121} (Radial)	69 cps	1.9368 ppm	4.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	164.5 %	0.0 ppm
Al 167.079 {502} (Axial)	20 cps	0.0180 ppm	2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.8292 %	2.0 %	1.8 %
B 249.773 {135} (Radial)	5 cps	0.0150 ppm	5.7 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0120 ppm	40.2 %	0.0 ppm
Si 251.611 {134} (Radial)	73 cps	0.8170 ppm	4.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	340 cps	0.3316 ppm	1.9 %	0.0 ppm
Y 224.306 {450} (Axial)		94.7947 %	1.1 %	1.1 %
Sc 361.384 {93} (Radial)		99.7029 %	0.6 %	0.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-52A

Sample type: UNKNOWN Analysis started at: 11/26/2020 3:04:40 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0089 ppm	96.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0024 ppm	367.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	177 cps	0.0546 ppm	6.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	212 cps	0.0725 ppm	16.5 %	0.0 ppm
Be 313.042 {108} (Axial)	-28 cps	-0.0007 ppm	21.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	774 cps	29.7100 ppm	10.1 %	3.0 ppm
Cd 228.802 {447} (Axial)	14 cps	0.0112 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0015 ppm	91.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0003 ppm	160.6 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0005 ppm	259.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	134 cps	0.0532 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.4096 ppm	7.7 %	0.0 ppm
Li 670.784 {50} (Radial)	-31 cps	-0.0217 ppm	11.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	969 cps	0.1326 ppm	4.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	-1 cps	-0.0027 ppm	51.8 %	0.0 ppm
Na 589.592 {57} (Radial)	24,256 cps	123.0338 ppm	1.9 %	2.3 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0057 ppm	20.7 %	0.0 ppm
K 766.490 {44} (Radial)	-3 cps	-0.0730 ppm	207.3 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0086 ppm	129.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0006 ppm	165.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	155 cps	0.0402 ppm	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0011 ppm	194.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	22 cps	0.1664 ppm	18.0 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0023 ppm	161.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	48,078 cps	43.8597 ppm	1.1 %	0.5 ppm
Sc 357.253 {94} (Axial)		104.1630 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		98.1427 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	16 cps	4.6271 ppm	9.0 %	0.4 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0023 ppm	399.5 %	0.0 ppm
Al 167.079 {502} (Axial)	39 cps	0.3463 ppm	50.9 %	0.2 ppm
Sc 227.318 {448} (Axial)		97.1302 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	1 cps	0.0397 ppm	45.6 %	0.0 ppm
Al 396.152 {85} (Radial)	55 cps	1.1957 ppm	16.7 %	0.2 ppm
Si 251.611 {134} (Radial)	61 cps	6.7898 ppm	3.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	494 cps	4.8254 ppm	1.3 %	0.1 ppm
Y 224.306 {450} (Axial)		101.3775 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.2402 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-52A

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:37:12 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.0077 ppm	10.8 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0028 ppm	9.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,355 cps	0.0418 ppm	3.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,257 cps	0.0429 ppm	4.7 %	0.0 ppm
Be 313.042 {108} (Axial)	19 cps	0.0001 ppm	12.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,459 cps	13.2773 ppm	3.4 %	0.4 ppm
Cd 228.802 {447} (Axial)	185 cps	0.0150 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	40.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	652.0 %	0.0 ppm
Co 228.616 {447} (Axial)	8 cps	0.0010 ppm	4.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,463 cps	0.0580 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0132 ppm	21.7 %	0.0 ppm
Li 670.784 {50} (Radial)	9 cps	0.0006 ppm	233.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,159 cps	0.0569 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	-1 cps	-0.0005 ppm	28.5 %	0.0 ppm
Na 589.592 {57} (Radial)	234,013 cps	118.6999 ppm	3.7 %	4.3 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0060 ppm	3.0 %	0.0 ppm
K 766.490 {44} (Radial)	2 cps	0.0041 ppm	260.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0002 ppm	184.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	24.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	935 cps	0.0242 ppm	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	80.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0010 ppm	159.5 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	238.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	353,959 cps	32.2906 ppm	1.4 %	0.5 ppm
Sc 357.253 {94} (Axial)		95.2484 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		88.2697 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	13 cps	0.3746 ppm	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	112.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3 cps	0.0030 ppm	11.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.6797 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	4 cps	0.0130 ppm	15.1 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0043 ppm	247.8 %	0.0 ppm
Si 251.611 {134} (Radial)	114 cps	1.2680 ppm	3.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	4,845 cps	4.7304 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		94.8735 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.2412 %	0.8 %	0.8 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-54A

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:42:27 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0038 ppm	19.1 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0015 ppm	105.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,671 cps	0.0516 ppm	3.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,565 cps	0.0534 ppm	5.1 %	0.0 ppm
Be 313.042 {108} (Axial)	12 cps	0.0000 ppm	58.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,033 cps	34.6784 ppm	5.4 %	1.9 ppm
Cd 228.802 {447} (Axial)	33 cps	0.0027 ppm	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	14 cps	0.0014 ppm	28.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0009 ppm	7.8 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	9.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	208 cps	0.0082 ppm	6.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0133 ppm	31.6 %	0.0 ppm
Li 670.784 {50} (Radial)	-13 cps	-0.0009 ppm	22.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,503 cps	0.0616 ppm	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	76.5 %	0.0 ppm
Na 589.592 {57} (Radial)	241,385 cps	122.4391 ppm	3.8 %	4.7 ppm
Ni 231.604 {445} (Axial)	18 cps	0.0041 ppm	4.7 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0415 ppm	65.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0007 ppm	295.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	58.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,441 cps	0.0373 ppm	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	33.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0025 ppm	51.3 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	918.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	104,993 cps	9.5782 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		94.6627 %	1.5 %	1.4 %
Sc 188.060 {479} (Axial)		88.3844 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	30 cps	0.8331 ppm	6.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	291.0 %	0.0 ppm
Al 167.079 {502} (Axial)	7 cps	0.0060 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.7579 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	4 cps	0.0116 ppm	28.2 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0006 ppm	2,093.4 %	0.0 ppm
Si 251.611 {134} (Radial)	96 cps	1.0713 ppm	4.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	763 cps	0.7446 ppm	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9341 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		98.0817 %	2.8 %	2.7 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-58A

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:47:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	13 cps	0.0213 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	60.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,190 cps	0.0676 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,983 cps	0.0677 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	23 cps	0.0001 ppm	180.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,878 cps	49.4359 ppm	1.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	27 cps	0.0022 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	54.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	23.3 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	37.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	69 cps	0.0027 ppm	61.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0101 ppm	20.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-7 cps	-0.0005 ppm	113.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,638 cps	0.0634 ppm	8.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	134.0 %	0.0 ppm
Na 589.592 {57} (Radial)	231,167 cps	117.2563 ppm	2.1 %	2.4 ppm
Ni 231.604 {445} (Axial)	9 cps	0.0020 ppm	10.9 %	0.0 ppm
K 766.490 {44} (Radial)	42 cps	0.0911 ppm	22.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	814.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-4 cps	-0.0003 ppm	314.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,831 cps	0.0474 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	31.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0020 ppm	77.1 %	0.0 ppm
V 292.402 {115} (Axial)	6 cps	0.0003 ppm	87.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	36,173 cps	3.2999 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.9627 %	7.2 %	6.6 %
Sc 188.060 {479} (Axial)		88.2362 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	40 cps	1.1261 ppm	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0007 ppm	90.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3 cps	0.0025 ppm	3.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.6869 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0095 ppm	8.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0025 ppm	206.7 %	0.0 ppm
Si 251.611 {134} (Radial)	40 cps	0.4422 ppm	1.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	214 cps	0.2088 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9268 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		99.5910 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-60A

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:02:46 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0044 ppm	34.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	184.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,158 cps	0.0358 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,064 cps	0.0363 ppm	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	17 cps	0.0000 ppm	27.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,154 cps	31.3037 ppm	1.5 %	0.5 ppm
Cd 228.802 {447} (Axial)	26 cps	0.0021 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0007 ppm	62.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	12.6 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	14.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	69 cps	0.0028 ppm	7.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0135 ppm	17.3 %	0.0 ppm
Li 670.784 {50} (Radial)	-24 cps	-0.0017 ppm	60.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,544 cps	0.0895 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	12.5 %	0.0 ppm
Na 589.592 {57} (Radial)	244,595 cps	124.0672 ppm	1.4 %	1.8 ppm
Ni 231.604 {445} (Axial)	8 cps	0.0020 ppm	10.6 %	0.0 ppm
K 766.490 {44} (Radial)	9 cps	0.0187 ppm	22.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0016 ppm	67.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	246.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	912 cps	0.0236 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	65.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0025 ppm	14.9 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	85.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	16,369 cps	1.4933 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.7699 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		88.1785 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	69 cps	1.9347 ppm	2.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	280.1 %	0.0 ppm
Al 167.079 {502} (Axial)	8 cps	0.0067 ppm	3.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.5886 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	4 cps	0.0106 ppm	28.4 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0018 ppm	148.9 %	0.0 ppm
Si 251.611 {134} (Radial)	21 cps	0.2322 ppm	5.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	123 cps	0.1206 ppm	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8671 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.6576 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

MBLK-168173

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:28:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0002 ppm	409.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	59.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	8 cps	0.0003 ppm	34.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	147 cps	0.0050 ppm	18.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-27 cps	-0.0001 ppm	22.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	40 cps	0.1531 ppm	15.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	56.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	1,043.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	28.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	74.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	-4 cps	-0.0002 ppm	178.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0114 ppm	27.3 %	0.0 ppm
Li 670.784 {50} (Radial)	-36 cps	-0.0025 ppm	14.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	15 cps	0.0002 ppm	16.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	175.7 %	0.0 ppm
Na 589.592 {57} (Radial)	194 cps	0.0983 ppm	1.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	120.7 %	0.0 ppm
K 766.490 {44} (Radial)	-1 cps	-0.0024 ppm	750.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	202.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	963.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	24 cps	0.0006 ppm	20.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	113.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	-0.0001 ppm	1,033.5 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	58.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	100 cps	0.0091 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.5306 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		96.6678 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	2 cps	0.0557 ppm	35.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	444.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0017 ppm	6.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.8626 %	0.8 %	0.7 %
B 249.773 {135} (Radial)	2 cps	0.0053 ppm	68.6 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0041 ppm	48.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0002 ppm	2,486.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	393.5 %	0.0 ppm
Y 224.306 {450} (Axial)		99.5927 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.5538 %	0.8 %	0.8 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168173

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:33:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	48 cps	0.0815 ppm	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	31 cps	0.0783 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,815 cps	0.0869 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,532 cps	0.0865 ppm	2.8 %	0.0 ppm
Be 313.042 {108} (Axial)	31,016 cps	0.0814 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,140 cps	8.2134 ppm	1.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	981 cps	0.0796 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	801 cps	0.0822 ppm	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	492 cps	0.0855 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	720 cps	0.0829 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,086 cps	0.0827 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,121 cps	8.3596 ppm	1.9 %	0.2 ppm
Li 670.784 {50} (Radial)	1,123 cps	0.0781 ppm	2.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,143 cps	0.0840 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	230 cps	0.0843 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	16,250 cps	8.2428 ppm	2.4 %	0.2 ppm
Ni 231.604 {445} (Axial)	353 cps	0.0822 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	3,803 cps	8.2209 ppm	2.2 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0805 ppm	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,093 cps	0.0845 ppm	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,260 cps	0.0845 ppm	2.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	85 cps	0.0825 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	109 cps	0.0838 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,424 cps	0.0837 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	852 cps	0.0777 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.4088 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		94.8375 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	291 cps	8.2019 ppm	1.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	31 cps	0.0853 ppm	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	116 cps	0.1019 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.3307 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	144 cps	0.4286 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	39 cps	0.0834 ppm	7.9 %	0.0 ppm
Si 251.611 {134} (Radial)	715 cps	7.9837 ppm	2.1 %	0.2 ppm
Pb 220.353 {453} (Axial)	88 cps	0.0862 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		98.6737 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.1958 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-02A

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:38:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0028 ppm	45.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0021 ppm	28.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,308 cps	0.0404 ppm	3.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,269 cps	0.0433 ppm	3.1 %	0.0 ppm
Be 313.042 {108} (Axial)	35 cps	0.0001 ppm	109.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,706 cps	21.9029 ppm	3.5 %	0.8 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	41.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	59.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	17.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	59.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	40 cps	0.0016 ppm	76.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	8 cps	0.0330 ppm	5.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-12 cps	-0.0008 ppm	169.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,699 cps	0.0916 ppm	7.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	1,584.3 %	0.0 ppm
Na 589.592 {57} (Radial)	232,264 cps	117.8125 ppm	3.0 %	3.5 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0007 ppm	8.6 %	0.0 ppm
K 766.490 {44} (Radial)	78 cps	0.1695 ppm	13.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	51.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0003 ppm	266.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	909 cps	0.0235 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	20.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0020 ppm	79.2 %	0.0 ppm
V 292.402 {115} (Axial)	3 cps	0.0002 ppm	157.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,195 cps	0.1090 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.0963 %	5.8 %	5.4 %
Sc 188.060 {479} (Axial)		88.2797 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	163 cps	4.6009 ppm	3.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	487.1 %	0.0 ppm
Al 167.079 {502} (Axial)	8 cps	0.0067 ppm	0.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.6920 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	3 cps	0.0098 ppm	24.6 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0011 ppm	1,071.6 %	0.0 ppm
Si 251.611 {134} (Radial)	23 cps	0.2537 ppm	2.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	10 cps	0.0102 ppm	8.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9755 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.4515 %	0.8 %	0.8 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-02AMS

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:43:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	50 cps	0.0841 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0828 ppm	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,211 cps	0.1300 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,798 cps	0.1297 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	31,864 cps	0.0836 ppm	0.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,787 cps	29.8917 ppm	2.3 %	0.7 ppm
Cd 228.802 {447} (Axial)	990 cps	0.0804 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	806 cps	0.0826 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	487 cps	0.0845 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	701 cps	0.0807 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,118 cps	0.0840 ppm	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,187 cps	8.6197 ppm	2.1 %	0.2 ppm
Li 670.784 {50} (Radial)	1,263 cps	0.0878 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,169 cps	0.1664 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	230 cps	0.0841 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	243,588 cps	123.5564 ppm	2.1 %	2.6 ppm
Ni 231.604 {445} (Axial)	346 cps	0.0805 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	4,341 cps	9.3842 ppm	2.4 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0814 ppm	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,104 cps	0.0854 ppm	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,267 cps	0.1105 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	84 cps	0.0813 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	117 cps	0.0900 ppm	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	1,445 cps	0.0849 ppm	0.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,992 cps	0.1818 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.9876 %	0.6 %	0.5 %
Sc 188.060 {479} (Axial)		87.6977 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	458 cps	12.9102 ppm	2.3 %	0.3 ppm
Tl 190.856 {477} (Axial)	29 cps	0.0801 ppm	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	123 cps	0.1081 ppm	1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.2616 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	151 cps	0.4489 ppm	3.3 %	0.0 ppm
Al 396.152 {85} (Radial)	43 cps	0.0940 ppm	3.9 %	0.0 ppm
Si 251.611 {134} (Radial)	766 cps	8.5553 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	96 cps	0.0933 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6815 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		101.5155 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-02AMSD

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:48:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	52 cps	0.0869 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0847 ppm	2.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,475 cps	0.1381 ppm	2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,032 cps	0.1377 ppm	3.6 %	0.0 ppm
Be 313.042 {108} (Axial)	32,971 cps	0.0866 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,291 cps	31.8297 ppm	2.9 %	0.9 ppm
Cd 228.802 {447} (Axial)	1,024 cps	0.0831 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	831 cps	0.0853 ppm	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	502 cps	0.0872 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	723 cps	0.0833 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,198 cps	0.0872 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,306 cps	9.0887 ppm	2.7 %	0.2 ppm
Li 670.784 {50} (Radial)	1,329 cps	0.0924 ppm	3.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,672 cps	0.1733 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	237 cps	0.0867 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	260,766 cps	132.2695 ppm	2.8 %	3.7 ppm
Ni 231.604 {445} (Axial)	356 cps	0.0830 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	4,564 cps	9.8659 ppm	2.6 %	0.3 ppm
Se 196.090 {472} (Axial)	21 cps	0.0848 ppm	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,138 cps	0.0880 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,544 cps	0.1177 ppm	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	87 cps	0.0838 ppm	1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	125 cps	0.0957 ppm	3.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,493 cps	0.0878 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,090 cps	0.1907 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.2569 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		86.7885 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	482 cps	13.5870 ppm	2.6 %	0.4 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0825 ppm	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	133 cps	0.1172 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.2822 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	161 cps	0.4781 ppm	3.0 %	0.0 ppm
Al 396.152 {85} (Radial)	49 cps	0.1060 ppm	6.6 %	0.0 ppm
Si 251.611 {134} (Radial)	807 cps	9.0035 ppm	2.6 %	0.2 ppm
Pb 220.353 {453} (Axial)	98 cps	0.0959 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		93.8816 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.7557 %	2.1 %	2.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-04A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:04:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	21 cps	0.0348 ppm	0.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0037 ppm	9.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	855 cps	0.0264 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	856 cps	0.0292 ppm	5.4 %	0.0 ppm
Be 313.042 {108} (Axial)	17 cps	0.0000 ppm	32.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,885 cps	11.0749 ppm	2.7 %	0.3 ppm
Cd 228.802 {447} (Axial)	51 cps	0.0041 ppm	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0001 ppm	302.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	17.1 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0008 ppm	14.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,023 cps	0.0406 ppm	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0190 ppm	16.0 %	0.0 ppm
Li 670.784 {50} (Radial)	-23 cps	-0.0016 ppm	48.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,936 cps	0.0675 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	51.0 %	0.0 ppm
Na 589.592 {57} (Radial)	224,737 cps	113.9947 ppm	2.6 %	3.0 ppm
Ni 231.604 {445} (Axial)	18 cps	0.0041 ppm	3.8 %	0.0 ppm
K 766.490 {44} (Radial)	-12 cps	-0.0269 ppm	147.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	57.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0005 ppm	34.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	442 cps	0.0114 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	55.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	-0.0002 ppm	211.1 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,070.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	34,099 cps	3.1107 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7836 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		87.8267 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	37 cps	1.0484 ppm	3.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	105.4 %	0.0 ppm
Al 167.079 {502} (Axial)	29 cps	0.0254 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.3538 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	3 cps	0.0098 ppm	22.5 %	0.0 ppm
Al 396.152 {85} (Radial)	11 cps	0.0236 ppm	8.1 %	0.0 ppm
Si 251.611 {134} (Radial)	31 cps	0.3487 ppm	2.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,332 cps	2.2763 ppm	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6675 %	0.3 %	0.2 %
Sc 361.384 {93} (Radial)		102.6744 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-06A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:09:09 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	13 cps	0.0213 ppm	4.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0011 ppm	57.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,960 cps	0.0605 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,849 cps	0.0631 ppm	3.9 %	0.0 ppm
Be 313.042 {108} (Axial)	16 cps	0.0000 ppm	21.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,886 cps	14.9169 ppm	2.2 %	0.3 ppm
Cd 228.802 {447} (Axial)	95 cps	0.0077 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	210.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	16.2 %	0.0 ppm
Co 228.616 {447} (Axial)	9 cps	0.0011 ppm	5.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	606 cps	0.0240 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0037 ppm	31.9 %	0.0 ppm
Li 670.784 {50} (Radial)	-5 cps	-0.0003 ppm	231.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,347 cps	0.0868 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	114.8 %	0.0 ppm
Na 589.592 {57} (Radial)	225,004 cps	114.1299 ppm	2.2 %	2.5 ppm
Ni 231.604 {445} (Axial)	37 cps	0.0086 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	60 cps	0.1306 ppm	3.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0011 ppm	53.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	112.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,351 cps	0.0350 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	26.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	119.8 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	119.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	92,434 cps	8.4325 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.3922 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		88.6067 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	59 cps	1.6557 ppm	1.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	205.2 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0108 ppm	0.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		88.0623 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.0213 ppm	3.2 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0060 ppm	116.8 %	0.0 ppm
Si 251.611 {134} (Radial)	128 cps	1.4339 ppm	1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,503 cps	1.4674 ppm	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.4549 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.2093 %	1.0 %	1.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-08A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:14:17 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0054 ppm	29.6 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0019 ppm	52.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,436 cps	0.0443 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,385 cps	0.0473 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	62 cps	0.0002 ppm	74.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,002 cps	19.2025 ppm	1.8 %	0.3 ppm
Cd 228.802 {447} (Axial)	80 cps	0.0065 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	21.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	25.7 %	0.0 ppm
Co 228.616 {447} (Axial)	8 cps	0.0009 ppm	6.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	689 cps	0.0273 ppm	12.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0134 ppm	32.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-22 cps	-0.0015 ppm	55.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,281 cps	0.0859 ppm	6.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	1,425.4 %	0.0 ppm
Na 589.592 {57} (Radial)	224,480 cps	113.8644 ppm	2.0 %	2.3 ppm
Ni 231.604 {445} (Axial)	12 cps	0.0028 ppm	5.2 %	0.0 ppm
K 766.490 {44} (Radial)	1 cps	0.0012 ppm	2,169.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0012 ppm	128.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	-4 cps	-0.0003 ppm	206.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	698 cps	0.0181 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	120.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	123.3 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	238.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	155,667 cps	14.2010 ppm	0.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		92.1131 %	7.6 %	7.0 %
Sc 188.060 {479} (Axial)		87.3003 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	22 cps	0.6297 ppm	2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	214.4 %	0.0 ppm
Al 167.079 {502} (Axial)	27 cps	0.0241 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.6352 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	14 cps	0.0411 ppm	4.1 %	0.0 ppm
Al 396.152 {85} (Radial)	10 cps	0.0223 ppm	55.3 %	0.0 ppm
Si 251.611 {134} (Radial)	118 cps	1.3119 ppm	2.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,404 cps	2.3471 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.1533 %	0.6 %	0.5 %
Sc 361.384 {93} (Radial)		102.3358 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-10A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:19:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	27 cps	0.0448 ppm	3.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0012 ppm	152.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,697 cps	0.1141 ppm	3.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,492 cps	0.1192 ppm	3.4 %	0.0 ppm
Be 313.042 {108} (Axial)	30 cps	0.0001 ppm	23.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	25,688 cps	98.6126 ppm	3.1 %	3.1 ppm
Cd 228.802 {447} (Axial)	70 cps	0.0056 ppm	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0006 ppm	30.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	7.0 %	0.0 ppm
Co 228.616 {447} (Axial)	9 cps	0.0010 ppm	13.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	293 cps	0.0116 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0131 ppm	5.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-24 cps	-0.0017 ppm	21.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	18,244 cps	0.2495 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	146.8 %	0.0 ppm
Na 589.592 {57} (Radial)	3,059 cps	1.5518 ppm	1.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	30 cps	0.0070 ppm	3.0 %	0.0 ppm
K 766.490 {44} (Radial)	27 cps	0.0588 ppm	7.4 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0021 ppm	104.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0004 ppm	68.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,397 cps	0.0880 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	49.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0041 ppm	34.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	243.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	144,839 cps	13.2132 ppm	2.1 %	0.3 ppm
Sc 357.253 {94} (Axial)		96.4708 %	1.4 %	1.3 %
Sc 188.060 {479} (Axial)		85.5584 %	1.6 %	1.4 %
Mg 279.079 {121} (Radial)	75 cps	2.1243 ppm	2.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	268.4 %	0.0 ppm
Al 167.079 {502} (Axial)	75 cps	0.0660 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.0416 %	1.6 %	1.4 %
B 249.773 {135} (Radial)	5 cps	0.0137 ppm	35.6 %	0.0 ppm
Al 396.152 {85} (Radial)	37 cps	0.0808 ppm	4.1 %	0.0 ppm
Si 251.611 {134} (Radial)	91 cps	1.0150 ppm	2.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,997 cps	2.9256 ppm	2.2 %	0.1 ppm
Y 224.306 {450} (Axial)		91.8967 %	1.1 %	1.0 %
Sc 361.384 {93} (Radial)		99.9979 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-12A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:24:33 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0103 ppm	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0014 ppm	63.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,617 cps	0.0808 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,606 cps	0.0890 ppm	4.1 %	0.0 ppm
Be 313.042 {108} (Axial)	36 cps	0.0001 ppm	5.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	14,805 cps	56.8355 ppm	2.7 %	1.5 ppm
Cd 228.802 {447} (Axial)	12 cps	0.0009 ppm	7.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	111.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	33.6 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	38.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	50 cps	0.0020 ppm	4.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0082 ppm	61.4 %	0.0 ppm
Li 670.784 {50} (Radial)	-12 cps	-0.0009 ppm	42.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	2,470 cps	0.0338 ppm	2.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	85.3 %	0.0 ppm
Na 589.592 {57} (Radial)	255,822 cps	129.7618 ppm	3.1 %	4.0 ppm
Ni 231.604 {445} (Axial)	7 cps	0.0017 ppm	11.1 %	0.0 ppm
K 766.490 {44} (Radial)	76 cps	0.1640 ppm	8.6 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0021 ppm	52.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0006 ppm	25.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,356 cps	0.0610 ppm	3.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	23.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0042 ppm	35.9 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	120.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,915 cps	0.6309 ppm	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.2031 %	1.1 %	1.1 %
Sc 188.060 {479} (Axial)		83.8164 %	0.9 %	0.7 %
Mg 279.079 {121} (Radial)	44 cps	1.2528 ppm	0.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0007 ppm	138.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0017 ppm	12.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.2321 %	0.9 %	0.7 %
B 249.773 {135} (Radial)	4 cps	0.0106 ppm	18.3 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0068 ppm	23.3 %	0.0 ppm
Si 251.611 {134} (Radial)	38 cps	0.4190 ppm	4.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	205 cps	0.1997 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		90.5642 %	0.8 %	0.7 %
Sc 361.384 {93} (Radial)		97.5160 %	0.6 %	0.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-16A

Sample type: UNKNOWN Analysis started at: 11/26/2020 3:09:50 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0579 ppm	10.9 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0225 ppm	41.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	238 cps	0.0735 ppm	5.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	327 cps	0.1117 ppm	5.4 %	0.0 ppm
Be 313.042 {108} (Axial)	-34 cps	-0.0009 ppm	18.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	409 cps	15.7178 ppm	0.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	25 cps	0.0199 ppm	3.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	-4 cps	-0.0037 ppm	18.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0003 ppm	196.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0017 ppm	42.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	9 cps	0.0037 ppm	44.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0760 ppm	42.7 %	0.0 ppm
Li 670.784 {50} (Radial)	-32 cps	-0.0223 ppm	39.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	2,186 cps	0.2990 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0003 ppm	892.0 %	0.0 ppm
Na 589.592 {57} (Radial)	24,310 cps	123.3087 ppm	1.0 %	1.2 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0046 ppm	55.0 %	0.0 ppm
K 766.490 {44} (Radial)	-23 cps	-0.5025 ppm	37.4 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0172 ppm	127.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0017 ppm	136.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	95 cps	0.0247 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0005 ppm	390.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0293 ppm	40.1 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0042 ppm	19.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,158 cps	4.7056 ppm	1.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		104.5241 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		97.9170 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	5 cps	1.4392 ppm	13.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0027 ppm	366.4 %	0.0 ppm
Al 167.079 {502} (Axial)	6 cps	0.0533 ppm	9.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.1086 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	0 cps	0.0147 ppm	51.0 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0728 ppm	63.6 %	0.0 ppm
Si 251.611 {134} (Radial)	31 cps	3.4926 ppm	2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	641 cps	6.2618 ppm	1.1 %	0.1 ppm
Y 224.306 {450} (Axial)		101.1892 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.2050 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-16A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:29:40 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0744 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	9 cps	0.0236 ppm	7.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,434 cps	0.0751 ppm	3.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,379 cps	0.0812 ppm	6.4 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,832 cps	14.7116 ppm	3.6 %	0.5 ppm
Cd 228.802 {447} (Axial)	305 cps	0.0247 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	500.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	27.4 %	0.0 ppm
Co 228.616 {447} (Axial)	21 cps	0.0024 ppm	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	272 cps	0.0108 ppm	3.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0110 ppm	8.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-14 cps	-0.0010 ppm	47.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	21,500 cps	0.2941 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0002 ppm	51.5 %	0.0 ppm
Na 589.592 {57} (Radial)	248,467 cps	126.0313 ppm	3.8 %	4.8 ppm
Ni 231.604 {445} (Axial)	24 cps	0.0056 ppm	4.6 %	0.0 ppm
K 766.490 {44} (Radial)	73 cps	0.1568 ppm	21.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0006 ppm	163.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	213.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	934 cps	0.0242 ppm	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	28.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	147.5 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,664.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	53,610 cps	4.8907 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6435 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		84.9403 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	45 cps	1.2590 ppm	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	160.8 %	0.0 ppm
Al 167.079 {502} (Axial)	31 cps	0.0278 ppm	0.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.3472 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	5 cps	0.0136 ppm	26.3 %	0.0 ppm
Al 396.152 {85} (Radial)	11 cps	0.0230 ppm	28.1 %	0.0 ppm
Si 251.611 {134} (Radial)	157 cps	1.7568 ppm	4.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	6,357 cps	6.2057 ppm	0.8 %	0.1 ppm
Y 224.306 {450} (Axial)		91.3569 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.7655 %	1.5 %	1.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-20A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:34:48 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	13 cps	0.0210 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0023 ppm	71.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,698 cps	0.0524 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,641 cps	0.0560 ppm	4.5 %	0.0 ppm
Be 313.042 {108} (Axial)	45 cps	0.0001 ppm	11.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,317 cps	20.4103 ppm	1.7 %	0.3 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0014 ppm	5.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	77.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	39.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	12.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	67 cps	0.0027 ppm	18.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0045 ppm	116.4 %	0.0 ppm
Li 670.784 {50} (Radial)	-4 cps	-0.0003 ppm	321.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,342 cps	0.1141 ppm	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	244.1 %	0.0 ppm
Na 589.592 {57} (Radial)	243,074 cps	123.2958 ppm	1.6 %	1.9 ppm
Ni 231.604 {445} (Axial)	15 cps	0.0036 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	46 cps	0.1004 ppm	14.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0003 ppm	111.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0005 ppm	37.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	839 cps	0.0217 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	37.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0013 ppm	119.0 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	837.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,748 cps	1.7103 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.8349 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		84.1974 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	81 cps	2.2907 ppm	2.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	141.9 %	0.0 ppm
Al 167.079 {502} (Axial)	11 cps	0.0100 ppm	2.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.6269 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0098 ppm	13.0 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0078 ppm	65.2 %	0.0 ppm
Si 251.611 {134} (Radial)	47 cps	0.5254 ppm	3.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	153 cps	0.1491 ppm	0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		90.6532 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.8661 %	1.4 %	1.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-22A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:39:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	9 cps	0.0157 ppm	6.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0022 ppm	26.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,592 cps	0.0491 ppm	0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,620 cps	0.0553 ppm	0.2 %	0.0 ppm
Be 313.042 {108} (Axial)	31 cps	0.0001 ppm	28.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,484 cps	21.0511 ppm	1.2 %	0.3 ppm
Cd 228.802 {447} (Axial)	14 cps	0.0011 ppm	7.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	813.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	73.1 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	49.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	45 cps	0.0018 ppm	13.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0113 ppm	41.5 %	0.0 ppm
Li 670.784 {50} (Radial)	-21 cps	-0.0014 ppm	73.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,787 cps	0.0928 ppm	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	660.3 %	0.0 ppm
Na 589.592 {57} (Radial)	240,351 cps	121.9144 ppm	1.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	6 cps	0.0013 ppm	24.9 %	0.0 ppm
K 766.490 {44} (Radial)	70 cps	0.1512 ppm	15.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	37.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0002 ppm	153.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	807 cps	0.0209 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0011 ppm	38.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0023 ppm	18.7 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	2,805.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,018 cps	0.3665 ppm	0.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.9106 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		85.0154 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	94 cps	2.6465 ppm	3.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	185.2 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0080 ppm	1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.4634 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	3 cps	0.0102 ppm	22.4 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0080 ppm	24.4 %	0.0 ppm
Si 251.611 {134} (Radial)	34 cps	0.3850 ppm	1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	59 cps	0.0573 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2381 %	0.5 %	0.4 %
Sc 361.384 {93} (Radial)		98.7860 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-24A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:45:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	37 cps	0.0614 ppm	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0095 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,731 cps	0.0534 ppm	4.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,747 cps	0.0597 ppm	4.3 %	0.0 ppm
Be 313.042 {108} (Axial)	45 cps	0.0001 ppm	16.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,016 cps	19.2563 ppm	4.4 %	0.9 ppm
Cd 228.802 {447} (Axial)	370 cps	0.0301 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	59.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	71.4 %	0.0 ppm
Co 228.616 {447} (Axial)	8 cps	0.0009 ppm	17.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	88 cps	0.0035 ppm	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0045 ppm	53.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-16 cps	-0.0011 ppm	40.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,475 cps	0.1433 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	411.4 %	0.0 ppm
Na 589.592 {57} (Radial)	249,880 cps	126.7477 ppm	4.1 %	5.1 ppm
Ni 231.604 {445} (Axial)	14 cps	0.0032 ppm	7.9 %	0.0 ppm
K 766.490 {44} (Radial)	39 cps	0.0852 ppm	13.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0009 ppm	40.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0007 ppm	5.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	822 cps	0.0213 ppm	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0012 ppm	53.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0005 ppm	115.0 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	128.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,689 cps	1.2488 ppm	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.0084 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		83.6713 %	1.3 %	1.1 %
Mg 279.079 {121} (Radial)	46 cps	1.3044 ppm	3.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	23.5 %	0.0 ppm
Al 167.079 {502} (Axial)	19 cps	0.0168 ppm	0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.1824 %	1.2 %	1.0 %
B 249.773 {135} (Radial)	3 cps	0.0094 ppm	21.2 %	0.0 ppm
Al 396.152 {85} (Radial)	10 cps	0.0225 ppm	8.2 %	0.0 ppm
Si 251.611 {134} (Radial)	60 cps	0.6743 ppm	6.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	3,675 cps	3.5882 ppm	1.7 %	0.1 ppm
Y 224.306 {450} (Axial)		90.5549 %	0.9 %	0.8 %
Sc 361.384 {93} (Radial)		99.2849 %	0.6 %	0.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-26A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:50:15 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	50 cps	0.0842 ppm	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	3 cps	0.0067 ppm	10.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,198 cps	0.0678 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,177 cps	0.0743 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	53 cps	0.0001 ppm	25.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,050 cps	15.5490 ppm	2.5 %	0.4 ppm
Cd 228.802 {447} (Axial)	174 cps	0.0141 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	31.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0005 ppm	7.6 %	0.0 ppm
Co 228.616 {447} (Axial)	17 cps	0.0019 ppm	4.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	718 cps	0.0285 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0152 ppm	30.0 %	0.0 ppm
Li 670.784 {50} (Radial)	-23 cps	-0.0016 ppm	18.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	20,579 cps	0.2815 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	37.8 %	0.0 ppm
Na 589.592 {57} (Radial)	248,313 cps	125.9531 ppm	2.1 %	2.7 ppm
Ni 231.604 {445} (Axial)	42 cps	0.0098 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	53 cps	0.1146 ppm	17.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0023 ppm	95.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0007 ppm	5.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	893 cps	0.0231 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0011 ppm	11.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0021 ppm	50.9 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	63.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,204 cps	2.3905 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3884 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		83.6742 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	49 cps	1.3722 ppm	5.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	498.0 %	0.0 ppm
Al 167.079 {502} (Axial)	25 cps	0.0220 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.1427 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	18 cps	0.0545 ppm	7.5 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0268 ppm	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	104 cps	1.1641 ppm	2.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,810 cps	2.7435 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.0724 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		98.9568 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-28A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:05:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	28 cps	0.0470 ppm	0.4 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0052 ppm	2.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,793 cps	0.0553 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,800 cps	0.0615 ppm	6.1 %	0.0 ppm
Be 313.042 {108} (Axial)	52 cps	0.0001 ppm	15.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,388 cps	16.8458 ppm	2.1 %	0.3 ppm
Cd 228.802 {447} (Axial)	76 cps	0.0062 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	42.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0005 ppm	4.9 %	0.0 ppm
Co 228.616 {447} (Axial)	17 cps	0.0019 ppm	4.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	306 cps	0.0121 ppm	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0189 ppm	10.5 %	0.0 ppm
Li 670.784 {50} (Radial)	-17 cps	-0.0012 ppm	81.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,700 cps	0.1874 ppm	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0002 ppm	50.2 %	0.0 ppm
Na 589.592 {57} (Radial)	249,433 cps	126.5212 ppm	2.0 %	2.6 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0059 ppm	3.5 %	0.0 ppm
K 766.490 {44} (Radial)	39 cps	0.0841 ppm	26.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0002 ppm	1,237.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0005 ppm	33.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	767 cps	0.0199 ppm	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	19.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	160.7 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,674.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,608 cps	1.2414 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.5437 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		83.5114 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	95 cps	2.6690 ppm	3.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	155.1 %	0.0 ppm
Al 167.079 {502} (Axial)	26 cps	0.0226 ppm	2.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.9777 %	0.7 %	0.5 %
B 249.773 {135} (Radial)	18 cps	0.0530 ppm	5.0 %	0.0 ppm
Al 396.152 {85} (Radial)	11 cps	0.0229 ppm	34.5 %	0.0 ppm
Si 251.611 {134} (Radial)	62 cps	0.6958 ppm	2.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	672 cps	0.6561 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		90.1551 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.5797 %	2.2 %	2.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-32A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:10:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0106 ppm	10.2 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0013 ppm	97.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,933 cps	0.0597 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,943 cps	0.0664 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	7.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	14,826 cps	56.9139 ppm	1.9 %	1.1 ppm
Cd 228.802 {447} (Axial)	25 cps	0.0020 ppm	3.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	42.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	13.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	157.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	47 cps	0.0019 ppm	0.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0024 ppm	47.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-28 cps	-0.0020 ppm	57.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,250 cps	0.0171 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	113.1 %	0.0 ppm
Na 589.592 {57} (Radial)	255,942 cps	129.8228 ppm	1.9 %	2.4 ppm
Ni 231.604 {445} (Axial)	6 cps	0.0015 ppm	9.3 %	0.0 ppm
K 766.490 {44} (Radial)	32 cps	0.0694 ppm	24.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	98.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	17.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,852 cps	0.0480 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0005 ppm	70.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0049 ppm	26.2 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	650.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,748 cps	0.3419 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.9689 %	0.2 %	0.1 %
Sc 188.060 {479} (Axial)		83.4930 %	1.1 %	0.9 %
Mg 279.079 {121} (Radial)	40 cps	1.1277 ppm	3.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0008 ppm	98.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0011 ppm	10.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.9449 %	1.1 %	0.9 %
B 249.773 {135} (Radial)	3 cps	0.0090 ppm	8.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0040 ppm	150.2 %	0.0 ppm
Si 251.611 {134} (Radial)	19 cps	0.2091 ppm	1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	49 cps	0.0483 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		90.4561 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		99.4465 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-34A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:15:46 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	17 cps	0.0292 ppm	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0040 ppm	19.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,138 cps	0.0351 ppm	2.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,203 cps	0.0411 ppm	4.8 %	0.0 ppm
Be 313.042 {108} (Axial)	44 cps	0.0001 ppm	9.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,750 cps	18.2358 ppm	1.6 %	0.3 ppm
Cd 228.802 {447} (Axial)	83 cps	0.0067 ppm	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	46.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	100.3 %	0.0 ppm
Co 228.616 {447} (Axial)	12 cps	0.0014 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	206 cps	0.0082 ppm	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0072 ppm	26.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-24 cps	-0.0016 ppm	23.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,049 cps	0.1374 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	754.1 %	0.0 ppm
Na 589.592 {57} (Radial)	248,369 cps	125.9813 ppm	2.5 %	3.1 ppm
Ni 231.604 {445} (Axial)	14 cps	0.0032 ppm	3.2 %	0.0 ppm
K 766.490 {44} (Radial)	14 cps	0.0311 ppm	71.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	73.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	275.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	571 cps	0.0148 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	7.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	21.3 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	137.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,735 cps	0.7968 ppm	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.8043 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		86.0294 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	88 cps	2.4890 ppm	2.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	492.5 %	0.0 ppm
Al 167.079 {502} (Axial)	14 cps	0.0120 ppm	2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.4473 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	2 cps	0.0067 ppm	30.1 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0088 ppm	18.9 %	0.0 ppm
Si 251.611 {134} (Radial)	26 cps	0.2928 ppm	4.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	922 cps	0.9001 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		92.3148 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		100.0066 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-36A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:20:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	25 cps	0.0426 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0035 ppm	39.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,411 cps	0.0744 ppm	2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,355 cps	0.0804 ppm	4.1 %	0.0 ppm
Be 313.042 {108} (Axial)	51 cps	0.0001 ppm	4.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,804 cps	22.2818 ppm	3.0 %	0.7 ppm
Cd 228.802 {447} (Axial)	73 cps	0.0059 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	135.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	25.8 %	0.0 ppm
Co 228.616 {447} (Axial)	22 cps	0.0025 ppm	8.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,125 cps	0.0843 ppm	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0144 ppm	24.6 %	0.0 ppm
Li 670.784 {50} (Radial)	-14 cps	-0.0010 ppm	92.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	11,547 cps	0.1579 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	267.6 %	0.0 ppm
Na 589.592 {57} (Radial)	264,767 cps	134.2993 ppm	3.3 %	4.5 ppm
Ni 231.604 {445} (Axial)	34 cps	0.0080 ppm	2.8 %	0.0 ppm
K 766.490 {44} (Radial)	16 cps	0.0344 ppm	33.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	293.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	31.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	867 cps	0.0225 ppm	3.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0018 ppm	55.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0014 ppm	130.5 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	7,929.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	30,859 cps	2.8152 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.9700 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		84.6460 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	50 cps	1.4084 ppm	5.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	392.5 %	0.0 ppm
Al 167.079 {502} (Axial)	17 cps	0.0154 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.0321 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0136 ppm	18.6 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0251 ppm	46.7 %	0.0 ppm
Si 251.611 {134} (Radial)	66 cps	0.7326 ppm	4.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,713 cps	2.6482 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0173 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		98.1705 %	1.4 %	1.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-38A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:26:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.0089 ppm	5.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0012 ppm	62.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,562 cps	0.0482 ppm	2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,559 cps	0.0532 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	28 cps	0.0001 ppm	15.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,056 cps	15.5711 ppm	2.5 %	0.4 ppm
Cd 228.802 {447} (Axial)	22 cps	0.0018 ppm	4.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0004 ppm	53.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	18.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	11.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	73 cps	0.0029 ppm	15.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0120 ppm	33.7 %	0.0 ppm
Li 670.784 {50} (Radial)	-22 cps	-0.0015 ppm	29.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,679 cps	0.1050 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	110.6 %	0.0 ppm
Na 589.592 {57} (Radial)	248,694 cps	126.1463 ppm	2.6 %	3.2 ppm
Ni 231.604 {445} (Axial)	13 cps	0.0031 ppm	3.8 %	0.0 ppm
K 766.490 {44} (Radial)	53 cps	0.1151 ppm	15.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0011 ppm	103.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	35.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	637 cps	0.0165 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	49.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0016 ppm	25.1 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	115.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,342 cps	1.7645 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3952 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		85.7321 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	112 cps	3.1553 ppm	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0007 ppm	96.2 %	0.0 ppm
Al 167.079 {502} (Axial)	16 cps	0.0139 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.0245 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	3 cps	0.0087 ppm	28.3 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0118 ppm	95.9 %	0.0 ppm
Si 251.611 {134} (Radial)	32 cps	0.3569 ppm	3.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	142 cps	0.1388 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		91.7629 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		99.1303 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-40A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:31:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0098 ppm	2.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0010 ppm	64.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,078 cps	0.0333 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,142 cps	0.0390 ppm	0.3 %	0.0 ppm
Be 313.042 {108} (Axial)	32 cps	0.0001 ppm	18.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,136 cps	19.7184 ppm	1.2 %	0.2 ppm
Cd 228.802 {447} (Axial)	24 cps	0.0019 ppm	3.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	64.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	219.7 %	0.0 ppm
Co 228.616 {447} (Axial)	6 cps	0.0007 ppm	4.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	69 cps	0.0027 ppm	4.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0086 ppm	33.4 %	0.0 ppm
Li 670.784 {50} (Radial)	-15 cps	-0.0010 ppm	68.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,101 cps	0.0834 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	-1 cps	-0.0002 ppm	9.1 %	0.0 ppm
Na 589.592 {57} (Radial)	254,289 cps	128.9843 ppm	1.5 %	1.9 ppm
Ni 231.604 {445} (Axial)	10 cps	0.0023 ppm	13.7 %	0.0 ppm
K 766.490 {44} (Radial)	23 cps	0.0491 ppm	59.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	164.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	195.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	698 cps	0.0181 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	42.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0022 ppm	41.7 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	85.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,864 cps	2.4508 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.4318 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		84.7648 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	65 cps	1.8370 ppm	1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0006 ppm	322.8 %	0.0 ppm
Al 167.079 {502} (Axial)	26 cps	0.0226 ppm	0.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.1458 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	2 cps	0.0060 ppm	51.4 %	0.0 ppm
Al 396.152 {85} (Radial)	9 cps	0.0202 ppm	11.0 %	0.0 ppm
Si 251.611 {134} (Radial)	23 cps	0.2577 ppm	4.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	627 cps	0.6121 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0679 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		98.0577 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-42A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:36:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.0087 ppm	11.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	295.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,436 cps	0.0752 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,300 cps	0.0785 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	53 cps	0.0001 ppm	65.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,411 cps	47.6452 ppm	2.1 %	1.0 ppm
Cd 228.802 {447} (Axial)	22 cps	0.0018 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	27.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	20.1 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	14.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	96 cps	0.0038 ppm	28.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0150 ppm	20.2 %	0.0 ppm
Li 670.784 {50} (Radial)	-22 cps	-0.0015 ppm	54.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,386 cps	0.0600 ppm	3.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	206.8 %	0.0 ppm
Na 589.592 {57} (Radial)	252,549 cps	128.1018 ppm	2.4 %	3.1 ppm
Ni 231.604 {445} (Axial)	14 cps	0.0033 ppm	3.7 %	0.0 ppm
K 766.490 {44} (Radial)	49 cps	0.1062 ppm	14.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0009 ppm	188.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	817.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,154 cps	0.0558 ppm	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	137.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0032 ppm	7.9 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	489.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	37,907 cps	3.4581 ppm	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.1455 %	4.9 %	4.4 %
Sc 188.060 {479} (Axial)		84.0369 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	42 cps	1.1864 ppm	4.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0007 ppm	93.4 %	0.0 ppm
Al 167.079 {502} (Axial)	6 cps	0.0049 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.3315 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	5 cps	0.0139 ppm	37.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0017 ppm	297.1 %	0.0 ppm
Si 251.611 {134} (Radial)	78 cps	0.8690 ppm	0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	247 cps	0.2408 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		90.7750 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.5689 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-44A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:41:25 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.0085 ppm	7.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	173.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,563 cps	0.0483 ppm	3.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,542 cps	0.0527 ppm	4.0 %	0.0 ppm
Be 313.042 {108} (Axial)	35 cps	0.0001 ppm	21.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,277 cps	27.9340 ppm	3.4 %	1.0 ppm
Cd 228.802 {447} (Axial)	14 cps	0.0011 ppm	7.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	58.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	98.1 %	0.0 ppm
Co 228.616 {447} (Axial)	9 cps	0.0011 ppm	2.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	94 cps	0.0037 ppm	4.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0054 ppm	24.5 %	0.0 ppm
Li 670.784 {50} (Radial)	-21 cps	-0.0015 ppm	61.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,345 cps	0.1005 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0002 ppm	10.8 %	0.0 ppm
Na 589.592 {57} (Radial)	247,403 cps	125.4914 ppm	3.5 %	4.4 ppm
Ni 231.604 {445} (Axial)	10 cps	0.0024 ppm	13.2 %	0.0 ppm
K 766.490 {44} (Radial)	23 cps	0.0503 ppm	44.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	80.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	53.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,343 cps	0.0348 ppm	3.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	67.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0025 ppm	10.2 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0001 ppm	180.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,308 cps	1.7615 ppm	0.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6792 %	1.4 %	1.3 %
Sc 188.060 {479} (Axial)		84.7146 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	43 cps	1.2052 ppm	2.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0011 ppm	23.7 %	0.0 ppm
Al 167.079 {502} (Axial)	10 cps	0.0087 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.2341 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	2 cps	0.0063 ppm	46.5 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0003 ppm	3,992.5 %	0.0 ppm
Si 251.611 {134} (Radial)	25 cps	0.2806 ppm	3.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	830 cps	0.8103 ppm	0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		91.1949 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.0873 %	0.6 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-46A

Sample type: UNKNOWN Analysis started at: 11/25/2020 3:46:33 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	11 cps	0.0192 ppm	3.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0012 ppm	96.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,093 cps	0.0646 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,948 cps	0.0665 ppm	3.4 %	0.0 ppm
Be 313.042 {108} (Axial)	30 cps	0.0001 ppm	19.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,201 cps	31.4814 ppm	2.8 %	0.9 ppm
Cd 228.802 {447} (Axial)	46 cps	0.0037 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0005 ppm	17.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	16.0 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0008 ppm	4.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	129 cps	0.0051 ppm	4.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0130 ppm	55.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-17 cps	-0.0012 ppm	36.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,863 cps	0.0802 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	214.9 %	0.0 ppm
Na 589.592 {57} (Radial)	246,901 cps	125.2371 ppm	2.2 %	2.7 ppm
Ni 231.604 {445} (Axial)	18 cps	0.0043 ppm	2.2 %	0.0 ppm
K 766.490 {44} (Radial)	47 cps	0.1026 ppm	24.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0009 ppm	154.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	120.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,139 cps	0.0295 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	35.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0024 ppm	49.4 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	150.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	21,948 cps	2.0022 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.5197 %	0.4 %	0.3 %
Sc 188.060 {479} (Axial)		84.6406 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	33 cps	0.9285 ppm	6.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	132.0 %	0.0 ppm
Al 167.079 {502} (Axial)	8 cps	0.0073 ppm	2.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.0225 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	2 cps	0.0059 ppm	27.9 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0003 ppm	3,611.4 %	0.0 ppm
Si 251.611 {134} (Radial)	34 cps	0.3752 ppm	2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,155 cps	2.1039 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2010 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.2933 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

MBLK-168176

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:24:43 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	1,109.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	2,179.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0004 ppm	32.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	183 cps	0.0063 ppm	38.6 %	0.0 ppm
Be 313.042 {108} (Axial)	-22 cps	-0.0001 ppm	10.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	29 cps	0.1104 ppm	13.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	-4 cps	-0.0003 ppm	14.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0004 ppm	35.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0006 ppm	5.8 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	35.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	1,570.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0589 ppm	10.0 %	0.0 ppm
Li 670.784 {50} (Radial)	-36 cps	-0.0025 ppm	23.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	79 cps	0.0011 ppm	6.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	1,024.8 %	0.0 ppm
Na 589.592 {57} (Radial)	101 cps	0.0510 ppm	11.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	21.3 %	0.0 ppm
K 766.490 {44} (Radial)	-28 cps	-0.0615 ppm	48.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0017 ppm	52.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	170.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0001 ppm	18.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	54.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	44.2 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	93.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	41 cps	0.0037 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.7977 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		93.9897 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	2 cps	0.0595 ppm	4.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0018 ppm	59.2 %	0.0 ppm
Al 167.079 {502} (Axial)	17 cps	0.0149 ppm	0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.1320 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1 cps	0.0022 ppm	135.8 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0089 ppm	110.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0032 ppm	288.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	2 cps	0.0015 ppm	5.5 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4370 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.2640 %	3.0 %	3.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168176

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:29:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	53 cps	0.0894 ppm	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0848 ppm	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,288 cps	0.1015 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,973 cps	0.1015 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	33,171 cps	0.0871 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,366 cps	9.0846 ppm	1.9 %	0.2 ppm
Cd 228.802 {447} (Axial)	1,060 cps	0.0861 ppm	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	883 cps	0.0906 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	557 cps	0.0968 ppm	0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	791 cps	0.0911 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,361 cps	0.0936 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,353 cps	9.2729 ppm	2.2 %	0.2 ppm
Li 670.784 {50} (Radial)	1,370 cps	0.0952 ppm	2.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,747 cps	0.0923 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	258 cps	0.0944 ppm	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	19,259 cps	9.7687 ppm	2.5 %	0.2 ppm
Ni 231.604 {445} (Axial)	387 cps	0.0901 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	4,427 cps	9.5686 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0873 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,195 cps	0.0924 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,782 cps	0.0980 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	92 cps	0.0894 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	128 cps	0.0985 ppm	3.7 %	0.0 ppm
V 292.402 {115} (Axial)	1,567 cps	0.0922 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	933 cps	0.0851 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.6901 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		90.5347 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	318 cps	8.9559 ppm	2.0 %	0.2 ppm
Tl 190.856 {477} (Axial)	32 cps	0.0893 ppm	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	130 cps	0.1145 ppm	0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		89.8472 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	163 cps	0.4830 ppm	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	47 cps	0.1025 ppm	4.8 %	0.0 ppm
Si 251.611 {134} (Radial)	776 cps	8.6637 ppm	2.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	98 cps	0.0957 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1700 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.7373 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-01A

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:34:58 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0720 ppm	23.1 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0976 ppm	10.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,219 cps	0.6848 ppm	0.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,090 cps	0.7138 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	76 cps	0.0020 ppm	9.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,357 cps	167.2707 ppm	0.5 %	0.8 ppm
Cd 228.802 {447} (Axial)	12 cps	0.0096 ppm	7.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	221 cps	0.2263 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	124 cps	0.2154 ppm	3.6 %	0.0 ppm
Co 228.616 {447} (Axial)	30 cps	0.0348 ppm	4.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	886 cps	0.3514 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,695 cps	106.2051 ppm	0.8 %	0.9 ppm
Li 670.784 {50} (Radial)	62 cps	0.0434 ppm	18.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	17,548 cps	2.4002 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0119 ppm	6.5 %	0.0 ppm
Na 589.592 {57} (Radial)	151 cps	0.7668 ppm	9.2 %	0.1 ppm
Ni 231.604 {445} (Axial)	35 cps	0.0819 ppm	4.3 %	0.0 ppm
K 766.490 {44} (Radial)	243 cps	5.2479 ppm	3.4 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0121 ppm	160.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	18 cps	0.0140 ppm	26.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	707 cps	0.1832 ppm	0.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	16 cps	0.1515 ppm	3.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	125 cps	0.9619 ppm	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	180 cps	0.1058 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,092 cps	2.8211 ppm	3.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		101.9974 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		94.8124 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	212 cps	59.7732 ppm	0.7 %	0.4 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0069 ppm	179.2 %	0.0 ppm
Al 167.079 {502} (Axial)	3,715 cps	32.7636 ppm	2.7 %	0.9 ppm
Sc 227.318 {448} (Axial)		93.9183 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	6 cps	0.1834 ppm	13.4 %	0.0 ppm
Al 396.152 {85} (Radial)	2,047 cps	44.2996 ppm	0.6 %	0.3 ppm
Si 251.611 {134} (Radial)	127 cps	14.1643 ppm	0.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	222 cps	2.1720 ppm	3.6 %	0.1 ppm
Y 224.306 {450} (Axial)		98.6048 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.9816 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-03A

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:40:05 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	57 cps	0.9549 ppm	5.6 %	0.1 ppm
As 189.042 {478} (Axial)	13 cps	0.3230 ppm	8.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	854 cps	0.2636 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	882 cps	0.3012 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	2,265.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,795 cps	184.0800 ppm	0.6 %	1.0 ppm
Cd 228.802 {447} (Axial)	28 cps	0.0224 ppm	6.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0487 ppm	5.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	26 cps	0.0447 ppm	5.4 %	0.0 ppm
Co 228.616 {447} (Axial)	21 cps	0.0243 ppm	8.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,867 cps	0.7404 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,822 cps	71.8091 ppm	0.6 %	0.4 ppm
Li 670.784 {50} (Radial)	0 cps	0.0001 ppm	5,587.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,527 cps	1.3030 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0057 ppm	26.5 %	0.0 ppm
Na 589.592 {57} (Radial)	192 cps	0.9761 ppm	2.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0615 ppm	5.7 %	0.0 ppm
K 766.490 {44} (Radial)	78 cps	1.6884 ppm	12.2 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0298 ppm	37.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	24 cps	0.0187 ppm	20.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	426 cps	0.1103 ppm	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	31 cps	0.2958 ppm	5.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	113 cps	0.8690 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	102 cps	0.0597 ppm	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,764 cps	13.4683 ppm	5.7 %	0.8 ppm
Sc 357.253 {94} (Axial)		100.4722 %	0.4 %	0.5 %
Sc 188.060 {479} (Axial)		93.5096 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	302 cps	85.0627 ppm	0.8 %	0.7 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0015 ppm	512.0 %	0.0 ppm
Al 167.079 {502} (Axial)	1,716 cps	15.1323 ppm	4.8 %	0.7 ppm
Sc 227.318 {448} (Axial)		92.7121 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	3 cps	0.0979 ppm	10.1 %	0.0 ppm
Al 396.152 {85} (Radial)	888 cps	19.2214 ppm	0.9 %	0.2 ppm
Si 251.611 {134} (Radial)	111 cps	12.3893 ppm	1.5 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,385 cps	13.5242 ppm	5.8 %	0.8 ppm
Y 224.306 {450} (Axial)		97.3866 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.4375 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-05A

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:45:13 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	92 cps	1.5442 ppm	3.8 %	0.1 ppm
As 189.042 {478} (Axial)	18 cps	0.4586 ppm	5.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,580 cps	1.1049 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,251 cps	1.1101 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	288 cps	0.0076 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,664 cps	255.8205 ppm	2.4 %	6.1 ppm
Cd 228.802 {447} (Axial)	99 cps	0.0807 ppm	4.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	110 cps	0.1124 ppm	3.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	61 cps	0.1064 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	46 cps	0.0530 ppm	5.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	19,428 cps	7.7046 ppm	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,869 cps	231.3053 ppm	2.2 %	5.1 ppm
Li 670.784 {50} (Radial)	36 cps	0.0247 ppm	10.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	24,694 cps	3.3776 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	9 cps	0.0317 ppm	10.9 %	0.0 ppm
Na 589.592 {57} (Radial)	429 cps	2.1759 ppm	2.7 %	0.1 ppm
Ni 231.604 {445} (Axial)	195 cps	0.4543 ppm	3.4 %	0.0 ppm
K 766.490 {44} (Radial)	205 cps	4.4239 ppm	4.1 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0153 ppm	302.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	828 cps	0.6408 ppm	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,679 cps	0.4348 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	97 cps	0.9351 ppm	3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	377 cps	2.8909 ppm	2.3 %	0.1 ppm
V 292.402 {115} (Axial)	375 cps	0.2207 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	82,321 cps	75.0991 ppm	3.5 %	2.6 ppm
Sc 357.253 {94} (Axial)		99.4645 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		91.3326 %	1.1 %	1.0 %
Mg 279.079 {121} (Radial)	363 cps	102.3086 ppm	2.4 %	2.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0083 ppm	101.0 %	0.0 ppm
Al 167.079 {502} (Axial)	5,020 cps	44.2699 ppm	2.6 %	1.2 ppm
Sc 227.318 {448} (Axial)		90.6970 %	1.1 %	1.0 %
B 249.773 {135} (Radial)	16 cps	0.4869 ppm	3.3 %	0.0 ppm
Al 396.152 {85} (Radial)	2,812 cps	60.8415 ppm	2.3 %	1.4 ppm
Si 251.611 {134} (Radial)	191 cps	21.2917 ppm	2.4 %	0.5 ppm
Pb 220.353 {453} (Axial)	7,768 cps	75.8321 ppm	3.8 %	2.9 ppm
Y 224.306 {450} (Axial)		96.0871 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		102.1693 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-07A

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:50:17 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	104 cps	1.7443 ppm	5.8 %	0.1 ppm
As 189.042 {478} (Axial)	11 cps	0.2875 ppm	6.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,794 cps	0.8623 ppm	0.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,634 cps	0.8996 ppm	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	89 cps	0.0023 ppm	11.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	14,612 cps	560.9275 ppm	1.1 %	6.4 ppm
Cd 228.802 {447} (Axial)	52 cps	0.0426 ppm	7.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	145 cps	0.1483 ppm	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	76 cps	0.1323 ppm	4.8 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0482 ppm	6.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	5,210 cps	2.0660 ppm	2.9 %	0.1 ppm
Fe 259.940 {130} (Radial)	4,356 cps	171.7020 ppm	0.9 %	1.5 ppm
Li 670.784 {50} (Radial)	54 cps	0.0377 ppm	18.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,107 cps	3.9812 ppm	3.0 %	0.1 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0189 ppm	10.2 %	0.0 ppm
Na 589.592 {57} (Radial)	1,014 cps	5.1429 ppm	1.7 %	0.1 ppm
Ni 231.604 {445} (Axial)	52 cps	0.1210 ppm	5.6 %	0.0 ppm
K 766.490 {44} (Radial)	211 cps	4.5714 ppm	3.6 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0351 ppm	20.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	77 cps	0.0598 ppm	7.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,452 cps	0.3762 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	140 cps	1.3518 ppm	5.5 %	0.1 ppm
Ti 334.941 {101} (Radial)	240 cps	1.8460 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	238 cps	0.1401 ppm	4.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	102,082 cps	93.1265 ppm	5.0 %	4.7 ppm
Sc 357.253 {94} (Axial)		97.0934 %	1.3 %	1.3 %
Sc 188.060 {479} (Axial)		89.6494 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	724 cps	203.8498 ppm	1.5 %	3.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0073 ppm	171.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,600 cps	31.7463 ppm	4.0 %	1.3 ppm
Sc 227.318 {448} (Axial)		89.0031 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	9 cps	0.2709 ppm	8.1 %	0.0 ppm
Al 396.152 {85} (Radial)	2,105 cps	45.5368 ppm	1.0 %	0.4 ppm
Si 251.611 {134} (Radial)	257 cps	28.7416 ppm	0.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	3,170 cps	30.9436 ppm	5.5 %	1.7 ppm
Y 224.306 {450} (Axial)		95.3066 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.9505 %	0.8 %	0.8 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-09A

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:55:22 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	134 cps	2.2562 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	10 cps	0.2652 ppm	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,974 cps	0.9178 ppm	0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,780 cps	0.9492 ppm	0.2 %	0.0 ppm
Be 313.042 {108} (Axial)	117 cps	0.0031 ppm	9.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,238 cps	508.2086 ppm	0.1 %	0.5 ppm
Cd 228.802 {447} (Axial)	42 cps	0.0343 ppm	3.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	149 cps	0.1533 ppm	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	87 cps	0.1519 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	33 cps	0.0379 ppm	3.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	5,090 cps	2.0186 ppm	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,167 cps	124.8329 ppm	0.4 %	0.5 ppm
Li 670.784 {50} (Radial)	52 cps	0.0359 ppm	9.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,519 cps	4.0374 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0156 ppm	4.0 %	0.0 ppm
Na 589.592 {57} (Radial)	560 cps	2.8409 ppm	1.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	47 cps	0.1095 ppm	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	179 cps	3.8701 ppm	5.2 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	1,673.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	134 cps	0.1034 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,759 cps	0.4556 ppm	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	29 cps	0.2776 ppm	1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	172 cps	1.3232 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	208 cps	0.1224 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	91,619 cps	83.5816 ppm	1.3 %	1.1 ppm
Sc 357.253 {94} (Axial)		98.9273 %	1.2 %	1.2 %
Sc 188.060 {479} (Axial)		90.5603 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	351 cps	98.8635 ppm	0.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0018 ppm	297.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,748 cps	33.0564 ppm	1.0 %	0.3 ppm
Sc 227.318 {448} (Axial)		89.8413 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	8 cps	0.2282 ppm	13.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,969 cps	42.5926 ppm	0.7 %	0.3 ppm
Si 251.611 {134} (Radial)	193 cps	21.5480 ppm	0.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	3,784 cps	36.9438 ppm	1.5 %	0.6 ppm
Y 224.306 {450} (Axial)		95.7670 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.7103 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-11A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:00:28 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	95 cps	1.6057 ppm	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	8 cps	0.1959 ppm	6.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,193 cps	0.9854 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,947 cps	1.0064 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	166 cps	0.0044 ppm	4.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	11,628 cps	446.3803 ppm	0.6 %	2.9 ppm
Cd 228.802 {447} (Axial)	35 cps	0.0288 ppm	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	196 cps	0.2010 ppm	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	115 cps	0.2002 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	55 cps	0.0631 ppm	3.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,264 cps	1.2946 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,808 cps	228.8989 ppm	0.7 %	1.6 ppm
Li 670.784 {50} (Radial)	52 cps	0.0363 ppm	12.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	39,088 cps	5.3463 ppm	1.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	7 cps	0.0245 ppm	4.5 %	0.0 ppm
Na 589.592 {57} (Radial)	274 cps	1.3907 ppm	2.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	81 cps	0.1896 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	235 cps	5.0732 ppm	7.7 %	0.4 ppm
Se 196.090 {472} (Axial)	1 cps	0.0327 ppm	66.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	118 cps	0.0916 ppm	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,552 cps	0.4020 ppm	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	45 cps	0.4381 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	171 cps	1.3127 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	298 cps	0.1751 ppm	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	24,029 cps	21.9213 ppm	1.5 %	0.3 ppm
Sc 357.253 {94} (Axial)		99.3646 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		90.4398 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	413 cps	116.2524 ppm	0.8 %	0.9 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0165 ppm	36.2 %	0.0 ppm
Al 167.079 {502} (Axial)	4,163 cps	36.7175 ppm	1.0 %	0.4 ppm
Sc 227.318 {448} (Axial)		89.6558 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	10 cps	0.2903 ppm	18.9 %	0.1 ppm
Al 396.152 {85} (Radial)	2,171 cps	46.9723 ppm	0.7 %	0.4 ppm
Si 251.611 {134} (Radial)	135 cps	15.0633 ppm	0.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	5,282 cps	51.5691 ppm	1.5 %	0.8 ppm
Y 224.306 {450} (Axial)		95.4607 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.9165 %	0.5 %	0.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-13A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:05:32 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	40 cps	0.6756 ppm	4.4 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1458 ppm	7.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,703 cps	0.8344 ppm	0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,484 cps	0.8482 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	165 cps	0.0043 ppm	6.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,767 cps	490.1252 ppm	0.4 %	2.0 ppm
Cd 228.802 {447} (Axial)	26 cps	0.0211 ppm	4.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	148 cps	0.1522 ppm	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	83 cps	0.1438 ppm	3.2 %	0.0 ppm
Co 228.616 {447} (Axial)	59 cps	0.0680 ppm	3.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,878 cps	1.1412 ppm	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	7,182 cps	283.0804 ppm	0.2 %	0.7 ppm
Li 670.784 {50} (Radial)	52 cps	0.0363 ppm	30.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,647 cps	5.0124 ppm	0.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0200 ppm	15.3 %	0.0 ppm
Na 589.592 {57} (Radial)	263 cps	1.3333 ppm	2.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	72 cps	0.1673 ppm	3.8 %	0.0 ppm
K 766.490 {44} (Radial)	236 cps	5.1026 ppm	5.7 %	0.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0222 ppm	120.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	68 cps	0.0528 ppm	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,607 cps	0.4162 ppm	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	36 cps	0.3472 ppm	3.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	159 cps	1.2228 ppm	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	239 cps	0.1408 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,493 cps	13.2217 ppm	3.5 %	0.5 ppm
Sc 357.253 {94} (Axial)		99.0148 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		90.6069 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	461 cps	129.7476 ppm	0.7 %	0.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0036 ppm	104.2 %	0.0 ppm
Al 167.079 {502} (Axial)	3,752 cps	33.0910 ppm	2.6 %	0.8 ppm
Sc 227.318 {448} (Axial)		90.0039 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	11 cps	0.3218 ppm	11.8 %	0.0 ppm
Al 396.152 {85} (Radial)	2,036 cps	44.0436 ppm	0.5 %	0.2 ppm
Si 251.611 {134} (Radial)	160 cps	17.8129 ppm	1.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	3,162 cps	30.8690 ppm	3.6 %	1.1 ppm
Y 224.306 {450} (Axial)		95.5433 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.8833 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-14A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:10:37 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	16 cps	0.2765 ppm	3.0 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.1121 ppm	9.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,793 cps	1.1708 ppm	0.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,428 cps	1.1707 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	178 cps	0.0047 ppm	4.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	14,549 cps	558.5373 ppm	0.3 %	1.8 ppm
Cd 228.802 {447} (Axial)	16 cps	0.0128 ppm	5.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	171 cps	0.1752 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	102 cps	0.1770 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	68 cps	0.0778 ppm	2.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,253 cps	1.2899 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	6,471 cps	255.0630 ppm	0.4 %	0.9 ppm
Li 670.784 {50} (Radial)	83 cps	0.0577 ppm	1.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	52,306 cps	7.1543 ppm	0.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0191 ppm	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	254 cps	1.2859 ppm	2.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	83 cps	0.1924 ppm	2.3 %	0.0 ppm
K 766.490 {44} (Radial)	338 cps	7.3091 ppm	2.2 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0312 ppm	26.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	27 cps	0.0206 ppm	17.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,088 cps	0.5409 ppm	0.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	28 cps	0.2669 ppm	1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	162 cps	1.2449 ppm	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	289 cps	0.1700 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,838 cps	8.0624 ppm	1.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.7541 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		90.9528 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	345 cps	97.2719 ppm	0.9 %	0.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0033 ppm	353.6 %	0.0 ppm
Al 167.079 {502} (Axial)	4,851 cps	42.7851 ppm	1.2 %	0.5 ppm
Sc 227.318 {448} (Axial)		90.2491 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	10 cps	0.3073 ppm	12.2 %	0.0 ppm
Al 396.152 {85} (Radial)	2,632 cps	56.9385 ppm	0.4 %	0.2 ppm
Si 251.611 {134} (Radial)	198 cps	22.1029 ppm	1.1 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,180 cps	11.5171 ppm	2.0 %	0.2 ppm
Y 224.306 {450} (Axial)		96.0443 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.4019 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-15A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:25:50 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	287 cps	4.8265 ppm	3.3 %	0.2 ppm
As 189.042 {478} (Axial)	230 cps	5.8584 ppm	3.3 %	0.2 ppm
Ba 455.403 {74} (Radial)	3,914 cps	1.2080 ppm	0.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,539 cps	1.2085 ppm	0.2 %	0.0 ppm
Be 313.042 {108} (Axial)	165 cps	0.0043 ppm	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,250 cps	201.5293 ppm	0.5 %	1.0 ppm
Cd 228.802 {447} (Axial)	405 cps	0.3287 ppm	3.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	157 cps	0.1609 ppm	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	90 cps	0.1569 ppm	2.6 %	0.0 ppm
Co 228.616 {447} (Axial)	48 cps	0.0552 ppm	3.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,385 cps	1.7388 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,415 cps	213.4109 ppm	0.6 %	1.3 ppm
Li 670.784 {50} (Radial)	80 cps	0.0558 ppm	4.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	45,597 cps	6.2366 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0189 ppm	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	398 cps	2.0179 ppm	2.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	78 cps	0.1811 ppm	4.0 %	0.0 ppm
K 766.490 {44} (Radial)	335 cps	7.2462 ppm	4.4 %	0.3 ppm
Se 196.090 {472} (Axial)	2 cps	0.0668 ppm	36.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	65 cps	0.0506 ppm	11.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	955 cps	0.2473 ppm	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	340 cps	3.2919 ppm	2.8 %	0.1 ppm
Ti 334.941 {101} (Radial)	218 cps	1.6758 ppm	1.1 %	0.0 ppm
V 292.402 {115} (Axial)	319 cps	0.1876 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	57,210 cps	52.1910 ppm	3.1 %	1.6 ppm
Sc 357.253 {94} (Axial)		100.3283 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.1695 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	307 cps	86.5458 ppm	0.9 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0022 ppm	477.7 %	0.0 ppm
Al 167.079 {502} (Axial)	5,347 cps	47.1565 ppm	2.1 %	1.0 ppm
Sc 227.318 {448} (Axial)		92.4182 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	11 cps	0.3209 ppm	5.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3,075 cps	66.5322 ppm	1.0 %	0.6 ppm
Si 251.611 {134} (Radial)	226 cps	25.1837 ppm	1.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	11,544 cps	112.7023 ppm	3.3 %	3.7 ppm
Y 224.306 {450} (Axial)		97.6459 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		103.5248 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-17A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:30:48 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	407 cps	6.8507 ppm	3.3 %	0.2 ppm
As 189.042 {478} (Axial)	281 cps	7.1540 ppm	3.2 %	0.2 ppm
Ba 455.403 {74} (Radial)	3,579 cps	1.1047 ppm	0.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,296 cps	1.1256 ppm	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	161 cps	0.0042 ppm	3.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,862 cps	263.4378 ppm	0.4 %	1.0 ppm
Cd 228.802 {447} (Axial)	358 cps	0.2905 ppm	3.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	204 cps	0.2097 ppm	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	120 cps	0.2089 ppm	2.9 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0483 ppm	3.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	7,861 cps	3.1176 ppm	0.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	6,553 cps	258.2605 ppm	0.3 %	0.9 ppm
Li 670.784 {50} (Radial)	68 cps	0.0472 ppm	19.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	48,001 cps	6.5654 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0167 ppm	19.4 %	0.0 ppm
Na 589.592 {57} (Radial)	566 cps	2.8713 ppm	0.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	83 cps	0.1923 ppm	4.2 %	0.0 ppm
K 766.490 {44} (Radial)	309 cps	6.6866 ppm	7.4 %	0.5 ppm
Se 196.090 {472} (Axial)	2 cps	0.0832 ppm	26.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	69 cps	0.0531 ppm	6.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,428 cps	0.3700 ppm	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	163 cps	1.5782 ppm	2.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	230 cps	1.7641 ppm	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	283 cps	0.1667 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	78,687 cps	71.7839 ppm	3.0 %	2.2 ppm
Sc 357.253 {94} (Axial)		99.6722 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		92.0594 %	1.1 %	1.0 %
Mg 279.079 {121} (Radial)	356 cps	100.1938 ppm	0.8 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0039 ppm	72.1 %	0.0 ppm
Al 167.079 {502} (Axial)	4,970 cps	43.8302 ppm	2.3 %	1.0 ppm
Sc 227.318 {448} (Axial)		91.2736 %	1.1 %	1.0 %
B 249.773 {135} (Radial)	11 cps	0.3150 ppm	15.4 %	0.0 ppm
Al 396.152 {85} (Radial)	2,717 cps	58.7760 ppm	0.4 %	0.2 ppm
Si 251.611 {134} (Radial)	356 cps	39.7387 ppm	0.5 %	0.2 ppm
Pb 220.353 {453} (Axial)	9,504 cps	92.7878 ppm	3.2 %	3.0 ppm
Y 224.306 {450} (Axial)		96.6264 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		101.6115 %	0.0 %	0.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-18A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:35:49 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	668 cps	11.2419 ppm	7.5 %	0.8 ppm
As 189.042 {478} (Axial)	508 cps	12.9439 ppm	7.4 %	1.0 ppm
Ba 455.403 {74} (Radial)	6,337 cps	1.9560 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	5,675 cps	1.9381 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	243 cps	0.0064 ppm	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,583 cps	367.8691 ppm	0.6 %	2.1 ppm
Cd 228.802 {447} (Axial)	898 cps	0.7286 ppm	7.3 %	0.1 ppm
Cr 267.716 {126} (Axial)	298 cps	0.3057 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	159 cps	0.2765 ppm	7.2 %	0.0 ppm
Co 228.616 {447} (Axial)	50 cps	0.0571 ppm	5.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	6,426 cps	2.5482 ppm	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	10,607 cps	418.0688 ppm	0.6 %	2.7 ppm
Li 670.784 {50} (Radial)	130 cps	0.0906 ppm	7.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	72,844 cps	9.9633 ppm	2.1 %	0.2 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0237 ppm	6.0 %	0.0 ppm
Na 589.592 {57} (Radial)	1,359 cps	6.8923 ppm	1.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	99 cps	0.2300 ppm	6.2 %	0.0 ppm
K 766.490 {44} (Radial)	403 cps	8.7059 ppm	0.9 %	0.1 ppm
Se 196.090 {472} (Axial)	4 cps	0.1454 ppm	18.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	162 cps	0.1250 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,302 cps	0.5962 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	327 cps	3.1672 ppm	6.7 %	0.2 ppm
Ti 334.941 {101} (Radial)	343 cps	2.6354 ppm	0.5 %	0.0 ppm
V 292.402 {115} (Axial)	426 cps	0.2504 ppm	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	103,106 cps	94.0605 ppm	6.7 %	6.3 ppm
Sc 357.253 {94} (Axial)		98.7566 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		90.9386 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	490 cps	137.8553 ppm	0.8 %	1.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0015 ppm	845.6 %	0.0 ppm
Al 167.079 {502} (Axial)	6,336 cps	55.8821 ppm	4.8 %	2.7 ppm
Sc 227.318 {448} (Axial)		90.1662 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	17 cps	0.5163 ppm	6.7 %	0.0 ppm
Al 396.152 {85} (Radial)	4,307 cps	93.1771 ppm	0.3 %	0.3 ppm
Si 251.611 {134} (Radial)	434 cps	48.4885 ppm	2.0 %	0.9 ppm
Pb 220.353 {453} (Axial)	16,046 cps	156.6524 ppm	7.3 %	11.4 ppm
Y 224.306 {450} (Axial)		96.0435 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.0032 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-19A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:40:48 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	38 cps	0.6460 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	15 cps	0.3937 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,161 cps	0.6670 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,049 cps	0.6999 ppm	2.9 %	0.0 ppm
Be 313.042 {108} (Axial)	55 cps	0.0015 ppm	11.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,510 cps	173.1464 ppm	2.0 %	3.5 ppm
Cd 228.802 {447} (Axial)	20 cps	0.0166 ppm	4.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	124 cps	0.1277 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	79 cps	0.1365 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	32 cps	0.0368 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,392 cps	0.5521 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,695 cps	145.6252 ppm	1.7 %	2.5 ppm
Li 670.784 {50} (Radial)	44 cps	0.0307 ppm	30.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	27,033 cps	3.6974 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0101 ppm	12.8 %	0.0 ppm
Na 589.592 {57} (Radial)	162 cps	0.8208 ppm	5.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	53 cps	0.1226 ppm	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	150 cps	3.2526 ppm	5.1 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0251 ppm	41.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	29 cps	0.0224 ppm	9.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	770 cps	0.1995 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	98 cps	0.9447 ppm	1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	142 cps	1.0872 ppm	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	208 cps	0.1220 ppm	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,250 cps	12.9995 ppm	0.8 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.3499 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		93.0041 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	248 cps	69.9365 ppm	2.3 %	1.6 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0166 ppm	48.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,773 cps	33.2766 ppm	0.7 %	0.2 ppm
Sc 227.318 {448} (Axial)		92.2596 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	6 cps	0.1925 ppm	19.9 %	0.0 ppm
Al 396.152 {85} (Radial)	1,703 cps	36.8496 ppm	1.9 %	0.7 ppm
Si 251.611 {134} (Radial)	142 cps	15.8270 ppm	1.7 %	0.3 ppm
Pb 220.353 {453} (Axial)	1,345 cps	13.1263 ppm	0.9 %	0.1 ppm
Y 224.306 {450} (Axial)		96.9471 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.8768 %	1.0 %	1.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-21A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:45:52 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	16 cps	0.2705 ppm	4.6 %	0.0 ppm
As 189.042 {478} (Axial)	13 cps	0.3432 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,376 cps	0.7334 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,234 cps	0.7629 ppm	2.8 %	0.0 ppm
Be 313.042 {108} (Axial)	91 cps	0.0024 ppm	0.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,113 cps	119.4947 ppm	1.7 %	2.0 ppm
Cd 228.802 {447} (Axial)	28 cps	0.0227 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	130 cps	0.1334 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	83 cps	0.1441 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	44 cps	0.0509 ppm	3.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,023 cps	0.4056 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,912 cps	154.1929 ppm	1.6 %	2.4 ppm
Li 670.784 {50} (Radial)	60 cps	0.0417 ppm	11.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,852 cps	5.0405 ppm	1.1 %	0.1 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0139 ppm	12.5 %	0.0 ppm
Na 589.592 {57} (Radial)	90 cps	0.4583 ppm	8.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	58 cps	0.1342 ppm	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	248 cps	5.3613 ppm	2.7 %	0.1 ppm
Se 196.090 {472} (Axial)	1 cps	0.0339 ppm	54.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0130 ppm	36.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	474 cps	0.1227 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	88 cps	0.8564 ppm	0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	104 cps	0.7995 ppm	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	228 cps	0.1341 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,849 cps	7.1601 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		101.4386 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		94.1453 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	142 cps	39.8775 ppm	2.1 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0079 ppm	124.0 %	0.0 ppm
Al 167.079 {502} (Axial)	4,791 cps	42.2564 ppm	1.0 %	0.4 ppm
Sc 227.318 {448} (Axial)		93.3707 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	6 cps	0.1902 ppm	6.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2,339 cps	50.6167 ppm	1.4 %	0.7 ppm
Si 251.611 {134} (Radial)	113 cps	12.6017 ppm	1.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	847 cps	8.2706 ppm	1.0 %	0.1 ppm
Y 224.306 {450} (Axial)		97.7410 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.5812 %	0.9 %	0.9 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-23A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:50:57 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	180 cps	3.0258 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	152 cps	3.8630 ppm	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,723 cps	0.5319 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,664 cps	0.5683 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	83 cps	0.0022 ppm	3.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,854 cps	224.7347 ppm	1.4 %	3.1 ppm
Cd 228.802 {447} (Axial)	370 cps	0.3000 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	138 cps	0.1416 ppm	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	84 cps	0.1455 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0438 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,003 cps	0.7944 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,666 cps	144.4987 ppm	1.2 %	1.8 ppm
Li 670.784 {50} (Radial)	34 cps	0.0233 ppm	16.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,957 cps	4.6445 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0161 ppm	3.6 %	0.0 ppm
Na 589.592 {57} (Radial)	342 cps	1.7322 ppm	3.0 %	0.1 ppm
Ni 231.604 {445} (Axial)	60 cps	0.1394 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	182 cps	3.9427 ppm	4.0 %	0.2 ppm
Se 196.090 {472} (Axial)	2 cps	0.0632 ppm	8.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	35 cps	0.0269 ppm	18.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	690 cps	0.1788 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	151 cps	1.4642 ppm	0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	136 cps	1.0444 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	227 cps	0.1332 ppm	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,313 cps	13.9699 ppm	0.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.6418 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		92.4141 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	339 cps	95.5162 ppm	1.3 %	1.3 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	1,420.0 %	0.0 ppm
Al 167.079 {502} (Axial)	4,074 cps	35.9338 ppm	0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		91.5910 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	7 cps	0.2018 ppm	8.5 %	0.0 ppm
Al 396.152 {85} (Radial)	2,005 cps	43.3748 ppm	1.3 %	0.5 ppm
Si 251.611 {134} (Radial)	184 cps	20.5796 ppm	1.5 %	0.3 ppm
Pb 220.353 {453} (Axial)	6,205 cps	60.5725 ppm	0.7 %	0.4 ppm
Y 224.306 {450} (Axial)		96.6063 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.7766 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-25A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:56:02 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	350 cps	5.8915 ppm	0.4 %	0.0 ppm
As 189.042 {478} (Axial)	98 cps	2.4920 ppm	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,331 cps	1.3367 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,920 cps	1.3386 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	128 cps	0.0034 ppm	2.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,950 cps	190.0182 ppm	0.9 %	1.8 ppm
Cd 228.802 {447} (Axial)	255 cps	0.2067 ppm	0.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	226 cps	0.2314 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	137 cps	0.2381 ppm	0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	57 cps	0.0653 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	15,928 cps	6.3167 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	8,336 cps	328.5557 ppm	0.8 %	2.5 ppm
Li 670.784 {50} (Radial)	68 cps	0.0472 ppm	7.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	46,526 cps	6.3636 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0234 ppm	7.5 %	0.0 ppm
Na 589.592 {57} (Radial)	988 cps	5.0132 ppm	2.0 %	0.1 ppm
Ni 231.604 {445} (Axial)	442 cps	1.0301 ppm	0.1 %	0.0 ppm
K 766.490 {44} (Radial)	284 cps	6.1281 ppm	3.0 %	0.2 ppm
Se 196.090 {472} (Axial)	2 cps	0.0646 ppm	17.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	61 cps	0.0470 ppm	3.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,012 cps	0.2623 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	298 cps	2.8880 ppm	0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	231 cps	1.7697 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	326 cps	0.1919 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	70,526 cps	64.3388 ppm	0.4 %	0.3 ppm
Sc 357.253 {94} (Axial)		100.1666 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		92.0834 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	247 cps	69.5892 ppm	0.8 %	0.5 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0146 ppm	93.6 %	0.0 ppm
Al 167.079 {502} (Axial)	5,728 cps	50.5218 ppm	0.2 %	0.1 ppm
Sc 227.318 {448} (Axial)		91.4266 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	13 cps	0.3901 ppm	6.4 %	0.0 ppm
Al 396.152 {85} (Radial)	3,161 cps	68.3858 ppm	0.7 %	0.4 ppm
Si 251.611 {134} (Radial)	258 cps	28.8125 ppm	0.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	11,038 cps	107.7563 ppm	0.5 %	0.5 ppm
Y 224.306 {450} (Axial)		96.5139 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		103.3324 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-27A

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:01:03 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	66 cps	1.1131 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	24 cps	0.6202 ppm	3.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,388 cps	0.7369 ppm	0.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,250 cps	0.7685 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	93 cps	0.0024 ppm	5.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,289 cps	279.8281 ppm	0.5 %	1.5 ppm
Cd 228.802 {447} (Axial)	78 cps	0.0630 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	115 cps	0.1180 ppm	2.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	70 cps	0.1211 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	46 cps	0.0524 ppm	3.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,905 cps	1.9450 ppm	0.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,634 cps	182.6305 ppm	0.2 %	0.3 ppm
Li 670.784 {50} (Radial)	51 cps	0.0352 ppm	18.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	30,758 cps	4.2070 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0137 ppm	22.7 %	0.0 ppm
Na 589.592 {57} (Radial)	215 cps	1.0930 ppm	2.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	72 cps	0.1669 ppm	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	229 cps	4.9520 ppm	5.8 %	0.3 ppm
Se 196.090 {472} (Axial)	0 cps	0.0202 ppm	169.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	22 cps	0.0173 ppm	23.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	783 cps	0.2027 ppm	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	104 cps	1.0108 ppm	1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	141 cps	1.0841 ppm	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	214 cps	0.1260 ppm	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,804 cps	18.0662 ppm	1.1 %	0.2 ppm
Sc 357.253 {94} (Axial)		100.1125 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		91.9489 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	365 cps	102.7814 ppm	0.6 %	0.6 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0071 ppm	104.6 %	0.0 ppm
Al 167.079 {502} (Axial)	4,449 cps	39.2365 ppm	0.8 %	0.3 ppm
Sc 227.318 {448} (Axial)		91.1525 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.2038 ppm	5.9 %	0.0 ppm
Al 396.152 {85} (Radial)	2,267 cps	49.0507 ppm	0.4 %	0.2 ppm
Si 251.611 {134} (Radial)	256 cps	28.6001 ppm	0.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	2,671 cps	26.0714 ppm	1.1 %	0.3 ppm
Y 224.306 {450} (Axial)		96.3082 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.8527 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-29A

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:06:07 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	64 cps	1.0846 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	23 cps	0.5767 ppm	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,566 cps	0.7920 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,428 cps	0.8292 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	89 cps	0.0023 ppm	7.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,988 cps	268.2534 ppm	1.9 %	5.1 ppm
Cd 228.802 {447} (Axial)	80 cps	0.0652 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	119 cps	0.1222 ppm	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	70 cps	0.1211 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	43 cps	0.0500 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	5,372 cps	2.1304 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,219 cps	166.2900 ppm	1.6 %	2.6 ppm
Li 670.784 {50} (Radial)	56 cps	0.0388 ppm	15.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	26,881 cps	3.6766 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0119 ppm	5.5 %	0.0 ppm
Na 589.592 {57} (Radial)	194 cps	0.9839 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	69 cps	0.1608 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	216 cps	4.6709 ppm	4.0 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0446 ppm	52.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	29 cps	0.0220 ppm	5.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	831 cps	0.2153 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	146 cps	1.4179 ppm	0.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	135 cps	1.0377 ppm	3.3 %	0.0 ppm
V 292.402 {115} (Axial)	233 cps	0.1369 ppm	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	17,245 cps	15.7324 ppm	0.8 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.0157 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.6354 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	399 cps	112.2415 ppm	2.1 %	2.4 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0016 ppm	333.5 %	0.0 ppm
Al 167.079 {502} (Axial)	4,345 cps	38.3186 ppm	0.4 %	0.2 ppm
Sc 227.318 {448} (Axial)		91.9031 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	5 cps	0.1579 ppm	23.6 %	0.0 ppm
Al 396.152 {85} (Radial)	2,296 cps	49.6861 ppm	1.5 %	0.8 ppm
Si 251.611 {134} (Radial)	188 cps	21.0334 ppm	1.5 %	0.3 ppm
Pb 220.353 {453} (Axial)	2,404 cps	23.4709 ppm	0.8 %	0.2 ppm
Y 224.306 {450} (Axial)		97.1089 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.8995 %	0.7 %	0.7 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-30A

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:11:12 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	67 cps	1.1213 ppm	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	20 cps	0.5207 ppm	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,593 cps	0.8004 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,421 cps	0.8267 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	130 cps	0.0034 ppm	52.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,701 cps	180.4796 ppm	1.2 %	2.1 ppm
Cd 228.802 {447} (Axial)	75 cps	0.0609 ppm	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	134 cps	0.1372 ppm	9.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	81 cps	0.1404 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	45 cps	0.0516 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,576 cps	1.4181 ppm	9.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	4,812 cps	189.6444 ppm	1.1 %	2.1 ppm
Li 670.784 {50} (Radial)	81 cps	0.0560 ppm	9.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,486 cps	4.9904 ppm	8.4 %	0.4 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0145 ppm	12.8 %	0.0 ppm
Na 589.592 {57} (Radial)	150 cps	0.7598 ppm	8.3 %	0.1 ppm
Ni 231.604 {445} (Axial)	70 cps	0.1620 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	243 cps	5.2497 ppm	1.7 %	0.1 ppm
Se 196.090 {472} (Axial)	1 cps	0.0330 ppm	24.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0056 ppm	218.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	621 cps	0.1608 ppm	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.9143 ppm	1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	123 cps	0.9425 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	249 cps	0.1464 ppm	10.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,611 cps	14.2416 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		95.5774 %	9.5 %	9.1 %
Sc 188.060 {479} (Axial)		93.4349 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	231 cps	65.1596 ppm	1.6 %	1.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0024 ppm	370.8 %	0.0 ppm
Al 167.079 {502} (Axial)	4,703 cps	41.4766 ppm	1.0 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.6559 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	7 cps	0.2053 ppm	7.7 %	0.0 ppm
Al 396.152 {85} (Radial)	2,318 cps	50.1430 ppm	0.9 %	0.5 ppm
Si 251.611 {134} (Radial)	129 cps	14.3665 ppm	0.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,585 cps	15.4774 ppm	1.0 %	0.2 ppm
Y 224.306 {450} (Axial)		97.3832 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.1860 %	1.3 %	1.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-31A

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:31:17 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	28 cps	0.4780 ppm	6.8 %	0.0 ppm
As 189.042 {478} (Axial)	10 cps	0.2652 ppm	5.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,694 cps	0.5228 ppm	0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,625 cps	0.5550 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	76 cps	0.0020 ppm	5.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	14,141 cps	542.8540 ppm	0.8 %	4.1 ppm
Cd 228.802 {447} (Axial)	33 cps	0.0268 ppm	5.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	74 cps	0.0760 ppm	2.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	40 cps	0.0697 ppm	5.6 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0424 ppm	6.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,287 cps	0.5105 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,092 cps	121.8788 ppm	1.2 %	1.5 ppm
Li 670.784 {50} (Radial)	66 cps	0.0459 ppm	7.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	25,395 cps	3.4735 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0105 ppm	14.5 %	0.0 ppm
Na 589.592 {57} (Radial)	318 cps	1.6133 ppm	2.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	39 cps	0.0910 ppm	7.6 %	0.0 ppm
K 766.490 {44} (Radial)	202 cps	4.3652 ppm	1.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0046 ppm	180.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0217 ppm	6.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,354 cps	0.3508 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	24 cps	0.2320 ppm	5.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	143 cps	1.0969 ppm	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	164 cps	0.0964 ppm	3.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,137 cps	7.4232 ppm	6.7 %	0.5 ppm
Sc 357.253 {94} (Axial)		99.1408 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		91.3312 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	627 cps	176.4652 ppm	0.8 %	1.4 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0014 ppm	471.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,221 cps	28.4058 ppm	5.2 %	1.5 ppm
Sc 227.318 {448} (Axial)		90.6682 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.2204 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,835 cps	39.7078 ppm	1.1 %	0.4 ppm
Si 251.611 {134} (Radial)	212 cps	23.6865 ppm	1.4 %	0.3 ppm
Pb 220.353 {453} (Axial)	740 cps	7.2264 ppm	6.6 %	0.5 ppm
Y 224.306 {450} (Axial)		96.6774 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.8946 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-33A

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:36:22 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	55 cps	0.9290 ppm	8.7 %	0.1 ppm
As 189.042 {478} (Axial)	16 cps	0.3970 ppm	9.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	910 cps	0.2807 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	971 cps	0.3317 ppm	5.6 %	0.0 ppm
Be 313.042 {108} (Axial)	37 cps	0.0010 ppm	14.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,849 cps	339.7179 ppm	1.6 %	5.4 ppm
Cd 228.802 {447} (Axial)	48 cps	0.0388 ppm	9.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	127 cps	0.1307 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	67 cps	0.1162 ppm	7.7 %	0.0 ppm
Co 228.616 {447} (Axial)	30 cps	0.0344 ppm	7.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,457 cps	0.5777 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,743 cps	108.1291 ppm	1.8 %	1.9 ppm
Li 670.784 {50} (Radial)	35 cps	0.0240 ppm	2.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,825 cps	4.6264 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0071 ppm	28.3 %	0.0 ppm
Na 589.592 {57} (Radial)	251 cps	1.2732 ppm	3.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	34 cps	0.0792 ppm	8.5 %	0.0 ppm
K 766.490 {44} (Radial)	154 cps	3.3224 ppm	11.0 %	0.4 ppm
Se 196.090 {472} (Axial)	1 cps	0.0326 ppm	39.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	68 cps	0.0530 ppm	5.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	819 cps	0.2123 ppm	2.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	24 cps	0.2295 ppm	8.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	156 cps	1.1943 ppm	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	197 cps	0.1158 ppm	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,466 cps	9.5481 ppm	8.8 %	0.8 ppm
Sc 357.253 {94} (Axial)		100.1936 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		92.2099 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	567 cps	159.6894 ppm	1.6 %	2.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0057 ppm	222.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,375 cps	20.9425 ppm	7.3 %	1.5 ppm
Sc 227.318 {448} (Axial)		91.5347 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	6 cps	0.1750 ppm	28.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,263 cps	27.3356 ppm	1.8 %	0.5 ppm
Si 251.611 {134} (Radial)	144 cps	16.1253 ppm	1.8 %	0.3 ppm
Pb 220.353 {453} (Axial)	1,389 cps	13.5630 ppm	8.8 %	1.2 ppm
Y 224.306 {450} (Axial)		96.9043 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.8862 %	1.5 %	1.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-33AMS

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:41:28 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	67 cps	1.1335 ppm	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	16 cps	0.3969 ppm	4.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,230 cps	0.3795 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,235 cps	0.4219 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	3,804 cps	0.0999 ppm	0.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,481 cps	325.5940 ppm	1.6 %	5.2 ppm
Cd 228.802 {447} (Axial)	158 cps	0.1280 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	218 cps	0.2238 ppm	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	127 cps	0.2197 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	116 cps	0.1339 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,523 cps	1.0004 ppm	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,889 cps	113.8614 ppm	1.4 %	1.6 ppm
Li 670.784 {50} (Radial)	205 cps	0.1427 ppm	7.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,330 cps	4.0117 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1018 ppm	2.5 %	0.0 ppm
Na 589.592 {57} (Radial)	2,507 cps	12.7170 ppm	2.0 %	0.3 ppm
Ni 231.604 {445} (Axial)	78 cps	0.1826 ppm	2.5 %	0.0 ppm
K 766.490 {44} (Radial)	706 cps	15.2560 ppm	2.1 %	0.3 ppm
Se 196.090 {472} (Axial)	3 cps	0.1086 ppm	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	195 cps	0.1506 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,188 cps	0.3078 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	42 cps	0.4040 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	203 cps	1.5623 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	367 cps	0.2158 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	9,046 cps	8.2523 ppm	1.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.8524 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.1038 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	555 cps	156.3582 ppm	1.8 %	2.7 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0948 ppm	7.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,259 cps	28.7419 ppm	1.0 %	0.3 ppm
Sc 227.318 {448} (Axial)		91.3612 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	25 cps	0.7463 ppm	5.7 %	0.0 ppm
Al 396.152 {85} (Radial)	1,616 cps	34.9603 ppm	1.5 %	0.5 ppm
Si 251.611 {134} (Radial)	280 cps	31.3039 ppm	1.7 %	0.5 ppm
Pb 220.353 {453} (Axial)	1,799 cps	17.5667 ppm	1.3 %	0.2 ppm
Y 224.306 {450} (Axial)		97.0928 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		102.6006 %	1.0 %	1.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-33AMSD

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:46:30 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	78 cps	1.3076 ppm	6.2 %	0.1 ppm
As 189.042 {478} (Axial)	26 cps	0.6635 ppm	5.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,340 cps	0.4136 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,342 cps	0.4584 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	4,051 cps	0.1063 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,767 cps	374.9321 ppm	1.7 %	6.4 ppm
Cd 228.802 {447} (Axial)	165 cps	0.1336 ppm	5.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	210 cps	0.2155 ppm	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	114 cps	0.1977 ppm	5.7 %	0.0 ppm
Co 228.616 {447} (Axial)	114 cps	0.1311 ppm	5.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,684 cps	0.6679 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,225 cps	127.1137 ppm	1.9 %	2.4 ppm
Li 670.784 {50} (Radial)	218 cps	0.1515 ppm	3.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	27,317 cps	3.7363 ppm	1.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1010 ppm	5.0 %	0.0 ppm
Na 589.592 {57} (Radial)	2,759 cps	13.9953 ppm	0.7 %	0.1 ppm
Ni 231.604 {445} (Axial)	72 cps	0.1671 ppm	5.1 %	0.0 ppm
K 766.490 {44} (Radial)	793 cps	17.1519 ppm	1.3 %	0.2 ppm
Se 196.090 {472} (Axial)	3 cps	0.1220 ppm	20.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	190 cps	0.1470 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,399 cps	0.3623 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	33 cps	0.3183 ppm	5.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	216 cps	1.6596 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	393 cps	0.2311 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,338 cps	10.3433 ppm	5.6 %	0.6 ppm
Sc 357.253 {94} (Axial)		99.0348 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.0247 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	614 cps	172.9798 ppm	1.7 %	2.9 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0964 ppm	10.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,931 cps	25.8488 ppm	4.3 %	1.1 ppm
Sc 227.318 {448} (Axial)		91.1998 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	28 cps	0.8208 ppm	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,602 cps	34.6548 ppm	2.0 %	0.7 ppm
Si 251.611 {134} (Radial)	298 cps	33.2775 ppm	1.6 %	0.5 ppm
Pb 220.353 {453} (Axial)	1,141 cps	11.1396 ppm	5.7 %	0.6 ppm
Y 224.306 {450} (Axial)		96.9858 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.7324 %	1.6 %	1.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

MBLK-168177

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:31:54 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	78.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0009 ppm	100.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0005 ppm	16.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	108 cps	0.0037 ppm	8.5 %	0.0 ppm
Be 313.042 {108} (Axial)	-25 cps	-0.0001 ppm	15.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	15 cps	0.0575 ppm	11.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	52.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0007 ppm	43.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0008 ppm	6.2 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	70.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	10 cps	0.0004 ppm	24.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	19 cps	0.0754 ppm	12.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-28 cps	-0.0019 ppm	43.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	92 cps	0.0013 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	1,978.9 %	0.0 ppm
Na 589.592 {57} (Radial)	17 cps	0.0086 ppm	34.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0006 ppm	38.1 %	0.0 ppm
K 766.490 {44} (Radial)	-14 cps	-0.0294 ppm	26.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	106.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0002 ppm	147.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0002 ppm	33.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0017 ppm	21.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0017 ppm	32.7 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	210.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	37 cps	0.0034 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.1545 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		93.7373 %	0.2 %	0.1 %
Mg 279.079 {121} (Radial)	2 cps	0.0622 ppm	28.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0015 ppm	84.7 %	0.0 ppm
Al 167.079 {502} (Axial)	29 cps	0.0254 ppm	2.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.9527 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	3 cps	0.0087 ppm	35.1 %	0.0 ppm
Al 396.152 {85} (Radial)	7 cps	0.0149 ppm	41.0 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0193 ppm	42.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	4 cps	0.0036 ppm	20.2 %	0.0 ppm
Y 224.306 {450} (Axial)		99.5063 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.9325 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168177

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:37:07 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	55 cps	0.0919 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0852 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,287 cps	0.1014 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,938 cps	0.1003 ppm	2.2 %	0.0 ppm
Be 313.042 {108} (Axial)	32,819 cps	0.0862 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,407 cps	9.2414 ppm	1.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,078 cps	0.0875 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	872 cps	0.0895 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	561 cps	0.0974 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	802 cps	0.0924 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,335 cps	0.0926 ppm	2.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,385 cps	9.4005 ppm	1.4 %	0.1 ppm
Li 670.784 {50} (Radial)	1,375 cps	0.0956 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,678 cps	0.0913 ppm	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	261 cps	0.0955 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	19,022 cps	9.6489 ppm	1.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	394 cps	0.0917 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	4,407 cps	9.5269 ppm	1.6 %	0.1 ppm
Se 196.090 {472} (Axial)	21 cps	0.0871 ppm	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,179 cps	0.0912 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,780 cps	0.0979 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	96 cps	0.0926 ppm	1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	131 cps	0.1008 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,554 cps	0.0914 ppm	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	975 cps	0.0889 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.7563 %	1.5 %	1.5 %
Sc 188.060 {479} (Axial)		90.7584 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	322 cps	9.0762 ppm	1.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	33 cps	0.0913 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	149 cps	0.1310 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.0935 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	163 cps	0.4844 ppm	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	56 cps	0.1207 ppm	8.4 %	0.0 ppm
Si 251.611 {134} (Radial)	787 cps	8.7805 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	100 cps	0.0975 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		97.4427 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		103.1657 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-35A

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:42:08 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	101 cps	1.6976 ppm	10.8 %	0.2 ppm
As 189.042 {478} (Axial)	31 cps	0.7959 ppm	11.7 %	0.1 ppm
Ba 455.403 {74} (Radial)	2,282 cps	0.7042 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,065 cps	0.7053 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	68 cps	0.0018 ppm	4.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,405 cps	284.2846 ppm	1.8 %	5.3 ppm
Cd 228.802 {447} (Axial)	50 cps	0.0403 ppm	13.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	91 cps	0.0935 ppm	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	45 cps	0.0782 ppm	12.5 %	0.0 ppm
Co 228.616 {447} (Axial)	35 cps	0.0404 ppm	11.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	7,509 cps	2.9779 ppm	1.7 %	0.1 ppm
Fe 259.940 {130} (Radial)	4,245 cps	167.3188 ppm	2.1 %	3.5 ppm
Li 670.784 {50} (Radial)	33 cps	0.0227 ppm	33.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	17,733 cps	2.4255 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0155 ppm	15.2 %	0.0 ppm
Na 589.592 {57} (Radial)	545 cps	2.7658 ppm	1.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	60 cps	0.1406 ppm	10.0 %	0.0 ppm
K 766.490 {44} (Radial)	145 cps	3.1346 ppm	2.1 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0186 ppm	120.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	49 cps	0.0379 ppm	7.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	915 cps	0.2371 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	134 cps	1.3007 ppm	9.8 %	0.1 ppm
Ti 334.941 {101} (Radial)	156 cps	1.1972 ppm	1.1 %	0.0 ppm
V 292.402 {115} (Axial)	212 cps	0.1248 ppm	2.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,782 cps	17.1340 ppm	10.9 %	1.9 ppm
Sc 357.253 {94} (Axial)		101.5975 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		94.9891 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	437 cps	122.9739 ppm	2.0 %	2.5 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0010 ppm	115.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,273 cps	20.0476 ppm	9.1 %	1.8 ppm
Sc 227.318 {448} (Axial)		94.1496 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	9 cps	0.2560 ppm	8.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,316 cps	28.4644 ppm	1.9 %	0.6 ppm
Si 251.611 {134} (Radial)	145 cps	16.2249 ppm	0.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	2,668 cps	26.0515 ppm	10.9 %	2.9 ppm
Y 224.306 {450} (Axial)		99.2414 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.5504 %	1.1 %	1.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-37A

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:47:12 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	25 cps	0.4124 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	10 cps	0.2440 ppm	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,094 cps	0.6462 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,931 cps	0.6596 ppm	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	97 cps	0.0026 ppm	7.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,379 cps	168.1006 ppm	1.0 %	1.6 ppm
Cd 228.802 {447} (Axial)	44 cps	0.0355 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	122 cps	0.1252 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	76 cps	0.1323 ppm	0.5 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0428 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,820 cps	0.7218 ppm	0.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	6,676 cps	263.1082 ppm	0.5 %	1.2 ppm
Li 670.784 {50} (Radial)	20 cps	0.0137 ppm	22.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,111 cps	4.3920 ppm	0.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0129 ppm	11.4 %	0.0 ppm
Na 589.592 {57} (Radial)	134 cps	0.6815 ppm	4.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	89 cps	0.2077 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	149 cps	3.2124 ppm	6.0 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0417 ppm	19.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	40 cps	0.0310 ppm	3.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	637 cps	0.1651 ppm	0.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	134 cps	1.2940 ppm	0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	162 cps	1.2470 ppm	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	265 cps	0.1558 ppm	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	24,514 cps	22.3632 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		102.3789 %	0.3 %	0.4 %
Sc 188.060 {479} (Axial)		94.6597 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	257 cps	72.4023 ppm	0.6 %	0.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0138 ppm	45.1 %	0.0 ppm
Al 167.079 {502} (Axial)	3,981 cps	35.1085 ppm	0.3 %	0.1 ppm
Sc 227.318 {448} (Axial)		93.8285 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	10 cps	0.2887 ppm	6.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,899 cps	41.0947 ppm	0.5 %	0.2 ppm
Si 251.611 {134} (Radial)	148 cps	16.5004 ppm	0.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,103 cps	10.7686 ppm	0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		98.7979 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		104.0297 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-39A

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:52:17 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	17 cps	0.2810 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0968 ppm	13.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	763 cps	0.2356 ppm	1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	804 cps	0.2745 ppm	5.9 %	0.0 ppm
Be 313.042 {108} (Axial)	28 cps	0.0007 ppm	17.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,723 cps	219.7190 ppm	2.0 %	4.4 ppm
Cd 228.802 {447} (Axial)	15 cps	0.0118 ppm	7.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	60 cps	0.0618 ppm	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0627 ppm	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0442 ppm	2.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	889 cps	0.3527 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,626 cps	103.4934 ppm	1.9 %	2.0 ppm
Li 670.784 {50} (Radial)	6 cps	0.0040 ppm	222.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,710 cps	1.8752 ppm	0.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0063 ppm	7.2 %	0.0 ppm
Na 589.592 {57} (Radial)	143 cps	0.7231 ppm	1.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	31 cps	0.0722 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	94 cps	2.0410 ppm	3.2 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0166 ppm	108.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	51 cps	0.0397 ppm	5.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	540 cps	0.1400 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	22 cps	0.2160 ppm	0.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	108 cps	0.8311 ppm	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	124 cps	0.0727 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,334 cps	16.7259 ppm	0.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		101.6815 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.8833 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	347 cps	97.5828 ppm	1.7 %	1.6 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0063 ppm	135.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,394 cps	21.1178 ppm	0.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		94.0959 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	5 cps	0.1440 ppm	24.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,084 cps	23.4607 ppm	2.2 %	0.5 ppm
Si 251.611 {134} (Radial)	116 cps	12.9364 ppm	1.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	717 cps	7.0015 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0930 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		102.8038 %	1.3 %	1.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-41A

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:57:23 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	1.0852 ppm	3.2 %	0.0 ppm
As 189.042 {478} (Axial)	21 cps	0.5245 ppm	4.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	6,943 cps	2.1429 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	6,164 cps	2.1048 ppm	0.3 %	0.0 ppm
Be 313.042 {108} (Axial)	142 cps	0.0037 ppm	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,912 cps	380.5204 ppm	0.3 %	1.2 ppm
Cd 228.802 {447} (Axial)	31 cps	0.0248 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	146 cps	0.1498 ppm	3.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	85 cps	0.1472 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0467 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,195 cps	0.8704 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,075 cps	200.0245 ppm	0.5 %	1.0 ppm
Li 670.784 {50} (Radial)	39 cps	0.0271 ppm	26.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,161 cps	4.3988 ppm	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0167 ppm	4.3 %	0.0 ppm
Na 589.592 {57} (Radial)	383 cps	1.9412 ppm	0.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	63 cps	0.1472 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	181 cps	3.9124 ppm	4.8 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0438 ppm	18.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	121 cps	0.0938 ppm	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,633 cps	0.4230 ppm	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	72 cps	0.6956 ppm	2.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	199 cps	1.5308 ppm	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	263 cps	0.1546 ppm	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	69,293 cps	63.2138 ppm	2.4 %	1.5 ppm
Sc 357.253 {94} (Axial)		101.7988 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.0812 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	375 cps	105.5672 ppm	0.9 %	1.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0083 ppm	110.3 %	0.0 ppm
Al 167.079 {502} (Axial)	4,209 cps	37.1189 ppm	1.8 %	0.7 ppm
Sc 227.318 {448} (Axial)		92.3686 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	11 cps	0.3338 ppm	11.7 %	0.0 ppm
Al 396.152 {85} (Radial)	2,239 cps	48.4441 ppm	0.5 %	0.2 ppm
Si 251.611 {134} (Radial)	210 cps	23.4638 ppm	0.9 %	0.2 ppm
Pb 220.353 {453} (Axial)	2,314 cps	22.5873 ppm	2.7 %	0.6 ppm
Y 224.306 {450} (Axial)		98.0903 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		104.1226 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-43A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:02:27 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	29 cps	0.4795 ppm	5.1 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1786 ppm	5.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,147 cps	0.3540 ppm	3.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,105 cps	0.3774 ppm	4.9 %	0.0 ppm
Be 313.042 {108} (Axial)	38 cps	0.0010 ppm	19.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,341 cps	281.8007 ppm	2.2 %	6.3 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0076 ppm	16.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	63 cps	0.0644 ppm	4.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0625 ppm	3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	27 cps	0.0308 ppm	3.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,180 cps	0.4681 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,320 cps	91.4223 ppm	2.2 %	2.0 ppm
Li 670.784 {50} (Radial)	4 cps	0.0031 ppm	82.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,557 cps	1.9911 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0043 ppm	60.5 %	0.0 ppm
Na 589.592 {57} (Radial)	204 cps	1.0357 ppm	4.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0610 ppm	4.1 %	0.0 ppm
K 766.490 {44} (Radial)	84 cps	1.8231 ppm	10.1 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0217 ppm	47.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	118 cps	0.0911 ppm	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	832 cps	0.2156 ppm	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	18 cps	0.1783 ppm	3.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	108 cps	0.8258 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	118 cps	0.0695 ppm	3.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,240 cps	13.9026 ppm	3.2 %	0.4 ppm
Sc 357.253 {94} (Axial)		102.1213 %	0.8 %	0.9 %
Sc 188.060 {479} (Axial)		94.1435 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	388 cps	109.1421 ppm	1.9 %	2.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0057 ppm	168.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,163 cps	19.0775 ppm	2.5 %	0.5 ppm
Sc 227.318 {448} (Axial)		93.2882 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.1250 ppm	9.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,003 cps	21.6970 ppm	2.2 %	0.5 ppm
Si 251.611 {134} (Radial)	120 cps	13.3693 ppm	2.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	986 cps	9.6217 ppm	3.2 %	0.3 ppm
Y 224.306 {450} (Axial)		98.7081 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		104.1525 %	0.0 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-45A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:07:33 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	94 cps	1.5798 ppm	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	44 cps	1.1171 ppm	0.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,056 cps	0.6347 ppm	1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,890 cps	0.6454 ppm	0.3 %	0.0 ppm
Be 313.042 {108} (Axial)	75 cps	0.0020 ppm	3.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,846 cps	262.8018 ppm	0.3 %	0.8 ppm
Cd 228.802 {447} (Axial)	90 cps	0.0727 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	100 cps	0.1026 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	62 cps	0.1071 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0480 ppm	3.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,274 cps	1.6951 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,518 cps	178.0729 ppm	0.1 %	0.2 ppm
Li 670.784 {50} (Radial)	23 cps	0.0161 ppm	49.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	27,639 cps	3.7803 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0159 ppm	5.3 %	0.0 ppm
Na 589.592 {57} (Radial)	240 cps	1.2150 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	70 cps	0.1634 ppm	2.1 %	0.0 ppm
K 766.490 {44} (Radial)	138 cps	2.9728 ppm	6.3 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0144 ppm	121.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	99 cps	0.0765 ppm	4.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	837 cps	0.2169 ppm	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	80 cps	0.7757 ppm	2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	132 cps	1.0121 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	200 cps	0.1173 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	45,913 cps	41.8852 ppm	1.1 %	0.5 ppm
Sc 357.253 {94} (Axial)		101.7969 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.2093 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	311 cps	87.6560 ppm	0.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0021 ppm	192.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,742 cps	32.9988 ppm	1.0 %	0.3 ppm
Sc 227.318 {448} (Axial)		93.3983 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.2128 ppm	8.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,664 cps	36.0011 ppm	0.3 %	0.1 ppm
Si 251.611 {134} (Radial)	133 cps	14.7926 ppm	0.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	3,657 cps	35.6994 ppm	1.1 %	0.4 ppm
Y 224.306 {450} (Axial)		98.8336 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.1857 %	0.7 %	0.8 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-47A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:12:37 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	22 cps	0.3673 ppm	4.3 %	0.0 ppm
As 189.042 {478} (Axial)	9 cps	0.2281 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,344 cps	0.7235 ppm	3.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,154 cps	0.7356 ppm	4.8 %	0.0 ppm
Be 313.042 {108} (Axial)	75 cps	0.0020 ppm	7.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,566 cps	136.8951 ppm	3.4 %	4.7 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0139 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	134 cps	0.1376 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	86 cps	0.1498 ppm	1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0435 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,205 cps	0.8745 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,348 cps	131.9494 ppm	3.2 %	4.2 ppm
Li 670.784 {50} (Radial)	46 cps	0.0319 ppm	35.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	26,845 cps	3.6717 ppm	1.7 %	0.1 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0133 ppm	13.6 %	0.0 ppm
Na 589.592 {57} (Radial)	121 cps	0.6138 ppm	5.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	50 cps	0.1176 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	197 cps	4.2627 ppm	6.4 %	0.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0241 ppm	57.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0089 ppm	31.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	568 cps	0.1470 ppm	3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	45 cps	0.4387 ppm	2.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	119 cps	0.9173 ppm	5.1 %	0.0 ppm
V 292.402 {115} (Axial)	240 cps	0.1409 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	9,533 cps	8.6963 ppm	1.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		103.3381 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		95.8360 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	180 cps	50.5685 ppm	4.7 %	2.4 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0069 ppm	49.2 %	0.0 ppm
Al 167.079 {502} (Axial)	4,590 cps	40.4828 ppm	1.3 %	0.5 ppm
Sc 227.318 {448} (Axial)		95.0226 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	6 cps	0.1757 ppm	7.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2,211 cps	47.8330 ppm	3.2 %	1.5 ppm
Si 251.611 {134} (Radial)	112 cps	12.5107 ppm	3.2 %	0.4 ppm
Pb 220.353 {453} (Axial)	868 cps	8.4730 ppm	1.3 %	0.1 ppm
Y 224.306 {450} (Axial)		99.8107 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		103.7027 %	0.8 %	0.9 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-49A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:17:42 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	107 cps	1.7916 ppm	9.0 %	0.2 ppm
As 189.042 {478} (Axial)	32 cps	0.8135 ppm	8.4 %	0.1 ppm
Ba 455.403 {74} (Radial)	3,388 cps	1.0456 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,060 cps	1.0450 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	108 cps	0.0028 ppm	4.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,237 cps	277.8262 ppm	2.2 %	6.2 ppm
Cd 228.802 {447} (Axial)	86 cps	0.0697 ppm	8.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	182 cps	0.1867 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	93 cps	0.1620 ppm	7.8 %	0.0 ppm
Co 228.616 {447} (Axial)	36 cps	0.0414 ppm	9.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,220 cps	8.0185 ppm	2.2 %	0.2 ppm
Fe 259.940 {130} (Radial)	4,945 cps	194.8862 ppm	2.6 %	5.1 ppm
Li 670.784 {50} (Radial)	63 cps	0.0440 ppm	16.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,417 cps	4.9809 ppm	1.9 %	0.1 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0137 ppm	15.4 %	0.0 ppm
Na 589.592 {57} (Radial)	290 cps	1.4730 ppm	2.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	208 cps	0.4849 ppm	8.5 %	0.0 ppm
K 766.490 {44} (Radial)	189 cps	4.0931 ppm	6.9 %	0.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0401 ppm	26.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	26 cps	0.0199 ppm	4.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	845 cps	0.2190 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	243 cps	2.3480 ppm	7.8 %	0.2 ppm
Ti 334.941 {101} (Radial)	189 cps	1.4481 ppm	2.8 %	0.0 ppm
V 292.402 {115} (Axial)	297 cps	0.1746 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	83,487 cps	76.1630 ppm	8.0 %	6.1 ppm
Sc 357.253 {94} (Axial)		101.2085 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.2132 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	470 cps	132.2237 ppm	2.4 %	3.2 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0008 ppm	1,410.3 %	0.0 ppm
Al 167.079 {502} (Axial)	4,277 cps	37.7178 ppm	6.2 %	2.4 ppm
Sc 227.318 {448} (Axial)		93.4849 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.2107 ppm	2.5 %	0.0 ppm
Al 396.152 {85} (Radial)	2,763 cps	59.7799 ppm	3.0 %	1.8 ppm
Si 251.611 {134} (Radial)	168 cps	18.7212 ppm	3.5 %	0.7 ppm
Pb 220.353 {453} (Axial)	1,677 cps	16.3741 ppm	8.8 %	1.4 ppm
Y 224.306 {450} (Axial)		98.9618 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.0917 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-51A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:37:46 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	296 cps	4.9713 ppm	1.6 %	0.1 ppm
As 189.042 {478} (Axial)	46 cps	1.1732 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,706 cps	0.8350 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,439 cps	0.8327 ppm	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	57 cps	0.0015 ppm	8.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,362 cps	244.2462 ppm	0.8 %	1.9 ppm
Cd 228.802 {447} (Axial)	176 cps	0.1428 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	104 cps	0.1072 ppm	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	62 cps	0.1075 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	43 cps	0.0501 ppm	3.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	30,689 cps	12.1705 ppm	0.8 %	0.1 ppm
Fe 259.940 {130} (Radial)	3,504 cps	138.0911 ppm	0.6 %	0.8 ppm
Li 670.784 {50} (Radial)	73 cps	0.0506 ppm	8.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,989 cps	3.1443 ppm	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0184 ppm	15.0 %	0.0 ppm
Na 589.592 {57} (Radial)	353 cps	1.7892 ppm	0.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	99 cps	0.2297 ppm	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	86 cps	1.8566 ppm	3.9 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0653 ppm	59.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	571 cps	0.4414 ppm	0.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	960 cps	0.2486 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	196 cps	1.8938 ppm	1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	216 cps	1.6613 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	205 cps	0.1207 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	312,413 cps	285.0050 ppm	1.6 %	4.6 ppm
Sc 357.253 {94} (Axial)		101.6281 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.2803 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	410 cps	115.3344 ppm	0.5 %	0.5 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0013 ppm	883.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,859 cps	25.2108 ppm	1.2 %	0.3 ppm
Sc 227.318 {448} (Axial)		93.3387 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	8 cps	0.2341 ppm	8.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,313 cps	28.4099 ppm	1.1 %	0.3 ppm
Si 251.611 {134} (Radial)	191 cps	21.2853 ppm	0.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	14,968 cps	146.1237 ppm	1.4 %	2.0 ppm
Y 224.306 {450} (Axial)		99.1897 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.8522 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-53A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:42:57 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	64 cps	1.0727 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	76 cps	1.9316 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,466 cps	0.4524 ppm	0.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,386 cps	0.4732 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	75 cps	0.0020 ppm	18.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,147 cps	312.7715 ppm	0.4 %	1.1 ppm
Cd 228.802 {447} (Axial)	37 cps	0.0304 ppm	2.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	67 cps	0.0686 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	39 cps	0.0679 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	34 cps	0.0388 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,091 cps	1.2260 ppm	2.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,260 cps	128.4966 ppm	0.3 %	0.4 ppm
Li 670.784 {50} (Radial)	42 cps	0.0295 ppm	7.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	19,159 cps	2.6205 ppm	2.1 %	0.1 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0149 ppm	10.0 %	0.0 ppm
Na 589.592 {57} (Radial)	195 cps	0.9867 ppm	2.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	46 cps	0.1083 ppm	3.4 %	0.0 ppm
K 766.490 {44} (Radial)	123 cps	2.6529 ppm	9.4 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0333 ppm	43.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	196 cps	0.1518 ppm	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,019 cps	0.2640 ppm	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	16 cps	0.1576 ppm	0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	162 cps	1.2443 ppm	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	166 cps	0.0977 ppm	0.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	75,253 cps	68.6508 ppm	0.9 %	0.6 ppm
Sc 357.253 {94} (Axial)		100.6906 %	2.6 %	2.7 %
Sc 188.060 {479} (Axial)		94.0029 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	401 cps	112.9859 ppm	0.7 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0020 ppm	430.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,873 cps	25.3416 ppm	0.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		93.1360 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	9 cps	0.2606 ppm	12.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,382 cps	29.9059 ppm	0.6 %	0.2 ppm
Si 251.611 {134} (Radial)	127 cps	14.1523 ppm	0.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,697 cps	16.5715 ppm	1.1 %	0.2 ppm
Y 224.306 {450} (Axial)		98.8368 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.8048 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-55A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:48:03 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	71 cps	1.1883 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	12 cps	0.2938 ppm	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,647 cps	0.5084 ppm	0.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,603 cps	0.5473 ppm	3.6 %	0.0 ppm
Be 313.042 {108} (Axial)	84 cps	0.0022 ppm	6.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,660 cps	332.4564 ppm	1.3 %	4.4 ppm
Cd 228.802 {447} (Axial)	22 cps	0.0179 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	73 cps	0.0752 ppm	6.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	43 cps	0.0745 ppm	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0474 ppm	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,071 cps	0.8214 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,890 cps	153.3030 ppm	1.5 %	2.2 ppm
Li 670.784 {50} (Radial)	47 cps	0.0330 ppm	3.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	19,905 cps	2.7225 ppm	0.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0186 ppm	7.9 %	0.0 ppm
Na 589.592 {57} (Radial)	223 cps	1.1287 ppm	6.3 %	0.1 ppm
Ni 231.604 {445} (Axial)	53 cps	0.1231 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	169 cps	3.6467 ppm	6.1 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0313 ppm	30.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	324 cps	0.2506 ppm	0.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,243 cps	0.3219 ppm	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.1289 ppm	2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	179 cps	1.3743 ppm	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	199 cps	0.1169 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	53,046 cps	48.3925 ppm	1.5 %	0.7 ppm
Sc 357.253 {94} (Axial)		101.5216 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.5970 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	470 cps	132.3018 ppm	1.2 %	1.6 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0038 ppm	169.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,147 cps	27.7586 ppm	1.0 %	0.3 ppm
Sc 227.318 {448} (Axial)		92.7416 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	10 cps	0.3091 ppm	3.4 %	0.0 ppm
Al 396.152 {85} (Radial)	1,576 cps	34.1024 ppm	1.4 %	0.5 ppm
Si 251.611 {134} (Radial)	139 cps	15.4911 ppm	1.1 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,721 cps	16.8045 ppm	1.6 %	0.3 ppm
Y 224.306 {450} (Axial)		98.6268 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.1283 %	1.4 %	1.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-56A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:53:07 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	71 cps	1.1940 ppm	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	16 cps	0.4173 ppm	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,774 cps	0.8562 ppm	4.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,512 cps	0.8577 ppm	3.9 %	0.0 ppm
Be 313.042 {108} (Axial)	134 cps	0.0035 ppm	6.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,996 cps	306.9445 ppm	3.4 %	10.5 ppm
Cd 228.802 {447} (Axial)	59 cps	0.0480 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	151 cps	0.1547 ppm	3.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	93 cps	0.1619 ppm	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0487 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	6,711 cps	2.6614 ppm	2.6 %	0.1 ppm
Fe 259.940 {130} (Radial)	5,205 cps	205.1586 ppm	3.4 %	7.0 ppm
Li 670.784 {50} (Radial)	40 cps	0.0278 ppm	26.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	26,751 cps	3.6589 ppm	2.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	10 cps	0.0381 ppm	3.9 %	0.0 ppm
Na 589.592 {57} (Radial)	391 cps	1.9854 ppm	3.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	115 cps	0.2670 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	221 cps	4.7740 ppm	4.7 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0168 ppm	70.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	517 cps	0.3996 ppm	3.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,477 cps	0.3827 ppm	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	73 cps	0.7052 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	205 cps	1.5744 ppm	5.0 %	0.1 ppm
V 292.402 {115} (Axial)	290 cps	0.1708 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	125,095 cps	114.1205 ppm	1.2 %	1.3 ppm
Sc 357.253 {94} (Axial)		101.8766 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		93.9385 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	350 cps	98.4624 ppm	3.8 %	3.8 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0057 ppm	244.4 %	0.0 ppm
Al 167.079 {502} (Axial)	4,257 cps	37.5434 ppm	1.2 %	0.4 ppm
Sc 227.318 {448} (Axial)		93.1841 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	11 cps	0.3316 ppm	13.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,945 cps	42.0812 ppm	3.5 %	1.5 ppm
Si 251.611 {134} (Radial)	154 cps	17.1483 ppm	3.5 %	0.6 ppm
Pb 220.353 {453} (Axial)	12,504 cps	122.0763 ppm	1.3 %	1.6 ppm
Y 224.306 {450} (Axial)		98.6946 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		104.0098 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-57A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:58:11 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	105 cps	1.7716 ppm	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	8 cps	0.2109 ppm	6.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,624 cps	0.8099 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,333 cps	0.7967 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	112 cps	0.0029 ppm	29.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,675 cps	371.4072 ppm	1.9 %	7.0 ppm
Cd 228.802 {447} (Axial)	56 cps	0.0458 ppm	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	117 cps	0.1205 ppm	5.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	73 cps	0.1265 ppm	2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	39 cps	0.0451 ppm	3.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,066 cps	1.2160 ppm	5.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	3,213 cps	126.6295 ppm	1.4 %	1.7 ppm
Li 670.784 {50} (Radial)	31 cps	0.0218 ppm	23.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	25,658 cps	3.5093 ppm	5.2 %	0.2 ppm
Mo 202.030 {467} (Axial)	7 cps	0.0244 ppm	6.0 %	0.0 ppm
Na 589.592 {57} (Radial)	256 cps	1.2986 ppm	3.9 %	0.1 ppm
Ni 231.604 {445} (Axial)	58 cps	0.1350 ppm	2.6 %	0.0 ppm
K 766.490 {44} (Radial)	155 cps	3.3490 ppm	6.2 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0049 ppm	725.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	66 cps	0.0511 ppm	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,218 cps	0.3155 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	92 cps	0.8906 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	138 cps	1.0620 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	202 cps	0.1186 ppm	6.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	39,109 cps	35.6779 ppm	1.5 %	0.5 ppm
Sc 357.253 {94} (Axial)		100.8940 %	4.3 %	4.3 %
Sc 188.060 {479} (Axial)		92.8785 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	378 cps	106.4349 ppm	1.6 %	1.7 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0021 ppm	613.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,583 cps	31.6034 ppm	1.4 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.1037 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.2202 ppm	10.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,605 cps	34.7183 ppm	1.4 %	0.5 ppm
Si 251.611 {134} (Radial)	154 cps	17.1678 ppm	2.5 %	0.4 ppm
Pb 220.353 {453} (Axial)	2,090 cps	20.4076 ppm	1.4 %	0.3 ppm
Y 224.306 {450} (Axial)		97.9273 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.4096 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-59A

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:03:16 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.1387 ppm	18.0 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0635 ppm	20.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,122 cps	0.3463 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,088 cps	0.3714 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	25 cps	0.0007 ppm	14.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,069 cps	463.3085 ppm	1.1 %	5.3 ppm
Cd 228.802 {447} (Axial)	21 cps	0.0169 ppm	18.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	73 cps	0.0748 ppm	5.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	33 cps	0.0570 ppm	12.1 %	0.0 ppm
Co 228.616 {447} (Axial)	26 cps	0.0301 ppm	19.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,773 cps	0.7033 ppm	4.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,600 cps	102.4709 ppm	1.4 %	1.4 ppm
Li 670.784 {50} (Radial)	49 cps	0.0337 ppm	21.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	18,696 cps	2.5572 ppm	4.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0059 ppm	14.4 %	0.0 ppm
Na 589.592 {57} (Radial)	193 cps	0.9769 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	28 cps	0.0658 ppm	14.4 %	0.0 ppm
K 766.490 {44} (Radial)	194 cps	4.1833 ppm	3.0 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0128 ppm	39.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	12 cps	0.0089 ppm	33.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	878 cps	0.2275 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	26 cps	0.2518 ppm	12.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	149 cps	1.1405 ppm	3.1 %	0.0 ppm
V 292.402 {115} (Axial)	170 cps	0.1000 ppm	8.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,566 cps	14.2008 ppm	13.6 %	1.9 ppm
Sc 357.253 {94} (Axial)		100.7322 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		93.5377 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	716 cps	201.5532 ppm	0.7 %	1.5 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0035 ppm	264.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,284 cps	20.1433 ppm	11.8 %	2.4 ppm
Sc 227.318 {448} (Axial)		92.7346 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	5 cps	0.1481 ppm	10.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,519 cps	32.8583 ppm	1.4 %	0.5 ppm
Si 251.611 {134} (Radial)	170 cps	19.0207 ppm	1.7 %	0.3 ppm
Pb 220.353 {453} (Axial)	317 cps	3.0915 ppm	13.7 %	0.4 ppm
Y 224.306 {450} (Axial)		98.3529 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.0722 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-59AMS

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:08:23 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	18 cps	0.3024 ppm	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1803 ppm	6.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,364 cps	0.4210 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,332 cps	0.4548 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	3,752 cps	0.0985 ppm	0.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,734 cps	373.6759 ppm	1.1 %	4.1 ppm
Cd 228.802 {447} (Axial)	137 cps	0.1115 ppm	2.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	175 cps	0.1797 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	103 cps	0.1796 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	115 cps	0.1327 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,652 cps	0.6550 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,705 cps	106.6271 ppm	0.6 %	0.6 ppm
Li 670.784 {50} (Radial)	226 cps	0.1569 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	18,548 cps	2.5370 ppm	0.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1033 ppm	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	2,462 cps	12.4858 ppm	0.9 %	0.1 ppm
Ni 231.604 {445} (Axial)	75 cps	0.1738 ppm	2.1 %	0.0 ppm
K 766.490 {44} (Radial)	793 cps	17.1392 ppm	2.8 %	0.5 ppm
Se 196.090 {472} (Axial)	3 cps	0.1127 ppm	22.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	161 cps	0.1245 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,242 cps	0.3217 ppm	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	38 cps	0.3671 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	188 cps	1.4401 ppm	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	371 cps	0.2179 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	31,379 cps	28.6264 ppm	1.9 %	0.5 ppm
Sc 357.253 {94} (Axial)		100.9694 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		93.1244 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	593 cps	166.9735 ppm	1.0 %	1.7 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0965 ppm	17.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,637 cps	32.0794 ppm	1.4 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.4665 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	23 cps	0.6958 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,857 cps	40.1824 ppm	0.9 %	0.4 ppm
Si 251.611 {134} (Radial)	271 cps	30.2916 ppm	1.0 %	0.3 ppm
Pb 220.353 {453} (Axial)	749 cps	7.3114 ppm	1.9 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5048 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.4154 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

20111574-59AMSD

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:13:25 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	15 cps	0.2463 ppm	4.8 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1530 ppm	3.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,244 cps	0.3840 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,192 cps	0.4069 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	3,557 cps	0.0934 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,965 cps	344.1539 ppm	0.9 %	2.9 ppm
Cd 228.802 {447} (Axial)	132 cps	0.1069 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	165 cps	0.1693 ppm	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	99 cps	0.1714 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	110 cps	0.1271 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,972 cps	0.7822 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,748 cps	108.3273 ppm	0.6 %	0.7 ppm
Li 670.784 {50} (Radial)	194 cps	0.1346 ppm	2.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	17,371 cps	2.3760 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1009 ppm	2.1 %	0.0 ppm
Na 589.592 {57} (Radial)	2,251 cps	11.4193 ppm	0.5 %	0.1 ppm
Ni 231.604 {445} (Axial)	74 cps	0.1735 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	684 cps	14.7766 ppm	2.0 %	0.3 ppm
Se 196.090 {472} (Axial)	3 cps	0.1092 ppm	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	162 cps	0.1250 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,104 cps	0.2860 ppm	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	38 cps	0.3638 ppm	2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	164 cps	1.2597 ppm	0.4 %	0.0 ppm
V 292.402 {115} (Axial)	339 cps	0.1992 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,167 cps	16.5730 ppm	1.5 %	0.3 ppm
Sc 357.253 {94} (Axial)		101.0256 %	1.3 %	1.3 %
Sc 188.060 {479} (Axial)		93.6436 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	542 cps	152.5914 ppm	0.7 %	1.1 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0867 ppm	10.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,402 cps	30.0010 ppm	1.4 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.9235 %	0.8 %	0.7 %
B 249.773 {135} (Radial)	22 cps	0.6648 ppm	4.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,648 cps	35.6582 ppm	0.5 %	0.2 ppm
Si 251.611 {134} (Radial)	270 cps	30.1063 ppm	0.9 %	0.3 ppm
Pb 220.353 {453} (Axial)	400 cps	3.9006 ppm	1.8 %	0.1 ppm
Y 224.306 {450} (Axial)		98.6389 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		102.8784 %	0.2 %	0.2 %

Calibration Summary

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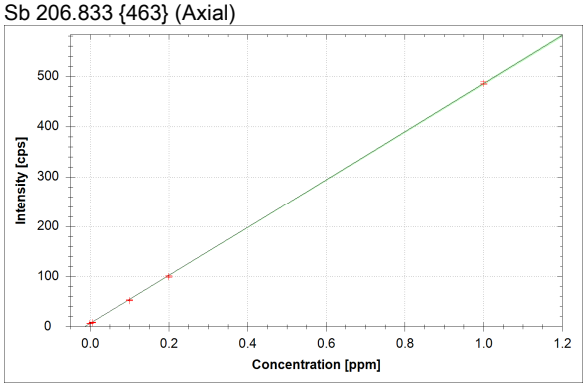
QTEGRA

LabBook: ICP2_201129B.imexp

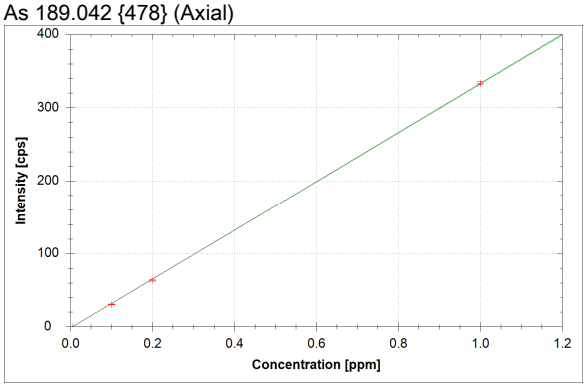
Calibration Graphs

Sb 206.833 {463} (Axial)



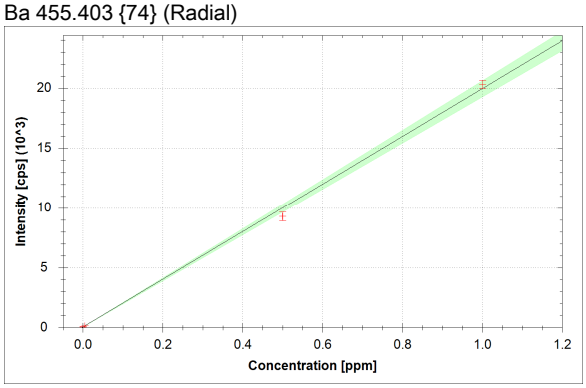
f(x) = 478.8389*x + 6.5298
R² = 0.9999
BEC = 0.014 ppm
LoD = 0.0025 ppm

As 189.042 {478} (Axial)



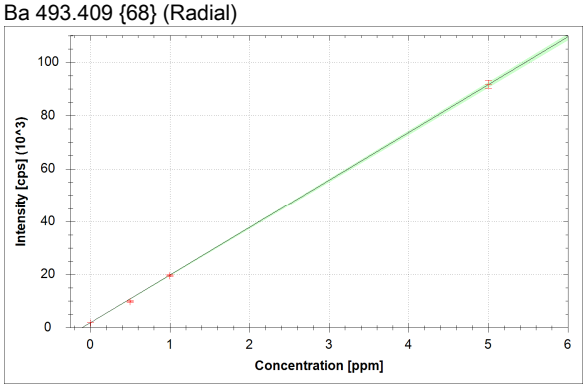
f(x) = 334.5984*x + -1.8175
R² = 0.9999
BEC = -0.005 ppm
LoD = 0.0035 ppm

Ba 455.403 {74} (Radial)



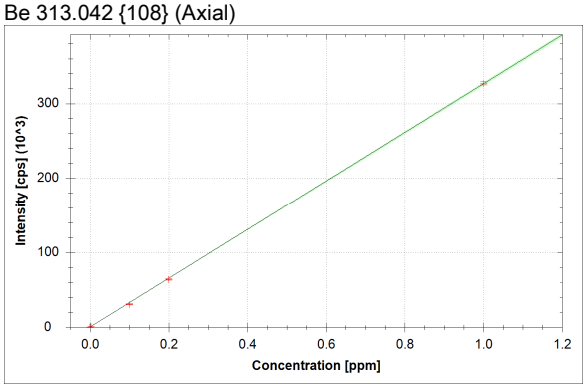
f(x) = 19909.8151*x + 63.7258
R² = 0.9977
BEC = 0.003 ppm
LoD = 0.0012 ppm

Ba 493.409 {68} (Radial)



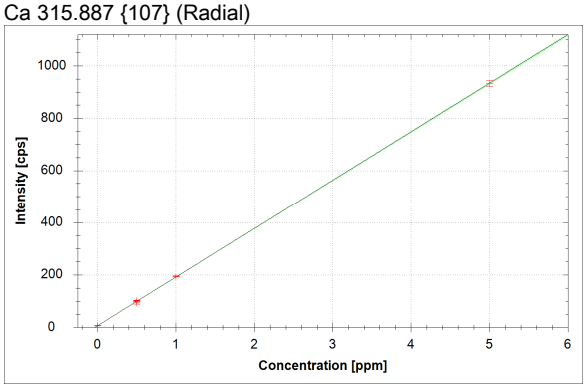
f(x) = 17944.2920*x + 1875.7622
R² = 0.9998
BEC = 0.105 ppm
LoD = 0.0047 ppm

Be 313.042 {108} (Axial)



f(x) = 326064.4445*x + 537.7838
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0005 ppm

Ca 315.887 {107} (Radial)



f(x) = 185.3912*x + 6.2718
R² = 0.9999
BEC = 0.034 ppm
LoD = 0.0142 ppm

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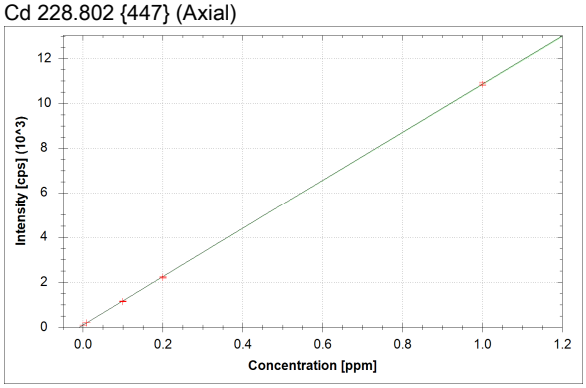
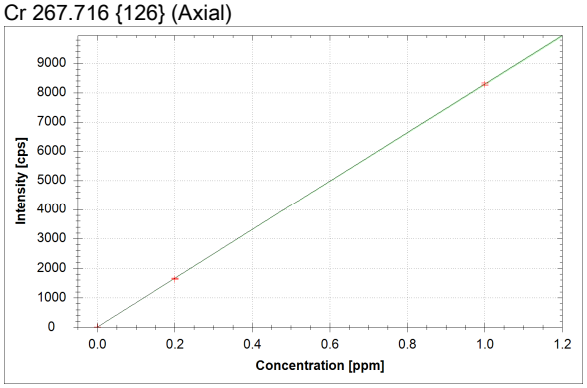
Cd 228.802 {447} (Axial)



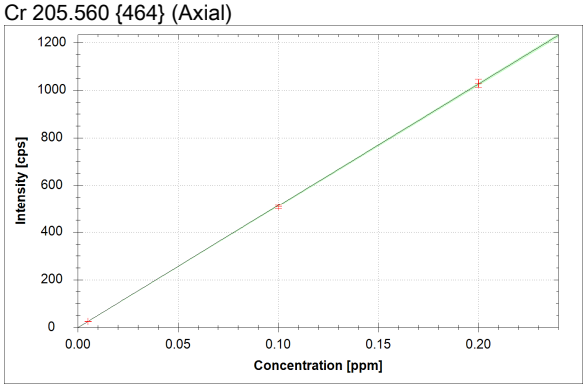
f(x) = 10758.2572*x + 97.3658
R² = 1.0000
BEC = 0.009 ppm
LoD = 0.0003 ppm

Cr 267.716 {126} (Axial)



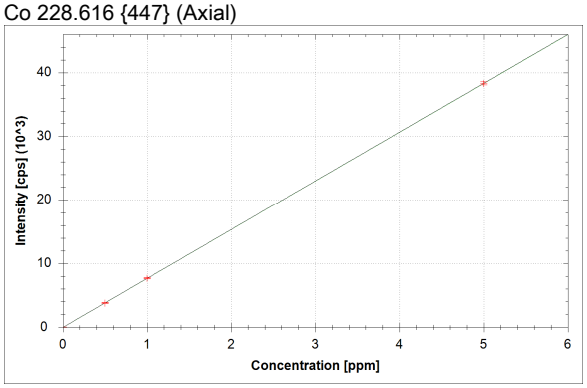
f(x) = 8282.0447*x + 5.8273
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0007 ppm

Cr 205.560 {464} (Axial)



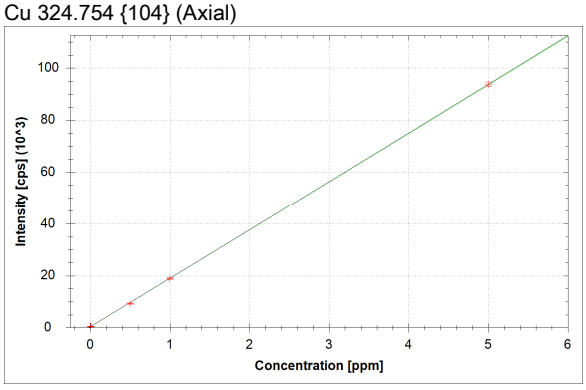
f(x) = 5131.3056*x + -0.7673
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0004 ppm

Co 228.616 {447} (Axial)



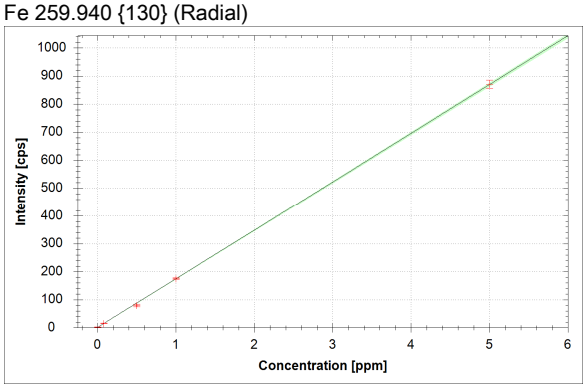
f(x) = 7665.5467*x + -1.9018
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Cu 324.754 {104} (Axial)



f(x) = 18667.3948*x + 352.2699
R² = 1.0000
BEC = 0.019 ppm
LoD = 0.0059 ppm

Fe 259.940 {130} (Radial)



f(x) = 173.7127*x + 1.1312
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0144 ppm

Calibration Summary

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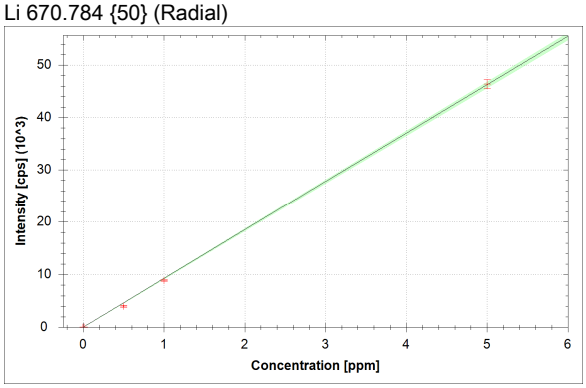
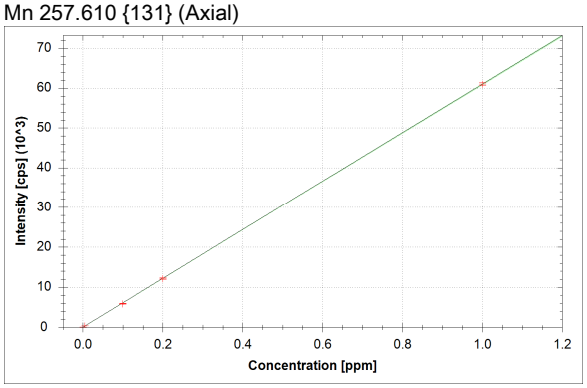
Li 670.784 {50} (Radial)



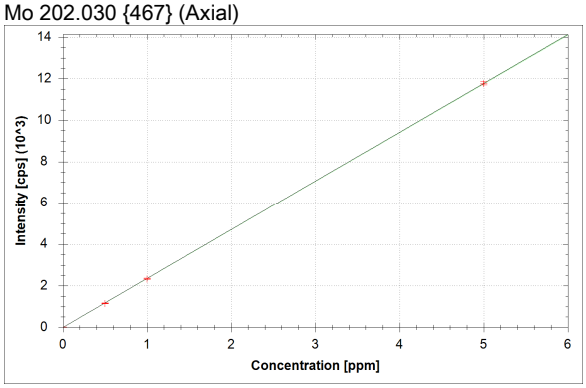
f(x) = 9243.7546*x + 21.9467
R² = 0.9996
BEC = 0.002 ppm
LoD = 0.0017 ppm

Mn 257.610 {131} (Axial)



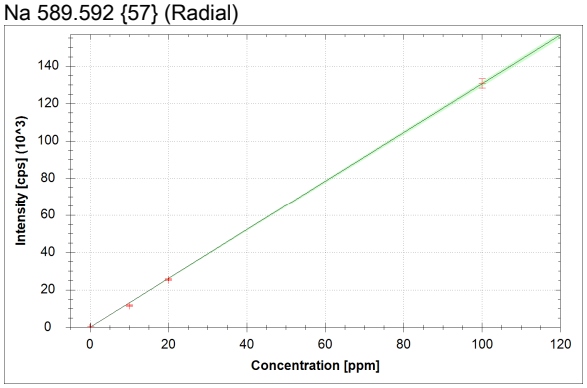
f(x) = 60951.1995*x + 29.8530
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Mo 202.030 {467} (Axial)



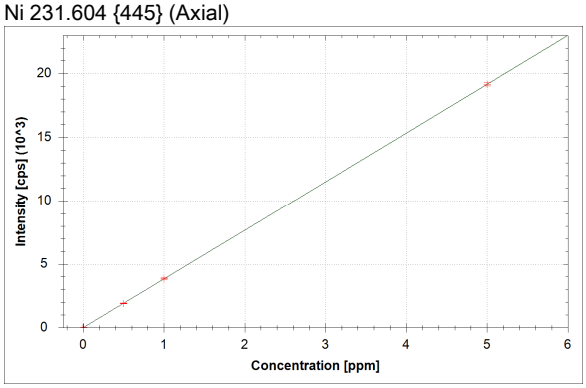
f(x) = 2354.3446*x + -0.7629
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Na 589.592 {57} (Radial)



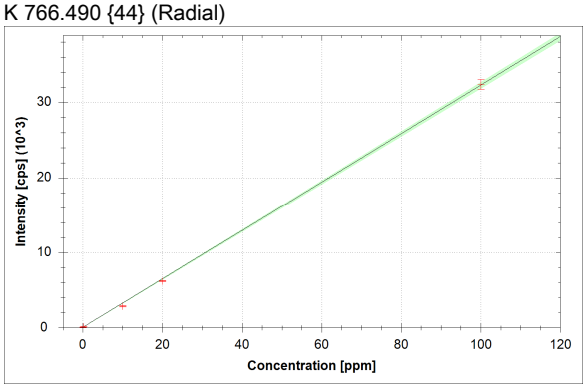
f(x) = 1304.7222*x + 8.8835
R² = 0.9998
BEC = 0.007 ppm
LoD = 0.0269 ppm

Ni 231.604 {445} (Axial)



f(x) = 3831.1837*x + 1.6600
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0000 ppm

K 766.490 {44} (Radial)



f(x) = 322.2230*x + 61.1138
R² = 0.9996
BEC = 0.190 ppm
LoD = 0.0243 ppm

Calibration Summary

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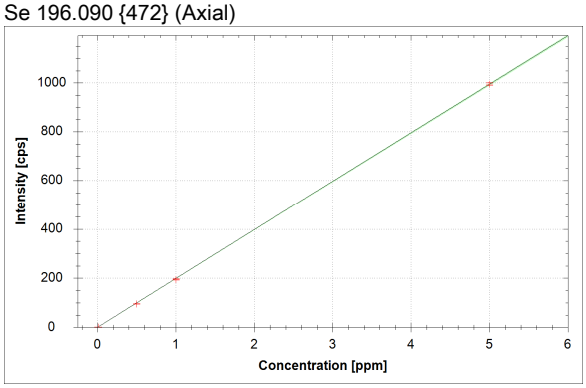
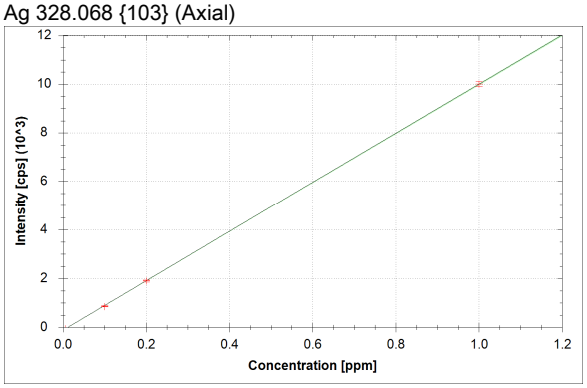
Se 196.090 {472} (Axial)



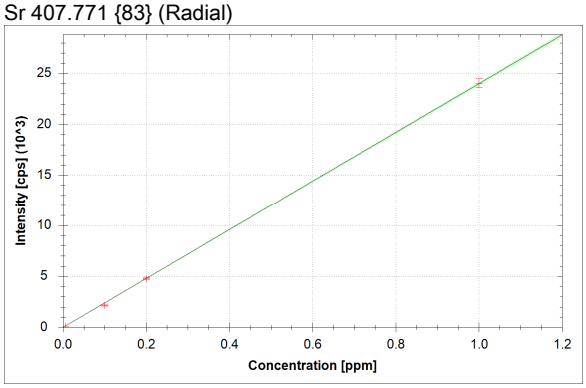
f(x) = 198.7870*x + 0.1341
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0061 ppm

Ag 328.068 {103} (Axial)



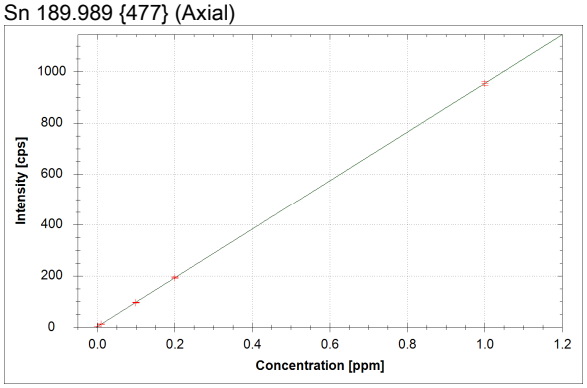
f(x) = 10122.8198*x + -118.5101
R² = 1.0000
BEC = -0.012 ppm
LoD = 0.0029 ppm

Sr 407.771 {83} (Radial)



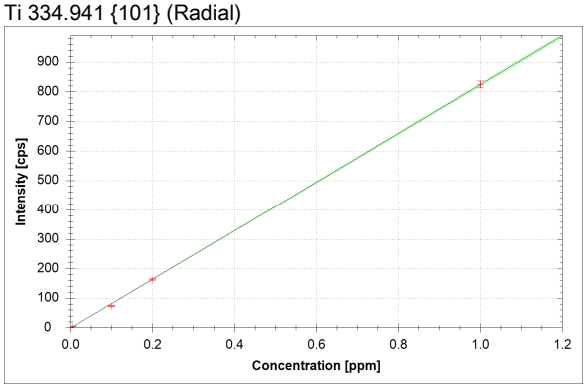
f(x) = 24013.0354*x + -7.3326
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0004 ppm

Sn 189.989 {477} (Axial)



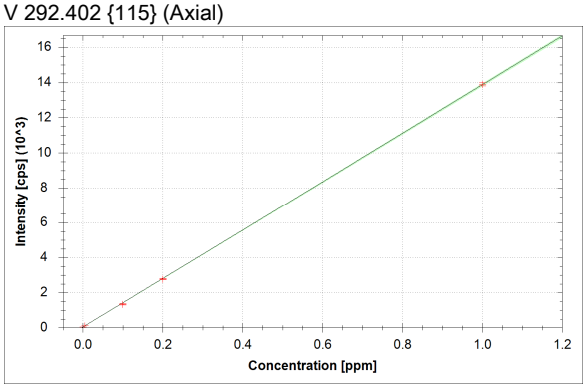
f(x) = 951.8559*x + 2.6245
R² = 1.0000
BEC = 0.003 ppm
LoD = 0.0016 ppm

Ti 334.941 {101} (Radial)



f(x) = 825.1743*x + -1.2294
R² = 0.9998
BEC = -0.001 ppm
LoD = 0.0087 ppm

V 292.402 {115} (Axial)



f(x) = 13837.7707*x + 42.4299
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0006 ppm

Calibration Summary

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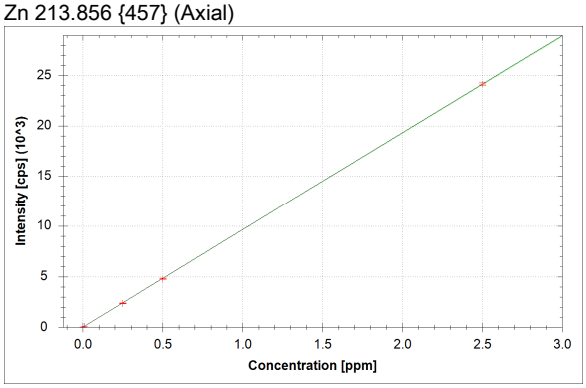
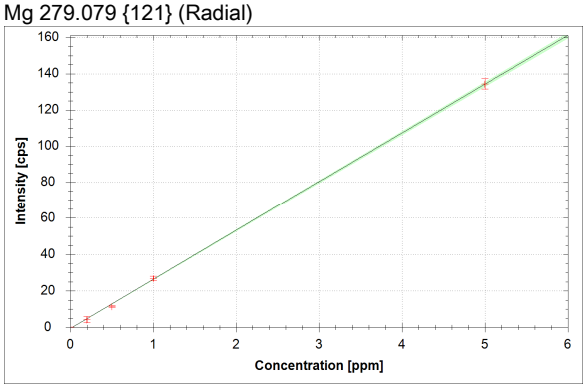
Zn 213.856 {457} (Axial)



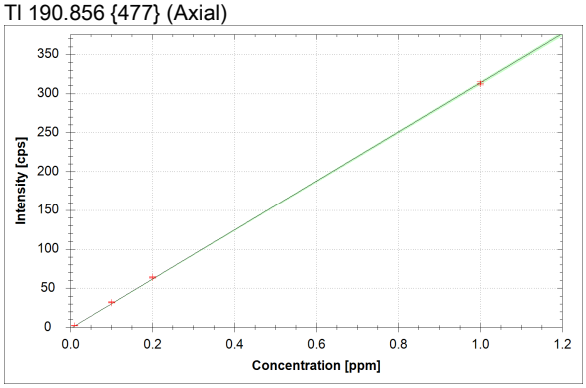
f(x) = 9645.0044*x + 15.9657
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



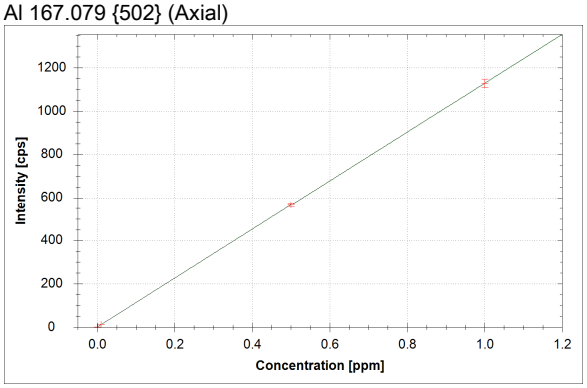
f(x) = 26.9667*x + -0.5895
R² = 0.9998
BEC = -0.022 ppm
LoD = 0.0726 ppm

Tl 190.856 {477} (Axial)



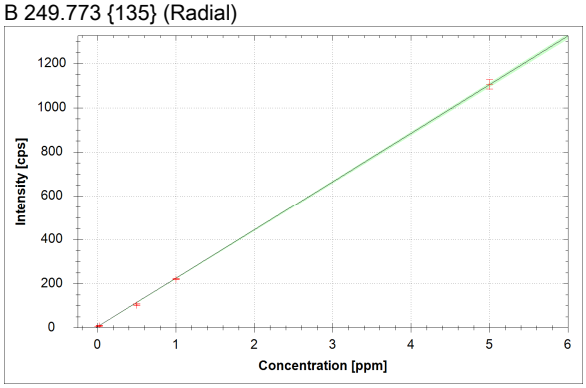
f(x) = 315.1183*x + -1.4880
R² = 0.9999
BEC = -0.005 ppm
LoD = 0.0064 ppm

Al 167.079 {502} (Axial)



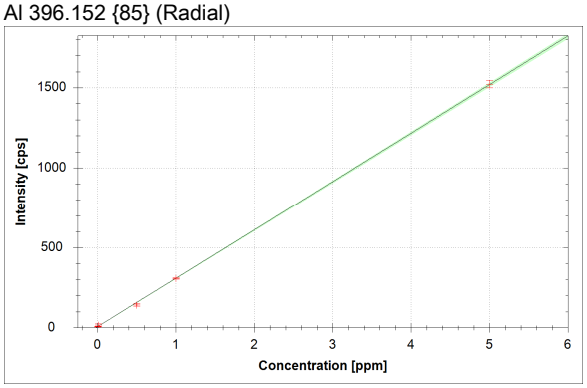
f(x) = 1127.3762*x + 1.6732
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0006 ppm

B 249.773 {135} (Radial)



f(x) = 219.7659*x + 4.7601
R² = 0.9998
BEC = 0.022 ppm
LoD = 0.0073 ppm

Al 396.152 {85} (Radial)



f(x) = 302.5469*x + 6.4331
R² = 0.9998
BEC = 0.021 ppm
LoD = 0.0122 ppm

Calibration Summary

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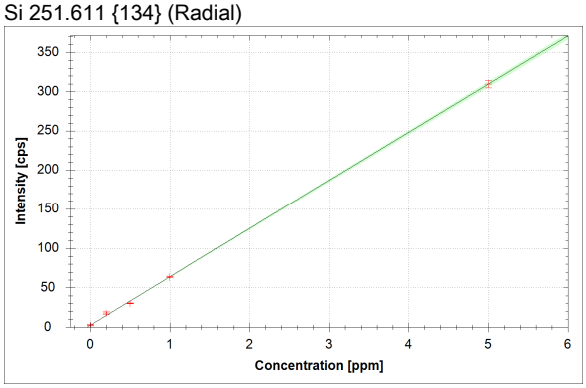
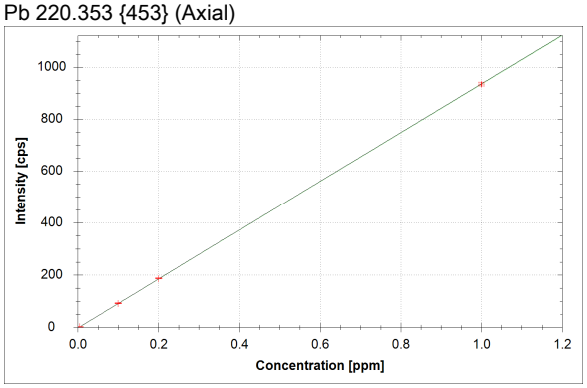
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 61.3727*x + 2.6123
R² = 0.9997
BEC = 0.043 ppm
LoD = 0.0361 ppm

Pb 220.353 {453} (Axial)



f(x) = 938.8512*x + -2.8437
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0024 ppm

Calibration Summary

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QTEGRA

Standards

Standard: ICAL2
Analysis started at: 11/29/2020 6:33:53 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0033 ppm	47.5 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0053 ppm	8.7 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0045 ppm	6.4 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0018 ppm	0.9 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.5143 ppm	1.0 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0097 ppm	1.4 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0050 ppm	3.5 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0048 ppm	3.2 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0092 ppm	3.4 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0818 ppm	7.6 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0063 ppm	12.4 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0050 ppm	1.0 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0049 ppm	4.4 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.2024 ppm	3.9 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0050 ppm	2.9 %	0.0050 ppm
K 766.490 {44} (Radial)	0.2264 ppm	0.5 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0077 ppm	6.4 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0059 ppm	6.2 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0051 ppm	2.3 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0105 ppm	2.2 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0065 ppm	17.7 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0049 ppm	6.8 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0097 ppm	1.0 %	0.0100 ppm
Sc 357.253 {94} (Axial)	104.3170 %	0.3 %	
Sc 188.060 {479} (Axial)	100.0017 %	0.3 %	
Mg 279.079 {121} (Radial)	0.1776 ppm	33.5 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0112 ppm	8.6 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0109 ppm	4.0 %	0.0100 ppm
Sc 227.318 {448} (Axial)	100.0078 %	0.3 %	
B 249.773 {135} (Radial)	0.0163 ppm	59.8 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0312 ppm	85.5 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2484 ppm	11.2 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0051 ppm	16.5 %	0.0050 ppm
Y 224.306 {450} (Axial)	100.0134 %	0.1 %	
Sc 361.384 {93} (Radial)	99.1428 %	0.8 %	

Calibration Summary

11/30/2020 11:19:07 AM

QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/29/2020 6:39:00 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0960 ppm	2.8 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0965 ppm	1.7 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4641 ppm	3.9 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4451 ppm	3.8 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0924 ppm	2.1 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.4709 ppm	5.5 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0974 ppm	1.6 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0988 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4953 ppm	1.5 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4764 ppm	1.8 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4511 ppm	6.0 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4299 ppm	4.1 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0959 ppm	2.0 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4879 ppm	1.6 %	0.5000 ppm
Na 589.592 {57} (Radial)	8.8743 ppm	3.9 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4980 ppm	1.6 %	0.5000 ppm
K 766.490 {44} (Radial)	8.6675 ppm	4.1 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4781 ppm	1.4 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0962 ppm	2.6 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0909 ppm	4.0 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0984 ppm	1.8 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0898 ppm	2.4 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0936 ppm	2.7 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2420 ppm	1.6 %	0.2500 ppm
Sc 357.253 {94} (Axial)	104.2606 %	0.1 %	
Sc 188.060 {479} (Axial)	98.7359 %	0.8 %	
Mg 279.079 {121} (Radial)	0.4453 ppm	3.5 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1055 ppm	2.4 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5011 ppm	1.5 %	0.5000 ppm
Sc 227.318 {448} (Axial)	99.9935 %	0.8 %	
B 249.773 {135} (Radial)	0.4482 ppm	4.4 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4498 ppm	5.6 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4527 ppm	1.5 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1009 ppm	2.1 %	0.1000 ppm
Y 224.306 {450} (Axial)	99.1428 %	0.8 %	
Sc 361.384 {93} (Radial)	101.3730 %	0.2 %	

Calibration Summary

11/30/2020 11:19:07 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/29/2020 6:43:59 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1956 ppm	2.1 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1951 ppm	1.9 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0180 ppm	1.6 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9853 ppm	1.6 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1957 ppm	1.6 %	0.2000 ppm
Ca 315.887 {107} (Radial)	1.0121 ppm	1.2 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1975 ppm	1.6 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1972 ppm	1.9 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.2006 ppm	1.7 %	0.2000 ppm
Co 228.616 {447} (Axial)	1.0016 ppm	1.6 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9919 ppm	1.4 %	1.0000 ppm
Fe 259.940 {130} (Radial)	1.0020 ppm	1.5 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9589 ppm	1.8 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1986 ppm	1.5 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9913 ppm	1.7 %	1.0000 ppm
Na 589.592 {57} (Radial)	19.5220 ppm	1.5 %	20.0000 ppm
Ni 231.604 {445} (Axial)	1.0062 ppm	1.6 %	1.0000 ppm
K 766.490 {44} (Radial)	18.9904 ppm	1.5 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9845 ppm	1.6 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1989 ppm	2.0 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1991 ppm	1.6 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1999 ppm	1.6 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1985 ppm	2.1 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1969 ppm	1.6 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4920 ppm	1.5 %	0.5000 ppm
Sc 357.253 {94} (Axial)	103.5509 %	0.6 %	
Sc 188.060 {479} (Axial)	97.3627 %	0.5 %	
Mg 279.079 {121} (Radial)	1.0133 ppm	4.6 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2068 ppm	1.4 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9994 ppm	1.7 %	1.0000 ppm
Sc 227.318 {448} (Axial)	100.2239 %	0.4 %	
B 249.773 {135} (Radial)	0.9831 ppm	1.4 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9951 ppm	1.4 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9956 ppm	1.7 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.2024 ppm	1.3 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.5390 %	0.4 %	
Sc 361.384 {93} (Radial)	100.3795 %	1.9 %	

Calibration Summary

11/30/2020 11:19:07 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/29/2020 6:48:57 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0013 ppm	0.6 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0013 ppm	0.7 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0084 ppm	1.6 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0016 ppm	0.6 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9990 ppm	1.3 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0008 ppm	0.7 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0006 ppm	0.5 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0002 ppm	0.7 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0040 ppm	0.8 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0045 ppm	1.7 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0152 ppm	1.9 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0007 ppm	0.6 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0029 ppm	0.7 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2082 ppm	1.9 %	100.0000 ppm
Ni 231.604 {445} (Axial)	4.9990 ppm	0.7 %	5.0000 ppm
K 766.490 {44} (Radial)	100.3351 ppm	2.1 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0053 ppm	0.6 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0006 ppm	1.0 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0011 ppm	1.8 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0002 ppm	0.7 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0013 ppm	1.4 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0013 ppm	0.7 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5024 ppm	0.7 %	2.5000 ppm
Sc 357.253 {94} (Axial)	99.2095 %	0.8 %	
Sc 188.060 {479} (Axial)	90.3879 %	0.3 %	
Mg 279.079 {121} (Radial)	5.0037 ppm	2.1 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9981 ppm	0.6 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	105.2031 %	0.3 %	
B 249.773 {135} (Radial)	5.0086 ppm	2.0 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0060 ppm	1.5 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0037 ppm	1.6 %	5.0000 ppm
Pb 220.353 {453} (Axial)	0.9994 ppm	0.8 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.9080 %	0.2 %	
Sc 361.384 {93} (Radial)	99.9108 %	0.4 %	

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

LabBook: ICP2_201129B.imexp

ICAL1

Sample type: BLK Analysis started at: 11/29/2020 6:28:44 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	1.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	3.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	-2.0 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/30/2020 11:20:00 AM

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/29/2020 6:33:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0033 ppm	47.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0053 ppm	8.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	90 cps	0.0045 ppm	6.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	592 cps	0.0018 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	95 cps	0.5143 ppm	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	105 cps	0.0097 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	26 cps	0.0050 ppm	3.5 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0048 ppm	3.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	172 cps	0.0092 ppm	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0818 ppm	7.6 %	0.0 ppm
Li 670.784 {50} (Radial)	58 cps	0.0063 ppm	12.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	306 cps	0.0050 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0049 ppm	4.4 %	0.0 ppm
Na 589.592 {57} (Radial)	264 cps	0.2024 ppm	3.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	19 cps	0.0050 ppm	2.9 %	0.0 ppm
K 766.490 {44} (Radial)	73 cps	0.2264 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0077 ppm	6.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	60 cps	0.0059 ppm	6.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	123 cps	0.0051 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0105 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0065 ppm	17.7 %	0.0 ppm
V 292.402 {115} (Axial)	67 cps	0.0049 ppm	6.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	94 cps	0.0097 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.3170 %	0.3 %	0.4 %
Sc 188.060 {479} (Axial)		100.0017 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	5 cps	0.1776 ppm	33.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0112 ppm	8.6 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0109 ppm	4.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0078 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0163 ppm	59.8 %	0.0 ppm
Al 396.152 {85} (Radial)	9 cps	0.0312 ppm	85.5 %	0.0 ppm
Si 251.611 {134} (Radial)	15 cps	0.2484 ppm	11.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0051 ppm	16.5 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0134 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.1428 %	0.8 %	0.8 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/29/2020 6:39:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	46 cps	0.0960 ppm	2.8 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.0965 ppm	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	9,240 cps	0.4641 ppm	3.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,987 cps	0.4451 ppm	3.8 %	0.0 ppm
Be 313.042 {108} (Axial)	30,129 cps	0.0924 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	87 cps	0.4709 ppm	5.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,048 cps	0.0974 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	507 cps	0.0988 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	3,797 cps	0.4953 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	8,893 cps	0.4764 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	78 cps	0.4511 ppm	6.0 %	0.0 ppm
Li 670.784 {50} (Radial)	3,974 cps	0.4299 ppm	4.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,846 cps	0.0959 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,149 cps	0.4879 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	11,578 cps	8.8743 ppm	3.9 %	0.3 ppm
Ni 231.604 {445} (Axial)	1,908 cps	0.4980 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	2,793 cps	8.6675 ppm	4.1 %	0.4 ppm
Se 196.090 {472} (Axial)	95 cps	0.4781 ppm	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	974 cps	0.0962 ppm	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,184 cps	0.0909 ppm	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.0984 ppm	1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	74 cps	0.0898 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,295 cps	0.0936 ppm	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,334 cps	0.2420 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.2606 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		98.7359 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	12 cps	0.4453 ppm	3.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	33 cps	0.1055 ppm	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	565 cps	0.5011 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9935 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	98 cps	0.4482 ppm	4.4 %	0.0 ppm
Al 396.152 {85} (Radial)	136 cps	0.4498 ppm	5.6 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.4527 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	95 cps	0.1009 ppm	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		99.1428 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		101.3730 %	0.2 %	0.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/29/2020 6:43:59 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	94 cps	0.1956 ppm	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	65 cps	0.1951 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	20,267 cps	1.0180 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	17,680 cps	0.9853 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	63,810 cps	0.1957 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	188 cps	1.0121 ppm	1.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,124 cps	0.1975 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,634 cps	0.1972 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,029 cps	0.2006 ppm	1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	7,678 cps	1.0016 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	18,516 cps	0.9919 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	174 cps	1.0020 ppm	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	8,863 cps	0.9589 ppm	1.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,106 cps	0.1986 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,334 cps	0.9913 ppm	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	25,471 cps	19.5220 ppm	1.5 %	0.3 ppm
Ni 231.604 {445} (Axial)	3,855 cps	1.0062 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	6,119 cps	18.9904 ppm	1.5 %	0.3 ppm
Se 196.090 {472} (Axial)	196 cps	0.9845 ppm	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,014 cps	0.1989 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,782 cps	0.1991 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	190 cps	0.1999 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	164 cps	0.1985 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	2,724 cps	0.1969 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,745 cps	0.4920 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.5509 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		97.3627 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	27 cps	1.0133 ppm	4.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	65 cps	0.2068 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1,127 cps	0.9994 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.2239 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	216 cps	0.9831 ppm	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	301 cps	0.9951 ppm	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	61 cps	0.9956 ppm	1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	190 cps	0.2024 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		98.5390 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.3795 %	1.9 %	1.9 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/29/2020 6:48:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	479 cps	1.0013 ppm	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	335 cps	1.0013 ppm	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	89,873 cps	5.0084 ppm	1.6 %	0.1 ppm
Be 313.042 {108} (Axial)	326,593 cps	1.0016 ppm	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	927 cps	4.9990 ppm	1.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	10,767 cps	1.0008 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	8,287 cps	1.0006 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	38,329 cps	5.0002 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	93,411 cps	5.0040 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	869 cps	5.0045 ppm	1.7 %	0.1 ppm
Li 670.784 {50} (Radial)	46,360 cps	5.0152 ppm	1.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	60,993 cps	1.0007 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	11,779 cps	5.0029 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	130,744 cps	100.2082 ppm	1.9 %	1.9 ppm
Ni 231.604 {445} (Axial)	19,152 cps	4.9990 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	32,330 cps	100.3351 ppm	2.1 %	2.1 ppm
Se 196.090 {472} (Axial)	995 cps	5.0053 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,129 cps	1.0006 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	24,039 cps	1.0011 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	952 cps	1.0002 ppm	0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	826 cps	1.0013 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	13,855 cps	1.0013 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	24,136 cps	2.5024 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.2095 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		90.3879 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	135 cps	5.0037 ppm	2.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	315 cps	0.9981 ppm	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		105.2031 %	0.3 %	0.4 %
B 249.773 {135} (Radial)	1,101 cps	5.0086 ppm	2.0 %	0.1 ppm
Al 396.152 {85} (Radial)	1,515 cps	5.0060 ppm	1.5 %	0.1 ppm
Si 251.611 {134} (Radial)	307 cps	5.0037 ppm	1.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	938 cps	0.9994 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9080 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.9108 %	0.4 %	0.4 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/29/2020 7:19:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-84 cps	-0.1745 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	-11 cps	-0.0342 ppm	6.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	421,052 cps	21.1479 ppm	3.3 %	0.7 ppm
Ba 493.409 {68} (Radial)	367,572 cps	20.4841 ppm	3.1 %	0.6 ppm
Be 313.042 {108} (Axial)	652,068 cps	1.9998 ppm	3.8 %	0.1 ppm
Ca 315.887 {107} (Radial)	37,106 cps	200.1519 ppm	2.7 %	5.3 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	68.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	82,095 cps	9.9124 ppm	2.0 %	0.2 ppm
Cr 205.560 {464} (Axial)	51,108 cps	9.9601 ppm	1.7 %	0.2 ppm
Co 228.616 {447} (Axial)	118 cps	0.0154 ppm	3.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	379,342 cps	20.3211 ppm	2.2 %	0.4 ppm
Fe 259.940 {130} (Radial)	34,514 cps	198.6869 ppm	2.4 %	4.8 ppm
Li 670.784 {50} (Radial)	95,958 cps	10.3809 ppm	2.9 %	0.3 ppm
Mn 257.610 {131} (Axial)	588,041 cps	9.6477 ppm	1.7 %	0.2 ppm
Mo 202.030 {467} (Axial)	-2 cps	-0.0010 ppm	36.3 %	0.0 ppm
Na 589.592 {57} (Radial)	-60 cps	-0.0461 ppm	9.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	-117 cps	-0.0304 ppm	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	-109 cps	-0.3369 ppm	9.2 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0100 ppm	41.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	22,545 cps	2.2271 ppm	2.3 %	0.1 ppm
Sr 407.771 {83} (Radial)	247,943 cps	10.3253 ppm	2.7 %	0.3 ppm
Sn 189.989 {477} (Axial)	-27 cps	-0.0284 ppm	2.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	8,327 cps	10.0910 ppm	2.4 %	0.2 ppm
V 292.402 {115} (Axial)	139,852 cps	10.1065 ppm	2.0 %	0.2 ppm
Zn 213.856 {457} (Axial)	-739 cps	-0.0766 ppm	3.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.0487 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		82.2350 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	5,637 cps	209.0508 ppm	2.7 %	5.6 ppm
Tl 190.856 {477} (Axial)	-16 cps	-0.0520 ppm	3.1 %	0.0 ppm
Al 167.079 {502} (Axial)	25,744 cps	22.8354 ppm	0.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		85.0389 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	4,655 cps	21.1815 ppm	2.9 %	0.6 ppm
Al 396.152 {85} (Radial)	61,954 cps	204.7743 ppm	2.5 %	5.0 ppm
Si 251.611 {134} (Radial)	1,255 cps	20.4478 ppm	2.7 %	0.6 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0029 ppm	86.9 %	0.0 ppm
Y 224.306 {450} (Axial)		89.9825 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		97.6704 %	0.7 %	0.7 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/29/2020 7:24:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,466 cps	5.1503 ppm	1.5 %	0.1 ppm
As 189.042 {478} (Axial)	1,624 cps	4.8536 ppm	1.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	139 cps	0.0070 ppm	27.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	100 cps	0.0056 ppm	51.8 %	0.0 ppm
Be 313.042 {108} (Axial)	-65 cps	-0.0002 ppm	47.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	18 cps	0.0949 ppm	29.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	267 cps	0.0248 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0011 ppm	27.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	35 cps	0.0068 ppm	5.9 %	0.0 ppm
Co 228.616 {447} (Axial)	79,455 cps	10.3652 ppm	1.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	152 cps	0.0081 ppm	8.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	18 cps	0.1060 ppm	27.1 %	0.0 ppm
Li 670.784 {50} (Radial)	1 cps	0.0001 ppm	2,551.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	-141 cps	-0.0023 ppm	23.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	24,063 cps	10.2209 ppm	1.3 %	0.1 ppm
Na 589.592 {57} (Radial)	4 cps	0.0029 ppm	132.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	39,506 cps	10.3118 ppm	1.2 %	0.1 ppm
K 766.490 {44} (Radial)	-34 cps	-0.1065 ppm	16.0 %	0.0 ppm
Se 196.090 {472} (Axial)	976 cps	4.9101 ppm	1.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	164.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	86 cps	0.0036 ppm	29.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	4,779 cps	5.0203 ppm	1.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	12 cps	0.0140 ppm	11.1 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0012 ppm	75.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	47,560 cps	4.9310 ppm	1.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		104.6117 %	0.9 %	1.0 %
Sc 188.060 {479} (Axial)		99.4894 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0535 ppm	54.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,720 cps	5.4579 ppm	1.0 %	0.1 ppm
Al 167.079 {502} (Axial)	20 cps	0.0177 ppm	32.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.1637 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	13 cps	0.0579 ppm	15.4 %	0.0 ppm
Al 396.152 {85} (Radial)	145 cps	0.4782 ppm	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	5 cps	0.0800 ppm	11.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	4,934 cps	5.2552 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		100.0577 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.4426 %	0.6 %	0.6 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/29/2020 6:53:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	467 cps	0.9757 ppm	97.568 %	0.5 %	0.0 ppm
As 189.042 {478} (Axial)	320 cps	0.9571 ppm	95.708 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	19,471 cps	0.9779 ppm		2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	16,965 cps	0.9454 ppm	94.542 %	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	302,946 cps	0.9291 ppm	92.910 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,081 cps	5.8313 ppm	97.188 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	10,484 cps	0.9745 ppm	97.453 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	7,858 cps	0.9488 ppm	94.878 %	2.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,037 cps	0.9817 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	7,545 cps	0.9842 ppm	98.425 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	17,778 cps	0.9523 ppm	95.233 %	3.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	168 cps	0.9657 ppm	96.571 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	8,686 cps	0.9397 ppm	93.968 %	2.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	58,645 cps	0.9622 ppm	96.217 %	3.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,354 cps	0.9998 ppm	99.978 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	25,459 cps	19.5131 ppm	92.919 %	2.6 %	0.5 ppm
Ni 231.604 {445} (Axial)	3,790 cps	0.9893 ppm	98.935 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	6,256 cps	19.4159 ppm	92.457 %	3.0 %	0.6 ppm
Se 196.090 {472} (Axial)	192 cps	0.9675 ppm	96.754 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,117 cps	0.9994 ppm	99.945 %	3.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	22,842 cps	0.9512 ppm	95.123 %	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	946 cps	0.9935 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	777 cps	0.9420 ppm	94.204 %	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	13,211 cps	0.9547 ppm	95.468 %	3.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	9,309 cps	0.9652 ppm	96.519 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.0139 %		2.7 %	2.8 %
Sc 188.060 {479} (Axial)		97.3998 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	27 cps	1.0096 ppm	100.956 %	7.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	322 cps	1.0231 ppm	102.312 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1,115 cps	0.9893 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9722 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	213 cps	0.9699 ppm	96.991 %	2.3 %	0.0 ppm
Al 396.152 {85} (Radial)	293 cps	0.9675 ppm	96.747 %	2.7 %	0.0 ppm
Si 251.611 {134} (Radial)	70 cps	1.1395 ppm		3.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	942 cps	1.0032 ppm	100.321 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		98.6615 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.3324 %		0.5 %	0.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/29/2020 6:58:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0014 ppm	29.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	685.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	5 cps	0.0002 ppm	162.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	-2 cps	-0.0001 ppm	416.7 %	0.0 ppm
Be 313.042 {108} (Axial)	34 cps	0.0001 ppm	36.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0100 ppm	48.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	383.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	344.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	93.8 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	119.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	-7 cps	-0.0004 ppm	73.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0016 ppm	391.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-33 cps	-0.0036 ppm	32.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	16 cps	0.0003 ppm	4.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0006 ppm	18.9 %	0.0 ppm
Na 589.592 {57} (Radial)	57 cps	0.0438 ppm	47.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	94.0 %	0.0 ppm
K 766.490 {44} (Radial)	-2 cps	-0.0052 ppm	781.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0021 ppm	22.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0009 ppm	21.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	43.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	69.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0057 ppm	45.5 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0002 ppm	107.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	55.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.0815 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		100.4459 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0509 ppm	48.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0007 ppm	27.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	62.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.3621 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	0 cps	-0.0010 ppm	411.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0040 ppm	185.2 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0154 ppm	44.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	28.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.2304 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.2864 %	1.3 %	1.3 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/29/2020 7:04:03 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0038 ppm	76.168 %	13.6 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0048 ppm	96.766 %	24.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	89 cps	0.0045 ppm		11.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	62 cps	0.0035 ppm		37.6 %	0.0 ppm
Be 313.042 {108} (Axial)	608 cps	0.0019 ppm	93.289 %	5.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	93 cps	0.5012 ppm	100.233 %	5.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	105 cps	0.0097 ppm	97.308 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	39 cps	0.0047 ppm	94.384 %	11.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	26 cps	0.0050 ppm	99.850 %	2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0050 ppm	99.590 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	172 cps	0.0092 ppm	92.393 %	11.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	13 cps	0.0774 ppm	96.696 %	3.6 %	0.0 ppm
Li 670.784 {50} (Radial)	33 cps	0.0036 ppm	35.691 %	33.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	313 cps	0.0051 ppm	102.606 %	2.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0053 ppm	106.106 %	2.4 %	0.0 ppm
Na 589.592 {57} (Radial)	257 cps	0.1971 ppm	98.546 %	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	19 cps	0.0049 ppm	97.019 %	2.9 %	0.0 ppm
K 766.490 {44} (Radial)	37 cps	0.1164 ppm	58.187 %	8.6 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0072 ppm	72.085 %	20.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	59 cps	0.0058 ppm	116.861 %	3.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	118 cps	0.0049 ppm	98.212 %	5.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0105 ppm		6.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0059 ppm	117.093 %	18.7 %	0.0 ppm
V 292.402 {115} (Axial)	64 cps	0.0046 ppm	92.544 %	12.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	95 cps	0.0098 ppm	98.352 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.1895 %		2.3 %	2.3 %
Sc 188.060 {479} (Axial)		99.7842 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	5 cps	0.1730 ppm	86.494 %	36.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0107 ppm	106.913 %	10.9 %	0.0 ppm
Al 167.079 {502} (Axial)	14 cps	0.0123 ppm		3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.8454 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0185 ppm	92.398 %	40.1 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0199 ppm		47.5 %	0.0 ppm
Si 251.611 {134} (Radial)	13 cps	0.2122 ppm		18.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	4 cps	0.0046 ppm	91.747 %	15.0 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1034 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.6699 %		0.7 %	0.7 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/29/2020 7:09:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0023 ppm	45.996 %	13.2 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0059 ppm	118.684 %	10.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	91 cps	0.0046 ppm		7.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0061 ppm		15.3 %	0.0 ppm
Be 313.042 {108} (Axial)	580 cps	0.0018 ppm	88.957 %	3.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	92 cps	0.4967 ppm	99.349 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	104 cps	0.0097 ppm	96.995 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	39 cps	0.0047 ppm	93.755 %	3.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	25 cps	0.0049 ppm	98.322 %	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0048 ppm	95.905 %	3.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	168 cps	0.0090 ppm	90.021 %	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0789 ppm	98.628 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0041 ppm	41.395 %	31.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	310 cps	0.0051 ppm	101.707 %	3.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0050 ppm	99.138 %	7.9 %	0.0 ppm
Na 589.592 {57} (Radial)	259 cps	0.1985 ppm	99.268 %	2.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	18 cps	0.0047 ppm	94.941 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	42 cps	0.1317 ppm	65.839 %	14.8 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0077 ppm	76.671 %	23.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	59 cps	0.0058 ppm	115.632 %	16.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	115 cps	0.0048 ppm	95.547 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0110 ppm		4.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0042 ppm	84.385 %	103.4 %	0.0 ppm
V 292.402 {115} (Axial)	62 cps	0.0044 ppm	88.901 %	4.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	94 cps	0.0097 ppm	97.076 %	0.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.7554 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		100.7150 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	5 cps	0.2020 ppm	100.988 %	23.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0106 ppm	106.035 %	3.7 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0119 ppm		2.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7562 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	3 cps	0.0143 ppm	71.332 %	14.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0033 ppm		75.1 %	0.0 ppm
Si 251.611 {134} (Radial)	14 cps	0.2295 ppm		4.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0052 ppm	103.067 %	12.6 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5169 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		99.8271 %		0.6 %	0.6 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/29/2020 7:14:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-7 cps	-0.0152 ppm		13.2 %	0.0 ppm
As 189.042 {478} (Axial)	-7 cps	-0.0220 ppm	0.000 %	6.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	4 cps	0.0002 ppm	0.000 %	214.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	25 cps	0.0014 ppm	0.000 %	45.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-862 cps	-0.0026 ppm	0.000 %	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	16,771 cps	90.4606 ppm	90.461 %	2.3 %	2.1 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	0.000 %	31.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	12 cps	0.0014 ppm	0.000 %	14.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0011 ppm	0.000 %	22.0 %	0.0 ppm
Co 228.616 {447} (Axial)	10 cps	0.0013 ppm	0.000 %	16.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	43 cps	0.0023 ppm	0.000 %	9.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	15,766 cps	90.7568 ppm	90.757 %	1.8 %	1.6 ppm
Li 670.784 {50} (Radial)	-30 cps	-0.0032 ppm		11.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-378 cps	-0.0062 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	4,640 cps	1.9710 ppm	98.548 %	2.1 %	0.0 ppm
Na 589.592 {57} (Radial)	120,803 cps	92.5887 ppm	92.589 %	2.7 %	2.5 ppm
Ni 231.604 {445} (Axial)	-61 cps	-0.0159 ppm	0.000 %	2.6 %	0.0 ppm
K 766.490 {44} (Radial)	30,021 cps	93.1688 ppm	93.169 %	3.2 %	3.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0008 ppm	0.000 %	414.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0001 ppm	0.000 %	1,187.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	-56 cps	-0.0023 ppm		5.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0111 ppm		9.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,532 cps	1.8566 ppm		2.0 %	0.0 ppm
V 292.402 {115} (Axial)	31 cps	0.0022 ppm	0.000 %	10.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	-39 cps	-0.0040 ppm	0.000 %	5.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.8010 %		1.4 %	1.3 %
Sc 188.060 {479} (Axial)		85.5192 %		0.9 %	0.8 %
Mg 279.079 {121} (Radial)	2,505 cps	92.8998 ppm	92.900 %	2.2 %	2.0 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0073 ppm	0.000 %	15.6 %	0.0 ppm
Al 167.079 {502} (Axial)	22,918 cps	20.3282 ppm		1.1 %	0.2 ppm
Sc 227.318 {448} (Axial)		86.5789 %		0.9 %	0.8 %
B 249.773 {135} (Radial)	20 cps	0.0909 ppm		4.3 %	0.0 ppm
Al 396.152 {85} (Radial)	27,086 cps	89.5281 ppm	89.528 %	2.0 %	1.8 ppm
Si 251.611 {134} (Radial)	2 cps	0.0371 ppm	0.000 %	33.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	-5 cps	-0.0052 ppm	0.000 %	39.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.5860 %		0.8 %	0.7 %
Sc 361.384 {93} (Radial)		99.5348 %		0.4 %	0.4 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 3:01:13 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	798 cps	1.6655 ppm	333.101 %	3.2 %	0.1 ppm
As 189.042 {478} (Axial)	555 cps	1.6579 ppm	331.573 %	3.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	154,081 cps	7.7389 ppm		0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	137,323 cps	7.6527 ppm	306.109 %	0.2 %	0.0 ppm
Be 313.042 {108} (Axial)	288,850 cps	1.3730 ppm	274.606 %	N/A	N/A
Ca 315.887 {107} (Radial)	1,435 cps	7.7411 ppm	309.643 %	0.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	17,877 cps	1.6617 ppm	332.337 %	3.4 %	0.1 ppm
Cr 267.716 {126} (Axial)	7,217 cps	1.3501 ppm	270.030 %	N/A	N/A
Cr 205.560 {464} (Axial)	8,674 cps	1.6905 ppm		3.5 %	0.1 ppm
Co 228.616 {447} (Axial)	64,181 cps	8.3726 ppm	334.906 %	3.3 %	0.3 ppm
Cu 324.754 {104} (Axial)	80,080 cps	6.6498 ppm	265.992 %	N/A	N/A
Fe 259.940 {130} (Radial)	1,323 cps	7.6136 ppm	304.543 %	0.1 %	0.0 ppm
Li 670.784 {50} (Radial)	70,101 cps	7.5836 ppm	303.345 %	0.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	52,898 cps	1.3440 ppm	268.809 %	N/A	N/A
Mo 202.030 {467} (Axial)	19,528 cps	8.2945 ppm	331.782 %	3.4 %	0.3 ppm
Na 589.592 {57} (Radial)	198,081 cps	151.8183 ppm	303.637 %	0.9 %	1.4 ppm
Ni 231.604 {445} (Axial)	32,086 cps	8.3749 ppm	334.994 %	3.4 %	0.3 ppm
K 766.490 {44} (Radial)	47,813 cps	148.3861 ppm	296.772 %	1.1 %	1.6 ppm
Se 196.090 {472} (Axial)	1,684 cps	8.4734 ppm	338.937 %	3.4 %	0.3 ppm
Ag 328.068 {103} (Axial)	8,927 cps	1.3593 ppm	271.858 %	N/A	N/A
Sr 407.771 {83} (Radial)	36,239 cps	1.5091 ppm	301.828 %	0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,619 cps	1.7010 ppm		3.4 %	0.1 ppm
Ti 334.941 {101} (Radial)	1,276 cps	1.5462 ppm	309.245 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	11,894 cps	1.3336 ppm	266.712 %	N/A	N/A
Zn 213.856 {457} (Axial)	40,110 cps	4.1586 ppm	332.690 %	3.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		45.9751 %		N/A	N/A
Sc 188.060 {479} (Axial)		37.3325 %		1.2 %	0.5 %
Mg 279.079 {121} (Radial)	207 cps	7.6889 ppm	307.555 %	2.0 %	0.2 ppm
Tl 190.856 {477} (Axial)	532 cps	1.6867 ppm	337.337 %	4.1 %	0.1 ppm
Al 167.079 {502} (Axial)	9,094 cps	8.0662 ppm		3.3 %	0.3 ppm
Sc 227.318 {448} (Axial)		47.0434 %		0.5 %	0.2 %
B 249.773 {135} (Radial)	1,656 cps	7.5374 ppm	301.494 %	0.6 %	0.0 ppm
Al 396.152 {85} (Radial)	2,310 cps	7.6368 ppm	305.470 %	0.6 %	0.0 ppm
Si 251.611 {134} (Radial)	464 cps	7.5591 ppm		1.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,577 cps	1.6801 ppm	336.022 %	3.3 %	0.1 ppm
Y 224.306 {450} (Axial)		37.8584 %		0.9 %	0.4 %
Sc 361.384 {93} (Radial)		38.8694 %		1.6 %	0.6 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 3:05:57 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	639 cps	1.6879 ppm	337.581 %	0.4 %	0.0 ppm
As 189.042 {478} (Axial)	447 cps	1.6854 ppm	337.076 %	0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	133,199 cps	8.4545 ppm		10.3 %	0.9 ppm
Ba 493.409 {68} (Radial)	118,685 cps	8.3840 ppm	335.361 %	10.1 %	0.9 ppm
Be 313.042 {108} (Axial)	324,030 cps	1.6498 ppm	329.967 %	N/A	N/A
Ca 315.887 {107} (Radial)	1,256 cps	8.5715 ppm	342.860 %	10.0 %	0.9 ppm
Cd 228.802 {447} (Axial)	14,330 cps	1.6843 ppm	336.855 %	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	8,113 cps	1.6266 ppm	325.316 %	N/A	N/A
Cr 205.560 {464} (Axial)	6,964 cps	1.7140 ppm		0.4 %	0.0 ppm
Co 228.616 {447} (Axial)	51,580 cps	8.4966 ppm	339.863 %	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	88,856 cps	7.9126 ppm	316.505 %	N/A	N/A
Fe 259.940 {130} (Radial)	1,148 cps	8.3477 ppm	333.910 %	9.6 %	0.8 ppm
Li 670.784 {50} (Radial)	60,625 cps	8.2876 ppm	331.502 %	10.6 %	0.9 ppm
Mn 257.610 {131} (Axial)	59,216 cps	1.6121 ppm	322.429 %	N/A	N/A
Mo 202.030 {467} (Axial)	15,668 cps	8.4022 ppm	336.090 %	0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	171,819 cps	166.3634 ppm	332.727 %	10.9 %	18.1 ppm
Ni 231.604 {445} (Axial)	25,783 cps	8.4977 ppm	339.910 %	0.3 %	0.0 ppm
K 766.490 {44} (Radial)	41,180 cps	161.4649 ppm	322.930 %	11.2 %	18.1 ppm
Se 196.090 {472} (Axial)	1,350 cps	8.5795 ppm	343.180 %	0.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	9,954 cps	1.6236 ppm	324.717 %	N/A	N/A
Sr 407.771 {83} (Radial)	31,373 cps	1.6504 ppm	330.086 %	10.4 %	0.2 ppm
Sn 189.989 {477} (Axial)	1,305 cps	1.7325 ppm		0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,120 cps	1.7171 ppm	343.414 %	9.9 %	0.2 ppm
V 292.402 {115} (Axial)	13,265 cps	1.5934 ppm	318.687 %	N/A	N/A
Zn 213.856 {457} (Axial)	32,205 cps	4.2165 ppm	337.324 %	0.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		40.4329 %		N/A	N/A
Sc 188.060 {479} (Axial)		37.2007 %		1.0 %	0.4 %
Mg 279.079 {121} (Radial)	182 cps	8.4549 ppm	338.196 %	10.3 %	0.9 ppm
Tl 190.856 {477} (Axial)	427 cps	1.7105 ppm	342.092 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	7,357 cps	8.2429 ppm		0.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		47.1023 %		1.3 %	0.6 %
B 249.773 {135} (Radial)	1,446 cps	8.3145 ppm	332.580 %	10.0 %	0.8 ppm
Al 396.152 {85} (Radial)	2,008 cps	8.3885 ppm	335.541 %	10.8 %	0.9 ppm
Si 251.611 {134} (Radial)	407 cps	8.3892 ppm		9.9 %	0.8 ppm
Pb 220.353 {453} (Axial)	1,270 cps	1.7068 ppm	341.363 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		37.5191 %		1.9 %	0.7 %
Sc 361.384 {93} (Radial)		37.4585 %		6.2 %	2.3 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 4:05:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	497 cps	1.8271 ppm	365.421 %	N/A	N/A
As 189.042 {478} (Axial)	347 cps	1.8177 ppm	363.532 %	N/A	N/A
Ba 455.403 {74} (Radial)	184,949 cps	9.2893 ppm		8.3 %	0.8 ppm
Ba 493.409 {68} (Radial)	164,923 cps	9.1909 ppm	367.634 %	8.3 %	0.8 ppm
Be 313.042 {108} (Axial)	N/A	N/A	0.000 %	N/A	N/A
Ca 315.887 {107} (Radial)	1,759 cps	9.4890 ppm	379.562 %	8.1 %	0.8 ppm
Cd 228.802 {447} (Axial)	11,156 cps	1.8244 ppm	364.887 %	N/A	N/A
Cr 267.716 {126} (Axial)	N/A	N/A	0.000 %	N/A	N/A
Cr 205.560 {464} (Axial)	5,451 cps	1.8610 ppm		N/A	N/A
Co 228.616 {447} (Axial)	40,326 cps	9.2203 ppm	368.814 %	N/A	N/A
Cu 324.754 {104} (Axial)	N/A	N/A	0.000 %	N/A	N/A
Fe 259.940 {130} (Radial)	1,586 cps	9.1306 ppm	365.226 %	8.4 %	0.8 ppm
Li 670.784 {50} (Radial)	84,103 cps	9.0983 ppm	363.933 %	8.5 %	0.8 ppm
Mn 257.610 {131} (Axial)	N/A	N/A	0.000 %	N/A	N/A
Mo 202.030 {467} (Axial)	12,235 cps	9.1050 ppm	364.200 %	N/A	N/A
Na 589.592 {57} (Radial)	239,689 cps	183.7087 ppm	367.417 %	8.6 %	15.9 ppm
Ni 231.604 {445} (Axial)	20,182 cps	9.2297 ppm	369.186 %	N/A	N/A
K 766.490 {44} (Radial)	57,653 cps	178.9242 ppm	357.848 %	9.0 %	16.0 ppm
Se 196.090 {472} (Axial)	1,056 cps	9.3027 ppm	372.109 %	N/A	N/A
Ag 328.068 {103} (Axial)	N/A	N/A	0.000 %	N/A	N/A
Sr 407.771 {83} (Radial)	43,498 cps	1.8114 ppm	362.286 %	8.3 %	0.1 ppm
Sn 189.989 {477} (Axial)	1,017 cps	1.8737 ppm		N/A	N/A
Ti 334.941 {101} (Radial)	1,536 cps	1.8620 ppm	372.405 %	8.7 %	0.2 ppm
V 292.402 {115} (Axial)	N/A	N/A	0.000 %	N/A	N/A
Zn 213.856 {457} (Axial)	25,171 cps	4.5744 ppm	365.956 %	N/A	N/A
Sc 357.253 {94} (Axial)	N/A	N/A		N/A	N/A
Sc 188.060 {479} (Axial)		33.2231 %		2.2 %	0.7 %
Mg 279.079 {121} (Radial)	256 cps	9.5010 ppm	380.039 %	8.5 %	0.8 ppm
Tl 190.856 {477} (Axial)	331 cps	1.8267 ppm	365.332 %	N/A	N/A
Al 167.079 {502} (Axial)	5,763 cps	8.9710 ppm		N/A	N/A
Sc 227.318 {448} (Axial)		43.1318 %		1.3 %	0.5 %
B 249.773 {135} (Radial)	2,001 cps	9.1069 ppm	364.276 %	8.2 %	0.7 ppm
Al 396.152 {85} (Radial)	2,792 cps	9.2272 ppm	369.090 %	8.6 %	0.8 ppm
Si 251.611 {134} (Radial)	567 cps	9.2443 ppm		8.3 %	0.8 ppm
Pb 220.353 {453} (Axial)	991 cps	1.8428 ppm	368.568 %	N/A	N/A
Y 224.306 {450} (Axial)		34.4220 %		N/A	N/A
Sc 361.384 {93} (Radial)		32.4929 %		6.7 %	2.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 4:10:21 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	515 cps	1.9318 ppm	386.357 %	N/A	N/A
As 189.042 {478} (Axial)	360 cps	1.9222 ppm	384.448 %	N/A	N/A
Ba 455.403 {74} (Radial)	200,217 cps	10.0562 ppm		14.3 %	1.4 ppm
Ba 493.409 {68} (Radial)	177,965 cps	9.9177 ppm	396.706 %	14.1 %	1.4 ppm
Be 313.042 {108} (Axial)	350,521 cps	1.8601 ppm	372.013 %	N/A	N/A
Ca 315.887 {107} (Radial)	1,898 cps	10.2401 ppm	409.603 %	14.1 %	1.4 ppm
Cd 228.802 {447} (Axial)	11,570 cps	1.9276 ppm	385.518 %	N/A	N/A
Cr 267.716 {126} (Axial)	8,794 cps	1.8239 ppm	364.777 %	N/A	N/A
Cr 205.560 {464} (Axial)	5,667 cps	1.9741 ppm		N/A	N/A
Co 228.616 {447} (Axial)	41,833 cps	9.7472 ppm	389.888 %	N/A	N/A
Cu 324.754 {104} (Axial)	96,119 cps	8.8634 ppm	354.535 %	N/A	N/A
Fe 259.940 {130} (Radial)	1,723 cps	9.9209 ppm	396.836 %	13.8 %	1.4 ppm
Li 670.784 {50} (Radial)	91,029 cps	9.8477 ppm	393.907 %	14.4 %	1.4 ppm
Mn 257.610 {131} (Axial)	64,401 cps	1.8150 ppm	362.997 %	N/A	N/A
Mo 202.030 {467} (Axial)	12,714 cps	9.6465 ppm	385.862 %	N/A	N/A
Na 589.592 {57} (Radial)	258,433 cps	198.0747 ppm	396.149 %	14.5 %	28.8 ppm
Ni 231.604 {445} (Axial)	20,939 cps	9.7640 ppm	390.562 %	N/A	N/A
K 766.490 {44} (Radial)	62,020 cps	192.4766 ppm	384.953 %	14.6 %	28.2 ppm
Se 196.090 {472} (Axial)	1,095 cps	9.8461 ppm	393.844 %	N/A	N/A
Ag 328.068 {103} (Axial)	10,714 cps	1.8059 ppm	361.176 %	N/A	N/A
Sr 407.771 {83} (Radial)	47,131 cps	1.9627 ppm	392.541 %	14.2 %	0.3 ppm
Sn 189.989 {477} (Axial)	1,060 cps	1.9928 ppm		N/A	N/A
Ti 334.941 {101} (Radial)	1,665 cps	2.0178 ppm	403.568 %	14.2 %	0.3 ppm
V 292.402 {115} (Axial)	14,481 cps	1.7996 ppm	359.914 %	N/A	N/A
Zn 213.856 {457} (Axial)	26,077 cps	4.8309 ppm	386.469 %	N/A	N/A
Sc 357.253 {94} (Axial)		36.7916 %		N/A	N/A
Sc 188.060 {479} (Axial)		32.2204 %		4.0 %	1.3 %
Mg 279.079 {121} (Radial)	275 cps	10.1810 ppm	407.241 %	14.3 %	1.5 ppm
Tl 190.856 {477} (Axial)	345 cps	1.9483 ppm	389.652 %	N/A	N/A
Al 167.079 {502} (Axial)	5,975 cps	9.4773 ppm		N/A	N/A
Sc 227.318 {448} (Axial)		42.4225 %		2.4 %	1.0 %
B 249.773 {135} (Radial)	2,171 cps	9.8792 ppm	395.169 %	15.0 %	1.5 ppm
Al 396.152 {85} (Radial)	3,015 cps	9.9639 ppm	398.555 %	13.5 %	1.3 ppm
Si 251.611 {134} (Radial)	612 cps	9.9765 ppm		15.1 %	1.5 ppm
Pb 220.353 {453} (Axial)	1,028 cps	1.9570 ppm	391.405 %	N/A	N/A
Y 224.306 {450} (Axial)		33.2448 %		N/A	N/A
Sc 361.384 {93} (Radial)		32.6251 %		10.6 %	3.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 5:10:07 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	559 cps	2.2204 ppm	444.084 %	N/A	N/A
As 189.042 {478} (Axial)	393 cps	2.2209 ppm	444.173 %	N/A	N/A
Ba 455.403 {74} (Radial)	201,155 cps	10.1033 ppm		0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	179,477 cps	10.0019 ppm	400.076 %	0.4 %	0.0 ppm
Be 313.042 {108} (Axial)	528,722 cps	2.0895 ppm	417.907 %	6.0 %	0.1 ppm
Ca 315.887 {107} (Radial)	1,925 cps	10.3814 ppm	415.255 %	0.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	12,620 cps	2.2264 ppm	445.288 %	N/A	N/A
Cr 267.716 {126} (Axial)	13,176 cps	2.0504 ppm	410.086 %	5.9 %	0.1 ppm
Cr 205.560 {464} (Axial)	6,179 cps	2.2793 ppm		N/A	N/A
Co 228.616 {447} (Axial)	45,621 cps	11.2621 ppm	450.485 %	N/A	N/A
Cu 324.754 {104} (Axial)	143,842 cps	9.9329 ppm	397.315 %	5.8 %	0.6 ppm
Fe 259.940 {130} (Radial)	1,723 cps	9.9205 ppm	396.821 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	91,498 cps	9.8984 ppm	395.935 %	0.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	96,262 cps	2.0346 ppm	406.923 %	6.0 %	0.1 ppm
Mo 202.030 {467} (Axial)	13,843 cps	11.1203 ppm	444.812 %	N/A	N/A
Na 589.592 {57} (Radial)	260,236 cps	199.4572 ppm	398.914 %	0.1 %	0.2 ppm
Ni 231.604 {445} (Axial)	22,841 cps	11.2834 ppm	451.337 %	N/A	N/A
K 766.490 {44} (Radial)	62,667 cps	194.4848 ppm	388.970 %	0.6 %	1.2 ppm
Se 196.090 {472} (Axial)	1,192 cps	11.3455 ppm	453.822 %	N/A	N/A
Ag 328.068 {103} (Axial)	16,060 cps	2.0414 ppm	408.282 %	6.3 %	0.1 ppm
Sr 407.771 {83} (Radial)	47,347 cps	1.9717 ppm	394.344 %	0.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,152 cps	2.2908 ppm		N/A	N/A
Ti 334.941 {101} (Radial)	1,670 cps	2.0235 ppm	404.690 %	0.5 %	0.0 ppm
V 292.402 {115} (Axial)	21,587 cps	2.0104 ppm	402.071 %	5.8 %	0.1 ppm
Zn 213.856 {457} (Axial)	28,466 cps	5.5844 ppm	446.755 %	N/A	N/A
Sc 357.253 {94} (Axial)		32.5651 %		3.2 %	1.1 %
Sc 188.060 {479} (Axial)		29.4549 %		2.6 %	0.8 %
Mg 279.079 {121} (Radial)	279 cps	10.3543 ppm	414.171 %	1.9 %	0.2 ppm
Tl 190.856 {477} (Axial)	378 cps	2.2648 ppm	452.958 %	N/A	N/A
Al 167.079 {502} (Axial)	6,547 cps	11.0022 ppm		N/A	N/A
Sc 227.318 {448} (Axial)		39.6901 %		2.0 %	0.8 %
B 249.773 {135} (Radial)	2,178 cps	9.9118 ppm	396.473 %	0.4 %	0.0 ppm
Al 396.152 {85} (Radial)	3,060 cps	10.1138 ppm	404.554 %	0.7 %	0.1 ppm
Si 251.611 {134} (Radial)	618 cps	10.0622 ppm		0.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,124 cps	2.2658 ppm	453.151 %	N/A	N/A
Y 224.306 {450} (Axial)		29.1877 %		N/A	N/A
Sc 361.384 {93} (Radial)		30.7534 %		1.5 %	0.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 5:14:51 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	532 cps	2.0366 ppm	407.329 %	N/A	N/A
As 189.042 {478} (Axial)	372 cps	2.0180 ppm	403.596 %	N/A	N/A
Ba 455.403 {74} (Radial)	196,056 cps	9.8472 ppm		8.1 %	0.8 ppm
Ba 493.409 {68} (Radial)	174,740 cps	9.7379 ppm	389.518 %	8.0 %	0.8 ppm
Be 313.042 {108} (Axial)	379,470 cps	2.1292 ppm	425.841 %	N/A	N/A
Ca 315.887 {107} (Radial)	1,852 cps	9.9919 ppm	399.675 %	8.0 %	0.8 ppm
Cd 228.802 {447} (Axial)	11,945 cps	2.0284 ppm	405.684 %	N/A	N/A
Cr 267.716 {126} (Axial)	9,444 cps	2.0846 ppm	416.928 %	N/A	N/A
Cr 205.560 {464} (Axial)	5,848 cps	2.0762 ppm		N/A	N/A
Co 228.616 {447} (Axial)	43,219 cps	10.2701 ppm	410.805 %	N/A	N/A
Cu 324.754 {104} (Axial)	102,980 cps	10.1045 ppm	404.180 %	N/A	N/A
Fe 259.940 {130} (Radial)	1,686 cps	9.7060 ppm	388.242 %	8.5 %	0.8 ppm
Li 670.784 {50} (Radial)	89,089 cps	9.6377 ppm	385.508 %	8.0 %	0.8 ppm
Mn 257.610 {131} (Axial)	69,191 cps	2.0776 ppm	415.515 %	N/A	N/A
Mo 202.030 {467} (Axial)	13,114 cps	10.1384 ppm	405.537 %	N/A	N/A
Na 589.592 {57} (Radial)	253,028 cps	193.9323 ppm	387.865 %	8.0 %	15.6 ppm
Ni 231.604 {445} (Axial)	21,626 cps	10.2817 ppm	411.266 %	N/A	N/A
K 766.490 {44} (Radial)	60,750 cps	188.5347 ppm	377.069 %	8.2 %	15.5 ppm
Se 196.090 {472} (Axial)	1,129 cps	10.3504 ppm	414.017 %	N/A	N/A
Ag 328.068 {103} (Axial)	11,485 cps	2.0627 ppm	412.541 %	N/A	N/A
Sr 407.771 {83} (Radial)	46,097 cps	1.9197 ppm	383.933 %	8.1 %	0.2 ppm
Sn 189.989 {477} (Axial)	1,092 cps	2.0901 ppm		N/A	N/A
Ti 334.941 {101} (Radial)	1,636 cps	1.9831 ppm	396.618 %	8.6 %	0.2 ppm
V 292.402 {115} (Axial)	15,523 cps	2.0536 ppm	410.715 %	N/A	N/A
Zn 213.856 {457} (Axial)	26,954 cps	5.0909 ppm	407.274 %	N/A	N/A
Sc 357.253 {94} (Axial)		32.2202 %		N/A	N/A
Sc 188.060 {479} (Axial)		30.3059 %		4.5 %	1.4 %
Mg 279.079 {121} (Radial)	269 cps	9.9596 ppm	398.383 %	7.6 %	0.8 ppm
Tl 190.856 {477} (Axial)	357 cps	2.0563 ppm	411.268 %	N/A	N/A
Al 167.079 {502} (Axial)	6,189 cps	10.0042 ppm		N/A	N/A
Sc 227.318 {448} (Axial)		40.5041 %		3.3 %	1.3 %
B 249.773 {135} (Radial)	2,127 cps	9.6770 ppm	387.080 %	8.3 %	0.8 ppm
Al 396.152 {85} (Radial)	2,961 cps	9.7879 ppm	391.517 %	8.1 %	0.8 ppm
Si 251.611 {134} (Radial)	600 cps	9.7776 ppm		8.5 %	0.8 ppm
Pb 220.353 {453} (Axial)	1,063 cps	2.0630 ppm	412.609 %	N/A	N/A
Y 224.306 {450} (Axial)		31.4309 %		N/A	N/A
Sc 361.384 {93} (Radial)		30.9625 %		5.5 %	1.7 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 6:13:55 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1,151 cps	2.4027 ppm	480.549 %	2.4 %	0.1 ppm
As 189.042 {478} (Axial)	791 cps	2.3643 ppm	472.861 %	2.3 %	0.1 ppm
Ba 455.403 {74} (Radial)	254,691 cps	12.7922 ppm		11.9 %	1.5 ppm
Ba 493.409 {68} (Radial)	227,504 cps	12.6784 ppm	507.135 %	11.9 %	1.5 ppm
Be 313.042 {108} (Axial)	395,980 cps	2.2104 ppm	442.083 %	N/A	N/A
Ca 315.887 {107} (Radial)	2,312 cps	12.4705 ppm	498.818 %	12.0 %	1.5 ppm
Cd 228.802 {447} (Axial)	25,303 cps	2.3520 ppm	470.396 %	2.3 %	0.1 ppm
Cr 267.716 {126} (Axial)	9,949 cps	2.1546 ppm	430.920 %	N/A	N/A
Cr 205.560 {464} (Axial)	12,268 cps	2.3909 ppm		2.2 %	0.1 ppm
Co 228.616 {447} (Axial)	90,372 cps	11.7894 ppm	471.577 %	2.2 %	0.3 ppm
Cu 324.754 {104} (Axial)	114,957 cps	11.0597 ppm	442.388 %	N/A	N/A
Fe 259.940 {130} (Radial)	2,146 cps	12.3525 ppm	494.099 %	12.7 %	1.6 ppm
Li 670.784 {50} (Radial)	115,277 cps	12.4708 ppm	498.830 %	11.6 %	1.4 ppm
Mn 257.610 {131} (Axial)	73,578 cps	2.1638 ppm	432.763 %	N/A	N/A
Mo 202.030 {467} (Axial)	27,702 cps	11.7663 ppm	470.650 %	2.2 %	0.3 ppm
Na 589.592 {57} (Radial)	322,691 cps	247.3253 ppm	494.651 %	11.5 %	28.3 ppm
Ni 231.604 {445} (Axial)	45,070 cps	11.7641 ppm	470.562 %	2.3 %	0.3 ppm
K 766.490 {44} (Radial)	76,430 cps	237.1973 ppm	474.395 %	11.2 %	26.5 ppm
Se 196.090 {472} (Axial)	2,432 cps	12.2358 ppm	489.434 %	2.2 %	0.3 ppm
Ag 328.068 {103} (Axial)	12,549 cps	2.2080 ppm	441.608 %	N/A	N/A
Sr 407.771 {83} (Radial)	59,804 cps	2.4905 ppm	498.097 %	11.9 %	0.3 ppm
Sn 189.989 {477} (Axial)	2,253 cps	2.3666 ppm		2.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	2,094 cps	2.5378 ppm	507.562 %	12.2 %	0.3 ppm
V 292.402 {115} (Axial)	16,674 cps	2.1642 ppm	432.832 %	N/A	N/A
Zn 213.856 {457} (Axial)	56,640 cps	5.8725 ppm	469.799 %	2.3 %	0.1 ppm
Sc 357.253 {94} (Axial)		32.8408 %		N/A	N/A
Sc 188.060 {479} (Axial)		29.0693 %		2.0 %	0.6 %
Mg 279.079 {121} (Radial)	322 cps	11.9304 ppm	477.216 %	12.1 %	1.4 ppm
Tl 190.856 {477} (Axial)	746 cps	2.3680 ppm	473.605 %	2.2 %	0.1 ppm
Al 167.079 {502} (Axial)	12,232 cps	10.8503 ppm		2.1 %	0.2 ppm
Sc 227.318 {448} (Axial)		39.8565 %		1.6 %	0.6 %
B 249.773 {135} (Radial)	2,676 cps	12.1775 ppm	487.099 %	11.7 %	1.4 ppm
Al 396.152 {85} (Radial)	3,743 cps	12.3727 ppm	494.906 %	11.8 %	1.5 ppm
Si 251.611 {134} (Radial)	766 cps	12.4826 ppm		12.0 %	1.5 ppm
Pb 220.353 {453} (Axial)	2,191 cps	2.3338 ppm	466.762 %	2.3 %	0.1 ppm
Y 224.306 {450} (Axial)		30.0319 %		2.1 %	0.6 %
Sc 361.384 {93} (Radial)		30.7993 %		11.1 %	3.4 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 6:18:43 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	920 cps	2.5249 ppm	504.983 %	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	635 cps	2.4926 ppm	498.510 %	0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	188,145 cps	12.2208 ppm		5.0 %	0.6 ppm
Ba 493.409 {68} (Radial)	168,012 cps	12.1380 ppm	485.521 %	5.1 %	0.6 ppm
Be 313.042 {108} (Axial)	565,596 cps	2.2338 ppm	446.756 %	3.4 %	0.1 ppm
Ca 315.887 {107} (Radial)	1,682 cps	11.7384 ppm	469.534 %	5.0 %	0.6 ppm
Cd 228.802 {447} (Axial)	20,225 cps	2.4701 ppm	494.021 %	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	14,038 cps	2.1786 ppm	435.714 %	3.5 %	0.1 ppm
Cr 205.560 {464} (Axial)	9,832 cps	2.5160 ppm		0.2 %	0.0 ppm
Co 228.616 {447} (Axial)	72,392 cps	12.3974 ppm	495.896 %	0.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	162,728 cps	11.2077 ppm	448.309 %	3.0 %	0.3 ppm
Fe 259.940 {130} (Radial)	1,558 cps	11.6082 ppm	464.329 %	5.1 %	0.6 ppm
Li 670.784 {50} (Radial)	85,098 cps	11.9003 ppm	476.012 %	4.8 %	0.6 ppm
Mn 257.610 {131} (Axial)	103,759 cps	2.1870 ppm	437.392 %	3.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	22,201 cps	12.3787 ppm	495.149 %	0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	237,798 cps	235.5193 ppm	471.039 %	4.6 %	10.8 ppm
Ni 231.604 {445} (Axial)	36,097 cps	12.3671 ppm	494.682 %	0.1 %	0.0 ppm
K 766.490 {44} (Radial)	56,495 cps	226.4266 ppm	452.853 %	4.3 %	9.7 ppm
Se 196.090 {472} (Axial)	1,943 cps	12.8313 ppm	513.252 %	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	17,643 cps	2.2348 ppm	446.964 %	3.2 %	0.1 ppm
Sr 407.771 {83} (Radial)	44,276 cps	2.3841 ppm	476.822 %	5.1 %	0.1 ppm
Sn 189.989 {477} (Axial)	1,804 cps	2.4887 ppm		0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,552 cps	2.4296 ppm	485.927 %	5.6 %	0.1 ppm
V 292.402 {115} (Axial)	23,577 cps	2.1891 ppm	437.815 %	3.3 %	0.1 ppm
Zn 213.856 {457} (Axial)	45,356 cps	6.1732 ppm	493.858 %	0.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		32.9198 %		3.8 %	1.2 %
Sc 188.060 {479} (Axial)		28.1842 %		3.8 %	1.1 %
Mg 279.079 {121} (Radial)	238 cps	11.3928 ppm	455.714 %	5.6 %	0.6 ppm
Tl 190.856 {477} (Axial)	596 cps	2.4825 ppm	496.503 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	9,799 cps	11.4141 ppm		0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		39.0751 %		3.0 %	1.2 %
B 249.773 {135} (Radial)	1,988 cps	11.7014 ppm	468.056 %	4.5 %	0.5 ppm
Al 396.152 {85} (Radial)	2,768 cps	11.8348 ppm	473.391 %	5.4 %	0.6 ppm
Si 251.611 {134} (Radial)	561 cps	11.8278 ppm		5.2 %	0.6 ppm
Pb 220.353 {453} (Axial)	1,756 cps	2.4537 ppm	490.744 %	0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		28.5545 %		2.3 %	0.7 %
Sc 361.384 {93} (Radial)		31.9141 %		5.0 %	1.6 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 7:40:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	236 cps	0.4920 ppm	98.396 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	164 cps	0.4906 ppm	98.122 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	48,922 cps	2.4572 ppm		2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,761 cps	2.3830 ppm	95.320 %	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	161,782 cps	0.4962 ppm	99.233 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	450 cps	2.4255 ppm	97.020 %	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,301 cps	0.4928 ppm	98.553 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,077 cps	0.4923 ppm	98.459 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,561 cps	0.4992 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	19,077 cps	2.4887 ppm	99.546 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	45,625 cps	2.4441 ppm	97.763 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	419 cps	2.4109 ppm	96.434 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	21,664 cps	2.3436 ppm	93.746 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	30,023 cps	0.4926 ppm	98.514 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,829 cps	2.4757 ppm	99.029 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	62,052 cps	47.5597 ppm	95.119 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	9,545 cps	2.4915 ppm	99.659 %	2.1 %	0.1 ppm
K 766.490 {44} (Radial)	15,076 cps	46.7885 ppm	93.577 %	2.5 %	1.2 ppm
Se 196.090 {472} (Axial)	491 cps	2.4686 ppm	98.745 %	2.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,008 cps	0.4948 ppm	98.954 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,518 cps	0.4797 ppm	95.934 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	479 cps	0.5032 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	398 cps	0.4828 ppm	96.551 %	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	6,800 cps	0.4914 ppm	98.283 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,852 cps	1.2288 ppm	98.307 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.9647 %		1.4 %	1.4 %
Sc 188.060 {479} (Axial)		94.4837 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	66 cps	2.4409 ppm	97.637 %	2.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	159 cps	0.5053 ppm	101.066 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,686 cps	2.3821 ppm		2.1 %	0.1 ppm
Sc 227.318 {448} (Axial)		101.9720 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	523 cps	2.3808 ppm	95.232 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	729 cps	2.4092 ppm	96.369 %	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	146 cps	2.3834 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	471 cps	0.5012 ppm	100.235 %	1.9 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1994 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.0504 %		0.5 %	0.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 8:40:33 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.4995 ppm	99.906 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	167 cps	0.4990 ppm	99.806 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	48,424 cps	2.4322 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,517 cps	2.3694 ppm	94.776 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	158,920 cps	0.4874 ppm	97.478 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	454 cps	2.4489 ppm	97.955 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,399 cps	0.5018 ppm	100.365 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,024 cps	0.4859 ppm	97.171 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,602 cps	0.5072 ppm		2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	19,342 cps	2.5233 ppm	100.932 %	2.3 %	0.1 ppm
Cu 324.754 {104} (Axial)	45,359 cps	2.4298 ppm	97.194 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	418 cps	2.4064 ppm	96.258 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	21,709 cps	2.3485 ppm	93.941 %	2.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,549 cps	0.4848 ppm	96.959 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,907 cps	2.5089 ppm	100.357 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	61,771 cps	47.3441 ppm	94.688 %	2.9 %	1.4 ppm
Ni 231.604 {445} (Axial)	9,678 cps	2.5260 ppm	101.039 %	2.3 %	0.1 ppm
K 766.490 {44} (Radial)	14,998 cps	46.5455 ppm	93.091 %	3.3 %	1.5 ppm
Se 196.090 {472} (Axial)	502 cps	2.5263 ppm	101.053 %	2.3 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,998 cps	0.4937 ppm	98.748 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,403 cps	0.4749 ppm	94.974 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	485 cps	0.5095 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	399 cps	0.4833 ppm	96.667 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	6,676 cps	0.4825 ppm	96.492 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,065 cps	1.2509 ppm	100.073 %	2.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.6555 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		93.8258 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	66 cps	2.4344 ppm	97.378 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	162 cps	0.5132 ppm	102.649 %	3.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,726 cps	2.4184 ppm		2.2 %	0.1 ppm
Sc 227.318 {448} (Axial)		101.2344 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	517 cps	2.3544 ppm	94.175 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	727 cps	2.4026 ppm	96.103 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	147 cps	2.3904 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	478 cps	0.5089 ppm	101.787 %	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2205 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.8137 %		0.1 %	0.1 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 9:41:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	244 cps	0.5100 ppm	102.000 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	170 cps	0.5073 ppm	101.455 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	50,750 cps	2.5490 ppm		0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	44,431 cps	2.4761 ppm	99.043 %	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	181,801 cps	0.5576 ppm	111.512 %	16.8 %	0.1 ppm
Ca 315.887 {107} (Radial)	466 cps	2.5142 ppm	100.569 %	1.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,470 cps	0.5084 ppm	101.688 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,596 cps	0.5549 ppm	110.984 %	16.8 %	0.1 ppm
Cr 205.560 {464} (Axial)	2,648 cps	0.5161 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	19,637 cps	2.5617 ppm	102.469 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	51,884 cps	2.7794 ppm	111.175 %	16.8 %	0.5 ppm
Fe 259.940 {130} (Radial)	433 cps	2.4917 ppm	99.667 %	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	22,861 cps	2.4731 ppm	98.924 %	1.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,774 cps	0.5541 ppm	110.822 %	16.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	5,990 cps	2.5444 ppm	101.776 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	64,976 cps	49.8010 ppm	99.602 %	1.2 %	0.6 ppm
Ni 231.604 {445} (Axial)	9,824 cps	2.5642 ppm	102.568 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	15,632 cps	48.5115 ppm	97.023 %	1.7 %	0.8 ppm
Se 196.090 {472} (Axial)	510 cps	2.5664 ppm	102.655 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,703 cps	0.5634 ppm	112.682 %	16.4 %	0.1 ppm
Sr 407.771 {83} (Radial)	11,936 cps	0.4970 ppm	99.409 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	493 cps	0.5177 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	414 cps	0.5012 ppm	100.237 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,626 cps	0.5511 ppm	110.217 %	16.7 %	0.1 ppm
Zn 213.856 {457} (Axial)	12,242 cps	1.2692 ppm	101.537 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.4153 %		15.9 %	14.5 %
Sc 188.060 {479} (Axial)		93.3471 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	67 cps	2.4937 ppm	99.749 %	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	164 cps	0.5212 ppm	104.246 %	2.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,774 cps	2.4608 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7474 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	543 cps	2.4711 ppm	98.843 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	756 cps	2.5003 ppm	100.011 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	152 cps	2.4767 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	484 cps	0.5160 ppm	103.192 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6898 %		0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.9980 %		0.7 %	0.7 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 9:46:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	245 cps	0.5107 ppm	102.142 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	171 cps	0.5097 ppm	101.941 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	49,876 cps	2.5051 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,596 cps	2.4295 ppm	97.181 %	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	161,085 cps	0.4940 ppm	98.805 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	456 cps	2.4577 ppm	98.307 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,511 cps	0.5123 ppm	102.454 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,077 cps	0.4922 ppm	98.448 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,663 cps	0.5190 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	19,776 cps	2.5798 ppm	103.193 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	45,972 cps	2.4627 ppm	98.508 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	424 cps	2.4436 ppm	97.744 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	22,487 cps	2.4327 ppm	97.308 %	1.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,957 cps	0.4915 ppm	98.298 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,033 cps	2.5625 ppm	102.500 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	64,018 cps	49.0663 ppm	98.133 %	2.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	9,889 cps	2.5813 ppm	103.253 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	15,486 cps	48.0599 ppm	96.120 %	2.5 %	1.2 ppm
Se 196.090 {472} (Axial)	513 cps	2.5827 ppm	103.307 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,054 cps	0.4993 ppm	99.852 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,743 cps	0.4890 ppm	97.806 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	497 cps	0.5220 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	410 cps	0.4964 ppm	99.276 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	6,762 cps	0.4886 ppm	97.728 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,319 cps	1.2772 ppm	102.179 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.7323 %		1.1 %	1.1 %
Sc 188.060 {479} (Axial)		92.6103 %		1.0 %	0.9 %
Mg 279.079 {121} (Radial)	67 cps	2.4685 ppm	98.739 %	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	166 cps	0.5254 ppm	105.075 %	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,796 cps	2.4804 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0247 %		1.1 %	1.1 %
B 249.773 {135} (Radial)	536 cps	2.4367 ppm	97.470 %	2.1 %	0.1 ppm
Al 396.152 {85} (Radial)	741 cps	2.4500 ppm	97.999 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	150 cps	2.4388 ppm		2.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	489 cps	0.5212 ppm	104.233 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0209 %		0.8 %	0.7 %
Sc 361.384 {93} (Radial)		97.3778 %		0.9 %	0.9 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 10:46:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	254 cps	0.5304 ppm	106.078 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	177 cps	0.5283 ppm	105.657 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	52,404 cps	2.6321 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	45,883 cps	2.5570 ppm	102.279 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	172,327 cps	0.5285 ppm	105.701 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	479 cps	2.5858 ppm	103.432 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,714 cps	0.5311 ppm	106.225 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,353 cps	0.5256 ppm	105.114 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,762 cps	0.5383 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,486 cps	2.6725 ppm	106.901 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	49,097 cps	2.6301 ppm	105.204 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	448 cps	2.5762 ppm	103.049 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	23,734 cps	2.5676 ppm	102.703 %	2.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,006 cps	0.5251 ppm	105.023 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,256 cps	2.6573 ppm	106.291 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	67,342 cps	51.6144 ppm	103.229 %	2.5 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,247 cps	2.6746 ppm	106.986 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	16,358 cps	50.7658 ppm	101.532 %	2.8 %	1.4 ppm
Se 196.090 {472} (Axial)	533 cps	2.6794 ppm	107.175 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,396 cps	0.5331 ppm	106.614 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,326 cps	0.5133 ppm	102.664 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	516 cps	0.5417 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	429 cps	0.5200 ppm	103.999 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,237 cps	0.5230 ppm	104.591 %	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,774 cps	1.3244 ppm	105.954 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.4833 %		2.1 %	2.0 %
Sc 188.060 {479} (Axial)		91.1467 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	68 cps	2.5354 ppm	101.415 %	1.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	171 cps	0.5438 ppm	108.754 %	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,908 cps	2.5797 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.6220 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	563 cps	2.5639 ppm	102.555 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	781 cps	2.5802 ppm	103.207 %	2.0 %	0.1 ppm
Si 251.611 {134} (Radial)	157 cps	2.5550 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	507 cps	0.5395 ppm	107.903 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		93.3692 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		94.5661 %		0.3 %	0.3 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 11:47:16 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	270 cps	0.5634 ppm	112.677 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5635 ppm	112.707 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	54,690 cps	2.7469 ppm		2.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	47,861 cps	2.6672 ppm	106.688 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	178,174 cps	0.5464 ppm	109.288 %	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	503 cps	2.7144 ppm	108.578 %	2.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,084 cps	0.5655 ppm	113.100 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,497 cps	0.5430 ppm	108.607 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,931 cps	0.5713 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	21,811 cps	2.8453 ppm	113.812 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	50,635 cps	2.7125 ppm	108.499 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	477 cps	2.7459 ppm	109.837 %	1.9 %	0.1 ppm
Li 670.784 {50} (Radial)	24,757 cps	2.6782 ppm	107.130 %	2.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,136 cps	0.5437 ppm	108.730 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,656 cps	2.8271 ppm	113.085 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	70,249 cps	53.8418 ppm	107.684 %	3.1 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,906 cps	2.8466 ppm	113.865 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	16,997 cps	52.7502 ppm	105.500 %	3.5 %	1.8 ppm
Se 196.090 {472} (Axial)	565 cps	2.8403 ppm	113.614 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,546 cps	0.5478 ppm	109.568 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,886 cps	0.5366 ppm	107.325 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	548 cps	0.5759 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5423 ppm	108.453 %	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	7,502 cps	0.5422 ppm	108.435 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,596 cps	1.4096 ppm	112.770 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.7575 %		0.8 %	0.8 %
Sc 188.060 {479} (Axial)		86.8097 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	73 cps	2.7162 ppm	108.649 %	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5814 ppm	116.289 %	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,109 cps	2.7578 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.5155 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	588 cps	2.6751 ppm	107.003 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	821 cps	2.7149 ppm	108.596 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	166 cps	2.6976 ppm		2.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	538 cps	0.5733 ppm	114.660 %	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		88.9460 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		91.2194 %		0.7 %	0.6 %

Simple Sample Report

11/30/2020 11:20:00 AM

CCV

Sample type: QC Analysis started at: 11/29/2020 11:52:10 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	270 cps	0.5635 ppm	112.704 %	3.6 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5584 ppm	111.673 %	3.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	52,642 cps	2.6440 ppm		5.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	46,346 cps	2.5828 ppm	103.311 %	5.5 %	0.1 ppm
Be 313.042 {108} (Axial)	183,061 cps	0.5614 ppm	112.285 %	5.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	490 cps	2.6420 ppm	105.678 %	5.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,057 cps	0.5630 ppm	112.595 %	3.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,627 cps	0.5587 ppm	111.734 %	5.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,914 cps	0.5679 ppm		3.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,696 cps	2.8304 ppm	113.214 %	3.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	51,894 cps	2.7799 ppm	111.198 %	5.6 %	0.2 ppm
Fe 259.940 {130} (Radial)	450 cps	2.5895 ppm	103.580 %	5.0 %	0.1 ppm
Li 670.784 {50} (Radial)	23,861 cps	2.5813 ppm	103.250 %	5.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,970 cps	0.5573 ppm	111.467 %	5.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,628 cps	2.8151 ppm	112.603 %	3.3 %	0.1 ppm
Na 589.592 {57} (Radial)	67,684 cps	51.8766 ppm	103.753 %	5.5 %	2.9 ppm
Ni 231.604 {445} (Axial)	10,844 cps	2.8303 ppm	113.213 %	3.2 %	0.1 ppm
K 766.490 {44} (Radial)	16,552 cps	51.3666 ppm	102.733 %	5.9 %	3.0 ppm
Se 196.090 {472} (Axial)	562 cps	2.8251 ppm	113.002 %	3.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,739 cps	0.5669 ppm	113.390 %	5.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,392 cps	0.5161 ppm	103.211 %	5.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	547 cps	0.5747 ppm		3.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	433 cps	0.5242 ppm	104.844 %	5.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,656 cps	0.5532 ppm	110.647 %	5.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,539 cps	1.4038 ppm	112.303 %	3.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.1968 %		7.2 %	6.7 %
Sc 188.060 {479} (Axial)		87.5089 %		1.2 %	1.1 %
Mg 279.079 {121} (Radial)	71 cps	2.6380 ppm	105.519 %	4.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5773 ppm	115.455 %	3.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,094 cps	2.7441 ppm		3.1 %	0.1 ppm
Sc 227.318 {448} (Axial)		95.2378 %		1.2 %	1.1 %
B 249.773 {135} (Radial)	568 cps	2.5837 ppm	103.349 %	5.4 %	0.1 ppm
Al 396.152 {85} (Radial)	789 cps	2.6072 ppm	104.286 %	6.5 %	0.2 ppm
Si 251.611 {134} (Radial)	158 cps	2.5767 ppm		5.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	536 cps	0.5708 ppm	114.162 %	3.3 %	0.0 ppm
Y 224.306 {450} (Axial)		89.5050 %		1.2 %	1.0 %
Sc 361.384 {93} (Radial)		90.7628 %		1.3 %	1.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 12:52:43 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	413 cps	0.8631 ppm	172.610 %	4.4 %	0.0 ppm
As 189.042 {478} (Axial)	286 cps	0.8538 ppm	170.766 %	4.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	78,698 cps	3.9527 ppm		4.9 %	0.2 ppm
Ba 493.409 {68} (Radial)	69,896 cps	3.8952 ppm	155.806 %	4.6 %	0.2 ppm
Be 313.042 {108} (Axial)	265,203 cps	0.9336 ppm	186.723 %	8.1 %	0.1 ppm
Ca 315.887 {107} (Radial)	735 cps	3.9630 ppm	158.519 %	4.6 %	0.2 ppm
Cd 228.802 {447} (Axial)	9,219 cps	0.8569 ppm	171.385 %	4.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	6,663 cps	0.9233 ppm	184.663 %	8.2 %	0.1 ppm
Cr 205.560 {464} (Axial)	4,455 cps	0.8682 ppm		4.4 %	0.0 ppm
Co 228.616 {447} (Axial)	33,067 cps	4.3137 ppm	172.549 %	4.3 %	0.2 ppm
Cu 324.754 {104} (Axial)	73,923 cps	4.5464 ppm	181.855 %	8.8 %	0.4 ppm
Fe 259.940 {130} (Radial)	678 cps	3.9005 ppm	156.019 %	4.3 %	0.2 ppm
Li 670.784 {50} (Radial)	35,694 cps	3.8614 ppm	154.456 %	4.7 %	0.2 ppm
Mn 257.610 {131} (Axial)	48,800 cps	0.9188 ppm	183.768 %	8.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	10,084 cps	4.2833 ppm	171.330 %	4.4 %	0.2 ppm
Na 589.592 {57} (Radial)	101,772 cps	78.0026 ppm	156.005 %	4.7 %	3.7 ppm
Ni 231.604 {445} (Axial)	16,540 cps	4.3172 ppm	172.689 %	4.3 %	0.2 ppm
K 766.490 {44} (Radial)	24,805 cps	76.9814 ppm	153.963 %	4.8 %	3.7 ppm
Se 196.090 {472} (Axial)	858 cps	4.3167 ppm	172.668 %	4.1 %	0.2 ppm
Ag 328.068 {103} (Axial)	8,196 cps	0.9275 ppm	185.505 %	8.7 %	0.1 ppm
Sr 407.771 {83} (Radial)	18,611 cps	0.7750 ppm	155.010 %	4.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	836 cps	0.8782 ppm		4.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	647 cps	0.7842 ppm	156.833 %	4.7 %	0.0 ppm
V 292.402 {115} (Axial)	10,994 cps	0.9124 ppm	182.471 %	8.1 %	0.1 ppm
Zn 213.856 {457} (Axial)	20,658 cps	2.1418 ppm	171.343 %	4.3 %	0.1 ppm
Sc 357.253 {94} (Axial)		63.6745 %		10.3 %	6.5 %
Sc 188.060 {479} (Axial)		64.8339 %		2.3 %	1.5 %
Mg 279.079 {121} (Radial)	107 cps	3.9507 ppm	158.028 %	3.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	276 cps	0.8744 ppm	174.883 %	4.7 %	0.0 ppm
Al 167.079 {502} (Axial)	4,723 cps	4.1891 ppm		4.2 %	0.2 ppm
Sc 227.318 {448} (Axial)		73.4838 %		1.6 %	1.2 %
B 249.773 {135} (Radial)	854 cps	3.8872 ppm	155.488 %	4.9 %	0.2 ppm
Al 396.152 {85} (Radial)	1,183 cps	3.9109 ppm	156.437 %	4.7 %	0.2 ppm
Si 251.611 {134} (Radial)	240 cps	3.9181 ppm		4.1 %	0.2 ppm
Pb 220.353 {453} (Axial)	816 cps	0.8695 ppm	173.901 %	4.2 %	0.0 ppm
Y 224.306 {450} (Axial)		66.1096 %		2.3 %	1.5 %
Sc 361.384 {93} (Radial)		67.8999 %		1.1 %	0.7 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 12:57:30 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	441 cps	0.9207 ppm	184.131 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	305 cps	0.9124 ppm	182.474 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	85,461 cps	4.2924 ppm		2.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	75,847 cps	4.2268 ppm	169.072 %	2.9 %	0.1 ppm
Be 313.042 {108} (Axial)	243,991 cps	0.8262 ppm	165.233 %	3.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	805 cps	4.3436 ppm	173.743 %	3.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	9,903 cps	0.9205 ppm	184.101 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	6,125 cps	0.8157 ppm	163.149 %	3.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	4,779 cps	0.9314 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	35,498 cps	4.6308 ppm	185.233 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	68,162 cps	4.0314 ppm	161.258 %	3.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	735 cps	4.2335 ppm	169.339 %	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	38,759 cps	4.1930 ppm	167.719 %	2.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	44,974 cps	0.8144 ppm	162.877 %	3.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	10,827 cps	4.5986 ppm	183.944 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	110,370 cps	84.5927 ppm	169.185 %	3.0 %	2.5 ppm
Ni 231.604 {445} (Axial)	17,753 cps	4.6339 ppm	185.355 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	26,903 cps	83.4921 ppm	166.984 %	3.6 %	3.0 ppm
Se 196.090 {472} (Axial)	924 cps	4.6492 ppm	185.968 %	1.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	7,569 cps	0.8229 ppm	164.583 %	2.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	20,174 cps	0.8401 ppm	168.024 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	897 cps	0.9429 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	706 cps	0.8557 ppm	171.147 %	2.6 %	0.0 ppm
V 292.402 {115} (Axial)	10,132 cps	0.8094 ppm	161.889 %	3.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	22,157 cps	2.2973 ppm	183.780 %	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		70.2596 %		4.8 %	3.4 %
Sc 188.060 {479} (Axial)		61.0312 %		1.8 %	1.1 %
Mg 279.079 {121} (Radial)	116 cps	4.2974 ppm	171.898 %	0.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	296 cps	0.9385 ppm	187.704 %	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	5,058 cps	4.4866 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		70.0284 %		1.7 %	1.2 %
B 249.773 {135} (Radial)	930 cps	4.2331 ppm	169.324 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,284 cps	4.2451 ppm	169.803 %	2.8 %	0.1 ppm
Si 251.611 {134} (Radial)	260 cps	4.2286 ppm		2.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	876 cps	0.9328 ppm	186.560 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		62.3649 %		1.8 %	1.1 %
Sc 361.384 {93} (Radial)		64.6067 %		1.5 %	1.0 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 1:57:24 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	534 cps	1.3722 ppm	274.438 %	5.2 %	0.1 ppm
As 189.042 {478} (Axial)	372 cps	1.3638 ppm	272.761 %	5.0 %	0.1 ppm
Ba 455.403 {74} (Radial)	103,847 cps	6.4137 ppm		1.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	91,974 cps	6.3290 ppm	253.158 %	1.3 %	0.1 ppm
Be 313.042 {108} (Axial)	272,871 cps	1.2130 ppm	242.595 %	N/A	N/A
Ca 315.887 {107} (Radial)	976 cps	6.4777 ppm	259.108 %	0.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	11,984 cps	1.3706 ppm	274.128 %	5.1 %	0.1 ppm
Cr 267.716 {126} (Axial)	6,817 cps	1.1934 ppm	238.679 %	N/A	N/A
Cr 205.560 {464} (Axial)	5,812 cps	1.3922 ppm		5.2 %	0.1 ppm
Co 228.616 {447} (Axial)	43,098 cps	6.9073 ppm	276.291 %	5.1 %	0.4 ppm
Cu 324.754 {104} (Axial)	75,157 cps	5.8565 ppm	234.262 %	N/A	N/A
Fe 259.940 {130} (Radial)	915 cps	6.4553 ppm	258.213 %	0.2 %	0.0 ppm
Li 670.784 {50} (Radial)	47,216 cps	6.2851 ppm	251.406 %	1.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	50,048 cps	1.1905 ppm	238.102 %	N/A	N/A
Mo 202.030 {467} (Axial)	13,114 cps	6.8440 ppm	273.759 %	5.1 %	0.3 ppm
Na 589.592 {57} (Radial)	134,395 cps	126.7407 ppm	253.481 %	1.7 %	2.1 ppm
Ni 231.604 {445} (Axial)	21,552 cps	6.9112 ppm	276.450 %	5.2 %	0.4 ppm
K 766.490 {44} (Radial)	32,471 cps	124.1198 ppm	248.240 %	1.6 %	2.0 ppm
Se 196.090 {472} (Axial)	1,120 cps	6.9207 ppm	276.829 %	5.2 %	0.4 ppm
Ag 328.068 {103} (Axial)	8,368 cps	1.1939 ppm	238.778 %	N/A	N/A
Sr 407.771 {83} (Radial)	24,518 cps	1.2554 ppm	251.083 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,090 cps	1.4072 ppm		5.4 %	0.1 ppm
Ti 334.941 {101} (Radial)	860 cps	1.2855 ppm	257.104 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	11,260 cps	1.1817 ppm	236.347 %	N/A	N/A
Zn 213.856 {457} (Axial)	26,882 cps	3.4242 ppm	273.938 %	5.1 %	0.2 ppm
Sc 357.253 {94} (Axial)		52.5629 %		N/A	N/A
Sc 188.060 {479} (Axial)		45.0394 %		2.8 %	1.3 %
Mg 279.079 {121} (Radial)	142 cps	6.4450 ppm	257.800 %	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	358 cps	1.3988 ppm	279.769 %	5.1 %	0.1 ppm
Al 167.079 {502} (Axial)	6,137 cps	6.6862 ppm		5.1 %	0.3 ppm
Sc 227.318 {448} (Axial)		54.6969 %		2.0 %	1.1 %
B 249.773 {135} (Radial)	1,123 cps	6.2943 ppm	251.772 %	1.6 %	0.1 ppm
Al 396.152 {85} (Radial)	1,563 cps	6.3468 ppm	253.871 %	0.1 %	0.0 ppm
Si 251.611 {134} (Radial)	320 cps	6.4213 ppm		1.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,060 cps	1.3863 ppm	277.256 %	5.1 %	0.1 ppm
Y 224.306 {450} (Axial)		45.3855 %		3.6 %	1.6 %
Sc 361.384 {93} (Radial)		47.1802 %		0.6 %	0.3 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 2:02:07 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	635 cps	1.3262 ppm	265.235 %	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	442 cps	1.3196 ppm	263.919 %	3.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	102,444 cps	6.2053 ppm		5.7 %	0.4 ppm
Ba 493.409 {68} (Radial)	90,848 cps	6.1296 ppm	245.183 %	5.5 %	0.3 ppm
Be 313.042 {108} (Axial)	403,675 cps	1.2380 ppm	247.604 %	2.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	964 cps	6.2783 ppm	251.134 %	5.7 %	0.4 ppm
Cd 228.802 {447} (Axial)	14,234 cps	1.3231 ppm	264.612 %	3.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	10,082 cps	1.2174 ppm	243.478 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	6,901 cps	1.3449 ppm		3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	51,152 cps	6.6729 ppm	266.917 %	3.2 %	0.2 ppm
Cu 324.754 {104} (Axial)	111,238 cps	5.9589 ppm	238.358 %	2.8 %	0.2 ppm
Fe 259.940 {130} (Radial)	886 cps	6.1626 ppm	246.503 %	4.8 %	0.3 ppm
Li 670.784 {50} (Radial)	46,521 cps	6.0647 ppm	242.589 %	5.7 %	0.3 ppm
Mn 257.610 {131} (Axial)	73,971 cps	1.2136 ppm	242.721 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	15,559 cps	6.6086 ppm	264.344 %	3.2 %	0.2 ppm
Na 589.592 {57} (Radial)	132,006 cps	121.8588 ppm	243.718 %	6.0 %	7.3 ppm
Ni 231.604 {445} (Axial)	25,605 cps	6.6832 ppm	267.327 %	3.2 %	0.2 ppm
K 766.490 {44} (Radial)	31,837 cps	118.9336 ppm	237.867 %	6.5 %	7.7 ppm
Se 196.090 {472} (Axial)	1,334 cps	6.7092 ppm	268.367 %	3.2 %	0.2 ppm
Ag 328.068 {103} (Axial)	12,285 cps	1.2136 ppm	242.722 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	24,151 cps	1.2134 ppm	242.680 %	5.6 %	0.1 ppm
Sn 189.989 {477} (Axial)	1,296 cps	1.3614 ppm		3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	852 cps	1.2460 ppm	249.202 %	4.7 %	0.1 ppm
V 292.402 {115} (Axial)	16,661 cps	1.2040 ppm	240.805 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	31,956 cps	3.3133 ppm	265.062 %	3.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		51.2589 %		2.4 %	1.2 %
Sc 188.060 {479} (Axial)		45.4586 %		1.3 %	0.6 %
Mg 279.079 {121} (Radial)	139 cps	6.1829 ppm	247.316 %	4.9 %	0.3 ppm
Tl 190.856 {477} (Axial)	424 cps	1.3443 ppm	268.867 %	3.9 %	0.1 ppm
Al 167.079 {502} (Axial)	7,298 cps	6.4734 ppm		3.1 %	0.2 ppm
Sc 227.318 {448} (Axial)		54.9934 %		1.0 %	0.5 %
B 249.773 {135} (Radial)	1,109 cps	6.0839 ppm	243.357 %	5.4 %	0.3 ppm
Al 396.152 {85} (Radial)	1,543 cps	6.1731 ppm	246.926 %	4.9 %	0.3 ppm
Si 251.611 {134} (Radial)	316 cps	6.2276 ppm		6.6 %	0.4 ppm
Pb 220.353 {453} (Axial)	1,258 cps	1.3400 ppm	268.001 %	3.2 %	0.0 ppm
Y 224.306 {450} (Axial)		46.2104 %		1.4 %	0.6 %
Sc 361.384 {93} (Radial)		47.8359 %		3.7 %	1.8 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:10:40 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.0222 ppm	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	-3 cps	-0.0115 ppm	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	171 cps	0.0086 ppm	30.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,622 cps	0.1461 ppm	7.8 %	0.0 ppm
Be 313.042 {108} (Axial)	559 cps	0.0025 ppm	7.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	16 cps	0.0868 ppm	59.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	-6 cps	0.0017 ppm	2.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	12 cps	0.0019 ppm	89.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	913.2 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0006 ppm	138.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	154 cps	0.0150 ppm	3.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	7 cps	0.0375 ppm	58.1 %	0.0 ppm
Li 670.784 {50} (Radial)	83 cps	0.0090 ppm	23.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	49 cps	0.0011 ppm	35.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	8 cps	0.0043 ppm	16.8 %	0.0 ppm
Na 589.592 {57} (Radial)	348 cps	0.2667 ppm	7.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	4 cps	0.0012 ppm	106.6 %	0.0 ppm
K 766.490 {44} (Radial)	206 cps	0.6402 ppm	25.2 %	0.2 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0056 ppm	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	55 cps	0.0035 ppm	10.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0006 ppm	30.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	4 cps	0.0056 ppm	10.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0096 ppm	26.8 %	0.0 ppm
V 292.402 {115} (Axial)	45 cps	0.0046 ppm	22.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	24 cps	0.0036 ppm	6.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		42.5961 %	2.7 %	1.1 %
Sc 188.060 {479} (Axial)		38.2304 %	2.5 %	1.0 %
Mg 279.079 {121} (Radial)	-4 cps	-0.1474 ppm	41.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0056 ppm	71.6 %	0.0 ppm
Al 167.079 {502} (Axial)	4 cps	0.0049 ppm	9.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		38.3555 %	2.1 %	0.8 %
B 249.773 {135} (Radial)	8 cps	0.0386 ppm	17.7 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0384 ppm	56.1 %	0.0 ppm
Si 251.611 {134} (Radial)	3 cps	0.0453 ppm	84.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	-5 cps	-0.0075 ppm	25.6 %	0.0 ppm
Y 224.306 {450} (Axial)		38.0874 %	2.7 %	1.0 %
Sc 361.384 {93} (Radial)		37.8778 %	4.0 %	1.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 4:15:06 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	13 cps	0.0269 ppm	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	-3 cps	-0.0087 ppm	17.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	230 cps	0.0116 ppm	11.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,293 cps	0.1835 ppm	4.0 %	0.0 ppm
Be 313.042 {108} (Axial)	794 cps	0.0036 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	28 cps	0.1524 ppm	6.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	20 cps	0.0019 ppm	13.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0016 ppm	29.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0003 ppm	109.5 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0007 ppm	67.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	240 cps	0.0217 ppm	5.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0262 ppm	54.4 %	0.0 ppm
Li 670.784 {50} (Radial)	122 cps	0.0132 ppm	15.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	71 cps	0.0016 ppm	3.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	8 cps	0.0036 ppm	37.8 %	0.0 ppm
Na 589.592 {57} (Radial)	269 cps	0.2061 ppm	13.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	6 cps	0.0015 ppm	9.1 %	0.0 ppm
K 766.490 {44} (Radial)	218 cps	0.6760 ppm	27.3 %	0.2 ppm
Se 196.090 {472} (Axial)	-2 cps	-0.0088 ppm	108.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	63 cps	0.0048 ppm	25.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	20 cps	0.0008 ppm	7.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	8 cps	0.0080 ppm	6.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0095 ppm	66.3 %	0.0 ppm
V 292.402 {115} (Axial)	61 cps	0.0065 ppm	24.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	38 cps	0.0040 ppm	13.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		34.9022 %	1.0 %	0.3 %
Sc 188.060 {479} (Axial)		35.3528 %	1.2 %	0.4 %
Mg 279.079 {121} (Radial)	-2 cps	-0.0808 ppm	91.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0067 ppm	19.6 %	0.0 ppm
Al 167.079 {502} (Axial)	6 cps	0.0056 ppm	17.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		35.4043 %	1.2 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.0324 ppm	16.2 %	0.0 ppm
Al 396.152 {85} (Radial)	20 cps	0.0663 ppm	119.6 %	0.1 ppm
Si 251.611 {134} (Radial)	7 cps	0.1169 ppm	64.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	-6 cps	-0.0062 ppm	56.5 %	0.0 ppm
Y 224.306 {450} (Axial)		34.9043 %	1.1 %	0.4 %
Sc 361.384 {93} (Radial)		33.0128 %	3.0 %	1.0 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 5:19:34 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0266 ppm	N/A	N/A
As 189.042 {478} (Axial)	0 cps	-0.0076 ppm	N/A	N/A
Ba 455.403 {74} (Radial)	234 cps	0.0118 ppm	33.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,978 cps	0.2217 ppm	26.4 %	0.1 ppm
Be 313.042 {108} (Axial)	807 cps	0.0036 ppm	3.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	35 cps	0.1903 ppm	27.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	-31 cps	0.0021 ppm	N/A	N/A
Cr 267.716 {126} (Axial)	9 cps	0.0016 ppm	32.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0008 ppm	N/A	N/A
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	N/A	N/A
Cu 324.754 {104} (Axial)	224 cps	0.0207 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	7 cps	0.0401 ppm	9.8 %	0.0 ppm
Li 670.784 {50} (Radial)	137 cps	0.0148 ppm	39.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	65 cps	0.0015 ppm	11.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0018 ppm	N/A	N/A
Na 589.592 {57} (Radial)	396 cps	0.3035 ppm	34.7 %	0.1 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0010 ppm	N/A	N/A
K 766.490 {44} (Radial)	286 cps	0.8876 ppm	35.4 %	0.3 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	N/A	N/A
Ag 328.068 {103} (Axial)	65 cps	0.0051 ppm	43.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	41 cps	0.0017 ppm	56.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0060 ppm	N/A	N/A
Ti 334.941 {101} (Radial)	2 cps	0.0030 ppm	143.2 %	0.0 ppm
V 292.402 {115} (Axial)	58 cps	0.0065 ppm	16.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	16 cps	0.0041 ppm	N/A	N/A
Sc 357.253 {94} (Axial)		33.7759 %	3.5 %	1.2 %
Sc 188.060 {479} (Axial)		32.6492 %	2.5 %	0.8 %
Mg 279.079 {121} (Radial)	-5 cps	-0.1955 ppm	79.4 %	0.2 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0089 ppm	N/A	N/A
Al 167.079 {502} (Axial)	3 cps	0.0060 ppm	N/A	N/A
Sc 227.318 {448} (Axial)		32.7043 %	2.7 %	0.9 %
B 249.773 {135} (Radial)	14 cps	0.0620 ppm	43.2 %	0.0 ppm
Al 396.152 {85} (Radial)	22 cps	0.0731 ppm	12.2 %	0.0 ppm
Si 251.611 {134} (Radial)	6 cps	0.0903 ppm	16.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0089 ppm	N/A	N/A
Y 224.306 {450} (Axial)		33.0239 %	N/A	N/A
Sc 361.384 {93} (Radial)		28.9851 %	17.1 %	5.0 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 6:23:28 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.0268 ppm	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	-3 cps	-0.0127 ppm	24.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	133 cps	0.0088 ppm	40.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,893 cps	0.2352 ppm	5.9 %	0.0 ppm
Be 313.042 {108} (Axial)	510 cps	0.0041 ppm	N/A	N/A
Ca 315.887 {107} (Radial)	28 cps	0.2141 ppm	13.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	-4 cps	0.0022 ppm	4.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0021 ppm	N/A	N/A
Cr 205.560 {464} (Axial)	0 cps	-0.0002 ppm	318.6 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0007 ppm	150.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	98 cps	0.0242 ppm	N/A	N/A
Fe 259.940 {130} (Radial)	7 cps	0.0495 ppm	60.9 %	0.0 ppm
Li 670.784 {50} (Radial)	56 cps	0.0086 ppm	27.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	50 cps	0.0020 ppm	N/A	N/A
Mo 202.030 {467} (Axial)	10 cps	0.0058 ppm	43.1 %	0.0 ppm
Na 589.592 {57} (Radial)	268 cps	0.2571 ppm	2.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	5 cps	0.0018 ppm	5.0 %	0.0 ppm
K 766.490 {44} (Radial)	126 cps	0.5531 ppm	8.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	516.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	91 cps	0.0084 ppm	N/A	N/A
Sr 407.771 {83} (Radial)	35 cps	0.0017 ppm	13.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	5 cps	0.0070 ppm	42.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0065 ppm	39.6 %	0.0 ppm
V 292.402 {115} (Axial)	22 cps	0.0049 ppm	N/A	N/A
Zn 213.856 {457} (Axial)	36 cps	0.0054 ppm	5.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		34.5338 %	N/A	N/A
Sc 188.060 {479} (Axial)		31.1257 %	1.3 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0151 ppm	678.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0110 ppm	26.3 %	0.0 ppm
Al 167.079 {502} (Axial)	7 cps	0.0080 ppm	23.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		31.3951 %	1.6 %	0.5 %
B 249.773 {135} (Radial)	7 cps	0.0470 ppm	11.7 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0296 ppm	97.9 %	0.0 ppm
Si 251.611 {134} (Radial)	13 cps	0.2887 ppm	7.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0053 ppm	116.6 %	0.0 ppm
Y 224.306 {450} (Axial)		31.3950 %	1.4 %	0.5 %
Sc 361.384 {93} (Radial)		34.0067 %	3.3 %	1.1 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/29/2020 7:45:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0011 ppm	80.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	301.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	30 cps	0.0015 ppm	35.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	5 cps	0.0003 ppm	407.2 %	0.0 ppm
Be 313.042 {108} (Axial)	6 cps	0.0000 ppm	105.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0187 ppm	54.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	374.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	195.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	175.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	123.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	-7 cps	-0.0004 ppm	39.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0053 ppm	103.7 %	0.0 ppm
Li 670.784 {50} (Radial)	-8 cps	-0.0009 ppm	138.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	13.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	27.7 %	0.0 ppm
Na 589.592 {57} (Radial)	65 cps	0.0499 ppm	31.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	199.3 %	0.0 ppm
K 766.490 {44} (Radial)	-7 cps	-0.0231 ppm	110.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	7,851.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	30.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	43.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	439.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0006 ppm	322.1 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0003 ppm	35.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	46.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.1588 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		99.4722 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	0 cps	-0.0068 ppm	302.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	1,181.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	73.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.3496 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	2 cps	0.0077 ppm	59.1 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0082 ppm	184.3 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0089 ppm	146.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0007 ppm	20.3 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4509 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.4562 %	0.1 %	0.1 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/29/2020 8:45:27 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0005 ppm	92.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	216.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	29 cps	0.0015 ppm	17.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	-5 cps	-0.0003 ppm	523.2 %	0.0 ppm
Be 313.042 {108} (Axial)	19 cps	0.0001 ppm	57.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0228 ppm	31.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	1,047.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	243.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	126.7 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	140.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	-4 cps	-0.0002 ppm	13.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0049 ppm	133.9 %	0.0 ppm
Li 670.784 {50} (Radial)	-1 cps	-0.0001 ppm	1,553.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	27.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0010 ppm	18.7 %	0.0 ppm
Na 589.592 {57} (Radial)	125 cps	0.0961 ppm	2.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	46.8 %	0.0 ppm
K 766.490 {44} (Radial)	14 cps	0.0430 ppm	68.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0033 ppm	117.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	75.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0003 ppm	33.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	115.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0035 ppm	108.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,983.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	48.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.8147 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		99.3439 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0457 ppm	22.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	382.4 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	57.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2231 %	1.0 %	1.0 %
B 249.773 {135} (Radial)	-1 cps	-0.0025 ppm	297.9 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0003 ppm	495.7 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0230 ppm	48.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	110.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0742 %	1.0 %	1.0 %
Sc 361.384 {93} (Radial)		99.8090 %	0.3 %	0.3 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/29/2020 9:51:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0003 ppm	273.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	88.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	20 cps	0.0010 ppm	35.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	15 cps	0.0008 ppm	136.3 %	0.0 ppm
Be 313.042 {108} (Axial)	18 cps	0.0001 ppm	69.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0196 ppm	19.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	1,013.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	114.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	431.3 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	344.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	-1 cps	-0.0001 ppm	38.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0027 ppm	71.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-9 cps	-0.0009 ppm	54.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	28.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	27.6 %	0.0 ppm
Na 589.592 {57} (Radial)	90 cps	0.0692 ppm	4.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	181.7 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0014 ppm	3,101.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0012 ppm	236.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	12 cps	0.0012 ppm	56.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	64.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	1,826.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	80.3 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	260.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	17.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.5082 %	0.6 %	0.7 %
Sc 188.060 {479} (Axial)		98.6554 %	0.9 %	0.9 %
Mg 279.079 {121} (Radial)	0 cps	-0.0050 ppm	115.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0004 ppm	260.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	59.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4217 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	-2 cps	-0.0078 ppm	46.3 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0155 ppm	45.2 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0091 ppm	232.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	146.0 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1549 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		97.4343 %	1.2 %	1.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/29/2020 10:51:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0015 ppm	133.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	730.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	23 cps	0.0011 ppm	42.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	99 cps	0.0055 ppm	7.0 %	0.0 ppm
Be 313.042 {108} (Axial)	49 cps	0.0001 ppm	8.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0202 ppm	68.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	119.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	351.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	124.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	188.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	16 cps	0.0008 ppm	41.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0029 ppm	43.9 %	0.0 ppm
Li 670.784 {50} (Radial)	-10 cps	-0.0011 ppm	94.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	28.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0010 ppm	16.9 %	0.0 ppm
Na 589.592 {57} (Radial)	61 cps	0.0464 ppm	10.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	148.8 %	0.0 ppm
K 766.490 {44} (Radial)	5 cps	0.0142 ppm	90.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0019 ppm	105.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	30.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0003 ppm	17.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0005 ppm	61.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0010 ppm	61.4 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	128.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	3 cps	0.0003 ppm	36.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.3029 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		96.2372 %	1.0 %	1.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0074 ppm	372.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	202.1 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	21.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.8949 %	1.0 %	1.0 %
B 249.773 {135} (Radial)	-2 cps	-0.0099 ppm	68.7 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0065 ppm	123.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0079 ppm	142.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0008 ppm	81.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6379 %	1.0 %	1.0 %
Sc 361.384 {93} (Radial)		94.9779 %	0.4 %	0.4 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/29/2020 11:57:04 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0023 ppm	22.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0001 ppm	819.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	12 cps	0.0006 ppm	54.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	97 cps	0.0054 ppm	12.7 %	0.0 ppm
Be 313.042 {108} (Axial)	73 cps	0.0002 ppm	6.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0095 ppm	57.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	17.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	138.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	9,930.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	127.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	18 cps	0.0010 ppm	72.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0080 ppm	3.9 %	0.0 ppm
Li 670.784 {50} (Radial)	13 cps	0.0014 ppm	82.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	17 cps	0.0003 ppm	8.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	27.1 %	0.0 ppm
Na 589.592 {57} (Radial)	41 cps	0.0313 ppm	48.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	17.4 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0591 ppm	60.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0004 ppm	177.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0014 ppm	67.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0003 ppm	17.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	91.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0011 ppm	216.9 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	364.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	3 cps	0.0003 ppm	28.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.1149 %	2.7 %	2.6 %
Sc 188.060 {479} (Axial)		92.2555 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0209 ppm	201.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0021 ppm	68.9 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0008 ppm	29.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.0042 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	1 cps	0.0040 ppm	200.9 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0202 ppm	82.4 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0034 ppm	459.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0005 ppm	314.7 %	0.0 ppm
Y 224.306 {450} (Axial)		91.5913 %	0.6 %	0.5 %
Sc 361.384 {93} (Radial)		90.5963 %	0.3 %	0.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 1:02:17 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0077 ppm	35.7 %	0.0 ppm
As 189.042 {478} (Axial)	-1 cps	-0.0040 ppm	55.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	95 cps	0.0048 ppm	13.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,053 cps	0.0587 ppm	3.7 %	0.0 ppm
Be 313.042 {108} (Axial)	399 cps	0.0012 ppm	10.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	12 cps	0.0653 ppm	30.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0008 ppm	27.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	8 cps	0.0010 ppm	31.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	367.1 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0007 ppm	56.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	129 cps	0.0069 ppm	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0154 ppm	25.8 %	0.0 ppm
Li 670.784 {50} (Radial)	8 cps	0.0008 ppm	41.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	46 cps	0.0007 ppm	10.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0023 ppm	32.8 %	0.0 ppm
Na 589.592 {57} (Radial)	175 cps	0.1341 ppm	25.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0009 ppm	64.0 %	0.0 ppm
K 766.490 {44} (Radial)	67 cps	0.2086 ppm	22.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0019 ppm	222.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	26 cps	0.0026 ppm	9.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	19 cps	0.0008 ppm	10.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0018 ppm	70.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0039 ppm	154.4 %	0.0 ppm
V 292.402 {115} (Axial)	29 cps	0.0021 ppm	18.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	15 cps	0.0015 ppm	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		65.3289 %	2.7 %	1.8 %
Sc 188.060 {479} (Axial)		63.0597 %	3.1 %	2.0 %
Mg 279.079 {121} (Radial)	-2 cps	-0.0772 ppm	32.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	75.2 %	0.0 ppm
Al 167.079 {502} (Axial)	3 cps	0.0024 ppm	21.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		63.0538 %	3.2 %	2.0 %
B 249.773 {135} (Radial)	3 cps	0.0127 ppm	55.4 %	0.0 ppm
Al 396.152 {85} (Radial)	10 cps	0.0327 ppm	88.3 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0323 ppm	60.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	-2 cps	-0.0016 ppm	135.4 %	0.0 ppm
Y 224.306 {450} (Axial)		62.3420 %	3.2 %	2.0 %
Sc 361.384 {93} (Radial)		60.8729 %	1.3 %	0.8 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 2:06:50 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.0141 ppm	18.7 %	0.0 ppm
As 189.042 {478} (Axial)	-2 cps	-0.0046 ppm	34.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	133 cps	0.0067 ppm	11.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,868 cps	0.1041 ppm	13.3 %	0.0 ppm
Be 313.042 {108} (Axial)	270 cps	0.0022 ppm	N/A	N/A
Ca 315.887 {107} (Radial)	17 cps	0.0910 ppm	15.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	12 cps	0.0011 ppm	9.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0005 ppm	N/A	N/A
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	452.3 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	147.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	34 cps	0.0137 ppm	N/A	N/A
Fe 259.940 {130} (Radial)	5 cps	0.0277 ppm	5.0 %	0.0 ppm
Li 670.784 {50} (Radial)	22 cps	0.0024 ppm	31.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	32 cps	0.0012 ppm	N/A	N/A
Mo 202.030 {467} (Axial)	7 cps	0.0030 ppm	34.6 %	0.0 ppm
Na 589.592 {57} (Radial)	166 cps	0.1269 ppm	20.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0008 ppm	99.1 %	0.0 ppm
K 766.490 {44} (Radial)	119 cps	0.3684 ppm	23.1 %	0.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0046 ppm	70.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	66 cps	0.0048 ppm	N/A	N/A
Sr 407.771 {83} (Radial)	20 cps	0.0008 ppm	59.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	4 cps	0.0042 ppm	28.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	10 cps	0.0118 ppm	26.5 %	0.0 ppm
V 292.402 {115} (Axial)	16 cps	0.0032 ppm	N/A	N/A
Zn 213.856 {457} (Axial)	23 cps	0.0024 ppm	12.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		47.4124 %	N/A	N/A
Sc 188.060 {479} (Axial)		48.5782 %	2.1 %	1.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0080 ppm	574.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0053 ppm	8.0 %	0.0 ppm
Al 167.079 {502} (Axial)	4 cps	0.0034 ppm	21.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		48.5417 %	2.0 %	1.0 %
B 249.773 {135} (Radial)	2 cps	0.0072 ppm	51.8 %	0.0 ppm
Al 396.152 {85} (Radial)	22 cps	0.0724 ppm	38.0 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0314 ppm	35.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0030 ppm	60.4 %	0.0 ppm
Y 224.306 {450} (Axial)		47.8531 %	1.8 %	0.9 %
Sc 361.384 {93} (Radial)		46.1035 %	5.3 %	2.4 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-05A

Sample type: UNKNOWN Analysis started at: 11/29/2020 8:50:36 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	1.3773 ppm	12.6 %	0.2 ppm
As 189.042 {478} (Axial)	2 cps	0.4782 ppm	15.7 %	0.1 ppm
Ba 455.403 {74} (Radial)	179 cps	0.8990 ppm	8.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	182 cps	1.0160 ppm	39.4 %	0.4 ppm
Be 313.042 {108} (Axial)	-2 cps	-0.0005 ppm	345.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	436 cps	235.2992 ppm	5.0 %	11.7 ppm
Cd 228.802 {447} (Axial)	8 cps	0.0778 ppm	11.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	10 cps	0.1207 ppm	41.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.1036 ppm	15.9 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0501 ppm	6.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,263 cps	6.7665 ppm	1.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	360 cps	207.0323 ppm	4.1 %	8.4 ppm
Li 670.784 {50} (Radial)	-40 cps	-0.4325 ppm	13.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	1,894 cps	3.1068 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0396 ppm	52.5 %	0.0 ppm
Na 589.592 {57} (Radial)	54 cps	4.1653 ppm	31.7 %	1.3 ppm
Ni 231.604 {445} (Axial)	17 cps	0.4464 ppm	5.8 %	0.0 ppm
K 766.490 {44} (Radial)	10 cps	3.0829 ppm	92.6 %	2.9 ppm
Se 196.090 {472} (Axial)	0 cps	-0.2034 ppm	94.3 %	0.2 ppm
Ag 328.068 {103} (Axial)	61 cps	0.6067 ppm	5.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	91 cps	0.3784 ppm	3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	9 cps	0.9757 ppm	6.1 %	0.1 ppm
Ti 334.941 {101} (Radial)	22 cps	2.6959 ppm	13.5 %	0.4 ppm
V 292.402 {115} (Axial)	24 cps	0.1744 ppm	22.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,590 cps	78.6894 ppm	0.8 %	0.6 ppm
Sc 357.253 {94} (Axial)		105.4264 %	0.4 %	0.5 %
Sc 188.060 {479} (Axial)		99.1008 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	26 cps	98.0951 ppm	1.8 %	1.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0884 ppm	53.7 %	0.0 ppm
Al 167.079 {502} (Axial)	627 cps	55.6501 ppm	0.7 %	0.4 ppm
Sc 227.318 {448} (Axial)		99.1174 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-1 cps	-0.5948 ppm	60.9 %	0.4 ppm
Al 396.152 {85} (Radial)	161 cps	53.0542 ppm	4.5 %	2.4 ppm
Si 251.611 {134} (Radial)	13 cps	21.9193 ppm	6.6 %	1.5 ppm
Pb 220.353 {453} (Axial)	728 cps	77.5185 ppm	0.8 %	0.6 ppm
Y 224.306 {450} (Axial)		100.0030 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		98.1973 %	3.0 %	3.0 %

Simple Sample Report

11/30/2020 11:20:00 AM

20111574-11A

Sample type: UNKNOWN Analysis started at: 11/29/2020 8:55:41 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	1.3233 ppm	20.0 %	0.3 ppm
As 189.042 {478} (Axial)	1 cps	0.1912 ppm	67.3 %	0.1 ppm
Ba 455.403 {74} (Radial)	170 cps	0.8544 ppm	5.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	132 cps	0.7357 ppm	14.2 %	0.1 ppm
Be 313.042 {108} (Axial)	19 cps	0.0058 ppm	176.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	768 cps	414.4117 ppm	1.1 %	4.7 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0229 ppm	37.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	17 cps	0.2005 ppm	17.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	10 cps	0.1975 ppm	5.0 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0531 ppm	18.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	223 cps	1.1949 ppm	13.9 %	0.2 ppm
Fe 259.940 {130} (Radial)	354 cps	203.9295 ppm	0.6 %	1.3 ppm
Li 670.784 {50} (Radial)	-27 cps	-0.2932 ppm	8.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,244 cps	5.3231 ppm	4.1 %	0.2 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0264 ppm	97.6 %	0.0 ppm
Na 589.592 {57} (Radial)	38 cps	2.8998 ppm	19.9 %	0.6 ppm
Ni 231.604 {445} (Axial)	7 cps	0.1828 ppm	9.4 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	-0.1493 ppm	2,358.1 %	3.5 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.2946 ppm	19.9 %	0.1 ppm
Ag 328.068 {103} (Axial)	17 cps	0.1636 ppm	82.8 %	0.1 ppm
Sr 407.771 {83} (Radial)	82 cps	0.3423 ppm	4.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	4 cps	0.4647 ppm	4.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	10 cps	1.1627 ppm	42.7 %	0.5 ppm
V 292.402 {115} (Axial)	17 cps	0.1215 ppm	27.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,157 cps	22.3657 ppm	0.6 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.8961 %	6.0 %	6.1 %
Sc 188.060 {479} (Axial)		97.9990 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	30 cps	112.0032 ppm	3.5 %	3.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.1457 ppm	87.8 %	0.1 ppm
Al 167.079 {502} (Axial)	497 cps	44.0593 ppm	0.8 %	0.4 ppm
Sc 227.318 {448} (Axial)		97.8501 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-2 cps	-0.8503 ppm	39.6 %	0.3 ppm
Al 396.152 {85} (Radial)	125 cps	41.1911 ppm	2.0 %	0.8 ppm
Si 251.611 {134} (Radial)	10 cps	16.8715 ppm	2.0 %	0.3 ppm
Pb 220.353 {453} (Axial)	549 cps	58.4270 ppm	0.6 %	0.4 ppm
Y 224.306 {450} (Axial)		98.7759 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.1194 %	1.4 %	1.4 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-15A

Sample type: UNKNOWN Analysis started at: 11/29/2020 9:00:45 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	25 cps	5.1270 ppm	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	22 cps	6.6156 ppm	0.8 %	0.1 ppm
Ba 455.403 {74} (Radial)	210 cps	1.0547 ppm	5.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	218 cps	1.2168 ppm	25.4 %	0.3 ppm
Be 313.042 {108} (Axial)	-15 cps	-0.0045 ppm	61.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	381 cps	205.2859 ppm	3.6 %	7.4 ppm
Cd 228.802 {447} (Axial)	39 cps	0.3651 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	13 cps	0.1554 ppm	11.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	9 cps	0.1766 ppm	6.5 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0371 ppm	38.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	292 cps	1.5659 ppm	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	364 cps	209.6060 ppm	3.7 %	7.8 ppm
Li 670.784 {50} (Radial)	-42 cps	-0.4537 ppm	16.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	3,944 cps	6.4702 ppm	1.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0331 ppm	55.4 %	0.0 ppm
Na 589.592 {57} (Radial)	46 cps	3.5424 ppm	55.7 %	2.0 ppm
Ni 231.604 {445} (Axial)	7 cps	0.1945 ppm	4.7 %	0.0 ppm
K 766.490 {44} (Radial)	-1 cps	-0.3863 ppm	742.0 %	2.9 ppm
Se 196.090 {472} (Axial)	0 cps	-0.1324 ppm	286.8 %	0.4 ppm
Ag 328.068 {103} (Axial)	14 cps	0.1390 ppm	35.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	55 cps	0.2291 ppm	0.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	35 cps	3.7168 ppm	1.6 %	0.1 ppm
Ti 334.941 {101} (Radial)	13 cps	1.5746 ppm	6.2 %	0.1 ppm
V 292.402 {115} (Axial)	22 cps	0.1608 ppm	23.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,880 cps	60.9694 ppm	0.6 %	0.4 ppm
Sc 357.253 {94} (Axial)		104.6843 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		98.4506 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	23 cps	87.0031 ppm	4.3 %	3.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0259 ppm	381.9 %	0.1 ppm
Al 167.079 {502} (Axial)	757 cps	67.1611 ppm	0.7 %	0.4 ppm
Sc 227.318 {448} (Axial)		98.3193 %	1.2 %	1.1 %
B 249.773 {135} (Radial)	-2 cps	-0.7132 ppm	106.7 %	0.8 ppm
Al 396.152 {85} (Radial)	193 cps	63.7305 ppm	4.2 %	2.7 ppm
Si 251.611 {134} (Radial)	17 cps	27.6771 ppm	6.0 %	1.7 ppm
Pb 220.353 {453} (Axial)	1,223 cps	130.2868 ppm	0.5 %	0.6 ppm
Y 224.306 {450} (Axial)		99.4336 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		97.4004 %	1.9 %	1.9 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-17A

Sample type: UNKNOWN Analysis started at: 11/29/2020 9:05:50 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	35 cps	7.2872 ppm	1.5 %	0.1 ppm
As 189.042 {478} (Axial)	26 cps	7.8070 ppm	1.4 %	0.1 ppm
Ba 455.403 {74} (Radial)	193 cps	0.9700 ppm	6.3 %	0.1 ppm
Ba 493.409 {68} (Radial)	163 cps	0.9094 ppm	10.6 %	0.1 ppm
Be 313.042 {108} (Axial)	-6 cps	-0.0017 ppm	100.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	480 cps	258.9503 ppm	1.7 %	4.5 ppm
Cd 228.802 {447} (Axial)	33 cps	0.3112 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	20 cps	0.2468 ppm	11.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	12 cps	0.2257 ppm	7.0 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0482 ppm	41.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	570 cps	3.0535 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	431 cps	248.3491 ppm	1.4 %	3.5 ppm
Li 670.784 {50} (Radial)	-28 cps	-0.3078 ppm	10.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,130 cps	6.7760 ppm	0.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0071 ppm	371.1 %	0.0 ppm
Na 589.592 {57} (Radial)	37 cps	2.8547 ppm	30.1 %	0.9 ppm
Ni 231.604 {445} (Axial)	7 cps	0.1949 ppm	3.0 %	0.0 ppm
K 766.490 {44} (Radial)	5 cps	1.5174 ppm	379.2 %	5.8 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.3711 ppm	47.2 %	0.2 ppm
Ag 328.068 {103} (Axial)	10 cps	0.1020 ppm	32.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	79 cps	0.3294 ppm	5.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	17 cps	1.7512 ppm	1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	15 cps	1.7614 ppm	12.4 %	0.2 ppm
V 292.402 {115} (Axial)	15 cps	0.1105 ppm	6.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,976 cps	82.6957 ppm	1.1 %	0.9 ppm
Sc 357.253 {94} (Axial)		104.5666 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		98.3675 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	27 cps	99.9614 ppm	2.9 %	2.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0456 ppm	12.0 %	0.0 ppm
Al 167.079 {502} (Axial)	667 cps	59.1198 ppm	1.4 %	0.8 ppm
Sc 227.318 {448} (Axial)		98.2854 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	-2 cps	-0.7516 ppm	9.1 %	0.1 ppm
Al 396.152 {85} (Radial)	173 cps	57.2608 ppm	3.5 %	2.0 ppm
Si 251.611 {134} (Radial)	24 cps	38.5206 ppm	1.2 %	0.5 ppm
Pb 220.353 {453} (Axial)	984 cps	104.7823 ppm	1.1 %	1.1 ppm
Y 224.306 {450} (Axial)		99.4091 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		98.9742 %	1.0 %	0.9 %

Simple Sample Report

11/30/2020 11:20:00 AM

20111574-18A

Sample type: UNKNOWN Analysis started at: 11/29/2020 9:10:54 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	57 cps	11.9082 ppm	1.2 %	0.1 ppm
As 189.042 {478} (Axial)	47 cps	14.1135 ppm	0.6 %	0.1 ppm
Ba 455.403 {74} (Radial)	317 cps	1.5921 ppm	3.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	335 cps	1.8675 ppm	25.2 %	0.5 ppm
Be 313.042 {108} (Axial)	4 cps	0.0011 ppm	119.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	601 cps	324.4174 ppm	2.8 %	9.1 ppm
Cd 228.802 {447} (Axial)	88 cps	0.8202 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	25 cps	0.3027 ppm	10.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	15 cps	0.2953 ppm	5.9 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0555 ppm	31.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	422 cps	2.2611 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	627 cps	360.6993 ppm	2.9 %	10.5 ppm
Li 670.784 {50} (Radial)	-24 cps	-0.2558 ppm	25.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	5,715 cps	9.3769 ppm	0.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0227 ppm	98.6 %	0.0 ppm
Na 589.592 {57} (Radial)	77 cps	5.8767 ppm	20.7 %	1.2 ppm
Ni 231.604 {445} (Axial)	9 cps	0.2374 ppm	9.7 %	0.0 ppm
K 766.490 {44} (Radial)	7 cps	2.0197 ppm	32.0 %	0.6 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.3923 ppm	111.6 %	0.4 ppm
Ag 328.068 {103} (Axial)	14 cps	0.1361 ppm	20.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	117 cps	0.4888 ppm	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	34 cps	3.5622 ppm	1.6 %	0.1 ppm
Ti 334.941 {101} (Radial)	20 cps	2.3702 ppm	7.6 %	0.2 ppm
V 292.402 {115} (Axial)	27 cps	0.1953 ppm	8.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,730 cps	111.2475 ppm	0.9 %	1.0 ppm
Sc 357.253 {94} (Axial)		104.2140 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		98.3433 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	32 cps	116.9906 ppm	7.7 %	9.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0235 ppm	538.7 %	0.1 ppm
Al 167.079 {502} (Axial)	926 cps	82.1081 ppm	0.9 %	0.8 ppm
Sc 227.318 {448} (Axial)		98.3296 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	-1 cps	-0.5404 ppm	114.9 %	0.6 ppm
Al 396.152 {85} (Radial)	235 cps	77.6389 ppm	2.7 %	2.1 ppm
Si 251.611 {134} (Radial)	28 cps	44.8732 ppm	7.9 %	3.6 ppm
Pb 220.353 {453} (Axial)	1,666 cps	177.4832 ppm	1.0 %	1.7 ppm
Y 224.306 {450} (Axial)		99.1577 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.5953 %	2.7 %	2.6 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-23A

Sample type: UNKNOWN Analysis started at: 11/29/2020 9:15:58 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	14 cps	3.0170 ppm	3.6 %	0.1 ppm
As 189.042 {478} (Axial)	14 cps	4.0872 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	88 cps	0.4410 ppm	2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	104 cps	0.5791 ppm	42.4 %	0.2 ppm
Be 313.042 {108} (Axial)	29 cps	0.0088 ppm	105.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	414 cps	223.4941 ppm	4.6 %	10.4 ppm
Cd 228.802 {447} (Axial)	35 cps	0.3222 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	12 cps	0.1394 ppm	34.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	8 cps	0.1516 ppm	5.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0299 ppm	43.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	173 cps	0.9258 ppm	20.0 %	0.2 ppm
Fe 259.940 {130} (Radial)	239 cps	137.7276 ppm	5.2 %	7.1 ppm
Li 670.784 {50} (Radial)	-45 cps	-0.4863 ppm	31.5 %	0.2 ppm
Mn 257.610 {131} (Axial)	3,096 cps	5.0796 ppm	6.3 %	0.3 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0077 ppm	74.4 %	0.0 ppm
Na 589.592 {57} (Radial)	35 cps	2.6649 ppm	41.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	6 cps	0.1602 ppm	20.2 %	0.0 ppm
K 766.490 {44} (Radial)	16 cps	4.9799 ppm	22.3 %	1.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.5399 ppm	38.2 %	0.2 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0710 ppm	94.1 %	0.1 ppm
Sr 407.771 {83} (Radial)	41 cps	0.1691 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	15 cps	1.5539 ppm	1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	10 cps	1.2474 ppm	26.2 %	0.3 ppm
V 292.402 {115} (Axial)	20 cps	0.1444 ppm	13.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,419 cps	14.7159 ppm	0.5 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.4232 %	5.0 %	4.9 %
Sc 188.060 {479} (Axial)		99.4092 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	26 cps	94.9623 ppm	4.4 %	4.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0173 ppm	542.0 %	0.1 ppm
Al 167.079 {502} (Axial)	494 cps	43.8581 ppm	0.7 %	0.3 ppm
Sc 227.318 {448} (Axial)		99.3001 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	-2 cps	-0.9451 ppm	58.5 %	0.6 ppm
Al 396.152 {85} (Radial)	125 cps	41.3696 ppm	6.0 %	2.5 ppm
Si 251.611 {134} (Radial)	12 cps	19.6150 ppm	4.0 %	0.8 ppm
Pb 220.353 {453} (Axial)	607 cps	64.6609 ppm	0.5 %	0.3 ppm
Y 224.306 {450} (Axial)		100.1984 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.4757 %	2.8 %	2.7 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-25A

Sample type: UNKNOWN Analysis started at: 11/29/2020 9:21:02 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	30 cps	6.2654 ppm	3.6 %	0.2 ppm
As 189.042 {478} (Axial)	9 cps	2.7334 ppm	4.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	233 cps	1.1690 ppm	3.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	190 cps	1.0614 ppm	8.8 %	0.1 ppm
Be 313.042 {108} (Axial)	-5 cps	-0.0015 ppm	51.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	357 cps	192.4797 ppm	2.0 %	3.9 ppm
Cd 228.802 {447} (Axial)	24 cps	0.2209 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	22 cps	0.2633 ppm	2.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	14 cps	0.2662 ppm	10.4 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0614 ppm	16.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,199 cps	6.4241 ppm	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	561 cps	322.7987 ppm	2.2 %	7.2 ppm
Li 670.784 {50} (Radial)	-30 cps	-0.3266 ppm	31.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	4,153 cps	6.8138 ppm	2.1 %	0.1 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0141 ppm	125.5 %	0.0 ppm
Na 589.592 {57} (Radial)	53 cps	4.1000 ppm	20.9 %	0.9 ppm
Ni 231.604 {445} (Axial)	43 cps	1.1130 ppm	3.7 %	0.0 ppm
K 766.490 {44} (Radial)	5 cps	1.6096 ppm	111.3 %	1.8 ppm
Se 196.090 {472} (Axial)	0 cps	-0.2026 ppm	39.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	11 cps	0.1133 ppm	43.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	60 cps	0.2515 ppm	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	31 cps	3.2958 ppm	3.1 %	0.1 ppm
Ti 334.941 {101} (Radial)	15 cps	1.8409 ppm	17.1 %	0.3 ppm
V 292.402 {115} (Axial)	26 cps	0.1852 ppm	21.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,170 cps	74.3368 ppm	2.5 %	1.9 ppm
Sc 357.253 {94} (Axial)		104.9220 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		99.0505 %	1.8 %	1.7 %
Mg 279.079 {121} (Radial)	19 cps	72.1101 ppm	5.0 %	3.6 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0066 ppm	1,229.8 %	0.1 ppm
Al 167.079 {502} (Axial)	810 cps	71.8191 ppm	2.7 %	2.0 ppm
Sc 227.318 {448} (Axial)		98.8562 %	1.7 %	1.7 %
B 249.773 {135} (Radial)	-3 cps	-1.1941 ppm	44.8 %	0.5 ppm
Al 396.152 {85} (Radial)	198 cps	65.5788 ppm	5.5 %	3.6 ppm
Si 251.611 {134} (Radial)	19 cps	30.3785 ppm	2.7 %	0.8 ppm
Pb 220.353 {453} (Axial)	1,151 cps	122.6470 ppm	2.5 %	3.0 ppm
Y 224.306 {450} (Axial)		99.9068 %	1.4 %	1.4 %
Sc 361.384 {93} (Radial)		98.9522 %	0.5 %	0.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-51A

Sample type: UNKNOWN Analysis started at: 11/29/2020 10:21:05 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	25 cps	5.3008 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	1.1828 ppm	7.8 %	0.1 ppm
Ba 455.403 {74} (Radial)	147 cps	0.7405 ppm	7.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	198 cps	1.1025 ppm	27.8 %	0.3 ppm
Be 313.042 {108} (Axial)	-1 cps	-0.0004 ppm	241.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	444 cps	239.4909 ppm	2.1 %	5.1 ppm
Cd 228.802 {447} (Axial)	17 cps	0.1545 ppm	3.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0781 ppm	86.2 %	0.1 ppm
Cr 205.560 {464} (Axial)	6 cps	0.1072 ppm	17.2 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0453 ppm	13.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,240 cps	11.9981 ppm	2.3 %	0.3 ppm
Fe 259.940 {130} (Radial)	236 cps	135.6961 ppm	1.9 %	2.6 ppm
Li 670.784 {50} (Radial)	-50 cps	-0.5396 ppm	4.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,932 cps	3.1704 ppm	2.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0155 ppm	120.6 %	0.0 ppm
Na 589.592 {57} (Radial)	43 cps	3.3002 ppm	19.1 %	0.6 ppm
Ni 231.604 {445} (Axial)	9 cps	0.2244 ppm	4.3 %	0.0 ppm
K 766.490 {44} (Radial)	-29 cps	-9.0055 ppm	18.9 %	1.7 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.5888 ppm	31.3 %	0.2 ppm
Ag 328.068 {103} (Axial)	54 cps	0.5315 ppm	15.2 %	0.1 ppm
Sr 407.771 {83} (Radial)	57 cps	0.2365 ppm	6.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	21 cps	2.1831 ppm	1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	14 cps	1.7389 ppm	10.0 %	0.2 ppm
V 292.402 {115} (Axial)	17 cps	0.1227 ppm	35.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	41,769 cps	433.0637 ppm	2.3 %	10.0 ppm
Sc 357.253 {94} (Axial)		103.6726 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		97.7650 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	30 cps	113.0933 ppm	3.6 %	4.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.1234 ppm	51.7 %	0.1 ppm
Al 167.079 {502} (Axial)	334 cps	29.6178 ppm	2.5 %	0.7 ppm
Sc 227.318 {448} (Axial)		97.6590 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	-1 cps	-0.4610 ppm	128.6 %	0.6 ppm
Al 396.152 {85} (Radial)	84 cps	27.7307 ppm	8.8 %	2.4 ppm
Si 251.611 {134} (Radial)	12 cps	19.0522 ppm	11.1 %	2.1 ppm
Pb 220.353 {453} (Axial)	1,559 cps	166.1018 ppm	2.2 %	3.7 ppm
Y 224.306 {450} (Axial)		98.5973 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		96.6729 %	1.0 %	1.0 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-56A

Sample type: UNKNOWN Analysis started at: 11/29/2020 10:26:09 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.9491 ppm	17.5 %	0.2 ppm
As 189.042 {478} (Axial)	1 cps	0.3914 ppm	32.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	141 cps	0.7069 ppm	6.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	165 cps	0.9213 ppm	49.7 %	0.5 ppm
Be 313.042 {108} (Axial)	-6 cps	-0.0018 ppm	24.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	552 cps	298.0113 ppm	4.1 %	12.1 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0391 ppm	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	11 cps	0.1311 ppm	29.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	8 cps	0.1490 ppm	8.7 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0339 ppm	30.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	432 cps	2.3148 ppm	4.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	336 cps	193.2618 ppm	3.9 %	7.5 ppm
Li 670.784 {50} (Radial)	-44 cps	-0.4726 ppm	13.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	2,026 cps	3.3247 ppm	2.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0496 ppm	45.2 %	0.0 ppm
Na 589.592 {57} (Radial)	16 cps	1.1916 ppm	33.1 %	0.4 ppm
Ni 231.604 {445} (Axial)	9 cps	0.2456 ppm	8.8 %	0.0 ppm
K 766.490 {44} (Radial)	-8 cps	-2.6196 ppm	220.0 %	5.8 ppm
Se 196.090 {472} (Axial)	0 cps	-0.1503 ppm	307.1 %	0.5 ppm
Ag 328.068 {103} (Axial)	43 cps	0.4232 ppm	11.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	83 cps	0.3465 ppm	6.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	7 cps	0.7025 ppm	7.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	14 cps	1.6826 ppm	18.6 %	0.3 ppm
V 292.402 {115} (Axial)	17 cps	0.1222 ppm	11.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,099 cps	115.0705 ppm	2.0 %	2.3 ppm
Sc 357.253 {94} (Axial)		103.9265 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		97.2643 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	27 cps	99.5759 ppm	4.9 %	4.9 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0531 ppm	234.2 %	0.1 ppm
Al 167.079 {502} (Axial)	477 cps	42.2841 ppm	2.0 %	0.9 ppm
Sc 227.318 {448} (Axial)		97.0690 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	-2 cps	-1.0336 ppm	54.4 %	0.6 ppm
Al 396.152 {85} (Radial)	126 cps	41.6622 ppm	5.8 %	2.4 ppm
Si 251.611 {134} (Radial)	11 cps	18.4848 ppm	3.2 %	0.6 ppm
Pb 220.353 {453} (Axial)	1,215 cps	129.4371 ppm	1.9 %	2.5 ppm
Y 224.306 {450} (Axial)		97.9926 %	1.0 %	1.0 %
Sc 361.384 {93} (Radial)		94.4696 %	3.5 %	3.3 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-59ASD

Sample type: UNKNOWN Analysis started at: 11/29/2020 10:41:19 PM

Standard DF: 50

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.2021 ppm	10.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0865 ppm	52.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	84 cps	0.2108 ppm	3.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	134 cps	0.3739 ppm	16.2 %	0.1 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	2,339.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,247 cps	336.2066 ppm	3.2 %	10.6 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0157 ppm	32.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0516 ppm	45.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	7 cps	0.0678 ppm	4.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0279 ppm	29.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	213 cps	0.5697 ppm	3.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	255 cps	73.4345 ppm	1.4 %	1.0 ppm
Li 670.784 {50} (Radial)	-22 cps	-0.1177 ppm	129.0 %	0.2 ppm
Mn 257.610 {131} (Axial)	2,587 cps	2.1221 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0007 ppm	2,100.7 %	0.0 ppm
Na 589.592 {57} (Radial)	8 cps	0.3237 ppm	168.7 %	0.5 ppm
Ni 231.604 {445} (Axial)	5 cps	0.0713 ppm	8.4 %	0.0 ppm
K 766.490 {44} (Radial)	22 cps	3.3882 ppm	42.7 %	1.4 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.1806 ppm	134.6 %	0.2 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0536 ppm	48.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	77 cps	0.1597 ppm	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	5 cps	0.2778 ppm	2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	15 cps	0.9243 ppm	19.7 %	0.2 ppm
V 292.402 {115} (Axial)	16 cps	0.0586 ppm	14.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,045 cps	15.7852 ppm	1.7 %	0.3 ppm
Sc 357.253 {94} (Axial)		101.3800 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		95.8244 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	82 cps	151.3121 ppm	2.8 %	4.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0197 ppm	27.5 %	0.0 ppm
Al 167.079 {502} (Axial)	547 cps	24.2709 ppm	1.7 %	0.4 ppm
Sc 227.318 {448} (Axial)		95.7703 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	-3 cps	-0.6384 ppm	32.7 %	0.2 ppm
Al 396.152 {85} (Radial)	141 cps	23.3249 ppm	5.3 %	1.2 ppm
Si 251.611 {134} (Radial)	20 cps	16.0097 ppm	6.3 %	1.0 ppm
Pb 220.353 {453} (Axial)	65 cps	3.4483 ppm	1.9 %	0.1 ppm
Y 224.306 {450} (Axial)		96.9353 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		94.1238 %	1.7 %	1.6 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-59APDS

Sample type: UNKNOWN Analysis started at: 11/29/2020 10:56:28 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	54 cps	1.1268 ppm	3.4 %	0.0 ppm
As 189.042 {478} (Axial)	36 cps	1.0797 ppm	3.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,019 cps	1.5162 ppm	0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,714 cps	1.5127 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	38,372 cps	1.1768 ppm	3.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,802 cps	528.7405 ppm	1.2 %	6.5 ppm
Cd 228.802 {447} (Axial)	1,142 cps	1.0619 ppm	2.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,049 cps	1.2660 ppm	3.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	577 cps	1.1244 ppm	2.4 %	0.0 ppm
Co 228.616 {447} (Axial)	828 cps	1.0798 ppm	2.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,562 cps	1.9084 ppm	4.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	3,628 cps	208.8592 ppm	1.1 %	2.3 ppm
Li 670.784 {50} (Radial)	1,093 cps	1.1827 ppm	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	23,060 cps	3.7834 ppm	3.6 %	0.1 ppm
Mo 202.030 {467} (Axial)	257 cps	1.0937 ppm	2.8 %	0.0 ppm
Na 589.592 {57} (Radial)	15,854 cps	121.5145 ppm	1.5 %	1.9 ppm
Ni 231.604 {445} (Axial)	429 cps	1.1205 ppm	2.7 %	0.0 ppm
K 766.490 {44} (Radial)	4,041 cps	125.4178 ppm	1.1 %	1.4 ppm
Se 196.090 {472} (Axial)	20 cps	1.0040 ppm	4.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,296 cps	1.2799 ppm	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,344 cps	1.3924 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	128 cps	1.3475 ppm	2.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	81 cps	0.9858 ppm	5.5 %	0.1 ppm
V 292.402 {115} (Axial)	1,802 cps	1.3023 ppm	3.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	17,646 cps	18.2956 ppm	2.7 %	0.5 ppm
Sc 357.253 {94} (Axial)		94.6486 %	4.5 %	4.3 %
Sc 188.060 {479} (Axial)		91.0302 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	820 cps	304.0287 ppm	1.3 %	3.8 ppm
Tl 190.856 {477} (Axial)	34 cps	1.0636 ppm	3.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,904 cps	25.7587 ppm	2.2 %	0.6 ppm
Sc 227.318 {448} (Axial)		91.1472 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	138 cps	6.2907 ppm	1.9 %	0.1 ppm
Al 396.152 {85} (Radial)	894 cps	29.5632 ppm	0.9 %	0.3 ppm
Si 251.611 {134} (Radial)	121 cps	19.6526 ppm	1.7 %	0.3 ppm
Pb 220.353 {453} (Axial)	442 cps	4.7045 ppm	2.6 %	0.1 ppm
Y 224.306 {450} (Axial)		94.2613 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		95.0238 %	1.0 %	0.9 %

Calibration Summary

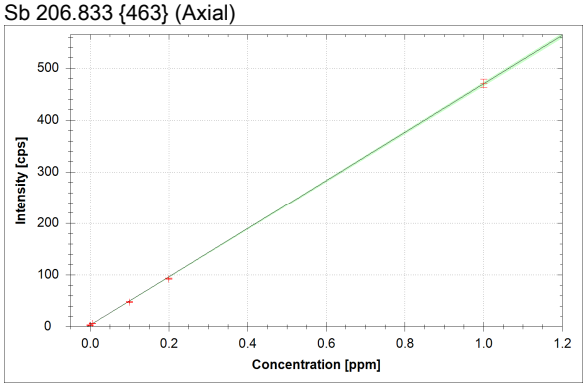
12/1/2020 8:29:17 AM

QTEGRA

LabBook: ICP2_201130B.imexp

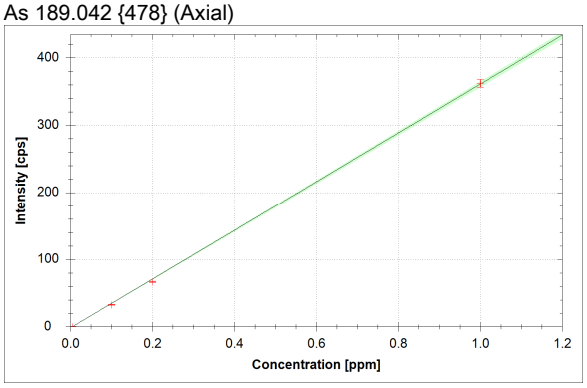
Calibration Graphs

Sb 206.833 {463} (Axial)



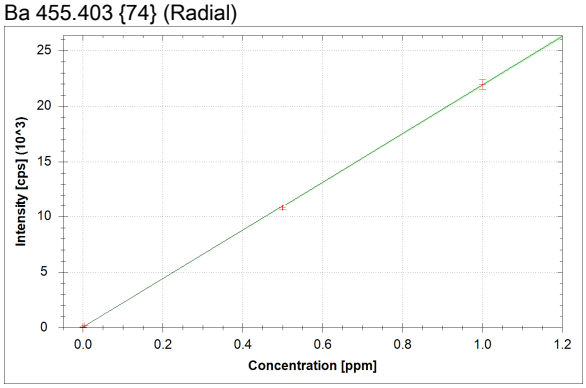
f(x) = 466.8351*x + 2.9259
R² = 0.9998
BEC = 0.006 ppm
LoD = 0.0034 ppm

As 189.042 {478} (Axial)



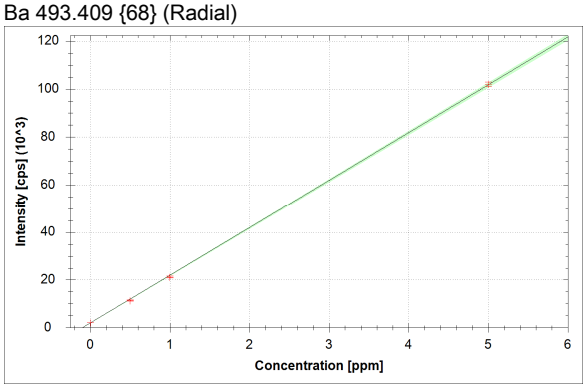
f(x) = 362.6423*x + -1.6820
R² = 0.9997
BEC = -0.005 ppm
LoD = 0.0034 ppm

Ba 455.403 {74} (Radial)



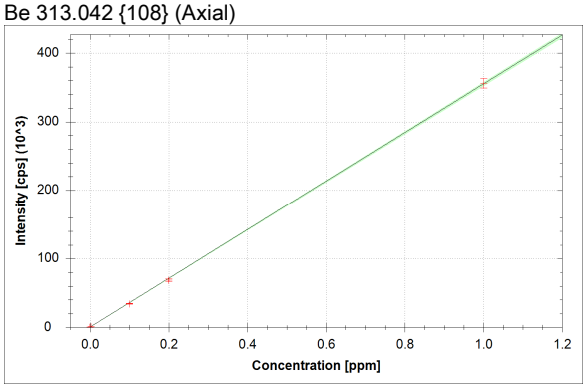
f(x) = 21857.4958*x + 50.1134
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0022 ppm

Ba 493.409 {68} (Radial)



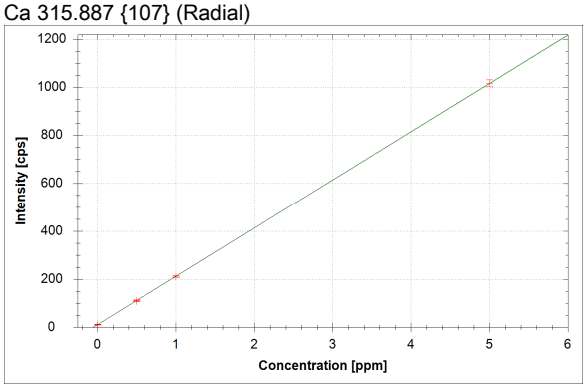
f(x) = 19952.1562*x + 2001.4971
R² = 0.9998
BEC = 0.100 ppm
LoD = 0.0018 ppm

Be 313.042 {108} (Axial)



f(x) = 354660.3706*x + 535.4197
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0001 ppm

Ca 315.887 {107} (Radial)



f(x) = 201.1067*x + 11.2014
R² = 1.0000
BEC = 0.056 ppm
LoD = 0.0259 ppm

Calibration Summary

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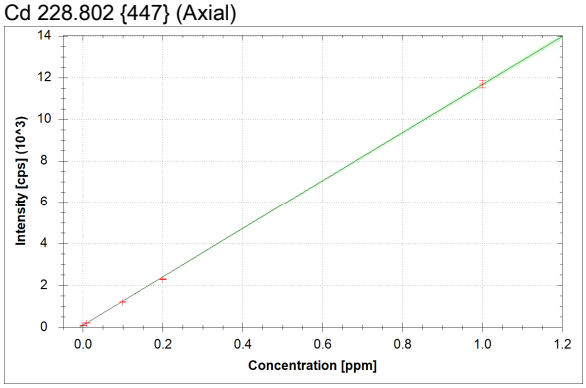
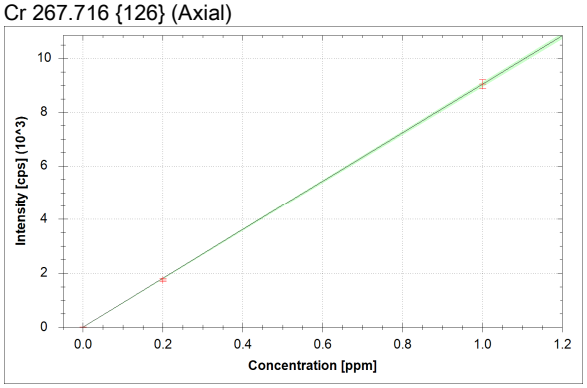
Cd 228.802 {447} (Axial)



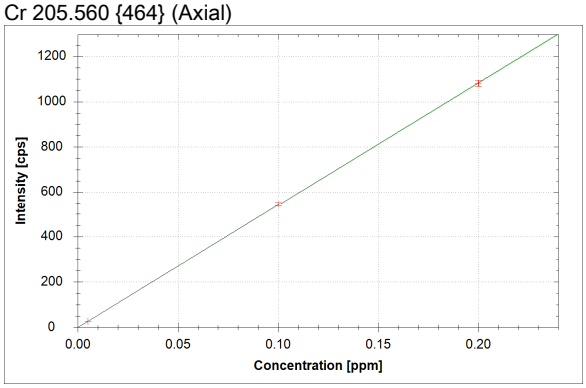
f(x) = 11571.7495*x + 97.2234
R² = 0.9998
BEC = 0.008 ppm
LoD = 0.0003 ppm

Cr 267.716 {126} (Axial)



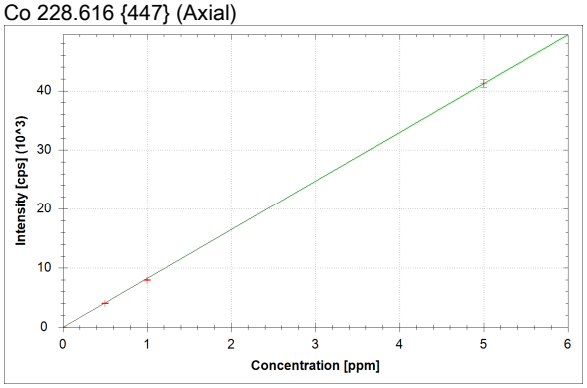
f(x) = 9030.2807*x + 4.8394
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0009 ppm

Cr 205.560 {464} (Axial)



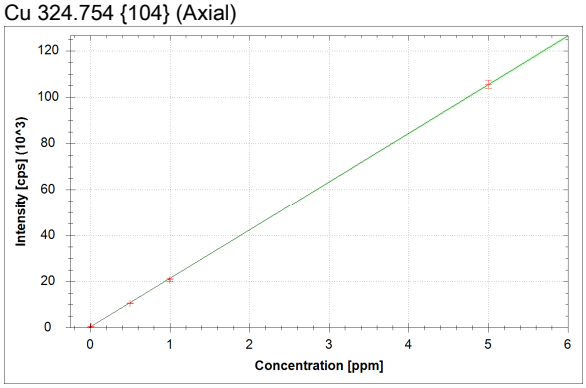
f(x) = 5416.7939*x + -0.4553
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Co 228.616 {447} (Axial)



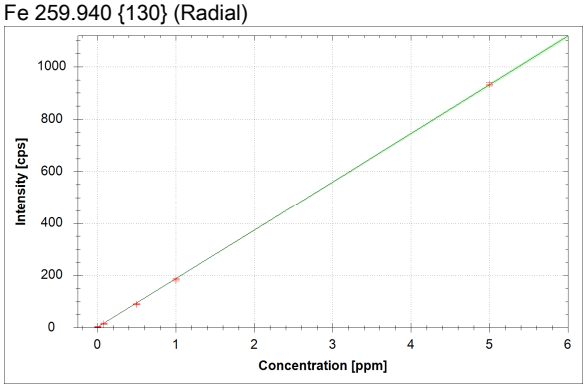
f(x) = 8239.4362*x + -3.4163
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Cu 324.754 {104} (Axial)



f(x) = 21000.2176*x + 350.3762
R² = 0.9999
BEC = 0.017 ppm
LoD = 0.0002 ppm

Fe 259.940 {130} (Radial)



f(x) = 185.7784*x + 2.1365
R² = 0.9999
BEC = 0.012 ppm
LoD = 0.0193 ppm

Calibration Summary

12/1/2020 8:29:17 AM

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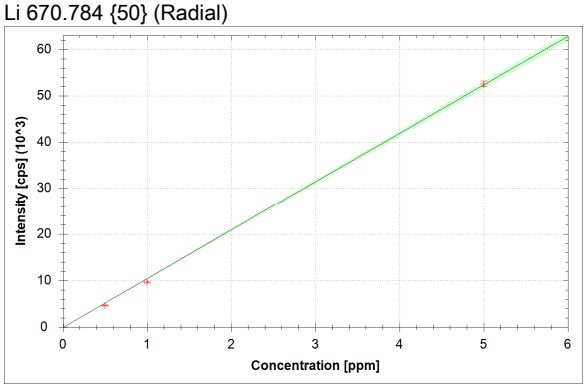
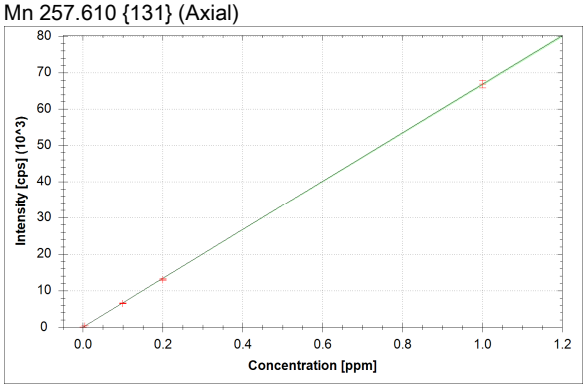
Li 670.784 {50} (Radial)



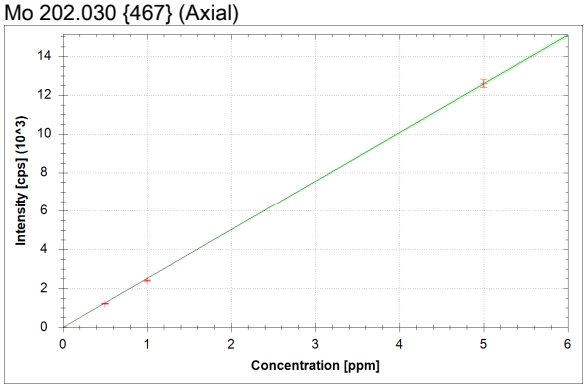
f(x) = 10478.8650*x + -36.7025
R² = 0.9995
BEC = -0.004 ppm
LoD = 0.0055 ppm

Mn 257.610 {131} (Axial)



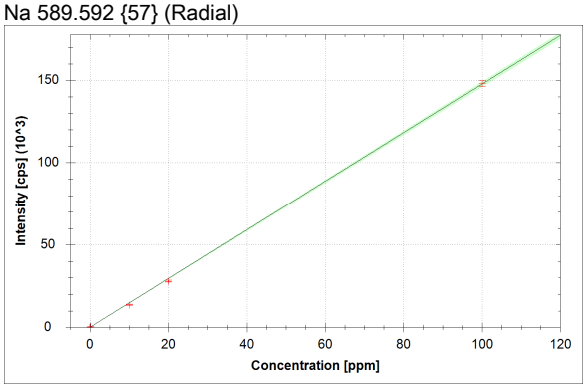
f(x) = 66765.3419*x + 29.0052
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Mo 202.030 {467} (Axial)



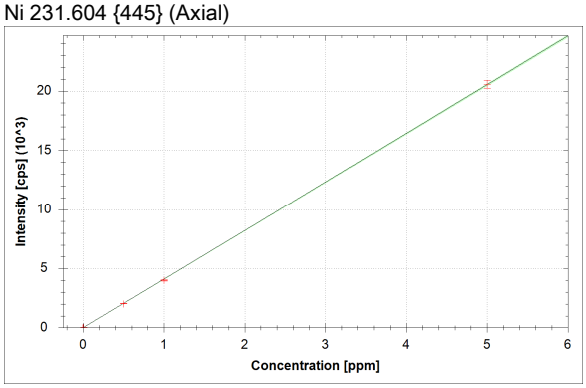
f(x) = 2516.1758*x + -1.2298
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0005 ppm

Na 589.592 {57} (Radial)



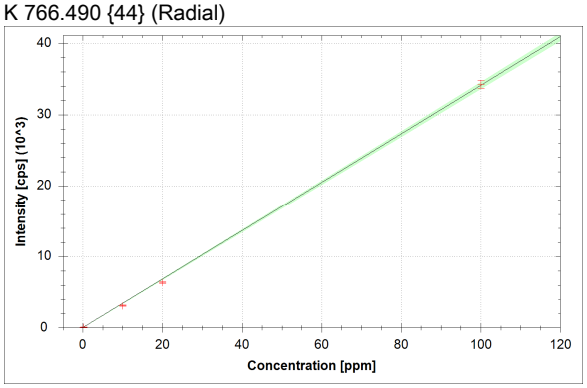
f(x) = 1476.9546*x + 46.1881
R² = 0.9997
BEC = 0.031 ppm
LoD = 0.0330 ppm

Ni 231.604 {445} (Axial)



f(x) = 4108.4666*x + 1.7819
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0002 ppm

K 766.490 {44} (Radial)



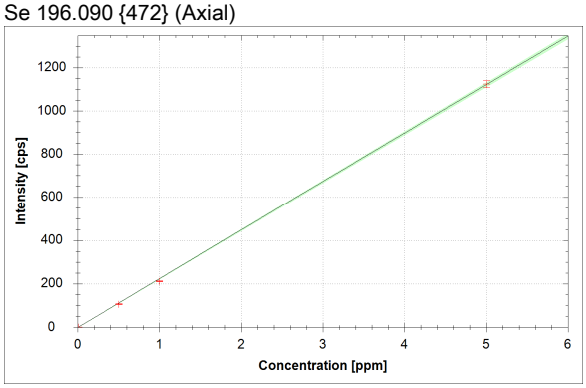
f(x) = 340.9180*x + 26.7023
R² = 0.9995
BEC = 0.078 ppm
LoD = 0.1089 ppm

Calibration Summary

12/1/2020 8:29:17 AM

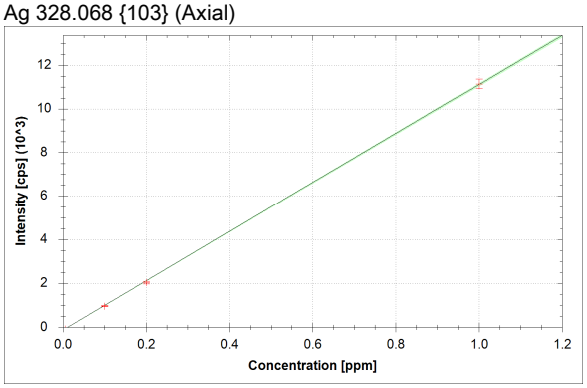
QTEGRA

Se 196.090 {472} (Axial)



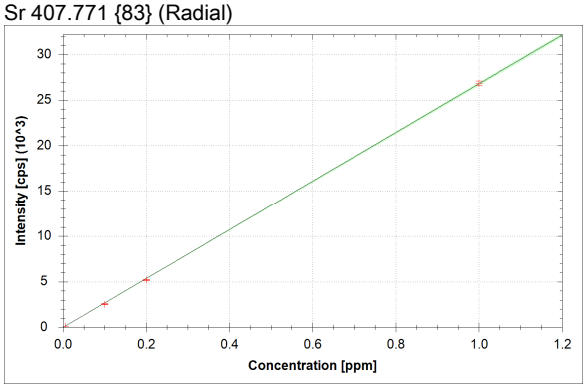
f(x) = 224.3617*x + -0.4619
R² = 0.9998
BEC = -0.002 ppm
LoD = 0.0066 ppm

Ag 328.068 {103} (Axial)



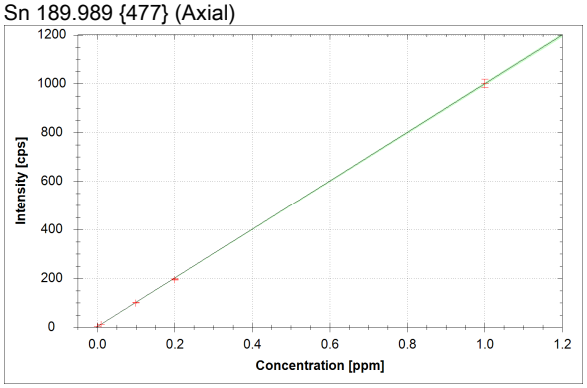
f(x) = 11251.4976*x + -127.9537
R² = 0.9999
BEC = -0.011 ppm
LoD = 0.0006 ppm

Sr 407.771 {83} (Radial)



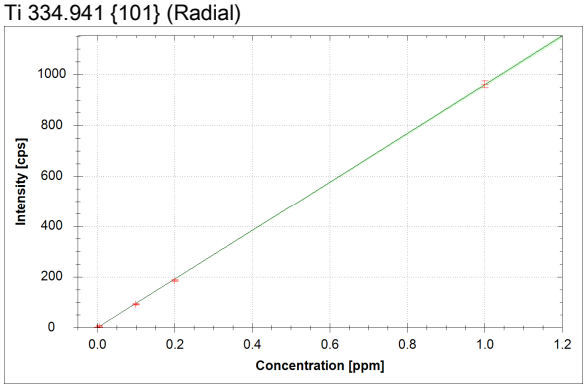
f(x) = 26818.8118*x + -8.4806
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Sn 189.989 {477} (Axial)



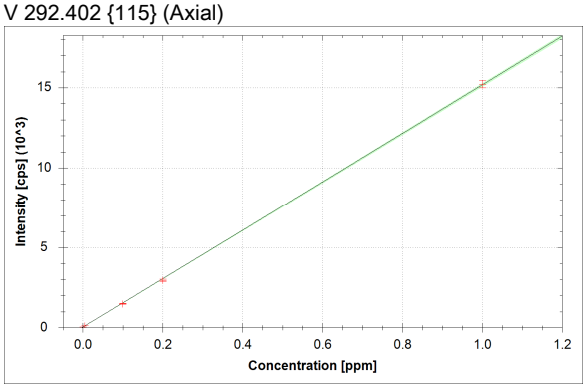
f(x) = 997.3521*x + 2.9014
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0017 ppm

Ti 334.941 {101} (Radial)



f(x) = 959.3957*x + 0.2025
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0049 ppm

V 292.402 {115} (Axial)



f(x) = 15139.5075*x + 41.0036
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0006 ppm

Calibration Summary

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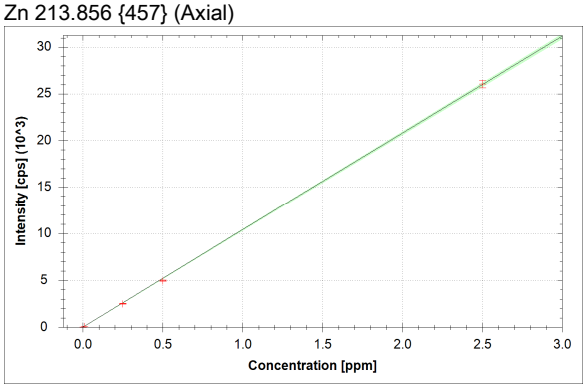
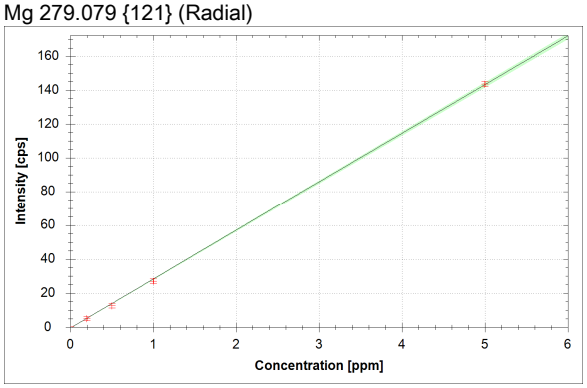
QTEGRA

Zn 213.856 {457} (Axial)



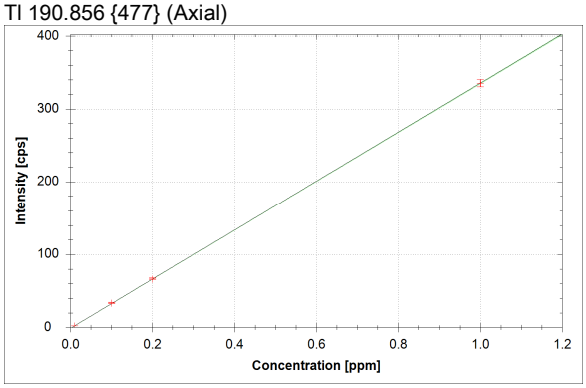
f(x) = 10389.8082*x + 22.8537
R² = 0.9998
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



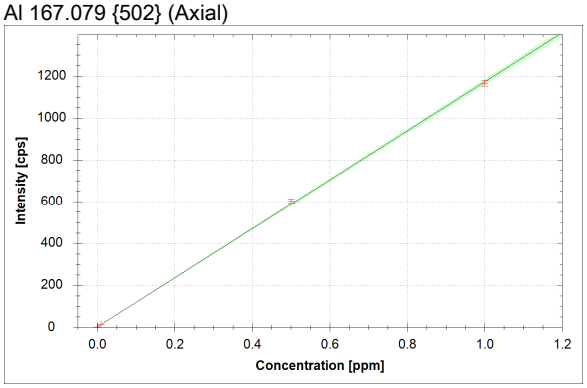
f(x) = 28.7287*x + -0.3816
R² = 0.9998
BEC = -0.013 ppm
LoD = 0.0828 ppm

Tl 190.856 {477} (Axial)



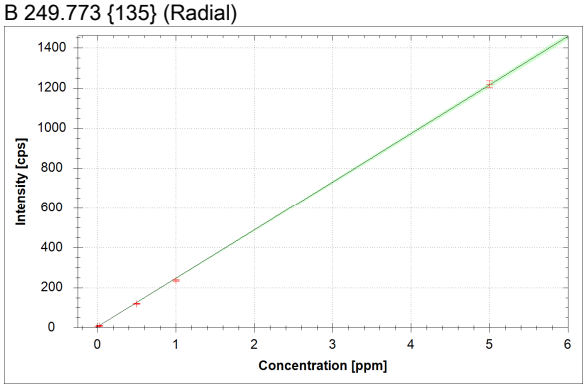
f(x) = 336.7253*x + -1.3294
R² = 1.0000
BEC = -0.004 ppm
LoD = 0.0040 ppm

Al 167.079 {502} (Axial)



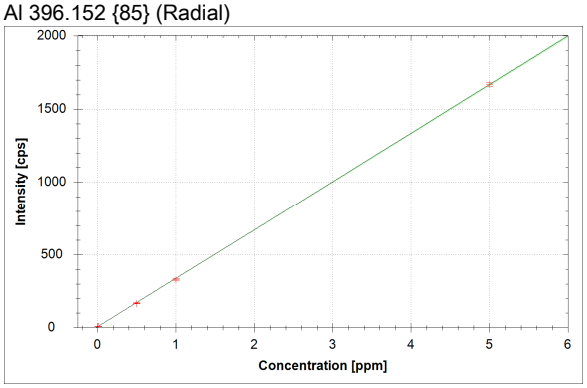
f(x) = 1170.5511*x + 1.9127
R² = 0.9997
BEC = 0.002 ppm
LoD = 0.0002 ppm

B 249.773 {135} (Radial)



f(x) = 241.9859*x + 5.2548
R² = 0.9998
BEC = 0.022 ppm
LoD = 0.0083 ppm

Al 396.152 {85} (Radial)



f(x) = 332.1216*x + 6.5431
R² = 0.9999
BEC = 0.020 ppm
LoD = 0.0014 ppm

Calibration Summary

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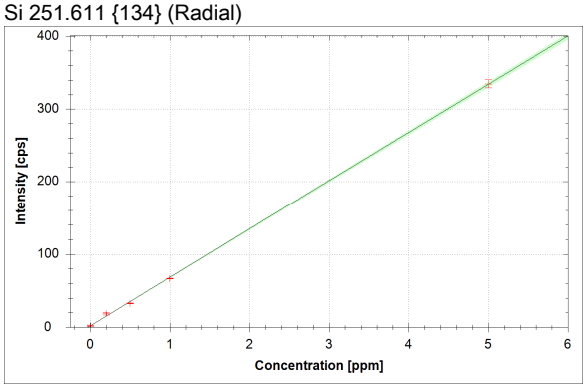
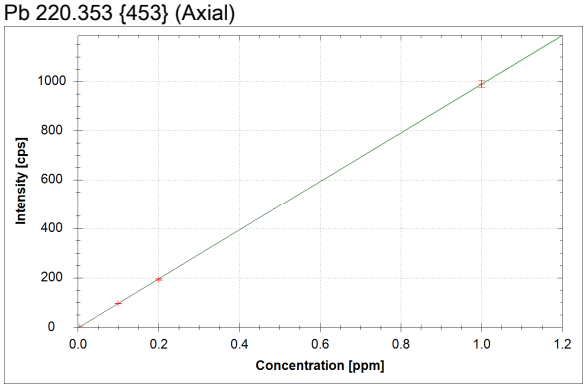
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 66.3807*x + 2.0934
R² = 0.9997
BEC = 0.032 ppm
LoD = 0.0347 ppm

Pb 220.353 {453} (Axial)



f(x) = 991.6667*x + -2.6978
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0008 ppm

Calibration Summary

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Standards

Standard: ICAL2
Analysis started at: 11/30/2020 2:30:20 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0071 ppm	6.5 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0038 ppm	44.8 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0050 ppm	3.2 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	3.1 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.4982 ppm	2.5 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0095 ppm	1.5 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0050 ppm	1.1 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0049 ppm	2.1 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0097 ppm	2.4 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0691 ppm	13.9 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0081 ppm	24.0 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0050 ppm	2.0 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0052 ppm	5.0 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1993 ppm	2.0 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0049 ppm	3.3 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1315 ppm	53.5 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0098 ppm	12.7 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0049 ppm	3.8 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0048 ppm	1.6 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0094 ppm	3.6 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0040 ppm	75.1 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0047 ppm	4.2 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0094 ppm	2.0 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.7922 %	0.7 %	
Sc 188.060 {479} (Axial)	99.9674 %	0.1 %	
Mg 279.079 {121} (Radial)	0.1930 ppm	20.4 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0098 ppm	2.8 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0107 ppm	3.8 %	0.0100 ppm
Sc 227.318 {448} (Axial)	100.0626 %	0.2 %	
B 249.773 {135} (Radial)	0.0150 ppm	38.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0078 ppm	51.9 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2500 ppm	9.8 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0054 ppm	12.3 %	0.0050 ppm
Y 224.306 {450} (Axial)	100.5115 %	0.2 %	
Sc 361.384 {93} (Radial)	99.5288 %	0.3 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/30/2020 2:35:29 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0953 ppm	3.6 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0937 ppm	2.3 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4944 ppm	2.3 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4673 ppm	2.5 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0948 ppm	1.3 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.4835 ppm	1.7 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0959 ppm	1.4 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.1007 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4900 ppm	1.4 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4856 ppm	1.4 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4717 ppm	3.6 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4509 ppm	2.5 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0978 ppm	1.2 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4828 ppm	1.4 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.2235 ppm	2.4 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4925 ppm	1.3 %	0.5000 ppm
K 766.490 {44} (Radial)	8.9926 ppm	2.6 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4735 ppm	1.7 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0976 ppm	1.3 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0956 ppm	2.4 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0975 ppm	1.0 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0956 ppm	3.0 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0955 ppm	1.2 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2385 ppm	1.3 %	0.2500 ppm
Sc 357.253 {94} (Axial)	100.6656 %	0.2 %	
Sc 188.060 {479} (Axial)	98.4206 %	0.4 %	
Mg 279.079 {121} (Radial)	0.4549 ppm	9.6 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1034 ppm	2.5 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5123 ppm	1.5 %	0.5000 ppm
Sc 227.318 {448} (Axial)	99.9481 %	0.2 %	
B 249.773 {135} (Radial)	0.4685 ppm	2.3 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4824 ppm	2.2 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4633 ppm	1.4 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.0997 ppm	1.1 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.9076 %	0.3 %	
Sc 361.384 {93} (Radial)	101.5209 %	0.3 %	

Calibration Summary

12/1/2020 8:29:17 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/30/2020 2:40:29 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1912 ppm	1.5 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1876 ppm	1.8 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0028 ppm	2.1 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9589 ppm	2.1 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1917 ppm	2.8 %	0.2000 ppm
Ca 315.887 {107} (Radial)	0.9984 ppm	2.0 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1905 ppm	1.1 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1930 ppm	3.3 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.1996 ppm	1.2 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9665 ppm	1.1 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9665 ppm	3.2 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9702 ppm	2.5 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9264 ppm	2.1 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1945 ppm	2.8 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9570 ppm	1.2 %	1.0000 ppm
Na 589.592 {57} (Radial)	18.9220 ppm	2.2 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9711 ppm	1.1 %	1.0000 ppm
K 766.490 {44} (Radial)	18.5037 ppm	2.5 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9473 ppm	1.0 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1926 ppm	2.8 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1935 ppm	2.0 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1932 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1937 ppm	2.1 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1926 ppm	2.7 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4749 ppm	1.2 %	0.5000 ppm
Sc 357.253 {94} (Axial)	99.7288 %	3.8 %	
Sc 188.060 {479} (Axial)	96.3975 %	0.1 %	
Mg 279.079 {121} (Radial)	0.9567 ppm	5.0 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2014 ppm	1.9 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9939 ppm	1.1 %	1.0000 ppm
Sc 227.318 {448} (Axial)	99.2633 %	0.3 %	
B 249.773 {135} (Radial)	0.9481 ppm	2.4 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9758 ppm	1.9 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9712 ppm	0.9 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.1962 ppm	1.6 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.3230 %	0.2 %	
Sc 361.384 {93} (Radial)	99.4583 %	0.4 %	

Calibration Summary

12/1/2020 8:29:17 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/30/2020 2:45:26 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0022 ppm	1.7 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0031 ppm	1.6 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0115 ppm	1.0 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0022 ppm	2.0 %	1.0000 ppm
Ca 315.887 {107} (Radial)	5.0022 ppm	1.4 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0023 ppm	1.6 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0014 ppm	1.8 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0077 ppm	1.6 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0081 ppm	1.7 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0090 ppm	0.7 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0196 ppm	1.2 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0013 ppm	1.6 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0103 ppm	1.7 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2933 ppm	1.3 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0065 ppm	1.6 %	5.0000 ppm
K 766.490 {44} (Radial)	100.4001 ppm	1.6 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0132 ppm	1.5 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0017 ppm	2.0 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0018 ppm	1.0 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0016 ppm	1.7 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0017 ppm	1.5 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0019 ppm	1.5 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5062 ppm	1.6 %	2.5000 ppm
Sc 357.253 {94} (Axial)	95.9590 %	0.5 %	
Sc 188.060 {479} (Axial)	89.3408 %	0.6 %	
Mg 279.079 {121} (Radial)	5.0134 ppm	1.0 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9994 ppm	1.5 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	104.0371 %	0.4 %	
B 249.773 {135} (Radial)	5.0135 ppm	1.4 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0066 ppm	0.8 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0074 ppm	1.7 %	5.0000 ppm
Pb 220.353 {453} (Axial)	1.0008 ppm	1.5 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.0845 %	0.5 %	
Sc 361.384 {93} (Radial)	100.5053 %	0.2 %	

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LabBook: ICP2_201130B.imexp

ICAL1

Sample type: BLK Analysis started at: 11/30/2020 2:25:09 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	7.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/30/2020 2:30:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0071 ppm	6.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0038 ppm	44.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	110 cps	0.0050 ppm	3.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	685 cps	0.0019 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4982 ppm	2.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	110 cps	0.0095 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	27 cps	0.0050 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0049 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	203 cps	0.0097 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	13 cps	0.0691 ppm	13.9 %	0.0 ppm
Li 670.784 {50} (Radial)	85 cps	0.0081 ppm	24.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	336 cps	0.0050 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0052 ppm	5.0 %	0.0 ppm
Na 589.592 {57} (Radial)	294 cps	0.1993 ppm	2.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0049 ppm	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	45 cps	0.1315 ppm	53.5 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0098 ppm	12.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	56 cps	0.0049 ppm	3.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	129 cps	0.0048 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	9 cps	0.0094 ppm	3.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0040 ppm	75.1 %	0.0 ppm
V 292.402 {115} (Axial)	72 cps	0.0047 ppm	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	98 cps	0.0094 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7922 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		99.9674 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	6 cps	0.1930 ppm	20.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0098 ppm	2.8 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0107 ppm	3.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0626 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0150 ppm	38.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0078 ppm	51.9 %	0.0 ppm
Si 251.611 {134} (Radial)	17 cps	0.2500 ppm	9.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0054 ppm	12.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5115 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.5288 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/30/2020 2:35:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0953 ppm	3.6 %	0.0 ppm
As 189.042 {478} (Axial)	34 cps	0.0937 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	10,806 cps	0.4944 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	9,323 cps	0.4673 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	33,638 cps	0.0948 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	97 cps	0.4835 ppm	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,110 cps	0.0959 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	545 cps	0.1007 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4,038 cps	0.4900 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,198 cps	0.4856 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	88 cps	0.4717 ppm	3.6 %	0.0 ppm
Li 670.784 {50} (Radial)	4,725 cps	0.4509 ppm	2.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,530 cps	0.0978 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,215 cps	0.4828 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	13,623 cps	9.2235 ppm	2.4 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,023 cps	0.4925 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	3,066 cps	8.9926 ppm	2.6 %	0.2 ppm
Se 196.090 {472} (Axial)	106 cps	0.4735 ppm	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,098 cps	0.0976 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,563 cps	0.0956 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	97 cps	0.0975 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	92 cps	0.0956 ppm	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,446 cps	0.0955 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,478 cps	0.2385 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6656 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.4206 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	13 cps	0.4549 ppm	9.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	35 cps	0.1034 ppm	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	600 cps	0.5123 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9481 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	113 cps	0.4685 ppm	2.3 %	0.0 ppm
Al 396.152 {85} (Radial)	160 cps	0.4824 ppm	2.2 %	0.0 ppm
Si 251.611 {134} (Radial)	31 cps	0.4633 ppm	1.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	99 cps	0.0997 ppm	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.9076 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.5209 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/30/2020 2:40:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	89 cps	0.1912 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	68 cps	0.1876 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	21,919 cps	1.0028 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	19,132 cps	0.9589 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	67,977 cps	0.1917 ppm	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	201 cps	0.9984 ppm	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,204 cps	0.1905 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,743 cps	0.1930 ppm	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,081 cps	0.1996 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	7,963 cps	0.9665 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,297 cps	0.9665 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	180 cps	0.9702 ppm	2.5 %	0.0 ppm
Li 670.784 {50} (Radial)	9,707 cps	0.9264 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,989 cps	0.1945 ppm	2.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,408 cps	0.9570 ppm	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	27,947 cps	18.9220 ppm	2.2 %	0.4 ppm
Ni 231.604 {445} (Axial)	3,990 cps	0.9711 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	6,308 cps	18.5037 ppm	2.5 %	0.5 ppm
Se 196.090 {472} (Axial)	213 cps	0.9473 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,167 cps	0.1926 ppm	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,189 cps	0.1935 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	193 cps	0.1932 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	186 cps	0.1937 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	2,917 cps	0.1926 ppm	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,934 cps	0.4749 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7288 %	3.8 %	3.8 %
Sc 188.060 {479} (Axial)		96.3975 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	0.9567 ppm	5.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	68 cps	0.2014 ppm	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	1,163 cps	0.9939 ppm	1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2633 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	229 cps	0.9481 ppm	2.4 %	0.0 ppm
Al 396.152 {85} (Radial)	324 cps	0.9758 ppm	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	64 cps	0.9712 ppm	0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	195 cps	0.1962 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		98.3230 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		99.4583 %	0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/30/2020 2:45:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	468 cps	1.0022 ppm	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	364 cps	1.0031 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	99,990 cps	5.0115 ppm	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	355,434 cps	1.0022 ppm	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,006 cps	5.0022 ppm	1.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,599 cps	1.0023 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,043 cps	1.0014 ppm	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	41,261 cps	5.0077 ppm	1.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	105,172 cps	5.0081 ppm	1.7 %	0.1 ppm
Fe 259.940 {130} (Radial)	931 cps	5.0090 ppm	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	52,600 cps	5.0196 ppm	1.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	66,853 cps	1.0013 ppm	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	12,607 cps	5.0103 ppm	1.7 %	0.1 ppm
Na 589.592 {57} (Radial)	148,129 cps	100.2933 ppm	1.3 %	1.3 ppm
Ni 231.604 {445} (Axial)	20,569 cps	5.0065 ppm	1.6 %	0.1 ppm
K 766.490 {44} (Radial)	34,228 cps	100.4001 ppm	1.6 %	1.6 ppm
Se 196.090 {472} (Axial)	1,125 cps	5.0132 ppm	1.5 %	0.1 ppm
Ag 328.068 {103} (Axial)	11,271 cps	1.0017 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,866 cps	1.0018 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	999 cps	1.0016 ppm	1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	961 cps	1.0017 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	15,169 cps	1.0019 ppm	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,039 cps	2.5062 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.9590 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		89.3408 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	144 cps	5.0134 ppm	1.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	337 cps	0.9994 ppm	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		104.0371 %	0.4 %	0.5 %
B 249.773 {135} (Radial)	1,213 cps	5.0135 ppm	1.4 %	0.1 ppm
Al 396.152 {85} (Radial)	1,663 cps	5.0066 ppm	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	332 cps	5.0074 ppm	1.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	992 cps	1.0008 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.0845 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.5053 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:15:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-28 cps	-0.0599 ppm	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	-15 cps	-0.0408 ppm	5.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	487,514 cps	22.3042 ppm	2.0 %	0.4 ppm
Ba 493.409 {68} (Radial)	427,408 cps	21.4217 ppm	2.5 %	0.5 ppm
Be 313.042 {108} (Axial)	774,313 cps	2.1833 ppm	3.5 %	0.1 ppm
Ca 315.887 {107} (Radial)	41,531 cps	206.5126 ppm	1.4 %	2.8 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	49.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	94,719 cps	10.4890 ppm	1.8 %	0.2 ppm
Cr 205.560 {464} (Axial)	58,408 cps	10.7828 ppm	1.3 %	0.1 ppm
Co 228.616 {447} (Axial)	97 cps	0.0118 ppm	2.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	447,461 cps	21.3074 ppm	4.2 %	0.9 ppm
Fe 259.940 {130} (Radial)	38,209 cps	205.6702 ppm	1.0 %	2.1 ppm
Li 670.784 {50} (Radial)	112,820 cps	10.7665 ppm	2.0 %	0.2 ppm
Mn 257.610 {131} (Axial)	673,793 cps	10.0920 ppm	2.5 %	0.3 ppm
Mo 202.030 {467} (Axial)	-3 cps	-0.0011 ppm	50.3 %	0.0 ppm
Na 589.592 {57} (Radial)	-40 cps	-0.0272 ppm	71.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	-119 cps	-0.0290 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	-63 cps	-0.1853 ppm	16.6 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0129 ppm	40.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	26,825 cps	2.3841 ppm	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	279,755 cps	10.4313 ppm	1.5 %	0.2 ppm
Sn 189.989 {477} (Axial)	-32 cps	-0.0319 ppm	3.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	9,928 cps	10.3480 ppm	1.3 %	0.1 ppm
V 292.402 {115} (Axial)	161,778 cps	10.6858 ppm	2.0 %	0.2 ppm
Zn 213.856 {457} (Axial)	-822 cps	-0.0791 ppm	4.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.9274 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		79.4810 %	0.6 %	0.4 %
Mg 279.079 {121} (Radial)	6,266 cps	218.0994 ppm	1.2 %	2.6 ppm
Tl 190.856 {477} (Axial)	-22 cps	-0.0653 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	25,293 cps	21.6076 ppm	0.3 %	0.1 ppm
Sc 227.318 {448} (Axial)		82.3373 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	5,269 cps	21.7735 ppm	1.7 %	0.4 ppm
Al 396.152 {85} (Radial)	70,836 cps	213.2847 ppm	1.3 %	2.7 ppm
Si 251.611 {134} (Radial)	1,395 cps	21.0156 ppm	1.4 %	0.3 ppm
Pb 220.353 {453} (Axial)	-4 cps	-0.0038 ppm	54.4 %	0.0 ppm
Y 224.306 {450} (Axial)		87.8947 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.2477 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:21:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,500 cps	5.3549 ppm	2.8 %	0.2 ppm
As 189.042 {478} (Axial)	1,852 cps	5.1058 ppm	2.7 %	0.1 ppm
Ba 455.403 {74} (Radial)	176 cps	0.0080 ppm	27.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	166 cps	0.0083 ppm	28.2 %	0.0 ppm
Be 313.042 {108} (Axial)	-46 cps	-0.0001 ppm	48.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	19 cps	0.0955 ppm	14.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	270 cps	0.0233 ppm	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	11 cps	0.0012 ppm	25.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0066 ppm	3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	90,106 cps	10.9360 ppm	2.7 %	0.3 ppm
Cu 324.754 {104} (Axial)	186 cps	0.0088 ppm	6.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	22 cps	0.1158 ppm	19.7 %	0.0 ppm
Li 670.784 {50} (Radial)	85 cps	0.0081 ppm	24.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-176 cps	-0.0026 ppm	19.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	27,114 cps	10.7757 ppm	2.9 %	0.3 ppm
Na 589.592 {57} (Radial)	0 cps	0.0002 ppm	2,702.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	44,674 cps	10.8738 ppm	2.7 %	0.3 ppm
K 766.490 {44} (Radial)	-4 cps	-0.0130 ppm	223.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1,151 cps	5.1297 ppm	2.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0002 ppm	126.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	101 cps	0.0038 ppm	26.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,307 cps	5.3215 ppm	2.8 %	0.2 ppm
Ti 334.941 {101} (Radial)	13 cps	0.0131 ppm	14.6 %	0.0 ppm
V 292.402 {115} (Axial)	11 cps	0.0007 ppm	36.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	53,720 cps	5.1705 ppm	2.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.5932 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		97.4264 %	1.4 %	1.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0754 ppm	44.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,953 cps	5.8011 ppm	2.2 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0185 ppm	32.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1981 %	1.2 %	1.2 %
B 249.773 {135} (Radial)	13 cps	0.0547 ppm	13.3 %	0.0 ppm
Al 396.152 {85} (Radial)	169 cps	0.5093 ppm	4.3 %	0.0 ppm
Si 251.611 {134} (Radial)	7 cps	0.0996 ppm	11.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,530 cps	5.5764 ppm	2.6 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5673 %	1.2 %	1.2 %
Sc 361.384 {93} (Radial)		99.7957 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/30/2020 2:50:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	462 cps	0.9894 ppm	98.941 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	351 cps	0.9666 ppm	96.657 %	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,198 cps	1.0156 ppm		2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	19,410 cps	0.9728 ppm	97.282 %	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	343,074 cps	0.9673 ppm	96.733 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,211 cps	6.0225 ppm	100.374 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,375 cps	0.9830 ppm	98.303 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	8,923 cps	0.9881 ppm	98.811 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,551 cps	1.0248 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	8,204 cps	0.9957 ppm	99.566 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,810 cps	0.9910 ppm	99.095 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	182 cps	0.9812 ppm	98.122 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	9,970 cps	0.9515 ppm	95.145 %	2.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	66,873 cps	1.0016 ppm	100.161 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,546 cps	1.0120 ppm	101.203 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	29,457 cps	19.9441 ppm	94.972 %	2.6 %	0.5 ppm
Ni 231.604 {445} (Axial)	4,113 cps	1.0010 ppm	100.099 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	6,797 cps	19.9365 ppm	94.936 %	2.8 %	0.6 ppm
Se 196.090 {472} (Axial)	219 cps	0.9752 ppm	97.519 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11,684 cps	1.0385 ppm	103.845 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,087 cps	0.9727 ppm	97.269 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	989 cps	0.9912 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	927 cps	0.9665 ppm	96.647 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	15,038 cps	0.9933 ppm	99.331 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,137 cps	0.9757 ppm	97.571 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.9448 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.4885 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	0.9369 ppm	93.694 %	3.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	350 cps	1.0384 ppm	103.844 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1,203 cps	1.0280 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.1732 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	240 cps	0.9912 ppm	99.123 %	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	328 cps	0.9886 ppm	98.865 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	67 cps	1.0089 ppm		3.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,011 cps	1.0192 ppm	101.917 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.5577 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.9516 %		0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/30/2020 2:55:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	79.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	148.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	13 cps	0.0006 ppm	46.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	101 cps	0.0051 ppm	9.0 %	0.0 ppm
Be 313.042 {108} (Axial)	111 cps	0.0003 ppm	16.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0237 ppm	30.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	92.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	88.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	6.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	107.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	7 cps	0.0004 ppm	55.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0035 ppm	60.2 %	0.0 ppm
Li 670.784 {50} (Radial)	11 cps	0.0010 ppm	136.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	21 cps	0.0003 ppm	27.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	27.0 %	0.0 ppm
Na 589.592 {57} (Radial)	58 cps	0.0390 ppm	10.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1,855.1 %	0.0 ppm
K 766.490 {44} (Radial)	-7 cps	-0.0210 ppm	222.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	121.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0007 ppm	20.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0006 ppm	26.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0005 ppm	49.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0045 ppm	28.4 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	431.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	45.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8855 %	0.2 %	0.1 %
Sc 188.060 {479} (Axial)		98.9241 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	0.0066 ppm	181.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	37.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	41.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8486 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	0 cps	-0.0009 ppm	159.5 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0184 ppm	46.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0058 ppm	274.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	75.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.3863 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.2813 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/30/2020 3:00:35 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0049 ppm	97.760 %	20.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0037 ppm	73.287 %	35.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	113 cps	0.0052 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	143 cps	0.0072 ppm		15.0 %	0.0 ppm
Be 313.042 {108} (Axial)	704 cps	0.0020 ppm	99.309 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	101 cps	0.5038 ppm	100.757 %	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0098 ppm	97.972 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	44 cps	0.0049 ppm	97.597 %	6.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0052 ppm	103.874 %	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0050 ppm	99.895 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	210 cps	0.0100 ppm	99.781 %	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0817 ppm	102.123 %	13.9 %	0.0 ppm
Li 670.784 {50} (Radial)	95 cps	0.0090 ppm	90.226 %	18.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	346 cps	0.0052 ppm	103.643 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0053 ppm	105.725 %	4.2 %	0.0 ppm
Na 589.592 {57} (Radial)	300 cps	0.2029 ppm	101.427 %	5.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0050 ppm	99.021 %	2.5 %	0.0 ppm
K 766.490 {44} (Radial)	49 cps	0.1444 ppm	72.213 %	30.9 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0129 ppm	128.639 %	28.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	64 cps	0.0057 ppm	113.902 %	6.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	135 cps	0.0050 ppm	100.966 %	0.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0104 ppm		5.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0051 ppm	102.874 %	42.2 %	0.0 ppm
V 292.402 {115} (Axial)	72 cps	0.0047 ppm	94.946 %	9.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	101 cps	0.0097 ppm	97.111 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6650 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		98.6937 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	6 cps	0.2038 ppm	101.879 %	5.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0106 ppm	106.176 %	16.9 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0112 ppm		3.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.5853 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0123 ppm	61.353 %	11.4 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0144 ppm		111.4 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2422 ppm		5.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0058 ppm	115.709 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0433 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.3638 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/30/2020 3:05:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0055 ppm	109.561 %	13.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0041 ppm	82.272 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	115 cps	0.0053 ppm		6.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	130 cps	0.0065 ppm		25.9 %	0.0 ppm
Be 313.042 {108} (Axial)	686 cps	0.0019 ppm	96.768 %	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4988 ppm	99.760 %	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0097 ppm	97.242 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	46 cps	0.0051 ppm	102.040 %	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	27 cps	0.0050 ppm	100.027 %	4.4 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0050 ppm	100.748 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	209 cps	0.0100 ppm	99.665 %	5.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0785 ppm	98.120 %	6.3 %	0.0 ppm
Li 670.784 {50} (Radial)	98 cps	0.0094 ppm	93.996 %	12.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	338 cps	0.0051 ppm	101.107 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0051 ppm	102.874 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	274 cps	0.1858 ppm	92.904 %	1.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	19 cps	0.0047 ppm	93.699 %	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	44 cps	0.1304 ppm	65.202 %	21.2 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0113 ppm	113.018 %	3.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	62 cps	0.0055 ppm	109.494 %	12.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	130 cps	0.0048 ppm	96.641 %	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0096 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0050 ppm	100.098 %	17.1 %	0.0 ppm
V 292.402 {115} (Axial)	70 cps	0.0046 ppm	92.997 %	4.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	99 cps	0.0095 ppm	95.381 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.1606 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		99.6488 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	6 cps	0.1970 ppm	98.492 %	6.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0102 ppm	101.688 %	10.1 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0110 ppm		3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.6855 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0118 ppm	58.850 %	49.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0017 ppm		190.4 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2444 ppm		7.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0046 ppm	92.613 %	19.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.6336 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.2785 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/30/2020 3:10:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-6 cps	-0.0125 ppm		9.0 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0215 ppm	0.000 %	4.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0006 ppm	0.000 %	57.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	77 cps	0.0039 ppm	0.000 %	33.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-925 cps	-0.0026 ppm	0.000 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,547 cps	92.2233 ppm	92.223 %	0.8 %	0.7 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	0.000 %	71.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	19 cps	0.0021 ppm	0.000 %	10.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0007 ppm	0.000 %	18.7 %	0.0 ppm
Co 228.616 {447} (Axial)	28 cps	0.0034 ppm	0.000 %	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	60 cps	0.0029 ppm	0.000 %	26.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,295 cps	93.0928 ppm	93.093 %	0.7 %	0.7 ppm
Li 670.784 {50} (Radial)	16 cps	0.0015 ppm		24.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-388 cps	-0.0058 ppm	0.000 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4,831 cps	1.9200 ppm	95.998 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	139,481 cps	94.4384 ppm	94.438 %	1.5 %	1.4 ppm
Ni 231.604 {445} (Axial)	-60 cps	-0.0147 ppm	0.000 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	32,868 cps	96.4105 ppm	96.411 %	2.0 %	1.9 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	0.000 %	465.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-8 cps	-0.0007 ppm	0.000 %	73.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	-66 cps	-0.0025 ppm		2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0112 ppm		7.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,819 cps	1.8955 ppm		0.6 %	0.0 ppm
V 292.402 {115} (Axial)	37 cps	0.0024 ppm	0.000 %	8.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-47 cps	-0.0045 ppm	0.000 %	3.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.5605 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		82.7742 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	2,740 cps	95.3892 ppm	95.389 %	0.9 %	0.8 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0083 ppm	0.000 %	7.7 %	0.0 ppm
Al 167.079 {502} (Axial)	22,395 cps	19.1324 ppm		0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		83.7823 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	16 cps	0.0643 ppm		15.1 %	0.0 ppm
Al 396.152 {85} (Radial)	30,598 cps	92.1279 ppm	92.128 %	0.7 %	0.6 ppm
Si 251.611 {134} (Radial)	7 cps	0.1008 ppm	0.000 %	9.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-4 cps	-0.0036 ppm	0.000 %	4.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0948 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.0759 %		0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 11:52:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5207 ppm	104.131 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5242 ppm	104.843 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,792 cps	2.7813 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	53,148 cps	2.6638 ppm	106.551 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	190,956 cps	0.5384 ppm	107.684 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	529 cps	2.6318 ppm	105.274 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,106 cps	0.5277 ppm	105.531 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,802 cps	0.5318 ppm	106.355 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,958 cps	0.5461 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,833 cps	2.6498 ppm	105.992 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,364 cps	2.6840 ppm	107.359 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	490 cps	2.6375 ppm	105.501 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	27,699 cps	2.6433 ppm	105.731 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,578 cps	0.5329 ppm	106.576 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6617 ppm	106.467 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	77,578 cps	52.5258 ppm	105.052 %	2.4 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,890 cps	2.6505 ppm	106.022 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	18,356 cps	53.8427 ppm	107.685 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	584 cps	2.6011 ppm	104.044 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,044 cps	0.5372 ppm	107.433 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,322 cps	0.5340 ppm	106.808 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	541 cps	0.5422 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	491 cps	0.5121 ppm	102.430 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,128 cps	0.5369 ppm	107.378 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,619 cps	1.3108 ppm	104.861 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6087 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		89.5617 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	77 cps	2.6663 ppm	106.651 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5437 ppm	108.738 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,071 cps	2.6238 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2318 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	624 cps	2.5790 ppm	103.159 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	883 cps	2.6573 ppm	106.290 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	174 cps	2.6211 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	531 cps	0.5355 ppm	107.096 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		93.0516 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.7441 %		0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 12:53:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5216 ppm	104.316 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5274 ppm	105.471 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,834 cps	2.6917 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	51,468 cps	2.5796 ppm	103.184 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	188,309 cps	0.5310 ppm	106.191 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	511 cps	2.5431 ppm	101.724 %	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,114 cps	0.5284 ppm	105.672 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,743 cps	0.5252 ppm	105.049 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,957 cps	0.5460 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,842 cps	2.6509 ppm	106.036 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,569 cps	2.6461 ppm	105.844 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	474 cps	2.5514 ppm	102.056 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	26,809 cps	2.5584 ppm	102.336 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,093 cps	0.5256 ppm	105.122 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,705 cps	2.6646 ppm	106.585 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	75,098 cps	50.8463 ppm	101.693 %	3.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,899 cps	2.6529 ppm	106.117 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,862 cps	52.3929 ppm	104.786 %	3.9 %	2.0 ppm
Se 196.090 {472} (Axial)	586 cps	2.6124 ppm	104.498 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,970 cps	0.5306 ppm	106.124 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,856 cps	0.5166 ppm	103.330 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	542 cps	0.5438 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	472 cps	0.4915 ppm	98.293 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	8,009 cps	0.5290 ppm	105.807 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,646 cps	1.3134 ppm	105.072 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.3537 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		89.2784 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	72 cps	2.4983 ppm	99.930 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5434 ppm	108.679 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,075 cps	2.6267 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7797 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	601 cps	2.4832 ppm	99.330 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	851 cps	2.5620 ppm	102.480 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	169 cps	2.5524 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	533 cps	0.5373 ppm	107.458 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6598 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.9246 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:55:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5211 ppm	104.219 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5270 ppm	105.398 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,536 cps	2.7696 ppm		2.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	52,956 cps	2.6542 ppm	106.167 %	2.9 %	0.1 ppm
Be 313.042 {108} (Axial)	181,485 cps	0.5117 ppm	102.343 %	7.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	521 cps	2.5887 ppm	103.550 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,112 cps	0.5282 ppm	105.641 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,557 cps	0.5047 ppm	100.933 %	7.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,958 cps	0.5461 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	21,829 cps	2.6494 ppm	105.974 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,873 cps	2.5654 ppm	102.614 %	7.2 %	0.2 ppm
Fe 259.940 {130} (Radial)	490 cps	2.6349 ppm	105.396 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	27,561 cps	2.6301 ppm	105.205 %	3.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,880 cps	0.5074 ppm	101.489 %	7.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,699 cps	2.6624 ppm	106.495 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	77,037 cps	52.1593 ppm	104.319 %	3.1 %	1.6 ppm
Ni 231.604 {445} (Axial)	10,891 cps	2.6509 ppm	106.037 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	18,324 cps	53.7492 ppm	107.498 %	3.4 %	1.8 ppm
Se 196.090 {472} (Axial)	584 cps	2.6013 ppm	104.050 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,759 cps	0.5118 ppm	102.360 %	7.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,253 cps	0.5314 ppm	106.289 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	541 cps	0.5422 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	487 cps	0.5074 ppm	101.488 %	3.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,768 cps	0.5131 ppm	102.620 %	7.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,626 cps	1.3114 ppm	104.916 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9360 %		8.1 %	7.9 %
Sc 188.060 {479} (Axial)		89.8628 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	74 cps	2.5771 ppm	103.085 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5441 ppm	108.822 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,076 cps	2.6279 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.4852 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	618 cps	2.5520 ppm	102.080 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	872 cps	2.6243 ppm	104.973 %	2.4 %	0.1 ppm
Si 251.611 {134} (Radial)	174 cps	2.6194 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	531 cps	0.5356 ppm	107.111 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.9661 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.2964 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 2:57:08 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	242 cps	0.5184 ppm	103.679 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5202 ppm	104.041 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,677 cps	2.4558 ppm		3.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	47,138 cps	2.3625 ppm	94.501 %	3.8 %	0.1 ppm
Be 313.042 {108} (Axial)	178,565 cps	0.5035 ppm	100.696 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	465 cps	2.3143 ppm	92.571 %	4.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,070 cps	0.5246 ppm	104.917 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,582 cps	0.5074 ppm	101.475 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,941 cps	0.5429 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,552 cps	2.6157 ppm	104.627 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,515 cps	2.5483 ppm	101.932 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	432 cps	2.3234 ppm	92.936 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	24,497 cps	2.3377 ppm	93.509 %	4.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,356 cps	0.4996 ppm	99.920 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,621 cps	2.6312 ppm	105.247 %	2.0 %	0.1 ppm
Na 589.592 {57} (Radial)	67,972 cps	46.0216 ppm	92.043 %	3.9 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,746 cps	2.6156 ppm	104.625 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	16,050 cps	47.0786 ppm	94.157 %	4.3 %	2.0 ppm
Se 196.090 {472} (Axial)	580 cps	2.5847 ppm	103.387 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,711 cps	0.5076 ppm	101.511 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,651 cps	0.4717 ppm	94.347 %	3.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	534 cps	0.5354 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	436 cps	0.4545 ppm	90.904 %	4.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,633 cps	0.5042 ppm	100.830 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,497 cps	1.2990 ppm	103.922 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.8057 %		1.8 %	1.7 %
Sc 188.060 {479} (Axial)		89.3585 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	65 cps	2.2501 ppm	90.005 %	5.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5382 ppm	107.644 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,039 cps	2.5961 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7523 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	545 cps	2.2522 ppm	90.088 %	3.5 %	0.1 ppm
Al 396.152 {85} (Radial)	778 cps	2.3421 ppm	93.684 %	3.0 %	0.1 ppm
Si 251.611 {134} (Radial)	152 cps	2.2879 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	526 cps	0.5301 ppm	106.022 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6300 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.3677 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 3:12:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5209 ppm	104.181 %	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5235 ppm	104.698 %	3.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,526 cps	2.5403 ppm		4.3 %	0.1 ppm
Ba 493.409 {68} (Radial)	48,722 cps	2.4419 ppm	97.677 %	4.1 %	0.1 ppm
Be 313.042 {108} (Axial)	177,779 cps	0.5013 ppm	100.253 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	488 cps	2.4288 ppm	97.151 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,095 cps	0.5267 ppm	105.346 %	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,460 cps	0.4939 ppm	98.782 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,933 cps	0.5414 ppm		3.1 %	0.0 ppm
Co 228.616 {447} (Axial)	21,708 cps	2.6347 ppm	105.386 %	3.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	53,406 cps	2.5431 ppm	101.724 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	444 cps	2.3887 ppm	95.549 %	4.2 %	0.1 ppm
Li 670.784 {50} (Radial)	25,327 cps	2.4170 ppm	96.680 %	4.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,255 cps	0.4981 ppm	99.617 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,666 cps	2.6492 ppm	105.969 %	3.0 %	0.1 ppm
Na 589.592 {57} (Radial)	70,334 cps	47.6213 ppm	95.243 %	4.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	10,822 cps	2.6340 ppm	105.359 %	3.0 %	0.1 ppm
K 766.490 {44} (Radial)	16,653 cps	48.8487 ppm	97.697 %	5.2 %	2.5 ppm
Se 196.090 {472} (Axial)	585 cps	2.6066 ppm	104.263 %	3.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,666 cps	0.5036 ppm	100.714 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,111 cps	0.4889 ppm	97.775 %	4.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	537 cps	0.5388 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	445 cps	0.4642 ppm	92.835 %	4.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,649 cps	0.5053 ppm	101.051 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,576 cps	1.3067 ppm	104.535 %	3.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.5695 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		88.6038 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	65 cps	2.2783 ppm	91.131 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5389 ppm	107.789 %	3.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,051 cps	2.6065 ppm		2.7 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.1666 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	563 cps	2.3265 ppm	93.060 %	4.8 %	0.1 ppm
Al 396.152 {85} (Radial)	798 cps	2.4018 ppm	96.071 %	3.9 %	0.1 ppm
Si 251.611 {134} (Radial)	157 cps	2.3709 ppm		5.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	528 cps	0.5323 ppm	106.464 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		92.2956 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.9706 %		0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 3:37:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.5000 ppm	100.002 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4986 ppm	99.722 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,009 cps	2.6082 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	49,635 cps	2.4877 ppm	99.508 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	181,199 cps	0.5109 ppm	102.182 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	499 cps	2.4815 ppm	99.258 %	3.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,814 cps	0.5025 ppm	100.491 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,565 cps	0.5056 ppm	101.111 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,833 cps	0.5230 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,856 cps	2.5313 ppm	101.252 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,085 cps	2.5278 ppm	101.113 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	470 cps	2.5286 ppm	101.143 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	25,814 cps	2.4635 ppm	98.538 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,785 cps	0.5060 ppm	101.204 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,355 cps	2.5256 ppm	101.023 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	73,291 cps	49.6228 ppm	99.246 %	3.2 %	1.6 ppm
Ni 231.604 {445} (Axial)	10,408 cps	2.5332 ppm	101.330 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	17,027 cps	49.9442 ppm	99.888 %	3.2 %	1.6 ppm
Se 196.090 {472} (Axial)	558 cps	2.4862 ppm	99.450 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,717 cps	0.5081 ppm	101.620 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,438 cps	0.5010 ppm	100.210 %	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	513 cps	0.5144 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	472 cps	0.4923 ppm	98.465 %	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,687 cps	0.5078 ppm	101.552 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,002 cps	1.2515 ppm	100.117 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.0649 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		91.2911 %		0.0 %	0.0 %
Mg 279.079 {121} (Radial)	71 cps	2.4806 ppm	99.225 %	4.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5169 ppm	103.387 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,901 cps	2.4786 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0493 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	603 cps	2.4926 ppm	99.705 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	830 cps	2.4982 ppm	99.927 %	2.9 %	0.1 ppm
Si 251.611 {134} (Radial)	166 cps	2.5071 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	506 cps	0.5104 ppm	102.089 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0051 %		0.2 %	0.1 %
Sc 361.384 {93} (Radial)		97.1607 %		0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 4:39:27 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.4994 ppm	99.884 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.5038 ppm	100.751 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	56,114 cps	2.5672 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	49,284 cps	2.4701 ppm	98.804 %	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	180,622 cps	0.5093 ppm	101.857 %	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	492 cps	2.4471 ppm	97.886 %	0.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,868 cps	0.5071 ppm	101.419 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,544 cps	0.5032 ppm	100.636 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,841 cps	0.5244 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,998 cps	2.5485 ppm	101.939 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	53,069 cps	2.5271 ppm	101.083 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	463 cps	2.4939 ppm	99.755 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	25,429 cps	2.4267 ppm	97.067 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,675 cps	0.5044 ppm	100.875 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,415 cps	2.5495 ppm	101.981 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	71,741 cps	48.5738 ppm	97.148 %	1.9 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,470 cps	2.5484 ppm	101.936 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	17,015 cps	49.9102 ppm	99.820 %	1.9 %	1.0 ppm
Se 196.090 {472} (Axial)	560 cps	2.4946 ppm	99.783 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,721 cps	0.5085 ppm	101.699 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,233 cps	0.4934 ppm	98.688 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	519 cps	0.5208 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	459 cps	0.4780 ppm	95.591 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,655 cps	0.5056 ppm	101.129 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,105 cps	1.2613 ppm	100.904 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3173 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		90.4134 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	70 cps	2.4499 ppm	97.995 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5200 ppm	104.002 %	2.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,937 cps	2.5092 ppm		2.1 %	0.1 ppm
Sc 227.318 {448} (Axial)		98.1373 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	587 cps	2.4257 ppm	97.029 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	817 cps	2.4607 ppm	98.429 %	1.2 %	0.0 ppm
Si 251.611 {134} (Radial)	164 cps	2.4711 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5162 ppm	103.247 %	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.3215 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		96.8765 %		0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 5:40:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	231 cps	0.4955 ppm	99.104 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4992 ppm	99.832 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,457 cps	2.6287 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	50,358 cps	2.5239 ppm	100.958 %	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	179,338 cps	0.5057 ppm	101.132 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	504 cps	2.5043 ppm	100.173 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,816 cps	0.5026 ppm	100.521 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,516 cps	0.5001 ppm	100.013 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,804 cps	0.5176 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.5222 ppm	100.888 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,661 cps	2.5076 ppm	100.305 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	473 cps	2.5441 ppm	101.762 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	25,887 cps	2.4704 ppm	98.818 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,476 cps	0.5014 ppm	100.280 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,359 cps	2.5273 ppm	101.093 %	2.0 %	0.1 ppm
Na 589.592 {57} (Radial)	72,986 cps	49.4168 ppm	98.834 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,378 cps	2.5259 ppm	101.037 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	17,223 cps	50.5192 ppm	101.038 %	2.2 %	1.1 ppm
Se 196.090 {472} (Axial)	556 cps	2.4767 ppm	99.069 %	1.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,663 cps	0.5033 ppm	100.664 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,533 cps	0.5046 ppm	100.923 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	514 cps	0.5158 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	469 cps	0.4886 ppm	97.716 %	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,639 cps	0.5046 ppm	100.916 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,977 cps	1.2490 ppm	99.922 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.4840 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		90.4593 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	71 cps	2.4568 ppm	98.272 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5172 ppm	103.441 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,913 cps	2.4883 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.8540 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	591 cps	2.4412 ppm	97.650 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	838 cps	2.5224 ppm	100.897 %	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	166 cps	2.4974 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	509 cps	0.5136 ppm	102.711 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2998 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		95.8560 %		0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 6:41:08 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.5129 ppm	102.581 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5168 ppm	103.357 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,960 cps	2.6975 ppm		1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	51,902 cps	2.6013 ppm	104.054 %	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	181,336 cps	0.5113 ppm	102.259 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	500 cps	2.4880 ppm	99.519 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,047 cps	0.5225 ppm	104.507 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,544 cps	0.5031 ppm	100.628 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,890 cps	0.5335 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,461 cps	2.6047 ppm	104.189 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,208 cps	2.5813 ppm	103.251 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	476 cps	2.5629 ppm	102.517 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	26,818 cps	2.5593 ppm	102.371 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,848 cps	0.5070 ppm	101.393 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,612 cps	2.6276 ppm	105.105 %	1.9 %	0.1 ppm
Na 589.592 {57} (Radial)	74,557 cps	50.4804 ppm	100.961 %	1.5 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,701 cps	2.6047 ppm	104.189 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	18,025 cps	52.8728 ppm	105.746 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	571 cps	2.5449 ppm	101.797 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,795 cps	0.5150 ppm	103.005 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,844 cps	0.5162 ppm	103.241 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	533 cps	0.5343 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	467 cps	0.4869 ppm	97.374 %	0.4 %	0.0 ppm
V 292.402 {115} (Axial)	7,782 cps	0.5140 ppm	102.802 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,426 cps	1.2922 ppm	103.380 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.3786 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		88.1774 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	69 cps	2.4184 ppm	96.736 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5378 ppm	107.552 %	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,991 cps	2.5549 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.8315 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	600 cps	2.4804 ppm	99.217 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	844 cps	2.5424 ppm	101.696 %	0.3 %	0.0 ppm
Si 251.611 {134} (Radial)	166 cps	2.5026 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	536 cps	0.5408 ppm	108.162 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0401 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.7641 %		0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 7:42:47 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	244 cps	0.5223 ppm	104.453 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5260 ppm	105.210 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,892 cps	2.7401 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	52,625 cps	2.6376 ppm	105.503 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	188,220 cps	0.5307 ppm	106.141 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	510 cps	2.5370 ppm	101.481 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,135 cps	0.5302 ppm	106.034 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,730 cps	0.5238 ppm	104.752 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,936 cps	0.5420 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	21,810 cps	2.6470 ppm	105.881 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,053 cps	2.6692 ppm	106.767 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	480 cps	2.5824 ppm	103.295 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	27,432 cps	2.6178 ppm	104.713 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,083 cps	0.5255 ppm	105.095 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,727 cps	2.6736 ppm	106.945 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	76,022 cps	51.4719 ppm	102.944 %	3.2 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,874 cps	2.6468 ppm	105.870 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	18,621 cps	54.6199 ppm	109.240 %	3.2 %	1.7 ppm
Se 196.090 {472} (Axial)	576 cps	2.5679 ppm	102.716 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,985 cps	0.5319 ppm	106.384 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,028 cps	0.5231 ppm	104.617 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	542 cps	0.5436 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	470 cps	0.4897 ppm	97.941 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,067 cps	0.5328 ppm	106.570 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,631 cps	1.3120 ppm	104.959 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3852 %		1.2 %	1.1 %
Sc 188.060 {479} (Axial)		88.0705 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	71 cps	2.4763 ppm	99.052 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5448 ppm	108.967 %	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,043 cps	2.5995 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.0323 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	611 cps	2.5266 ppm	101.064 %	3.3 %	0.1 ppm
Al 396.152 {85} (Radial)	862 cps	2.5963 ppm	103.852 %	3.5 %	0.1 ppm
Si 251.611 {134} (Radial)	170 cps	2.5552 ppm		3.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	532 cps	0.5362 ppm	107.235 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6806 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.6003 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 8:44:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5205 ppm	104.105 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5247 ppm	104.943 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,860 cps	2.6471 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	50,873 cps	2.5497 ppm	101.989 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	183,750 cps	0.5181 ppm	103.620 %	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	508 cps	2.5275 ppm	101.101 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,113 cps	0.5282 ppm	105.648 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,610 cps	0.5105 ppm	102.101 %	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,929 cps	0.5407 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	21,743 cps	2.6389 ppm	105.556 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,707 cps	2.6051 ppm	104.203 %	3.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	464 cps	2.4995 ppm	99.978 %	0.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26,433 cps	2.5225 ppm	100.900 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,268 cps	0.5133 ppm	102.653 %	3.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6616 ppm	106.463 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73,751 cps	49.9348 ppm	99.870 %	2.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	10,835 cps	2.6371 ppm	105.485 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,899 cps	52.5031 ppm	105.006 %	2.3 %	1.2 ppm
Se 196.090 {472} (Axial)	579 cps	2.5785 ppm	103.138 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,868 cps	0.5215 ppm	104.299 %	3.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,596 cps	0.5070 ppm	101.391 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	539 cps	0.5402 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	457 cps	0.4760 ppm	95.198 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,852 cps	0.5187 ppm	103.731 %	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,598 cps	1.3088 ppm	104.701 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3493 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		89.0648 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	69 cps	2.4127 ppm	96.510 %	0.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5426 ppm	108.515 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,040 cps	2.5969 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.8495 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	593 cps	2.4500 ppm	98.001 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	838 cps	2.5233 ppm	100.931 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.4562 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	530 cps	0.5343 ppm	106.856 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		92.8151 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.8360 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 9:45:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	169 cps	0.3617 ppm	72.343 %	35.3 %	0.1 ppm
As 189.042 {478} (Axial)	160 cps	0.4399 ppm	87.979 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	-10 cps	-0.0005 ppm		21.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,196 cps	-0.0600 ppm	-2.398 %	11.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-360 cps	-0.0010 ppm	-0.203 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0155 ppm	-0.621 %	73.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,129 cps	0.4433 ppm	88.655 %	2.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	-0.056 %	33.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,498 cps	0.4611 ppm		2.8 %	0.0 ppm
Co 228.616 {447} (Axial)	18,428 cps	2.2366 ppm	89.462 %	2.5 %	0.1 ppm
Cu 324.754 {104} (Axial)	-93 cps	-0.0044 ppm	-0.176 %	32.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0066 ppm	0.263 %	142.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-5 cps	-0.0005 ppm	-0.021 %	218.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-12 cps	-0.0002 ppm	-0.036 %	22.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,648 cps	2.2446 ppm	89.784 %	2.5 %	0.1 ppm
Na 589.592 {57} (Radial)	-64 cps	-0.0436 ppm	-0.087 %	6.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	9,192 cps	2.2373 ppm	89.492 %	2.5 %	0.1 ppm
K 766.490 {44} (Radial)	-27 cps	-0.0780 ppm	-0.156 %	18.8 %	0.0 ppm
Se 196.090 {472} (Axial)	396 cps	1.7645 ppm	70.578 %	36.3 %	0.6 ppm
Ag 328.068 {103} (Axial)	-6 cps	-0.0005 ppm	-0.100 %	278.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	-1 cps	0.0000 ppm	-0.006 %	123.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	384 cps	0.3853 ppm		34.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	0.063 %	427.1 %	0.0 ppm
V 292.402 {115} (Axial)	-15 cps	-0.0010 ppm	-0.202 %	4.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,658 cps	1.1221 ppm	89.766 %	2.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		201.2136 %		4.2 %	8.5 %
Sc 188.060 {479} (Axial)		98.7768 %		11.7 %	11.5 %
Mg 279.079 {121} (Radial)	0 cps	0.0033 ppm	0.131 %	333.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	125 cps	0.3699 ppm	73.976 %	37.5 %	0.1 ppm
Al 167.079 {502} (Axial)	2,251 cps	1.9233 ppm		32.9 %	0.6 ppm
Sc 227.318 {448} (Axial)		104.4710 %		9.6 %	10.0 %
B 249.773 {135} (Radial)	-5 cps	-0.0206 ppm	-0.825 %	8.7 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0039 ppm	-0.156 %	81.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0012 ppm		2,906.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	460 cps	0.4637 ppm	92.743 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		101.7252 %		11.1 %	11.2 %
Sc 361.384 {93} (Radial)		165.7025 %		8.2 %	13.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 9:50:37 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	220 cps	0.4722 ppm	94.436 %	4.6 %	0.0 ppm
As 189.042 {478} (Axial)	170 cps	0.4698 ppm	93.967 %	5.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	-1 cps	-0.0001 ppm		81.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,074 cps	-0.0538 ppm	-2.153 %	3.4 %	0.0 ppm
Be 313.042 {108} (Axial)	158,648 cps	0.4473 ppm	89.465 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	120 cps	0.5990 ppm	23.960 %	177.5 %	1.1 ppm
Cd 228.802 {447} (Axial)	5,625 cps	0.4861 ppm	97.223 %	5.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,037 cps	0.4471 ppm	89.412 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,723 cps	0.5027 ppm		4.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,128 cps	2.4429 ppm	97.718 %	5.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	47,149 cps	2.2452 ppm	89.806 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0060 ppm	-0.239 %	135.8 %	0.0 ppm
Li 670.784 {50} (Radial)	6 cps	0.0006 ppm	0.024 %	50.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,659 cps	0.4442 ppm	88.847 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,179 cps	2.4556 ppm	98.226 %	5.0 %	0.1 ppm
Na 589.592 {57} (Radial)	-40 cps	-0.0268 ppm	-0.054 %	23.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	10,034 cps	2.4423 ppm	97.694 %	5.0 %	0.1 ppm
K 766.490 {44} (Radial)	-28 cps	-0.0824 ppm	-0.165 %	78.7 %	0.1 ppm
Se 196.090 {472} (Axial)	530 cps	2.3643 ppm	94.572 %	6.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,970 cps	0.4418 ppm	88.350 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	2 cps	0.0001 ppm	0.012 %	506.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	499 cps	0.5005 ppm		5.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0018 ppm	0.353 %	8.8 %	0.0 ppm
V 292.402 {115} (Axial)	6,823 cps	0.4507 ppm	90.131 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,286 cps	1.1825 ppm	94.599 %	4.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		96.7005 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		89.7929 %		1.0 %	0.9 %
Mg 279.079 {121} (Radial)	0 cps	-0.0049 ppm	-0.194 %	83.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	167 cps	0.4957 ppm	99.144 %	5.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,851 cps	2.4358 ppm		4.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.9746 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	-3 cps	-0.0143 ppm	-0.572 %	32.8 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0010 ppm	0.041 %	218.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0079 ppm		20.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	489 cps	0.4927 ppm	98.540 %	5.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.1162 %		0.6 %	0.6 %
Sc 361.384 {93} (Radial)		139.7202 %		18.7 %	26.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 10:51:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	240 cps	0.5144 ppm	102.880 %	3.5 %	0.0 ppm
As 189.042 {478} (Axial)	188 cps	0.5174 ppm	103.480 %	3.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,560 cps	2.6792 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	51,393 cps	2.5758 ppm	103.032 %	2.0 %	0.1 ppm
Be 313.042 {108} (Axial)	175,222 cps	0.5001 ppm	100.027 %	0.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	504 cps	2.5070 ppm	100.278 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,034 cps	0.5215 ppm	104.297 %	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,409 cps	0.4936 ppm	98.725 %	0.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,900 cps	0.5353 ppm		3.7 %	0.0 ppm
Co 228.616 {447} (Axial)	21,486 cps	2.6077 ppm	104.308 %	3.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	51,935 cps	2.5074 ppm	100.297 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	478 cps	2.5739 ppm	102.955 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	26,681 cps	2.5461 ppm	101.846 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,724 cps	0.4963 ppm	99.265 %	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,598 cps	2.6224 ppm	104.896 %	3.7 %	0.1 ppm
Na 589.592 {57} (Radial)	74,404 cps	50.3768 ppm	100.754 %	2.6 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,710 cps	2.6067 ppm	104.269 %	3.6 %	0.1 ppm
K 766.490 {44} (Radial)	17,784 cps	52.1660 ppm	104.332 %	3.0 %	1.5 ppm
Se 196.090 {472} (Axial)	576 cps	2.5654 ppm	102.618 %	3.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,565 cps	0.5016 ppm	100.327 %	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,778 cps	0.5138 ppm	102.752 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	533 cps	0.5344 ppm		3.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	469 cps	0.4889 ppm	97.771 %	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	7,477 cps	0.5007 ppm	100.142 %	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,425 cps	1.2922 ppm	103.372 %	3.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.6996 %		2.5 %	2.4 %
Sc 188.060 {479} (Axial)		89.2564 %		1.1 %	1.0 %
Mg 279.079 {121} (Radial)	71 cps	2.4852 ppm	99.407 %	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	180 cps	0.5355 ppm	107.099 %	4.1 %	0.0 ppm
Al 167.079 {502} (Axial)	3,017 cps	2.5776 ppm		3.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.8871 %		0.8 %	0.8 %
B 249.773 {135} (Radial)	595 cps	2.4582 ppm	98.328 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	852 cps	2.5639 ppm	102.557 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	167 cps	2.5164 ppm		3.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	524 cps	0.5288 ppm	105.760 %	3.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.7141 %		1.1 %	1.0 %
Sc 361.384 {93} (Radial)		95.9100 %		1.5 %	1.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:57:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0013 ppm	83.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0005 ppm	148.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	38 cps	0.0017 ppm	19.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0102 ppm	7.7 %	0.0 ppm
Be 313.042 {108} (Axial)	65 cps	0.0002 ppm	10.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0169 ppm	57.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	34.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	83.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	317.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	78.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	30 cps	0.0014 ppm	12.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0060 ppm	133.1 %	0.0 ppm
Li 670.784 {50} (Radial)	30 cps	0.0029 ppm	13.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0002 ppm	40.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	15.5 %	0.0 ppm
Na 589.592 {57} (Radial)	102 cps	0.0688 ppm	9.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0004 ppm	58.4 %	0.0 ppm
K 766.490 {44} (Radial)	20 cps	0.0601 ppm	70.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	136.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	22.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	10 cps	0.0004 ppm	6.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	507.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0002 ppm	1,572.9 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	43.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	52.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5244 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		95.6457 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	-2 cps	-0.0725 ppm	89.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0011 ppm	43.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	151.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.2865 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	-3 cps	-0.0112 ppm	63.8 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0074 ppm	106.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0224 ppm	64.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	318.2 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6715 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		95.4581 %	0.7 %	0.7 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:58:42 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0016 ppm	82.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	209.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	34 cps	0.0016 ppm	34.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	256 cps	0.0129 ppm	14.6 %	0.0 ppm
Be 313.042 {108} (Axial)	56 cps	0.0002 ppm	35.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0207 ppm	95.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	4.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	45.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	224.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	57.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	24 cps	0.0011 ppm	82.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0003 ppm	457.6 %	0.0 ppm
Li 670.784 {50} (Radial)	33 cps	0.0031 ppm	46.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	11.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	29.5 %	0.0 ppm
Na 589.592 {57} (Radial)	126 cps	0.0854 ppm	9.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	-1 cps	-0.0002 ppm	34.1 %	0.0 ppm
K 766.490 {44} (Radial)	12 cps	0.0356 ppm	98.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0001 ppm	828.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	13 cps	0.0011 ppm	72.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	10 cps	0.0004 ppm	55.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	77.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	126.6 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	220.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	82.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8648 %	4.6 %	4.6 %
Sc 188.060 {479} (Axial)		95.4626 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	0 cps	-0.0077 ppm	732.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	29.4 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	99.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1702 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	0 cps	0.0004 ppm	1,296.6 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0122 ppm	44.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0060 ppm	113.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	69.3 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9303 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.8498 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:00:14 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0027 ppm	53.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	231.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	31 cps	0.0014 ppm	35.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	240 cps	0.0121 ppm	10.9 %	0.0 ppm
Be 313.042 {108} (Axial)	70 cps	0.0002 ppm	5.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0056 ppm	223.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	22.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	94.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	24.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	82.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	32 cps	0.0015 ppm	29.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0012 ppm	692.7 %	0.0 ppm
Li 670.784 {50} (Radial)	24 cps	0.0023 ppm	60.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	38.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	23.1 %	0.0 ppm
Na 589.592 {57} (Radial)	91 cps	0.0613 ppm	23.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	89.2 %	0.0 ppm
K 766.490 {44} (Radial)	7 cps	0.0217 ppm	122.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0011 ppm	77.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0006 ppm	45.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2 cps	0.0001 ppm	56.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	325.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0027 ppm	18.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	306.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	273.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.2189 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		95.5666 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0318 ppm	146.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0007 ppm	14.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	125.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.3659 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-2 cps	-0.0066 ppm	63.9 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0007 ppm	1,795.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0085 ppm	166.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	1,213.6 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9809 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.5971 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:02:03 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	48.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	186.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	49 cps	0.0022 ppm	31.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	214 cps	0.0107 ppm	17.4 %	0.0 ppm
Be 313.042 {108} (Axial)	110 cps	0.0003 ppm	7.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0178 ppm	37.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	2.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	23 cps	0.0025 ppm	13.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	10 cps	0.0019 ppm	5.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0005 ppm	56.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	44 cps	0.0021 ppm	10.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0002 ppm	1,559.0 %	0.0 ppm
Li 670.784 {50} (Radial)	42 cps	0.0040 ppm	33.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	16 cps	0.0002 ppm	13.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	36.6 %	0.0 ppm
Na 589.592 {57} (Radial)	481 cps	0.3259 ppm	6.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0006 ppm	65.4 %	0.0 ppm
K 766.490 {44} (Radial)	18 cps	0.0515 ppm	57.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0002 ppm	533.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0008 ppm	44.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0005 ppm	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	158.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0009 ppm	135.6 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	33.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	111.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.1188 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		95.9602 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	-0.0090 ppm	36.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	38.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	31.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.7157 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-1 cps	-0.0028 ppm	142.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0028 ppm	462.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0065 ppm	196.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	466.5 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2284 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		96.5225 %	0.7 %	0.7 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:17:21 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0008 ppm	237.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	170.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	43 cps	0.0020 ppm	35.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	271 cps	0.0136 ppm	14.4 %	0.0 ppm
Be 313.042 {108} (Axial)	106 cps	0.0003 ppm	9.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	7 cps	0.0336 ppm	15.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	22.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	17.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	14.0 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	68.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	43 cps	0.0021 ppm	3.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0020 ppm	410.4 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0035 ppm	15.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	16 cps	0.0002 ppm	29.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0014 ppm	32.6 %	0.0 ppm
Na 589.592 {57} (Radial)	262 cps	0.1772 ppm	3.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	258.1 %	0.0 ppm
K 766.490 {44} (Radial)	21 cps	0.0615 ppm	11.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	26.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	91.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	21 cps	0.0008 ppm	7.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	186.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	406.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	583.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	879.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9201 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.1725 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0145 ppm	173.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	107.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	51.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.7488 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	-3 cps	-0.0106 ppm	23.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0032 ppm	682.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0070 ppm	51.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	58.3 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4190 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		96.8498 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:41:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	50.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0007 ppm	175.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	44.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	135 cps	0.0068 ppm	7.6 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	20.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0206 ppm	43.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	8.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0003 ppm	89.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	261.4 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	67.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	27 cps	0.0013 ppm	20.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0027 ppm	224.2 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	17.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	29.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	23.9 %	0.0 ppm
Na 589.592 {57} (Radial)	59 cps	0.0402 ppm	31.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	190.5 %	0.0 ppm
K 766.490 {44} (Radial)	7 cps	0.0219 ppm	287.9 %	0.1 ppm
Se 196.090 {472} (Axial)	1 cps	0.0026 ppm	97.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0005 ppm	118.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0003 ppm	23.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	78.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0021 ppm	126.8 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0002 ppm	130.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	202.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0807 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.0867 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0349 ppm	51.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0008 ppm	71.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	26.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.1161 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	2 cps	0.0072 ppm	93.2 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0005 ppm	268.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0050 ppm	119.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	98.9 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4223 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		97.8888 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 4:44:22 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	171.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	155.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	32.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	49 cps	0.0024 ppm	54.7 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	12.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0093 ppm	100.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	63.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	251.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	110.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	50.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	21 cps	0.0010 ppm	18.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0023 ppm	151.9 %	0.0 ppm
Li 670.784 {50} (Radial)	29 cps	0.0028 ppm	33.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	42.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	39.5 %	0.0 ppm
Na 589.592 {57} (Radial)	63 cps	0.0430 ppm	19.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	370.5 %	0.0 ppm
K 766.490 {44} (Radial)	-6 cps	-0.0188 ppm	291.2 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0007 ppm	50.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0005 ppm	26.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0002 ppm	61.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	594.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0016 ppm	19.5 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	223.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	157.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4287 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		98.3495 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0213 ppm	291.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	142.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	82.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3699 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-2 cps	-0.0069 ppm	82.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0051 ppm	254.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0140 ppm	80.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	209.3 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4730 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.2198 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 5:44:59 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	94.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	209.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	18.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	146 cps	0.0073 ppm	13.5 %	0.0 ppm
Be 313.042 {108} (Axial)	46 cps	0.0001 ppm	36.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0128 ppm	112.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	29.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	421.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	10.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	25.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	25 cps	0.0012 ppm	14.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0098 ppm	60.1 %	0.0 ppm
Li 670.784 {50} (Radial)	25 cps	0.0024 ppm	85.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	60.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	17.2 %	0.0 ppm
Na 589.592 {57} (Radial)	54 cps	0.0368 ppm	35.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	225.3 %	0.0 ppm
K 766.490 {44} (Radial)	-4 cps	-0.0122 ppm	53.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0001 ppm	2,711.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	77.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	47.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0003 ppm	80.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	120.4 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	52.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	57.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.3880 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.3524 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0159 ppm	266.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	229.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	65.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2292 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-1 cps	-0.0028 ppm	150.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0068 ppm	364.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0053 ppm	85.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0007 ppm	16.0 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7902 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.3841 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 6:46:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	196.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0011 ppm	49.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	29 cps	0.0013 ppm	25.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	222 cps	0.0111 ppm	8.8 %	0.0 ppm
Be 313.042 {108} (Axial)	58 cps	0.0002 ppm	25.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0119 ppm	25.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0006 ppm	25.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	102.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0001 ppm	85.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	105.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	36 cps	0.0017 ppm	12.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0022 ppm	92.6 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0039 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	55.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	46.7 %	0.0 ppm
Na 589.592 {57} (Radial)	113 cps	0.0763 ppm	23.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	98.8 %	0.0 ppm
K 766.490 {44} (Radial)	20 cps	0.0574 ppm	74.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	84.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	46.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0002 ppm	41.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	337.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0020 ppm	70.9 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0003 ppm	73.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	56.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.7657 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		94.8371 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0216 ppm	286.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	70.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	6.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.8329 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-2 cps	-0.0086 ppm	46.3 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0030 ppm	208.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0048 ppm	99.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	2 cps	0.0019 ppm	44.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0723 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.6113 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 7:47:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	235.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0014 ppm	57.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	32 cps	0.0015 ppm	70.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	173 cps	0.0087 ppm	18.7 %	0.0 ppm
Be 313.042 {108} (Axial)	74 cps	0.0002 ppm	10.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0262 ppm	20.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	11.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	59.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	315.9 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	44.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	34 cps	0.0016 ppm	9.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0090 ppm	45.0 %	0.0 ppm
Li 670.784 {50} (Radial)	69 cps	0.0066 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	39.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	22.6 %	0.0 ppm
Na 589.592 {57} (Radial)	62 cps	0.0420 ppm	39.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	2,082.8 %	0.0 ppm
K 766.490 {44} (Radial)	34 cps	0.1009 ppm	25.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	1,129.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	46.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	42.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	375.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0005 ppm	202.9 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	184.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	100.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8045 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.1046 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0196 ppm	138.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0023 ppm	26.2 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	52.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.0053 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-1 cps	-0.0031 ppm	197.9 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0128 ppm	63.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0112 ppm	139.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	653.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5530 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.0514 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 8:49:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0022 ppm	59.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	480.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	21 cps	0.0010 ppm	83.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	249 cps	0.0125 ppm	10.5 %	0.0 ppm
Be 313.042 {108} (Axial)	60 cps	0.0002 ppm	19.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0129 ppm	16.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	35.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	143.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	201.2 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	88.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	36 cps	0.0017 ppm	25.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0006 ppm	743.7 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	21.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	12.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	15.8 %	0.0 ppm
Na 589.592 {57} (Radial)	61 cps	0.0410 ppm	12.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	258.7 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0552 ppm	70.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	135.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	44.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0003 ppm	16.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	97.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	181.8 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	43.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0299 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.3701 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0104 ppm	565.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0013 ppm	76.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	92.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1283 %	1.1 %	1.0 %
B 249.773 {135} (Radial)	-3 cps	-0.0140 ppm	15.8 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0144 ppm	107.8 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0116 ppm	64.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	85.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3095 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		96.9997 %	0.2 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 9:55:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0015 ppm	68.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	202.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	9 cps	0.0004 ppm	48.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,131 cps	-0.0567 ppm	14.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-198 cps	-0.0006 ppm	115.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	-4 cps	-0.0201 ppm	62.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0008 ppm	13.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	105.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0006 ppm	31.6 %	0.0 ppm
Co 228.616 {447} (Axial)	24 cps	0.0029 ppm	20.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	-32 cps	-0.0015 ppm	277.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0027 ppm	239.1 %	0.0 ppm
Li 670.784 {50} (Radial)	5 cps	0.0005 ppm	192.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	208.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	10 cps	0.0042 ppm	20.1 %	0.0 ppm
Na 589.592 {57} (Radial)	-27 cps	-0.0184 ppm	56.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	11 cps	0.0028 ppm	19.7 %	0.0 ppm
K 766.490 {44} (Radial)	-23 cps	-0.0685 ppm	30.5 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0046 ppm	61.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	-15 cps	-0.0014 ppm	111.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1 cps	0.0000 ppm	134.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	14.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0008 ppm	42.9 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0006 ppm	95.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12 cps	0.0012 ppm	23.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		166.6489 %	30.3 %	50.6 %
Sc 188.060 {479} (Axial)		95.9125 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	0.0124 ppm	305.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	326.0 %	0.0 ppm
Al 167.079 {502} (Axial)	4 cps	0.0035 ppm	18.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.6869 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	-3 cps	-0.0115 ppm	7.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0054 ppm	30.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0157 ppm	135.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	481.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2029 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		161.4753 %	5.6 %	9.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:56:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0024 ppm	21.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	80.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	24 cps	0.0011 ppm	28.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0102 ppm	4.0 %	0.0 ppm
Be 313.042 {108} (Axial)	61 cps	0.0002 ppm	14.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0045 ppm	220.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	47.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	1,981.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	59.7 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	97.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	26 cps	0.0012 ppm	37.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0026 ppm	97.4 %	0.0 ppm
Li 670.784 {50} (Radial)	28 cps	0.0027 ppm	48.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	32.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	39.2 %	0.0 ppm
Na 589.592 {57} (Radial)	32 cps	0.0217 ppm	60.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	86.1 %	0.0 ppm
K 766.490 {44} (Radial)	18 cps	0.0521 ppm	22.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0006 ppm	472.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0012 ppm	13.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	26.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	89.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0025 ppm	100.3 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	16.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	521.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9624 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.0514 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0054 ppm	345.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	54.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	68.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.8671 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	-2 cps	-0.0089 ppm	26.7 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0117 ppm	71.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0125 ppm	14.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0008 ppm	46.4 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8155 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.5867 %	0.6 %	0.6 %

Calibration Summary

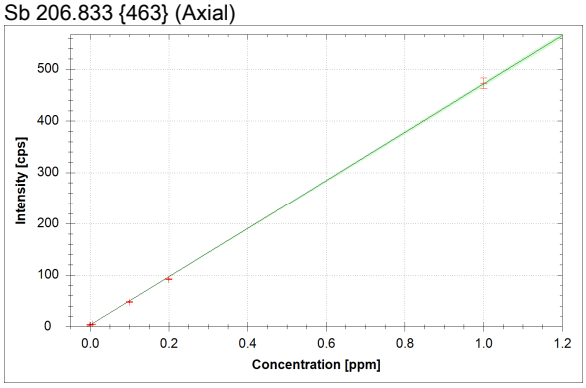
12/2/2020 8:16:42 AM

QTEGRA

LabBook: ICP2_201201C.imexp

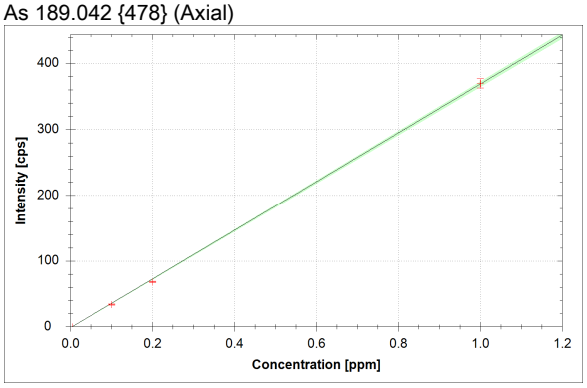
Calibration Graphs

Sb 206.833 {463} (Axial)



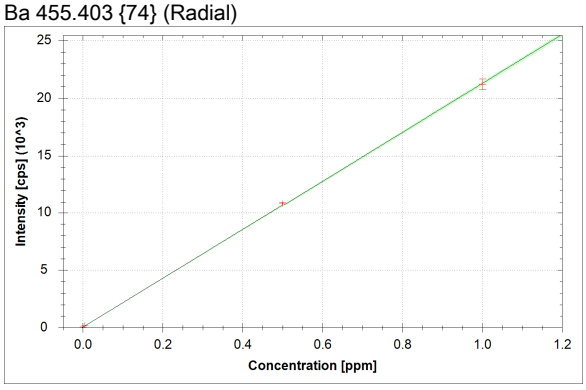
f(x) = 468.3114*x + 3.1847
R² = 0.9998
BEC = 0.007 ppm
LoD = 0.0052 ppm

As 189.042 {478} (Axial)



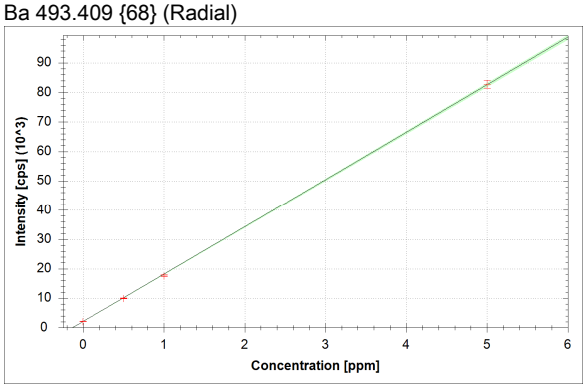
f(x) = 370.3503*x + -1.6228
R² = 0.9997
BEC = -0.004 ppm
LoD = 0.0023 ppm

Ba 455.403 {74} (Radial)



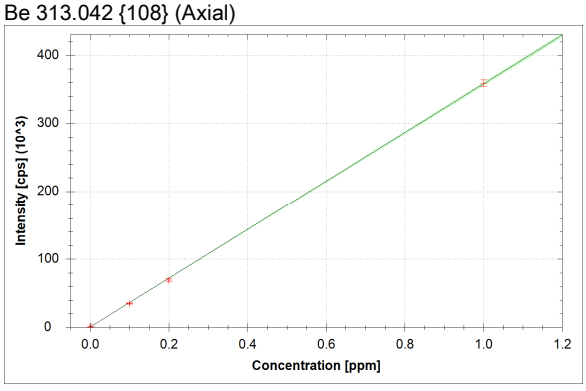
f(x) = 21233.8595*x + 50.8413
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



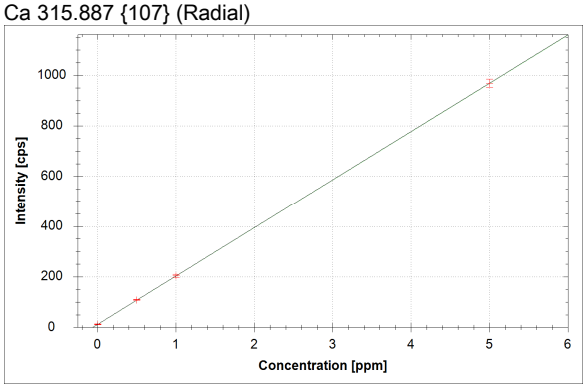
f(x) = 16090.9736*x + 2122.6339
R² = 0.9999
BEC = 0.132 ppm
LoD = 0.0013 ppm

Be 313.042 {108} (Axial)



f(x) = 357641.4770*x + 541.7958
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



f(x) = 191.3679*x + 11.4745
R² = 1.0000
BEC = 0.060 ppm
LoD = 0.0207 ppm

Calibration Summary

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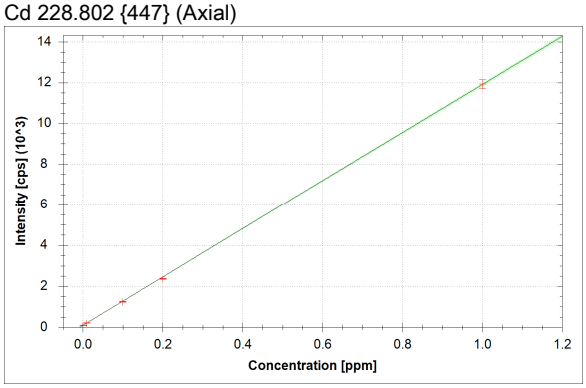
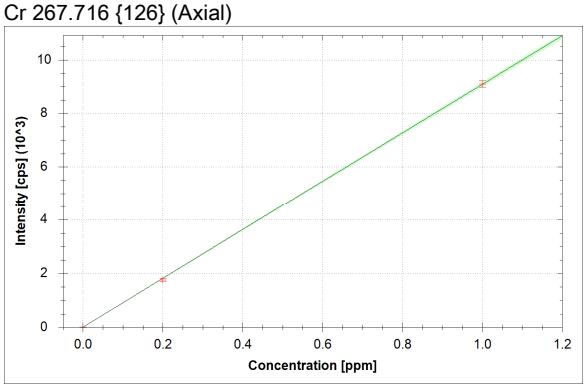
QTEGRA

Cd 228.802 {447} (Axial)



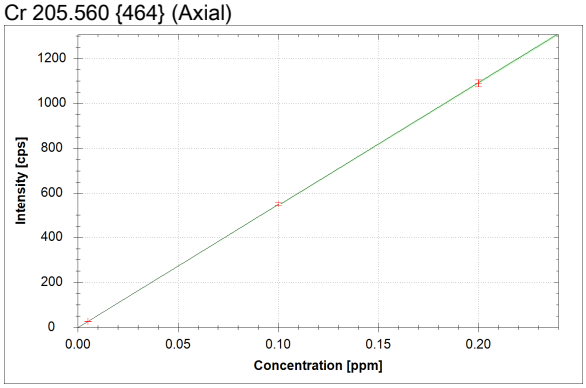
f(x) = 11814.1230*x + 97.9012
R² = 0.9999
BEC = 0.008 ppm
LoD = 0.0005 ppm

Cr 267.716 {126} (Axial)



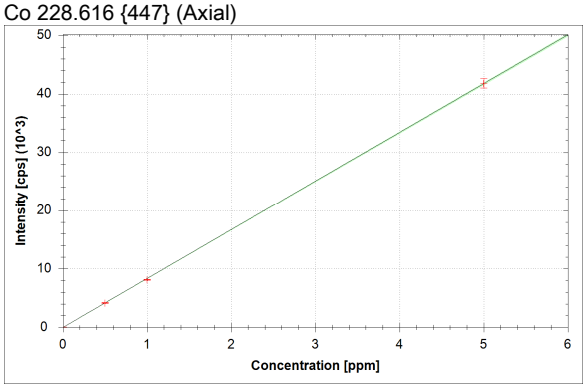
f(x) = 9085.6753*x + 4.6714
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0011 ppm

Cr 205.560 {464} (Axial)



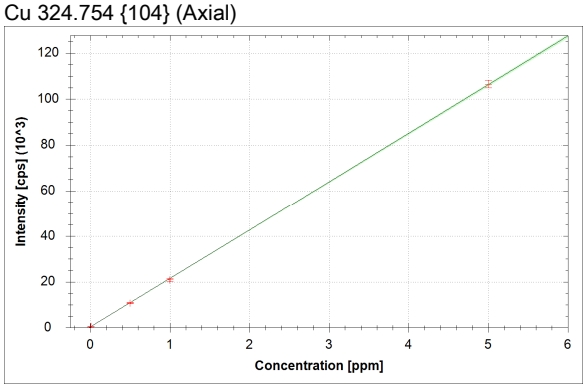
f(x) = 5465.3718*x + -1.2163
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Co 228.616 {447} (Axial)



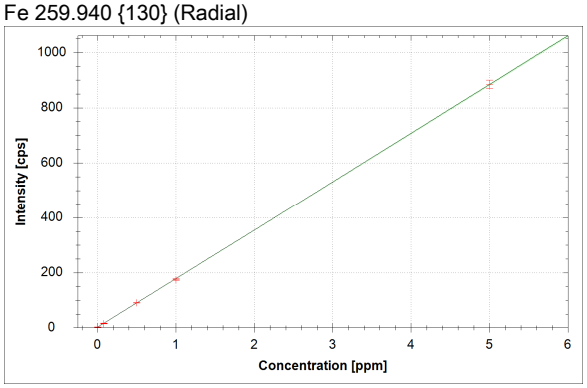
f(x) = 8354.0153*x + -3.0038
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0005 ppm

Cu 324.754 {104} (Axial)



f(x) = 21180.8634*x + 351.4723
R² = 0.9999
BEC = 0.017 ppm
LoD = 0.0009 ppm

Fe 259.940 {130} (Radial)



f(x) = 176.4469*x + 1.8118
R² = 1.0000
BEC = 0.010 ppm
LoD = 0.0193 ppm

Calibration Summary

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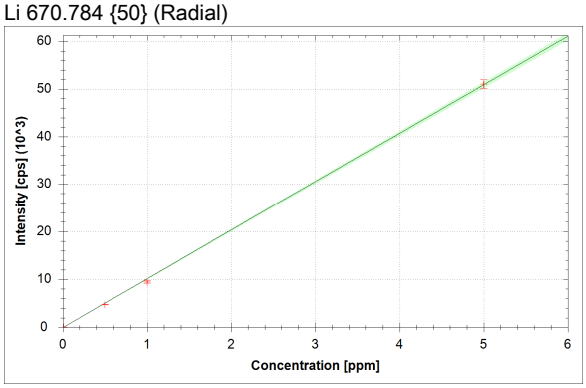
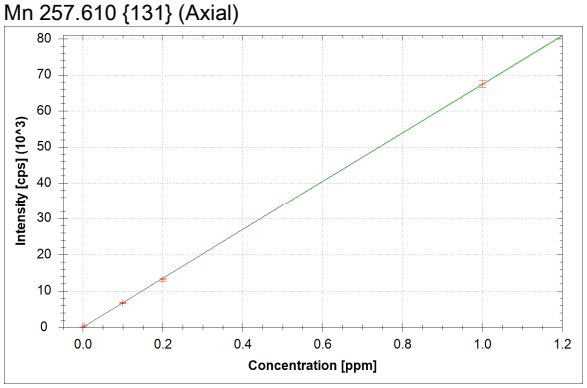
QTEGRA

Li 670.784 {50} (Radial)



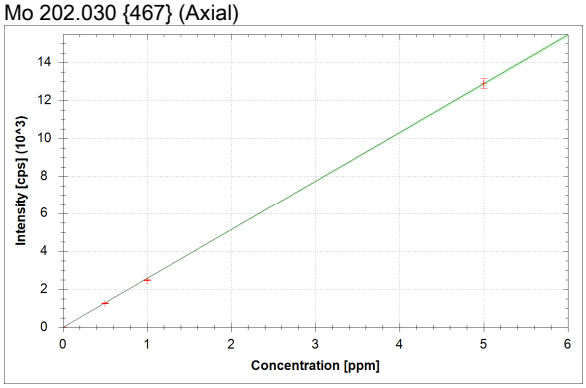
f(x) = 10188.2136*x + -44.0733
R² = 0.9997
BEC = -0.004 ppm
LoD = 0.0019 ppm

Mn 257.610 {131} (Axial)



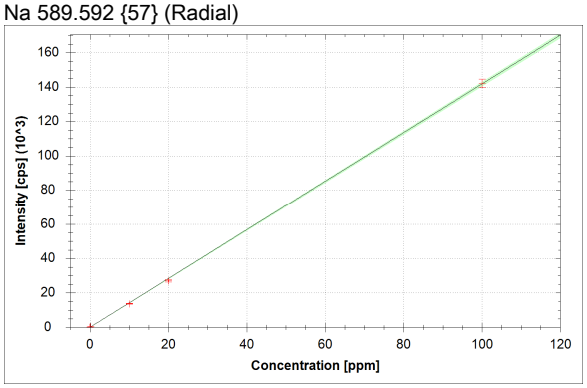
f(x) = 67343.0590*x + 31.1313
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Mo 202.030 {467} (Axial)



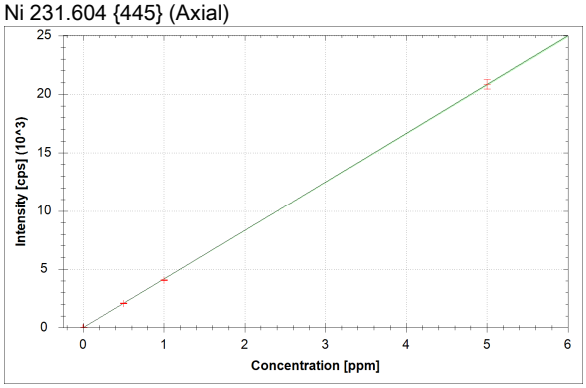
f(x) = 2576.9820*x + -0.8325
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0006 ppm

Na 589.592 {57} (Radial)



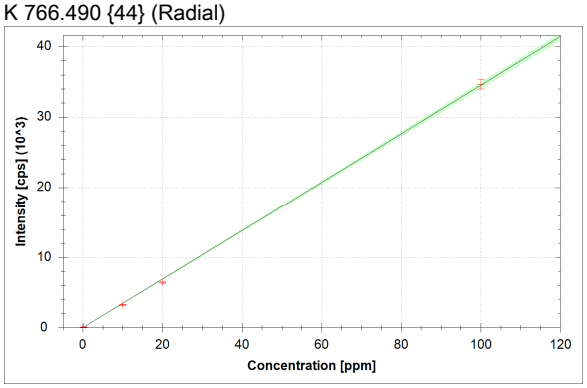
f(x) = 1418.1426*x + 54.2050
R² = 0.9998
BEC = 0.038 ppm
LoD = 0.0066 ppm

Ni 231.604 {445} (Axial)



f(x) = 4164.2212*x + 0.9704
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

K 766.490 {44} (Radial)



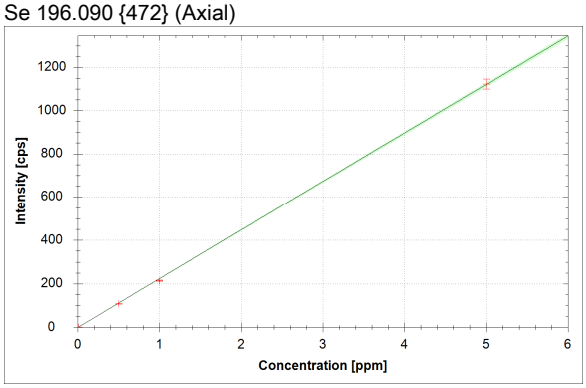
f(x) = 345.0272*x + 10.7215
R² = 0.9996
BEC = 0.031 ppm
LoD = 0.0468 ppm

Calibration Summary

12/2/2020 8:16:42 AM

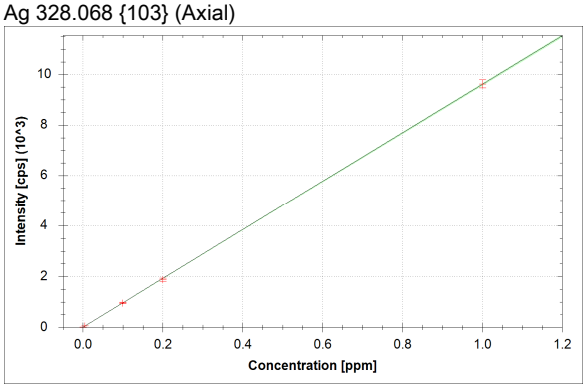
QTEGRA

Se 196.090 {472} (Axial)



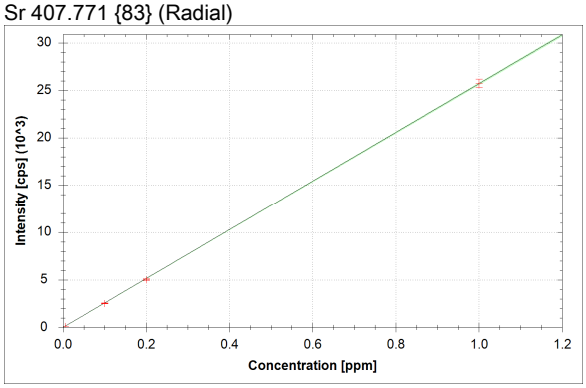
f(x) = 224.0616*x + -0.3683
R² = 0.9999
BEC = -0.002 ppm
LoD = 0.0054 ppm

Ag 328.068 {103} (Axial)



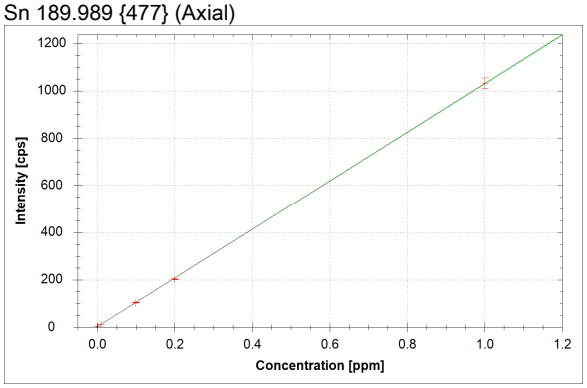
f(x) = 9607.9426*x + 4.1270
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

Sr 407.771 {83} (Radial)



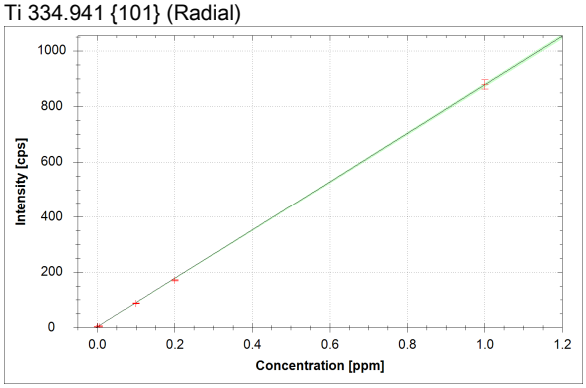
f(x) = 25708.7320*x + -9.5305
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Sn 189.989 {477} (Axial)



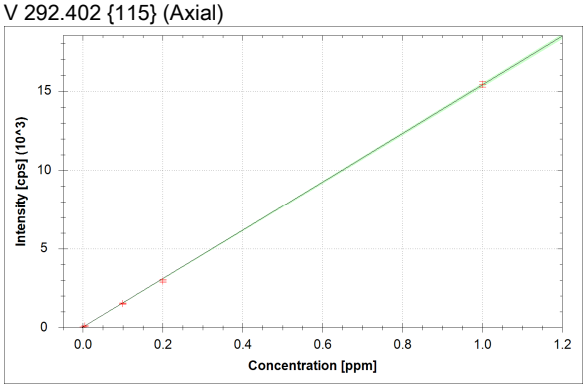
f(x) = 1027.8064*x + 2.6799
R² = 1.0000
BEC = 0.003 ppm
LoD = 0.0009 ppm

Ti 334.941 {101} (Radial)



f(x) = 874.5663*x + 3.3455
R² = 0.9999
BEC = 0.004 ppm
LoD = 0.0034 ppm

V 292.402 {115} (Axial)



f(x) = 15362.0382*x + 36.8129
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0013 ppm

Calibration Summary

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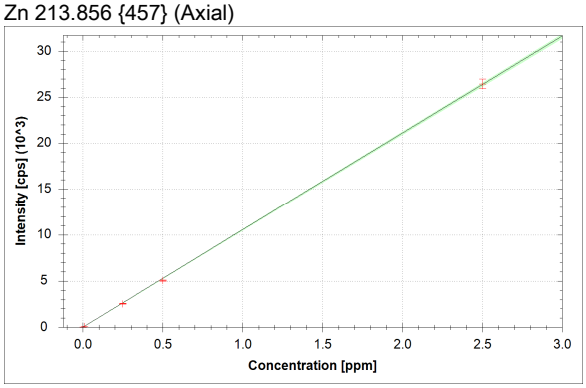
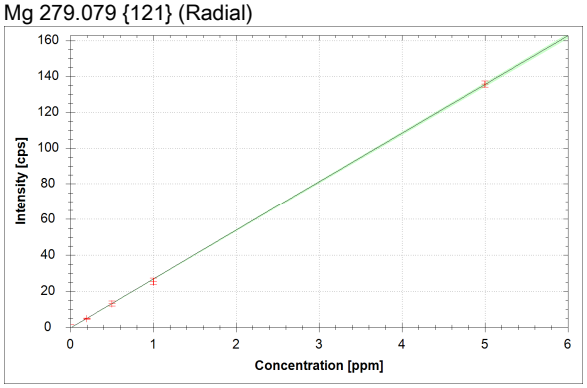
QTEGRA

Zn 213.856 {457} (Axial)



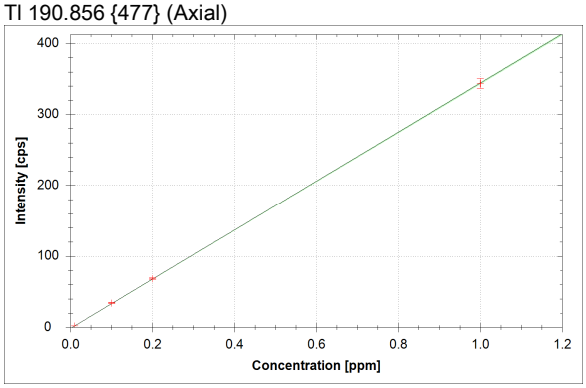
f(x) = 10545.5149*x + 18.1216
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



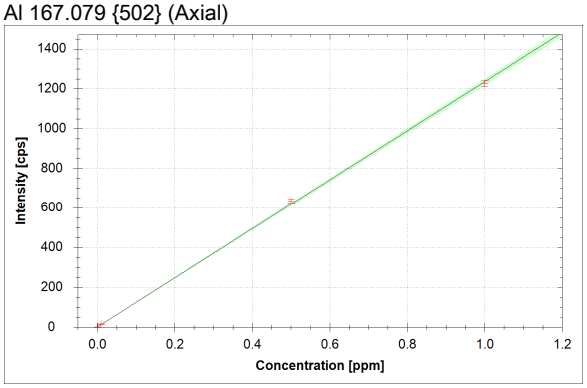
f(x) = 27.1751*x + -0.3929
R² = 0.9998
BEC = -0.014 ppm
LoD = 0.1980 ppm

Tl 190.856 {477} (Axial)



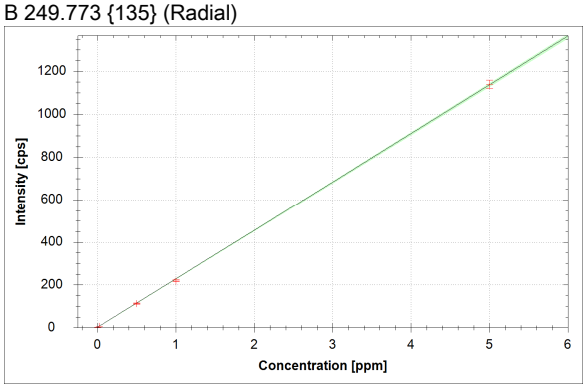
f(x) = 345.6315*x + -1.5056
R² = 1.0000
BEC = -0.004 ppm
LoD = 0.0008 ppm

Al 167.079 {502} (Axial)



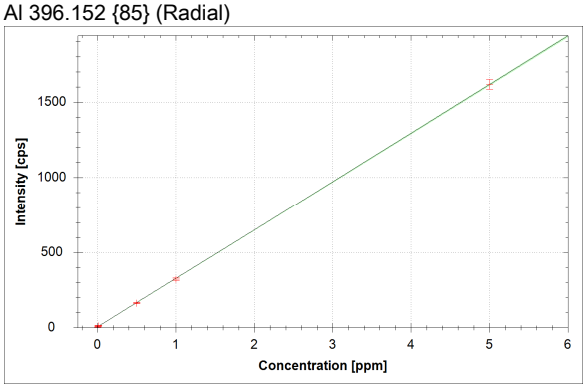
f(x) = 1233.9246*x + 1.7741
R² = 0.9997
BEC = 0.001 ppm
LoD = 0.0002 ppm

B 249.773 {135} (Radial)



f(x) = 226.9921*x + 1.9947
R² = 0.9999
BEC = 0.009 ppm
LoD = 0.0007 ppm

Al 396.152 {85} (Radial)



f(x) = 322.0300*x + 5.7665
R² = 1.0000
BEC = 0.018 ppm
LoD = 0.0473 ppm

Calibration Summary

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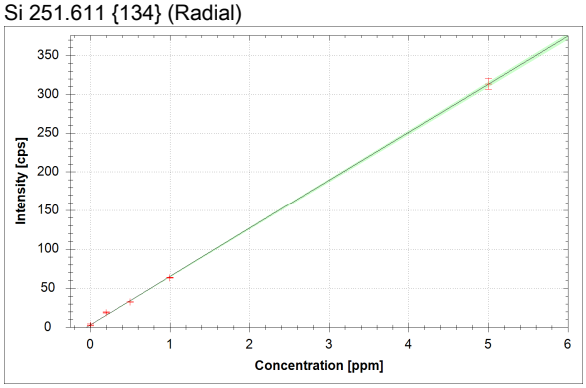
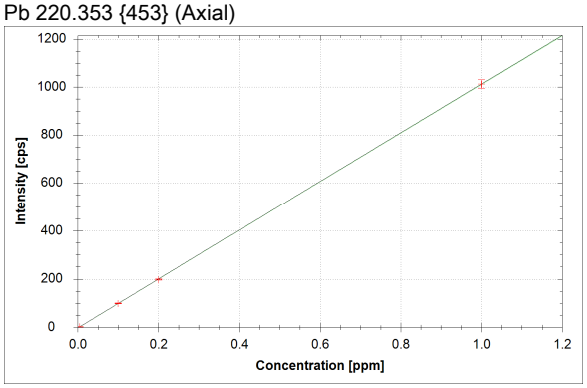
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 61.9682*x + 3.0697
R² = 0.9997
BEC = 0.050 ppm
LoD = 0.0650 ppm

Pb 220.353 {453} (Axial)



f(x) = 1014.9581*x + -2.6530
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0020 ppm

Calibration Summary

12/2/2020 8:16:42 AM

Standards

Standard: ICAL2
Analysis started at: 12/1/2020 11:29:13 AM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0033 ppm	14.7 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0040 ppm	16.8 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0048 ppm	3.0 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	2.6 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.5050 ppm	2.3 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0096 ppm	1.3 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0051 ppm	3.3 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0048 ppm	2.2 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0104 ppm	6.0 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0719 ppm	10.5 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0096 ppm	3.8 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0051 ppm	2.9 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0046 ppm	2.9 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.2113 ppm	3.7 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0054 ppm	5.4 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1485 ppm	35.3 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0084 ppm	31.8 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0053 ppm	3.4 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0050 ppm	4.5 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0100 ppm	3.8 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0010 ppm	187.5 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0049 ppm	12.3 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0103 ppm	1.9 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.8243 %	0.7 %	
Sc 188.060 {479} (Axial)	98.7786 %	0.6 %	
Mg 279.079 {121} (Radial)	0.1932 ppm	6.7 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0102 ppm	0.9 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0117 ppm	7.6 %	0.0100 ppm
Sc 227.318 {448} (Axial)	98.8280 %	0.5 %	
B 249.773 {135} (Radial)	0.0199 ppm	1.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0213 ppm	31.2 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2558 ppm	5.3 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0049 ppm	22.4 %	0.0050 ppm
Y 224.306 {450} (Axial)	99.4292 %	0.4 %	
Sc 361.384 {93} (Radial)	99.9853 %	0.3 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL3
Analysis started at: 12/1/2020 11:34:20 AM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0957 ppm	2.5 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0950 ppm	2.0 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.5078 ppm	1.5 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4860 ppm	1.4 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0961 ppm	2.9 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.5038 ppm	2.3 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0970 ppm	1.4 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.1009 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4943 ppm	1.6 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4920 ppm	2.5 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.5018 ppm	1.1 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4683 ppm	1.3 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0989 ppm	2.7 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4869 ppm	1.6 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.5541 ppm	1.7 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4970 ppm	1.6 %	0.5000 ppm
K 766.490 {44} (Radial)	9.2386 ppm	1.9 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4805 ppm	1.2 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0989 ppm	2.8 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0990 ppm	1.6 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0982 ppm	1.9 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0961 ppm	2.0 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0969 ppm	2.6 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2407 ppm	1.5 %	0.2500 ppm
Sc 357.253 {94} (Axial)	99.5242 %	1.2 %	
Sc 188.060 {479} (Axial)	97.2677 %	0.2 %	
Mg 279.079 {121} (Radial)	0.4962 ppm	10.3 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1038 ppm	1.7 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5132 ppm	1.7 %	0.5000 ppm
Sc 227.318 {448} (Axial)	98.8219 %	0.2 %	
B 249.773 {135} (Radial)	0.4870 ppm	2.9 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4869 ppm	2.9 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4764 ppm	0.8 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1005 ppm	1.7 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.2272 %	0.1 %	
Sc 361.384 {93} (Radial)	100.8179 %	0.2 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 12/1/2020 11:39:20 AM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1902 ppm	1.5 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1874 ppm	1.4 %	0.2000 ppm
Ba 455.403 {74} (Radial)	0.9961 ppm	2.2 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9615 ppm	2.2 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1918 ppm	3.1 %	0.2000 ppm
Ca 315.887 {107} (Radial)	1.0039 ppm	3.4 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1915 ppm	1.2 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1935 ppm	3.0 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.1995 ppm	1.4 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9702 ppm	1.3 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9650 ppm	3.2 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9797 ppm	1.5 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9320 ppm	2.2 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1937 ppm	3.0 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9603 ppm	1.4 %	1.0000 ppm
Na 589.592 {57} (Radial)	18.9710 ppm	2.5 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9748 ppm	1.4 %	1.0000 ppm
K 766.490 {44} (Radial)	18.5585 ppm	2.6 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9542 ppm	1.3 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1944 ppm	3.1 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1943 ppm	2.0 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1945 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1921 ppm	1.7 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1904 ppm	3.0 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4775 ppm	1.3 %	0.5000 ppm
Sc 357.253 {94} (Axial)	99.7305 %	1.4 %	
Sc 188.060 {479} (Axial)	96.9326 %	0.1 %	
Mg 279.079 {121} (Radial)	0.9499 ppm	7.3 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2030 ppm	1.4 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9934 ppm	1.3 %	1.0000 ppm
Sc 227.318 {448} (Axial)	100.0794 %	0.2 %	
B 249.773 {135} (Radial)	0.9554 ppm	2.0 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9814 ppm	2.8 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9707 ppm	0.9 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.1973 ppm	1.4 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.2275 %	0.2 %	
Sc 361.384 {93} (Radial)	101.8464 %	0.3 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 12/1/2020 11:44:17 AM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0024 ppm	2.2 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0030 ppm	1.8 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0091 ppm	1.6 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0020 ppm	1.3 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9983 ppm	1.7 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0020 ppm	2.0 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0013 ppm	1.3 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0065 ppm	2.0 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0078 ppm	1.5 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0040 ppm	1.8 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0168 ppm	1.7 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0014 ppm	1.4 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0092 ppm	2.1 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2504 ppm	1.8 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0053 ppm	2.0 %	5.0000 ppm
K 766.490 {44} (Radial)	100.3646 ppm	2.0 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0111 ppm	2.0 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0012 ppm	1.7 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0012 ppm	1.7 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0013 ppm	2.2 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0020 ppm	1.9 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0022 ppm	1.2 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5054 ppm	2.0 %	2.5000 ppm
Sc 357.253 {94} (Axial)	95.7274 %	0.5 %	
Sc 188.060 {479} (Axial)	89.3180 %	0.7 %	
Mg 279.079 {121} (Radial)	5.0107 ppm	1.3 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9990 ppm	2.0 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	105.1002 %	0.5 %	
B 249.773 {135} (Radial)	5.0102 ppm	1.7 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0050 ppm	2.0 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0060 ppm	2.3 %	5.0000 ppm
Pb 220.353 {453} (Axial)	1.0005 ppm	1.8 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.2035 %	0.8 %	
Sc 361.384 {93} (Radial)	99.7689 %	0.5 %	

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LabBook: ICP2_201201C.imexp

ICAL1

Sample type: BLK Analysis started at: 12/1/2020 11:24:02 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-4.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 12/1/2020 11:29:13 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0033 ppm	14.7 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0040 ppm	16.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	101 cps	0.0048 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	683 cps	0.0019 ppm	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	97 cps	0.5050 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0096 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	28 cps	0.0051 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0048 ppm	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	220 cps	0.0104 ppm	6.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	13 cps	0.0719 ppm	10.5 %	0.0 ppm
Li 670.784 {50} (Radial)	98 cps	0.0096 ppm	3.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	344 cps	0.0051 ppm	2.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0046 ppm	2.9 %	0.0 ppm
Na 589.592 {57} (Radial)	300 cps	0.2113 ppm	3.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	23 cps	0.0054 ppm	5.4 %	0.0 ppm
K 766.490 {44} (Radial)	51 cps	0.1485 ppm	35.3 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0084 ppm	31.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	51 cps	0.0053 ppm	3.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	129 cps	0.0050 ppm	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0100 ppm	3.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0010 ppm	187.5 %	0.0 ppm
V 292.402 {115} (Axial)	75 cps	0.0049 ppm	12.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	109 cps	0.0103 ppm	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.8243 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		98.7786 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	5 cps	0.1932 ppm	6.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0102 ppm	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	14 cps	0.0117 ppm	7.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8280 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	5 cps	0.0199 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	7 cps	0.0213 ppm	31.2 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2558 ppm	5.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0049 ppm	22.4 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4292 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.9853 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 12/1/2020 11:34:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.0957 ppm	2.5 %	0.0 ppm
As 189.042 {478} (Axial)	35 cps	0.0950 ppm	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	10,782 cps	0.5078 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,820 cps	0.4860 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	34,352 cps	0.0961 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	96 cps	0.5038 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,146 cps	0.0970 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	552 cps	0.1009 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4,129 cps	0.4943 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,422 cps	0.4920 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	89 cps	0.5018 ppm	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	4,771 cps	0.4683 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,660 cps	0.0989 ppm	2.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,255 cps	0.4869 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	13,549 cps	9.5541 ppm	1.7 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,069 cps	0.4970 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	3,188 cps	9.2386 ppm	1.9 %	0.2 ppm
Se 196.090 {472} (Axial)	108 cps	0.4805 ppm	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	950 cps	0.0989 ppm	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,546 cps	0.0990 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	101 cps	0.0982 ppm	1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	84 cps	0.0961 ppm	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,489 cps	0.0969 ppm	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,539 cps	0.2407 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5242 %	1.2 %	1.2 %
Sc 188.060 {479} (Axial)		97.2677 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	13 cps	0.4962 ppm	10.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	36 cps	0.1038 ppm	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	633 cps	0.5132 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8219 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	111 cps	0.4870 ppm	2.9 %	0.0 ppm
Al 396.152 {85} (Radial)	157 cps	0.4869 ppm	2.9 %	0.0 ppm
Si 251.611 {134} (Radial)	30 cps	0.4764 ppm	0.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	102 cps	0.1005 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		98.2272 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.8179 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 12/1/2020 11:39:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	89 cps	0.1902 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	69 cps	0.1874 ppm	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	21,151 cps	0.9961 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	15,472 cps	0.9615 ppm	2.2 %	0.0 ppm
Be 313.042 {108} (Axial)	68,602 cps	0.1918 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	192 cps	1.0039 ppm	3.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,262 cps	0.1915 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,758 cps	0.1935 ppm	3.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,091 cps	0.1995 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	8,105 cps	0.9702 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,439 cps	0.9650 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	173 cps	0.9797 ppm	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	9,496 cps	0.9320 ppm	2.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,047 cps	0.1937 ppm	3.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,475 cps	0.9603 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	26,904 cps	18.9710 ppm	2.5 %	0.5 ppm
Ni 231.604 {445} (Axial)	4,059 cps	0.9748 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	6,403 cps	18.5585 ppm	2.6 %	0.5 ppm
Se 196.090 {472} (Axial)	214 cps	0.9542 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,868 cps	0.1944 ppm	3.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,995 cps	0.1943 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	200 cps	0.1945 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	0.1921 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	2,925 cps	0.1904 ppm	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,035 cps	0.4775 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7305 %	1.4 %	1.4 %
Sc 188.060 {479} (Axial)		96.9326 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	26 cps	0.9499 ppm	7.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	70 cps	0.2030 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1,226 cps	0.9934 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0794 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	217 cps	0.9554 ppm	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	316 cps	0.9814 ppm	2.8 %	0.0 ppm
Si 251.611 {134} (Radial)	60 cps	0.9707 ppm	0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	200 cps	0.1973 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		98.2275 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.8464 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 12/1/2020 11:44:17 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	469 cps	1.0024 ppm	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	371 cps	1.0030 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	80,601 cps	5.0091 ppm	1.6 %	0.1 ppm
Be 313.042 {108} (Axial)	358,368 cps	1.0020 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	957 cps	4.9983 ppm	1.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,838 cps	1.0020 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,098 cps	1.0013 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	41,825 cps	5.0065 ppm	2.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	106,069 cps	5.0078 ppm	1.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	883 cps	5.0040 ppm	1.8 %	0.1 ppm
Li 670.784 {50} (Radial)	51,112 cps	5.0168 ppm	1.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	67,435 cps	1.0014 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	12,909 cps	5.0092 ppm	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	142,169 cps	100.2504 ppm	1.8 %	1.8 ppm
Ni 231.604 {445} (Axial)	20,843 cps	5.0053 ppm	2.0 %	0.1 ppm
K 766.490 {44} (Radial)	34,628 cps	100.3646 ppm	2.0 %	2.0 ppm
Se 196.090 {472} (Axial)	1,123 cps	5.0111 ppm	2.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	9,620 cps	1.0012 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	25,741 cps	1.0012 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,029 cps	1.0013 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	876 cps	1.0020 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	15,396 cps	1.0022 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,421 cps	2.5054 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.7274 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		89.3180 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	136 cps	5.0107 ppm	1.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	345 cps	0.9990 ppm	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		105.1002 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1,137 cps	5.0102 ppm	1.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,612 cps	5.0050 ppm	2.0 %	0.1 ppm
Si 251.611 {134} (Radial)	310 cps	5.0060 ppm	2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,015 cps	1.0005 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2035 %	0.8 %	0.7 %
Sc 361.384 {93} (Radial)		99.7689 %	0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:14:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-21 cps	-0.0452 ppm	2.4 %	0.0 ppm
As 189.042 {478} (Axial)	-13 cps	-0.0354 ppm	3.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	445,391 cps	20.9755 ppm	2.3 %	0.5 ppm
Ba 493.409 {68} (Radial)	328,931 cps	20.4420 ppm	2.3 %	0.5 ppm
Be 313.042 {108} (Axial)	715,546 cps	2.0007 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	38,103 cps	199.1110 ppm	1.7 %	3.3 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	42.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	89,337 cps	9.8327 ppm	1.1 %	0.1 ppm
Cr 205.560 {464} (Axial)	53,637 cps	9.8140 ppm	1.8 %	0.2 ppm
Co 228.616 {447} (Axial)	94 cps	0.0112 ppm	3.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	431,714 cps	20.3823 ppm	1.3 %	0.3 ppm
Fe 259.940 {130} (Radial)	34,741 cps	196.8946 ppm	1.5 %	3.0 ppm
Li 670.784 {50} (Radial)	105,789 cps	10.3834 ppm	1.7 %	0.2 ppm
Mn 257.610 {131} (Axial)	645,355 cps	9.5831 ppm	1.2 %	0.1 ppm
Mo 202.030 {467} (Axial)	-4 cps	-0.0016 ppm	26.7 %	0.0 ppm
Na 589.592 {57} (Radial)	-51 cps	-0.0358 ppm	37.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	-117 cps	-0.0282 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	-67 cps	-0.1953 ppm	16.1 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0146 ppm	28.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	21,017 cps	2.1875 ppm	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	264,707 cps	10.2964 ppm	1.6 %	0.2 ppm
Sn 189.989 {477} (Axial)	-29 cps	-0.0279 ppm	2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	8,753 cps	10.0081 ppm	1.6 %	0.2 ppm
V 292.402 {115} (Axial)	154,175 cps	10.0361 ppm	1.2 %	0.1 ppm
Zn 213.856 {457} (Axial)	-761 cps	-0.0721 ppm	2.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0229 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		80.0778 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	5,610 cps	206.4334 ppm	1.7 %	3.5 ppm
Tl 190.856 {477} (Axial)	-17 cps	-0.0498 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	25,620 cps	20.7632 ppm	0.7 %	0.1 ppm
Sc 227.318 {448} (Axial)		83.1861 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	4,769 cps	21.0098 ppm	1.7 %	0.4 ppm
Al 396.152 {85} (Radial)	64,961 cps	201.7249 ppm	1.5 %	3.0 ppm
Si 251.611 {134} (Radial)	1,263 cps	20.3745 ppm	1.9 %	0.4 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0012 ppm	50.7 %	0.0 ppm
Y 224.306 {450} (Axial)		88.8128 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		97.6051 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:19:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,256 cps	4.8171 ppm	1.7 %	0.1 ppm
As 189.042 {478} (Axial)	1,703 cps	4.5990 ppm	1.5 %	0.1 ppm
Ba 455.403 {74} (Radial)	158 cps	0.0075 ppm	17.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	131 cps	0.0082 ppm	29.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-29 cps	-0.0001 ppm	83.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	18 cps	0.0940 ppm	16.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	263 cps	0.0223 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	45.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	35 cps	0.0064 ppm	4.5 %	0.0 ppm
Co 228.616 {447} (Axial)	81,535 cps	9.7600 ppm	1.6 %	0.2 ppm
Cu 324.754 {104} (Axial)	199 cps	0.0094 ppm	9.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0869 ppm	21.4 %	0.0 ppm
Li 670.784 {50} (Radial)	80 cps	0.0078 ppm	13.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	-153 cps	-0.0023 ppm	13.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	24,929 cps	9.6737 ppm	1.7 %	0.2 ppm
Na 589.592 {57} (Radial)	-7 cps	-0.0050 ppm	87.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	40,682 cps	9.7694 ppm	1.7 %	0.2 ppm
K 766.490 {44} (Radial)	-3 cps	-0.0077 ppm	288.9 %	0.0 ppm
Se 196.090 {472} (Axial)	1,036 cps	4.6234 ppm	1.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0029 ppm	18.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	86 cps	0.0034 ppm	23.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	4,916 cps	4.7828 ppm	1.6 %	0.1 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0064 ppm	28.9 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0011 ppm	22.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	48,493 cps	4.5984 ppm	1.6 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.4019 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		99.8376 %	1.6 %	1.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0300 ppm	136.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,810 cps	5.2376 ppm	1.1 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0176 ppm	41.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.5577 %	1.5 %	1.5 %
B 249.773 {135} (Radial)	15 cps	0.0667 ppm	9.1 %	0.0 ppm
Al 396.152 {85} (Radial)	154 cps	0.4796 ppm	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	4 cps	0.0635 ppm	8.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,091 cps	5.0156 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		99.9713 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		100.3664 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 12/1/2020 11:49:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	466 cps	0.9945 ppm	99.445 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	359 cps	0.9691 ppm	96.913 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,669 cps	1.0676 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	16,487 cps	1.0246 ppm	102.461 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	356,424 cps	0.9966 ppm	99.660 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,216 cps	6.3553 ppm	105.922 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	11,662 cps	0.9871 ppm	98.710 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,231 cps	1.0160 ppm	101.600 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,586 cps	1.0220 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	8,343 cps	0.9987 ppm	99.866 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	21,703 cps	1.0247 ppm	102.466 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	185 cps	1.0488 ppm	104.883 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	10,278 cps	1.0088 ppm	100.878 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	69,352 cps	1.0298 ppm	102.983 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,617 cps	1.0154 ppm	101.539 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	29,848 cps	21.0473 ppm	100.225 %	1.5 %	0.3 ppm
Ni 231.604 {445} (Axial)	4,177 cps	1.0030 ppm	100.299 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	7,237 cps	20.9765 ppm	99.888 %	1.4 %	0.3 ppm
Se 196.090 {472} (Axial)	219 cps	0.9781 ppm	97.807 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,068 cps	1.0479 ppm	104.789 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,515 cps	1.0313 ppm	103.134 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,021 cps	0.9932 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	896 cps	1.0246 ppm	102.463 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	15,733 cps	1.0241 ppm	102.413 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,327 cps	0.9793 ppm	97.932 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7252 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.8434 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	1.0043 ppm	100.432 %	7.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	359 cps	1.0394 ppm	103.943 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1,262 cps	1.0231 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.5065 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	238 cps	1.0506 ppm	105.063 %	0.9 %	0.0 ppm
Al 396.152 {85} (Radial)	339 cps	1.0530 ppm	105.299 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	66 cps	1.0610 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,035 cps	1.0196 ppm	101.957 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8822 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.0633 %		0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 12/1/2020 11:54:14 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	129.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0007 ppm	108.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	52.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	8 cps	0.0005 ppm	525.3 %	0.0 ppm
Be 313.042 {108} (Axial)	90 cps	0.0003 ppm	15.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0128 ppm	70.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	13.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	591.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	29.2 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	62.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	10 cps	0.0005 ppm	65.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0029 ppm	110.1 %	0.0 ppm
Li 670.784 {50} (Radial)	37 cps	0.0036 ppm	23.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	41.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	21.8 %	0.0 ppm
Na 589.592 {57} (Radial)	27 cps	0.0188 ppm	48.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	323.2 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0548 ppm	59.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0001 ppm	576.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	9,570.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	17 cps	0.0007 ppm	46.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	87.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0007 ppm	108.8 %	0.0 ppm
V 292.402 {115} (Axial)	9 cps	0.0006 ppm	55.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	165.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.4239 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		100.4139 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	0 cps	-0.0151 ppm	218.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0006 ppm	141.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	523.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.3799 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	2 cps	0.0096 ppm	84.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	259.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0029 ppm	203.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	202.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.6108 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		99.8994 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 12/1/2020 12:03:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0044 ppm	88.531 %	42.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0047 ppm	93.467 %	9.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	97 cps	0.0046 ppm		4.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	92 cps	0.0057 ppm		15.8 %	0.0 ppm
Be 313.042 {108} (Axial)	718 cps	0.0020 ppm	100.314 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	101 cps	0.5288 ppm	105.760 %	2.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	116 cps	0.0098 ppm	98.206 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0052 ppm	103.223 %	4.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0051 ppm	102.576 %	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0048 ppm	96.301 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	215 cps	0.0102 ppm	101.663 %	3.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0802 ppm	100.307 %	6.4 %	0.0 ppm
Li 670.784 {50} (Radial)	108 cps	0.0106 ppm	106.471 %	8.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	350 cps	0.0052 ppm	103.932 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0050 ppm	100.715 %	3.7 %	0.0 ppm
Na 589.592 {57} (Radial)	273 cps	0.1926 ppm	96.303 %	6.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	22 cps	0.0053 ppm	106.695 %	2.7 %	0.0 ppm
K 766.490 {44} (Radial)	67 cps	0.1937 ppm	96.863 %	11.8 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0088 ppm	87.531 %	29.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	52 cps	0.0054 ppm	108.520 %	8.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	133 cps	0.0052 ppm	103.842 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0098 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0032 ppm	64.936 %	83.8 %	0.0 ppm
V 292.402 {115} (Axial)	78 cps	0.0051 ppm	101.769 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	104 cps	0.0098 ppm	98.207 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7136 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		101.0121 %		1.4 %	1.4 %
Mg 279.079 {121} (Radial)	6 cps	0.2306 ppm	115.305 %	15.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0107 ppm	107.051 %	8.6 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0108 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0619 %		1.5 %	1.5 %
B 249.773 {135} (Radial)	5 cps	0.0214 ppm	106.973 %	16.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0078 ppm		129.1 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2503 ppm		13.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0053 ppm	106.906 %	4.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1436 %		0.8 %	0.8 %
Sc 361.384 {93} (Radial)		99.7226 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 12/1/2020 12:09:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-7 cps	-0.0156 ppm		18.4 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0214 ppm	0.000 %	6.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	0.000 %	998.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	75 cps	0.0046 ppm	0.000 %	49.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-954 cps	-0.0027 ppm	0.000 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,427 cps	96.2919 ppm	96.292 %	1.9 %	1.9 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	0.000 %	20.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	16 cps	0.0017 ppm	0.000 %	18.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0008 ppm	0.000 %	19.1 %	0.0 ppm
Co 228.616 {447} (Axial)	30 cps	0.0036 ppm	0.000 %	3.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	63 cps	0.0030 ppm	0.000 %	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,138 cps	97.1286 ppm	97.129 %	2.2 %	2.1 ppm
Li 670.784 {50} (Radial)	21 cps	0.0021 ppm		55.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-403 cps	-0.0060 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,000 cps	1.9401 ppm	97.005 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	140,038 cps	98.7473 ppm	98.747 %	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	-63 cps	-0.0151 ppm	0.000 %	2.3 %	0.0 ppm
K 766.490 {44} (Radial)	34,726 cps	100.6461 ppm	100.646 %	2.6 %	2.6 ppm
Se 196.090 {472} (Axial)	1 cps	0.0027 ppm	0.000 %	142.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	0.000 %	26.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	-61 cps	-0.0024 ppm		8.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0107 ppm		3.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,724 cps	1.9716 ppm		1.9 %	0.0 ppm
V 292.402 {115} (Axial)	34 cps	0.0022 ppm	0.000 %	24.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-42 cps	-0.0040 ppm	0.000 %	4.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.2637 %		0.7 %	0.6 %
Sc 188.060 {479} (Axial)		82.7250 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	2,686 cps	98.8441 ppm	98.844 %	2.2 %	2.2 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0076 ppm	0.000 %	3.3 %	0.0 ppm
Al 167.079 {502} (Axial)	23,054 cps	18.6839 ppm		0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.9277 %		0.3 %	0.2 %
B 249.773 {135} (Radial)	21 cps	0.0927 ppm		4.7 %	0.0 ppm
Al 396.152 {85} (Radial)	30,653 cps	95.1867 ppm	95.187 %	2.0 %	1.9 ppm
Si 251.611 {134} (Radial)	6 cps	0.0945 ppm	0.000 %	38.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0031 ppm	0.000 %	32.3 %	0.0 ppm
Y 224.306 {450} (Axial)		92.2943 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.2398 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 8:25:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5085 ppm	101.704 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	188 cps	0.5073 ppm	101.466 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,444 cps	2.7524 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,067 cps	2.6143 ppm	104.573 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	174,163 cps	0.4870 ppm	97.395 %	8.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	588 cps	3.0748 ppm	122.992 %	7.0 %	0.2 ppm
Cd 228.802 {447} (Axial)	6,012 cps	0.5089 ppm	101.781 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,352 cps	0.4790 ppm	95.808 %	8.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,738 cps	0.5010 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,741 cps	2.4828 ppm	99.312 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,619 cps	2.7203 ppm	108.813 %	8.5 %	0.2 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5544 ppm	102.176 %	0.2 %	0.0 ppm
Li 670.784 {50} (Radial)	27,447 cps	2.6940 ppm	107.761 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,878 cps	0.4882 ppm	97.643 %	8.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,618 cps	2.5680 ppm	102.720 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	71,905 cps	50.7036 ppm	101.407 %	1.7 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,296 cps	2.4725 ppm	98.898 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	18,800 cps	54.4876 ppm	108.975 %	2.0 %	1.1 ppm
Se 196.090 {472} (Axial)	553 cps	2.4673 ppm	98.692 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,673 cps	0.4863 ppm	97.267 %	8.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,603 cps	0.5291 ppm	105.824 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	512 cps	0.4981 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	415 cps	0.4749 ppm	94.980 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,784 cps	0.5067 ppm	101.344 %	8.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,104 cps	1.2426 ppm	99.410 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.1340 %		9.6 %	9.7 %
Sc 188.060 {479} (Axial)		88.1232 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	67 cps	2.4781 ppm	99.123 %	3.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5231 ppm	104.623 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,797 cps	2.2666 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.8618 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	560 cps	2.4686 ppm	98.745 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	829 cps	2.5743 ppm	102.970 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	174 cps	2.8132 ppm		1.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	504 cps	0.4963 ppm	99.266 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6324 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		114.9287 %		0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 8:30:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	244 cps	0.5218 ppm	104.369 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5154 ppm	103.089 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,878 cps	2.8199 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,030 cps	2.6742 ppm	106.967 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	169,697 cps	0.4745 ppm	94.898 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	452 cps	2.3618 ppm	94.474 %	1.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,133 cps	0.5192 ppm	103.832 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,222 cps	0.4647 ppm	92.935 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,798 cps	0.5119 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	21,164 cps	2.5334 ppm	101.337 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,644 cps	2.6743 ppm	106.973 %	2.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	448 cps	2.5370 ppm	101.480 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	28,266 cps	2.7744 ppm	110.977 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	31,880 cps	0.4734 ppm	94.678 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,771 cps	2.6273 ppm	105.093 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73,593 cps	51.8937 ppm	103.787 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,508 cps	2.5235 ppm	100.939 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	19,359 cps	56.1087 ppm	112.217 %	2.5 %	1.4 ppm
Se 196.090 {472} (Axial)	563 cps	2.5149 ppm	100.597 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,548 cps	0.4734 ppm	94.679 %	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,923 cps	0.5416 ppm	108.316 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5092 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	417 cps	0.4765 ppm	95.302 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,628 cps	0.4966 ppm	99.312 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,372 cps	1.2680 ppm	101.443 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.9083 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		86.7321 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	60 cps	2.2074 ppm	88.297 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	184 cps	0.5327 ppm	106.542 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,835 cps	2.2976 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.5967 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	574 cps	2.5265 ppm	101.062 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	827 cps	2.5667 ppm	102.667 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	158 cps	2.5417 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	511 cps	0.5038 ppm	100.755 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6752 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		115.1854 %		0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 9:31:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5346 ppm	106.914 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5217 ppm	104.348 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,893 cps	2.8678 ppm		2.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,950 cps	2.7314 ppm	109.254 %	2.8 %	0.1 ppm
Be 313.042 {108} (Axial)	163,034 cps	0.4559 ppm	91.172 %	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	415 cps	2.1705 ppm	86.818 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,108 cps	0.5170 ppm	103.397 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,037 cps	0.4443 ppm	88.859 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,776 cps	0.5079 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,992 cps	2.5128 ppm	100.514 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,973 cps	2.7371 ppm	109.483 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	454 cps	2.5754 ppm	103.017 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	29,407 cps	2.8864 ppm	115.454 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	30,746 cps	0.4566 ppm	91.312 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,797 cps	2.6376 ppm	105.505 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	74,879 cps	52.8009 ppm	105.602 %	3.2 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,394 cps	2.4960 ppm	99.840 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	19,580 cps	56.7491 ppm	113.498 %	3.4 %	1.9 ppm
Se 196.090 {472} (Axial)	574 cps	2.5628 ppm	102.511 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,491 cps	0.4674 ppm	93.487 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,073 cps	0.5474 ppm	109.478 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4973 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	412 cps	0.4710 ppm	94.202 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,435 cps	0.4840 ppm	96.800 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,256 cps	1.2570 ppm	100.559 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.5788 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		83.2928 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	54 cps	1.9996 ppm	79.984 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5293 ppm	105.869 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,687 cps	2.1779 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.0149 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	562 cps	2.4746 ppm	98.984 %	3.2 %	0.1 ppm
Al 396.152 {85} (Radial)	841 cps	2.6100 ppm	104.400 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	151 cps	2.4327 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	499 cps	0.4918 ppm	98.353 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6026 %		0.8 %	0.7 %
Sc 361.384 {93} (Radial)		125.8367 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 9:36:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5331 ppm	106.624 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.5185 ppm	103.709 %	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,642 cps	2.7617 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,493 cps	2.6408 ppm	105.633 %	2.4 %	0.1 ppm
Be 313.042 {108} (Axial)	156,775 cps	0.4384 ppm	87.671 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	397 cps	2.0732 ppm	82.927 %	2.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,066 cps	0.5135 ppm	102.691 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,894 cps	0.4285 ppm	85.707 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,746 cps	0.5025 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,815 cps	2.4917 ppm	99.667 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,783 cps	2.6337 ppm	105.346 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	411 cps	2.3308 ppm	93.231 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	28,340 cps	2.7816 ppm	111.265 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,524 cps	0.4384 ppm	87.681 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,744 cps	2.6170 ppm	104.679 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	71,901 cps	50.7006 ppm	101.401 %	2.8 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,295 cps	2.4723 ppm	98.890 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	18,870 cps	54.6906 ppm	109.381 %	3.4 %	1.8 ppm
Se 196.090 {472} (Axial)	571 cps	2.5464 ppm	101.857 %	2.3 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,331 cps	0.4508 ppm	90.155 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,565 cps	0.5276 ppm	105.526 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	505 cps	0.4917 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	397 cps	0.4538 ppm	90.760 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,127 cps	0.4639 ppm	92.787 %	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,157 cps	1.2476 ppm	99.809 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.7189 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		82.3021 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	51 cps	1.8920 ppm	75.678 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5267 ppm	105.338 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,653 cps	2.1498 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.0436 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	541 cps	2.3820 ppm	95.278 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	792 cps	2.4587 ppm	98.349 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	142 cps	2.2939 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4899 ppm	97.978 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.8250 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		125.5937 %		0.8 %	1.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 10:38:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	252 cps	0.5382 ppm	107.630 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5209 ppm	104.171 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,961 cps	2.7767 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,551 cps	2.6444 ppm	105.777 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	151,919 cps	0.4248 ppm	84.956 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	386 cps	2.0187 ppm	80.749 %	2.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,105 cps	0.5168 ppm	103.355 %	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,759 cps	0.4137 ppm	82.748 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,757 cps	0.5044 ppm		2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,846 cps	2.4953 ppm	99.812 %	2.4 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,453 cps	2.6181 ppm	104.724 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	405 cps	2.2927 ppm	91.707 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	28,859 cps	2.8326 ppm	113.303 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	28,613 cps	0.4249 ppm	84.976 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,774 cps	2.6287 ppm	105.149 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	72,350 cps	51.0177 ppm	102.035 %	2.3 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,310 cps	2.4759 ppm	99.034 %	2.4 %	0.1 ppm
K 766.490 {44} (Radial)	19,041 cps	55.1866 ppm	110.373 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	579 cps	2.5846 ppm	103.383 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,224 cps	0.4396 ppm	87.920 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,595 cps	0.5288 ppm	105.765 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	507 cps	0.4931 ppm		2.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	390 cps	0.4455 ppm	89.103 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	6,996 cps	0.4554 ppm	91.088 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,210 cps	1.2527 ppm	100.217 %	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		110.7610 %		3.7 %	4.1 %
Sc 188.060 {479} (Axial)		82.4071 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	50 cps	1.8479 ppm	73.917 %	4.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5298 ppm	105.963 %	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,667 cps	2.1616 ppm		2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.7470 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	537 cps	2.3672 ppm	94.686 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	791 cps	2.4574 ppm	98.298 %	1.8 %	0.0 ppm
Si 251.611 {134} (Radial)	142 cps	2.2955 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4901 ppm	98.030 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0806 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		126.1009 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 10:42:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	252 cps	0.5390 ppm	107.806 %	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	195 cps	0.5253 ppm	105.061 %	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,657 cps	2.8095 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,143 cps	2.6812 ppm	107.248 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	154,959 cps	0.4333 ppm	86.656 %	4.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	398 cps	2.0778 ppm	83.113 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,142 cps	0.5199 ppm	103.978 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,841 cps	0.4227 ppm	84.543 %	4.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,774 cps	0.5075 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,982 cps	2.5116 ppm	100.465 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,739 cps	2.6316 ppm	105.262 %	4.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3400 ppm	93.601 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	29,036 cps	2.8500 ppm	114.000 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,163 cps	0.4330 ppm	86.609 %	4.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,827 cps	2.6491 ppm	105.964 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	73,189 cps	51.6088 ppm	103.218 %	2.0 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,383 cps	2.4934 ppm	99.734 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	19,242 cps	55.7690 ppm	111.538 %	2.3 %	1.3 ppm
Se 196.090 {472} (Axial)	577 cps	2.5759 ppm	103.035 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,288 cps	0.4463 ppm	89.268 %	4.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,767 cps	0.5355 ppm	107.102 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4970 ppm		2.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	398 cps	0.4556 ppm	91.129 %	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,093 cps	0.4617 ppm	92.347 %	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,284 cps	1.2597 ppm	100.776 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		110.2972 %		2.3 %	2.6 %
Sc 188.060 {479} (Axial)		82.0639 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	52 cps	1.9022 ppm	76.087 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	184 cps	0.5313 ppm	106.262 %	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,686 cps	2.1766 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.6294 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	548 cps	2.4163 ppm	96.650 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	806 cps	2.5028 ppm	100.113 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	145 cps	2.3355 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	501 cps	0.4940 ppm	98.794 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		90.9839 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		125.6427 %		1.0 %	1.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 12:35:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.4978 ppm	99.559 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4958 ppm	99.158 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,688 cps	2.6226 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	40,752 cps	2.5326 ppm	101.303 %	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	181,796 cps	0.5083 ppm	101.664 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	487 cps	2.5451 ppm	101.805 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,901 cps	0.4995 ppm	99.890 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,583 cps	0.5045 ppm	100.893 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,833 cps	0.5183 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,008 cps	2.5147 ppm	100.588 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,409 cps	2.5216 ppm	100.863 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5535 ppm	102.139 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	25,442 cps	2.4972 ppm	99.889 %	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,957 cps	0.5042 ppm	100.848 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,454 cps	2.5044 ppm	100.177 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	71,503 cps	50.4205 ppm	100.841 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,478 cps	2.5163 ppm	100.650 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	17,222 cps	49.9159 ppm	99.832 %	1.7 %	0.9 ppm
Se 196.090 {472} (Axial)	557 cps	2.4867 ppm	99.468 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,826 cps	0.5023 ppm	100.460 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,088 cps	0.5091 ppm	101.818 %	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5092 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	444 cps	0.5080 ppm	101.592 %	0.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,734 cps	0.5034 ppm	100.689 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,119 cps	1.2440 ppm	99.521 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7487 %		0.8 %	0.7 %
Sc 188.060 {479} (Axial)		91.9789 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	69 cps	2.5346 ppm	101.385 %	2.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5171 ppm	103.415 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,002 cps	2.4326 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1570 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	577 cps	2.5404 ppm	101.616 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	809 cps	2.5126 ppm	100.502 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	156 cps	2.5158 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	513 cps	0.5054 ppm	101.077 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8548 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.3188 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 11:45:25 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	249 cps	0.5318 ppm	106.357 %	2.8 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5126 ppm	102.512 %	3.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,725 cps	2.7185 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	41,822 cps	2.5991 ppm	103.963 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	153,976 cps	0.4305 ppm	86.106 %	5.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	379 cps	1.9824 ppm	79.295 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,041 cps	0.5113 ppm	102.262 %	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,843 cps	0.4230 ppm	84.592 %	5.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,702 cps	0.4944 ppm		2.9 %	0.0 ppm
Co 228.616 {447} (Axial)	20,520 cps	2.4563 ppm	98.251 %	2.9 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,884 cps	2.6856 ppm	107.425 %	5.8 %	0.2 ppm
Fe 259.940 {130} (Radial)	398 cps	2.2531 ppm	90.125 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	28,199 cps	2.7678 ppm	110.713 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,155 cps	0.4329 ppm	86.588 %	5.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,643 cps	2.5777 ppm	103.106 %	3.0 %	0.1 ppm
Na 589.592 {57} (Radial)	70,621 cps	49.7979 ppm	99.596 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,137 cps	2.4344 ppm	97.376 %	2.9 %	0.1 ppm
K 766.490 {44} (Radial)	18,297 cps	53.0298 ppm	106.060 %	2.6 %	1.4 ppm
Se 196.090 {472} (Axial)	568 cps	2.5372 ppm	101.487 %	2.8 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,345 cps	0.4522 ppm	90.445 %	6.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,305 cps	0.5175 ppm	103.503 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	497 cps	0.4840 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	387 cps	0.4429 ppm	88.585 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,109 cps	0.4627 ppm	92.549 %	5.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,020 cps	1.2346 ppm	98.770 %	3.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.8307 %		4.7 %	5.0 %
Sc 188.060 {479} (Axial)		82.2687 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	50 cps	1.8354 ppm	73.414 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	158 cps	0.4572 ppm	91.441 %	4.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,617 cps	2.1206 ppm		2.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		90.7874 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	525 cps	2.3146 ppm	92.584 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	782 cps	2.4294 ppm	97.177 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	137 cps	2.2098 ppm		1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	493 cps	0.4854 ppm	97.088 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.6687 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		125.4704 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 11:50:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	253 cps	0.5411 ppm	108.230 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.5192 ppm	103.843 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,270 cps	2.8384 ppm		1.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,688 cps	2.7151 ppm	108.602 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	155,341 cps	0.4343 ppm	86.870 %	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	399 cps	2.0854 ppm	83.416 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,121 cps	0.5181 ppm	103.626 %	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,873 cps	0.4263 ppm	85.263 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,742 cps	0.5016 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,801 cps	2.4900 ppm	99.600 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,971 cps	2.6897 ppm	107.590 %	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	416 cps	2.3584 ppm	94.335 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	29,469 cps	2.8925 ppm	115.698 %	1.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,357 cps	0.4359 ppm	87.187 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,749 cps	2.6188 ppm	104.751 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	74,040 cps	52.2092 ppm	104.418 %	2.2 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,270 cps	2.4663 ppm	98.654 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	19,191 cps	55.6214 ppm	111.243 %	2.6 %	1.5 ppm
Se 196.090 {472} (Axial)	575 cps	2.5659 ppm	102.635 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,369 cps	0.4547 ppm	90.945 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,888 cps	0.5402 ppm	108.045 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	506 cps	0.4919 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	406 cps	0.4645 ppm	92.904 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,149 cps	0.4653 ppm	93.069 %	0.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,190 cps	1.2508 ppm	100.063 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.3088 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		82.6387 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	52 cps	1.9278 ppm	77.112 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	164 cps	0.4746 ppm	94.916 %	3.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,652 cps	2.1491 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.2645 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	553 cps	2.4344 ppm	97.376 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	817 cps	2.5359 ppm	101.435 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	143 cps	2.3023 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.4908 ppm	98.153 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0380 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		125.9780 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 12:41:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5337 ppm	106.741 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5169 ppm	103.385 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,151 cps	2.8328 ppm		0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,602 cps	2.7097 ppm	108.388 %	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	154,060 cps	0.4308 ppm	86.153 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	396 cps	2.0676 ppm	82.704 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,069 cps	0.5137 ppm	102.741 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,827 cps	0.4212 ppm	84.246 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,732 cps	0.4999 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,703 cps	2.4782 ppm	99.126 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,156 cps	2.6512 ppm	106.050 %	2.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3414 ppm	93.656 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	29,339 cps	2.8797 ppm	115.189 %	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,074 cps	0.4317 ppm	86.347 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,716 cps	2.6060 ppm	104.242 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	73,824 cps	52.0568 ppm	104.114 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,236 cps	2.4580 ppm	98.322 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	19,099 cps	55.3554 ppm	110.711 %	1.9 %	1.0 ppm
Se 196.090 {472} (Axial)	571 cps	2.5472 ppm	101.890 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,318 cps	0.4495 ppm	89.893 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,862 cps	0.5392 ppm	107.842 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4880 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	401 cps	0.4581 ppm	91.620 %	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,066 cps	0.4600 ppm	91.996 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,110 cps	1.2432 ppm	99.454 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.5290 %		1.5 %	1.7 %
Sc 188.060 {479} (Axial)		82.4790 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	51 cps	1.8857 ppm	75.428 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5023 ppm	100.455 %	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,634 cps	2.1351 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.0787 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	547 cps	2.4082 ppm	96.326 %	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	814 cps	2.5279 ppm	101.114 %	0.5 %	0.0 ppm
Si 251.611 {134} (Radial)	142 cps	2.2859 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	494 cps	0.4866 ppm	97.319 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3500 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		126.7401 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 12:46:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	254 cps	0.5434 ppm	108.679 %	2.7 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5215 ppm	104.303 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,776 cps	2.8151 ppm		2.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,161 cps	2.6823 ppm	107.292 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	156,923 cps	0.4388 ppm	87.754 %	2.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	395 cps	2.0661 ppm	82.644 %	2.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,136 cps	0.5194 ppm	103.872 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,894 cps	0.4286 ppm	85.722 %	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,759 cps	0.5048 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,926 cps	2.5050 ppm	100.198 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,954 cps	2.6889 ppm	107.558 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3382 ppm	93.529 %	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	29,066 cps	2.8529 ppm	114.116 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,600 cps	0.4395 ppm	87.908 %	2.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,790 cps	2.6348 ppm	105.390 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	73,237 cps	51.6431 ppm	103.286 %	3.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,345 cps	2.4842 ppm	99.366 %	2.1 %	0.1 ppm
K 766.490 {44} (Radial)	19,018 cps	55.1192 ppm	110.238 %	4.0 %	2.2 ppm
Se 196.090 {472} (Axial)	578 cps	2.5784 ppm	103.136 %	2.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,367 cps	0.4545 ppm	90.895 %	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,769 cps	0.5356 ppm	107.119 %	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	508 cps	0.4941 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	398 cps	0.4549 ppm	90.990 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,200 cps	0.4687 ppm	93.737 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,254 cps	1.2568 ppm	100.544 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.8947 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		82.0419 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	52 cps	1.8999 ppm	75.995 %	3.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5067 ppm	101.338 %	3.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,659 cps	2.1553 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.6597 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	545 cps	2.3988 ppm	95.952 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	807 cps	2.5060 ppm	100.239 %	2.4 %	0.1 ppm
Si 251.611 {134} (Radial)	142 cps	2.2935 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	500 cps	0.4923 ppm	98.460 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.8574 %		0.6 %	0.5 %
Sc 361.384 {93} (Radial)		126.5799 %		0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:36:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	230 cps	0.4921 ppm	98.422 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	182 cps	0.4921 ppm	98.424 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	52,304 cps	2.4632 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	38,471 cps	2.3908 ppm	95.633 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	178,486 cps	0.4991 ppm	99.813 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	732 cps	3.8262 ppm	153.050 %	11.6 %	0.4 ppm
Cd 228.802 {447} (Axial)	5,832 cps	0.4936 ppm	98.724 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,510 cps	0.4964 ppm	99.270 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,803 cps	0.5129 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.4876 ppm	99.505 %	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,168 cps	2.4630 ppm	98.519 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	425 cps	2.4112 ppm	96.446 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	23,862 cps	2.3421 ppm	93.684 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,276 cps	0.4941 ppm	98.826 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,376 cps	2.4741 ppm	98.965 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	67,418 cps	47.5398 ppm	95.080 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,361 cps	2.4882 ppm	99.528 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	16,173 cps	46.8758 ppm	93.752 %	2.1 %	1.0 ppm
Se 196.090 {472} (Axial)	554 cps	2.4718 ppm	98.871 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,765 cps	0.4960 ppm	99.192 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,301 cps	0.4785 ppm	95.693 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	518 cps	0.5039 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	423 cps	0.4838 ppm	96.758 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,544 cps	0.4911 ppm	98.218 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,995 cps	1.2323 ppm	98.585 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7200 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.9881 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	76 cps	2.7999 ppm	111.998 %	5.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5113 ppm	102.266 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,979 cps	2.4139 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0417 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	542 cps	2.3864 ppm	95.454 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	769 cps	2.3866 ppm	95.463 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.6270 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	509 cps	0.5013 ppm	100.255 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6413 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.0278 %		0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:41:38 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	231 cps	0.4931 ppm	98.625 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4938 ppm	98.769 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,052 cps	2.4985 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	38,997 cps	2.4236 ppm	96.942 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	179,063 cps	0.5007 ppm	100.135 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	480 cps	2.5071 ppm	100.283 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,859 cps	0.4960 ppm	99.191 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,527 cps	0.4982 ppm	99.647 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,815 cps	0.5150 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,867 cps	2.4978 ppm	99.912 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,470 cps	2.4772 ppm	99.090 %	2.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	430 cps	2.4377 ppm	97.509 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	24,205 cps	2.3758 ppm	95.030 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,378 cps	0.4956 ppm	99.128 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,407 cps	2.4863 ppm	99.452 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	68,095 cps	48.0172 ppm	96.034 %	2.3 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,401 cps	2.4976 ppm	99.904 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	16,291 cps	47.2170 ppm	94.434 %	2.4 %	1.1 ppm
Se 196.090 {472} (Axial)	555 cps	2.4787 ppm	99.146 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,783 cps	0.4979 ppm	99.570 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,485 cps	0.4856 ppm	97.128 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	520 cps	0.5057 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	429 cps	0.4910 ppm	98.194 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,570 cps	0.4928 ppm	98.559 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,039 cps	1.2364 ppm	98.916 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5770 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.1865 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	67 cps	2.4577 ppm	98.307 %	0.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	178 cps	0.5138 ppm	102.764 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,989 cps	2.4227 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2333 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	549 cps	2.4187 ppm	96.748 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	774 cps	2.4050 ppm	96.200 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	155 cps	2.4957 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	510 cps	0.5025 ppm	100.496 %	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2497 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.0405 %		0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 2:53:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5089 ppm	101.784 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4974 ppm	99.472 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,444 cps	2.7053 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,455 cps	2.6384 ppm	105.538 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	174,328 cps	0.4874 ppm	97.488 %	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.4147 ppm	96.590 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,862 cps	0.4962 ppm	99.236 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,378 cps	0.4819 ppm	96.370 %	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,801 cps	0.5124 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,687 cps	2.4763 ppm	99.052 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,968 cps	2.5952 ppm	103.808 %	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	444 cps	2.5171 ppm	100.685 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	26,605 cps	2.6114 ppm	104.454 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,697 cps	0.4855 ppm	97.105 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,447 cps	2.5019 ppm	100.075 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	72,446 cps	51.0851 ppm	102.170 %	2.1 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,262 cps	2.4644 ppm	98.575 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,394 cps	50.4135 ppm	100.827 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	565 cps	2.5202 ppm	100.809 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,791 cps	0.4987 ppm	99.732 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,427 cps	0.5223 ppm	104.457 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	507 cps	0.4933 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5114 ppm	102.273 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,540 cps	0.4908 ppm	98.168 %	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,964 cps	1.2293 ppm	98.345 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.2385 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.0107 %		1.3 %	1.2 %
Mg 279.079 {121} (Radial)	64 cps	2.3410 ppm	93.639 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5107 ppm	102.135 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,782 cps	2.2546 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4838 %		1.2 %	1.2 %
B 249.773 {135} (Radial)	569 cps	2.5086 ppm	100.346 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	817 cps	2.5375 ppm	101.501 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	154 cps	2.4856 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.4904 ppm	98.071 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4741 %		1.2 %	1.2 %
Sc 361.384 {93} (Radial)		115.7543 %		0.2 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 3:55:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5092 ppm	101.843 %	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4964 ppm	99.290 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,571 cps	2.6171 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	40,932 cps	2.5438 ppm	101.751 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	169,294 cps	0.4734 ppm	94.672 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	440 cps	2.3016 ppm	92.064 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,823 cps	0.4929 ppm	98.577 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,242 cps	0.4669 ppm	93.376 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,780 cps	0.5087 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,569 cps	2.4622 ppm	98.487 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,573 cps	2.5293 ppm	101.173 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	428 cps	2.4266 ppm	97.064 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	25,670 cps	2.5196 ppm	100.785 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	31,699 cps	0.4707 ppm	94.142 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,416 cps	2.4897 ppm	99.589 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	69,748 cps	49.1825 ppm	98.365 %	1.5 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,204 cps	2.4505 ppm	98.021 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	16,759 cps	48.5735 ppm	97.147 %	1.9 %	0.9 ppm
Se 196.090 {472} (Axial)	561 cps	2.5026 ppm	100.105 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,624 cps	0.4813 ppm	96.255 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,995 cps	0.5055 ppm	101.098 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4887 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	431 cps	0.4933 ppm	98.660 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,357 cps	0.4789 ppm	95.785 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,906 cps	1.2238 ppm	97.905 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.9055 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		91.2906 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	60 cps	2.2261 ppm	89.045 %	4.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	176 cps	0.5083 ppm	101.660 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,786 cps	2.2581 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2854 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	546 cps	2.4054 ppm	96.216 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	784 cps	2.4354 ppm	97.415 %	0.6 %	0.0 ppm
Si 251.611 {134} (Radial)	148 cps	2.3889 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	494 cps	0.4871 ppm	97.415 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.3794 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		116.9395 %		0.0 %	0.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 4:00:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	242 cps	0.5172 ppm	103.431 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5044 ppm	100.884 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,202 cps	2.7410 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,762 cps	2.6575 ppm	106.299 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	177,187 cps	0.4954 ppm	99.087 %	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	458 cps	2.3908 ppm	95.631 %	2.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,910 cps	0.5003 ppm	100.052 %	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,441 cps	0.4888 ppm	97.763 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,828 cps	0.5175 ppm		0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,894 cps	2.5011 ppm	100.042 %	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,184 cps	2.6526 ppm	106.104 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	442 cps	2.5023 ppm	100.090 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	26,996 cps	2.6498 ppm	105.991 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,204 cps	0.4931 ppm	98.613 %	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,529 cps	2.5336 ppm	101.344 %	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	73,306 cps	51.6913 ppm	103.383 %	2.6 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,371 cps	2.4906 ppm	99.625 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	17,692 cps	51.2767 ppm	102.553 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	569 cps	2.5401 ppm	101.605 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,846 cps	0.5044 ppm	100.870 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,577 cps	0.5281 ppm	105.623 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4970 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5116 ppm	102.325 %	2.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,725 cps	0.5029 ppm	100.577 %	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,099 cps	1.2421 ppm	99.370 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.7285 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.7916 %		1.1 %	1.0 %
Mg 279.079 {121} (Radial)	63 cps	2.3072 ppm	92.288 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5166 ppm	103.318 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,824 cps	2.2883 ppm		0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.1435 %		0.9 %	0.9 %
B 249.773 {135} (Radial)	574 cps	2.5284 ppm	101.134 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	815 cps	2.5303 ppm	101.213 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	154 cps	2.4791 ppm		3.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	502 cps	0.4943 ppm	98.863 %	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.5446 %		0.9 %	0.9 %
Sc 361.384 {93} (Radial)		115.9002 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 5:02:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	237 cps	0.5068 ppm	101.354 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.5001 ppm	100.017 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	56,401 cps	2.6562 ppm		1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	41,092 cps	2.5537 ppm	102.149 %	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	171,384 cps	0.4792 ppm	95.841 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	454 cps	2.3732 ppm	94.929 %	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,932 cps	0.5021 ppm	100.415 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,285 cps	0.4716 ppm	94.320 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,782 cps	0.5090 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.4877 ppm	99.507 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,419 cps	2.5692 ppm	102.770 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	437 cps	2.4754 ppm	99.016 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26,198 cps	2.5714 ppm	102.854 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,172 cps	0.4777 ppm	95.546 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,522 cps	2.5310 ppm	101.240 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	70,370 cps	49.6213 ppm	99.243 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,323 cps	2.4790 ppm	99.160 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	17,477 cps	50.6553 ppm	101.311 %	2.7 %	1.4 ppm
Se 196.090 {472} (Axial)	561 cps	2.5035 ppm	100.139 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,629 cps	0.4818 ppm	96.363 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,177 cps	0.5125 ppm	102.509 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	513 cps	0.4987 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	422 cps	0.4823 ppm	96.466 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,509 cps	0.4888 ppm	97.765 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,068 cps	1.2392 ppm	99.134 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.8734 %		0.2 %	0.3 %
Sc 188.060 {479} (Axial)		90.9500 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	60 cps	2.2105 ppm	88.419 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5165 ppm	103.309 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,831 cps	2.2944 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2449 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	554 cps	2.4416 ppm	97.664 %	2.3 %	0.1 ppm
Al 396.152 {85} (Radial)	795 cps	2.4684 ppm	98.736 %	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	151 cps	2.4337 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	503 cps	0.4953 ppm	99.065 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.2266 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		114.1500 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 5:07:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	236 cps	0.5041 ppm	100.830 %	3.8 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4961 ppm	99.218 %	3.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,894 cps	2.7736 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,934 cps	2.6682 ppm	106.729 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	174,795 cps	0.4887 ppm	97.749 %	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	469 cps	2.4522 ppm	98.088 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,879 cps	0.4976 ppm	99.517 %	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,373 cps	0.4813 ppm	96.261 %	0.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,744 cps	0.5021 ppm		3.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,530 cps	2.4575 ppm	98.300 %	3.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,532 cps	2.6218 ppm	104.872 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5570 ppm	102.278 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	27,310 cps	2.6805 ppm	107.222 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,741 cps	0.4862 ppm	97.237 %	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,459 cps	2.5065 ppm	100.258 %	3.6 %	0.1 ppm
Na 589.592 {57} (Radial)	73,249 cps	51.6517 ppm	103.303 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,201 cps	2.4498 ppm	97.990 %	3.5 %	0.1 ppm
K 766.490 {44} (Radial)	18,352 cps	53.1890 ppm	106.378 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	553 cps	2.4672 ppm	98.690 %	3.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,709 cps	0.4901 ppm	98.016 %	0.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,750 cps	0.5349 ppm	106.971 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	506 cps	0.4928 ppm		3.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	438 cps	0.5011 ppm	100.210 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,658 cps	0.4985 ppm	99.697 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,915 cps	1.2247 ppm	97.972 %	3.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.8181 %		0.7 %	0.8 %
Sc 188.060 {479} (Axial)		91.7097 %		0.9 %	0.8 %
Mg 279.079 {121} (Radial)	63 cps	2.3124 ppm	92.496 %	3.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5125 ppm	102.500 %	3.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,798 cps	2.2674 ppm		3.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		100.2793 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	578 cps	2.5449 ppm	101.796 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	832 cps	2.5821 ppm	103.284 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5097 ppm		3.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4893 ppm	97.866 %	3.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7609 %		1.4 %	1.4 %
Sc 361.384 {93} (Radial)		112.8619 %		1.2 %	1.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 6:10:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.5109 ppm	102.187 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5098 ppm	101.955 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,617 cps	2.7605 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,341 cps	2.6314 ppm	105.255 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	173,238 cps	0.4844 ppm	96.878 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	485 cps	2.5348 ppm	101.390 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,057 cps	0.5127 ppm	102.542 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,333 cps	0.4769 ppm	95.384 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,812 cps	0.5145 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,116 cps	2.5277 ppm	101.108 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,158 cps	2.6041 ppm	104.165 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	452 cps	2.5599 ppm	102.395 %	1.3 %	0.0 ppm
Li 670.784 {50} (Radial)	27,202 cps	2.6699 ppm	106.798 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,512 cps	0.4828 ppm	96.556 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,667 cps	2.5870 ppm	103.480 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	72,611 cps	51.2012 ppm	102.402 %	2.3 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,497 cps	2.5209 ppm	100.835 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	18,533 cps	53.7144 ppm	107.429 %	2.5 %	1.4 ppm
Se 196.090 {472} (Axial)	564 cps	2.5176 ppm	100.706 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,626 cps	0.4814 ppm	96.289 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,642 cps	0.5306 ppm	106.128 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5093 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	427 cps	0.4880 ppm	97.604 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,629 cps	0.4966 ppm	99.322 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,300 cps	1.2612 ppm	100.899 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.8170 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.2467 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	63 cps	2.3220 ppm	92.880 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5255 ppm	105.101 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,892 cps	2.3436 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.9172 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	570 cps	2.5108 ppm	100.430 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	818 cps	2.5401 ppm	101.606 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5202 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5041 ppm	100.821 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3637 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		112.5664 %		0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 7:12:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5076 ppm	101.523 %	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5056 ppm	101.127 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,610 cps	2.8073 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,707 cps	2.6541 ppm	106.164 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	173,186 cps	0.4842 ppm	96.849 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	466 cps	2.4338 ppm	97.354 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,039 cps	0.5111 ppm	102.228 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,332 cps	0.4768 ppm	95.359 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,785 cps	0.5095 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	20,995 cps	2.5131 ppm	100.525 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,435 cps	2.6172 ppm	104.688 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	456 cps	2.5850 ppm	103.399 %	2.0 %	0.1 ppm
Li 670.784 {50} (Radial)	27,652 cps	2.7141 ppm	108.564 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,431 cps	0.4816 ppm	96.316 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,657 cps	2.5832 ppm	103.327 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	73,173 cps	51.5981 ppm	103.196 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,454 cps	2.5104 ppm	100.417 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	19,127 cps	55.4360 ppm	110.872 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	554 cps	2.4748 ppm	98.991 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,582 cps	0.4769 ppm	95.372 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,862 cps	0.5392 ppm	107.838 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	522 cps	0.5076 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	422 cps	0.4825 ppm	96.500 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,671 cps	0.4994 ppm	99.872 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,220 cps	1.2536 ppm	100.291 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.7581 %		0.9 %	1.0 %
Sc 188.060 {479} (Axial)		90.0961 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	62 cps	2.2970 ppm	91.878 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5251 ppm	105.020 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,884 cps	2.3373 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8785 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	577 cps	2.5441 ppm	101.763 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	826 cps	2.5660 ppm	102.640 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5244 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	511 cps	0.5032 ppm	100.638 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4890 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		111.2390 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 7:17:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	240 cps	0.5124 ppm	102.485 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5105 ppm	102.096 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,367 cps	2.7958 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,799 cps	2.6598 ppm	106.393 %	2.3 %	0.1 ppm
Be 313.042 {108} (Axial)	176,814 cps	0.4944 ppm	98.878 %	0.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.4147 ppm	96.588 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,072 cps	0.5140 ppm	102.798 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,426 cps	0.4871 ppm	97.426 %	0.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,794 cps	0.5112 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,076 cps	2.5229 ppm	100.915 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,731 cps	2.6784 ppm	107.136 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	453 cps	2.5665 ppm	102.658 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	27,577 cps	2.7067 ppm	108.269 %	2.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,103 cps	0.4916 ppm	98.312 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,683 cps	2.5935 ppm	103.740 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	72,925 cps	51.4231 ppm	102.846 %	2.7 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,472 cps	2.5148 ppm	100.593 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	19,042 cps	55.1893 ppm	110.379 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	557 cps	2.4877 ppm	99.509 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,709 cps	0.4901 ppm	98.020 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,813 cps	0.5373 ppm	107.457 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	525 cps	0.5105 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	426 cps	0.4873 ppm	97.454 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,799 cps	0.5077 ppm	101.535 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,286 cps	1.2599 ppm	100.793 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.8453 %		2.0 %	2.0 %
Sc 188.060 {479} (Axial)		89.5272 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	63 cps	2.3325 ppm	93.299 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5295 ppm	105.897 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,894 cps	2.3455 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4513 %		0.0 %	0.0 %
B 249.773 {135} (Radial)	578 cps	2.5458 ppm	101.832 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	836 cps	2.5963 ppm	103.851 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5185 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5040 ppm	100.801 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.1571 %		0.2 %	0.1 %
Sc 361.384 {93} (Radial)		111.9724 %		0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 8:35:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0014 ppm	78.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	137.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	6 cps	0.0003 ppm	108.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	170 cps	0.0106 ppm	9.9 %	0.0 ppm
Be 313.042 {108} (Axial)	43 cps	0.0001 ppm	17.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0143 ppm	6.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0009 ppm	7.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	837.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	132.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	80.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	31 cps	0.0015 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0048 ppm	184.8 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0037 ppm	18.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	21.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	36.5 %	0.0 ppm
Na 589.592 {57} (Radial)	59 cps	0.0420 ppm	12.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	72.1 %	0.0 ppm
K 766.490 {44} (Radial)	32 cps	0.0931 ppm	16.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	242.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0012 ppm	22.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	70.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	1,049.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0031 ppm	19.8 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	50.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	97.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.9106 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		95.2028 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0037 ppm	601.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	899.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0014 ppm	29.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.9795 %	1.0 %	1.0 %
B 249.773 {135} (Radial)	1 cps	0.0062 ppm	57.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0036 ppm	267.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0118 ppm	42.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	288.2 %	0.0 ppm
Y 224.306 {450} (Axial)		98.7263 %	1.0 %	0.9 %
Sc 361.384 {93} (Radial)		115.2465 %	0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 9:41:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0023 ppm	36.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	161.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	8 cps	0.0004 ppm	155.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0068 ppm	29.7 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	17.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0093 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	12 cps	0.0010 ppm	7.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	213.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	33.7 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	41.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	31 cps	0.0014 ppm	15.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0084 ppm	39.1 %	0.0 ppm
Li 670.784 {50} (Radial)	66 cps	0.0065 ppm	22.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	2 cps	0.0000 ppm	330.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	35.5 %	0.0 ppm
Na 589.592 {57} (Radial)	54 cps	0.0381 ppm	14.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	57.9 %	0.0 ppm
K 766.490 {44} (Radial)	44 cps	0.1262 ppm	20.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0027 ppm	29.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	70.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	20.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	863.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0018 ppm	94.6 %	0.0 ppm
V 292.402 {115} (Axial)	-14 cps	-0.0009 ppm	19.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	671.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		113.7508 %	0.3 %	0.4 %
Sc 188.060 {479} (Axial)		91.4330 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	0.0120 ppm	40.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	9,178.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0014 ppm	24.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.3533 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	0 cps	0.0018 ppm	272.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0035 ppm	362.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0069 ppm	97.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	180.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6161 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		126.1074 %	0.9 %	1.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 10:47:49 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0007 ppm	111.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0001 ppm	378.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	30 cps	0.0014 ppm	13.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	100 cps	0.0062 ppm	22.7 %	0.0 ppm
Be 313.042 {108} (Axial)	95 cps	0.0003 ppm	11.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0163 ppm	43.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	15 cps	0.0013 ppm	10.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	117.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	37.8 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0005 ppm	59.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	53 cps	0.0025 ppm	8.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0007 ppm	140.3 %	0.0 ppm
Li 670.784 {50} (Radial)	84 cps	0.0082 ppm	8.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	41.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0016 ppm	42.5 %	0.0 ppm
Na 589.592 {57} (Radial)	157 cps	0.1108 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	63.2 %	0.0 ppm
K 766.490 {44} (Radial)	263 cps	0.7633 ppm	4.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	416.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0010 ppm	31.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0005 ppm	13.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	459.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0031 ppm	27.5 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0006 ppm	19.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	102.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		114.4716 %	0.8 %	0.9 %
Sc 188.060 {479} (Axial)		91.0722 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	-0.0015 ppm	3,430.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	176.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0007 ppm	52.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.9630 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0050 ppm	50.3 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0012 ppm	798.4 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0058 ppm	142.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	191.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.0559 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		126.8467 %	0.4 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 11:55:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0011 ppm	49.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	203.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	22.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	74 cps	0.0046 ppm	21.1 %	0.0 ppm
Be 313.042 {108} (Axial)	103 cps	0.0003 ppm	7.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0130 ppm	47.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0014 ppm	5.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	28.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	30.4 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	52.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	51 cps	0.0024 ppm	10.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0024 ppm	74.0 %	0.0 ppm
Li 670.784 {50} (Radial)	71 cps	0.0070 ppm	18.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	1 cps	0.0000 ppm	113.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0018 ppm	31.3 %	0.0 ppm
Na 589.592 {57} (Radial)	142 cps	0.1000 ppm	8.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	73.3 %	0.0 ppm
K 766.490 {44} (Radial)	87 cps	0.2528 ppm	11.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0017 ppm	117.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0008 ppm	8.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	12 cps	0.0005 ppm	6.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	190.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0023 ppm	33.6 %	0.0 ppm
V 292.402 {115} (Axial)	-11 cps	-0.0007 ppm	9.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	118.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		113.2963 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		90.3240 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0137 ppm	160.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	1 cps	0.0020 ppm	68.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	26.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.4238 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1 cps	0.0034 ppm	61.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0066 ppm	120.2 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0247 ppm	31.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0006 ppm	100.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9248 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		127.1687 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:40:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0010 ppm	122.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	109.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	20 cps	0.0010 ppm	65.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	35 cps	0.0022 ppm	38.1 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	11.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0149 ppm	24.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0000 ppm	94.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0005 ppm	70.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	246.0 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	65.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	18 cps	0.0008 ppm	25.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0014 ppm	391.4 %	0.0 ppm
Li 670.784 {50} (Radial)	30 cps	0.0029 ppm	24.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	32.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	49.3 %	0.0 ppm
Na 589.592 {57} (Radial)	31 cps	0.0222 ppm	29.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	9.9 %	0.0 ppm
K 766.490 {44} (Radial)	15 cps	0.0424 ppm	105.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0009 ppm	292.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	295.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0003 ppm	8.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	1,209.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0028 ppm	44.4 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	409.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	99.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.1081 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		99.0099 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0499 ppm	31.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	210.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	11.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0509 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0166 ppm	57.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0023 ppm	205.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0056 ppm	85.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	180.9 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4255 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.4205 %	0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 12:51:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0016 ppm	38.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	619.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0007 ppm	59.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	82 cps	0.0051 ppm	8.2 %	0.0 ppm
Be 313.042 {108} (Axial)	78 cps	0.0002 ppm	19.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0131 ppm	53.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	16 cps	0.0014 ppm	4.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	151.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	63.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	89.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	40 cps	0.0019 ppm	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0017 ppm	290.7 %	0.0 ppm
Li 670.784 {50} (Radial)	56 cps	0.0055 ppm	13.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-1 cps	0.0000 ppm	408.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0015 ppm	27.1 %	0.0 ppm
Na 589.592 {57} (Radial)	101 cps	0.0714 ppm	7.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	65.6 %	0.0 ppm
K 766.490 {44} (Radial)	65 cps	0.1890 ppm	8.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0005 ppm	570.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0008 ppm	26.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	931.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0018 ppm	69.0 %	0.0 ppm
V 292.402 {115} (Axial)	-12 cps	-0.0008 ppm	21.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	107.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		114.1869 %	0.7 %	0.8 %
Sc 188.060 {479} (Axial)		89.7618 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0214 ppm	85.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	564.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	26.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.7632 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1 cps	0.0028 ppm	110.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0070 ppm	115.5 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0184 ppm	24.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	2,643.7 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8825 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		127.3580 %	0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:46:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	183.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	393.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	19 cps	0.0009 ppm	52.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	40 cps	0.0025 ppm	14.7 %	0.0 ppm
Be 313.042 {108} (Axial)	42 cps	0.0001 ppm	28.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	6 cps	0.0313 ppm	10.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	19.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	109.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	41.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	74.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	14 cps	0.0007 ppm	6.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0017 ppm	106.8 %	0.0 ppm
Li 670.784 {50} (Radial)	18 cps	0.0018 ppm	61.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	14.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0010 ppm	26.4 %	0.0 ppm
Na 589.592 {57} (Radial)	43 cps	0.0300 ppm	24.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	107.7 %	0.0 ppm
K 766.490 {44} (Radial)	4 cps	0.0125 ppm	343.6 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0024 ppm	55.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	2,763.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	38.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	144.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0011 ppm	143.5 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	48.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	38.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2287 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		100.0211 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0193 ppm	232.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	4,922.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	64.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9128 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0136 ppm	37.3 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0160 ppm	36.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0191 ppm	3.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	331.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1849 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5408 %	0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:58:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0004 ppm	89.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	75.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	26 cps	0.0012 ppm	38.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	21 cps	0.0013 ppm	107.4 %	0.0 ppm
Be 313.042 {108} (Axial)	42 cps	0.0001 ppm	29.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0166 ppm	34.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	57.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	5,037.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	112.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	33.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	14 cps	0.0007 ppm	33.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0016 ppm	251.0 %	0.0 ppm
Li 670.784 {50} (Radial)	35 cps	0.0035 ppm	4.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	82.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	27.9 %	0.0 ppm
Na 589.592 {57} (Radial)	69 cps	0.0484 ppm	12.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	63.0 %	0.0 ppm
K 766.490 {44} (Radial)	13 cps	0.0382 ppm	13.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	63.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0003 ppm	122.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	12.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	30.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0024 ppm	52.5 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0004 ppm	73.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	31.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		107.9666 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		99.5087 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	0.0016 ppm	791.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	296.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	31.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.8315 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	1 cps	0.0038 ppm	109.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	191.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0093 ppm	60.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0005 ppm	81.9 %	0.0 ppm
Y 224.306 {450} (Axial)		101.9284 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		116.0994 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 4:04:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0003 ppm	661.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	171.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	343.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	62 cps	0.0038 ppm	105.2 %	0.0 ppm
Be 313.042 {108} (Axial)	23 cps	0.0001 ppm	13.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0118 ppm	10.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	68.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	114.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	62.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	5 cps	0.0002 ppm	82.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0019 ppm	447.2 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0035 ppm	24.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-2 cps	0.0000 ppm	122.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	16.0 %	0.0 ppm
Na 589.592 {57} (Radial)	39 cps	0.0277 ppm	20.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	81.9 %	0.0 ppm
K 766.490 {44} (Radial)	14 cps	0.0419 ppm	23.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0006 ppm	45.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	754.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0002 ppm	31.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	406.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0025 ppm	136.8 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0005 ppm	35.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	39.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.9120 %	0.4 %	0.5 %
Sc 188.060 {479} (Axial)		97.6081 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0234 ppm	94.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,027.9 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0004 ppm	18.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9100 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0023 ppm	51.9 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0052 ppm	158.0 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0239 ppm	21.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	78.0 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5030 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		117.1824 %	2.3 %	2.7 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 5:12:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0002 ppm	695.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0010 ppm	15.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	60.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	82 cps	0.0051 ppm	18.1 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	32.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0033 ppm	174.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	16.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	112.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	48.2 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	40.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	19 cps	0.0009 ppm	18.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0018 ppm	297.4 %	0.0 ppm
Li 670.784 {50} (Radial)	48 cps	0.0047 ppm	22.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	27.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	40.6 %	0.0 ppm
Na 589.592 {57} (Radial)	134 cps	0.0948 ppm	9.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	69.3 %	0.0 ppm
K 766.490 {44} (Radial)	28 cps	0.0818 ppm	35.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	72.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	105.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0003 ppm	44.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	847.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0029 ppm	14.5 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0005 ppm	52.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	58.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		107.9284 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		98.7035 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	-0.0112 ppm	617.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,488.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	39.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0748 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0053 ppm	51.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	175.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0069 ppm	59.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	10.8 %	0.0 ppm
Y 224.306 {450} (Axial)		101.1591 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		113.7029 %	0.5 %	0.6 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 6:15:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0006 ppm	53.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	66.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	10 cps	0.0005 ppm	72.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0068 ppm	9.7 %	0.0 ppm
Be 313.042 {108} (Axial)	40 cps	0.0001 ppm	21.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	-0.0020 ppm	66.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	17.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0001 ppm	455.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	67.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	12.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	23 cps	0.0011 ppm	39.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0015 ppm	89.2 %	0.0 ppm
Li 670.784 {50} (Radial)	42 cps	0.0041 ppm	15.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	22.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	43.7 %	0.0 ppm
Na 589.592 {57} (Radial)	124 cps	0.0875 ppm	11.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	28.3 %	0.0 ppm
K 766.490 {44} (Radial)	10 cps	0.0285 ppm	61.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	243.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	22.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	21.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	42.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0030 ppm	62.0 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0004 ppm	64.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	3 cps	0.0002 ppm	51.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.2386 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		97.4489 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	0 cps	0.0066 ppm	592.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	306.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	31.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9783 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	0 cps	0.0014 ppm	471.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0104 ppm	37.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0184 ppm	106.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	674.6 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0759 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		113.6259 %	0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 7:22:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0005 ppm	73.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	32.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0007 ppm	68.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	131 cps	0.0082 ppm	10.3 %	0.0 ppm
Be 313.042 {108} (Axial)	63 cps	0.0002 ppm	61.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	-1 cps	-0.0053 ppm	226.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0007 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	2,102.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	56.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	35.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	41 cps	0.0019 ppm	58.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0005 ppm	869.8 %	0.0 ppm
Li 670.784 {50} (Radial)	58 cps	0.0057 ppm	4.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	126.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	10.1 %	0.0 ppm
Na 589.592 {57} (Radial)	133 cps	0.0937 ppm	4.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	4 cps	0.0010 ppm	13.0 %	0.0 ppm
K 766.490 {44} (Radial)	71 cps	0.2058 ppm	9.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	66.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	23.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	32.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0004 ppm	34.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0027 ppm	26.3 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0005 ppm	18.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	96.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.8888 %	5.9 %	6.2 %
Sc 188.060 {479} (Axial)		97.7107 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0270 ppm	136.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	451.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0004 ppm	29.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3277 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	2 cps	0.0078 ppm	60.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0037 ppm	68.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0269 ppm	32.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	18,776.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0898 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		112.5119 %	0.1 %	0.1 %

Sample Prep and Screen Data

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ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-02A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 7.37 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.71 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL):
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 117202060
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935
RPM: 30
EXTRACTION pH AT FINISH: 5.35 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 191956734
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-04A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102T780

Balance ID: 11

INITIAL pH OF SLURRY: 8.93 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.80 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020c00

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.08 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-06A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: + g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.24 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 561 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020160

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-08A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.91 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.62 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.34 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Charge

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-10A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL D0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.47 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 8.45 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-6-1
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 2 2.93
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020600
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935
RPM: 30
EXTRACTION pH AT FINISH: 4.97 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 191956734
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-12A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.51 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 2.07 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 7.33 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-16A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0L0277806
Balance ID: 11

INITIAL pH OF SLURRY: 8.34 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.63 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: SOL 1 4.89
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: #11720260
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1505 FINISH: 11/21/2020 935
RPM: 30
EXTRACTION pH AT FINISH: 5.12 PRESERVATION BPL: —
pH Meter ID: pH TCLP THERMOMETER ID: 191956734
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Charge

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20115574-20A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.22 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.64 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 80 | 1 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020060
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935
RPM: 30
EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 191956734
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: Z0111574-22A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.00 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.66 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020060
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.18 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20115574-24A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 9.52 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.74 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 \ 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.14 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Charge

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-26A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.4 g to 96.5mL DI Cup BPL P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.20 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020060
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.10 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-28A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 7.28 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: ~~7.70~~ 7.05 MW 11/20/2020 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5011 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020 00
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.17 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environment

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-32A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 6.34 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 3.98 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-B-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 117202060
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 6.39 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-34A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100.0 % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.92 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.47 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 111720206O

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.18 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 17072485I

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-36A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 4.82 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.64 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 117202060
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.23 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-38A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.40 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.80 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 50 | 1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 1117202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.16 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.6 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-40A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.62 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.78 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Charge

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: R0111574-42A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: R0102778001
Balance ID: 11

INITIAL pH OF SLURRY: 8.15 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.90 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #1 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020160
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.94 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-44A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P010277800
Balance ID: 11
INITIAL pH OF SLURRY: 8.60 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.81 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 117202060
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1585 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.33 PRESERVATION BPL: —
pH Meter ID: pH TCLP THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574 - 46A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.54 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5@1 4.98
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 1117202060
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2060 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 35
EXTRACTION pH AT FINISH: 5.39 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724/851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-48A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.44 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.81 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 \ 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11202020060
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.20 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.90 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-50A ANALYST: EJ/MLG

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 7.91 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.55 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 112020200

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.18 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-52A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P002778001
Balance ID: n
INITIAL pH OF SLURRY: 7.94 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.76 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 1 | 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935
RPM: 30
EXTRACTION pH AT FINISH: 5.73 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 191956734
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-54A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.06 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.72 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 120202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.61 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.52

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-58A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.38 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.96 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 85.8 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 1720 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 6.45 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-60A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100 % % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.79 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.67 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 50/1 4.98
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30
EXTRACTION pH AT FINISH: 5.44 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168176** Prep Code: **MP_6010_S**

Start Date: **11/23/2020 1:47:53 PM** End Date: **11/23/2020 4:25:57 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-01A	Soil		0.673		0	50	74.2942
20111574-03A	Soil		0.684		0	50	73.0994
20111574-05A	Soil		0.624		0	50	80.1282
20111574-07A	Soil		0.656		0	50	76.2195
20111574-09A	Soil		0.633		0	50	78.9889
20111574-11A	Soil		0.781		0	50	64.0205
20111574-13A	Soil		0.762		0	50	65.6168
20111574-14A	Soil		0.716		0	50	69.8324
20111574-15A	Soil		0.729		0	50	68.5871
20111574-17A	Soil		0.701		0	50	71.3267
20111574-18A	Soil		0.722		0	50	69.2521
20111574-19A	Soil		0.653		0	50	76.5697
20111574-21A	Soil		0.646		0	50	77.3994
20111574-23A	Soil		0.774		0	50	64.5995
20111574-25A	Soil		0.793		0	50	63.0517
20111574-27A	Soil		0.63		0	50	79.3651
20111574-29A	Soil		0.767		0	50	65.189
20111574-30A	Soil		0.695		0	50	71.9424
20111574-31A	Soil		0.726		0	50	68.8705
20111574-33A	Soil		0.764		0	50	65.445
20111574-33AMS	Soil		0.784		0	50	63.7755
20111574-33AMS	Soil		0.779		0	50	64.1849
LCS-168176			1		0	50	50
MBLK-168176			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168176** Prep Code: **MP_6010_S**

Start Date: **11/23/2020 1:47:53 PM** End Date: **11/23/2020 4:25:57 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	1 g
FinSampVol:	50 mL
OriginalFac:	50
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168173** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 11:58:46 AM** End Date: **11/23/2020 1:04:09 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-02A	Tclp Extract			2.5	0	27.5	11
20111574-02AMS	Tclp Extract			2.5	0	27.5	11
20111574-02AMS	Tclp Extract			2.5	0	27.5	11
20111574-04A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-06A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-08A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-10A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-12A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-16A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-20A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-22A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-24A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-26A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-28A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168173** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 11:58:46 AM** End Date: **11/23/2020 1:04:09 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-32A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-34A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-36A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-38A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-40A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-42A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-44A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-46A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
LCS-168173				25	0	27.5	1.1
MBLK-168173				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168173** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 11:58:46 AM** End Date: **11/23/2020 1:04:09 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168177** Prep Code: **MP_6010_S**

Start Date: **11/23/2020 1:48:56 PM** End Date: **11/23/2020 4:26:34 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-35A	Soil		0.615		0	50	81.3008
20111574-37A	Soil		0.747		0	50	66.9344
20111574-39A	Soil		0.669		0	50	74.7384
20111574-41A	Soil		0.745		0	50	67.1141
20111574-43A	Soil		0.661		0	50	75.643
20111574-45A	Soil		0.784		0	50	63.7755
20111574-47A	Soil		0.728		0	50	68.6813
20111574-49A	Soil		0.765		0	50	65.3595
20111574-51A	Soil		0.758		0	50	65.9631
20111574-53A	Soil		0.632		0	50	79.1139
20111574-55A	Soil		0.694		0	50	72.0461
20111574-56A	Soil		0.778		0	50	64.2674
20111574-57A	Soil		0.635		0	50	78.7402
20111574-59A	Soil		0.711		0	50	70.3235
20111574-59AMS	Soil		0.741		0	50	67.4764
20111574-59AMS	Soil		0.717		0	50	69.735
20111726-01A	Soil		0.696		0	50	71.8391
20111726-08A	Soil		0.701		0	50	71.3267
20111726-14A	Soil		0.695		0	50	71.9424
20111726-21A	Soil		0.779		0	50	64.1849
20111726-22A	Soil		0.664		0	50	75.3012
20111726-28A	Soil		0.638		0	50	78.3699
LCS-168177			1		0	50	50
MBLK-168177			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168177** Prep Code: **MP_6010_S**

Start Date: **11/23/2020 1:48:56 PM** End Date: **11/23/2020 4:26:34 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	1 g
FinSampVol:	50 mL
OriginalFac:	50
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168174** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 1:05:54 PM** End Date: **11/23/2020 2:06:35 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-48A	Tclp Extract			2.5	0	27.5	11
20111574-48AMS	Tclp Extract			2.5	0	27.5	11
20111574-48AMS	Tclp Extract			2.5	0	27.5	11
20111574-50A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-52A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-54A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-58A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-60A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111734-02B	Water			25	0	27.5	1.1
20111734-03B	Water			25	0	27.5	1.1
20111734-04B	Water			25	0	27.5	1.1
20111734-05B	Water			25	0	27.5	1.1
LCS-168174				25	0	27.5	1.1
MBLK-168174				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168174** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 1:05:54 PM** End Date: **11/23/2020 2:06:35 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

General Chemistry

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**4.9**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**7.3**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**14**	% of sample	0.10	1	11/25/20 12:21	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-14		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-18		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 12:21	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-25		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-27		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 12:21	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-29		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-30		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/25/20 12:21	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-31		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.9**	% of sample	0.10	1	11/25/20 12:21	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-33		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.8**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-35		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**7.9**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-37		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 13:45	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-39		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**20**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-41		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-43		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-45		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**26**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-47		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-49		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-51		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 13:45	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-53		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-55		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 13:45	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-56		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/25/20 13:45	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-57		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/25/20 13:45	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-59		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.5**	% of sample	0.10	1	11/25/20 13:45	NA	

Moisture

Analyst:	AJS	Date/Time In:	11/25/20 12:21 PM	Temp In Deg C:	104
Review By:		Date/Time Out:	11/28/20 10:35 AM	Temp Out Deg C:	103
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_201125A	Sand BPL:	2049-184-4
SOP:	HN-WC-018	Balance ID:	6	Oven ID:	5

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.0866	0	0.0000				1.0868	0.02	0.02	Moisture
LCS		LCS	LCS	1.1006	0	6.616				7.7186	100.03	100.03	Moisture
20111997-04A	1	SAMP	E14	1.0852	0	6.959				7.0778	86.11	13.89	Moisture
2011997-04A DUP	1	DUP	E13	1.0897	0	7.0655				7.2179	86.73	13.27	Moisture
2011574-01A	1	SAMP	E12	1.078	0	6.2027				6.3701	85.32	14.68	Moisture
2011574-03A	1	SAMP	E22	1.0941	0	6.3095				7.0944	95.10	4.90	Moisture
2011574-05A	1	SAMP	E6	1.0908	0	6.3109				6.4858	85.49	14.51	Moisture
20111574-07A	1	SAMP	E11	1.1082	0	5.9248				6.6004	92.70	7.30	Moisture
20111574-09A	1	SAMP	E5	1.105	0	6.108				6.3113	85.24	14.76	Moisture
20111574-11A	1	SAMP	R21	1.0984	0	6.5043				6.5521	83.85	16.15	Moisture
20111574-14A	1	SAMP	E15	1.0891	0	6.1533				6.1669	82.52	17.48	Moisture
20111574-15A	1	SAMP	E16	1.0862	0	6.8381				7.2025	89.44	10.56	Moisture
20111574-13A	1	SAMP	E4	1.0984	0	6.2625				6.5013	86.27	13.73	Moisture
20111574-17A	1	SAMP	E8	1.0915	0	6.3229				6.7251	89.10	10.90	Moisture
20111574-17A DUP	1	DUP	E21	1.1092	0	6.4314					-17.25	117.25	Moisture
20111574-18A	1	SAMP	E3	1.105	0	6.273				6.6626	88.60	11.40	Moisture
20111571-19A	1	SAMP	E18	1.0769	0	6.265				6.5781	87.81	12.19	Moisture
20111574-21A	1	SAMP	E17	1.0885	0	6.0934				6.1732	83.45	16.55	Moisture
20111574-23A	1	SAMP	E9	1.0828	0	6.2099				6.599	88.83	11.17	Moisture
20111574-25A	1	SAMP	E2	1.1109	0	6.5881				6.8132	86.55	13.45	Moisture
20111574-27A	1	SAMP	E1	1.097	0	5.9469				6.3538	88.40	11.60	Moisture
20111574-29A	1	SAMP	E20	1.1025	0	6.8251				7.1659	88.84	11.16	Moisture
20111574-30A	1	SAMP	E7	1.1134	0	6.0645				6.0561	81.50	18.50	Moisture
20111574-31A	1	SAMP	E10	1.0776	0	6.0861				6.5639	90.14	9.86	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/28/2020 12:34PM	AJS

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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Moisture

2nd /S/ RM 11/29/20

Analyst:	AJS			Date/Time In:	11/25/20 1:45 PM				Temp In Deg C:	104			
Review By:				Date/Time Out:	11/28/2020 10:21AM				Temp Out Deg C:	103.5			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_201125B				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	9			
WO	**Btl. #**	**SampType**	**Dish ID**	**Pan Wt**	**Tare Wt***	**Wet Wt**	**1st Wt**	**2nd Wt**	**3rd Wt**	**Final Wt****	**% Solid**	**%Moisture**	**Analyte**
WBLKS		MBLK	BLK	1.0943	0	0.0000				1.0943	0.00	0.00	Moisture
LCS		LCS	LCS	1.0989	0	6.385				7.4826	99.98	99.98	Moisture
20111574-33A		SAMP	B16	1.1023	0	5.552				6.3299	94.16	5.84	Moisture
20111574-33A DUP		DUP	B11	1.1006	0	6.7798				7.4753	94.02	5.98	Moisture
20111574-35A		SAMP	Z6	1.0923	0	5.5985				6.2476	92.08	7.92	Moisture
20111574-37A		SAMP	B18	1.1078	0	6.4801				6.6424	85.41	14.59	Moisture
20111574-39A		SAMP	B5	1.1148	0	6.9803				6.6952	79.94	20.06	Moisture
20111574-41A		SAMP	B13	1.1025	0	5.6364				5.8792	84.75	15.25	Moisture
20111574-432A		SAMP	B2	1.0948	0	6.8654				7.1467	88.15	11.85	Moisture
20111574-45A		SAMP	Z5	1.098	0	6.4008				5.8196	73.77	26.23	Moisture
20111574-47A		SAMP	B1	1.1013	0	6.3886				6.407	83.05	16.95	Moisture
20111574-49A		SAMP	B8	1.1197	0	5.2055				5.4573	83.33	16.67	Moisture
20111574-51A		SAMP	Z16	1.0928	0	5.1747				5.7074	89.18	10.82	Moisture
20111574-53A		SAMP	Z7	1.0945	0	5.3747				5.7647	86.89	13.11	Moisture
20111574-53A DUP		DUP	Z9	1.0877	0	5.6753				5.6728	80.79	19.21	Moisture
20111574-55A		SAMP	B20	1.0855	0	6.0621				6.4391	88.31	11.69	Moisture
20111574-56A		SAMP	B21	1.0914	0	6.3658				6.3443	82.52	17.48	Moisture
20111574-57A		SAMP	B17	1.0924	0	6.3592				6.4585	84.38	15.62	Moisture
20111574-59A		SAMP	B4	1.1114	0	5.2575				5.8675	90.46	9.54	Moisture
20111367-02B		SAMP	B10	1.1002	0	7.2577				7.0816	82.41	17.59	Moisture
20112041-01A		SAMP	B15	1.0984	0	5.67				5.9037	84.75	15.25	Moisture
20111490-01A		SAMP	Z22	1.0893	0	8.5195				8.4491	86.39	13.61	Moisture
20111490-11A		SAMP	Z21	1.112	0	6.4803				6.4135	81.81	18.19	Moisture
20111571-01A		SAMP	Z4	1.0952	0	8.9309				7.5913	72.74	27.26	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/28/2020 11:31AM	AJS

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

20111574-432A is 20111574-43A

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30-Nov-2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Re: **IDA001** Work Order: **20111574**

Dear Ray,

ALS Environmental received 60 samples on 17-Nov-2020 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 77.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: OH: CL 103

ALS Group, USA

Date: 30-Nov-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111574**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111574-01	IDA001:DU-C1:S000010	Soil	DU-C1	11/13/2020 14:35	11/17/2020 09:30	☐
20111574-02	IDA001:DU-C1:S000010	Tclp Extract	DU-C1	11/13/2020 14:35	11/17/2020 09:30	☐
20111574-03	IDA001:DU-D1:S000010	Soil	DU-D1	11/13/2020 13:55	11/17/2020 09:30	☐
20111574-04	IDA001:DU-D1:S000010	Tclp Extract	DU-D1	11/13/2020 13:55	11/17/2020 09:30	☐
20111574-05	IDA001:DU-E5:S000010	Soil	DU-E5	11/12/2020 14:50	11/17/2020 09:30	☐
20111574-06	IDA001:DU-E5:S000010	Tclp Extract	DU-E5	11/12/2020 14:50	11/17/2020 09:30	☐
20111574-07	IDA001:DU-B5:S000010	Soil	DU-B5	11/12/2020 08:20	11/17/2020 09:30	☐
20111574-08	IDA001:DU-B5:S000010	Tclp Extract	DU-B5	11/12/2020 08:20	11/17/2020 09:30	☐
20111574-09	IDA001:DU-C5:S000010	Soil	DU-C5	11/12/2020 08:58	11/17/2020 09:30	☐
20111574-10	IDA001:DU-C5:S000010	Tclp Extract	DU-C5	11/12/2020 08:58	11/17/2020 09:30	☐
20111574-11	IDA001:DU-D5:S000010	Soil	DU-D5	11/12/2020 09:48	11/17/2020 09:30	☐
20111574-12	IDA001:DU-D5:S000010	Tclp Extract	DU-D5	11/12/2020 09:48	11/17/2020 09:30	☐
20111574-13	IDA001:DU-D5-TE:S000010	Soil	DU-D5-TE	11/12/2020 11:12	11/17/2020 09:30	☐
20111574-14	IDA001:DU-D5-TS:S000010	Soil	DU-D5-TS	11/12/2020 10:34	11/17/2020 09:30	☐
20111574-15	IDA001:DU-E9:S000010	Soil	DU-E9	11/14/2020 09:07	11/17/2020 09:30	☐
20111574-16	IDA001:DU-E9:S000010	Tclp Extract	DU-E9	11/14/2020 09:07	11/17/2020 09:30	☐
20111574-17	IDA001:DU-E9-TE:S000010	Soil	DU-E9-TE	11/14/2020 09:49	11/17/2020 09:30	☐
20111574-18	IDA001:DU-E9-TS:S000010	Soil	DU-E9-TS	11/14/2020 10:28	11/17/2020 09:30	☐
20111574-19	IDA001:DU-D9:S000010	Soil	DU-D9	11/14/2020 11:01	11/17/2020 09:30	☐
20111574-20	IDA001:DU-D9:S000010	Tclp Extract	DU-D9	11/14/2020 11:01	11/17/2020 09:30	☐
20111574-21	IDA001:DU-C9:S000010	Soil	DU-C9	11/14/2020 11:32	11/17/2020 09:30	☐
20111574-22	IDA001:DU-C9:S000010	Tclp Extract	DU-C9	11/14/2020 11:32	11/17/2020 09:30	☐
20111574-23	IDA001:DU-B9:S000010	Soil	DU-B9	11/14/2020 12:19	11/17/2020 09:30	☐
20111574-24	IDA001:DU-B9:S000010	Tclp Extract	DU-B9	11/14/2020 12:19	11/17/2020 09:30	☐
20111574-25	IDA001:DU-A9:S000010	Soil	DU-A9	11/14/2020 12:51	11/17/2020 09:30	☐
20111574-26	IDA001:DU-A9:S000010	Tclp Extract	DU-A9	11/14/2020 12:51	11/17/2020 09:30	☐
20111574-27	IDA001:DU-A8:S000010	Soil	DU-A8:	11/14/2020 13:30	11/17/2020 09:30	☐
20111574-28	IDA001:DU-A8:S000010	Tclp Extract	DU-A8:	11/14/2020 13:30	11/17/2020 09:30	☐
20111574-29	IDA001:DU-A8-TE:S000010	Soil	DU-A8-TE	11/14/2020 14:00	11/17/2020 09:30	☐
20111574-30	IDA001:DU-A8-TS:S000010	Soil	DU-A8-TS	11/14/2020 14:30	11/17/2020 09:30	☐
20111574-31	IDA001:DU-B8:S000010	Soil	DU-B8	11/14/2020 15:00	11/17/2020 09:30	☐
20111574-32	IDA001:DU-B8:S000010	Tclp Extract	DU-B8	11/14/2020 15:00	11/17/2020 09:30	☐
20111574-33	IDA001:DU-C8:S000010	Soil	DU-C8	11/14/2020 15:30	11/17/2020 09:30	☐
20111574-34	IDA001:DU-C8:S000010	Tclp Extract	DU-C8	11/14/2020 15:30	11/17/2020 09:30	☐
20111574-35	IDA001:DU-D8:S000010	Soil	DU-D8	11/14/2020 16:00	11/17/2020 09:30	☐
20111574-36	IDA001:DU-D8:S000010	Tclp Extract	DU-D8	11/14/2020 16:00	11/17/2020 09:30	☐
20111574-37	IDA001:DU-E8:S000010	Soil	DU-E8	11/15/2020 07:42	11/17/2020 09:30	☐
20111574-38	IDA001:DU-E8:S000010	Tclp Extract	DU-E8	11/15/2020 07:42	11/17/2020 09:30	☐
20111574-39	IDA001:DU-E7:S000010	Soil	DU-E7	11/15/2020 08:08	11/17/2020 09:30	☐

Client: Hull & Associates
Project: IDA001
Work Order: **20111574**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111574-40	IDA001:DU-E7:S000010	Tclp Extract	DU-E7	11/15/2020 08:08	11/17/2020 09:30	☐
20111574-41	IDA001:DU-D7:S000010	Soil	DU-D7	11/15/2020 08:34	11/17/2020 09:30	☐
20111574-42	IDA001:DU-D7:S000010	Tclp Extract	DU-D7	11/15/2020 08:34	11/17/2020 09:30	☐
20111574-43	IDA001:DU-C7:S000010	Soil	DU-C7	11/15/2020 09:07	11/17/2020 09:30	☐
20111574-44	IDA001:DU-C7:S000010	Tclp Extract	DU-C7	11/15/2020 09:07	11/17/2020 09:30	☐
20111574-45	IDA001:DU-B7:S000010	Soil	DU-B7	11/15/2020 09:39	11/17/2020 09:30	☐
20111574-46	IDA001:DU-B7:S000010	Tclp Extract	DU-B7	11/15/2020 09:39	11/17/2020 09:30	☐
20111574-47	IDA001:DU-A7:S000010	Soil	DU-A7	11/15/2020 10:20	11/17/2020 09:30	☐
20111574-48	IDA001:DU-A7:S000010	Tclp Extract	DU-A7	11/15/2020 10:20	11/17/2020 09:30	☐
20111574-49	IDA001:DU-A6:S000010	Soil	DU-A6	11/15/2020 11:40	11/17/2020 09:30	☐
20111574-50	IDA001:DU-A6:S000010	Tclp Extract	DU-A6	11/15/2020 11:40	11/17/2020 09:30	☐
20111574-51	IDA001:DU-B6:S000010	Soil	DU-B6	11/15/2020 12:10	11/17/2020 09:30	☐
20111574-52	IDA001:DU-B6:S000010	Tclp Extract	DU-B6	11/15/2020 12:10	11/17/2020 09:30	☐
20111574-53	IDA001:DU-C6:S000010	Soil	DU-C6	11/15/2020 12:35	11/17/2020 09:30	☐
20111574-54	IDA001:DU-C6:S000010	Tclp Extract	DU-C6	11/15/2020 12:35	11/17/2020 09:30	☐
20111574-55	IDA001:DU-C6-TE:S000010	Soil	DU-C6-TE	11/15/2020 12:55	11/17/2020 09:30	☐
20111574-56	IDA001:DU-C6-TS:S000010	Soil	DU-C6-TS	11/15/2020 13:20	11/17/2020 09:30	☐
20111574-57	IDA001:DU-D6:S000010	Soil	DU-D6	11/15/2020 13:50	11/17/2020 09:30	☐
20111574-58	IDA001:DU-D6:S000010	Tclp Extract	DU-D6	11/15/2020 13:50	11/17/2020 09:30	☐
20111574-59	IDA001:DU-E6:S000010	Soil	DU-E6	11/15/2020 14:10	11/17/2020 09:30	☐
20111574-60	IDA001:DU-E6:S000010	Tclp Extract	DU-E6	11/15/2020 14:10	11/17/2020 09:30	☐

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111574**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

Client:	Hull & Associates
Project:	IDA001
Work Order:	20111574

Case Narrative

Samples for the above noted Work Order were received on 11/17/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168176, Method SW6010D, Sample 20111574-33AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Batch 168177, Method SW6010D, Sample 20111574-59AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168176, Method SW6010D, Sample 20111574-33AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Batch 168177, Method SW6010D, Sample 20111574-59AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Wet Chemistry:
No other deviations or anomalies were noted.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C1:S000010
Collection Date: 11/13/2020 02:35 PM

Work Order: 20111574
Lab ID: 20111574-01
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**8.5**		**1.1**	**4.4**	**mg/Kg-dry**	10	11/25/2020 21:34
Lead	**190**		**3.5**	**4.4**	**mg/Kg-dry**	10	11/25/2020 21:34
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C1:S000010
Collection Date: 11/13/2020 02:35 PM

Work Order: 20111574
Lab ID: 20111574-02
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.023**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 13:38
Lead	**0.11**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 13:38

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D1:S000010
Collection Date: 11/13/2020 01:55 PM

Work Order: 20111574
Lab ID: 20111574-03
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**25**		**1.0**	**3.8**	**mg/Kg-dry**	10	11/25/2020 21:40
Lead	**1,000**		**3.1**	**3.8**	**mg/Kg-dry**	10	11/25/2020 21:40
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**4.9**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D1:S000010
Collection Date: 11/13/2020 01:55 PM

Work Order: 20111574
Lab ID: 20111574-04
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.040**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 14:04
Lead	**25**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E5:S000010
Collection Date: 11/12/2020 02:50 PM

Work Order: 20111574
Lab ID: 20111574-05
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**43**		**1.2**	**4.7**	**mg/Kg-dry**	10	11/25/2020 21:45
Lead	**7,300**		**37**	**47**	**mg/Kg-dry**	100	11/29/2020 20:50
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E5:S000010
Collection Date: 11/12/2020 02:50 PM

Work Order: 20111574
Lab ID: 20111574-06
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 14:09
Lead	**16**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B5:S000010
Collection Date: 11/12/2020 08:20 AM

Work Order: 20111574
Lab ID: 20111574-07
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**24**		**1.1**	**4.1**	**mg/Kg-dry**	10	11/25/2020 21:50
Lead	**2,500**		**3.3**	**4.1**	**mg/Kg-dry**	10	11/25/2020 21:50
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**7.3**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B5:S000010
Collection Date: 11/12/2020 08:20 AM

Work Order: 20111574
Lab ID: 20111574-08
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.021**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 14:14
Lead	**26**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C5:S000010
Collection Date: 11/12/2020 08:58 AM

Work Order: 20111574
Lab ID: 20111574-09
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**25**		**1.2**	**4.6**	**mg/Kg-dry**	10	11/25/2020 21:55
Lead	**3,400**		**3.7**	**4.6**	**mg/Kg-dry**	10	11/25/2020 21:55
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C5:S000010
Collection Date: 11/12/2020 08:58 AM

Work Order: 20111574
Lab ID: 20111574-10
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 14:19
Lead	**32**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D5:S000010
Collection Date: 11/12/2020 09:48 AM

Work Order: 20111574
Lab ID: 20111574-11
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**15**		**0.99**	**3.8**	**mg/Kg-dry**	10	11/25/2020 22:00
Lead	**4,500**		**31**	**38**	**mg/Kg-dry**	100	11/29/2020 20:55
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D5:S000010
Collection Date: 11/12/2020 09:48 AM

Work Order: 20111574
Lab ID: 20111574-12
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 14:24
Lead	**2.2**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D5-TE:S000010
Collection Date: 11/12/2020 11:12 AM

Work Order: 20111574
Lab ID: 20111574-13
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**11**		**0.99**	**3.8**	**mg/Kg-dry**	10	11/25/2020 22:05
Lead	**2,300**		**3.0**	**3.8**	**mg/Kg-dry**	10	11/25/2020 22:05
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**14**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D5-TS:S000010
Collection Date: 11/12/2020 10:34 AM

Work Order: 20111574
Lab ID: 20111574-14
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**9.5**		**1.1**	**4.2**	**mg/Kg-dry**	10	11/25/2020 22:10
Lead	**970**		**3.4**	**4.2**	**mg/Kg-dry**	10	11/25/2020 22:10
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E9:S000010
Collection Date: 11/14/2020 09:07 AM

Work Order: 20111574
Lab ID: 20111574-15
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**450**		**1.0**	**3.8**	**mg/Kg-dry**	10	11/25/2020 22:25
Lead	**10,000**		**31**	**38**	**mg/Kg-dry**	100	11/29/2020 21:00
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E9:S000010
Collection Date: 11/14/2020 09:07 AM

Work Order: 20111574
Lab ID: 20111574-16
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.26**		**0.016**	**0.050**	**mg/L**	1	11/25/2020 14:29
Lead	**69**		**0.13**	**0.50**	**mg/L**	10	11/26/2020 03:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E9-TE:S000010
Collection Date: 11/14/2020 09:49 AM

Work Order: 20111574
Lab ID: 20111574-17
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**570**		**1.0**	**4.0**	**mg/Kg-dry**	10	11/25/2020 22:30
Lead	**8,400**		**32**	**40**	**mg/Kg-dry**	100	11/29/2020 21:05
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E9-TS:S000010
Collection Date: 11/14/2020 10:28 AM

Work Order: 20111574
Lab ID: 20111574-18
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**1,000**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/25/2020 22:35
Lead	**14,000**		**31**	**39**	**mg/Kg-dry**	100	11/29/2020 21:10
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D9:S000010
Collection Date: 11/14/2020 11:01 AM

Work Order: 20111574
Lab ID: 20111574-19
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**34**		**1.1**	**4.4**	**mg/Kg-dry**	10	11/25/2020 22:40
Lead	**1,100**		**3.5**	**4.4**	**mg/Kg-dry**	10	11/25/2020 22:40
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D9:S000010
Collection Date: 11/14/2020 11:01 AM

Work Order: 20111574
Lab ID: 20111574-20
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.025**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 14:34
Lead	**1.6**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C9:S000010
Collection Date: 11/14/2020 11:32 AM

Work Order: 20111574
Lab ID: 20111574-21
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**32**		**1.2**	**4.6**	**mg/Kg-dry**	10	11/25/2020 22:45
Lead	**770**		**3.7**	**4.6**	**mg/Kg-dry**	10	11/25/2020 22:45
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C9:S000010
Collection Date: 11/14/2020 11:32 AM

Work Order: 20111574
Lab ID: 20111574-22
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.024**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 14:39
Lead	**0.63**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:39

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B9:S000010
Collection Date: 11/14/2020 12:19 PM

Work Order: 20111574
Lab ID: 20111574-23
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**280**		**0.95**	**3.6**	**mg/Kg-dry**	10	11/25/2020 22:50
Lead	**4,700**		**29**	**36**	**mg/Kg-dry**	100	11/29/2020 21:15
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B9:S000010
Collection Date: 11/14/2020 12:19 PM

Work Order: 20111574
Lab ID: 20111574-24
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.10**		**0.016**	**0.050**	**mg/L**	1	11/25/2020 14:45
Lead	**39**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A9:S000010
Collection Date: 11/14/2020 12:51 PM

Work Order: 20111574
Lab ID: 20111574-25
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**180**		**0.95**	**3.6**	**mg/Kg-dry**	10	11/25/2020 22:56
Lead	**8,900**		**29**	**36**	**mg/Kg-dry**	100	11/29/2020 21:21
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**13**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A9:S000010
Collection Date: 11/14/2020 12:51 PM

Work Order: 20111574
Lab ID: 20111574-26
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.074**		**0.016**	**0.050**	**mg/L**	1	11/25/2020 14:50
Lead	**30**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 14:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A8:S000010
Collection Date: 11/14/2020 01:30 PM

Work Order: 20111574
Lab ID: 20111574-27
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**56**		**1.2**	**4.5**	**mg/Kg-dry**	10	11/25/2020 23:01
Lead	**2,300**		**3.6**	**4.5**	**mg/Kg-dry**	10	11/25/2020 23:01
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A8:S000010
Collection Date: 11/14/2020 01:30 PM

Work Order: 20111574
Lab ID: 20111574-28
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.058**		**0.016**	**0.050**	**mg/L**	1	11/25/2020 15:05
Lead	**7.2**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A8-TE:S000010
Collection Date: 11/14/2020 02:00 PM

Work Order: 20111574
Lab ID: 20111574-29
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**42**		**0.95**	**3.7**	**mg/Kg-dry**	10	11/25/2020 23:06
Lead	**1,700**		**2.9**	**3.7**	**mg/Kg-dry**	10	11/25/2020 23:06
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A8-TS:S000010
Collection Date: 11/14/2020 02:30 PM

Work Order: 20111574
Lab ID: 20111574-30
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**46**		**1.1**	**4.4**	**mg/Kg-dry**	10	11/25/2020 23:11
Lead	**1,400**		**3.5**	**4.4**	**mg/Kg-dry**	10	11/25/2020 23:11
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B8:S000010
Collection Date: 11/14/2020 03:00 PM

Work Order: 20111574
Lab ID: 20111574-31
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**20**		**0.99**	**3.8**	**mg/Kg-dry**	10	11/25/2020 23:31
Lead	**550**		**3.1**	**3.8**	**mg/Kg-dry**	10	11/25/2020 23:31
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**9.9**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 12:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B8:S000010
Collection Date: 11/14/2020 03:00 PM

Work Order: 20111574
Lab ID: 20111574-32
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 15:10
Lead	**0.53**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C8:S000010
Collection Date: 11/14/2020 03:30 PM

Work Order: 20111574
Lab ID: 20111574-33
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**28**		**0.90**	**3.5**	**mg/Kg-dry**	10	11/25/2020 23:36
Lead	**940**		**2.8**	**3.5**	**mg/Kg-dry**	10	11/25/2020 23:36
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**5.8**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C8:S000010
Collection Date: 11/14/2020 03:30 PM

Work Order: 20111574
Lab ID: 20111574-34
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.044**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 15:15
Lead	**9.9**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D8:S000010
Collection Date: 11/14/2020 04:00 PM

Work Order: 20111574
Lab ID: 20111574-35
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**70**		**1.1**	**4.4**	**mg/Kg-dry**	10	11/26/2020 00:42
Lead	**2,300**		**3.5**	**4.4**	**mg/Kg-dry**	10	11/26/2020 00:42
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**7.9**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D8:S000010
Collection Date: 11/14/2020 04:00 PM

Work Order: 20111574
Lab ID: 20111574-36
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.038**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 15:20
Lead	**29**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:20

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E8:S000010
Collection Date: 11/15/2020 07:42 AM

Work Order: 20111574
Lab ID: 20111574-37
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**19**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/26/2020 00:47
Lead	**840**		**3.1**	**3.9**	**mg/Kg-dry**	10	11/26/2020 00:47
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E8:S000010
Collection Date: 11/15/2020 07:42 AM

Work Order: 20111574
Lab ID: 20111574-38
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 15:26
Lead	**1.5**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E7:S000010
Collection Date: 11/15/2020 08:08 AM

Work Order: 20111574
Lab ID: 20111574-39
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**9.1**		**1.2**	**4.7**	**mg/Kg-dry**	10	11/26/2020 00:52
Lead	**650**		**3.7**	**4.7**	**mg/Kg-dry**	10	11/26/2020 00:52
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**20**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E7:S000010
Collection Date: 11/15/2020 08:08 AM

Work Order: 20111574
Lab ID: 20111574-40
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 15:31
Lead	**6.7**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D7:S000010
Collection Date: 11/15/2020 08:34 AM

Work Order: 20111574
Lab ID: 20111574-41
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**42**		**1.0**	**4.0**	**mg/Kg-dry**	10	11/26/2020 00:57
Lead	**1,800**		**3.2**	**4.0**	**mg/Kg-dry**	10	11/26/2020 00:57
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D7:S000010
Collection Date: 11/15/2020 08:34 AM

Work Order: 20111574
Lab ID: 20111574-42
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 15:36
Lead	**2.6**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:36

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C7:S000010
Collection Date: 11/15/2020 09:07 AM

Work Order: 20111574
Lab ID: 20111574-43
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**15**		**1.1**	**4.3**	**mg/Kg-dry**	10	11/26/2020 01:02
Lead	**830**		**3.4**	**4.3**	**mg/Kg-dry**	10	11/26/2020 01:02
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C7:S000010
Collection Date: 11/15/2020 09:07 AM

Work Order: 20111574
Lab ID: 20111574-44
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 15:41
Lead	**8.9**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:41

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B7:S000010
Collection Date: 11/15/2020 09:39 AM

Work Order: 20111574
Lab ID: 20111574-45
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**97**		**1.1**	**4.3**	**mg/Kg-dry**	10	11/26/2020 01:07
Lead	**3,100**		**3.5**	**4.3**	**mg/Kg-dry**	10	11/26/2020 01:07
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**26**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B7:S000010
Collection Date: 11/15/2020 09:39 AM

Work Order: 20111574
Lab ID: 20111574-46
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 15:46
Lead	**23**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 15:46

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A7:S000010
Collection Date: 11/15/2020 10:20 AM

Work Order: 20111574
Lab ID: 20111574-47
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**19**		**1.1**	**4.1**	**mg/Kg-dry**	10	11/26/2020 01:12
Lead	**700**		**3.3**	**4.1**	**mg/Kg-dry**	10	11/26/2020 01:12
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A7:S000010
Collection Date: 11/15/2020 10:20 AM

Work Order: 20111574
Lab ID: 20111574-48
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.023**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 12:16
Lead	**1.1**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 12:16

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A6:S000010
Collection Date: 11/15/2020 11:40 AM

Work Order: 20111574
Lab ID: 20111574-49
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**64**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/26/2020 01:17
Lead	**1,300**		**3.1**	**3.9**	**mg/Kg-dry**	10	11/26/2020 01:17
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-A6:S000010
Collection Date: 11/15/2020 11:40 AM

Work Order: 20111574
Lab ID: 20111574-50
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.042**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 12:32
Lead	**3.6**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 12:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B6:S000010
Collection Date: 11/15/2020 12:10 PM

Work Order: 20111574
Lab ID: 20111574-51
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**87**		**0.96**	**3.7**	**mg/Kg-dry**	10	11/26/2020 01:37
Lead	**12,000**		**30**	**37**	**mg/Kg-dry**	100	11/29/2020 22:21
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-B6:S000010
Collection Date: 11/15/2020 12:10 PM

Work Order: 20111574
Lab ID: 20111574-52
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.031**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 12:37
Lead	**53**		**0.13**	**0.50**	**mg/L**	10	11/26/2020 03:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C6:S000010
Collection Date: 11/15/2020 12:35 PM

Work Order: 20111574
Lab ID: 20111574-53
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**180**		**1.2**	**4.6**	**mg/Kg-dry**	10	11/26/2020 01:42
Lead	**1,500**		**3.6**	**4.6**	**mg/Kg-dry**	10	11/26/2020 01:42
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**13**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C6:S000010
Collection Date: 11/15/2020 12:35 PM

Work Order: 20111574
Lab ID: 20111574-54
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	**0.017**	J	**0.016**	**0.050**	**mg/L**	1	11/25/2020 12:42
Lead	**8.2**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 12:42

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C6-TE:S000010
Collection Date: 11/15/2020 12:55 PM

Work Order: 20111574
Lab ID: 20111574-55
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**24**		**1.1**	**4.1**	**mg/Kg-dry**	10	11/26/2020 01:48
Lead	**1,400**		**3.3**	**4.1**	**mg/Kg-dry**	10	11/26/2020 01:48
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-C6-TS:S000010
Collection Date: 11/15/2020 01:20 PM

Work Order: 20111574
Lab ID: 20111574-56
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**32**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/26/2020 01:53
Lead	**10,000**		**31**	**39**	**mg/Kg-dry**	100	11/29/2020 22:26
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D6:S000010
Collection Date: 11/15/2020 01:50 PM

Work Order: 20111574
Lab ID: 20111574-57
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**20**		**1.2**	**4.7**	**mg/Kg-dry**	10	11/26/2020 01:58
Lead	**1,900**		**3.7**	**4.7**	**mg/Kg-dry**	10	11/26/2020 01:58
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-D6:S000010
Collection Date: 11/15/2020 01:50 PM

Work Order: 20111574
Lab ID: 20111574-58
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 12:47
Lead	**2.3**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 12:47

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E6:S000010
Collection Date: 11/15/2020 02:10 PM

Work Order: 20111574
Lab ID: 20111574-59
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**4.9**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/26/2020 02:03
Lead	**240**		**3.1**	**3.9**	**mg/Kg-dry**	10	11/26/2020 02:03
MOISTURE		Method: **SW3550C**					Analyst: **AJS**
Moisture	**9.5**		**0.10**	**0.10**	**% of sample**	1	11/25/2020 13:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Nov-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-E6:S000010
Collection Date: 11/15/2020 02:10 PM

Work Order: 20111574
Lab ID: 20111574-60
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/23/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	11/25/2020 13:02
Lead	**1.3**		**0.013**	**0.050**	**mg/L**	1	11/25/2020 13:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

Batch ID: **168173** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168173-168173** Units: **mg/L** Analysis Date: **11/25/2020 01:28 PM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6935026** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168173-168173** Units: **mg/L** Analysis Date: **11/25/2020 01:33 PM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6935027** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.08613	0.0050	0.1	0	86.1	80-120	0			
Lead	0.09482	0.0050	0.1	0	94.8	80-120	0			

MS Sample ID: **20111574-02AMS** Units: **mg/L** Analysis Date: **11/25/2020 01:43 PM**
Client ID: **IDA001:DU-C1:S000010** Run ID: **ICP2_201125A** SeqNo: **6935029** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.9108	0.050	1	0.0231	88.8	75-125	0			
Lead	1.026	0.050	1	0.1122	91.4	75-125	0			

MSD Sample ID: **20111574-02AMSD** Units: **mg/L** Analysis Date: **11/25/2020 01:48 PM**
Client ID: **IDA001:DU-C1:S000010** Run ID: **ICP2_201125A** SeqNo: **6935030** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.9317	0.050	1	0.0231	90.9	75-125	0.9108	2.27	20	
Lead	1.055	0.050	1	0.1122	94.3	75-125	1.026	2.75	20	

The following samples were analyzed in this batch:

20111574-02A	20111574-04A	20111574-06A
20111574-08A	20111574-10A	20111574-12A
20111574-16A	20111574-20A	20111574-22A
20111574-24A	20111574-26A	20111574-28A
20111574-32A	20111574-34A	20111574-36A
20111574-38A	20111574-40A	20111574-42A
20111574-44A	20111574-46A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111574
Project: IDA001

QC BATCH REPORT

Batch ID: **168174** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168174-168174** Units: **mg/L** Analysis Date: **11/25/2020 12:06 PM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6935010** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168174-168174** Units: **mg/L** Analysis Date: **11/25/2020 12:11 PM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6935011** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.08624	0.0050	0.1	0	86.2	80-120	0			
Lead	0.09724	0.0050	0.1	0	97.2	80-120	0			

MS Sample ID: **20111574-48AMS** Units: **mg/L** Analysis Date: **11/25/2020 12:22 PM**
Client ID: **IDA001:DU-A7:S000010** Run ID: **ICP2_201125A** SeqNo: **6935013** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.924	0.050	1	0.02343	90.1	75-125	0			
Lead	2.042	0.050	1	1.126	91.6	75-125	0			

MSD Sample ID: **20111574-48AMSD** Units: **mg/L** Analysis Date: **11/25/2020 12:27 PM**
Client ID: **IDA001:DU-A7:S000010** Run ID: **ICP2_201125A** SeqNo: **6935014** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.9438	0.050	1	0.02343	92	75-125	0.924	2.12	20	
Lead	2.043	0.050	1	1.126	91.7	75-125	2.042	0.0436	20	

The following samples were analyzed in this batch:

20111574-48A	20111574-50A	20111574-52A
20111574-54A	20111574-58A	20111574-60A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111574
Project: IDA001

QC BATCH REPORT

Batch ID: **168176** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168176-168176** Units: **mg/Kg** Analysis Date: **11/25/2020 09:24 PM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6937720** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Lead	U	0.25								

LCS Sample ID: **LCS-168176-168176** Units: **mg/Kg** Analysis Date: **11/25/2020 09:29 PM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6937721** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.24	0.25	5	0	84.8	80-120	0			
Lead	4.785	0.25	5	0	95.7	80-120	0			

MS Sample ID: **20111574-33AMS** Units: **mg/Kg** Analysis Date: **11/25/2020 11:41 PM**
Client ID: **IDA001:DU-C8:S000010** Run ID: **ICP2_201125A** SeqNo: **6937747** Prep Date: **11/23/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	25.32	3.2	6.378	25.98	-10.4	75-125	0			SO
Lead	1120	3.2	6.378	887.6	3650	75-125	0			SO

MSD Sample ID: **20111574-33AMSD** Units: **mg/Kg** Analysis Date: **11/25/2020 11:46 PM**
Client ID: **IDA001:DU-C8:S000010** Run ID: **ICP2_201125A** SeqNo: **6937748** Prep Date: **11/23/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	42.62	3.2	6.418	25.98	259	75-125	25.32	50.9	20	SRO
Lead	715	3.2	6.418	887.6	-2690	75-125	1120	44.2	20	SRO

The following samples were analyzed in this batch:

20111574-01A	20111574-03A	20111574-05A
20111574-07A	20111574-09A	20111574-11A
20111574-13A	20111574-14A	20111574-15A
20111574-17A	20111574-18A	20111574-19A
20111574-21A	20111574-23A	20111574-25A
20111574-27A	20111574-29A	20111574-30A
20111574-31A	20111574-33A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111574
Project: IDA001

QC BATCH REPORT

Batch ID: **168177** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168177-168177** Units: **mg/Kg** Analysis Date: **11/26/2020 12:31 AM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6937757** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Lead	U	0.25								

LCS Sample ID: **LCS-168177-168177** Units: **mg/Kg** Analysis Date: **11/26/2020 12:37 AM**
Client ID: Run ID: **ICP2_201125A** SeqNo: **6937758** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.26	0.25	5	0	85.2	80-120	0			
Lead	4.875	0.25	5	0	97.5	80-120	0			

MS Sample ID: **20111574-59AMS** Units: **mg/Kg** Analysis Date: **11/26/2020 02:08 AM**
Client ID: **IDA001:DU-E6:S000010** Run ID: **ICP2_201125A** SeqNo: **6937776** Prep Date: **11/23/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.17	3.4	6.748	4.466	114	75-125	0			
Lead	493.3	3.4	6.748	217.4	4090	75-125	0			SO

MSD Sample ID: **20111574-59AMSD** Units: **mg/Kg** Analysis Date: **11/26/2020 02:13 AM**
Client ID: **IDA001:DU-E6:S000010** Run ID: **ICP2_201125A** SeqNo: **6937777** Prep Date: **11/23/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.67	3.5	6.974	4.466	89	75-125	12.17	13.1	20	
Lead	272	3.5	6.974	217.4	783	75-125	493.3	57.8	20	SRO

The following samples were analyzed in this batch:

20111574-35A	20111574-37A	20111574-39A
20111574-41A	20111574-43A	20111574-45A
20111574-47A	20111574-49A	20111574-51A
20111574-53A	20111574-55A	20111574-56A
20111574-57A	20111574-59A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111574
Project: IDA001

QC BATCH REPORT

Batch ID: **R304552** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R304552** Units: **% of sample** Analysis Date: **11/25/2020 12:21 PM**
Client ID: Run ID: **MOIST_201125A** SeqNo: **6937203** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R304552** Units: **% of sample** Analysis Date: **11/25/2020 12:21 PM**
Client ID: Run ID: **MOIST_201125A** SeqNo: **6937202** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20111997-04A DUP** Units: **% of sample** Analysis Date: **11/25/2020 12:21 PM**
Client ID: Run ID: **MOIST_201125A** SeqNo: **6937201** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.27	0.10	0	0	0	0-0	13.89	4.57	10	

The following samples were analyzed in this batch:

20111574-01A	20111574-03A	20111574-05A
20111574-07A	20111574-09A	20111574-11A
20111574-13A	20111574-14A	20111574-15A
20111574-17A	20111574-18A	20111574-19A
20111574-21A	20111574-23A	20111574-25A
20111574-27A	20111574-29A	20111574-30A
20111574-31A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111574
Project: IDA001

QC BATCH REPORT

Batch ID: **R304553** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R304553** Units: **% of sample** Analysis Date: **11/25/2020 01:45 PM**
Client ID: Run ID: **MOIST_201125B** SeqNo: **6937307** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R304553** Units: **% of sample** Analysis Date: **11/25/2020 01:45 PM**
Client ID: Run ID: **MOIST_201125B** SeqNo: **6937306** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.98	0.10	100	0	100	98-102	0			

DUP Sample ID: **20111574-33A DUP** Units: **% of sample** Analysis Date: **11/25/2020 01:45 PM**
Client ID: **IDA001:DU-C8:S000010** Run ID: **MOIST_201125B** SeqNo: **6937289** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	5.98	0.10	0	0	0	0-0	5.84	2.37	10	

DUP Sample ID: **20111574-53A DUP** Units: **% of sample** Analysis Date: **11/25/2020 01:45 PM**
Client ID: **IDA001:DU-C6:S000010** Run ID: **MOIST_201125B** SeqNo: **6937300** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	19.7	0.10	0	0	0	0-0	13.11	40.2	10	R

The following samples were analyzed in this batch:

20111574-33A	20111574-35A	20111574-37A
20111574-39A	20111574-41A	20111574-43A
20111574-45A	20111574-47A	20111574-49A
20111574-51A	20111574-53A	20111574-55A
20111574-56A	20111574-57A	20111574-59A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

20111574

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK PAGE 1 OF 3
DATA ADMIN
LANCE TORLEY
NO. 377
REPORT TO: RAYMOND KENNEDY

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 448-0315

Client: IDA
Site: USS LEAD OU-1; ZONE 1
Project #: IDA0001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA0001_DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	PRESERVATIVES	ARSENIC (6010D)	LEAD (6010D)	TCLP - ARSENIC	TCLP - LEAD					COMMENTS
IDA0001 : DU-C1 : S0000010	1	COMPOSITE	11/12/20/1435	N	J	X	X	X	X					
IDA0001 : DU-D1 : S0000010	1	COMPOSITE	11/13/20/1355	N	J	X	X	X	X					
IDA0001 : DU-E5 : S0000010	1	COMPOSITE	11/12/20/1450	N	J	X	X	X	X					
IDA0001 : DU-B5 : S0000010	1	COMPOSITE	11/12/20/0820	N	J	X	X	X	X					
IDA0001 : DU-C5 : S0000010	1	COMPOSITE	11/12/20/0858	N	J	X	X	X	X					
IDA0001 : DU-D5 : S0000010	1	COMPOSITE	11/12/20/0948	N	J	X	X	X	X					
IDA0001 : DU-D5-TE : S0000010	1	COMPOSITE	11/12/20/1112	N	J	X	X							
IDA0001 : DU-D5-TS : S0000010	1	COMPOSITE	11/12/20/1034	N	J	X	X							
IDA0001 : DU-E9 : S0000010	1	COMPOSITE	11/14/20/0907	N	J	X	X	X	X					
IDA0001 : DU-E9-TE : S0000010	1	COMPOSITE	11/14/20/0949	N	J	X	X							
IDA0001 : DU-E9-TS : S0000010	1	COMPOSITE	11/14/20/1028	N	J	X	X							
IDA0001 : DU-D9 : S0000010	1	COMPOSITE	11/14/20/1161	N	J	X	X	X	X					

RELINQUISHED BY:	DATE: 16 NOV 20	RECEIVED BY: FEDEX	DATE: 16 NOV 20
	TIME: 1500		TIME: 1900
RELINQUISHED BY: 8539 8578	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY: FEDEX	DATE: 11/17/20	RECEIVED BY:	DATE:
	TIME: 0930		TIME:

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

COOLER TEMPERATURE AS RECEIVED: IR1 4.1°C °C; 5.8°C 0.0°C 5.8°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

20111574

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒ 6397 Emerald Pkwy Suite 200 Dublin, OH 43016 P: (614) 793-8777

Newark, OH ☐ 59 Grant St. Newark, OH 43055 P: (740) 344-5451

Mason, OH ☐ 4770 Duke Dr. Suite 300 Mason, OH 45040 P: (513) 459-9677

Bedford, OH ☐ 4 Hemisphere Way Bedford, OH 44146 P: (440) 232-9945

Toledo, OH ☐ 219 S. Erie St. Toledo, OH 43604 P: (419) 385-2018

St. Clairsville, OH ☐ 146 W. Main St. 2nd Floor St. Clairsville, OH 43950 P: (800) 241-7173

Pittsburgh, PA ☐ 300 Merchant Ln., Suite 307 Pittsburgh, PA 15205 P: (412) 446-0315

TERRIE BARANEK DATA ADMIN
LANCE TURLEY

NO. 378

REPORT TO: RAYMOND KENNEDY

Client: IDA

Site: USSLEAD OU-1; ZONE 1

Project #: IDA001 Phase: DU SAMPLING

Samplers: TIM LOUS / JEREMY CONNER

Purchase Order # IDA001_DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010 D	LEAD 6010 D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C9 : S000010	1	COMPOSITE	11/14/20 / 1132	N	X	X	X	X	
IDA001 : DU-B9 : S000010	1	COMPOSITE	11/14/20 / 1219	N	X	X	X	X	
IDA001 : DU-A9 : S000010	1	COMPOSITE	11/14/20 / 1251	N	X	X	X	X	
IDA001 : DU-A8 : S000010	1	COMPOSITE	11/14/20 / 1330	N	X	X	X	X	
IDA001 : DU-A8-TE : S000010	1	COMPOSITE	11/14/20 / 1400	N	X	X			
IDA001 : DU-A8-TS : S000010	1	COMPOSITE	11/14/20 / 1430	N	X	X			
IDA001 : DU-B8 : S000010	1	COMPOSITE	11/14/20 / 1500	N	X	X	X	X	
IDA001 : DU-C8 : S000010	1	COMPOSITE	11/14/20 / 1530	N	X	X	X	X	
IDA001 : DU-D8 : S000010	1	COMPOSITE	11/14/20 / 1600	N	X	X	X	X	
IDA001 : DU-E8 : S000010	1	COMPOSITE	11/15/20 / 0742	N	X	X	X	X	
IDA001 : DU-E7 : S000010	1	COMPOSITE	11/15/20 / 0808	N	X	X	X	X	
IDA001 : DU-D7 : S000010	1	COMPOSITE	11/15/20 / 0834	N	X	X	X	X	

RELINQUISHED BY: DATE: 16 NOV 20 TIME: 1500

RECEIVED BY: FEDEX DATE: 16 NOV 20 TIME: 1500

RELINQUISHED BY: DATE: TIME:

RECEIVED BY: DATE: TIME:

RELINQUISHED BY: FED EX DATE: 11/17/20 TIME: 0930

RECEIVED BY: DATE: TIME:

COOLER TEMPERATURE AS RECEIVED 4.6 °C °C

5.8°C 6.0°C 5.8°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

20111574

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK
DATA ADMIN
LANCE TURLEY

NO. 379

REPORT TO: RAYMOND KENNEDY

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

Client: IDA
Site: USS LEAD OU-1, ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: Tim Lass / JEREMY CONNER
Purchase Order # IDA001_DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C7 : S000010	1	COMPOSITE	11/15/20 / 0907	N	X	X	X	X	
IDA001 : DU-B7 : S000010	1	COMPOSITE	11/15/20 / 0939	N	X	X	X	X	
IDA001 : DU-A7 : S000010	1	COMPOSITE	11/15/20 / 1020	N	X	X	X	X	
IDA001 : DU-A6 : S000010	1	COMPOSITE	11/15/20 / 1140	N	X	X	X	X	
IDA001 : DU-B6 : S000010	1	COMPOSITE	11/15/20 / 1210	N	X	X	X	X	
IDA001 : DU-C6 : S000010	1	COMPOSITE	11/15/20 / 1235	N	X	X	X	X	
IDA001 : DU-CL-TE : S000010	1	COMPOSITE	11/15/20 / 1255	N	X	X			
IDA001 : DU-C6-TS : S000010	1	COMPOSITE	11/15/20 / 1320	N	X	X			
IDA001 : DU-D6 : S000010	1	COMPOSITE	11/15/20 / 1350	N	X	X	X	X	
IDA001 : DU-E6 : S000010	1	COMPOSITE	11/15/20 / 1410	N	X	X	X	X	
: :			/						
: :			/						

RELINQUISHED BY:	DATE: 16 NOV 20	RECEIVED BY: FEDEX	DATE: 16 NOV 20
	TIME: 1500		TIME: 1500
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY: FEDEX	DATE: 11/17/20	RECEIVED BY:	DATE:
	TIME: 0930		TIME:

8856 8857

Deliver To: ALS - HOLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

COOLER TEMPERATURE AS RECEIVED: IR1 °C
4.6°C 5.8°C 5.8°C 6.0°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

#3870316 11/16 56BJ5/BA89/8766

Custody Seal
http://www.alsglobal.com

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263
Phone: 616-399-6070
Attn: Sample Receiving

Company: HULL
Name:
Date: 16 NOV 20

#3870316 11/16 56BJ5/BA89/8766

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/www.alsglobal.com

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Company: HULL
Name:
Date: 11.16.2020

ALS Group, USA

Sample Receipt Checklist

Client Name: **HULL&ASSOC-DUBLIN** Date/Time Received: **17-Nov-20 09:30**

Work Order: **20111574** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 17-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 17-Nov-20 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	4.6/4.6, 5.8/5.8, 6.0/6.0, 5.8/5.8 c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/17/2020 2:32:13 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

December 08, 2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Work Order: **20111754**

Re: **IDA001**

Dear Ray,

ALS Environmental received 24 sample(s) on Nov 19, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 482.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Bill Carey
/S/ Bill Carey

Bill Carey
Project Manager

Narrative Documents

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: Hull & Associates
Project: IDA001
Work Order: 20111754

Case Narrative

Samples for the above noted Work Order were received on 11/19/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168178, Method SW6010D, Sample IDA001:DU-F0:S000010 (20111754-01A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1:S000010 (20111754-03A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1-TE:S000010 (20111754-05A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1-TS:S000010 (20111754-06A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F2:S000010 (20111754-07A): The

concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F3:S000010 (20111754-09A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F4:S000010 (20111754-11A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F5:S000010 (20111754-13A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7:S000010 (20111754-15A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7-TE:S000010 (20111754-17A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7-TS:S000010 (20111754-18A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F6:S000010 (20111754-19A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F8:S000010 (20111754-21A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is

necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F9:S000010 (20111754-23A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Wet Chemistry:
No other deviations or anomalies were noted.Batch 168178, Method ICP_6010_S, Sample 20111726-41AMS: 1
Batch 168178, Method ICP_6010_S, Sample 20111726-41AMSD: 1

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-F0:S000010			Lab ID: 20111754-01			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	8.0		0.97	3.7	mg/Kg-dry	SW6010D
Lead	450	B	3.0	3.7	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	11		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F0:S000010			Lab ID: 20111754-02			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.73		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F1:S000010			Lab ID: 20111754-03			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	47		1.0	4.0	mg/Kg-dry	SW6010D
Lead	2,000	B	3.2	4.0	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	17		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F1:S000010			Lab ID: 20111754-04			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.43		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F1-TE:S000010			Lab ID: 20111754-05			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	37		1.1	4.1	mg/Kg-dry	SW6010D
Lead	2,400	B	3.3	4.1	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F1-TS:S000010			Lab ID: 20111754-06			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	18		1.1	4.4	mg/Kg-dry	SW6010D
Lead	770	B	3.5	4.4	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	18		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F2:S000010			Lab ID: 20111754-07			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	18		1.3	4.9	mg/Kg-dry	SW6010D
Lead	900	B	3.9	4.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	19		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-F2:S000010			Lab ID: 20111754-08			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.47		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F3:S000010			Lab ID: 20111754-09			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	26		1.1	4.2	mg/Kg-dry	SW6010D
Lead	1,300	B	3.3	4.2	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	19		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F3:S000010			Lab ID: 20111754-10			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.36		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F4:S000010			Lab ID: 20111754-11			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	25		1.4	5.3	mg/Kg-dry	SW6010D
Lead	1,300	B	4.2	5.3	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	26		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F4:S000010			Lab ID: 20111754-12			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.41		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F5:S000010			Lab ID: 20111754-13			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	6.1		1.0	3.9	mg/Kg-dry	SW6010D
Lead	200	B	3.1	3.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	15		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F5:S000010			Lab ID: 20111754-14			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.080		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F7:S000010			Lab ID: 20111754-15			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	13		1.0	3.9	mg/Kg-dry	SW6010D
Lead	610	B	3.1	3.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	13		0.10	0.10	% of sample	SW3550C

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-F7:S000010			Lab ID: 20111754-16			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.30		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F7-TE:S000010			Lab ID: 20111754-17			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	17		0.99	3.8	mg/Kg-dry	SW6010D
Lead	620	B	3.1	3.8	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F7-TS:S000010			Lab ID: 20111754-18			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	10		1.1	4.3	mg/Kg-dry	SW6010D
Lead	310	B	3.5	4.3	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	12		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F6:S000010			Lab ID: 20111754-19			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	7.7		1.0	3.9	mg/Kg-dry	SW6010D
Lead	240	B	3.1	3.9	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	18		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F6:S000010			Lab ID: 20111754-20			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	1.1		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F8:S000010			Lab ID: 20111754-21			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	33		1.1	4.2	mg/Kg-dry	SW6010D
Lead	880	B	34	42	mg/Kg-dry	SW6010D
Miscellaneous	0	U	0	0		MISC
Moisture	18		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F8:S000010			Lab ID: 20111754-22			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.44		0.013	0.050	mg/L	SW6010D

CLIENT ID: IDA001:DU-F9:S000010			Lab ID: 20111754-23			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	46		1.0	4.0	mg/Kg-dry	SW6010D
Lead	740	B	32	40	mg/Kg-dry	SW6010D

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DU-F9:S000010			Lab ID: 20111754-23			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Miscellaneous	0	U	0	0		MISC
Moisture	16		0.10	0.10	% of sample	SW3550C

CLIENT ID: IDA001:DU-F9:S000010			Lab ID: 20111754-24			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Lead	0.29		0.013	0.050	mg/L	SW6010D

Sample Receipt Information

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

ALS Group, USA

Date: 08-Dec-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111754**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111754-01	IDA001:DU-F0:S000010	Soil	DU-F0	11/16/2020 08:40	11/19/2020 09:30	☐
20111754-02	IDA001:DU-F0:S000010	Tclp Extract	DU-F0	11/16/2020 08:40	11/19/2020 09:30	☐
20111754-03	IDA001:DU-F1:S000010	Soil	DU-F1	11/16/2020 09:08	11/19/2020 09:30	☐
20111754-04	IDA001:DU-F1:S000010	Tclp Extract	DU-F1	11/16/2020 09:08	11/19/2020 09:30	☐
20111754-05	IDA001:DU-F1-TE:S000010	Soil	DU-F1-TE	11/16/2020 09:34	11/19/2020 09:30	☐
20111754-06	IDA001:DU-F1-TS:S000010	Soil	DU-F1-TS	11/16/2020 09:55	11/19/2020 09:30	☐
20111754-07	IDA001:DU-F2:S000010	Soil	DU-F2	11/16/2020 10:38	11/19/2020 09:30	☐
20111754-08	IDA001:DU-F2:S000010	Tclp Extract	DU-F2	11/16/2020 10:38	11/19/2020 09:30	☐
20111754-09	IDA001:DU-F3:S000010	Soil	DU-F3	11/16/2020 11:26	11/19/2020 09:30	☐
20111754-10	IDA001:DU-F3:S000010	Tclp Extract	DU-F3	11/16/2020 11:26	11/19/2020 09:30	☐
20111754-11	IDA001:DU-F4:S000010	Soil	DU-F4	11/16/2020 12:00	11/19/2020 09:30	☐
20111754-12	IDA001:DU-F4:S000010	Tclp Extract	DU-F4	11/16/2020 12:00	11/19/2020 09:30	☐
20111754-13	IDA001:DU-F5:S000010	Soil	DU-F5	11/16/2020 12:45	11/19/2020 09:30	☐
20111754-14	IDA001:DU-F5:S000010	Tclp Extract	DU-F5	11/16/2020 12:45	11/19/2020 09:30	☐
20111754-15	IDA001:DU-F7:S000010	Soil	DU-F7	11/16/2020 13:10	11/19/2020 09:30	☐
20111754-16	IDA001:DU-F7:S000010	Tclp Extract	DU-F7	11/16/2020 13:10	11/19/2020 09:30	☐
20111754-17	IDA001:DU-F7-TE:S000010	Soil	DU-F7-TE	11/16/2020 13:30	11/19/2020 09:30	☐
20111754-18	IDA001:DU-F7-TS:S000010	Soil	DU-F7-TS	11/16/2020 13:45	11/19/2020 09:30	☐
20111754-19	IDA001:DU-F6:S000010	Soil	DU-F6	11/17/2020 08:40	11/19/2020 09:30	☐
20111754-20	IDA001:DU-F6:S000010	Tclp Extract	DU-F6	11/17/2020 08:40	11/19/2020 09:30	☐
20111754-21	IDA001:DU-F8:S000010	Soil	DU-F8	11/17/2020 09:12	11/19/2020 09:30	☐
20111754-22	IDA001:DU-F8:S000010	Tclp Extract	DU-F8	11/17/2020 09:12	11/19/2020 09:30	☐
20111754-23	IDA001:DU-F9:S000010	Soil	DU-F9	11/17/2020 09:58	11/19/2020 09:30	☐
20111754-24	IDA001:DU-F9:S000010	Tclp Extract	DU-F9	11/17/2020 09:58	11/19/2020 09:30	☐

20111754

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK PAGE 1 OF 2
DATA ADMIN
LANCE TURLEY NO. 380

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: RAYMOND KENNEDY

Client: IDA
Site: USS LEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA001_DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS PRESERVATIVES	ARSENIC 6010D J	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD					COMMENTS
IDA001 : DU-F0 : S000010	1	Composite	11/16/20/0840	N	X	X	X	X					
IDA001 : DU-F1 : S000010	1	Composite	11/16/20/0908	N	X	X	X	X					
IDA001 : DU-F1-TE : S000010	1	Composite	11/16/20/0934	N	X	X							
IDA001 : DU-F1-TS : S000010	1	Composite	11/16/20/0955	N	X	X							
IDA001 : DU-F2 : S000010	1	Composite	11/16/20/1038	N	X	X	X	X					
IDA001 : DU-F3 : S000010	1	Composite	11/16/20/1126	N	X	X	X	X					
IDA001 : DU-F4 : S000010	1	Composite	11/16/20/1200	N	X	X	X	X					
IDA001 : DU-F5 : S000010	1	Composite	11/16/20/1245	N	X	X	X	X					
IDA001 : DU-F7 : S000010	1	Composite	11/16/20/1310	N	X	X	X	X					
IDA001 : DU-F7-TE : S000010	1	Composite	11/16/20/1330	N	X	X							
IDA001 : DU-F7-TS : S000010	1	Composite	11/16/20/1345	N	X	X							
IDA001 : DU-F6 : S000010	1	Composite	11/17/20/0840	N	X	X	X	X					

RELINQUISHED BY:	DATE: 11/18/2020	RECEIVED BY: FEDEX	DATE: 11/18/2020
	TIME: 1600		TIME: 1600
RELINQUISHED BY: FEDEX	DATE: 11/19/20	RECEIVED BY:	DATE:
	TIME: 0930		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

Deliver To: ALS-HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

COOLER TEMPERATURE
AS RECEIVED 1.9, 2.4, 2.1 °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

12 0482

183

20111754

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK PAGE 2 OF 2
DATA ADMIN
LANCE TURLEY NO. 381
REPORT TO: RAYMOND KENNEDY

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

Client: IDA
Site: VSS LEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA001_DUS_BLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES — PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010 D	LEAD 6010 D	TCLP- ARSENIC	TCLP- LEAD					COMMENTS
IDA001 : DU-F8 : S0000010	1	COMPOSITE	11/17/20/0912	N	X	X	X	X					
IDA001 : DU-F9 : S0000010	1	COMPOSITE	11/17/20/0958	N	X	X	X	X					
: :			/										
: :			/										
: :			/										
: :			/										
: :			/										
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: :			/										
: :			/										
: :			/										
: :			/										

RELINQUISHED BY: [signature] DATE: 11/18/2020 TIME: 1600
RECEIVED BY: FEDEX DATE: 11/18/2020 TIME: 1600
RELINQUISHED BY: FedEx DATE: 11/19/20 TIME: 0930
RECEIVED BY: DATE: TIME:
RELINQUISHED BY: DATE: TIME:
RECEIVED BY: DATE: TIME:

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

13 482

COOLER TEMPERATURE AS RECEIVED °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

MK

SIGNATURE

DATE 11.18.20

Pace Analytical®

CUSTODY SEAL

ALS Group, USA

Sample Receipt Checklist

Client Name: ***HULL&ASSOC-DUBLIN*** Date/Time Received: ***19-Nov-20 09:30***

Work Order: ***20111754*** Received by: ***KRW***

Checklist completed by Keith Wierenga (eSignature) 19-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 19-Nov-20 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.9, 2.4, 2.1 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/19/2020 1:12:33 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Miscellaneous Forms

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111754**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
as noted	
mg/L	Milligrams per Liter

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Sample Name: IDA001:DU-F0:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-01A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F0:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-02A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-F1:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-03A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F1:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-04A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Sample Name: IDA001:DU-F1-TE:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-05A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F1-TS:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-06A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F2:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-07A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F2:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-08A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Sample Name: IDA001:DU-F3:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-09A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F3:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-10A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-F4:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-11A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F4:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-12A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Sample Name: IDA001:DU-F5:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-13A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F5:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-14A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-F7:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-15A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F7:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-16A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Sample Name: IDA001:DU-F7-TE:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-17A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F7-TS:S000010 **Date Collected:** 11/16/2020
Lab Code: 20111754-18A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F6:S000010 **Date Collected:** 11/17/2020
Lab Code: 20111754-19A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F6:S000010 **Date Collected:** 11/17/2020
Lab Code: 20111754-20A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Sample Name: IDA001:DU-F8:S000010 **Date Collected:** 11/17/2020
Lab Code: 20111754-21A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F8:S000010 **Date Collected:** 11/17/2020
Lab Code: 20111754-22A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Name: IDA001:DU-F9:S000010 **Date Collected:** 11/17/2020
Lab Code: 20111754-23A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL
MISC		ABL
SW3550C		KTP

Sample Name: IDA001:DU-F9:S000010 **Date Collected:** 11/17/2020
Lab Code: 20111754-24A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW6010D		ABL

Sample Results

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Metals

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Dry
Lab Code:	20111754-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.0**	mg/Kg-dry	3.7	10	12/01/20 14:24	11/23/20 16:27	
Lead	SW6010D	**450 B**	mg/Kg-dry	3.7	10	12/01/20 14:24	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Wet
Lab Code:	20111754-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Wet
Lab Code:	20111754-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 00:38	11/29/20 15:02	
Lead	SW6010D	**0.73**	mg/L	0.050	1	12/01/20 00:38	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Dry
Lab Code:	20111754-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**47**	mg/Kg-dry	4.0	10	12/01/20 14:29	11/23/20 16:27	
Lead	SW6010D	**2,000 B**	mg/Kg-dry	4.0	10	12/01/20 14:29	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Wet
Lab Code:	20111754-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Wet
Lab Code:	20111754-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:03	11/29/20 15:02	
Lead	SW6010D	**0.43**	mg/L	0.050	1	12/01/20 01:03	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:34
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TE:S000010	**Basis:**	Dry
Lab Code:	20111754-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**37**	mg/Kg-dry	4.1	10	12/01/20 14:34	11/23/20 16:27	
Lead	SW6010D	**2,400 B**	mg/Kg-dry	4.1	10	12/01/20 14:34	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:34
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:55
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TS:S000010	**Basis:**	Dry
Lab Code:	20111754-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**18**	mg/Kg-dry	4.4	10	12/01/20 14:38	11/23/20 16:27	
Lead	SW6010D	**770 B**	mg/Kg-dry	4.4	10	12/01/20 14:38	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:55
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Dry
Lab Code:	20111754-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**18**	mg/Kg-dry	4.9	10	12/01/20 14:43	11/23/20 16:27	
Lead	SW6010D	**900 B**	mg/Kg-dry	4.9	10	12/01/20 14:43	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Wet
Lab Code:	20111754-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Wet
Lab Code:	20111754-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:09	11/29/20 15:02	
Lead	SW6010D	**0.47**	mg/L	0.050	1	12/01/20 01:09	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Dry
Lab Code:	20111754-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**26**	mg/Kg-dry	4.2	10	12/01/20 14:48	11/23/20 16:27	
Lead	SW6010D	**1,300 B**	mg/Kg-dry	4.2	10	12/01/20 14:48	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Wet
Lab Code:	20111754-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Wet
Lab Code:	20111754-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:14	11/29/20 15:02	
Lead	SW6010D	**0.36**	mg/L	0.050	1	12/01/20 01:14	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Dry
Lab Code:	20111754-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	5.3	10	12/01/20 15:04	11/23/20 16:27	
Lead	SW6010D	**1,300 B**	mg/Kg-dry	5.3	10	12/01/20 15:04	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Wet
Lab Code:	20111754-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Wet
Lab Code:	20111754-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:19	11/29/20 15:02	
Lead	SW6010D	**0.41**	mg/L	0.050	1	12/01/20 01:19	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Dry
Lab Code:	20111754-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**6.1**	mg/Kg-dry	3.9	10	11/30/20 22:21	11/23/20 16:27	
Lead	SW6010D	**200 B**	mg/Kg-dry	3.9	10	11/30/20 22:21	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Wet
Lab Code:	20111754-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Wet
Lab Code:	20111754-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:24	11/29/20 15:02	
Lead	SW6010D	**0.080**	mg/L	0.050	1	12/01/20 01:24	11/29/20 15:02	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Dry
Lab Code:	20111754-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.9	10	11/30/20 22:26	11/23/20 16:27	
Lead	SW6010D	**610 B**	mg/Kg-dry	3.9	10	11/30/20 22:26	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Wet
Lab Code:	20111754-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Wet
Lab Code:	20111754-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:29	11/29/20 15:02	
Lead	SW6010D	**0.30**	mg/L	0.050	1	12/01/20 01:29	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TE:S000010	**Basis:**	Dry
Lab Code:	20111754-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**17**	mg/Kg-dry	3.8	10	11/30/20 22:31	11/23/20 16:27	
Lead	SW6010D	**620 B**	mg/Kg-dry	3.8	10	11/30/20 22:31	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TS:S000010	**Basis:**	Dry
Lab Code:	20111754-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**10**	mg/Kg-dry	4.3	10	11/30/20 22:36	11/23/20 16:27	
Lead	SW6010D	**310 B**	mg/Kg-dry	4.3	10	11/30/20 22:36	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Dry
Lab Code:	20111754-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**7.7**	mg/Kg-dry	3.9	10	11/30/20 22:41	11/23/20 16:27	
Lead	SW6010D	**240 B**	mg/Kg-dry	3.9	10	11/30/20 22:41	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Wet
Lab Code:	20111754-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Wet
Lab Code:	20111754-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:34	11/29/20 15:02	
Lead	SW6010D	**1.1**	mg/L	0.050	1	12/01/20 01:34	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Dry
Lab Code:	20111754-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**33**	mg/Kg-dry	4.2	10	11/30/20 22:46	11/23/20 16:27	
Lead	SW6010D	**880 B**	mg/Kg-dry	42	100	12/01/20 15:09	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Wet
Lab Code:	20111754-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Wet
Lab Code:	20111754-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:05	11/29/20 15:04	
Lead	SW6010D	**0.44**	mg/L	0.050	1	12/01/20 02:05	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Dry
Lab Code:	20111754-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**46**	mg/Kg-dry	4.0	10	11/30/20 23:01	11/23/20 16:27	
Lead	SW6010D	**740 B**	mg/Kg-dry	40	100	12/01/20 15:14	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Wet
Lab Code:	20111754-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Wet
Lab Code:	20111754-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:20	11/29/20 15:04	
Lead	SW6010D	**0.29**	mg/L	0.050	1	12/01/20 02:20	11/29/20 15:04	

General Chemistry

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Wet
Lab Code:	20111754-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Wet
Lab Code:	20111754-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:34
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:55
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-06		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Wet
Lab Code:	20111754-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**19**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Wet
Lab Code:	20111754-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**19**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Wet
Lab Code:	20111754-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**26**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Wet
Lab Code:	20111754-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Wet
Lab Code:	20111754-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-18		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Wet
Lab Code:	20111754-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Wet
Lab Code:	20111754-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Wet
Lab Code:	20111754-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/29/20 15:15	NA	

QC Summary Forms

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Metals

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3352 128th Avenue, Holland, MI 49424
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www.alsglobal.com

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/30/20 14:50						
Antimony	SW6010D	ICP2_201130B	0.9894	1	98.9	90-110
Arsenic	SW6010D	ICP2_201130B	0.9666	1	96.7	90-110
Barium	SW6010D	ICP2_201130B	0.9728	1	97.3	90-110
Beryllium	SW6010D	ICP2_201130B	0.9673	1	96.7	90-110
Cadmium	SW6010D	ICP2_201130B	0.983	1	98.3	90-110
Chromium	SW6010D	ICP2_201130B	0.9881	1	98.8	90-110
Cobalt	SW6010D	ICP2_201130B	0.9957	1	99.6	90-110
Lead	SW6010D	ICP2_201130B	1.019	1	102	90-110
Manganese	SW6010D	ICP2_201130B	1.002	1	100	90-110
Nickel	SW6010D	ICP2_201130B	1.001	1	100	90-110
Selenium	SW6010D	ICP2_201130B	0.9752	1	97.5	90-110
Silver	SW6010D	ICP2_201130B	1.038	1	104	90-110
Thallium	SW6010D	ICP2_201130B	1.038	1	104	90-110
Vanadium	SW6010D	ICP2_201130B	0.9933	1	99.3	90-110
Zinc	SW6010D	ICP2_201130B	0.9757	1	97.6	90-110
CCV 11/30/20 15:37						
Antimony	SW6010D	ICP2_201130B	0.5	0.5	100	90-110
Arsenic	SW6010D	ICP2_201130B	0.4986	0.5	99.7	90-110
Barium	SW6010D	ICP2_201130B	2.488	2.5	99.5	90-110
Beryllium	SW6010D	ICP2_201130B	0.5109	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5025	0.5	100	90-110
Chromium	SW6010D	ICP2_201130B	0.5056	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.531	2.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5104	0.5	102	90-110
Manganese	SW6010D	ICP2_201130B	0.506	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.533	2.5	101	90-110
Selenium	SW6010D	ICP2_201130B	2.486	2.5	99.4	90-110
Silver	SW6010D	ICP2_201130B	0.5081	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5169	0.5	103	90-110
Vanadium	SW6010D	ICP2_201130B	0.5078	0.5	102	90-110
Zinc	SW6010D	ICP2_201130B	1.251	1.25	100	90-110
CCV 11/30/20 16:39						
Antimony	SW6010D	ICP2_201130B	0.4994	0.5	99.9	90-110
Arsenic	SW6010D	ICP2_201130B	0.5038	0.5	101	90-110
Barium	SW6010D	ICP2_201130B	2.47	2.5	98.8	90-110
Beryllium	SW6010D	ICP2_201130B	0.5093	0.5	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 16:39						
Cadmium	SW6010D	ICP2_201130B	0.5071	0.5	101	90-110
Chromium	SW6010D	ICP2_201130B	0.5032	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.548	2.5	102	90-110
Lead	SW6010D	ICP2_201130B	0.5162	0.5	103	90-110
Manganese	SW6010D	ICP2_201130B	0.5044	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.548	2.5	102	90-110
Selenium	SW6010D	ICP2_201130B	2.495	2.5	99.8	90-110
Silver	SW6010D	ICP2_201130B	0.5085	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.52	0.5	104	90-110
Vanadium	SW6010D	ICP2_201130B	0.5056	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.261	1.25	101	90-110
CCV 11/30/20 17:40						
Antimony	SW6010D	ICP2_201130B	0.4955	0.5	99.1	90-110
Arsenic	SW6010D	ICP2_201130B	0.4992	0.5	99.8	90-110
Barium	SW6010D	ICP2_201130B	2.524	2.5	101	90-110
Beryllium	SW6010D	ICP2_201130B	0.5057	0.5	101	90-110
Cadmium	SW6010D	ICP2_201130B	0.5026	0.5	101	90-110
Chromium	SW6010D	ICP2_201130B	0.5001	0.5	100	90-110
Cobalt	SW6010D	ICP2_201130B	2.522	2.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5136	0.5	103	90-110
Manganese	SW6010D	ICP2_201130B	0.5014	0.5	100	90-110
Nickel	SW6010D	ICP2_201130B	2.526	2.5	101	90-110
Selenium	SW6010D	ICP2_201130B	2.477	2.5	99.1	90-110
Silver	SW6010D	ICP2_201130B	0.5033	0.5	101	90-110
Thallium	SW6010D	ICP2_201130B	0.5172	0.5	103	90-110
Vanadium	SW6010D	ICP2_201130B	0.5046	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.249	1.25	99.9	90-110
CCV 11/30/20 18:41						
Antimony	SW6010D	ICP2_201130B	0.5129	0.5	103	90-110
Arsenic	SW6010D	ICP2_201130B	0.5168	0.5	103	90-110
Barium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Beryllium	SW6010D	ICP2_201130B	0.5113	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5225	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.5031	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.605	2.5	104	90-110
Lead	SW6010D	ICP2_201130B	0.5408	0.5	108	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 18:41						
Manganese	SW6010D	ICP2_201130B	0.507	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.605	2.5	104	90-110
Selenium	SW6010D	ICP2_201130B	2.545	2.5	102	90-110
Silver	SW6010D	ICP2_201130B	0.515	0.5	103	90-110
Thallium	SW6010D	ICP2_201130B	0.5378	0.5	108	90-110
Vanadium	SW6010D	ICP2_201130B	0.514	0.5	103	90-110
Zinc	SW6010D	ICP2_201130B	1.292	1.25	103	90-110
CCV 11/30/20 19:42						
Antimony	SW6010D	ICP2_201130B	0.5223	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.526	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.638	2.5	106	90-110
Beryllium	SW6010D	ICP2_201130B	0.5307	0.5	106	90-110
Cadmium	SW6010D	ICP2_201130B	0.5302	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5238	0.5	105	90-110
Cobalt	SW6010D	ICP2_201130B	2.647	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5362	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5255	0.5	105	90-110
Nickel	SW6010D	ICP2_201130B	2.647	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.568	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5319	0.5	106	90-110
Thallium	SW6010D	ICP2_201130B	0.5448	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5328	0.5	107	90-110
Zinc	SW6010D	ICP2_201130B	1.312	1.25	105	90-110
CCV 11/30/20 20:44						
Antimony	SW6010D	ICP2_201130B	0.5205	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5247	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.55	2.5	102	90-110
Beryllium	SW6010D	ICP2_201130B	0.5181	0.5	104	90-110
Cadmium	SW6010D	ICP2_201130B	0.5282	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5105	0.5	102	90-110
Cobalt	SW6010D	ICP2_201130B	2.639	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5343	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5133	0.5	103	90-110
Nickel	SW6010D	ICP2_201130B	2.637	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.578	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5215	0.5	104	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 20:44						
Thallium	SW6010D	ICP2_201130B	0.5426	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5187	0.5	104	90-110
Zinc	SW6010D	ICP2_201130B	1.309	1.25	105	90-110
CCV 11/30/20 21:50						
Antimony	SW6010D	ICP2_201130B	0.4722	0.5	94.4	90-110
Arsenic	SW6010D	ICP2_201130B	0.4698	0.5	94.0	90-110
Barium	SW6010D	ICP2_201130B	0	2.5	0 *	90-110
Beryllium	SW6010D	ICP2_201130B	0.4473	0.5	89.5 *	90-110
Cadmium	SW6010D	ICP2_201130B	0.4861	0.5	97.2	90-110
Chromium	SW6010D	ICP2_201130B	0.4471	0.5	89.4 *	90-110
Cobalt	SW6010D	ICP2_201130B	2.443	2.5	97.7	90-110
Lead	SW6010D	ICP2_201130B	0.4927	0.5	98.5	90-110
Manganese	SW6010D	ICP2_201130B	0.4442	0.5	88.8 *	90-110
Nickel	SW6010D	ICP2_201130B	2.442	2.5	97.7	90-110
Selenium	SW6010D	ICP2_201130B	2.364	2.5	94.6	90-110
Silver	SW6010D	ICP2_201130B	0.4418	0.5	88.3 *	90-110
Thallium	SW6010D	ICP2_201130B	0.4957	0.5	99.1	90-110
Vanadium	SW6010D	ICP2_201130B	0.4507	0.5	90.1	90-110
Zinc	SW6010D	ICP2_201130B	1.182	1.25	94.6	90-110
CCV 11/30/20 22:51						
Antimony	SW6010D	ICP2_201130B	0.5144	0.5	103	90-110
Arsenic	SW6010D	ICP2_201130B	0.5174	0.5	103	90-110
Barium	SW6010D	ICP2_201130B	2.576	2.5	103	90-110
Beryllium	SW6010D	ICP2_201130B	0.5001	0.5	100	90-110
Cadmium	SW6010D	ICP2_201130B	0.5215	0.5	104	90-110
Chromium	SW6010D	ICP2_201130B	0.4936	0.5	98.7	90-110
Cobalt	SW6010D	ICP2_201130B	2.608	2.5	104	90-110
Lead	SW6010D	ICP2_201130B	0.5288	0.5	106	90-110
Manganese	SW6010D	ICP2_201130B	0.4963	0.5	99.3	90-110
Nickel	SW6010D	ICP2_201130B	2.607	2.5	104	90-110
Selenium	SW6010D	ICP2_201130B	2.565	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5016	0.5	100	90-110
Thallium	SW6010D	ICP2_201130B	0.5355	0.5	107	90-110
Vanadium	SW6010D	ICP2_201130B	0.5007	0.5	100	90-110
Zinc	SW6010D	ICP2_201130B	1.292	1.25	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 23:52						
Antimony	SW6010D	ICP2_201130B	0.5207	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5242	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.664	2.5	107	90-110
Beryllium	SW6010D	ICP2_201130B	0.5384	0.5	108	90-110
Cadmium	SW6010D	ICP2_201130B	0.5277	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5318	0.5	106	90-110
Cobalt	SW6010D	ICP2_201130B	2.65	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5355	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5329	0.5	107	90-110
Nickel	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5372	0.5	107	90-110
Thallium	SW6010D	ICP2_201130B	0.5437	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5369	0.5	107	90-110
Zinc	SW6010D	ICP2_201130B	1.311	1.25	105	90-110
CCV 12/01/20 00:53						
Antimony	SW6010D	ICP2_201130B	0.5216	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5274	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.58	2.5	103	90-110
Beryllium	SW6010D	ICP2_201130B	0.531	0.5	106	90-110
Cadmium	SW6010D	ICP2_201130B	0.5284	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5252	0.5	105	90-110
Cobalt	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5373	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5256	0.5	105	90-110
Nickel	SW6010D	ICP2_201130B	2.653	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.612	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5306	0.5	106	90-110
Thallium	SW6010D	ICP2_201130B	0.5434	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.529	0.5	106	90-110
Zinc	SW6010D	ICP2_201130B	1.313	1.25	105	90-110
CCV 12/01/20 01:55						
Antimony	SW6010D	ICP2_201130B	0.5211	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.527	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.654	2.5	106	90-110
Beryllium	SW6010D	ICP2_201130B	0.5117	0.5	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 01:55						
Cadmium	SW6010D	ICP2_201130B	0.5282	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5047	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.649	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5356	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5074	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5118	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5441	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5131	0.5	103	90-110
Zinc	SW6010D	ICP2_201130B	1.311	1.25	105	90-110
CCV 12/01/20 02:57						
Antimony	SW6010D	ICP2_201130B	0.5184	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5202	0.5	104	90-110
Barium	SW6010D	ICP2_201130B	2.363	2.5	94.5	90-110
Beryllium	SW6010D	ICP2_201130B	0.5035	0.5	101	90-110
Cadmium	SW6010D	ICP2_201130B	0.5246	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.5074	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.616	2.5	105	90-110
Lead	SW6010D	ICP2_201130B	0.5301	0.5	106	90-110
Manganese	SW6010D	ICP2_201130B	0.4996	0.5	99.9	90-110
Nickel	SW6010D	ICP2_201130B	2.616	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.585	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5076	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5382	0.5	108	90-110
Vanadium	SW6010D	ICP2_201130B	0.5042	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.299	1.25	104	90-110
CCV 12/01/20 03:12						
Antimony	SW6010D	ICP2_201130B	0.5209	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5235	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.442	2.5	97.7	90-110
Beryllium	SW6010D	ICP2_201130B	0.5013	0.5	100	90-110
Cadmium	SW6010D	ICP2_201130B	0.5267	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.4939	0.5	98.8	90-110
Cobalt	SW6010D	ICP2_201130B	2.635	2.5	105	90-110
Lead	SW6010D	ICP2_201130B	0.5323	0.5	106	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 03:12						
Manganese	SW6010D	ICP2_201130B	0.4981	0.5	99.6	90-110
Nickel	SW6010D	ICP2_201130B	2.634	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.607	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5036	0.5	101	90-110
Thallium	SW6010D	ICP2_201130B	0.5389	0.5	108	90-110
Vanadium	SW6010D	ICP2_201130B	0.5053	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.307	1.25	105	90-110
ICV 12/01/20 11:49						
Antimony	SW6010D	ICP2_201201B	0.9945	1	99.4	90-110
Arsenic	SW6010D	ICP2_201201B	0.9691	1	96.9	90-110
Barium	SW6010D	ICP2_201201B	1.025	1	102	90-110
Beryllium	SW6010D	ICP2_201201B	0.9966	1	99.7	90-110
Cadmium	SW6010D	ICP2_201201B	0.9871	1	98.7	90-110
Calcium	SW6010D	ICP2_201201B	6.355	6	106	90-110
Chromium	SW6010D	ICP2_201201B	1.016	1	102	90-110
Cobalt	SW6010D	ICP2_201201B	0.9987	1	99.9	90-110
Copper	SW6010D	ICP2_201201B	1.025	1	102	90-110
Iron	SW6010D	ICP2_201201B	1.049	1	105	90-110
Lead	SW6010D	ICP2_201201B	1.02	1	102	90-110
Magnesium	SW6010D	ICP2_201201B	1.004	1	100	90-110
Manganese	SW6010D	ICP2_201201B	1.03	1	103	90-110
Nickel	SW6010D	ICP2_201201B	1.003	1	100	90-110
Potassium	SW6010D	ICP2_201201B	20.98	21	99.9	90-110
Selenium	SW6010D	ICP2_201201B	0.9781	1	97.8	90-110
Silver	SW6010D	ICP2_201201B	1.048	1	105	90-110
Sodium	SW6010D	ICP2_201201B	21.05	21	100	90-110
Thallium	SW6010D	ICP2_201201B	1.039	1	104	90-110
Vanadium	SW6010D	ICP2_201201B	1.024	1	102	90-110
Zinc	SW6010D	ICP2_201201B	0.9793	1	97.9	90-110
CCV 12/01/20 12:35						
Antimony	SW6010D	ICP2_201201B	0.4978	0.5	99.6	90-110
Arsenic	SW6010D	ICP2_201201B	0.4958	0.5	99.2	90-110
Barium	SW6010D	ICP2_201201B	2.533	2.5	101	90-110
Beryllium	SW6010D	ICP2_201201B	0.5083	0.5	102	90-110
Cadmium	SW6010D	ICP2_201201B	0.4995	0.5	99.9	90-110
Calcium	SW6010D	ICP2_201201B	2.545	2.5	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 12:35						
Chromium	SW6010D	ICP2_201201B	0.5045	0.5	101	90-110
Cobalt	SW6010D	ICP2_201201B	2.515	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.522	2.5	101	90-110
Iron	SW6010D	ICP2_201201B	2.553	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.5054	0.5	101	90-110
Magnesium	SW6010D	ICP2_201201B	2.535	2.5	101	90-110
Manganese	SW6010D	ICP2_201201B	0.5042	0.5	101	90-110
Nickel	SW6010D	ICP2_201201B	2.516	2.5	101	90-110
Potassium	SW6010D	ICP2_201201B	49.92	50	99.8	90-110
Selenium	SW6010D	ICP2_201201B	2.487	2.5	99.5	90-110
Silver	SW6010D	ICP2_201201B	0.5023	0.5	100	90-110
Sodium	SW6010D	ICP2_201201B	50.42	50	101	90-110
Thallium	SW6010D	ICP2_201201B	0.5171	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.5034	0.5	101	90-110
Zinc	SW6010D	ICP2_201201B	1.244	1.25	99.5	90-110
CCV 12/01/20 13:41						
Antimony	SW6010D	ICP2_201201B	0.4931	0.5	98.6	90-110
Arsenic	SW6010D	ICP2_201201B	0.4938	0.5	98.8	90-110
Barium	SW6010D	ICP2_201201B	2.424	2.5	96.9	90-110
Beryllium	SW6010D	ICP2_201201B	0.5007	0.5	100	90-110
Cadmium	SW6010D	ICP2_201201B	0.496	0.5	99.2	90-110
Calcium	SW6010D	ICP2_201201B	2.507	2.5	100	90-110
Chromium	SW6010D	ICP2_201201B	0.4982	0.5	99.6	90-110
Cobalt	SW6010D	ICP2_201201B	2.498	2.5	99.9	90-110
Copper	SW6010D	ICP2_201201B	2.477	2.5	99.1	90-110
Iron	SW6010D	ICP2_201201B	2.438	2.5	97.5	90-110
Lead	SW6010D	ICP2_201201B	0.5025	0.5	100	90-110
Magnesium	SW6010D	ICP2_201201B	2.458	2.5	98.3	90-110
Manganese	SW6010D	ICP2_201201B	0.4956	0.5	99.1	90-110
Nickel	SW6010D	ICP2_201201B	2.498	2.5	99.9	90-110
Potassium	SW6010D	ICP2_201201B	47.22	50	94.4	90-110
Selenium	SW6010D	ICP2_201201B	2.479	2.5	99.1	90-110
Silver	SW6010D	ICP2_201201B	0.4979	0.5	99.6	90-110
Sodium	SW6010D	ICP2_201201B	48.02	50	96.0	90-110
Thallium	SW6010D	ICP2_201201B	0.5138	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.4928	0.5	98.6	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 13:41						
Zinc	SW6010D	ICP2_201201B	1.236	1.25	98.9	90-110
CCV 12/01/20 14:53						
Antimony	SW6010D	ICP2_201201B	0.5089	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.4974	0.5	99.5	90-110
Barium	SW6010D	ICP2_201201B	2.638	2.5	106	90-110
Beryllium	SW6010D	ICP2_201201B	0.4874	0.5	97.5	90-110
Cadmium	SW6010D	ICP2_201201B	0.4962	0.5	99.2	90-110
Calcium	SW6010D	ICP2_201201B	2.415	2.5	96.6	90-110
Chromium	SW6010D	ICP2_201201B	0.4819	0.5	96.4	90-110
Cobalt	SW6010D	ICP2_201201B	2.476	2.5	99.1	90-110
Copper	SW6010D	ICP2_201201B	2.595	2.5	104	90-110
Iron	SW6010D	ICP2_201201B	2.517	2.5	101	90-110
Lead	SW6010D	ICP2_201201B	0.4904	0.5	98.1	90-110
Magnesium	SW6010D	ICP2_201201B	2.341	2.5	93.6	90-110
Manganese	SW6010D	ICP2_201201B	0.4855	0.5	97.1	90-110
Nickel	SW6010D	ICP2_201201B	2.464	2.5	98.6	90-110
Potassium	SW6010D	ICP2_201201B	50.41	50	101	90-110
Selenium	SW6010D	ICP2_201201B	2.52	2.5	101	90-110
Silver	SW6010D	ICP2_201201B	0.4987	0.5	99.7	90-110
Sodium	SW6010D	ICP2_201201B	51.09	50	102	90-110
Thallium	SW6010D	ICP2_201201B	0.5107	0.5	102	90-110
Vanadium	SW6010D	ICP2_201201B	0.4908	0.5	98.2	90-110
Zinc	SW6010D	ICP2_201201B	1.229	1.25	98.3	90-110
CCV 12/01/20 16:00						
Antimony	SW6010D	ICP2_201201B	0.5172	0.5	103	90-110
Arsenic	SW6010D	ICP2_201201B	0.5044	0.5	101	90-110
Barium	SW6010D	ICP2_201201B	2.657	2.5	106	90-110
Beryllium	SW6010D	ICP2_201201B	0.4954	0.5	99.1	90-110
Cadmium	SW6010D	ICP2_201201B	0.5003	0.5	100	90-110
Calcium	SW6010D	ICP2_201201B	2.391	2.5	95.6	90-110
Chromium	SW6010D	ICP2_201201B	0.4888	0.5	97.8	90-110
Cobalt	SW6010D	ICP2_201201B	2.501	2.5	100	90-110
Copper	SW6010D	ICP2_201201B	2.653	2.5	106	90-110
Iron	SW6010D	ICP2_201201B	2.502	2.5	100	90-110
Lead	SW6010D	ICP2_201201B	0.4943	0.5	98.9	90-110
Magnesium	SW6010D	ICP2_201201B	2.307	2.5	92.3	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 16:00						
Manganese	SW6010D	ICP2_201201B	0.4931	0.5	98.6	90-110
Nickel	SW6010D	ICP2_201201B	2.491	2.5	99.6	90-110
Potassium	SW6010D	ICP2_201201B	51.28	50	103	90-110
Selenium	SW6010D	ICP2_201201B	2.54	2.5	102	90-110
Silver	SW6010D	ICP2_201201B	0.5043	0.5	101	90-110
Sodium	SW6010D	ICP2_201201B	51.69	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5166	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.5029	0.5	101	90-110
Zinc	SW6010D	ICP2_201201B	1.242	1.25	99.4	90-110
CCV 12/01/20 17:07						
Antimony	SW6010D	ICP2_201201B	0.5041	0.5	101	90-110
Arsenic	SW6010D	ICP2_201201B	0.4961	0.5	99.2	90-110
Barium	SW6010D	ICP2_201201B	2.668	2.5	107	90-110
Beryllium	SW6010D	ICP2_201201B	0.4887	0.5	97.7	90-110
Cadmium	SW6010D	ICP2_201201B	0.4976	0.5	99.5	90-110
Calcium	SW6010D	ICP2_201201B	2.452	2.5	98.1	90-110
Chromium	SW6010D	ICP2_201201B	0.4813	0.5	96.3	90-110
Cobalt	SW6010D	ICP2_201201B	2.457	2.5	98.3	90-110
Copper	SW6010D	ICP2_201201B	2.622	2.5	105	90-110
Iron	SW6010D	ICP2_201201B	2.557	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.4893	0.5	97.9	90-110
Magnesium	SW6010D	ICP2_201201B	2.312	2.5	92.5	90-110
Manganese	SW6010D	ICP2_201201B	0.4862	0.5	97.2	90-110
Nickel	SW6010D	ICP2_201201B	2.45	2.5	98.0	90-110
Potassium	SW6010D	ICP2_201201B	53.19	50	106	90-110
Selenium	SW6010D	ICP2_201201B	2.467	2.5	98.7	90-110
Silver	SW6010D	ICP2_201201B	0.4901	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201201B	51.65	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5125	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.4985	0.5	99.7	90-110
Zinc	SW6010D	ICP2_201201B	1.225	1.25	98.0	90-110
CCV 12/01/20 18:10						
Antimony	SW6010D	ICP2_201201B	0.5109	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.5098	0.5	102	90-110
Barium	SW6010D	ICP2_201201B	2.631	2.5	105	90-110
Beryllium	SW6010D	ICP2_201201B	0.4844	0.5	96.9	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 18:10						
Cadmium	SW6010D	ICP2_201201B	0.5127	0.5	103	90-110
Calcium	SW6010D	ICP2_201201B	2.535	2.5	101	90-110
Chromium	SW6010D	ICP2_201201B	0.4769	0.5	95.4	90-110
Cobalt	SW6010D	ICP2_201201B	2.528	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.604	2.5	104	90-110
Iron	SW6010D	ICP2_201201B	2.56	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.5041	0.5	101	90-110
Magnesium	SW6010D	ICP2_201201B	2.322	2.5	92.9	90-110
Manganese	SW6010D	ICP2_201201B	0.4828	0.5	96.6	90-110
Nickel	SW6010D	ICP2_201201B	2.521	2.5	101	90-110
Potassium	SW6010D	ICP2_201201B	53.71	50	107	90-110
Selenium	SW6010D	ICP2_201201B	2.518	2.5	101	90-110
Silver	SW6010D	ICP2_201201B	0.4814	0.5	96.3	90-110
Sodium	SW6010D	ICP2_201201B	51.2	50	102	90-110
Thallium	SW6010D	ICP2_201201B	0.5255	0.5	105	90-110
Vanadium	SW6010D	ICP2_201201B	0.4966	0.5	99.3	90-110
Zinc	SW6010D	ICP2_201201B	1.261	1.25	101	90-110
CCV 12/01/20 19:17						
Antimony	SW6010D	ICP2_201201B	0.5124	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.5105	0.5	102	90-110
Barium	SW6010D	ICP2_201201B	2.66	2.5	106	90-110
Beryllium	SW6010D	ICP2_201201B	0.4944	0.5	98.9	90-110
Cadmium	SW6010D	ICP2_201201B	0.514	0.5	103	90-110
Calcium	SW6010D	ICP2_201201B	2.415	2.5	96.6	90-110
Chromium	SW6010D	ICP2_201201B	0.4871	0.5	97.4	90-110
Cobalt	SW6010D	ICP2_201201B	2.523	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.678	2.5	107	90-110
Iron	SW6010D	ICP2_201201B	2.566	2.5	103	90-110
Lead	SW6010D	ICP2_201201B	0.504	0.5	101	90-110
Magnesium	SW6010D	ICP2_201201B	2.332	2.5	93.3	90-110
Manganese	SW6010D	ICP2_201201B	0.4916	0.5	98.3	90-110
Nickel	SW6010D	ICP2_201201B	2.515	2.5	101	90-110
Potassium	SW6010D	ICP2_201201B	55.19	50	110 *	90-110
Selenium	SW6010D	ICP2_201201B	2.488	2.5	99.5	90-110
Silver	SW6010D	ICP2_201201B	0.4901	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201201B	51.42	50	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 19:17						
Thallium	SW6010D	ICP2_201201B	0.5295	0.5	106	90-110
Vanadium	SW6010D	ICP2_201201B	0.5077	0.5	102	90-110
Zinc	SW6010D	ICP2_201201B	1.26	1.25	101	90-110
CCV 12/01/20 20:25						
Antimony	SW6010D	ICP2_201201B	0.5085	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.5073	0.5	101	90-110
Barium	SW6010D	ICP2_201201B	2.614	2.5	105	90-110
Beryllium	SW6010D	ICP2_201201B	0.487	0.5	97.4	90-110
Cadmium	SW6010D	ICP2_201201B	0.5089	0.5	102	90-110
Calcium	SW6010D	ICP2_201201B	3.075	2.5	123 *	90-110
Chromium	SW6010D	ICP2_201201B	0.479	0.5	95.8	90-110
Cobalt	SW6010D	ICP2_201201B	2.483	2.5	99.3	90-110
Copper	SW6010D	ICP2_201201B	2.72	2.5	109	90-110
Iron	SW6010D	ICP2_201201B	2.554	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.4963	0.5	99.3	90-110
Magnesium	SW6010D	ICP2_201201B	2.478	2.5	99.1	90-110
Manganese	SW6010D	ICP2_201201B	0.4882	0.5	97.6	90-110
Nickel	SW6010D	ICP2_201201B	2.472	2.5	98.9	90-110
Potassium	SW6010D	ICP2_201201B	54.49	50	109	90-110
Selenium	SW6010D	ICP2_201201B	2.467	2.5	98.7	90-110
Silver	SW6010D	ICP2_201201B	0.4863	0.5	97.3	90-110
Sodium	SW6010D	ICP2_201201B	50.7	50	101	90-110
Thallium	SW6010D	ICP2_201201B	0.5231	0.5	105	90-110
Vanadium	SW6010D	ICP2_201201B	0.5067	0.5	101	90-110
Zinc	SW6010D	ICP2_201201B	1.243	1.25	99.4	90-110
CCV 12/01/20 21:31						
Antimony	SW6010D	ICP2_201201B	0.5346	0.5	107	90-110
Arsenic	SW6010D	ICP2_201201B	0.5217	0.5	104	90-110
Barium	SW6010D	ICP2_201201B	2.731	2.5	109	90-110
Beryllium	SW6010D	ICP2_201201B	0.4559	0.5	91.2	90-110
Cadmium	SW6010D	ICP2_201201B	0.517	0.5	103	90-110
Calcium	SW6010D	ICP2_201201B	2.17	2.5	86.8 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4443	0.5	88.9 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.513	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.737	2.5	109	90-110
Iron	SW6010D	ICP2_201201B	2.575	2.5	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 21:31						
Lead	SW6010D	ICP2_201201B	0.4918	0.5	98.4	90-110
Magnesium	SW6010D	ICP2_201201B	2	2.5	80.0 *	90-110
Manganese	SW6010D	ICP2_201201B	0.4566	0.5	91.3	90-110
Nickel	SW6010D	ICP2_201201B	2.496	2.5	99.8	90-110
Potassium	SW6010D	ICP2_201201B	56.75	50	113 *	90-110
Selenium	SW6010D	ICP2_201201B	2.563	2.5	103	90-110
Silver	SW6010D	ICP2_201201B	0.4674	0.5	93.5	90-110
Sodium	SW6010D	ICP2_201201B	52.8	50	106	90-110
Thallium	SW6010D	ICP2_201201B	0.5293	0.5	106	90-110
Vanadium	SW6010D	ICP2_201201B	0.484	0.5	96.8	90-110
Zinc	SW6010D	ICP2_201201B	1.257	1.25	101	90-110
CCV 12/01/20 22:42						
Antimony	SW6010D	ICP2_201201B	0.539	0.5	108	90-110
Arsenic	SW6010D	ICP2_201201B	0.5253	0.5	105	90-110
Barium	SW6010D	ICP2_201201B	2.681	2.5	107	90-110
Beryllium	SW6010D	ICP2_201201B	0.4333	0.5	86.7 *	90-110
Cadmium	SW6010D	ICP2_201201B	0.5199	0.5	104	90-110
Calcium	SW6010D	ICP2_201201B	2.078	2.5	83.1 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4227	0.5	84.5 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.512	2.5	100	90-110
Copper	SW6010D	ICP2_201201B	2.632	2.5	105	90-110
Iron	SW6010D	ICP2_201201B	2.34	2.5	93.6	90-110
Lead	SW6010D	ICP2_201201B	0.494	0.5	98.8	90-110
Magnesium	SW6010D	ICP2_201201B	1.902	2.5	76.1 *	90-110
Manganese	SW6010D	ICP2_201201B	0.433	0.5	86.6 *	90-110
Nickel	SW6010D	ICP2_201201B	2.493	2.5	99.7	90-110
Potassium	SW6010D	ICP2_201201B	55.77	50	112 *	90-110
Selenium	SW6010D	ICP2_201201B	2.576	2.5	103	90-110
Silver	SW6010D	ICP2_201201B	0.4463	0.5	89.3 *	90-110
Sodium	SW6010D	ICP2_201201B	51.61	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5313	0.5	106	90-110
Vanadium	SW6010D	ICP2_201201B	0.4617	0.5	92.3	90-110
Zinc	SW6010D	ICP2_201201B	1.26	1.25	101	90-110
CCV 12/01/20 23:50						
Antimony	SW6010D	ICP2_201201B	0.5411	0.5	108	90-110
Arsenic	SW6010D	ICP2_201201B	0.5192	0.5	104	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 23:50						
Barium	SW6010D	ICP2_201201B	2.715	2.5	109	90-110
Beryllium	SW6010D	ICP2_201201B	0.4343	0.5	86.9 *	90-110
Cadmium	SW6010D	ICP2_201201B	0.5181	0.5	104	90-110
Calcium	SW6010D	ICP2_201201B	2.085	2.5	83.4 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4263	0.5	85.3 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.49	2.5	99.6	90-110
Copper	SW6010D	ICP2_201201B	2.69	2.5	108	90-110
Iron	SW6010D	ICP2_201201B	2.358	2.5	94.3	90-110
Lead	SW6010D	ICP2_201201B	0.4908	0.5	98.2	90-110
Magnesium	SW6010D	ICP2_201201B	1.928	2.5	77.1 *	90-110
Manganese	SW6010D	ICP2_201201B	0.4359	0.5	87.2 *	90-110
Nickel	SW6010D	ICP2_201201B	2.466	2.5	98.7	90-110
Potassium	SW6010D	ICP2_201201B	55.62	50	111 *	90-110
Selenium	SW6010D	ICP2_201201B	2.566	2.5	103	90-110
Silver	SW6010D	ICP2_201201B	0.4547	0.5	90.9	90-110
Sodium	SW6010D	ICP2_201201B	52.21	50	104	90-110
Thallium	SW6010D	ICP2_201201B	0.4746	0.5	94.9	90-110
Vanadium	SW6010D	ICP2_201201B	0.4653	0.5	93.1	90-110
Zinc	SW6010D	ICP2_201201B	1.251	1.25	100	90-110
CCV 12/02/20 00:46						
Antimony	SW6010D	ICP2_201201B	0.5434	0.5	109	90-110
Arsenic	SW6010D	ICP2_201201B	0.5215	0.5	104	90-110
Barium	SW6010D	ICP2_201201B	2.682	2.5	107	90-110
Beryllium	SW6010D	ICP2_201201B	0.4388	0.5	87.8 *	90-110
Cadmium	SW6010D	ICP2_201201B	0.5194	0.5	104	90-110
Calcium	SW6010D	ICP2_201201B	2.066	2.5	82.6 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4286	0.5	85.7 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.505	2.5	100	90-110
Copper	SW6010D	ICP2_201201B	2.689	2.5	108	90-110
Iron	SW6010D	ICP2_201201B	2.338	2.5	93.5	90-110
Lead	SW6010D	ICP2_201201B	0.4923	0.5	98.5	90-110
Magnesium	SW6010D	ICP2_201201B	1.9	2.5	76.0 *	90-110
Manganese	SW6010D	ICP2_201201B	0.4395	0.5	87.9 *	90-110
Nickel	SW6010D	ICP2_201201B	2.484	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201201B	55.12	50	110 *	90-110
Selenium	SW6010D	ICP2_201201B	2.578	2.5	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 00:46						
Silver	SW6010D	ICP2_201201B	0.4545	0.5	90.9	90-110
Sodium	SW6010D	ICP2_201201B	51.64	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5067	0.5	101	90-110
Vanadium	SW6010D	ICP2_201201B	0.4687	0.5	93.7	90-110
Zinc	SW6010D	ICP2_201201B	1.257	1.25	101	90-110
ICV 12/02/20 14:06						
Aluminum	SW6010D	ICP2_201202B	0.9746	1	97.5	90-110
Antimony	SW6010D	ICP2_201202B	1.005	1	101	90-110
Arsenic	SW6010D	ICP2_201202B	0.9787	1	97.9	90-110
Barium	SW6010D	ICP2_201202B	0.9562	1	95.6	90-110
Beryllium	SW6010D	ICP2_201202B	0.9607	1	96.1	90-110
Boron	SW6010D	ICP2_201202B	0.9693	1	96.9	90-110
Cadmium	SW6010D	ICP2_201202B	0.9975	1	99.7	90-110
Calcium	SW6010D	ICP2_201202B	5.872	6	97.9	90-110
Chromium	SW6010D	ICP2_201202B	0.9891	1	98.9	90-110
Cobalt	SW6010D	ICP2_201202B	1.013	1	101	90-110
Copper	SW6010D	ICP2_201202B	0.9986	1	99.9	90-110
Iron	SW6010D	ICP2_201202B	0.9626	1	96.3	90-110
Lead	SW6010D	ICP2_201202B	1.035	1	104	90-110
Lithium	SW6010D	ICP2_201202B	0.9397	1	94.0	90-110
Magnesium	SW6010D	ICP2_201202B	0.9659	1	96.6	90-110
Manganese	SW6010D	ICP2_201202B	1.003	1	100	90-110
Molybdenum	SW6010D	ICP2_201202B	1.031	1	103	90-110
Nickel	SW6010D	ICP2_201202B	1.019	1	102	90-110
Potassium	SW6010D	ICP2_201202B	19.77	21	94.1	90-110
Selenium	SW6010D	ICP2_201202B	0.9859	1	98.6	90-110
Silicon	SW6010D	ICP2_201202B	1.036	1	104	90-110
Silver	SW6010D	ICP2_201202B	1.058	1	106	90-110
Sodium	SW6010D	ICP2_201202B	19.71	21	93.8	90-110
Strontium	SW6010D	ICP2_201202B	0.9544	1	95.4	90-110
Thallium	SW6010D	ICP2_201202B	1.045	1	105	90-110
Tin	SW6010D	ICP2_201202B	0.9943	1	99.4	90-110
Titanium	SW6010D	ICP2_201202B	0.9462	1	94.6	90-110
Vanadium	SW6010D	ICP2_201202B	0.9975	1	99.8	90-110
Zinc	SW6010D	ICP2_201202B	0.9908	1	99.1	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 14:53						
Aluminum	SW6010D	ICP2_201202B	2.375	2.5	95.0	90-110
Antimony	SW6010D	ICP2_201202B	0.4986	0.5	99.7	90-110
Arsenic	SW6010D	ICP2_201202B	0.495	0.5	99.0	90-110
Barium	SW6010D	ICP2_201202B	2.352	2.5	94.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4846	0.5	96.9	90-110
Boron	SW6010D	ICP2_201202B	2.334	2.5	93.4	90-110
Cadmium	SW6010D	ICP2_201202B	0.4974	0.5	99.5	90-110
Calcium	SW6010D	ICP2_201202B	2.375	2.5	95.0	90-110
Chromium	SW6010D	ICP2_201202B	0.4826	0.5	96.5	90-110
Cobalt	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Copper	SW6010D	ICP2_201202B	2.393	2.5	95.7	90-110
Iron	SW6010D	ICP2_201202B	2.357	2.5	94.3	90-110
Lead	SW6010D	ICP2_201202B	0.5082	0.5	102	90-110
Lithium	SW6010D	ICP2_201202B	2.304	2.5	92.2	90-110
Magnesium	SW6010D	ICP2_201202B	2.355	2.5	94.2	90-110
Manganese	SW6010D	ICP2_201202B	0.4801	0.5	96.0	90-110
Molybdenum	SW6010D	ICP2_201202B	2.497	2.5	99.9	90-110
Nickel	SW6010D	ICP2_201202B	2.513	2.5	101	90-110
Potassium	SW6010D	ICP2_201202B	46.07	50	92.1	90-110
Selenium	SW6010D	ICP2_201202B	2.486	2.5	99.4	90-110
Silicon	SW6010D	ICP2_201202B	2.34	2.5	93.6	90-110
Silver	SW6010D	ICP2_201202B	0.4819	0.5	96.4	90-110
Sodium	SW6010D	ICP2_201202B	46.85	50	93.7	90-110
Strontium	SW6010D	ICP2_201202B	0.4702	0.5	94.0	90-110
Thallium	SW6010D	ICP2_201202B	0.5112	0.5	102	90-110
Tin	SW6010D	ICP2_201202B	0.5008	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.4723	0.5	94.5	90-110
Vanadium	SW6010D	ICP2_201202B	0.4775	0.5	95.5	90-110
Zinc	SW6010D	ICP2_201202B	1.243	1.25	99.4	90-110
CCV 12/02/20 15:34						
Aluminum	SW6010D	ICP2_201202B	2.392	2.5	95.7	90-110
Antimony	SW6010D	ICP2_201202B	0.4974	0.5	99.5	90-110
Arsenic	SW6010D	ICP2_201202B	0.4968	0.5	99.4	90-110
Barium	SW6010D	ICP2_201202B	2.371	2.5	94.8	90-110
Beryllium	SW6010D	ICP2_201202B	0.4957	0.5	99.1	90-110
Boron	SW6010D	ICP2_201202B	2.374	2.5	94.9	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 15:34						
Cadmium	SW6010D	ICP2_201202B	0.4984	0.5	99.7	90-110
Calcium	SW6010D	ICP2_201202B	2.402	2.5	96.1	90-110
Chromium	SW6010D	ICP2_201202B	0.4936	0.5	98.7	90-110
Cobalt	SW6010D	ICP2_201202B	2.521	2.5	101	90-110
Copper	SW6010D	ICP2_201202B	2.446	2.5	97.9	90-110
Iron	SW6010D	ICP2_201202B	2.391	2.5	95.6	90-110
Lead	SW6010D	ICP2_201202B	0.5078	0.5	102	90-110
Lithium	SW6010D	ICP2_201202B	2.34	2.5	93.6	90-110
Magnesium	SW6010D	ICP2_201202B	2.382	2.5	95.3	90-110
Manganese	SW6010D	ICP2_201202B	0.4916	0.5	98.3	90-110
Molybdenum	SW6010D	ICP2_201202B	2.505	2.5	100	90-110
Nickel	SW6010D	ICP2_201202B	2.521	2.5	101	90-110
Potassium	SW6010D	ICP2_201202B	46.62	50	93.2	90-110
Selenium	SW6010D	ICP2_201202B	2.498	2.5	99.9	90-110
Silicon	SW6010D	ICP2_201202B	2.386	2.5	95.5	90-110
Silver	SW6010D	ICP2_201202B	0.4884	0.5	97.7	90-110
Sodium	SW6010D	ICP2_201202B	47.55	50	95.1	90-110
Strontium	SW6010D	ICP2_201202B	0.4778	0.5	95.6	90-110
Thallium	SW6010D	ICP2_201202B	0.5132	0.5	103	90-110
Tin	SW6010D	ICP2_201202B	0.501	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.4765	0.5	95.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.4907	0.5	98.1	90-110
Zinc	SW6010D	ICP2_201202B	1.245	1.25	99.6	90-110
CCV 12/02/20 16:44						
Aluminum	SW6010D	ICP2_201202B	2.343	2.5	93.7	90-110
Antimony	SW6010D	ICP2_201202B	0.5001	0.5	100	90-110
Arsenic	SW6010D	ICP2_201202B	0.4966	0.5	99.3	90-110
Barium	SW6010D	ICP2_201202B	2.327	2.5	93.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4866	0.5	97.3	90-110
Boron	SW6010D	ICP2_201202B	2.334	2.5	93.4	90-110
Cadmium	SW6010D	ICP2_201202B	0.4978	0.5	99.6	90-110
Calcium	SW6010D	ICP2_201202B	2.368	2.5	94.7	90-110
Chromium	SW6010D	ICP2_201202B	0.4822	0.5	96.4	90-110
Cobalt	SW6010D	ICP2_201202B	2.524	2.5	101	90-110
Copper	SW6010D	ICP2_201202B	2.418	2.5	96.7	90-110
Iron	SW6010D	ICP2_201202B	2.342	2.5	93.7	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 16:44						
Lead	SW6010D	ICP2_201202B	0.5082	0.5	102	90-110
Lithium	SW6010D	ICP2_201202B	2.298	2.5	91.9	90-110
Magnesium	SW6010D	ICP2_201202B	2.323	2.5	92.9	90-110
Manganese	SW6010D	ICP2_201202B	0.4831	0.5	96.6	90-110
Molybdenum	SW6010D	ICP2_201202B	2.507	2.5	100	90-110
Nickel	SW6010D	ICP2_201202B	2.522	2.5	101	90-110
Potassium	SW6010D	ICP2_201202B	45.76	50	91.5	90-110
Selenium	SW6010D	ICP2_201202B	2.506	2.5	100	90-110
Silicon	SW6010D	ICP2_201202B	2.384	2.5	95.4	90-110
Silver	SW6010D	ICP2_201202B	0.4826	0.5	96.5	90-110
Sodium	SW6010D	ICP2_201202B	46.93	50	93.9	90-110
Strontium	SW6010D	ICP2_201202B	0.4698	0.5	94.0	90-110
Thallium	SW6010D	ICP2_201202B	0.5123	0.5	102	90-110
Tin	SW6010D	ICP2_201202B	0.5008	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.475	0.5	95.0	90-110
Vanadium	SW6010D	ICP2_201202B	0.4814	0.5	96.3	90-110
Zinc	SW6010D	ICP2_201202B	1.246	1.25	99.7	90-110
CCV 12/02/20 17:45						
Aluminum	SW6010D	ICP2_201202B	2.363	2.5	94.5	90-110
Antimony	SW6010D	ICP2_201202B	0.4988	0.5	99.8	90-110
Arsenic	SW6010D	ICP2_201202B	0.4958	0.5	99.2	90-110
Barium	SW6010D	ICP2_201202B	2.353	2.5	94.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4798	0.5	96.0	90-110
Boron	SW6010D	ICP2_201202B	2.303	2.5	92.1	90-110
Cadmium	SW6010D	ICP2_201202B	0.4949	0.5	99.0	90-110
Calcium	SW6010D	ICP2_201202B	2.405	2.5	96.2	90-110
Chromium	SW6010D	ICP2_201202B	0.4754	0.5	95.1	90-110
Cobalt	SW6010D	ICP2_201202B	2.503	2.5	100	90-110
Copper	SW6010D	ICP2_201202B	2.429	2.5	97.2	90-110
Iron	SW6010D	ICP2_201202B	2.401	2.5	96.0	90-110
Lead	SW6010D	ICP2_201202B	0.502	0.5	100	90-110
Lithium	SW6010D	ICP2_201202B	2.334	2.5	93.4	90-110
Magnesium	SW6010D	ICP2_201202B	2.281	2.5	91.2	90-110
Manganese	SW6010D	ICP2_201202B	0.4781	0.5	95.6	90-110
Molybdenum	SW6010D	ICP2_201202B	2.49	2.5	99.6	90-110
Nickel	SW6010D	ICP2_201202B	2.5	2.5	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 17:45						
Potassium	SW6010D	ICP2_201202B	46.24	50	92.5	90-110
Selenium	SW6010D	ICP2_201202B	2.519	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.364	2.5	94.5	90-110
Silver	SW6010D	ICP2_201202B	0.4794	0.5	95.9	90-110
Sodium	SW6010D	ICP2_201202B	47.41	50	94.8	90-110
Strontium	SW6010D	ICP2_201202B	0.473	0.5	94.6	90-110
Thallium	SW6010D	ICP2_201202B	0.5104	0.5	102	90-110
Tin	SW6010D	ICP2_201202B	0.4946	0.5	98.9	90-110
Titanium	SW6010D	ICP2_201202B	0.4739	0.5	94.8	90-110
Vanadium	SW6010D	ICP2_201202B	0.478	0.5	95.6	90-110
Zinc	SW6010D	ICP2_201202B	1.236	1.25	98.9	90-110
CCV 12/02/20 18:47						
Aluminum	SW6010D	ICP2_201202B	2.473	2.5	98.9	90-110
Antimony	SW6010D	ICP2_201202B	0.5059	0.5	101	90-110
Arsenic	SW6010D	ICP2_201202B	0.5	0.5	100.0	90-110
Barium	SW6010D	ICP2_201202B	2.499	2.5	99.9	90-110
Beryllium	SW6010D	ICP2_201202B	0.4881	0.5	97.6	90-110
Boron	SW6010D	ICP2_201202B	2.404	2.5	96.2	90-110
Cadmium	SW6010D	ICP2_201202B	0.499	0.5	99.8	90-110
Calcium	SW6010D	ICP2_201202B	2.401	2.5	96.1	90-110
Chromium	SW6010D	ICP2_201202B	0.4837	0.5	96.7	90-110
Cobalt	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Copper	SW6010D	ICP2_201202B	2.484	2.5	99.3	90-110
Iron	SW6010D	ICP2_201202B	2.421	2.5	96.8	90-110
Lead	SW6010D	ICP2_201202B	0.5038	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.465	2.5	98.6	90-110
Magnesium	SW6010D	ICP2_201202B	2.373	2.5	94.9	90-110
Manganese	SW6010D	ICP2_201202B	0.4838	0.5	96.8	90-110
Molybdenum	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Nickel	SW6010D	ICP2_201202B	2.509	2.5	100	90-110
Potassium	SW6010D	ICP2_201202B	48.83	50	97.7	90-110
Selenium	SW6010D	ICP2_201202B	2.516	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.435	2.5	97.4	90-110
Silver	SW6010D	ICP2_201202B	0.4911	0.5	98.2	90-110
Sodium	SW6010D	ICP2_201202B	49.44	50	98.9	90-110
Strontium	SW6010D	ICP2_201202B	0.5001	0.5	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 18:47						
Thallium	SW6010D	ICP2_201202B	0.5137	0.5	103	90-110
Tin	SW6010D	ICP2_201202B	0.4983	0.5	99.7	90-110
Titanium	SW6010D	ICP2_201202B	0.4869	0.5	97.4	90-110
Vanadium	SW6010D	ICP2_201202B	0.4867	0.5	97.3	90-110
Zinc	SW6010D	ICP2_201202B	1.243	1.25	99.5	90-110
CCV 12/02/20 19:54						
Aluminum	SW6010D	ICP2_201202B	2.3	2.5	92.0	90-110
Antimony	SW6010D	ICP2_201202B	0.5133	0.5	103	90-110
Arsenic	SW6010D	ICP2_201202B	0.4954	0.5	99.1	90-110
Barium	SW6010D	ICP2_201202B	2.31	2.5	92.4	90-110
Beryllium	SW6010D	ICP2_201202B	0.4677	0.5	93.5	90-110
Boron	SW6010D	ICP2_201202B	2.22	2.5	88.8 *	90-110
Cadmium	SW6010D	ICP2_201202B	0.5043	0.5	101	90-110
Calcium	SW6010D	ICP2_201202B	2.217	2.5	88.7 *	90-110
Chromium	SW6010D	ICP2_201202B	0.4668	0.5	93.4	90-110
Cobalt	SW6010D	ICP2_201202B	2.493	2.5	99.7	90-110
Copper	SW6010D	ICP2_201202B	2.466	2.5	98.7	90-110
Iron	SW6010D	ICP2_201202B	2.226	2.5	89.1 *	90-110
Lead	SW6010D	ICP2_201202B	0.506	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.316	2.5	92.6	90-110
Magnesium	SW6010D	ICP2_201202B	2.153	2.5	86.1 *	90-110
Manganese	SW6010D	ICP2_201202B	0.4688	0.5	93.8	90-110
Molybdenum	SW6010D	ICP2_201202B	2.489	2.5	99.6	90-110
Nickel	SW6010D	ICP2_201202B	2.485	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201202B	45.76	50	91.5	90-110
Selenium	SW6010D	ICP2_201202B	2.536	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.228	2.5	89.1 *	90-110
Silver	SW6010D	ICP2_201202B	0.4806	0.5	96.1	90-110
Sodium	SW6010D	ICP2_201202B	46.59	50	93.2	90-110
Strontium	SW6010D	ICP2_201202B	0.4639	0.5	92.8	90-110
Thallium	SW6010D	ICP2_201202B	0.4609	0.5	92.2	90-110
Tin	SW6010D	ICP2_201202B	0.497	0.5	99.4	90-110
Titanium	SW6010D	ICP2_201202B	0.4565	0.5	91.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.4731	0.5	94.6	90-110
Zinc	SW6010D	ICP2_201202B	1.239	1.25	99.1	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 20:56						
Aluminum	SW6010D	ICP2_201202B	2.537	2.5	101	90-110
Antimony	SW6010D	ICP2_201202B	0.5144	0.5	103	90-110
Arsenic	SW6010D	ICP2_201202B	0.502	0.5	100	90-110
Barium	SW6010D	ICP2_201202B	2.565	2.5	103	90-110
Beryllium	SW6010D	ICP2_201202B	0.4834	0.5	96.7	90-110
Boron	SW6010D	ICP2_201202B	2.451	2.5	98.0	90-110
Cadmium	SW6010D	ICP2_201202B	0.5047	0.5	101	90-110
Calcium	SW6010D	ICP2_201202B	2.481	2.5	99.2	90-110
Chromium	SW6010D	ICP2_201202B	0.4788	0.5	95.8	90-110
Cobalt	SW6010D	ICP2_201202B	2.514	2.5	101	90-110
Copper	SW6010D	ICP2_201202B	2.498	2.5	99.9	90-110
Iron	SW6010D	ICP2_201202B	2.486	2.5	99.4	90-110
Lead	SW6010D	ICP2_201202B	0.5074	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.557	2.5	102	90-110
Magnesium	SW6010D	ICP2_201202B	2.408	2.5	96.3	90-110
Manganese	SW6010D	ICP2_201202B	0.4813	0.5	96.3	90-110
Molybdenum	SW6010D	ICP2_201202B	2.521	2.5	101	90-110
Nickel	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Potassium	SW6010D	ICP2_201202B	50.54	50	101	90-110
Selenium	SW6010D	ICP2_201202B	2.532	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Silver	SW6010D	ICP2_201202B	0.4865	0.5	97.3	90-110
Sodium	SW6010D	ICP2_201202B	51	50	102	90-110
Strontium	SW6010D	ICP2_201202B	0.5146	0.5	103	90-110
Thallium	SW6010D	ICP2_201202B	0.4977	0.5	99.5	90-110
Tin	SW6010D	ICP2_201202B	0.5012	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.4934	0.5	98.7	90-110
Vanadium	SW6010D	ICP2_201202B	0.4871	0.5	97.4	90-110
Zinc	SW6010D	ICP2_201202B	1.248	1.25	99.8	90-110
CCV 12/02/20 22:03						
Aluminum	SW6010D	ICP2_201202B	2.331	2.5	93.2	90-110
Antimony	SW6010D	ICP2_201202B	0.5011	0.5	100	90-110
Arsenic	SW6010D	ICP2_201202B	0.4917	0.5	98.3	90-110
Barium	SW6010D	ICP2_201202B	2.353	2.5	94.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4862	0.5	97.2	90-110
Boron	SW6010D	ICP2_201202B	2.246	2.5	89.9 *	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 22:03						
Cadmium	SW6010D	ICP2_201202B	0.4955	0.5	99.1	90-110
Calcium	SW6010D	ICP2_201202B	2.294	2.5	91.8	90-110
Chromium	SW6010D	ICP2_201202B	0.4783	0.5	95.7	90-110
Cobalt	SW6010D	ICP2_201202B	2.481	2.5	99.3	90-110
Copper	SW6010D	ICP2_201202B	2.415	2.5	96.6	90-110
Iron	SW6010D	ICP2_201202B	2.303	2.5	92.1	90-110
Lead	SW6010D	ICP2_201202B	0.503	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.309	2.5	92.3	90-110
Magnesium	SW6010D	ICP2_201202B	2.277	2.5	91.1	90-110
Manganese	SW6010D	ICP2_201202B	0.4804	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201202B	2.488	2.5	99.5	90-110
Nickel	SW6010D	ICP2_201202B	2.486	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201202B	46.79	50	93.6	90-110
Selenium	SW6010D	ICP2_201202B	2.466	2.5	98.6	90-110
Silicon	SW6010D	ICP2_201202B	2.296	2.5	91.9	90-110
Silver	SW6010D	ICP2_201202B	0.4754	0.5	95.1	90-110
Sodium	SW6010D	ICP2_201202B	46.37	50	92.7	90-110
Strontium	SW6010D	ICP2_201202B	0.4735	0.5	94.7	90-110
Thallium	SW6010D	ICP2_201202B	0.4995	0.5	99.9	90-110
Tin	SW6010D	ICP2_201202B	0.4963	0.5	99.3	90-110
Titanium	SW6010D	ICP2_201202B	0.4508	0.5	90.2	90-110
Vanadium	SW6010D	ICP2_201202B	0.4866	0.5	97.3	90-110
Zinc	SW6010D	ICP2_201202B	1.23	1.25	98.4	90-110
CCV 12/02/20 23:09						
Aluminum	SW6010D	ICP2_201202B	2.428	2.5	97.1	90-110
Antimony	SW6010D	ICP2_201202B	0.4997	0.5	99.9	90-110
Arsenic	SW6010D	ICP2_201202B	0.4918	0.5	98.4	90-110
Barium	SW6010D	ICP2_201202B	2.444	2.5	97.8	90-110
Beryllium	SW6010D	ICP2_201202B	0.523	0.5	105	90-110
Boron	SW6010D	ICP2_201202B	2.343	2.5	93.7	90-110
Cadmium	SW6010D	ICP2_201202B	0.4938	0.5	98.8	90-110
Calcium	SW6010D	ICP2_201202B	2.396	2.5	95.8	90-110
Chromium	SW6010D	ICP2_201202B	0.5158	0.5	103	90-110
Cobalt	SW6010D	ICP2_201202B	2.483	2.5	99.3	90-110
Copper	SW6010D	ICP2_201202B	2.569	2.5	103	90-110
Iron	SW6010D	ICP2_201202B	2.389	2.5	95.6	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 23:09						
Lead	SW6010D	ICP2_201202B	0.5002	0.5	100	90-110
Lithium	SW6010D	ICP2_201202B	2.392	2.5	95.7	90-110
Magnesium	SW6010D	ICP2_201202B	2.337	2.5	93.5	90-110
Manganese	SW6010D	ICP2_201202B	0.517	0.5	103	90-110
Molybdenum	SW6010D	ICP2_201202B	2.483	2.5	99.3	90-110
Nickel	SW6010D	ICP2_201202B	2.483	2.5	99.3	90-110
Potassium	SW6010D	ICP2_201202B	47.85	50	95.7	90-110
Selenium	SW6010D	ICP2_201202B	2.476	2.5	99.0	90-110
Silicon	SW6010D	ICP2_201202B	2.384	2.5	95.4	90-110
Silver	SW6010D	ICP2_201202B	0.5085	0.5	102	90-110
Sodium	SW6010D	ICP2_201202B	48.41	50	96.8	90-110
Strontium	SW6010D	ICP2_201202B	0.4925	0.5	98.5	90-110
Thallium	SW6010D	ICP2_201202B	0.5067	0.5	101	90-110
Tin	SW6010D	ICP2_201202B	0.4954	0.5	99.1	90-110
Titanium	SW6010D	ICP2_201202B	0.4866	0.5	97.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.5186	0.5	104	90-110
Zinc	SW6010D	ICP2_201202B	1.228	1.25	98.2	90-110
CCV 12/03/20 00:16						
Aluminum	SW6010D	ICP2_201202B	2.347	2.5	93.9	90-110
Antimony	SW6010D	ICP2_201202B	0.5024	0.5	100	90-110
Arsenic	SW6010D	ICP2_201202B	0.4909	0.5	98.2	90-110
Barium	SW6010D	ICP2_201202B	2.382	2.5	95.3	90-110
Beryllium	SW6010D	ICP2_201202B	0.4846	0.5	96.9	90-110
Boron	SW6010D	ICP2_201202B	2.281	2.5	91.3	90-110
Cadmium	SW6010D	ICP2_201202B	0.4939	0.5	98.8	90-110
Calcium	SW6010D	ICP2_201202B	2.295	2.5	91.8	90-110
Chromium	SW6010D	ICP2_201202B	0.4781	0.5	95.6	90-110
Cobalt	SW6010D	ICP2_201202B	2.478	2.5	99.1	90-110
Copper	SW6010D	ICP2_201202B	2.439	2.5	97.6	90-110
Iron	SW6010D	ICP2_201202B	2.295	2.5	91.8	90-110
Lead	SW6010D	ICP2_201202B	0.4984	0.5	99.7	90-110
Lithium	SW6010D	ICP2_201202B	2.351	2.5	94.0	90-110
Magnesium	SW6010D	ICP2_201202B	2.246	2.5	89.9 *	90-110
Manganese	SW6010D	ICP2_201202B	0.4803	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201202B	2.48	2.5	99.2	90-110
Nickel	SW6010D	ICP2_201202B	2.477	2.5	99.1	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/03/20 00:16						
Potassium	SW6010D	ICP2_201202B	46.77	50	93.5	90-110
Selenium	SW6010D	ICP2_201202B	2.495	2.5	99.8	90-110
Silicon	SW6010D	ICP2_201202B	2.306	2.5	92.2	90-110
Silver	SW6010D	ICP2_201202B	0.4785	0.5	95.7	90-110
Sodium	SW6010D	ICP2_201202B	47.04	50	94.1	90-110
Strontium	SW6010D	ICP2_201202B	0.4775	0.5	95.5	90-110
Thallium	SW6010D	ICP2_201202B	0.5042	0.5	101	90-110
Tin	SW6010D	ICP2_201202B	0.493	0.5	98.6	90-110
Titanium	SW6010D	ICP2_201202B	0.4666	0.5	93.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.4851	0.5	97.0	90-110
Zinc	SW6010D	ICP2_201202B	1.226	1.25	98.1	90-110
CCV 12/03/20 01:22						
Aluminum	SW6010D	ICP2_201202B	2.299	2.5	92.0	90-110
Antimony	SW6010D	ICP2_201202B	0.4937	0.5	98.7	90-110
Arsenic	SW6010D	ICP2_201202B	0.4876	0.5	97.5	90-110
Barium	SW6010D	ICP2_201202B	2.313	2.5	92.5	90-110
Beryllium	SW6010D	ICP2_201202B	0.4719	0.5	94.4	90-110
Boron	SW6010D	ICP2_201202B	2.203	2.5	88.1 *	90-110
Cadmium	SW6010D	ICP2_201202B	0.4883	0.5	97.7	90-110
Calcium	SW6010D	ICP2_201202B	2.25	2.5	90.0 *	90-110
Chromium	SW6010D	ICP2_201202B	0.466	0.5	93.2	90-110
Cobalt	SW6010D	ICP2_201202B	2.461	2.5	98.5	90-110
Copper	SW6010D	ICP2_201202B	2.35	2.5	94.0	90-110
Iron	SW6010D	ICP2_201202B	2.236	2.5	89.4 *	90-110
Lead	SW6010D	ICP2_201202B	0.4958	0.5	99.2	90-110
Lithium	SW6010D	ICP2_201202B	2.263	2.5	90.5	90-110
Magnesium	SW6010D	ICP2_201202B	2.154	2.5	86.1 *	90-110
Manganese	SW6010D	ICP2_201202B	0.4681	0.5	93.6	90-110
Molybdenum	SW6010D	ICP2_201202B	2.457	2.5	98.3	90-110
Nickel	SW6010D	ICP2_201202B	2.458	2.5	98.3	90-110
Potassium	SW6010D	ICP2_201202B	44.53	50	89.1 *	90-110
Selenium	SW6010D	ICP2_201202B	2.48	2.5	99.2	90-110
Silicon	SW6010D	ICP2_201202B	2.239	2.5	89.6 *	90-110
Silver	SW6010D	ICP2_201202B	0.464	0.5	92.8	90-110
Sodium	SW6010D	ICP2_201202B	45.79	50	91.6	90-110
Strontium	SW6010D	ICP2_201202B	0.4666	0.5	93.3	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/03/20 01:22						
Thallium	SW6010D	ICP2_201202B	0.5025	0.5	100	90-110
Tin	SW6010D	ICP2_201202B	0.4882	0.5	97.6	90-110
Titanium	SW6010D	ICP2_201202B	0.466	0.5	93.2	90-110
Vanadium	SW6010D	ICP2_201202B	0.4696	0.5	93.9	90-110
Zinc	SW6010D	ICP2_201202B	1.214	1.25	97.2	90-110
CCV 12/03/20 01:37						
Aluminum	SW6010D	ICP2_201202B	2.389	2.5	95.6	90-110
Antimony	SW6010D	ICP2_201202B	0.4974	0.5	99.5	90-110
Arsenic	SW6010D	ICP2_201202B	0.4897	0.5	97.9	90-110
Barium	SW6010D	ICP2_201202B	2.393	2.5	95.7	90-110
Beryllium	SW6010D	ICP2_201202B	0.4844	0.5	96.9	90-110
Boron	SW6010D	ICP2_201202B	2.281	2.5	91.2	90-110
Cadmium	SW6010D	ICP2_201202B	0.4913	0.5	98.3	90-110
Calcium	SW6010D	ICP2_201202B	2.368	2.5	94.7	90-110
Chromium	SW6010D	ICP2_201202B	0.4789	0.5	95.8	90-110
Cobalt	SW6010D	ICP2_201202B	2.476	2.5	99.0	90-110
Copper	SW6010D	ICP2_201202B	2.409	2.5	96.3	90-110
Iron	SW6010D	ICP2_201202B	2.348	2.5	93.9	90-110
Lead	SW6010D	ICP2_201202B	0.4964	0.5	99.3	90-110
Lithium	SW6010D	ICP2_201202B	2.344	2.5	93.7	90-110
Magnesium	SW6010D	ICP2_201202B	2.278	2.5	91.1	90-110
Manganese	SW6010D	ICP2_201202B	0.4803	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201202B	2.472	2.5	98.9	90-110
Nickel	SW6010D	ICP2_201202B	2.472	2.5	98.9	90-110
Potassium	SW6010D	ICP2_201202B	46.13	50	92.3	90-110
Selenium	SW6010D	ICP2_201202B	2.495	2.5	99.8	90-110
Silicon	SW6010D	ICP2_201202B	2.327	2.5	93.1	90-110
Silver	SW6010D	ICP2_201202B	0.4763	0.5	95.3	90-110
Sodium	SW6010D	ICP2_201202B	47.47	50	94.9	90-110
Strontium	SW6010D	ICP2_201202B	0.4834	0.5	96.7	90-110
Thallium	SW6010D	ICP2_201202B	0.5032	0.5	101	90-110
Tin	SW6010D	ICP2_201202B	0.4905	0.5	98.1	90-110
Titanium	SW6010D	ICP2_201202B	0.482	0.5	96.4	90-110
Vanadium	SW6010D	ICP2_201202B	0.48	0.5	96.0	90-110
Zinc	SW6010D	ICP2_201202B	1.222	1.25	97.7	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Antimony	SW6010D	ICP2_201130B	0.00548	0.005	110	80-120	11/30/20 15:05
Arsenic	SW6010D	ICP2_201130B	0.00411	0.005	82.2	80-120	11/30/20 15:05
Barium	SW6010D	ICP2_201130B	0.00527	0.005	105	80-120	11/30/20 15:05
Beryllium	SW6010D	ICP2_201130B	0.00194	0.002	97.0	80-120	11/30/20 15:05
Cadmium	SW6010D	ICP2_201130B	0.00972	0.01	97.2	80-120	11/30/20 15:05
Chromium	SW6010D	ICP2_201130B	0.005	0.005	100	80-120	11/30/20 15:05
Cobalt	SW6010D	ICP2_201130B	0.00504	0.005	101	80-120	11/30/20 15:05
Lead	SW6010D	ICP2_201130B	0.00463	0.005	92.6	80-120	11/30/20 15:05
Manganese	SW6010D	ICP2_201130B	0.00506	0.005	101	80-120	11/30/20 15:05
Nickel	SW6010D	ICP2_201130B	0.00468	0.005	93.6	80-120	11/30/20 15:05
Selenium	SW6010D	ICP2_201130B	0.0113	0.01	113	80-120	11/30/20 15:05
Silver	SW6010D	ICP2_201130B	0.00547	0.005	109	80-120	11/30/20 15:05
Thallium	SW6010D	ICP2_201130B	0.0102	0.01	102	80-120	11/30/20 15:05
Vanadium	SW6010D	ICP2_201130B	0.00465	0.005	93.0	80-120	11/30/20 15:05
Zinc	SW6010D	ICP2_201130B	0.00954	0.01	95.4	80-120	11/30/20 15:05
LLICV							
Antimony	SW6010D	ICP2_201201B	0.00443	0.005	88.6	80-120	12/01/20 12:03
Arsenic	SW6010D	ICP2_201201B	0.00467	0.005	93.4	80-120	12/01/20 12:03
Barium	SW6010D	ICP2_201201B	0.00455	0.005	91.0	80-120	12/01/20 12:03
Beryllium	SW6010D	ICP2_201201B	0.00201	0.002	101	80-120	12/01/20 12:03
Cadmium	SW6010D	ICP2_201201B	0.00982	0.01	98.2	80-120	12/01/20 12:03
Calcium	SW6010D	ICP2_201201B	0.5288	0.5	106	80-120	12/01/20 12:03
Chromium	SW6010D	ICP2_201201B	0.00513	0.005	103	80-120	12/01/20 12:03
Cobalt	SW6010D	ICP2_201201B	0.00482	0.005	96.4	80-120	12/01/20 12:03
Copper	SW6010D	ICP2_201201B	0.0102	0.01	102	80-120	12/01/20 12:03
Iron	SW6010D	ICP2_201201B	0.0802	0.08	100	80-120	12/01/20 12:03
Lead	SW6010D	ICP2_201201B	0.00535	0.005	107	80-120	12/01/20 12:03
Magnesium	SW6010D	ICP2_201201B	0.2306	0.2	115	80-120	12/01/20 12:03
Manganese	SW6010D	ICP2_201201B	0.0052	0.005	104	80-120	12/01/20 12:03
Nickel	SW6010D	ICP2_201201B	0.00533	0.005	107	80-120	12/01/20 12:03
Potassium	SW6010D	ICP2_201201B	0.1937	0.2	96.9	80-120	12/01/20 12:03
Selenium	SW6010D	ICP2_201201B	0.00875	0.01	87.5	80-120	12/01/20 12:03
Silver	SW6010D	ICP2_201201B	0.00543	0.005	109	80-120	12/01/20 12:03
Sodium	SW6010D	ICP2_201201B	0	0.2	96.3	80-120	12/01/20 12:03
Thallium	SW6010D	ICP2_201201B	0.0107	0.01	107	80-120	12/01/20 12:03
Vanadium	SW6010D	ICP2_201201B	0.00509	0.005	102	80-120	12/01/20 12:03

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV								
	Zinc	SW6010D	ICP2_201201B	0.00982	0.01	98.2	80-120	12/01/20 12:03
LLICV								
	Aluminum	SW6010D	ICP2_201202B	0.011	0.01	110	80-120	12/02/20 14:22
	Antimony	SW6010D	ICP2_201202B	0.00558	0.005	112	80-120	12/02/20 14:22
	Arsenic	SW6010D	ICP2_201202B	0.0063	0.005	126 *	80-120	12/02/20 14:22
	Barium	SW6010D	ICP2_201202B	0.00471	0.005	94.2	80-120	12/02/20 14:22
	Beryllium	SW6010D	ICP2_201202B	0.00189	0.002	94.5	80-120	12/02/20 14:22
	Boron	SW6010D	ICP2_201202B	0.0207	0.02	103	80-120	12/02/20 14:22
	Cadmium	SW6010D	ICP2_201202B	0.00975	0.01	97.5	80-120	12/02/20 14:22
	Calcium	SW6010D	ICP2_201202B	0.4965	0.5	99.3	80-120	12/02/20 14:22
	Chromium	SW6010D	ICP2_201202B	0.00507	0.005	101	80-120	12/02/20 14:22
	Cobalt	SW6010D	ICP2_201202B	0.00492	0.005	98.4	80-120	12/02/20 14:22
	Copper	SW6010D	ICP2_201202B	0.00976	0.01	97.6	80-120	12/02/20 14:22
	Iron	SW6010D	ICP2_201202B	0	0.08	96.0	80-120	12/02/20 14:22
	Lead	SW6010D	ICP2_201202B	0.00584	0.005	117	80-120	12/02/20 14:22
	Lithium	SW6010D	ICP2_201202B	0.01	0.01	100	80-120	12/02/20 14:22
	Magnesium	SW6010D	ICP2_201202B	0.205	0.2	103	80-120	12/02/20 14:22
	Manganese	SW6010D	ICP2_201202B	0.00513	0.005	103	80-120	12/02/20 14:22
	Molybdenum	SW6010D	ICP2_201202B	0.00512	0.005	102	80-120	12/02/20 14:22
	Nickel	SW6010D	ICP2_201202B	0.00488	0.005	97.6	80-120	12/02/20 14:22
	Potassium	SW6010D	ICP2_201202B	0.1712	0.2	85.6	80-120	12/02/20 14:22
	Selenium	SW6010D	ICP2_201202B	0.00876	0.01	87.6	80-120	12/02/20 14:22
	Silicon	SW6010D	ICP2_201202B	0.2832	0.2	142 *	80-120	12/02/20 14:22
	Silver	SW6010D	ICP2_201202B	0.00518	0.005	104	80-120	12/02/20 14:22
	Sodium	SW6010D	ICP2_201202B	0	0.2	97.0	80-120	12/02/20 14:22
	Strontium	SW6010D	ICP2_201202B	0.00494	0.005	98.8	80-120	12/02/20 14:22
	Thallium	SW6010D	ICP2_201202B	0.0103	0.01	103	80-120	12/02/20 14:22
	Tin	SW6010D	ICP2_201202B	0.0103	0.01	103	80-120	12/02/20 14:22
	Titanium	SW6010D	ICP2_201202B	0.00546	0.005	109	80-120	12/02/20 14:22
	Vanadium	SW6010D	ICP2_201202B	0.00472	0.005	94.4	80-120	12/02/20 14:22
	Zinc	SW6010D	ICP2_201202B	0.0101	0.01	101	80-120	12/02/20 14:22

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/30/20 14:55				
Antimony	SW6010D	ICP2_201130B	0.00199	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.000312	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 15:41				
Antimony	SW6010D	ICP2_201130B	0.00204	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 16:44				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 16:44				
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 17:44				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 18:46				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0.00189	J

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 18:46				
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 19:47				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 20:49				
Antimony	SW6010D	ICP2_201130B	0.0022	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 20:49				
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 21:55				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0.000814	J
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0.00294	J
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0.00277	J
Selenium	SW6010D	ICP2_201130B	0.00455	J
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 22:56				
Antimony	SW6010D	ICP2_201130B	0.00242	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 23:57				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 12/01/20 00:58				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 12/01/20 02:00				
Antimony	SW6010D	ICP2_201130B	0.0027	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 02:00				
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:02				
Antimony	SW6010D	ICP2_201130B	0.00202	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.000309	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0.00193	J
Cobalt	SW6010D	ICP2_201130B	0.000479	J
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:17				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.0003	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0.000441	J
Lead	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 03:17				
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
ICB 12/01/20 11:54				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0.000251	J
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 12:40				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 12:40				
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 13:46				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 13:46				
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 14:58				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 16:04				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 16:04				
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 17:12				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 18:15				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 18:15				
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 19:22				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0.00101	J
Potassium	SW6010D	ICP2_201201B	0.2058	C
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 19:22				
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 20:35				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0.000876	J
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 21:41				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0.001	J
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 21:41				
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 22:47				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0.000265	J
Cadmium	SW6010D	ICP2_201201B	0.00125	J
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0.000545	J
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0.7633	C
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 23:55				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 23:55				
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0.000289	J
Cadmium	SW6010D	ICP2_201201B	0.0014	J
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0.2528	C
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/02/20 00:51				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0.00137	J
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0.189	J
Selenium	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 00:51				
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
ICB 12/02/20 14:11				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0.00331	J
Arsenic	SW6010D	ICP2_201202B	0.00176	J
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0.000303	J
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00058	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 14:58				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0.00168	J
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0.00815	J
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00114	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 15:39				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0.000272	J
Boron	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 15:39				
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00102	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0.00355	J
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 16:49				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 16:49				
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00109	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 17:50				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0.00182	J
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00123	J
Nickel	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 17:50				
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 18:52				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0.000284	J
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0.00052	J
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00143	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 18:52				
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 19:59				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0.00242	J
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0.000859	J
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00152	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0.2861	C
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0.0105	C
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 21:01				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00126	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0.1697	J
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 22:08				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0.0021	J
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 22:08				
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0.00509	J
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.0014	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 23:14				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 23:14				
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00109	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/03/20 00:21				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00132	J
Nickel	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/03/20 00:21				
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/03/20 01:27				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0.00227	J
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.000952	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/03/20 01:27				
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/03/20 01:42				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00115	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168178	**Basis:**	Wet
Lab Code:	MBLK-168178		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/30/20 20:54	11/23/20 16:27	
Lead	SW6010D	**0.7281**	mg/Kg	0.25	1	12/01/20 12:55	11/23/20 16:27	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168378	**Basis:**	Wet
Lab Code:	MBLK-168378		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/30/20 23:21	11/29/20 15:02	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/30/20 23:21	11/29/20 15:02	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168379	**Basis:**	Wet
Lab Code:	MBLK-168379		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	12/01/20 01:45	11/29/20 15:04	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	12/01/20 01:45	11/29/20 15:04	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201130B	92.13	100	92.1	80-120	11/30/20 15:10
Antimony	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Arsenic	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Barium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Beryllium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Cadmium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Calcium	SW6010D	ICP2_201130B	92.22	100	92.2	80-120	11/30/20 15:10
Chromium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Cobalt	SW6010D	ICP2_201130B	0.00342 J	-	-	-	11/30/20 15:10
Iron	SW6010D	ICP2_201130B	93.09	100	93.1	80-120	11/30/20 15:10
Lead	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Magnesium	SW6010D	ICP2_201130B	95.39	100	95.4	80-120	11/30/20 15:10
Manganese	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Molybdenum	SW6010D	ICP2_201130B	1.92	2	96.0	80-120	11/30/20 15:10
Nickel	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Potassium	SW6010D	ICP2_201130B	96.41 E	100	96.4	80-120	11/30/20 15:10
Selenium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Silver	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Sodium	SW6010D	ICP2_201130B	94.44 E	100	94.4	80-120	11/30/20 15:10
Thallium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Titanium	SW6010D	ICP2_201130B	1.896	2	94.8	80-120	11/30/20 15:10
Vanadium	SW6010D	ICP2_201130B	0.00245 J	-	-	-	11/30/20 15:10
Zinc	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201201B	95.19	100	95.2	80-120	12/01/20 12:09
Antimony	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Arsenic	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Barium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Beryllium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Cadmium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Calcium	SW6010D	ICP2_201201B	96.29	100	96.3	80-120	12/01/20 12:09
Chromium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Cobalt	SW6010D	ICP2_201201B	0.00355 J	-	-	-	12/01/20 12:09
Copper	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Iron	SW6010D	ICP2_201201B	97.13	100	97.1	80-120	12/01/20 12:09
Lead	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Magnesium	SW6010D	ICP2_201201B	98.84	100	98.8	80-120	12/01/20 12:09
Manganese	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Molybdenum	SW6010D	ICP2_201201B	1.94	2	97.0	80-120	12/01/20 12:09
Nickel	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Potassium	SW6010D	ICP2_201201B	100.6 E	100	101	80-120	12/01/20 12:09
Selenium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Silver	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Sodium	SW6010D	ICP2_201201B	98.75 E	100	98.7	80-120	12/01/20 12:09
Thallium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Titanium	SW6010D	ICP2_201201B	1.972	2	98.6	80-120	12/01/20 12:09
Vanadium	SW6010D	ICP2_201201B	0.00221 J	-	-	-	12/01/20 12:09
Zinc	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201202B	93.05	100	93.1	80-120	12/02/20 14:27
Antimony	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Arsenic	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Barium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Beryllium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Boron	SW6010D	ICP2_201202B	0.09642	-	-	-	12/02/20 14:27
Cadmium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Calcium	SW6010D	ICP2_201202B	92.03	100	92.0	80-120	12/02/20 14:27
Chromium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Cobalt	SW6010D	ICP2_201202B	0.00132 J	-	-	-	12/02/20 14:27
Copper	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Iron	SW6010D	ICP2_201202B	92.41	100	92.4	80-120	12/02/20 14:27
Lead	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Lithium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Magnesium	SW6010D	ICP2_201202B	95.54	100	95.5	80-120	12/02/20 14:27
Manganese	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Molybdenum	SW6010D	ICP2_201202B	1.981	2	99.0	80-120	12/02/20 14:27
Nickel	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Potassium	SW6010D	ICP2_201202B	96.23 E	100	96.2	80-120	12/02/20 14:27
Selenium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Silicon	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Silver	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Sodium	SW6010D	ICP2_201202B	94.79 E	100	94.8	80-120	12/02/20 14:27
Strontium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Thallium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Tin	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Titanium	SW6010D	ICP2_201202B	1.878	2	93.9	80-120	12/02/20 14:27
Vanadium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Zinc	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/23/2020

Matrix Spike Summary
Metals

Sample Name:	BatchQC	**Units:**	mg/Kg
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

20111726-41AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	-3.052	6.743 S	7.386	133 *	75-125
Lead	18.71	21.27 BS	7.386	34.6 *	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/29/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-F0:S000010	**Units:**	mg/L
Lab Code:	IDA001:DU-F0:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

20111754-02AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.008052	1.014	1	101	75-125
Lead	0.7293	1.722	1	99.3	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/29/2020

Matrix Spike Summary
Metals

Sample Name:	IDA001:DU-F8:S000010	**Units:**	mg/L
Lab Code:	IDA001:DU-F8:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

20111754-22AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	-0.004378	1.013	1	102	75-125
Lead	0.4389	1.467	1	103	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111726-41A	**Units:**	mg/Kg
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111726-41AMS			**Duplicate Matrix Spike** 20111726-41AMSD				
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	-3.052	6.273 S	7.716	121				75-125	9.93	20
Lead	18.71	27.00 BS	7.716	107	B			75-125	19	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/29/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111754-02A	**Units:**	mg/L
Lab Code:	IDA001:DU-F0:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111754-02AMS			Duplicate Matrix Spike 20111754-02AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	0.008052	1.014	1	101	1.006	1	99.8	75-125	0.762	20
Lead	0.7293	1.722	1	99.3	1.718	1	98.8	75-125	0.283	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/29/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111754-22A	**Units:**	mg/L
Lab Code:	IDA001:DU-F8:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111754-22AMS			Duplicate Matrix Spike 20111754-22AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	-0.004378	1.013	1	102	0.99	1	99.4	75-125	2.28	20
Lead	0.4389	1.467	1	103	1.487	1	105	75-125	1.32	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

POST SPIKE SAMPLE RECOVERY

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
20111726-41APDSA								
Arsenic	SW6010D	ICP2_201202B	6.196	7.119	6.553	14.1 *	80-120	12/02/20 16:14
Lead	SW6010D	ICP2_201202B	25.15	20.46	6.553	-71.6 *	80-120	12/02/20 16:14

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Analyzed:**	11/30/2020
Sample Matrix:	Soil	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201130B

LCS-168178

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.89	5	97.8	80-120
Lead	5.693 B	5	114	80-120

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Analyzed:**	11/30/2020
Sample Matrix:	Water	**Date Extracted:**	11/29/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201130B

LCS-168378

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.09857	0.1	98.6	80-120
Lead	0.1098	0.1	110	80-120

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Analyzed:**	12/01/2020
Sample Matrix:	Water	**Date Extracted:**	11/29/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201130B

LCS-168379

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.09691	0.1	96.9	80-120
Lead	0.1079	0.1	108	80-120

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP SERIAL DILUTIONS

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
20111726-41ASD							
Arsenic	SW6010D	ICP2_201202B	6.196	0.7634 JR	87.7	10	12/02/20 16:04
Lead	SW6010D	ICP2_201202B	25.15	15.07 BR	40.1	10	12/02/20 16:04

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Detection Limits

Instrument: ICP2 **Matrix:** Soil

Analyte	Units	MRL	MDL	Method
Arsenic	mg/Kg-dry	0.25	0.065	SW6010D
Lead	mg/Kg-dry	0.25	0.20	SW6010D
Miscellaneous		0	0	MISC

Instrument: ICP2 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.0016	SW6010D
Lead	mg/L	0.0050	0.0013	SW6010D

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201123A
Analysis Method: MISC **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
	IDA001:DU-F0:S000010	20111754-01	11/23/2020	00:00	
	IDA001:DU-F1:S000010	20111754-03	11/23/2020	00:00	
	IDA001:DU-F1-TE:S000010	20111754-05	11/23/2020	00:00	
	IDA001:DU-F1-TS:S000010	20111754-06	11/23/2020	00:00	
	IDA001:DU-F2:S000010	20111754-07	11/23/2020	00:00	
	IDA001:DU-F3:S000010	20111754-09	11/23/2020	00:00	
	IDA001:DU-F4:S000010	20111754-11	11/23/2020	00:00	
	IDA001:DU-F5:S000010	20111754-13	11/23/2020	00:00	
	IDA001:DU-F7:S000010	20111754-15	11/23/2020	00:00	
	IDA001:DU-F7-TE:S000010	20111754-17	11/23/2020	00:00	
	IDA001:DU-F7-TS:S000010	20111754-18	11/23/2020	00:00	
	IDA001:DU-F6:S000010	20111754-19	11/23/2020	00:00	
	IDA001:DU-F8:S000010	20111754-21	11/23/2020	00:00	
	IDA001:DU-F9:S000010	20111754-23	11/23/2020	00:00	

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/30/2020	14:25	
2	ICAL2	ICAL2	11/30/2020	14:30	
3	ICAL3	ICAL3	11/30/2020	14:35	
4	ICAL4	ICAL4	11/30/2020	14:40	
5	ICAL5	ICAL5	11/30/2020	14:45	
9	ICVLL	ICVLL	11/30/2020	15:05	
10	ICSA	ICSA	11/30/2020	15:10	
11	LDR1	LDR1	11/30/2020	15:15	
12	LDR2	LDR2	11/30/2020	15:21	
15	CCV	CCV	11/30/2020	15:37	
16	CCB	CCB	11/30/2020	15:41	
25	CCV	CCV	11/30/2020	16:39	
26	CCB	CCB	11/30/2020	16:44	
37	CCV	CCV	11/30/2020	17:40	
38	CCB	CCB	11/30/2020	17:44	
49	CCV	CCV	11/30/2020	18:41	
50	CCB	CCB	11/30/2020	18:46	
61	CCV	CCV	11/30/2020	19:42	
62	CCB	CCB	11/30/2020	19:47	
73	CCV	CCV	11/30/2020	20:44	
74	CCB	CCB	11/30/2020	20:49	
75	MBLK-168178	MBLK-168178	11/30/2020	20:54	
76	LCS-168178	LCS-168178	11/30/2020	20:59	
86	CCV	CCV	11/30/2020	21:50	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
87	CCB	CCB	11/30/2020	21:55	
92	IDA001:DU-F5:S000010	20111754-13	11/30/2020	22:21	
93	IDA001:DU-F7:S000010	20111754-15	11/30/2020	22:26	
94	IDA001:DU-F7-TE:S000010	20111754-17	11/30/2020	22:31	
95	IDA001:DU-F7-TS:S000010	20111754-18	11/30/2020	22:36	
96	IDA001:DU-F6:S000010	20111754-19	11/30/2020	22:41	
97	IDA001:DU-F8:S000010	20111754-21	11/30/2020	22:46	
98	CCV	CCV	11/30/2020	22:51	
99	CCB	CCB	11/30/2020	22:56	
100	IDA001:DU-F9:S000010	20111754-23	11/30/2020	23:01	
104	MBLK-168378	MBLK-168378	11/30/2020	23:21	
105	LCS-168378	LCS-168378	11/30/2020	23:26	
110	CCV	CCV	11/30/2020	23:52	
111	CCB	CCB	11/30/2020	23:57	
119	IDA001:DU-F0:S000010	20111754-02	12/01/2020	00:38	
120	20111754-02AMS	20111754-02AMS	12/01/2020	00:43	
121	20111754-02AMSD	20111754-02AMSD	12/01/2020	00:48	
122	CCV	CCV	12/01/2020	00:53	
123	CCB	CCB	12/01/2020	00:58	
124	IDA001:DU-F1:S000010	20111754-04	12/01/2020	01:03	
125	IDA001:DU-F2:S000010	20111754-08	12/01/2020	01:09	
126	IDA001:DU-F3:S000010	20111754-10	12/01/2020	01:14	
127	IDA001:DU-F4:S000010	20111754-12	12/01/2020	01:19	
128	IDA001:DU-F5:S000010	20111754-14	12/01/2020	01:24	
129	IDA001:DU-F7:S000010	20111754-16	12/01/2020	01:29	
130	IDA001:DU-F6:S000010	20111754-20	12/01/2020	01:34	
132	MBLK-168379	MBLK-168379	12/01/2020	01:45	
133	LCS-168379	LCS-168379	12/01/2020	01:50	
134	CCV	CCV	12/01/2020	01:55	
135	CCB	CCB	12/01/2020	02:00	
136	IDA001:DU-F8:S000010	20111754-22	12/01/2020	02:05	
137	20111754-22AMS	20111754-22AMS	12/01/2020	02:10	
138	20111754-22AMSD	20111754-22AMSD	12/01/2020	02:15	
139	IDA001:DU-F9:S000010	20111754-24	12/01/2020	02:20	
146	CCV	CCV	12/01/2020	02:57	
147	CCB	CCB	12/01/2020	03:02	
149	CCV	CCV	12/01/2020	03:12	
150	CCB	CCB	12/01/2020	03:17	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	12/01/2020	11:24	
2	ICAL2	ICAL2	12/01/2020	11:29	
3	ICAL3	ICAL3	12/01/2020	11:34	
4	ICAL4	ICAL4	12/01/2020	11:39	
5	ICAL5	ICAL5	12/01/2020	11:44	
9	ICVLL	ICVLL	12/01/2020	12:03	
10	ICSA	ICSA	12/01/2020	12:09	
11	LDR1	LDR1	12/01/2020	12:14	
12	LDR2	LDR2	12/01/2020	12:19	
15	CCV	CCV	12/01/2020	12:35	
16	CCB	CCB	12/01/2020	12:40	
19	MBLK-168178	MBLK-168178	12/01/2020	12:55	
28	CCV	CCV	12/01/2020	13:41	
29	CCB	CCB	12/01/2020	13:46	
31	20111726-41AMS	20111726-41AMS	12/01/2020	14:08	
32	20111726-41AMSD	20111726-41AMSD	12/01/2020	14:13	
34	IDA001:DU-F0:S000010	20111754-01	12/01/2020	14:24	
35	IDA001:DU-F1:S000010	20111754-03	12/01/2020	14:29	
36	IDA001:DU-F1-TE:S000010	20111754-05	12/01/2020	14:34	
37	IDA001:DU-F1-TS:S000010	20111754-06	12/01/2020	14:38	
38	IDA001:DU-F2:S000010	20111754-07	12/01/2020	14:43	
39	IDA001:DU-F3:S000010	20111754-09	12/01/2020	14:48	
40	CCV	CCV	12/01/2020	14:53	
41	CCB	CCB	12/01/2020	14:58	
42	IDA001:DU-F4:S000010	20111754-11	12/01/2020	15:04	
43	IDA001:DU-F8:S000010	20111754-21	12/01/2020	15:09	
44	IDA001:DU-F9:S000010	20111754-23	12/01/2020	15:14	
53	CCV	CCV	12/01/2020	16:00	
54	CCB	CCB	12/01/2020	16:04	
66	CCV	CCV	12/01/2020	17:07	
67	CCB	CCB	12/01/2020	17:12	
78	CCV	CCV	12/01/2020	18:10	
79	CCB	CCB	12/01/2020	18:15	
91	CCV	CCV	12/01/2020	19:17	
92	CCB	CCB	12/01/2020	19:22	
103	CCV	CCV	12/01/2020	20:25	
105	CCB	CCB	12/01/2020	20:35	
116	CCV	CCV	12/01/2020	21:31	
118	CCB	CCB	12/01/2020	21:41	
130	CCV	CCV	12/01/2020	22:42	
131	CCB	CCB	12/01/2020	22:47	
143	CCV	CCV	12/01/2020	23:50	
144	CCB	CCB	12/01/2020	23:55	
154	CCV	CCV	12/02/2020	00:46	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
155	CCB	CCB	12/02/2020	00:51	

Analysis Lot:ICP2_201202B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	12/02/2020	13:41	
2	ICAL2	ICAL2	12/02/2020	13:46	
3	ICAL3	ICAL3	12/02/2020	13:51	
4	ICAL4	ICAL4	12/02/2020	13:56	
5	ICAL5	ICAL5	12/02/2020	14:01	
9	ICVLL	ICVLL	12/02/2020	14:22	
10	ICSA	ICSA	12/02/2020	14:27	
11	LDR1	LDR1	12/02/2020	14:32	
12	LDR2	LDR2	12/02/2020	14:38	
15	CCV	CCV	12/02/2020	14:53	
16	CCB	CCB	12/02/2020	14:58	
23	CCV	CCV	12/02/2020	15:34	
24	CCB	CCB	12/02/2020	15:39	
29	20111726-41ASD	20111726-41ASD	12/02/2020	16:04	
30	20111726-41APDS	20111726-41APDS	12/02/2020	16:14	
36	CCV	CCV	12/02/2020	16:44	
37	CCB	CCB	12/02/2020	16:49	
48	CCV	CCV	12/02/2020	17:45	
49	CCB	CCB	12/02/2020	17:50	
60	CCV	CCV	12/02/2020	18:47	
61	CCB	CCB	12/02/2020	18:52	
73	CCV	CCV	12/02/2020	19:54	
74	CCB	CCB	12/02/2020	19:59	
85	CCV	CCV	12/02/2020	20:56	
86	CCB	CCB	12/02/2020	21:01	
98	CCV	CCV	12/02/2020	22:03	
99	CCB	CCB	12/02/2020	22:08	
111	CCV	CCV	12/02/2020	23:09	
112	CCB	CCB	12/02/2020	23:14	
124	CCV	CCV	12/03/2020	00:16	
125	CCB	CCB	12/03/2020	00:21	
137	CCV	CCV	12/03/2020	01:22	
138	CCB	CCB	12/03/2020	01:27	
140	CCV	CCV	12/03/2020	01:37	
141	CCB	CCB	12/03/2020	01:42	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ICAL1	1	11/30/20 14:25		X									X				
ICAL2	1	11/30/20 14:30		X									X				
ICAL3	1	11/30/20 14:35		X									X				
ICAL4	1	11/30/20 14:40		X									X				
ICAL5	1	11/30/20 14:45		X									X				
ICV/QCS	1	11/30/20 14:50		X									X				
ICB	1	11/30/20 14:55		X									X				
ICSA	1	11/30/20 15:10		X									X				
CCV	1	11/30/20 15:37		X									X				
CCB	1	11/30/20 15:41		X									X				
CCV	1	11/30/20 16:39		X									X				
CCB	1	11/30/20 16:44		X									X				
ZZZZZZ	1	11/30/20 16:49											X				
ZZZZZZ	1	11/30/20 17:14											X				
ZZZZZZ	1	11/30/20 17:19											X				
ZZZZZZ	1	11/30/20 17:24								X							
ZZZZZZ	1	11/30/20 17:29								X							
ZZZZZZ	10	11/30/20 17:34								X							
CCV	1	11/30/20 17:40		X									X				
CCB	1	11/30/20 17:44		X									X				
ZZZZZZ	10	11/30/20 17:50								X							
ZZZZZZ	1	11/30/20 17:55								X							
ZZZZZZ	1	11/30/20 18:10	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:25	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:30	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:36	X	X	X		X		X						X		
CCV	1	11/30/20 18:41		X									X				
CCB	1	11/30/20 18:46		X									X				
ZZZZZZ	1	11/30/20 19:01	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 19:06								X							
ZZZZZZ	1	11/30/20 19:22								X							
ZZZZZZ	1	11/30/20 19:27								X							
ZZZZZZ	1	11/30/20 19:32								X							
ZZZZZZ	1	11/30/20 19:37															X
CCV	1	11/30/20 19:42		X									X				
CCB	1	11/30/20 19:47		X									X				
ZZZZZZ	1	11/30/20 19:52															X

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ZZZZZZ	1	11/30/20 19:58															X
ZZZZZZ	1	11/30/20 20:03															X
ZZZZZZ	1	11/30/20 20:08															X
ZZZZZZ	1	11/30/20 20:13															X
ZZZZZZ	1	11/30/20 20:18															X
ZZZZZZ	1	11/30/20 20:23															X
ZZZZZZ	1	11/30/20 20:29															X
ZZZZZZ	1	11/30/20 20:34															X
ZZZZZZ	1	11/30/20 20:39		X			X						X				
CCV	1	11/30/20 20:44		X									X				
CCB	1	11/30/20 20:49		X									X				
MBLK-168178	1	11/30/20 20:54		X													
LCS-168178	1	11/30/20 20:59		X									X				
CCV	1	11/30/20 21:50		X									X				
CCB	1	11/30/20 21:55		X									X				
IDA001:DU-F5:S000010	10	11/30/20 22:21		X									X				
IDA001:DU-F7:S000010	10	11/30/20 22:26		X									X				
IDA001:DU-F7-TE:S000010	10	11/30/20 22:31		X									X				
IDA001:DU-F7-TS:S000010	10	11/30/20 22:36		X									X				
IDA001:DU-F6:S000010	10	11/30/20 22:41		X									X				
IDA001:DU-F8:S000010	10	11/30/20 22:46		X													
CCV	1	11/30/20 22:51		X									X				
CCB	1	11/30/20 22:56		X									X				
IDA001:DU-F9:S000010	10	11/30/20 23:01		X													
ZZZZZZ	1	11/30/20 23:06		X		X	X	X	X		X	X		X	X		
ZZZZZZ	1	11/30/20 23:11		X		X	X	X	X		X	X		X	X		
ZZZZZZ	1	11/30/20 23:16		X		X	X	X	X		X	X		X	X		
MBLK-168378	1	11/30/20 23:21		X									X				
LCS-168378	1	11/30/20 23:26		X									X				
ZZZZZZ	1	11/30/20 23:31									X		X				
ZZZZZZ	1	11/30/20 23:37									X		X				
ZZZZZZ	1	11/30/20 23:42									X		X				
ZZZZZZ	1	11/30/20 23:47									X		X				

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
CCV	1	11/30/20 23:52		X									X				
CCB	1	11/30/20 23:57		X									X				
ZZZZZZ	1	12/01/20 00:02									X		X				
ZZZZZZ	1	12/01/20 00:07									X		X				
ZZZZZZ	1	12/01/20 00:12									X		X				
ZZZZZZ	1	12/01/20 00:17									X		X				
ZZZZZZ	1	12/01/20 00:23									X		X				
ZZZZZZ	1	12/01/20 00:28									X		X				
ZZZZZZ	1	12/01/20 00:33									X		X				
IDA001:DU-F0:S000010	1	12/01/20 00:38		X									X				
20111754-02AMS	1	12/01/20 00:43		X									X				
20111754-02AMSD	1	12/01/20 00:48		X									X				
CCV	1	12/01/20 00:53		X									X				
CCB	1	12/01/20 00:58		X									X				
IDA001:DU-F1:S000010	1	12/01/20 01:03		X									X				
IDA001:DU-F2:S000010	1	12/01/20 01:09		X									X				
IDA001:DU-F3:S000010	1	12/01/20 01:14		X									X				
IDA001:DU-F4:S000010	1	12/01/20 01:19		X									X				
IDA001:DU-F5:S000010	1	12/01/20 01:24		X									X				
IDA001:DU-F7:S000010	1	12/01/20 01:29		X									X				
IDA001:DU-F6:S000010	1	12/01/20 01:34		X									X				
ZZZZZZ	1	12/01/20 01:39	X	X	X		X		X				X		X		
MBLK-168379	1	12/01/20 01:45		X									X				
LCS-168379	1	12/01/20 01:50		X									X				
CCV	1	12/01/20 01:55		X									X				
CCB	1	12/01/20 02:00		X									X				
IDA001:DU-F8:S000010	1	12/01/20 02:05		X									X				
20111754-22AMS	1	12/01/20 02:10		X									X				
20111754-22AMSD	1	12/01/20 02:15		X									X				
IDA001:DU-F9:S000010	1	12/01/20 02:20		X									X				
ZZZZZZ	1	12/01/20 02:25	X	X	X		X		X						X		

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ZZZZZZ	1	12/01/20 02:30	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 02:36	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 02:41	X	X	X	X	X		X			X	X	X	X	X	
ZZZZZZ	1	12/01/20 02:46	X	X	X	X	X					X	X	X	X	X	
ZZZZZZ	1	12/01/20 02:51	X	X	X	X	X		X			X	X	X	X	X	
CCV	1	12/01/20 02:57		X									X				
CCB	1	12/01/20 03:02		X									X				
ZZZZZZ	1	12/01/20 03:07	X	X	X	X	X		X			X	X	X	X	X	
CCV	1	12/01/20 03:12		X									X				
CCB	1	12/01/20 03:17		X									X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ICAL1	1	12/01/20 11:24			X												X					
ICAL2	1	12/01/20 11:29			X												X					
ICAL3	1	12/01/20 11:34			X												X					
ICAL4	1	12/01/20 11:39			X												X					
ICAL5	1	12/01/20 11:44			X												X					
ICV/QCS	1	12/01/20 11:49			X												X					
ICB	1	12/01/20 11:54			X												X					
ICSA	1	12/01/20 12:09			X												X					
CCV	1	12/01/20 12:35			X												X					
CCB	1	12/01/20 12:40			X												X					
MBLK-168178	1	12/01/20 12:55															X					
ZZZZZZ	1	12/01/20 13:16	X																			
ZZZZZZ	1	12/01/20 13:21	X																			
ZZZZZZ	100	12/01/20 13:26															X					
ZZZZZZ	1	12/01/20 13:31	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
CCV	1	12/01/20 13:41			X												X					
CCB	1	12/01/20 13:46			X												X					
ZZZZZZ	1	12/01/20 14:03	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZMS	1	12/01/20 14:08			X												X					
ZZZZZZMSD	1	12/01/20 14:13			X												X					
ZZZZZZ	1	12/01/20 14:18	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDA001:DU-F0:S000010	10	12/01/20 14:24			X												X					
IDA001:DU-F1:S000010	10	12/01/20 14:29			X												X					
IDA001:DU-F1-TE:S000010	10	12/01/20 14:34			X												X					
IDA001:DU-F1-TS:S000010	10	12/01/20 14:38			X												X					
IDA001:DU-F2:S000010	10	12/01/20 14:43			X												X					
IDA001:DU-F3:S000010	10	12/01/20 14:48			X												X					
CCV	1	12/01/20 14:53			X												X					
CCB	1	12/01/20 14:58			X												X					
IDA001:DU-F4:S000010	10	12/01/20 15:04			X												X					
IDA001:DU-F8:S000010	100	12/01/20 15:09															X					
IDA001:DU-F9:S000010	100	12/01/20 15:14															X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	10	12/01/20 15:19															X					
ZZZZZZ	100	12/01/20 15:24								X												
ZZZZZZ	1	12/01/20 15:39										X										
CCV	1	12/01/20 16:00			X												X					
CCB	1	12/01/20 16:04			X												X					
ZZZZZZ	1	12/01/20 16:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:30										X					X					
ZZZZZZ	1	12/01/20 16:46										X										
ZZZZZZ	1	12/01/20 16:51										X					X					
ZZZZZZ	1	12/01/20 16:57										X										
CCV	1	12/01/20 17:07			X												X					
CCB	1	12/01/20 17:12			X												X					
ZZZZZZ	1	12/01/20 17:17										X					X					
ZZZZZZ	1	12/01/20 17:22										X										
ZZZZZZ	1	12/01/20 17:28										X					X					
ZZZZZZ	1	12/01/20 17:33										X										
ZZZZZZ	1	12/01/20 17:38															X					
ZZZZZZ	1	12/01/20 17:43															X					
ZZZZZZ	1	12/01/20 17:48															X					
ZZZZZZ	1	12/01/20 17:54															X					
ZZZZZZ	1	12/01/20 17:59															X					
ZZZZZZ	1	12/01/20 18:04															X					
CCV	1	12/01/20 18:10			X												X					
CCB	1	12/01/20 18:15			X												X					
ZZZZZZ	1	12/01/20 18:20	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:25	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:30	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:35	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:41	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:46	X					X		X						X	X					
ZZZZZZ	1	12/01/20 19:01	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:07	X		X	X		X		X							X		X			
CCV	1	12/01/20 19:17			X												X					
CCB	1	12/01/20 19:22			X												X					
ZZZZZZ	1	12/01/20 19:50	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:55	X		X	X		X		X							X		X			

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 20:00	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:05	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:20	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
CCV	1	12/01/20 20:25			X												X					
CCB	1	12/01/20 20:35			X												X					
ZZZZZZ	1	12/01/20 20:51						X									X					
ZZZZZZ	1	12/01/20 20:56						X									X					
ZZZZZZ	1	12/01/20 21:01						X									X					
ZZZZZZ	1	12/01/20 21:06						X									X					
ZZZZZZ	1	12/01/20 21:11						X									X					
ZZZZZZ	1	12/01/20 21:16						X									X					
ZZZZZZ	1	12/01/20 21:21						X									X					
ZZZZZZ	1	12/01/20 21:26						X									X					
CCV	1	12/01/20 21:31			X												X					
CCB	1	12/01/20 21:41			X												X					
ZZZZZZ	1	12/01/20 21:46						X									X					
ZZZZZZ	1	12/01/20 21:51						X									X					
ZZZZZZ	1	12/01/20 22:16			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:22			X												X					
ZZZZZZ	1	12/01/20 22:27			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:32			X	X		X									X		X			
CCV	1	12/01/20 22:42			X												X					
CCB	1	12/01/20 22:47			X												X					
ZZZZZZ	1	12/01/20 22:53			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:58			X	X		X									X		X			
ZZZZZZ	1	12/01/20 23:03			X	X		X								X	X	X	X	X		
ZZZZZZ	10	12/01/20 23:08				X						X			X							
ZZZZZZ	10	12/01/20 23:13				X						X										
ZZZZZZ	10	12/01/20 23:19				X						X			X							
ZZZZZZ	10	12/01/20 23:24				X						X			X							
ZZZZZZ	10	12/01/20 23:29				X						X			X							
ZZZZZZ	10	12/01/20 23:34				X						X			X							
ZZZZZZ	10	12/01/20 23:40				X						X										
CCV	1	12/01/20 23:50			X												X					
CCB	1	12/01/20 23:55			X												X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/02/20 00:00	X		X	X		X									X		X			
CCV	1	12/02/20 00:46			X												X					
CCB	1	12/02/20 00:51			X												X					

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201202B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CR	CU	FE	K	MG	MN	MO	NA	NI	PB	SE	ZN
ICAL1	1	12/02/20 13:41			X														X		
ICAL2	1	12/02/20 13:46			X														X		
ICAL3	1	12/02/20 13:51			X														X		
ICAL4	1	12/02/20 13:56			X														X		
ICAL5	1	12/02/20 14:01			X														X		
ICV/QCS	1	12/02/20 14:06			X														X		
ICB	1	12/02/20 14:11			X														X		
ICSA	1	12/02/20 14:27			X														X		
CCV	1	12/02/20 14:53			X														X		
CCB	1	12/02/20 14:58			X														X		
ZZZZZZ	1	12/02/20 15:13	X						X	X									X	X	
ZZZZZZ	1	12/02/20 15:29							X	X									X		
CCV	1	12/02/20 15:34			X														X		
CCB	1	12/02/20 15:39			X														X		
ZZZZZZ	100	12/02/20 15:44						X						X							
ZZZZZZ	100	12/02/20 15:49						X						X							
ZZZZZZSD	5	12/02/20 16:04			X														X		
ZZZZZZPDS	1	12/02/20 16:14			X														X		
ZZZZZZ	100	12/02/20 16:19						X						X							
ZZZZZZ	10	12/02/20 16:24						X					X	X	X						
CCV	1	12/02/20 16:44			X														X		
CCB	1	12/02/20 16:49			X														X		
ZZZZZZ	1	12/02/20 16:55	X			X			X	X									X	X	
ZZZZZZ	1	12/02/20 17:21								X											
ZZZZZZ	1	12/02/20 17:26								X											
ZZZZZZ	1	12/02/20 17:31								X											
ZZZZZZ	1	12/02/20 17:36								X											
ZZZZZZ	1	12/02/20 17:41								X											
CCV	1	12/02/20 17:45			X														X		
CCB	1	12/02/20 17:50			X														X		
ZZZZZZ	1	12/02/20 17:56								X											
ZZZZZZ	1	12/02/20 18:01								X											
ZZZZZZ	1	12/02/20 18:07								X											
ZZZZZZ	1	12/02/20 18:12								X											
ZZZZZZ	1	12/02/20 18:17								X											
ZZZZZZ	1	12/02/20 18:42	X							X											
CCV	1	12/02/20 18:47			X														X		

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201202B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CR	CU	FE	K	MG	MN	MO	NA	NI	PB	SE	ZN
CCB	1	12/02/20 18:52			X														X		
ZZZZZZ	1	12/02/20 19:03								X											
ZZZZZZ	1	12/02/20 19:08	X							X											
ZZZZZZ	1	12/02/20 19:13	X							X											
ZZZZZZ	1	12/02/20 19:18	X							X											
ZZZZZZ	1	12/02/20 19:24	X							X											
ZZZZZZ	1	12/02/20 19:29	X				X														
ZZZZZZ	100	12/02/20 19:39											X				X				
ZZZZZZ	10	12/02/20 19:44											X								
CCV	1	12/02/20 19:54			X														X		
CCB	1	12/02/20 19:59			X														X		
ZZZZZZ	10	12/02/20 20:04											X								
ZZZZZZ	100	12/02/20 20:20											X				X				
ZZZZZZ	1	12/02/20 20:25								X											
ZZZZZZ	1	12/02/20 20:46													X						
CCV	1	12/02/20 20:56			X														X		
CCB	1	12/02/20 21:01			X														X		
ZZZZZZ	1	12/02/20 21:06													X						
ZZZZZZ	1	12/02/20 21:11										X									
ZZZZZZ	1	12/02/20 21:17													X						
ZZZZZZ	1	12/02/20 21:22										X									
ZZZZZZ	1	12/02/20 21:27													X						
ZZZZZZ	1	12/02/20 21:32										X									
ZZZZZZ	1	12/02/20 21:37													X						
ZZZZZZ	1	12/02/20 21:42										X									
ZZZZZZ	1	12/02/20 21:48													X						
ZZZZZZ	1	12/02/20 21:53	X						X	X									X	X	
CCV	1	12/02/20 22:03			X														X		
CCB	1	12/02/20 22:08			X														X		
ZZZZZZ	1	12/02/20 22:13	X						X	X									X	X	
ZZZZZZ	1	12/02/20 22:18	X		X				X	X									X	X	
ZZZZZZ	1	12/02/20 22:23	X						X	X									X	X	
ZZZZZZ	1	12/02/20 22:28	X		X				X	X									X	X	
ZZZZZZ	1	12/02/20 22:34	X						X	X									X	X	
CCV	1	12/02/20 23:09			X														X		
CCB	1	12/02/20 23:14			X														X		
ZZZZZZ	1	12/02/20 23:24	X		X	X			X	X									X	X	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201202B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CR	CU	FE	K	MG	MN	MO	NA	NI	PB	SE	ZN
ZZZZZZ	1	12/02/20 23:30	X		X	X			X	X									X	X	
ZZZZZZ	1	12/02/20 23:35	X		X	X			X	X	X							X	X	X	
ZZZZZZ	10	12/03/20 00:01		X															X		
ZZZZZZ	10	12/03/20 00:06		X																	
CCV	1	12/03/20 00:16			X														X		
CCB	1	12/03/20 00:21			X														X		
ZZZZZZ	10	12/03/20 00:36		X																	
ZZZZZZ	1	12/03/20 00:41																	X		
ZZZZZZ	1	12/03/20 00:46																	X		
ZZZZZZ	1	12/03/20 00:52																	X		
ZZZZZZ	1	12/03/20 00:57	X			X			X	X									X	X	
ZZZZZZ	1	12/03/20 01:02	X		X	X			X	X									X	X	
ZZZZZZ	1	12/03/20 01:07				X			X	X									X	X	
ZZZZZZ	1	12/03/20 01:12	X			X			X	X									X	X	
CCV	1	12/03/20 01:22			X														X		
CCB	1	12/03/20 01:27			X														X		
ZZZZZZ	1	12/03/20 01:32	X			X			X	X	X					X		X	X	X	X
CCV	1	12/03/20 01:37			X														X		
CCB	1	12/03/20 01:42			X														X		

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168178
Analytical Method: SW6010D **Extraction Date:** 11/23/20 16:27

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	20111726-41AMS	NA	NA	0.677 g	50 mL	0
Duplicate Matrix Spike	20111726-41AMSD	NA	NA	0.648 g	50 mL	0
IDA001:DU-F0:S000010	20111754-01A	11/16/20	11/19/20	0.747 g	50 mL	89
IDA001:DU-F1:S000010	20111754-03A	11/16/20	11/19/20	0.755 g	50 mL	83
IDA001:DU-F1-TE:S000010	20111754-05A	11/16/20	11/19/20	0.735 g	50 mL	84
IDA001:DU-F1-TS:S000010	20111754-06A	11/16/20	11/19/20	0.69 g	50 mL	82
IDA001:DU-F2:S000010	20111754-07A	11/16/20	11/19/20	0.625 g	50 mL	81
IDA001:DU-F3:S000010	20111754-09A	11/16/20	11/19/20	0.739 g	50 mL	81
IDA001:DU-F4:S000010	20111754-11A	11/16/20	11/19/20	0.636 g	50 mL	74
IDA001:DU-F5:S000010	20111754-13A	11/16/20	11/19/20	0.765 g	50 mL	85
IDA001:DU-F7:S000010	20111754-15A	11/16/20	11/19/20	0.735 g	50 mL	87
IDA001:DU-F7-TE:S000010	20111754-17A	11/16/20	11/19/20	0.779 g	50 mL	84
IDA001:DU-F7-TS:S000010	20111754-18A	11/16/20	11/19/20	0.655 g	50 mL	88
IDA001:DU-F6:S000010	20111754-19A	11/17/20	11/19/20	0.783 g	50 mL	82
IDA001:DU-F8:S000010	20111754-21A	11/17/20	11/19/20	0.725 g	50 mL	82
IDA001:DU-F9:S000010	20111754-23A	11/17/20	11/19/20	0.741 g	50 mL	84
LCS-168178	LCS-168178	NA	NA	1 g	50 mL	0
MBLK-168178	MBLK-168178	NA	NA	1 g	50 mL	0

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168378
Analytical Method: SW6010D **Extraction Date:** 11/29/20 15:02

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-F0:S000010	20111754-02A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
Matrix Spike	20111754-02AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111754-02AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-F1:S000010	20111754-04A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F2:S000010	20111754-08A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F3:S000010	20111754-10A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F4:S000010	20111754-12A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F5:S000010	20111754-14A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F7:S000010	20111754-16A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F6:S000010	20111754-20A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
LCS-168378	LCS-168378	NA	NA	25 mL	27.5 mL	0
MBLK-168378	MBLK-168378	NA	NA	25 mL	27.5 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168379
Analytical Method: SW6010D **Extraction Date:** 11/29/20 15:04

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-F8:S000010	20111754-22A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
Matrix Spike	20111754-22AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111754-22AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-F9:S000010	20111754-24A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
LCS-168379	LCS-168379	NA	NA	25 mL	27.5 mL	0
MBLK-168379	MBLK-168379	NA	NA	25 mL	27.5 mL	0

General Chemistry

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	WBLKS	**Basis:**	Wet
Lab Code:	WBLKS		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/29/20 14:53	NA	
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/29/20 15:15	NA	

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/29/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111754-23A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-F9:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111754-23A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	15.51	15.07	2.88	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/29/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20112166-25A DUP	**Units:**	% of sample
Lab Code:	BatchQC	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20112166-25A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	13.99	13.73	1.88	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/29/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20112166-31A DUP	**Units:**	% of sample
Lab Code:	BatchQC	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20112166-31A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	8.41	9.08	7.66	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Analyzed:**	11/29/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201129D

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	100	100	100.0	98-102

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Analyzed:**	11/29/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201129C

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	100	100	100.0	98-102

Raw Data

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Metals

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Dry
Lab Code:	20111754-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.0**	mg/Kg-dry	3.7	10	12/01/20 14:24	11/23/20 16:27	
Lead	SW6010D	**450 B**	mg/Kg-dry	3.7	10	12/01/20 14:24	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Wet
Lab Code:	20111754-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Wet
Lab Code:	20111754-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 00:38	11/29/20 15:02	
Lead	SW6010D	**0.73**	mg/L	0.050	1	12/01/20 00:38	11/29/20 15:02	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Dry
Lab Code:	20111754-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**47**	mg/Kg-dry	4.0	10	12/01/20 14:29	11/23/20 16:27	
Lead	SW6010D	**2,000 B**	mg/Kg-dry	4.0	10	12/01/20 14:29	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Wet
Lab Code:	20111754-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Wet
Lab Code:	20111754-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:03	11/29/20 15:02	
Lead	SW6010D	**0.43**	mg/L	0.050	1	12/01/20 01:03	11/29/20 15:02	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:34
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TE:S000010	**Basis:**	Dry
Lab Code:	20111754-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**37**	mg/Kg-dry	4.1	10	12/01/20 14:34	11/23/20 16:27	
Lead	SW6010D	**2,400 B**	mg/Kg-dry	4.1	10	12/01/20 14:34	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:34
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:55
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TS:S000010	**Basis:**	Dry
Lab Code:	20111754-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**18**	mg/Kg-dry	4.4	10	12/01/20 14:38	11/23/20 16:27	
Lead	SW6010D	**770 B**	mg/Kg-dry	4.4	10	12/01/20 14:38	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:55
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Dry
Lab Code:	20111754-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**18**	mg/Kg-dry	4.9	10	12/01/20 14:43	11/23/20 16:27	
Lead	SW6010D	**900 B**	mg/Kg-dry	4.9	10	12/01/20 14:43	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Wet
Lab Code:	20111754-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Wet
Lab Code:	20111754-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:09	11/29/20 15:02	
Lead	SW6010D	**0.47**	mg/L	0.050	1	12/01/20 01:09	11/29/20 15:02	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Dry
Lab Code:	20111754-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**26**	mg/Kg-dry	4.2	10	12/01/20 14:48	11/23/20 16:27	
Lead	SW6010D	**1,300 B**	mg/Kg-dry	4.2	10	12/01/20 14:48	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Wet
Lab Code:	20111754-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Wet
Lab Code:	20111754-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:14	11/29/20 15:02	
Lead	SW6010D	**0.36**	mg/L	0.050	1	12/01/20 01:14	11/29/20 15:02	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Dry
Lab Code:	20111754-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	5.3	10	12/01/20 15:04	11/23/20 16:27	
Lead	SW6010D	**1,300 B**	mg/Kg-dry	5.3	10	12/01/20 15:04	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Wet
Lab Code:	20111754-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Wet
Lab Code:	20111754-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:19	11/29/20 15:02	
Lead	SW6010D	**0.41**	mg/L	0.050	1	12/01/20 01:19	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Dry
Lab Code:	20111754-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**6.1**	mg/Kg-dry	3.9	10	11/30/20 22:21	11/23/20 16:27	
Lead	SW6010D	**200 B**	mg/Kg-dry	3.9	10	11/30/20 22:21	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Wet
Lab Code:	20111754-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Wet
Lab Code:	20111754-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:24	11/29/20 15:02	
Lead	SW6010D	**0.080**	mg/L	0.050	1	12/01/20 01:24	11/29/20 15:02	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Dry
Lab Code:	20111754-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**13**	mg/Kg-dry	3.9	10	11/30/20 22:26	11/23/20 16:27	
Lead	SW6010D	**610 B**	mg/Kg-dry	3.9	10	11/30/20 22:26	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Wet
Lab Code:	20111754-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Wet
Lab Code:	20111754-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:29	11/29/20 15:02	
Lead	SW6010D	**0.30**	mg/L	0.050	1	12/01/20 01:29	11/29/20 15:02	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TE:S000010	**Basis:**	Dry
Lab Code:	20111754-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**17**	mg/Kg-dry	3.8	10	11/30/20 22:31	11/23/20 16:27	
Lead	SW6010D	**620 B**	mg/Kg-dry	3.8	10	11/30/20 22:31	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TS:S000010	**Basis:**	Dry
Lab Code:	20111754-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**10**	mg/Kg-dry	4.3	10	11/30/20 22:36	11/23/20 16:27	
Lead	SW6010D	**310 B**	mg/Kg-dry	4.3	10	11/30/20 22:36	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Dry
Lab Code:	20111754-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**7.7**	mg/Kg-dry	3.9	10	11/30/20 22:41	11/23/20 16:27	
Lead	SW6010D	**240 B**	mg/Kg-dry	3.9	10	11/30/20 22:41	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Wet
Lab Code:	20111754-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Wet
Lab Code:	20111754-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 01:34	11/29/20 15:02	
Lead	SW6010D	**1.1**	mg/L	0.050	1	12/01/20 01:34	11/29/20 15:02	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Dry
Lab Code:	20111754-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**33**	mg/Kg-dry	4.2	10	11/30/20 22:46	11/23/20 16:27	
Lead	SW6010D	**880 B**	mg/Kg-dry	42	100	12/01/20 15:09	11/23/20 16:27	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Wet
Lab Code:	20111754-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Wet
Lab Code:	20111754-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:05	11/29/20 15:04	
Lead	SW6010D	**0.44**	mg/L	0.050	1	12/01/20 02:05	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Dry
Lab Code:	20111754-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**46**	mg/Kg-dry	4.0	10	11/30/20 23:01	11/23/20 16:27	
Lead	SW6010D	**740 B**	mg/Kg-dry	40	100	12/01/20 15:14	11/23/20 16:27	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Wet
Lab Code:	20111754-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Miscellaneous	MISC	0 U		0	1	11/23/20 00:00	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Wet
Lab Code:	20111754-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:20	11/29/20 15:04	
Lead	SW6010D	**0.29**	mg/L	0.050	1	12/01/20 02:20	11/29/20 15:04	

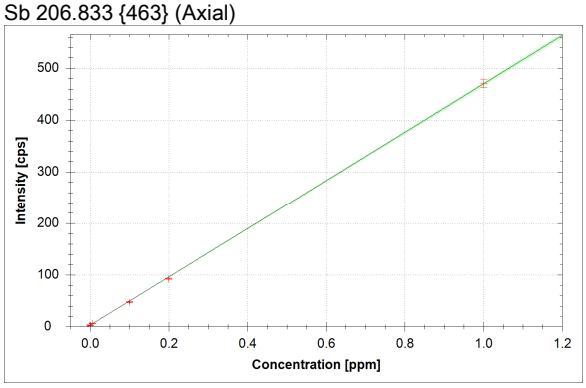
Calibration Summary

12/1/2020 8:29:17 AM

LabBook: ICP2_201130B.imexp

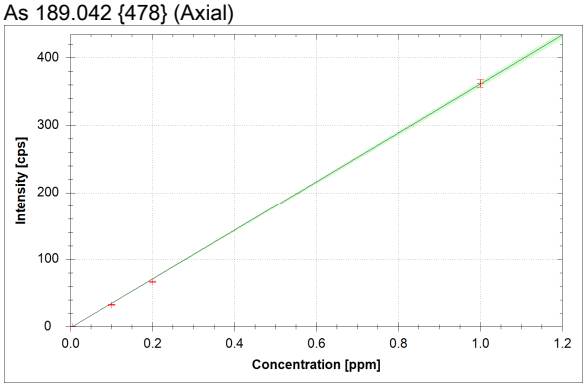
Calibration Graphs

Sb 206.833 {463} (Axial)



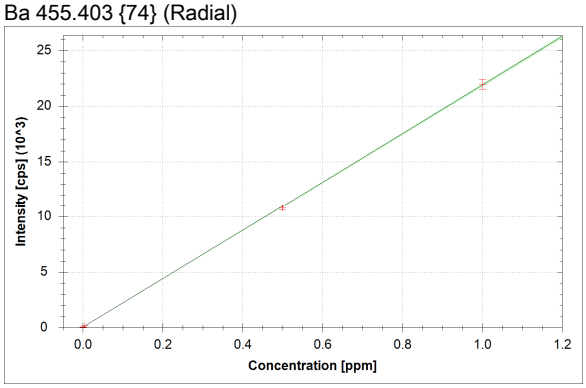
f(x) = 466.8351*x + 2.9259
R² = 0.9998
BEC = 0.006 ppm
LoD = 0.0034 ppm

As 189.042 {478} (Axial)



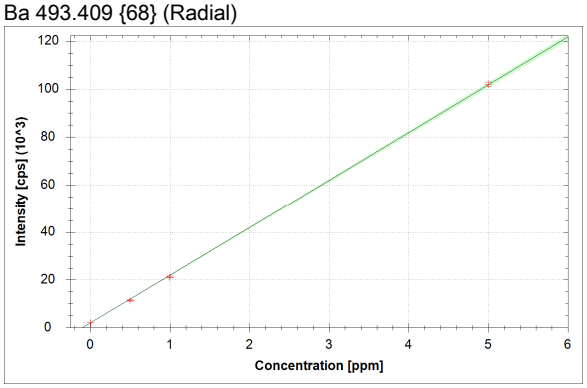
f(x) = 362.6423*x + -1.6820
R² = 0.9997
BEC = -0.005 ppm
LoD = 0.0034 ppm

Ba 455.403 {74} (Radial)



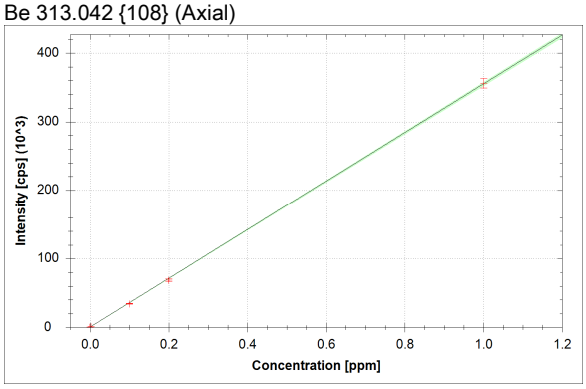
f(x) = 21857.4958*x + 50.1134
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0022 ppm

Ba 493.409 {68} (Radial)



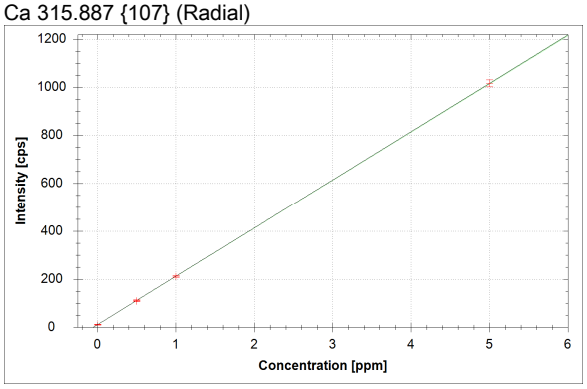
f(x) = 19952.1562*x + 2001.4971
R² = 0.9998
BEC = 0.100 ppm
LoD = 0.0018 ppm

Be 313.042 {108} (Axial)



f(x) = 354660.3706*x + 535.4197
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0001 ppm

Ca 315.887 {107} (Radial)



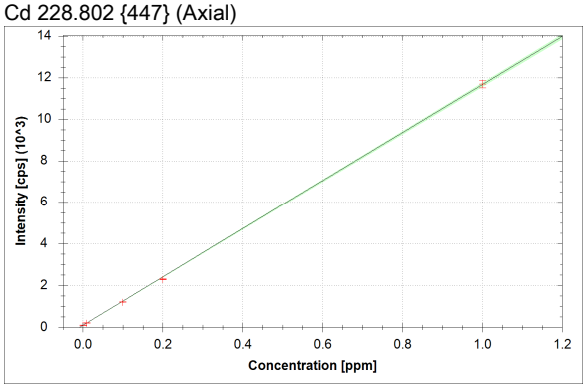
f(x) = 201.1067*x + 11.2014
R² = 1.0000
BEC = 0.056 ppm
LoD = 0.0259 ppm

Calibration Summary

12/1/2020 8:29:17 AM

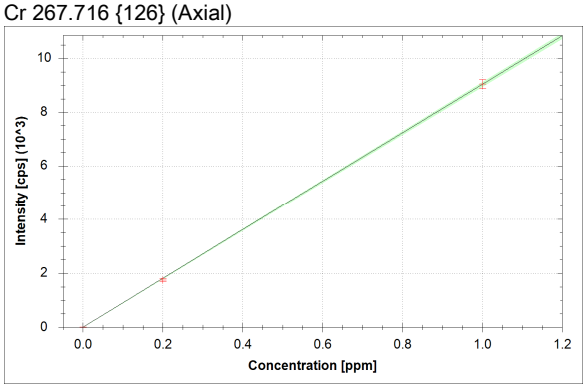
QTEGRA

Cd 228.802 {447} (Axial)



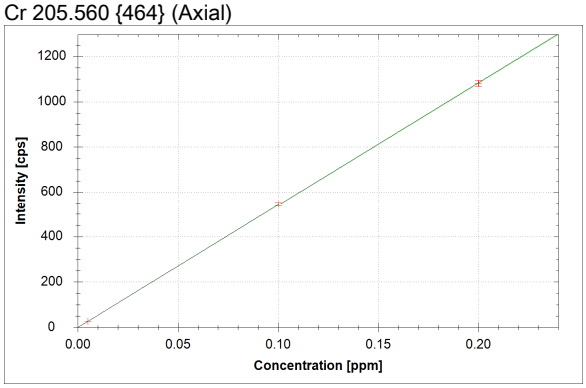
f(x) = 11571.7495*x + 97.2234
R² = 0.9998
BEC = 0.008 ppm
LoD = 0.0003 ppm

Cr 267.716 {126} (Axial)



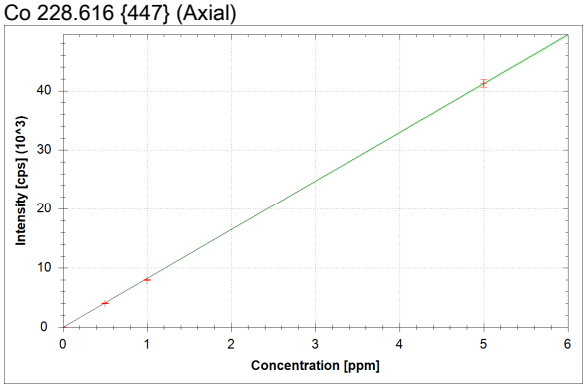
f(x) = 9030.2807*x + 4.8394
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0009 ppm

Cr 205.560 {464} (Axial)



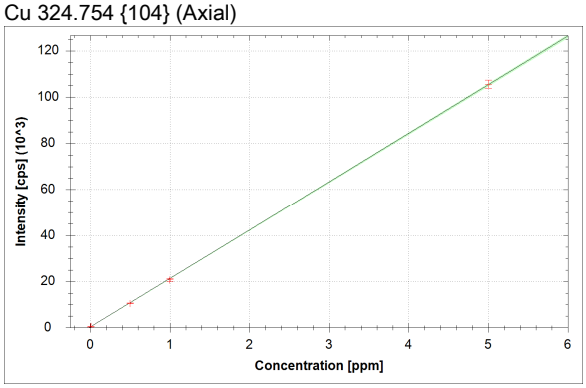
f(x) = 5416.7939*x + -0.4553
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Co 228.616 {447} (Axial)



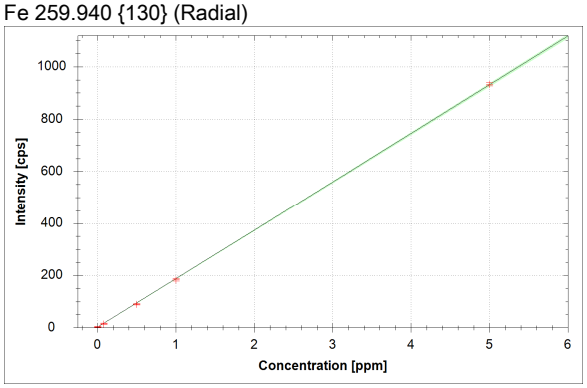
f(x) = 8239.4362*x + -3.4163
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Cu 324.754 {104} (Axial)



f(x) = 21000.2176*x + 350.3762
R² = 0.9999
BEC = 0.017 ppm
LoD = 0.0002 ppm

Fe 259.940 {130} (Radial)



f(x) = 185.7784*x + 2.1365
R² = 0.9999
BEC = 0.012 ppm
LoD = 0.0193 ppm

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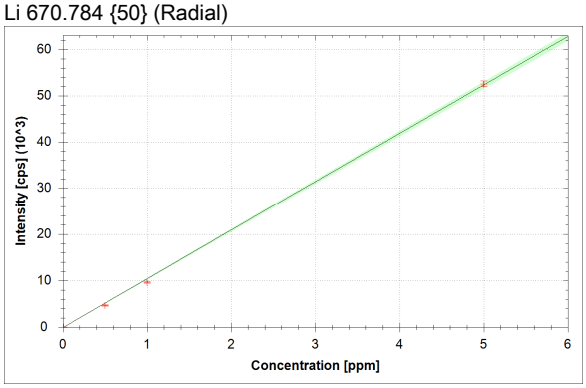
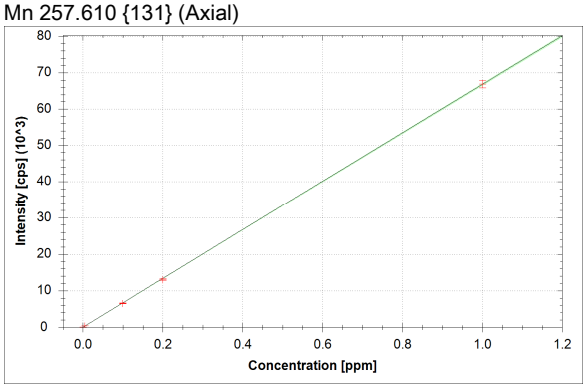
QTEGRA

Li 670.784 {50} (Radial)



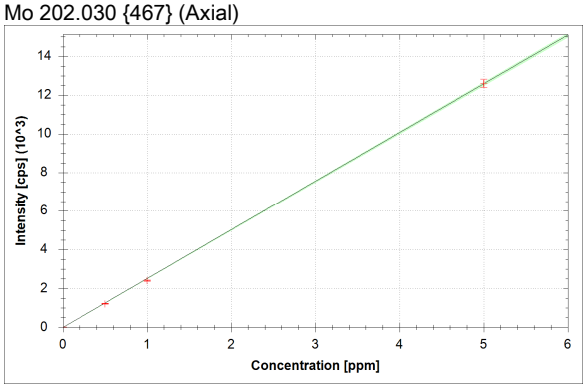
f(x) = 10478.8650*x + -36.7025
R² = 0.9995
BEC = -0.004 ppm
LoD = 0.0055 ppm

Mn 257.610 {131} (Axial)



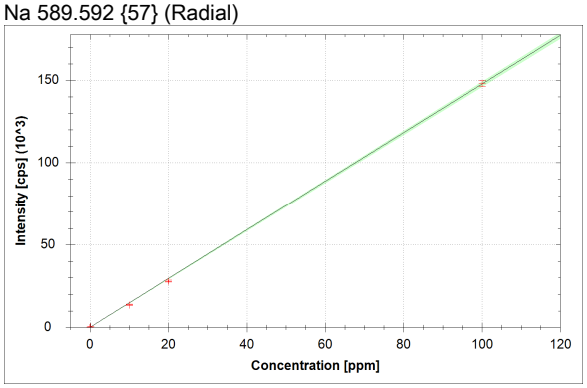
f(x) = 66765.3419*x + 29.0052
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Mo 202.030 {467} (Axial)



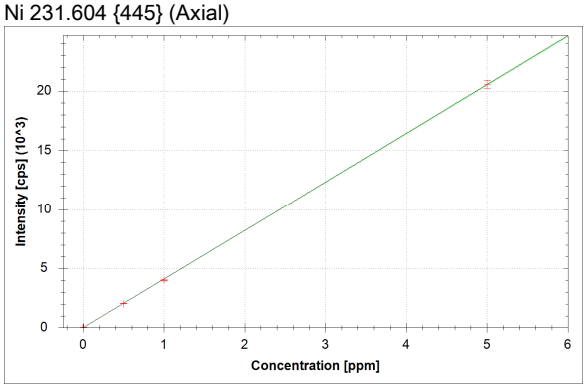
f(x) = 2516.1758*x + -1.2298
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0005 ppm

Na 589.592 {57} (Radial)



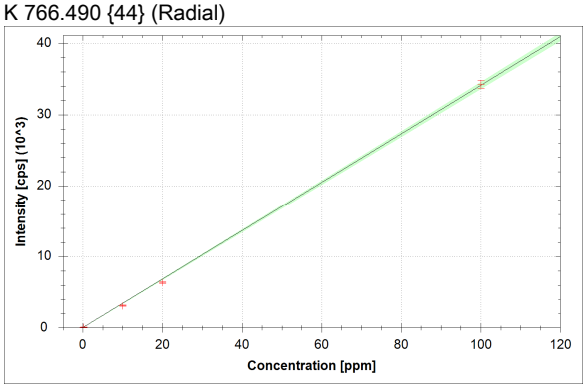
f(x) = 1476.9546*x + 46.1881
R² = 0.9997
BEC = 0.031 ppm
LoD = 0.0330 ppm

Ni 231.604 {445} (Axial)



f(x) = 4108.4666*x + 1.7819
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0002 ppm

K 766.490 {44} (Radial)



f(x) = 340.9180*x + 26.7023
R² = 0.9995
BEC = 0.078 ppm
LoD = 0.1089 ppm

Calibration Summary

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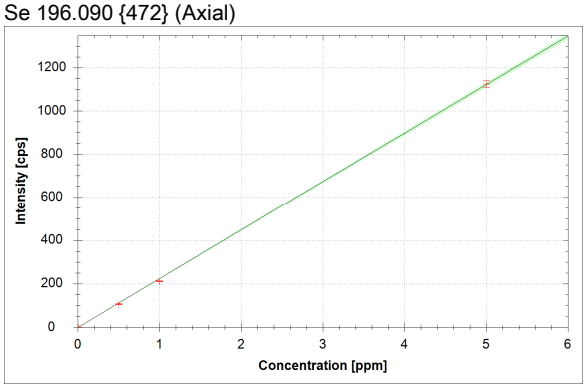
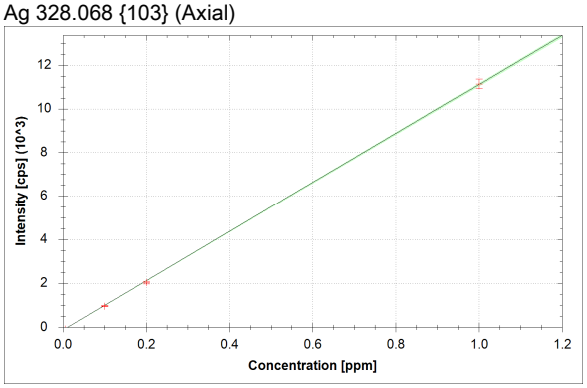
Se 196.090 {472} (Axial)



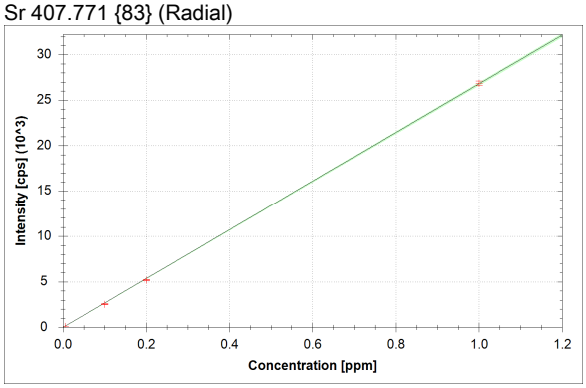
f(x) = 224.3617*x + -0.4619
R² = 0.9998
BEC = -0.002 ppm
LoD = 0.0066 ppm

Ag 328.068 {103} (Axial)



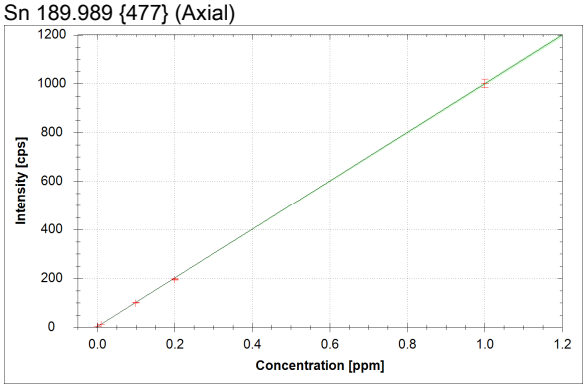
f(x) = 11251.4976*x + -127.9537
R² = 0.9999
BEC = -0.011 ppm
LoD = 0.0006 ppm

Sr 407.771 {83} (Radial)



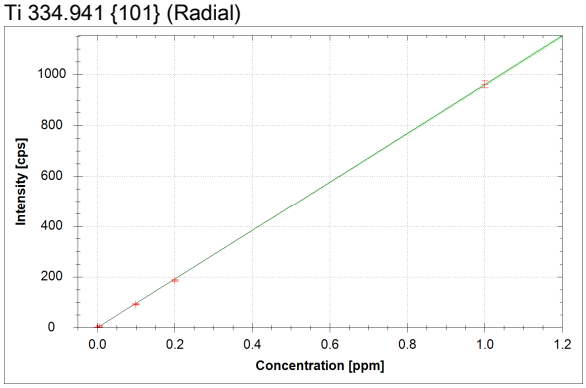
f(x) = 26818.8118*x + -8.4806
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Sn 189.989 {477} (Axial)



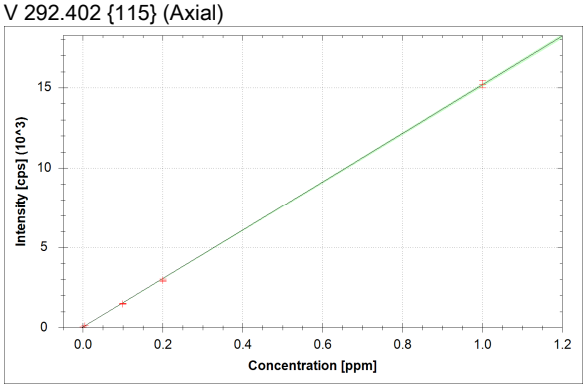
f(x) = 997.3521*x + 2.9014
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0017 ppm

Ti 334.941 {101} (Radial)



f(x) = 959.3957*x + 0.2025
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0049 ppm

V 292.402 {115} (Axial)



f(x) = 15139.5075*x + 41.0036
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0006 ppm

Calibration Summary

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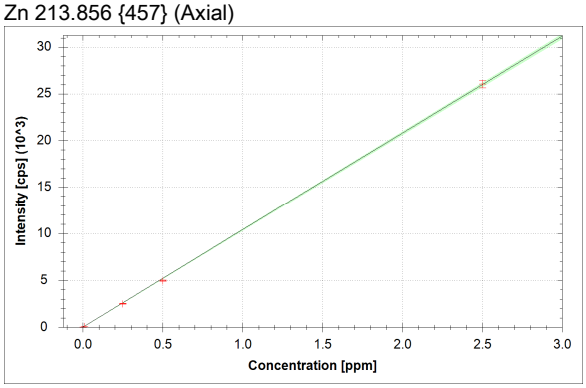
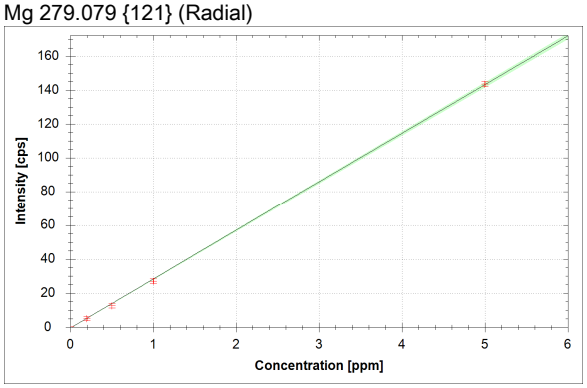
Zn 213.856 {457} (Axial)



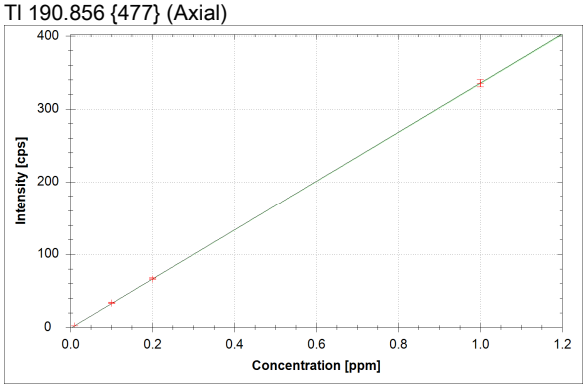
f(x) = 10389.8082*x + 22.8537
R² = 0.9998
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



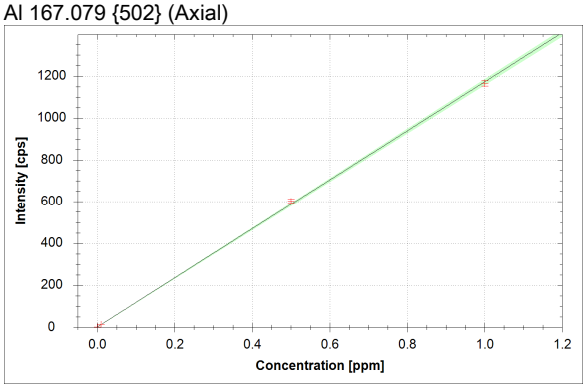
f(x) = 28.7287*x + -0.3816
R² = 0.9998
BEC = -0.013 ppm
LoD = 0.0828 ppm

Tl 190.856 {477} (Axial)



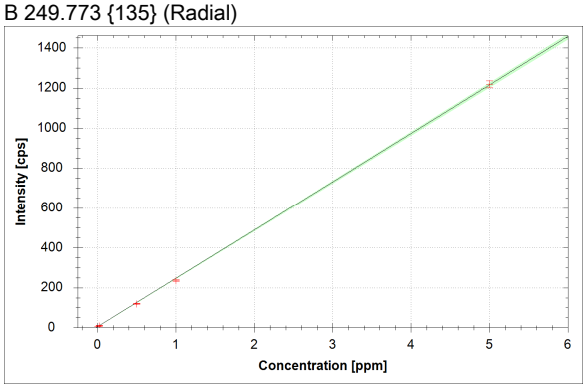
f(x) = 336.7253*x + -1.3294
R² = 1.0000
BEC = -0.004 ppm
LoD = 0.0040 ppm

Al 167.079 {502} (Axial)



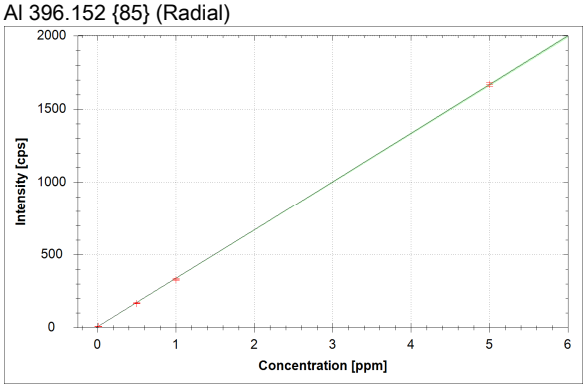
f(x) = 1170.5511*x + 1.9127
R² = 0.9997
BEC = 0.002 ppm
LoD = 0.0002 ppm

B 249.773 {135} (Radial)



f(x) = 241.9859*x + 5.2548
R² = 0.9998
BEC = 0.022 ppm
LoD = 0.0083 ppm

Al 396.152 {85} (Radial)



f(x) = 332.1216*x + 6.5431
R² = 0.9999
BEC = 0.020 ppm
LoD = 0.0014 ppm

Calibration Summary

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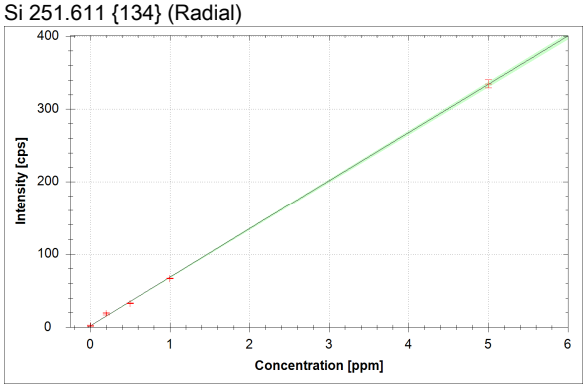
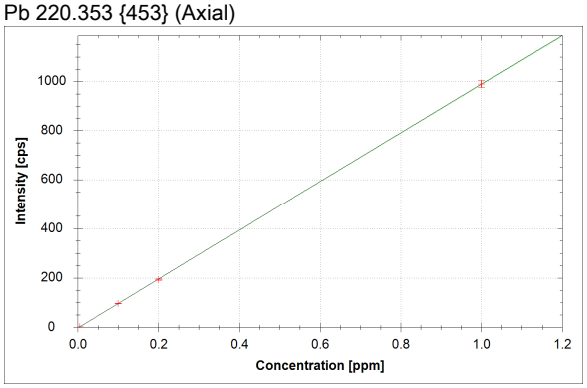
Si 251.611 {134} (Radial)



f(x) = 66.3807*x + 2.0934
R² = 0.9997
BEC = 0.032 ppm
LoD = 0.0347 ppm

Pb 220.353 {453} (Axial)



f(x) = 991.6667*x + -2.6978
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0008 ppm

Calibration Summary

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QTEGRA

Standards

Standard: ICAL2
Analysis started at: 11/30/2020 2:30:20 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0071 ppm	6.5 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0038 ppm	44.8 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0050 ppm	3.2 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	3.1 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.4982 ppm	2.5 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0095 ppm	1.5 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0050 ppm	1.1 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0049 ppm	2.1 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0097 ppm	2.4 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0691 ppm	13.9 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0081 ppm	24.0 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0050 ppm	2.0 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0052 ppm	5.0 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1993 ppm	2.0 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0049 ppm	3.3 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1315 ppm	53.5 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0098 ppm	12.7 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0049 ppm	3.8 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0048 ppm	1.6 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0094 ppm	3.6 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0040 ppm	75.1 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0047 ppm	4.2 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0094 ppm	2.0 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.7922 %	0.7 %	
Sc 188.060 {479} (Axial)	99.9674 %	0.1 %	
Mg 279.079 {121} (Radial)	0.1930 ppm	20.4 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0098 ppm	2.8 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0107 ppm	3.8 %	0.0100 ppm
Sc 227.318 {448} (Axial)	100.0626 %	0.2 %	
B 249.773 {135} (Radial)	0.0150 ppm	38.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0078 ppm	51.9 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2500 ppm	9.8 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0054 ppm	12.3 %	0.0050 ppm
Y 224.306 {450} (Axial)	100.5115 %	0.2 %	
Sc 361.384 {93} (Radial)	99.5288 %	0.3 %	

Calibration Summary

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Standards

Standard: ICAL3
Analysis started at: 11/30/2020 2:35:29 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0953 ppm	3.6 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0937 ppm	2.3 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4944 ppm	2.3 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4673 ppm	2.5 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0948 ppm	1.3 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.4835 ppm	1.7 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0959 ppm	1.4 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.1007 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4900 ppm	1.4 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4856 ppm	1.4 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4717 ppm	3.6 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4509 ppm	2.5 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0978 ppm	1.2 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4828 ppm	1.4 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.2235 ppm	2.4 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4925 ppm	1.3 %	0.5000 ppm
K 766.490 {44} (Radial)	8.9926 ppm	2.6 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4735 ppm	1.7 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0976 ppm	1.3 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0956 ppm	2.4 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0975 ppm	1.0 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0956 ppm	3.0 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0955 ppm	1.2 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2385 ppm	1.3 %	0.2500 ppm
Sc 357.253 {94} (Axial)	100.6656 %	0.2 %	
Sc 188.060 {479} (Axial)	98.4206 %	0.4 %	
Mg 279.079 {121} (Radial)	0.4549 ppm	9.6 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1034 ppm	2.5 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5123 ppm	1.5 %	0.5000 ppm
Sc 227.318 {448} (Axial)	99.9481 %	0.2 %	
B 249.773 {135} (Radial)	0.4685 ppm	2.3 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4824 ppm	2.2 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4633 ppm	1.4 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.0997 ppm	1.1 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.9076 %	0.3 %	
Sc 361.384 {93} (Radial)	101.5209 %	0.3 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/30/2020 2:40:29 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1912 ppm	1.5 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1876 ppm	1.8 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0028 ppm	2.1 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9589 ppm	2.1 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1917 ppm	2.8 %	0.2000 ppm
Ca 315.887 {107} (Radial)	0.9984 ppm	2.0 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1905 ppm	1.1 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1930 ppm	3.3 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.1996 ppm	1.2 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9665 ppm	1.1 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9665 ppm	3.2 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9702 ppm	2.5 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9264 ppm	2.1 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1945 ppm	2.8 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9570 ppm	1.2 %	1.0000 ppm
Na 589.592 {57} (Radial)	18.9220 ppm	2.2 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9711 ppm	1.1 %	1.0000 ppm
K 766.490 {44} (Radial)	18.5037 ppm	2.5 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9473 ppm	1.0 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1926 ppm	2.8 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1935 ppm	2.0 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1932 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1937 ppm	2.1 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1926 ppm	2.7 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4749 ppm	1.2 %	0.5000 ppm
Sc 357.253 {94} (Axial)	99.7288 %	3.8 %	
Sc 188.060 {479} (Axial)	96.3975 %	0.1 %	
Mg 279.079 {121} (Radial)	0.9567 ppm	5.0 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2014 ppm	1.9 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9939 ppm	1.1 %	1.0000 ppm
Sc 227.318 {448} (Axial)	99.2633 %	0.3 %	
B 249.773 {135} (Radial)	0.9481 ppm	2.4 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9758 ppm	1.9 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9712 ppm	0.9 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.1962 ppm	1.6 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.3230 %	0.2 %	
Sc 361.384 {93} (Radial)	99.4583 %	0.4 %	

Calibration Summary

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QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/30/2020 2:45:26 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0022 ppm	1.7 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0031 ppm	1.6 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0115 ppm	1.0 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0022 ppm	2.0 %	1.0000 ppm
Ca 315.887 {107} (Radial)	5.0022 ppm	1.4 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0023 ppm	1.6 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0014 ppm	1.8 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0077 ppm	1.6 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0081 ppm	1.7 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0090 ppm	0.7 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0196 ppm	1.2 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0013 ppm	1.6 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0103 ppm	1.7 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2933 ppm	1.3 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0065 ppm	1.6 %	5.0000 ppm
K 766.490 {44} (Radial)	100.4001 ppm	1.6 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0132 ppm	1.5 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0017 ppm	2.0 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0018 ppm	1.0 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0016 ppm	1.7 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0017 ppm	1.5 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0019 ppm	1.5 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5062 ppm	1.6 %	2.5000 ppm
Sc 357.253 {94} (Axial)	95.9590 %	0.5 %	
Sc 188.060 {479} (Axial)	89.3408 %	0.6 %	
Mg 279.079 {121} (Radial)	5.0134 ppm	1.0 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9994 ppm	1.5 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	104.0371 %	0.4 %	
B 249.773 {135} (Radial)	5.0135 ppm	1.4 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0066 ppm	0.8 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0074 ppm	1.7 %	5.0000 ppm
Pb 220.353 {453} (Axial)	1.0008 ppm	1.5 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.0845 %	0.5 %	
Sc 361.384 {93} (Radial)	100.5053 %	0.2 %	

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LabBook: ICP2_201130B.imexp

ICAL1

Sample type: BLK Analysis started at: 11/30/2020 2:25:09 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	7.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/30/2020 2:30:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0071 ppm	6.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0038 ppm	44.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	110 cps	0.0050 ppm	3.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	685 cps	0.0019 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4982 ppm	2.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	110 cps	0.0095 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	27 cps	0.0050 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0049 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	203 cps	0.0097 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	13 cps	0.0691 ppm	13.9 %	0.0 ppm
Li 670.784 {50} (Radial)	85 cps	0.0081 ppm	24.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	336 cps	0.0050 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0052 ppm	5.0 %	0.0 ppm
Na 589.592 {57} (Radial)	294 cps	0.1993 ppm	2.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0049 ppm	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	45 cps	0.1315 ppm	53.5 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0098 ppm	12.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	56 cps	0.0049 ppm	3.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	129 cps	0.0048 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	9 cps	0.0094 ppm	3.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0040 ppm	75.1 %	0.0 ppm
V 292.402 {115} (Axial)	72 cps	0.0047 ppm	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	98 cps	0.0094 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7922 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		99.9674 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	6 cps	0.1930 ppm	20.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0098 ppm	2.8 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0107 ppm	3.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0626 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0150 ppm	38.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0078 ppm	51.9 %	0.0 ppm
Si 251.611 {134} (Radial)	17 cps	0.2500 ppm	9.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0054 ppm	12.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5115 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.5288 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/30/2020 2:35:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0953 ppm	3.6 %	0.0 ppm
As 189.042 {478} (Axial)	34 cps	0.0937 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	10,806 cps	0.4944 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	9,323 cps	0.4673 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	33,638 cps	0.0948 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	97 cps	0.4835 ppm	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,110 cps	0.0959 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	545 cps	0.1007 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4,038 cps	0.4900 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,198 cps	0.4856 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	88 cps	0.4717 ppm	3.6 %	0.0 ppm
Li 670.784 {50} (Radial)	4,725 cps	0.4509 ppm	2.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,530 cps	0.0978 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,215 cps	0.4828 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	13,623 cps	9.2235 ppm	2.4 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,023 cps	0.4925 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	3,066 cps	8.9926 ppm	2.6 %	0.2 ppm
Se 196.090 {472} (Axial)	106 cps	0.4735 ppm	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,098 cps	0.0976 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,563 cps	0.0956 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	97 cps	0.0975 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	92 cps	0.0956 ppm	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,446 cps	0.0955 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,478 cps	0.2385 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6656 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.4206 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	13 cps	0.4549 ppm	9.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	35 cps	0.1034 ppm	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	600 cps	0.5123 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9481 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	113 cps	0.4685 ppm	2.3 %	0.0 ppm
Al 396.152 {85} (Radial)	160 cps	0.4824 ppm	2.2 %	0.0 ppm
Si 251.611 {134} (Radial)	31 cps	0.4633 ppm	1.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	99 cps	0.0997 ppm	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.9076 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.5209 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/30/2020 2:40:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	89 cps	0.1912 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	68 cps	0.1876 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	21,919 cps	1.0028 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	19,132 cps	0.9589 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	67,977 cps	0.1917 ppm	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	201 cps	0.9984 ppm	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,204 cps	0.1905 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,743 cps	0.1930 ppm	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,081 cps	0.1996 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	7,963 cps	0.9665 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,297 cps	0.9665 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	180 cps	0.9702 ppm	2.5 %	0.0 ppm
Li 670.784 {50} (Radial)	9,707 cps	0.9264 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,989 cps	0.1945 ppm	2.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,408 cps	0.9570 ppm	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	27,947 cps	18.9220 ppm	2.2 %	0.4 ppm
Ni 231.604 {445} (Axial)	3,990 cps	0.9711 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	6,308 cps	18.5037 ppm	2.5 %	0.5 ppm
Se 196.090 {472} (Axial)	213 cps	0.9473 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,167 cps	0.1926 ppm	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,189 cps	0.1935 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	193 cps	0.1932 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	186 cps	0.1937 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	2,917 cps	0.1926 ppm	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,934 cps	0.4749 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7288 %	3.8 %	3.8 %
Sc 188.060 {479} (Axial)		96.3975 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	0.9567 ppm	5.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	68 cps	0.2014 ppm	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	1,163 cps	0.9939 ppm	1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2633 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	229 cps	0.9481 ppm	2.4 %	0.0 ppm
Al 396.152 {85} (Radial)	324 cps	0.9758 ppm	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	64 cps	0.9712 ppm	0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	195 cps	0.1962 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		98.3230 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		99.4583 %	0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/30/2020 2:45:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	468 cps	1.0022 ppm	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	364 cps	1.0031 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	99,990 cps	5.0115 ppm	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	355,434 cps	1.0022 ppm	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,006 cps	5.0022 ppm	1.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,599 cps	1.0023 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,043 cps	1.0014 ppm	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	41,261 cps	5.0077 ppm	1.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	105,172 cps	5.0081 ppm	1.7 %	0.1 ppm
Fe 259.940 {130} (Radial)	931 cps	5.0090 ppm	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	52,600 cps	5.0196 ppm	1.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	66,853 cps	1.0013 ppm	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	12,607 cps	5.0103 ppm	1.7 %	0.1 ppm
Na 589.592 {57} (Radial)	148,129 cps	100.2933 ppm	1.3 %	1.3 ppm
Ni 231.604 {445} (Axial)	20,569 cps	5.0065 ppm	1.6 %	0.1 ppm
K 766.490 {44} (Radial)	34,228 cps	100.4001 ppm	1.6 %	1.6 ppm
Se 196.090 {472} (Axial)	1,125 cps	5.0132 ppm	1.5 %	0.1 ppm
Ag 328.068 {103} (Axial)	11,271 cps	1.0017 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,866 cps	1.0018 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	999 cps	1.0016 ppm	1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	961 cps	1.0017 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	15,169 cps	1.0019 ppm	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,039 cps	2.5062 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.9590 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		89.3408 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	144 cps	5.0134 ppm	1.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	337 cps	0.9994 ppm	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		104.0371 %	0.4 %	0.5 %
B 249.773 {135} (Radial)	1,213 cps	5.0135 ppm	1.4 %	0.1 ppm
Al 396.152 {85} (Radial)	1,663 cps	5.0066 ppm	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	332 cps	5.0074 ppm	1.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	992 cps	1.0008 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.0845 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.5053 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:15:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-28 cps	-0.0599 ppm	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	-15 cps	-0.0408 ppm	5.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	487,514 cps	22.3042 ppm	2.0 %	0.4 ppm
Ba 493.409 {68} (Radial)	427,408 cps	21.4217 ppm	2.5 %	0.5 ppm
Be 313.042 {108} (Axial)	774,313 cps	2.1833 ppm	3.5 %	0.1 ppm
Ca 315.887 {107} (Radial)	41,531 cps	206.5126 ppm	1.4 %	2.8 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	49.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	94,719 cps	10.4890 ppm	1.8 %	0.2 ppm
Cr 205.560 {464} (Axial)	58,408 cps	10.7828 ppm	1.3 %	0.1 ppm
Co 228.616 {447} (Axial)	97 cps	0.0118 ppm	2.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	447,461 cps	21.3074 ppm	4.2 %	0.9 ppm
Fe 259.940 {130} (Radial)	38,209 cps	205.6702 ppm	1.0 %	2.1 ppm
Li 670.784 {50} (Radial)	112,820 cps	10.7665 ppm	2.0 %	0.2 ppm
Mn 257.610 {131} (Axial)	673,793 cps	10.0920 ppm	2.5 %	0.3 ppm
Mo 202.030 {467} (Axial)	-3 cps	-0.0011 ppm	50.3 %	0.0 ppm
Na 589.592 {57} (Radial)	-40 cps	-0.0272 ppm	71.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	-119 cps	-0.0290 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	-63 cps	-0.1853 ppm	16.6 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0129 ppm	40.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	26,825 cps	2.3841 ppm	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	279,755 cps	10.4313 ppm	1.5 %	0.2 ppm
Sn 189.989 {477} (Axial)	-32 cps	-0.0319 ppm	3.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	9,928 cps	10.3480 ppm	1.3 %	0.1 ppm
V 292.402 {115} (Axial)	161,778 cps	10.6858 ppm	2.0 %	0.2 ppm
Zn 213.856 {457} (Axial)	-822 cps	-0.0791 ppm	4.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.9274 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		79.4810 %	0.6 %	0.4 %
Mg 279.079 {121} (Radial)	6,266 cps	218.0994 ppm	1.2 %	2.6 ppm
Tl 190.856 {477} (Axial)	-22 cps	-0.0653 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	25,293 cps	21.6076 ppm	0.3 %	0.1 ppm
Sc 227.318 {448} (Axial)		82.3373 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	5,269 cps	21.7735 ppm	1.7 %	0.4 ppm
Al 396.152 {85} (Radial)	70,836 cps	213.2847 ppm	1.3 %	2.7 ppm
Si 251.611 {134} (Radial)	1,395 cps	21.0156 ppm	1.4 %	0.3 ppm
Pb 220.353 {453} (Axial)	-4 cps	-0.0038 ppm	54.4 %	0.0 ppm
Y 224.306 {450} (Axial)		87.8947 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.2477 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:21:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,500 cps	5.3549 ppm	2.8 %	0.2 ppm
As 189.042 {478} (Axial)	1,852 cps	5.1058 ppm	2.7 %	0.1 ppm
Ba 455.403 {74} (Radial)	176 cps	0.0080 ppm	27.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	166 cps	0.0083 ppm	28.2 %	0.0 ppm
Be 313.042 {108} (Axial)	-46 cps	-0.0001 ppm	48.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	19 cps	0.0955 ppm	14.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	270 cps	0.0233 ppm	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	11 cps	0.0012 ppm	25.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0066 ppm	3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	90,106 cps	10.9360 ppm	2.7 %	0.3 ppm
Cu 324.754 {104} (Axial)	186 cps	0.0088 ppm	6.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	22 cps	0.1158 ppm	19.7 %	0.0 ppm
Li 670.784 {50} (Radial)	85 cps	0.0081 ppm	24.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-176 cps	-0.0026 ppm	19.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	27,114 cps	10.7757 ppm	2.9 %	0.3 ppm
Na 589.592 {57} (Radial)	0 cps	0.0002 ppm	2,702.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	44,674 cps	10.8738 ppm	2.7 %	0.3 ppm
K 766.490 {44} (Radial)	-4 cps	-0.0130 ppm	223.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1,151 cps	5.1297 ppm	2.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0002 ppm	126.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	101 cps	0.0038 ppm	26.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,307 cps	5.3215 ppm	2.8 %	0.2 ppm
Ti 334.941 {101} (Radial)	13 cps	0.0131 ppm	14.6 %	0.0 ppm
V 292.402 {115} (Axial)	11 cps	0.0007 ppm	36.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	53,720 cps	5.1705 ppm	2.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.5932 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		97.4264 %	1.4 %	1.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0754 ppm	44.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,953 cps	5.8011 ppm	2.2 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0185 ppm	32.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1981 %	1.2 %	1.2 %
B 249.773 {135} (Radial)	13 cps	0.0547 ppm	13.3 %	0.0 ppm
Al 396.152 {85} (Radial)	169 cps	0.5093 ppm	4.3 %	0.0 ppm
Si 251.611 {134} (Radial)	7 cps	0.0996 ppm	11.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,530 cps	5.5764 ppm	2.6 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5673 %	1.2 %	1.2 %
Sc 361.384 {93} (Radial)		99.7957 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/30/2020 2:50:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	462 cps	0.9894 ppm	98.941 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	351 cps	0.9666 ppm	96.657 %	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,198 cps	1.0156 ppm		2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	19,410 cps	0.9728 ppm	97.282 %	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	343,074 cps	0.9673 ppm	96.733 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,211 cps	6.0225 ppm	100.374 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,375 cps	0.9830 ppm	98.303 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	8,923 cps	0.9881 ppm	98.811 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,551 cps	1.0248 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	8,204 cps	0.9957 ppm	99.566 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,810 cps	0.9910 ppm	99.095 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	182 cps	0.9812 ppm	98.122 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	9,970 cps	0.9515 ppm	95.145 %	2.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	66,873 cps	1.0016 ppm	100.161 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,546 cps	1.0120 ppm	101.203 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	29,457 cps	19.9441 ppm	94.972 %	2.6 %	0.5 ppm
Ni 231.604 {445} (Axial)	4,113 cps	1.0010 ppm	100.099 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	6,797 cps	19.9365 ppm	94.936 %	2.8 %	0.6 ppm
Se 196.090 {472} (Axial)	219 cps	0.9752 ppm	97.519 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11,684 cps	1.0385 ppm	103.845 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,087 cps	0.9727 ppm	97.269 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	989 cps	0.9912 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	927 cps	0.9665 ppm	96.647 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	15,038 cps	0.9933 ppm	99.331 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,137 cps	0.9757 ppm	97.571 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.9448 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.4885 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	0.9369 ppm	93.694 %	3.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	350 cps	1.0384 ppm	103.844 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1,203 cps	1.0280 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.1732 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	240 cps	0.9912 ppm	99.123 %	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	328 cps	0.9886 ppm	98.865 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	67 cps	1.0089 ppm		3.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,011 cps	1.0192 ppm	101.917 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.5577 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.9516 %		0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/30/2020 2:55:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	79.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	148.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	13 cps	0.0006 ppm	46.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	101 cps	0.0051 ppm	9.0 %	0.0 ppm
Be 313.042 {108} (Axial)	111 cps	0.0003 ppm	16.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0237 ppm	30.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	92.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	88.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	6.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	107.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	7 cps	0.0004 ppm	55.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0035 ppm	60.2 %	0.0 ppm
Li 670.784 {50} (Radial)	11 cps	0.0010 ppm	136.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	21 cps	0.0003 ppm	27.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	27.0 %	0.0 ppm
Na 589.592 {57} (Radial)	58 cps	0.0390 ppm	10.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1,855.1 %	0.0 ppm
K 766.490 {44} (Radial)	-7 cps	-0.0210 ppm	222.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	121.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0007 ppm	20.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0006 ppm	26.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0005 ppm	49.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0045 ppm	28.4 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	431.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	45.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8855 %	0.2 %	0.1 %
Sc 188.060 {479} (Axial)		98.9241 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	0.0066 ppm	181.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	37.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	41.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8486 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	0 cps	-0.0009 ppm	159.5 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0184 ppm	46.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0058 ppm	274.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	75.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.3863 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.2813 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/30/2020 3:00:35 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0049 ppm	97.760 %	20.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0037 ppm	73.287 %	35.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	113 cps	0.0052 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	143 cps	0.0072 ppm		15.0 %	0.0 ppm
Be 313.042 {108} (Axial)	704 cps	0.0020 ppm	99.309 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	101 cps	0.5038 ppm	100.757 %	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0098 ppm	97.972 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	44 cps	0.0049 ppm	97.597 %	6.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0052 ppm	103.874 %	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0050 ppm	99.895 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	210 cps	0.0100 ppm	99.781 %	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0817 ppm	102.123 %	13.9 %	0.0 ppm
Li 670.784 {50} (Radial)	95 cps	0.0090 ppm	90.226 %	18.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	346 cps	0.0052 ppm	103.643 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0053 ppm	105.725 %	4.2 %	0.0 ppm
Na 589.592 {57} (Radial)	300 cps	0.2029 ppm	101.427 %	5.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0050 ppm	99.021 %	2.5 %	0.0 ppm
K 766.490 {44} (Radial)	49 cps	0.1444 ppm	72.213 %	30.9 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0129 ppm	128.639 %	28.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	64 cps	0.0057 ppm	113.902 %	6.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	135 cps	0.0050 ppm	100.966 %	0.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0104 ppm		5.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0051 ppm	102.874 %	42.2 %	0.0 ppm
V 292.402 {115} (Axial)	72 cps	0.0047 ppm	94.946 %	9.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	101 cps	0.0097 ppm	97.111 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6650 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		98.6937 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	6 cps	0.2038 ppm	101.879 %	5.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0106 ppm	106.176 %	16.9 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0112 ppm		3.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.5853 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0123 ppm	61.353 %	11.4 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0144 ppm		111.4 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2422 ppm		5.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0058 ppm	115.709 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0433 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.3638 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/30/2020 3:05:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0055 ppm	109.561 %	13.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0041 ppm	82.272 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	115 cps	0.0053 ppm		6.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	130 cps	0.0065 ppm		25.9 %	0.0 ppm
Be 313.042 {108} (Axial)	686 cps	0.0019 ppm	96.768 %	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4988 ppm	99.760 %	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0097 ppm	97.242 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	46 cps	0.0051 ppm	102.040 %	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	27 cps	0.0050 ppm	100.027 %	4.4 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0050 ppm	100.748 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	209 cps	0.0100 ppm	99.665 %	5.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0785 ppm	98.120 %	6.3 %	0.0 ppm
Li 670.784 {50} (Radial)	98 cps	0.0094 ppm	93.996 %	12.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	338 cps	0.0051 ppm	101.107 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0051 ppm	102.874 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	274 cps	0.1858 ppm	92.904 %	1.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	19 cps	0.0047 ppm	93.699 %	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	44 cps	0.1304 ppm	65.202 %	21.2 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0113 ppm	113.018 %	3.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	62 cps	0.0055 ppm	109.494 %	12.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	130 cps	0.0048 ppm	96.641 %	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0096 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0050 ppm	100.098 %	17.1 %	0.0 ppm
V 292.402 {115} (Axial)	70 cps	0.0046 ppm	92.997 %	4.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	99 cps	0.0095 ppm	95.381 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.1606 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		99.6488 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	6 cps	0.1970 ppm	98.492 %	6.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0102 ppm	101.688 %	10.1 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0110 ppm		3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.6855 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0118 ppm	58.850 %	49.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0017 ppm		190.4 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2444 ppm		7.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0046 ppm	92.613 %	19.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.6336 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.2785 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/30/2020 3:10:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-6 cps	-0.0125 ppm		9.0 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0215 ppm	0.000 %	4.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0006 ppm	0.000 %	57.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	77 cps	0.0039 ppm	0.000 %	33.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-925 cps	-0.0026 ppm	0.000 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,547 cps	92.2233 ppm	92.223 %	0.8 %	0.7 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	0.000 %	71.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	19 cps	0.0021 ppm	0.000 %	10.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0007 ppm	0.000 %	18.7 %	0.0 ppm
Co 228.616 {447} (Axial)	28 cps	0.0034 ppm	0.000 %	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	60 cps	0.0029 ppm	0.000 %	26.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,295 cps	93.0928 ppm	93.093 %	0.7 %	0.7 ppm
Li 670.784 {50} (Radial)	16 cps	0.0015 ppm		24.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-388 cps	-0.0058 ppm	0.000 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4,831 cps	1.9200 ppm	95.998 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	139,481 cps	94.4384 ppm	94.438 %	1.5 %	1.4 ppm
Ni 231.604 {445} (Axial)	-60 cps	-0.0147 ppm	0.000 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	32,868 cps	96.4105 ppm	96.411 %	2.0 %	1.9 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	0.000 %	465.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-8 cps	-0.0007 ppm	0.000 %	73.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	-66 cps	-0.0025 ppm		2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0112 ppm		7.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,819 cps	1.8955 ppm		0.6 %	0.0 ppm
V 292.402 {115} (Axial)	37 cps	0.0024 ppm	0.000 %	8.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-47 cps	-0.0045 ppm	0.000 %	3.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.5605 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		82.7742 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	2,740 cps	95.3892 ppm	95.389 %	0.9 %	0.8 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0083 ppm	0.000 %	7.7 %	0.0 ppm
Al 167.079 {502} (Axial)	22,395 cps	19.1324 ppm		0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		83.7823 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	16 cps	0.0643 ppm		15.1 %	0.0 ppm
Al 396.152 {85} (Radial)	30,598 cps	92.1279 ppm	92.128 %	0.7 %	0.6 ppm
Si 251.611 {134} (Radial)	7 cps	0.1008 ppm	0.000 %	9.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-4 cps	-0.0036 ppm	0.000 %	4.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0948 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.0759 %		0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 11:52:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5207 ppm	104.131 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5242 ppm	104.843 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,792 cps	2.7813 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	53,148 cps	2.6638 ppm	106.551 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	190,956 cps	0.5384 ppm	107.684 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	529 cps	2.6318 ppm	105.274 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,106 cps	0.5277 ppm	105.531 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,802 cps	0.5318 ppm	106.355 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,958 cps	0.5461 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,833 cps	2.6498 ppm	105.992 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,364 cps	2.6840 ppm	107.359 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	490 cps	2.6375 ppm	105.501 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	27,699 cps	2.6433 ppm	105.731 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,578 cps	0.5329 ppm	106.576 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6617 ppm	106.467 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	77,578 cps	52.5258 ppm	105.052 %	2.4 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,890 cps	2.6505 ppm	106.022 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	18,356 cps	53.8427 ppm	107.685 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	584 cps	2.6011 ppm	104.044 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,044 cps	0.5372 ppm	107.433 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,322 cps	0.5340 ppm	106.808 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	541 cps	0.5422 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	491 cps	0.5121 ppm	102.430 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,128 cps	0.5369 ppm	107.378 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,619 cps	1.3108 ppm	104.861 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6087 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		89.5617 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	77 cps	2.6663 ppm	106.651 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5437 ppm	108.738 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,071 cps	2.6238 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2318 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	624 cps	2.5790 ppm	103.159 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	883 cps	2.6573 ppm	106.290 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	174 cps	2.6211 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	531 cps	0.5355 ppm	107.096 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		93.0516 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.7441 %		0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 12:53:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5216 ppm	104.316 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5274 ppm	105.471 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,834 cps	2.6917 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	51,468 cps	2.5796 ppm	103.184 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	188,309 cps	0.5310 ppm	106.191 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	511 cps	2.5431 ppm	101.724 %	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,114 cps	0.5284 ppm	105.672 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,743 cps	0.5252 ppm	105.049 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,957 cps	0.5460 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,842 cps	2.6509 ppm	106.036 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,569 cps	2.6461 ppm	105.844 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	474 cps	2.5514 ppm	102.056 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	26,809 cps	2.5584 ppm	102.336 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,093 cps	0.5256 ppm	105.122 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,705 cps	2.6646 ppm	106.585 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	75,098 cps	50.8463 ppm	101.693 %	3.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,899 cps	2.6529 ppm	106.117 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,862 cps	52.3929 ppm	104.786 %	3.9 %	2.0 ppm
Se 196.090 {472} (Axial)	586 cps	2.6124 ppm	104.498 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,970 cps	0.5306 ppm	106.124 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,856 cps	0.5166 ppm	103.330 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	542 cps	0.5438 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	472 cps	0.4915 ppm	98.293 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	8,009 cps	0.5290 ppm	105.807 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,646 cps	1.3134 ppm	105.072 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.3537 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		89.2784 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	72 cps	2.4983 ppm	99.930 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5434 ppm	108.679 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,075 cps	2.6267 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7797 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	601 cps	2.4832 ppm	99.330 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	851 cps	2.5620 ppm	102.480 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	169 cps	2.5524 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	533 cps	0.5373 ppm	107.458 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6598 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.9246 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:55:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5211 ppm	104.219 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5270 ppm	105.398 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,536 cps	2.7696 ppm		2.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	52,956 cps	2.6542 ppm	106.167 %	2.9 %	0.1 ppm
Be 313.042 {108} (Axial)	181,485 cps	0.5117 ppm	102.343 %	7.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	521 cps	2.5887 ppm	103.550 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,112 cps	0.5282 ppm	105.641 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,557 cps	0.5047 ppm	100.933 %	7.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,958 cps	0.5461 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	21,829 cps	2.6494 ppm	105.974 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,873 cps	2.5654 ppm	102.614 %	7.2 %	0.2 ppm
Fe 259.940 {130} (Radial)	490 cps	2.6349 ppm	105.396 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	27,561 cps	2.6301 ppm	105.205 %	3.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,880 cps	0.5074 ppm	101.489 %	7.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,699 cps	2.6624 ppm	106.495 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	77,037 cps	52.1593 ppm	104.319 %	3.1 %	1.6 ppm
Ni 231.604 {445} (Axial)	10,891 cps	2.6509 ppm	106.037 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	18,324 cps	53.7492 ppm	107.498 %	3.4 %	1.8 ppm
Se 196.090 {472} (Axial)	584 cps	2.6013 ppm	104.050 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,759 cps	0.5118 ppm	102.360 %	7.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,253 cps	0.5314 ppm	106.289 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	541 cps	0.5422 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	487 cps	0.5074 ppm	101.488 %	3.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,768 cps	0.5131 ppm	102.620 %	7.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,626 cps	1.3114 ppm	104.916 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9360 %		8.1 %	7.9 %
Sc 188.060 {479} (Axial)		89.8628 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	74 cps	2.5771 ppm	103.085 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5441 ppm	108.822 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,076 cps	2.6279 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.4852 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	618 cps	2.5520 ppm	102.080 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	872 cps	2.6243 ppm	104.973 %	2.4 %	0.1 ppm
Si 251.611 {134} (Radial)	174 cps	2.6194 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	531 cps	0.5356 ppm	107.111 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.9661 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.2964 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 2:57:08 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	242 cps	0.5184 ppm	103.679 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5202 ppm	104.041 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,677 cps	2.4558 ppm		3.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	47,138 cps	2.3625 ppm	94.501 %	3.8 %	0.1 ppm
Be 313.042 {108} (Axial)	178,565 cps	0.5035 ppm	100.696 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	465 cps	2.3143 ppm	92.571 %	4.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,070 cps	0.5246 ppm	104.917 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,582 cps	0.5074 ppm	101.475 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,941 cps	0.5429 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,552 cps	2.6157 ppm	104.627 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,515 cps	2.5483 ppm	101.932 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	432 cps	2.3234 ppm	92.936 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	24,497 cps	2.3377 ppm	93.509 %	4.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,356 cps	0.4996 ppm	99.920 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,621 cps	2.6312 ppm	105.247 %	2.0 %	0.1 ppm
Na 589.592 {57} (Radial)	67,972 cps	46.0216 ppm	92.043 %	3.9 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,746 cps	2.6156 ppm	104.625 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	16,050 cps	47.0786 ppm	94.157 %	4.3 %	2.0 ppm
Se 196.090 {472} (Axial)	580 cps	2.5847 ppm	103.387 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,711 cps	0.5076 ppm	101.511 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,651 cps	0.4717 ppm	94.347 %	3.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	534 cps	0.5354 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	436 cps	0.4545 ppm	90.904 %	4.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,633 cps	0.5042 ppm	100.830 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,497 cps	1.2990 ppm	103.922 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.8057 %		1.8 %	1.7 %
Sc 188.060 {479} (Axial)		89.3585 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	65 cps	2.2501 ppm	90.005 %	5.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5382 ppm	107.644 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,039 cps	2.5961 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7523 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	545 cps	2.2522 ppm	90.088 %	3.5 %	0.1 ppm
Al 396.152 {85} (Radial)	778 cps	2.3421 ppm	93.684 %	3.0 %	0.1 ppm
Si 251.611 {134} (Radial)	152 cps	2.2879 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	526 cps	0.5301 ppm	106.022 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6300 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.3677 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 3:12:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5209 ppm	104.181 %	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5235 ppm	104.698 %	3.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,526 cps	2.5403 ppm		4.3 %	0.1 ppm
Ba 493.409 {68} (Radial)	48,722 cps	2.4419 ppm	97.677 %	4.1 %	0.1 ppm
Be 313.042 {108} (Axial)	177,779 cps	0.5013 ppm	100.253 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	488 cps	2.4288 ppm	97.151 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,095 cps	0.5267 ppm	105.346 %	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,460 cps	0.4939 ppm	98.782 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,933 cps	0.5414 ppm		3.1 %	0.0 ppm
Co 228.616 {447} (Axial)	21,708 cps	2.6347 ppm	105.386 %	3.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	53,406 cps	2.5431 ppm	101.724 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	444 cps	2.3887 ppm	95.549 %	4.2 %	0.1 ppm
Li 670.784 {50} (Radial)	25,327 cps	2.4170 ppm	96.680 %	4.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,255 cps	0.4981 ppm	99.617 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,666 cps	2.6492 ppm	105.969 %	3.0 %	0.1 ppm
Na 589.592 {57} (Radial)	70,334 cps	47.6213 ppm	95.243 %	4.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	10,822 cps	2.6340 ppm	105.359 %	3.0 %	0.1 ppm
K 766.490 {44} (Radial)	16,653 cps	48.8487 ppm	97.697 %	5.2 %	2.5 ppm
Se 196.090 {472} (Axial)	585 cps	2.6066 ppm	104.263 %	3.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,666 cps	0.5036 ppm	100.714 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,111 cps	0.4889 ppm	97.775 %	4.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	537 cps	0.5388 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	445 cps	0.4642 ppm	92.835 %	4.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,649 cps	0.5053 ppm	101.051 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,576 cps	1.3067 ppm	104.535 %	3.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.5695 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		88.6038 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	65 cps	2.2783 ppm	91.131 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5389 ppm	107.789 %	3.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,051 cps	2.6065 ppm		2.7 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.1666 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	563 cps	2.3265 ppm	93.060 %	4.8 %	0.1 ppm
Al 396.152 {85} (Radial)	798 cps	2.4018 ppm	96.071 %	3.9 %	0.1 ppm
Si 251.611 {134} (Radial)	157 cps	2.3709 ppm		5.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	528 cps	0.5323 ppm	106.464 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		92.2956 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.9706 %		0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 3:37:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.5000 ppm	100.002 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4986 ppm	99.722 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,009 cps	2.6082 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	49,635 cps	2.4877 ppm	99.508 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	181,199 cps	0.5109 ppm	102.182 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	499 cps	2.4815 ppm	99.258 %	3.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,814 cps	0.5025 ppm	100.491 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,565 cps	0.5056 ppm	101.111 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,833 cps	0.5230 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,856 cps	2.5313 ppm	101.252 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,085 cps	2.5278 ppm	101.113 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	470 cps	2.5286 ppm	101.143 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	25,814 cps	2.4635 ppm	98.538 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,785 cps	0.5060 ppm	101.204 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,355 cps	2.5256 ppm	101.023 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	73,291 cps	49.6228 ppm	99.246 %	3.2 %	1.6 ppm
Ni 231.604 {445} (Axial)	10,408 cps	2.5332 ppm	101.330 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	17,027 cps	49.9442 ppm	99.888 %	3.2 %	1.6 ppm
Se 196.090 {472} (Axial)	558 cps	2.4862 ppm	99.450 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,717 cps	0.5081 ppm	101.620 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,438 cps	0.5010 ppm	100.210 %	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	513 cps	0.5144 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	472 cps	0.4923 ppm	98.465 %	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,687 cps	0.5078 ppm	101.552 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,002 cps	1.2515 ppm	100.117 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.0649 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		91.2911 %		0.0 %	0.0 %
Mg 279.079 {121} (Radial)	71 cps	2.4806 ppm	99.225 %	4.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5169 ppm	103.387 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,901 cps	2.4786 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0493 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	603 cps	2.4926 ppm	99.705 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	830 cps	2.4982 ppm	99.927 %	2.9 %	0.1 ppm
Si 251.611 {134} (Radial)	166 cps	2.5071 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	506 cps	0.5104 ppm	102.089 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0051 %		0.2 %	0.1 %
Sc 361.384 {93} (Radial)		97.1607 %		0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 4:39:27 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.4994 ppm	99.884 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.5038 ppm	100.751 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	56,114 cps	2.5672 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	49,284 cps	2.4701 ppm	98.804 %	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	180,622 cps	0.5093 ppm	101.857 %	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	492 cps	2.4471 ppm	97.886 %	0.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,868 cps	0.5071 ppm	101.419 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,544 cps	0.5032 ppm	100.636 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,841 cps	0.5244 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,998 cps	2.5485 ppm	101.939 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	53,069 cps	2.5271 ppm	101.083 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	463 cps	2.4939 ppm	99.755 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	25,429 cps	2.4267 ppm	97.067 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,675 cps	0.5044 ppm	100.875 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,415 cps	2.5495 ppm	101.981 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	71,741 cps	48.5738 ppm	97.148 %	1.9 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,470 cps	2.5484 ppm	101.936 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	17,015 cps	49.9102 ppm	99.820 %	1.9 %	1.0 ppm
Se 196.090 {472} (Axial)	560 cps	2.4946 ppm	99.783 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,721 cps	0.5085 ppm	101.699 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,233 cps	0.4934 ppm	98.688 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	519 cps	0.5208 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	459 cps	0.4780 ppm	95.591 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,655 cps	0.5056 ppm	101.129 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,105 cps	1.2613 ppm	100.904 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3173 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		90.4134 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	70 cps	2.4499 ppm	97.995 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5200 ppm	104.002 %	2.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,937 cps	2.5092 ppm		2.1 %	0.1 ppm
Sc 227.318 {448} (Axial)		98.1373 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	587 cps	2.4257 ppm	97.029 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	817 cps	2.4607 ppm	98.429 %	1.2 %	0.0 ppm
Si 251.611 {134} (Radial)	164 cps	2.4711 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5162 ppm	103.247 %	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.3215 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		96.8765 %		0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 5:40:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	231 cps	0.4955 ppm	99.104 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4992 ppm	99.832 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,457 cps	2.6287 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	50,358 cps	2.5239 ppm	100.958 %	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	179,338 cps	0.5057 ppm	101.132 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	504 cps	2.5043 ppm	100.173 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,816 cps	0.5026 ppm	100.521 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,516 cps	0.5001 ppm	100.013 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,804 cps	0.5176 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.5222 ppm	100.888 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,661 cps	2.5076 ppm	100.305 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	473 cps	2.5441 ppm	101.762 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	25,887 cps	2.4704 ppm	98.818 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,476 cps	0.5014 ppm	100.280 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,359 cps	2.5273 ppm	101.093 %	2.0 %	0.1 ppm
Na 589.592 {57} (Radial)	72,986 cps	49.4168 ppm	98.834 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,378 cps	2.5259 ppm	101.037 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	17,223 cps	50.5192 ppm	101.038 %	2.2 %	1.1 ppm
Se 196.090 {472} (Axial)	556 cps	2.4767 ppm	99.069 %	1.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,663 cps	0.5033 ppm	100.664 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,533 cps	0.5046 ppm	100.923 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	514 cps	0.5158 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	469 cps	0.4886 ppm	97.716 %	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,639 cps	0.5046 ppm	100.916 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,977 cps	1.2490 ppm	99.922 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.4840 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		90.4593 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	71 cps	2.4568 ppm	98.272 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5172 ppm	103.441 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,913 cps	2.4883 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.8540 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	591 cps	2.4412 ppm	97.650 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	838 cps	2.5224 ppm	100.897 %	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	166 cps	2.4974 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	509 cps	0.5136 ppm	102.711 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2998 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		95.8560 %		0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 6:41:08 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.5129 ppm	102.581 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5168 ppm	103.357 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,960 cps	2.6975 ppm		1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	51,902 cps	2.6013 ppm	104.054 %	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	181,336 cps	0.5113 ppm	102.259 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	500 cps	2.4880 ppm	99.519 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,047 cps	0.5225 ppm	104.507 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,544 cps	0.5031 ppm	100.628 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,890 cps	0.5335 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,461 cps	2.6047 ppm	104.189 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,208 cps	2.5813 ppm	103.251 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	476 cps	2.5629 ppm	102.517 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	26,818 cps	2.5593 ppm	102.371 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,848 cps	0.5070 ppm	101.393 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,612 cps	2.6276 ppm	105.105 %	1.9 %	0.1 ppm
Na 589.592 {57} (Radial)	74,557 cps	50.4804 ppm	100.961 %	1.5 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,701 cps	2.6047 ppm	104.189 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	18,025 cps	52.8728 ppm	105.746 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	571 cps	2.5449 ppm	101.797 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,795 cps	0.5150 ppm	103.005 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,844 cps	0.5162 ppm	103.241 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	533 cps	0.5343 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	467 cps	0.4869 ppm	97.374 %	0.4 %	0.0 ppm
V 292.402 {115} (Axial)	7,782 cps	0.5140 ppm	102.802 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,426 cps	1.2922 ppm	103.380 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.3786 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		88.1774 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	69 cps	2.4184 ppm	96.736 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5378 ppm	107.552 %	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,991 cps	2.5549 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.8315 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	600 cps	2.4804 ppm	99.217 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	844 cps	2.5424 ppm	101.696 %	0.3 %	0.0 ppm
Si 251.611 {134} (Radial)	166 cps	2.5026 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	536 cps	0.5408 ppm	108.162 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0401 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.7641 %		0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 7:42:47 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	244 cps	0.5223 ppm	104.453 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5260 ppm	105.210 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,892 cps	2.7401 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	52,625 cps	2.6376 ppm	105.503 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	188,220 cps	0.5307 ppm	106.141 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	510 cps	2.5370 ppm	101.481 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,135 cps	0.5302 ppm	106.034 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,730 cps	0.5238 ppm	104.752 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,936 cps	0.5420 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	21,810 cps	2.6470 ppm	105.881 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,053 cps	2.6692 ppm	106.767 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	480 cps	2.5824 ppm	103.295 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	27,432 cps	2.6178 ppm	104.713 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,083 cps	0.5255 ppm	105.095 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,727 cps	2.6736 ppm	106.945 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	76,022 cps	51.4719 ppm	102.944 %	3.2 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,874 cps	2.6468 ppm	105.870 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	18,621 cps	54.6199 ppm	109.240 %	3.2 %	1.7 ppm
Se 196.090 {472} (Axial)	576 cps	2.5679 ppm	102.716 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,985 cps	0.5319 ppm	106.384 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,028 cps	0.5231 ppm	104.617 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	542 cps	0.5436 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	470 cps	0.4897 ppm	97.941 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,067 cps	0.5328 ppm	106.570 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,631 cps	1.3120 ppm	104.959 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3852 %		1.2 %	1.1 %
Sc 188.060 {479} (Axial)		88.0705 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	71 cps	2.4763 ppm	99.052 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5448 ppm	108.967 %	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,043 cps	2.5995 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.0323 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	611 cps	2.5266 ppm	101.064 %	3.3 %	0.1 ppm
Al 396.152 {85} (Radial)	862 cps	2.5963 ppm	103.852 %	3.5 %	0.1 ppm
Si 251.611 {134} (Radial)	170 cps	2.5552 ppm		3.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	532 cps	0.5362 ppm	107.235 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6806 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.6003 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 8:44:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5205 ppm	104.105 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5247 ppm	104.943 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,860 cps	2.6471 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	50,873 cps	2.5497 ppm	101.989 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	183,750 cps	0.5181 ppm	103.620 %	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	508 cps	2.5275 ppm	101.101 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,113 cps	0.5282 ppm	105.648 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,610 cps	0.5105 ppm	102.101 %	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,929 cps	0.5407 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	21,743 cps	2.6389 ppm	105.556 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,707 cps	2.6051 ppm	104.203 %	3.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	464 cps	2.4995 ppm	99.978 %	0.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26,433 cps	2.5225 ppm	100.900 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,268 cps	0.5133 ppm	102.653 %	3.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6616 ppm	106.463 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73,751 cps	49.9348 ppm	99.870 %	2.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	10,835 cps	2.6371 ppm	105.485 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,899 cps	52.5031 ppm	105.006 %	2.3 %	1.2 ppm
Se 196.090 {472} (Axial)	579 cps	2.5785 ppm	103.138 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,868 cps	0.5215 ppm	104.299 %	3.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,596 cps	0.5070 ppm	101.391 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	539 cps	0.5402 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	457 cps	0.4760 ppm	95.198 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,852 cps	0.5187 ppm	103.731 %	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,598 cps	1.3088 ppm	104.701 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3493 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		89.0648 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	69 cps	2.4127 ppm	96.510 %	0.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5426 ppm	108.515 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,040 cps	2.5969 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.8495 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	593 cps	2.4500 ppm	98.001 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	838 cps	2.5233 ppm	100.931 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.4562 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	530 cps	0.5343 ppm	106.856 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		92.8151 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.8360 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 9:45:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	169 cps	0.3617 ppm	72.343 %	35.3 %	0.1 ppm
As 189.042 {478} (Axial)	160 cps	0.4399 ppm	87.979 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	-10 cps	-0.0005 ppm		21.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,196 cps	-0.0600 ppm	-2.398 %	11.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-360 cps	-0.0010 ppm	-0.203 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0155 ppm	-0.621 %	73.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,129 cps	0.4433 ppm	88.655 %	2.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	-0.056 %	33.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,498 cps	0.4611 ppm		2.8 %	0.0 ppm
Co 228.616 {447} (Axial)	18,428 cps	2.2366 ppm	89.462 %	2.5 %	0.1 ppm
Cu 324.754 {104} (Axial)	-93 cps	-0.0044 ppm	-0.176 %	32.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0066 ppm	0.263 %	142.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-5 cps	-0.0005 ppm	-0.021 %	218.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-12 cps	-0.0002 ppm	-0.036 %	22.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,648 cps	2.2446 ppm	89.784 %	2.5 %	0.1 ppm
Na 589.592 {57} (Radial)	-64 cps	-0.0436 ppm	-0.087 %	6.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	9,192 cps	2.2373 ppm	89.492 %	2.5 %	0.1 ppm
K 766.490 {44} (Radial)	-27 cps	-0.0780 ppm	-0.156 %	18.8 %	0.0 ppm
Se 196.090 {472} (Axial)	396 cps	1.7645 ppm	70.578 %	36.3 %	0.6 ppm
Ag 328.068 {103} (Axial)	-6 cps	-0.0005 ppm	-0.100 %	278.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	-1 cps	0.0000 ppm	-0.006 %	123.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	384 cps	0.3853 ppm		34.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	0.063 %	427.1 %	0.0 ppm
V 292.402 {115} (Axial)	-15 cps	-0.0010 ppm	-0.202 %	4.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,658 cps	1.1221 ppm	89.766 %	2.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		201.2136 %		4.2 %	8.5 %
Sc 188.060 {479} (Axial)		98.7768 %		11.7 %	11.5 %
Mg 279.079 {121} (Radial)	0 cps	0.0033 ppm	0.131 %	333.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	125 cps	0.3699 ppm	73.976 %	37.5 %	0.1 ppm
Al 167.079 {502} (Axial)	2,251 cps	1.9233 ppm		32.9 %	0.6 ppm
Sc 227.318 {448} (Axial)		104.4710 %		9.6 %	10.0 %
B 249.773 {135} (Radial)	-5 cps	-0.0206 ppm	-0.825 %	8.7 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0039 ppm	-0.156 %	81.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0012 ppm		2,906.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	460 cps	0.4637 ppm	92.743 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		101.7252 %		11.1 %	11.2 %
Sc 361.384 {93} (Radial)		165.7025 %		8.2 %	13.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 9:50:37 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	220 cps	0.4722 ppm	94.436 %	4.6 %	0.0 ppm
As 189.042 {478} (Axial)	170 cps	0.4698 ppm	93.967 %	5.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	-1 cps	-0.0001 ppm		81.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,074 cps	-0.0538 ppm	-2.153 %	3.4 %	0.0 ppm
Be 313.042 {108} (Axial)	158,648 cps	0.4473 ppm	89.465 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	120 cps	0.5990 ppm	23.960 %	177.5 %	1.1 ppm
Cd 228.802 {447} (Axial)	5,625 cps	0.4861 ppm	97.223 %	5.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,037 cps	0.4471 ppm	89.412 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,723 cps	0.5027 ppm		4.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,128 cps	2.4429 ppm	97.718 %	5.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	47,149 cps	2.2452 ppm	89.806 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0060 ppm	-0.239 %	135.8 %	0.0 ppm
Li 670.784 {50} (Radial)	6 cps	0.0006 ppm	0.024 %	50.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,659 cps	0.4442 ppm	88.847 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,179 cps	2.4556 ppm	98.226 %	5.0 %	0.1 ppm
Na 589.592 {57} (Radial)	-40 cps	-0.0268 ppm	-0.054 %	23.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	10,034 cps	2.4423 ppm	97.694 %	5.0 %	0.1 ppm
K 766.490 {44} (Radial)	-28 cps	-0.0824 ppm	-0.165 %	78.7 %	0.1 ppm
Se 196.090 {472} (Axial)	530 cps	2.3643 ppm	94.572 %	6.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,970 cps	0.4418 ppm	88.350 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	2 cps	0.0001 ppm	0.012 %	506.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	499 cps	0.5005 ppm		5.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0018 ppm	0.353 %	8.8 %	0.0 ppm
V 292.402 {115} (Axial)	6,823 cps	0.4507 ppm	90.131 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,286 cps	1.1825 ppm	94.599 %	4.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		96.7005 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		89.7929 %		1.0 %	0.9 %
Mg 279.079 {121} (Radial)	0 cps	-0.0049 ppm	-0.194 %	83.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	167 cps	0.4957 ppm	99.144 %	5.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,851 cps	2.4358 ppm		4.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.9746 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	-3 cps	-0.0143 ppm	-0.572 %	32.8 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0010 ppm	0.041 %	218.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0079 ppm		20.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	489 cps	0.4927 ppm	98.540 %	5.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.1162 %		0.6 %	0.6 %
Sc 361.384 {93} (Radial)		139.7202 %		18.7 %	26.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 10:51:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	240 cps	0.5144 ppm	102.880 %	3.5 %	0.0 ppm
As 189.042 {478} (Axial)	188 cps	0.5174 ppm	103.480 %	3.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,560 cps	2.6792 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	51,393 cps	2.5758 ppm	103.032 %	2.0 %	0.1 ppm
Be 313.042 {108} (Axial)	175,222 cps	0.5001 ppm	100.027 %	0.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	504 cps	2.5070 ppm	100.278 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,034 cps	0.5215 ppm	104.297 %	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,409 cps	0.4936 ppm	98.725 %	0.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,900 cps	0.5353 ppm		3.7 %	0.0 ppm
Co 228.616 {447} (Axial)	21,486 cps	2.6077 ppm	104.308 %	3.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	51,935 cps	2.5074 ppm	100.297 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	478 cps	2.5739 ppm	102.955 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	26,681 cps	2.5461 ppm	101.846 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,724 cps	0.4963 ppm	99.265 %	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,598 cps	2.6224 ppm	104.896 %	3.7 %	0.1 ppm
Na 589.592 {57} (Radial)	74,404 cps	50.3768 ppm	100.754 %	2.6 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,710 cps	2.6067 ppm	104.269 %	3.6 %	0.1 ppm
K 766.490 {44} (Radial)	17,784 cps	52.1660 ppm	104.332 %	3.0 %	1.5 ppm
Se 196.090 {472} (Axial)	576 cps	2.5654 ppm	102.618 %	3.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,565 cps	0.5016 ppm	100.327 %	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,778 cps	0.5138 ppm	102.752 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	533 cps	0.5344 ppm		3.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	469 cps	0.4889 ppm	97.771 %	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	7,477 cps	0.5007 ppm	100.142 %	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,425 cps	1.2922 ppm	103.372 %	3.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.6996 %		2.5 %	2.4 %
Sc 188.060 {479} (Axial)		89.2564 %		1.1 %	1.0 %
Mg 279.079 {121} (Radial)	71 cps	2.4852 ppm	99.407 %	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	180 cps	0.5355 ppm	107.099 %	4.1 %	0.0 ppm
Al 167.079 {502} (Axial)	3,017 cps	2.5776 ppm		3.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.8871 %		0.8 %	0.8 %
B 249.773 {135} (Radial)	595 cps	2.4582 ppm	98.328 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	852 cps	2.5639 ppm	102.557 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	167 cps	2.5164 ppm		3.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	524 cps	0.5288 ppm	105.760 %	3.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.7141 %		1.1 %	1.0 %
Sc 361.384 {93} (Radial)		95.9100 %		1.5 %	1.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:57:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0013 ppm	83.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0005 ppm	148.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	38 cps	0.0017 ppm	19.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0102 ppm	7.7 %	0.0 ppm
Be 313.042 {108} (Axial)	65 cps	0.0002 ppm	10.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0169 ppm	57.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	34.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	83.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	317.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	78.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	30 cps	0.0014 ppm	12.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0060 ppm	133.1 %	0.0 ppm
Li 670.784 {50} (Radial)	30 cps	0.0029 ppm	13.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0002 ppm	40.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	15.5 %	0.0 ppm
Na 589.592 {57} (Radial)	102 cps	0.0688 ppm	9.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0004 ppm	58.4 %	0.0 ppm
K 766.490 {44} (Radial)	20 cps	0.0601 ppm	70.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	136.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	22.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	10 cps	0.0004 ppm	6.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	507.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0002 ppm	1,572.9 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	43.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	52.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5244 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		95.6457 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	-2 cps	-0.0725 ppm	89.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0011 ppm	43.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	151.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.2865 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	-3 cps	-0.0112 ppm	63.8 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0074 ppm	106.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0224 ppm	64.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	318.2 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6715 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		95.4581 %	0.7 %	0.7 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:58:42 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0016 ppm	82.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	209.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	34 cps	0.0016 ppm	34.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	256 cps	0.0129 ppm	14.6 %	0.0 ppm
Be 313.042 {108} (Axial)	56 cps	0.0002 ppm	35.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0207 ppm	95.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	4.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	45.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	224.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	57.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	24 cps	0.0011 ppm	82.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0003 ppm	457.6 %	0.0 ppm
Li 670.784 {50} (Radial)	33 cps	0.0031 ppm	46.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	11.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	29.5 %	0.0 ppm
Na 589.592 {57} (Radial)	126 cps	0.0854 ppm	9.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	-1 cps	-0.0002 ppm	34.1 %	0.0 ppm
K 766.490 {44} (Radial)	12 cps	0.0356 ppm	98.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0001 ppm	828.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	13 cps	0.0011 ppm	72.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	10 cps	0.0004 ppm	55.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	77.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	126.6 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	220.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	82.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8648 %	4.6 %	4.6 %
Sc 188.060 {479} (Axial)		95.4626 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	0 cps	-0.0077 ppm	732.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	29.4 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	99.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1702 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	0 cps	0.0004 ppm	1,296.6 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0122 ppm	44.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0060 ppm	113.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	69.3 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9303 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.8498 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:00:14 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0027 ppm	53.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	231.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	31 cps	0.0014 ppm	35.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	240 cps	0.0121 ppm	10.9 %	0.0 ppm
Be 313.042 {108} (Axial)	70 cps	0.0002 ppm	5.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0056 ppm	223.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	22.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	94.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	24.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	82.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	32 cps	0.0015 ppm	29.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0012 ppm	692.7 %	0.0 ppm
Li 670.784 {50} (Radial)	24 cps	0.0023 ppm	60.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	38.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	23.1 %	0.0 ppm
Na 589.592 {57} (Radial)	91 cps	0.0613 ppm	23.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	89.2 %	0.0 ppm
K 766.490 {44} (Radial)	7 cps	0.0217 ppm	122.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0011 ppm	77.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0006 ppm	45.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2 cps	0.0001 ppm	56.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	325.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0027 ppm	18.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	306.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	273.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.2189 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		95.5666 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0318 ppm	146.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0007 ppm	14.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	125.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.3659 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-2 cps	-0.0066 ppm	63.9 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0007 ppm	1,795.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0085 ppm	166.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	1,213.6 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9809 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.5971 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:02:03 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	48.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	186.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	49 cps	0.0022 ppm	31.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	214 cps	0.0107 ppm	17.4 %	0.0 ppm
Be 313.042 {108} (Axial)	110 cps	0.0003 ppm	7.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0178 ppm	37.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	2.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	23 cps	0.0025 ppm	13.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	10 cps	0.0019 ppm	5.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0005 ppm	56.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	44 cps	0.0021 ppm	10.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0002 ppm	1,559.0 %	0.0 ppm
Li 670.784 {50} (Radial)	42 cps	0.0040 ppm	33.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	16 cps	0.0002 ppm	13.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	36.6 %	0.0 ppm
Na 589.592 {57} (Radial)	481 cps	0.3259 ppm	6.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0006 ppm	65.4 %	0.0 ppm
K 766.490 {44} (Radial)	18 cps	0.0515 ppm	57.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0002 ppm	533.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0008 ppm	44.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0005 ppm	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	158.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0009 ppm	135.6 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	33.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	111.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.1188 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		95.9602 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	-0.0090 ppm	36.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	38.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	31.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.7157 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-1 cps	-0.0028 ppm	142.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0028 ppm	462.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0065 ppm	196.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	466.5 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2284 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		96.5225 %	0.7 %	0.7 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:17:21 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0008 ppm	237.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	170.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	43 cps	0.0020 ppm	35.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	271 cps	0.0136 ppm	14.4 %	0.0 ppm
Be 313.042 {108} (Axial)	106 cps	0.0003 ppm	9.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	7 cps	0.0336 ppm	15.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	22.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	17.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	14.0 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	68.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	43 cps	0.0021 ppm	3.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0020 ppm	410.4 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0035 ppm	15.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	16 cps	0.0002 ppm	29.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0014 ppm	32.6 %	0.0 ppm
Na 589.592 {57} (Radial)	262 cps	0.1772 ppm	3.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	258.1 %	0.0 ppm
K 766.490 {44} (Radial)	21 cps	0.0615 ppm	11.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	26.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	91.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	21 cps	0.0008 ppm	7.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	186.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	406.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	583.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	879.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9201 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.1725 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0145 ppm	173.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	107.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	51.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.7488 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	-3 cps	-0.0106 ppm	23.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0032 ppm	682.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0070 ppm	51.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	58.3 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4190 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		96.8498 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:41:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	50.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0007 ppm	175.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	44.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	135 cps	0.0068 ppm	7.6 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	20.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0206 ppm	43.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	8.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0003 ppm	89.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	261.4 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	67.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	27 cps	0.0013 ppm	20.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0027 ppm	224.2 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	17.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	29.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	23.9 %	0.0 ppm
Na 589.592 {57} (Radial)	59 cps	0.0402 ppm	31.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	190.5 %	0.0 ppm
K 766.490 {44} (Radial)	7 cps	0.0219 ppm	287.9 %	0.1 ppm
Se 196.090 {472} (Axial)	1 cps	0.0026 ppm	97.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0005 ppm	118.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0003 ppm	23.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	78.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0021 ppm	126.8 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0002 ppm	130.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	202.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0807 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.0867 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0349 ppm	51.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0008 ppm	71.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	26.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.1161 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	2 cps	0.0072 ppm	93.2 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0005 ppm	268.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0050 ppm	119.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	98.9 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4223 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		97.8888 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 4:44:22 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	171.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	155.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	32.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	49 cps	0.0024 ppm	54.7 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	12.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0093 ppm	100.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	63.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	251.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	110.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	50.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	21 cps	0.0010 ppm	18.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0023 ppm	151.9 %	0.0 ppm
Li 670.784 {50} (Radial)	29 cps	0.0028 ppm	33.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	42.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	39.5 %	0.0 ppm
Na 589.592 {57} (Radial)	63 cps	0.0430 ppm	19.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	370.5 %	0.0 ppm
K 766.490 {44} (Radial)	-6 cps	-0.0188 ppm	291.2 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0007 ppm	50.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0005 ppm	26.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0002 ppm	61.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	594.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0016 ppm	19.5 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	223.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	157.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4287 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		98.3495 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0213 ppm	291.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	142.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	82.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3699 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-2 cps	-0.0069 ppm	82.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0051 ppm	254.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0140 ppm	80.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	209.3 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4730 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.2198 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 5:44:59 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	94.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	209.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	18.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	146 cps	0.0073 ppm	13.5 %	0.0 ppm
Be 313.042 {108} (Axial)	46 cps	0.0001 ppm	36.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0128 ppm	112.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	29.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	421.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	10.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	25.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	25 cps	0.0012 ppm	14.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0098 ppm	60.1 %	0.0 ppm
Li 670.784 {50} (Radial)	25 cps	0.0024 ppm	85.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	60.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	17.2 %	0.0 ppm
Na 589.592 {57} (Radial)	54 cps	0.0368 ppm	35.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	225.3 %	0.0 ppm
K 766.490 {44} (Radial)	-4 cps	-0.0122 ppm	53.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0001 ppm	2,711.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	77.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	47.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0003 ppm	80.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	120.4 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	52.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	57.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.3880 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.3524 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0159 ppm	266.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	229.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	65.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2292 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-1 cps	-0.0028 ppm	150.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0068 ppm	364.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0053 ppm	85.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0007 ppm	16.0 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7902 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.3841 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 6:46:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	196.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0011 ppm	49.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	29 cps	0.0013 ppm	25.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	222 cps	0.0111 ppm	8.8 %	0.0 ppm
Be 313.042 {108} (Axial)	58 cps	0.0002 ppm	25.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0119 ppm	25.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0006 ppm	25.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	102.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0001 ppm	85.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	105.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	36 cps	0.0017 ppm	12.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0022 ppm	92.6 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0039 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	55.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	46.7 %	0.0 ppm
Na 589.592 {57} (Radial)	113 cps	0.0763 ppm	23.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	98.8 %	0.0 ppm
K 766.490 {44} (Radial)	20 cps	0.0574 ppm	74.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	84.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	46.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0002 ppm	41.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	337.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0020 ppm	70.9 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0003 ppm	73.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	56.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.7657 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		94.8371 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0216 ppm	286.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	70.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	6.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.8329 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-2 cps	-0.0086 ppm	46.3 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0030 ppm	208.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0048 ppm	99.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	2 cps	0.0019 ppm	44.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0723 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.6113 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 7:47:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	235.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0014 ppm	57.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	32 cps	0.0015 ppm	70.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	173 cps	0.0087 ppm	18.7 %	0.0 ppm
Be 313.042 {108} (Axial)	74 cps	0.0002 ppm	10.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0262 ppm	20.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	11.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	59.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	315.9 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	44.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	34 cps	0.0016 ppm	9.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0090 ppm	45.0 %	0.0 ppm
Li 670.784 {50} (Radial)	69 cps	0.0066 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	39.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	22.6 %	0.0 ppm
Na 589.592 {57} (Radial)	62 cps	0.0420 ppm	39.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	2,082.8 %	0.0 ppm
K 766.490 {44} (Radial)	34 cps	0.1009 ppm	25.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	1,129.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	46.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	42.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	375.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0005 ppm	202.9 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	184.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	100.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8045 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.1046 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0196 ppm	138.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0023 ppm	26.2 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	52.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.0053 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-1 cps	-0.0031 ppm	197.9 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0128 ppm	63.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0112 ppm	139.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	653.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5530 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.0514 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 8:49:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0022 ppm	59.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	480.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	21 cps	0.0010 ppm	83.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	249 cps	0.0125 ppm	10.5 %	0.0 ppm
Be 313.042 {108} (Axial)	60 cps	0.0002 ppm	19.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0129 ppm	16.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	35.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	143.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	201.2 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	88.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	36 cps	0.0017 ppm	25.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0006 ppm	743.7 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	21.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	12.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	15.8 %	0.0 ppm
Na 589.592 {57} (Radial)	61 cps	0.0410 ppm	12.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	258.7 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0552 ppm	70.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	135.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	44.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0003 ppm	16.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	97.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	181.8 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	43.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0299 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.3701 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0104 ppm	565.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0013 ppm	76.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	92.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1283 %	1.1 %	1.0 %
B 249.773 {135} (Radial)	-3 cps	-0.0140 ppm	15.8 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0144 ppm	107.8 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0116 ppm	64.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	85.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3095 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		96.9997 %	0.2 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 9:55:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0015 ppm	68.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	202.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	9 cps	0.0004 ppm	48.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,131 cps	-0.0567 ppm	14.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-198 cps	-0.0006 ppm	115.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	-4 cps	-0.0201 ppm	62.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0008 ppm	13.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	105.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0006 ppm	31.6 %	0.0 ppm
Co 228.616 {447} (Axial)	24 cps	0.0029 ppm	20.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	-32 cps	-0.0015 ppm	277.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0027 ppm	239.1 %	0.0 ppm
Li 670.784 {50} (Radial)	5 cps	0.0005 ppm	192.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	208.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	10 cps	0.0042 ppm	20.1 %	0.0 ppm
Na 589.592 {57} (Radial)	-27 cps	-0.0184 ppm	56.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	11 cps	0.0028 ppm	19.7 %	0.0 ppm
K 766.490 {44} (Radial)	-23 cps	-0.0685 ppm	30.5 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0046 ppm	61.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	-15 cps	-0.0014 ppm	111.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1 cps	0.0000 ppm	134.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	14.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0008 ppm	42.9 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0006 ppm	95.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12 cps	0.0012 ppm	23.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		166.6489 %	30.3 %	50.6 %
Sc 188.060 {479} (Axial)		95.9125 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	0.0124 ppm	305.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	326.0 %	0.0 ppm
Al 167.079 {502} (Axial)	4 cps	0.0035 ppm	18.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.6869 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	-3 cps	-0.0115 ppm	7.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0054 ppm	30.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0157 ppm	135.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	481.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2029 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		161.4753 %	5.6 %	9.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:56:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0024 ppm	21.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	80.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	24 cps	0.0011 ppm	28.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0102 ppm	4.0 %	0.0 ppm
Be 313.042 {108} (Axial)	61 cps	0.0002 ppm	14.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0045 ppm	220.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	47.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	1,981.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	59.7 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	97.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	26 cps	0.0012 ppm	37.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0026 ppm	97.4 %	0.0 ppm
Li 670.784 {50} (Radial)	28 cps	0.0027 ppm	48.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	32.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	39.2 %	0.0 ppm
Na 589.592 {57} (Radial)	32 cps	0.0217 ppm	60.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	86.1 %	0.0 ppm
K 766.490 {44} (Radial)	18 cps	0.0521 ppm	22.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0006 ppm	472.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0012 ppm	13.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	26.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	89.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0025 ppm	100.3 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	16.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	521.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9624 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.0514 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0054 ppm	345.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	54.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	68.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.8671 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	-2 cps	-0.0089 ppm	26.7 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0117 ppm	71.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0125 ppm	14.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0008 ppm	46.4 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8155 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.5867 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

MBLK-168178

Sample type: UNKNOWN Analysis started at: 11/30/2020 8:54:40 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0039 ppm	21.9 %	0.0 ppm
As 189.042 {478} (Axial)	-1 cps	-0.0019 ppm	33.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	21 cps	0.0010 ppm	37.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	180 cps	0.0090 ppm	9.9 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	8.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	46 cps	0.2298 ppm	6.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	15.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0006 ppm	8.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	20.2 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	17.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	58 cps	0.0028 ppm	24.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0825 ppm	5.4 %	0.0 ppm
Li 670.784 {50} (Radial)	-16 cps	-0.0015 ppm	51.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	167 cps	0.0025 ppm	3.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0002 ppm	171.1 %	0.0 ppm
Na 589.592 {57} (Radial)	25 cps	0.0170 ppm	84.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	27.2 %	0.0 ppm
K 766.490 {44} (Radial)	-14 cps	-0.0406 ppm	95.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0011 ppm	346.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0006 ppm	25.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0002 ppm	80.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0005 ppm	56.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0019 ppm	87.1 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	225.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	92 cps	0.0088 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8207 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		90.5169 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	2 cps	0.0823 ppm	61.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0027 ppm	40.4 %	0.0 ppm
Al 167.079 {502} (Axial)	49 cps	0.0415 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.4426 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	-3 cps	-0.0135 ppm	35.2 %	0.0 ppm
Al 396.152 {85} (Radial)	15 cps	0.0448 ppm	31.4 %	0.0 ppm
Si 251.611 {134} (Radial)	5 cps	0.0740 ppm	12.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	15 cps	0.0154 ppm	6.7 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9766 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		97.6849 %	0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LCS-168178

Sample type: UNKNOWN Analysis started at: 11/30/2020 8:59:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	48 cps	0.1035 ppm	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	35 cps	0.0978 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,311 cps	0.1057 ppm	3.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,188 cps	0.1096 ppm	3.1 %	0.0 ppm
Be 313.042 {108} (Axial)	35,316 cps	0.0996 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,970 cps	9.7936 ppm	4.1 %	0.4 ppm
Cd 228.802 {447} (Axial)	1,179 cps	0.1019 ppm	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	935 cps	0.1036 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	590 cps	0.1089 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	863 cps	0.1048 ppm	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,296 cps	0.1093 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,864 cps	10.0360 ppm	3.9 %	0.4 ppm
Li 670.784 {50} (Radial)	1,026 cps	0.0979 ppm	5.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,987 cps	0.1047 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	273 cps	0.1083 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	14,301 cps	9.6825 ppm	3.8 %	0.4 ppm
Ni 231.604 {445} (Axial)	426 cps	0.1037 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	3,486 cps	10.2264 ppm	3.7 %	0.4 ppm
Se 196.090 {472} (Axial)	22 cps	0.0964 ppm	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,204 cps	0.1070 ppm	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,699 cps	0.1006 ppm	3.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	106 cps	0.1060 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	95 cps	0.0991 ppm	6.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,592 cps	0.1052 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,038 cps	0.0999 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.2803 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		87.9871 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	279 cps	9.6957 ppm	3.5 %	0.3 ppm
Tl 190.856 {477} (Axial)	35 cps	0.1045 ppm	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	169 cps	0.1443 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		88.1687 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	119 cps	0.4899 ppm	2.5 %	0.0 ppm
Al 396.152 {85} (Radial)	40 cps	0.1206 ppm	8.2 %	0.0 ppm
Si 251.611 {134} (Radial)	624 cps	9.3992 ppm	3.8 %	0.4 ppm
Pb 220.353 {453} (Axial)	113 cps	0.1139 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		93.8257 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.7635 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-13A

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:21:05 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0690 ppm	9.6 %	0.0 ppm
As 189.042 {478} (Axial)	3 cps	0.0789 ppm	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,984 cps	0.9078 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,896 cps	0.9504 ppm	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	264 cps	0.0074 ppm	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,572 cps	227.3349 ppm	2.1 %	4.7 ppm
Cd 228.802 {447} (Axial)	23 cps	0.0198 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	177 cps	0.1957 ppm	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	108 cps	0.1989 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0460 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	928 cps	0.4420 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,742 cps	147.6093 ppm	1.7 %	2.5 ppm
Li 670.784 {50} (Radial)	58 cps	0.0553 ppm	12.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	40,440 cps	6.0571 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0220 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	112 cps	0.7612 ppm	14.0 %	0.1 ppm
Ni 231.604 {445} (Axial)	46 cps	0.1112 ppm	3.2 %	0.0 ppm
K 766.490 {44} (Radial)	181 cps	5.3099 ppm	7.5 %	0.4 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	1,232.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0099 ppm	38.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	683 cps	0.2545 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	132 cps	1.3253 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	127 cps	1.3191 ppm	0.8 %	0.0 ppm
V 292.402 {115} (Axial)	293 cps	0.1934 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,731 cps	5.5160 ppm	0.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		96.9252 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		92.0307 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	283 cps	98.3514 ppm	1.7 %	1.7 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0204 ppm	41.1 %	0.0 ppm
Al 167.079 {502} (Axial)	6,744 cps	57.6135 ppm	0.8 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.0561 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	3 cps	0.1053 ppm	20.6 %	0.0 ppm
Al 396.152 {85} (Radial)	2,142 cps	64.4954 ppm	1.6 %	1.0 ppm
Si 251.611 {134} (Radial)	164 cps	24.6521 ppm	1.3 %	0.3 ppm
Pb 220.353 {453} (Axial)	258 cps	2.6000 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9034 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		96.9807 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-15A

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:26:08 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.1788 ppm	3.2 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1704 ppm	6.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,177 cps	0.5387 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,277 cps	0.6402 ppm	2.7 %	0.0 ppm
Be 313.042 {108} (Axial)	161 cps	0.0046 ppm	3.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,252 cps	111.9699 ppm	3.2 %	3.6 ppm
Cd 228.802 {447} (Axial)	63 cps	0.0542 ppm	0.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	104 cps	0.1152 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	64 cps	0.1188 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	35 cps	0.0424 ppm	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,430 cps	0.6809 ppm	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,790 cps	203.9965 ppm	3.4 %	6.9 ppm
Li 670.784 {50} (Radial)	24 cps	0.0234 ppm	29.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,474 cps	3.3661 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0170 ppm	6.8 %	0.0 ppm
Na 589.592 {57} (Radial)	91 cps	0.6187 ppm	10.2 %	0.1 ppm
Ni 231.604 {445} (Axial)	41 cps	0.0992 ppm	2.6 %	0.0 ppm
K 766.490 {44} (Radial)	89 cps	2.6127 ppm	9.1 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0159 ppm	206.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	24 cps	0.0215 ppm	21.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	448 cps	0.1669 ppm	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	452 cps	4.5363 ppm	0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	120 cps	1.2493 ppm	4.9 %	0.1 ppm
V 292.402 {115} (Axial)	192 cps	0.1268 ppm	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,359 cps	14.7826 ppm	0.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.6019 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		92.8650 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	132 cps	45.8997 ppm	3.6 %	1.6 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0215 ppm	47.1 %	0.0 ppm
Al 167.079 {502} (Axial)	4,371 cps	37.3390 ppm	0.7 %	0.3 ppm
Sc 227.318 {448} (Axial)		92.7528 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	2 cps	0.0774 ppm	64.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,239 cps	37.2957 ppm	3.1 %	1.2 ppm
Si 251.611 {134} (Radial)	148 cps	22.3167 ppm	2.4 %	0.5 ppm
Pb 220.353 {453} (Axial)	773 cps	7.7905 ppm	0.7 %	0.1 ppm
Y 224.306 {450} (Axial)		96.0708 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.0533 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-17A

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:31:10 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	11 cps	0.2314 ppm	4.8 %	0.0 ppm
As 189.042 {478} (Axial)	8 cps	0.2240 ppm	7.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,290 cps	1.0479 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,166 cps	1.0857 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	298 cps	0.0084 ppm	3.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,867 cps	142.5546 ppm	1.9 %	2.8 ppm
Cd 228.802 {447} (Axial)	62 cps	0.0537 ppm	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	155 cps	0.1716 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	98 cps	0.1800 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	45 cps	0.0544 ppm	3.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,985 cps	0.9451 ppm	3.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,737 cps	308.8247 ppm	1.6 %	5.0 ppm
Li 670.784 {50} (Radial)	55 cps	0.0528 ppm	15.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,395 cps	5.1516 ppm	2.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0240 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	145 cps	0.9813 ppm	11.9 %	0.1 ppm
Ni 231.604 {445} (Axial)	61 cps	0.1476 ppm	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	161 cps	4.7162 ppm	9.8 %	0.5 ppm
Se 196.090 {472} (Axial)	1 cps	0.0296 ppm	126.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	33 cps	0.0293 ppm	14.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	907 cps	0.3381 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	638 cps	6.3947 ppm	1.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	172 cps	1.7908 ppm	0.8 %	0.0 ppm
V 292.402 {115} (Axial)	275 cps	0.1818 ppm	2.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,193 cps	17.5109 ppm	1.4 %	0.2 ppm
Sc 357.253 {94} (Axial)		97.5006 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		92.5558 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	138 cps	48.0343 ppm	1.8 %	0.9 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0170 ppm	50.4 %	0.0 ppm
Al 167.079 {502} (Axial)	5,959 cps	50.9081 ppm	1.3 %	0.6 ppm
Sc 227.318 {448} (Axial)		92.6577 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	8 cps	0.3312 ppm	14.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,797 cps	54.0938 ppm	1.7 %	0.9 ppm
Si 251.611 {134} (Radial)	204 cps	30.7855 ppm	1.2 %	0.4 ppm
Pb 220.353 {453} (Axial)	806 cps	8.1286 ppm	1.3 %	0.1 ppm
Y 224.306 {450} (Axial)		96.1334 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.2081 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-18A

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:36:10 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.1185 ppm	10.1 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.1172 ppm	7.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,111 cps	0.5081 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,169 cps	0.5861 ppm	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	155 cps	0.0044 ppm	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,544 cps	126.5183 ppm	1.1 %	1.4 ppm
Cd 228.802 {447} (Axial)	30 cps	0.0255 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	105 cps	0.1165 ppm	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	63 cps	0.1157 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	27 cps	0.0329 ppm	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,044 cps	0.4971 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,672 cps	143.8065 ppm	1.2 %	1.7 ppm
Li 670.784 {50} (Radial)	34 cps	0.0324 ppm	40.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	21,462 cps	3.2146 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0164 ppm	4.1 %	0.0 ppm
Na 589.592 {57} (Radial)	71 cps	0.4799 ppm	1.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	28 cps	0.0675 ppm	3.2 %	0.0 ppm
K 766.490 {44} (Radial)	99 cps	2.9181 ppm	6.5 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0281 ppm	112.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	17 cps	0.0150 ppm	7.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	466 cps	0.1736 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	501 cps	5.0193 ppm	1.7 %	0.1 ppm
Ti 334.941 {101} (Radial)	105 cps	1.0989 ppm	2.6 %	0.0 ppm
V 292.402 {115} (Axial)	153 cps	0.1012 ppm	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,397 cps	7.1199 ppm	1.8 %	0.1 ppm
Sc 357.253 {94} (Axial)		98.2963 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		93.5374 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	117 cps	40.6713 ppm	1.0 %	0.4 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0151 ppm	36.6 %	0.0 ppm
Al 167.079 {502} (Axial)	4,367 cps	37.3111 ppm	1.6 %	0.6 ppm
Sc 227.318 {448} (Axial)		93.4306 %	0.8 %	0.7 %
B 249.773 {135} (Radial)	2 cps	0.0666 ppm	77.1 %	0.1 ppm
Al 396.152 {85} (Radial)	1,269 cps	38.2051 ppm	1.1 %	0.4 ppm
Si 251.611 {134} (Radial)	155 cps	23.3749 ppm	1.3 %	0.3 ppm
Pb 220.353 {453} (Axial)	355 cps	3.5768 ppm	1.8 %	0.1 ppm
Y 224.306 {450} (Axial)		96.1548 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		97.6925 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-19A

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:41:12 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0261 ppm	36.5 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0985 ppm	8.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,135 cps	0.9770 ppm	1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,055 cps	1.0301 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	358 cps	0.0101 ppm	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,983 cps	247.7677 ppm	1.5 %	3.8 ppm
Cd 228.802 {447} (Axial)	20 cps	0.0177 ppm	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	179 cps	0.1982 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	113 cps	0.2083 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	60 cps	0.0734 ppm	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	889 cps	0.4233 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,494 cps	188.0617 ppm	1.3 %	2.5 ppm
Li 670.784 {50} (Radial)	85 cps	0.0807 ppm	4.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	44,298 cps	6.6348 ppm	1.0 %	0.1 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0252 ppm	4.3 %	0.0 ppm
Na 589.592 {57} (Radial)	307 cps	2.0780 ppm	3.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	48 cps	0.1170 ppm	2.7 %	0.0 ppm
K 766.490 {44} (Radial)	264 cps	7.7478 ppm	5.7 %	0.4 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0012 ppm	1,986.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	12 cps	0.0105 ppm	18.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,092 cps	0.4072 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	346 cps	3.4673 ppm	1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	187 cps	1.9529 ppm	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	346 cps	0.2284 ppm	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	9,550 cps	9.1914 ppm	1.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.2612 %	0.6 %	0.5 %
Sc 188.060 {479} (Axial)		91.8094 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	249 cps	86.5490 ppm	1.8 %	1.5 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0195 ppm	69.9 %	0.0 ppm
Al 167.079 {502} (Axial)	9,107 cps	77.8047 ppm	0.8 %	0.6 ppm
Sc 227.318 {448} (Axial)		91.8669 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	8 cps	0.3101 ppm	13.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3,203 cps	96.4545 ppm	0.9 %	0.8 ppm
Si 251.611 {134} (Radial)	315 cps	47.5191 ppm	0.5 %	0.3 ppm
Pb 220.353 {453} (Axial)	310 cps	3.1286 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8507 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.1356 %	0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-21A

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:46:13 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	24 cps	0.5102 ppm	3.2 %	0.0 ppm
As 189.042 {478} (Axial)	14 cps	0.3867 ppm	3.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,766 cps	1.2653 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,578 cps	1.2922 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	243 cps	0.0069 ppm	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,957 cps	97.3148 ppm	2.2 %	2.1 ppm
Cd 228.802 {447} (Axial)	103 cps	0.0887 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	190 cps	0.2102 ppm	4.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	115 cps	0.2122 ppm	2.4 %	0.0 ppm
Co 228.616 {447} (Axial)	56 cps	0.0683 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,960 cps	1.4094 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	9,956 cps	535.9287 ppm	2.0 %	10.9 ppm
Li 670.784 {50} (Radial)	53 cps	0.0509 ppm	18.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	45,885 cps	6.8725 ppm	1.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	9 cps	0.0350 ppm	2.9 %	0.0 ppm
Na 589.592 {57} (Radial)	104 cps	0.7067 ppm	4.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	90 cps	0.2200 ppm	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	148 cps	4.3362 ppm	5.5 %	0.2 ppm
Se 196.090 {472} (Axial)	1 cps	0.0502 ppm	11.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	37 cps	0.0332 ppm	13.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,384 cps	0.5159 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	823 cps	8.2537 ppm	1.6 %	0.1 ppm
Ti 334.941 {101} (Radial)	193 cps	2.0160 ppm	2.6 %	0.1 ppm
V 292.402 {115} (Axial)	326 cps	0.2151 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	22,214 cps	21.3801 ppm	1.7 %	0.4 ppm
Sc 357.253 {94} (Axial)		97.6635 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.4621 %	1.1 %	1.0 %
Mg 279.079 {121} (Radial)	101 cps	35.0450 ppm	3.0 %	1.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0370 ppm	7.3 %	0.0 ppm
Al 167.079 {502} (Axial)	5,184 cps	44.2849 ppm	1.6 %	0.7 ppm
Sc 227.318 {448} (Axial)		93.5950 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	12 cps	0.5109 ppm	8.9 %	0.0 ppm
Al 396.152 {85} (Radial)	1,568 cps	47.2050 ppm	2.0 %	0.9 ppm
Si 251.611 {134} (Radial)	160 cps	24.0453 ppm	1.8 %	0.4 ppm
Pb 220.353 {453} (Axial)	1,173 cps	11.8276 ppm	1.8 %	0.2 ppm
Y 224.306 {450} (Axial)		96.9010 %	1.2 %	1.2 %
Sc 361.384 {93} (Radial)		96.3050 %	0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-23A

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:01:16 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	24 cps	0.5198 ppm	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	21 cps	0.5749 ppm	3.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,607 cps	0.7351 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,569 cps	0.7863 ppm	3.3 %	0.0 ppm
Be 313.042 {108} (Axial)	242 cps	0.0068 ppm	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,149 cps	156.5856 ppm	1.9 %	3.0 ppm
Cd 228.802 {447} (Axial)	60 cps	0.0520 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	145 cps	0.1606 ppm	3.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	91 cps	0.1689 ppm	0.5 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0597 ppm	3.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,227 cps	1.0607 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	7,676 cps	413.1959 ppm	1.5 %	6.2 ppm
Li 670.784 {50} (Radial)	33 cps	0.0315 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,612 cps	4.8846 ppm	1.6 %	0.1 ppm
Mo 202.030 {467} (Axial)	7 cps	0.0295 ppm	8.0 %	0.0 ppm
Na 589.592 {57} (Radial)	138 cps	0.9356 ppm	11.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	67 cps	0.1640 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	166 cps	4.8838 ppm	8.0 %	0.4 ppm
Se 196.090 {472} (Axial)	1 cps	0.0412 ppm	48.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	30 cps	0.0268 ppm	8.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	613 cps	0.2288 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	635 cps	6.3717 ppm	1.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	157 cps	1.6358 ppm	0.1 %	0.0 ppm
V 292.402 {115} (Axial)	273 cps	0.1800 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,914 cps	14.3547 ppm	1.2 %	0.2 ppm
Sc 357.253 {94} (Axial)		97.2818 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		91.7248 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	208 cps	72.2448 ppm	1.4 %	1.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0332 ppm	48.2 %	0.0 ppm
Al 167.079 {502} (Axial)	4,458 cps	38.0842 ppm	1.1 %	0.4 ppm
Sc 227.318 {448} (Axial)		91.7054 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	11 cps	0.4506 ppm	13.1 %	0.1 ppm
Al 396.152 {85} (Radial)	1,272 cps	38.2947 ppm	1.7 %	0.7 ppm
Si 251.611 {134} (Radial)	148 cps	22.2783 ppm	1.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	1,043 cps	10.5207 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		95.5565 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.7021 %	0.3 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

MBLK-168378

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:21:37 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0019 ppm	123.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0009 ppm	83.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	7 cps	0.0003 ppm	201.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	171 cps	0.0085 ppm	15.2 %	0.0 ppm
Be 313.042 {108} (Axial)	26 cps	0.0001 ppm	16.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0235 ppm	56.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	31.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	49.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	46.4 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	54.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	15 cps	0.0007 ppm	59.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0069 ppm	87.4 %	0.0 ppm
Li 670.784 {50} (Radial)	-5 cps	-0.0005 ppm	23.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	14 cps	0.0002 ppm	17.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0002 ppm	35.1 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	-0.0001 ppm	1,140.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	-0.0001 ppm	80.2 %	0.0 ppm
K 766.490 {44} (Radial)	-17 cps	-0.0496 ppm	42.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	92.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	163.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	2 cps	0.0001 ppm	226.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	178.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0007 ppm	177.3 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0005 ppm	67.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-2 cps	-0.0002 ppm	16.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.1580 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		94.6471 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0028 ppm	1,737.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0018 ppm	24.7 %	0.0 ppm
Al 167.079 {502} (Axial)	4 cps	0.0037 ppm	5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.3891 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-4 cps	-0.0173 ppm	11.7 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0107 ppm	217.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0013 ppm	2,598.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	52,399.3 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5867 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		95.4949 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LCS-168378

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:26:51 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0938 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.0896 ppm	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,099 cps	0.0960 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,955 cps	0.0980 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	32,434 cps	0.0915 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,805 cps	8.9756 ppm	3.0 %	0.3 ppm
Cd 228.802 {447} (Axial)	1,067 cps	0.0922 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	840 cps	0.0931 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	528 cps	0.0974 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	776 cps	0.0942 ppm	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,011 cps	0.0957 ppm	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,687 cps	9.0784 ppm	2.8 %	0.3 ppm
Li 670.784 {50} (Radial)	937 cps	0.0894 ppm	4.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,312 cps	0.0945 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	241 cps	0.0957 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	13,036 cps	8.8263 ppm	3.2 %	0.3 ppm
Ni 231.604 {445} (Axial)	381 cps	0.0928 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	3,142 cps	9.2174 ppm	3.4 %	0.3 ppm
Se 196.090 {472} (Axial)	20 cps	0.0908 ppm	3.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,051 cps	0.0934 ppm	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,456 cps	0.0916 ppm	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.0942 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	88 cps	0.0921 ppm	4.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,421 cps	0.0939 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	932 cps	0.0897 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9676 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		91.4236 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	257 cps	8.9453 ppm	3.0 %	0.3 ppm
Tl 190.856 {477} (Axial)	32 cps	0.0956 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	140 cps	0.1200 ppm	1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.3760 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	107 cps	0.4436 ppm	3.8 %	0.0 ppm
Al 396.152 {85} (Radial)	33 cps	0.0988 ppm	4.6 %	0.0 ppm
Si 251.611 {134} (Radial)	570 cps	8.5867 ppm	3.4 %	0.3 ppm
Pb 220.353 {453} (Axial)	99 cps	0.0998 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8373 %	0.3 %	0.2 %
Sc 361.384 {93} (Radial)		96.2404 %	0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-02A

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:38:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0062 ppm	11.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	91.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,242 cps	0.0568 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,194 cps	0.0598 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	79 cps	0.0002 ppm	9.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,171 cps	35.6570 ppm	2.1 %	0.8 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0008 ppm	8.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0004 ppm	14.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	57.0 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	20.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	47 cps	0.0022 ppm	12.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0127 ppm	34.5 %	0.0 ppm
Li 670.784 {50} (Radial)	15 cps	0.0014 ppm	52.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,274 cps	0.1389 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	215.0 %	0.0 ppm
Na 589.592 {57} (Radial)	182,556 cps	123.6033 ppm	2.1 %	2.6 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0008 ppm	25.7 %	0.0 ppm
K 766.490 {44} (Radial)	26 cps	0.0763 ppm	15.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0022 ppm	14.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0007 ppm	56.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	880 cps	0.0328 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0012 ppm	26.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0020 ppm	57.6 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	372.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,425 cps	0.1371 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.2573 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		85.3476 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	148 cps	5.1508 ppm	1.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	107.1 %	0.0 ppm
Al 167.079 {502} (Axial)	29 cps	0.0247 ppm	1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.3533 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	-2 cps	-0.0069 ppm	68.4 %	0.0 ppm
Al 396.152 {85} (Radial)	8 cps	0.0226 ppm	29.4 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.4065 ppm	3.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	66 cps	0.0663 ppm	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3890 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		94.4793 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-02AMS

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:43:47 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0951 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0922 ppm	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,192 cps	0.1461 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,922 cps	0.1464 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	32,329 cps	0.0912 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,421 cps	41.8732 ppm	2.2 %	0.9 ppm
Cd 228.802 {447} (Axial)	1,065 cps	0.0920 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	817 cps	0.0905 ppm	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	511 cps	0.0944 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	748 cps	0.0908 ppm	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,975 cps	0.0940 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,638 cps	8.8143 ppm	1.9 %	0.2 ppm
Li 670.784 {50} (Radial)	949 cps	0.0906 ppm	2.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,892 cps	0.2231 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	237 cps	0.0943 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	184,356 cps	124.8220 ppm	2.2 %	2.8 ppm
Ni 231.604 {445} (Axial)	377 cps	0.0918 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	3,261 cps	9.5665 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0897 ppm	3.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,024 cps	0.0910 ppm	2.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,210 cps	0.1197 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	92 cps	0.0923 ppm	0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	88 cps	0.0916 ppm	4.7 %	0.0 ppm
V 292.402 {115} (Axial)	1,410 cps	0.0931 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,311 cps	0.2224 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.5803 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		85.5454 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	383 cps	13.3313 ppm	1.9 %	0.3 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0892 ppm	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	183 cps	0.1560 ppm	0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.6176 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	107 cps	0.4408 ppm	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	46 cps	0.1394 ppm	5.6 %	0.0 ppm
Si 251.611 {134} (Radial)	581 cps	8.7510 ppm	2.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	155 cps	0.1566 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		91.4494 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.9830 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-02AMSD

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:48:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0947 ppm	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0915 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,265 cps	0.1494 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,975 cps	0.1491 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	32,547 cps	0.0918 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,655 cps	43.0355 ppm	1.2 %	0.5 ppm
Cd 228.802 {447} (Axial)	1,054 cps	0.0911 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	822 cps	0.0910 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	508 cps	0.0937 ppm	2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	743 cps	0.0901 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,997 cps	0.0951 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,676 cps	9.0197 ppm	1.0 %	0.1 ppm
Li 670.784 {50} (Radial)	978 cps	0.0933 ppm	2.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,944 cps	0.2238 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	236 cps	0.0937 ppm	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	187,947 cps	127.2532 ppm	1.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	366 cps	0.0891 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	3,327 cps	9.7593 ppm	2.8 %	0.3 ppm
Se 196.090 {472} (Axial)	20 cps	0.0891 ppm	3.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,033 cps	0.0918 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,295 cps	0.1228 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	91 cps	0.0914 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	90 cps	0.0933 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	1,415 cps	0.0934 ppm	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,284 cps	0.2198 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.8180 %	1.3 %	1.2 %
Sc 188.060 {479} (Axial)		84.9795 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	397 cps	13.8194 ppm	1.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0877 ppm	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	157 cps	0.1337 ppm	2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.9788 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	109 cps	0.4507 ppm	0.5 %	0.0 ppm
Al 396.152 {85} (Radial)	39 cps	0.1171 ppm	2.3 %	0.0 ppm
Si 251.611 {134} (Radial)	597 cps	8.9989 ppm	2.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	155 cps	0.1561 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		91.4439 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		94.5800 %	0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-04A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:03:54 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0070 ppm	23.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	639.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,294 cps	0.0592 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,248 cps	0.0625 ppm	0.5 %	0.0 ppm
Be 313.042 {108} (Axial)	71 cps	0.0002 ppm	4.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	10,121 cps	50.3267 ppm	2.1 %	1.1 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0008 ppm	8.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	34.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	44.6 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	134.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	52 cps	0.0025 ppm	18.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0048 ppm	48.9 %	0.0 ppm
Li 670.784 {50} (Radial)	11 cps	0.0010 ppm	155.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,521 cps	0.1276 ppm	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0005 ppm	19.3 %	0.0 ppm
Na 589.592 {57} (Radial)	188,651 cps	127.7298 ppm	2.4 %	3.0 ppm
Ni 231.604 {445} (Axial)	6 cps	0.0016 ppm	5.2 %	0.0 ppm
K 766.490 {44} (Radial)	60 cps	0.1766 ppm	3.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0003 ppm	1,158.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0007 ppm	57.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,001 cps	0.0373 ppm	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	62.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0019 ppm	68.9 %	0.0 ppm
V 292.402 {115} (Axial)	24 cps	0.0016 ppm	27.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,179 cps	0.3060 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.7710 %	1.2 %	1.1 %
Sc 188.060 {479} (Axial)		85.0221 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	54 cps	1.8825 ppm	3.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	18.7 %	0.0 ppm
Al 167.079 {502} (Axial)	14 cps	0.0117 ppm	2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.9713 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	-3 cps	-0.0105 ppm	12.5 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0159 ppm	98.0 %	0.0 ppm
Si 251.611 {134} (Radial)	75 cps	1.1346 ppm	2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	38 cps	0.0387 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2030 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.1124 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-08A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:09:03 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0088 ppm	7.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0012 ppm	54.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	620 cps	0.0284 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	699 cps	0.0350 ppm	4.6 %	0.0 ppm
Be 313.042 {108} (Axial)	65 cps	0.0002 ppm	10.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,553 cps	12.6943 ppm	0.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	13 cps	0.0011 ppm	7.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	22.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	43.0 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	157.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	65 cps	0.0031 ppm	8.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.0559 ppm	16.2 %	0.0 ppm
Li 670.784 {50} (Radial)	20 cps	0.0019 ppm	28.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,368 cps	0.0804 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	47.7 %	0.0 ppm
Na 589.592 {57} (Radial)	168,114 cps	113.8245 ppm	1.6 %	1.8 ppm
Ni 231.604 {445} (Axial)	7 cps	0.0016 ppm	7.3 %	0.0 ppm
K 766.490 {44} (Radial)	91 cps	0.2674 ppm	16.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0003 ppm	748.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	13 cps	0.0011 ppm	47.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	742 cps	0.0277 ppm	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	3 cps	0.0031 ppm	10.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0039 ppm	21.5 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	743.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,926 cps	0.5704 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.6762 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		86.5522 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	103 cps	3.5732 ppm	0.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	232.7 %	0.0 ppm
Al 167.079 {502} (Axial)	56 cps	0.0477 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.4776 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	-3 cps	-0.0109 ppm	34.0 %	0.0 ppm
Al 396.152 {85} (Radial)	17 cps	0.0513 ppm	23.1 %	0.0 ppm
Si 251.611 {134} (Radial)	41 cps	0.6154 ppm	2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	42 cps	0.0425 ppm	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0854 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		94.6017 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-10A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:14:12 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0057 ppm	36.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	429.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	865 cps	0.0396 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	893 cps	0.0447 ppm	4.8 %	0.0 ppm
Be 313.042 {108} (Axial)	60 cps	0.0002 ppm	5.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,802 cps	23.8796 ppm	2.7 %	0.6 ppm
Cd 228.802 {447} (Axial)	18 cps	0.0015 ppm	8.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	136.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0003 ppm	27.5 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	14.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	54 cps	0.0026 ppm	16.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0077 ppm	22.2 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	61.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,040 cps	0.0755 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	65.3 %	0.0 ppm
Na 589.592 {57} (Radial)	177,116 cps	119.9198 ppm	3.0 %	3.6 ppm
Ni 231.604 {445} (Axial)	8 cps	0.0021 ppm	3.7 %	0.0 ppm
K 766.490 {44} (Radial)	133 cps	0.3911 ppm	5.8 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0024 ppm	203.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	30.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	769 cps	0.0287 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	48.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	83.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	481.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,790 cps	0.7497 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.9109 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		85.6219 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	324 cps	11.2760 ppm	2.5 %	0.3 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0015 ppm	92.9 %	0.0 ppm
Al 167.079 {502} (Axial)	15 cps	0.0132 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.6003 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	-1 cps	-0.0039 ppm	98.2 %	0.0 ppm
Al 396.152 {85} (Radial)	9 cps	0.0265 ppm	38.0 %	0.0 ppm
Si 251.611 {134} (Radial)	24 cps	0.3576 ppm	5.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	32 cps	0.0323 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2654 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.6114 %	1.1 %	1.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-12A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:19:22 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0068 ppm	20.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	348.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	908 cps	0.0415 ppm	0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	922 cps	0.0462 ppm	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	71 cps	0.0002 ppm	7.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,125 cps	20.5114 ppm	1.4 %	0.3 ppm
Cd 228.802 {447} (Axial)	14 cps	0.0012 ppm	4.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0004 ppm	103.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	32.0 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	22.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	99 cps	0.0047 ppm	5.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	10 cps	0.0548 ppm	6.2 %	0.0 ppm
Li 670.784 {50} (Radial)	39 cps	0.0037 ppm	23.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,119 cps	0.1516 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	5,244.8 %	0.0 ppm
Na 589.592 {57} (Radial)	176,861 cps	119.7471 ppm	1.9 %	2.2 ppm
Ni 231.604 {445} (Axial)	10 cps	0.0024 ppm	3.0 %	0.0 ppm
K 766.490 {44} (Radial)	165 cps	0.4851 ppm	2.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	134.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0006 ppm	101.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	879 cps	0.0328 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	3 cps	0.0029 ppm	24.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0035 ppm	16.3 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	847.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,363 cps	0.6124 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.2416 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		86.1418 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	232 cps	8.0918 ppm	2.0 %	0.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	169.3 %	0.0 ppm
Al 167.079 {502} (Axial)	51 cps	0.0436 ppm	2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.1510 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	2 cps	0.0071 ppm	56.2 %	0.0 ppm
Al 396.152 {85} (Radial)	18 cps	0.0557 ppm	20.8 %	0.0 ppm
Si 251.611 {134} (Radial)	47 cps	0.7132 ppm	2.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	37 cps	0.0371 ppm	3.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6686 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		95.3030 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-14A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:24:31 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0031 ppm	56.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	718.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	894 cps	0.0409 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	898 cps	0.0450 ppm	3.6 %	0.0 ppm
Be 313.042 {108} (Axial)	75 cps	0.0002 ppm	8.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,655 cps	18.1737 ppm	1.7 %	0.3 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	16.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0004 ppm	155.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	51.9 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	138.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	45 cps	0.0021 ppm	28.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0230 ppm	11.6 %	0.0 ppm
Li 670.784 {50} (Radial)	16 cps	0.0015 ppm	165.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,373 cps	0.1254 ppm	2.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	-1 cps	-0.0003 ppm	42.6 %	0.0 ppm
Na 589.592 {57} (Radial)	176,646 cps	119.6017 ppm	2.0 %	2.4 ppm
Ni 231.604 {445} (Axial)	5 cps	0.0011 ppm	7.7 %	0.0 ppm
K 766.490 {44} (Radial)	79 cps	0.2329 ppm	18.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0019 ppm	195.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0008 ppm	62.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	625 cps	0.0233 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	77.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0027 ppm	111.5 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0003 ppm	102.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,765 cps	0.1699 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.6958 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		86.5466 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	191 cps	6.6394 ppm	2.3 %	0.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	336.8 %	0.0 ppm
Al 167.079 {502} (Axial)	45 cps	0.0386 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.5326 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	-2 cps	-0.0070 ppm	37.6 %	0.0 ppm
Al 396.152 {85} (Radial)	13 cps	0.0377 ppm	22.3 %	0.0 ppm
Si 251.611 {134} (Radial)	51 cps	0.7666 ppm	2.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0073 ppm	2.8 %	0.0 ppm
Y 224.306 {450} (Axial)		92.1832 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.2824 %	0.5 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-16A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:29:40 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0042 ppm	24.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	72.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	851 cps	0.0389 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	833 cps	0.0417 ppm	3.7 %	0.0 ppm
Be 313.042 {108} (Axial)	76 cps	0.0002 ppm	12.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,816 cps	14.0034 ppm	1.5 %	0.2 ppm
Cd 228.802 {447} (Axial)	27 cps	0.0023 ppm	2.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	506 cps	0.0561 ppm	2.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	315 cps	0.0582 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	1,216.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	75 cps	0.0036 ppm	7.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0081 ppm	64.8 %	0.0 ppm
Li 670.784 {50} (Radial)	12 cps	0.0012 ppm	59.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,612 cps	0.0841 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	109.3 %	0.0 ppm
Na 589.592 {57} (Radial)	190,662 cps	129.0915 ppm	2.1 %	2.8 ppm
Ni 231.604 {445} (Axial)	8 cps	0.0021 ppm	6.7 %	0.0 ppm
K 766.490 {44} (Radial)	63 cps	0.1841 ppm	10.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0019 ppm	179.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0002 ppm	236.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	480 cps	0.0179 ppm	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0012 ppm	23.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0011 ppm	385.0 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0005 ppm	29.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,459 cps	0.7179 ppm	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.5709 %	1.1 %	1.0 %
Sc 188.060 {479} (Axial)		86.2261 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	121 cps	4.2235 ppm	2.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0026 ppm	32.2 %	0.0 ppm
Al 167.079 {502} (Axial)	22 cps	0.0189 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.1552 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	-4 cps	-0.0153 ppm	20.6 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0125 ppm	66.1 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.4112 ppm	3.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	27 cps	0.0276 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.7724 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		95.7739 %	0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-20A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:34:47 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0037 ppm	29.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	278.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,003 cps	0.0459 ppm	0.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,042 cps	0.0522 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	63 cps	0.0002 ppm	3.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,182 cps	25.7666 ppm	0.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0003 ppm	30.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0007 ppm	2.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0003 ppm	25.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	121.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	38 cps	0.0018 ppm	24.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0132 ppm	39.8 %	0.0 ppm
Li 670.784 {50} (Radial)	14 cps	0.0013 ppm	73.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,518 cps	0.0677 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0002 ppm	3.4 %	0.0 ppm
Na 589.592 {57} (Radial)	192,348 cps	130.2327 ppm	0.3 %	0.4 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0007 ppm	21.3 %	0.0 ppm
K 766.490 {44} (Radial)	89 cps	0.2623 ppm	26.7 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0011 ppm	204.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	19.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	818 cps	0.0305 ppm	0.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0011 ppm	115.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0027 ppm	58.1 %	0.0 ppm
V 292.402 {115} (Axial)	3 cps	0.0002 ppm	74.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,152 cps	0.2071 ppm	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.4131 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		85.2752 %	1.0 %	0.9 %
Mg 279.079 {121} (Radial)	140 cps	4.8851 ppm	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0004 ppm	148.9 %	0.0 ppm
Al 167.079 {502} (Axial)	34 cps	0.0288 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.2515 %	1.0 %	0.9 %
B 249.773 {135} (Radial)	-1 cps	-0.0044 ppm	6.1 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0174 ppm	6.1 %	0.0 ppm
Si 251.611 {134} (Radial)	51 cps	0.7689 ppm	1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	103 cps	0.1041 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3600 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		94.6082 %	1.0 %	0.9 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

MBLK-168379

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:45:04 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	129.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0006 ppm	81.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	724.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	150 cps	0.0075 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	27 cps	0.0001 ppm	17.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0032 ppm	261.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	11.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	635.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	1,396.1 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	89.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	8 cps	0.0004 ppm	76.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0034 ppm	120.3 %	0.0 ppm
Li 670.784 {50} (Radial)	11 cps	0.0011 ppm	54.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	13.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	310.8 %	0.0 ppm
Na 589.592 {57} (Radial)	163 cps	0.1106 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	11,526.1 %	0.0 ppm
K 766.490 {44} (Radial)	5 cps	0.0137 ppm	266.1 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0031 ppm	55.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	27.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	-1 cps	0.0000 ppm	288.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	250.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	869.9 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	0.0000 ppm	1,126.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	-3 cps	-0.0003 ppm	25.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.4446 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.8558 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0241 ppm	90.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0017 ppm	58.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0019 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.5852 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	-4 cps	-0.0158 ppm	25.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0094 ppm	135.5 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0087 ppm	154.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	118.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.5165 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		96.7389 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LCS-168379

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:50:18 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	43 cps	0.0930 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.0881 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,114 cps	0.0967 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,018 cps	0.1012 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,833 cps	0.0898 ppm	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,811 cps	9.0039 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,058 cps	0.0915 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	823 cps	0.0911 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	520 cps	0.0960 ppm	2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	766 cps	0.0930 ppm	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,975 cps	0.0941 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,701 cps	9.1583 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	934 cps	0.0891 ppm	0.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,185 cps	0.0926 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	238 cps	0.0948 ppm	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	13,116 cps	8.8807 ppm	1.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	379 cps	0.0922 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	3,143 cps	9.2192 ppm	1.2 %	0.1 ppm
Se 196.090 {472} (Axial)	19 cps	0.0866 ppm	4.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,030 cps	0.0915 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,471 cps	0.0921 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	93 cps	0.0936 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	89 cps	0.0932 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,406 cps	0.0928 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	921 cps	0.0886 ppm	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9441 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		91.3046 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	258 cps	8.9950 ppm	2.2 %	0.2 ppm
Tl 190.856 {477} (Axial)	32 cps	0.0947 ppm	2.1 %	0.0 ppm
Al 167.079 {502} (Axial)	145 cps	0.1240 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.1809 %	1.0 %	0.9 %
B 249.773 {135} (Radial)	108 cps	0.4468 ppm	3.3 %	0.0 ppm
Al 396.152 {85} (Radial)	38 cps	0.1153 ppm	13.6 %	0.0 ppm
Si 251.611 {134} (Radial)	571 cps	8.6045 ppm	2.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	97 cps	0.0981 ppm	2.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.7287 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		95.6570 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-22A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:05:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0082 ppm	17.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	126.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	916 cps	0.0419 ppm	0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	976 cps	0.0489 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	75 cps	0.0002 ppm	5.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,055 cps	10.2198 ppm	1.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	24 cps	0.0021 ppm	4.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	2,548.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	86.7 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	86.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	65 cps	0.0031 ppm	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	6 cps	0.0330 ppm	16.0 %	0.0 ppm
Li 670.784 {50} (Radial)	20 cps	0.0019 ppm	35.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,795 cps	0.0568 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0003 ppm	41.4 %	0.0 ppm
Na 589.592 {57} (Radial)	211,211 cps	143.0042 ppm	1.4 %	1.9 ppm
Ni 231.604 {445} (Axial)	13 cps	0.0032 ppm	3.4 %	0.0 ppm
K 766.490 {44} (Radial)	86 cps	0.2520 ppm	12.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0002 ppm	1,024.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0013 ppm	9.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,496 cps	0.0558 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0019 ppm	9.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	108.6 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	535.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,055 cps	0.7753 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.8431 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		86.0997 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	97 cps	3.3899 ppm	0.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0021 ppm	18.5 %	0.0 ppm
Al 167.079 {502} (Axial)	33 cps	0.0280 ppm	0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.0907 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-2 cps	-0.0088 ppm	41.7 %	0.0 ppm
Al 396.152 {85} (Radial)	10 cps	0.0296 ppm	29.4 %	0.0 ppm
Si 251.611 {134} (Radial)	42 cps	0.6255 ppm	2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	40 cps	0.0399 ppm	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.8211 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		94.9201 %	0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-22AMS

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:10:37 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	46 cps	0.0984 ppm	3.2 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0921 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,975 cps	0.1361 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,747 cps	0.1377 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	33,061 cps	0.0932 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,738 cps	18.5874 ppm	1.5 %	0.3 ppm
Cd 228.802 {447} (Axial)	1,093 cps	0.0944 ppm	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	836 cps	0.0925 ppm	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	520 cps	0.0960 ppm	2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	759 cps	0.0921 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,042 cps	0.0973 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,708 cps	9.1934 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	1,001 cps	0.0956 ppm	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,843 cps	0.1474 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	241 cps	0.0958 ppm	2.4 %	0.0 ppm
Na 589.592 {57} (Radial)	209,862 cps	142.0908 ppm	2.0 %	2.9 ppm
Ni 231.604 {445} (Axial)	381 cps	0.0926 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	3,441 cps	10.0938 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0906 ppm	8.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,048 cps	0.0932 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,869 cps	0.1442 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.0942 ppm	2.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	91 cps	0.0944 ppm	2.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,425 cps	0.0941 ppm	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,753 cps	0.8425 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.3678 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		85.5507 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	347 cps	12.0957 ppm	2.2 %	0.3 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0895 ppm	2.7 %	0.0 ppm
Al 167.079 {502} (Axial)	170 cps	0.1451 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.5772 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	112 cps	0.4622 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	44 cps	0.1310 ppm	5.3 %	0.0 ppm
Si 251.611 {134} (Radial)	619 cps	9.3264 ppm	2.6 %	0.2 ppm
Pb 220.353 {453} (Axial)	132 cps	0.1334 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6821 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		93.8539 %	0.0 %	0.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-22AMSD

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:15:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.0961 ppm	4.0 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0900 ppm	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,797 cps	0.1280 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,544 cps	0.1275 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,240 cps	0.0881 ppm	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,527 cps	17.5369 ppm	1.4 %	0.2 ppm
Cd 228.802 {447} (Axial)	1,060 cps	0.0916 ppm	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	794 cps	0.0879 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	502 cps	0.0927 ppm	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	736 cps	0.0893 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,941 cps	0.0924 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,618 cps	8.7103 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	940 cps	0.0897 ppm	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,304 cps	0.1394 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	233 cps	0.0925 ppm	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	196,259 cps	132.8809 ppm	1.9 %	2.6 ppm
Ni 231.604 {445} (Axial)	369 cps	0.0897 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	3,253 cps	9.5412 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0880 ppm	5.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	998 cps	0.0887 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,648 cps	0.1360 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	91 cps	0.0916 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	86 cps	0.0897 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,356 cps	0.0895 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,876 cps	0.8543 ppm	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.7726 %	0.4 %	0.3 %
Sc 188.060 {479} (Axial)		85.8362 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	328 cps	11.4302 ppm	1.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	29 cps	0.0875 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	182 cps	0.1559 ppm	2.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.0298 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	104 cps	0.4278 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	42 cps	0.1268 ppm	4.7 %	0.0 ppm
Si 251.611 {134} (Radial)	587 cps	8.8439 ppm	2.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	134 cps	0.1352 ppm	2.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6764 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		95.8130 %	0.7 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-24A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:20:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0063 ppm	8.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	345.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	783 cps	0.0358 ppm	2.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	836 cps	0.0419 ppm	5.4 %	0.0 ppm
Be 313.042 {108} (Axial)	134 cps	0.0004 ppm	3.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,959 cps	14.7120 ppm	2.8 %	0.4 ppm
Cd 228.802 {447} (Axial)	19 cps	0.0017 ppm	3.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0005 ppm	18.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	29.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	43.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	59 cps	0.0028 ppm	2.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	9 cps	0.0508 ppm	7.1 %	0.0 ppm
Li 670.784 {50} (Radial)	22 cps	0.0021 ppm	39.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,917 cps	0.0886 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0004 ppm	50.5 %	0.0 ppm
Na 589.592 {57} (Radial)	186,052 cps	125.9699 ppm	3.1 %	3.9 ppm
Ni 231.604 {445} (Axial)	8 cps	0.0019 ppm	13.7 %	0.0 ppm
K 766.490 {44} (Radial)	126 cps	0.3708 ppm	11.5 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0025 ppm	57.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0008 ppm	17.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	467 cps	0.0174 ppm	2.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0023 ppm	17.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0013 ppm	147.2 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	477.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,554 cps	0.5346 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3564 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		85.9053 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	170 cps	5.9332 ppm	3.3 %	0.2 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	2,133.0 %	0.0 ppm
Al 167.079 {502} (Axial)	26 cps	0.0223 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.7532 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-3 cps	-0.0122 ppm	43.1 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0183 ppm	29.4 %	0.0 ppm
Si 251.611 {134} (Radial)	34 cps	0.5150 ppm	2.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	26 cps	0.0267 ppm	4.3 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6105 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		95.3382 %	0.6 %	0.6 %

Calibration Summary

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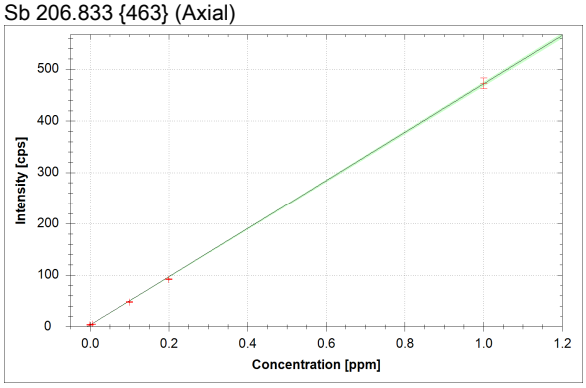
QTEGRA

LabBook: ICP2_201201C.imexp

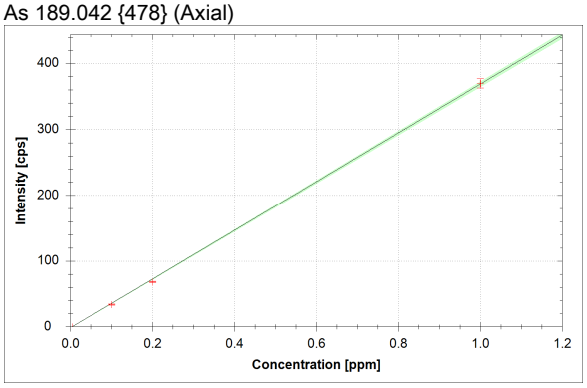
Calibration Graphs

Sb 206.833 {463} (Axial)



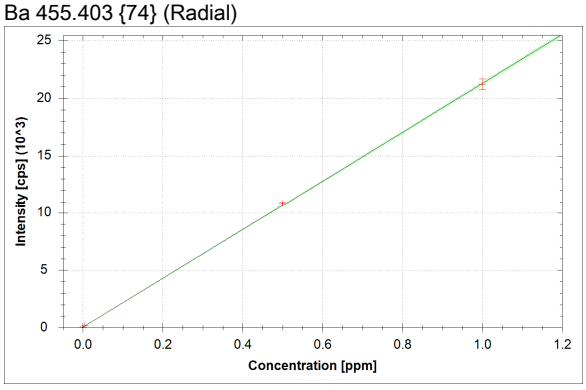
f(x) = 468.3114*x + 3.1847
R² = 0.9998
BEC = 0.007 ppm
LoD = 0.0052 ppm

As 189.042 {478} (Axial)



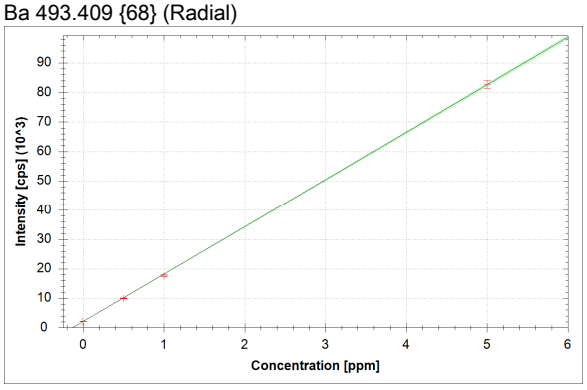
f(x) = 370.3503*x + -1.6228
R² = 0.9997
BEC = -0.004 ppm
LoD = 0.0023 ppm

Ba 455.403 {74} (Radial)



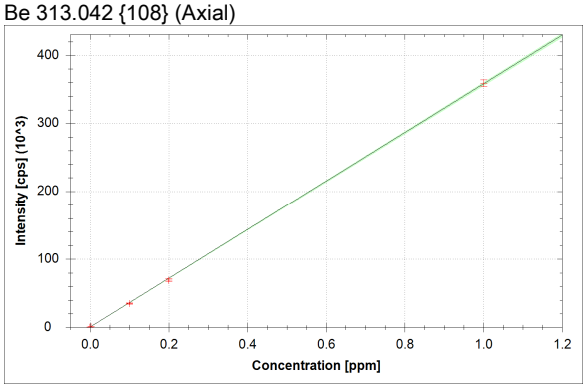
f(x) = 21233.8595*x + 50.8413
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



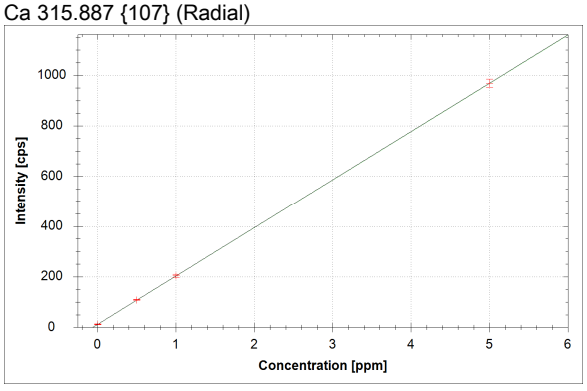
f(x) = 16090.9736*x + 2122.6339
R² = 0.9999
BEC = 0.132 ppm
LoD = 0.0013 ppm

Be 313.042 {108} (Axial)



f(x) = 357641.4770*x + 541.7958
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



f(x) = 191.3679*x + 11.4745
R² = 1.0000
BEC = 0.060 ppm
LoD = 0.0207 ppm

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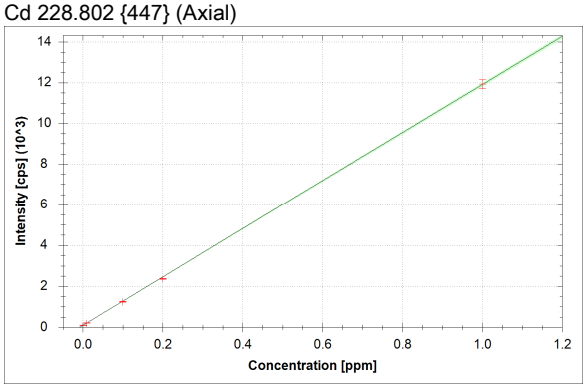
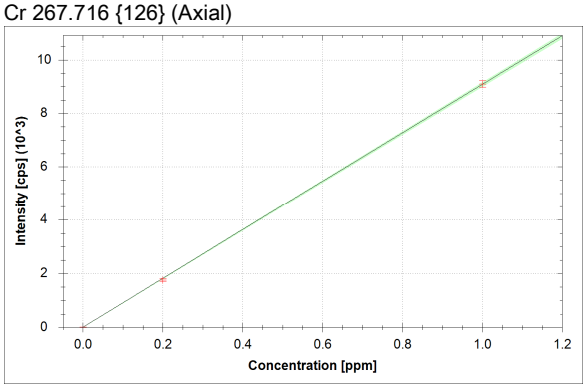
Cd 228.802 {447} (Axial)



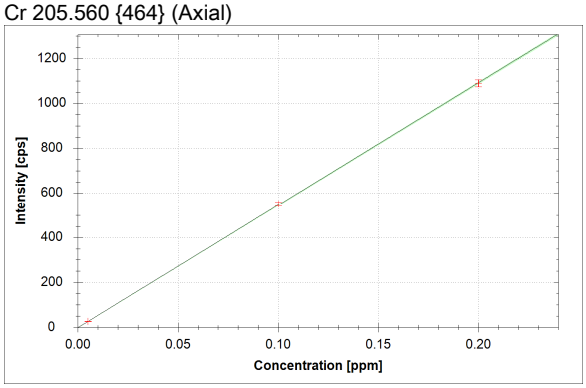
f(x) = 11814.1230*x + 97.9012
R² = 0.9999
BEC = 0.008 ppm
LoD = 0.0005 ppm

Cr 267.716 {126} (Axial)



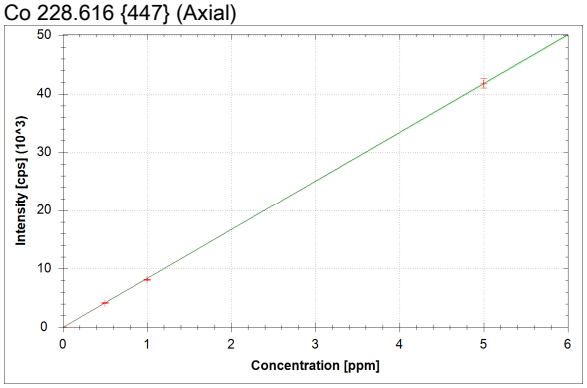
f(x) = 9085.6753*x + 4.6714
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0011 ppm

Cr 205.560 {464} (Axial)



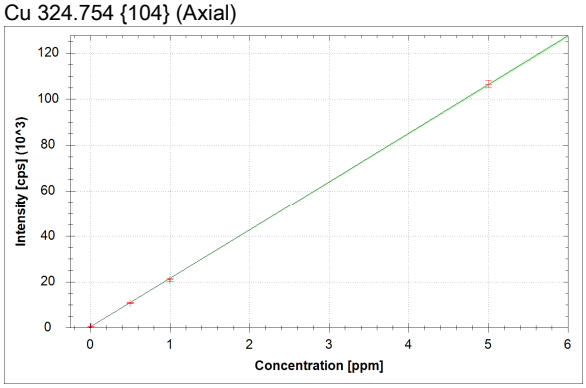
f(x) = 5465.3718*x + -1.2163
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Co 228.616 {447} (Axial)



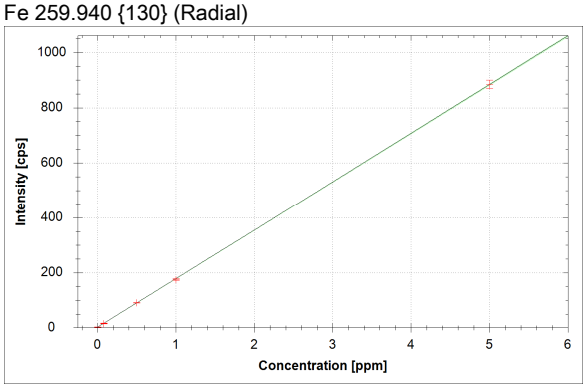
f(x) = 8354.0153*x + -3.0038
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0005 ppm

Cu 324.754 {104} (Axial)



f(x) = 21180.8634*x + 351.4723
R² = 0.9999
BEC = 0.017 ppm
LoD = 0.0009 ppm

Fe 259.940 {130} (Radial)



f(x) = 176.4469*x + 1.8118
R² = 1.0000
BEC = 0.010 ppm
LoD = 0.0193 ppm

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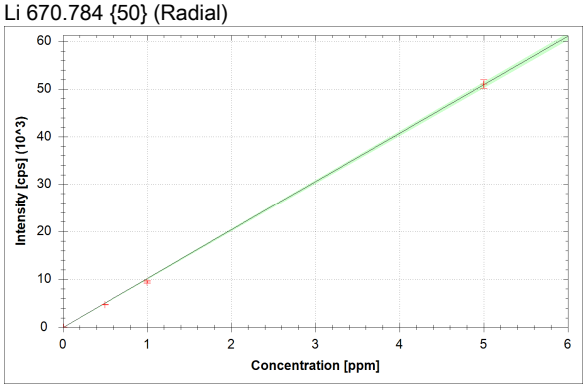
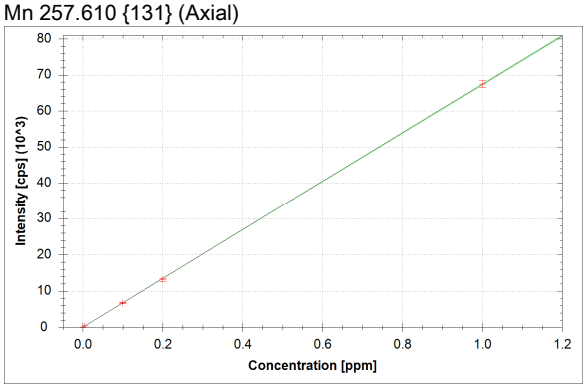
Li 670.784 {50} (Radial)



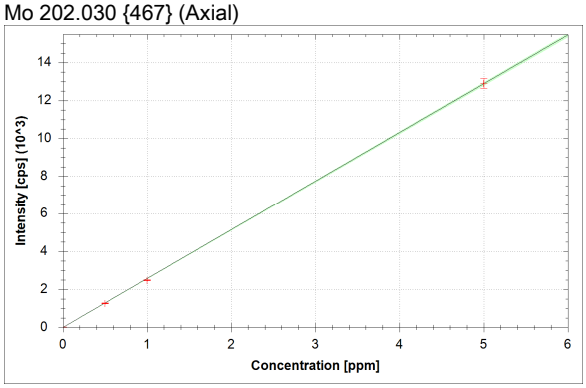
f(x) = 10188.2136*x + -44.0733
R² = 0.9997
BEC = -0.004 ppm
LoD = 0.0019 ppm

Mn 257.610 {131} (Axial)



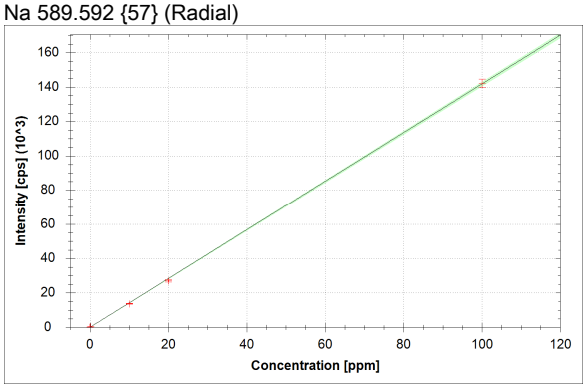
f(x) = 67343.0590*x + 31.1313
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Mo 202.030 {467} (Axial)



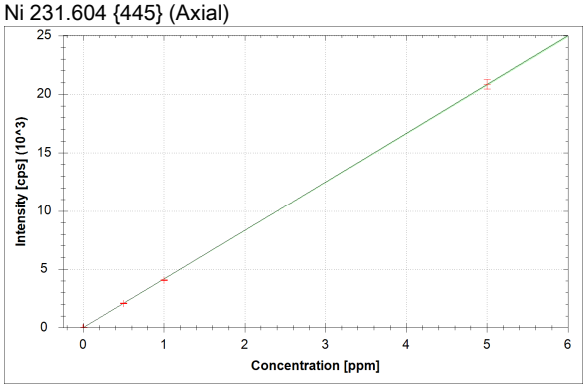
f(x) = 2576.9820*x + -0.8325
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0006 ppm

Na 589.592 {57} (Radial)



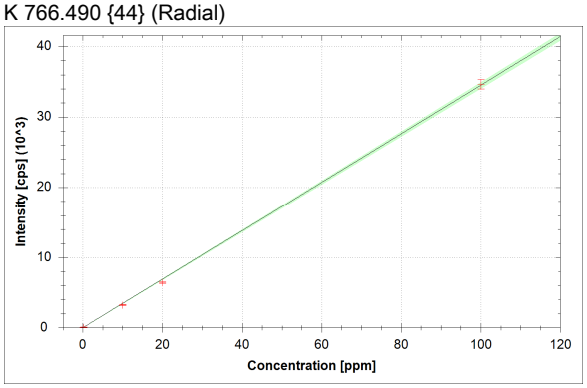
f(x) = 1418.1426*x + 54.2050
R² = 0.9998
BEC = 0.038 ppm
LoD = 0.0066 ppm

Ni 231.604 {445} (Axial)



f(x) = 4164.2212*x + 0.9704
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

K 766.490 {44} (Radial)



f(x) = 345.0272*x + 10.7215
R² = 0.9996
BEC = 0.031 ppm
LoD = 0.0468 ppm

Calibration Summary

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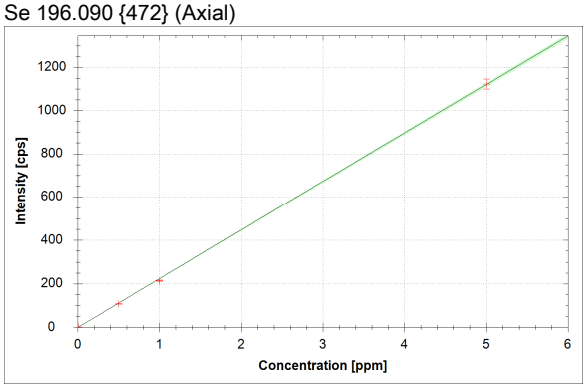
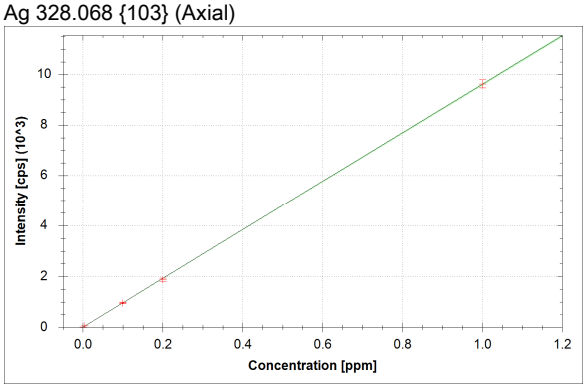
Se 196.090 {472} (Axial)



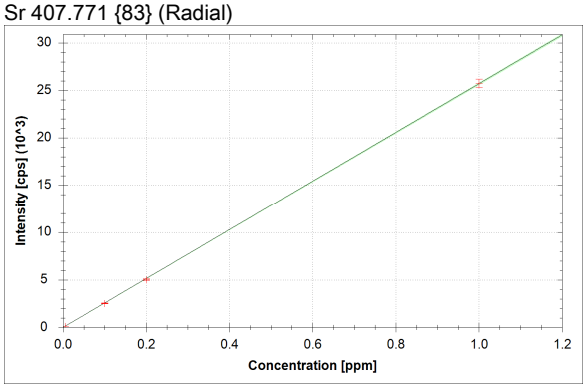
f(x) = 224.0616*x + -0.3683
R² = 0.9999
BEC = -0.002 ppm
LoD = 0.0054 ppm

Ag 328.068 {103} (Axial)



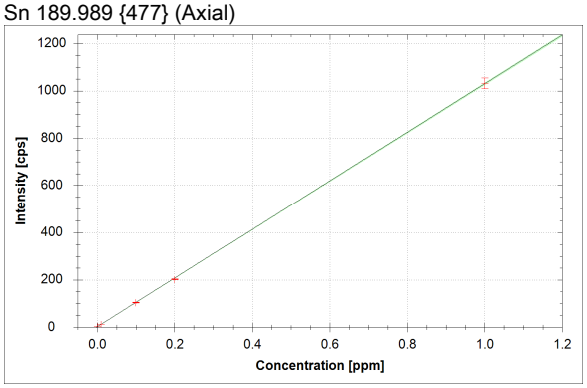
f(x) = 9607.9426*x + 4.1270
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

Sr 407.771 {83} (Radial)



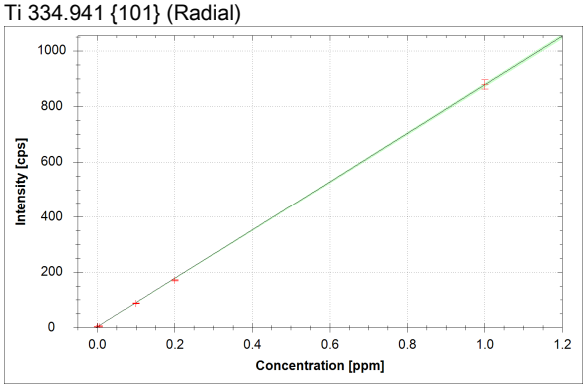
f(x) = 25708.7320*x + -9.5305
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Sn 189.989 {477} (Axial)



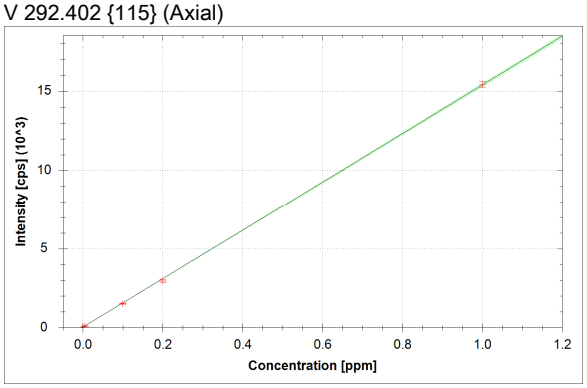
f(x) = 1027.8064*x + 2.6799
R² = 1.0000
BEC = 0.003 ppm
LoD = 0.0009 ppm

Ti 334.941 {101} (Radial)



f(x) = 874.5663*x + 3.3455
R² = 0.9999
BEC = 0.004 ppm
LoD = 0.0034 ppm

V 292.402 {115} (Axial)



f(x) = 15362.0382*x + 36.8129
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0013 ppm

Calibration Summary

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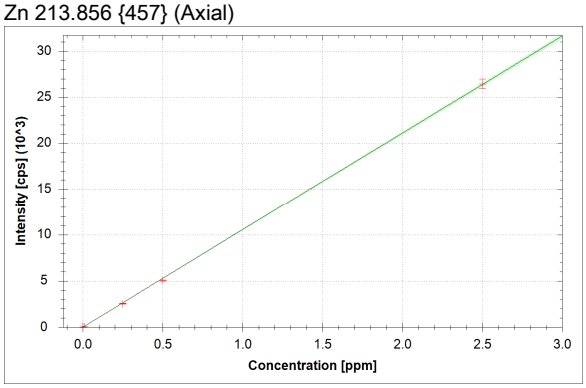
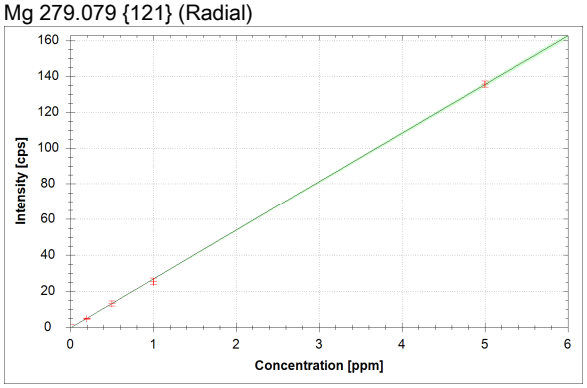
Zn 213.856 {457} (Axial)



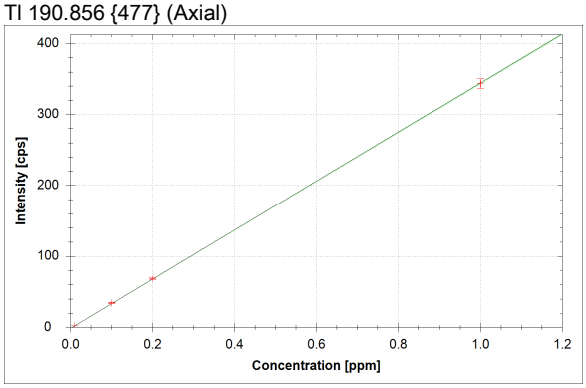
f(x) = 10545.5149*x + 18.1216
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



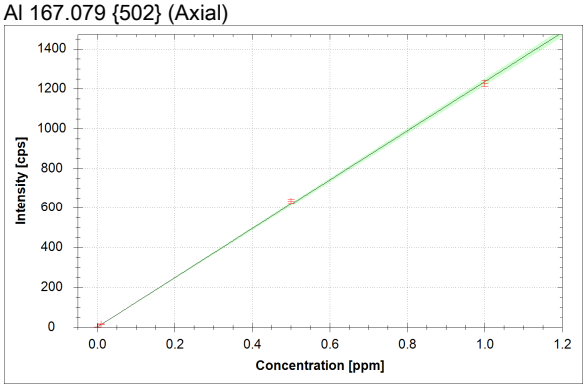
f(x) = 27.1751*x + -0.3929
R² = 0.9998
BEC = -0.014 ppm
LoD = 0.1980 ppm

Tl 190.856 {477} (Axial)



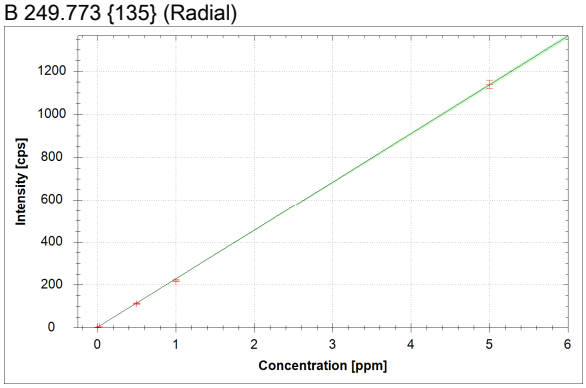
f(x) = 345.6315*x + -1.5056
R² = 1.0000
BEC = -0.004 ppm
LoD = 0.0008 ppm

Al 167.079 {502} (Axial)



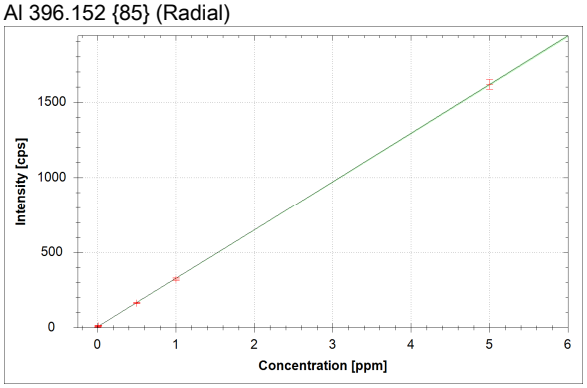
f(x) = 1233.9246*x + 1.7741
R² = 0.9997
BEC = 0.001 ppm
LoD = 0.0002 ppm

B 249.773 {135} (Radial)



f(x) = 226.9921*x + 1.9947
R² = 0.9999
BEC = 0.009 ppm
LoD = 0.0007 ppm

Al 396.152 {85} (Radial)



f(x) = 322.0300*x + 5.7665
R² = 1.0000
BEC = 0.018 ppm
LoD = 0.0473 ppm

Calibration Summary

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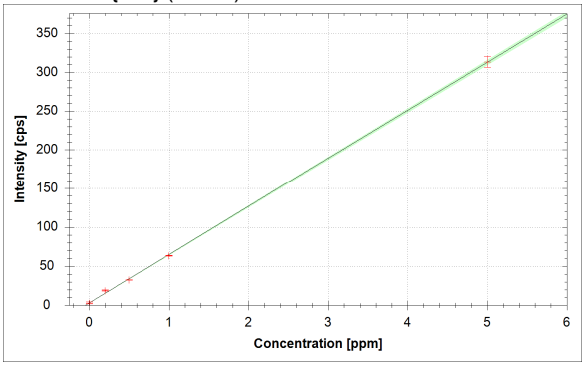
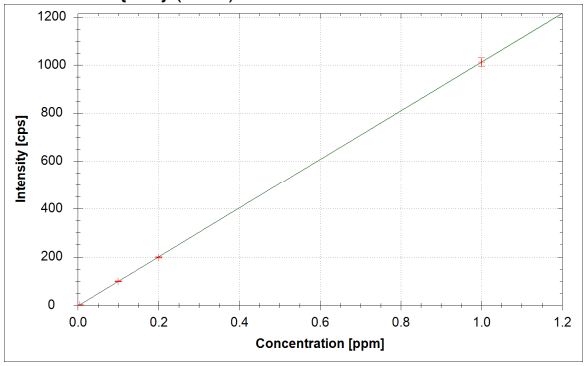
Si 251.611 {134} (Radial)



f(x) = 61.9682*x + 3.0697
R² = 0.9997
BEC = 0.050 ppm
LoD = 0.0650 ppm

Pb 220.353 {453} (Axial)



f(x) = 1014.9581*x + -2.6530
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0020 ppm

Calibration Summary

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QTEGRA

Standards

Standard: ICAL2
Analysis started at: 12/1/2020 11:29:13 AM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0033 ppm	14.7 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0040 ppm	16.8 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0048 ppm	3.0 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	2.6 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.5050 ppm	2.3 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0096 ppm	1.3 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0051 ppm	3.3 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0048 ppm	2.2 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0104 ppm	6.0 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0719 ppm	10.5 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0096 ppm	3.8 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0051 ppm	2.9 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0046 ppm	2.9 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.2113 ppm	3.7 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0054 ppm	5.4 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1485 ppm	35.3 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0084 ppm	31.8 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0053 ppm	3.4 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0050 ppm	4.5 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0100 ppm	3.8 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0010 ppm	187.5 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0049 ppm	12.3 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0103 ppm	1.9 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.8243 %	0.7 %	
Sc 188.060 {479} (Axial)	98.7786 %	0.6 %	
Mg 279.079 {121} (Radial)	0.1932 ppm	6.7 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0102 ppm	0.9 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0117 ppm	7.6 %	0.0100 ppm
Sc 227.318 {448} (Axial)	98.8280 %	0.5 %	
B 249.773 {135} (Radial)	0.0199 ppm	1.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0213 ppm	31.2 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2558 ppm	5.3 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0049 ppm	22.4 %	0.0050 ppm
Y 224.306 {450} (Axial)	99.4292 %	0.4 %	
Sc 361.384 {93} (Radial)	99.9853 %	0.3 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL3
Analysis started at: 12/1/2020 11:34:20 AM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0957 ppm	2.5 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0950 ppm	2.0 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.5078 ppm	1.5 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4860 ppm	1.4 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0961 ppm	2.9 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.5038 ppm	2.3 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0970 ppm	1.4 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.1009 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4943 ppm	1.6 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4920 ppm	2.5 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.5018 ppm	1.1 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4683 ppm	1.3 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0989 ppm	2.7 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4869 ppm	1.6 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.5541 ppm	1.7 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4970 ppm	1.6 %	0.5000 ppm
K 766.490 {44} (Radial)	9.2386 ppm	1.9 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4805 ppm	1.2 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0989 ppm	2.8 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0990 ppm	1.6 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0982 ppm	1.9 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0961 ppm	2.0 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0969 ppm	2.6 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2407 ppm	1.5 %	0.2500 ppm
Sc 357.253 {94} (Axial)	99.5242 %	1.2 %	
Sc 188.060 {479} (Axial)	97.2677 %	0.2 %	
Mg 279.079 {121} (Radial)	0.4962 ppm	10.3 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1038 ppm	1.7 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5132 ppm	1.7 %	0.5000 ppm
Sc 227.318 {448} (Axial)	98.8219 %	0.2 %	
B 249.773 {135} (Radial)	0.4870 ppm	2.9 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4869 ppm	2.9 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4764 ppm	0.8 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1005 ppm	1.7 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.2272 %	0.1 %	
Sc 361.384 {93} (Radial)	100.8179 %	0.2 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 12/1/2020 11:39:20 AM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1902 ppm	1.5 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1874 ppm	1.4 %	0.2000 ppm
Ba 455.403 {74} (Radial)	0.9961 ppm	2.2 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9615 ppm	2.2 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1918 ppm	3.1 %	0.2000 ppm
Ca 315.887 {107} (Radial)	1.0039 ppm	3.4 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1915 ppm	1.2 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1935 ppm	3.0 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.1995 ppm	1.4 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9702 ppm	1.3 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9650 ppm	3.2 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9797 ppm	1.5 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9320 ppm	2.2 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1937 ppm	3.0 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9603 ppm	1.4 %	1.0000 ppm
Na 589.592 {57} (Radial)	18.9710 ppm	2.5 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9748 ppm	1.4 %	1.0000 ppm
K 766.490 {44} (Radial)	18.5585 ppm	2.6 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9542 ppm	1.3 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1944 ppm	3.1 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1943 ppm	2.0 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1945 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1921 ppm	1.7 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1904 ppm	3.0 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4775 ppm	1.3 %	0.5000 ppm
Sc 357.253 {94} (Axial)	99.7305 %	1.4 %	
Sc 188.060 {479} (Axial)	96.9326 %	0.1 %	
Mg 279.079 {121} (Radial)	0.9499 ppm	7.3 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2030 ppm	1.4 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9934 ppm	1.3 %	1.0000 ppm
Sc 227.318 {448} (Axial)	100.0794 %	0.2 %	
B 249.773 {135} (Radial)	0.9554 ppm	2.0 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9814 ppm	2.8 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9707 ppm	0.9 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.1973 ppm	1.4 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.2275 %	0.2 %	
Sc 361.384 {93} (Radial)	101.8464 %	0.3 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 12/1/2020 11:44:17 AM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0024 ppm	2.2 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0030 ppm	1.8 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0091 ppm	1.6 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0020 ppm	1.3 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9983 ppm	1.7 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0020 ppm	2.0 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0013 ppm	1.3 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0065 ppm	2.0 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0078 ppm	1.5 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0040 ppm	1.8 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0168 ppm	1.7 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0014 ppm	1.4 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0092 ppm	2.1 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2504 ppm	1.8 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0053 ppm	2.0 %	5.0000 ppm
K 766.490 {44} (Radial)	100.3646 ppm	2.0 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0111 ppm	2.0 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0012 ppm	1.7 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0012 ppm	1.7 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0013 ppm	2.2 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0020 ppm	1.9 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0022 ppm	1.2 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5054 ppm	2.0 %	2.5000 ppm
Sc 357.253 {94} (Axial)	95.7274 %	0.5 %	
Sc 188.060 {479} (Axial)	89.3180 %	0.7 %	
Mg 279.079 {121} (Radial)	5.0107 ppm	1.3 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9990 ppm	2.0 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	105.1002 %	0.5 %	
B 249.773 {135} (Radial)	5.0102 ppm	1.7 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0050 ppm	2.0 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0060 ppm	2.3 %	5.0000 ppm
Pb 220.353 {453} (Axial)	1.0005 ppm	1.8 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.2035 %	0.8 %	
Sc 361.384 {93} (Radial)	99.7689 %	0.5 %	

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LabBook: ICP2_201201C.imexp

ICAL1

Sample type: BLK Analysis started at: 12/1/2020 11:24:02 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-4.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 12/1/2020 11:29:13 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0033 ppm	14.7 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0040 ppm	16.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	101 cps	0.0048 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	683 cps	0.0019 ppm	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	97 cps	0.5050 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0096 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	28 cps	0.0051 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0048 ppm	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	220 cps	0.0104 ppm	6.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	13 cps	0.0719 ppm	10.5 %	0.0 ppm
Li 670.784 {50} (Radial)	98 cps	0.0096 ppm	3.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	344 cps	0.0051 ppm	2.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0046 ppm	2.9 %	0.0 ppm
Na 589.592 {57} (Radial)	300 cps	0.2113 ppm	3.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	23 cps	0.0054 ppm	5.4 %	0.0 ppm
K 766.490 {44} (Radial)	51 cps	0.1485 ppm	35.3 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0084 ppm	31.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	51 cps	0.0053 ppm	3.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	129 cps	0.0050 ppm	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0100 ppm	3.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0010 ppm	187.5 %	0.0 ppm
V 292.402 {115} (Axial)	75 cps	0.0049 ppm	12.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	109 cps	0.0103 ppm	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.8243 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		98.7786 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	5 cps	0.1932 ppm	6.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0102 ppm	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	14 cps	0.0117 ppm	7.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8280 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	5 cps	0.0199 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	7 cps	0.0213 ppm	31.2 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2558 ppm	5.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0049 ppm	22.4 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4292 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.9853 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 12/1/2020 11:34:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.0957 ppm	2.5 %	0.0 ppm
As 189.042 {478} (Axial)	35 cps	0.0950 ppm	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	10,782 cps	0.5078 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,820 cps	0.4860 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	34,352 cps	0.0961 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	96 cps	0.5038 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,146 cps	0.0970 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	552 cps	0.1009 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4,129 cps	0.4943 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,422 cps	0.4920 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	89 cps	0.5018 ppm	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	4,771 cps	0.4683 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,660 cps	0.0989 ppm	2.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,255 cps	0.4869 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	13,549 cps	9.5541 ppm	1.7 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,069 cps	0.4970 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	3,188 cps	9.2386 ppm	1.9 %	0.2 ppm
Se 196.090 {472} (Axial)	108 cps	0.4805 ppm	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	950 cps	0.0989 ppm	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,546 cps	0.0990 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	101 cps	0.0982 ppm	1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	84 cps	0.0961 ppm	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,489 cps	0.0969 ppm	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,539 cps	0.2407 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5242 %	1.2 %	1.2 %
Sc 188.060 {479} (Axial)		97.2677 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	13 cps	0.4962 ppm	10.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	36 cps	0.1038 ppm	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	633 cps	0.5132 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8219 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	111 cps	0.4870 ppm	2.9 %	0.0 ppm
Al 396.152 {85} (Radial)	157 cps	0.4869 ppm	2.9 %	0.0 ppm
Si 251.611 {134} (Radial)	30 cps	0.4764 ppm	0.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	102 cps	0.1005 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		98.2272 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.8179 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 12/1/2020 11:39:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	89 cps	0.1902 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	69 cps	0.1874 ppm	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	21,151 cps	0.9961 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	15,472 cps	0.9615 ppm	2.2 %	0.0 ppm
Be 313.042 {108} (Axial)	68,602 cps	0.1918 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	192 cps	1.0039 ppm	3.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,262 cps	0.1915 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,758 cps	0.1935 ppm	3.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,091 cps	0.1995 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	8,105 cps	0.9702 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,439 cps	0.9650 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	173 cps	0.9797 ppm	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	9,496 cps	0.9320 ppm	2.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,047 cps	0.1937 ppm	3.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,475 cps	0.9603 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	26,904 cps	18.9710 ppm	2.5 %	0.5 ppm
Ni 231.604 {445} (Axial)	4,059 cps	0.9748 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	6,403 cps	18.5585 ppm	2.6 %	0.5 ppm
Se 196.090 {472} (Axial)	214 cps	0.9542 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,868 cps	0.1944 ppm	3.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,995 cps	0.1943 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	200 cps	0.1945 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	0.1921 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	2,925 cps	0.1904 ppm	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,035 cps	0.4775 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7305 %	1.4 %	1.4 %
Sc 188.060 {479} (Axial)		96.9326 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	26 cps	0.9499 ppm	7.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	70 cps	0.2030 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1,226 cps	0.9934 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0794 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	217 cps	0.9554 ppm	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	316 cps	0.9814 ppm	2.8 %	0.0 ppm
Si 251.611 {134} (Radial)	60 cps	0.9707 ppm	0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	200 cps	0.1973 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		98.2275 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.8464 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 12/1/2020 11:44:17 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	469 cps	1.0024 ppm	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	371 cps	1.0030 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	80,601 cps	5.0091 ppm	1.6 %	0.1 ppm
Be 313.042 {108} (Axial)	358,368 cps	1.0020 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	957 cps	4.9983 ppm	1.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,838 cps	1.0020 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,098 cps	1.0013 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	41,825 cps	5.0065 ppm	2.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	106,069 cps	5.0078 ppm	1.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	883 cps	5.0040 ppm	1.8 %	0.1 ppm
Li 670.784 {50} (Radial)	51,112 cps	5.0168 ppm	1.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	67,435 cps	1.0014 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	12,909 cps	5.0092 ppm	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	142,169 cps	100.2504 ppm	1.8 %	1.8 ppm
Ni 231.604 {445} (Axial)	20,843 cps	5.0053 ppm	2.0 %	0.1 ppm
K 766.490 {44} (Radial)	34,628 cps	100.3646 ppm	2.0 %	2.0 ppm
Se 196.090 {472} (Axial)	1,123 cps	5.0111 ppm	2.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	9,620 cps	1.0012 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	25,741 cps	1.0012 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,029 cps	1.0013 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	876 cps	1.0020 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	15,396 cps	1.0022 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,421 cps	2.5054 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.7274 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		89.3180 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	136 cps	5.0107 ppm	1.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	345 cps	0.9990 ppm	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		105.1002 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1,137 cps	5.0102 ppm	1.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,612 cps	5.0050 ppm	2.0 %	0.1 ppm
Si 251.611 {134} (Radial)	310 cps	5.0060 ppm	2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,015 cps	1.0005 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2035 %	0.8 %	0.7 %
Sc 361.384 {93} (Radial)		99.7689 %	0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:14:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-21 cps	-0.0452 ppm	2.4 %	0.0 ppm
As 189.042 {478} (Axial)	-13 cps	-0.0354 ppm	3.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	445,391 cps	20.9755 ppm	2.3 %	0.5 ppm
Ba 493.409 {68} (Radial)	328,931 cps	20.4420 ppm	2.3 %	0.5 ppm
Be 313.042 {108} (Axial)	715,546 cps	2.0007 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	38,103 cps	199.1110 ppm	1.7 %	3.3 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	42.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	89,337 cps	9.8327 ppm	1.1 %	0.1 ppm
Cr 205.560 {464} (Axial)	53,637 cps	9.8140 ppm	1.8 %	0.2 ppm
Co 228.616 {447} (Axial)	94 cps	0.0112 ppm	3.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	431,714 cps	20.3823 ppm	1.3 %	0.3 ppm
Fe 259.940 {130} (Radial)	34,741 cps	196.8946 ppm	1.5 %	3.0 ppm
Li 670.784 {50} (Radial)	105,789 cps	10.3834 ppm	1.7 %	0.2 ppm
Mn 257.610 {131} (Axial)	645,355 cps	9.5831 ppm	1.2 %	0.1 ppm
Mo 202.030 {467} (Axial)	-4 cps	-0.0016 ppm	26.7 %	0.0 ppm
Na 589.592 {57} (Radial)	-51 cps	-0.0358 ppm	37.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	-117 cps	-0.0282 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	-67 cps	-0.1953 ppm	16.1 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0146 ppm	28.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	21,017 cps	2.1875 ppm	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	264,707 cps	10.2964 ppm	1.6 %	0.2 ppm
Sn 189.989 {477} (Axial)	-29 cps	-0.0279 ppm	2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	8,753 cps	10.0081 ppm	1.6 %	0.2 ppm
V 292.402 {115} (Axial)	154,175 cps	10.0361 ppm	1.2 %	0.1 ppm
Zn 213.856 {457} (Axial)	-761 cps	-0.0721 ppm	2.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0229 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		80.0778 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	5,610 cps	206.4334 ppm	1.7 %	3.5 ppm
Tl 190.856 {477} (Axial)	-17 cps	-0.0498 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	25,620 cps	20.7632 ppm	0.7 %	0.1 ppm
Sc 227.318 {448} (Axial)		83.1861 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	4,769 cps	21.0098 ppm	1.7 %	0.4 ppm
Al 396.152 {85} (Radial)	64,961 cps	201.7249 ppm	1.5 %	3.0 ppm
Si 251.611 {134} (Radial)	1,263 cps	20.3745 ppm	1.9 %	0.4 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0012 ppm	50.7 %	0.0 ppm
Y 224.306 {450} (Axial)		88.8128 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		97.6051 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:19:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,256 cps	4.8171 ppm	1.7 %	0.1 ppm
As 189.042 {478} (Axial)	1,703 cps	4.5990 ppm	1.5 %	0.1 ppm
Ba 455.403 {74} (Radial)	158 cps	0.0075 ppm	17.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	131 cps	0.0082 ppm	29.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-29 cps	-0.0001 ppm	83.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	18 cps	0.0940 ppm	16.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	263 cps	0.0223 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	45.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	35 cps	0.0064 ppm	4.5 %	0.0 ppm
Co 228.616 {447} (Axial)	81,535 cps	9.7600 ppm	1.6 %	0.2 ppm
Cu 324.754 {104} (Axial)	199 cps	0.0094 ppm	9.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0869 ppm	21.4 %	0.0 ppm
Li 670.784 {50} (Radial)	80 cps	0.0078 ppm	13.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	-153 cps	-0.0023 ppm	13.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	24,929 cps	9.6737 ppm	1.7 %	0.2 ppm
Na 589.592 {57} (Radial)	-7 cps	-0.0050 ppm	87.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	40,682 cps	9.7694 ppm	1.7 %	0.2 ppm
K 766.490 {44} (Radial)	-3 cps	-0.0077 ppm	288.9 %	0.0 ppm
Se 196.090 {472} (Axial)	1,036 cps	4.6234 ppm	1.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0029 ppm	18.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	86 cps	0.0034 ppm	23.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	4,916 cps	4.7828 ppm	1.6 %	0.1 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0064 ppm	28.9 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0011 ppm	22.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	48,493 cps	4.5984 ppm	1.6 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.4019 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		99.8376 %	1.6 %	1.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0300 ppm	136.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,810 cps	5.2376 ppm	1.1 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0176 ppm	41.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.5577 %	1.5 %	1.5 %
B 249.773 {135} (Radial)	15 cps	0.0667 ppm	9.1 %	0.0 ppm
Al 396.152 {85} (Radial)	154 cps	0.4796 ppm	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	4 cps	0.0635 ppm	8.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,091 cps	5.0156 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		99.9713 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		100.3664 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 12/1/2020 11:49:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	466 cps	0.9945 ppm	99.445 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	359 cps	0.9691 ppm	96.913 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,669 cps	1.0676 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	16,487 cps	1.0246 ppm	102.461 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	356,424 cps	0.9966 ppm	99.660 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,216 cps	6.3553 ppm	105.922 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	11,662 cps	0.9871 ppm	98.710 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,231 cps	1.0160 ppm	101.600 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,586 cps	1.0220 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	8,343 cps	0.9987 ppm	99.866 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	21,703 cps	1.0247 ppm	102.466 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	185 cps	1.0488 ppm	104.883 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	10,278 cps	1.0088 ppm	100.878 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	69,352 cps	1.0298 ppm	102.983 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,617 cps	1.0154 ppm	101.539 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	29,848 cps	21.0473 ppm	100.225 %	1.5 %	0.3 ppm
Ni 231.604 {445} (Axial)	4,177 cps	1.0030 ppm	100.299 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	7,237 cps	20.9765 ppm	99.888 %	1.4 %	0.3 ppm
Se 196.090 {472} (Axial)	219 cps	0.9781 ppm	97.807 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,068 cps	1.0479 ppm	104.789 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,515 cps	1.0313 ppm	103.134 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,021 cps	0.9932 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	896 cps	1.0246 ppm	102.463 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	15,733 cps	1.0241 ppm	102.413 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,327 cps	0.9793 ppm	97.932 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7252 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.8434 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	1.0043 ppm	100.432 %	7.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	359 cps	1.0394 ppm	103.943 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1,262 cps	1.0231 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.5065 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	238 cps	1.0506 ppm	105.063 %	0.9 %	0.0 ppm
Al 396.152 {85} (Radial)	339 cps	1.0530 ppm	105.299 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	66 cps	1.0610 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,035 cps	1.0196 ppm	101.957 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8822 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.0633 %		0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 12/1/2020 11:54:14 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	129.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0007 ppm	108.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	52.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	8 cps	0.0005 ppm	525.3 %	0.0 ppm
Be 313.042 {108} (Axial)	90 cps	0.0003 ppm	15.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0128 ppm	70.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	13.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	591.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	29.2 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	62.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	10 cps	0.0005 ppm	65.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0029 ppm	110.1 %	0.0 ppm
Li 670.784 {50} (Radial)	37 cps	0.0036 ppm	23.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	41.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	21.8 %	0.0 ppm
Na 589.592 {57} (Radial)	27 cps	0.0188 ppm	48.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	323.2 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0548 ppm	59.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0001 ppm	576.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	9,570.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	17 cps	0.0007 ppm	46.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	87.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0007 ppm	108.8 %	0.0 ppm
V 292.402 {115} (Axial)	9 cps	0.0006 ppm	55.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	165.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.4239 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		100.4139 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	0 cps	-0.0151 ppm	218.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0006 ppm	141.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	523.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.3799 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	2 cps	0.0096 ppm	84.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	259.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0029 ppm	203.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	202.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.6108 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		99.8994 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 12/1/2020 12:03:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0044 ppm	88.531 %	42.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0047 ppm	93.467 %	9.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	97 cps	0.0046 ppm		4.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	92 cps	0.0057 ppm		15.8 %	0.0 ppm
Be 313.042 {108} (Axial)	718 cps	0.0020 ppm	100.314 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	101 cps	0.5288 ppm	105.760 %	2.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	116 cps	0.0098 ppm	98.206 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0052 ppm	103.223 %	4.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0051 ppm	102.576 %	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0048 ppm	96.301 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	215 cps	0.0102 ppm	101.663 %	3.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0802 ppm	100.307 %	6.4 %	0.0 ppm
Li 670.784 {50} (Radial)	108 cps	0.0106 ppm	106.471 %	8.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	350 cps	0.0052 ppm	103.932 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0050 ppm	100.715 %	3.7 %	0.0 ppm
Na 589.592 {57} (Radial)	273 cps	0.1926 ppm	96.303 %	6.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	22 cps	0.0053 ppm	106.695 %	2.7 %	0.0 ppm
K 766.490 {44} (Radial)	67 cps	0.1937 ppm	96.863 %	11.8 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0088 ppm	87.531 %	29.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	52 cps	0.0054 ppm	108.520 %	8.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	133 cps	0.0052 ppm	103.842 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0098 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0032 ppm	64.936 %	83.8 %	0.0 ppm
V 292.402 {115} (Axial)	78 cps	0.0051 ppm	101.769 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	104 cps	0.0098 ppm	98.207 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7136 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		101.0121 %		1.4 %	1.4 %
Mg 279.079 {121} (Radial)	6 cps	0.2306 ppm	115.305 %	15.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0107 ppm	107.051 %	8.6 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0108 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0619 %		1.5 %	1.5 %
B 249.773 {135} (Radial)	5 cps	0.0214 ppm	106.973 %	16.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0078 ppm		129.1 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2503 ppm		13.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0053 ppm	106.906 %	4.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1436 %		0.8 %	0.8 %
Sc 361.384 {93} (Radial)		99.7226 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 12/1/2020 12:09:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-7 cps	-0.0156 ppm		18.4 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0214 ppm	0.000 %	6.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	0.000 %	998.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	75 cps	0.0046 ppm	0.000 %	49.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-954 cps	-0.0027 ppm	0.000 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,427 cps	96.2919 ppm	96.292 %	1.9 %	1.9 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	0.000 %	20.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	16 cps	0.0017 ppm	0.000 %	18.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0008 ppm	0.000 %	19.1 %	0.0 ppm
Co 228.616 {447} (Axial)	30 cps	0.0036 ppm	0.000 %	3.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	63 cps	0.0030 ppm	0.000 %	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,138 cps	97.1286 ppm	97.129 %	2.2 %	2.1 ppm
Li 670.784 {50} (Radial)	21 cps	0.0021 ppm		55.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-403 cps	-0.0060 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,000 cps	1.9401 ppm	97.005 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	140,038 cps	98.7473 ppm	98.747 %	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	-63 cps	-0.0151 ppm	0.000 %	2.3 %	0.0 ppm
K 766.490 {44} (Radial)	34,726 cps	100.6461 ppm	100.646 %	2.6 %	2.6 ppm
Se 196.090 {472} (Axial)	1 cps	0.0027 ppm	0.000 %	142.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	0.000 %	26.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	-61 cps	-0.0024 ppm		8.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0107 ppm		3.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,724 cps	1.9716 ppm		1.9 %	0.0 ppm
V 292.402 {115} (Axial)	34 cps	0.0022 ppm	0.000 %	24.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-42 cps	-0.0040 ppm	0.000 %	4.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.2637 %		0.7 %	0.6 %
Sc 188.060 {479} (Axial)		82.7250 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	2,686 cps	98.8441 ppm	98.844 %	2.2 %	2.2 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0076 ppm	0.000 %	3.3 %	0.0 ppm
Al 167.079 {502} (Axial)	23,054 cps	18.6839 ppm		0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.9277 %		0.3 %	0.2 %
B 249.773 {135} (Radial)	21 cps	0.0927 ppm		4.7 %	0.0 ppm
Al 396.152 {85} (Radial)	30,653 cps	95.1867 ppm	95.187 %	2.0 %	1.9 ppm
Si 251.611 {134} (Radial)	6 cps	0.0945 ppm	0.000 %	38.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0031 ppm	0.000 %	32.3 %	0.0 ppm
Y 224.306 {450} (Axial)		92.2943 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.2398 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 8:25:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5085 ppm	101.704 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	188 cps	0.5073 ppm	101.466 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,444 cps	2.7524 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,067 cps	2.6143 ppm	104.573 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	174,163 cps	0.4870 ppm	97.395 %	8.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	588 cps	3.0748 ppm	122.992 %	7.0 %	0.2 ppm
Cd 228.802 {447} (Axial)	6,012 cps	0.5089 ppm	101.781 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,352 cps	0.4790 ppm	95.808 %	8.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,738 cps	0.5010 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,741 cps	2.4828 ppm	99.312 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,619 cps	2.7203 ppm	108.813 %	8.5 %	0.2 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5544 ppm	102.176 %	0.2 %	0.0 ppm
Li 670.784 {50} (Radial)	27,447 cps	2.6940 ppm	107.761 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,878 cps	0.4882 ppm	97.643 %	8.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,618 cps	2.5680 ppm	102.720 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	71,905 cps	50.7036 ppm	101.407 %	1.7 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,296 cps	2.4725 ppm	98.898 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	18,800 cps	54.4876 ppm	108.975 %	2.0 %	1.1 ppm
Se 196.090 {472} (Axial)	553 cps	2.4673 ppm	98.692 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,673 cps	0.4863 ppm	97.267 %	8.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,603 cps	0.5291 ppm	105.824 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	512 cps	0.4981 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	415 cps	0.4749 ppm	94.980 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,784 cps	0.5067 ppm	101.344 %	8.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,104 cps	1.2426 ppm	99.410 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.1340 %		9.6 %	9.7 %
Sc 188.060 {479} (Axial)		88.1232 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	67 cps	2.4781 ppm	99.123 %	3.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5231 ppm	104.623 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,797 cps	2.2666 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.8618 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	560 cps	2.4686 ppm	98.745 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	829 cps	2.5743 ppm	102.970 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	174 cps	2.8132 ppm		1.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	504 cps	0.4963 ppm	99.266 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6324 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		114.9287 %		0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 8:30:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	244 cps	0.5218 ppm	104.369 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5154 ppm	103.089 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,878 cps	2.8199 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,030 cps	2.6742 ppm	106.967 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	169,697 cps	0.4745 ppm	94.898 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	452 cps	2.3618 ppm	94.474 %	1.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,133 cps	0.5192 ppm	103.832 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,222 cps	0.4647 ppm	92.935 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,798 cps	0.5119 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	21,164 cps	2.5334 ppm	101.337 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,644 cps	2.6743 ppm	106.973 %	2.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	448 cps	2.5370 ppm	101.480 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	28,266 cps	2.7744 ppm	110.977 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	31,880 cps	0.4734 ppm	94.678 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,771 cps	2.6273 ppm	105.093 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73,593 cps	51.8937 ppm	103.787 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,508 cps	2.5235 ppm	100.939 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	19,359 cps	56.1087 ppm	112.217 %	2.5 %	1.4 ppm
Se 196.090 {472} (Axial)	563 cps	2.5149 ppm	100.597 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,548 cps	0.4734 ppm	94.679 %	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,923 cps	0.5416 ppm	108.316 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5092 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	417 cps	0.4765 ppm	95.302 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,628 cps	0.4966 ppm	99.312 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,372 cps	1.2680 ppm	101.443 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.9083 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		86.7321 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	60 cps	2.2074 ppm	88.297 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	184 cps	0.5327 ppm	106.542 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,835 cps	2.2976 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.5967 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	574 cps	2.5265 ppm	101.062 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	827 cps	2.5667 ppm	102.667 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	158 cps	2.5417 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	511 cps	0.5038 ppm	100.755 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6752 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		115.1854 %		0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 9:31:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5346 ppm	106.914 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5217 ppm	104.348 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,893 cps	2.8678 ppm		2.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,950 cps	2.7314 ppm	109.254 %	2.8 %	0.1 ppm
Be 313.042 {108} (Axial)	163,034 cps	0.4559 ppm	91.172 %	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	415 cps	2.1705 ppm	86.818 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,108 cps	0.5170 ppm	103.397 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,037 cps	0.4443 ppm	88.859 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,776 cps	0.5079 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,992 cps	2.5128 ppm	100.514 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,973 cps	2.7371 ppm	109.483 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	454 cps	2.5754 ppm	103.017 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	29,407 cps	2.8864 ppm	115.454 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	30,746 cps	0.4566 ppm	91.312 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,797 cps	2.6376 ppm	105.505 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	74,879 cps	52.8009 ppm	105.602 %	3.2 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,394 cps	2.4960 ppm	99.840 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	19,580 cps	56.7491 ppm	113.498 %	3.4 %	1.9 ppm
Se 196.090 {472} (Axial)	574 cps	2.5628 ppm	102.511 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,491 cps	0.4674 ppm	93.487 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,073 cps	0.5474 ppm	109.478 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4973 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	412 cps	0.4710 ppm	94.202 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,435 cps	0.4840 ppm	96.800 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,256 cps	1.2570 ppm	100.559 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.5788 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		83.2928 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	54 cps	1.9996 ppm	79.984 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5293 ppm	105.869 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,687 cps	2.1779 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.0149 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	562 cps	2.4746 ppm	98.984 %	3.2 %	0.1 ppm
Al 396.152 {85} (Radial)	841 cps	2.6100 ppm	104.400 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	151 cps	2.4327 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	499 cps	0.4918 ppm	98.353 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6026 %		0.8 %	0.7 %
Sc 361.384 {93} (Radial)		125.8367 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 9:36:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5331 ppm	106.624 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.5185 ppm	103.709 %	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,642 cps	2.7617 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,493 cps	2.6408 ppm	105.633 %	2.4 %	0.1 ppm
Be 313.042 {108} (Axial)	156,775 cps	0.4384 ppm	87.671 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	397 cps	2.0732 ppm	82.927 %	2.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,066 cps	0.5135 ppm	102.691 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,894 cps	0.4285 ppm	85.707 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,746 cps	0.5025 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,815 cps	2.4917 ppm	99.667 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,783 cps	2.6337 ppm	105.346 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	411 cps	2.3308 ppm	93.231 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	28,340 cps	2.7816 ppm	111.265 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,524 cps	0.4384 ppm	87.681 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,744 cps	2.6170 ppm	104.679 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	71,901 cps	50.7006 ppm	101.401 %	2.8 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,295 cps	2.4723 ppm	98.890 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	18,870 cps	54.6906 ppm	109.381 %	3.4 %	1.8 ppm
Se 196.090 {472} (Axial)	571 cps	2.5464 ppm	101.857 %	2.3 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,331 cps	0.4508 ppm	90.155 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,565 cps	0.5276 ppm	105.526 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	505 cps	0.4917 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	397 cps	0.4538 ppm	90.760 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,127 cps	0.4639 ppm	92.787 %	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,157 cps	1.2476 ppm	99.809 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.7189 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		82.3021 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	51 cps	1.8920 ppm	75.678 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5267 ppm	105.338 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,653 cps	2.1498 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.0436 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	541 cps	2.3820 ppm	95.278 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	792 cps	2.4587 ppm	98.349 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	142 cps	2.2939 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4899 ppm	97.978 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.8250 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		125.5937 %		0.8 %	1.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 10:38:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	252 cps	0.5382 ppm	107.630 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5209 ppm	104.171 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,961 cps	2.7767 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,551 cps	2.6444 ppm	105.777 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	151,919 cps	0.4248 ppm	84.956 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	386 cps	2.0187 ppm	80.749 %	2.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,105 cps	0.5168 ppm	103.355 %	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,759 cps	0.4137 ppm	82.748 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,757 cps	0.5044 ppm		2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,846 cps	2.4953 ppm	99.812 %	2.4 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,453 cps	2.6181 ppm	104.724 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	405 cps	2.2927 ppm	91.707 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	28,859 cps	2.8326 ppm	113.303 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	28,613 cps	0.4249 ppm	84.976 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,774 cps	2.6287 ppm	105.149 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	72,350 cps	51.0177 ppm	102.035 %	2.3 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,310 cps	2.4759 ppm	99.034 %	2.4 %	0.1 ppm
K 766.490 {44} (Radial)	19,041 cps	55.1866 ppm	110.373 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	579 cps	2.5846 ppm	103.383 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,224 cps	0.4396 ppm	87.920 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,595 cps	0.5288 ppm	105.765 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	507 cps	0.4931 ppm		2.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	390 cps	0.4455 ppm	89.103 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	6,996 cps	0.4554 ppm	91.088 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,210 cps	1.2527 ppm	100.217 %	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		110.7610 %		3.7 %	4.1 %
Sc 188.060 {479} (Axial)		82.4071 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	50 cps	1.8479 ppm	73.917 %	4.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5298 ppm	105.963 %	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,667 cps	2.1616 ppm		2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.7470 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	537 cps	2.3672 ppm	94.686 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	791 cps	2.4574 ppm	98.298 %	1.8 %	0.0 ppm
Si 251.611 {134} (Radial)	142 cps	2.2955 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4901 ppm	98.030 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0806 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		126.1009 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 10:42:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	252 cps	0.5390 ppm	107.806 %	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	195 cps	0.5253 ppm	105.061 %	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,657 cps	2.8095 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,143 cps	2.6812 ppm	107.248 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	154,959 cps	0.4333 ppm	86.656 %	4.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	398 cps	2.0778 ppm	83.113 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,142 cps	0.5199 ppm	103.978 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,841 cps	0.4227 ppm	84.543 %	4.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,774 cps	0.5075 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,982 cps	2.5116 ppm	100.465 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,739 cps	2.6316 ppm	105.262 %	4.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3400 ppm	93.601 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	29,036 cps	2.8500 ppm	114.000 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,163 cps	0.4330 ppm	86.609 %	4.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,827 cps	2.6491 ppm	105.964 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	73,189 cps	51.6088 ppm	103.218 %	2.0 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,383 cps	2.4934 ppm	99.734 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	19,242 cps	55.7690 ppm	111.538 %	2.3 %	1.3 ppm
Se 196.090 {472} (Axial)	577 cps	2.5759 ppm	103.035 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,288 cps	0.4463 ppm	89.268 %	4.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,767 cps	0.5355 ppm	107.102 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4970 ppm		2.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	398 cps	0.4556 ppm	91.129 %	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,093 cps	0.4617 ppm	92.347 %	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,284 cps	1.2597 ppm	100.776 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		110.2972 %		2.3 %	2.6 %
Sc 188.060 {479} (Axial)		82.0639 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	52 cps	1.9022 ppm	76.087 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	184 cps	0.5313 ppm	106.262 %	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,686 cps	2.1766 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.6294 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	548 cps	2.4163 ppm	96.650 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	806 cps	2.5028 ppm	100.113 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	145 cps	2.3355 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	501 cps	0.4940 ppm	98.794 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		90.9839 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		125.6427 %		1.0 %	1.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCV

Sample type: QC Analysis started at: 12/1/2020 12:35:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.4978 ppm	99.559 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4958 ppm	99.158 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,688 cps	2.6226 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	40,752 cps	2.5326 ppm	101.303 %	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	181,796 cps	0.5083 ppm	101.664 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	487 cps	2.5451 ppm	101.805 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,901 cps	0.4995 ppm	99.890 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,583 cps	0.5045 ppm	100.893 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,833 cps	0.5183 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,008 cps	2.5147 ppm	100.588 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,409 cps	2.5216 ppm	100.863 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5535 ppm	102.139 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	25,442 cps	2.4972 ppm	99.889 %	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,957 cps	0.5042 ppm	100.848 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,454 cps	2.5044 ppm	100.177 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	71,503 cps	50.4205 ppm	100.841 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,478 cps	2.5163 ppm	100.650 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	17,222 cps	49.9159 ppm	99.832 %	1.7 %	0.9 ppm
Se 196.090 {472} (Axial)	557 cps	2.4867 ppm	99.468 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,826 cps	0.5023 ppm	100.460 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,088 cps	0.5091 ppm	101.818 %	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5092 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	444 cps	0.5080 ppm	101.592 %	0.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,734 cps	0.5034 ppm	100.689 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,119 cps	1.2440 ppm	99.521 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7487 %		0.8 %	0.7 %
Sc 188.060 {479} (Axial)		91.9789 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	69 cps	2.5346 ppm	101.385 %	2.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5171 ppm	103.415 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,002 cps	2.4326 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1570 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	577 cps	2.5404 ppm	101.616 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	809 cps	2.5126 ppm	100.502 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	156 cps	2.5158 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	513 cps	0.5054 ppm	101.077 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8548 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.3188 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 11:45:25 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	249 cps	0.5318 ppm	106.357 %	2.8 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5126 ppm	102.512 %	3.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,725 cps	2.7185 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	41,822 cps	2.5991 ppm	103.963 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	153,976 cps	0.4305 ppm	86.106 %	5.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	379 cps	1.9824 ppm	79.295 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,041 cps	0.5113 ppm	102.262 %	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,843 cps	0.4230 ppm	84.592 %	5.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,702 cps	0.4944 ppm		2.9 %	0.0 ppm
Co 228.616 {447} (Axial)	20,520 cps	2.4563 ppm	98.251 %	2.9 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,884 cps	2.6856 ppm	107.425 %	5.8 %	0.2 ppm
Fe 259.940 {130} (Radial)	398 cps	2.2531 ppm	90.125 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	28,199 cps	2.7678 ppm	110.713 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,155 cps	0.4329 ppm	86.588 %	5.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,643 cps	2.5777 ppm	103.106 %	3.0 %	0.1 ppm
Na 589.592 {57} (Radial)	70,621 cps	49.7979 ppm	99.596 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,137 cps	2.4344 ppm	97.376 %	2.9 %	0.1 ppm
K 766.490 {44} (Radial)	18,297 cps	53.0298 ppm	106.060 %	2.6 %	1.4 ppm
Se 196.090 {472} (Axial)	568 cps	2.5372 ppm	101.487 %	2.8 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,345 cps	0.4522 ppm	90.445 %	6.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,305 cps	0.5175 ppm	103.503 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	497 cps	0.4840 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	387 cps	0.4429 ppm	88.585 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,109 cps	0.4627 ppm	92.549 %	5.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,020 cps	1.2346 ppm	98.770 %	3.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.8307 %		4.7 %	5.0 %
Sc 188.060 {479} (Axial)		82.2687 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	50 cps	1.8354 ppm	73.414 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	158 cps	0.4572 ppm	91.441 %	4.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,617 cps	2.1206 ppm		2.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		90.7874 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	525 cps	2.3146 ppm	92.584 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	782 cps	2.4294 ppm	97.177 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	137 cps	2.2098 ppm		1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	493 cps	0.4854 ppm	97.088 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.6687 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		125.4704 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 11:50:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	253 cps	0.5411 ppm	108.230 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.5192 ppm	103.843 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,270 cps	2.8384 ppm		1.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,688 cps	2.7151 ppm	108.602 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	155,341 cps	0.4343 ppm	86.870 %	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	399 cps	2.0854 ppm	83.416 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,121 cps	0.5181 ppm	103.626 %	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,873 cps	0.4263 ppm	85.263 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,742 cps	0.5016 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,801 cps	2.4900 ppm	99.600 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,971 cps	2.6897 ppm	107.590 %	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	416 cps	2.3584 ppm	94.335 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	29,469 cps	2.8925 ppm	115.698 %	1.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,357 cps	0.4359 ppm	87.187 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,749 cps	2.6188 ppm	104.751 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	74,040 cps	52.2092 ppm	104.418 %	2.2 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,270 cps	2.4663 ppm	98.654 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	19,191 cps	55.6214 ppm	111.243 %	2.6 %	1.5 ppm
Se 196.090 {472} (Axial)	575 cps	2.5659 ppm	102.635 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,369 cps	0.4547 ppm	90.945 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,888 cps	0.5402 ppm	108.045 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	506 cps	0.4919 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	406 cps	0.4645 ppm	92.904 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,149 cps	0.4653 ppm	93.069 %	0.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,190 cps	1.2508 ppm	100.063 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.3088 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		82.6387 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	52 cps	1.9278 ppm	77.112 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	164 cps	0.4746 ppm	94.916 %	3.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,652 cps	2.1491 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.2645 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	553 cps	2.4344 ppm	97.376 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	817 cps	2.5359 ppm	101.435 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	143 cps	2.3023 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.4908 ppm	98.153 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0380 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		125.9780 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 12:41:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5337 ppm	106.741 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5169 ppm	103.385 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,151 cps	2.8328 ppm		0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,602 cps	2.7097 ppm	108.388 %	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	154,060 cps	0.4308 ppm	86.153 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	396 cps	2.0676 ppm	82.704 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,069 cps	0.5137 ppm	102.741 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,827 cps	0.4212 ppm	84.246 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,732 cps	0.4999 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,703 cps	2.4782 ppm	99.126 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,156 cps	2.6512 ppm	106.050 %	2.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3414 ppm	93.656 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	29,339 cps	2.8797 ppm	115.189 %	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,074 cps	0.4317 ppm	86.347 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,716 cps	2.6060 ppm	104.242 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	73,824 cps	52.0568 ppm	104.114 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,236 cps	2.4580 ppm	98.322 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	19,099 cps	55.3554 ppm	110.711 %	1.9 %	1.0 ppm
Se 196.090 {472} (Axial)	571 cps	2.5472 ppm	101.890 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,318 cps	0.4495 ppm	89.893 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,862 cps	0.5392 ppm	107.842 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4880 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	401 cps	0.4581 ppm	91.620 %	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,066 cps	0.4600 ppm	91.996 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,110 cps	1.2432 ppm	99.454 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.5290 %		1.5 %	1.7 %
Sc 188.060 {479} (Axial)		82.4790 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	51 cps	1.8857 ppm	75.428 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5023 ppm	100.455 %	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,634 cps	2.1351 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.0787 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	547 cps	2.4082 ppm	96.326 %	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	814 cps	2.5279 ppm	101.114 %	0.5 %	0.0 ppm
Si 251.611 {134} (Radial)	142 cps	2.2859 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	494 cps	0.4866 ppm	97.319 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3500 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		126.7401 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 12:46:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	254 cps	0.5434 ppm	108.679 %	2.7 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5215 ppm	104.303 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,776 cps	2.8151 ppm		2.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,161 cps	2.6823 ppm	107.292 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	156,923 cps	0.4388 ppm	87.754 %	2.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	395 cps	2.0661 ppm	82.644 %	2.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,136 cps	0.5194 ppm	103.872 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,894 cps	0.4286 ppm	85.722 %	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,759 cps	0.5048 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,926 cps	2.5050 ppm	100.198 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,954 cps	2.6889 ppm	107.558 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3382 ppm	93.529 %	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	29,066 cps	2.8529 ppm	114.116 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,600 cps	0.4395 ppm	87.908 %	2.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,790 cps	2.6348 ppm	105.390 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	73,237 cps	51.6431 ppm	103.286 %	3.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,345 cps	2.4842 ppm	99.366 %	2.1 %	0.1 ppm
K 766.490 {44} (Radial)	19,018 cps	55.1192 ppm	110.238 %	4.0 %	2.2 ppm
Se 196.090 {472} (Axial)	578 cps	2.5784 ppm	103.136 %	2.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,367 cps	0.4545 ppm	90.895 %	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,769 cps	0.5356 ppm	107.119 %	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	508 cps	0.4941 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	398 cps	0.4549 ppm	90.990 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,200 cps	0.4687 ppm	93.737 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,254 cps	1.2568 ppm	100.544 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.8947 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		82.0419 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	52 cps	1.8999 ppm	75.995 %	3.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5067 ppm	101.338 %	3.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,659 cps	2.1553 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.6597 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	545 cps	2.3988 ppm	95.952 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	807 cps	2.5060 ppm	100.239 %	2.4 %	0.1 ppm
Si 251.611 {134} (Radial)	142 cps	2.2935 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	500 cps	0.4923 ppm	98.460 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.8574 %		0.6 %	0.5 %
Sc 361.384 {93} (Radial)		126.5799 %		0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:36:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	230 cps	0.4921 ppm	98.422 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	182 cps	0.4921 ppm	98.424 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	52,304 cps	2.4632 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	38,471 cps	2.3908 ppm	95.633 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	178,486 cps	0.4991 ppm	99.813 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	732 cps	3.8262 ppm	153.050 %	11.6 %	0.4 ppm
Cd 228.802 {447} (Axial)	5,832 cps	0.4936 ppm	98.724 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,510 cps	0.4964 ppm	99.270 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,803 cps	0.5129 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.4876 ppm	99.505 %	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,168 cps	2.4630 ppm	98.519 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	425 cps	2.4112 ppm	96.446 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	23,862 cps	2.3421 ppm	93.684 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,276 cps	0.4941 ppm	98.826 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,376 cps	2.4741 ppm	98.965 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	67,418 cps	47.5398 ppm	95.080 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,361 cps	2.4882 ppm	99.528 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	16,173 cps	46.8758 ppm	93.752 %	2.1 %	1.0 ppm
Se 196.090 {472} (Axial)	554 cps	2.4718 ppm	98.871 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,765 cps	0.4960 ppm	99.192 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,301 cps	0.4785 ppm	95.693 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	518 cps	0.5039 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	423 cps	0.4838 ppm	96.758 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,544 cps	0.4911 ppm	98.218 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,995 cps	1.2323 ppm	98.585 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7200 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.9881 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	76 cps	2.7999 ppm	111.998 %	5.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5113 ppm	102.266 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,979 cps	2.4139 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0417 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	542 cps	2.3864 ppm	95.454 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	769 cps	2.3866 ppm	95.463 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.6270 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	509 cps	0.5013 ppm	100.255 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6413 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.0278 %		0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:41:38 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	231 cps	0.4931 ppm	98.625 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4938 ppm	98.769 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,052 cps	2.4985 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	38,997 cps	2.4236 ppm	96.942 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	179,063 cps	0.5007 ppm	100.135 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	480 cps	2.5071 ppm	100.283 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,859 cps	0.4960 ppm	99.191 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,527 cps	0.4982 ppm	99.647 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,815 cps	0.5150 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,867 cps	2.4978 ppm	99.912 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,470 cps	2.4772 ppm	99.090 %	2.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	430 cps	2.4377 ppm	97.509 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	24,205 cps	2.3758 ppm	95.030 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,378 cps	0.4956 ppm	99.128 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,407 cps	2.4863 ppm	99.452 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	68,095 cps	48.0172 ppm	96.034 %	2.3 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,401 cps	2.4976 ppm	99.904 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	16,291 cps	47.2170 ppm	94.434 %	2.4 %	1.1 ppm
Se 196.090 {472} (Axial)	555 cps	2.4787 ppm	99.146 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,783 cps	0.4979 ppm	99.570 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,485 cps	0.4856 ppm	97.128 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	520 cps	0.5057 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	429 cps	0.4910 ppm	98.194 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,570 cps	0.4928 ppm	98.559 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,039 cps	1.2364 ppm	98.916 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5770 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.1865 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	67 cps	2.4577 ppm	98.307 %	0.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	178 cps	0.5138 ppm	102.764 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,989 cps	2.4227 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2333 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	549 cps	2.4187 ppm	96.748 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	774 cps	2.4050 ppm	96.200 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	155 cps	2.4957 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	510 cps	0.5025 ppm	100.496 %	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2497 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.0405 %		0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 2:53:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5089 ppm	101.784 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4974 ppm	99.472 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,444 cps	2.7053 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,455 cps	2.6384 ppm	105.538 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	174,328 cps	0.4874 ppm	97.488 %	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.4147 ppm	96.590 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,862 cps	0.4962 ppm	99.236 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,378 cps	0.4819 ppm	96.370 %	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,801 cps	0.5124 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,687 cps	2.4763 ppm	99.052 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,968 cps	2.5952 ppm	103.808 %	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	444 cps	2.5171 ppm	100.685 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	26,605 cps	2.6114 ppm	104.454 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,697 cps	0.4855 ppm	97.105 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,447 cps	2.5019 ppm	100.075 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	72,446 cps	51.0851 ppm	102.170 %	2.1 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,262 cps	2.4644 ppm	98.575 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,394 cps	50.4135 ppm	100.827 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	565 cps	2.5202 ppm	100.809 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,791 cps	0.4987 ppm	99.732 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,427 cps	0.5223 ppm	104.457 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	507 cps	0.4933 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5114 ppm	102.273 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,540 cps	0.4908 ppm	98.168 %	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,964 cps	1.2293 ppm	98.345 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.2385 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.0107 %		1.3 %	1.2 %
Mg 279.079 {121} (Radial)	64 cps	2.3410 ppm	93.639 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5107 ppm	102.135 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,782 cps	2.2546 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4838 %		1.2 %	1.2 %
B 249.773 {135} (Radial)	569 cps	2.5086 ppm	100.346 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	817 cps	2.5375 ppm	101.501 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	154 cps	2.4856 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.4904 ppm	98.071 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4741 %		1.2 %	1.2 %
Sc 361.384 {93} (Radial)		115.7543 %		0.2 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 3:55:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5092 ppm	101.843 %	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4964 ppm	99.290 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,571 cps	2.6171 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	40,932 cps	2.5438 ppm	101.751 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	169,294 cps	0.4734 ppm	94.672 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	440 cps	2.3016 ppm	92.064 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,823 cps	0.4929 ppm	98.577 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,242 cps	0.4669 ppm	93.376 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,780 cps	0.5087 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,569 cps	2.4622 ppm	98.487 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,573 cps	2.5293 ppm	101.173 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	428 cps	2.4266 ppm	97.064 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	25,670 cps	2.5196 ppm	100.785 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	31,699 cps	0.4707 ppm	94.142 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,416 cps	2.4897 ppm	99.589 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	69,748 cps	49.1825 ppm	98.365 %	1.5 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,204 cps	2.4505 ppm	98.021 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	16,759 cps	48.5735 ppm	97.147 %	1.9 %	0.9 ppm
Se 196.090 {472} (Axial)	561 cps	2.5026 ppm	100.105 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,624 cps	0.4813 ppm	96.255 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,995 cps	0.5055 ppm	101.098 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4887 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	431 cps	0.4933 ppm	98.660 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,357 cps	0.4789 ppm	95.785 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,906 cps	1.2238 ppm	97.905 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.9055 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		91.2906 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	60 cps	2.2261 ppm	89.045 %	4.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	176 cps	0.5083 ppm	101.660 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,786 cps	2.2581 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2854 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	546 cps	2.4054 ppm	96.216 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	784 cps	2.4354 ppm	97.415 %	0.6 %	0.0 ppm
Si 251.611 {134} (Radial)	148 cps	2.3889 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	494 cps	0.4871 ppm	97.415 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.3794 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		116.9395 %		0.0 %	0.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 4:00:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	242 cps	0.5172 ppm	103.431 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5044 ppm	100.884 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,202 cps	2.7410 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,762 cps	2.6575 ppm	106.299 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	177,187 cps	0.4954 ppm	99.087 %	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	458 cps	2.3908 ppm	95.631 %	2.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,910 cps	0.5003 ppm	100.052 %	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,441 cps	0.4888 ppm	97.763 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,828 cps	0.5175 ppm		0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,894 cps	2.5011 ppm	100.042 %	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,184 cps	2.6526 ppm	106.104 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	442 cps	2.5023 ppm	100.090 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	26,996 cps	2.6498 ppm	105.991 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,204 cps	0.4931 ppm	98.613 %	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,529 cps	2.5336 ppm	101.344 %	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	73,306 cps	51.6913 ppm	103.383 %	2.6 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,371 cps	2.4906 ppm	99.625 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	17,692 cps	51.2767 ppm	102.553 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	569 cps	2.5401 ppm	101.605 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,846 cps	0.5044 ppm	100.870 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,577 cps	0.5281 ppm	105.623 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4970 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5116 ppm	102.325 %	2.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,725 cps	0.5029 ppm	100.577 %	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,099 cps	1.2421 ppm	99.370 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.7285 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.7916 %		1.1 %	1.0 %
Mg 279.079 {121} (Radial)	63 cps	2.3072 ppm	92.288 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5166 ppm	103.318 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,824 cps	2.2883 ppm		0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.1435 %		0.9 %	0.9 %
B 249.773 {135} (Radial)	574 cps	2.5284 ppm	101.134 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	815 cps	2.5303 ppm	101.213 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	154 cps	2.4791 ppm		3.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	502 cps	0.4943 ppm	98.863 %	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.5446 %		0.9 %	0.9 %
Sc 361.384 {93} (Radial)		115.9002 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 5:02:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	237 cps	0.5068 ppm	101.354 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.5001 ppm	100.017 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	56,401 cps	2.6562 ppm		1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	41,092 cps	2.5537 ppm	102.149 %	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	171,384 cps	0.4792 ppm	95.841 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	454 cps	2.3732 ppm	94.929 %	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,932 cps	0.5021 ppm	100.415 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,285 cps	0.4716 ppm	94.320 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,782 cps	0.5090 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.4877 ppm	99.507 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,419 cps	2.5692 ppm	102.770 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	437 cps	2.4754 ppm	99.016 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26,198 cps	2.5714 ppm	102.854 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,172 cps	0.4777 ppm	95.546 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,522 cps	2.5310 ppm	101.240 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	70,370 cps	49.6213 ppm	99.243 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,323 cps	2.4790 ppm	99.160 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	17,477 cps	50.6553 ppm	101.311 %	2.7 %	1.4 ppm
Se 196.090 {472} (Axial)	561 cps	2.5035 ppm	100.139 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,629 cps	0.4818 ppm	96.363 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,177 cps	0.5125 ppm	102.509 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	513 cps	0.4987 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	422 cps	0.4823 ppm	96.466 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,509 cps	0.4888 ppm	97.765 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,068 cps	1.2392 ppm	99.134 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.8734 %		0.2 %	0.3 %
Sc 188.060 {479} (Axial)		90.9500 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	60 cps	2.2105 ppm	88.419 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5165 ppm	103.309 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,831 cps	2.2944 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2449 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	554 cps	2.4416 ppm	97.664 %	2.3 %	0.1 ppm
Al 396.152 {85} (Radial)	795 cps	2.4684 ppm	98.736 %	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	151 cps	2.4337 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	503 cps	0.4953 ppm	99.065 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.2266 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		114.1500 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 5:07:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	236 cps	0.5041 ppm	100.830 %	3.8 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4961 ppm	99.218 %	3.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,894 cps	2.7736 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,934 cps	2.6682 ppm	106.729 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	174,795 cps	0.4887 ppm	97.749 %	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	469 cps	2.4522 ppm	98.088 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,879 cps	0.4976 ppm	99.517 %	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,373 cps	0.4813 ppm	96.261 %	0.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,744 cps	0.5021 ppm		3.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,530 cps	2.4575 ppm	98.300 %	3.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,532 cps	2.6218 ppm	104.872 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5570 ppm	102.278 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	27,310 cps	2.6805 ppm	107.222 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,741 cps	0.4862 ppm	97.237 %	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,459 cps	2.5065 ppm	100.258 %	3.6 %	0.1 ppm
Na 589.592 {57} (Radial)	73,249 cps	51.6517 ppm	103.303 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,201 cps	2.4498 ppm	97.990 %	3.5 %	0.1 ppm
K 766.490 {44} (Radial)	18,352 cps	53.1890 ppm	106.378 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	553 cps	2.4672 ppm	98.690 %	3.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,709 cps	0.4901 ppm	98.016 %	0.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,750 cps	0.5349 ppm	106.971 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	506 cps	0.4928 ppm		3.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	438 cps	0.5011 ppm	100.210 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,658 cps	0.4985 ppm	99.697 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,915 cps	1.2247 ppm	97.972 %	3.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.8181 %		0.7 %	0.8 %
Sc 188.060 {479} (Axial)		91.7097 %		0.9 %	0.8 %
Mg 279.079 {121} (Radial)	63 cps	2.3124 ppm	92.496 %	3.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5125 ppm	102.500 %	3.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,798 cps	2.2674 ppm		3.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		100.2793 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	578 cps	2.5449 ppm	101.796 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	832 cps	2.5821 ppm	103.284 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5097 ppm		3.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4893 ppm	97.866 %	3.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7609 %		1.4 %	1.4 %
Sc 361.384 {93} (Radial)		112.8619 %		1.2 %	1.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 6:10:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.5109 ppm	102.187 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5098 ppm	101.955 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,617 cps	2.7605 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,341 cps	2.6314 ppm	105.255 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	173,238 cps	0.4844 ppm	96.878 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	485 cps	2.5348 ppm	101.390 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,057 cps	0.5127 ppm	102.542 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,333 cps	0.4769 ppm	95.384 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,812 cps	0.5145 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,116 cps	2.5277 ppm	101.108 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,158 cps	2.6041 ppm	104.165 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	452 cps	2.5599 ppm	102.395 %	1.3 %	0.0 ppm
Li 670.784 {50} (Radial)	27,202 cps	2.6699 ppm	106.798 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,512 cps	0.4828 ppm	96.556 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,667 cps	2.5870 ppm	103.480 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	72,611 cps	51.2012 ppm	102.402 %	2.3 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,497 cps	2.5209 ppm	100.835 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	18,533 cps	53.7144 ppm	107.429 %	2.5 %	1.4 ppm
Se 196.090 {472} (Axial)	564 cps	2.5176 ppm	100.706 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,626 cps	0.4814 ppm	96.289 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,642 cps	0.5306 ppm	106.128 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5093 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	427 cps	0.4880 ppm	97.604 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,629 cps	0.4966 ppm	99.322 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,300 cps	1.2612 ppm	100.899 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.8170 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.2467 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	63 cps	2.3220 ppm	92.880 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5255 ppm	105.101 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,892 cps	2.3436 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.9172 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	570 cps	2.5108 ppm	100.430 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	818 cps	2.5401 ppm	101.606 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5202 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5041 ppm	100.821 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3637 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		112.5664 %		0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 7:12:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5076 ppm	101.523 %	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5056 ppm	101.127 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,610 cps	2.8073 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,707 cps	2.6541 ppm	106.164 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	173,186 cps	0.4842 ppm	96.849 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	466 cps	2.4338 ppm	97.354 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,039 cps	0.5111 ppm	102.228 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,332 cps	0.4768 ppm	95.359 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,785 cps	0.5095 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	20,995 cps	2.5131 ppm	100.525 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,435 cps	2.6172 ppm	104.688 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	456 cps	2.5850 ppm	103.399 %	2.0 %	0.1 ppm
Li 670.784 {50} (Radial)	27,652 cps	2.7141 ppm	108.564 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,431 cps	0.4816 ppm	96.316 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,657 cps	2.5832 ppm	103.327 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	73,173 cps	51.5981 ppm	103.196 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,454 cps	2.5104 ppm	100.417 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	19,127 cps	55.4360 ppm	110.872 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	554 cps	2.4748 ppm	98.991 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,582 cps	0.4769 ppm	95.372 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,862 cps	0.5392 ppm	107.838 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	522 cps	0.5076 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	422 cps	0.4825 ppm	96.500 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,671 cps	0.4994 ppm	99.872 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,220 cps	1.2536 ppm	100.291 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.7581 %		0.9 %	1.0 %
Sc 188.060 {479} (Axial)		90.0961 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	62 cps	2.2970 ppm	91.878 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5251 ppm	105.020 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,884 cps	2.3373 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8785 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	577 cps	2.5441 ppm	101.763 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	826 cps	2.5660 ppm	102.640 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5244 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	511 cps	0.5032 ppm	100.638 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4890 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		111.2390 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 7:17:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	240 cps	0.5124 ppm	102.485 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5105 ppm	102.096 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,367 cps	2.7958 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,799 cps	2.6598 ppm	106.393 %	2.3 %	0.1 ppm
Be 313.042 {108} (Axial)	176,814 cps	0.4944 ppm	98.878 %	0.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.4147 ppm	96.588 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,072 cps	0.5140 ppm	102.798 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,426 cps	0.4871 ppm	97.426 %	0.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,794 cps	0.5112 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,076 cps	2.5229 ppm	100.915 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,731 cps	2.6784 ppm	107.136 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	453 cps	2.5665 ppm	102.658 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	27,577 cps	2.7067 ppm	108.269 %	2.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,103 cps	0.4916 ppm	98.312 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,683 cps	2.5935 ppm	103.740 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	72,925 cps	51.4231 ppm	102.846 %	2.7 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,472 cps	2.5148 ppm	100.593 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	19,042 cps	55.1893 ppm	110.379 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	557 cps	2.4877 ppm	99.509 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,709 cps	0.4901 ppm	98.020 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,813 cps	0.5373 ppm	107.457 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	525 cps	0.5105 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	426 cps	0.4873 ppm	97.454 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,799 cps	0.5077 ppm	101.535 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,286 cps	1.2599 ppm	100.793 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.8453 %		2.0 %	2.0 %
Sc 188.060 {479} (Axial)		89.5272 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	63 cps	2.3325 ppm	93.299 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5295 ppm	105.897 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,894 cps	2.3455 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4513 %		0.0 %	0.0 %
B 249.773 {135} (Radial)	578 cps	2.5458 ppm	101.832 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	836 cps	2.5963 ppm	103.851 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5185 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5040 ppm	100.801 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.1571 %		0.2 %	0.1 %
Sc 361.384 {93} (Radial)		111.9724 %		0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 8:35:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0014 ppm	78.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	137.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	6 cps	0.0003 ppm	108.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	170 cps	0.0106 ppm	9.9 %	0.0 ppm
Be 313.042 {108} (Axial)	43 cps	0.0001 ppm	17.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0143 ppm	6.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0009 ppm	7.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	837.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	132.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	80.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	31 cps	0.0015 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0048 ppm	184.8 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0037 ppm	18.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	21.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	36.5 %	0.0 ppm
Na 589.592 {57} (Radial)	59 cps	0.0420 ppm	12.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	72.1 %	0.0 ppm
K 766.490 {44} (Radial)	32 cps	0.0931 ppm	16.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	242.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0012 ppm	22.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	70.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	1,049.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0031 ppm	19.8 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	50.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	97.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.9106 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		95.2028 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0037 ppm	601.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	899.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0014 ppm	29.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.9795 %	1.0 %	1.0 %
B 249.773 {135} (Radial)	1 cps	0.0062 ppm	57.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0036 ppm	267.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0118 ppm	42.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	288.2 %	0.0 ppm
Y 224.306 {450} (Axial)		98.7263 %	1.0 %	0.9 %
Sc 361.384 {93} (Radial)		115.2465 %	0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 9:41:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0023 ppm	36.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	161.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	8 cps	0.0004 ppm	155.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0068 ppm	29.7 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	17.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0093 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	12 cps	0.0010 ppm	7.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	213.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	33.7 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	41.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	31 cps	0.0014 ppm	15.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0084 ppm	39.1 %	0.0 ppm
Li 670.784 {50} (Radial)	66 cps	0.0065 ppm	22.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	2 cps	0.0000 ppm	330.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	35.5 %	0.0 ppm
Na 589.592 {57} (Radial)	54 cps	0.0381 ppm	14.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	57.9 %	0.0 ppm
K 766.490 {44} (Radial)	44 cps	0.1262 ppm	20.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0027 ppm	29.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	70.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	20.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	863.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0018 ppm	94.6 %	0.0 ppm
V 292.402 {115} (Axial)	-14 cps	-0.0009 ppm	19.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	671.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		113.7508 %	0.3 %	0.4 %
Sc 188.060 {479} (Axial)		91.4330 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	0.0120 ppm	40.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	9,178.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0014 ppm	24.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.3533 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	0 cps	0.0018 ppm	272.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0035 ppm	362.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0069 ppm	97.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	180.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6161 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		126.1074 %	0.9 %	1.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 10:47:49 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0007 ppm	111.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0001 ppm	378.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	30 cps	0.0014 ppm	13.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	100 cps	0.0062 ppm	22.7 %	0.0 ppm
Be 313.042 {108} (Axial)	95 cps	0.0003 ppm	11.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0163 ppm	43.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	15 cps	0.0013 ppm	10.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	117.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	37.8 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0005 ppm	59.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	53 cps	0.0025 ppm	8.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0007 ppm	140.3 %	0.0 ppm
Li 670.784 {50} (Radial)	84 cps	0.0082 ppm	8.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	41.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0016 ppm	42.5 %	0.0 ppm
Na 589.592 {57} (Radial)	157 cps	0.1108 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	63.2 %	0.0 ppm
K 766.490 {44} (Radial)	263 cps	0.7633 ppm	4.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	416.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0010 ppm	31.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0005 ppm	13.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	459.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0031 ppm	27.5 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0006 ppm	19.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	102.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		114.4716 %	0.8 %	0.9 %
Sc 188.060 {479} (Axial)		91.0722 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	-0.0015 ppm	3,430.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	176.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0007 ppm	52.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.9630 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0050 ppm	50.3 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0012 ppm	798.4 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0058 ppm	142.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	191.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.0559 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		126.8467 %	0.4 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 11:55:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0011 ppm	49.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	203.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	22.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	74 cps	0.0046 ppm	21.1 %	0.0 ppm
Be 313.042 {108} (Axial)	103 cps	0.0003 ppm	7.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0130 ppm	47.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0014 ppm	5.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	28.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	30.4 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	52.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	51 cps	0.0024 ppm	10.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0024 ppm	74.0 %	0.0 ppm
Li 670.784 {50} (Radial)	71 cps	0.0070 ppm	18.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	1 cps	0.0000 ppm	113.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0018 ppm	31.3 %	0.0 ppm
Na 589.592 {57} (Radial)	142 cps	0.1000 ppm	8.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	73.3 %	0.0 ppm
K 766.490 {44} (Radial)	87 cps	0.2528 ppm	11.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0017 ppm	117.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0008 ppm	8.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	12 cps	0.0005 ppm	6.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	190.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0023 ppm	33.6 %	0.0 ppm
V 292.402 {115} (Axial)	-11 cps	-0.0007 ppm	9.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	118.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		113.2963 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		90.3240 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0137 ppm	160.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	1 cps	0.0020 ppm	68.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	26.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.4238 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1 cps	0.0034 ppm	61.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0066 ppm	120.2 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0247 ppm	31.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0006 ppm	100.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9248 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		127.1687 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:40:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0010 ppm	122.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	109.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	20 cps	0.0010 ppm	65.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	35 cps	0.0022 ppm	38.1 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	11.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0149 ppm	24.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0000 ppm	94.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0005 ppm	70.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	246.0 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	65.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	18 cps	0.0008 ppm	25.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0014 ppm	391.4 %	0.0 ppm
Li 670.784 {50} (Radial)	30 cps	0.0029 ppm	24.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	32.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	49.3 %	0.0 ppm
Na 589.592 {57} (Radial)	31 cps	0.0222 ppm	29.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	9.9 %	0.0 ppm
K 766.490 {44} (Radial)	15 cps	0.0424 ppm	105.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0009 ppm	292.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	295.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0003 ppm	8.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	1,209.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0028 ppm	44.4 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	409.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	99.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.1081 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		99.0099 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0499 ppm	31.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	210.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	11.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0509 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0166 ppm	57.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0023 ppm	205.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0056 ppm	85.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	180.9 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4255 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.4205 %	0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 12:51:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0016 ppm	38.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	619.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0007 ppm	59.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	82 cps	0.0051 ppm	8.2 %	0.0 ppm
Be 313.042 {108} (Axial)	78 cps	0.0002 ppm	19.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0131 ppm	53.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	16 cps	0.0014 ppm	4.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	151.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	63.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	89.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	40 cps	0.0019 ppm	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0017 ppm	290.7 %	0.0 ppm
Li 670.784 {50} (Radial)	56 cps	0.0055 ppm	13.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-1 cps	0.0000 ppm	408.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0015 ppm	27.1 %	0.0 ppm
Na 589.592 {57} (Radial)	101 cps	0.0714 ppm	7.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	65.6 %	0.0 ppm
K 766.490 {44} (Radial)	65 cps	0.1890 ppm	8.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0005 ppm	570.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0008 ppm	26.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	931.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0018 ppm	69.0 %	0.0 ppm
V 292.402 {115} (Axial)	-12 cps	-0.0008 ppm	21.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	107.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		114.1869 %	0.7 %	0.8 %
Sc 188.060 {479} (Axial)		89.7618 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0214 ppm	85.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	564.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	26.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.7632 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1 cps	0.0028 ppm	110.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0070 ppm	115.5 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0184 ppm	24.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	2,643.7 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8825 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		127.3580 %	0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:46:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	183.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	393.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	19 cps	0.0009 ppm	52.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	40 cps	0.0025 ppm	14.7 %	0.0 ppm
Be 313.042 {108} (Axial)	42 cps	0.0001 ppm	28.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	6 cps	0.0313 ppm	10.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	19.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	109.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	41.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	74.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	14 cps	0.0007 ppm	6.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0017 ppm	106.8 %	0.0 ppm
Li 670.784 {50} (Radial)	18 cps	0.0018 ppm	61.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	14.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0010 ppm	26.4 %	0.0 ppm
Na 589.592 {57} (Radial)	43 cps	0.0300 ppm	24.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	107.7 %	0.0 ppm
K 766.490 {44} (Radial)	4 cps	0.0125 ppm	343.6 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0024 ppm	55.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	2,763.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	38.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	144.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0011 ppm	143.5 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	48.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	38.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2287 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		100.0211 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0193 ppm	232.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	4,922.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	64.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9128 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0136 ppm	37.3 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0160 ppm	36.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0191 ppm	3.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	331.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1849 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5408 %	0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:58:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0004 ppm	89.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	75.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	26 cps	0.0012 ppm	38.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	21 cps	0.0013 ppm	107.4 %	0.0 ppm
Be 313.042 {108} (Axial)	42 cps	0.0001 ppm	29.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0166 ppm	34.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	57.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	5,037.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	112.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	33.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	14 cps	0.0007 ppm	33.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0016 ppm	251.0 %	0.0 ppm
Li 670.784 {50} (Radial)	35 cps	0.0035 ppm	4.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	82.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	27.9 %	0.0 ppm
Na 589.592 {57} (Radial)	69 cps	0.0484 ppm	12.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	63.0 %	0.0 ppm
K 766.490 {44} (Radial)	13 cps	0.0382 ppm	13.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	63.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0003 ppm	122.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	12.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	30.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0024 ppm	52.5 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0004 ppm	73.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	31.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		107.9666 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		99.5087 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	0.0016 ppm	791.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	296.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	31.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.8315 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	1 cps	0.0038 ppm	109.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	191.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0093 ppm	60.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0005 ppm	81.9 %	0.0 ppm
Y 224.306 {450} (Axial)		101.9284 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		116.0994 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 4:04:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0003 ppm	661.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	171.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	343.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	62 cps	0.0038 ppm	105.2 %	0.0 ppm
Be 313.042 {108} (Axial)	23 cps	0.0001 ppm	13.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0118 ppm	10.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	68.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	114.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	62.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	5 cps	0.0002 ppm	82.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0019 ppm	447.2 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0035 ppm	24.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-2 cps	0.0000 ppm	122.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	16.0 %	0.0 ppm
Na 589.592 {57} (Radial)	39 cps	0.0277 ppm	20.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	81.9 %	0.0 ppm
K 766.490 {44} (Radial)	14 cps	0.0419 ppm	23.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0006 ppm	45.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	754.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0002 ppm	31.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	406.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0025 ppm	136.8 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0005 ppm	35.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	39.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.9120 %	0.4 %	0.5 %
Sc 188.060 {479} (Axial)		97.6081 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0234 ppm	94.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,027.9 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0004 ppm	18.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9100 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0023 ppm	51.9 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0052 ppm	158.0 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0239 ppm	21.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	78.0 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5030 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		117.1824 %	2.3 %	2.7 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 5:12:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0002 ppm	695.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0010 ppm	15.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	60.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	82 cps	0.0051 ppm	18.1 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	32.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0033 ppm	174.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	16.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	112.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	48.2 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	40.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	19 cps	0.0009 ppm	18.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0018 ppm	297.4 %	0.0 ppm
Li 670.784 {50} (Radial)	48 cps	0.0047 ppm	22.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	27.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	40.6 %	0.0 ppm
Na 589.592 {57} (Radial)	134 cps	0.0948 ppm	9.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	69.3 %	0.0 ppm
K 766.490 {44} (Radial)	28 cps	0.0818 ppm	35.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	72.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	105.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0003 ppm	44.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	847.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0029 ppm	14.5 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0005 ppm	52.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	58.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		107.9284 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		98.7035 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	-0.0112 ppm	617.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,488.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	39.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0748 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0053 ppm	51.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	175.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0069 ppm	59.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	10.8 %	0.0 ppm
Y 224.306 {450} (Axial)		101.1591 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		113.7029 %	0.5 %	0.6 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 6:15:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0006 ppm	53.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	66.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	10 cps	0.0005 ppm	72.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0068 ppm	9.7 %	0.0 ppm
Be 313.042 {108} (Axial)	40 cps	0.0001 ppm	21.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	-0.0020 ppm	66.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	17.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0001 ppm	455.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	67.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	12.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	23 cps	0.0011 ppm	39.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0015 ppm	89.2 %	0.0 ppm
Li 670.784 {50} (Radial)	42 cps	0.0041 ppm	15.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	22.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	43.7 %	0.0 ppm
Na 589.592 {57} (Radial)	124 cps	0.0875 ppm	11.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	28.3 %	0.0 ppm
K 766.490 {44} (Radial)	10 cps	0.0285 ppm	61.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	243.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	22.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	21.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	42.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0030 ppm	62.0 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0004 ppm	64.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	3 cps	0.0002 ppm	51.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.2386 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		97.4489 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	0 cps	0.0066 ppm	592.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	306.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	31.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9783 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	0 cps	0.0014 ppm	471.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0104 ppm	37.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0184 ppm	106.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	674.6 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0759 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		113.6259 %	0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 7:22:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0005 ppm	73.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	32.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0007 ppm	68.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	131 cps	0.0082 ppm	10.3 %	0.0 ppm
Be 313.042 {108} (Axial)	63 cps	0.0002 ppm	61.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	-1 cps	-0.0053 ppm	226.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0007 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	2,102.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	56.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	35.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	41 cps	0.0019 ppm	58.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0005 ppm	869.8 %	0.0 ppm
Li 670.784 {50} (Radial)	58 cps	0.0057 ppm	4.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	126.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	10.1 %	0.0 ppm
Na 589.592 {57} (Radial)	133 cps	0.0937 ppm	4.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	4 cps	0.0010 ppm	13.0 %	0.0 ppm
K 766.490 {44} (Radial)	71 cps	0.2058 ppm	9.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	66.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	23.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	32.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0004 ppm	34.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0027 ppm	26.3 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0005 ppm	18.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	96.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.8888 %	5.9 %	6.2 %
Sc 188.060 {479} (Axial)		97.7107 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0270 ppm	136.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	451.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0004 ppm	29.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3277 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	2 cps	0.0078 ppm	60.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0037 ppm	68.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0269 ppm	32.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	18,776.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0898 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		112.5119 %	0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

MBLK-168178

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:55:47 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0019 ppm	75.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0012 ppm	31.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	5 cps	0.0003 ppm	121.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	-49 cps	-0.0031 ppm	64.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-1 cps	0.0000 ppm	1,215.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	45 cps	0.2335 ppm	7.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	165.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0004 ppm	24.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0005 ppm	15.4 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	30.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	31 cps	0.0015 ppm	36.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0854 ppm	3.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-7 cps	-0.0007 ppm	8.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	158 cps	0.0023 ppm	4.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0002 ppm	25.2 %	0.0 ppm
Na 589.592 {57} (Radial)	6 cps	0.0042 ppm	225.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	17.7 %	0.0 ppm
K 766.490 {44} (Radial)	-1 cps	-0.0016 ppm	2,388.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0016 ppm	153.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	102.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0002 ppm	54.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	33.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0034 ppm	84.2 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	52.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	91 cps	0.0086 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.8634 %	2.3 %	2.3 %
Sc 188.060 {479} (Axial)		94.7943 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	2 cps	0.0873 ppm	67.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0034 ppm	31.2 %	0.0 ppm
Al 167.079 {502} (Axial)	52 cps	0.0424 ppm	1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1534 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	0 cps	-0.0003 ppm	1,401.9 %	0.0 ppm
Al 396.152 {85} (Radial)	13 cps	0.0410 ppm	15.8 %	0.0 ppm
Si 251.611 {134} (Radial)	3 cps	0.0495 ppm	26.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	15 cps	0.0146 ppm	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		98.6015 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.3170 %	1.9 %	1.9 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111726-41AMS

Sample type: UNKNOWN Analysis started at: 12/2/2020 12:26:05 AM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.2862 ppm	34.3 %	0.1 ppm
As 189.042 {478} (Axial)	0 cps	0.0769 ppm	106.8 %	0.1 ppm
Ba 455.403 {74} (Radial)	100 cps	0.4701 ppm	4.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	139 cps	0.8616 ppm	12.7 %	0.1 ppm
Be 313.042 {108} (Axial)	316 cps	0.0883 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,105 cps	1,622.7193 ppm	1.8 %	29.7 ppm
Cd 228.802 {447} (Axial)	25 cps	0.2107 ppm	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	11 cps	0.1238 ppm	30.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	8 cps	0.1524 ppm	6.6 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0839 ppm	8.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	104 cps	0.4928 ppm	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	87 cps	49.4314 ppm	1.4 %	0.7 ppm
Li 670.784 {50} (Radial)	35 cps	0.3459 ppm	25.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	2,452 cps	3.6415 ppm	1.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0960 ppm	29.7 %	0.0 ppm
Na 589.592 {57} (Radial)	233 cps	16.4610 ppm	3.8 %	0.6 ppm
Ni 231.604 {445} (Axial)	5 cps	0.1122 ppm	15.3 %	0.0 ppm
K 766.490 {44} (Radial)	75 cps	21.8396 ppm	12.1 %	2.6 ppm
Se 196.090 {472} (Axial)	0 cps	-0.2117 ppm	169.0 %	0.4 ppm
Ag 328.068 {103} (Axial)	15 cps	0.1541 ppm	8.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	284 cps	1.1057 ppm	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0742 ppm	63.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	15 cps	1.7147 ppm	3.7 %	0.1 ppm
V 292.402 {115} (Axial)	11 cps	0.0689 ppm	32.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	27 cps	0.2582 ppm	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		112.2329 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		86.4919 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	169 cps	622.9301 ppm	1.3 %	8.4 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0799 ppm	46.6 %	0.0 ppm
Al 167.079 {502} (Axial)	575 cps	46.5715 ppm	0.9 %	0.4 ppm
Sc 227.318 {448} (Axial)		87.5120 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	-1 cps	-0.2532 ppm	108.0 %	0.3 ppm
Al 396.152 {85} (Radial)	155 cps	48.2456 ppm	1.9 %	0.9 ppm
Si 251.611 {134} (Radial)	57 cps	92.6803 ppm	0.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	3 cps	0.3017 ppm	11.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.0206 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		126.4644 %	0.4 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111726-41AMS

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:08:40 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	43 cps	0.0928 ppm	4.9 %	0.0 ppm
As 189.042 {478} (Axial)	34 cps	0.0913 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	14,185 cps	0.6680 ppm	3.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	10,561 cps	0.6563 ppm	3.2 %	0.0 ppm
Be 313.042 {108} (Axial)	37,940 cps	0.1061 ppm	2.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	404,046 cps	2,111.3592 ppm	1.6 %	33.5 ppm
Cd 228.802 {447} (Axial)	1,181 cps	0.1000 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,475 cps	0.1624 ppm	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	907 cps	0.1660 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	825 cps	0.0987 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	8,595 cps	0.4058 ppm	2.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	10,560 cps	59.8489 ppm	3.0 %	1.8 ppm
Li 670.784 {50} (Radial)	2,403 cps	0.2359 ppm	3.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	304,326 cps	4.5190 ppm	2.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	251 cps	0.0972 ppm	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	22,526 cps	15.8845 ppm	3.5 %	0.6 ppm
Ni 231.604 {445} (Axial)	415 cps	0.0996 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	7,061 cps	20.4663 ppm	3.6 %	0.7 ppm
Se 196.090 {472} (Axial)	19 cps	0.0827 ppm	3.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,069 cps	0.1112 ppm	2.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	31,069 cps	1.2085 ppm	3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	95 cps	0.0926 ppm	0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,790 cps	2.0465 ppm	3.5 %	0.1 ppm
V 292.402 {115} (Axial)	2,946 cps	0.1918 ppm	2.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,836 cps	0.3637 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		81.9574 %	0.6 %	0.5 %
Sc 188.060 {479} (Axial)		65.3557 %	0.1 %	0.0 %
Mg 279.079 {121} (Radial)	26,328 cps	968.8358 ppm	3.2 %	30.7 ppm
Tl 190.856 {477} (Axial)	24 cps	0.0681 ppm	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	19,454 cps	15.7662 ppm	0.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		66.1224 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	147 cps	0.6496 ppm	4.7 %	0.0 ppm
Al 396.152 {85} (Radial)	18,832 cps	58.4794 ppm	3.1 %	1.8 ppm
Si 251.611 {134} (Radial)	7,999 cps	129.0802 ppm	2.1 %	2.7 ppm
Pb 220.353 {453} (Axial)	292 cps	0.2880 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		82.0658 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		92.1087 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

20111726-41AMSD

Sample type: UNKNOWN Analysis started at: 12/2/2020 12:31:15 AM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.1989 ppm	40.5 %	0.1 ppm
As 189.042 {478} (Axial)	0 cps	0.0281 ppm	517.9 %	0.1 ppm
Ba 455.403 {74} (Radial)	156 cps	0.7351 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	182 cps	1.1299 ppm	11.8 %	0.1 ppm
Be 313.042 {108} (Axial)	286 cps	0.0798 ppm	2.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,561 cps	1,338.2992 ppm	0.6 %	7.9 ppm
Cd 228.802 {447} (Axial)	22 cps	0.1890 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	12 cps	0.1372 ppm	18.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	9 cps	0.1649 ppm	6.0 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0788 ppm	6.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	102 cps	0.4829 ppm	3.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	179 cps	101.6078 ppm	0.8 %	0.8 ppm
Li 670.784 {50} (Radial)	41 cps	0.4072 ppm	31.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	5,285 cps	7.8484 ppm	2.1 %	0.2 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0886 ppm	7.9 %	0.0 ppm
Na 589.592 {57} (Radial)	204 cps	14.4113 ppm	4.9 %	0.7 ppm
Ni 231.604 {445} (Axial)	4 cps	0.0950 ppm	5.6 %	0.0 ppm
K 766.490 {44} (Radial)	71 cps	20.4605 ppm	14.0 %	2.9 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.2656 ppm	47.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	14 cps	0.1411 ppm	33.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	307 cps	1.1947 ppm	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0465 ppm	63.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	19 cps	2.1356 ppm	6.9 %	0.1 ppm
V 292.402 {115} (Axial)	20 cps	0.1279 ppm	19.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	26 cps	0.2505 ppm	3.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		113.3558 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		87.3201 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	68 cps	249.9885 ppm	0.7 %	1.8 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0347 ppm	115.3 %	0.0 ppm
Al 167.079 {502} (Axial)	815 cps	66.0621 ppm	2.3 %	1.5 ppm
Sc 227.318 {448} (Axial)		88.3793 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	0 cps	0.0909 ppm	478.5 %	0.4 ppm
Al 396.152 {85} (Radial)	224 cps	69.6170 ppm	1.1 %	0.7 ppm
Si 251.611 {134} (Radial)	60 cps	96.4134 ppm	0.7 %	0.7 ppm
Pb 220.353 {453} (Axial)	3 cps	0.3246 ppm	12.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.7989 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		126.4064 %	0.5 %	0.6 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111726-41AMSD

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:13:43 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	35 cps	0.0749 ppm	2.6 %	0.0 ppm
As 189.042 {478} (Axial)	30 cps	0.0813 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	21,716 cps	1.0227 ppm	5.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	16,123 cps	1.0020 ppm	5.2 %	0.1 ppm
Be 313.042 {108} (Axial)	40,237 cps	0.1125 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	367,793 cps	1,921.9164 ppm	4.1 %	77.9 ppm
Cd 228.802 {447} (Axial)	1,141 cps	0.0965 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,691 cps	0.1861 ppm	3.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,038 cps	0.1899 ppm	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	858 cps	0.1027 ppm	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,027 cps	0.4734 ppm	3.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	23,362 cps	132.4012 ppm	4.9 %	6.5 ppm
Li 670.784 {50} (Radial)	2,496 cps	0.2450 ppm	5.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	708,639 cps	10.5228 ppm	3.0 %	0.3 ppm
Mo 202.030 {467} (Axial)	240 cps	0.0932 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	22,328 cps	15.7445 ppm	5.3 %	0.8 ppm
Ni 231.604 {445} (Axial)	448 cps	0.1075 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	7,049 cps	20.4298 ppm	5.6 %	1.1 ppm
Se 196.090 {472} (Axial)	20 cps	0.0905 ppm	3.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,049 cps	0.1091 ppm	3.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	36,529 cps	1.4209 ppm	5.3 %	0.1 ppm
Sn 189.989 {477} (Axial)	88 cps	0.0856 ppm	0.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2,614 cps	2.9892 ppm	5.1 %	0.2 ppm
V 292.402 {115} (Axial)	4,402 cps	0.2866 ppm	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,228 cps	0.4009 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		86.2333 %	1.1 %	0.9 %
Sc 188.060 {479} (Axial)		66.7166 %	0.7 %	0.5 %
Mg 279.079 {121} (Radial)	11,328 cps	416.8439 ppm	5.3 %	22.1 ppm
Tl 190.856 {477} (Axial)	21 cps	0.0615 ppm	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	18,195 cps	14.7458 ppm	2.5 %	0.4 ppm
Sc 227.318 {448} (Axial)		67.7298 %	0.6 %	0.4 %
B 249.773 {135} (Radial)	161 cps	0.7109 ppm	6.6 %	0.0 ppm
Al 396.152 {85} (Radial)	29,787 cps	92.4984 ppm	5.2 %	4.8 ppm
Si 251.611 {134} (Radial)	8,842 cps	142.6872 ppm	5.8 %	8.2 ppm
Pb 220.353 {453} (Axial)	355 cps	0.3499 ppm	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		88.3529 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		95.9465 %	0.8 %	0.7 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-01A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:24:00 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.1393 ppm	8.5 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.1072 ppm	12.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,941 cps	0.9140 ppm	3.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,367 cps	0.8495 ppm	3.9 %	0.0 ppm
Be 313.042 {108} (Axial)	290 cps	0.0081 ppm	47.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	10,154 cps	530.5888 ppm	2.5 %	13.2 ppm
Cd 228.802 {447} (Axial)	18 cps	0.0155 ppm	3.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	170 cps	0.1868 ppm	16.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	91 cps	0.1671 ppm	3.4 %	0.0 ppm
Co 228.616 {447} (Axial)	39 cps	0.0461 ppm	6.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,601 cps	0.7559 ppm	20.6 %	0.2 ppm
Fe 259.940 {130} (Radial)	4,498 cps	254.9170 ppm	3.1 %	7.9 ppm
Li 670.784 {50} (Radial)	78 cps	0.0766 ppm	8.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	48,737 cps	7.2371 ppm	16.7 %	1.2 ppm
Mo 202.030 {467} (Axial)	7 cps	0.0258 ppm	5.1 %	0.0 ppm
Na 589.592 {57} (Radial)	254 cps	1.7918 ppm	3.8 %	0.1 ppm
Ni 231.604 {445} (Axial)	38 cps	0.0909 ppm	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	165 cps	4.7853 ppm	1.9 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0075 ppm	215.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0151 ppm	16.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,228 cps	0.4778 ppm	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.9164 ppm	3.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	145 cps	1.6582 ppm	4.4 %	0.1 ppm
V 292.402 {115} (Axial)	267 cps	0.1735 ppm	19.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,258 cps	4.9864 ppm	4.3 %	0.2 ppm
Sc 357.253 {94} (Axial)		98.3680 %	15.3 %	15.1 %
Sc 188.060 {479} (Axial)		92.9788 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	582 cps	214.3285 ppm	2.9 %	6.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0099 ppm	82.6 %	0.0 ppm
Al 167.079 {502} (Axial)	5,000 cps	40.5214 ppm	3.2 %	1.3 ppm
Sc 227.318 {448} (Axial)		93.4081 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.3176 ppm	7.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,681 cps	52.2086 ppm	3.1 %	1.6 ppm
Si 251.611 {134} (Radial)	202 cps	32.5521 ppm	3.1 %	1.0 ppm
Pb 220.353 {453} (Axial)	608 cps	5.9899 ppm	4.4 %	0.3 ppm
Y 224.306 {450} (Axial)		100.1412 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		118.2817 %	0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

20111754-03A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:29:02 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	75 cps	1.6024 ppm	9.5 %	0.2 ppm
As 189.042 {478} (Axial)	22 cps	0.5825 ppm	7.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,694 cps	1.7398 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,673 cps	1.6613 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	245 cps	0.0068 ppm	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	11,662 cps	609.4032 ppm	1.4 %	8.8 ppm
Cd 228.802 {447} (Axial)	58 cps	0.0489 ppm	8.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,700 cps	1.8708 ppm	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	905 cps	1.6555 ppm	9.8 %	0.2 ppm
Co 228.616 {447} (Axial)	61 cps	0.0735 ppm	11.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,532 cps	2.1396 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	11,877 cps	673.1170 ppm	1.8 %	11.8 ppm
Li 670.784 {50} (Radial)	94 cps	0.0918 ppm	7.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	186,381 cps	27.6764 ppm	1.3 %	0.4 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0505 ppm	12.9 %	0.0 ppm
Na 589.592 {57} (Radial)	752 cps	5.3006 ppm	1.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	320 cps	0.7673 ppm	10.1 %	0.1 ppm
K 766.490 {44} (Radial)	322 cps	9.3203 ppm	3.3 %	0.3 ppm
Se 196.090 {472} (Axial)	0 cps	0.0123 ppm	81.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	92 cps	0.0960 ppm	3.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,858 cps	0.7228 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	121 cps	1.1779 ppm	10.1 %	0.1 ppm
Ti 334.941 {101} (Radial)	522 cps	5.9708 ppm	1.3 %	0.1 ppm
V 292.402 {115} (Axial)	2,130 cps	1.3865 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	20,990 cps	19.9046 ppm	10.2 %	2.0 ppm
Sc 357.253 {94} (Axial)		105.1412 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		91.1918 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	481 cps	177.0031 ppm	1.4 %	2.5 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0280 ppm	36.0 %	0.0 ppm
Al 167.079 {502} (Axial)	7,254 cps	58.7846 ppm	7.1 %	4.2 ppm
Sc 227.318 {448} (Axial)		91.6502 %	1.1 %	1.0 %
B 249.773 {135} (Radial)	28 cps	1.2546 ppm	3.8 %	0.0 ppm
Al 396.152 {85} (Radial)	3,361 cps	104.3638 ppm	1.9 %	2.0 ppm
Si 251.611 {134} (Radial)	209 cps	33.6955 ppm	1.6 %	0.5 ppm
Pb 220.353 {453} (Axial)	2,532 cps	24.9458 ppm	9.9 %	2.5 ppm
Y 224.306 {450} (Axial)		99.1241 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		117.5065 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-05A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:34:00 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	46 cps	0.9838 ppm	9.8 %	0.1 ppm
As 189.042 {478} (Axial)	17 cps	0.4602 ppm	7.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,619 cps	1.7043 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,619 cps	1.6273 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	363 cps	0.0102 ppm	0.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,549 cps	289.9900 ppm	1.8 %	5.2 ppm
Cd 228.802 {447} (Axial)	62 cps	0.0525 ppm	9.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	533 cps	0.5863 ppm	0.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	311 cps	0.5696 ppm	7.7 %	0.0 ppm
Co 228.616 {447} (Axial)	65 cps	0.0774 ppm	8.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,535 cps	2.1411 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	9,295 cps	526.7759 ppm	1.7 %	8.8 ppm
Li 670.784 {50} (Radial)	72 cps	0.0706 ppm	12.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	84,290 cps	12.5165 ppm	0.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0521 ppm	10.6 %	0.0 ppm
Na 589.592 {57} (Radial)	387 cps	2.7320 ppm	0.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	107 cps	0.2566 ppm	7.3 %	0.0 ppm
K 766.490 {44} (Radial)	309 cps	8.9488 ppm	3.8 %	0.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0350 ppm	21.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	142 cps	0.1483 ppm	4.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,631 cps	0.6345 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	308 cps	2.9953 ppm	7.4 %	0.2 ppm
Ti 334.941 {101} (Radial)	311 cps	3.5540 ppm	1.5 %	0.1 ppm
V 292.402 {115} (Axial)	967 cps	0.6294 ppm	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	29,298 cps	27.7822 ppm	7.3 %	2.0 ppm
Sc 357.253 {94} (Axial)		108.0011 %	0.4 %	0.5 %
Sc 188.060 {479} (Axial)		93.0974 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	237 cps	87.3665 ppm	1.5 %	1.3 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0216 ppm	25.9 %	0.0 ppm
Al 167.079 {502} (Axial)	6,257 cps	50.7079 ppm	5.7 %	2.9 ppm
Sc 227.318 {448} (Axial)		93.5214 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	18 cps	0.7862 ppm	5.6 %	0.0 ppm
Al 396.152 {85} (Radial)	2,321 cps	72.0716 ppm	1.5 %	1.0 ppm
Si 251.611 {134} (Radial)	170 cps	27.4711 ppm	1.9 %	0.5 ppm
Pb 220.353 {453} (Axial)	3,011 cps	29.6681 ppm	7.0 %	2.1 ppm
Y 224.306 {450} (Axial)		100.0613 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		118.8916 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-06A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:38:58 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	9 cps	0.1831 ppm	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.2012 ppm	6.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,601 cps	1.2250 ppm	4.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	1,855 cps	1.1530 ppm	6.2 %	0.1 ppm
Be 313.042 {108} (Axial)	350 cps	0.0098 ppm	25.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,860 cps	253.9816 ppm	4.6 %	11.7 ppm
Cd 228.802 {447} (Axial)	38 cps	0.0321 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	342 cps	0.3768 ppm	11.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	210 cps	0.3839 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	51 cps	0.0612 ppm	2.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,416 cps	1.1409 ppm	12.6 %	0.1 ppm
Fe 259.940 {130} (Radial)	5,564 cps	315.3335 ppm	4.4 %	13.8 ppm
Li 670.784 {50} (Radial)	71 cps	0.0697 ppm	11.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	58,655 cps	8.7098 ppm	10.8 %	0.9 ppm
Mo 202.030 {467} (Axial)	11 cps	0.0432 ppm	4.2 %	0.0 ppm
Na 589.592 {57} (Radial)	905 cps	6.3806 ppm	3.6 %	0.2 ppm
Ni 231.604 {445} (Axial)	59 cps	0.1428 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	240 cps	6.9663 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0029 ppm	962.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	23 cps	0.0237 ppm	9.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,330 cps	0.5174 ppm	4.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	111 cps	1.0782 ppm	1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	248 cps	2.8323 ppm	4.2 %	0.1 ppm
V 292.402 {115} (Axial)	852 cps	0.5549 ppm	10.5 %	0.1 ppm
Zn 213.856 {457} (Axial)	12,846 cps	12.1812 ppm	1.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		103.2267 %	9.8 %	10.1 %
Sc 188.060 {479} (Axial)		94.2050 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	255 cps	93.7898 ppm	3.8 %	3.6 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0049 ppm	231.7 %	0.0 ppm
Al 167.079 {502} (Axial)	6,995 cps	56.6902 ppm	1.0 %	0.5 ppm
Sc 227.318 {448} (Axial)		94.7177 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	20 cps	0.8990 ppm	4.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2,338 cps	72.6171 ppm	4.5 %	3.3 ppm
Si 251.611 {134} (Radial)	227 cps	36.6508 ppm	4.4 %	1.6 ppm
Pb 220.353 {453} (Axial)	891 cps	8.7805 ppm	1.0 %	0.1 ppm
Y 224.306 {450} (Axial)		100.6421 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		117.2866 %	1.8 %	2.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-07A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:43:59 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	17 cps	0.3555 ppm	9.1 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1820 ppm	12.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,460 cps	1.1587 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,754 cps	1.0899 ppm	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	172 cps	0.0048 ppm	4.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,356 cps	175.3655 ppm	0.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	54 cps	0.0461 ppm	11.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	359 cps	0.3952 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	192 cps	0.3511 ppm	9.6 %	0.0 ppm
Co 228.616 {447} (Axial)	47 cps	0.0563 ppm	11.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,546 cps	1.2019 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	7,818 cps	443.0817 ppm	0.1 %	0.4 ppm
Li 670.784 {50} (Radial)	60 cps	0.0586 ppm	6.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	60,000 cps	8.9096 ppm	2.0 %	0.2 ppm
Mo 202.030 {467} (Axial)	8 cps	0.0318 ppm	10.0 %	0.0 ppm
Na 589.592 {57} (Radial)	278 cps	1.9605 ppm	3.2 %	0.1 ppm
Ni 231.604 {445} (Axial)	67 cps	0.1616 ppm	9.3 %	0.0 ppm
K 766.490 {44} (Radial)	199 cps	5.7692 ppm	3.3 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0066 ppm	398.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	18 cps	0.0184 ppm	13.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,005 cps	0.3908 ppm	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	422 cps	4.1078 ppm	9.3 %	0.4 ppm
Ti 334.941 {101} (Radial)	254 cps	2.9097 ppm	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	505 cps	0.3290 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,060 cps	17.1261 ppm	9.9 %	1.7 ppm
Sc 357.253 {94} (Axial)		107.9693 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		94.9728 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	170 cps	62.6898 ppm	0.6 %	0.4 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0206 ppm	30.7 %	0.0 ppm
Al 167.079 {502} (Axial)	4,559 cps	36.9432 ppm	7.7 %	2.9 ppm
Sc 227.318 {448} (Axial)		95.4823 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	13 cps	0.5710 ppm	11.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,823 cps	56.6090 ppm	0.3 %	0.2 ppm
Si 251.611 {134} (Radial)	204 cps	32.8689 ppm	0.7 %	0.2 ppm
Pb 220.353 {453} (Axial)	924 cps	9.1029 ppm	10.0 %	0.9 ppm
Y 224.306 {450} (Axial)		100.8558 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		117.7838 %	0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-09A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:48:58 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	24 cps	0.5197 ppm	6.5 %	0.0 ppm
As 189.042 {478} (Axial)	11 cps	0.3090 ppm	14.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,436 cps	1.6180 ppm	0.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,470 cps	1.5348 ppm	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	283 cps	0.0079 ppm	3.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	19,283 cps	1,007.6219 ppm	0.4 %	3.7 ppm
Cd 228.802 {447} (Axial)	78 cps	0.0660 ppm	9.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	211 cps	0.2328 ppm	4.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	110 cps	0.2009 ppm	8.6 %	0.0 ppm
Co 228.616 {447} (Axial)	53 cps	0.0640 ppm	11.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,570 cps	1.6856 ppm	3.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	9,799 cps	555.3632 ppm	0.8 %	4.3 ppm
Li 670.784 {50} (Radial)	70 cps	0.0687 ppm	5.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	54,755 cps	8.1308 ppm	2.9 %	0.2 ppm
Mo 202.030 {467} (Axial)	8 cps	0.0328 ppm	9.5 %	0.0 ppm
Na 589.592 {57} (Radial)	365 cps	2.5742 ppm	1.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	71 cps	0.1711 ppm	11.7 %	0.0 ppm
K 766.490 {44} (Radial)	257 cps	7.4614 ppm	3.1 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0210 ppm	39.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	38 cps	0.0398 ppm	2.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,637 cps	0.6367 ppm	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	599 cps	5.8303 ppm	8.6 %	0.5 ppm
Ti 334.941 {101} (Radial)	226 cps	2.5819 ppm	0.4 %	0.0 ppm
V 292.402 {115} (Axial)	394 cps	0.2567 ppm	4.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	27,239 cps	25.8299 ppm	9.4 %	2.4 ppm
Sc 357.253 {94} (Axial)		104.5714 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		89.4712 %	1.3 %	1.1 %
Mg 279.079 {121} (Radial)	1,482 cps	545.2827 ppm	0.2 %	1.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0109 ppm	39.3 %	0.0 ppm
Al 167.079 {502} (Axial)	4,692 cps	38.0243 ppm	7.4 %	2.8 ppm
Sc 227.318 {448} (Axial)		90.0081 %	1.3 %	1.2 %
B 249.773 {135} (Radial)	18 cps	0.7975 ppm	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1,923 cps	59.7147 ppm	0.5 %	0.3 ppm
Si 251.611 {134} (Radial)	219 cps	35.3953 ppm	1.1 %	0.4 ppm
Pb 220.353 {453} (Axial)	1,583 cps	15.6013 ppm	9.4 %	1.5 ppm
Y 224.306 {450} (Axial)		97.5677 %	1.0 %	1.0 %
Sc 361.384 {93} (Radial)		117.3254 %	0.2 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-11A

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:04:02 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	16 cps	0.3507 ppm	6.4 %	0.0 ppm
As 189.042 {478} (Axial)	9 cps	0.2399 ppm	7.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,986 cps	1.4060 ppm	0.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,124 cps	1.3200 ppm	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	228 cps	0.0064 ppm	3.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,656 cps	295.5636 ppm	0.4 %	1.3 ppm
Cd 228.802 {447} (Axial)	51 cps	0.0429 ppm	4.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	292 cps	0.3211 ppm	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	162 cps	0.2957 ppm	5.4 %	0.0 ppm
Co 228.616 {447} (Axial)	46 cps	0.0553 ppm	6.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,639 cps	2.1902 ppm	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	7,865 cps	445.7655 ppm	0.7 %	3.3 ppm
Li 670.784 {50} (Radial)	68 cps	0.0669 ppm	12.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	44,740 cps	6.6436 ppm	1.7 %	0.1 ppm
Mo 202.030 {467} (Axial)	8 cps	0.0308 ppm	2.9 %	0.0 ppm
Na 589.592 {57} (Radial)	312 cps	2.2010 ppm	3.4 %	0.1 ppm
Ni 231.604 {445} (Axial)	74 cps	0.1789 ppm	5.7 %	0.0 ppm
K 766.490 {44} (Radial)	236 cps	6.8478 ppm	3.2 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0075 ppm	155.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	23 cps	0.0239 ppm	14.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,010 cps	0.3928 ppm	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	464 cps	4.5099 ppm	5.4 %	0.2 ppm
Ti 334.941 {101} (Radial)	193 cps	2.2073 ppm	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	385 cps	0.2504 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	20,517 cps	19.4557 ppm	5.7 %	1.1 ppm
Sc 357.253 {94} (Axial)		106.4593 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		94.0283 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	374 cps	137.6796 ppm	0.8 %	1.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0254 ppm	23.8 %	0.0 ppm
Al 167.079 {502} (Axial)	5,056 cps	40.9735 ppm	4.1 %	1.7 ppm
Sc 227.318 {448} (Axial)		94.3847 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	13 cps	0.5758 ppm	3.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1,978 cps	61.4296 ppm	0.8 %	0.5 ppm
Si 251.611 {134} (Radial)	116 cps	18.7982 ppm	1.1 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,216 cps	11.9770 ppm	5.8 %	0.7 ppm
Y 224.306 {450} (Axial)		100.3032 %	1.0 %	1.0 %
Sc 361.384 {93} (Radial)		118.3610 %	0.2 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-21A

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:09:04 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.3575 ppm	22.7 %	0.1 ppm
As 189.042 {478} (Axial)	1 cps	0.2577 ppm	7.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	214 cps	1.0101 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	145 cps	0.9031 ppm	7.6 %	0.1 ppm
Be 313.042 {108} (Axial)	10 cps	0.0027 ppm	68.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	158 cps	82.5198 ppm	1.5 %	1.2 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0839 ppm	4.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	15 cps	0.1690 ppm	15.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	11 cps	0.2072 ppm	0.4 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0602 ppm	13.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	303 cps	1.4316 ppm	2.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	810 cps	459.3168 ppm	1.1 %	5.1 ppm
Li 670.784 {50} (Radial)	13 cps	0.1324 ppm	91.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	3,965 cps	5.8879 ppm	1.9 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0327 ppm	34.3 %	0.0 ppm
Na 589.592 {57} (Radial)	5 cps	0.3421 ppm	163.9 %	0.6 ppm
Ni 231.604 {445} (Axial)	9 cps	0.2165 ppm	2.6 %	0.0 ppm
K 766.490 {44} (Radial)	11 cps	3.1661 ppm	104.2 %	3.3 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0960 ppm	270.8 %	0.3 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0308 ppm	123.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	120 cps	0.4660 ppm	3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	74 cps	7.1636 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	14 cps	1.5515 ppm	17.2 %	0.3 ppm
V 292.402 {115} (Axial)	22 cps	0.1407 ppm	12.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,998 cps	18.9457 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		109.3811 %	0.7 %	0.8 %
Sc 188.060 {479} (Axial)		98.8025 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	7 cps	25.9414 ppm	15.6 %	4.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.1424 ppm	29.7 %	0.0 ppm
Al 167.079 {502} (Axial)	524 cps	42.5025 ppm	0.5 %	0.2 ppm
Sc 227.318 {448} (Axial)		99.0183 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	0 cps	-0.0140 ppm	1,483.2 %	0.2 ppm
Al 396.152 {85} (Radial)	128 cps	39.9003 ppm	0.8 %	0.3 ppm
Si 251.611 {134} (Radial)	13 cps	21.4260 ppm	3.4 %	0.7 ppm
Pb 220.353 {453} (Axial)	106 cps	10.4472 ppm	1.5 %	0.2 ppm
Y 224.306 {450} (Axial)		102.5718 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		118.5905 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-23A

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:14:13 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.2421 ppm	42.1 %	0.1 ppm
As 189.042 {478} (Axial)	1 cps	0.3951 ppm	16.8 %	0.1 ppm
Ba 455.403 {74} (Radial)	156 cps	0.7358 ppm	5.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	58 cps	0.3630 ppm	30.5 %	0.1 ppm
Be 313.042 {108} (Axial)	13 cps	0.0036 ppm	26.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	307 cps	160.6310 ppm	1.2 %	1.9 ppm
Cd 228.802 {447} (Axial)	7 cps	0.0576 ppm	6.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	11 cps	0.1176 ppm	10.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	9 cps	0.1572 ppm	10.5 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0598 ppm	6.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	244 cps	1.1507 ppm	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	764 cps	433.0225 ppm	0.1 %	0.4 ppm
Li 670.784 {50} (Radial)	13 cps	0.1241 ppm	56.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	3,219 cps	4.7796 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0124 ppm	147.7 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	-0.0347 ppm	2,675.4 %	0.9 ppm
Ni 231.604 {445} (Axial)	7 cps	0.1578 ppm	4.3 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	5.5091 ppm	20.1 %	1.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0432 ppm	402.2 %	0.2 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0224 ppm	224.8 %	0.1 ppm
Sr 407.771 {83} (Radial)	72 cps	0.2796 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	56 cps	5.4659 ppm	2.7 %	0.1 ppm
Ti 334.941 {101} (Radial)	13 cps	1.4837 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	20 cps	0.1307 ppm	11.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,331 cps	12.6185 ppm	3.3 %	0.4 ppm
Sc 357.253 {94} (Axial)		109.6048 %	0.2 %	0.3 %
Sc 188.060 {479} (Axial)		98.2799 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	20 cps	73.3556 ppm	2.3 %	1.7 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0860 ppm	81.5 %	0.1 ppm
Al 167.079 {502} (Axial)	438 cps	35.4671 ppm	2.9 %	1.0 ppm
Sc 227.318 {448} (Axial)		98.5826 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1 cps	0.2637 ppm	100.4 %	0.3 ppm
Al 396.152 {85} (Radial)	135 cps	41.8380 ppm	1.3 %	0.5 ppm
Si 251.611 {134} (Radial)	15 cps	24.5411 ppm	5.3 %	1.3 ppm
Pb 220.353 {453} (Axial)	94 cps	9.2512 ppm	3.0 %	0.3 ppm
Y 224.306 {450} (Axial)		102.2217 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		118.7852 %	0.3 %	0.4 %

Calibration Summary

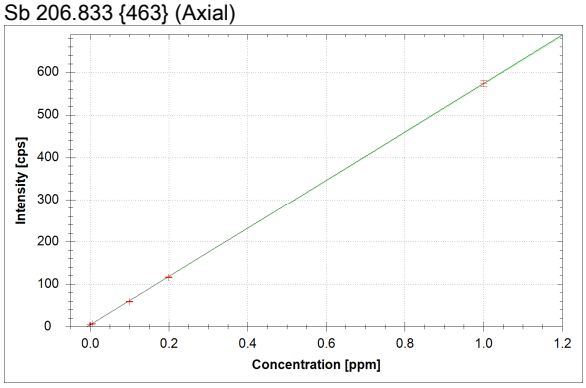
12/3/2020 9:59:42 AM

QTEGRA

LabBook: ICP2_201202C.imexp

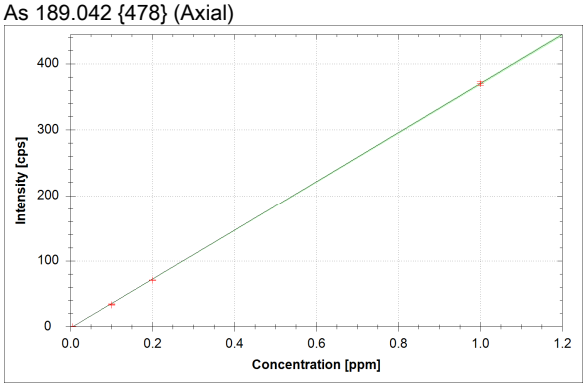
Calibration Graphs

Sb 206.833 {463} (Axial)



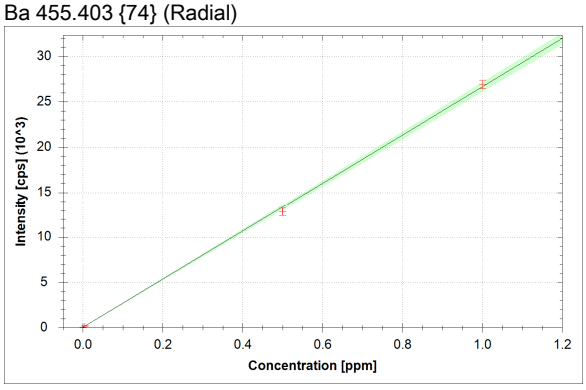
f(x) = 568.8610*x + 4.3946
R² = 1.0000
BEC = 0.008 ppm
LoD = 0.0007 ppm

As 189.042 {478} (Axial)



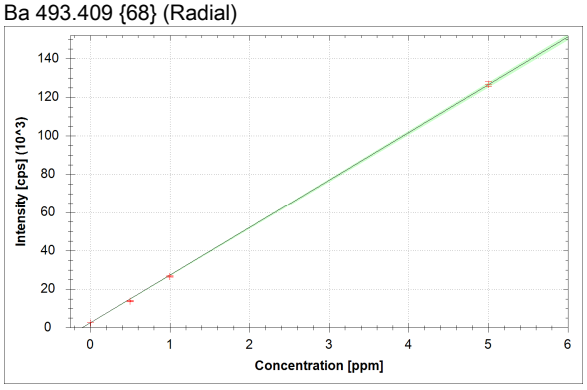
f(x) = 372.0209*x + -2.1371
R² = 0.9999
BEC = -0.006 ppm
LoD = 0.0075 ppm

Ba 455.403 {74} (Radial)



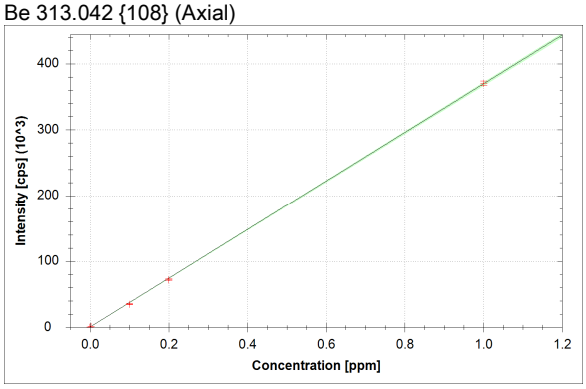
f(x) = 26612.2977*x + 45.4143
R² = 0.9993
BEC = 0.002 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



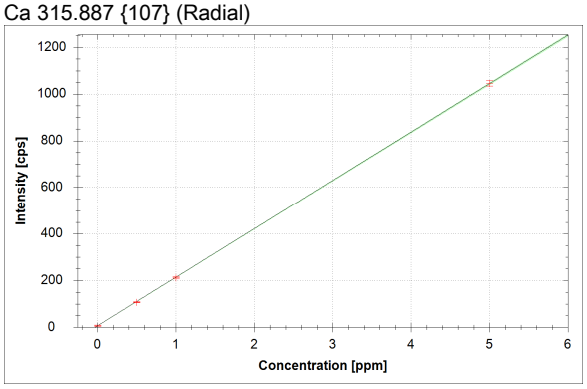
f(x) = 24789.7347*x + 2556.9160
R² = 0.9998
BEC = 0.103 ppm
LoD = 0.0001 ppm

Be 313.042 {108} (Axial)



f(x) = 369128.2871*x + 629.0861
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0001 ppm

Ca 315.887 {107} (Radial)



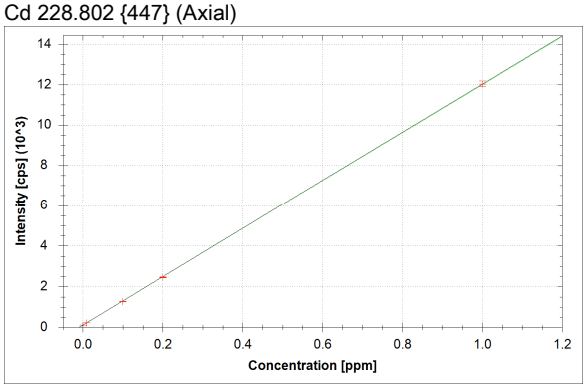
f(x) = 207.5117*x + 6.9253
R² = 0.9999
BEC = 0.033 ppm
LoD = 0.0475 ppm

Calibration Summary

12/3/2020 9:59:42 AM

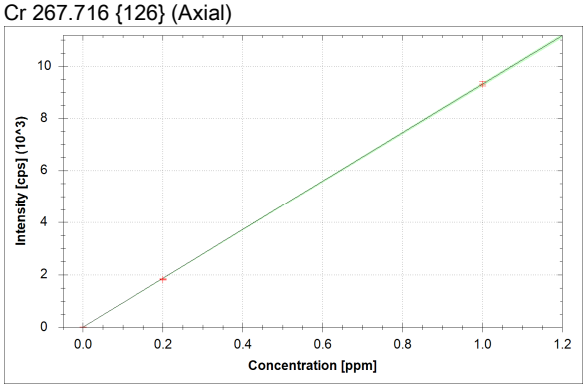
QTEGRA

Cd 228.802 {447} (Axial)



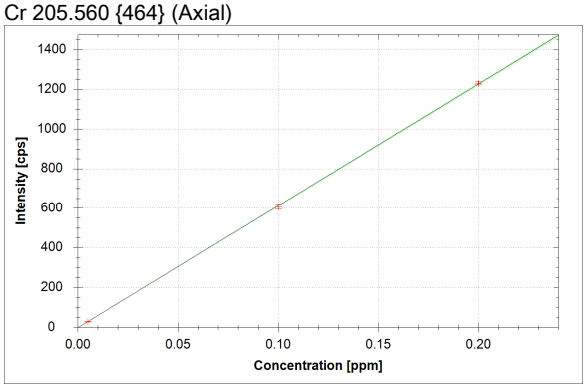
f(x) = 11913.0035*x + 109.4224
R² = 1.0000
BEC = 0.009 ppm
LoD = 0.0002 ppm

Cr 267.716 {126} (Axial)



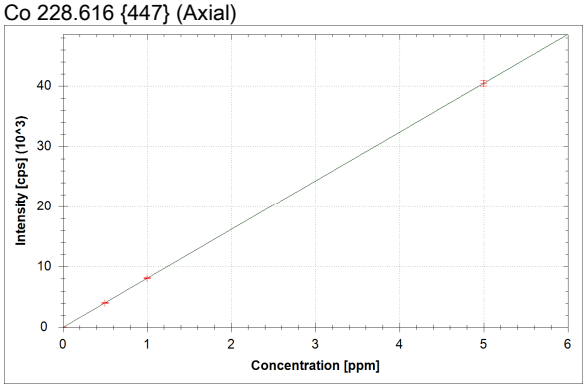
f(x) = 9305.0914*x + 3.8321
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0008 ppm

Cr 205.560 {464} (Axial)



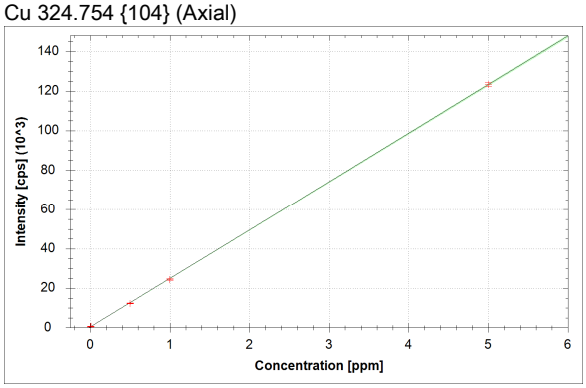
f(x) = 6141.5902*x + -1.7020
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Co 228.616 {447} (Axial)



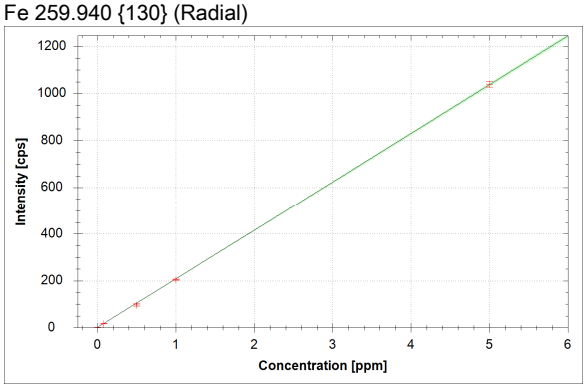
f(x) = 8092.7766*x + -1.4328
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

Cu 324.754 {104} (Axial)



f(x) = 24562.8531*x + 433.7580
R² = 0.9999
BEC = 0.018 ppm
LoD = 0.0003 ppm

Fe 259.940 {130} (Radial)



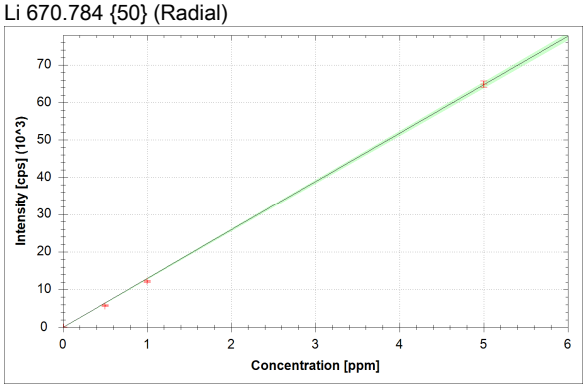
f(x) = 207.1763*x + 1.5020
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0003 ppm

Calibration Summary

12/3/2020 9:59:42 AM

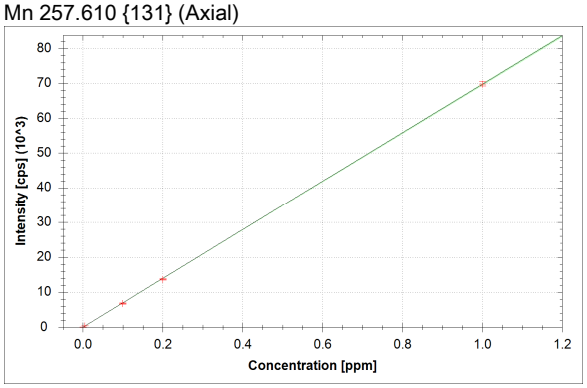
QTEGRA

Li 670.784 {50} (Radial)



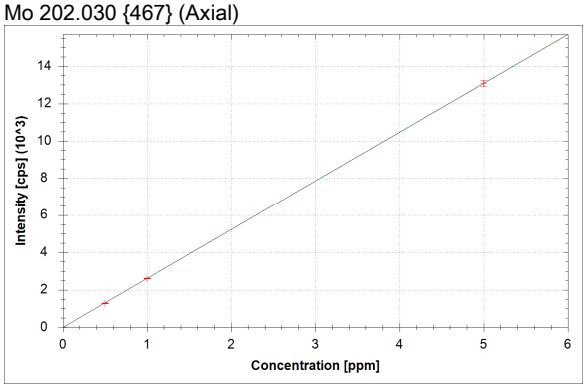
f(x) = 12947.1536*x + -29.6364
R² = 0.9996
BEC = -0.002 ppm
LoD = 0.0016 ppm

Mn 257.610 {131} (Axial)



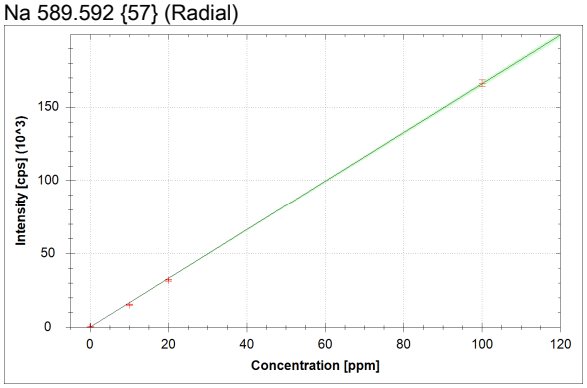
f(x) = 69723.4930*x + 28.2855
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0001 ppm

Mo 202.030 {467} (Axial)



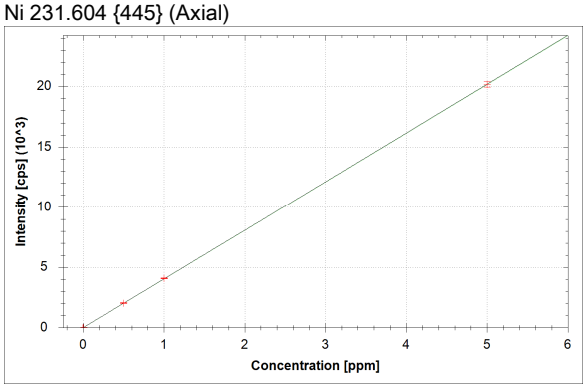
f(x) = 2616.3363*x + -0.2262
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Na 589.592 {57} (Radial)



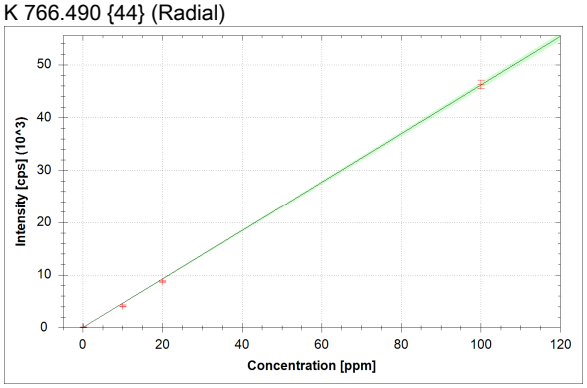
f(x) = 1656.8505*x + 71.5025
R² = 0.9998
BEC = 0.043 ppm
LoD = 0.0200 ppm

Ni 231.604 {445} (Axial)



f(x) = 4036.1847*x + 2.2813
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0002 ppm

K 766.490 {44} (Radial)



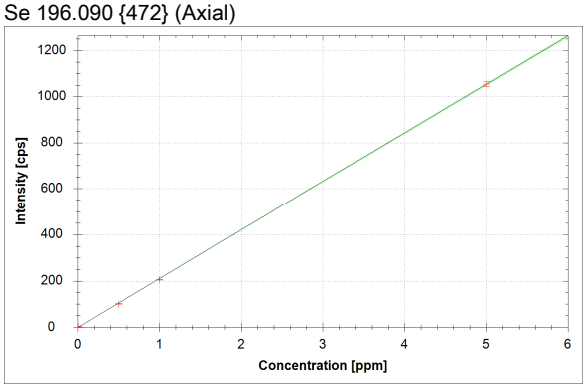
f(x) = 461.2191*x + 28.0370
R² = 0.9997
BEC = 0.061 ppm
LoD = 0.0946 ppm

Calibration Summary

12/3/2020 9:59:42 AM

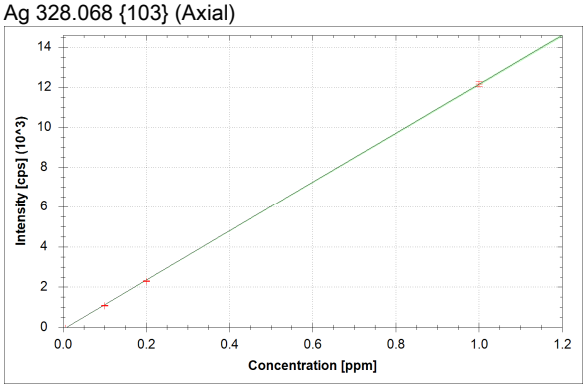
QTEGRA

Se 196.090 {472} (Axial)



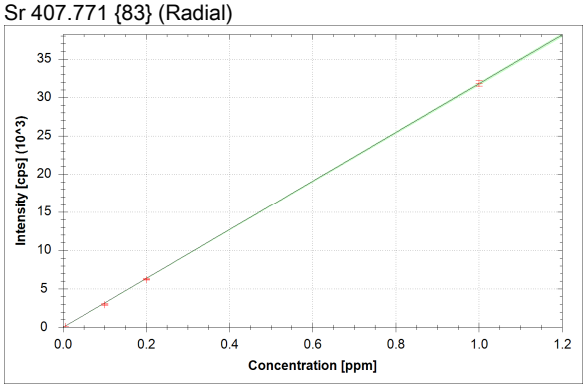
f(x) = 210.6121*x + -0.1695
R² = 0.9999
BEC = -0.001 ppm
LoD = 0.0086 ppm

Ag 328.068 {103} (Axial)



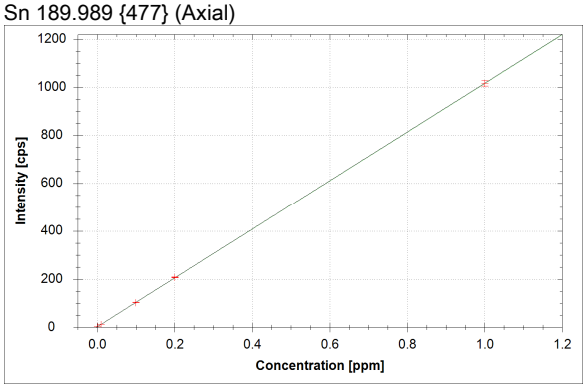
f(x) = 12256.3017*x + -107.9370
R² = 1.0000
BEC = -0.009 ppm
LoD = 0.0007 ppm

Sr 407.771 {83} (Radial)



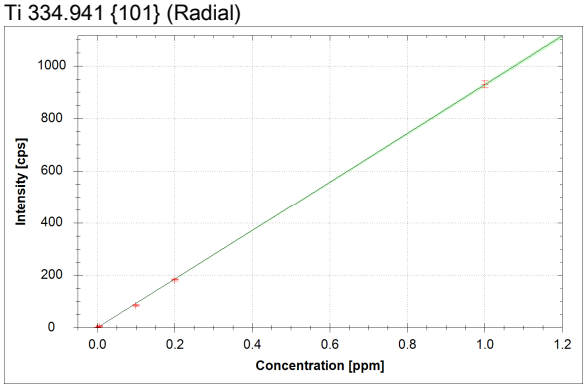
f(x) = 31801.5996*x + -11.1864
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0000 ppm

Sn 189.989 {477} (Axial)



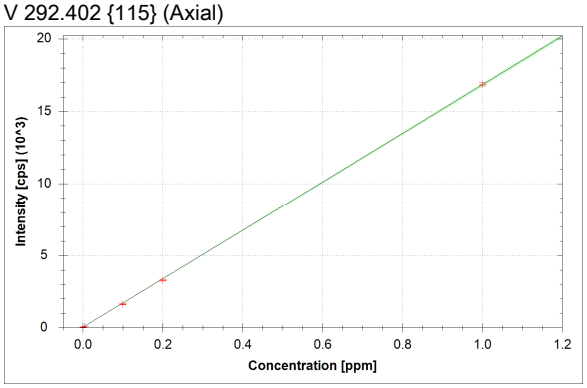
f(x) = 1014.5849*x + 2.5228
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0011 ppm

Ti 334.941 {101} (Radial)



f(x) = 928.0475*x + 0.1037
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0035 ppm

V 292.402 {115} (Axial)



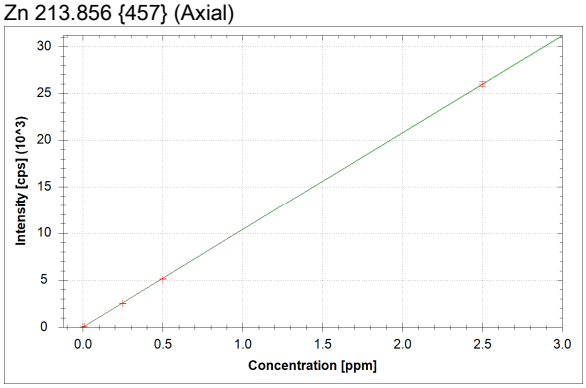
f(x) = 16802.3977*x + 31.3644
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0007 ppm

Calibration Summary

12/3/2020 9:59:42 AM

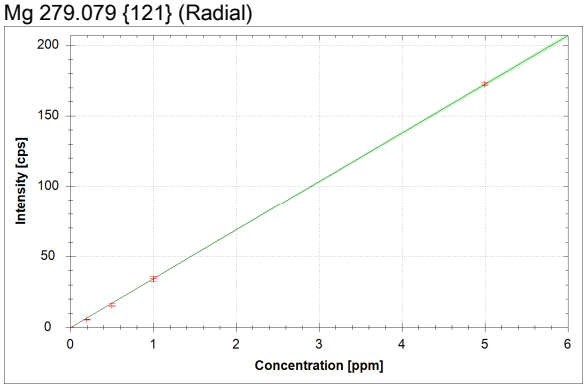
QTEGRA

Zn 213.856 {457} (Axial)



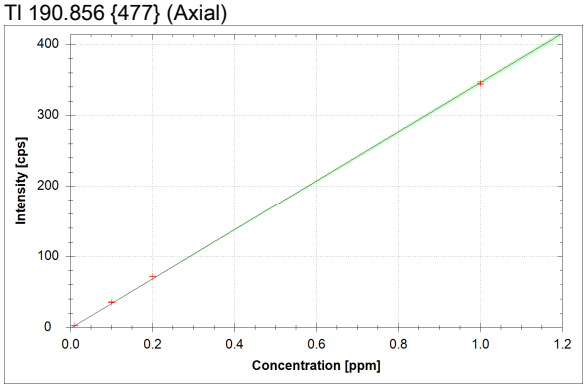
f(x) = 10384.4991*x + 16.7557
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0001 ppm

Mg 279.079 {121} (Radial)



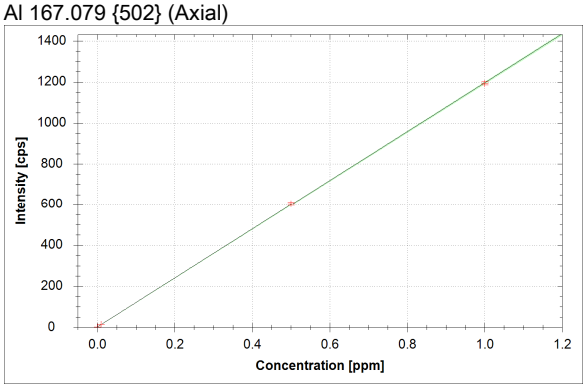
f(x) = 34.5230*x + -0.2915
R² = 0.9998
BEC = -0.008 ppm
LoD = 0.0444 ppm

Tl 190.856 {477} (Axial)



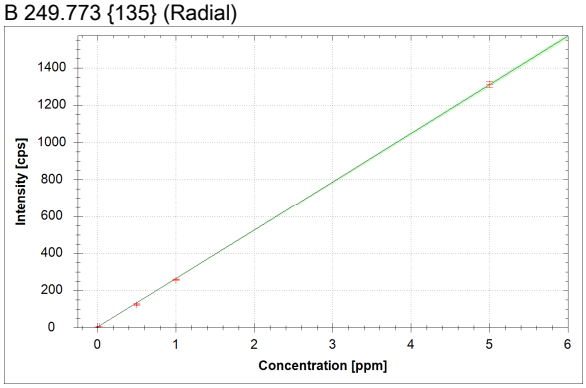
f(x) = 347.0545*x + -1.3566
R² = 0.9998
BEC = -0.004 ppm
LoD = 0.0014 ppm

Al 167.079 {502} (Axial)



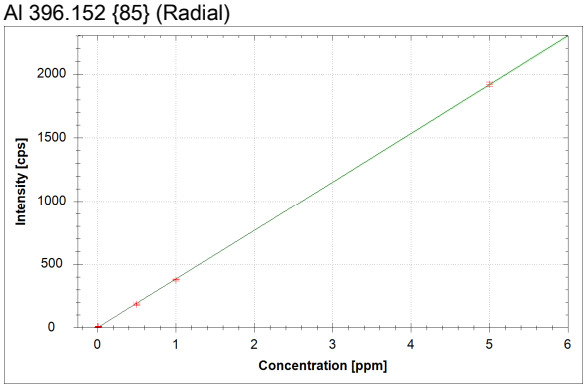
f(x) = 1194.1728*x + 1.9631
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0002 ppm

B 249.773 {135} (Radial)



f(x) = 261.0858*x + 3.5738
R² = 0.9999
BEC = 0.014 ppm
LoD = 0.0058 ppm

Al 396.152 {85} (Radial)



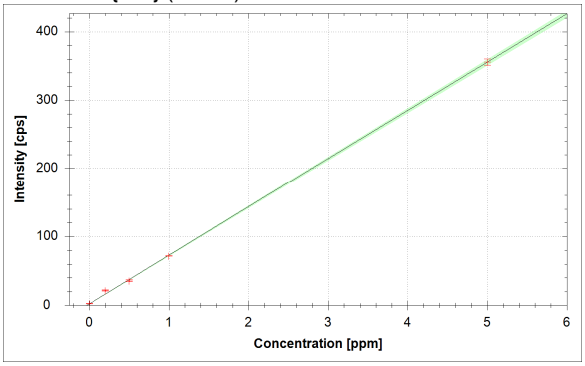
f(x) = 383.4268*x + 0.3285
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0082 ppm

Calibration Summary

12/3/2020 9:59:42 AM

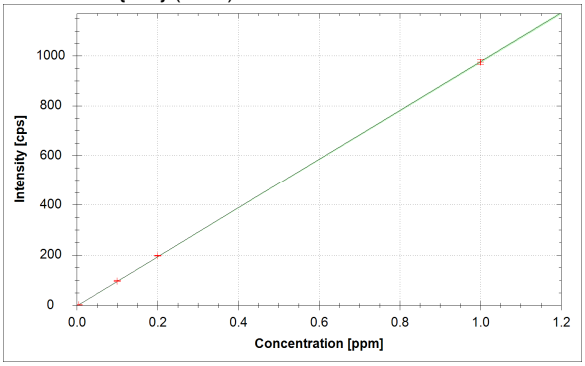
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 70.6557*x + 2.1644
R² = 0.9996
BEC = 0.031 ppm
LoD = 0.0114 ppm

Pb 220.353 {453} (Axial)



f(x) = 979.3602*x + -2.8296
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0009 ppm

Calibration Summary

12/3/2020 9:59:42 AM

QTEGRA

Standards

Standard: ICAL2
Analysis started at: 12/2/2020 1:46:40 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0044 ppm	15.6 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0061 ppm	6.1 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0048 ppm	6.2 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	0.7 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.4810 ppm	1.4 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0098 ppm	2.2 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0049 ppm	3.2 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0048 ppm	2.8 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0099 ppm	4.0 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0725 ppm	7.4 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0095 ppm	4.8 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0049 ppm	1.9 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0051 ppm	2.4 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1918 ppm	1.2 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0049 ppm	1.6 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1452 ppm	7.4 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0098 ppm	20.2 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0049 ppm	3.6 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0047 ppm	3.4 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0099 ppm	4.8 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0052 ppm	45.3 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0045 ppm	5.7 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0100 ppm	1.9 %	0.0100 ppm
Sc 357.253 {94} (Axial)	100.2450 %	0.4 %	
Sc 188.060 {479} (Axial)	100.5285 %	0.7 %	
Mg 279.079 {121} (Radial)	0.1668 ppm	3.7 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0107 ppm	7.8 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0107 ppm	5.1 %	0.0100 ppm
Sc 227.318 {448} (Axial)	100.5740 %	0.6 %	
B 249.773 {135} (Radial)	0.0155 ppm	12.7 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0194 ppm	30.5 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2720 ppm	4.2 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0055 ppm	13.6 %	0.0050 ppm
Y 224.306 {450} (Axial)	100.3958 %	0.7 %	
Sc 361.384 {93} (Radial)	99.9947 %	0.1 %	

Calibration Summary

12/3/2020 9:59:42 AM

QTEGRA

Standards

Standard: ICAL3
Analysis started at: 12/2/2020 1:51:52 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0958 ppm	1.2 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0956 ppm	2.2 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4799 ppm	3.3 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4567 ppm	3.6 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0937 ppm	2.6 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.4822 ppm	0.8 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0971 ppm	1.4 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0989 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4994 ppm	1.3 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4809 ppm	2.3 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4610 ppm	4.9 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4429 ppm	3.5 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0968 ppm	2.5 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4926 ppm	1.6 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.1134 ppm	3.3 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.5019 ppm	1.4 %	0.5000 ppm
K 766.490 {44} (Radial)	8.8711 ppm	3.8 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4754 ppm	0.9 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0962 ppm	1.8 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0935 ppm	3.3 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0995 ppm	1.5 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0917 ppm	3.8 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0950 ppm	2.3 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2418 ppm	1.3 %	0.2500 ppm
Sc 357.253 {94} (Axial)	99.9909 %	0.4 %	
Sc 188.060 {479} (Axial)	98.3146 %	0.2 %	
Mg 279.079 {121} (Radial)	0.4589 ppm	6.4 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1052 ppm	1.4 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5047 ppm	1.4 %	0.5000 ppm
Sc 227.318 {448} (Axial)	100.1876 %	0.3 %	
B 249.773 {135} (Radial)	0.4592 ppm	3.8 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4817 ppm	4.8 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4736 ppm	4.0 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1025 ppm	1.7 %	0.1000 ppm
Y 224.306 {450} (Axial)	99.2408 %	0.3 %	
Sc 361.384 {93} (Radial)	100.7219 %	0.5 %	

Calibration Summary

12/3/2020 9:59:42 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 12/2/2020 1:56:52 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1962 ppm	0.9 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1957 ppm	0.2 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0101 ppm	1.7 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9723 ppm	1.8 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1934 ppm	1.4 %	0.2000 ppm
Ca 315.887 {107} (Radial)	0.9867 ppm	2.7 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1970 ppm	0.6 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1952 ppm	1.4 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.2005 ppm	0.6 %	0.2000 ppm
Co 228.616 {447} (Axial)	1.0057 ppm	0.7 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9777 ppm	1.7 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9815 ppm	1.1 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9443 ppm	2.1 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1961 ppm	1.4 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9966 ppm	0.7 %	1.0000 ppm
Na 589.592 {57} (Radial)	19.2812 ppm	2.1 %	20.0000 ppm
Ni 231.604 {445} (Axial)	1.0100 ppm	0.7 %	1.0000 ppm
K 766.490 {44} (Radial)	18.9712 ppm	2.4 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9731 ppm	0.4 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1959 ppm	1.4 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1962 ppm	1.5 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.2018 ppm	0.9 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1960 ppm	1.9 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1934 ppm	1.4 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4912 ppm	0.6 %	0.5000 ppm
Sc 357.253 {94} (Axial)	98.7367 %	0.7 %	
Sc 188.060 {479} (Axial)	96.2113 %	0.6 %	
Mg 279.079 {121} (Radial)	0.9935 ppm	5.0 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2099 ppm	0.3 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9977 ppm	0.6 %	1.0000 ppm
Sc 227.318 {448} (Axial)	99.9599 %	0.4 %	
B 249.773 {135} (Radial)	0.9715 ppm	1.9 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9799 ppm	1.9 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9820 ppm	0.5 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.2048 ppm	0.9 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.1304 %	0.5 %	
Sc 361.384 {93} (Radial)	100.7841 %	0.2 %	

Calibration Summary

12/3/2020 9:59:42 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 12/2/2020 2:01:50 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0012 ppm	1.3 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0013 ppm	0.8 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0099 ppm	1.1 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0019 ppm	0.9 %	1.0000 ppm
Ca 315.887 {107} (Radial)	5.0063 ppm	1.1 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0009 ppm	1.2 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0010 ppm	0.9 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	4.9989 ppm	1.2 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0064 ppm	0.8 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0077 ppm	1.1 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0169 ppm	1.2 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0011 ppm	0.9 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0014 ppm	1.3 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2324 ppm	1.4 %	100.0000 ppm
Ni 231.604 {445} (Axial)	4.9978 ppm	1.2 %	5.0000 ppm
K 766.490 {44} (Radial)	100.3188 ppm	1.7 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0078 ppm	1.1 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0012 ppm	1.1 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0014 ppm	1.1 %	1.0000 ppm
Sn 189.989 {477} (Axial)	0.9997 ppm	1.2 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0016 ppm	1.4 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0018 ppm	0.7 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5026 ppm	1.2 %	2.5000 ppm
Sc 357.253 {94} (Axial)	92.7872 %	0.6 %	
Sc 188.060 {479} (Axial)	88.2534 %	0.1 %	
Mg 279.079 {121} (Radial)	5.0067 ppm	0.7 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9975 ppm	0.6 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	105.4482 %	0.4 %	
B 249.773 {135} (Radial)	5.0098 ppm	1.3 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0058 ppm	0.9 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0034 ppm	1.3 %	5.0000 ppm
Pb 220.353 {453} (Axial)	0.9988 ppm	1.0 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.2245 %	0.1 %	
Sc 361.384 {93} (Radial)	98.2259 %	0.5 %	

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

LabBook: ICP2_201202C.imexp

ICAL1

Sample type: BLK Analysis started at: 12/2/2020 1:41:30 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-3.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	10.4 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-1.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	3.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

12/3/2020 10:05:50 AM

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 12/2/2020 1:46:40 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0044 ppm	15.6 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0061 ppm	6.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	127 cps	0.0048 ppm	6.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	684 cps	0.0019 ppm	0.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4810 ppm	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	117 cps	0.0098 ppm	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	30 cps	0.0049 ppm	3.2 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0048 ppm	2.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	243 cps	0.0099 ppm	4.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0725 ppm	7.4 %	0.0 ppm
Li 670.784 {50} (Radial)	123 cps	0.0095 ppm	4.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	344 cps	0.0049 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0051 ppm	2.4 %	0.0 ppm
Na 589.592 {57} (Radial)	318 cps	0.1918 ppm	1.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0049 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	67 cps	0.1452 ppm	7.4 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0098 ppm	20.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	60 cps	0.0049 ppm	3.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	150 cps	0.0047 ppm	3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0099 ppm	4.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0052 ppm	45.3 %	0.0 ppm
V 292.402 {115} (Axial)	76 cps	0.0045 ppm	5.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	104 cps	0.0100 ppm	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2450 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		100.5285 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	6 cps	0.1668 ppm	3.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0107 ppm	7.8 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0107 ppm	5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.5740 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	4 cps	0.0155 ppm	12.7 %	0.0 ppm
Al 396.152 {85} (Radial)	7 cps	0.0194 ppm	30.5 %	0.0 ppm
Si 251.611 {134} (Radial)	19 cps	0.2720 ppm	4.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0055 ppm	13.6 %	0.0 ppm
Y 224.306 {450} (Axial)		100.3958 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		99.9947 %	0.1 %	0.1 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 12/2/2020 1:51:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	54 cps	0.0958 ppm	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	36 cps	0.0956 ppm	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	12,770 cps	0.4799 ppm	3.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	11,321 cps	0.4567 ppm	3.6 %	0.0 ppm
Be 313.042 {108} (Axial)	34,587 cps	0.0937 ppm	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4822 ppm	0.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,156 cps	0.0971 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	607 cps	0.0989 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4,042 cps	0.4994 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	11,812 cps	0.4809 ppm	2.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	96 cps	0.4610 ppm	4.9 %	0.0 ppm
Li 670.784 {50} (Radial)	5,734 cps	0.4429 ppm	3.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,749 cps	0.0968 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,289 cps	0.4926 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	15,100 cps	9.1134 ppm	3.3 %	0.3 ppm
Ni 231.604 {445} (Axial)	2,026 cps	0.5019 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	4,092 cps	8.8711 ppm	3.8 %	0.3 ppm
Se 196.090 {472} (Axial)	100 cps	0.4754 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,179 cps	0.0962 ppm	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,973 cps	0.0935 ppm	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	101 cps	0.0995 ppm	1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	85 cps	0.0917 ppm	3.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,597 cps	0.0950 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,511 cps	0.2418 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.9909 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		98.3146 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	16 cps	0.4589 ppm	6.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	37 cps	0.1052 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	603 cps	0.5047 ppm	1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1876 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	120 cps	0.4592 ppm	3.8 %	0.0 ppm
Al 396.152 {85} (Radial)	185 cps	0.4817 ppm	4.8 %	0.0 ppm
Si 251.611 {134} (Radial)	33 cps	0.4736 ppm	4.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	100 cps	0.1025 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.2408 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.7219 %	0.5 %	0.5 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 12/2/2020 1:56:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	112 cps	0.1962 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	73 cps	0.1957 ppm	0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	26,880 cps	1.0101 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	24,104 cps	0.9723 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	71,408 cps	0.1934 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	205 cps	0.9867 ppm	2.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,346 cps	0.1970 ppm	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,816 cps	0.1952 ppm	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,232 cps	0.2005 ppm	0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	8,139 cps	1.0057 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	24,014 cps	0.9777 ppm	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	203 cps	0.9815 ppm	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	12,226 cps	0.9443 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,670 cps	0.1961 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,607 cps	0.9966 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	31,946 cps	19.2812 ppm	2.1 %	0.4 ppm
Ni 231.604 {445} (Axial)	4,077 cps	1.0100 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	8,750 cps	18.9712 ppm	2.4 %	0.5 ppm
Se 196.090 {472} (Axial)	205 cps	0.9731 ppm	0.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,401 cps	0.1959 ppm	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,239 cps	0.1962 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	205 cps	0.2018 ppm	0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	182 cps	0.1960 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	3,250 cps	0.1934 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,101 cps	0.4912 ppm	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7367 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		96.2113 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	34 cps	0.9935 ppm	5.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	73 cps	0.2099 ppm	0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1,191 cps	0.9977 ppm	0.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9599 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	254 cps	0.9715 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	376 cps	0.9799 ppm	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	69 cps	0.9820 ppm	0.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	201 cps	0.2048 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1304 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.7841 %	0.2 %	0.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 12/2/2020 2:01:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	570 cps	1.0012 ppm	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	372 cps	1.0013 ppm	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	124,193 cps	5.0099 ppm	1.1 %	0.1 ppm
Be 313.042 {108} (Axial)	369,845 cps	1.0019 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,039 cps	5.0063 ppm	1.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,924 cps	1.0009 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,314 cps	1.0010 ppm	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	40,455 cps	4.9989 ppm	1.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	122,971 cps	5.0064 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,037 cps	5.0077 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	64,954 cps	5.0169 ppm	1.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	69,801 cps	1.0011 ppm	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	13,085 cps	5.0014 ppm	1.3 %	0.1 ppm
Na 589.592 {57} (Radial)	166,070 cps	100.2324 ppm	1.4 %	1.4 ppm
Ni 231.604 {445} (Axial)	20,172 cps	4.9978 ppm	1.2 %	0.1 ppm
K 766.490 {44} (Radial)	46,269 cps	100.3188 ppm	1.7 %	1.7 ppm
Se 196.090 {472} (Axial)	1,055 cps	5.0078 ppm	1.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	12,271 cps	1.0012 ppm	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	31,847 cps	1.0014 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,014 cps	0.9997 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	930 cps	1.0016 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	16,833 cps	1.0018 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	25,988 cps	2.5026 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.7872 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		88.2534 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	173 cps	5.0067 ppm	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	346 cps	0.9975 ppm	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		105.4482 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	1,308 cps	5.0098 ppm	1.3 %	0.1 ppm
Al 396.152 {85} (Radial)	1,919 cps	5.0058 ppm	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	354 cps	5.0034 ppm	1.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	978 cps	0.9988 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2245 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.2259 %	0.5 %	0.5 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 12/2/2020 2:32:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-87 cps	-0.1537 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	-15 cps	-0.0394 ppm	2.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	546,188 cps	20.5239 ppm	1.9 %	0.4 ppm
Ba 493.409 {68} (Radial)	494,650 cps	19.9538 ppm	2.0 %	0.4 ppm
Be 313.042 {108} (Axial)	750,711 cps	2.0337 ppm	4.6 %	0.1 ppm
Ca 315.887 {107} (Radial)	40,326 cps	194.3317 ppm	2.1 %	4.1 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	135.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	91,179 cps	9.7988 ppm	0.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	60,057 cps	9.7788 ppm	0.1 %	0.0 ppm
Co 228.616 {447} (Axial)	121 cps	0.0149 ppm	0.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	493,919 cps	20.1084 ppm	1.6 %	0.3 ppm
Fe 259.940 {130} (Radial)	39,151 cps	188.9733 ppm	2.0 %	3.8 ppm
Li 670.784 {50} (Radial)	131,323 cps	10.1430 ppm	2.7 %	0.3 ppm
Mn 257.610 {131} (Axial)	654,877 cps	9.3925 ppm	0.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	-5 cps	-0.0018 ppm	22.4 %	0.0 ppm
Na 589.592 {57} (Radial)	-32 cps	-0.0192 ppm	81.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	-122 cps	-0.0301 ppm	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	-19 cps	-0.0421 ppm	39.2 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0155 ppm	23.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	28,073 cps	2.2905 ppm	0.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	325,517 cps	10.2359 ppm	4.9 %	0.5 ppm
Sn 189.989 {477} (Axial)	-18 cps	-0.0176 ppm	3.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	9,018 cps	9.7169 ppm	2.2 %	0.2 ppm
V 292.402 {115} (Axial)	167,356 cps	9.9603 ppm	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	-876 cps	-0.0843 ppm	3.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		89.5433 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		78.7744 %	1.1 %	0.8 %
Mg 279.079 {121} (Radial)	7,048 cps	204.1609 ppm	2.1 %	4.4 ppm
Tl 190.856 {477} (Axial)	-11 cps	-0.0330 ppm	5.9 %	0.0 ppm
Al 167.079 {502} (Axial)	21,955 cps	18.3850 ppm	0.9 %	0.2 ppm
Sc 227.318 {448} (Axial)		82.0210 %	1.0 %	0.8 %
B 249.773 {135} (Radial)	5,333 cps	20.4264 ppm	2.7 %	0.6 ppm
Al 396.152 {85} (Radial)	76,606 cps	199.7930 ppm	2.1 %	4.3 ppm
Si 251.611 {134} (Radial)	1,408 cps	19.9277 ppm	2.4 %	0.5 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	682.5 %	0.0 ppm
Y 224.306 {450} (Axial)		88.1921 %	0.9 %	0.8 %
Sc 361.384 {93} (Radial)		97.5802 %	0.5 %	0.5 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 12/2/2020 2:38:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,829 cps	4.9723 ppm	1.5 %	0.1 ppm
As 189.042 {478} (Axial)	1,739 cps	4.6756 ppm	1.1 %	0.1 ppm
Ba 455.403 {74} (Radial)	251 cps	0.0094 ppm	19.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	240 cps	0.0097 ppm	21.6 %	0.0 ppm
Be 313.042 {108} (Axial)	85 cps	0.0002 ppm	117.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	25 cps	0.1188 ppm	19.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	316 cps	0.0266 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	15 cps	0.0016 ppm	17.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	8 cps	0.0012 ppm	38.2 %	0.0 ppm
Co 228.616 {447} (Axial)	81,454 cps	10.0650 ppm	1.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	351 cps	0.0143 ppm	38.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	28 cps	0.1370 ppm	24.8 %	0.0 ppm
Li 670.784 {50} (Radial)	127 cps	0.0098 ppm	15.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	-119 cps	-0.0017 ppm	47.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	25,955 cps	9.9204 ppm	1.3 %	0.1 ppm
Na 589.592 {57} (Radial)	-24 cps	-0.0142 ppm	38.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	40,667 cps	10.0757 ppm	1.1 %	0.1 ppm
K 766.490 {44} (Radial)	-5 cps	-0.0100 ppm	150.7 %	0.0 ppm
Se 196.090 {472} (Axial)	999 cps	4.7447 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	-14 cps	-0.0012 ppm	164.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	145 cps	0.0046 ppm	20.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	4,919 cps	4.8484 ppm	1.2 %	0.1 ppm
Ti 334.941 {101} (Radial)	12 cps	0.0126 ppm	25.7 %	0.0 ppm
V 292.402 {115} (Axial)	40 cps	0.0024 ppm	10.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	48,629 cps	4.6829 ppm	1.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		90.8933 %	17.7 %	16.1 %
Sc 188.060 {479} (Axial)		99.1670 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	3 cps	0.1014 ppm	51.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	1,850 cps	5.3318 ppm	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	28 cps	0.0231 ppm	42.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		103.1119 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	13 cps	0.0515 ppm	20.9 %	0.0 ppm
Al 396.152 {85} (Radial)	178 cps	0.4654 ppm	4.4 %	0.0 ppm
Si 251.611 {134} (Radial)	7 cps	0.0987 ppm	4.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,078 cps	5.1851 ppm	1.0 %	0.1 ppm
Y 224.306 {450} (Axial)		100.5585 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.9702 %	0.2 %	0.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 12/2/2020 2:06:48 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	572 cps	1.0050 ppm	100.502 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	364 cps	0.9787 ppm	97.865 %	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	26,363 cps	0.9906 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	23,704 cps	0.9562 ppm	95.619 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	354,607 cps	0.9607 ppm	96.066 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,218 cps	5.8716 ppm	97.861 %	1.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,883 cps	0.9975 ppm	99.746 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,203 cps	0.9891 ppm	98.908 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	6,193 cps	1.0084 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	8,198 cps	1.0130 ppm	101.296 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	24,527 cps	0.9986 ppm	99.855 %	2.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	199 cps	0.9626 ppm	96.255 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	12,166 cps	0.9397 ppm	93.967 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	69,912 cps	1.0027 ppm	100.270 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,697 cps	1.0308 ppm	103.082 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	32,649 cps	19.7052 ppm	93.834 %	1.6 %	0.3 ppm
Ni 231.604 {445} (Axial)	4,112 cps	1.0187 ppm	101.874 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	9,118 cps	19.7686 ppm	94.136 %	1.8 %	0.4 ppm
Se 196.090 {472} (Axial)	208 cps	0.9859 ppm	98.586 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	12,966 cps	1.0579 ppm	105.788 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,350 cps	0.9544 ppm	95.435 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,009 cps	0.9943 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	878 cps	0.9462 ppm	94.619 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	16,761 cps	0.9975 ppm	99.753 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,289 cps	0.9908 ppm	99.079 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.3036 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.8062 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	33 cps	0.9659 ppm	96.594 %	5.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	363 cps	1.0452 ppm	104.519 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1,203 cps	1.0071 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.8673 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	253 cps	0.9693 ppm	96.930 %	1.1 %	0.0 ppm
Al 396.152 {85} (Radial)	374 cps	0.9746 ppm	97.460 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	73 cps	1.0361 ppm		2.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,014 cps	1.0351 ppm	103.508 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		97.6292 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		101.1195 %		0.3 %	0.3 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 12/2/2020 2:11:48 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0033 ppm	5.2 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0018 ppm	34.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0006 ppm	39.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	19 cps	0.0008 ppm	79.1 %	0.0 ppm
Be 313.042 {108} (Axial)	112 cps	0.0003 ppm	18.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0100 ppm	11.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	23.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	94.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	56.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	82.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	5 cps	0.0002 ppm	199.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0011 ppm	130.9 %	0.0 ppm
Li 670.784 {50} (Radial)	28 cps	0.0021 ppm	25.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	20 cps	0.0003 ppm	18.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0006 ppm	48.3 %	0.0 ppm
Na 589.592 {57} (Radial)	39 cps	0.0235 ppm	41.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	575.4 %	0.0 ppm
K 766.490 {44} (Radial)	17 cps	0.0359 ppm	38.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0003 ppm	707.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0001 ppm	182.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	22 cps	0.0007 ppm	30.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	99.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0026 ppm	27.9 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	55.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	16.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.8845 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		99.8614 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0268 ppm	89.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	305.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	14,167.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0697 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	1 cps	0.0023 ppm	229.6 %	0.0 ppm
Al 396.152 {85} (Radial)	7 cps	0.0178 ppm	23.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0064 ppm	181.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	51.3 %	0.0 ppm
Y 224.306 {450} (Axial)		99.8352 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		101.1502 %	0.4 %	0.4 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 12/2/2020 2:16:59 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0058 ppm	115.013 %	7.9 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0059 ppm	118.941 %	9.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	128 cps	0.0048 ppm		6.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	162 cps	0.0065 ppm		23.8 %	0.0 ppm
Be 313.042 {108} (Axial)	666 cps	0.0018 ppm	90.169 %	6.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	105 cps	0.5071 ppm	101.426 %	3.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	116 cps	0.0097 ppm	97.355 %	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	46 cps	0.0050 ppm	99.546 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	30 cps	0.0049 ppm	98.954 %	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0049 ppm	98.059 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	217 cps	0.0089 ppm	88.541 %	10.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	16 cps	0.0752 ppm	93.999 %	7.4 %	0.0 ppm
Li 670.784 {50} (Radial)	120 cps	0.0093 ppm	92.525 %	5.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	341 cps	0.0049 ppm	97.891 %	3.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0050 ppm	100.176 %	2.7 %	0.0 ppm
Na 589.592 {57} (Radial)	344 cps	0.2078 ppm	103.884 %	5.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0049 ppm	98.493 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	87 cps	0.1876 ppm	93.811 %	6.9 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0069 ppm	69.184 %	15.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	62 cps	0.0051 ppm	101.188 %	3.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	155 cps	0.0049 ppm	97.434 %	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0097 ppm		3.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0067 ppm	134.638 %	23.6 %	0.0 ppm
V 292.402 {115} (Axial)	78 cps	0.0046 ppm	92.382 %	7.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	103 cps	0.0099 ppm	99.313 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.9784 %		2.9 %	2.9 %
Sc 188.060 {479} (Axial)		100.3938 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	7 cps	0.2072 ppm	103.601 %	5.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0105 ppm	105.041 %	10.3 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0108 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.3284 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0176 ppm	87.942 %	35.2 %	0.0 ppm
Al 396.152 {85} (Radial)	9 cps	0.0235 ppm		45.1 %	0.0 ppm
Si 251.611 {134} (Radial)	19 cps	0.2680 ppm		3.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0050 ppm	100.966 %	5.7 %	0.0 ppm
Y 224.306 {450} (Axial)		100.2237 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.1134 %		2.0 %	2.0 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 12/2/2020 2:22:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0056 ppm	111.584 %	24.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0063 ppm	125.943 %	16.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	125 cps	0.0047 ppm		15.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	193 cps	0.0078 ppm		44.9 %	0.0 ppm
Be 313.042 {108} (Axial)	698 cps	0.0019 ppm	94.502 %	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	103 cps	0.4965 ppm	99.293 %	0.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	116 cps	0.0098 ppm	97.537 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0050 ppm	100.051 %	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	31 cps	0.0051 ppm	101.399 %	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0049 ppm	98.371 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	240 cps	0.0098 ppm	97.551 %	4.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	16 cps	0.0768 ppm	96.011 %	6.4 %	0.0 ppm
Li 670.784 {50} (Radial)	130 cps	0.0100 ppm	100.191 %	5.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	358 cps	0.0051 ppm	102.687 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0051 ppm	102.472 %	4.2 %	0.0 ppm
Na 589.592 {57} (Radial)	322 cps	0.1941 ppm	97.028 %	3.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0049 ppm	97.579 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	79 cps	0.1712 ppm	85.594 %	3.2 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0088 ppm	87.601 %	16.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	63 cps	0.0052 ppm	103.607 %	9.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	157 cps	0.0049 ppm	98.877 %	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0103 ppm		4.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0055 ppm	109.129 %	34.6 %	0.0 ppm
V 292.402 {115} (Axial)	79 cps	0.0047 ppm	94.372 %	5.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	105 cps	0.0101 ppm	101.089 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2442 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		99.9782 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	7 cps	0.2050 ppm	102.516 %	13.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0103 ppm	103.012 %	5.4 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0110 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1509 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0207 ppm	103.630 %	11.3 %	0.0 ppm
Al 396.152 {85} (Radial)	14 cps	0.0359 ppm		29.7 %	0.0 ppm
Si 251.611 {134} (Radial)	20 cps	0.2832 ppm		8.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0058 ppm	116.867 %	9.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0753 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		98.6688 %		2.2 %	2.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 12/2/2020 2:27:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-9 cps	-0.0159 ppm		3.6 %	0.0 ppm
As 189.042 {478} (Axial)	-9 cps	-0.0233 ppm	0.000 %	8.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	8 cps	0.0003 ppm	0.000 %	102.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	46 cps	0.0018 ppm	0.000 %	42.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-913 cps	-0.0025 ppm	0.000 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	19,097 cps	92.0274 ppm	92.027 %	1.3 %	1.2 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	0.000 %	16.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	14 cps	0.0016 ppm	0.000 %	17.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	0.000 %	128.5 %	0.0 ppm
Co 228.616 {447} (Axial)	11 cps	0.0013 ppm	0.000 %	3.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	63 cps	0.0026 ppm	0.000 %	20.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	19,145 cps	92.4112 ppm	92.411 %	1.0 %	1.0 ppm
Li 670.784 {50} (Radial)	28 cps	0.0021 ppm		31.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	-391 cps	-0.0056 ppm	0.000 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,182 cps	1.9808 ppm	99.040 %	3.4 %	0.1 ppm
Na 589.592 {57} (Radial)	157,059 cps	94.7936 ppm	94.794 %	1.6 %	1.6 ppm
Ni 231.604 {445} (Axial)	-64 cps	-0.0157 ppm	0.000 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	44,381 cps	96.2264 ppm	96.226 %	2.1 %	2.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	0.000 %	150.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	0.000 %	69.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	-58 cps	-0.0018 ppm		2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	-8 cps	-0.0077 ppm		9.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,743 cps	1.8779 ppm		0.8 %	0.0 ppm
V 292.402 {115} (Axial)	11 cps	0.0007 ppm	0.000 %	43.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	-51 cps	-0.0049 ppm	0.000 %	2.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.2609 %		2.6 %	2.5 %
Sc 188.060 {479} (Axial)		82.5137 %		1.3 %	1.1 %
Mg 279.079 {121} (Radial)	3,298 cps	95.5355 ppm	95.535 %	1.2 %	1.2 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0069 ppm	0.000 %	15.6 %	0.0 ppm
Al 167.079 {502} (Axial)	19,386 cps	16.2335 ppm		1.4 %	0.2 ppm
Sc 227.318 {448} (Axial)		83.7442 %		1.3 %	1.1 %
B 249.773 {135} (Radial)	25 cps	0.0964 ppm		2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	35,678 cps	93.0507 ppm	93.051 %	1.0 %	0.9 ppm
Si 251.611 {134} (Radial)	6 cps	0.0806 ppm	0.000 %	15.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	-2 cps	-0.0025 ppm	0.000 %	15.5 %	0.0 ppm
Y 224.306 {450} (Axial)		91.4974 %		1.1 %	1.0 %
Sc 361.384 {93} (Radial)		96.9685 %		0.3 %	0.3 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 11:04:51 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	284 cps	0.4992 ppm	99.841 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4923 ppm	98.452 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	65,129 cps	2.4473 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	58,042 cps	2.3414 ppm	93.655 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	182,828 cps	0.4953 ppm	99.059 %	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	474 cps	2.2830 ppm	91.320 %	2.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,908 cps	0.4959 ppm	99.189 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,553 cps	0.4893 ppm	97.866 %	2.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,072 cps	0.5002 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,192 cps	2.4951 ppm	99.803 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,807 cps	2.4348 ppm	97.394 %	3.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	470 cps	2.2674 ppm	90.696 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	29,785 cps	2.3005 ppm	92.022 %	2.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,126 cps	0.4894 ppm	97.888 %	3.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,523 cps	2.4934 ppm	99.735 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	77,252 cps	46.6261 ppm	93.252 %	2.8 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,078 cps	2.4970 ppm	99.880 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	21,319 cps	46.2238 ppm	92.448 %	2.9 %	1.3 ppm
Se 196.090 {472} (Axial)	524 cps	2.4895 ppm	99.580 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,929 cps	0.4838 ppm	96.755 %	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,962 cps	0.4705 ppm	94.094 %	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	505 cps	0.4979 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	426 cps	0.4585 ppm	91.705 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,249 cps	0.4909 ppm	98.183 %	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,806 cps	1.2332 ppm	98.658 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.6776 %		3.1 %	3.0 %
Sc 188.060 {479} (Axial)		94.2409 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	78 cps	2.2473 ppm	89.893 %	2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	176 cps	0.5062 ppm	101.238 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,769 cps	2.3188 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.9001 %		0.0 %	0.0 %
B 249.773 {135} (Radial)	585 cps	2.2400 ppm	89.601 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	891 cps	2.3230 ppm	92.921 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	160 cps	2.2676 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	493 cps	0.5032 ppm	100.644 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1400 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		106.0677 %		0.5 %	0.5 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 11:09:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	284 cps	0.4997 ppm	99.942 %	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4918 ppm	98.359 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	67,883 cps	2.5508 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	60,592 cps	2.4443 ppm	97.770 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	193,070 cps	0.5230 ppm	104.608 %	9.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	497 cps	2.3957 ppm	95.830 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,883 cps	0.4938 ppm	98.766 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,800 cps	0.5158 ppm	103.165 %	9.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,056 cps	0.4976 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,093 cps	2.4828 ppm	99.312 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	63,090 cps	2.5685 ppm	102.741 %	9.2 %	0.2 ppm
Fe 259.940 {130} (Radial)	495 cps	2.3891 ppm	95.565 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	30,972 cps	2.3922 ppm	95.689 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,050 cps	0.5170 ppm	103.409 %	9.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,495 cps	2.4825 ppm	99.300 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	80,211 cps	48.4117 ppm	96.823 %	1.6 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,021 cps	2.4828 ppm	99.313 %	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	22,067 cps	47.8454 ppm	95.691 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	521 cps	2.4755 ppm	99.021 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,232 cps	0.5085 ppm	101.702 %	9.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,661 cps	0.4925 ppm	98.491 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	503 cps	0.4954 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	452 cps	0.4866 ppm	97.321 %	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	8,714 cps	0.5186 ppm	103.723 %	9.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,750 cps	1.2278 ppm	98.225 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.8741 %		10.5 %	9.7 %
Sc 188.060 {479} (Axial)		94.2299 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	81 cps	2.3368 ppm	93.471 %	3.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	176 cps	0.5067 ppm	101.341 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,759 cps	2.3101 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.8137 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	612 cps	2.3434 ppm	93.735 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	931 cps	2.4284 ppm	97.136 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	168 cps	2.3842 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	490 cps	0.5002 ppm	100.041 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1965 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		105.3832 %		0.1 %	0.1 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/3/2020 12:11:32 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	285 cps	0.5008 ppm	100.150 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4913 ppm	98.261 %	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	65,618 cps	2.4657 ppm		4.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	58,559 cps	2.3622 ppm	94.490 %	4.9 %	0.1 ppm
Be 313.042 {108} (Axial)	178,123 cps	0.4825 ppm	96.510 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	491 cps	2.3658 ppm	94.631 %	3.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,895 cps	0.4949 ppm	98.973 %	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,441 cps	0.4773 ppm	95.460 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,053 cps	0.4971 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,090 cps	2.4824 ppm	99.296 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,689 cps	2.4300 ppm	97.202 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	474 cps	2.2857 ppm	91.428 %	4.8 %	0.1 ppm
Li 670.784 {50} (Radial)	30,101 cps	2.3249 ppm	92.998 %	4.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,365 cps	0.4785 ppm	95.706 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,501 cps	2.4849 ppm	99.397 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	77,030 cps	46.4915 ppm	92.983 %	4.8 %	2.2 ppm
Ni 231.604 {445} (Axial)	10,008 cps	2.4797 ppm	99.188 %	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	21,291 cps	46.1620 ppm	92.324 %	4.8 %	2.2 ppm
Se 196.090 {472} (Axial)	523 cps	2.4839 ppm	99.356 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,865 cps	0.4785 ppm	95.706 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,064 cps	0.4737 ppm	94.738 %	4.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	501 cps	0.4935 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	429 cps	0.4626 ppm	92.521 %	5.4 %	0.0 ppm
V 292.402 {115} (Axial)	8,090 cps	0.4815 ppm	96.292 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,755 cps	1.2282 ppm	98.259 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.6905 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		93.5332 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	77 cps	2.2350 ppm	89.401 %	5.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	176 cps	0.5073 ppm	101.457 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,732 cps	2.2874 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.1528 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	587 cps	2.2499 ppm	89.995 %	4.9 %	0.1 ppm
Al 396.152 {85} (Radial)	895 cps	2.3345 ppm	93.382 %	4.6 %	0.1 ppm
Si 251.611 {134} (Radial)	163 cps	2.3022 ppm		5.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	490 cps	0.5002 ppm	100.034 %	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		97.6864 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		107.3048 %		0.8 %	0.9 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/3/2020 12:16:26 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	286 cps	0.5024 ppm	100.486 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4909 ppm	98.188 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	66,239 cps	2.4890 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	59,049 cps	2.3820 ppm	95.279 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	178,871 cps	0.4846 ppm	96.915 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	476 cps	2.2948 ppm	91.793 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,883 cps	0.4939 ppm	98.772 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,449 cps	0.4781 ppm	95.628 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,044 cps	0.4956 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,056 cps	2.4783 ppm	99.132 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,911 cps	2.4391 ppm	97.563 %	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	476 cps	2.2952 ppm	91.807 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	30,440 cps	2.3511 ppm	94.045 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,490 cps	0.4803 ppm	96.065 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,489 cps	2.4803 ppm	99.210 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	77,938 cps	47.0398 ppm	94.080 %	2.2 %	1.0 ppm
Ni 231.604 {445} (Axial)	9,999 cps	2.4774 ppm	99.098 %	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	21,569 cps	46.7657 ppm	93.531 %	2.6 %	1.2 ppm
Se 196.090 {472} (Axial)	526 cps	2.4951 ppm	99.806 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,864 cps	0.4785 ppm	95.692 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,185 cps	0.4775 ppm	95.496 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	500 cps	0.4930 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	433 cps	0.4666 ppm	93.320 %	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	8,152 cps	0.4851 ppm	97.029 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,732 cps	1.2261 ppm	98.086 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.7953 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		93.4995 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	78 cps	2.2463 ppm	89.854 %	0.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5042 ppm	100.835 %	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,723 cps	2.2801 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.2323 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	596 cps	2.2814 ppm	91.257 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	900 cps	2.3473 ppm	93.891 %	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.3063 ppm		2.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	488 cps	0.4984 ppm	99.687 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8628 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		106.4339 %		0.1 %	0.1 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/3/2020 1:17:17 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	282 cps	0.4964 ppm	99.289 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	182 cps	0.4892 ppm	97.835 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	63,564 cps	2.3885 ppm		2.6 %	0.1 ppm
Ba 493.409 {68} (Radial)	56,481 cps	2.2784 ppm	91.136 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	175,613 cps	0.4757 ppm	95.150 %	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	466 cps	2.2472 ppm	89.890 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,853 cps	0.4913 ppm	98.257 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,370 cps	0.4696 ppm	93.917 %	2.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,021 cps	0.4919 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	20,060 cps	2.4788 ppm	99.152 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,267 cps	2.3721 ppm	94.886 %	2.7 %	0.1 ppm
Fe 259.940 {130} (Radial)	464 cps	2.2378 ppm	89.514 %	2.0 %	0.0 ppm
Li 670.784 {50} (Radial)	28,997 cps	2.2396 ppm	89.586 %	2.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,946 cps	0.4725 ppm	94.505 %	2.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,471 cps	2.4734 ppm	98.935 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	75,631 cps	45.6472 ppm	91.294 %	3.1 %	1.4 ppm
Ni 231.604 {445} (Axial)	9,993 cps	2.4758 ppm	99.034 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	20,504 cps	44.4559 ppm	88.912 %	3.5 %	1.6 ppm
Se 196.090 {472} (Axial)	526 cps	2.4989 ppm	99.956 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,724 cps	0.4670 ppm	93.409 %	3.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,630 cps	0.4600 ppm	92.007 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	497 cps	0.4899 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	425 cps	0.4581 ppm	91.617 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	7,966 cps	0.4741 ppm	94.822 %	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,697 cps	1.2226 ppm	97.812 %	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.6854 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.4743 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	75 cps	2.1739 ppm	86.955 %	1.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5048 ppm	100.962 %	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,724 cps	2.2810 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.8061 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	568 cps	2.1758 ppm	87.031 %	3.2 %	0.1 ppm
Al 396.152 {85} (Radial)	875 cps	2.2823 ppm	91.292 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	158 cps	2.2342 ppm		3.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	487 cps	0.4977 ppm	99.530 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		98.9592 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		107.2508 %		0.4 %	0.4 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/3/2020 1:22:11 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	281 cps	0.4937 ppm	98.740 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4876 ppm	97.529 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	64,321 cps	2.4170 ppm		3.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	57,329 cps	2.3126 ppm	92.505 %	3.3 %	0.1 ppm
Be 313.042 {108} (Axial)	174,189 cps	0.4719 ppm	94.379 %	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	467 cps	2.2495 ppm	89.982 %	4.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,818 cps	0.4883 ppm	97.669 %	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,336 cps	0.4660 ppm	93.198 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,003 cps	0.4889 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	19,920 cps	2.4615 ppm	98.458 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,726 cps	2.3501 ppm	94.006 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	463 cps	2.2359 ppm	89.438 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	29,302 cps	2.2632 ppm	90.527 %	3.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,638 cps	0.4681 ppm	93.621 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,427 cps	2.4566 ppm	98.266 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	75,860 cps	45.7854 ppm	91.571 %	4.0 %	1.8 ppm
Ni 231.604 {445} (Axial)	9,919 cps	2.4576 ppm	98.305 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	20,540 cps	44.5336 ppm	89.067 %	4.6 %	2.0 ppm
Se 196.090 {472} (Axial)	522 cps	2.4805 ppm	99.219 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,687 cps	0.4640 ppm	92.799 %	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,837 cps	0.4666 ppm	93.311 %	3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	495 cps	0.4882 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	432 cps	0.4660 ppm	93.203 %	3.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,890 cps	0.4696 ppm	93.913 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,611 cps	1.2144 ppm	97.155 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.3069 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.3445 %		0.8 %	0.7 %
Mg 279.079 {121} (Radial)	74 cps	2.1535 ppm	86.141 %	3.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5025 ppm	100.496 %	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,701 cps	2.2621 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.4627 %		0.8 %	0.9 %
B 249.773 {135} (Radial)	575 cps	2.2030 ppm	88.120 %	3.8 %	0.1 ppm
Al 396.152 {85} (Radial)	881 cps	2.2988 ppm	91.953 %	2.9 %	0.1 ppm
Si 251.611 {134} (Radial)	158 cps	2.2392 ppm		3.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	486 cps	0.4958 ppm	99.156 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		98.5402 %		0.4 %	0.3 %
Sc 361.384 {93} (Radial)		107.8114 %		0.5 %	0.5 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/3/2020 1:37:22 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	283 cps	0.4974 ppm	99.478 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	182 cps	0.4897 ppm	97.930 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	66,615 cps	2.5032 ppm		5.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	59,328 cps	2.3933 ppm	95.731 %	5.2 %	0.1 ppm
Be 313.042 {108} (Axial)	178,810 cps	0.4844 ppm	96.883 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	491 cps	2.3684 ppm	94.736 %	4.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,853 cps	0.4913 ppm	98.269 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,456 cps	0.4789 ppm	95.784 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,022 cps	0.4920 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,037 cps	2.4759 ppm	99.037 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,161 cps	2.4085 ppm	96.342 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	486 cps	2.3481 ppm	93.924 %	4.8 %	0.1 ppm
Li 670.784 {50} (Radial)	30,345 cps	2.3437 ppm	93.750 %	5.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,487 cps	0.4803 ppm	96.056 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,467 cps	2.4718 ppm	98.873 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	78,645 cps	47.4667 ppm	94.933 %	5.1 %	2.4 ppm
Ni 231.604 {445} (Axial)	9,977 cps	2.4718 ppm	98.872 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	21,278 cps	46.1337 ppm	92.267 %	5.2 %	2.4 ppm
Se 196.090 {472} (Axial)	525 cps	2.4947 ppm	99.790 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,838 cps	0.4763 ppm	95.267 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,372 cps	0.4834 ppm	96.674 %	5.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	498 cps	0.4905 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.4820 ppm	96.401 %	4.8 %	0.0 ppm
V 292.402 {115} (Axial)	8,065 cps	0.4800 ppm	95.994 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,688 cps	1.2218 ppm	97.742 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.2328 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		93.6146 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	79 cps	2.2785 ppm	91.140 %	4.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5032 ppm	100.649 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,717 cps	2.2753 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.6991 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	596 cps	2.2809 ppm	91.237 %	5.5 %	0.1 ppm
Al 396.152 {85} (Radial)	916 cps	2.3891 ppm	95.565 %	5.0 %	0.1 ppm
Si 251.611 {134} (Radial)	164 cps	2.3271 ppm		5.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	486 cps	0.4964 ppm	99.275 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.7730 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		107.1345 %		1.5 %	1.6 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 2:53:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	284 cps	0.4986 ppm	99.726 %	2.6 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4950 ppm	98.992 %	2.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	64,779 cps	2.4342 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	58,311 cps	2.3522 ppm	94.088 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	178,884 cps	0.4846 ppm	96.922 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	493 cps	2.3747 ppm	94.990 %	1.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,925 cps	0.4974 ppm	99.474 %	2.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,491 cps	0.4826 ppm	96.529 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,080 cps	0.5016 ppm		2.9 %	0.0 ppm
Co 228.616 {447} (Axial)	20,329 cps	2.5120 ppm	100.482 %	2.9 %	0.1 ppm
Cu 324.754 {104} (Axial)	58,778 cps	2.3929 ppm	95.718 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	488 cps	2.3570 ppm	94.278 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	29,835 cps	2.3044 ppm	92.174 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,475 cps	0.4801 ppm	96.023 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,532 cps	2.4965 ppm	99.862 %	2.9 %	0.1 ppm
Na 589.592 {57} (Radial)	77,628 cps	46.8525 ppm	93.705 %	1.6 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,144 cps	2.5133 ppm	100.534 %	2.8 %	0.1 ppm
K 766.490 {44} (Radial)	21,248 cps	46.0699 ppm	92.140 %	2.1 %	1.0 ppm
Se 196.090 {472} (Axial)	524 cps	2.4862 ppm	99.447 %	2.7 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,906 cps	0.4819 ppm	96.374 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,953 cps	0.4702 ppm	94.037 %	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	508 cps	0.5008 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	438 cps	0.4723 ppm	94.453 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,022 cps	0.4775 ppm	95.490 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,904 cps	1.2426 ppm	99.411 %	2.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.6381 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.4721 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	81 cps	2.3551 ppm	94.203 %	1.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5112 ppm	102.249 %	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,791 cps	2.3369 ppm		2.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		101.3041 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	609 cps	2.3343 ppm	93.370 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	911 cps	2.3752 ppm	95.007 %	0.7 %	0.0 ppm
Si 251.611 {134} (Radial)	165 cps	2.3395 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	498 cps	0.5082 ppm	101.641 %	2.5 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3966 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.5252 %		0.6 %	0.6 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 3:34:12 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	283 cps	0.4974 ppm	99.479 %	3.7 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.4968 ppm	99.354 %	3.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	65,810 cps	2.4729 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	58,782 cps	2.3712 ppm	94.849 %	2.3 %	0.1 ppm
Be 313.042 {108} (Axial)	182,973 cps	0.4957 ppm	99.138 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	498 cps	2.4018 ppm	96.071 %	2.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,938 cps	0.4984 ppm	99.683 %	3.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,593 cps	0.4936 ppm	98.716 %	2.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,079 cps	0.5013 ppm		3.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,400 cps	2.5208 ppm	100.832 %	3.5 %	0.1 ppm
Cu 324.754 {104} (Axial)	60,090 cps	2.4464 ppm	97.855 %	2.7 %	0.1 ppm
Fe 259.940 {130} (Radial)	495 cps	2.3909 ppm	95.635 %	2.5 %	0.1 ppm
Li 670.784 {50} (Radial)	30,291 cps	2.3396 ppm	93.585 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,275 cps	0.4916 ppm	98.316 %	2.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,554 cps	2.5050 ppm	100.199 %	3.6 %	0.1 ppm
Na 589.592 {57} (Radial)	78,780 cps	47.5483 ppm	95.097 %	2.4 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,177 cps	2.5215 ppm	100.858 %	3.4 %	0.1 ppm
K 766.490 {44} (Radial)	21,502 cps	46.6201 ppm	93.240 %	2.7 %	1.3 ppm
Se 196.090 {472} (Axial)	526 cps	2.4985 ppm	99.938 %	3.4 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,986 cps	0.4884 ppm	97.688 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,194 cps	0.4778 ppm	95.557 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	508 cps	0.5010 ppm		3.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	442 cps	0.4765 ppm	95.309 %	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,245 cps	0.4907 ppm	98.136 %	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,929 cps	1.2450 ppm	99.599 %	3.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.1749 %		3.7 %	3.6 %
Sc 188.060 {479} (Axial)		92.6799 %		1.2 %	1.1 %
Mg 279.079 {121} (Radial)	82 cps	2.3823 ppm	95.293 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	178 cps	0.5132 ppm	102.641 %	3.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,795 cps	2.3405 ppm		3.3 %	0.1 ppm
Sc 227.318 {448} (Axial)		101.6810 %		1.0 %	1.0 %
B 249.773 {135} (Radial)	620 cps	2.3735 ppm	94.942 %	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	917 cps	2.3918 ppm	95.670 %	1.8 %	0.0 ppm
Si 251.611 {134} (Radial)	169 cps	2.3863 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.5078 ppm	101.568 %	3.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.7828 %		1.1 %	1.1 %
Sc 361.384 {93} (Radial)		100.5124 %		1.9 %	1.9 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 4:39:31 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	281 cps	0.4939 ppm	98.777 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4942 ppm	98.849 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	63,522 cps	2.3869 ppm		2.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	56,822 cps	2.2921 ppm	91.686 %	2.8 %	0.1 ppm
Be 313.042 {108} (Axial)	178,987 cps	0.4849 ppm	96.978 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	494 cps	2.3806 ppm	95.223 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,906 cps	0.4958 ppm	99.157 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,480 cps	0.4815 ppm	96.291 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,056 cps	0.4976 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,343 cps	2.5138 ppm	100.550 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,344 cps	2.4160 ppm	96.640 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	480 cps	2.3159 ppm	92.635 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	29,137 cps	2.2505 ppm	90.019 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,610 cps	0.4820 ppm	96.408 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,524 cps	2.4936 ppm	99.744 %	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	76,083 cps	45.9205 ppm	91.841 %	3.4 %	1.6 ppm
Ni 231.604 {445} (Axial)	10,140 cps	2.5123 ppm	100.494 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	20,697 cps	44.8745 ppm	89.749 %	3.7 %	1.7 ppm
Se 196.090 {472} (Axial)	528 cps	2.5090 ppm	100.358 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,897 cps	0.4812 ppm	96.234 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,644 cps	0.4605 ppm	92.093 %	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	506 cps	0.4991 ppm		2.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	430 cps	0.4631 ppm	92.630 %	3.1 %	0.0 ppm
V 292.402 {115} (Axial)	8,067 cps	0.4801 ppm	96.024 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,881 cps	1.2404 ppm	99.229 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.0381 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		92.4599 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	80 cps	2.3309 ppm	93.234 %	3.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5101 ppm	102.013 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,776 cps	2.3243 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.7034 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	599 cps	2.2924 ppm	91.697 %	3.2 %	0.1 ppm
Al 396.152 {85} (Radial)	883 cps	2.3020 ppm	92.078 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	169 cps	2.3873 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	496 cps	0.5066 ppm	101.310 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1070 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.7009 %		0.4 %	0.4 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 4:44:25 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	285 cps	0.5001 ppm	100.028 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.4966 ppm	99.313 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	64,738 cps	2.4326 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	57,689 cps	2.3271 ppm	93.086 %	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	179,599 cps	0.4865 ppm	97.310 %	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	491 cps	2.3681 ppm	94.723 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,930 cps	0.4978 ppm	99.554 %	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,487 cps	0.4822 ppm	96.442 %	3.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,075 cps	0.5007 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,423 cps	2.5237 ppm	100.946 %	2.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	59,396 cps	2.4181 ppm	96.725 %	3.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	485 cps	2.3421 ppm	93.682 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	29,748 cps	2.2977 ppm	91.906 %	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,682 cps	0.4831 ppm	96.616 %	3.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,560 cps	2.5073 ppm	100.293 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	77,758 cps	46.9310 ppm	93.862 %	2.3 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,181 cps	2.5224 ppm	100.896 %	2.1 %	0.1 ppm
K 766.490 {44} (Radial)	21,104 cps	45.7580 ppm	91.516 %	2.4 %	1.1 ppm
Se 196.090 {472} (Axial)	528 cps	2.5063 ppm	100.251 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,915 cps	0.4826 ppm	96.524 %	3.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,942 cps	0.4698 ppm	93.967 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	508 cps	0.5008 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	441 cps	0.4750 ppm	95.006 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,089 cps	0.4814 ppm	96.288 %	3.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,937 cps	1.2458 ppm	99.661 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8364 %		1.9 %	1.9 %
Sc 188.060 {479} (Axial)		92.3563 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	80 cps	2.3234 ppm	92.936 %	3.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	178 cps	0.5123 ppm	102.455 %	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,782 cps	2.3300 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.8543 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	609 cps	2.3343 ppm	93.373 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	898 cps	2.3428 ppm	93.711 %	1.8 %	0.0 ppm
Si 251.611 {134} (Radial)	168 cps	2.3845 ppm		1.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	498 cps	0.5082 ppm	101.643 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		97.2041 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.2120 %		0.2 %	0.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 5:45:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	284 cps	0.4988 ppm	99.758 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4958 ppm	99.167 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	65,489 cps	2.4608 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	58,337 cps	2.3533 ppm	94.130 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	177,126 cps	0.4798 ppm	95.970 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	499 cps	2.4049 ppm	96.197 %	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,896 cps	0.4949 ppm	98.982 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,424 cps	0.4754 ppm	95.086 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,044 cps	0.4957 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,258 cps	2.5032 ppm	100.129 %	2.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	59,665 cps	2.4291 ppm	97.163 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	497 cps	2.4005 ppm	96.021 %	2.1 %	0.1 ppm
Li 670.784 {50} (Radial)	30,221 cps	2.3342 ppm	93.366 %	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,336 cps	0.4781 ppm	95.623 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,515 cps	2.4901 ppm	99.603 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	78,546 cps	47.4068 ppm	94.814 %	1.8 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,091 cps	2.5000 ppm	100.002 %	2.0 %	0.1 ppm
K 766.490 {44} (Radial)	21,328 cps	46.2430 ppm	92.486 %	1.6 %	0.7 ppm
Se 196.090 {472} (Axial)	531 cps	2.5191 ppm	100.762 %	2.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,875 cps	0.4794 ppm	95.873 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,042 cps	0.4730 ppm	94.601 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4946 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	440 cps	0.4739 ppm	94.784 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	8,032 cps	0.4780 ppm	95.603 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,832 cps	1.2357 ppm	98.858 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.6366 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		91.8202 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	79 cps	2.2807 ppm	91.228 %	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5104 ppm	102.071 %	2.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,743 cps	2.2971 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.1451 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	601 cps	2.3035 ppm	92.139 %	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	906 cps	2.3629 ppm	94.515 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	167 cps	2.3637 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	492 cps	0.5020 ppm	100.402 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		97.3353 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.5795 %		0.9 %	1.0 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 6:47:43 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	285 cps	0.5059 ppm	101.172 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.5000 ppm	99.994 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	69,119 cps	2.5972 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	61,941 cps	2.4987 ppm	99.947 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	180,176 cps	0.4881 ppm	97.622 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	498 cps	2.4013 ppm	96.050 %	1.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,885 cps	0.4990 ppm	99.791 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,501 cps	0.4837 ppm	96.749 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,062 cps	0.5032 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,134 cps	2.5117 ppm	100.467 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	61,007 cps	2.4837 ppm	99.349 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	502 cps	2.4208 ppm	96.834 %	1.3 %	0.0 ppm
Li 670.784 {50} (Radial)	31,917 cps	2.4652 ppm	98.608 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,733 cps	0.4838 ppm	96.761 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,513 cps	2.5117 ppm	100.469 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	81,916 cps	49.4408 ppm	98.882 %	1.6 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,032 cps	2.5092 ppm	100.368 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	22,519 cps	48.8259 ppm	97.652 %	1.8 %	0.9 ppm
Se 196.090 {472} (Axial)	524 cps	2.5163 ppm	100.652 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,019 cps	0.4911 ppm	98.213 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,905 cps	0.5001 ppm	100.024 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4983 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	452 cps	0.4869 ppm	97.387 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	8,177 cps	0.4867 ppm	97.331 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,786 cps	1.2432 ppm	99.455 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5589 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.9354 %		0.0 %	0.0 %
Mg 279.079 {121} (Radial)	82 cps	2.3730 ppm	94.920 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5137 ppm	102.745 %	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,714 cps	2.2954 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.4916 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	628 cps	2.4040 ppm	96.162 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	948 cps	2.4732 ppm	98.927 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	172 cps	2.4348 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	488 cps	0.5038 ppm	100.763 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		95.4492 %		0.0 %	0.0 %
Sc 361.384 {93} (Radial)		104.3607 %		0.8 %	0.8 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 7:49:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	295 cps	0.5183 ppm	103.662 %	2.5 %	0.0 ppm
As 189.042 {478} (Axial)	186 cps	0.5003 ppm	100.054 %	2.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	64,719 cps	2.4319 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	57,764 cps	2.3302 ppm	93.206 %	2.5 %	0.1 ppm
Be 313.042 {108} (Axial)	171,908 cps	0.4657 ppm	93.142 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.2272 ppm	89.087 %	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,060 cps	0.5087 ppm	101.738 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,335 cps	0.4659 ppm	93.173 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,063 cps	0.4987 ppm		2.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,298 cps	2.5081 ppm	100.326 %	2.3 %	0.1 ppm
Cu 324.754 {104} (Axial)	60,753 cps	2.4734 ppm	98.934 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	463 cps	2.2330 ppm	89.319 %	1.8 %	0.0 ppm
Li 670.784 {50} (Radial)	30,211 cps	2.3334 ppm	93.336 %	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,614 cps	0.4678 ppm	93.553 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,543 cps	2.5008 ppm	100.033 %	2.5 %	0.1 ppm
Na 589.592 {57} (Radial)	77,553 cps	46.8072 ppm	93.614 %	2.4 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,085 cps	2.4986 ppm	99.945 %	2.3 %	0.1 ppm
K 766.490 {44} (Radial)	21,113 cps	45.7770 ppm	91.554 %	2.6 %	1.2 ppm
Se 196.090 {472} (Axial)	540 cps	2.5616 ppm	102.464 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,922 cps	0.4832 ppm	96.640 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,834 cps	0.4664 ppm	93.289 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	508 cps	0.5011 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	426 cps	0.4591 ppm	91.816 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	7,912 cps	0.4709 ppm	94.180 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,958 cps	1.2478 ppm	99.825 %	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.6040 %		1.5 %	1.5 %
Sc 188.060 {479} (Axial)		93.1752 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	75 cps	2.1630 ppm	86.521 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	153 cps	0.4411 ppm	88.213 %	2.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,771 cps	2.3207 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.0778 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	583 cps	2.2313 ppm	89.253 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	889 cps	2.3177 ppm	92.709 %	2.7 %	0.1 ppm
Si 251.611 {134} (Radial)	158 cps	2.2356 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	499 cps	0.5093 ppm	101.862 %	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.0813 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.4924 %		1.8 %	1.8 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 7:54:51 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	292 cps	0.5133 ppm	102.663 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4954 ppm	99.084 %	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	64,160 cps	2.4109 ppm		2.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	57,255 cps	2.3096 ppm	92.386 %	2.8 %	0.1 ppm
Be 313.042 {108} (Axial)	172,637 cps	0.4677 ppm	93.537 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	460 cps	2.2173 ppm	88.693 %	3.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,008 cps	0.5043 ppm	100.862 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,344 cps	0.4668 ppm	93.367 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,049 cps	0.4965 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,175 cps	2.4930 ppm	99.719 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,584 cps	2.4665 ppm	98.660 %	2.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	461 cps	2.2264 ppm	89.055 %	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	29,981 cps	2.3156 ppm	92.625 %	3.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,689 cps	0.4688 ppm	93.769 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,512 cps	2.4888 ppm	99.552 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	77,186 cps	46.5861 ppm	93.172 %	3.2 %	1.5 ppm
Ni 231.604 {445} (Axial)	10,028 cps	2.4845 ppm	99.382 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	21,106 cps	45.7619 ppm	91.524 %	3.6 %	1.6 ppm
Se 196.090 {472} (Axial)	534 cps	2.5361 ppm	101.445 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,890 cps	0.4806 ppm	96.117 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,753 cps	0.4639 ppm	92.780 %	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	504 cps	0.4970 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	424 cps	0.4565 ppm	91.291 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,949 cps	0.4731 ppm	94.623 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,866 cps	1.2390 ppm	99.116 %	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7208 %		1.4 %	1.4 %
Sc 188.060 {479} (Axial)		93.5037 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	74 cps	2.1531 ppm	86.122 %	2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	160 cps	0.4609 ppm	92.177 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,753 cps	2.3050 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.3269 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	580 cps	2.2201 ppm	88.805 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	882 cps	2.2999 ppm	91.997 %	2.1 %	0.0 ppm
Si 251.611 {134} (Radial)	157 cps	2.2278 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	496 cps	0.5060 ppm	101.205 %	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4546 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.0396 %		0.3 %	0.4 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 8:56:31 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	293 cps	0.5144 ppm	102.876 %	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5020 ppm	100.403 %	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	71,427 cps	2.6840 ppm		4.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	63,587 cps	2.5650 ppm	102.602 %	4.7 %	0.1 ppm
Be 313.042 {108} (Axial)	178,418 cps	0.4834 ppm	96.670 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	515 cps	2.4808 ppm	99.233 %	4.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,013 cps	0.5047 ppm	100.948 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,455 cps	0.4788 ppm	95.754 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,101 cps	0.5050 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,348 cps	2.5144 ppm	100.576 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	61,352 cps	2.4978 ppm	99.911 %	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	515 cps	2.4856 ppm	99.425 %	4.3 %	0.1 ppm
Li 670.784 {50} (Radial)	33,104 cps	2.5569 ppm	102.274 %	4.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,557 cps	0.4813 ppm	96.257 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,597 cps	2.5213 ppm	100.852 %	2.0 %	0.1 ppm
Na 589.592 {57} (Radial)	84,499 cps	50.9997 ppm	101.999 %	4.8 %	2.4 ppm
Ni 231.604 {445} (Axial)	10,137 cps	2.5116 ppm	100.465 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	23,311 cps	50.5425 ppm	101.085 %	5.0 %	2.5 ppm
Se 196.090 {472} (Axial)	533 cps	2.5325 ppm	101.299 %	2.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,962 cps	0.4865 ppm	97.292 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	16,366 cps	0.5146 ppm	102.924 %	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	509 cps	0.5012 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	458 cps	0.4934 ppm	98.681 %	4.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,185 cps	0.4871 ppm	97.429 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,958 cps	1.2478 ppm	99.827 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.1607 %		1.3 %	1.3 %
Sc 188.060 {479} (Axial)		92.1481 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	83 cps	2.4077 ppm	96.308 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	173 cps	0.4977 ppm	99.537 %	2.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,762 cps	2.3126 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4044 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	640 cps	2.4507 ppm	98.029 %	4.5 %	0.1 ppm
Al 396.152 {85} (Radial)	973 cps	2.5373 ppm	101.494 %	4.9 %	0.1 ppm
Si 251.611 {134} (Radial)	177 cps	2.5121 ppm		4.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.5074 ppm	101.473 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9275 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		102.7454 %		2.5 %	2.6 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 9:58:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	288 cps	0.5064 ppm	101.279 %	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.4980 ppm	99.606 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	64,394 cps	2.4197 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	57,527 cps	2.3206 ppm	92.824 %	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	179,839 cps	0.4872 ppm	97.440 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	471 cps	2.2680 ppm	90.721 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,971 cps	0.5012 ppm	100.236 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,458 cps	0.4791 ppm	95.813 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,117 cps	0.5076 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,298 cps	2.5081 ppm	100.325 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	59,512 cps	2.4228 ppm	96.914 %	2.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	466 cps	2.2477 ppm	89.909 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	29,491 cps	2.2778 ppm	91.112 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,598 cps	0.4819 ppm	96.374 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,585 cps	2.5168 ppm	100.674 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	75,994 cps	45.8663 ppm	91.733 %	2.4 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,143 cps	2.5130 ppm	100.520 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	21,407 cps	46.4146 ppm	92.829 %	2.7 %	1.3 ppm
Se 196.090 {472} (Axial)	524 cps	2.4879 ppm	99.518 %	1.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,853 cps	0.4775 ppm	95.506 %	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,812 cps	0.4658 ppm	93.153 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.5033 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	416 cps	0.4479 ppm	89.580 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	8,205 cps	0.4883 ppm	97.669 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,916 cps	1.2438 ppm	99.504 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.7338 %		3.6 %	3.4 %
Sc 188.060 {479} (Axial)		93.6597 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	76 cps	2.2038 ppm	88.154 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5044 ppm	100.879 %	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,797 cps	2.3419 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.5865 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	578 cps	2.2135 ppm	88.540 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	873 cps	2.2774 ppm	91.097 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	160 cps	2.2628 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.5083 ppm	101.657 %	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.7761 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.5437 %		0.3 %	0.3 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 10:03:12 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	285 cps	0.5011 ppm	100.219 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4917 ppm	98.332 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	65,550 cps	2.4631 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	58,340 cps	2.3534 ppm	94.135 %	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	179,479 cps	0.4862 ppm	97.245 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	476 cps	2.2945 ppm	91.780 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,903 cps	0.4955 ppm	99.099 %	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,451 cps	0.4783 ppm	95.661 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,072 cps	0.5002 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,080 cps	2.4813 ppm	99.251 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	59,331 cps	2.4155 ppm	96.619 %	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	477 cps	2.3035 ppm	92.140 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	29,889 cps	2.3086 ppm	92.342 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,497 cps	0.4804 ppm	96.087 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,510 cps	2.4881 ppm	99.523 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	76,823 cps	46.3666 ppm	92.733 %	2.7 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,032 cps	2.4855 ppm	99.421 %	2.1 %	0.1 ppm
K 766.490 {44} (Radial)	21,581 cps	46.7914 ppm	93.583 %	3.0 %	1.4 ppm
Se 196.090 {472} (Axial)	519 cps	2.4662 ppm	98.648 %	2.3 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,827 cps	0.4754 ppm	95.088 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	15,057 cps	0.4735 ppm	94.693 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	504 cps	0.4963 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	418 cps	0.4508 ppm	90.156 %	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	8,176 cps	0.4866 ppm	97.315 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,774 cps	1.2301 ppm	98.408 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.4102 %		2.7 %	2.6 %
Sc 188.060 {479} (Axial)		93.7657 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	79 cps	2.2774 ppm	91.095 %	4.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	173 cps	0.4995 ppm	99.893 %	2.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,757 cps	2.3084 ppm		2.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.8865 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	587 cps	2.2465 ppm	89.858 %	2.8 %	0.1 ppm
Al 396.152 {85} (Radial)	894 cps	2.3305 ppm	93.222 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	162 cps	2.2963 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	493 cps	0.5030 ppm	100.594 %	1.9 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1985 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.2659 %		1.3 %	1.4 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 11:14:38 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	41.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	60.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	20 cps	0.0007 ppm	59.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	25 cps	0.0010 ppm	166.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-11 cps	0.0000 ppm	235.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0138 ppm	32.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	35.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	54.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	38.0 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	47.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	-1 cps	-0.0001 ppm	993.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0011 ppm	517.8 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0030 ppm	20.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	5 cps	0.0001 ppm	97.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	27.2 %	0.0 ppm
Na 589.592 {57} (Radial)	61 cps	0.0369 ppm	6.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0001 ppm	87.8 %	0.0 ppm
K 766.490 {44} (Radial)	50 cps	0.1076 ppm	3.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0013 ppm	143.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-6 cps	-0.0005 ppm	88.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	27.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	339.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0027 ppm	65.4 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	23,787.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	70.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7829 %	4.5 %	4.5 %
Sc 188.060 {479} (Axial)		102.5837 %	0.4 %	0.5 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0257 ppm	118.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	332.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	138.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.5108 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	0 cps	-0.0009 ppm	515.3 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0166 ppm	22.6 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0135 ppm	71.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	73.3 %	0.0 ppm
Y 224.306 {450} (Axial)		102.1479 %	0.4 %	0.5 %
Sc 361.384 {93} (Radial)		104.1127 %	2.2 %	2.3 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/3/2020 12:21:19 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0006 ppm	126.8 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0016 ppm	58.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	26 cps	0.0010 ppm	42.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	-21 cps	-0.0009 ppm	129.7 %	0.0 ppm
Be 313.042 {108} (Axial)	56 cps	0.0002 ppm	140.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0206 ppm	29.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	25.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	105.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	265.1 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	56.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	41 cps	0.0017 ppm	163.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0035 ppm	174.9 %	0.0 ppm
Li 670.784 {50} (Radial)	50 cps	0.0038 ppm	21.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	62.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0013 ppm	20.3 %	0.0 ppm
Na 589.592 {57} (Radial)	186 cps	0.1120 ppm	8.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	17.6 %	0.0 ppm
K 766.490 {44} (Radial)	41 cps	0.0897 ppm	47.8 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0029 ppm	108.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	-11 cps	-0.0009 ppm	176.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13 cps	0.0004 ppm	55.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	369.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	152.0 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,845.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	24.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.0489 %	13.0 %	12.3 %
Sc 188.060 {479} (Axial)		102.1083 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	0 cps	0.0139 ppm	38.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	549.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	52.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.3981 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	0 cps	0.0006 ppm	330.4 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0094 ppm	91.8 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0145 ppm	52.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	70.1 %	0.0 ppm
Y 224.306 {450} (Axial)		102.1064 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		108.0535 %	0.1 %	0.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/3/2020 1:27:05 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0014 ppm	66.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0023 ppm	33.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	11 cps	0.0004 ppm	15.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	-21 cps	-0.0008 ppm	74.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-22 cps	-0.0001 ppm	21.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0103 ppm	121.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	31.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	72.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	26.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	41.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	-9 cps	-0.0004 ppm	29.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0031 ppm	28.8 %	0.0 ppm
Li 670.784 {50} (Radial)	45 cps	0.0035 ppm	14.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	3 cps	0.0000 ppm	35.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0010 ppm	28.9 %	0.0 ppm
Na 589.592 {57} (Radial)	87 cps	0.0527 ppm	20.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	37.6 %	0.0 ppm
K 766.490 {44} (Radial)	30 cps	0.0651 ppm	41.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	796.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0002 ppm	97.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0003 ppm	21.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	548.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0005 ppm	313.6 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	164.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	406.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.3685 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		101.7360 %	0.5 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	-0.0089 ppm	349.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	9,776.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	89.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.5075 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	0 cps	-0.0001 ppm	2,997.4 %	0.0 ppm
Al 396.152 {85} (Radial)	8 cps	0.0209 ppm	37.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0085 ppm	73.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	419.0 %	0.0 ppm
Y 224.306 {450} (Axial)		102.9167 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		106.5406 %	1.1 %	1.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/3/2020 1:42:16 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0017 ppm	22.3 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0014 ppm	96.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	31 cps	0.0012 ppm	35.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	-16 cps	-0.0006 ppm	268.2 %	0.0 ppm
Be 313.042 {108} (Axial)	17 cps	0.0000 ppm	317.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0199 ppm	43.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	19.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	82.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	59.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	27.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	18 cps	0.0008 ppm	252.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	26,848.1 %	0.0 ppm
Li 670.784 {50} (Radial)	50 cps	0.0039 ppm	18.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	39.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	41.7 %	0.0 ppm
Na 589.592 {57} (Radial)	97 cps	0.0583 ppm	27.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	184.1 %	0.0 ppm
K 766.490 {44} (Radial)	39 cps	0.0852 ppm	13.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0005 ppm	259.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	-5 cps	-0.0004 ppm	297.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	16 cps	0.0005 ppm	39.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	1,520.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0012 ppm	76.5 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	36,871.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	113.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9976 %	9.2 %	9.0 %
Sc 188.060 {479} (Axial)		102.0563 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	0 cps	-0.0018 ppm	1,325.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0009 ppm	87.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	27.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.6840 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	0 cps	0.0009 ppm	218.5 %	0.0 ppm
Al 396.152 {85} (Radial)	7 cps	0.0195 ppm	24.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0182 ppm	7.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	70.3 %	0.0 ppm
Y 224.306 {450} (Axial)		102.7929 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		107.8998 %	0.8 %	0.8 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 2:58:27 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	93.8 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0017 ppm	7.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	38 cps	0.0014 ppm	87.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	43 cps	0.0018 ppm	102.5 %	0.0 ppm
Be 313.042 {108} (Axial)	57 cps	0.0002 ppm	14.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0208 ppm	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	301.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	19.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	148.6 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	31.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	9 cps	0.0003 ppm	64.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0054 ppm	145.6 %	0.0 ppm
Li 670.784 {50} (Radial)	34 cps	0.0026 ppm	11.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	11.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	24.4 %	0.0 ppm
Na 589.592 {57} (Radial)	71 cps	0.0427 ppm	13.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	372.0 %	0.0 ppm
K 766.490 {44} (Radial)	9 cps	0.0205 ppm	127.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0022 ppm	78.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	96.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	16 cps	0.0005 ppm	38.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	162.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0010 ppm	110.2 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	302.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	83.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.3529 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		100.0735 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0025 ppm	609.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	407.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	68.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.5414 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	2 cps	0.0081 ppm	31.4 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0128 ppm	67.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0107 ppm	46.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	547.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.2688 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.8208 %	0.9 %	0.9 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 3:39:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0002 ppm	267.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0008 ppm	114.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	24 cps	0.0009 ppm	51.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	45 cps	0.0018 ppm	44.9 %	0.0 ppm
Be 313.042 {108} (Axial)	101 cps	0.0003 ppm	124.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0086 ppm	80.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	26.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	101.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	40.4 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	75.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	48 cps	0.0020 ppm	183.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0039 ppm	118.7 %	0.0 ppm
Li 670.784 {50} (Radial)	50 cps	0.0038 ppm	21.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	63.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	26.6 %	0.0 ppm
Na 589.592 {57} (Radial)	94 cps	0.0567 ppm	23.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	160.8 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0405 ppm	62.2 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0035 ppm	63.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	-13 cps	-0.0010 ppm	118.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	12 cps	0.0004 ppm	34.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	168.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0008 ppm	103.6 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	320.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	51.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.9437 %	15.8 %	14.5 %
Sc 188.060 {479} (Axial)		100.4722 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0189 ppm	107.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	104.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	140.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.9557 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	0 cps	0.0017 ppm	133.3 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0160 ppm	56.7 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0081 ppm	177.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0007 ppm	12.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.8942 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.9900 %	0.3 %	0.3 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 4:49:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0017 ppm	15.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0013 ppm	75.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	22 cps	0.0008 ppm	35.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	42 cps	0.0017 ppm	55.7 %	0.0 ppm
Be 313.042 {108} (Axial)	33 cps	0.0001 ppm	10.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0082 ppm	58.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	12.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	31.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	336.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	16.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	9 cps	0.0004 ppm	7.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0010 ppm	80.6 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0032 ppm	39.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	14.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	37.9 %	0.0 ppm
Na 589.592 {57} (Radial)	49 cps	0.0298 ppm	29.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	771.7 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0406 ppm	68.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0018 ppm	96.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-5 cps	-0.0004 ppm	34.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	12 cps	0.0004 ppm	32.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	217.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	-0.0001 ppm	2,410.7 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	196.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	27.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.1726 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		99.9937 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0242 ppm	115.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0008 ppm	63.4 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0001 ppm	349.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7707 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	1 cps	0.0029 ppm	79.6 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0154 ppm	30.9 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0257 ppm	7.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	297.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.9835 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		102.3541 %	0.2 %	0.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 5:50:51 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	82.8 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0018 ppm	57.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	39 cps	0.0015 ppm	18.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	77 cps	0.0031 ppm	35.0 %	0.0 ppm
Be 313.042 {108} (Axial)	39 cps	0.0001 ppm	31.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0210 ppm	43.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	45.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	169.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	28.7 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	67.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	8 cps	0.0003 ppm	71.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0210 ppm	19.1 %	0.0 ppm
Li 670.784 {50} (Radial)	48 cps	0.0037 ppm	12.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	7.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	23.4 %	0.0 ppm
Na 589.592 {57} (Radial)	46 cps	0.0277 ppm	31.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	136.9 %	0.0 ppm
K 766.490 {44} (Radial)	11 cps	0.0232 ppm	162.2 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0026 ppm	54.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	515.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13 cps	0.0004 ppm	22.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	441.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0015 ppm	51.6 %	0.0 ppm
V 292.402 {115} (Axial)	3 cps	0.0002 ppm	89.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	20.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.4794 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		99.6999 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	0.0098 ppm	98.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	1,838.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0012 ppm	18.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4655 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	-2 cps	-0.0070 ppm	42.2 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0168 ppm	44.1 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0318 ppm	14.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	384.1 %	0.0 ppm
Y 224.306 {450} (Axial)		101.0669 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		104.6027 %	0.2 %	0.3 %

Simple Sample Report

12/3/2020 10:05:50 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 6:52:35 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0015 ppm	20.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0013 ppm	51.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	64 cps	0.0024 ppm	23.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	95 cps	0.0038 ppm	25.5 %	0.0 ppm
Be 313.042 {108} (Axial)	105 cps	0.0003 ppm	14.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0123 ppm	88.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	33.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0003 ppm	75.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	85.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0005 ppm	76.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	35 cps	0.0014 ppm	16.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0057 ppm	82.3 %	0.0 ppm
Li 670.784 {50} (Radial)	58 cps	0.0045 ppm	21.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	17 cps	0.0002 ppm	30.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0014 ppm	51.0 %	0.0 ppm
Na 589.592 {57} (Radial)	130 cps	0.0784 ppm	29.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0004 ppm	90.9 %	0.0 ppm
K 766.490 {44} (Radial)	29 cps	0.0623 ppm	19.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0022 ppm	134.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0003 ppm	48.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	18 cps	0.0006 ppm	23.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	94.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0015 ppm	28.8 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	361.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	72.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6474 %	0.6 %	0.7 %
Sc 188.060 {479} (Axial)		98.4430 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	-0.0008 ppm	3,519.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	76.2 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	50.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.7198 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0020 ppm	75.0 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0122 ppm	49.1 %	0.0 ppm
Si 251.611 {134} (Radial)	2 cps	0.0239 ppm	18.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	1,815.6 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4732 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		104.3744 %	0.5 %	0.5 %

Simple Sample Report

12/3/2020 10:05:50 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 7:59:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0024 ppm	74.4 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0016 ppm	47.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	34 cps	0.0013 ppm	43.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	29 cps	0.0012 ppm	56.4 %	0.0 ppm
Be 313.042 {108} (Axial)	73 cps	0.0002 ppm	23.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0090 ppm	73.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0009 ppm	13.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	289.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	114.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	55.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	19 cps	0.0008 ppm	22.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0001 ppm	1,826.2 %	0.0 ppm
Li 670.784 {50} (Radial)	47 cps	0.0036 ppm	25.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	38.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0015 ppm	26.7 %	0.0 ppm
Na 589.592 {57} (Radial)	115 cps	0.0692 ppm	17.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	101.4 %	0.0 ppm
K 766.490 {44} (Radial)	132 cps	0.2861 ppm	4.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0021 ppm	22.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	52.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0004 ppm	49.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	394.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0019 ppm	62.1 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	940.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	3 cps	0.0003 ppm	30.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.1855 %	1.1 %	1.1 %
Sc 188.060 {479} (Axial)		102.5216 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0155 ppm	8.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0105 ppm	25.6 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	85.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.9691 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	-1 cps	-0.0025 ppm	315.0 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0076 ppm	53.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0123 ppm	77.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	602.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.8200 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		104.7666 %	0.2 %	0.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 9:01:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0010 ppm	73.3 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0014 ppm	67.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	38 cps	0.0014 ppm	27.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	75 cps	0.0030 ppm	59.4 %	0.0 ppm
Be 313.042 {108} (Axial)	55 cps	0.0001 ppm	4.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0078 ppm	40.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0004 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	177.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	142.8 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	71.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	22 cps	0.0009 ppm	23.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0055 ppm	31.9 %	0.0 ppm
Li 670.784 {50} (Radial)	57 cps	0.0044 ppm	26.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	35.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0013 ppm	49.3 %	0.0 ppm
Na 589.592 {57} (Radial)	102 cps	0.0616 ppm	21.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	69.4 %	0.0 ppm
K 766.490 {44} (Radial)	78 cps	0.1697 ppm	2.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	203.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0003 ppm	74.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0004 ppm	38.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	301.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	95.4 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	20.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	91.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.7252 %	1.6 %	1.7 %
Sc 188.060 {479} (Axial)		101.1672 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0244 ppm	143.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	233.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	57.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2628 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	0 cps	0.0014 ppm	141.1 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0127 ppm	18.7 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0164 ppm	21.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	2,313.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.8382 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		106.2614 %	1.2 %	1.2 %

Simple Sample Report

12/3/2020 10:05:50 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 10:08:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0021 ppm	29.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0011 ppm	24.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	50 cps	0.0019 ppm	10.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	75 cps	0.0030 ppm	30.5 %	0.0 ppm
Be 313.042 {108} (Axial)	26 cps	0.0001 ppm	43.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0130 ppm	41.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0004 ppm	23.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0003 ppm	94.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	1,162.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	87.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	14 cps	0.0006 ppm	60.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0006 ppm	402.3 %	0.0 ppm
Li 670.784 {50} (Radial)	66 cps	0.0051 ppm	23.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	21.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0014 ppm	29.8 %	0.0 ppm
Na 589.592 {57} (Radial)	97 cps	0.0587 ppm	9.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	43.6 %	0.0 ppm
K 766.490 {44} (Radial)	51 cps	0.1115 ppm	3.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	96.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	106.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0005 ppm	17.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	100.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	106.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	1,529.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	180.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6556 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		101.6581 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	-0.0029 ppm	1,242.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	3,538.6 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	23.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0341 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	0 cps	-0.0004 ppm	374.9 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0131 ppm	79.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0057 ppm	66.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	474.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.8686 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		104.4767 %	0.3 %	0.3 %

Simple Sample Report

12/3/2020 10:05:50 AM

20111726-41ASD

Sample type: UNKNOWN Analysis started at: 12/2/2020 4:04:52 PM

Standard DF: 5

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0066 ppm	120.2 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0116 ppm	32.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,681 cps	0.6916 ppm	3.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,341 cps	0.6739 ppm	6.3 %	0.0 ppm
Be 313.042 {108} (Axial)	871 cps	0.0118 ppm	23.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	95,741 cps	2,306.8800 ppm	4.4 %	102.3 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0015 ppm	11.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	164 cps	0.0884 ppm	13.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	92 cps	0.0752 ppm	2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	24 cps	0.0151 ppm	5.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,748 cps	0.3558 ppm	16.9 %	0.1 ppm
Fe 259.940 {130} (Radial)	3,314 cps	79.9728 ppm	4.6 %	3.7 ppm
Li 670.784 {50} (Radial)	295 cps	0.1139 ppm	5.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	60,775 cps	4.3583 ppm	12.9 %	0.6 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0061 ppm	14.4 %	0.0 ppm
Na 589.592 {57} (Radial)	1,527 cps	4.6082 ppm	3.5 %	0.2 ppm
Ni 231.604 {445} (Axial)	13 cps	0.0158 ppm	12.2 %	0.0 ppm
K 766.490 {44} (Radial)	718 cps	7.7788 ppm	2.6 %	0.2 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0242 ppm	50.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-20 cps	-0.0082 ppm	92.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	7,603 cps	1.1954 ppm	4.3 %	0.1 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0023 ppm	108.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	474 cps	2.5541 ppm	3.3 %	0.1 ppm
V 292.402 {115} (Axial)	466 cps	0.1385 ppm	15.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	661 cps	0.3184 ppm	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		84.2831 %	13.5 %	11.3 %
Sc 188.060 {479} (Axial)		80.9155 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	5,214 cps	755.1328 ppm	4.5 %	33.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0071 ppm	81.6 %	0.0 ppm
Al 167.079 {502} (Axial)	8,983 cps	37.6130 ppm	1.1 %	0.4 ppm
Sc 227.318 {448} (Axial)		81.5874 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.1436 ppm	11.9 %	0.0 ppm
Al 396.152 {85} (Radial)	4,738 cps	61.7883 ppm	4.8 %	3.0 ppm
Si 251.611 {134} (Radial)	1,779 cps	125.9052 ppm	5.4 %	6.8 ppm
Pb 220.353 {453} (Axial)	45 cps	0.2301 ppm	3.5 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0240 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.3044 %	3.0 %	2.9 %

Simple Sample Report

12/3/2020 10:05:50 AM

20111726-41APDS

Sample type: UNKNOWN Analysis started at: 12/2/2020 4:14:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	62 cps	0.1095 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	40 cps	0.1086 ppm	2.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	19,408 cps	0.7293 ppm	4.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	17,676 cps	0.7130 ppm	3.9 %	0.0 ppm
Be 313.042 {108} (Axial)	44,513 cps	0.1206 ppm	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	394,940 cps	1,903.2188 ppm	2.9 %	54.4 ppm
Cd 228.802 {447} (Axial)	1,386 cps	0.1164 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,672 cps	0.1797 ppm	3.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,080 cps	0.1759 ppm	1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	890 cps	0.1100 ppm	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,913 cps	0.4443 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	16,116 cps	77.7896 ppm	4.0 %	3.1 ppm
Li 670.784 {50} (Radial)	2,900 cps	0.2240 ppm	4.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	271,807 cps	3.8984 ppm	3.0 %	0.1 ppm
Mo 202.030 {467} (Axial)	299 cps	0.1143 ppm	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	26,848 cps	16.2044 ppm	4.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	471 cps	0.1168 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	9,398 cps	20.3755 ppm	4.5 %	0.9 ppm
Se 196.090 {472} (Axial)	21 cps	0.1004 ppm	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,771 cps	0.1445 ppm	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	37,365 cps	1.1749 ppm	4.3 %	0.1 ppm
Sn 189.989 {477} (Axial)	108 cps	0.1061 ppm	1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,899 cps	2.0457 ppm	4.8 %	0.1 ppm
V 292.402 {115} (Axial)	3,912 cps	0.2328 ppm	3.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,486 cps	0.4320 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		77.8117 %	4.2 %	3.3 %
Sc 188.060 {479} (Axial)		65.0420 %	0.6 %	0.4 %
Mg 279.079 {121} (Radial)	23,784 cps	688.9284 ppm	4.2 %	28.9 ppm
Tl 190.856 {477} (Axial)	27 cps	0.0769 ppm	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	16,341 cps	13.6838 ppm	0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		65.9065 %	0.7 %	0.4 %
B 249.773 {135} (Radial)	182 cps	0.6982 ppm	3.9 %	0.0 ppm
Al 396.152 {85} (Radial)	21,467 cps	55.9883 ppm	4.3 %	2.4 ppm
Si 251.611 {134} (Radial)	7,945 cps	112.4448 ppm	3.3 %	3.7 ppm
Pb 220.353 {453} (Axial)	306 cps	0.3122 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		81.7695 %	0.3 %	0.2 %
Sc 361.384 {93} (Radial)		92.5194 %	0.5 %	0.4 %

Sample Prep and Screen Data

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168178** Prep Code: **MP_6010_S**

Start Date: **11/23/2020 1:50:00 PM** End Date: **11/23/2020 4:27:16 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	1 g
FinSampVol:	50 mL
OriginalFac:	50
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111726-35A	Soil		0.742		0	50	67.3854
20111726-41A	Soil		0.652		0	50	76.6871
20111726-41AMS	Soil		0.677		0	50	73.8552
20111726-41AMS	Soil		0.648		0	50	77.1605
20111726-47A	Soil		0.698		0	50	71.6332
20111754-01A	Soil		0.747		0	50	66.9344
20111754-03A	Soil		0.755		0	50	66.2252
20111754-05A	Soil		0.735		0	50	68.0272
20111754-06A	Soil		0.69		0	50	72.4638
20111754-07A	Soil		0.625		0	50	80
20111754-09A	Soil		0.739		0	50	67.659
20111754-11A	Soil		0.636		0	50	78.6164
20111754-13A	Soil		0.765		0	50	65.3595
20111754-15A	Soil		0.735		0	50	68.0272
20111754-17A	Soil		0.779		0	50	64.1849
20111754-18A	Soil		0.655		0	50	76.3359
20111754-19A	Soil		0.783		0	50	63.857
20111754-21A	Soil		0.725		0	50	68.9655
20111754-23A	Soil		0.741		0	50	67.4764
20111847-01A	Solid		0.625		0	50	80
20111847-02A	Solid		0.654		0	50	76.4526
20111847-03A	Solid		0.729		0	50	68.5871
LCS-168178			1		0	50	50
MBLK-168178			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168178** Prep Code: **MP_6010_S**

Start Date: **11/23/2020 1:50:00 PM** End Date: **11/23/2020 4:27:16 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	1 g
FinSampVol:	50 mL
OriginalFac:	50
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168378** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 1:59:41 PM** End Date: **11/29/2020 3:02:17 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111391-01B	Groundwater			25	0	27.5	1.1
20111391-01C	Groundwater			25	0	27.5	1.1
20111391-02B	Groundwater			25	0	27.5	1.1
20111391-02C	Groundwater			25	0	27.5	1.1
20111391-03B	Groundwater			25	0	27.5	1.1
20111391-03C	Groundwater			25	0	27.5	1.1
20111391-04B	Groundwater			25	0	27.5	1.1
20111391-04C	Groundwater			25	0	27.5	1.1
20111391-05B	Groundwater			25	0	27.5	1.1
20111391-05C	Groundwater			25	0	27.5	1.1
20111391-06B	Groundwater			25	0	27.5	1.1
20111754-02A	Tclp Extract			2.5	0	27.5	11
20111754-02AMS	Tclp Extract			2.5	0	27.5	11
20111754-02AMS	Tclp Extract			2.5	0	27.5	11
20111754-04A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-08A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-10A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-12A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-14A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168378** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 1:59:41 PM** End Date: **11/29/2020 3:02:17 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111754-16A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111754-20A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20112050-01A	Solid	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
LCS-168378				25	0	27.5	1.1
MBLK-168378				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168378** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 1:59:41 PM** End Date: **11/29/2020 3:02:17 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168379** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 2:02:56 PM** End Date: **11/29/2020 3:04:23 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111754-22A	Tclp Extract			2.5	0	27.5	11
20111754-22AMS	Tclp Extract			2.5	0	27.5	11
20111754-22AMS	Tclp Extract			2.5	0	27.5	11
20111754-24A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111764-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111764-04A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111764-06A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111823-01A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111824-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111826-01A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111827-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
LCS-168379				25	0	27.5	1.1
MBLK-168379				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

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PREP BATCH REPORT

Batch ID: **168379** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 2:02:56 PM** End Date: **11/29/2020 3:04:23 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

General Chemistry

ALS Enviromental - Holland Laboratory
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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F0:S000010	**Basis:**	Wet
Lab Code:	20111754-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:08
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1:S000010	**Basis:**	Wet
Lab Code:	20111754-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**17**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:34
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 09:55
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F1-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-06		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 10:38
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F2:S000010	**Basis:**	Wet
Lab Code:	20111754-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**19**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 11:26
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F3:S000010	**Basis:**	Wet
Lab Code:	20111754-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**19**	% of sample	0.10	1	11/29/20 14:53	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F4:S000010	**Basis:**	Wet
Lab Code:	20111754-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**26**	% of sample	0.10	1	11/29/20 14:53	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 12:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F5:S000010	**Basis:**	Wet
Lab Code:	20111754-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:10
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7:S000010	**Basis:**	Wet
Lab Code:	20111754-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/29/20 15:15	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TE:S000010	**Basis:**	Wet
Lab Code:	20111754-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/16/20 13:45
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F7-TS:S000010	**Basis:**	Wet
Lab Code:	20111754-18		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 08:40
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F6:S000010	**Basis:**	Wet
Lab Code:	20111754-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/29/20 15:15	NA	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:12
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F8:S000010	**Basis:**	Wet
Lab Code:	20111754-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/29/20 15:15	NA	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111754
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 09:58
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DU-F9:S000010	**Basis:**	Wet
Lab Code:	20111754-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/29/20 15:15	NA	

Moisture

Analyst:	KT			Date/Time In:	11/29/20 2:53 PM				Temp In Deg C:	105.3			
Review By:				Date/Time Out:	11/30/20 7:49 AM				Temp Out Deg C:	105.8			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_201129C				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	11			

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.1027	0	0.0000				1.1026	0.01	0.01	Moisture
LCS		LCS	LCS	1.0995	0	8.0922				9.1913	100.00	100.00	Moisture
20112166-25A	2	SAMP	C1	1.0975	0	6.8034				6.9492	86.01	13.99	Moisture
20112166-25A DUP	2	DUP	C2	1.0957	0	6.8323				6.9897	86.27	13.73	Moisture
20112166-20A	1	SAMP	C3	1.1057	0	6.5445				4.6642	54.37	45.63	Moisture
20112166-21A	1	SAMP	C4	1.0899	0	6.7264				4.6265	52.58	47.42	Moisture
20112166-22A	1	SAMP	C5	1.1026	0	8.5105				7.4499	74.58	25.42	Moisture
20112166-23A	1	SAMP	C6	1.0989	0	8.5207				8.729	89.55	10.45	Moisture
20112166-19A	1	SAMP	C7	1.0993	0	6.8629				6.5436	79.33	20.67	Moisture
20112166-24A	1	SAMP	C8	1.0865	0	8.7577				9.0945	91.44	8.56	Moisture
20112166-26A	1	SAMP	C9	1.0932	0	6.2274				6.2371	82.60	17.40	Moisture
20112166-27A	1	SAMP	C10	1.0919	0	6.7716				5.0892	59.03	40.97	Moisture
20112166-28A	1	SAMP	C11	1.0865	0	5.7111				4.9391	67.46	32.54	Moisture
20112166-31A	1	SAMP	C12	1.097	0	8.9133				9.2609	91.59	8.41	Moisture
20112166-31A DUP	1	DUP	C13	1.0898	0	8.886				9.1692	90.92	9.08	Moisture
20112166-29A	1	SAMP	C14	1.0916	0	6.986				5.4653	62.61	37.39	Moisture
20112166-30A	1	SAMP	C15	1.0945	0	6.2251				4.6565	57.22	42.78	Moisture
20111754-01A	1	SAMP	C16	1.0895	0	7.9831				8.2172	89.28	10.72	Moisture
20111754-03A	1	SAMP	C17	1.0895	0	7.2199				7.0659	82.78	17.22	Moisture
20111754-05A	1	SAMP	C18	1.0998	0	8.1705				7.9262	83.55	16.45	Moisture
20111754-07A	1	SAMP	C19	1.0955	0	8.0723				7.657	81.28	18.72	Moisture
20111754-06A	1	SAMP	C20	1.0894	0	6.3007				6.278	82.35	17.65	Moisture
20111754-09A	1	SAMP	C21	1.1011	0	8.7513				8.2065	81.19	18.81	Moisture
20111754-11A	1	SAMP	C22	1.0949	0	6.8181				6.1702	74.44	25.56	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/30/2020 9:34	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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Moisture

Analyst:	KT	Date/Time In:	11/29/20 3:15 PM	Temp In Deg C:	104
Review By:		Date/Time Out:	11/30/20 7:43 AM	Temp Out Deg C:	105.8
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_201129D	Sand BPL:	2049-184-4
SOP:	HN-WC-018	Balance ID:	6	Oven ID:	11

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.0869	0	0.0000				1.0863	0.06	0.06	Moisture
LCS		LCS	LCS	1.1048	0	9.0045				10.1089	100.00	100.00	Moisture
20111754-23A	1	SAMP	E1	1.1078	0	7.2688				7.2491	84.49	15.51	Moisture
20111754-23A DUP	1	DUP	E2	1.0975	0	7.2486				7.254	84.93	15.07	Moisture
20111754-21A	1	SAMP	E3	1.0941	0	7.1947				6.9579	81.50	18.50	Moisture
20111754-18A	1	SAMP	E4	1.0968	0	7.7198				7.9277	88.49	11.51	Moisture
20111754-19A	1	SAMP	E5	1.1011	0	7.5464				7.3008	82.15	17.85	Moisture
20111754-15A	1	SAMP	E6	1.1041	0	8.3102				8.3045	86.65	13.35	Moisture
20111754-13A	1	SAMP	E7	1.0909	0	7.4591				7.4102	84.72	15.28	Moisture
20111754-17A	1	SAMP	E8	1.0996	0	8.8921				8.5753	84.07	15.93	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		DUP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/30/2020 9:38	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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02-Dec-2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Re: **IDA001** Work Order: **20111754**

Dear Ray,

ALS Environmental received 24 samples on 19-Nov-2020 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 40.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: OH: CL 103

ALS Group, USA

Date: 02-Dec-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111754**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111754-01	IDA001:DU-F0:S000010	Soil	DU-F0	11/16/2020 08:40	11/19/2020 09:30	☐
20111754-02	IDA001:DU-F0:S000010	Tclp Extract	DU-F0	11/16/2020 08:40	11/19/2020 09:30	☐
20111754-03	IDA001:DU-F1:S000010	Soil	DU-F1	11/16/2020 09:08	11/19/2020 09:30	☐
20111754-04	IDA001:DU-F1:S000010	Tclp Extract	DU-F1	11/16/2020 09:08	11/19/2020 09:30	☐
20111754-05	IDA001:DU-F1-TE:S000010	Soil	DU-F1-TE	11/16/2020 09:34	11/19/2020 09:30	☐
20111754-06	IDA001:DU-F1-TS:S000010	Soil	DU-F1-TS	11/16/2020 09:55	11/19/2020 09:30	☐
20111754-07	IDA001:DU-F2:S000010	Soil	DU-F2	11/16/2020 10:38	11/19/2020 09:30	☐
20111754-08	IDA001:DU-F2:S000010	Tclp Extract	DU-F2	11/16/2020 10:38	11/19/2020 09:30	☐
20111754-09	IDA001:DU-F3:S000010	Soil	DU-F3	11/16/2020 11:26	11/19/2020 09:30	☐
20111754-10	IDA001:DU-F3:S000010	Tclp Extract	DU-F3	11/16/2020 11:26	11/19/2020 09:30	☐
20111754-11	IDA001:DU-F4:S000010	Soil	DU-F4	11/16/2020 12:00	11/19/2020 09:30	☐
20111754-12	IDA001:DU-F4:S000010	Tclp Extract	DU-F4	11/16/2020 12:00	11/19/2020 09:30	☐
20111754-13	IDA001:DU-F5:S000010	Soil	DU-F5	11/16/2020 12:45	11/19/2020 09:30	☐
20111754-14	IDA001:DU-F5:S000010	Tclp Extract	DU-F5	11/16/2020 12:45	11/19/2020 09:30	☐
20111754-15	IDA001:DU-F7:S000010	Soil	DU-F7	11/16/2020 13:10	11/19/2020 09:30	☐
20111754-16	IDA001:DU-F7:S000010	Tclp Extract	DU-F7	11/16/2020 13:10	11/19/2020 09:30	☐
20111754-17	IDA001:DU-F7-TE:S000010	Soil	DU-F7-TE	11/16/2020 13:30	11/19/2020 09:30	☐
20111754-18	IDA001:DU-F7-TS:S000010	Soil	DU-F7-TS	11/16/2020 13:45	11/19/2020 09:30	☐
20111754-19	IDA001:DU-F6:S000010	Soil	DU-F6	11/17/2020 08:40	11/19/2020 09:30	☐
20111754-20	IDA001:DU-F6:S000010	Tclp Extract	DU-F6	11/17/2020 08:40	11/19/2020 09:30	☐
20111754-21	IDA001:DU-F8:S000010	Soil	DU-F8	11/17/2020 09:12	11/19/2020 09:30	☐
20111754-22	IDA001:DU-F8:S000010	Tclp Extract	DU-F8	11/17/2020 09:12	11/19/2020 09:30	☐
20111754-23	IDA001:DU-F9:S000010	Soil	DU-F9	11/17/2020 09:58	11/19/2020 09:30	☐
20111754-24	IDA001:DU-F9:S000010	Tclp Extract	DU-F9	11/17/2020 09:58	11/19/2020 09:30	☐

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111754**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

Client:	Hull & Associates
Project:	IDA001
Work Order:	20111754

Case Narrative

Samples for the above noted Work Order were received on 11/19/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168178, Method SW6010D, Sample IDA001:DU-F0:S000010 (20111754-01A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1:S000010 (20111754-03A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1-TE:S000010 (20111754-05A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1-TS:S000010 (20111754-06A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F2:S000010 (20111754-07A): The

concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F3:S000010 (20111754-09A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F4:S000010 (20111754-11A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F5:S000010 (20111754-13A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7:S000010 (20111754-15A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7-TE:S000010 (20111754-17A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7-TS:S000010 (20111754-18A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F6:S000010 (20111754-19A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F8:S000010 (20111754-21A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is

necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F9:S000010 (20111754-23A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Wet Chemistry:
No other deviations or anomalies were noted.

Batch ID: **168178** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168178-168178** Units: **mg/Kg** Analysis Date: **11/30/2020 08:54 PM**

Client ID: Run ID: **ICP2_201130B** SeqNo: **6943662** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								

MBLK Sample ID: **MBLK-168178-168178** Units: **mg/Kg** Analysis Date: **12/1/2020 12:55 PM**

Client ID: Run ID: **ICP2_201201B** SeqNo: **6946781** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.7281	0.25								

LCS Sample ID: **LCS-168178-168178** Units: **mg/Kg** Analysis Date: **11/30/2020 08:59 PM**

Client ID: Run ID: **ICP2_201130B** SeqNo: **6943663** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.89	0.25	5	0	97.8	80-120	0			
Lead	5.693	0.25	5	0	114	80-120	0			B

MS Sample ID: **20111726-41AMS** Units: **mg/Kg** Analysis Date: **12/1/2020 02:08 PM**

Client ID: Run ID: **ICP2_201201B** SeqNo: **6948865** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.743	0.37	7.386	-3.052	133	75-125	0			S
Lead	21.27	0.37	7.386	18.71	34.6	75-125	0			BS

MSD Sample ID: **20111726-41AMSD** Units: **mg/Kg** Analysis Date: **12/1/2020 02:13 PM**

Client ID: Run ID: **ICP2_201201B** SeqNo: **6948866** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.273	0.39	7.716	-3.052	121	75-125	5.679	9.93	20	
Lead	27	0.39	7.716	18.71	107	75-125	22.3	19	20	B

The following samples were analyzed in this batch:

20111754-01A	20111754-03A	20111754-05A
20111754-06A	20111754-07A	20111754-09A
20111754-11A	20111754-13A	20111754-15A
20111754-17A	20111754-18A	20111754-19A
20111754-21A	20111754-23A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **168378** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168378-168378** Units: **mg/L** Analysis Date: **11/30/2020 11:21 PM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943691** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168378-168378** Units: **mg/L** Analysis Date: **11/30/2020 11:26 PM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943692** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09857	0.0050	0.1	0	98.6	80-120	0			
Lead	0.1098	0.0050	0.1	0	110	80-120	0			

MS Sample ID: **20111754-02AMS** Units: **mg/L** Analysis Date: **12/1/2020 12:43 AM**
Client ID: **IDA001:DU-F0:S000010** Run ID: **ICP2_201130B** SeqNo: **6943726** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.014	0.050	1	0.008052	101	75-125	0			
Lead	1.722	0.050	1	0.7293	99.3	75-125	0			

MSD Sample ID: **20111754-02AMSD** Units: **mg/L** Analysis Date: **12/1/2020 12:48 AM**
Client ID: **IDA001:DU-F0:S000010** Run ID: **ICP2_201130B** SeqNo: **6943733** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.006	0.050	1	0.008052	99.8	75-125	1.014	0.762	20	
Lead	1.718	0.050	1	0.7293	98.8	75-125	1.722	0.283	20	

The following samples were analyzed in this batch:

20111754-02A	20111754-04A	20111754-08A
20111754-10A	20111754-12A	20111754-14A
20111754-16A	20111754-20A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **168379** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168379-168379** Units: **mg/L** Analysis Date: **12/1/2020 01:45 AM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943747** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168379-168379** Units: **mg/L** Analysis Date: **12/1/2020 01:50 AM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943748** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09691	0.0050	0.1	0	96.9	80-120	0			
Lead	0.1079	0.0050	0.1	0	108	80-120	0			

MS Sample ID: **20111754-22AMS** Units: **mg/L** Analysis Date: **12/1/2020 02:10 AM**
Client ID: **IDA001:DU-F8:S000010** Run ID: **ICP2_201130B** SeqNo: **6943752** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.013	0.050	1	-0.004378	102	75-125	0			
Lead	1.467	0.050	1	0.4389	103	75-125	0			

MSD Sample ID: **20111754-22AMSD** Units: **mg/L** Analysis Date: **12/1/2020 02:15 AM**
Client ID: **IDA001:DU-F8:S000010** Run ID: **ICP2_201130B** SeqNo: **6943753** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.99	0.050	1	-0.004378	99.4	75-125	1.013	2.28	20	
Lead	1.487	0.050	1	0.4389	105	75-125	1.467	1.32	20	

The following samples were analyzed in this batch: 20111754-22A 20111754-24A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **R304622** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R304622** Units: **% of sample** Analysis Date: **11/29/2020 02:53 PM**
Client ID: Run ID: **MOIST_201129C** SeqNo: **6939769** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R304622** Units: **% of sample** Analysis Date: **11/29/2020 02:53 PM**
Client ID: Run ID: **MOIST_201129C** SeqNo: **6939768** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20112166-25A DUP** Units: **% of sample** Analysis Date: **11/29/2020 02:53 PM**
Client ID: Run ID: **MOIST_201129C** SeqNo: **6939760** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.73	0.10	0	0	0	0-0	13.99	1.88	10	

DUP Sample ID: **20112166-31A DUP** Units: **% of sample** Analysis Date: **11/29/2020 02:53 PM**
Client ID: Run ID: **MOIST_201129C** SeqNo: **6939767** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.08	0.10	0	0	0	0-0	8.41	7.66	10	

The following samples were analyzed in this batch:

20111754-01A	20111754-03A	20111754-05A
20111754-06A	20111754-07A	20111754-09A
20111754-11A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **R304624** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R304624** Units: **% of sample** Analysis Date: **11/29/2020 03:15 PM**
Client ID: Run ID: **MOIST_201129D** SeqNo: **6939783** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R304624** Units: **% of sample** Analysis Date: **11/29/2020 03:15 PM**
Client ID: Run ID: **MOIST_201129D** SeqNo: **6939782** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20111754-23A DUP** Units: **% of sample** Analysis Date: **11/29/2020 03:15 PM**
Client ID: **IDA001:DU-F9:S000010** Run ID: **MOIST_201129D** SeqNo: **6939781** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.07	0.10	0	0	0	0-0	15.51	2.88	10	

The following samples were analyzed in this batch:

20111754-13A	20111754-15A	20111754-17A
20111754-18A	20111754-19A	20111754-21A
20111754-23A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F0:S000010
Collection Date: 11/16/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-01
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**8.0**		**0.97**	**3.7**	**mg/Kg-dry**	10	12/1/2020 14:24
Lead	**450**	B	**3.0**	**3.7**	**mg/Kg-dry**	10	12/1/2020 14:24
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**11**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F0:S000010
Collection Date: 11/16/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-02
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 00:38
Lead	**0.73**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 00:38

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1:S000010
Collection Date: 11/16/2020 09:08 AM

Work Order: 20111754
Lab ID: 20111754-03
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**47**		**1.0**	**4.0**	**mg/Kg-dry**	10	12/1/2020 14:29
Lead	**2,000**	B	**3.2**	**4.0**	**mg/Kg-dry**	10	12/1/2020 14:29
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1:S000010
Collection Date: 11/16/2020 09:08 AM

Work Order: 20111754
Lab ID: 20111754-04
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:03
Lead	**0.43**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1-TE:S000010
Collection Date: 11/16/2020 09:34 AM

Work Order: 20111754
Lab ID: 20111754-05
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**37**		**1.1**	**4.1**	**mg/Kg-dry**	10	12/1/2020 14:34
Lead	**2,400**	B	**3.3**	**4.1**	**mg/Kg-dry**	10	12/1/2020 14:34
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1-TS:S000010
Collection Date: 11/16/2020 09:55 AM

Work Order: 20111754
Lab ID: 20111754-06
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**18**		**1.1**	**4.4**	**mg/Kg-dry**	10	12/1/2020 14:38
Lead	**770**	B	**3.5**	**4.4**	**mg/Kg-dry**	10	12/1/2020 14:38
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F2:S000010
Collection Date: 11/16/2020 10:38 AM

Work Order: 20111754
Lab ID: 20111754-07
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**18**		**1.3**	**4.9**	**mg/Kg-dry**	10	12/1/2020 14:43
Lead	**900**	B	**3.9**	**4.9**	**mg/Kg-dry**	10	12/1/2020 14:43
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**19**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F2:S000010
Collection Date: 11/16/2020 10:38 AM

Work Order: 20111754
Lab ID: 20111754-08
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:09
Lead	**0.47**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F3:S000010
Collection Date: 11/16/2020 11:26 AM

Work Order: 20111754
Lab ID: 20111754-09
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**26**		**1.1**	**4.2**	**mg/Kg-dry**	10	12/1/2020 14:48
Lead	**1,300**	B	**3.3**	**4.2**	**mg/Kg-dry**	10	12/1/2020 14:48
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**19**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F3:S000010
Collection Date: 11/16/2020 11:26 AM

Work Order: 20111754
Lab ID: 20111754-10
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:14
Lead	**0.36**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F4:S000010
Collection Date: 11/16/2020 12:00 PM

Work Order: 20111754
Lab ID: 20111754-11
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**25**		**1.4**	**5.3**	**mg/Kg-dry**	10	12/1/2020 15:04
Lead	**1,300**	B	**4.2**	**5.3**	**mg/Kg-dry**	10	12/1/2020 15:04
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**26**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F4:S000010
Collection Date: 11/16/2020 12:00 PM

Work Order: 20111754
Lab ID: 20111754-12
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:19
Lead	**0.41**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F5:S000010
Collection Date: 11/16/2020 12:45 PM

Work Order: 20111754
Lab ID: 20111754-13
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**6.1**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:21
Lead	**200**	B	**3.1**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:21
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F5:S000010
Collection Date: 11/16/2020 12:45 PM

Work Order: 20111754
Lab ID: 20111754-14
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:24
Lead	**0.080**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7:S000010
Collection Date: 11/16/2020 01:10 PM

Work Order: 20111754
Lab ID: 20111754-15
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**13**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:26
Lead	**610**	B	**3.1**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:26
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**13**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7:S000010
Collection Date: 11/16/2020 01:10 PM

Work Order: 20111754
Lab ID: 20111754-16
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:29
Lead	**0.30**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7-TE:S000010
Collection Date: 11/16/2020 01:30 PM

Work Order: 20111754
Lab ID: 20111754-17
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**17**		**0.99**	**3.8**	**mg/Kg-dry**	10	11/30/2020 22:31
Lead	**620**	B	**3.1**	**3.8**	**mg/Kg-dry**	10	11/30/2020 22:31
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7-TS:S000010
Collection Date: 11/16/2020 01:45 PM

Work Order: 20111754
Lab ID: 20111754-18
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**10**		**1.1**	**4.3**	**mg/Kg-dry**	10	11/30/2020 22:36
Lead	**310**	B	**3.5**	**4.3**	**mg/Kg-dry**	10	11/30/2020 22:36
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F6:S000010
Collection Date: 11/17/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-19
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**7.7**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:41
Lead	**240**	B	**3.1**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:41
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F6:S000010
Collection Date: 11/17/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-20
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:34
Lead	**1.1**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F8:S000010
Collection Date: 11/17/2020 09:12 AM

Work Order: 20111754
Lab ID: 20111754-21
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**33**		**1.1**	**4.2**	**mg/Kg-dry**	10	11/30/2020 22:46
Lead	**880**	B	**34**	**42**	**mg/Kg-dry**	100	12/1/2020 15:09
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F8:S000010
Collection Date: 11/17/2020 09:12 AM

Work Order: 20111754
Lab ID: 20111754-22
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 02:05
Lead	**0.44**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 02:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F9:S000010
Collection Date: 11/17/2020 09:58 AM

Work Order: 20111754
Lab ID: 20111754-23
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**46**		**1.0**	**4.0**	**mg/Kg-dry**	10	11/30/2020 23:01
Lead	**740**	B	**32**	**40**	**mg/Kg-dry**	100	12/1/2020 15:14
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F9:S000010
Collection Date: 11/17/2020 09:58 AM

Work Order: 20111754
Lab ID: 20111754-24
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 02:20
Lead	**0.29**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 02:20

Note: See Qualifiers page for a list of qualifiers and their definitions.

20111754

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK PAGE 1 OF 2
DATA ADMIN
LANCE TURLEY NO. 380

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: RAYMOND KENNEDY

Client: IDA
Site: USS LEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA001_DUS_RI/FS01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	PRESERVATIVES	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD					COMMENTS
IDA001 : DU-F0 : S000010	1	COMPOSITE	11/16/20/0840	N	J	X	X	X	X					
IDA001 : DU-F1 : S000010	1	COMPOSITE	11/16/20/0908	N	J	X	X	X	X					
IDA001 : DU-F1-TE : S000010	1	COMPOSITE	11/16/20/0934	N	J	X	X							
IDA001 : DU-F1-TS : S000010	1	COMPOSITE	11/16/20/0955	N	J	X	X							
IDA001 : DU-F2 : S000010	1	COMPOSITE	11/16/20/1038	N	J	X	X	X	X					
IDA001 : DU-F3 : S000010	1	COMPOSITE	11/16/20/1126	N	J	X	X	X	X					
IDA001 : DU-F4 : S000010	1	COMPOSITE	11/16/20/1200	N	J	X	X	X	X					
IDA001 : DU-F5 : S000010	1	COMPOSITE	11/16/20/1245	N	J	X	X	X	X					
IDA001 : DU-F7 : S000010	1	COMPOSITE	11/16/20/1310	N	J	X	X	X	X					
IDA001 : DU-F7-TE : S000010	1	COMPOSITE	11/16/20/1330	N	J	X	X							
IDA001 : DU-F7-TS : S000010	1	COMPOSITE	11/16/20/1345	N	J	X	X							
IDA001 : DU-F6 : S000010	1	COMPOSITE	11/17/20/0840	N	J	X	X	X	X					

RELINQUISHED BY:	DATE: 11/18/2020	RECEIVED BY: FEDEX	DATE: 11/18/2020
	TIME: 1600		TIME: 1600
RELINQUISHED BY: FEDEX	DATE: 11/19/20	RECEIVED BY:	DATE:
	TIME: 0930		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

Deliver To: ALS-HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

COOLER TEMPERATURE
AS RECEIVED 1.9, 2.4, 2.1 °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

479
482

IR3

20111754

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

TERRIE BARANEK PAGE 1 OF 2
DATA ADMIN NO. 381
LANCE TURLEY
REPORT TO: RAYMOND KENNEDY

Client: IDA
Site: VOS LEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA001_DUS_BLK01

SAMPLE MATRIX	PRESERVATIVES		METALS
AA-AMBIENT AIR	A-Cool only, <4 deg. C	H-EDTA	N - Not filtered
C-ASBESTOS	B-HNO_3 pH<2	I-5ml 1:1 HCL	F45u- filtered with 0.45 micron
D-SEDIMENT	C-H_2SO_4 pH<2	J-none	F5u- filtered with 5 micron
G-GROUNDWATER	D-NaOH pH>12	K-Stored in dark	
IA-INDOOR AIR	E-ZnAcetate + NaOH, pH>9	L-NH_4Cl	
L-LEACHATE	F-$Na_2S_2O_3$ (0.008%)	M-Methanol	
P-PRODUCT	G-HCL pH <2	S-Sodium	
S-SOIL			
SG-SOIL GAS			
SS-SUBSLAB VAPOR			
W-WATER			
X-CONCRETE			

ANALYSES

PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010 D	LEAD 6010 D	TCLP- ARSENIC	TCLP- LEAD	COMMENTS
IDA001 : DU-F8 : S000010	1	COMPOSITE	11/17/20/0912	N	X	X	X	X	
IDA001 : DU-F9 : S000010	1	COMPOSITE	11/17/20/0958	N	X	X	X	X	
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						

~~RELINQUISHED BY:~~	DATE: 11/18/2020	RECEIVED BY: FEDEX	DATE: 11/18/2020
	TIME: 1600		TIME: 1600
RELINQUISHED BY:	DATE: 11/19/20	RECEIVED BY:	DATE:
	TIME: 0930		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

480 482

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

COOLER TEMPERATURE AS RECEIVED °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

UK

Pace Analytical®

CUSTODY SEAL

SIGNATURE

DATE 11.18.20

ALS Group, USA

Sample Receipt Checklist

Client Name: **HULL&ASSOC-DUBLIN** Date/Time Received: **19-Nov-20 09:30**

Work Order: **20111754** Received by: **KRW**

Checklist completed by Keith Wierenga eSignature 19-Nov-20 Date Reviewed by: Bill Carey eSignature 19-Nov-20 Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.9, 2.4, 2.1 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/19/2020 1:12:33 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

December 09, 2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Work Order: **20111764**

Re: **IDA001**

Dear Ray,

ALS Environmental received 7 sample(s) on Nov 19, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 2553.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Bill Carey
/S/ Bill Carey

Bill Carey
Project Manager

Narrative Documents

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: Hull & Associates
Project: IDA001
Work Order: 20111764

Case Narrative

Samples for the above noted Work Order were received on 11/19/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
No other deviations or anomalies were noted.

Extractable Organics:
No other deviations or anomalies were noted.

Metals:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:E2-3:S000010			Lab ID: 20111764-01			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Flashpoint/Ignitability	>200		1.00	50.0	°F	SW1010AMOD
pH	8.34		0.100	0.100	s.u.	SW9045D
Temperature	20.1		0.100	0.100	°C	SW9045D

CLIENT ID: IDA001:E2-3:S00010			Lab ID: 20111764-02			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Barium	0.65		0.043	0.050	mg/L	SW6010D
Cadmium	0.10		0.0078	0.10	mg/L	SW6010D
Lead	29	*	0.13	0.50	mg/L	SW6010D

CLIENT ID: IDA001:C5-3:S00010			Lab ID: 20111764-03			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Flashpoint/Ignitability	>200		1.00	50.0	°F	SW1010AMOD
pH	7.65		0.100	0.100	s.u.	SW9045D
Temperature	20.2		0.100	0.100	°C	SW9045D

CLIENT ID: IDA001:C5-3:S00010			Lab ID: 20111764-04			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Barium	1.4		0.043	0.050	mg/L	SW6010D
Lead	0.098		0.013	0.050	mg/L	SW6010D
Benzene	200		9.2	20	ug/L	SW8260C

CLIENT ID: IDA001:B8-3:S00010			Lab ID: 20111764-05			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Flashpoint/Ignitability	>200		1.00	50.0	°F	SW1010AMOD
pH	7.57		0.100	0.100	s.u.	SW9045D
Temperature	20.0		0.100	0.100	°C	SW9045D

CLIENT ID: IDA001:B8-3:S00010			Lab ID: 20111764-06			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Barium	1.4		0.043	0.050	mg/L	SW6010D
Cadmium	0.013	J	0.0078	0.10	mg/L	SW6010D
Lead	0.12		0.013	0.050	mg/L	SW6010D
Benzene	77		9.2	20	ug/L	SW8260C

CLIENT ID: IDA001:DECONWATER:W111720			Lab ID: 20111764-07			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Mercury	0.00089		0.00016	0.00020	mg/L	SW7470A
Arsenic	0.17		0.00019	0.0050	mg/L	SW6020B
Barium	0.23		0.0020	0.0050	mg/L	SW6020B
Cadmium	0.020		0.00015	0.0020	mg/L	SW6020B
Chromium	0.17		0.0020	0.0050	mg/L	SW6020B
Lead	7.4		0.0072	0.050	mg/L	SW6020B
Selenium	0.0048	J	0.00048	0.0050	mg/L	SW6020B

SAMPLE DETECTION SUMMARY

CLIENT ID: IDA001:DECONWATER:W111720			Lab ID: 20111764-07			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Silver	0.016		0.00084	0.0050	mg/L	SW6020B

Sample Receipt Information

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

ALS Group, USA

Date: 08-Dec-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111764**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111764-01	IDA001:E2-3:S000010	Soil	E2-3	11/17/2020 10:15	11/19/2020 09:30	☐
20111764-02	IDA001:E2-3:S00010	Tclp Extract	E2-3	11/17/2020 10:15	11/19/2020 09:30	☐
20111764-03	IDA001:C5-3:S00010	Soil	C5-3	11/17/2020 10:30	11/19/2020 09:30	☐
20111764-04	IDA001:C5-3:S00010	Tclp Extract	C5-3	11/17/2020 10:30	11/19/2020 09:30	☐
20111764-05	IDA001:B8-3:S00010	Soil	B8-3	11/17/2020 10:50	11/19/2020 09:30	☐
20111764-06	IDA001:B8-3:S00010	Tclp Extract	B8-3	11/17/2020 10:50	11/19/2020 09:30	☐
20111764-07	IDA001:DECONWATER:W111720	Water	DECONWATER	11/17/2020 11:41	11/19/2020 09:30	☐

20111764

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK
DATA ADMIN
LANCE TURLEY

PAGE 1 OF 1

NO. 382

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: RAYMOND KENNEDY

Client: IDA
Site: USLEAD OU-1, ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOIS / SEREMY CONNER
Purchase Order # IDA001_DUS_BLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	PRESERVATIVES	TCLP - VOCs	TCLP - SVOCs	IGNITABILITY SW1030	pH 9045C	RCRA 8 METALS	TCLP - RCRA 8 METALS			COMMENTS
IDA001 : E2-3 : S000010	5	DISCRETE	11/17/20 / 1015	N		X	X	X	X		X			
IDA001 : C5-3 : S000010	5	~~DISCRETE~~ DISCRETE	11/17/20 / 1030	N		X	X	X	X		X			
IDA001 : BB-3 : S000010	5	DISCRETE	11/17/20 / 1050	N		X	X	X	X		X			
IDA001 : DEION-WATER : W111720	2	DISCRETE	11/17/20 / 1141	N						X				
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											

RELINQUISHED BY:	DATE: 11/18/2020	RECEIVED BY: FEDEX	DATE: 11/18/2020	Deliver To: ALS-HOLLAND, MI
RELINQUISHED BY: FEDEX	TIME: 1600	RECEIVED BY:	TIME: 1600	Method of Delivery: FEDEX
	DATE: 11/19/20		DATE:	Airbill Number:
	TIME: 0930		TIME:	Regulatory Program: CERCLA
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:	Required Limits:
	TIME:		TIME:	

8 of 553

COOLER TEMPERATURE AS RECEIVED 4.7 °C IR3

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES:

TURN AROUND TIME: STD DAYS

ALS Group, USA

Sample Receipt Checklist

Client Name: ***HULL&ASSOC-DUBLIN*** Date/Time Received: ***19-Nov-20 09:30***

Work Order: ***20111764*** Received by: ***KRW***

Checklist completed by Keith Wierenga (eSignature) 19-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 19-Nov-20 (Date)

Matrices: Soil & Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.7/5.7 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/19/2020 2:20:54 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Miscellaneous Forms

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111764**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

Analyst Summary report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Sample Name: IDA001:E2-3:S000010 **Date Collected:** 11/17/2020
Lab Code: 20111764-01A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW1010AMOD		RZM
SW9045D		QTN

Sample Name: IDA001:E2-3:S00010 **Date Collected:** 11/17/2020
Lab Code: 20111764-02A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW7470A		MAC
SW6010D		ABL
SW8270D		EE
SW8260C		BG

Sample Name: IDA001:C5-3:S00010 **Date Collected:** 11/17/2020
Lab Code: 20111764-03A **Date Received:** 11/19/2020
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
SW1010AMOD		RZM
SW9045D		QTN

Sample Name: IDA001:C5-3:S00010 **Date Collected:** 11/17/2020
Lab Code: 20111764-04A **Date Received:** 11/19/2020
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SW7470A		MAC
SW6010D		ABL
SW8270D		EE
SW8260C		JNS

Analyst Summary report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001		

Sample Name:	IDA001:B8-3:S00010	**Date Collected:**	11/17/2020
Lab Code:	20111764-05A	**Date Received:**	11/19/2020
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
SW1010AMOD		RZM
SW9045D		QTN

Sample Name:	IDA001:B8-3:S00010	**Date Collected:**	11/17/2020
Lab Code:	20111764-06A	**Date Received:**	11/19/2020
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
SW7470A		MAC
SW6010D		ABL
SW8270D		EE
SW8260C		MF

Sample Name:	IDA001:DECONWATER:W111720	**Date Collected:**	11/17/2020
Lab Code:	20111764-07A	**Date Received:**	11/19/2020
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
SW7470A		MAC
SW6020B		STP

Sample Results

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Volatile Organic Compounds by GCMS

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S00010	**Units:**	ug/L
Lab Code:	20111764-02	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
1,2-Dichloroethane	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
2-Butanone	100 U	100	20	12/01/20 23:00	11/30/20 10:24	
Benzene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Carbon tetrachloride	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Chlorobenzene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Chloroform	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Tetrachloroethene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Trichloroethene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Vinyl chloride	20 U	20	20	12/01/20 23:00	11/30/20 10:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	105	85 - 115	12/01/20 23:00	
1,2-Dichloroethane-d4	108	75 - 120	12/01/20 23:00	
Toluene-d8	103	85 - 110	12/01/20 23:00	
4-Bromofluorobenzene	91.5	80 - 110	12/01/20 23:00	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Units:**	ug/L
Lab Code:	20111764-04	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
1,2-Dichloroethane	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Carbon tetrachloride	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Chlorobenzene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Chloroform	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Tetrachloroethene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Vinyl chloride	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
2-Butanone	100 U	100	20	11/28/20 01:14	11/25/20 12:36	
Benzene	**200**	20	20	11/28/20 01:14	11/25/20 12:36	
Trichloroethene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	102	85 - 115	11/28/20 01:14	
1,2-Dichloroethane-d4	103	75 - 120	11/28/20 01:14	
Toluene-d8	101	85 - 110	11/28/20 01:14	
4-Bromofluorobenzene	101	80 - 110	11/28/20 01:14	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Units:**	ug/L
Lab Code:	20111764-06	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
1,2-Dichloroethane	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
2-Butanone	100 U	100	20	12/01/20 13:46	11/25/20 12:36	
Carbon tetrachloride	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Chlorobenzene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Chloroform	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Tetrachloroethene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Vinyl chloride	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Benzene	**77**	20	20	12/01/20 13:46	11/25/20 12:36	
Trichloroethene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	101	85 - 115	12/01/20 13:46	
1,2-Dichloroethane-d4	96.7	75 - 120	12/01/20 13:46	
Toluene-d8	101	85 - 110	12/01/20 13:46	
4-Bromofluorobenzene	103	80 - 110	12/01/20 13:46	

Semivolatile Organic Compounds by GCMS

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S00010	**Units:**	ug/L
Lab Code:	20111764-02	**Basis:**	Wet

Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Prep Method: SW3510

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
2,4,5-Trichlorophenol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
2,4,6-Trichlorophenol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
2,4-Dinitrotoluene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Hexachloro-1,3-butadiene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Hexachlorobenzene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Hexachloroethane	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
m-Cresol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Nitrobenzene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
o-Cresol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
p-Cresol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Pentachlorophenol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Pyridine	200 U	200	1	12/01/20 01:20	11/27/20 12:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorophenol	33.4	13 - 56	12/01/20 01:20	
Phenol-d6	23.0	10 - 35	12/01/20 01:20	
Nitrobenzene-d5	45.6	29 - 80	12/01/20 01:20	
2-Fluorobiphenyl	47.2	26 - 79	12/01/20 01:20	
2,4,6-Tribromophenol	52.3	27 - 83	12/01/20 01:20	
4-Terphenyl-d14	71.1	43 - 106	12/01/20 01:20	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Units:**	ug/L
Lab Code:	20111764-04	**Basis:**	Wet

Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Prep Method: SW3510

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
2,4,5-Trichlorophenol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
2,4,6-Trichlorophenol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
2,4-Dinitrotoluene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Hexachloro-1,3-butadiene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Hexachlorobenzene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Hexachloroethane	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
m-Cresol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Nitrobenzene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
o-Cresol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
p-Cresol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Pentachlorophenol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Pyridine	200 U	200	1	12/01/20 01:43	11/27/20 12:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorophenol	39.3	13 - 56	12/01/20 01:43	
Phenol-d6	27.5	10 - 35	12/01/20 01:43	
Nitrobenzene-d5	51.5	29 - 80	12/01/20 01:43	
2-Fluorobiphenyl	50.4	26 - 79	12/01/20 01:43	
2,4,6-Tribromophenol	58.5	27 - 83	12/01/20 01:43	
4-Terphenyl-d14	72.7	43 - 106	12/01/20 01:43	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Units:**	ug/L
Lab Code:	20111764-06	**Basis:**	Wet

Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Prep Method: SW3510

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
2,4,5-Trichlorophenol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
2,4,6-Trichlorophenol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
2,4-Dinitrotoluene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Hexachloro-1,3-butadiene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Hexachlorobenzene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Hexachloroethane	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
m-Cresol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Nitrobenzene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
o-Cresol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
p-Cresol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Pentachlorophenol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Pyridine	200 U	200	1	12/01/20 02:07	11/27/20 12:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorophenol	39.0	13 - 56	12/01/20 02:07	
Phenol-d6	26.1	10 - 35	12/01/20 02:07	
Nitrobenzene-d5	52.6	29 - 80	12/01/20 02:07	
2-Fluorobiphenyl	52.8	26 - 79	12/01/20 02:07	
2,4,6-Tribromophenol	55.8	27 - 83	12/01/20 02:07	
4-Terphenyl-d14	75.1	43 - 106	12/01/20 02:07	

Metals

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S00010	**Basis:**	Wet
Lab Code:	20111764-02		

Metals

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050	U	mg/L	0.050	1	12/01/20 02:25	11/29/20 15:04	
Barium	SW6010D	**0.65**		mg/L	0.050	1	12/01/20 02:25	11/29/20 15:04	
Cadmium	SW6010D	**0.10**		mg/L	0.10	1	12/01/20 02:25	11/29/20 15:04	
Chromium	SW6010D	0.10	U	mg/L	0.10	1	12/01/20 02:25	11/29/20 15:04	
Lead	SW6010D	**29**	*	mg/L	0.50	10	12/01/20 15:19	11/29/20 15:04	
Mercury	SW7470A	0.0020	U	mg/L	0.0020	1	11/30/20 16:57	11/30/20 13:10	
Selenium	SW6010D	0.10	U	mg/L	0.10	1	12/01/20 02:25	11/29/20 15:04	
Silver	SW6010D	0.050	U	mg/L	0.050	1	12/01/20 02:25	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Basis:**	Wet
Lab Code:	20111764-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	
Barium	SW6010D	**1.4**	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	
Cadmium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:30	11/29/20 15:04	
Chromium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:30	11/29/20 15:04	
Lead	SW6010D	**0.098**	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	
Mercury	SW7470A	0.0020 U	mg/L	0.0020	1	11/30/20 16:59	11/30/20 13:10	
Selenium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:30	11/29/20 15:04	
Silver	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Basis:**	Wet
Lab Code:	20111764-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	
Barium	SW6010D	**1.4**	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	
Cadmium	SW6010D	**0.013 J**	mg/L	0.10	1	12/01/20 02:36	11/29/20 15:04	
Chromium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:36	11/29/20 15:04	
Lead	SW6010D	**0.12**	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	
Mercury	SW7470A	0.0020 U	mg/L	0.0020	1	11/30/20 17:00	11/30/20 13:10	
Selenium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:36	11/29/20 15:04	
Silver	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 11:41
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DECONWATER:W111720	**Basis:**	Wet
Lab Code:	20111764-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6020B	**0.17**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	
Barium	SW6020B	**0.23**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	
Cadmium	SW6020B	**0.020**	mg/L	0.0020	1	11/30/20 23:55	11/30/20 13:11	
Chromium	SW6020B	**0.17**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	
Lead	SW6020B	**7.4**	mg/L	0.050	10	12/01/20 16:11	11/30/20 13:11	
Mercury	SW7470A	**0.00089**	mg/L	0.00020	1	11/30/20 17:02	11/30/20 13:10	
Selenium	SW6020B	**0.0048**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	**J**
Silver	SW6020B	**0.016**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	

General Chemistry

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Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S000010	**Basis:**	Wet
Lab Code:	20111764-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Flashpoint/Ignitability	SW1010AMOD	**>200**	°F	50.0	1	12/02/20 15:45	NA	
pH	SW9045D	**8.34**	s.u.	0.100	1	11/21/20 12:15	11/20/20 19:30	
Temperature	SW9045D	**20.1**	°C	0.100	1	11/21/20 12:15	11/20/20 19:30	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Basis:**	Wet
Lab Code:	20111764-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Flashpoint/Ignitability	SW1010AMOD	**>200**	°F	50.0	1	12/02/20 15:45	NA	
pH	SW9045D	**7.65**	s.u.	0.100	1	11/21/20 12:15	11/20/20 19:30	
Temperature	SW9045D	**20.2**	°C	0.100	1	11/21/20 12:15	11/20/20 19:30	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Basis:**	Wet
Lab Code:	20111764-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Flashpoint/Ignitability	SW1010AMOD	**>200**	°F	50.0	1	12/02/20 15:45	NA	
pH	SW9045D	**7.57**	s.u.	0.100	1	11/21/20 12:15	11/20/20 19:30	
Temperature	SW9045D	**20.0**	°C	0.100	1	11/21/20 12:15	11/20/20 19:30	

QC Summary Forms

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Volatile Organic Compounds by GCMS

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Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Sample Name	Lab Code	1,2-Dichloroethane-d4 75 - 120	4-Bromofluorobenzene 80 - 110	Dibromofluoromethane 85 - 115
IDA001:E2-3:S00010	20111764-02	108	91.5	105
IDA001:C5-3:S00010	20111764-04	103	101	102
IDA001:B8-3:S00010	20111764-06	96.7	103	101
20111800-04F MS	20111800-04F MS	97.3	130 S *	97.7
20111800-04F MSD	20111800-04F MSD	100	127 S *	99.0
20111803-03A MS	20111803-03A MS	96.8	101	99.4
20111803-03A MSD	20111803-03A MSD	93.8	99.8	98.3
20111985-06A MS	20111985-06A MS	102	99.6	105
20111985-06A MSD	20111985-06A MSD	101	102	104
VBLKW1-201201	VBLKW1-201201	94.4	102	100
VBLKW2-201127	VBLKW2-201127	105	103	104
VLCSW1-201127	VLCSW1-201127	101	99.5	102
VLCSW1-201201	VLCSW1-201201	89.5	101	96.8

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Sample Name	Lab Code	Toluene-d8 85 - 110
IDA001:E2-3:S00010	20111764-02A	103
IDA001:C5-3:S00010	20111764-04A	101
IDA001:B8-3:S00010	20111764-06A	101
20111800-04F MS	20111800-04F MS	100
20111800-04F MSD	20111800-04F MSD	101
20111803-03A MS	20111803-03A MS	102
20111803-03A MSD	20111803-03A MSD	99.8
20111985-06A MS	20111985-06A MS	101
20111985-06A MSD	20111985-06A MSD	104
VBLKW1-201201	VBLKW1-201201	101
VBLKW2-201127	VBLKW2-201127	102
VLCSW1-201127	VLCSW1-201127	101
VLCSW1-201201	VLCSW1-201201	103

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/28/2020

Matrix Spike Summary
Volatile Organic Compounds by GCMS

Sample Name:	BatchQC	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8260C		

20111800-04F MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Vinyl chloride	0	11260 H	10000	113	50-136
1,1-Dichloroethene	0	11880 H	10000	119	70-145
2-Butanone	0	11450 H	10000	114	55-150
Chloroform	0	9970 H	10000	99.7	66-135
Carbon tetrachloride	0	9290 H	10000	92.9	65-140
Benzene	0	11110 H	10000	111	70-130
1,2-Dichloroethane	0	10440 H	10000	104	78-125
Trichloroethene	0	10440 H	10000	104	77-125
Tetrachloroethene	0	11340 H	10000	113	68-166
Chlorobenzene	0	11380 H	10000	114	80-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020

Matrix Spike Summary
Volatile Organic Compounds by GCMS

Sample Name:	BatchQC	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8260C		

20111803-03A MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Vinyl chloride	0	1048 HHH	1000	105	50-136
1,1-Dichloroethene	0	1115 HHH	1000	112	70-145
2-Butanone	0	1050 HHH	1000	105	55-150
Chloroform	0	972.5 HHH	1000	97.2	66-135
Carbon tetrachloride	0	950 HHH	1000	95.0	65-140
Benzene	0	1094 HHH	1000	109	70-130
1,2-Dichloroethane	0	998.5 HHH	1000	99.8	78-125
Trichloroethene	0	1058 HHH	1000	106	77-125
Tetrachloroethene	0	1112 HHH	1000	111	68-166
Chlorobenzene	0	1100 HHH	1000	110	80-120

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/02/2020

Matrix Spike Summary
Volatile Organic Compounds by GCMS

Sample Name:	BatchQC	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8260C		

20111985-06A MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Vinyl chloride	0	23.34 H	20	117	50-136
1,1-Dichloroethene	0	22.34 H	20	112	70-145
2-Butanone	0	18.84 H	20	94.2	55-150
Chloroform	0	19.7 H	20	98.5	66-135
Carbon tetrachloride	0	20.73 H	20	104	65-140
Benzene	0	22.01 H	20	110	70-130
1,2-Dichloroethane	0	21.81 H	20	109	78-125
Trichloroethene	0	22.36 H	20	112	77-125
Tetrachloroethene	0	22.72 H	20	114	68-166
Chlorobenzene	0	21.24 H	20	106	80-120

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/28/2020

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GCMS

Sample Name:	20111800-04F	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8260C		

		Matrix Spike 20111800-04F MS			Duplicate Matrix Spike 20111800-04F MSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	0	11880 H	10000	119	11660 H	10000	117	70-145	1.91	30
1,2-Dichloroethane	0	10440 H	10000	104	10400 H	10000	104	78-125	0.384	30
2-Butanone	0	11450 H	10000	114	11030 H	10000	110	55-150	3.74	30
Benzene	0	11110 H	10000	111	10880 H	10000	109	70-130	2.05	30
Carbon tetrachloride	0	9290 H	10000	92.9	9325 H	10000	93.2	65-140	0.376	30
Chlorobenzene	0	11380 H	10000	114	11070 H	10000	111	80-120	2.81	30
Chloroform	0	9970 H	10000	99.7	9860 H	10000	98.6	66-135	1.11	30
Tetrachloroethene	0	11340 H	10000	113	11100 H	10000	111	68-166	2.14	30
Trichloroethene	0	10440 H	10000	104	10700 H	10000	107	77-125	2.55	30
Vinyl chloride	0	11260 H	10000	113	10740 H	10000	107	50-136	4.77	30
1,4-Dichlorobenzene-d4	0	10000 H	10000	100	10000 H	10000	100	50-200	0	
1,4-Difluorobenzene	0	10000 H	10000	100	10000 H	10000	100	50-200	0	
Chlorobenzene-d5	0	10000 H	10000	100	10000 H	10000	100	50-200	0	
Pentafluorobenzene	0	10000 H	10000	100	10000 H	10000	100	50-200	0	
1,2-Dichloroethane-d4	0	9730	10000	97.3	10040	10000	100	75-120	3.14	30
4-Bromofluorobenzene	0	12960 S	10000	130 *	12660 S	10000	127 *	80-110	2.42	30
Dibromofluoromethane	0	9770	10000	97.7	9895	10000	99.0	85-115	1.27	30
Toluene-d8	0	10000	10000	100	10060	10000	101	85-110	0.499	30

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GCMS

Sample Name:	20111803-03A	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8260C		

		Matrix Spike 20111803-03A MS			Duplicate Matrix Spike 20111803-03A MSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	0	1115 HHH	1000	112	1093 HHH	1000	109	70-145	1.99	30
1,2-Dichloroethane	0	998.5 HHH	1000	99.8	983.5 HHH	1000	98.4	78-125	1.51	30
2-Butanone	0	1050 HHH	1000	105	1013 HHH	1000	101	55-150	3.54	30
Benzene	0	1094 HHH	1000	109	1100 HHH	1000	110	70-130	0.593	30
Carbon tetrachloride	0	950.0 HHH	1000	95.0	977.5 HHH	1000	97.8	65-140	2.85	30
Chlorobenzene	0	1100 HHH	1000	110	1116 HHH	1000	112	80-120	1.44	30
Chloroform	0	972.5 HHH	1000	97.2	934.5 HHH	1000	93.4	66-135	3.99	30
Tetrachloroethene	0	1112 HHH	1000	111	1124 HHH	1000	112	68-166	1.03	30
Trichloroethene	0	1058 HHH	1000	106	1032 HHH	1000	103	77-125	2.39	30
Vinyl chloride	0	1048 HHH	1000	105	998.5 HHH	1000	99.8	50-136	4.89	30
1,4-Dichlorobenzene-d4	0	1000 HHH	1000	100	1000 HHH	1000	100	50-200	0	
1,4-Difluorobenzene	0	1000 HHH	1000	100	1000 HHH	1000	100	50-200	0	
Chlorobenzene-d5	0	1000 HHH	1000	100	1000 HHH	1000	100	50-200	0	
Pentafluorobenzene	0	1000 HHH	1000	100	1000 HHH	1000	100	50-200	0	
1,2-Dichloroethane-d4	0	967.5	1000	96.8	938.5	1000	93.8	75-120	3.04	30
4-Bromofluorobenzene	0	1010	1000	101	998.5	1000	99.8	80-110	1.19	30
Dibromofluoromethane	0	994.5	1000	99.4	983	1000	98.3	85-115	1.16	30
Toluene-d8	0	1019	1000	102	998	1000	99.8	85-110	2.08	30

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/02/2020

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GCMS

Sample Name:	20111985-06A	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8260C		

		Matrix Spike 20111985-06A MS			Duplicate Matrix Spike 20111985-06A MSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	0	22.34 H	20	112	22.29 H	20	111	70-145	0.224	30
1,2-Dichloroethane	0	21.81 H	20	109	21.72 H	20	109	78-125	0.414	30
2-Butanone	0	18.84 H	20	94.2	18.98 H	20	94.9	55-150	0.74	30
Benzene	0	22.01 H	20	110	22.06 H	20	110	70-130	0.227	30
Carbon tetrachloride	0	20.73 H	20	104	20.75 H	20	104	65-140	0.0964	30
Chlorobenzene	0	21.24 H	20	106	21.86 H	20	109	80-120	2.88	30
Chloroform	0	19.70 H	20	98.5	19.76 H	20	98.8	66-135	0.304	30
Tetrachloroethene	0	22.72 H	20	114	23.04 H	20	115	68-166	1.4	30
Trichloroethene	0	22.36 H	20	112	22.61 H	20	113	77-125	1.11	30
Vinyl chloride	0	23.34 H	20	117	23.58 H	20	118	50-136	1.02	30
1,4-Dichlorobenzene-d4	0	20.00 H	20	100	20 H	20	100	50-200	0	
1,4-Difluorobenzene	0	20.00 H	20	100	20 H	20	100	50-200	0	
Chlorobenzene-d5	0	20.00 H	20	100	20 H	20	100	50-200	0	
Pentafluorobenzene	0	20.00 H	20	100	20 H	20	100	50-200	0	
1,2-Dichloroethane-d4	0	20.46	20	102	20.24	20	101	75-120	1.08	30
4-Bromofluorobenzene	0	19.91	20	99.6	20.35	20	102	80-110	2.19	30
Dibromofluoromethane	0	21.07	20	105	20.86	20	104	85-115	1	30
Toluene-d8	0	20.14	20	101	20.73	20	104	85-110	2.89	30

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QA/QC Report

Client: HULL&ASSOC-DUBLIN
Project: IDA001/IDA001
Sample Matrix: Water

Service Request: 20111764
Date Analyzed: 12/01/20 11:20

Method Blank Summary
Volatile Organic Compounds by GCMS

Sample Name: MB
Lab Code: VBLKW1-201201

Instrument ID: VMS8
File ID: 20120106.D

Analysis Method: SW8260C

Analysis Lot: VMS8_201127A
Extraction Lot: 0

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
LCS	VLCSW1-201127	20112725.D	11/27/20 18:45
SMPL	20111764-04	20112749.D	11/28/20 01:14
MS	20111800-04F MS	20112750.D	11/28/20 01:30
DMS	20111800-04F MSD	20112751.D	11/28/20 01:46
LCS	VLCSW1-201201	20120103.D	12/01/20 10:31
SMPL	20111764-06	20120114.D	12/01/20 13:46
LCS	VLCSW1-201201	20120109.D	12/01/20 17:14
MS	20111803-03A MS	20120129.D	12/01/20 17:58
DMS	20111803-03A MSD	20120130.D	12/01/20 18:14
SMPL	20111764-02	20120130.D	12/01/20 23:00
MS	20111985-06A MS	20120134.D	12/02/20 00:06
DMS	20111985-06A MSD	20120135.D	12/02/20 00:22

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QA/QC Report

Client: HULL&ASSOC-DUBLIN
Project: IDA001/IDA001
Sample Matrix: Water

Service Request: 20111764
Date Analyzed: 11/27/20 19:34

Method Blank Summary
Volatile Organic Compounds by GCMS

Sample Name: MB
Lab Code: VBLKW2-201127

Instrument ID: VMS8
File ID: 20112728.D

Analysis Method: SW8260C

Analysis Lot: VMS8_201127A
Extraction Lot: 0

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
LCS	VLCSW1-201127	20112725.D	11/27/20 18:45
SMPL	20111764-04	20112749.D	11/28/20 01:14
MS	20111800-04F MS	20112750.D	11/28/20 01:30
DMS	20111800-04F MSD	20112751.D	11/28/20 01:46
LCS	VLCSW1-201201	20120103.D	12/01/20 10:31
SMPL	20111764-06	20120114.D	12/01/20 13:46
LCS	VLCSW1-201201	20120109.D	12/01/20 17:14
MS	20111803-03A MS	20120129.D	12/01/20 17:58
DMS	20111803-03A MSD	20120130.D	12/01/20 18:14
SMPL	20111764-02	20120130.D	12/01/20 23:00
MS	20111985-06A MS	20120134.D	12/02/20 00:06
DMS	20111985-06A MSD	20120135.D	12/02/20 00:22

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	VBLKW1-201201	**Units:**	ug/L
Lab Code:	VBLKW1-201201	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	1.0 U	1.0	1	12/01/20 11:20	NA	
1,1-Dichloroethene	1.0 U	1.0	1	12/01/20 18:04	NA	
1,2-Dichloroethane	1.0 U	1.0	1	12/01/20 18:04	NA	
1,2-Dichloroethane	1.0 U	1.0	1	12/01/20 11:20	NA	
2-Butanone	5.0 U	5.0	1	12/01/20 11:20	NA	
2-Butanone	5.0 U	5.0	1	12/01/20 18:04	NA	
Benzene	1.0 U	1.0	1	12/01/20 18:04	NA	
Benzene	1.0 U	1.0	1	12/01/20 11:20	NA	
Carbon tetrachloride	1.0 U	1.0	1	12/01/20 11:20	NA	
Carbon tetrachloride	1.0 U	1.0	1	12/01/20 18:04	NA	
Chlorobenzene	1.0 U	1.0	1	12/01/20 18:04	NA	
Chlorobenzene	1.0 U	1.0	1	12/01/20 11:20	NA	
Chloroform	1.0 U	1.0	1	12/01/20 11:20	NA	
Chloroform	1.0 U	1.0	1	12/01/20 18:04	NA	
Tetrachloroethene	1.0 U	1.0	1	12/01/20 18:04	NA	
Tetrachloroethene	1.0 U	1.0	1	12/01/20 11:20	NA	
Trichloroethene	1.0 U	1.0	1	12/01/20 18:04	NA	
Trichloroethene	1.0 U	1.0	1	12/01/20 11:20	NA	
Vinyl chloride	1.0 U	1.0	1	12/01/20 11:20	NA	
Vinyl chloride	1.0 U	1.0	1	12/01/20 18:04	NA	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	102	85 - 115	12/01/20 11:20	
Dibromofluoromethane	100	85 - 115	12/01/20 18:04	
1,2-Dichloroethane-d4	99.2	75 - 120	12/01/20 11:20	
1,2-Dichloroethane-d4	94.4	75 - 120	12/01/20 18:04	
Toluene-d8	101	85 - 110	12/01/20 18:04	
Toluene-d8	102	85 - 110	12/01/20 11:20	
4-Bromofluorobenzene	91.2	80 - 110	12/01/20 18:04	
4-Bromofluorobenzene	102	80 - 110	12/01/20 11:20	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	VBLKW2-201127	**Units:**	ug/L
Lab Code:	VBLKW2-201127	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	1.0 U	1.0	1	11/27/20 19:34	NA	
1,2-Dichloroethane	1.0 U	1.0	1	11/27/20 19:34	NA	
2-Butanone	5.0 U	5.0	1	11/27/20 19:34	NA	
Benzene	1.0 U	1.0	1	11/27/20 19:34	NA	
Carbon tetrachloride	1.0 U	1.0	1	11/27/20 19:34	NA	
Chlorobenzene	1.0 U	1.0	1	11/27/20 19:34	NA	
Chloroform	1.0 U	1.0	1	11/27/20 19:34	NA	
Tetrachloroethene	1.0 U	1.0	1	11/27/20 19:34	NA	
Trichloroethene	1.0 U	1.0	1	11/27/20 19:34	NA	
Vinyl chloride	1.0 U	1.0	1	11/27/20 19:34	NA	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	104	85 - 115	11/27/20 19:34	
1,2-Dichloroethane-d4	105	75 - 120	11/27/20 19:34	
Toluene-d8	102	85 - 110	11/27/20 19:34	
4-Bromofluorobenzene	103	80 - 110	11/27/20 19:34	

Client: HULL&ASSOC-DUBLIN
Project: IDA001/IDA001
Sample Matrix: Water

Service Request: 20111764
Date Analyzed: 11/27/20 18:45

Lab Control Sample Summary
Volatile Organic Compounds by GCMS

Sample Name: LCS
Lab Code: VLCSW1-201127

Instrument ID: VMS8
File ID: 20112725.D

Analysis Method: SW8260C

Analysis Lot: VMS8_201127A
Extraction Lot: 0

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
MB	VBLKW2-201127	20112728.D	11/27/20 19:34
SMPL	20111764-04	20112749.D	11/28/20 01:14
MS	20111800-04F MS	20112750.D	11/28/20 01:30
DMS	20111800-04F MSD	20112751.D	11/28/20 01:46
MB	VBLKW1-201201	20120106.D	12/01/20 11:20
SMPL	20111764-06	20120114.D	12/01/20 13:46
MS	20111803-03A MS	20120129.D	12/01/20 17:58
MB	VBLKW1-201201	20120112.D	12/01/20 18:04
DMS	20111803-03A MSD	20120130.D	12/01/20 18:14
SMPL	20111764-02	20120130.D	12/01/20 23:00
MS	20111985-06A MS	20120134.D	12/02/20 00:06
DMS	20111985-06A MSD	20120135.D	12/02/20 00:22

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QA/QC Report

Client: HULL&ASSOC-DUBLIN
Project: IDA001/IDA001
Sample Matrix: Water

Service Request: 20111764
Date Analyzed: 12/01/20 10:31

Lab Control Sample Summary
Volatile Organic Compounds by GCMS

Sample Name: LCS
Lab Code: VLCSW1-201201

Instrument ID: VMS8
File ID: 20120103.D

Analysis Method: SW8260C

Analysis Lot: VMS8_201127A
Extraction Lot: 0

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
MB	VBLKW2-201127	20112728.D	11/27/20 19:34
SMPL	20111764-04	20112749.D	11/28/20 01:14
MS	20111800-04F MS	20112750.D	11/28/20 01:30
DMS	20111800-04F MSD	20112751.D	11/28/20 01:46
MB	VBLKW1-201201	20120106.D	12/01/20 11:20
SMPL	20111764-06	20120114.D	12/01/20 13:46
MS	20111803-03A MS	20120129.D	12/01/20 17:58
MB	VBLKW1-201201	20120112.D	12/01/20 18:04
DMS	20111803-03A MSD	20120130.D	12/01/20 18:14
SMPL	20111764-02	20120130.D	12/01/20 23:00
MS	20111985-06A MS	20120134.D	12/02/20 00:06
DMS	20111985-06A MSD	20120135.D	12/02/20 00:22

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	11/27/2020
Sample Matrix:	Water		

Lab Control Sample Summary
Volatile Organic Compounds by GCMS

Analysis Method:	SW8260C	**Units:**	ug/L
		Basis:	Wet
		Analysis Lot:	VMS8_201127A

VLCSW1-201127

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1-Dichloroethene	22.48	20	112	70-145
1,2-Dichloroethane	21.65	20	108	78-125
2-Butanone	20.71	20	104	55-150
Benzene	22.32	20	112	70-130
Carbon tetrachloride	19.19	20	96.0	65-140
Chlorobenzene	22.54	20	113	80-120
Chloroform	20.04	20	100	66-135
Tetrachloroethene	21.38	20	107	68-166
Trichloroethene	21.04	20	105	77-125
Vinyl chloride	21.96	20	110	50-136

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	12/01/2020
Sample Matrix:	Water		

Lab Control Sample Summary
Volatile Organic Compounds by GCMS

Analysis Method:	SW8260C	**Units:**	ug/L
		Basis:	Wet
		Analysis Lot:	VMS8_201201A

VLCSW1-201201

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1-Dichloroethene	23.25	20	116	70-145
1,1-Dichloroethene	19.21	20	96.0	70-145
1,2-Dichloroethane	17.74	20	88.7	78-125
1,2-Dichloroethane	20.79	20	104	78-125
2-Butanone	16.52	20	82.6	55-150
2-Butanone	20.75	20	104	55-150
Benzene	20.02	20	100	70-130
Benzene	22.63	20	113	70-130
Carbon tetrachloride	19.27	20	96.4	65-140
Carbon tetrachloride	18.68	20	93.4	65-140
Chlorobenzene	20.83	20	104	80-120
Chlorobenzene	23.09	20	115	80-120
Chloroform	19.97	20	99.8	66-135
Chloroform	17.26	20	86.3	66-135
Tetrachloroethene	22.74	20	114	68-166
Tetrachloroethene	23.7	20	118	68-166
Trichloroethene	21.83	20	109	77-125
Trichloroethene	20.94	20	105	77-125
Vinyl chloride	22.06	20	110	50-136
Vinyl chloride	23.25	20	116	50-136

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**12/01/20 09:34

Tune Summary
Volatile Organic Compounds by GCMS

File ID: 20120101.D **Analytical Method:** BFB_TUNE
Instrument ID: VMS8 **Analysis Lot:** VMS8_201201A

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	16.2	2999	Pass
75	95	30	60	45.7	8435	Pass
95	95	100	100	100	18456	Pass
96	95	5	9	6.8	1262	Pass
173	174	0	2	0.4	63	Pass
174	95	50	120	81.3	14996	Pass
175	174	5	9	7.6	1138	Pass
176	174	95	101	95.6	14335	Pass
177	176	5	9	6.5	932	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
VCCV1-201201	VCCV1-201201	20120102.D	12/01/20 09:58	
VLCSW1-201201	VLCSW1-201201	20120103.D	12/01/20 10:31	
VBLKW1-201201	VBLKW1-201201	20120106.D	12/01/20 11:20	
IDA001:B8-3:S00010	20111764-06	20120114.D	12/01/20 13:46	
20111803-03A MS	20111803-03A MS	20120129.D	12/01/20 17:58	
20111803-03A MSD	20111803-03A MSD	20120130.D	12/01/20 18:14	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**12/01/20 16:29

Tune Summary
Volatile Organic Compounds by GCMS

File ID: 20120107.D **Analytical Method:** BFB_TUNE
Instrument ID: VMS7 **Analysis Lot:** VMS7_201201A

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	22.5	925	Pass
75	95	30	60	48.3	1987	Pass
95	95	100	100	100	4117	Pass
96	95	5	9	8	328	Pass
173	174	0	2	0	0	Pass
174	95	50	120	89.1	3669	Pass
175	174	5	9	7.9	291	Pass
176	174	95	101	97	3558	Pass
177	176	5	9	7.3	260	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
VCCV1-201201	VCCV1-201201	20120108.D	12/01/20 16:48	
VLCSW1-201201	VLCSW1-201201	20120109.D	12/01/20 17:14	
VBLKW1-201201	VBLKW1-201201	20120112.D	12/01/20 18:04	
IDA001:E2-3:S00010	20111764-02	20120130.D	12/01/20 23:00	
20111985-06A MS	20111985-06A MS	20120134.D	12/02/20 00:06	
20111985-06A MSD	20111985-06A MSD	20120135.D	12/02/20 00:22	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**11/27/20 17:42

Tune Summary
Volatile Organic Compounds by GCMS

File ID: 20112721.D **Analytical Method:** BFB_TUNE
Instrument ID: VMS8 **Analysis Lot:** VMS8_201127A

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	16.7	12443	Pass
75	95	30	60	46.3	34410	Pass
95	95	100	100	100	74305	Pass
96	95	5	9	6.9	5117	Pass
173	174	0	2	0.8	445	Pass
174	95	50	120	72.2	53630	Pass
175	174	5	9	7.5	4030	Pass
176	174	95	101	96.3	51627	Pass
177	176	5	9	6.8	3536	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
VCCV2-201127	VCCV2-201127	20112724.D	11/27/20 18:29	
VLCSW1-201127	VLCSW1-201127	20112725.D	11/27/20 18:45	
VBLKW2-201127	VBLKW2-201127	20112728.D	11/27/20 19:34	
IDA001:C5-3:S00010	20111764-04	20112749.D	11/28/20 01:14	
20111800-04F MS	20111800-04F MS	20112750.D	11/28/20 01:30	
20111800-04F MSD	20111800-04F MSD	20112751.D	11/28/20 01:46	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**11/27/20 18:29

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GCMS

File ID: 20112724.D **Lab Code:**VCCV2-201127
Instrument ID: VMS8 **Analysis Lot:**VMS8_201127A
Analysis Method: SW8260C **Signal ID:**

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	172,806	10.60	391,573	5.11	367,126	9.20
	Upper Limit ==>	345,612	11.10	783,146	5.61	734,252	9.70
	Lower Limit ==>	86,403	10.10	195,787	4.61	183,563	8.70
Associated Analyses							
VCCV2-201127	VCCV2-201127	172806	10.6	391573	5.11	367126	9.2
VLCSW1-201127	VLCSW1-201127	183603	10.6	387305	5.11	363184	9.2
VBLKW2-201127	VBLKW2-201127	193947	10.6	396415	5.12	370112	9.2
IDA001:C5-3:S00010	20111764-04	199889	10.6	400026	5.12	375338	9.2
20111800-04F MSMS	20111800-04F MS	183506	10.6	403849	5.12	368789	9.2
20111800-04F MSDDMS	20111800-04F MSD	186593	10.6	405142	5.12	377825	9.2

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**11/27/20 18:29

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GCMS

File ID: 20112724.D **Lab Code:**VCCV2-201127
Instrument ID: VMS8 **Analysis Lot:**VMS8_201127A
Analysis Method: SW8260C **Signal ID:**

	Pentafluorobenzene	
	Area	**RT**
Result ==>	213,683	3.98
Upper Limit ==>	427,366	4.48
Lower Limit ==>	106,842	3.48

Associated Analyses

VCCV2-201127	VCCV2-201127	213683	3.98
VLCSW1-201127	VLCSW1-201127	222246	3.98
VBLKW2-201127	VBLKW2-201127	238484	3.99
IDA001:C5-3:S00010	20111764-04	243350	3.99
20111800-04F MSMS	20111800-04F MS	233855	3.99
20111800-04F MSDDMS	20111800-04F MSD	236925	3.99

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**12/01/20 09:58

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GCMS

File ID: 20120102.D **Lab Code:**VCCV1-201201
Instrument ID: VMS8 **Analysis Lot:**VMS8_201201A
Analysis Method: SW8260C **Signal ID:**

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	155,580	10.60	323,957	5.11	315,233	9.20
	Upper Limit ==>	311,160	11.10	647,914	5.61	630,466	9.70
	Lower Limit ==>	77,790	10.10	161,979	4.61	157,617	8.70
Associated Analyses							
VCCV1-201201	VCCV1-201201	155580	10.6	323957	5.11	315233	9.2
VLCSW1-201201	VLCSW1-201201	154234	10.6	329988	5.11	308789	9.2
VBLKW1-201201	VBLKW1-201201	161452	10.6	337335	5.12	317620	9.2
IDA001:B8-3:S00010	20111764-06	161449	10.6	340764	5.11	315190	9.2
20111803-03A MSMS	20111803-03A MS	150852	10.6	332075	5.11	305737	9.2
20111803-03A MSDDMS	20111803-03A MSD	156275	10.6	335930	5.11	309899	9.2

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**12/01/20 09:58

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GCMS

File ID: 20120102.D **Lab Code:**VCCV1-201201
Instrument ID: VMS8 **Analysis Lot:**VMS8_201201A
Analysis Method: SW8260C **Signal ID:**

	Pentafluorobenzene	
	Area	**RT**
Result ==>	181,813	3.98
Upper Limit ==>	363,626	4.48
Lower Limit ==>	90,907	3.48

Associated Analyses

VCCV1-201201	VCCV1-201201	181813	3.98
VLCSW1-201201	VLCSW1-201201	190594	3.98
VBLKW1-201201	VBLKW1-201201	198280	3.99
IDA001:B8-3:S00010	20111764-06	198319	3.98
20111803-03A MSMS	20111803-03A MS	189311	3.99
20111803-03A MSDDMS	20111803-03A MSD	199250	3.99

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**12/01/20 16:48

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GCMS

File ID: 20120108.D **Lab Code:**VCCV1-201201
Instrument ID: VMS7 **Analysis Lot:**VMS7_201201A
Analysis Method: SW8260C **Signal ID:**

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	116,430	9.76	234,726	5.23	218,121	8.42
	Upper Limit ==>	232,860	10.26	469,452	5.73	436,242	8.92
	Lower Limit ==>	58,215	9.26	117,363	4.73	109,061	7.92
Associated Analyses							
VCCV1-201201	VCCV1-201201	116430	9.76	234726	5.23	218121	8.42
VLCSW1-201201	VLCSW1-201201	129304	9.76	260788	5.23	238485	8.42
VBLKW1-201201	VBLKW1-201201	94241	9.76	251152	5.24	223931	8.42
IDA001:E2-3:S00010	20111764-02	67760	9.76	185768	5.24	166786	8.42
20111985-06A MSMS	20111985-06A MS	107312	9.76	216242	5.24	207916	8.42
20111985-06A MSDDMS	20111985-06A MSD	104859	9.76	211656	5.24	198464	8.42

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**12/01/20 16:48

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GCMS

File ID: 20120108.D **Lab Code:**VCCV1-201201
Instrument ID: VMS7 **Analysis Lot:**VMS7_201201A
Analysis Method: SW8260C **Signal ID:**

	Pentafluorobenzene	
	Area	**RT**
Result ==>	151,756	4.10
Upper Limit ==>	303,512	4.60
Lower Limit ==>	75,878	3.60

Associated Analyses

VCCV1-201201	VCCV1-201201	151756	4.1
VLCSW1-201201	VLCSW1-201201	172145	4.09
VBLKW1-201201	VBLKW1-201201	164252	4.1
IDA001:E2-3:S00010	20111764-02	114608	4.1
20111985-06A MSMS	20111985-06A MS	139807	4.1
20111985-06A MSDDMS	20111985-06A MSD	136026	4.1

Semivolatile Organic Compounds by GCMS

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Extraction Method: SW3510

		2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
Sample Name	**Lab Code**	**27 - 83**	**26 - 79**	**13 - 56**
20111733-02A MS	20111733-02A MS	70.7	63.0	43.7
20111733-02A MSD	20111733-02A MSD	70.7	65.1	45.9
IDA001:E2-3:S00010	20111764-02	52.3	47.2	33.4
IDA001:C5-3:S00010	20111764-04	58.5	50.4	39.3
IDA001:B8-3:S00010	20111764-06	55.8	52.8	39.0
SBLKW1-168343	SBLKW1-168343	72.3	72.0	50.8
SLCSW1-168343	SLCSW1-168343	77.3	71.0	43.1

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Extraction Method: SW3510

Sample Name	Lab Code	4-Terphenyl-d14 43 - 106	Nitrobenzene-d5 29 - 80	Phenol-d6 10 - 35
20111733-02A MS	20111733-02A MS	79.4	65.2	30.3
20111733-02A MSD	20111733-02A MSD	79.0	68.3	31.2
IDA001:E2-3:S00010	20111764-02A	71.1	45.6	23.0
IDA001:C5-3:S00010	20111764-04A	72.7	51.5	27.5
IDA001:B8-3:S00010	20111764-06A	75.1	52.6	26.1
SBLKW1-168343	SBLKW1-168343	85.0	71.5	31.6
SLCSW1-168343	SLCSW1-168343	81.7	71.0	28.8

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/27/2020

Matrix Spike Summary
Semivolatile Organic Compounds by GCMS

Sample Name:	BatchQC	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8270D		
Prep Method:	SW3510		

20111733-02A MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Pyridine	0	165.2 J	400	41.3	10-50
1,4-Dichlorobenzene	0	178.8	400	44.7	12-85
o-Cresol	0	252.2	400	63.0	30-110
m-Cresol	0	242	400	60.5	30-110
p-Cresol	0	242	400	60.5	30-110
Hexachloroethane	0	168.8	400	42.2	10-85
Nitrobenzene	0	270.4	400	67.6	38-86
Hexachloro-1,3-butadiene	0	189.4	400	47.4	11-83
2,4,6-Trichlorophenol	0	274.2	400	68.5	45-83
2,4,5-Trichlorophenol	0	294.4	400	73.6	47-84
2,4-Dinitrotoluene	0	288.2	400	72.0	54-93
Hexachlorobenzene	0	279.4	400	69.8	53-89
Pentachlorophenol	0	301.6	400	75.4	37-94

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/27/2020

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GCMS

Sample Name:	20111733-02A	**Units:**	ug/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW8270D		
Prep Method:	SW3510		

		Matrix Spike			Duplicate Matrix Spike					
		20111733-02A MS			20111733-02A MSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,4-Dichlorobenzene	0	178.8	400	44.7	223	400	55.8	12-85	22	30
2,4,5-Trichlorophenol	0	294.4	400	73.6	295.2	400	73.8	47-84	0.271	30
2,4,6-Trichlorophenol	0	274.2	400	68.5	276.2	400	69.0	45-83	0.727	30
2,4-Dinitrotoluene	0	288.2	400	72.0	287.8	400	72.0	54-93	0.139	30
Hexachloro-1,3-butadiene	0	189.4	400	47.4	231.8	400	58.0	11-83	20.1	30
Hexachlorobenzene	0	279.4	400	69.8	279	400	69.8	53-89	0.143	30
Hexachloroethane	0	168.8	400	42.2	216.8	400	54.2	10-85	24.9	30
m-Cresol	0	242.0	400	60.5	242	400	60.5	30-110	0	30
Nitrobenzene	0	270.4	400	67.6	283.6	400	70.9	38-86	4.77	30
o-Cresol	0	252.2	400	63.0	255.6	400	63.9	30-110	1.34	30
p-Cresol	0	242.0	400	60.5	242	400	60.5	30-110	0	30
Pentachlorophenol	0	301.6	400	75.4	294.6	400	73.6	37-94	2.35	30
Pyridine	0	165.2 J	400	41.3	163.6 J	400	40.9	10-50	0	30
1,4-Dichlorobenzene-d4	0	800.0	800	100	800	800	100	50-200	0	
Acenaphthene-d10	0	800.0	800	100	800	800	100	50-200	0	
Chrysene-d12	0	800.0	800	100	800	800	100	50-200	0	
Naphthalene-d8	0	800.0	800	100	800	800	100	50-200	0	
Perylene-d12	0	800.0	800	100	800	800	100	50-200	0	
Phenanthrene-d10	0	800.0	800	100	800	800	100	50-200	0	
2,4,6-Tribromophenol	0	707.4	1000	70.7	707.4	1000	70.7	27-83	0	40
2-Fluorobiphenyl	0	629.6	1000	63.0	650.6	1000	65.1	26-79	3.28	40
2-Fluorophenol	0	436.6	1000	43.7	459.2	1000	45.9	13-56	5.05	40
4-Terphenyl-d14	0	794.2	1000	79.4	790.4	1000	79.0	43-106	0.48	40
Nitrobenzene-d5	0	652.2	1000	65.2	682.8	1000	68.3	29-80	4.58	40
Phenol-d6	0	303.0	1000	30.3	312.2	1000	31.2	10-35	2.99	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	11/30/20 18:30
Sample Matrix:	Water	**Date Extracted:**	11/27/2020

Method Blank Summary
Semivolatile Organic Compounds by GCMS

Sample Name:	MB	**Instrument ID:**	SVMS9
Lab Code:	SBLKW1-168343	**File ID:**	20113022.D
Analysis Method:	SW8270D	**Analysis Lot:**	SVMS9_201130A
Prep Method:	SW3510	**Extraction Lot:**	168343

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
LCS	SLCSW1-168343	20113023.D	11/30/20 18:54
MS	20111733-02A MS	20113036.D	12/01/20 00:08
DMS	20111733-02A MSD	20113037.D	12/01/20 00:32
SMPL	20111764-02	20113039.D	12/01/20 01:20
SMPL	20111764-04	20113040.D	12/01/20 01:43
SMPL	20111764-06	20113041.D	12/01/20 02:07

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	SBLKW1-168343	**Units:**	ug/L
Lab Code:	SBLKW1-168343	**Basis:**	Wet

Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Prep Method: SW3510

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
2,4,5-Trichlorophenol	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
2,4,6-Trichlorophenol	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
2,4-Dinitrotoluene	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
Hexachloro-1,3-butadiene	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
Hexachlorobenzene	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
Hexachloroethane	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
m-Cresol	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
Nitrobenzene	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
o-Cresol	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
p-Cresol	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
Pentachlorophenol	5.0 U	5.0	1	11/30/20 18:30	11/27/20 12:49	
Pyridine	10 U	10	1	11/30/20 18:30	11/27/20 12:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorophenol	50.8	13 - 56	11/30/20 18:30	
Phenol-d6	31.6	10 - 35	11/30/20 18:30	
Nitrobenzene-d5	71.5	29 - 80	11/30/20 18:30	
2-Fluorobiphenyl	72.0	26 - 79	11/30/20 18:30	
2,4,6-Tribromophenol	72.3	27 - 83	11/30/20 18:30	
4-Terphenyl-d14	85.0	43 - 106	11/30/20 18:30	

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	11/30/20 18:54
Sample Matrix:	Water	**Date Extracted:**	11/27/2020

Lab Control Sample Summary
Semivolatile Organic Compounds by GCMS

Sample Name:	LCS	**Instrument ID:**	SVMS9
Lab Code:	SLCSW1-168343	**File ID:**	20113023.D
Analysis Method:	SW8270D	**Analysis Lot:**	SVMS9_201130A
Prep Method:	SW3510	**Extraction Lot:**	168343

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
MB	SBLKW1-168343	20113022.D	11/30/20 18:30
MS	20111733-02A MS	20113036.D	12/01/20 00:08
DMS	20111733-02A MSD	20113037.D	12/01/20 00:32
SMPL	20111764-02	20113039.D	12/01/20 01:20
SMPL	20111764-04	20113040.D	12/01/20 01:43
SMPL	20111764-06	20113041.D	12/01/20 02:07

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	11/30/2020
Sample Matrix:	Water	**Date Extracted:**	11/27/2020

Lab Control Sample Summary
Semivolatile Organic Compounds by GCMS

Analysis Method:	SW8270D	**Units:**	ug/L
Prep Method:	SW3510	**Basis:**	Wet
		Analysis Lot:	SVMS9_201130A

SLCSW1-168343

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,4-Dichlorobenzene	10.88	20	54.4	12-85
2,4,5-Trichlorophenol	15.64	20	78.2	47-84
2,4,6-Trichlorophenol	14.79	20	73.9	45-83
2,4-Dinitrotoluene	15.71	20	78.6	54-93
Hexachloro-1,3-butadiene	12.12	20	60.6	11-83
Hexachlorobenzene	15.94	20	79.7	53-89
Hexachloroethane	10.28	20	51.4	10-85
m-Cresol	12.06	20	60.3	30-110
Nitrobenzene	14.78	20	73.9	38-86
o-Cresol	12.86	20	64.3	30-110
p-Cresol	12.06	20	60.3	30-110
Pentachlorophenol	15.8	20	79.0	37-94
Pyridine	7.74 J	20	38.7	10-50

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**11/30/20 17:51

Tune Summary
Semivolatile Organic Compounds by GCMS

File ID: 20113020.D **Analytical Method:** DFTTP_TUNE
Instrument ID: SVMS9 **Analysis Lot:** SVMS9_201130A

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	60	32.2	8815	Pass
68	69	0	2	1.9	224	Pass
69	198	0	100	42.3	11574	Pass
70	69	0	2	0.8	89	Pass
127	198	40	60	46.9	12832	Pass
197	198	0	1	0.7	200	Pass
198	198	100	100	100	27388	Pass
199	198	5	9	6.9	1893	Pass
275	198	10	30	24.4	6688	Pass
365	198	1	100	3.6	978	Pass
441	443	0.01	100	76.1	3420	Pass
442	198	50	100	81.6	22343	Pass
443	442	17	23	20.1	4496	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
CCV2-201130-BNA	CCV2-201130-BNA	20113021.D	11/30/20 18:06	
SBLKW1-168343	SBLKW1-168343	20113022.D	11/30/20 18:30	
SLCSW1-168343	SLCSW1-168343	20113023.D	11/30/20 18:54	
20111733-02A MS	20111733-02A MS	20113036.D	12/01/20 00:08	
20111733-02A MSD	20111733-02A MSD	20113037.D	12/01/20 00:32	
IDA001:E2-3:S00010	20111764-02	20113039.D	12/01/20 01:20	
IDA001:C5-3:S00010	20111764-04	20113040.D	12/01/20 01:43	
IDA001:B8-3:S00010	20111764-06	20113041.D	12/01/20 02:07	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**11/30/20 18:06

Internal Standard Area and RT SUMMARY
Semivolatile Organic Compounds by GCMS

File ID: 20113021.D **Lab Code:**CCV2-201130-BNA
Instrument ID: SVMS9 **Analysis Lot:**SVMS9_201130A
Analysis Method: SW8270D **Signal ID:**

		1,4-Dichlorobenzene-d4		Acenaphthene-d10		Chrysene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	160,435	4.42	192,779	6.30	370,074	9.98
	Upper Limit ==>	320,870	4.92	385,558	6.80	740,148	10.48
	Lower Limit ==>	80,218	3.92	96,390	5.80	185,037	9.48
Associated Analyses							
CCV2-201130-BNA	CCV2-201130-BNA	160435	4.42	192779	6.3	370074	9.98
SBLKW1-168343	SBLKW1-168343	133064	4.42	178595	6.29	337509	9.98
SLCSW1-168343	SLCSW1-168343	148630	4.42	196921	6.29	378061	9.98
20111733-02A MSMS	20111733-02A MS	139067	4.42	192325	6.29	346487	9.98
20111733-02A MSDDMS	20111733-02A MSD	132862	4.42	183527	6.29	334470	9.98
IDA001:E2-3:S00010	20111764-02	132595	4.42	182497	6.3	328034	9.98
IDA001:C5-3:S00010	20111764-04	145827	4.42	204787	6.29	371865	9.98
IDA001:B8-3:S00010	20111764-06	145355	4.42	209007	6.29	381125	9.98

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001 **Date Analyzed:**11/30/20 18:06

Internal Standard Area and RT SUMMARY
Semivolatile Organic Compounds by GCMS

File ID: 20113021.D **Lab Code:**CCV2-201130-BNA
Instrument ID: SVMS9 **Analysis Lot:**SVMS9_201130A
Analysis Method: SW8270D **Signal ID:**

		Naphthalene-d8		Perylene-d12		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	342,885	5.19	400,479	12.60	348,028	7.30
	Upper Limit ==>	685,770	5.69	800,958	13.10	696,056	7.80
	Lower Limit ==>	171,443	4.69	200,240	12.10	174,014	6.80
Associated Analyses							
CCV2-201130-BNA	CCV2-201130-BNA	342885	5.19	400479	12.6	348028	7.3
SBLKW1-168343	SBLKW1-168343	307940	5.19	359355	12.6	339607	7.29
SLCSW1-168343	SLCSW1-168343	334378	5.19	398417	12.6	366229	7.29
20111733-02A MSMS	20111733-02A MS	322085	5.19	355063	12.6	356579	7.3
20111733-02A MSDDMS	20111733-02A MSD	307258	5.19	346010	12.6	342599	7.29
IDA001:E2-3:S00010	20111764-02	314003	5.19	337815	12.6	344608	7.3
IDA001:C5-3:S00010	20111764-04	346765	5.19	384068	12.6	387456	7.29
IDA001:B8-3:S00010	20111764-06	347501	5.19	399742	12.6	394838	7.29

Metals

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/30/20 09:47						
Mercury	SW7470A	HG4_201130A	0.00193	0.002	96.5	90-110
CCV 11/30/20 09:50						
Mercury	SW7470A	HG4_201130A	0.00201	0.002	101	90-110
CCV 11/30/20 13:07						
Mercury	SW7470A	HG4_201130A	0.0019	0.002	95.0	90-110
CCV 11/30/20 13:31						
Mercury	SW7470A	HG4_201130A	0.00193	0.002	96.5	90-110
CCV 11/30/20 13:56						
Mercury	SW7470A	HG4_201130A	0.00197	0.002	98.5	90-110
CCV 11/30/20 14:55						
Mercury	SW7470A	HG4_201130A	0.00192	0.002	96.0	90-110
CCV 11/30/20 15:58						
Mercury	SW7470A	HG4_201130A	0.00218	0.002	109	90-110
CCV 11/30/20 16:23						
Mercury	SW7470A	HG4_201130A	0.00214	0.002	107	90-110
CCV 11/30/20 16:46						
Mercury	SW7470A	HG4_201130A	0.0021	0.002	105	90-110
CCV 11/30/20 17:09						
Mercury	SW7470A	HG4_201130A	0.00205	0.002	103	90-110
CCV 11/30/20 17:32						
Mercury	SW7470A	HG4_201130A	0.0021	0.002	105	90-110
CCV 11/30/20 17:55						
Mercury	SW7470A	HG4_201130A	0.0021	0.002	105	90-110
CCV 11/30/20 18:19						
Mercury	SW7470A	HG4_201130A	0.00209	0.002	104	90-110
CCV 11/30/20 18:42						
Mercury	SW7470A	HG4_201130A	0.00209	0.002	104	90-110
CCV 11/30/20 19:05						
Mercury	SW7470A	HG4_201130A	0.00209	0.002	104	90-110
ICV 11/30/20 14:50						
Antimony	SW6010D	ICP2_201130B	0.9894	1	98.9	90-110
Arsenic	SW6010D	ICP2_201130B	0.9666	1	96.7	90-110
Barium	SW6010D	ICP2_201130B	0.9728	1	97.3	90-110
Beryllium	SW6010D	ICP2_201130B	0.9673	1	96.7	90-110
Cadmium	SW6010D	ICP2_201130B	0.983	1	98.3	90-110
Chromium	SW6010D	ICP2_201130B	0.9881	1	98.8	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/30/20 14:50						
Lead	SW6010D	ICP2_201130B	1.019	1	102	90-110
Nickel	SW6010D	ICP2_201130B	1.001	1	100	90-110
Selenium	SW6010D	ICP2_201130B	0.9752	1	97.5	90-110
Silver	SW6010D	ICP2_201130B	1.038	1	104	90-110
Thallium	SW6010D	ICP2_201130B	1.038	1	104	90-110
CCV 11/30/20 15:37						
Antimony	SW6010D	ICP2_201130B	0.5	0.5	100	90-110
Arsenic	SW6010D	ICP2_201130B	0.4986	0.5	99.7	90-110
Barium	SW6010D	ICP2_201130B	2.488	2.5	99.5	90-110
Beryllium	SW6010D	ICP2_201130B	0.5109	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5025	0.5	100	90-110
Chromium	SW6010D	ICP2_201130B	0.5056	0.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5104	0.5	102	90-110
Nickel	SW6010D	ICP2_201130B	2.533	2.5	101	90-110
Selenium	SW6010D	ICP2_201130B	2.486	2.5	99.4	90-110
Silver	SW6010D	ICP2_201130B	0.5081	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5169	0.5	103	90-110
CCV 11/30/20 16:39						
Antimony	SW6010D	ICP2_201130B	0.4994	0.5	99.9	90-110
Arsenic	SW6010D	ICP2_201130B	0.5038	0.5	101	90-110
Barium	SW6010D	ICP2_201130B	2.47	2.5	98.8	90-110
Beryllium	SW6010D	ICP2_201130B	0.5093	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5071	0.5	101	90-110
Chromium	SW6010D	ICP2_201130B	0.5032	0.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5162	0.5	103	90-110
Nickel	SW6010D	ICP2_201130B	2.548	2.5	102	90-110
Selenium	SW6010D	ICP2_201130B	2.495	2.5	99.8	90-110
Silver	SW6010D	ICP2_201130B	0.5085	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.52	0.5	104	90-110
CCV 11/30/20 17:40						
Antimony	SW6010D	ICP2_201130B	0.4955	0.5	99.1	90-110
Arsenic	SW6010D	ICP2_201130B	0.4992	0.5	99.8	90-110
Barium	SW6010D	ICP2_201130B	2.524	2.5	101	90-110
Beryllium	SW6010D	ICP2_201130B	0.5057	0.5	101	90-110
Cadmium	SW6010D	ICP2_201130B	0.5026	0.5	101	90-110
Chromium	SW6010D	ICP2_201130B	0.5001	0.5	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 17:40						
Lead	SW6010D	ICP2_201130B	0.5136	0.5	103	90-110
Nickel	SW6010D	ICP2_201130B	2.526	2.5	101	90-110
Selenium	SW6010D	ICP2_201130B	2.477	2.5	99.1	90-110
Silver	SW6010D	ICP2_201130B	0.5033	0.5	101	90-110
Thallium	SW6010D	ICP2_201130B	0.5172	0.5	103	90-110
CCV 11/30/20 18:41						
Antimony	SW6010D	ICP2_201130B	0.5129	0.5	103	90-110
Arsenic	SW6010D	ICP2_201130B	0.5168	0.5	103	90-110
Barium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Beryllium	SW6010D	ICP2_201130B	0.5113	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5225	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.5031	0.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5408	0.5	108	90-110
Nickel	SW6010D	ICP2_201130B	2.605	2.5	104	90-110
Selenium	SW6010D	ICP2_201130B	2.545	2.5	102	90-110
Silver	SW6010D	ICP2_201130B	0.515	0.5	103	90-110
Thallium	SW6010D	ICP2_201130B	0.5378	0.5	108	90-110
CCV 11/30/20 19:42						
Antimony	SW6010D	ICP2_201130B	0.5223	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.526	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.638	2.5	106	90-110
Beryllium	SW6010D	ICP2_201130B	0.5307	0.5	106	90-110
Cadmium	SW6010D	ICP2_201130B	0.5302	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5238	0.5	105	90-110
Lead	SW6010D	ICP2_201130B	0.5362	0.5	107	90-110
Nickel	SW6010D	ICP2_201130B	2.647	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.568	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5319	0.5	106	90-110
Thallium	SW6010D	ICP2_201130B	0.5448	0.5	109	90-110
CCV 11/30/20 20:44						
Antimony	SW6010D	ICP2_201130B	0.5205	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5247	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.55	2.5	102	90-110
Beryllium	SW6010D	ICP2_201130B	0.5181	0.5	104	90-110
Cadmium	SW6010D	ICP2_201130B	0.5282	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5105	0.5	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 20:44						
Lead	SW6010D	ICP2_201130B	0.5343	0.5	107	90-110
Nickel	SW6010D	ICP2_201130B	2.637	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.578	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5215	0.5	104	90-110
Thallium	SW6010D	ICP2_201130B	0.5426	0.5	109	90-110
CCV 11/30/20 21:50						
Antimony	SW6010D	ICP2_201130B	0.4722	0.5	94.4	90-110
Arsenic	SW6010D	ICP2_201130B	0.4698	0.5	94.0	90-110
Barium	SW6010D	ICP2_201130B	0	2.5	0 *	90-110
Beryllium	SW6010D	ICP2_201130B	0.4473	0.5	89.5 *	90-110
Cadmium	SW6010D	ICP2_201130B	0.4861	0.5	97.2	90-110
Chromium	SW6010D	ICP2_201130B	0.4471	0.5	89.4 *	90-110
Lead	SW6010D	ICP2_201130B	0.4927	0.5	98.5	90-110
Nickel	SW6010D	ICP2_201130B	2.442	2.5	97.7	90-110
Selenium	SW6010D	ICP2_201130B	2.364	2.5	94.6	90-110
Silver	SW6010D	ICP2_201130B	0.4418	0.5	88.3 *	90-110
Thallium	SW6010D	ICP2_201130B	0.4957	0.5	99.1	90-110
CCV 11/30/20 22:51						
Antimony	SW6010D	ICP2_201130B	0.5144	0.5	103	90-110
Arsenic	SW6010D	ICP2_201130B	0.5174	0.5	103	90-110
Barium	SW6010D	ICP2_201130B	2.576	2.5	103	90-110
Beryllium	SW6010D	ICP2_201130B	0.5001	0.5	100	90-110
Cadmium	SW6010D	ICP2_201130B	0.5215	0.5	104	90-110
Chromium	SW6010D	ICP2_201130B	0.4936	0.5	98.7	90-110
Lead	SW6010D	ICP2_201130B	0.5288	0.5	106	90-110
Nickel	SW6010D	ICP2_201130B	2.607	2.5	104	90-110
Selenium	SW6010D	ICP2_201130B	2.565	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5016	0.5	100	90-110
Thallium	SW6010D	ICP2_201130B	0.5355	0.5	107	90-110
CCV 11/30/20 23:52						
Antimony	SW6010D	ICP2_201130B	0.5207	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5242	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.664	2.5	107	90-110
Beryllium	SW6010D	ICP2_201130B	0.5384	0.5	108	90-110
Cadmium	SW6010D	ICP2_201130B	0.5277	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5318	0.5	106	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 23:52						
Lead	SW6010D	ICP2_201130B	0.5355	0.5	107	90-110
Nickel	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5372	0.5	107	90-110
Thallium	SW6010D	ICP2_201130B	0.5437	0.5	109	90-110
CCV 12/01/20 00:53						
Antimony	SW6010D	ICP2_201130B	0.5216	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5274	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.58	2.5	103	90-110
Beryllium	SW6010D	ICP2_201130B	0.531	0.5	106	90-110
Cadmium	SW6010D	ICP2_201130B	0.5284	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5252	0.5	105	90-110
Lead	SW6010D	ICP2_201130B	0.5373	0.5	107	90-110
Nickel	SW6010D	ICP2_201130B	2.653	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.612	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5306	0.5	106	90-110
Thallium	SW6010D	ICP2_201130B	0.5434	0.5	109	90-110
CCV 12/01/20 01:55						
Antimony	SW6010D	ICP2_201130B	0.5211	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.527	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.654	2.5	106	90-110
Beryllium	SW6010D	ICP2_201130B	0.5117	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5282	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5047	0.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5356	0.5	107	90-110
Nickel	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5118	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5441	0.5	109	90-110
CCV 12/01/20 02:57						
Antimony	SW6010D	ICP2_201130B	0.5184	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5202	0.5	104	90-110
Barium	SW6010D	ICP2_201130B	2.363	2.5	94.5	90-110
Beryllium	SW6010D	ICP2_201130B	0.5035	0.5	101	90-110
Cadmium	SW6010D	ICP2_201130B	0.5246	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.5074	0.5	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 02:57						
Lead	SW6010D	ICP2_201130B	0.5301	0.5	106	90-110
Nickel	SW6010D	ICP2_201130B	2.616	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.585	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5076	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5382	0.5	108	90-110
CCV 12/01/20 03:12						
Antimony	SW6010D	ICP2_201130B	0.5209	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5235	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.442	2.5	97.7	90-110
Beryllium	SW6010D	ICP2_201130B	0.5013	0.5	100	90-110
Cadmium	SW6010D	ICP2_201130B	0.5267	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.4939	0.5	98.8	90-110
Lead	SW6010D	ICP2_201130B	0.5323	0.5	106	90-110
Nickel	SW6010D	ICP2_201130B	2.634	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.607	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5036	0.5	101	90-110
Thallium	SW6010D	ICP2_201130B	0.5389	0.5	108	90-110
ICV 11/30/20 15:31						
Aluminum	SW6020B	ICPMS3_201130A	0.07917	0.08	99.0	90-110
Antimony	SW6020B	ICPMS3_201130A	0.08029	0.08	100	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.07865	0.08	98.3	90-110
Barium	SW6020B	ICPMS3_201130A	0.07889	0.08	98.6	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.07747	0.08	96.8	90-110
Boron	SW6020B	ICPMS3_201130A	0.1838	0.2	91.9	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.08209	0.08	103	90-110
Calcium	SW6020B	ICPMS3_201130A	7.963	8	99.5	90-110
Chromium	SW6020B	ICPMS3_201130A	0.07951	0.08	99.4	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.07921	0.08	99.0	90-110
Copper	SW6020B	ICPMS3_201130A	0.07947	0.08	99.3	90-110
Iron	SW6020B	ICPMS3_201130A	7.885	8	98.6	90-110
Lead	SW6020B	ICPMS3_201130A	0.08035	0.08	100	90-110
Lithium	SW6020B	ICPMS3_201130A	0.07771	0.08	97.1	90-110
Magnesium	SW6020B	ICPMS3_201130A	7.945	8	99.3	90-110
Manganese	SW6020B	ICPMS3_201130A	0.08092	0.08	101	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.07937	0.08	99.2	90-110
Nickel	SW6020B	ICPMS3_201130A	0.07836	0.08	98.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/30/20 15:31						
Potassium	SW6020B	ICPMS3_201130A	7.963	8	99.5	90-110
Selenium	SW6020B	ICPMS3_201130A	0.08104	0.08	101	90-110
Silicon	SW6020B	ICPMS3_201130A	8.543	8	107	90-110
Silver	SW6020B	ICPMS3_201130A	0.07734	0.08	96.7	90-110
Sodium	SW6020B	ICPMS3_201130A	7.981	8	99.8	90-110
Strontium	SW6020B	ICPMS3_201130A	0.0783	0.08	97.9	90-110
Thallium	SW6020B	ICPMS3_201130A	0.08023	0.08	100	90-110
Uranium	SW6020B	ICPMS3_201130A	0.07736	0.08	96.7	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.08251	0.08	103	90-110
Zinc	SW6020B	ICPMS3_201130A	0.07995	0.08	99.9	90-110
CCV 11/30/20 15:47						
Aluminum	SW6020B	ICPMS3_201130A	0.1037	0.1	104	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1077	0.1	108	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2549	0.25	102	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Calcium	SW6020B	ICPMS3_201130A	10.27	10	103	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1029	0.1	103	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Copper	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	10.13	10	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.35	10	104	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1028	0.1	103	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1016	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.2	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1044	0.1	104	90-110
Silicon	SW6020B	ICPMS3_201130A	10.48	10	105	90-110
Silver	SW6020B	ICPMS3_201130A	0.1056	0.1	106	90-110
Sodium	SW6020B	ICPMS3_201130A	10.24	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09926	0.1	99.3	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 15:47						
Uranium	SW6020B	ICPMS3_201130A	0.1004	0.1	100	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1072	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1036	0.1	104	90-110
CCV 11/30/20 15:53						
Aluminum	SW6020B	ICPMS3_201130A	0.1029	0.1	103	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1054	0.1	105	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Barium	SW6020B	ICPMS3_201130A	0.1011	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.248	0.25	99.2	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
Calcium	SW6020B	ICPMS3_201130A	10.19	10	102	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1029	0.1	103	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1025	0.1	103	90-110
Copper	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Iron	SW6020B	ICPMS3_201130A	10.14	10	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1016	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.36	10	104	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1037	0.1	104	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Potassium	SW6020B	ICPMS3_201130A	10.14	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1051	0.1	105	90-110
Silicon	SW6020B	ICPMS3_201130A	10.49	10	105	90-110
Silver	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201130A	10.32	10	103	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1025	0.1	103	90-110
Thallium	SW6020B	ICPMS3_201130A	0.1004	0.1	100	90-110
Uranium	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1073	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1029	0.1	103	90-110
CCV 11/30/20 16:13						
Aluminum	SW6020B	ICPMS3_201130A	0.1032	0.1	103	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1039	0.1	104	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 16:13						
Barium	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.09856	0.1	98.6	90-110
Boron	SW6020B	ICPMS3_201130A	0.2367	0.25	94.7	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1032	0.1	103	90-110
Calcium	SW6020B	ICPMS3_201130A	10.14	10	101	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.102	0.1	102	90-110
Copper	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	10.11	10	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.1028	0.1	103	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.38	10	104	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.16	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1032	0.1	103	90-110
Silicon	SW6020B	ICPMS3_201130A	10.46	10	105	90-110
Silver	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201130A	10.37	10	104	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09978	0.1	99.8	90-110
Uranium	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1074	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1026	0.1	103	90-110
CCV 11/30/20 16:32						
Aluminum	SW6020B	ICPMS3_201130A	0.1015	0.1	102	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1041	0.1	104	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1011	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1002	0.1	100	90-110
Boron	SW6020B	ICPMS3_201130A	0.2484	0.25	99.3	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Calcium	SW6020B	ICPMS3_201130A	10.16	10	102	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 16:32						
Copper	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	10.1	10	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.22	10	102	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.11	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1048	0.1	105	90-110
Silicon	SW6020B	ICPMS3_201130A	10.44	10	104	90-110
Silver	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201130A	10.23	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1025	0.1	103	90-110
Thallium	SW6020B	ICPMS3_201130A	0.1008	0.1	101	90-110
Uranium	SW6020B	ICPMS3_201130A	0.1026	0.1	103	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1072	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
CCV 11/30/20 16:52						
Aluminum	SW6020B	ICPMS3_201130A	0.1025	0.1	102	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1048	0.1	105	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.09908	0.1	99.1	90-110
Boron	SW6020B	ICPMS3_201130A	0.2433	0.25	97.3	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Calcium	SW6020B	ICPMS3_201130A	10.17	10	102	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Copper	SW6020B	ICPMS3_201130A	0.102	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	10.01	10	100	90-110
Lead	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.27	10	103	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1011	0.1	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 16:52						
Nickel	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.14	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201130A	10.33	10	103	90-110
Silver	SW6020B	ICPMS3_201130A	0.102	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201130A	10.26	10	103	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1025	0.1	103	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09978	0.1	99.8	90-110
Uranium	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1079	0.1	108	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1026	0.1	103	90-110
CCV 11/30/20 17:28						
Aluminum	SW6020B	ICPMS3_201130A	0.1025	0.1	102	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1045	0.1	105	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Barium	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.09984	0.1	99.8	90-110
Boron	SW6020B	ICPMS3_201130A	0.2525	0.25	101	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1029	0.1	103	90-110
Calcium	SW6020B	ICPMS3_201130A	10.24	10	102	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Copper	SW6020B	ICPMS3_201130A	0.1008	0.1	101	90-110
Iron	SW6020B	ICPMS3_201130A	10.07	10	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.3	10	103	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1025	0.1	103	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201130A	10.16	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Silicon	SW6020B	ICPMS3_201130A	10.4	10	104	90-110
Silver	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Sodium	SW6020B	ICPMS3_201130A	10.18	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1028	0.1	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 17:28						
Thallium	SW6020B	ICPMS3_201130A	0.1005	0.1	100	90-110
Uranium	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1065	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1015	0.1	102	90-110
CCV 11/30/20 18:31						
Aluminum	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Antimony	SW6020B	ICPMS3_201130A	0.106	0.1	106	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.09956	0.1	99.6	90-110
Barium	SW6020B	ICPMS3_201130A	0.1016	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.09843	0.1	98.4	90-110
Boron	SW6020B	ICPMS3_201130A	0.2425	0.25	97.0	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1038	0.1	104	90-110
Calcium	SW6020B	ICPMS3_201130A	10.29	10	103	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.0995	0.1	99.5	90-110
Copper	SW6020B	ICPMS3_201130A	0.09979	0.1	99.8	90-110
Iron	SW6020B	ICPMS3_201130A	9.913	10	99.1	90-110
Lead	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.47	10	105	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1002	0.1	100	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09997	0.1	100.0	90-110
Potassium	SW6020B	ICPMS3_201130A	10.09	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1015	0.1	102	90-110
Silicon	SW6020B	ICPMS3_201130A	10.27	10	103	90-110
Silver	SW6020B	ICPMS3_201130A	0.1015	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201130A	10.41	10	104	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09989	0.1	99.9	90-110
Uranium	SW6020B	ICPMS3_201130A	0.1032	0.1	103	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1072	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
ICV 11/30/20 18:58						
Aluminum	SW6020B	ICPMS3_201130A	0.07737	0.08	96.7	90-110
Antimony	SW6020B	ICPMS3_201130A	0.07999	0.08	100.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/30/20 18:58						
Arsenic	SW6020B	ICPMS3_201130A	0.07982	0.08	99.8	90-110
Barium	SW6020B	ICPMS3_201130A	0.07708	0.08	96.3	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.07829	0.08	97.9	90-110
Boron	SW6020B	ICPMS3_201130A	0.189	0.2	94.5	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.07867	0.08	98.3	90-110
Calcium	SW6020B	ICPMS3_201130A	7.855	8	98.2	90-110
Chromium	SW6020B	ICPMS3_201130A	0.08047	0.08	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.08138	0.08	102	90-110
Copper	SW6020B	ICPMS3_201130A	0.08096	0.08	101	90-110
Iron	SW6020B	ICPMS3_201130A	7.995	8	99.9	90-110
Lead	SW6020B	ICPMS3_201130A	0.0777	0.08	97.1	90-110
Lithium	SW6020B	ICPMS3_201130A	0.07797	0.08	97.5	90-110
Magnesium	SW6020B	ICPMS3_201130A	8.11	8	101	90-110
Manganese	SW6020B	ICPMS3_201130A	0.07977	0.08	99.7	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.07656	0.08	95.7	90-110
Nickel	SW6020B	ICPMS3_201130A	0.0799	0.08	99.9	90-110
Potassium	SW6020B	ICPMS3_201130A	8.083	8	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.08024	0.08	100	90-110
Silicon	SW6020B	ICPMS3_201130A	8.405	8	105	90-110
Silver	SW6020B	ICPMS3_201130A	0.08048	0.08	101	90-110
Sodium	SW6020B	ICPMS3_201130A	8.175	8	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.07658	0.08	95.7	90-110
Thallium	SW6020B	ICPMS3_201130A	0.0778	0.08	97.2	90-110
Uranium	SW6020B	ICPMS3_201130A	0.07364	0.08	92.0	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.08215	0.08	103	90-110
Zinc	SW6020B	ICPMS3_201130A	0.08178	0.08	102	90-110
CCV 11/30/20 19:05						
Aluminum	SW6020B	ICPMS3_201130A	0.1005	0.1	101	90-110
Antimony	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Barium	SW6020B	ICPMS3_201130A	0.1002	0.1	100	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2491	0.25	99.6	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09916	0.1	99.2	90-110
Calcium	SW6020B	ICPMS3_201130A	10.07	10	101	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1026	0.1	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 19:05						
Cobalt	SW6020B	ICPMS3_201130A	0.1016	0.1	102	90-110
Copper	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	10.16	10	102	90-110
Lead	SW6020B	ICPMS3_201130A	0.09859	0.1	98.6	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.29	10	103	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.26	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09934	0.1	99.3	90-110
Silicon	SW6020B	ICPMS3_201130A	10.31	10	103	90-110
Silver	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201130A	10.22	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1002	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201130A	0.0992	0.1	99.2	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09797	0.1	98.0	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1057	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
CCV 11/30/20 19:25						
Aluminum	SW6020B	ICPMS3_201130A	0.1005	0.1	100	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Barium	SW6020B	ICPMS3_201130A	0.09944	0.1	99.4	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.101	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2468	0.25	98.7	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09949	0.1	99.5	90-110
Calcium	SW6020B	ICPMS3_201130A	10.01	10	100	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Copper	SW6020B	ICPMS3_201130A	0.102	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	10.07	10	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.09871	0.1	98.7	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.36	10	104	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 19:25						
Molybdenum	SW6020B	ICPMS3_201130A	0.0998	0.1	99.8	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.27	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09782	0.1	97.8	90-110
Silicon	SW6020B	ICPMS3_201130A	10.28	10	103	90-110
Silver	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201130A	10.24	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09993	0.1	99.9	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09908	0.1	99.1	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09793	0.1	97.9	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1055	0.1	105	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1029	0.1	103	90-110
CCV 11/30/20 19:45						
Aluminum	SW6020B	ICPMS3_201130A	0.09948	0.1	99.5	90-110
Antimony	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1002	0.1	100	90-110
Barium	SW6020B	ICPMS3_201130A	0.1	0.1	100	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.101	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2435	0.25	97.4	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09939	0.1	99.4	90-110
Calcium	SW6020B	ICPMS3_201130A	9.987	10	99.9	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1005	0.1	101	90-110
Copper	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	10.1	10	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.09841	0.1	98.4	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.37	10	104	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09884	0.1	98.8	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.14	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201130A	10.25	10	102	90-110
Silver	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
Sodium	SW6020B	ICPMS3_201130A	10.34	10	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 19:45						
Strontium	SW6020B	ICPMS3_201130A	0.09953	0.1	99.5	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09785	0.1	97.8	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09734	0.1	97.3	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.106	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
CCV 11/30/20 20:05						
Aluminum	SW6020B	ICPMS3_201130A	0.09745	0.1	97.5	90-110
Antimony	SW6020B	ICPMS3_201130A	0.105	0.1	105	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.0999	0.1	99.9	90-110
Barium	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.09783	0.1	97.8	90-110
Boron	SW6020B	ICPMS3_201130A	0.2819	0.25	113 *	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Calcium	SW6020B	ICPMS3_201130A	10.11	10	101	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Copper	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Iron	SW6020B	ICPMS3_201130A	9.963	10	99.6	90-110
Lead	SW6020B	ICPMS3_201130A	0.09871	0.1	98.7	90-110
Lithium	SW6020B	ICPMS3_201130A	0.0997	0.1	99.7	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.18	10	102	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09668	0.1	96.7	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09964	0.1	99.6	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1002	0.1	100	90-110
Potassium	SW6020B	ICPMS3_201130A	10.07	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09945	0.1	99.4	90-110
Silicon	SW6020B	ICPMS3_201130A	12.06	10	121 *	90-110
Silver	SW6020B	ICPMS3_201130A	0.1057	0.1	106	90-110
Sodium	SW6020B	ICPMS3_201130A	10.21	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09937	0.1	99.4	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09875	0.1	98.8	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09876	0.1	98.8	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1066	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
CCV 11/30/20 20:25						
Aluminum	SW6020B	ICPMS3_201130A	0.09771	0.1	97.7	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 20:25						
Antimony	SW6020B	ICPMS3_201130A	0.1035	0.1	103	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.09954	0.1	99.5	90-110
Barium	SW6020B	ICPMS3_201130A	0.101	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2565	0.25	103	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09985	0.1	99.8	90-110
Calcium	SW6020B	ICPMS3_201130A	9.994	10	99.9	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09989	0.1	99.9	90-110
Copper	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Iron	SW6020B	ICPMS3_201130A	9.929	10	99.3	90-110
Lead	SW6020B	ICPMS3_201130A	0.09891	0.1	98.9	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.21	10	102	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09844	0.1	98.4	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09985	0.1	99.8	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201130A	10.04	10	100	90-110
Selenium	SW6020B	ICPMS3_201130A	0.0991	0.1	99.1	90-110
Silicon	SW6020B	ICPMS3_201130A	10.02	10	100	90-110
Silver	SW6020B	ICPMS3_201130A	0.1038	0.1	104	90-110
Sodium	SW6020B	ICPMS3_201130A	10.12	10	101	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09946	0.1	99.5	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09836	0.1	98.4	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09776	0.1	97.8	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1056	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110
CCV 11/30/20 20:45						
Aluminum	SW6020B	ICPMS3_201130A	0.09795	0.1	98.0	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1034	0.1	103	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1008	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.261	0.25	104	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09961	0.1	99.6	90-110
Calcium	SW6020B	ICPMS3_201130A	10.03	10	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 20:45						
Chromium	SW6020B	ICPMS3_201130A	0.1005	0.1	100	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09955	0.1	99.5	90-110
Copper	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Iron	SW6020B	ICPMS3_201130A	9.912	10	99.1	90-110
Lead	SW6020B	ICPMS3_201130A	0.09793	0.1	97.9	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.15	10	101	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09935	0.1	99.4	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09956	0.1	99.6	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1005	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201130A	10.02	10	100	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201130A	10.06	10	101	90-110
Silver	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Sodium	SW6020B	ICPMS3_201130A	10.11	10	101	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09954	0.1	99.5	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09918	0.1	99.2	90-110
Uranium	SW6020B	ICPMS3_201130A	0.0977	0.1	97.7	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1055	0.1	105	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110
CCV 11/30/20 21:06						
Aluminum	SW6020B	ICPMS3_201130A	0.09643	0.1	96.4	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1036	0.1	104	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.09913	0.1	99.1	90-110
Barium	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1028	0.1	103	90-110
Boron	SW6020B	ICPMS3_201130A	0.2577	0.25	103	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09725	0.1	97.2	90-110
Calcium	SW6020B	ICPMS3_201130A	10.05	10	100	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1011	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.0997	0.1	99.7	90-110
Copper	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Iron	SW6020B	ICPMS3_201130A	9.892	10	98.9	90-110
Lead	SW6020B	ICPMS3_201130A	0.09604	0.1	96.0	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.18	10	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 21:06						
Manganese	SW6020B	ICPMS3_201130A	0.09922	0.1	99.2	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09754	0.1	97.5	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Potassium	SW6020B	ICPMS3_201130A	10.17	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09771	0.1	97.7	90-110
Silicon	SW6020B	ICPMS3_201130A	10.01	10	100	90-110
Silver	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Sodium	SW6020B	ICPMS3_201130A	10.18	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09806	0.1	98.1	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09834	0.1	98.3	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09561	0.1	95.6	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.106	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1016	0.1	102	90-110
CCV 11/30/20 21:26						
Aluminum	SW6020B	ICPMS3_201130A	0.09703	0.1	97.0	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1035	0.1	103	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.09972	0.1	99.7	90-110
Barium	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.0996	0.1	99.6	90-110
Boron	SW6020B	ICPMS3_201130A	0.2713	0.25	109	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.0965	0.1	96.5	90-110
Calcium	SW6020B	ICPMS3_201130A	10.02	10	100	90-110
Chromium	SW6020B	ICPMS3_201130A	0.09937	0.1	99.4	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09863	0.1	98.6	90-110
Copper	SW6020B	ICPMS3_201130A	0.09953	0.1	99.5	90-110
Iron	SW6020B	ICPMS3_201130A	9.896	10	99.0	90-110
Lead	SW6020B	ICPMS3_201130A	0.0977	0.1	97.7	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.23	10	102	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09876	0.1	98.8	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09783	0.1	97.8	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09927	0.1	99.3	90-110
Potassium	SW6020B	ICPMS3_201130A	10.21	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09899	0.1	99.0	90-110
Silicon	SW6020B	ICPMS3_201130A	10.17	10	102	90-110
Silver	SW6020B	ICPMS3_201130A	0.102	0.1	102	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 21:26						
Sodium	SW6020B	ICPMS3_201130A	10.14	10	101	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09914	0.1	99.1	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09714	0.1	97.1	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09507	0.1	95.1	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1051	0.1	105	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09959	0.1	99.6	90-110
CCV 11/30/20 21:47						
Aluminum	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Barium	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2507	0.25	100	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09698	0.1	97.0	90-110
Calcium	SW6020B	ICPMS3_201130A	10.07	10	101	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09932	0.1	99.3	90-110
Copper	SW6020B	ICPMS3_201130A	0.09978	0.1	99.8	90-110
Iron	SW6020B	ICPMS3_201130A	9.988	10	99.9	90-110
Lead	SW6020B	ICPMS3_201130A	0.09993	0.1	99.9	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1015	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.09	10	101	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09895	0.1	98.9	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09886	0.1	98.9	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09948	0.1	99.5	90-110
Potassium	SW6020B	ICPMS3_201130A	10.25	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09929	0.1	99.3	90-110
Silicon	SW6020B	ICPMS3_201130A	10.35	10	103	90-110
Silver	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201130A	10.04	10	100	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1011	0.1	101	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09705	0.1	97.1	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09535	0.1	95.3	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1056	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09927	0.1	99.3	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 22:08						
Aluminum	SW6020B	ICPMS3_201130A	0.09803	0.1	98.0	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1039	0.1	104	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.101	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Boron	SW6020B	ICPMS3_201130A	0.2414	0.25	96.6	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09862	0.1	98.6	90-110
Calcium	SW6020B	ICPMS3_201130A	10.03	10	100	90-110
Chromium	SW6020B	ICPMS3_201130A	0.09978	0.1	99.8	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09843	0.1	98.4	90-110
Copper	SW6020B	ICPMS3_201130A	0.09957	0.1	99.6	90-110
Iron	SW6020B	ICPMS3_201130A	9.712	10	97.1	90-110
Lead	SW6020B	ICPMS3_201130A	0.09801	0.1	98.0	90-110
Lithium	SW6020B	ICPMS3_201130A	0.09952	0.1	99.5	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.05	10	100	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09884	0.1	98.8	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09949	0.1	99.5	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09928	0.1	99.3	90-110
Potassium	SW6020B	ICPMS3_201130A	10.22	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201130A	10.21	10	102	90-110
Silver	SW6020B	ICPMS3_201130A	0.101	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201130A	9.86	10	98.6	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09962	0.1	99.6	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09924	0.1	99.2	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09647	0.1	96.5	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1067	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09931	0.1	99.3	90-110
CCV 11/30/20 22:28						
Aluminum	SW6020B	ICPMS3_201130A	0.09742	0.1	97.4	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1045	0.1	104	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1005	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
Boron	SW6020B	ICPMS3_201130A	0.2873	0.25	115 *	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.0996	0.1	99.6	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 22:28						
Calcium	SW6020B	ICPMS3_201130A	10.02	10	100	90-110
Chromium	SW6020B	ICPMS3_201130A	0.09993	0.1	99.9	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09783	0.1	97.8	90-110
Copper	SW6020B	ICPMS3_201130A	0.09924	0.1	99.2	90-110
Iron	SW6020B	ICPMS3_201130A	9.752	10	97.5	90-110
Lead	SW6020B	ICPMS3_201130A	0.09943	0.1	99.4	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.06	10	101	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09904	0.1	99.0	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09978	0.1	99.8	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1	0.1	100	90-110
Potassium	SW6020B	ICPMS3_201130A	10.3	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09867	0.1	98.7	90-110
Silicon	SW6020B	ICPMS3_201130A	10.23	10	102	90-110
Silver	SW6020B	ICPMS3_201130A	0.1015	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201130A	10.04	10	100	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09892	0.1	98.9	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09693	0.1	96.9	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1078	0.1	108	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09962	0.1	99.6	90-110
CCV 11/30/20 22:49						
Aluminum	SW6020B	ICPMS3_201130A	0.09675	0.1	96.8	90-110
Antimony	SW6020B	ICPMS3_201130A	0.104	0.1	104	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1028	0.1	103	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.101	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2522	0.25	101	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09829	0.1	98.3	90-110
Calcium	SW6020B	ICPMS3_201130A	9.897	10	99.0	90-110
Chromium	SW6020B	ICPMS3_201130A	0.09888	0.1	98.9	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09715	0.1	97.2	90-110
Copper	SW6020B	ICPMS3_201130A	0.09935	0.1	99.3	90-110
Iron	SW6020B	ICPMS3_201130A	9.679	10	96.8	90-110
Lead	SW6020B	ICPMS3_201130A	0.09826	0.1	98.3	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1002	0.1	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 22:49						
Magnesium	SW6020B	ICPMS3_201130A	9.869	10	98.7	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09937	0.1	99.4	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09813	0.1	98.1	90-110
Potassium	SW6020B	ICPMS3_201130A	10.23	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1036	0.1	104	90-110
Silicon	SW6020B	ICPMS3_201130A	10.16	10	102	90-110
Silver	SW6020B	ICPMS3_201130A	0.09875	0.1	98.8	90-110
Sodium	SW6020B	ICPMS3_201130A	9.92	10	99.2	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09997	0.1	100.0	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09842	0.1	98.4	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09523	0.1	95.2	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1062	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09938	0.1	99.4	90-110
CCV 11/30/20 23:10						
Aluminum	SW6020B	ICPMS3_201130A	0.09706	0.1	97.1	90-110
Antimony	SW6020B	ICPMS3_201130A	0.105	0.1	105	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1022	0.1	102	90-110
Barium	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1023	0.1	102	90-110
Boron	SW6020B	ICPMS3_201130A	0.25	0.25	100.0	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09851	0.1	98.5	90-110
Calcium	SW6020B	ICPMS3_201130A	10.03	10	100	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09758	0.1	97.6	90-110
Copper	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Iron	SW6020B	ICPMS3_201130A	9.764	10	97.6	90-110
Lead	SW6020B	ICPMS3_201130A	0.0982	0.1	98.2	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1021	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.05	10	101	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09834	0.1	98.3	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09785	0.1	97.8	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09955	0.1	99.5	90-110
Potassium	SW6020B	ICPMS3_201130A	10.23	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.09931	0.1	99.3	90-110
Silicon	SW6020B	ICPMS3_201130A	10.14	10	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 23:10						
Silver	SW6020B	ICPMS3_201130A	0.1005	0.1	100	90-110
Sodium	SW6020B	ICPMS3_201130A	10.06	10	101	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09948	0.1	99.5	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09734	0.1	97.3	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09464	0.1	94.6	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1075	0.1	107	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110
CCV 11/30/20 23:31						
Aluminum	SW6020B	ICPMS3_201130A	0.09779	0.1	97.8	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1048	0.1	105	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
Barium	SW6020B	ICPMS3_201130A	0.102	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1044	0.1	104	90-110
Boron	SW6020B	ICPMS3_201130A	0.2517	0.25	101	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09896	0.1	99.0	90-110
Calcium	SW6020B	ICPMS3_201130A	9.999	10	100.0	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.0978	0.1	97.8	90-110
Copper	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Iron	SW6020B	ICPMS3_201130A	9.772	10	97.7	90-110
Lead	SW6020B	ICPMS3_201130A	0.09984	0.1	99.8	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1016	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201130A	9.926	10	99.3	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09855	0.1	98.6	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09862	0.1	98.6	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1003	0.1	100	90-110
Potassium	SW6020B	ICPMS3_201130A	10.29	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Silicon	SW6020B	ICPMS3_201130A	10.27	10	103	90-110
Silver	SW6020B	ICPMS3_201130A	0.09904	0.1	99.0	90-110
Sodium	SW6020B	ICPMS3_201130A	9.885	10	98.8	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1009	0.1	101	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09707	0.1	97.1	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09501	0.1	95.0	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1088	0.1	109	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 23:51						
Aluminum	SW6020B	ICPMS3_201130A	0.09589	0.1	95.9	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1073	0.1	107	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1025	0.1	102	90-110
Barium	SW6020B	ICPMS3_201130A	0.1051	0.1	105	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1053	0.1	105	90-110
Boron	SW6020B	ICPMS3_201130A	0.2552	0.25	102	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.09924	0.1	99.2	90-110
Calcium	SW6020B	ICPMS3_201130A	9.998	10	100.0	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09776	0.1	97.8	90-110
Copper	SW6020B	ICPMS3_201130A	0.09987	0.1	99.9	90-110
Iron	SW6020B	ICPMS3_201130A	9.739	10	97.4	90-110
Lead	SW6020B	ICPMS3_201130A	0.09596	0.1	96.0	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Magnesium	SW6020B	ICPMS3_201130A	9.976	10	99.8	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09899	0.1	99.0	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201130A	10.24	10	102	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Silicon	SW6020B	ICPMS3_201130A	10.06	10	101	90-110
Silver	SW6020B	ICPMS3_201130A	0.09934	0.1	99.3	90-110
Sodium	SW6020B	ICPMS3_201130A	9.864	10	98.6	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09899	0.1	99.0	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09928	0.1	99.3	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09577	0.1	95.8	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1082	0.1	108	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
CCV 12/01/20 00:13						
Aluminum	SW6020B	ICPMS3_201130A	0.09709	0.1	97.1	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1071	0.1	107	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1012	0.1	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.1038	0.1	104	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.101	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2401	0.25	96.0	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1005	0.1	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 00:13						
Calcium	SW6020B	ICPMS3_201130A	9.989	10	99.9	90-110
Chromium	SW6020B	ICPMS3_201130A	0.09809	0.1	98.1	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.09819	0.1	98.2	90-110
Copper	SW6020B	ICPMS3_201130A	0.09691	0.1	96.9	90-110
Iron	SW6020B	ICPMS3_201130A	9.64	10	96.4	90-110
Lead	SW6020B	ICPMS3_201130A	0.09854	0.1	98.5	90-110
Lithium	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
Magnesium	SW6020B	ICPMS3_201130A	9.895	10	99.0	90-110
Manganese	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09731	0.1	97.3	90-110
Potassium	SW6020B	ICPMS3_201130A	10.29	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1031	0.1	103	90-110
Silicon	SW6020B	ICPMS3_201130A	10.28	10	103	90-110
Silver	SW6020B	ICPMS3_201130A	0.09643	0.1	96.4	90-110
Sodium	SW6020B	ICPMS3_201130A	9.79	10	97.9	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1004	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09985	0.1	99.8	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09713	0.1	97.1	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1059	0.1	106	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09905	0.1	99.0	90-110
CCV 12/01/20 00:34						
Aluminum	SW6020B	ICPMS3_201130A	0.0964	0.1	96.4	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1068	0.1	107	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
Barium	SW6020B	ICPMS3_201130A	0.1049	0.1	105	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1044	0.1	104	90-110
Boron	SW6020B	ICPMS3_201130A	0.2459	0.25	98.4	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Calcium	SW6020B	ICPMS3_201130A	9.97	10	99.7	90-110
Chromium	SW6020B	ICPMS3_201130A	0.09989	0.1	99.9	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1006	0.1	101	90-110
Copper	SW6020B	ICPMS3_201130A	0.09838	0.1	98.4	90-110
Iron	SW6020B	ICPMS3_201130A	9.647	10	96.5	90-110
Lead	SW6020B	ICPMS3_201130A	0.09787	0.1	97.9	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 00:34						
Magnesium	SW6020B	ICPMS3_201130A	9.912	10	99.1	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09999	0.1	100.0	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1004	0.1	100	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09854	0.1	98.5	90-110
Potassium	SW6020B	ICPMS3_201130A	10.31	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1071	0.1	107	90-110
Silicon	SW6020B	ICPMS3_201130A	10.21	10	102	90-110
Silver	SW6020B	ICPMS3_201130A	0.09791	0.1	97.9	90-110
Sodium	SW6020B	ICPMS3_201130A	9.83	10	98.3	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1005	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09967	0.1	99.7	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09775	0.1	97.8	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1082	0.1	108	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09868	0.1	98.7	90-110
CCV 12/01/20 00:56						
Aluminum	SW6020B	ICPMS3_201130A	0.09891	0.1	98.9	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1057	0.1	106	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
Barium	SW6020B	ICPMS3_201130A	0.1043	0.1	104	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1046	0.1	105	90-110
Boron	SW6020B	ICPMS3_201130A	0.2496	0.25	99.9	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Calcium	SW6020B	ICPMS3_201130A	9.935	10	99.3	90-110
Chromium	SW6020B	ICPMS3_201130A	0.0994	0.1	99.4	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1	0.1	100	90-110
Copper	SW6020B	ICPMS3_201130A	0.09896	0.1	99.0	90-110
Iron	SW6020B	ICPMS3_201130A	9.663	10	96.6	90-110
Lead	SW6020B	ICPMS3_201130A	0.09945	0.1	99.5	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1025	0.1	103	90-110
Magnesium	SW6020B	ICPMS3_201130A	9.923	10	99.2	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09922	0.1	99.2	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09835	0.1	98.3	90-110
Potassium	SW6020B	ICPMS3_201130A	10.33	10	103	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1051	0.1	105	90-110
Silicon	SW6020B	ICPMS3_201130A	10.29	10	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 00:56						
Silver	SW6020B	ICPMS3_201130A	0.09857	0.1	98.6	90-110
Sodium	SW6020B	ICPMS3_201130A	9.793	10	97.9	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1007	0.1	101	90-110
Thallium	SW6020B	ICPMS3_201130A	0.0996	0.1	99.6	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09752	0.1	97.5	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1087	0.1	109	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1004	0.1	100	90-110
CCV 12/01/20 01:17						
Aluminum	SW6020B	ICPMS3_201130A	0.09546	0.1	95.5	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1079	0.1	108	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1005	0.1	100	90-110
Barium	SW6020B	ICPMS3_201130A	0.1056	0.1	106	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1042	0.1	104	90-110
Boron	SW6020B	ICPMS3_201130A	0.2413	0.25	96.5	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1008	0.1	101	90-110
Calcium	SW6020B	ICPMS3_201130A	9.95	10	99.5	90-110
Chromium	SW6020B	ICPMS3_201130A	0.09623	0.1	96.2	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.0977	0.1	97.7	90-110
Copper	SW6020B	ICPMS3_201130A	0.09578	0.1	95.8	90-110
Iron	SW6020B	ICPMS3_201130A	9.376	10	93.8	90-110
Lead	SW6020B	ICPMS3_201130A	0.09889	0.1	98.9	90-110
Lithium	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
Magnesium	SW6020B	ICPMS3_201130A	9.286	10	92.9	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09788	0.1	97.9	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09987	0.1	99.9	90-110
Nickel	SW6020B	ICPMS3_201130A	0.09604	0.1	96.0	90-110
Potassium	SW6020B	ICPMS3_201130A	9.767	10	97.7	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1032	0.1	103	90-110
Silicon	SW6020B	ICPMS3_201130A	10.08	10	101	90-110
Silver	SW6020B	ICPMS3_201130A	0.09871	0.1	98.7	90-110
Sodium	SW6020B	ICPMS3_201130A	9.1	10	91.0	90-110
Strontium	SW6020B	ICPMS3_201130A	0.1001	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09864	0.1	98.6	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09691	0.1	96.9	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1033	0.1	103	90-110
Zinc	SW6020B	ICPMS3_201130A	0.09835	0.1	98.4	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 12/01/20 01:41						
Aluminum	SW6020B	ICPMS3_201130A	0.07435	0.08	92.9	90-110
Antimony	SW6020B	ICPMS3_201130A	0.0801	0.08	100	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.08044	0.08	101	90-110
Barium	SW6020B	ICPMS3_201130A	0.07885	0.08	98.6	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.07877	0.08	98.5	90-110
Boron	SW6020B	ICPMS3_201130A	0.1908	0.2	95.4	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.07927	0.08	99.1	90-110
Calcium	SW6020B	ICPMS3_201130A	7.732	8	96.7	90-110
Chromium	SW6020B	ICPMS3_201130A	0.08521	0.08	107	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.08438	0.08	105	90-110
Copper	SW6020B	ICPMS3_201130A	0.08495	0.08	106	90-110
Iron	SW6020B	ICPMS3_201130A	8.062	8	101	90-110
Lead	SW6020B	ICPMS3_201130A	0.0761	0.08	95.1	90-110
Lithium	SW6020B	ICPMS3_201130A	0.07513	0.08	93.9	90-110
Magnesium	SW6020B	ICPMS3_201130A	8.049	8	101	90-110
Manganese	SW6020B	ICPMS3_201130A	0.07804	0.08	97.6	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.07509	0.08	93.9	90-110
Nickel	SW6020B	ICPMS3_201130A	0.08102	0.08	101	90-110
Potassium	SW6020B	ICPMS3_201130A	8.019	8	100	90-110
Selenium	SW6020B	ICPMS3_201130A	0.07965	0.08	99.6	90-110
Silicon	SW6020B	ICPMS3_201130A	8.161	8	102	90-110
Silver	SW6020B	ICPMS3_201130A	0.08364	0.08	105	90-110
Sodium	SW6020B	ICPMS3_201130A	8.049	8	101	90-110
Strontium	SW6020B	ICPMS3_201130A	0.07534	0.08	94.2	90-110
Thallium	SW6020B	ICPMS3_201130A	0.07718	0.08	96.5	90-110
Uranium	SW6020B	ICPMS3_201130A	0.07311	0.08	91.4	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.07924	0.08	99.0	90-110
Zinc	SW6020B	ICPMS3_201130A	0.08167	0.08	102	90-110
CCV 12/01/20 01:46						
Aluminum	SW6020B	ICPMS3_201130A	0.09716	0.1	97.2	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1019	0.1	102	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Barium	SW6020B	ICPMS3_201130A	0.1015	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1015	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2415	0.25	96.6	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1	0.1	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 01:46						
Calcium	SW6020B	ICPMS3_201130A	9.85	10	98.5	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1074	0.1	107	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.1064	0.1	106	90-110
Copper	SW6020B	ICPMS3_201130A	0.107	0.1	107	90-110
Iron	SW6020B	ICPMS3_201130A	10.22	10	102	90-110
Lead	SW6020B	ICPMS3_201130A	0.09647	0.1	96.5	90-110
Lithium	SW6020B	ICPMS3_201130A	0.09833	0.1	98.3	90-110
Magnesium	SW6020B	ICPMS3_201130A	10.22	10	102	90-110
Manganese	SW6020B	ICPMS3_201130A	0.09897	0.1	99.0	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09822	0.1	98.2	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1024	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201130A	10.07	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1037	0.1	104	90-110
Silicon	SW6020B	ICPMS3_201130A	10	10	100	90-110
Silver	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201130A	10.13	10	101	90-110
Strontium	SW6020B	ICPMS3_201130A	0.0973	0.1	97.3	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09913	0.1	99.1	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09787	0.1	97.9	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1013	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201130A	0.103	0.1	103	90-110
CCV 12/01/20 02:06						
Aluminum	SW6020B	ICPMS3_201130A	0.09767	0.1	97.7	90-110
Antimony	SW6020B	ICPMS3_201130A	0.1027	0.1	103	90-110
Arsenic	SW6020B	ICPMS3_201130A	0.1016	0.1	102	90-110
Barium	SW6020B	ICPMS3_201130A	0.1017	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201130A	0.1011	0.1	101	90-110
Boron	SW6020B	ICPMS3_201130A	0.2415	0.25	96.6	90-110
Cadmium	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Calcium	SW6020B	ICPMS3_201130A	9.831	10	98.3	90-110
Chromium	SW6020B	ICPMS3_201130A	0.1082	0.1	108	90-110
Cobalt	SW6020B	ICPMS3_201130A	0.107	0.1	107	90-110
Copper	SW6020B	ICPMS3_201130A	0.1065	0.1	107	90-110
Iron	SW6020B	ICPMS3_201130A	10.22	10	102	90-110
Lead	SW6020B	ICPMS3_201130A	0.09668	0.1	96.7	90-110
Lithium	SW6020B	ICPMS3_201130A	0.09767	0.1	97.7	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 02:06						
Magnesium	SW6020B	ICPMS3_201130A	10.25	10	103	90-110
Manganese	SW6020B	ICPMS3_201130A	0.099	0.1	99.0	90-110
Molybdenum	SW6020B	ICPMS3_201130A	0.09874	0.1	98.7	90-110
Nickel	SW6020B	ICPMS3_201130A	0.1034	0.1	103	90-110
Potassium	SW6020B	ICPMS3_201130A	10.09	10	101	90-110
Selenium	SW6020B	ICPMS3_201130A	0.1014	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201130A	10.01	10	100	90-110
Silver	SW6020B	ICPMS3_201130A	0.1018	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201130A	10.16	10	102	90-110
Strontium	SW6020B	ICPMS3_201130A	0.09762	0.1	97.6	90-110
Thallium	SW6020B	ICPMS3_201130A	0.09862	0.1	98.6	90-110
Uranium	SW6020B	ICPMS3_201130A	0.09812	0.1	98.1	90-110
Vanadium	SW6020B	ICPMS3_201130A	0.1011	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201130A	0.1028	0.1	103	90-110
ICV 12/01/20 11:49						
Lead	SW6010D	ICP2_201201B	1.02	1	102	90-110
CCV 12/01/20 12:35						
Lead	SW6010D	ICP2_201201B	0.5054	0.5	101	90-110
CCV 12/01/20 13:41						
Lead	SW6010D	ICP2_201201B	0.5025	0.5	100	90-110
CCV 12/01/20 14:53						
Lead	SW6010D	ICP2_201201B	0.4904	0.5	98.1	90-110
CCV 12/01/20 16:00						
Lead	SW6010D	ICP2_201201B	0.4943	0.5	98.9	90-110
CCV 12/01/20 17:07						
Lead	SW6010D	ICP2_201201B	0.4893	0.5	97.9	90-110
CCV 12/01/20 18:10						
Lead	SW6010D	ICP2_201201B	0.5041	0.5	101	90-110
CCV 12/01/20 19:17						
Lead	SW6010D	ICP2_201201B	0.504	0.5	101	90-110
CCV 12/01/20 20:25						
Lead	SW6010D	ICP2_201201B	0.4963	0.5	99.3	90-110
CCV 12/01/20 21:31						
Lead	SW6010D	ICP2_201201B	0.4918	0.5	98.4	90-110
CCV 12/01/20 22:42						
Lead	SW6010D	ICP2_201201B	0.494	0.5	98.8	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 23:50						
Lead	SW6010D	ICP2_201201B	0.4908	0.5	98.2	90-110
CCV 12/02/20 00:46						
Lead	SW6010D	ICP2_201201B	0.4923	0.5	98.5	90-110
ICV 12/01/20 14:24						
Aluminum	SW6020B	ICPMS3_201201A	0.078	0.08	97.5	90-110
Antimony	SW6020B	ICPMS3_201201A	0.07949	0.08	99.4	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.08013	0.08	100	90-110
Barium	SW6020B	ICPMS3_201201A	0.07845	0.08	98.1	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.07879	0.08	98.5	90-110
Boron	SW6020B	ICPMS3_201201A	0.1896	0.2	94.8	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.0796	0.08	99.5	90-110
Calcium	SW6020B	ICPMS3_201201A	8.042	8	101	90-110
Chromium	SW6020B	ICPMS3_201201A	0.08049	0.08	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.08142	0.08	102	90-110
Copper	SW6020B	ICPMS3_201201A	0.08118	0.08	101	90-110
Iron	SW6020B	ICPMS3_201201A	8.001	8	100	90-110
Lead	SW6020B	ICPMS3_201201A	0.07855	0.08	98.2	90-110
Lithium	SW6020B	ICPMS3_201201A	0.07836	0.08	98.0	90-110
Magnesium	SW6020B	ICPMS3_201201A	7.942	8	99.3	90-110
Manganese	SW6020B	ICPMS3_201201A	0.07923	0.08	99.0	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.07655	0.08	95.7	90-110
Nickel	SW6020B	ICPMS3_201201A	0.07877	0.08	98.5	90-110
Potassium	SW6020B	ICPMS3_201201A	8.07	8	101	90-110
Selenium	SW6020B	ICPMS3_201201A	0.07789	0.08	97.4	90-110
Silicon	SW6020B	ICPMS3_201201A	8.505	8	106	90-110
Silver	SW6020B	ICPMS3_201201A	0.08063	0.08	101	90-110
Sodium	SW6020B	ICPMS3_201201A	8.024	8	100	90-110
Strontium	SW6020B	ICPMS3_201201A	0.07776	0.08	97.2	90-110
Thallium	SW6020B	ICPMS3_201201A	0.07867	0.08	98.3	90-110
Uranium	SW6020B	ICPMS3_201201A	0.0752	0.08	94.0	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.07851	0.08	98.1	90-110
Zinc	SW6020B	ICPMS3_201201A	0.08005	0.08	100	90-110
CCV 12/01/20 14:37						
Aluminum	SW6020B	ICPMS3_201201A	0.09925	0.1	99.3	90-110
Antimony	SW6020B	ICPMS3_201201A	0.107	0.1	107	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09884	0.1	98.8	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 14:37						
Barium	SW6020B	ICPMS3_201201A	0.09795	0.1	98.0	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.09842	0.1	98.4	90-110
Boron	SW6020B	ICPMS3_201201A	0.2635	0.25	105	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09797	0.1	98.0	90-110
Calcium	SW6020B	ICPMS3_201201A	10.07	10	101	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1004	0.1	100	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.09961	0.1	99.6	90-110
Copper	SW6020B	ICPMS3_201201A	0.1009	0.1	101	90-110
Iron	SW6020B	ICPMS3_201201A	9.91	10	99.1	90-110
Lead	SW6020B	ICPMS3_201201A	0.09872	0.1	98.7	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09971	0.1	99.7	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.888	10	98.9	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09912	0.1	99.1	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09815	0.1	98.1	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09888	0.1	98.9	90-110
Potassium	SW6020B	ICPMS3_201201A	9.999	10	100.0	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09404	0.1	94.0	90-110
Silicon	SW6020B	ICPMS3_201201A	10.15	10	102	90-110
Silver	SW6020B	ICPMS3_201201A	0.1016	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201201A	10.04	10	100	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09933	0.1	99.3	90-110
Thallium	SW6020B	ICPMS3_201201A	0.0998	0.1	99.8	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09751	0.1	97.5	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09903	0.1	99.0	90-110
Zinc	SW6020B	ICPMS3_201201A	0.0995	0.1	99.5	90-110
CCV 12/01/20 14:44						
Aluminum	SW6020B	ICPMS3_201201A	0.09929	0.1	99.3	90-110
Antimony	SW6020B	ICPMS3_201201A	0.101	0.1	101	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09994	0.1	99.9	90-110
Barium	SW6020B	ICPMS3_201201A	0.09775	0.1	97.8	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.09793	0.1	97.9	90-110
Boron	SW6020B	ICPMS3_201201A	0.2484	0.25	99.3	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09831	0.1	98.3	90-110
Calcium	SW6020B	ICPMS3_201201A	10.02	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1017	0.1	102	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 14:44						
Copper	SW6020B	ICPMS3_201201A	0.1016	0.1	102	90-110
Iron	SW6020B	ICPMS3_201201A	9.987	10	99.9	90-110
Lead	SW6020B	ICPMS3_201201A	0.0988	0.1	98.8	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09903	0.1	99.0	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.948	10	99.5	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09868	0.1	98.7	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.0985	0.1	98.5	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09926	0.1	99.3	90-110
Potassium	SW6020B	ICPMS3_201201A	9.99	10	99.9	90-110
Selenium	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201201A	10.13	10	101	90-110
Silver	SW6020B	ICPMS3_201201A	0.1001	0.1	100	90-110
Sodium	SW6020B	ICPMS3_201201A	9.897	10	99.0	90-110
Strontium	SW6020B	ICPMS3_201201A	0.0995	0.1	99.5	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09845	0.1	98.4	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09742	0.1	97.4	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09932	0.1	99.3	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1	0.1	100	90-110
CCV 12/01/20 15:11						
Aluminum	SW6020B	ICPMS3_201201A	0.09434	0.1	94.3	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09863	0.1	98.6	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
Barium	SW6020B	ICPMS3_201201A	0.09823	0.1	98.2	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1008	0.1	101	90-110
Boron	SW6020B	ICPMS3_201201A	0.2664	0.25	107	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
Calcium	SW6020B	ICPMS3_201201A	10.03	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1022	0.1	102	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1027	0.1	103	90-110
Copper	SW6020B	ICPMS3_201201A	0.1159	0.1	116 *	90-110
Iron	SW6020B	ICPMS3_201201A	9.89	10	98.9	90-110
Lead	SW6020B	ICPMS3_201201A	0.09888	0.1	98.9	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09706	0.1	97.1	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.792	10	97.9	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09657	0.1	96.6	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.1002	0.1	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 15:11						
Nickel	SW6020B	ICPMS3_201201A	0.1015	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201201A	9.847	10	98.5	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09616	0.1	96.2	90-110
Silicon	SW6020B	ICPMS3_201201A	9.779	10	97.8	90-110
Silver	SW6020B	ICPMS3_201201A	0.1027	0.1	103	90-110
Sodium	SW6020B	ICPMS3_201201A	10.13	10	101	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09972	0.1	99.7	90-110
Thallium	SW6020B	ICPMS3_201201A	0.0989	0.1	98.9	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09791	0.1	97.9	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1015	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
CCV 12/01/20 15:36						
Aluminum	SW6020B	ICPMS3_201201A	0.09506	0.1	95.1	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09847	0.1	98.5	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1028	0.1	103	90-110
Barium	SW6020B	ICPMS3_201201A	0.09881	0.1	98.8	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1055	0.1	106	90-110
Boron	SW6020B	ICPMS3_201201A	0.2708	0.25	108	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09941	0.1	99.4	90-110
Calcium	SW6020B	ICPMS3_201201A	9.999	10	100.0	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1044	0.1	104	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1056	0.1	106	90-110
Copper	SW6020B	ICPMS3_201201A	0.1072	0.1	107	90-110
Iron	SW6020B	ICPMS3_201201A	10.02	10	100	90-110
Lead	SW6020B	ICPMS3_201201A	0.09909	0.1	99.1	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09886	0.1	98.9	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.825	10	98.3	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09735	0.1	97.4	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.0985	0.1	98.5	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1045	0.1	104	90-110
Potassium	SW6020B	ICPMS3_201201A	9.876	10	98.8	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09725	0.1	97.3	90-110
Silicon	SW6020B	ICPMS3_201201A	9.745	10	97.4	90-110
Silver	SW6020B	ICPMS3_201201A	0.1045	0.1	105	90-110
Sodium	SW6020B	ICPMS3_201201A	10.15	10	101	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09947	0.1	99.5	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 15:36						
Thallium	SW6020B	ICPMS3_201201A	0.09974	0.1	99.7	90-110
Uranium	SW6020B	ICPMS3_201201A	0.0971	0.1	97.1	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1021	0.1	102	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1029	0.1	103	90-110
CCV 12/01/20 15:55						
Aluminum	SW6020B	ICPMS3_201201A	0.09498	0.1	95.0	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09995	0.1	99.9	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1024	0.1	102	90-110
Barium	SW6020B	ICPMS3_201201A	0.09798	0.1	98.0	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1058	0.1	106	90-110
Boron	SW6020B	ICPMS3_201201A	0.2908	0.25	116 *	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09878	0.1	98.8	90-110
Calcium	SW6020B	ICPMS3_201201A	10.02	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1051	0.1	105	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1058	0.1	106	90-110
Copper	SW6020B	ICPMS3_201201A	0.1073	0.1	107	90-110
Iron	SW6020B	ICPMS3_201201A	10.11	10	101	90-110
Lead	SW6020B	ICPMS3_201201A	0.09877	0.1	98.8	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09889	0.1	98.9	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.953	10	99.5	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09671	0.1	96.7	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09806	0.1	98.1	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1049	0.1	105	90-110
Potassium	SW6020B	ICPMS3_201201A	9.859	10	98.6	90-110
Selenium	SW6020B	ICPMS3_201201A	0.0953	0.1	95.3	90-110
Silicon	SW6020B	ICPMS3_201201A	9.789	10	97.9	90-110
Silver	SW6020B	ICPMS3_201201A	0.1047	0.1	105	90-110
Sodium	SW6020B	ICPMS3_201201A	10.2	10	102	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09985	0.1	99.8	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09863	0.1	98.6	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09598	0.1	96.0	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.102	0.1	102	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1029	0.1	103	90-110
CCV 12/01/20 16:15						
Aluminum	SW6020B	ICPMS3_201201A	0.09563	0.1	95.6	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09944	0.1	99.4	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 16:15						
Arsenic	SW6020B	ICPMS3_201201A	0.102	0.1	102	90-110
Barium	SW6020B	ICPMS3_201201A	0.09825	0.1	98.3	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.104	0.1	104	90-110
Boron	SW6020B	ICPMS3_201201A	0.2673	0.25	107	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1005	0.1	100	90-110
Calcium	SW6020B	ICPMS3_201201A	10.07	10	101	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1042	0.1	104	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1052	0.1	105	90-110
Copper	SW6020B	ICPMS3_201201A	0.1058	0.1	106	90-110
Iron	SW6020B	ICPMS3_201201A	10.01	10	100	90-110
Lead	SW6020B	ICPMS3_201201A	0.09977	0.1	99.8	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09891	0.1	98.9	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.841	10	98.4	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09738	0.1	97.4	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09908	0.1	99.1	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1043	0.1	104	90-110
Potassium	SW6020B	ICPMS3_201201A	9.76	10	97.6	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09841	0.1	98.4	90-110
Silicon	SW6020B	ICPMS3_201201A	9.818	10	98.2	90-110
Silver	SW6020B	ICPMS3_201201A	0.1049	0.1	105	90-110
Sodium	SW6020B	ICPMS3_201201A	10.08	10	101	90-110
Strontium	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201201A	0.1	0.1	100	90-110
Uranium	SW6020B	ICPMS3_201201A	0.0975	0.1	97.5	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1015	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1023	0.1	102	90-110
CCV 12/01/20 16:35						
Aluminum	SW6020B	ICPMS3_201201A	0.09533	0.1	95.3	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1017	0.1	102	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.09897	0.1	99.0	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1031	0.1	103	90-110
Boron	SW6020B	ICPMS3_201201A	0.2644	0.25	106	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Calcium	SW6020B	ICPMS3_201201A	10.07	10	101	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1027	0.1	103	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 16:35						
Cobalt	SW6020B	ICPMS3_201201A	0.1035	0.1	103	90-110
Copper	SW6020B	ICPMS3_201201A	0.1038	0.1	104	90-110
Iron	SW6020B	ICPMS3_201201A	9.927	10	99.3	90-110
Lead	SW6020B	ICPMS3_201201A	0.09844	0.1	98.4	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09871	0.1	98.7	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.91	10	99.1	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09825	0.1	98.2	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09946	0.1	99.5	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1019	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201201A	9.895	10	99.0	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09453	0.1	94.5	90-110
Silicon	SW6020B	ICPMS3_201201A	9.82	10	98.2	90-110
Silver	SW6020B	ICPMS3_201201A	0.1046	0.1	105	90-110
Sodium	SW6020B	ICPMS3_201201A	10.13	10	101	90-110
Strontium	SW6020B	ICPMS3_201201A	0.1008	0.1	101	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09896	0.1	99.0	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09698	0.1	97.0	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1016	0.1	102	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1027	0.1	103	90-110
CCV 12/01/20 16:55						
Aluminum	SW6020B	ICPMS3_201201A	0.09575	0.1	95.7	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09995	0.1	99.9	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.101	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.09951	0.1	99.5	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1044	0.1	104	90-110
Boron	SW6020B	ICPMS3_201201A	0.2667	0.25	107	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1001	0.1	100	90-110
Calcium	SW6020B	ICPMS3_201201A	10.04	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1024	0.1	102	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1031	0.1	103	90-110
Copper	SW6020B	ICPMS3_201201A	0.1035	0.1	103	90-110
Iron	SW6020B	ICPMS3_201201A	9.869	10	98.7	90-110
Lead	SW6020B	ICPMS3_201201A	0.09957	0.1	99.6	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09932	0.1	99.3	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.867	10	98.7	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09604	0.1	96.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 16:55						
Molybdenum	SW6020B	ICPMS3_201201A	0.09768	0.1	97.7	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1019	0.1	102	90-110
Potassium	SW6020B	ICPMS3_201201A	9.839	10	98.4	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09623	0.1	96.2	90-110
Silicon	SW6020B	ICPMS3_201201A	9.847	10	98.5	90-110
Silver	SW6020B	ICPMS3_201201A	0.1033	0.1	103	90-110
Sodium	SW6020B	ICPMS3_201201A	10.12	10	101	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09991	0.1	99.9	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09925	0.1	99.2	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09757	0.1	97.6	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1002	0.1	100	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1019	0.1	102	90-110
CCV 12/01/20 18:17						
Aluminum	SW6020B	ICPMS3_201201A	0.09702	0.1	97.0	90-110
Antimony	SW6020B	ICPMS3_201201A	0.0991	0.1	99.1	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.09833	0.1	98.3	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1023	0.1	102	90-110
Boron	SW6020B	ICPMS3_201201A	0.2631	0.25	105	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09644	0.1	96.4	90-110
Calcium	SW6020B	ICPMS3_201201A	10.12	10	101	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1017	0.1	102	90-110
Copper	SW6020B	ICPMS3_201201A	0.09963	0.1	99.6	90-110
Iron	SW6020B	ICPMS3_201201A	9.937	10	99.4	90-110
Lead	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Lithium	SW6020B	ICPMS3_201201A	0.0983	0.1	98.3	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.862	10	98.6	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09825	0.1	98.2	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09807	0.1	98.1	90-110
Nickel	SW6020B	ICPMS3_201201A	0.0993	0.1	99.3	90-110
Potassium	SW6020B	ICPMS3_201201A	10.25	10	102	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09434	0.1	94.3	90-110
Silicon	SW6020B	ICPMS3_201201A	9.901	10	99.0	90-110
Silver	SW6020B	ICPMS3_201201A	0.1002	0.1	100	90-110
Sodium	SW6020B	ICPMS3_201201A	10.11	10	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 18:17						
Strontium	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09556	0.1	95.6	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1015	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09993	0.1	99.9	90-110
CCV 12/01/20 18:37						
Aluminum	SW6020B	ICPMS3_201201A	0.102	0.1	102	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09988	0.1	99.9	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09853	0.1	98.5	90-110
Barium	SW6020B	ICPMS3_201201A	0.1064	0.1	106	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.104	0.1	104	90-110
Boron	SW6020B	ICPMS3_201201A	0.2613	0.25	105	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1042	0.1	104	90-110
Calcium	SW6020B	ICPMS3_201201A	10.51	10	105	90-110
Chromium	SW6020B	ICPMS3_201201A	0.09931	0.1	99.3	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.0991	0.1	99.1	90-110
Copper	SW6020B	ICPMS3_201201A	0.09722	0.1	97.2	90-110
Iron	SW6020B	ICPMS3_201201A	9.585	10	95.8	90-110
Lead	SW6020B	ICPMS3_201201A	0.1048	0.1	105	90-110
Lithium	SW6020B	ICPMS3_201201A	0.1022	0.1	102	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.666	10	96.7	90-110
Manganese	SW6020B	ICPMS3_201201A	0.1029	0.1	103	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.1033	0.1	103	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09796	0.1	98.0	90-110
Potassium	SW6020B	ICPMS3_201201A	10.01	10	100	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09754	0.1	97.5	90-110
Silicon	SW6020B	ICPMS3_201201A	10.56	10	106	90-110
Silver	SW6020B	ICPMS3_201201A	0.09978	0.1	99.8	90-110
Sodium	SW6020B	ICPMS3_201201A	9.83	10	98.3	90-110
Strontium	SW6020B	ICPMS3_201201A	0.1064	0.1	106	90-110
Thallium	SW6020B	ICPMS3_201201A	0.1059	0.1	106	90-110
Uranium	SW6020B	ICPMS3_201201A	0.1016	0.1	102	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1	0.1	100	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09829	0.1	98.3	90-110
CCV 12/01/20 18:57						
Aluminum	SW6020B	ICPMS3_201201A	0.09737	0.1	97.4	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 18:57						
Antimony	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1019	0.1	102	90-110
Boron	SW6020B	ICPMS3_201201A	0.2523	0.25	101	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.0989	0.1	98.9	90-110
Calcium	SW6020B	ICPMS3_201201A	10.08	10	101	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1001	0.1	100	90-110
Copper	SW6020B	ICPMS3_201201A	0.09816	0.1	98.2	90-110
Iron	SW6020B	ICPMS3_201201A	9.613	10	96.1	90-110
Lead	SW6020B	ICPMS3_201201A	0.09834	0.1	98.3	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09829	0.1	98.3	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.635	10	96.3	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09708	0.1	97.1	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09748	0.1	97.5	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09826	0.1	98.3	90-110
Potassium	SW6020B	ICPMS3_201201A	9.817	10	98.2	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09667	0.1	96.7	90-110
Silicon	SW6020B	ICPMS3_201201A	10.04	10	100	90-110
Silver	SW6020B	ICPMS3_201201A	0.09987	0.1	99.9	90-110
Sodium	SW6020B	ICPMS3_201201A	9.69	10	96.9	90-110
Strontium	SW6020B	ICPMS3_201201A	0.1	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09952	0.1	99.5	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09488	0.1	94.9	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09953	0.1	99.5	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09842	0.1	98.4	90-110
CCV 12/01/20 19:17						
Aluminum	SW6020B	ICPMS3_201201A	0.09539	0.1	95.4	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.101	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.1019	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1026	0.1	103	90-110
Boron	SW6020B	ICPMS3_201201A	0.2558	0.25	102	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09988	0.1	99.9	90-110
Calcium	SW6020B	ICPMS3_201201A	10.03	10	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 19:17						
Chromium	SW6020B	ICPMS3_201201A	0.101	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1005	0.1	100	90-110
Copper	SW6020B	ICPMS3_201201A	0.09843	0.1	98.4	90-110
Iron	SW6020B	ICPMS3_201201A	9.625	10	96.2	90-110
Lead	SW6020B	ICPMS3_201201A	0.09815	0.1	98.2	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09846	0.1	98.5	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.663	10	96.6	90-110
Manganese	SW6020B	ICPMS3_201201A	0.0964	0.1	96.4	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09739	0.1	97.4	90-110
Nickel	SW6020B	ICPMS3_201201A	0.0987	0.1	98.7	90-110
Potassium	SW6020B	ICPMS3_201201A	9.922	10	99.2	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09446	0.1	94.5	90-110
Silicon	SW6020B	ICPMS3_201201A	9.943	10	99.4	90-110
Silver	SW6020B	ICPMS3_201201A	0.1005	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201201A	9.859	10	98.6	90-110
Strontium	SW6020B	ICPMS3_201201A	0.1004	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09861	0.1	98.6	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09561	0.1	95.6	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1007	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201201A	0.0986	0.1	98.6	90-110
CCV 12/01/20 19:41						
Aluminum	SW6020B	ICPMS3_201201A	0.09464	0.1	94.6	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.101	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.09969	0.1	99.7	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1047	0.1	105	90-110
Boron	SW6020B	ICPMS3_201201A	0.3631	0.25	145 *	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09885	0.1	98.8	90-110
Calcium	SW6020B	ICPMS3_201201A	10.02	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.0997	0.1	99.7	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Copper	SW6020B	ICPMS3_201201A	0.09938	0.1	99.4	90-110
Iron	SW6020B	ICPMS3_201201A	9.687	10	96.9	90-110
Lead	SW6020B	ICPMS3_201201A	0.09875	0.1	98.7	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09898	0.1	99.0	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.582	10	95.8	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 19:41						
Manganese	SW6020B	ICPMS3_201201A	0.0955	0.1	95.5	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.0975	0.1	97.5	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09957	0.1	99.6	90-110
Potassium	SW6020B	ICPMS3_201201A	9.872	10	98.7	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09845	0.1	98.4	90-110
Silicon	SW6020B	ICPMS3_201201A	9.798	10	98.0	90-110
Silver	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201201A	9.663	10	96.6	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09997	0.1	100.0	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09933	0.1	99.3	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09537	0.1	95.4	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.102	0.1	102	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09828	0.1	98.3	90-110
CCV 12/01/20 20:01						
Aluminum	SW6020B	ICPMS3_201201A	0.0944	0.1	94.4	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1005	0.1	100	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09966	0.1	99.7	90-110
Barium	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1058	0.1	106	90-110
Boron	SW6020B	ICPMS3_201201A	0.283	0.25	113 *	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09916	0.1	99.2	90-110
Calcium	SW6020B	ICPMS3_201201A	10.03	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1005	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1007	0.1	101	90-110
Copper	SW6020B	ICPMS3_201201A	0.09798	0.1	98.0	90-110
Iron	SW6020B	ICPMS3_201201A	9.558	10	95.6	90-110
Lead	SW6020B	ICPMS3_201201A	0.09883	0.1	98.8	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09931	0.1	99.3	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.553	10	95.5	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09609	0.1	96.1	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09817	0.1	98.2	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09895	0.1	99.0	90-110
Potassium	SW6020B	ICPMS3_201201A	9.802	10	98.0	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09331	0.1	93.3	90-110
Silicon	SW6020B	ICPMS3_201201A	9.808	10	98.1	90-110
Silver	SW6020B	ICPMS3_201201A	0.09994	0.1	99.9	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 20:01						
Sodium	SW6020B	ICPMS3_201201A	9.601	10	96.0	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09999	0.1	100.0	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09935	0.1	99.4	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09492	0.1	94.9	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1009	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09866	0.1	98.7	90-110
CCV 12/01/20 20:25						
Aluminum	SW6020B	ICPMS3_201201A	0.09367	0.1	93.7	90-110
Antimony	SW6020B	ICPMS3_201201A	0.102	0.1	102	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.1021	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1069	0.1	107	90-110
Boron	SW6020B	ICPMS3_201201A	0.2706	0.25	108	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1004	0.1	100	90-110
Calcium	SW6020B	ICPMS3_201201A	9.989	10	99.9	90-110
Chromium	SW6020B	ICPMS3_201201A	0.09872	0.1	98.7	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.09982	0.1	99.8	90-110
Copper	SW6020B	ICPMS3_201201A	0.09684	0.1	96.8	90-110
Iron	SW6020B	ICPMS3_201201A	9.392	10	93.9	90-110
Lead	SW6020B	ICPMS3_201201A	0.09837	0.1	98.4	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09938	0.1	99.4	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.31	10	93.1	90-110
Manganese	SW6020B	ICPMS3_201201A	0.0947	0.1	94.7	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09774	0.1	97.7	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09775	0.1	97.8	90-110
Potassium	SW6020B	ICPMS3_201201A	9.642	10	96.4	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09412	0.1	94.1	90-110
Silicon	SW6020B	ICPMS3_201201A	9.697	10	97.0	90-110
Silver	SW6020B	ICPMS3_201201A	0.1022	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201201A	9.418	10	94.2	90-110
Strontium	SW6020B	ICPMS3_201201A	0.1005	0.1	100	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09887	0.1	98.9	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09553	0.1	95.5	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09803	0.1	98.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 12/01/20 20:45						
Aluminum	SW6020B	ICPMS3_201201A	0.07892	0.08	98.6	90-110
Antimony	SW6020B	ICPMS3_201201A	0.081	0.08	101	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.07978	0.08	99.7	90-110
Barium	SW6020B	ICPMS3_201201A	0.07996	0.08	100.0	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.08229	0.08	103	90-110
Boron	SW6020B	ICPMS3_201201A	0.1957	0.2	97.9	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.08086	0.08	101	90-110
Calcium	SW6020B	ICPMS3_201201A	8.013	8	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.08014	0.08	100	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.08381	0.08	105	90-110
Copper	SW6020B	ICPMS3_201201A	0.08352	0.08	104	90-110
Iron	SW6020B	ICPMS3_201201A	8.101	8	101	90-110
Lead	SW6020B	ICPMS3_201201A	0.07906	0.08	98.8	90-110
Lithium	SW6020B	ICPMS3_201201A	0.07782	0.08	97.3	90-110
Magnesium	SW6020B	ICPMS3_201201A	8.063	8	101	90-110
Manganese	SW6020B	ICPMS3_201201A	0.07996	0.08	99.9	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.07658	0.08	95.7	90-110
Nickel	SW6020B	ICPMS3_201201A	0.07954	0.08	99.4	90-110
Potassium	SW6020B	ICPMS3_201201A	7.963	8	99.5	90-110
Selenium	SW6020B	ICPMS3_201201A	0.08097	0.08	101	90-110
Silicon	SW6020B	ICPMS3_201201A	8.537	8	107	90-110
Silver	SW6020B	ICPMS3_201201A	0.08272	0.08	103	90-110
Sodium	SW6020B	ICPMS3_201201A	7.986	8	99.8	90-110
Strontium	SW6020B	ICPMS3_201201A	0.07752	0.08	96.9	90-110
Thallium	SW6020B	ICPMS3_201201A	0.07792	0.08	97.4	90-110
Uranium	SW6020B	ICPMS3_201201A	0.07476	0.08	93.4	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.07907	0.08	98.8	90-110
Zinc	SW6020B	ICPMS3_201201A	0.0808	0.08	101	90-110
CCV 12/01/20 20:50						
Aluminum	SW6020B	ICPMS3_201201A	0.1002	0.1	100	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1001	0.1	100	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.0984	0.1	98.4	90-110
Barium	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1017	0.1	102	90-110
Boron	SW6020B	ICPMS3_201201A	0.2408	0.25	96.3	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1005	0.1	101	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 20:50						
Calcium	SW6020B	ICPMS3_201201A	9.959	10	99.6	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1	0.1	100	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1033	0.1	103	90-110
Copper	SW6020B	ICPMS3_201201A	0.1028	0.1	103	90-110
Iron	SW6020B	ICPMS3_201201A	9.974	10	99.7	90-110
Lead	SW6020B	ICPMS3_201201A	0.09865	0.1	98.6	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09857	0.1	98.6	90-110
Magnesium	SW6020B	ICPMS3_201201A	10.02	10	100	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09954	0.1	99.5	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09864	0.1	98.6	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09987	0.1	99.9	90-110
Potassium	SW6020B	ICPMS3_201201A	9.849	10	98.5	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09966	0.1	99.7	90-110
Silicon	SW6020B	ICPMS3_201201A	10.12	10	101	90-110
Silver	SW6020B	ICPMS3_201201A	0.1021	0.1	102	90-110
Sodium	SW6020B	ICPMS3_201201A	9.905	10	99.1	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09948	0.1	99.5	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09821	0.1	98.2	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09836	0.1	98.4	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09885	0.1	98.9	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
CCV 12/01/20 21:10						
Aluminum	SW6020B	ICPMS3_201201A	0.09914	0.1	99.1	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1002	0.1	100	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09733	0.1	97.3	90-110
Barium	SW6020B	ICPMS3_201201A	0.09936	0.1	99.4	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.09957	0.1	99.6	90-110
Boron	SW6020B	ICPMS3_201201A	0.2558	0.25	102	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09973	0.1	99.7	90-110
Calcium	SW6020B	ICPMS3_201201A	9.955	10	99.5	90-110
Chromium	SW6020B	ICPMS3_201201A	0.09764	0.1	97.6	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1023	0.1	102	90-110
Copper	SW6020B	ICPMS3_201201A	0.1018	0.1	102	90-110
Iron	SW6020B	ICPMS3_201201A	9.832	10	98.3	90-110
Lead	SW6020B	ICPMS3_201201A	0.09873	0.1	98.7	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09848	0.1	98.5	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 21:10						
Magnesium	SW6020B	ICPMS3_201201A	9.915	10	99.2	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09846	0.1	98.5	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09817	0.1	98.2	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09869	0.1	98.7	90-110
Potassium	SW6020B	ICPMS3_201201A	9.849	10	98.5	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09811	0.1	98.1	90-110
Silicon	SW6020B	ICPMS3_201201A	10.15	10	101	90-110
Silver	SW6020B	ICPMS3_201201A	0.1005	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201201A	9.894	10	98.9	90-110
Strontium	SW6020B	ICPMS3_201201A	0.099	0.1	99.0	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09897	0.1	99.0	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09861	0.1	98.6	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09787	0.1	97.9	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09864	0.1	98.6	90-110
CCV 12/01/20 21:34						
Aluminum	SW6020B	ICPMS3_201201A	0.105	0.1	105	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09492	0.1	94.9	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1009	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.09698	0.1	97.0	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.09522	0.1	95.2	90-110
Boron	SW6020B	ICPMS3_201201A	0.2386	0.25	95.4	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09439	0.1	94.4	90-110
Calcium	SW6020B	ICPMS3_201201A	9.954	10	99.5	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1043	0.1	104	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1045	0.1	105	90-110
Copper	SW6020B	ICPMS3_201201A	0.1023	0.1	102	90-110
Iron	SW6020B	ICPMS3_201201A	10.42	10	104	90-110
Lead	SW6020B	ICPMS3_201201A	0.09884	0.1	98.8	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09755	0.1	97.5	90-110
Magnesium	SW6020B	ICPMS3_201201A	10.69	10	107	90-110
Manganese	SW6020B	ICPMS3_201201A	0.1061	0.1	106	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09567	0.1	95.7	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1008	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201201A	10.8	10	108	90-110
Selenium	SW6020B	ICPMS3_201201A	0.1035	0.1	104	90-110
Silicon	SW6020B	ICPMS3_201201A	10.54	10	105	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 21:34						
Silver	SW6020B	ICPMS3_201201A	0.09228	0.1	92.3	90-110
Sodium	SW6020B	ICPMS3_201201A	11.09	10	111 *	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09962	0.1	99.6	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09852	0.1	98.5	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09495	0.1	94.9	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.1015	0.1	102	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
ICV 12/01/20 21:54						
Aluminum	SW6020B	ICPMS3_201201A	0.07691	0.08	96.1	90-110
Antimony	SW6020B	ICPMS3_201201A	0.08027	0.08	100	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.08032	0.08	100	90-110
Barium	SW6020B	ICPMS3_201201A	0.08092	0.08	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.08177	0.08	102	90-110
Boron	SW6020B	ICPMS3_201201A	0.1971	0.2	98.5	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.07962	0.08	99.5	90-110
Calcium	SW6020B	ICPMS3_201201A	8.021	8	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.0814	0.08	102	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.08369	0.08	105	90-110
Copper	SW6020B	ICPMS3_201201A	0.08375	0.08	105	90-110
Iron	SW6020B	ICPMS3_201201A	7.985	8	99.8	90-110
Lead	SW6020B	ICPMS3_201201A	0.07766	0.08	97.1	90-110
Lithium	SW6020B	ICPMS3_201201A	0.07904	0.08	98.8	90-110
Magnesium	SW6020B	ICPMS3_201201A	8.047	8	101	90-110
Manganese	SW6020B	ICPMS3_201201A	0.08026	0.08	100	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.07648	0.08	95.6	90-110
Nickel	SW6020B	ICPMS3_201201A	0.08099	0.08	101	90-110
Potassium	SW6020B	ICPMS3_201201A	8.123	8	102	90-110
Selenium	SW6020B	ICPMS3_201201A	0.07973	0.08	99.7	90-110
Silicon	SW6020B	ICPMS3_201201A	8.442	8	106	90-110
Silver	SW6020B	ICPMS3_201201A	0.0831	0.08	104	90-110
Sodium	SW6020B	ICPMS3_201201A	8.025	8	100	90-110
Strontium	SW6020B	ICPMS3_201201A	0.07761	0.08	97.0	90-110
Thallium	SW6020B	ICPMS3_201201A	0.07761	0.08	97.0	90-110
Uranium	SW6020B	ICPMS3_201201A	0.07332	0.08	91.6	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.08012	0.08	100	90-110
Zinc	SW6020B	ICPMS3_201201A	0.08023	0.08	100	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 21:59						
Aluminum	SW6020B	ICPMS3_201201A	0.09812	0.1	98.1	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09969	0.1	99.7	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.0994	0.1	99.4	90-110
Barium	SW6020B	ICPMS3_201201A	0.1014	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1021	0.1	102	90-110
Boron	SW6020B	ICPMS3_201201A	0.2441	0.25	97.6	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.0995	0.1	99.5	90-110
Calcium	SW6020B	ICPMS3_201201A	9.932	10	99.3	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1031	0.1	103	90-110
Copper	SW6020B	ICPMS3_201201A	0.1037	0.1	104	90-110
Iron	SW6020B	ICPMS3_201201A	9.879	10	98.8	90-110
Lead	SW6020B	ICPMS3_201201A	0.09734	0.1	97.3	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09896	0.1	99.0	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.933	10	99.3	90-110
Manganese	SW6020B	ICPMS3_201201A	0.1001	0.1	100	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.0978	0.1	97.8	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201201A	10.03	10	100	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09677	0.1	96.8	90-110
Silicon	SW6020B	ICPMS3_201201A	10.05	10	101	90-110
Silver	SW6020B	ICPMS3_201201A	0.1014	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201201A	9.847	10	98.5	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09867	0.1	98.7	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09879	0.1	98.8	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09714	0.1	97.1	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09953	0.1	99.5	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1002	0.1	100	90-110
CCV 12/01/20 22:19						
Aluminum	SW6020B	ICPMS3_201201A	0.09953	0.1	99.5	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09857	0.1	98.6	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09899	0.1	99.0	90-110
Barium	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.09896	0.1	99.0	90-110
Boron	SW6020B	ICPMS3_201201A	0.2415	0.25	96.6	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09928	0.1	99.3	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 22:19						
Calcium	SW6020B	ICPMS3_201201A	9.978	10	99.8	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1035	0.1	104	90-110
Copper	SW6020B	ICPMS3_201201A	0.1026	0.1	103	90-110
Iron	SW6020B	ICPMS3_201201A	9.978	10	99.8	90-110
Lead	SW6020B	ICPMS3_201201A	0.09692	0.1	96.9	90-110
Lithium	SW6020B	ICPMS3_201201A	0.0988	0.1	98.8	90-110
Magnesium	SW6020B	ICPMS3_201201A	10.18	10	102	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09996	0.1	100.0	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09728	0.1	97.3	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09908	0.1	99.1	90-110
Potassium	SW6020B	ICPMS3_201201A	10.12	10	101	90-110
Selenium	SW6020B	ICPMS3_201201A	0.101	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201201A	10.29	10	103	90-110
Silver	SW6020B	ICPMS3_201201A	0.09993	0.1	99.9	90-110
Sodium	SW6020B	ICPMS3_201201A	9.974	10	99.7	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09857	0.1	98.6	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09836	0.1	98.4	90-110
Uranium	SW6020B	ICPMS3_201201A	0.0966	0.1	96.6	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.0989	0.1	98.9	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09941	0.1	99.4	90-110
CCV 12/01/20 22:39						
Aluminum	SW6020B	ICPMS3_201201A	0.09919	0.1	99.2	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09932	0.1	99.3	90-110
Barium	SW6020B	ICPMS3_201201A	0.1009	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1018	0.1	102	90-110
Boron	SW6020B	ICPMS3_201201A	0.2454	0.25	98.1	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09912	0.1	99.1	90-110
Calcium	SW6020B	ICPMS3_201201A	10.01	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1035	0.1	104	90-110
Copper	SW6020B	ICPMS3_201201A	0.1027	0.1	103	90-110
Iron	SW6020B	ICPMS3_201201A	9.942	10	99.4	90-110
Lead	SW6020B	ICPMS3_201201A	0.09672	0.1	96.7	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09911	0.1	99.1	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 22:39						
Magnesium	SW6020B	ICPMS3_201201A	10	10	100	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09982	0.1	99.8	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.0982	0.1	98.2	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1007	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201201A	10.07	10	101	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09902	0.1	99.0	90-110
Silicon	SW6020B	ICPMS3_201201A	10.19	10	102	90-110
Silver	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201201A	9.778	10	97.8	90-110
Strontium	SW6020B	ICPMS3_201201A	0.0987	0.1	98.7	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09813	0.1	98.1	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09609	0.1	96.1	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09821	0.1	98.2	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
CCV 12/01/20 23:01						
Aluminum	SW6020B	ICPMS3_201201A	0.1037	0.1	104	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09456	0.1	94.6	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.1007	0.1	101	90-110
Barium	SW6020B	ICPMS3_201201A	0.09803	0.1	98.0	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.09653	0.1	96.5	90-110
Boron	SW6020B	ICPMS3_201201A	0.2451	0.25	98.0	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09434	0.1	94.3	90-110
Calcium	SW6020B	ICPMS3_201201A	9.992	10	99.9	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1045	0.1	104	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1049	0.1	105	90-110
Copper	SW6020B	ICPMS3_201201A	0.103	0.1	103	90-110
Iron	SW6020B	ICPMS3_201201A	10.37	10	104	90-110
Lead	SW6020B	ICPMS3_201201A	0.09779	0.1	97.8	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09928	0.1	99.3	90-110
Magnesium	SW6020B	ICPMS3_201201A	10.46	10	105	90-110
Manganese	SW6020B	ICPMS3_201201A	0.1066	0.1	107	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09641	0.1	96.4	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1005	0.1	101	90-110
Potassium	SW6020B	ICPMS3_201201A	10.71	10	107	90-110
Selenium	SW6020B	ICPMS3_201201A	0.103	0.1	103	90-110
Silicon	SW6020B	ICPMS3_201201A	10.55	10	106	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 23:01						
Silver	SW6020B	ICPMS3_201201A	0.0931	0.1	93.1	90-110
Sodium	SW6020B	ICPMS3_201201A	10.5	10	105	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09967	0.1	99.7	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09877	0.1	98.8	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09397	0.1	94.0	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09763	0.1	97.6	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1008	0.1	101	90-110
CCV 12/01/20 23:21						
Aluminum	SW6020B	ICPMS3_201201A	0.09864	0.1	98.6	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09986	0.1	99.9	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09775	0.1	97.8	90-110
Barium	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1006	0.1	101	90-110
Boron	SW6020B	ICPMS3_201201A	0.24	0.25	96.0	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09875	0.1	98.7	90-110
Calcium	SW6020B	ICPMS3_201201A	10.02	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.09915	0.1	99.1	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1009	0.1	101	90-110
Copper	SW6020B	ICPMS3_201201A	0.09993	0.1	99.9	90-110
Iron	SW6020B	ICPMS3_201201A	9.806	10	98.1	90-110
Lead	SW6020B	ICPMS3_201201A	0.0967	0.1	96.7	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09954	0.1	99.5	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.919	10	99.2	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09973	0.1	99.7	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09742	0.1	97.4	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09717	0.1	97.2	90-110
Potassium	SW6020B	ICPMS3_201201A	10.04	10	100	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09936	0.1	99.4	90-110
Silicon	SW6020B	ICPMS3_201201A	10.21	10	102	90-110
Silver	SW6020B	ICPMS3_201201A	0.09947	0.1	99.5	90-110
Sodium	SW6020B	ICPMS3_201201A	9.611	10	96.1	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09889	0.1	98.9	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09792	0.1	97.9	90-110
Uranium	SW6020B	ICPMS3_201201A	0.0962	0.1	96.2	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09835	0.1	98.3	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09895	0.1	98.9	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 23:42						
Aluminum	SW6020B	ICPMS3_201201A	0.1032	0.1	103	90-110
Antimony	SW6020B	ICPMS3_201201A	0.09465	0.1	94.6	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09937	0.1	99.4	90-110
Barium	SW6020B	ICPMS3_201201A	0.09818	0.1	98.2	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.09706	0.1	97.1	90-110
Boron	SW6020B	ICPMS3_201201A	0.2467	0.25	98.7	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09413	0.1	94.1	90-110
Calcium	SW6020B	ICPMS3_201201A	10.01	10	100	90-110
Chromium	SW6020B	ICPMS3_201201A	0.1036	0.1	104	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1035	0.1	104	90-110
Copper	SW6020B	ICPMS3_201201A	0.1021	0.1	102	90-110
Iron	SW6020B	ICPMS3_201201A	10.17	10	102	90-110
Lead	SW6020B	ICPMS3_201201A	0.09713	0.1	97.1	90-110
Lithium	SW6020B	ICPMS3_201201A	0.0986	0.1	98.6	90-110
Magnesium	SW6020B	ICPMS3_201201A	10.11	10	101	90-110
Manganese	SW6020B	ICPMS3_201201A	0.1067	0.1	107	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09594	0.1	95.9	90-110
Nickel	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
Potassium	SW6020B	ICPMS3_201201A	10.35	10	103	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09952	0.1	99.5	90-110
Silicon	SW6020B	ICPMS3_201201A	10.48	10	105	90-110
Silver	SW6020B	ICPMS3_201201A	0.09208	0.1	92.1	90-110
Sodium	SW6020B	ICPMS3_201201A	10.39	10	104	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09883	0.1	98.8	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09799	0.1	98.0	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09382	0.1	93.8	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.0962	0.1	96.2	90-110
Zinc	SW6020B	ICPMS3_201201A	0.1003	0.1	100	90-110
CCV 12/02/20 00:03						
Aluminum	SW6020B	ICPMS3_201201A	0.09838	0.1	98.4	90-110
Antimony	SW6020B	ICPMS3_201201A	0.0999	0.1	99.9	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09806	0.1	98.1	90-110
Barium	SW6020B	ICPMS3_201201A	0.1007	0.1	101	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1007	0.1	101	90-110
Boron	SW6020B	ICPMS3_201201A	0.2449	0.25	98.0	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.09852	0.1	98.5	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 00:03						
Calcium	SW6020B	ICPMS3_201201A	9.981	10	99.8	90-110
Chromium	SW6020B	ICPMS3_201201A	0.09827	0.1	98.3	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Copper	SW6020B	ICPMS3_201201A	0.1001	0.1	100	90-110
Iron	SW6020B	ICPMS3_201201A	9.747	10	97.5	90-110
Lead	SW6020B	ICPMS3_201201A	0.09736	0.1	97.4	90-110
Lithium	SW6020B	ICPMS3_201201A	0.1002	0.1	100	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.917	10	99.2	90-110
Manganese	SW6020B	ICPMS3_201201A	0.1004	0.1	100	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09836	0.1	98.4	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09796	0.1	98.0	90-110
Potassium	SW6020B	ICPMS3_201201A	10.08	10	101	90-110
Selenium	SW6020B	ICPMS3_201201A	0.09978	0.1	99.8	90-110
Silicon	SW6020B	ICPMS3_201201A	10.22	10	102	90-110
Silver	SW6020B	ICPMS3_201201A	0.09967	0.1	99.7	90-110
Sodium	SW6020B	ICPMS3_201201A	9.532	10	95.3	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09888	0.1	98.9	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09863	0.1	98.6	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09617	0.1	96.2	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09792	0.1	97.9	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09874	0.1	98.7	90-110
CCV 12/02/20 00:23						
Aluminum	SW6020B	ICPMS3_201201A	0.09806	0.1	98.1	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1017	0.1	102	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.0986	0.1	98.6	90-110
Barium	SW6020B	ICPMS3_201201A	0.1015	0.1	102	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1022	0.1	102	90-110
Boron	SW6020B	ICPMS3_201201A	0.2508	0.25	100	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1	0.1	100	90-110
Calcium	SW6020B	ICPMS3_201201A	9.952	10	99.5	90-110
Chromium	SW6020B	ICPMS3_201201A	0.09922	0.1	99.2	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Copper	SW6020B	ICPMS3_201201A	0.1009	0.1	101	90-110
Iron	SW6020B	ICPMS3_201201A	9.687	10	96.9	90-110
Lead	SW6020B	ICPMS3_201201A	0.09714	0.1	97.1	90-110
Lithium	SW6020B	ICPMS3_201201A	0.09923	0.1	99.2	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 00:23						
Magnesium	SW6020B	ICPMS3_201201A	9.823	10	98.2	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09809	0.1	98.1	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.09736	0.1	97.4	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09832	0.1	98.3	90-110
Potassium	SW6020B	ICPMS3_201201A	9.893	10	98.9	90-110
Selenium	SW6020B	ICPMS3_201201A	0.1004	0.1	100	90-110
Silicon	SW6020B	ICPMS3_201201A	10.08	10	101	90-110
Silver	SW6020B	ICPMS3_201201A	0.1014	0.1	101	90-110
Sodium	SW6020B	ICPMS3_201201A	9.616	10	96.2	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09872	0.1	98.7	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09786	0.1	97.9	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09698	0.1	97.0	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09774	0.1	97.7	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09806	0.1	98.1	90-110
CCV 12/02/20 02:38						
Aluminum	SW6020B	ICPMS3_201201A	0.09645	0.1	96.5	90-110
Antimony	SW6020B	ICPMS3_201201A	0.1052	0.1	105	90-110
Arsenic	SW6020B	ICPMS3_201201A	0.09847	0.1	98.5	90-110
Barium	SW6020B	ICPMS3_201201A	0.1049	0.1	105	90-110
Beryllium	SW6020B	ICPMS3_201201A	0.1064	0.1	106	90-110
Boron	SW6020B	ICPMS3_201201A	0.2446	0.25	97.9	90-110
Cadmium	SW6020B	ICPMS3_201201A	0.1013	0.1	101	90-110
Calcium	SW6020B	ICPMS3_201201A	9.947	10	99.5	90-110
Chromium	SW6020B	ICPMS3_201201A	0.09426	0.1	94.3	90-110
Cobalt	SW6020B	ICPMS3_201201A	0.09689	0.1	96.9	90-110
Copper	SW6020B	ICPMS3_201201A	0.09508	0.1	95.1	90-110
Iron	SW6020B	ICPMS3_201201A	9.149	10	91.5	90-110
Lead	SW6020B	ICPMS3_201201A	0.09618	0.1	96.2	90-110
Lithium	SW6020B	ICPMS3_201201A	0.1011	0.1	101	90-110
Magnesium	SW6020B	ICPMS3_201201A	9.221	10	92.2	90-110
Manganese	SW6020B	ICPMS3_201201A	0.09577	0.1	95.8	90-110
Molybdenum	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Nickel	SW6020B	ICPMS3_201201A	0.09304	0.1	93.0	90-110
Potassium	SW6020B	ICPMS3_201201A	9.725	10	97.3	90-110
Selenium	SW6020B	ICPMS3_201201A	0.1012	0.1	101	90-110
Silicon	SW6020B	ICPMS3_201201A	9.98	10	99.8	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 02:38						
Silver	SW6020B	ICPMS3_201201A	0.09999	0.1	100.0	90-110
Sodium	SW6020B	ICPMS3_201201A	8.743	10	87.4 *	90-110
Strontium	SW6020B	ICPMS3_201201A	0.09903	0.1	99.0	90-110
Thallium	SW6020B	ICPMS3_201201A	0.09606	0.1	96.1	90-110
Uranium	SW6020B	ICPMS3_201201A	0.09452	0.1	94.5	90-110
Vanadium	SW6020B	ICPMS3_201201A	0.09761	0.1	97.6	90-110
Zinc	SW6020B	ICPMS3_201201A	0.09597	0.1	96.0	90-110

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000216	0.0002	108	60-140	11/30/20 09:52
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000208	0.0002	104	60-140	11/30/20 13:09
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000206	0.0002	103	60-140	11/30/20 13:33
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000168	0.0002	84.0	60-140	11/30/20 13:58
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000171	0.0002	85.5	60-140	11/30/20 14:57
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000236	0.0002	118	60-140	11/30/20 16:00
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000235	0.0002	117	60-140	11/30/20 16:25
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000234	0.0002	117	60-140	11/30/20 16:48
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000232	0.0002	116	60-140	11/30/20 17:11
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000236	0.0002	118	60-140	11/30/20 17:34
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000238	0.0002	119	60-140	11/30/20 17:57
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000235	0.0002	117	60-140	11/30/20 18:20
LLCCV							
Mercury	SW7470A	HG4_201130A	0.000234	0.0002	117	60-140	11/30/20 18:43
LLCCV							
Mercury	SW7470A	HG4_201130A	0.00025	0.0002	125	60-140	11/30/20 19:07
LLICV							
Antimony	SW6010D	ICP2_201130B	0.00548	0.005	110	80-120	11/30/20 15:05
Arsenic	SW6010D	ICP2_201130B	0.00411	0.005	82.2	80-120	11/30/20 15:05
Barium	SW6010D	ICP2_201130B	0.00527	0.005	105	80-120	11/30/20 15:05
Beryllium	SW6010D	ICP2_201130B	0.00194	0.002	97.0	80-120	11/30/20 15:05
Cadmium	SW6010D	ICP2_201130B	0.00972	0.01	97.2	80-120	11/30/20 15:05
Chromium	SW6010D	ICP2_201130B	0.005	0.005	100	80-120	11/30/20 15:05
Lead	SW6010D	ICP2_201130B	0.00463	0.005	92.6	80-120	11/30/20 15:05
Nickel	SW6010D	ICP2_201130B	0.00468	0.005	93.6	80-120	11/30/20 15:05

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Selenium	SW6010D	ICP2_201130B	0.0113	0.01	113	80-120	11/30/20 15:05
Silver	SW6010D	ICP2_201130B	0.00547	0.005	109	80-120	11/30/20 15:05
Thallium	SW6010D	ICP2_201130B	0.0102	0.01	102	80-120	11/30/20 15:05
LLICV							
Aluminum	SW6020B	ICPMS3_201130A	0.01026	0.01	103	80-120	11/30/20 15:35
Antimony	SW6020B	ICPMS3_201130A	0.004745	0.005	94.9	80-120	11/30/20 15:35
Arsenic	SW6020B	ICPMS3_201130A	0.004864	0.005	97.3	80-120	11/30/20 15:35
Barium	SW6020B	ICPMS3_201130A	0.004754	0.005	95.1	80-120	11/30/20 15:35
Beryllium	SW6020B	ICPMS3_201130A	0.001941	0.002	97.0	80-120	11/30/20 15:35
Boron	SW6020B	ICPMS3_201130A	0.01929	0.02	96.4	80-120	11/30/20 15:35
Cadmium	SW6020B	ICPMS3_201130A	0.002027	0.002	101	80-120	11/30/20 15:35
Calcium	SW6020B	ICPMS3_201130A	0.538	0.5	108	80-120	11/30/20 15:35
Chromium	SW6020B	ICPMS3_201130A	0.00492	0.005	98.4	80-120	11/30/20 15:35
Cobalt	SW6020B	ICPMS3_201130A	0.005078	0.005	102	80-120	11/30/20 15:35
Copper	SW6020B	ICPMS3_201130A	0.005104	0.005	102	80-120	11/30/20 15:35
Iron	SW6020B	ICPMS3_201130A	0.09242	0.08	116	80-120	11/30/20 15:35
Lead	SW6020B	ICPMS3_201130A	0.004882	0.005	97.6	80-120	11/30/20 15:35
Lithium	SW6020B	ICPMS3_201130A	0.009786	0.01	97.9	80-120	11/30/20 15:35
Magnesium	SW6020B	ICPMS3_201130A	0.2066	0.2	103	80-120	11/30/20 15:35
Manganese	SW6020B	ICPMS3_201130A	0.005029	0.005	101	80-120	11/30/20 15:35
Molybdenum	SW6020B	ICPMS3_201130A	0.004793	0.005	95.9	80-120	11/30/20 15:35
Nickel	SW6020B	ICPMS3_201130A	0.004836	0.005	96.7	80-120	11/30/20 15:35
Potassium	SW6020B	ICPMS3_201130A	0.2061	0.2	103	80-120	11/30/20 15:35
Selenium	SW6020B	ICPMS3_201130A	0.005139	0.005	103	80-120	11/30/20 15:35
Silicon	SW6020B	ICPMS3_201130A	1.106	1	111	80-120	11/30/20 15:35
Silver	SW6020B	ICPMS3_201130A	0	0.005	-4.40 *	80-120	11/30/20 15:35
Sodium	SW6020B	ICPMS3_201130A	0.212	0.2	106	80-120	11/30/20 15:35
Strontium	SW6020B	ICPMS3_201130A	0.004947	0.005	98.9	80-120	11/30/20 15:35
Thallium	SW6020B	ICPMS3_201130A	0.004509	0.005	90.2	80-120	11/30/20 15:35
Uranium	SW6020B	ICPMS3_201130A	0.004604	0.005	92.1	80-120	11/30/20 15:35
Vanadium	SW6020B	ICPMS3_201130A	0.005242	0.005	105	80-120	11/30/20 15:35
Zinc	SW6020B	ICPMS3_201130A	0.0105	0.01	105	80-120	11/30/20 15:35
LLICV							
Aluminum	SW6020B	ICPMS3_201130A	0.01018	0.01	102	80-120	11/30/20 19:02
Antimony	SW6020B	ICPMS3_201130A	0.004705	0.005	94.1	80-120	11/30/20 19:02
Arsenic	SW6020B	ICPMS3_201130A	0.004715	0.005	94.3	80-120	11/30/20 19:02

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Barium	SW6020B	ICPMS3_201130A	0.004712	0.005	94.2	80-120	11/30/20 19:02
Beryllium	SW6020B	ICPMS3_201130A	0.00196	0.002	98.0	80-120	11/30/20 19:02
Boron	SW6020B	ICPMS3_201130A	0.01961	0.02	98.0	80-120	11/30/20 19:02
Cadmium	SW6020B	ICPMS3_201130A	0.001966	0.002	98.3	80-120	11/30/20 19:02
Calcium	SW6020B	ICPMS3_201130A	0.5525	0.5	111	80-120	11/30/20 19:02
Chromium	SW6020B	ICPMS3_201130A	0.005028	0.005	101	80-120	11/30/20 19:02
Cobalt	SW6020B	ICPMS3_201130A	0.005189	0.005	104	80-120	11/30/20 19:02
Copper	SW6020B	ICPMS3_201130A	0.005178	0.005	104	80-120	11/30/20 19:02
Iron	SW6020B	ICPMS3_201130A	0.09814	0.08	123 *	80-120	11/30/20 19:02
Lead	SW6020B	ICPMS3_201130A	0.004742	0.005	94.8	80-120	11/30/20 19:02
Lithium	SW6020B	ICPMS3_201130A	0.009717	0.01	97.2	80-120	11/30/20 19:02
Magnesium	SW6020B	ICPMS3_201130A	0.2068	0.2	103	80-120	11/30/20 19:02
Manganese	SW6020B	ICPMS3_201130A	0.004987	0.005	99.7	80-120	11/30/20 19:02
Molybdenum	SW6020B	ICPMS3_201130A	0.004759	0.005	95.2	80-120	11/30/20 19:02
Nickel	SW6020B	ICPMS3_201130A	0.004921	0.005	98.4	80-120	11/30/20 19:02
Potassium	SW6020B	ICPMS3_201130A	0.2123	0.2	106	80-120	11/30/20 19:02
Selenium	SW6020B	ICPMS3_201130A	0.005193	0.005	104	80-120	11/30/20 19:02
Silicon	SW6020B	ICPMS3_201130A	1.099	1	110	80-120	11/30/20 19:02
Silver	SW6020B	ICPMS3_201130A	0.005167	0.005	103	80-120	11/30/20 19:02
Sodium	SW6020B	ICPMS3_201130A	0.2164	0.2	108	80-120	11/30/20 19:02
Strontium	SW6020B	ICPMS3_201130A	0.004881	0.005	97.6	80-120	11/30/20 19:02
Thallium	SW6020B	ICPMS3_201130A	0.004488	0.005	89.8	80-120	11/30/20 19:02
Uranium	SW6020B	ICPMS3_201130A	0.004432	0.005	88.6	80-120	11/30/20 19:02
Vanadium	SW6020B	ICPMS3_201130A	0.005171	0.005	103	80-120	11/30/20 19:02
Zinc	SW6020B	ICPMS3_201130A	0.01056	0.01	106	80-120	11/30/20 19:02
LLICV							
Aluminum	SW6020B	ICPMS3_201130A	0.01054	0.01	105	80-120	12/01/20 01:44
Antimony	SW6020B	ICPMS3_201130A	0.00473	0.005	94.6	80-120	12/01/20 01:44
Arsenic	SW6020B	ICPMS3_201130A	0.004893	0.005	97.9	80-120	12/01/20 01:44
Barium	SW6020B	ICPMS3_201130A	0.004876	0.005	97.5	80-120	12/01/20 01:44
Beryllium	SW6020B	ICPMS3_201130A	0.001981	0.002	99.1	80-120	12/01/20 01:44
Boron	SW6020B	ICPMS3_201130A	0.01918	0.02	95.9	80-120	12/01/20 01:44
Cadmium	SW6020B	ICPMS3_201130A	0.002012	0.002	101	80-120	12/01/20 01:44
Calcium	SW6020B	ICPMS3_201130A	0.5548	0.5	111	80-120	12/01/20 01:44
Chromium	SW6020B	ICPMS3_201130A	0.005399	0.005	108	80-120	12/01/20 01:44
Cobalt	SW6020B	ICPMS3_201130A	0.005454	0.005	109	80-120	12/01/20 01:44

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Copper	SW6020B	ICPMS3_201130A	0.005417	0.005	108	80-120	12/01/20 01:44
Iron	SW6020B	ICPMS3_201130A	0.1058	0.08	132 *	80-120	12/01/20 01:44
Lead	SW6020B	ICPMS3_201130A	0.004814	0.005	96.3	80-120	12/01/20 01:44
Lithium	SW6020B	ICPMS3_201130A	0.009887	0.01	98.9	80-120	12/01/20 01:44
Magnesium	SW6020B	ICPMS3_201130A	0.2125	0.2	106	80-120	12/01/20 01:44
Manganese	SW6020B	ICPMS3_201130A	0.004895	0.005	97.9	80-120	12/01/20 01:44
Molybdenum	SW6020B	ICPMS3_201130A	0.005036	0.005	101	80-120	12/01/20 01:44
Nickel	SW6020B	ICPMS3_201130A	0.00525	0.005	105	80-120	12/01/20 01:44
Potassium	SW6020B	ICPMS3_201130A	0.227	0.2	113	80-120	12/01/20 01:44
Selenium	SW6020B	ICPMS3_201130A	0.005453	0.005	109	80-120	12/01/20 01:44
Silicon	SW6020B	ICPMS3_201130A	1.109	1	111	80-120	12/01/20 01:44
Silver	SW6020B	ICPMS3_201130A	0.005309	0.005	106	80-120	12/01/20 01:44
Sodium	SW6020B	ICPMS3_201130A	0.2207	0.2	110	80-120	12/01/20 01:44
Strontium	SW6020B	ICPMS3_201130A	0.004973	0.005	99.5	80-120	12/01/20 01:44
Thallium	SW6020B	ICPMS3_201130A	0.004704	0.005	94.1	80-120	12/01/20 01:44
Uranium	SW6020B	ICPMS3_201130A	0.004589	0.005	91.8	80-120	12/01/20 01:44
Vanadium	SW6020B	ICPMS3_201130A	0.004951	0.005	99.0	80-120	12/01/20 01:44
Zinc	SW6020B	ICPMS3_201130A	0.01026	0.01	103	80-120	12/01/20 01:44
LLICV							
Lead	SW6010D	ICP2_201201B	0.00535	0.005	107	80-120	12/01/20 12:03
LLICV							
Aluminum	SW6020B	ICPMS3_201201A	0.0102	0.01	102	80-120	12/01/20 14:27
Antimony	SW6020B	ICPMS3_201201A	0.00472	0.005	94.4	80-120	12/01/20 14:27
Arsenic	SW6020B	ICPMS3_201201A	0.00496	0.005	99.2	80-120	12/01/20 14:27
Barium	SW6020B	ICPMS3_201201A	0.004877	0.005	97.5	80-120	12/01/20 14:27
Beryllium	SW6020B	ICPMS3_201201A	0.001977	0.002	98.8	80-120	12/01/20 14:27
Boron	SW6020B	ICPMS3_201201A	0.02062	0.02	103	80-120	12/01/20 14:27
Cadmium	SW6020B	ICPMS3_201201A	0.002033	0.002	102	80-120	12/01/20 14:27
Calcium	SW6020B	ICPMS3_201201A	0.5209	0.5	104	80-120	12/01/20 14:27
Chromium	SW6020B	ICPMS3_201201A	0.005109	0.005	102	80-120	12/01/20 14:27
Cobalt	SW6020B	ICPMS3_201201A	0.005114	0.005	102	80-120	12/01/20 14:27
Copper	SW6020B	ICPMS3_201201A	0.005012	0.005	100	80-120	12/01/20 14:27
Iron	SW6020B	ICPMS3_201201A	0.09511	0.08	119	80-120	12/01/20 14:27
Lead	SW6020B	ICPMS3_201201A	0.004795	0.005	95.9	80-120	12/01/20 14:27
Lithium	SW6020B	ICPMS3_201201A	0.009957	0.01	99.6	80-120	12/01/20 14:27
Magnesium	SW6020B	ICPMS3_201201A	0.2093	0.2	105	80-120	12/01/20 14:27

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Manganese	SW6020B	ICPMS3_201201A	0.005054	0.005	101	80-120	12/01/20 14:27
Molybdenum	SW6020B	ICPMS3_201201A	0.004754	0.005	95.1	80-120	12/01/20 14:27
Nickel	SW6020B	ICPMS3_201201A	0.004854	0.005	97.1	80-120	12/01/20 14:27
Potassium	SW6020B	ICPMS3_201201A	0.2042	0.2	102	80-120	12/01/20 14:27
Selenium	SW6020B	ICPMS3_201201A	0.00451	0.005	90.2	80-120	12/01/20 14:27
Silicon	SW6020B	ICPMS3_201201A	1.116	1	112	80-120	12/01/20 14:27
Silver	SW6020B	ICPMS3_201201A	0.005069	0.005	101	80-120	12/01/20 14:27
Sodium	SW6020B	ICPMS3_201201A	0.2108	0.2	105	80-120	12/01/20 14:27
Strontium	SW6020B	ICPMS3_201201A	0.004936	0.005	98.7	80-120	12/01/20 14:27
Thallium	SW6020B	ICPMS3_201201A	0.004641	0.005	92.8	80-120	12/01/20 14:27
Uranium	SW6020B	ICPMS3_201201A	0.004577	0.005	91.5	80-120	12/01/20 14:27
Vanadium	SW6020B	ICPMS3_201201A	0.005029	0.005	101	80-120	12/01/20 14:27
Zinc	SW6020B	ICPMS3_201201A	0.009987	0.01	99.9	80-120	12/01/20 14:27
LLICV							
Aluminum	SW6020B	ICPMS3_201201A	0.01068	0.01	107	80-120	12/01/20 20:48
Antimony	SW6020B	ICPMS3_201201A	0.004831	0.005	96.6	80-120	12/01/20 20:48
Arsenic	SW6020B	ICPMS3_201201A	0.004878	0.005	97.6	80-120	12/01/20 20:48
Barium	SW6020B	ICPMS3_201201A	0.004859	0.005	97.2	80-120	12/01/20 20:48
Beryllium	SW6020B	ICPMS3_201201A	0.002058	0.002	103	80-120	12/01/20 20:48
Boron	SW6020B	ICPMS3_201201A	0.01805	0.02	90.2	80-120	12/01/20 20:48
Cadmium	SW6020B	ICPMS3_201201A	0.002032	0.002	102	80-120	12/01/20 20:48
Calcium	SW6020B	ICPMS3_201201A	0.5356	0.5	107	80-120	12/01/20 20:48
Chromium	SW6020B	ICPMS3_201201A	0.005044	0.005	101	80-120	12/01/20 20:48
Cobalt	SW6020B	ICPMS3_201201A	0.005244	0.005	105	80-120	12/01/20 20:48
Copper	SW6020B	ICPMS3_201201A	0.005473	0.005	109	80-120	12/01/20 20:48
Iron	SW6020B	ICPMS3_201201A	0.1044	0.08	130 *	80-120	12/01/20 20:48
Lead	SW6020B	ICPMS3_201201A	0.004988	0.005	99.8	80-120	12/01/20 20:48
Lithium	SW6020B	ICPMS3_201201A	0.01018	0.01	102	80-120	12/01/20 20:48
Magnesium	SW6020B	ICPMS3_201201A	0.2084	0.2	104	80-120	12/01/20 20:48
Manganese	SW6020B	ICPMS3_201201A	0.005026	0.005	101	80-120	12/01/20 20:48
Molybdenum	SW6020B	ICPMS3_201201A	0.005091	0.005	102	80-120	12/01/20 20:48
Nickel	SW6020B	ICPMS3_201201A	0.005072	0.005	101	80-120	12/01/20 20:48
Potassium	SW6020B	ICPMS3_201201A	0.2125	0.2	106	80-120	12/01/20 20:48
Selenium	SW6020B	ICPMS3_201201A	0.00542	0.005	108	80-120	12/01/20 20:48
Silicon	SW6020B	ICPMS3_201201A	1.161	1	116	80-120	12/01/20 20:48
Silver	SW6020B	ICPMS3_201201A	0.005276	0.005	106	80-120	12/01/20 20:48

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Sodium	SW6020B	ICPMS3_201201A	0.1893	0.2	94.7	80-120	12/01/20 20:48
Strontium	SW6020B	ICPMS3_201201A	0.005031	0.005	101	80-120	12/01/20 20:48
Thallium	SW6020B	ICPMS3_201201A	0.004647	0.005	92.9	80-120	12/01/20 20:48
Uranium	SW6020B	ICPMS3_201201A	0.00466	0.005	93.2	80-120	12/01/20 20:48
Vanadium	SW6020B	ICPMS3_201201A	0.004954	0.005	99.1	80-120	12/01/20 20:48
Zinc	SW6020B	ICPMS3_201201A	0.01034	0.01	103	80-120	12/01/20 20:48
LLICV							
Aluminum	SW6020B	ICPMS3_201201A	0.01063	0.01	106	80-120	12/01/20 21:57
Antimony	SW6020B	ICPMS3_201201A	0.004751	0.005	95.0	80-120	12/01/20 21:57
Arsenic	SW6020B	ICPMS3_201201A	0.004931	0.005	98.6	80-120	12/01/20 21:57
Barium	SW6020B	ICPMS3_201201A	0.004973	0.005	99.5	80-120	12/01/20 21:57
Beryllium	SW6020B	ICPMS3_201201A	0.002117	0.002	106	80-120	12/01/20 21:57
Boron	SW6020B	ICPMS3_201201A	0.01735	0.02	86.8	80-120	12/01/20 21:57
Cadmium	SW6020B	ICPMS3_201201A	0.002053	0.002	103	80-120	12/01/20 21:57
Calcium	SW6020B	ICPMS3_201201A	0.5312	0.5	106	80-120	12/01/20 21:57
Chromium	SW6020B	ICPMS3_201201A	0.005114	0.005	102	80-120	12/01/20 21:57
Cobalt	SW6020B	ICPMS3_201201A	0.005283	0.005	106	80-120	12/01/20 21:57
Copper	SW6020B	ICPMS3_201201A	0.005406	0.005	108	80-120	12/01/20 21:57
Iron	SW6020B	ICPMS3_201201A	0.1022	0.08	128 *	80-120	12/01/20 21:57
Lead	SW6020B	ICPMS3_201201A	0.004862	0.005	97.2	80-120	12/01/20 21:57
Lithium	SW6020B	ICPMS3_201201A	0.01032	0.01	103	80-120	12/01/20 21:57
Magnesium	SW6020B	ICPMS3_201201A	0.2095	0.2	105	80-120	12/01/20 21:57
Manganese	SW6020B	ICPMS3_201201A	0.005169	0.005	103	80-120	12/01/20 21:57
Molybdenum	SW6020B	ICPMS3_201201A	0.004927	0.005	98.5	80-120	12/01/20 21:57
Nickel	SW6020B	ICPMS3_201201A	0.005287	0.005	106	80-120	12/01/20 21:57
Potassium	SW6020B	ICPMS3_201201A	0.1914	0.2	95.7	80-120	12/01/20 21:57
Selenium	SW6020B	ICPMS3_201201A	0.004696	0.005	93.9	80-120	12/01/20 21:57
Silicon	SW6020B	ICPMS3_201201A	1.138	1	114	80-120	12/01/20 21:57
Silver	SW6020B	ICPMS3_201201A	0.005145	0.005	103	80-120	12/01/20 21:57
Sodium	SW6020B	ICPMS3_201201A	0	0.2	-3.95 *	80-120	12/01/20 21:57
Strontium	SW6020B	ICPMS3_201201A	0.005026	0.005	101	80-120	12/01/20 21:57
Thallium	SW6020B	ICPMS3_201201A	0.004575	0.005	91.5	80-120	12/01/20 21:57
Uranium	SW6020B	ICPMS3_201201A	0.004597	0.005	91.9	80-120	12/01/20 21:57
Vanadium	SW6020B	ICPMS3_201201A	0.00495	0.005	99.0	80-120	12/01/20 21:57
Zinc	SW6020B	ICPMS3_201201A	0.01063	0.01	106	80-120	12/01/20 21:57

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/30/20 09:49				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 09:54				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 13:10				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 13:35				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 14:00				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 14:59				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 16:02				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 16:27				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 16:50				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 17:13				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 17:36				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 17:59				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 18:22				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 18:45				
Mercury	SW7470A	HG4_201130A	0	
CCB 11/30/20 19:08				
Mercury	SW7470A	HG4_201130A	0	
ICB 11/30/20 14:55				
Antimony	SW6010D	ICP2_201130B	0.00199	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.000312	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/30/20 14:55				
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 15:41				
Antimony	SW6010D	ICP2_201130B	0.00204	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 16:44				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 17:44				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 17:44				
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 18:46				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0.00189	J
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 19:47				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 20:49				
Antimony	SW6010D	ICP2_201130B	0.0022	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 20:49				
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 21:55				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0.000814	J
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0.00277	J
Selenium	SW6010D	ICP2_201130B	0.00455	J
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 22:56				
Antimony	SW6010D	ICP2_201130B	0.00242	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 11/30/20 23:57				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 23:57				
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 12/01/20 00:58				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 12/01/20 02:00				
Antimony	SW6010D	ICP2_201130B	0.0027	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:02				
Antimony	SW6010D	ICP2_201130B	0.00202	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.000309	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0.00193	J

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 03:02				
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:17				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.0003	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
ICB 11/30/20 15:33				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/30/20 15:33				
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0	
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 15:49				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000243	J

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 15:49				
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 15:55				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	C
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000226	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 16:14				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 16:14				
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	C
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000226	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 16:34				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 16:34				
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	C
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.00021	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 16:54				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 16:54				
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	C
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000217	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 17:30				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	C
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 17:30				
Thallium	SW6020B	ICPMS3_201130A	0.000254	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 18:32				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	C
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000187	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
ICB 11/30/20 19:00				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/30/20 19:00				
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0	
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 19:07				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 19:07				
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.00018	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 19:27				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 19:27				
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000175	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 19:47				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 19:47				
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000181	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 20:07				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0.0229	C
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0.2911	J
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000201	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 20:27				
Aluminum	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 20:27				
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000191	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 20:47				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 20:47				
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000223	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 21:08				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 21:08				
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000189	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 21:28				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 21:28				
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000177	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 21:48				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000217	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 22:10				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000209	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 22:30				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0.03523	C
Cadmium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 22:30				
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000201	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 22:51				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 22:51				
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0.2503	C
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000239	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 23:12				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 23:12				
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000225	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 11/30/20 23:33				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000235	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 23:53				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0.000331	J
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000234	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 12/01/20 00:15				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 00:15				
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0.000384	J
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000183	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 12/01/20 00:36				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 00:36				
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000187	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 12/01/20 00:57				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 00:57				
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000187	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 12/01/20 01:22				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000199	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 12/01/20 01:42				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0.000502	J
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0	
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 12/01/20 01:47				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 01:47				
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000217	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
CCB 12/01/20 02:08				
Aluminum	SW6020B	ICPMS3_201130A	0	
Antimony	SW6020B	ICPMS3_201130A	0	
Arsenic	SW6020B	ICPMS3_201130A	0	
Barium	SW6020B	ICPMS3_201130A	0	
Beryllium	SW6020B	ICPMS3_201130A	0	
Boron	SW6020B	ICPMS3_201130A	0	
Cadmium	SW6020B	ICPMS3_201130A	0	
Calcium	SW6020B	ICPMS3_201130A	0	
Chromium	SW6020B	ICPMS3_201130A	0	
Cobalt	SW6020B	ICPMS3_201130A	0	
Copper	SW6020B	ICPMS3_201130A	0	
Iron	SW6020B	ICPMS3_201130A	0	
Lead	SW6020B	ICPMS3_201130A	0	
Lithium	SW6020B	ICPMS3_201130A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 02:08				
Magnesium	SW6020B	ICPMS3_201130A	0	
Manganese	SW6020B	ICPMS3_201130A	0	
Molybdenum	SW6020B	ICPMS3_201130A	0	
Nickel	SW6020B	ICPMS3_201130A	0	
Potassium	SW6020B	ICPMS3_201130A	0	
Selenium	SW6020B	ICPMS3_201130A	0	
Silicon	SW6020B	ICPMS3_201130A	0	
Silver	SW6020B	ICPMS3_201130A	0	
Sodium	SW6020B	ICPMS3_201130A	0	
Strontium	SW6020B	ICPMS3_201130A	0	
Thallium	SW6020B	ICPMS3_201130A	0.000227	J
Uranium	SW6020B	ICPMS3_201130A	0	
Vanadium	SW6020B	ICPMS3_201130A	0	
Zinc	SW6020B	ICPMS3_201130A	0	
ICB 12/01/20 11:54				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 12:40				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 13:46				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 14:58				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 16:04				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 17:12				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 18:15				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 19:22				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 20:35				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 21:41				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/01/20 22:47				
Lead	SW6010D	ICP2_201201B	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 23:55				
Lead	SW6010D	ICP2_201201B	0	
CCB 12/02/20 00:51				
Lead	SW6010D	ICP2_201201B	0	
ICB 12/01/20 14:25				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 14:39				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0.002372	J
Arsenic	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 14:39				
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0.001568	J
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0.000167	J
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 14:46				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 14:46				
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 15:13				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0.006349	C
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0.000354	J

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 15:13				
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 15:38				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 15:38				
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 15:57				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0.01616	J
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 16:16				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 16:16				
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 16:36				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 16:36				
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 16:56				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 16:56				
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 18:19				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 18:19				
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 18:39				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 18:59				
Aluminum	SW6020B	ICPMS3_201201A	0	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 18:59				
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 19:19				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 19:19				
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 19:43				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0.07881	C
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 19:43				
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 20:03				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0.0178	J
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 20:03				
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 20:27				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0.0005	J
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 12/01/20 20:47				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 20:52				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 20:52				
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 21:12				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 21:12				
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 21:35				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 21:35				
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0.5442	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
ICB 12/01/20 21:55				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 22:00				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 22:21				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0.001121	J

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 22:21				
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 22:41				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0.000308	J
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 22:41				
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 23:02				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0.000368	J
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 23:02				
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/01/20 23:23				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 23:43				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0.000382	J
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0.000154	J
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/02/20 00:04				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 00:04				
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/02/20 00:24				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 00:24				
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0	
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	
CCB 12/02/20 02:39				
Aluminum	SW6020B	ICPMS3_201201A	0	
Antimony	SW6020B	ICPMS3_201201A	0	
Arsenic	SW6020B	ICPMS3_201201A	0	
Barium	SW6020B	ICPMS3_201201A	0	
Beryllium	SW6020B	ICPMS3_201201A	0	
Boron	SW6020B	ICPMS3_201201A	0	
Cadmium	SW6020B	ICPMS3_201201A	0	
Calcium	SW6020B	ICPMS3_201201A	0	
Chromium	SW6020B	ICPMS3_201201A	0	
Cobalt	SW6020B	ICPMS3_201201A	0	
Copper	SW6020B	ICPMS3_201201A	0	
Iron	SW6020B	ICPMS3_201201A	0	
Lead	SW6020B	ICPMS3_201201A	0	
Lithium	SW6020B	ICPMS3_201201A	0	
Magnesium	SW6020B	ICPMS3_201201A	0	
Manganese	SW6020B	ICPMS3_201201A	0	
Molybdenum	SW6020B	ICPMS3_201201A	0	
Nickel	SW6020B	ICPMS3_201201A	0	
Potassium	SW6020B	ICPMS3_201201A	0	
Selenium	SW6020B	ICPMS3_201201A	0	
Silicon	SW6020B	ICPMS3_201201A	0	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 02:39				
Silver	SW6020B	ICPMS3_201201A	0	
Sodium	SW6020B	ICPMS3_201201A	0	C
Strontium	SW6020B	ICPMS3_201201A	0	
Thallium	SW6020B	ICPMS3_201201A	0.000183	J
Uranium	SW6020B	ICPMS3_201201A	0	
Vanadium	SW6020B	ICPMS3_201201A	0	
Zinc	SW6020B	ICPMS3_201201A	0	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168379	**Basis:**	Wet
Lab Code:	MBLK-168379		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	12/01/20 01:45	11/29/20 15:04	
Barium	SW6010D	0.0050 U	mg/L	0.0050	1	12/01/20 01:45	11/29/20 15:04	
Cadmium	SW6010D	0.010 U	mg/L	0.010	1	12/01/20 01:45	11/29/20 15:04	
Chromium	SW6010D	0.0050 U	mg/L	0.0050	1	12/01/20 01:45	11/29/20 15:04	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	12/01/20 01:45	11/29/20 15:04	
Selenium	SW6010D	**0.00341 J**	mg/L	0.010	1	12/01/20 01:45	11/29/20 15:04	
Silver	SW6010D	0.0050 U	mg/L	0.0050	1	12/01/20 01:45	11/29/20 15:04	

ALS Group USA, Corp.
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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168407	**Basis:**	Wet
Lab Code:	MBLK-168407		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6020B	0.0050 U	mg/L	0.0050	1	11/30/20 23:48	11/30/20 13:11	
Barium	SW6020B	0.0050 U	mg/L	0.0050	1	11/30/20 23:48	11/30/20 13:11	
Cadmium	SW6020B	0.0020 U	mg/L	0.0020	1	11/30/20 23:48	11/30/20 13:11	
Chromium	SW6020B	0.0050 U	mg/L	0.0050	1	11/30/20 23:48	11/30/20 13:11	
Lead	SW6020B	0.0050 U	mg/L	0.0050	1	11/30/20 23:48	11/30/20 13:11	
Selenium	SW6020B	0.0050 U	mg/L	0.0050	1	11/30/20 23:48	11/30/20 13:11	
Silver	SW6020B	0.0050 U	mg/L	0.0050	1	11/30/20 23:48	11/30/20 13:11	

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168415	**Basis:**	Wet
Lab Code:	MBLK-168415		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	SW7470A	0.00020 U	mg/L	0.00020	1	11/30/20 16:20	11/30/20 13:10	

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201130B	92.13	100	92.1	80-120	11/30/20 15:10
Antimony	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Arsenic	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Barium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Beryllium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Cadmium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Calcium	SW6010D	ICP2_201130B	92.22	100	92.2	80-120	11/30/20 15:10
Chromium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Iron	SW6010D	ICP2_201130B	93.09	100	93.1	80-120	11/30/20 15:10
Lead	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Magnesium	SW6010D	ICP2_201130B	95.39	100	95.4	80-120	11/30/20 15:10
Molybdenum	SW6010D	ICP2_201130B	1.92	2	96.0	80-120	11/30/20 15:10
Nickel	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Potassium	SW6010D	ICP2_201130B	96.41 E	100	96.4	80-120	11/30/20 15:10
Selenium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Silver	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Sodium	SW6010D	ICP2_201130B	94.44 E	100	94.4	80-120	11/30/20 15:10
Thallium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Titanium	SW6010D	ICP2_201130B	1.896	2	94.8	80-120	11/30/20 15:10

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6020B	ICPMS3_201130A	46.1 E	50	92.2	80-120	11/30/20 15:37
Antimony	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Arsenic	SW6020B	ICPMS3_201130A	0.000191 J	-	-	-	11/30/20 15:37
Barium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Beryllium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Boron	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Cadmium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Calcium	SW6020B	ICPMS3_201130A	47.82	50	95.6	80-120	11/30/20 15:37
Chromium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Cobalt	SW6020B	ICPMS3_201130A	0.000216 J	-	-	-	11/30/20 15:37
Copper	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Iron	SW6020B	ICPMS3_201130A	46.89	50	93.8	80-120	11/30/20 15:37
Lead	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Lithium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Magnesium	SW6020B	ICPMS3_201130A	46.91	50	93.8	80-120	11/30/20 15:37
Manganese	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Molybdenum	SW6020B	ICPMS3_201130A	0.9588	1	95.9	80-120	11/30/20 15:37
Nickel	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Potassium	SW6020B	ICPMS3_201130A	47.52	50	95.0	80-120	11/30/20 15:37
Selenium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Silicon	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Silver	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Sodium	SW6020B	ICPMS3_201130A	47.51	50	95.0	80-120	11/30/20 15:37
Strontium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Thallium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Titanium	SW6020B	ICPMS3_201130A	1.009	1	101	80-120	11/30/20 15:37
Uranium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Vanadium	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37
Zinc	SW6020B	ICPMS3_201130A	0	-	-	-	11/30/20 15:37

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201201B	95.19	100	95.2	80-120	12/01/20 12:09
Calcium	SW6010D	ICP2_201201B	96.29	100	96.3	80-120	12/01/20 12:09
Iron	SW6010D	ICP2_201201B	97.13	100	97.1	80-120	12/01/20 12:09
Lead	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Magnesium	SW6010D	ICP2_201201B	98.84	100	98.8	80-120	12/01/20 12:09
Molybdenum	SW6010D	ICP2_201201B	1.94	2	97.0	80-120	12/01/20 12:09
Potassium	SW6010D	ICP2_201201B	100.6 E	100	101	80-120	12/01/20 12:09
Sodium	SW6010D	ICP2_201201B	98.75 E	100	98.7	80-120	12/01/20 12:09
Titanium	SW6010D	ICP2_201201B	1.972	2	98.6	80-120	12/01/20 12:09

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6020B	ICPMS3_201201A	43.99 E	50	88.0	80-120	12/01/20 14:29
Antimony	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Arsenic	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Barium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Beryllium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Boron	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Cadmium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Calcium	SW6020B	ICPMS3_201201A	45.8	50	91.6	80-120	12/01/20 14:29
Chromium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Cobalt	SW6020B	ICPMS3_201201A	0.000207 J	-	-	-	12/01/20 14:29
Copper	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Iron	SW6020B	ICPMS3_201201A	45.84	50	91.7	80-120	12/01/20 14:29
Lead	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Lithium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Magnesium	SW6020B	ICPMS3_201201A	45.96	50	91.9	80-120	12/01/20 14:29
Manganese	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Molybdenum	SW6020B	ICPMS3_201201A	0.926	1	92.6	80-120	12/01/20 14:29
Nickel	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Potassium	SW6020B	ICPMS3_201201A	46.94	50	93.9	80-120	12/01/20 14:29
Selenium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Silicon	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Silver	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Sodium	SW6020B	ICPMS3_201201A	46.96	50	93.9	80-120	12/01/20 14:29
Strontium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Thallium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Titanium	SW6020B	ICPMS3_201201A	0.9609	1	96.1	80-120	12/01/20 14:29
Uranium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Vanadium	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29
Zinc	SW6020B	ICPMS3_201201A	0	-	-	-	12/01/20 14:29

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6020B	ICPMS3_201201A	41.85 E	50	83.7	80-120	12/02/20 02:41
Antimony	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Arsenic	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Barium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Beryllium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Boron	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Cadmium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Calcium	SW6020B	ICPMS3_201201A	46.02	50	92.0	80-120	12/02/20 02:41
Chromium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Cobalt	SW6020B	ICPMS3_201201A	0.00022 J	-	-	-	12/02/20 02:41
Copper	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Iron	SW6020B	ICPMS3_201201A	42.19	50	84.4	80-120	12/02/20 02:41
Lead	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Lithium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Magnesium	SW6020B	ICPMS3_201201A	42.21	50	84.4	80-120	12/02/20 02:41
Manganese	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Molybdenum	SW6020B	ICPMS3_201201A	0.9111	1	91.1	80-120	12/02/20 02:41
Nickel	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Potassium	SW6020B	ICPMS3_201201A	45.49	50	91.0	80-120	12/02/20 02:41
Selenium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Silicon	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Silver	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Sodium	SW6020B	ICPMS3_201201A	42.69	50	85.4	80-120	12/02/20 02:41
Strontium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Thallium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Titanium	SW6020B	ICPMS3_201201A	0.9341	1	93.4	80-120	12/02/20 02:41
Uranium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Vanadium	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41
Zinc	SW6020B	ICPMS3_201201A	0	-	-	-	12/02/20 02:41

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/30/2020
		Date Extracted:	11/30/2020

Matrix Spike Summary
Metals

Sample Name:	BatchQC	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW7470A		
Prep Method:	SW7470		

20111636-02BMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	0.0001425	0.002415	0.002	114	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/29/2020

Matrix Spike Summary
Metals

Sample Name:	BatchQC	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

20111754-22AMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	-0.004378	1.013	1	102	75-125
Barium	0.4609	1.497	1	104	75-125
Cadmium	0.02277	1.038	1	102	75-125
Chromium	0.001815	1.056	1	105	75-125
Lead	0.4389	1.467	1	103	75-125
Selenium	-0.002486	0.9966	1	99.9	75-125
Silver	0.0143	1.025	1	101	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/30/2020

Matrix Spike Summary
Metals

Sample Name:	BatchQC	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6020B		
Prep Method:	SW3005A		

20111837-02BMS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.002261	0.1075	0.1	105	75-125
Barium	0.0202	0.1212	0.1	101	75-125
Cadmium	0.000059	0.08889	0.1	88.8	75-125
Chromium	0.007548	0.1063	0.1	98.8	75-125
Lead	0.001117	0.104	0.1	103	75-125
Selenium	0.002423	0.02569 S	0.1	23.3 *	75-125
Silver	0.000142	0.000917 JS	0.1	0.775 *	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/30/2020
		Date Extracted:	11/30/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111636-02B	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW7470A		
Prep Method:	SW7470		

		Matrix Spike 20111636-02BMS			**Duplicate Matrix Spike** 20111636-02BMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Mercury	0.0001425	0.002415	0.002	114	0.00249	0.002	117	75-125	3.06	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/29/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111754-22A	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111754-22AMS			**Duplicate Matrix Spike** 20111754-22AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	-0.004378	1.013	1	102	0.99	1	99.4	75-125	2.28	20
Barium	0.4609	1.497	1	104	1.408	1	94.7	75-125	6.17	20
Cadmium	0.02277	1.038	1	102	1.008	1	98.5	75-125	3.01	20
Chromium	0.001815	1.056	1	105	1.02	1	102	75-125	3.5	20
Lead	0.4389	1.467	1	103	1.487	1	105	75-125	1.32	20
Selenium	-0.002486	0.9966	1	99.9	0.968	1	97.0	75-125	2.91	20
Silver	0.0143	1.025	1	101	0.9757	1	96.1	75-125	4.95	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/01/2020
		Date Extracted:	11/30/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111837-02B	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6020B		
Prep Method:	SW3005A		

		Matrix Spike 20111837-02BMS			Duplicate Matrix Spike 20111837-02BMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	0.002261	0.1075	0.1	105	0.106	0.1	104	75-125	1.39	20
Barium	0.0202	0.1212	0.1	101	0.1201	0.1	99.9	75-125	0.972	20
Cadmium	0.000059	0.08889	0.1	88.8	0.08726	0.1	87.2	75-125	1.85	20
Chromium	0.007548	0.1063	0.1	98.8	0.1062	0.1	98.7	75-125	0.0903	20
Lead	0.001117	0.1040	0.1	103	0.1028	0.1	102	75-125	1.12	20
Selenium	0.002423	0.02569 S	0.1	23.3 *	0.02385 S	0.1	21.4 *	75-125	7.43	20
Silver	0.000142	0.0009170 JS	0.1	0.775 *	0.002337 JS	0.1	2.19 *	75-125	0	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

POST SPIKE SAMPLE RECOVERY

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
20111837-02BPDSA								
Arsenic	SW6020B	ICPMS3_201201A	0.002261	0.1123	0.1	110	80-120	12/01/20 16:23
Barium	SW6020B	ICPMS3_201201A	0.0202	0.1261	0.1	106	80-120	12/01/20 16:23
Cadmium	SW6020B	ICPMS3_201201A	0	0.09843	0.1	98.4	80-120	12/01/20 16:23
Chromium	SW6020B	ICPMS3_201201A	0.007548	0.1149	0.1	107	80-120	12/01/20 16:23
Lead	SW6020B	ICPMS3_201201A	0.001117	0.1125	0.1	111	80-120	12/01/20 16:23
Selenium	SW6020B	ICPMS3_201201A	0.002423	0.1134	0.1	111	80-120	12/01/20 16:23
Silver	SW6020B	ICPMS3_201201A	0	0.08026	0.1	80.3	80-120	12/01/20 16:23

Results flagged with a pound (#) indicate the control criteria is not applicable.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	12/01/2020
Sample Matrix:	Water	**Date Extracted:**	11/29/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201130B

LCS-168379

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.09691	0.1	96.9	80-120
Barium	0.1064	0.1	106	80-120
Cadmium	0.1006	0.1	101	80-120
Chromium	0.1056	0.1	106	80-120
Lead	0.1079	0.1	108	80-120
Selenium	0.09526	0.1	95.3	80-120
Silver	0.1006	0.1	101	80-120

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	11/30/2020
Sample Matrix:	Water	**Date Extracted:**	11/30/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6020B	**Units:**	mg/L
Prep Method:	SW3005A	**Basis:**	Wet
		Analysis Lot:	ICPMS3_201130A

LCS-168407

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.1024	0.1	102	80-120
Barium	0.1035	0.1	103	80-120
Cadmium	0.1036	0.1	104	80-120
Chromium	0.09934	0.1	99.3	80-120
Lead	0.09972	0.1	99.7	80-120
Selenium	0.1031	0.1	103	80-120
Silver	0.09367	0.1	93.7	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	11/30/2020
Sample Matrix:	Water	**Date Extracted:**	11/30/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW7470A	**Units:**	mg/L
Prep Method:	SW7470	**Basis:**	Wet
		Analysis Lot:	HG4_201130A

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS-168415	LCS-168415	0.00237	0.002	118	80-120

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

ICP SERIAL DILUTIONS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
20111837-02BSD							
Arsenic	SW6020B	ICPMS3_201201A	0.002261	0.002129 J	0	10	12/01/20 16:21
Barium	SW6020B	ICPMS3_201201A	0.0202	0.02006 J	0	10	12/01/20 16:21
Cadmium	SW6020B	ICPMS3_201201A		0	0	10	12/01/20 16:21
Chromium	SW6020B	ICPMS3_201201A	0.007548	0	0	10	12/01/20 16:21
Lead	SW6020B	ICPMS3_201201A	0.001117	0	0	10	12/01/20 16:21
Selenium	SW6020B	ICPMS3_201201A	0.002423	0	0	10	12/01/20 16:21
Silver	SW6020B	ICPMS3_201201A		0	0	10	12/01/20 16:21

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Detection Limits

Instrument: HG4 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Mercury	mg/L	0.00020	0.00016	SW7470A

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Detection Limits

Instrument: ICP2 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.0016	SW6010D
Barium	mg/L	0.0050	0.0043	SW6010D
Cadmium	mg/L	0.010	0.00078	SW6010D
Chromium	mg/L	0.010	0.00093	SW6010D
Lead	mg/L	0.0050	0.0013	SW6010D
Selenium	mg/L	0.010	0.0032	SW6010D
Silver	mg/L	0.0050	0.0025	SW6010D

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Detection Limits

Instrument: ICPMS3 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.00019	SW6020B
Barium	mg/L	0.0050	0.0020	SW6020B
Cadmium	mg/L	0.0020	0.00015	SW6020B
Chromium	mg/L	0.0050	0.0020	SW6020B
Lead	mg/L	0.0050	0.00072	SW6020B
Selenium	mg/L	0.0050	0.00048	SW6020B
Silver	mg/L	0.0050	0.00084	SW6020B

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:HG4_201130A
Analysis Method: SW7470A **Instrument ID:**HG4

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
output.csv	CCV	CCV	11/30/2020	09:50	
output.csv	CRDL	CRDL	11/30/2020	09:52	
output.csv	CCB	CCB	11/30/2020	09:54	
output.csv	CCV	CCV	11/30/2020	13:07	
output.csv	CRDL	CRDL	11/30/2020	13:09	
output.csv	CCB	CCB	11/30/2020	13:10	
output.csv	CCV	CCV	11/30/2020	13:31	
output.csv	CRDL	CRDL	11/30/2020	13:33	
output.csv	CCB	CCB	11/30/2020	13:35	
output.csv	CCV	CCV	11/30/2020	13:56	
output.csv	CRDL	CRDL	11/30/2020	13:58	
output.csv	CCB	CCB	11/30/2020	14:00	
output.csv	CCV	CCV	11/30/2020	14:55	
output.csv	CRDL	CRDL	11/30/2020	14:57	
output.csv	CCB	CCB	11/30/2020	14:59	
output.csv	CCV	CCV	11/30/2020	15:58	
output.csv	CRDL	CRDL	11/30/2020	16:00	
output.csv	CCB	CCB	11/30/2020	16:02	
output.csv	MBLK-168415	MBLK-168415	11/30/2020	16:20	
output.csv	CCV	CCV	11/30/2020	16:23	
output.csv	CRDL	CRDL	11/30/2020	16:25	
output.csv	CCB	CCB	11/30/2020	16:27	
output.csv	LCS-168415	LCS-168415	11/30/2020	16:29	
output.csv	20111636-02BMS	20111636-02BMS	11/30/2020	16:44	
output.csv	CCV	CCV	11/30/2020	16:46	
output.csv	CRDL	CRDL	11/30/2020	16:48	
output.csv	CCB	CCB	11/30/2020	16:50	
output.csv	20111636-02BMSD	20111636-02BMSD	11/30/2020	16:52	
output.csv	IDA001:E2-3:S00010	20111764-02	11/30/2020	16:57	
output.csv	IDA001:C5-3:S00010	20111764-04	11/30/2020	16:59	
output.csv	IDA001:B8-3:S00010	20111764-06	11/30/2020	17:00	
output.csv	IDA001:DECONWATER:W111720	20111764-07	11/30/2020	17:02	
output.csv	CCV	CCV	11/30/2020	17:09	
output.csv	CRDL	CRDL	11/30/2020	17:11	
output.csv	CCB	CCB	11/30/2020	17:13	
output.csv	CCV	CCV	11/30/2020	17:32	
output.csv	CRDL	CRDL	11/30/2020	17:34	
output.csv	CCB	CCB	11/30/2020	17:36	
output.csv	CCV	CCV	11/30/2020	17:55	
output.csv	CRDL	CRDL	11/30/2020	17:57	
output.csv	CCB	CCB	11/30/2020	17:59	
output.csv	CCV	CCV	11/30/2020	18:19	
output.csv	CRDL	CRDL	11/30/2020	18:20	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:HG4_201130A
Analysis Method: SW7470A **Instrument ID:**HG4

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
output.csv	CCB	CCB	11/30/2020	18:22	
output.csv	CCV	CCV	11/30/2020	18:42	
output.csv	CRDL	CRDL	11/30/2020	18:43	
output.csv	CCB	CCB	11/30/2020	18:45	
output.csv	CCV	CCV	11/30/2020	19:05	
output.csv	CRDL	CRDL	11/30/2020	19:07	
output.csv	CCB	CCB	11/30/2020	19:08	

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/30/2020	14:25	
2	ICAL2	ICAL2	11/30/2020	14:30	
3	ICAL3	ICAL3	11/30/2020	14:35	
4	ICAL4	ICAL4	11/30/2020	14:40	
5	ICAL5	ICAL5	11/30/2020	14:45	
9	ICVLL	ICVLL	11/30/2020	15:05	
10	ICSA	ICSA	11/30/2020	15:10	
11	LDR1	LDR1	11/30/2020	15:15	
12	LDR2	LDR2	11/30/2020	15:21	
15	CCV	CCV	11/30/2020	15:37	
16	CCB	CCB	11/30/2020	15:41	
25	CCV	CCV	11/30/2020	16:39	
26	CCB	CCB	11/30/2020	16:44	
37	CCV	CCV	11/30/2020	17:40	
38	CCB	CCB	11/30/2020	17:44	
49	CCV	CCV	11/30/2020	18:41	
50	CCB	CCB	11/30/2020	18:46	
61	CCV	CCV	11/30/2020	19:42	
62	CCB	CCB	11/30/2020	19:47	
73	CCV	CCV	11/30/2020	20:44	
74	CCB	CCB	11/30/2020	20:49	
86	CCV	CCV	11/30/2020	21:50	
87	CCB	CCB	11/30/2020	21:55	
98	CCV	CCV	11/30/2020	22:51	
99	CCB	CCB	11/30/2020	22:56	
110	CCV	CCV	11/30/2020	23:52	
111	CCB	CCB	11/30/2020	23:57	
122	CCV	CCV	12/01/2020	00:53	
123	CCB	CCB	12/01/2020	00:58	
132	MBLK-168379	MBLK-168379	12/01/2020	01:45	
133	LCS-168379	LCS-168379	12/01/2020	01:50	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
134	CCV	CCV	12/01/2020	01:55	
135	CCB	CCB	12/01/2020	02:00	
137	20111754-22AMS	20111754-22AMS	12/01/2020	02:10	
138	20111754-22AMSD	20111754-22AMSD	12/01/2020	02:15	
140	IDA001:E2-3:S00010	20111764-02	12/01/2020	02:25	
141	IDA001:C5-3:S00010	20111764-04	12/01/2020	02:30	
142	IDA001:B8-3:S00010	20111764-06	12/01/2020	02:36	
146	CCV	CCV	12/01/2020	02:57	
147	CCB	CCB	12/01/2020	03:02	
149	CCV	CCV	12/01/2020	03:12	
150	CCB	CCB	12/01/2020	03:17	

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	12/01/2020	11:24	
2	ICAL2	ICAL2	12/01/2020	11:29	
3	ICAL3	ICAL3	12/01/2020	11:34	
4	ICAL4	ICAL4	12/01/2020	11:39	
5	ICAL5	ICAL5	12/01/2020	11:44	
9	ICVLL	ICVLL	12/01/2020	12:03	
10	ICSA	ICSA	12/01/2020	12:09	
12	LDR2	LDR2	12/01/2020	12:19	
15	CCV	CCV	12/01/2020	12:35	
16	CCB	CCB	12/01/2020	12:40	
28	CCV	CCV	12/01/2020	13:41	
29	CCB	CCB	12/01/2020	13:46	
40	CCV	CCV	12/01/2020	14:53	
41	CCB	CCB	12/01/2020	14:58	
45	IDA001:E2-3:S00010	20111764-02	12/01/2020	15:19	
53	CCV	CCV	12/01/2020	16:00	
54	CCB	CCB	12/01/2020	16:04	
66	CCV	CCV	12/01/2020	17:07	
67	CCB	CCB	12/01/2020	17:12	
78	CCV	CCV	12/01/2020	18:10	
79	CCB	CCB	12/01/2020	18:15	
91	CCV	CCV	12/01/2020	19:17	
92	CCB	CCB	12/01/2020	19:22	
103	CCV	CCV	12/01/2020	20:25	
105	CCB	CCB	12/01/2020	20:35	
116	CCV	CCV	12/01/2020	21:31	
118	CCB	CCB	12/01/2020	21:41	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
130	CCV	CCV	12/01/2020	22:42	
131	CCB	CCB	12/01/2020	22:47	
143	CCV	CCV	12/01/2020	23:50	
144	CCB	CCB	12/01/2020	23:55	
154	CCV	CCV	12/02/2020	00:46	
155	CCB	CCB	12/02/2020	00:51	

Analysis Lot:ICPMS3_201130A
Analysis Method: SW6020B **Instrument ID:**ICPMS3

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
046LICV.d	LLICV	LLICV	11/30/2020	15:35	
047ICSA.d	ICSA	ICSA	11/30/2020	15:37	
048_LRS.d	LDR	LDR	11/30/2020	15:38	
053_CCV.d	CCV	CCV	11/30/2020	15:47	
054_CCB.d	CCB	CCB	11/30/2020	15:49	
057_CCV.d	CCV	CCV	11/30/2020	15:53	
058_CCB.d	CCB	CCB	11/30/2020	15:55	
069_CCV.d	CCV	CCV	11/30/2020	16:13	
070_CCB.d	CCB	CCB	11/30/2020	16:14	
081_CCV.d	CCV	CCV	11/30/2020	16:32	
082_CCB.d	CCB	CCB	11/30/2020	16:34	
093_CCV.d	CCV	CCV	11/30/2020	16:52	
094_CCB.d	CCB	CCB	11/30/2020	16:54	
105_CCV.d	CCV	CCV	11/30/2020	17:28	
106_CCB.d	CCB	CCB	11/30/2020	17:30	
143_CCV.d	CCV	CCV	11/30/2020	18:31	
144_CCB.d	CCB	CCB	11/30/2020	18:32	
159LICV.d	LLICV	LLICV	11/30/2020	19:02	
161_CCV.d	CCV	CCV	11/30/2020	19:05	
162_CCB.d	CCB	CCB	11/30/2020	19:07	
173_CCV.d	CCV	CCV	11/30/2020	19:25	
174_CCB.d	CCB	CCB	11/30/2020	19:27	
185_CCV.d	CCV	CCV	11/30/2020	19:45	
186_CCB.d	CCB	CCB	11/30/2020	19:47	
197_CCV.d	CCV	CCV	11/30/2020	20:05	
198_CCB.d	CCB	CCB	11/30/2020	20:07	
209_CCV.d	CCV	CCV	11/30/2020	20:25	
210_CCB.d	CCB	CCB	11/30/2020	20:27	
221_CCV.d	CCV	CCV	11/30/2020	20:45	
222_CCB.d	CCB	CCB	11/30/2020	20:47	
233_CCV.d	CCV	CCV	11/30/2020	21:06	
234_CCB.d	CCB	CCB	11/30/2020	21:08	

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICPMS3_201130A
Analysis Method: SW6020B **Instrument ID:**ICPMS3

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
245_CCV.d	CCV	CCV	11/30/2020	21:26	
246_CCB.d	CCB	CCB	11/30/2020	21:28	
257_CCV.d	CCV	CCV	11/30/2020	21:47	
258_CCB.d	CCB	CCB	11/30/2020	21:48	
269_CCV.d	CCV	CCV	11/30/2020	22:08	
270_CCB.d	CCB	CCB	11/30/2020	22:10	
281_CCV.d	CCV	CCV	11/30/2020	22:28	
282_CCB.d	CCB	CCB	11/30/2020	22:30	
293_CCV.d	CCV	CCV	11/30/2020	22:49	
294_CCB.d	CCB	CCB	11/30/2020	22:51	
305_CCV.d	CCV	CCV	11/30/2020	23:10	
306_CCB.d	CCB	CCB	11/30/2020	23:12	
317_CCV.d	CCV	CCV	11/30/2020	23:31	
318_CCB.d	CCB	CCB	11/30/2020	23:33	
327SMPL.d	MBLK-168407	MBLK-168407	11/30/2020	23:48	
328SMPL.d	LCS-168407	LCS-168407	11/30/2020	23:49	
329_CCV.d	CCV	CCV	11/30/2020	23:51	
330_CCB.d	CCB	CCB	11/30/2020	23:53	
331SMPL.d	IDA001:DECONWATER:W111720	20111764-07	11/30/2020	23:55	
334SMPL.d	20111837-02BMS	20111837-02BMS	12/01/2020	00:00	
335SMPL.d	20111837-02BMSD	20111837-02BMSD	12/01/2020	00:02	
341_CCV.d	CCV	CCV	12/01/2020	00:13	
342_CCB.d	CCB	CCB	12/01/2020	00:15	
353_CCV.d	CCV	CCV	12/01/2020	00:34	
354_CCB.d	CCB	CCB	12/01/2020	00:36	
365_CCV.d	CCV	CCV	12/01/2020	00:56	
366_CCB.d	CCB	CCB	12/01/2020	00:57	
377_CCV.d	CCV	CCV	12/01/2020	01:17	
380_CCB.d	CCB	CCB	12/01/2020	01:22	
393LICV.d	LLICV	LLICV	12/01/2020	01:44	
394_CCV.d	CCV	CCV	12/01/2020	01:46	
395_CCB.d	CCB	CCB	12/01/2020	01:47	
406_CCV.d	CCV	CCV	12/01/2020	02:06	
407_CCB.d	CCB	CCB	12/01/2020	02:08	

Analysis Lot:ICPMS3_201201A
Analysis Method: SW6020B **Instrument ID:**ICPMS3

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
018LICV.d	LLICV	LLICV	12/01/2020	14:27	
019ICSA.d	ICSA	ICSA	12/01/2020	14:29	
020_LRS.d	LDR	LDR	12/01/2020	14:31	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICPMS3_201201A
Analysis Method: SW6020B **Instrument ID:**ICPMS3

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
023_CCV.d	CCV	CCV	12/01/2020	14:37	
024_CCB.d	CCB	CCB	12/01/2020	14:39	
027_CCV.d	CCV	CCV	12/01/2020	14:44	
028_CCB.d	CCB	CCB	12/01/2020	14:46	
041_CCV.d	CCV	CCV	12/01/2020	15:11	
042_CCB.d	CCB	CCB	12/01/2020	15:13	
056_CCV.d	CCV	CCV	12/01/2020	15:36	
057_CCB.d	CCB	CCB	12/01/2020	15:38	
068_CCV.d	CCV	CCV	12/01/2020	15:55	
069_CCB.d	CCB	CCB	12/01/2020	15:57	
078SMPL.d	IDA001:DECONWATER:W11 1720	20111764-07	12/01/2020	16:11	
080_CCV.d	CCV	CCV	12/01/2020	16:15	
081_CCB.d	CCB	CCB	12/01/2020	16:16	
084SMPL.d	20111837-02BSD	20111837-02BSD	12/01/2020	16:21	
085SMPL.d	20111837-02BPDS	20111837-02BPDS	12/01/2020	16:23	
092_CCV.d	CCV	CCV	12/01/2020	16:35	
093_CCB.d	CCB	CCB	12/01/2020	16:36	
104_CCV.d	CCV	CCV	12/01/2020	16:55	
105_CCB.d	CCB	CCB	12/01/2020	16:56	
152_CCV.d	CCV	CCV	12/01/2020	18:17	
153_CCB.d	CCB	CCB	12/01/2020	18:19	
164_CCV.d	CCV	CCV	12/01/2020	18:37	
165_CCB.d	CCB	CCB	12/01/2020	18:39	
176_CCV.d	CCV	CCV	12/01/2020	18:57	
177_CCB.d	CCB	CCB	12/01/2020	18:59	
188_CCV.d	CCV	CCV	12/01/2020	19:17	
189_CCB.d	CCB	CCB	12/01/2020	19:19	
202_CCV.d	CCV	CCV	12/01/2020	19:41	
203_CCB.d	CCB	CCB	12/01/2020	19:43	
214_CCV.d	CCV	CCV	12/01/2020	20:01	
215_CCB.d	CCB	CCB	12/01/2020	20:03	
228_CCV.d	CCV	CCV	12/01/2020	20:25	
229_CCB.d	CCB	CCB	12/01/2020	20:27	
242LICV.d	LLICV	LLICV	12/01/2020	20:48	
243_CCV.d	CCV	CCV	12/01/2020	20:50	
244_CCB.d	CCB	CCB	12/01/2020	20:52	
255_CCV.d	CCV	CCV	12/01/2020	21:10	
256_CCB.d	CCB	CCB	12/01/2020	21:12	
269_CCV.d	CCV	CCV	12/01/2020	21:34	
270_CCB.d	CCB	CCB	12/01/2020	21:35	
283LICV.d	LLICV	LLICV	12/01/2020	21:57	
284_CCV.d	CCV	CCV	12/01/2020	21:59	
285_CCB.d	CCB	CCB	12/01/2020	22:00	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICPMS3_201201A
Analysis Method: SW6020B **Instrument ID:**ICPMS3

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
296_CCV.d	CCV	CCV	12/01/2020	22:19	
297_CCB.d	CCB	CCB	12/01/2020	22:21	
308_CCV.d	CCV	CCV	12/01/2020	22:39	
309_CCB.d	CCB	CCB	12/01/2020	22:41	
320_CCV.d	CCV	CCV	12/01/2020	23:01	
321_CCB.d	CCB	CCB	12/01/2020	23:02	
332_CCV.d	CCV	CCV	12/01/2020	23:21	
333_CCB.d	CCB	CCB	12/01/2020	23:23	
344_CCV.d	CCV	CCV	12/01/2020	23:42	
345_CCB.d	CCB	CCB	12/01/2020	23:43	
356_CCV.d	CCV	CCV	12/02/2020	00:03	
357_CCB.d	CCB	CCB	12/02/2020	00:04	
368_CCV.d	CCV	CCV	12/02/2020	00:23	
369_CCB.d	CCB	CCB	12/02/2020	00:24	
444_CCV.d	CCV	CCV	12/02/2020	02:38	
445_CCB.d	CCB	CCB	12/02/2020	02:39	
446ICSA.d	ICSA	ICSA	12/02/2020	02:41	

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **HG4** **Analytical BatchID:** **HG4_201130A**

Sample	Dilution Factor	Date/Time	HG
ICV	1	11/30/20 09:47	X
ICB	1	11/30/20 09:49	X
CCV	1	11/30/20 09:50	X
CCB	1	11/30/20 09:54	X
CCV	1	11/30/20 13:07	X
CCB	1	11/30/20 13:10	X
ZZZZZZ	2	11/30/20 13:12	X
ZZZZZZ	10	11/30/20 13:14	X
ZZZZZZ	10	11/30/20 13:16	X
ZZZZZZ	20	11/30/20 13:20	X
ZZZZZZ	1	11/30/20 13:26	X
ZZZZZZ	1	11/30/20 13:28	X
ZZZZZZ	1	11/30/20 13:30	X
CCV	1	11/30/20 13:31	X
CCB	1	11/30/20 13:35	X
ZZZZZZ	1	11/30/20 13:40	X
ZZZZZZ	1	11/30/20 13:42	X
ZZZZZZ	1	11/30/20 13:44	X
ZZZZZZ	1	11/30/20 13:46	X
ZZZZZZ	1	11/30/20 13:47	X
ZZZZZZ	1	11/30/20 13:49	X
ZZZZZZ	1	11/30/20 13:53	X
CCV	1	11/30/20 13:56	X
CCB	1	11/30/20 14:00	X
CCV	1	11/30/20 14:55	X
CCB	1	11/30/20 14:59	X
CCV	1	11/30/20 15:58	X
CCB	1	11/30/20 16:02	X
ZZZZZZ	1	11/30/20 16:04	X
ZZZZZZ	1	11/30/20 16:09	X
ZZZZZZ	1	11/30/20 16:11	X
ZZZZZZ	1	11/30/20 16:13	X
ZZZZZZ	1	11/30/20 16:14	X
ZZZZZZ	1	11/30/20 16:16	X
MBLK-168415	1	11/30/20 16:20	X
CCV	1	11/30/20 16:23	X
CCB	1	11/30/20 16:27	X

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **HG4** **Analytical BatchID:** **HG4_201130A**

Sample	Dilution Factor	Date/Time	HG
LCS-168415	1	11/30/20 16:29	X
ZZZZZZ	1	11/30/20 16:30	X
ZZZZZZ	1	11/30/20 16:32	X
ZZZZZZ	1	11/30/20 16:34	X
ZZZZZZ	1	11/30/20 16:36	X
ZZZZZZ	1	11/30/20 16:37	X
ZZZZZZ	1	11/30/20 16:39	X
ZZZZZZ	1	11/30/20 16:41	X
ZZZZZZ	1	11/30/20 16:43	X
ZZZZZZMS	1	11/30/20 16:44	X
CCV	1	11/30/20 16:46	X
CCB	1	11/30/20 16:50	X
ZZZZZZMSD	1	11/30/20 16:52	X
ZZZZZZ	1	11/30/20 16:53	X
ZZZZZZ	1	11/30/20 16:55	X
IDA001:E2-3:S00010	1	11/30/20 16:57	X
IDA001:C5-3:S00010	1	11/30/20 16:59	X
IDA001:B8-3:S00010	1	11/30/20 17:00	X
IDA001:DECONWATER:W111720	1	11/30/20 17:02	X
ZZZZZZ	1	11/30/20 17:04	X
ZZZZZZ	1	11/30/20 17:06	X
ZZZZZZ	1	11/30/20 17:08	X
CCV	1	11/30/20 17:09	X
CCB	1	11/30/20 17:13	X
ZZZZZZ	1	11/30/20 17:15	X
ZZZZZZ	1	11/30/20 17:16	X
ZZZZZZ	1	11/30/20 17:18	X
ZZZZZZ	1	11/30/20 17:24	X
ZZZZZZ	1	11/30/20 17:29	X
ZZZZZZ	1	11/30/20 17:31	X
CCV	1	11/30/20 17:32	X
CCB	1	11/30/20 17:36	X
ZZZZZZ	1	11/30/20 17:38	X
ZZZZZZ	1	11/30/20 17:40	X
ZZZZZZ	1	11/30/20 17:41	X
ZZZZZZ	1	11/30/20 17:43	X
ZZZZZZ	1	11/30/20 17:45	X

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **HG4** **Analytical BatchID:** **HG4_201130A**

Sample	Dilution Factor	Date/Time	HG
ZZZZZZ	1	11/30/20 17:47	X
ZZZZZZ	1	11/30/20 17:48	X
ZZZZZZ	1	11/30/20 17:50	X
ZZZZZZ	1	11/30/20 17:52	X
ZZZZZZ	1	11/30/20 17:54	X
CCV	1	11/30/20 17:55	X
CCB	1	11/30/20 17:59	X
ZZZZZZ	1	11/30/20 18:01	X
ZZZZZZ	1	11/30/20 18:03	X
ZZZZZZ	1	11/30/20 18:04	X
ZZZZZZ	1	11/30/20 18:06	X
ZZZZZZ	1	11/30/20 18:08	X
ZZZZZZ	1	11/30/20 18:10	X
ZZZZZZ	1	11/30/20 18:11	X
ZZZZZZ	1	11/30/20 18:17	X
CCV	1	11/30/20 18:19	X
CCB	1	11/30/20 18:22	X
ZZZZZZ	1	11/30/20 18:24	X
ZZZZZZ	1	11/30/20 18:26	X
ZZZZZZ	1	11/30/20 18:27	X
ZZZZZZ	1	11/30/20 18:29	X
ZZZZZZ	1	11/30/20 18:31	X
ZZZZZZ	1	11/30/20 18:33	X
ZZZZZZ	1	11/30/20 18:35	X
ZZZZZZ	1	11/30/20 18:36	X
ZZZZZZ	1	11/30/20 18:38	X
ZZZZZZ	1	11/30/20 18:40	X
CCV	1	11/30/20 18:42	X
CCB	1	11/30/20 18:45	X
ZZZZZZ	1	11/30/20 18:51	X
ZZZZZZ	1	11/30/20 18:52	X
ZZZZZZ	1	11/30/20 18:54	X
ZZZZZZ	1	11/30/20 18:56	X
ZZZZZZ	1	11/30/20 18:58	X
ZZZZZZ	1	11/30/20 18:59	X
ZZZZZZ	1	11/30/20 19:01	X
ZZZZZZ	1	11/30/20 19:03	X

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **HG4** **Analytical BatchID:** **HG4_201130A**

Sample	Dilution Factor	Date/Time	HG
CCV	1	11/30/20 19:05	X
CCB	1	11/30/20 19:08	X

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ICAL1	1	11/30/20 14:25	X	X	X		X		X				X		X		
ICAL2	1	11/30/20 14:30	X	X	X		X		X				X		X		
ICAL3	1	11/30/20 14:35	X	X	X		X		X				X		X		
ICAL4	1	11/30/20 14:40	X	X	X		X		X				X		X		
ICAL5	1	11/30/20 14:45	X	X	X		X		X				X		X		
ICV/QCS	1	11/30/20 14:50	X	X	X		X		X				X		X		
ICB	1	11/30/20 14:55	X	X	X		X		X				X		X		
ICSA	1	11/30/20 15:10	X	X	X		X		X				X		X		
CCV	1	11/30/20 15:37	X	X	X		X		X				X		X		
CCB	1	11/30/20 15:41	X	X	X		X		X				X		X		
CCV	1	11/30/20 16:39	X	X	X		X		X				X		X		
CCB	1	11/30/20 16:44	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 16:49											X				
ZZZZZZ	1	11/30/20 17:14											X				
ZZZZZZ	1	11/30/20 17:19											X				
ZZZZZZ	1	11/30/20 17:24								X							
ZZZZZZ	1	11/30/20 17:29								X							
ZZZZZZ	10	11/30/20 17:34								X							
CCV	1	11/30/20 17:40	X	X	X		X		X				X		X		
CCB	1	11/30/20 17:44	X	X	X		X		X				X		X		
ZZZZZZ	10	11/30/20 17:50								X							
ZZZZZZ	1	11/30/20 17:55								X							
ZZZZZZ	1	11/30/20 18:10	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:25	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:30	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:36	X	X	X		X		X						X		
CCV	1	11/30/20 18:41	X	X	X		X		X				X		X		
CCB	1	11/30/20 18:46	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 19:01	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 19:06								X							
ZZZZZZ	1	11/30/20 19:22								X							
ZZZZZZ	1	11/30/20 19:27								X							
ZZZZZZ	1	11/30/20 19:32								X							
ZZZZZZ	1	11/30/20 19:37															X
CCV	1	11/30/20 19:42	X	X	X		X		X				X		X		
CCB	1	11/30/20 19:47	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 19:52															X

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ZZZZZZ	1	11/30/20 19:58															X
ZZZZZZ	1	11/30/20 20:03															X
ZZZZZZ	1	11/30/20 20:08															X
ZZZZZZ	1	11/30/20 20:13															X
ZZZZZZ	1	11/30/20 20:18															X
ZZZZZZ	1	11/30/20 20:23															X
ZZZZZZ	1	11/30/20 20:29															X
ZZZZZZ	1	11/30/20 20:34															X
ZZZZZZ	1	11/30/20 20:39		X			X						X				
CCV	1	11/30/20 20:44	X	X	X		X		X				X		X		
CCB	1	11/30/20 20:49	X	X	X		X		X				X		X		
CCV	1	11/30/20 21:50	X	X	X		X		X				X		X		
CCB	1	11/30/20 21:55	X	X	X		X		X				X		X		
ZZZZZZ	10	11/30/20 22:21		X									X				
ZZZZZZ	10	11/30/20 22:26		X									X				
ZZZZZZ	10	11/30/20 22:31		X									X				
ZZZZZZ	10	11/30/20 22:36		X									X				
ZZZZZZ	10	11/30/20 22:41		X									X				
ZZZZZZ	10	11/30/20 22:46		X													
CCV	1	11/30/20 22:51	X	X	X		X		X				X		X		
CCB	1	11/30/20 22:56	X	X	X		X		X				X		X		
ZZZZZZ	10	11/30/20 23:01		X													
ZZZZZZ	1	11/30/20 23:06		X		X	X	X	X		X	X		X	X		
ZZZZZZ	1	11/30/20 23:11		X		X	X	X	X		X	X		X	X		
ZZZZZZ	1	11/30/20 23:16		X		X	X	X	X		X	X		X	X		
ZZZZZZ	1	11/30/20 23:31									X		X				
ZZZZZZ	1	11/30/20 23:37									X		X				
ZZZZZZ	1	11/30/20 23:42									X		X				
ZZZZZZ	1	11/30/20 23:47									X		X				
CCV	1	11/30/20 23:52	X	X	X		X		X				X		X		
CCB	1	11/30/20 23:57	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 00:02									X		X				
ZZZZZZ	1	12/01/20 00:07									X		X				
ZZZZZZ	1	12/01/20 00:12									X		X				
ZZZZZZ	1	12/01/20 00:17									X		X				
ZZZZZZ	1	12/01/20 00:23									X		X				
ZZZZZZ	1	12/01/20 00:28									X		X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ZZZZZZ	1	12/01/20 00:33									X		X				
ZZZZZZ	1	12/01/20 00:38		X									X				
CCV	1	12/01/20 00:53	X	X	X		X		X				X		X		
CCB	1	12/01/20 00:58	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 01:03		X									X				
ZZZZZZ	1	12/01/20 01:09		X									X				
ZZZZZZ	1	12/01/20 01:14		X									X				
ZZZZZZ	1	12/01/20 01:19		X									X				
ZZZZZZ	1	12/01/20 01:24		X									X				
ZZZZZZ	1	12/01/20 01:29		X									X				
ZZZZZZ	1	12/01/20 01:34		X									X				
ZZZZZZ	1	12/01/20 01:39	X	X	X		X		X				X		X		
MBLK-168379	1	12/01/20 01:45	X	X	X		X		X				X		X		
LCS-168379	1	12/01/20 01:50	X	X	X		X		X				X		X		
CCV	1	12/01/20 01:55	X	X	X		X		X				X		X		
CCB	1	12/01/20 02:00	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 02:05		X									X				
ZZZZZZMS	1	12/01/20 02:10	X	X	X		X		X				X		X		
ZZZZZZMSD	1	12/01/20 02:15	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 02:20		X									X				
IDA001:E2-3:S00010	1	12/01/20 02:25	X	X	X		X		X						X		
IDA001:C5-3:S00010	1	12/01/20 02:30	X	X	X		X		X				X		X		
IDA001:B8-3:S00010	1	12/01/20 02:36	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 02:41	X	X	X	X	X		X			X	X	X	X	X	
ZZZZZZ	1	12/01/20 02:46	X	X	X	X	X					X	X	X	X	X	
ZZZZZZ	1	12/01/20 02:51	X	X	X	X	X		X			X	X	X	X	X	
CCV	1	12/01/20 02:57	X	X	X		X		X				X		X		
CCB	1	12/01/20 03:02	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 03:07	X	X	X	X	X		X			X	X	X	X	X	
CCV	1	12/01/20 03:12	X	X	X		X		X				X		X		
CCB	1	12/01/20 03:17	X	X	X		X		X				X		X		

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ICAL1	1	12/01/20 11:24															X					
ICAL2	1	12/01/20 11:29															X					
ICAL3	1	12/01/20 11:34															X					
ICAL4	1	12/01/20 11:39															X					
ICAL5	1	12/01/20 11:44															X					
ICV/QCS	1	12/01/20 11:49															X					
ICB	1	12/01/20 11:54															X					
ICSA	1	12/01/20 12:09															X					
CCV	1	12/01/20 12:35															X					
CCB	1	12/01/20 12:40															X					
ZZZZZZ	1	12/01/20 13:16	X																			
ZZZZZZ	1	12/01/20 13:21	X																			
ZZZZZZ	100	12/01/20 13:26															X					
ZZZZZZ	1	12/01/20 13:31	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
CCV	1	12/01/20 13:41															X					
CCB	1	12/01/20 13:46															X					
ZZZZZZ	1	12/01/20 14:03	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	12/01/20 14:18	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	10	12/01/20 14:24			X												X					
ZZZZZZ	10	12/01/20 14:29			X												X					
ZZZZZZ	10	12/01/20 14:34			X												X					
ZZZZZZ	10	12/01/20 14:38			X												X					
ZZZZZZ	10	12/01/20 14:43			X												X					
ZZZZZZ	10	12/01/20 14:48			X												X					
CCV	1	12/01/20 14:53															X					
CCB	1	12/01/20 14:58															X					
ZZZZZZ	10	12/01/20 15:04			X												X					
ZZZZZZ	100	12/01/20 15:09															X					
ZZZZZZ	100	12/01/20 15:14															X					
IDA001:E2-3:S00010	10	12/01/20 15:19															X					
ZZZZZZ	100	12/01/20 15:24								X												
ZZZZZZ	1	12/01/20 15:39										X										
CCV	1	12/01/20 16:00															X					
CCB	1	12/01/20 16:04															X					
ZZZZZZ	1	12/01/20 16:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:30										X					X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 16:46										X										
ZZZZZZ	1	12/01/20 16:51										X					X					
ZZZZZZ	1	12/01/20 16:57										X										
CCV	1	12/01/20 17:07															X					
CCB	1	12/01/20 17:12															X					
ZZZZZZ	1	12/01/20 17:17										X					X					
ZZZZZZ	1	12/01/20 17:22										X										
ZZZZZZ	1	12/01/20 17:28										X					X					
ZZZZZZ	1	12/01/20 17:33										X										
ZZZZZZ	1	12/01/20 17:38															X					
ZZZZZZ	1	12/01/20 17:43															X					
ZZZZZZ	1	12/01/20 17:48															X					
ZZZZZZ	1	12/01/20 17:54															X					
ZZZZZZ	1	12/01/20 17:59															X					
ZZZZZZ	1	12/01/20 18:04															X					
CCV	1	12/01/20 18:10															X					
CCB	1	12/01/20 18:15															X					
ZZZZZZ	1	12/01/20 18:20	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:25	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:30	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:35	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:41	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:46	X					X		X						X	X					
ZZZZZZ	1	12/01/20 19:01	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:07	X		X	X		X		X							X		X			
CCV	1	12/01/20 19:17															X					
CCB	1	12/01/20 19:22															X					
ZZZZZZ	1	12/01/20 19:50	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:55	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:00	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:05	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:20	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
CCV	1	12/01/20 20:25															X					
CCB	1	12/01/20 20:35															X					
ZZZZZZ	1	12/01/20 20:51						X									X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 20:56						X									X					
ZZZZZZ	1	12/01/20 21:01						X									X					
ZZZZZZ	1	12/01/20 21:06						X									X					
ZZZZZZ	1	12/01/20 21:11						X									X					
ZZZZZZ	1	12/01/20 21:16						X									X					
ZZZZZZ	1	12/01/20 21:21						X									X					
ZZZZZZ	1	12/01/20 21:26						X									X					
CCV	1	12/01/20 21:31															X					
CCB	1	12/01/20 21:41															X					
ZZZZZZ	1	12/01/20 21:46						X									X					
ZZZZZZ	1	12/01/20 21:51						X									X					
ZZZZZZ	1	12/01/20 22:16			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:22			X												X					
ZZZZZZ	1	12/01/20 22:27			X	X	X	X								X	X	X	X	X		
ZZZZZZ	1	12/01/20 22:32			X	X		X									X		X			
CCV	1	12/01/20 22:42															X					
CCB	1	12/01/20 22:47															X					
ZZZZZZ	1	12/01/20 22:53			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:58			X	X		X									X		X			
ZZZZZZ	10	12/01/20 23:08				X						X			X							
ZZZZZZ	10	12/01/20 23:13				X						X										
ZZZZZZ	10	12/01/20 23:19				X						X			X							
ZZZZZZ	10	12/01/20 23:24				X						X			X							
ZZZZZZ	10	12/01/20 23:29				X						X			X							
ZZZZZZ	10	12/01/20 23:34				X						X			X							
ZZZZZZ	10	12/01/20 23:40				X						X										
CCV	1	12/01/20 23:50															X					
CCB	1	12/01/20 23:55															X					
ZZZZZZ	1	12/02/20 00:00	X		X	X		X									X		X			
CCV	1	12/02/20 00:46															X					
CCB	1	12/02/20 00:51															X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201130A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	SR	TI	TL	U	V	ZN
ICV	1	11/30/20 15:31	X		X	X			X		X											X		X								
ICB	1	11/30/20 15:33	X		X	X			X		X											X		X								
ICSA	1	11/30/20 15:37	X		X	X			X		X											X		X								
CCV	1	11/30/20 15:47	X		X	X			X		X											X		X								
CCB	1	11/30/20 15:49	X		X	X			X		X											X		X								
CCV	1	11/30/20 15:53	X		X	X			X		X											X		X								
CCB	1	11/30/20 15:55	X		X	X			X		X											X		X								
ZZZZZZ	10	11/30/20 16:05		X																												
ZZZZZZ	10	11/30/20 16:06		X																												
ZZZZZZ	100	11/30/20 16:08		X																												
ZZZZZZ	100	11/30/20 16:09		X																												
ZZZZZZ	100	11/30/20 16:11		X																												
CCV	1	11/30/20 16:13	X		X	X			X		X											X		X								
CCB	1	11/30/20 16:14	X		X	X			X		X											X		X								
ZZZZZZ	100	11/30/20 16:19		X																												
ZZZZZZ	10	11/30/20 16:21		X																												
ZZZZZZ	10	11/30/20 16:22		X																												
ZZZZZZ	10	11/30/20 16:27				X														X												
ZZZZZZ	1	11/30/20 16:29				X		X								X																
ZZZZZZ	10	11/30/20 16:31																														X
CCV	1	11/30/20 16:32	X		X	X			X		X											X		X								
CCB	1	11/30/20 16:34	X		X	X			X		X											X		X								
ZZZZZZ	10	11/30/20 16:39																														X
ZZZZZZ	1	11/30/20 16:41										X																				X
ZZZZZZ	10	11/30/20 16:46		X																												
ZZZZZZ	10	11/30/20 16:47																		X												
ZZZZZZ	10	11/30/20 16:49									X										X											X
CCV	1	11/30/20 16:52	X		X	X			X		X											X		X								
CCB	1	11/30/20 16:54	X		X	X			X		X											X		X								
CCV	1	11/30/20 17:28	X		X	X			X		X											X		X								
CCB	1	11/30/20 17:30	X		X	X			X		X											X		X								
CCV	1	11/30/20 18:31	X		X	X			X		X											X		X								
CCB	1	11/30/20 18:32	X		X	X			X		X											X		X								
ICV	1	11/30/20 18:58	X		X	X			X		X											X		X								
ICB	1	11/30/20 19:00	X		X	X			X		X											X		X								
CCV	1	11/30/20 19:05	X		X	X			X		X											X		X								
CCB	1	11/30/20 19:07	X		X	X			X		X											X		X								

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201130A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	SR	TI	TL	U	V	ZN
CCV	1	11/30/20 19:25	X		X		X			X		X											X		X								
CCB	1	11/30/20 19:27	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 19:38																															X
CCV	1	11/30/20 19:45	X		X		X			X		X											X		X								
CCB	1	11/30/20 19:47	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 19:53	X		X					X	X	X	X				X			X		X	X		X								X
ZZZZZZ	1	11/30/20 19:55																					X										X
ZZZZZZ	1	11/30/20 19:56			X								X						X			X		X	X	X							X
ZZZZZZ	1	11/30/20 19:58																					X										
ZZZZZZ	1	11/30/20 20:00											X																				X
ZZZZZZ	1	11/30/20 20:02																					X										
ZZZZZZ	1	11/30/20 20:03																															X
CCV	1	11/30/20 20:05	X		X		X			X		X											X		X								
CCB	1	11/30/20 20:07	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 20:08																					X										
ZZZZZZ	1	11/30/20 20:10																															X
ZZZZZZ	1	11/30/20 20:12	X		X					X		X	X	X						X		X	X		X								X
ZZZZZZ	1	11/30/20 20:13	X							X			X										X		X					X			X
ZZZZZZ	1	11/30/20 20:18											X										X										X
ZZZZZZ	1	11/30/20 20:20	X																														
ZZZZZZ	1	11/30/20 20:22																					X										X
ZZZZZZ	1	11/30/20 20:23																					X										X
CCV	1	11/30/20 20:25	X		X		X			X		X											X		X								
CCB	1	11/30/20 20:27	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 20:28	X							X			X										X		X					X			X
ZZZZZZ	1	11/30/20 20:30																					X										X
ZZZZZZ	1	11/30/20 20:35																					X										X
ZZZZZZ	1	11/30/20 20:37																					X										X
ZZZZZZ	1	11/30/20 20:39																					X										X
CCV	1	11/30/20 20:45	X		X		X			X		X											X		X								
CCB	1	11/30/20 20:47	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 20:52																							X								
ZZZZZZ	1	11/30/20 20:57											X										X										X
ZZZZZZ	1	11/30/20 21:02	X	X									X										X										X
ZZZZZZ	1	11/30/20 21:04	X	X									X	X									X										X
CCV	1	11/30/20 21:06	X		X		X			X		X											X		X								
CCB	1	11/30/20 21:08	X		X		X			X		X											X		X								

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201130A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	SR	TI	TL	U	V	ZN
ZZZZZZ	10	11/30/20 21:09																			X												
ZZZZZZ	1	11/30/20 21:11	X		X					X		X	X							X		X	X		X								X
ZZZZZZ	1	11/30/20 21:13	X		X					X		X	X							X		X	X		X								X
ZZZZZZ	1	11/30/20 21:14	X		X					X		X	X							X		X	X		X								X
ZZZZZZ	1	11/30/20 21:19	X		X					X		X	X							X		X	X		X								X
ZZZZZZ	1	11/30/20 21:21			X		X				X	X	X							X		X	X	X			X						X
ZZZZZZ	1	11/30/20 21:23																							X					X			
ZZZZZZ	1	11/30/20 21:24																					X										X
CCV	1	11/30/20 21:26	X		X		X			X		X											X		X								
CCB	1	11/30/20 21:28	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 21:30	X																														
ZZZZZZ	1	11/30/20 21:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
ZZZZZZ	1	11/30/20 21:33											X																				
ZZZZZZ	1	11/30/20 21:41																														X	
ZZZZZZ	1	11/30/20 21:43																														X	
CCV	1	11/30/20 21:47	X		X		X			X		X											X		X								
CCB	1	11/30/20 21:48	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 21:52																														X	
ZZZZZZ	1	11/30/20 21:54																														X	
ZZZZZZ	1	11/30/20 21:56																														X	
ZZZZZZ	1	11/30/20 21:58																														X	
ZZZZZZ	1	11/30/20 21:59																														X	
ZZZZZZ	1	11/30/20 22:01																														X	
ZZZZZZ	1	11/30/20 22:03																														X	
ZZZZZZ	1	11/30/20 22:05																														X	
CCV	1	11/30/20 22:08	X		X		X			X		X											X		X								
CCB	1	11/30/20 22:10	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:11					X		X					X	X	X		X	X		X					X		X					
ZZZZZZ	1	11/30/20 22:13		X	X		X		X	X	X	X		X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
ZZZZZZ	1	11/30/20 22:15	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:16	X		X					X		X											X		X								
ZZZZZZ	1	11/30/20 22:18	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:20	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:21	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:23	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:25	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:26	X							X		X										X	X										

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201130A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	SR	TI	TL	U	V	ZN
CCV	1	11/30/20 22:28	X		X		X			X		X											X		X								
CCB	1	11/30/20 22:30	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:35	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:37	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:38	X	X	X		X	X	X	X	X	X	X	X		X		X	X			X	X	X	X					X		X	X
ZZZZZZ	1	11/30/20 22:40	X		X		X	X	X	X	X	X	X	X		X		X				X	X	X	X					X		X	X
ZZZZZZ	1	11/30/20 22:42	X		X		X	X	X	X	X	X	X	X		X		X				X	X	X	X					X		X	X
ZZZZZZ	1	11/30/20 22:44	X		X		X	X	X	X	X	X	X			X		X				X	X	X	X					X		X	X
CCV	1	11/30/20 22:49	X		X		X			X		X											X		X								
CCB	1	11/30/20 22:51	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 22:52			X		X									X		X			X												X
ZZZZZZ	1	11/30/20 22:54			X		X									X		X			X												
ZZZZZZ	1	11/30/20 22:56			X		X									X		X			X												X
ZZZZZZ	1	11/30/20 22:58			X		X									X		X			X												
ZZZZZZ	1	11/30/20 22:59			X		X									X		X			X												X
ZZZZZZ	1	11/30/20 23:01			X		X									X		X			X												X
ZZZZZZ	1	11/30/20 23:03			X		X									X		X			X												X
ZZZZZZ	1	11/30/20 23:05			X		X									X		X			X												X
ZZZZZZ	1	11/30/20 23:06			X		X									X		X			X												
ZZZZZZ	1	11/30/20 23:08		X	X		X							X					X				X											
CCV	1	11/30/20 23:10	X		X		X			X		X											X		X								
CCB	1	11/30/20 23:12	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 23:13																														X	
ZZZZZZ	1	11/30/20 23:15																														X	
ZZZZZZ	1	11/30/20 23:17																														X	
ZZZZZZ	1	11/30/20 23:19																														X	
CCV	1	11/30/20 23:31	X		X		X			X		X											X		X								
CCB	1	11/30/20 23:33	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 23:34	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 23:40	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 23:41	X		X		X			X		X											X		X								
ZZZZZZ	1	11/30/20 23:43	X		X		X			X		X											X		X								
MBLK-168407	1	11/30/20 23:48	X		X		X			X		X											X		X								
LCS-168407	1	11/30/20 23:49	X		X		X			X		X											X		X								
CCV	1	11/30/20 23:51	X		X		X			X		X											X		X								
CCB	1	11/30/20 23:53	X		X		X			X		X											X		X								
IDA001:DECONWATER:W111720	1	11/30/20 23:55	X		X		X			X		X													X								

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201130A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	SR	TI	TL	U	V	ZN
ZZZZZZ	1	11/30/20 23:57	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X					X		X	X
ZZZZZZ	1	11/30/20 23:58	X		X	X	X	X		X	X	X	X	X				X		X		X	X	X	X					X		X	X
ZZZZZZMS	1	12/01/20 00:00	X		X		X			X		X											X		X									
ZZZZZZMSD	1	12/01/20 00:02	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:04										X																						
ZZZZZZ	1	12/01/20 00:06	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:08	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:10	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:11	X		X		X			X		X											X		X									
CCV	1	12/01/20 00:13	X		X		X			X		X											X		X									
CCB	1	12/01/20 00:15	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:17	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:18	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:20	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:22	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:24	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:25	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:27																							X									
ZZZZZZ	1	12/01/20 00:29																							X									
ZZZZZZ	1	12/01/20 00:31																							X									
ZZZZZZ	1	12/01/20 00:32																							X									
CCV	1	12/01/20 00:34	X		X		X			X		X											X		X									
CCB	1	12/01/20 00:36	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:41	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:43	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:45	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:46	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:48			X																													
CCV	1	12/01/20 00:56	X		X		X			X		X											X		X									
CCB	1	12/01/20 00:57	X		X		X			X		X											X		X									
ZZZZZZ	1	12/01/20 00:59	X		X		X			X		X					X						X		X									
ZZZZZZ	1	12/01/20 01:01	X		X		X			X		X					X						X		X									
ZZZZZZ	1	12/01/20 01:03				X																												
ZZZZZZ	1	12/01/20 01:04				X																												
ZZZZZZ	1	12/01/20 01:06				X																												
ZZZZZZ	1	12/01/20 01:08				X																												
ZZZZZZ	1	12/01/20 01:10				X																												

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201130A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BB	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	SR	TI	TL	U	V	ZN
ZZZZZZ	1	12/01/20 01:12				X																											
ZZZZZZ	1	12/01/20 01:14				X																											
ZZZZZZ	1	12/01/20 01:16				X																											
CCV	1	12/01/20 01:17	X		X		X			X		X											X		X								
CCB	1	12/01/20 01:22	X		X		X			X		X											X		X								
ICV	1	12/01/20 01:41	X		X		X			X		X											X		X								
ICB	1	12/01/20 01:42	X		X		X			X		X											X		X								
CCV	1	12/01/20 01:46	X		X		X			X		X											X		X								
CCB	1	12/01/20 01:47	X		X		X			X		X											X		X								
ZZZZZZ	1	12/01/20 01:49				X																											
ZZZZZZ	1	12/01/20 01:51				X																											
ZZZZZZ	1	12/01/20 01:52	X		X		X			X		X											X		X								
ZZZZZZ	1	12/01/20 01:54	X		X		X			X		X											X		X								
ZZZZZZ	1	12/01/20 01:56	X		X		X			X		X											X		X								
CCV	1	12/01/20 02:06	X		X		X			X		X											X		X								
CCB	1	12/01/20 02:08	X		X		X			X		X											X		X								

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201201A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	TL	V	ZN
ICV	1	12/01/20 14:24	X		X		X			X		X										X		X				
ICB	1	12/01/20 14:25	X		X		X			X		X										X		X				
ICSA	1	12/01/20 14:29	X		X		X			X		X										X		X				
CCV	1	12/01/20 14:37	X		X		X			X		X										X		X				
CCB	1	12/01/20 14:39	X		X		X			X		X										X		X				
CCV	1	12/01/20 14:44	X		X		X			X		X										X		X				
CCB	1	12/01/20 14:46	X		X		X			X		X										X		X				
ZZZZZZ	10	12/01/20 14:56																										X
ZZZZZZ	10	12/01/20 14:57																										X
ZZZZZZ	100	12/01/20 14:59																										X
ZZZZZZ	10	12/01/20 15:00				X			X							X	X											
ZZZZZZ	1	12/01/20 15:02												X								X						
CCV	1	12/01/20 15:11	X		X		X			X		X										X		X				
CCB	1	12/01/20 15:13	X		X		X			X		X										X		X				
CCV	1	12/01/20 15:36	X		X		X			X		X										X		X				
CCB	1	12/01/20 15:38	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 15:42												X														
ZZZZZZ	1	12/01/20 15:44												X														
ZZZZZZ	1	12/01/20 15:46												X														
ZZZZZZ	100	12/01/20 15:47																X										
ZZZZZZ	10	12/01/20 15:49											X						X									X
ZZZZZZ	10	12/01/20 15:51					X																					
ZZZZZZ	100	12/01/20 15:54																		X								
CCV	1	12/01/20 15:55	X		X		X			X		X										X		X				
CCB	1	12/01/20 15:57	X		X		X			X		X										X		X				
ZZZZZZ	100	12/01/20 15:59		X														X		X								
ZZZZZZ	100	12/01/20 16:00		X														X		X								
ZZZZZZ	100	12/01/20 16:02		X										X				X		X								
ZZZZZZ	10	12/01/20 16:04																										X
ZZZZZZ	10	12/01/20 16:05																										X
ZZZZZZ	10	12/01/20 16:07																										X
IDA001:DECONWATER:W111720	10	12/01/20 16:11																				X						
ZZZZZZ	10	12/01/20 16:13		X					X							X		X		X								
CCV	1	12/01/20 16:15	X		X		X			X		X										X		X				
CCB	1	12/01/20 16:16	X		X		X			X		X										X		X				
ZZZZZZSD	5	12/01/20 16:21	X		X		X			X		X										X		X				
ZZZZZZPDS	1	12/01/20 16:23	X		X		X			X		X										X		X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201201A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	TL	V	ZN
ZZZZZZ	100	12/01/20 16:27		X										X				X										
CCV	1	12/01/20 16:35	X		X		X			X		X										X		X				
CCB	1	12/01/20 16:36	X		X		X			X		X										X		X				
CCV	1	12/01/20 16:55	X		X		X			X		X										X		X				
CCB	1	12/01/20 16:56	X		X		X			X		X										X		X				
CCV	1	12/01/20 18:17	X		X		X			X		X										X		X				
CCB	1	12/01/20 18:19	X		X		X			X		X										X		X				
ZZZZZZ	10	12/01/20 18:20							X								X			X								
ZZZZZZ	10	12/01/20 18:22							X								X											
ZZZZZZ	10	12/01/20 18:24							X								X											
ZZZZZZ	10	12/01/20 18:25															X											
ZZZZZZ	10	12/01/20 18:29							X								X											
ZZZZZZ	10	12/01/20 18:31							X								X											
ZZZZZZ	10	12/01/20 18:32							X								X											
ZZZZZZ	10	12/01/20 18:34							X								X			X								
ZZZZZZ	10	12/01/20 18:36							X								X			X								
CCV	1	12/01/20 18:37	X		X		X			X		X										X		X				
CCB	1	12/01/20 18:39	X		X		X			X		X										X		X				
ZZZZZZ	10	12/01/20 18:41							X								X			X								
ZZZZZZ	10	12/01/20 18:42															X			X								
ZZZZZZ	10	12/01/20 18:44							X								X											
ZZZZZZ	10	12/01/20 18:46							X								X											
ZZZZZZ	10	12/01/20 18:48							X								X											
ZZZZZZ	10	12/01/20 18:49							X								X			X								
CCV	1	12/01/20 18:57	X		X		X			X		X										X		X				
CCB	1	12/01/20 18:59	X		X		X			X		X										X		X				
ZZZZZZ	100	12/01/20 19:01																		X								
ZZZZZZ	1	12/01/20 19:04					X	X			X	X	X								X		X	X		X	X	X
ZZZZZZ	1	12/01/20 19:06	X	X	X	X			X	X				X	X		X	X		X		X						
CCV	1	12/01/20 19:17	X		X		X			X		X										X		X				
CCB	1	12/01/20 19:19	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 19:27								X		X	X								X	X						X
ZZZZZZ	1	12/01/20 19:29								X		X	X								X	X						X
ZZZZZZ	1	12/01/20 19:30								X		X	X								X	X						X
ZZZZZZ	1	12/01/20 19:32						X																				
CCV	1	12/01/20 19:41	X		X		X			X		X										X		X				
CCB	1	12/01/20 19:43	X		X		X			X		X										X		X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201201A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	TL	V	ZN
ZZZZZZ	1	12/01/20 19:44						X		X		X									X							
ZZZZZZ	1	12/01/20 19:46						X		X		X									X							
ZZZZZZ	1	12/01/20 19:48																							X			
ZZZZZZ	1	12/01/20 19:50												X														
ZZZZZZ	1	12/01/20 19:51																						X				
ZZZZZZ	1	12/01/20 19:53																						X				
ZZZZZZ	1	12/01/20 19:55												X														
ZZZZZZ	1	12/01/20 19:56	X	X	X		X	X		X	X	X	X	X					X		X	X	X	X		X		X
CCV	1	12/01/20 20:01	X		X		X			X		X										X		X				
CCB	1	12/01/20 20:03	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 20:05												X														
ZZZZZZ	1	12/01/20 20:06	X	X	X		X	X		X	X	X	X	X					X		X	X	X	X		X		X
ZZZZZZ	1	12/01/20 20:08												X														
ZZZZZZ	1	12/01/20 20:10	X	X	X		X	X		X	X	X	X	X					X		X	X	X	X		X		X
ZZZZZZ	1	12/01/20 20:11													X						X							
ZZZZZZ	1	12/01/20 20:13													X						X							
ZZZZZZ	1	12/01/20 20:15													X						X							
ZZZZZZ	1	12/01/20 20:17													X						X							
CCV	1	12/01/20 20:25	X		X		X			X		X										X		X				
CCB	1	12/01/20 20:27	X		X		X			X		X										X		X				
ICV	1	12/01/20 20:45	X		X		X			X		X										X		X				
ICB	1	12/01/20 20:47	X		X		X			X		X										X		X				
CCV	1	12/01/20 20:50	X		X		X			X		X										X		X				
CCB	1	12/01/20 20:52	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 20:56								X		X	X								X	X						X
ZZZZZZ	1	12/01/20 20:58																		X								
ZZZZZZ	1	12/01/20 21:00																				X						X
ZZZZZZ	1	12/01/20 21:05											X															X
ZZZZZZ	1	12/01/20 21:07																				X						X
ZZZZZZ	1	12/01/20 21:08																										X
CCV	1	12/01/20 21:10	X		X		X			X		X										X		X				
CCB	1	12/01/20 21:12	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 21:16							X							X	X											
ZZZZZZ	1	12/01/20 21:18							X							X	X											
ZZZZZZ	1	12/01/20 21:20							X							X	X											
ZZZZZZ	1	12/01/20 21:22							X							X	X											
CCV	1	12/01/20 21:34	X		X		X			X		X										X		X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201201A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	TL	V	ZN
CCB	1	12/01/20 21:35	X		X		X			X		X										X		X				
ICV	1	12/01/20 21:54	X		X		X			X		X										X		X				
ICB	1	12/01/20 21:55	X		X		X			X		X										X		X				
CCV	1	12/01/20 21:59	X		X		X			X		X										X		X				
CCB	1	12/01/20 22:00	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 22:05	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 22:07	X		X		X	X		X		X									X	X	X	X		X		
ZZZZZZ	1	12/01/20 22:09	X		X		X	X		X	X	X	X	X		X	X	X			X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 22:14	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 22:16			X									X				X		X	X	X						X
ZZZZZZ	1	12/01/20 22:18			X									X				X		X	X	X						X
CCV	1	12/01/20 22:19	X		X		X			X		X										X		X				
CCB	1	12/01/20 22:21	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 22:22			X									X				X		X	X	X						X
ZZZZZZ	1	12/01/20 22:24	X	X	X		X	X	X	X	X	X	X			X	X	X		X	X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 22:26	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 22:28	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 22:29	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X		X	X	X
CCV	1	12/01/20 22:39	X		X		X			X		X										X		X				
CCB	1	12/01/20 22:41	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 22:43	X		X		X	X		X	X	X	X								X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 22:44	X		X		X	X		X	X	X	X	X							X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 22:46	X		X			X		X	X	X	X	X							X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 22:52			X									X				X										
ZZZZZZ	1	12/01/20 22:54			X													X		X								
ZZZZZZ	1	12/01/20 22:55			X									X				X										
ZZZZZZ	1	12/01/20 22:57			X											X		X		X								
ZZZZZZ	1	12/01/20 22:59			X									X				X										
CCV	1	12/01/20 23:01	X		X		X			X		X										X		X				
CCB	1	12/01/20 23:02	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 23:04			X											X		X		X								
ZZZZZZ	1	12/01/20 23:06			X									X				X										
ZZZZZZ	1	12/01/20 23:07			X									X		X		X		X								
ZZZZZZ	1	12/01/20 23:09			X									X				X										
ZZZZZZ	1	12/01/20 23:11			X									X		X		X		X								
ZZZZZZ	1	12/01/20 23:13			X									X				X										
ZZZZZZ	1	12/01/20 23:14			X									X		X		X		X								

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111764
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICPMS3** **Analytical BatchID:** **ICPMS3_201201A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	TL	V	ZN
ZZZZZZ	1	12/01/20 23:16			X									X				X										
ZZZZZZ	1	12/01/20 23:18			X													X		X								
ZZZZZZ	1	12/01/20 23:19			X									X				X										
CCV	1	12/01/20 23:21	X		X		X			X		X										X		X				
CCB	1	12/01/20 23:23	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 23:24			X									X		X		X		X								
ZZZZZZ	1	12/01/20 23:26	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 23:34	X		X		X	X		X	X	X	X								X	X	X	X		X	X	X
ZZZZZZ	1	12/01/20 23:40			X									X				X										
CCV	1	12/01/20 23:42	X		X		X			X		X										X		X				
CCB	1	12/01/20 23:43	X		X		X			X		X										X		X				
ZZZZZZ	1	12/01/20 23:45			X									X				X		X								
ZZZZZZ	1	12/01/20 23:47			X									X				X										
ZZZZZZ	1	12/01/20 23:49			X									X		X		X		X								
ZZZZZZ	1	12/01/20 23:50			X									X				X										
ZZZZZZ	1	12/01/20 23:52			X											X		X		X								
ZZZZZZ	1	12/01/20 23:54			X									X				X										
ZZZZZZ	1	12/01/20 23:56			X											X		X		X								
ZZZZZZ	1	12/01/20 23:57			X									X				X										
ZZZZZZ	1	12/01/20 23:59			X									X				X		X								
ZZZZZZ	1	12/02/20 00:01			X									X				X										
CCV	1	12/02/20 00:03	X		X		X			X		X										X		X				
CCB	1	12/02/20 00:04	X		X		X			X		X										X		X				
ZZZZZZ	1	12/02/20 00:06			X													X		X								
ZZZZZZ	1	12/02/20 00:08	X		X		X			X		X										X		X				
ZZZZZZ	1	12/02/20 00:09																						X				
ZZZZZZ	1	12/02/20 00:11																						X				
ZZZZZZ	1	12/02/20 00:13																						X				
ZZZZZZ	1	12/02/20 00:15																						X				
CCV	1	12/02/20 00:23	X		X		X			X		X										X		X				
CCB	1	12/02/20 00:24	X		X		X			X		X										X		X				
CCV	1	12/02/20 02:38	X		X		X			X		X										X		X				
CCB	1	12/02/20 02:39	X		X		X			X		X										X		X				
ICSA	1	12/02/20 02:41	X		X		X			X		X										X		X				

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168379
Analytical Method: SW6010D **Extraction Date:** 11/29/20 15:04

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	20111754-22AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111754-22AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:E2-3:S00010	20111764-02A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:C5-3:S00010	20111764-04A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:B8-3:S00010	20111764-06A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
LCS-168379	LCS-168379	NA	NA	25 mL	27.5 mL	0
MBLK-168379	MBLK-168379	NA	NA	25 mL	27.5 mL	0

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3005A **Extraction Lot:** 168407
Analytical Method: SW6020B **Extraction Date:** 11/30/20 13:11

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DECONWATER:W111720	20111764-07A	11/17/20	11/19/20	50 mL	50 mL	0
Matrix Spike	20111837-02BMS	NA	NA	50 mL	50 mL	0
Duplicate Matrix Spike	20111837-02BMSD	NA	NA	50 mL	50 mL	0
LCS-168407	LCS-168407	NA	NA	50 mL	50 mL	0
MBLK-168407	MBLK-168407	NA	NA	50 mL	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW7470 **Extraction Lot:** 168415
Analytical Method: SW7470A **Extraction Date:** 11/30/20 13:10

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	20111636-02BMS	NA	NA	10 mL	15 mL	0
Duplicate Matrix Spike	20111636-02BMSD	NA	NA	10 mL	15 mL	0
IDA001:E2-3:S00010	20111764-02A	11/17/20	11/19/20	1 mL	15 mL	0
IDA001:C5-3:S00010	20111764-04A	11/17/20	11/19/20	1 mL	15 mL	0
IDA001:B8-3:S00010	20111764-06A	11/17/20	11/19/20	1 mL	15 mL	0
IDA001:DECONWATER:W111720	20111764-07A	11/17/20	11/19/20	10 mL	15 mL	0
LCS-168415	LCS-168415	NA	NA	10 mL	15 mL	0
MBLK-168415	MBLK-168415	NA	NA	10 mL	15 mL	0

General Chemistry

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/21/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111764-01A DUP	**Units:**	s.u.
Lab Code:	IDA001:E2-3:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111764-01A DUP Result	RPD	RPD Limit
pH	SW9045D	0.100	8.34	8.28	0.722	20

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/21/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111764-01A DUP	**Units:**	°C
Lab Code:	IDA001:E2-3:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111764-01A DUP Result	RPD	RPD Limit
Temperature	SW9045D	0.100	20.1	20	0.499	

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Liquid	**Date Received:**	NA
		Date Analyzed:	12/02/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20112226-01C DUP	**Units:**	°F
Lab Code:	BatchQC	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20112226-01C DUP Result	RPD	RPD Limit
Flashpoint/Ignitability	SW1010A	50.0	101	106	4.83	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Analyzed:**	11/21/2020
Sample Matrix:	Soil	**Date Extracted:**	11/20/2020

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW9045D	**Units:**	s.u.
Prep Method:	SW9045D	**Basis:**	Wet
		Analysis Lot:	WETCHEM_201121C

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS-168126	LCS-168126	3.94	4	98.5	90-110

Client: HULL&ASSOC-DUBLIN
Project: IDA001/IDA001
Sample Matrix: Liquid

Service Request: 20111764
Date Analyzed: 12/02/2020

Lab Control Sample Summary
General Chemistry

Units: °F
Basis: Wet

Lab Control Sample
LCS-R304918

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Flashpoint/Ignitability	SW1010A	83	81	102	97-103
Flashpoint/Ignitability	SW1010AMOD	83	81	102	97-103

Raw Data

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Volatile Organic Compounds by GCMS

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TCVO_8260_S

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S00010	**Units:**	ug/L
Lab Code:	20111764-02	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
1,2-Dichloroethane	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
2-Butanone	100 U	100	20	12/01/20 23:00	11/30/20 10:24	
Benzene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Carbon tetrachloride	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Chlorobenzene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Chloroform	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Tetrachloroethene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Trichloroethene	20 U	20	20	12/01/20 23:00	11/30/20 10:24	
Vinyl chloride	20 U	20	20	12/01/20 23:00	11/30/20 10:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	105	85 - 115	12/01/20 23:00	
1,2-Dichloroethane-d4	108	75 - 120	12/01/20 23:00	
Toluene-d8	103	85 - 110	12/01/20 23:00	
4-Bromofluorobenzene	91.5	80 - 110	12/01/20 23:00	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Units:**	ug/L
Lab Code:	20111764-04	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
1,2-Dichloroethane	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Carbon tetrachloride	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Chlorobenzene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Chloroform	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Tetrachloroethene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
Vinyl chloride	20 U	20	20	11/28/20 01:14	11/25/20 12:36	
2-Butanone	100 U	100	20	11/28/20 01:14	11/25/20 12:36	
Benzene	**200**	20	20	11/28/20 01:14	11/25/20 12:36	
Trichloroethene	20 U	20	20	11/28/20 01:14	11/25/20 12:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	102	85 - 115	11/28/20 01:14	
1,2-Dichloroethane-d4	103	75 - 120	11/28/20 01:14	
Toluene-d8	101	85 - 110	11/28/20 01:14	
4-Bromofluorobenzene	101	80 - 110	11/28/20 01:14	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Units:**	ug/L
Lab Code:	20111764-06	**Basis:**	Wet

Volatile Organic Compounds by GCMS

Analysis Method: SW8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,1-Dichloroethene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
1,2-Dichloroethane	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
2-Butanone	100 U	100	20	12/01/20 13:46	11/25/20 12:36	
Carbon tetrachloride	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Chlorobenzene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Chloroform	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Tetrachloroethene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Vinyl chloride	20 U	20	20	12/01/20 13:46	11/25/20 12:36	
Benzene	**77**	20	20	12/01/20 13:46	11/25/20 12:36	
Trichloroethene	20 U	20	20	12/01/20 13:46	11/25/20 12:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Dibromofluoromethane	101	85 - 115	12/01/20 13:46	
1,2-Dichloroethane-d4	96.7	75 - 120	12/01/20 13:46	
Toluene-d8	101	85 - 110	12/01/20 13:46	
4-Bromofluorobenzene	103	80 - 110	12/01/20 13:46	

Quantitation Report (QT Reviewed)

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120130.D
Acq On : 01 Dec 2020 11:00 pm
Operator : MF
Sample : 20111764-02A DF20
Misc : IS 200-21725
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 02 07:42:04 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.103	168	114608	20.00	ug/L		0.00
43) 1,4-Difluorobenzene	5.235	114	185768	20.00	ug/L		0.00
65) Chlorobenzene-d5	8.423	117	166786	20.00	ug/L		0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	67760	20.00	ug/L		0.00
118) Ethyl-d5-Acetate-d3	3.370	46	83164	20.00	ug/L		0.00
System Monitoring Compounds							
45) Dibromofluoromethane	4.036	111	81074	20.99	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 104.95%				
48) 1,2-Dichloroethane-d4	4.494	65	98127	21.67	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 108.35%				
67) Toluene-d8	7.296	98	221218	20.66	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 103.30%				
89) Bromofluorobenzene	9.148	95	73404	18.30	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 91.50%				
Target Compounds							Qvalue
3) Chloromethane	1.117	50	1016	0.27	ug/L		82
7) Dichlorofluoromethane	1.323	67	54	Below Cal		#	1
9) Ethanol	1.727	45	163	Below Cal		#	51
15) Acetone	1.939	43	6445	3.07	ug/L		96
19) Methyl acetate	2.165	43	2700	0.58	ug/L	#	86
21) Methylene chloride	2.257	49	476	Below Cal		#	63
32) 2,2-Dichloropropane	3.373	77	233	Below Cal		#	27
35) Ethyl Acetate	3.487	43	82	Below Cal		#	72
39) Tetrahydrofuran	3.730	42	322	Below Cal		#	41
42) Cyclohexane	4.101	56	2628	Below Cal		#	3
66) 4-Methyl-2-pentanone	7.235	43	199	Below Cal		#	48
82) m/p-Xylene	8.599	91	3113	0.53	ug/L		96
119) 2-Propanone	1.939	43	6445	3.17	ug/L		96
120) 2-Propanol	2.045	45	112	Below Cal		#	34
122) Isopropyl Acetate	6.426	61	2382	2.03	ug/L	#	6

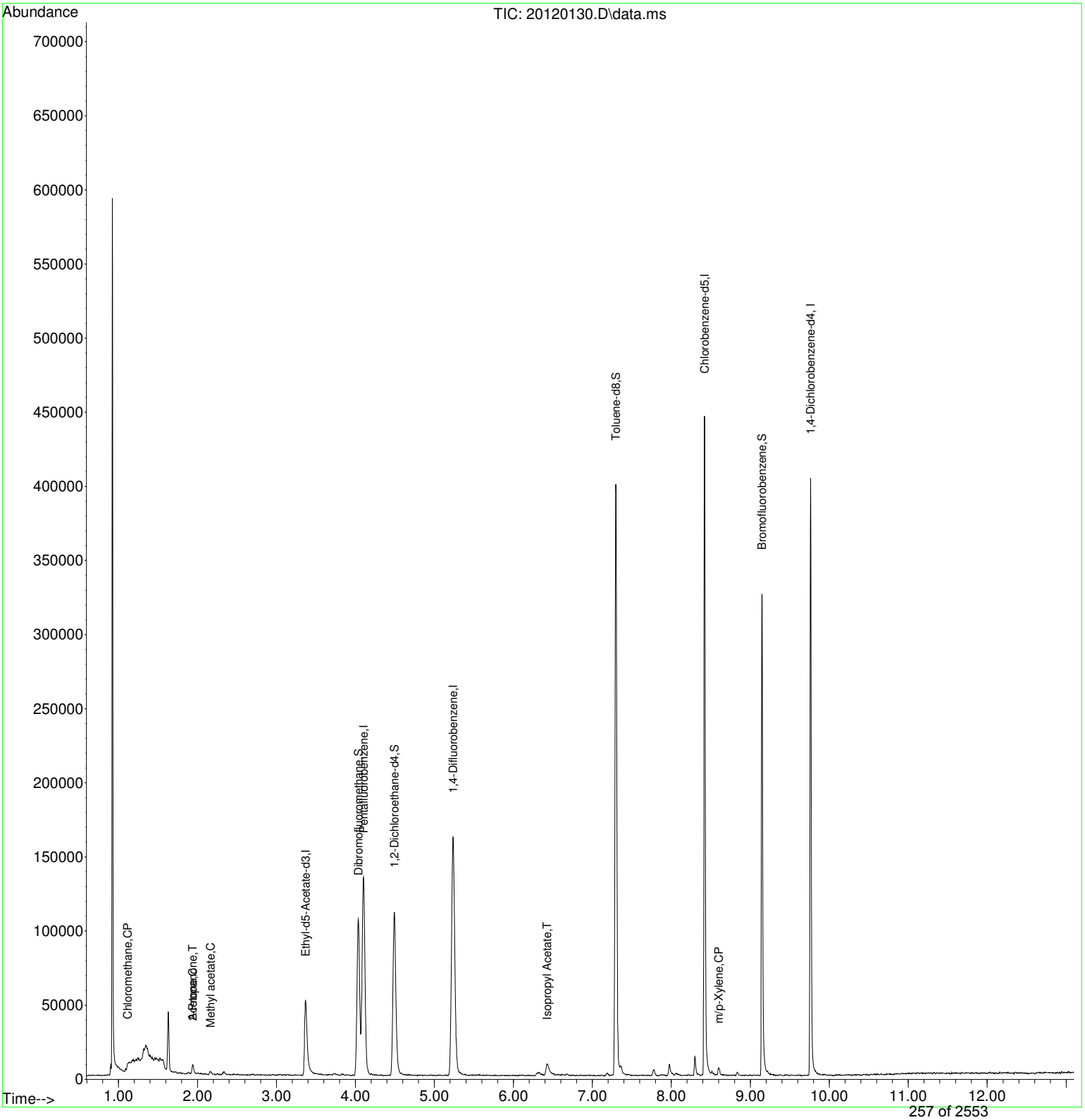
(#) = qualifier out of range (m) = manual integration (+) = signals summed

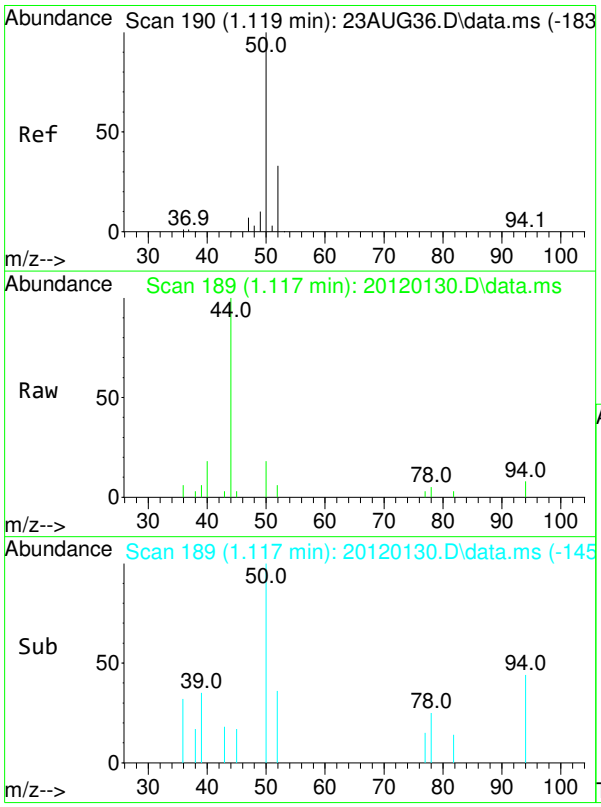
1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120130.D
Acq On : 01 Dec 2020 11:00 pm
Operator : MF
Sample : 20111764-02A DF20
Misc : IS 200-21725
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 02 07:42:04 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

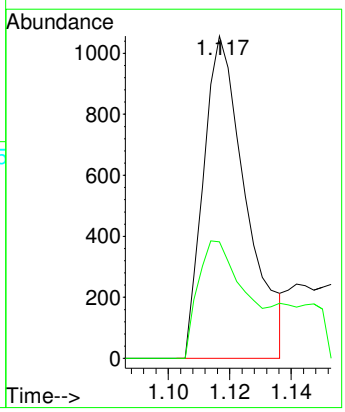


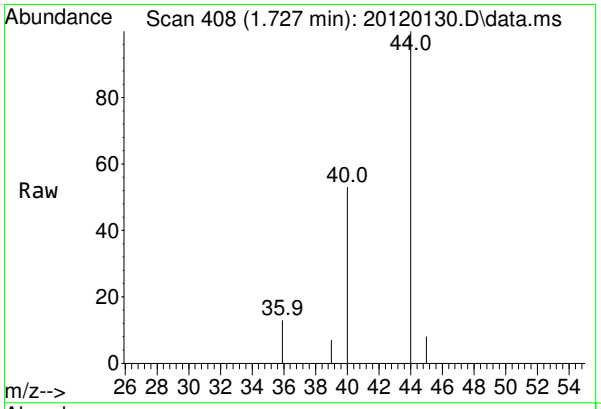


#3
Chloromethane
Concen: 0.27 ug/L
RT: 1.117 min Scan# 189
Delta R.T. 0.003 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 50 Resp: 1016

Ion	Ratio	Lower	Upper
50	100		
52	42.3	2.4	62.4

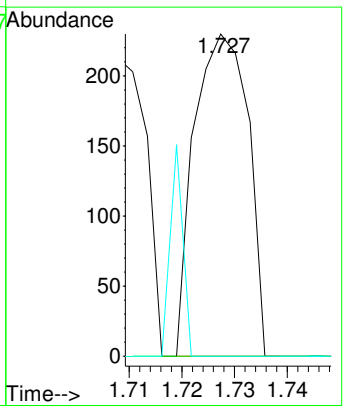


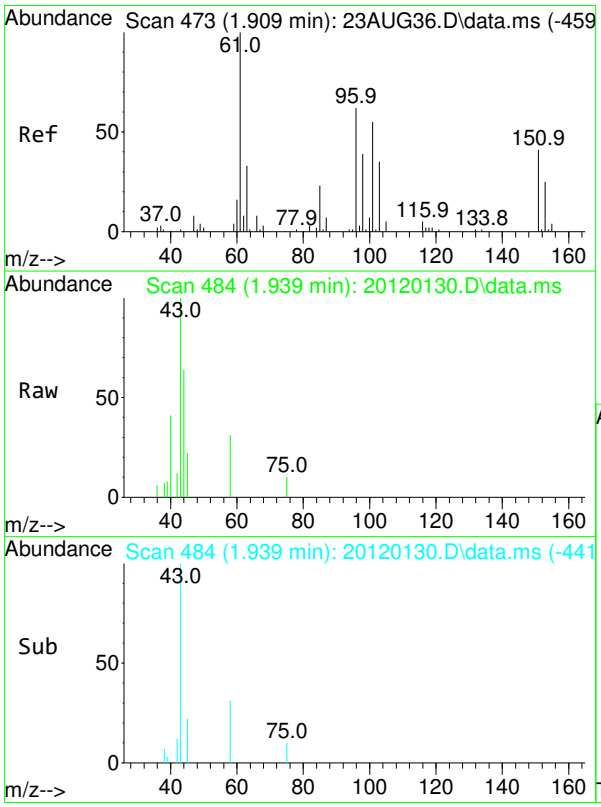


#9
Ethanol
Concen: Below Cal
RT: 1.727 min Scan# 408
Delta R.T. -0.023 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 45 Resp: 163

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	55.2
43	31.9	0.0	43.1

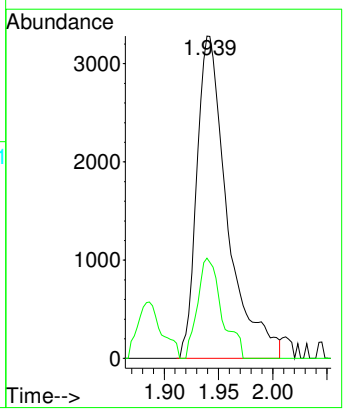


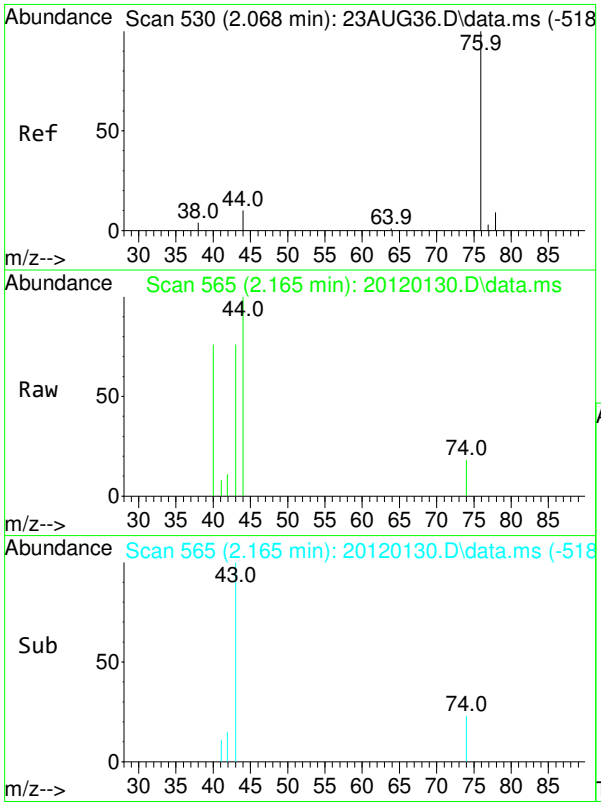


#15
Acetone
Concen: 3.07 ug/L
RT: 1.939 min Scan# 484
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 43 Resp: 6445

Ion	Ratio	Lower	Upper
43	100		
58	24.7	0.0	56.9

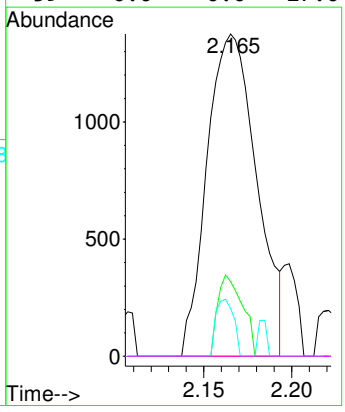


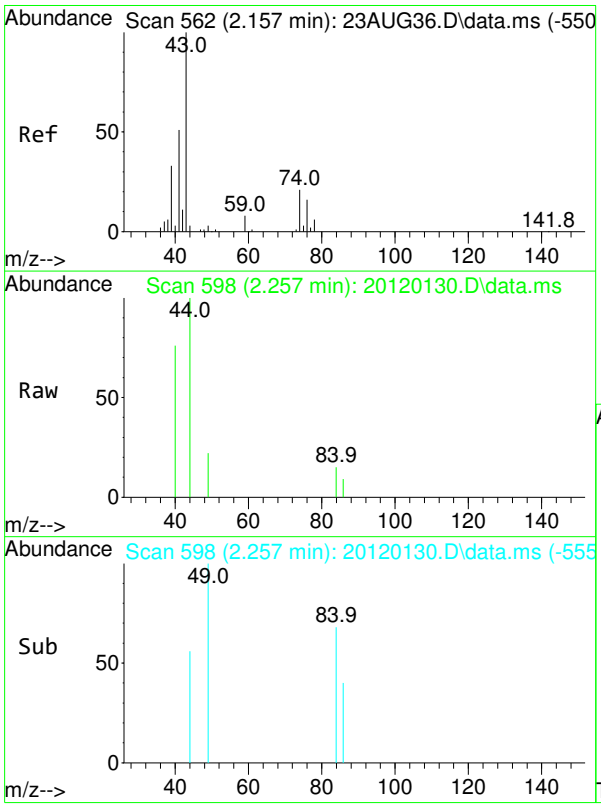


#19
Methyl acetate
Concen: 0.58 ug/L
RT: 2.165 min Scan# 565
Delta R.T. 0.011 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 43 Resp: 2700

Ion	Ratio	Lower	Upper
43	100		
74	12.6	0.0	46.2
42	6.3	0.0	43.3
59	0.0	0.0	27.0

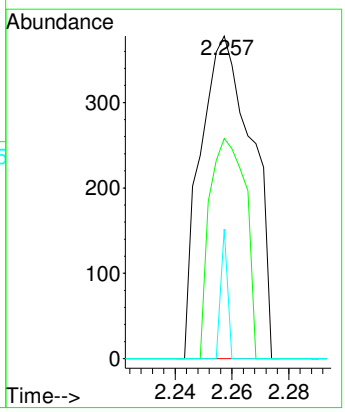


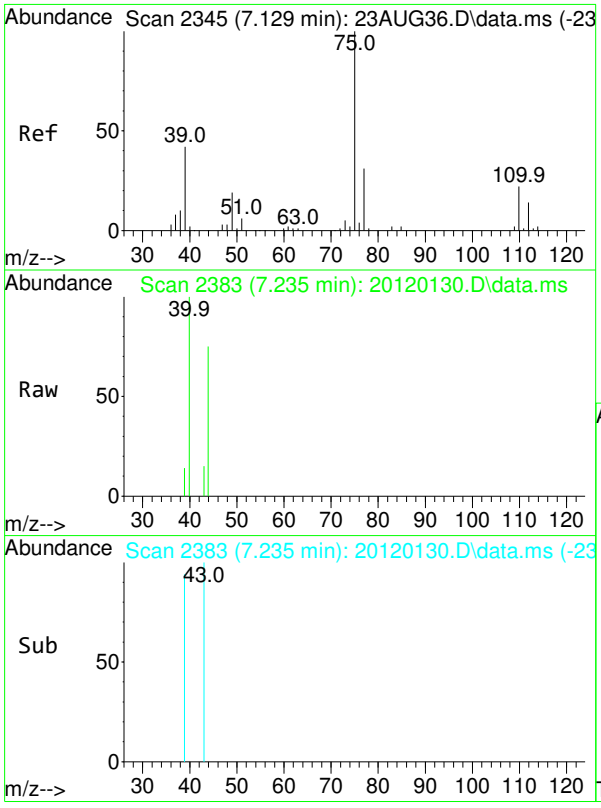


#21
Methylene chloride
Concen: Below Cal
RT: 2.257 min Scan# 598
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 49 Resp: 476

Ion	Ratio	Lower	Upper
49	100		
84	47.1	31.8	91.8
86	0.0	9.7	69.7#

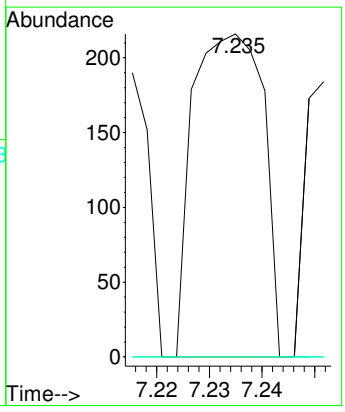


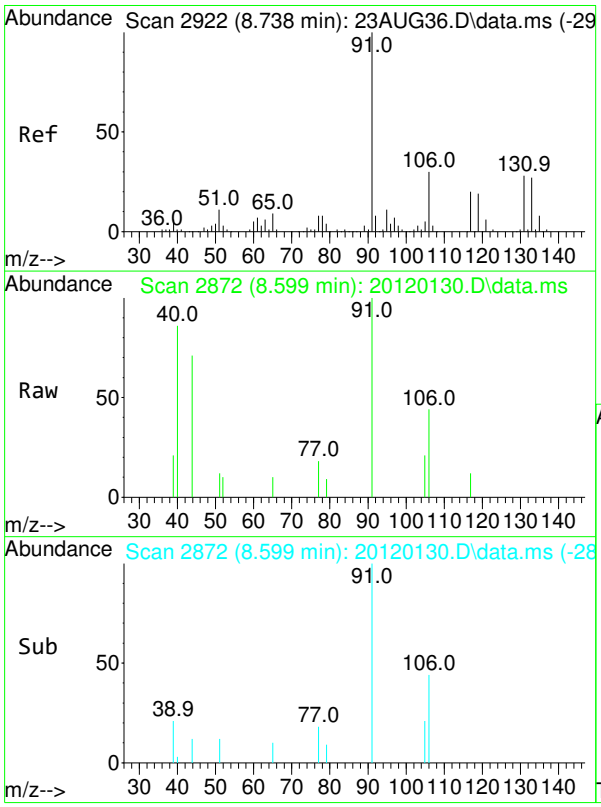


#66
4-Methyl-2-pentanone
Concen: Below Cal
RT: 7.235 min Scan# 2383
Delta R.T. 0.011 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 43 Resp: 199

Ion	Ratio	Lower	Upper
43	100		
58	0.0	13.4	53.4#
100	0.0	0.0	27.3

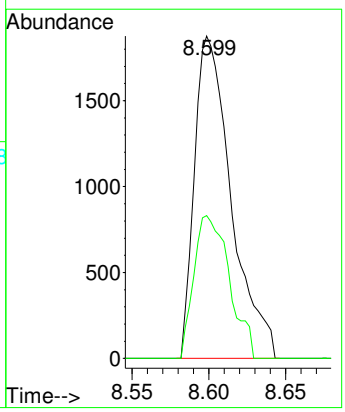


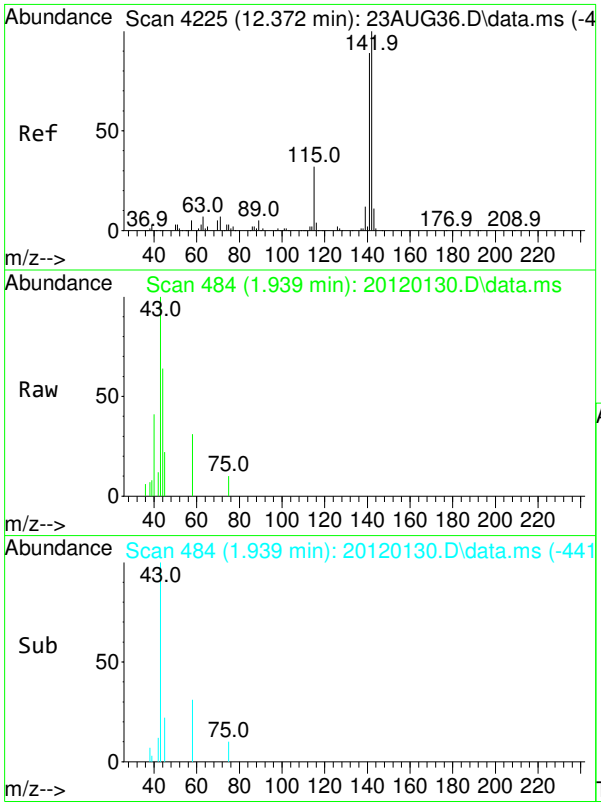


#82
m/p-Xylene
Concen: 0.53 ug/L
RT: 8.599 min Scan# 2872
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 91 Resp: 3113

Ion	Ratio	Lower	Upper
91	100		
106	42.8	15.7	75.7

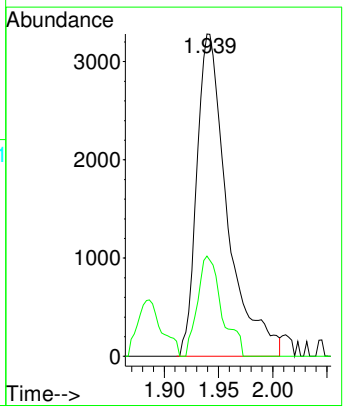


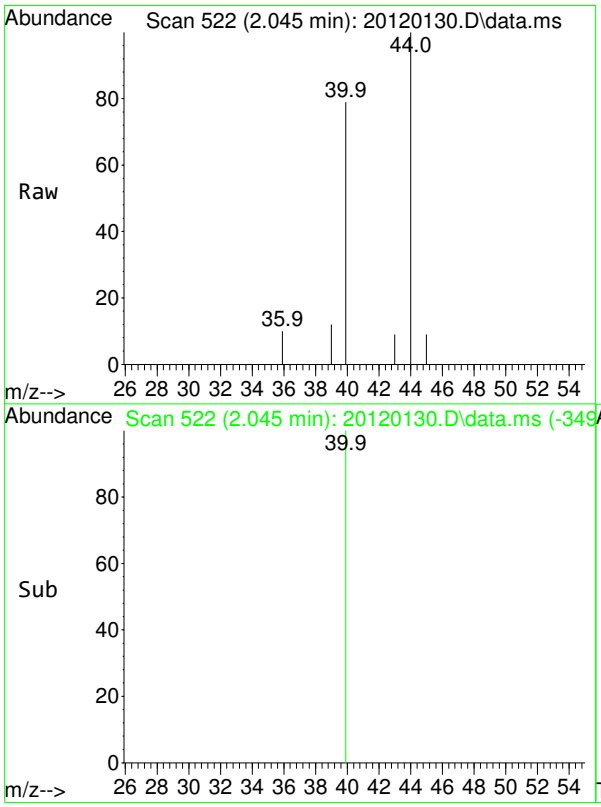


#119
2-Propanone
Concen: 3.17 ug/L
RT: 1.939 min Scan# 484
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 43 Resp: 6445

Ion	Ratio	Lower	Upper
43	100		
58	24.7	0.0	56.9

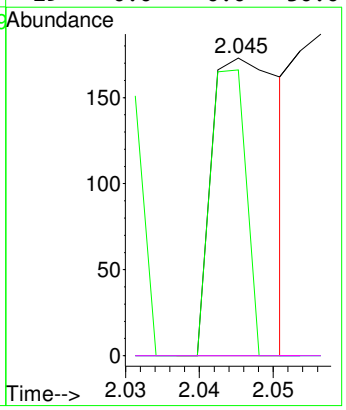


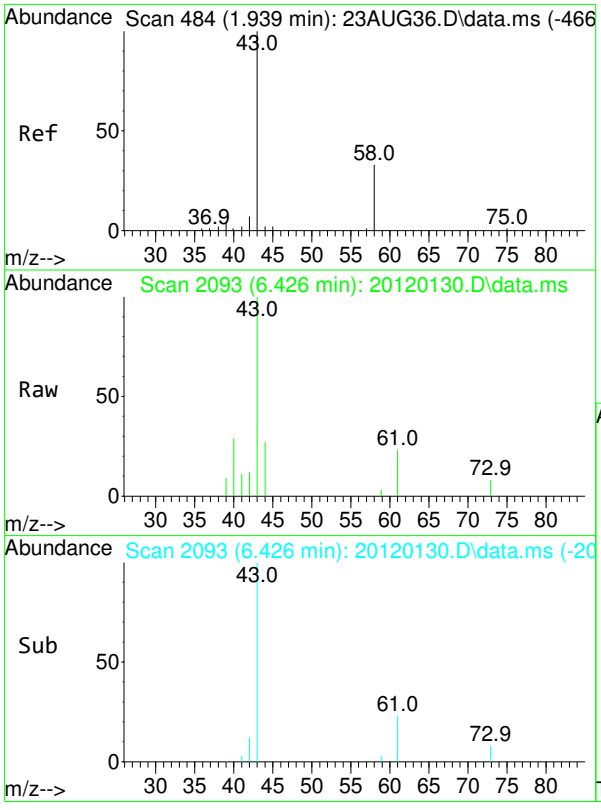


#120
2-Propanol
Concen: Below Cal
RT: 2.045 min Scan# 522
Delta R.T. -0.017 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 45 Resp: 112

Ion	Ratio	Lower	Upper
45	100		
43	49.1	0.0	49.1#
27	0.0	0.0	30.0
29	0.0	0.0	30.0

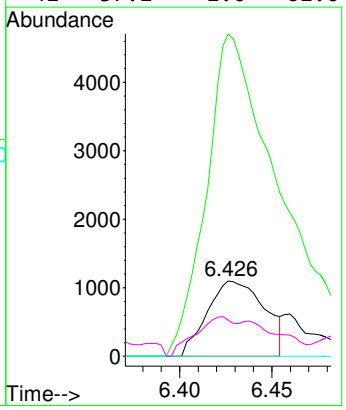




#122
Isopropyl Acetate
Concen: 2.03 ug/L
RT: 6.426 min Scan# 2093
Delta R.T. 0.008 min
Lab File: 20120130.D
Acq: 01 Dec 2020 11:00 pm

Tgt Ion: 61 Resp: 2382

Ion	Ratio	Lower	Upper
61	100		
43	588.5	333.3	393.3#
87	0.0	0.0	30.4
41	37.1	1.0	61.0



1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120134.D
Acq On : 02 Dec 2020 12:06 am
Operator : MF
Sample : 20111985-06A MS
Misc : IS 200-21725
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Dec 02 07:42:28 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.100	168	139807	20.00	ug/L		0.00
43) 1,4-Difluorobenzene	5.235	114	216242	20.00	ug/L		0.00
65) Chlorobenzene-d5	8.420	117	207916	20.00	ug/L		0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	107312	20.00	ug/L		0.00
118) Ethyl-d5-Acetate-d3	3.367	46	93764	20.00	ug/L		0.00
System Monitoring Compounds							
45) Dibromofluoromethane	4.036	111	94707	21.07	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 105.35%				
48) 1,2-Dichloroethane-d4	4.491	65	107825	20.46	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 102.30%				
67) Toluene-d8	7.296	98	268917	20.14	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.70%				
89) Bromofluorobenzene	9.148	95	99542	19.91	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 99.55%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.019	85	51327	29.53	ug/L		98
3) Chloromethane	1.117	50	72133	14.35	ug/L		99
4) Vinyl chloride	1.181	62	64054	23.34	ug/L		97
5) Bromomethane	1.368	96	27784	144.30	ug/L		95
6) Chloroethane	1.429	64	29644	34.04	ug/L		91
7) Dichlorofluoromethane	1.552	67	89216	17.48	ug/L		94
8) Trichlorofluoromethane	1.577	101	71579	20.19	ug/L		98
9) Ethanol	1.705	45	96974	250.11	ug/L		62
10) Ethyl ether	1.750	59	46749	19.85	ug/L		98
11) Acrolein	2.344	56	73220	Below Cal			96
12) 1,1-Dichloroethene	1.906	61	87585	22.34	ug/L		99
15) Acetone	1.936	43	60135	28.31	ug/L		97
17) Carbon disulfide	2.068	76	151369	21.82	ug/L		99
18) Allyl chloride	2.162	41	82014	15.15	ug/L		84
19) Methyl acetate	2.157	43	2916	0.51	ug/L	#	1
20) Acetonitrile	2.466	41	151192	77.29	ug/L		98
21) Methylene chloride	2.257	49	91766	18.83	ug/L		99
22) trans-1,2-Dichloroethene	2.475	61	88585	20.79	ug/L		99
23) t-Butanol	3.256	59	243760	158.96	ug/L		98
24) Acrylonitrile	2.441	53	46839	21.70	ug/L		98
25) Methyl tert-butyl ether	2.466	73	534060	75.25	ug/L		99
27) 1,1-Dichloroethane	2.854	63	109854	21.13	ug/L		99
28) Diisopropyl ether	2.890	45	244664	24.67	ug/L	#	39
30) Ethyl tert butyl ether	3.256	59	243760	31.79	ug/L		99
31) Methylcyclopentane	3.317	56	87633	17.47	ug/L		98
32) 2,2-Dichloropropane	3.431	77	69156	19.33	ug/L		98
33) cis-1,2-Dichloroethene	3.431	61	97893	21.24	ug/L		99
34) 2-Butanone	3.426	43	63689	18.84	ug/L		98
35) Ethyl Acetate	3.484	43	110265	16.63	ug/L		100
36) Methyl acrylate	3.532	55	88823	19.26	ug/L		99
37) Propionitrile	4.192	54	971	3.24	ug/L	#	1
38) Bromochloromethane	3.699	49	63482	21.87	ug/L		98
39) Tetrahydrofuran	3.721	42	41944	18.37	ug/L		99
40) Methacrylonitrile	3.663	67	34709	18.53	ug/L		98
41) Chloroform	3.836	83	104538	19.70	ug/L		99

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120134.D
Acq On : 02 Dec 2020 12:06 am
Operator : MF
Sample : 20111985-06A MS
Misc : IS 200-21725
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Dec 02 07:42:28 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) 1,1,1-Trichloroethane	4.025	97	80735	22.22	ug/L		100
46) Carbon tetrachloride	4.229	117	65416	20.73	ug/L		99
47) 1,1-Dichloropropene	4.243	75	71951	21.52	ug/L		99
49) 1,2-Dichloroethane	4.605	62	86806	21.81	ug/L		99
50) Benzene	4.508	78	204186	22.01	ug/L		99
51) Tertiaryamylmethylether	4.750	73	165405	25.58	ug/L	#	97
52) Isobutyl Alcohol	4.625	43	703168	88.21	ug/L	#	40
53) Heptane	5.026	43	102	Below Cal		#	21
54) 1,4-Dioxane	6.181	88	2423	28.94	ug/L		95
57) Trichloroethene	5.612	130	49610	22.36	ug/L		98
58) 1,2-Dichloropropane	6.094	63	59753	19.04	ug/L		95
59) Dibromomethane	6.231	93	43821	21.54	ug/L		100
60) Methyl methacrylate	6.295	41	63765	16.35	ug/L		95
61) Bromodichloromethane	6.532	83	71053	20.95	ug/L		99
62) 2-Chloroethyl vinyl ether	6.978	43	235	0.43	ug/L	#	14
63) 2-Nitropropane	6.808	43	24917	18.69	ug/L		97
64) cis-1,3-Dichloropropene	7.054	75	76658	19.97	ug/L		96
66) 4-Methyl-2-pentanone	7.221	43	164036	30.33	ug/L		85
68) Toluene	7.358	91	192878	21.40	ug/L		98
69) trans-1,3-Dichloropropene	7.600	75	70323	19.58	ug/L		98
71) Ethyl methacrylate	7.673	69	67398	17.23	ug/L		95
72) 1,1,2-Trichloroethane	7.751	97	56737	20.76	ug/L		95
73) Tetrachloroethene	7.790	166	53570	22.72	ug/L		98
74) 1,3-Dichloropropane	7.868	76	86387	19.74	ug/L		95
75) 2-Hexanone	7.935	43	94036	20.25	ug/L		93
76) Chlorodibromomethane	8.027	129	53582	19.25	ug/L		100
77) Butyl acetate	8.044	43	120317	15.70	ug/L		98
78) 1,2-Dibromoethane	8.097	107	61679	20.44	ug/L		98
79) Chlorobenzene	8.440	112	125158	21.24	ug/L		99
80) 1,1,1,2-Tetrachloroethane	8.509	131	47254	21.01	ug/L		99
81) Ethylbenzene	8.512	91	201970	20.88	ug/L		99
82) m/p-Xylene	8.599	91	306822	41.80	ug/L		97
83) Nonane	8.640	43	49984	27.25	ug/L	#	47
84) Styrene	8.847	104	116006	23.36	ug/L		99
85) o-Xylene	8.830	91	157833	21.12	ug/L		98
86) Cyclohexanone	9.089	55	3573	9.03	ug/L	#	41
87) Bromoform	8.950	173	39378	16.69	ug/L		99
88) Isopropylbenzene	9.050	105	172684	21.98	ug/L		100
90) Bromobenzene	9.220	77	84743	20.19	ug/L		96
91) 1,1,2,2-Tetrachloroethane	9.229	83	105313	19.02	ug/L		97
92) 1,2,3-Trichloropropane	9.257	110	22494	19.54	ug/L		98
93) trans-1,4-Dichloro-2-b...	9.248	53	22016	16.08	ug/L		90
94) n-Propylbenzene	9.282	91	220131	21.92	ug/L		100
95) 2-Chlorotoluene	9.326	91	134994	20.45	ug/L		98
96) 4-Chlorotoluene	9.393	91	152950	20.38	ug/L		98
97) 1,3,5-Trimethylbenzene	9.379	105	136497	22.03	ug/L		99
98) tert-Butylbenzene	9.544	91	77792	20.63	ug/L		92
99) 1,2,4-Trimethylbenzene	9.575	105	138247	22.19	ug/L		99
100) sec-Butylbenzene	9.661	105	165082	22.75	ug/L		99
102) 1,3-Dichlorobenzene	9.722	146	90313	20.67	ug/L		97
103) p-Isopropyltoluene	9.739	119	128218	22.26	ug/L		99
104) 1,4-Dichlorobenzene	9.775	146	92599	20.75	ug/L		100
105) 1,2,3-Trimethylbenzene	9.784	105	145695	19.84	ug/L		100

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120134.D
Acq On : 02 Dec 2020 12:06 am
Operator : MF
Sample : 20111985-06A MS
Misc : IS 200-21725
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Dec 02 07:42:28 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
106) Benzyl chloride	9.828	91	713	0.36	ug/L	#	74
107) 1,2-Dichlorobenzene	9.954	146	89705	19.56	ug/L		98
108) n-Butylbenzene	9.943	91	112820	19.58	ug/L		99
109) Hexachloroethane	10.090	117	27095	20.37	ug/L		98
110) 1,2-Dibromo-3-chloropr...	10.336	157	20210	17.80	ug/L		97
112) 1,2,4-Trichlorobenzene	10.949	180	41549	15.55	ug/L		99
113) Hexachlorobutadiene	10.785	225	23722	23.78	ug/L		98
114) Naphthalene	10.849	128	100180	9.93	ug/L		99
115) 1,2,3-Trichlorobenzene	10.949	180	41549	15.55	ug/L		99
119) 2-Propanone	1.936	43	60135	31.94	ug/L		97
120) 2-Propanol	2.040	45	297397	415.25	ug/L	#	95
121) Acetic Ether	3.484	43	110265	18.93	ug/L		98
123) Amyl Acetate	8.955	43	90766	16.17	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120134.D
Acq On : 02 Dec 2020 12:06 am
Operator : MF
Sample : 20111985-06A MS
Misc : IS 200-21725
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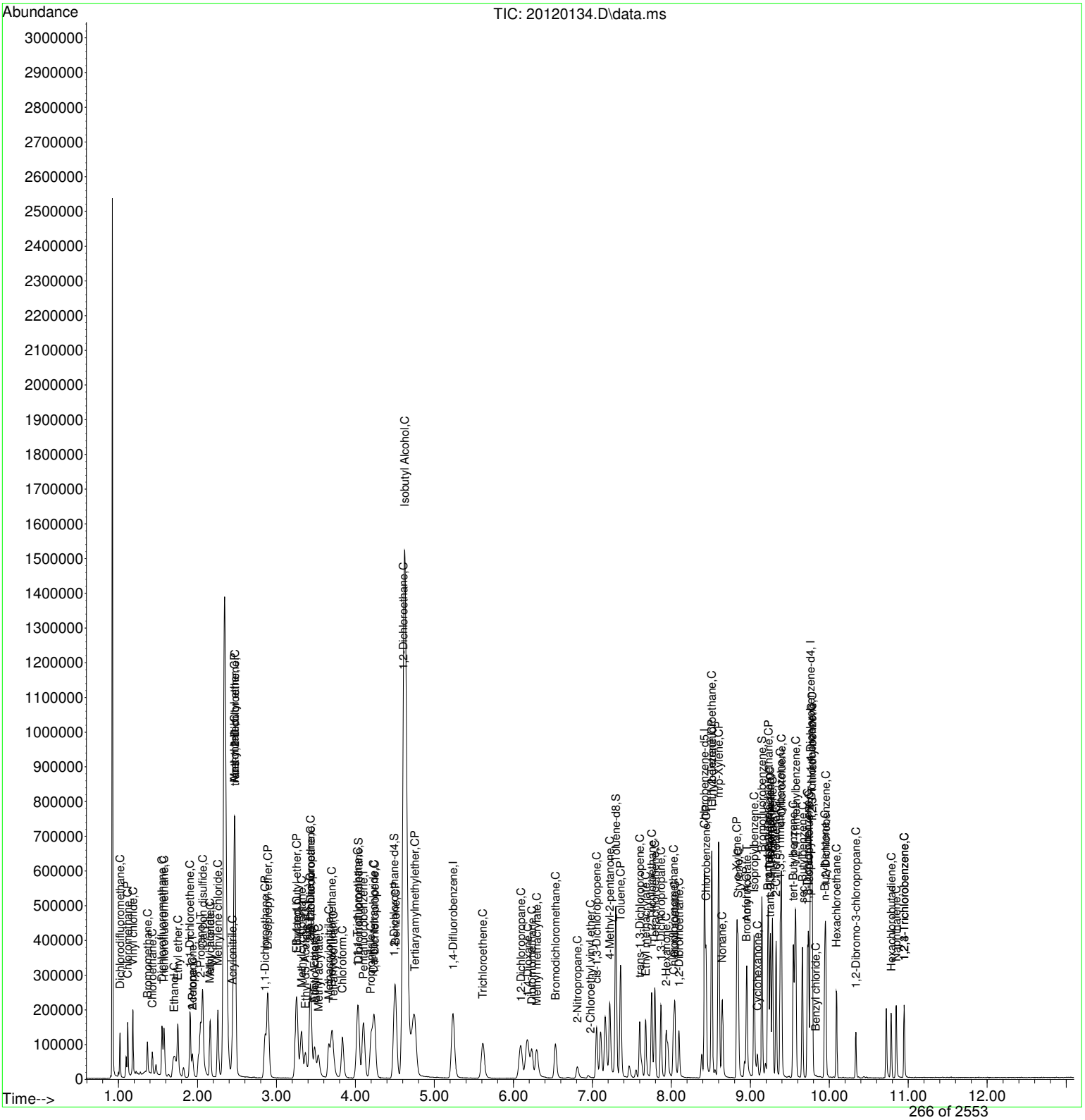
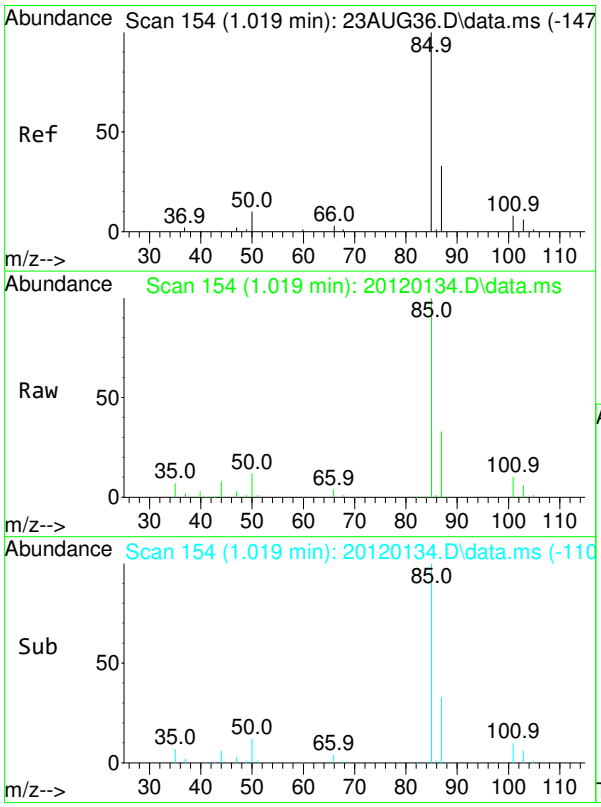
Quant Time: Dec 02 07:42:28 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

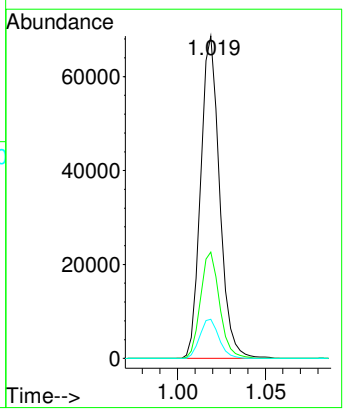


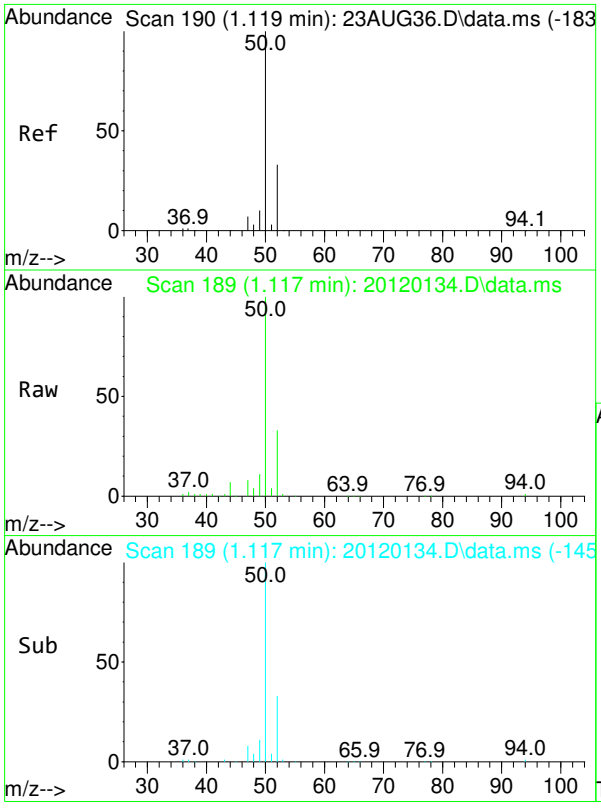


#2
Dichlorodifluoromethane
Concen: 29.53 ug/L
RT: 1.019 min Scan# 154
Delta R.T. 0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 85 Resp: 51327

Ion	Ratio	Lower	Upper
85	100		
87	33.2	2.2	62.2
50	12.3	0.0	42.7

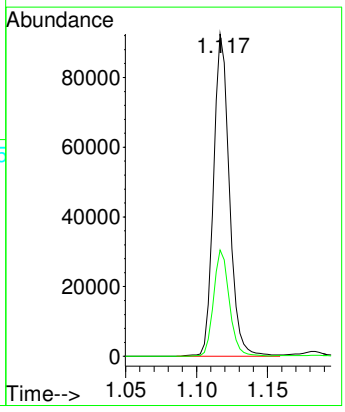


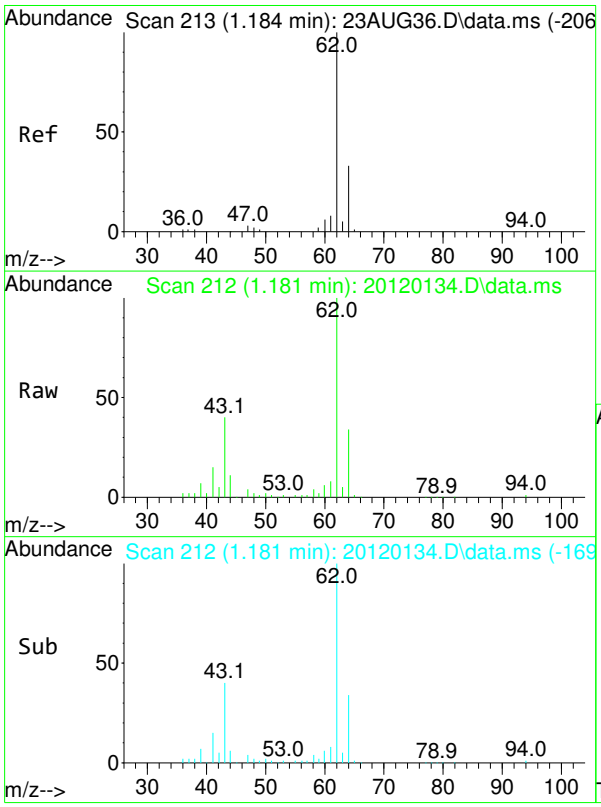


#3
Chloromethane
Concen: 14.35 ug/L
RT: 1.117 min Scan# 189
Delta R.T. 0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 50 Resp: 72133

Ion	Ratio	Lower	Upper
50	100		
52	32.9	2.4	62.4

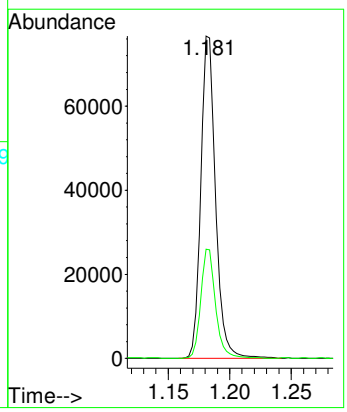


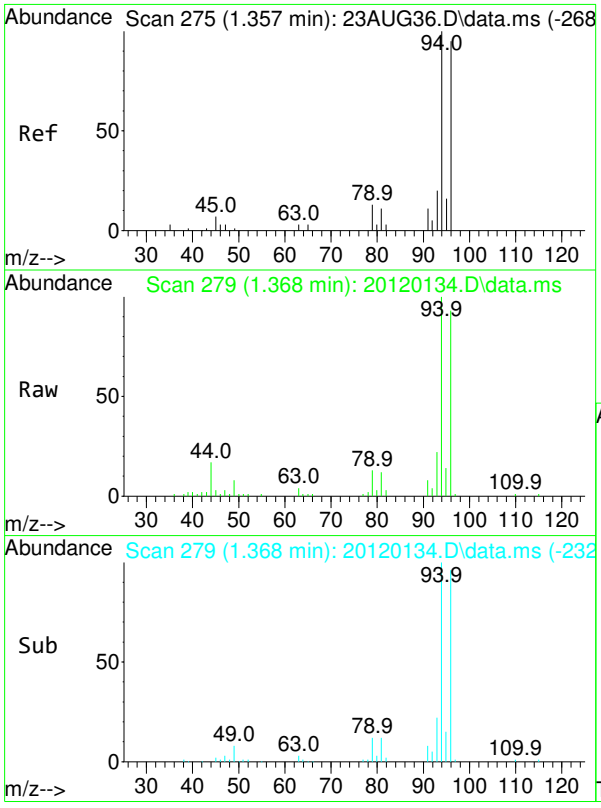


#4
Vinyl chloride
Concen: 23.34 ug/L
RT: 1.181 min Scan# 212
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 62 Resp: 64054

Ion	Ratio	Lower	Upper
62	100		
64	34.2	2.3	62.3

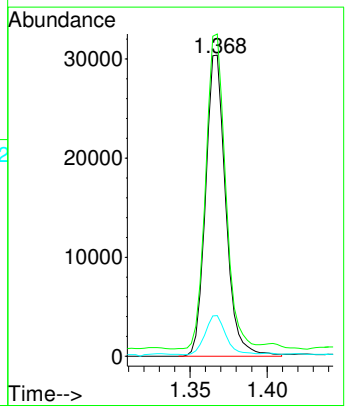


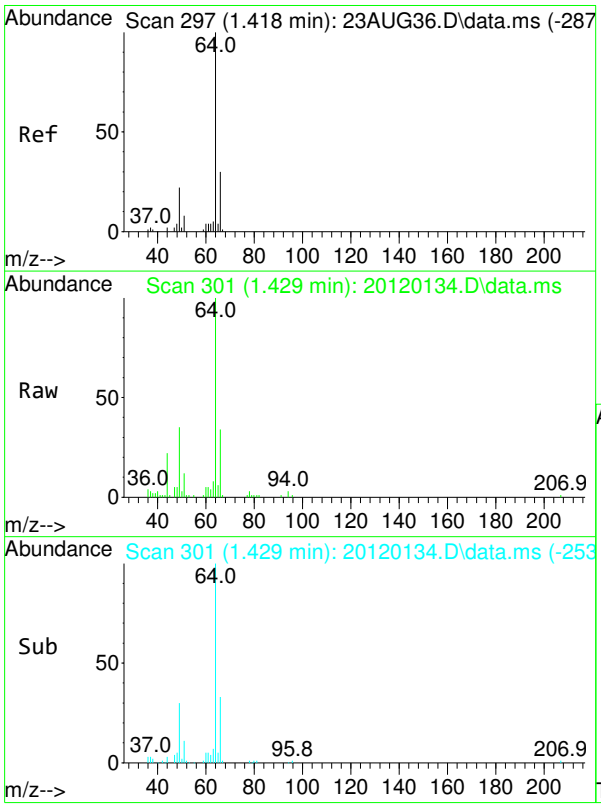


#5
Bromomethane
Concen: 144.30 ug/L
RT: 1.368 min Scan# 279
Delta R.T. 0.012 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 96 Resp: 27784

Ion	Ratio	Lower	Upper
96	100		
94	102.8	77.8	137.8
79	13.6	0.0	45.3

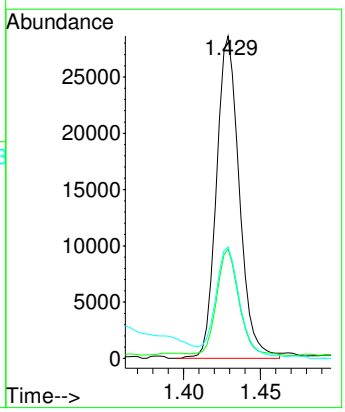


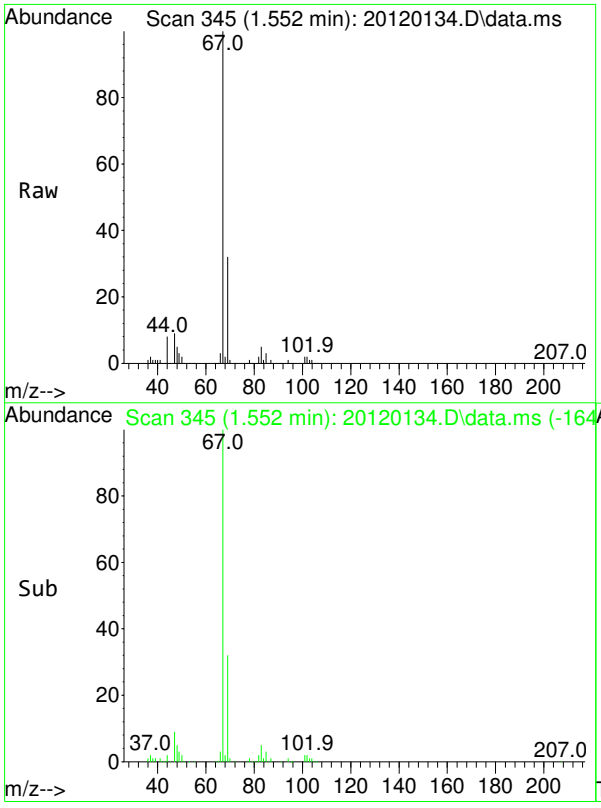


#6
Chloroethane
Concen: 34.04 ug/L
RT: 1.429 min Scan# 301
Delta R.T. 0.014 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 64 Resp: 29644

Ion	Ratio	Lower	Upper
64	100		
66	32.5	2.1	62.1
49	35.3	14.5	74.5

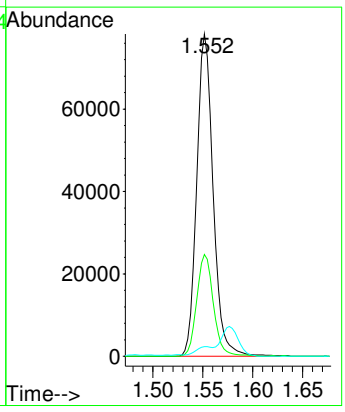


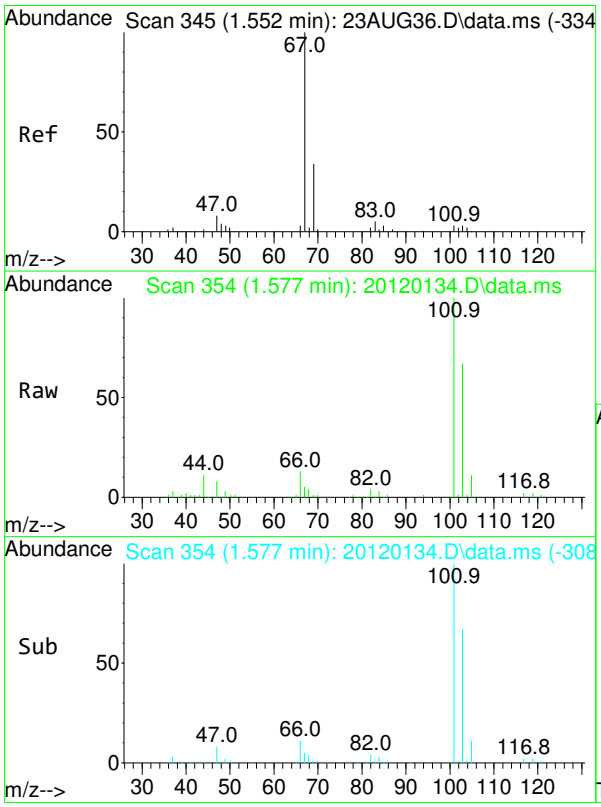


#7
Dichlorofluoromethane
Concen: 17.48 ug/L
RT: 1.552 min Scan# 345
Delta R.T. 0.006 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 67 Resp: 89216

Ion	Ratio	Lower	Upper
67	100		
69	32.2	2.3	62.3
66	2.7	0.0	41.5

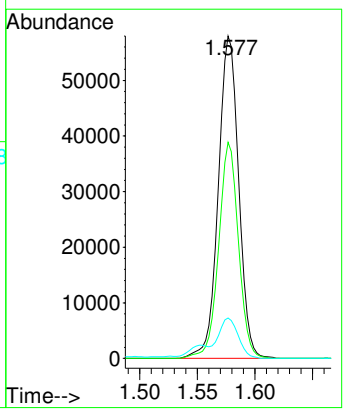


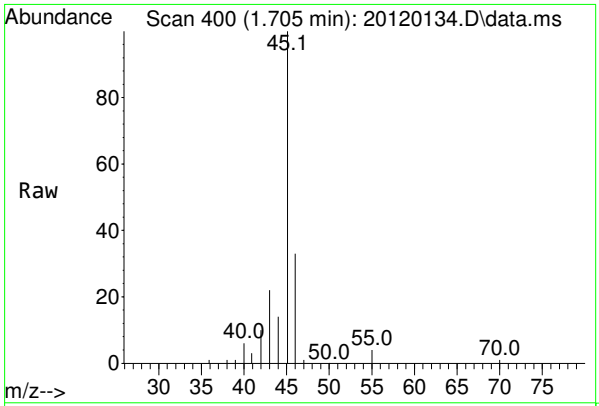


#8
Trichlorofluoromethane
Concen: 20.19 ug/L
RT: 1.577 min Scan# 354
Delta R.T. 0.009 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:101 Resp: 71579

Ion	Ratio	Lower	Upper
101	100		
103	65.0	35.0	95.0
66	12.3	0.0	46.7

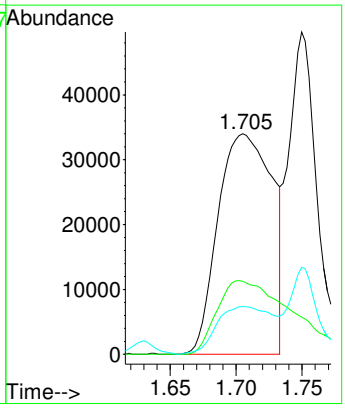


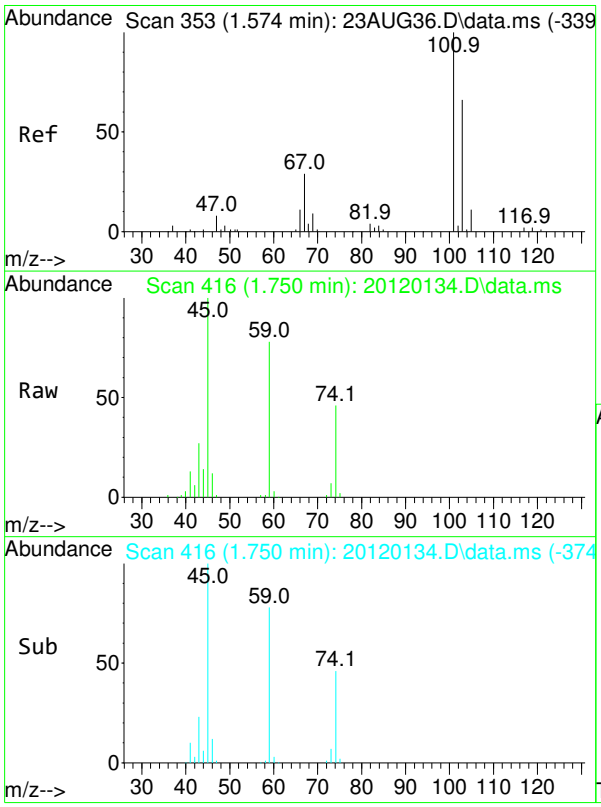


#9
Ethanol
Concen: 250.11 ug/L
RT: 1.705 min Scan# 400
Delta R.T. -0.045 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 45 Resp: 96974

Ion	Ratio	Lower	Upper
45	100		
46	48.4	0.0	55.2
43	22.3	0.0	43.1

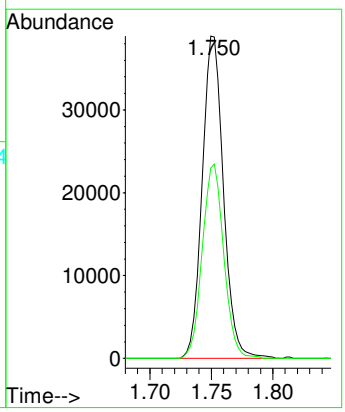


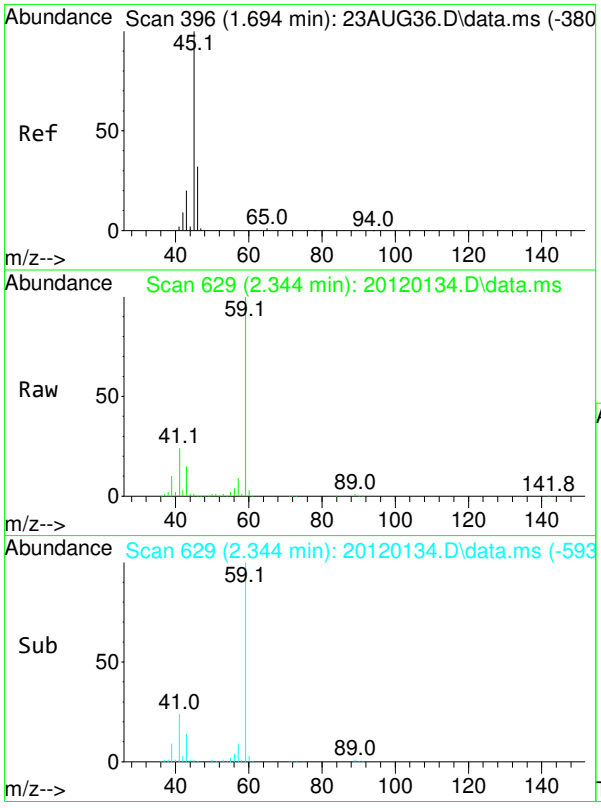


#10
Ethyl ether
Concen: 19.85 ug/L
RT: 1.750 min Scan# 416
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 59 Resp: 46749

Ion	Ratio	Lower	Upper
59	100		
74	60.9	29.5	89.5

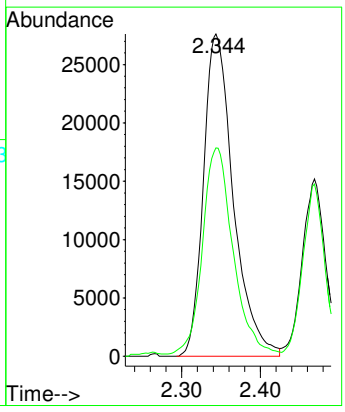


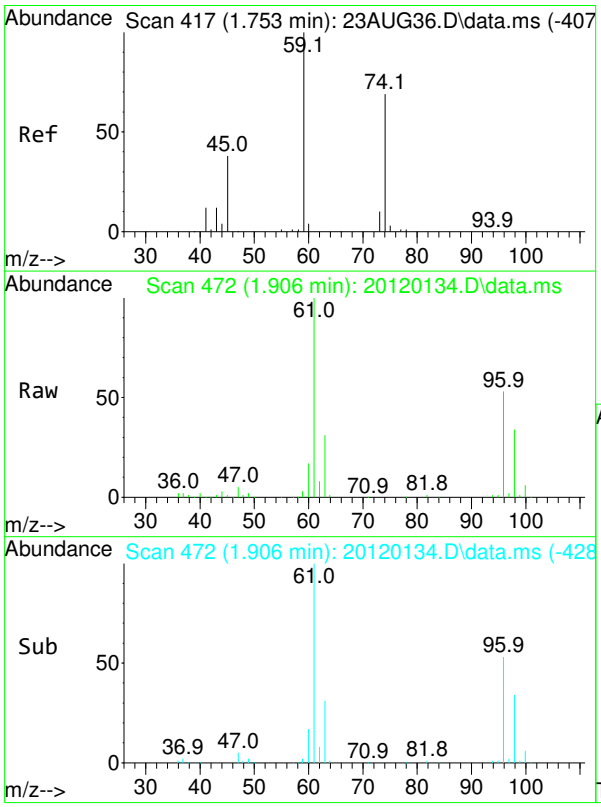


#11
Acrolein
Concen: Below Cal
RT: 2.344 min Scan# 629
Delta R.T. -0.019 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 56 Resp: 73220

Ion	Ratio	Lower	Upper
56	100		
55	64.7	37.7	97.7

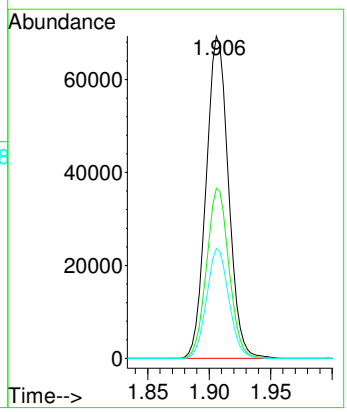


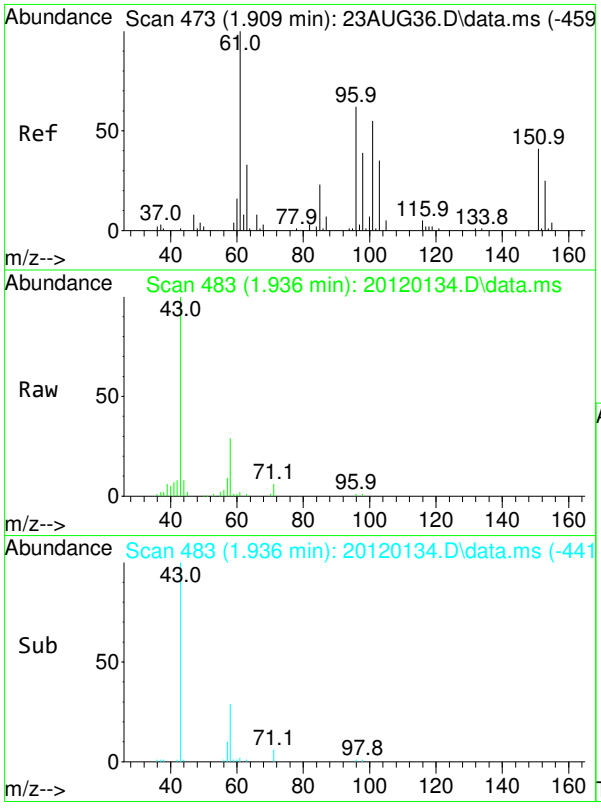


#12
1,1-Dichloroethene
Concen: 22.34 ug/L
RT: 1.906 min Scan# 472
Delta R.T. 0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 61 Resp: 87585

Ion	Ratio	Lower	Upper
61	100		
96	53.0	22.2	82.2
98	33.9	3.4	63.4

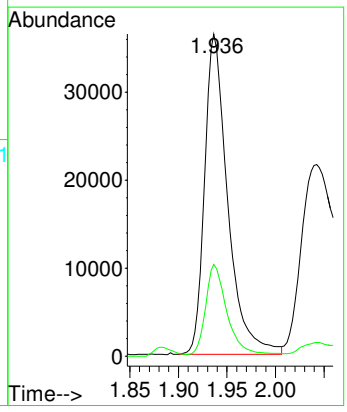


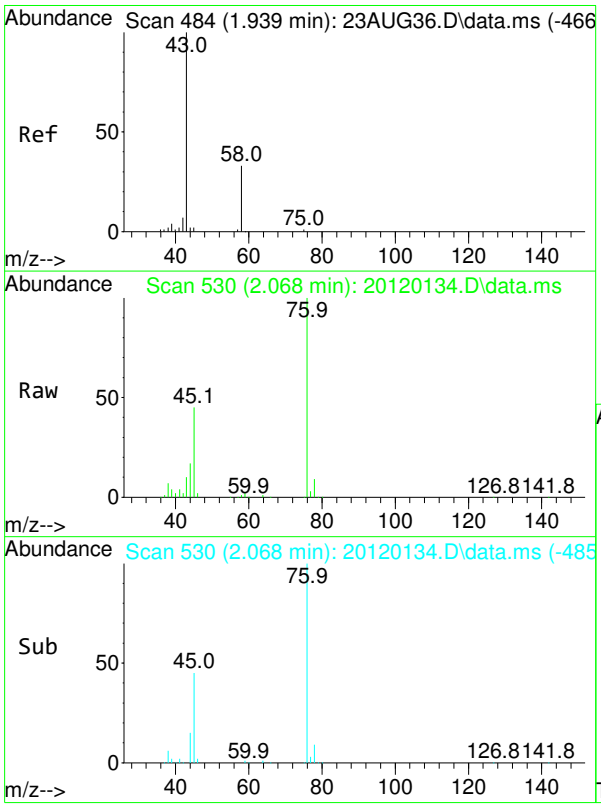


#15
Acetone
Concen: 28.31 ug/L
RT: 1.936 min Scan# 483
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 60135

Ion	Ratio	Lower	Upper
43	100		
58	25.5	0.0	56.9

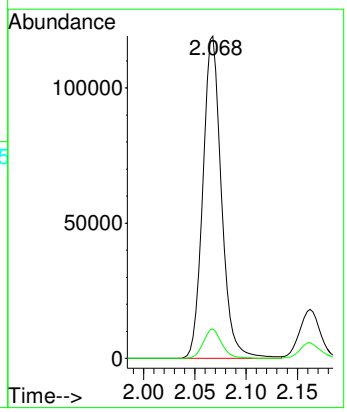


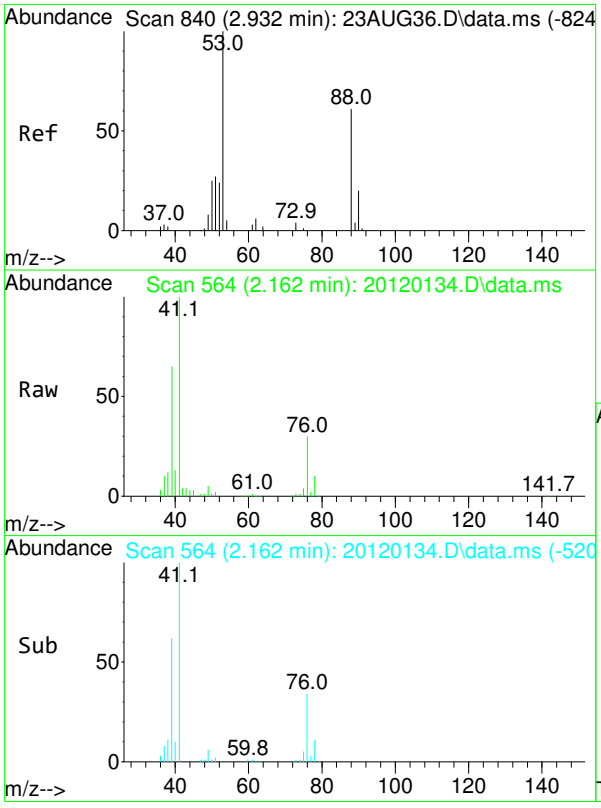


#17
Carbon disulfide
Concen: 21.82 ug/L
RT: 2.068 min Scan# 530
Delta R.T. 0.006 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 76 Resp: 151369

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	39.3

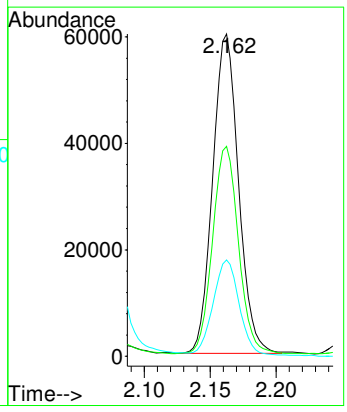


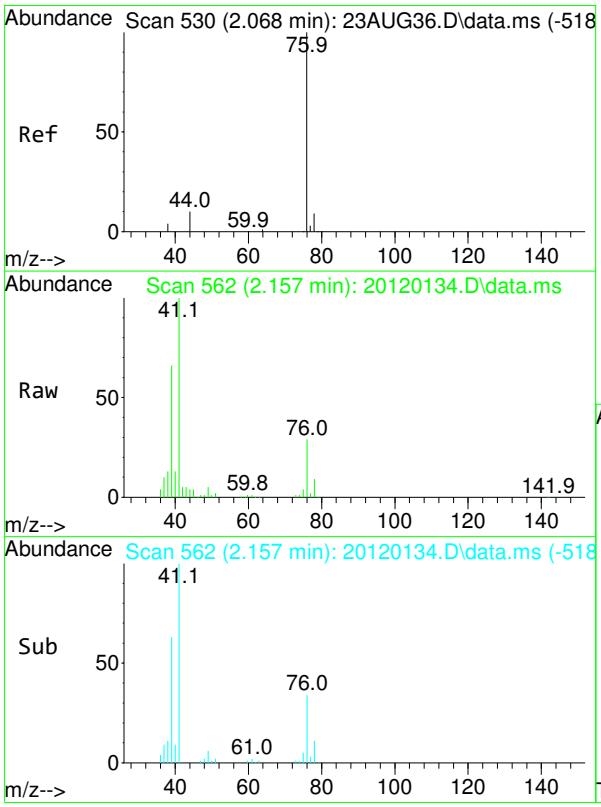


#18
Allyl chloride
Concen: 15.15 ug/L
RT: 2.162 min Scan# 564
Delta R.T. 0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 41 Resp: 82014

Ion	Ratio	Lower	Upper
41	100		
39	65.0	24.2	84.2
76	31.4	0.0	53.2

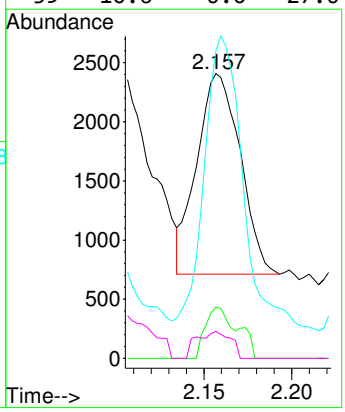


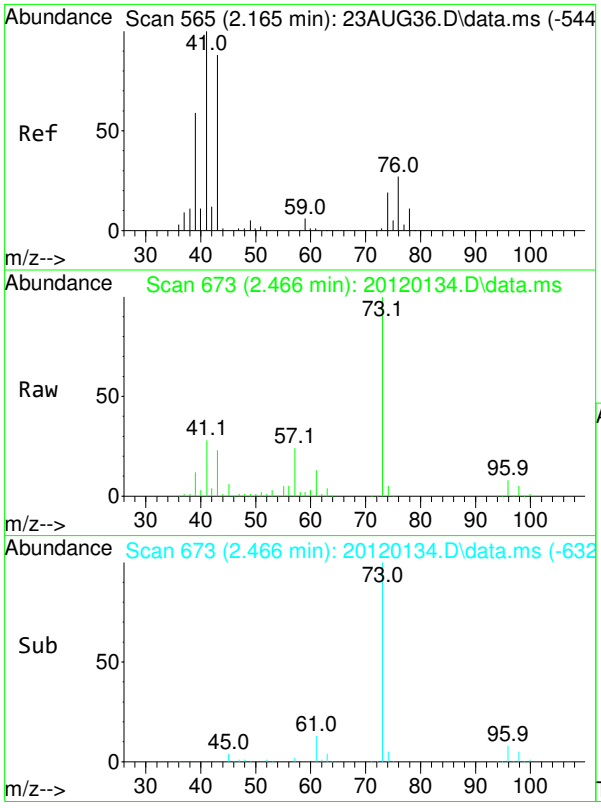


#19
Methyl acetate
Concen: 0.51 ug/L
RT: 2.157 min Scan# 562
Delta R.T. 0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 2916

Ion	Ratio	Lower	Upper
43	100		
74	14.7	0.0	46.2
42	131.1	0.0	43.3#
59	10.6	0.0	27.0

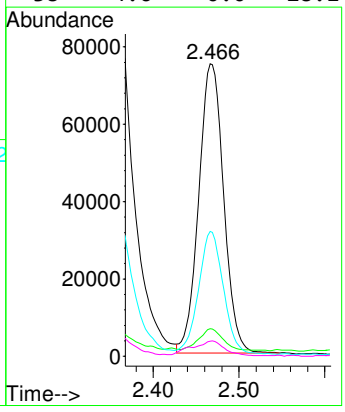


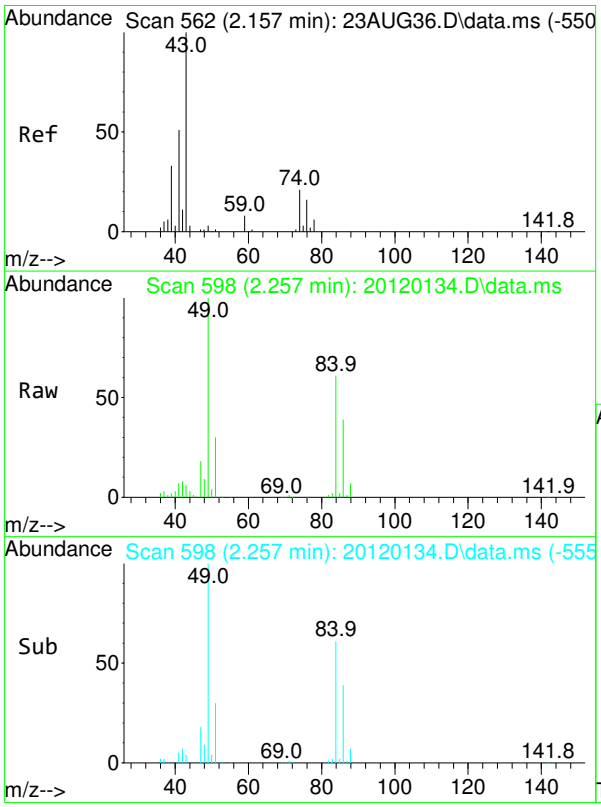


#20
Acetonitrile
Concen: 77.29 ug/L
RT: 2.466 min Scan# 673
Delta R.T. -0.006 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 41 Resp: 151192

Ion	Ratio	Lower	Upper
41	100		
40	6.9	0.0	37.4
39	42.5	13.1	73.1
38	4.6	0.0	28.1

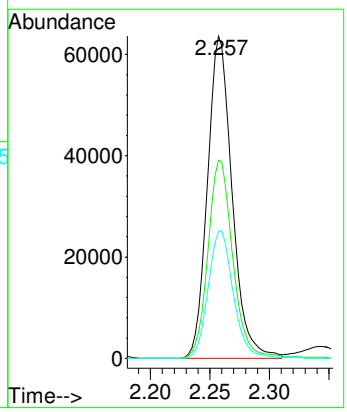


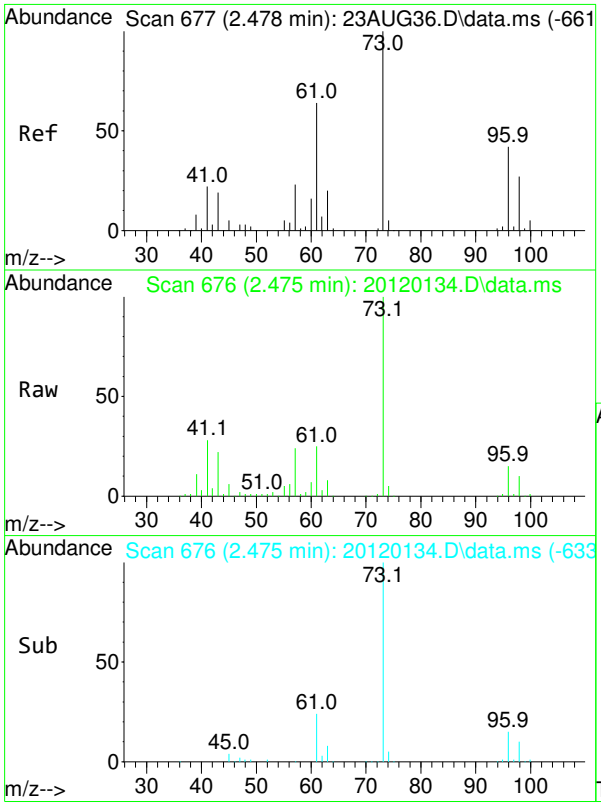


#21
Methylene chloride
Concen: 18.83 ug/L
RT: 2.257 min Scan# 598
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 49 Resp: 91766

Ion	Ratio	Lower	Upper
49	100		
84	62.4	31.8	91.8
86	40.4	9.7	69.7

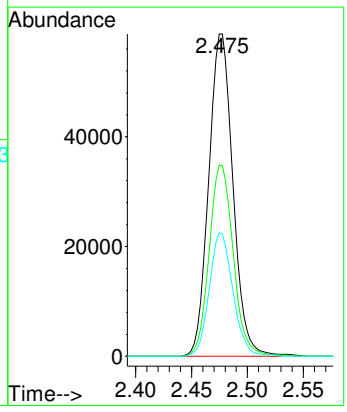


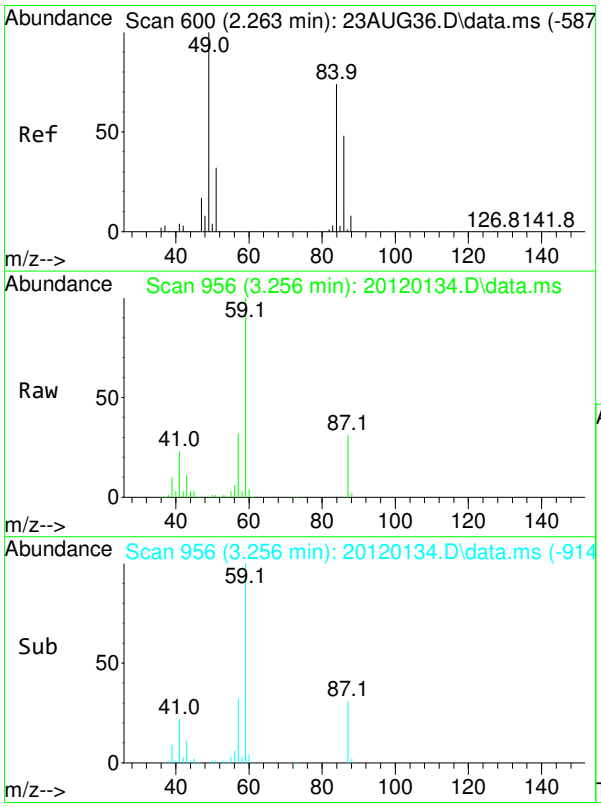


#22
trans-1,2-Dichloroethene
Concen: 20.79 ug/L
RT: 2.475 min Scan# 676
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 61 Resp: 88585

Ion	Ratio	Lower	Upper
61	100		
96	59.1	27.9	87.9
98	37.4	7.0	67.0

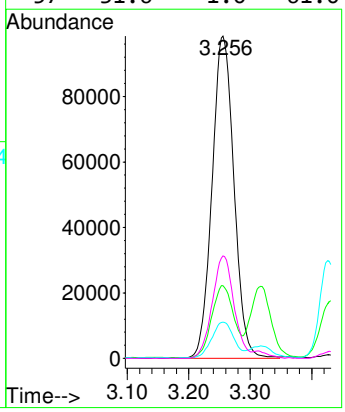


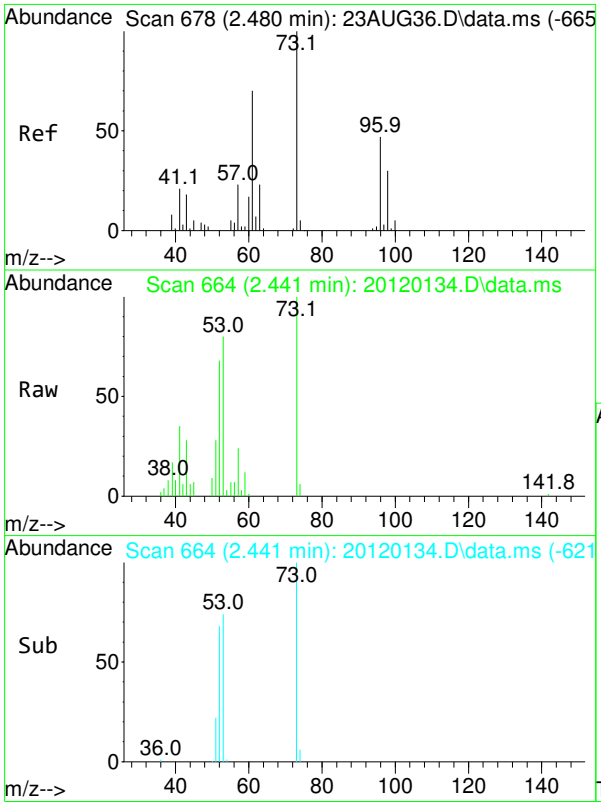


#23
t-Butanol
Concen: 158.96 ug/L
RT: 3.256 min Scan# 956
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 59 Resp: 243760

Ion	Ratio	Lower	Upper
59	100		
41	22.6	0.0	51.3
43	11.1	0.0	40.7
57	31.6	1.0	61.0

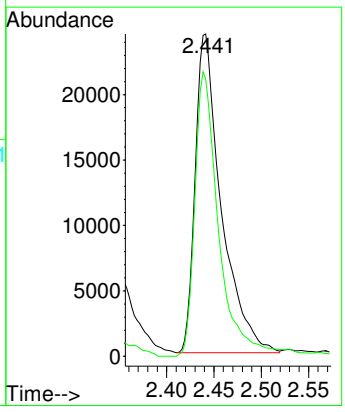


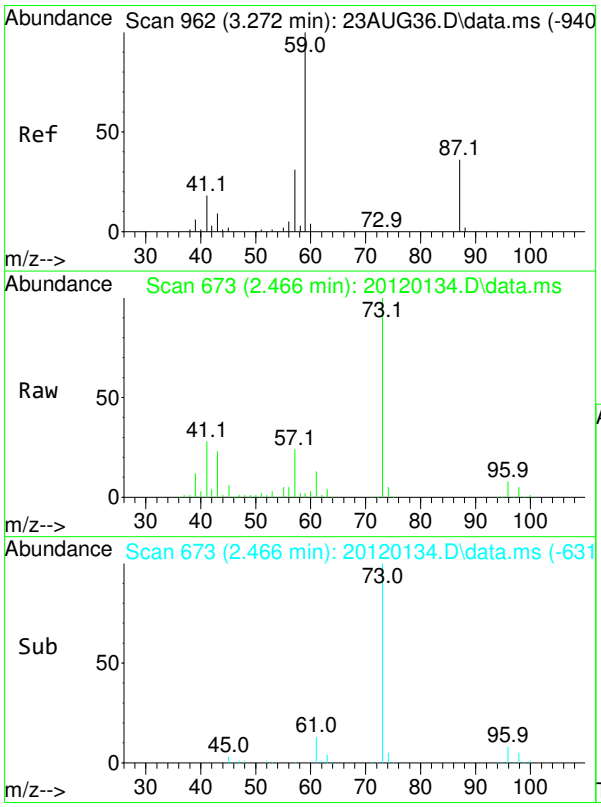


#24
Acrylonitrile
Concen: 21.70 ug/L
RT: 2.441 min Scan# 664
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 53 Resp: 46839

Ion	Ratio	Lower	Upper
53	100		
52	80.8	53.0	113.0

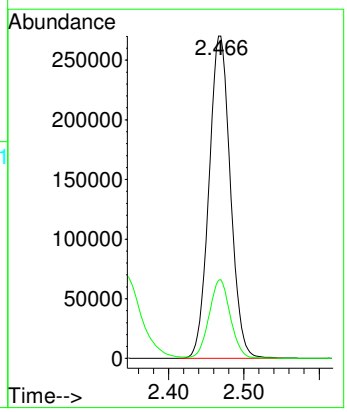


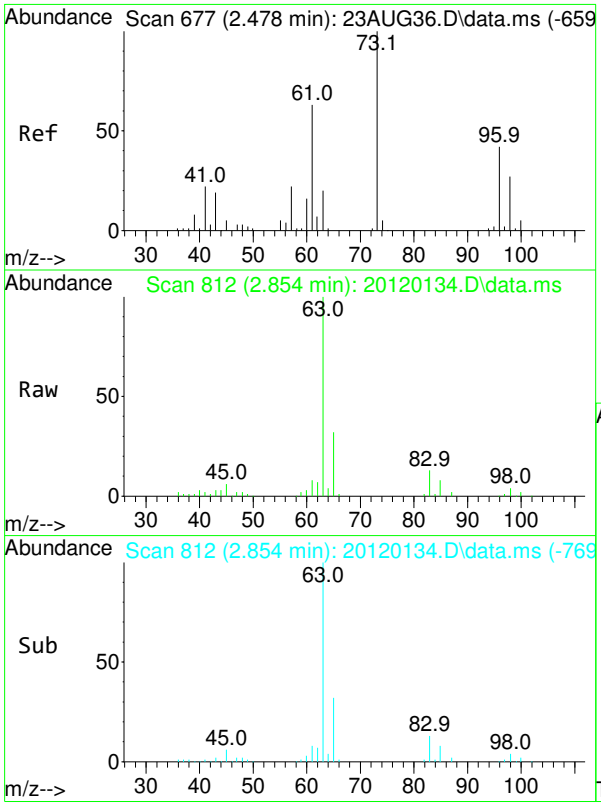


#25
Methyl tert-butyl ether
Concen: 75.25 ug/L
RT: 2.466 min Scan# 673
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 73 Resp: 534060

Ion	Ratio	Lower	Upper
73	100		
57	24.1	0.0	54.6

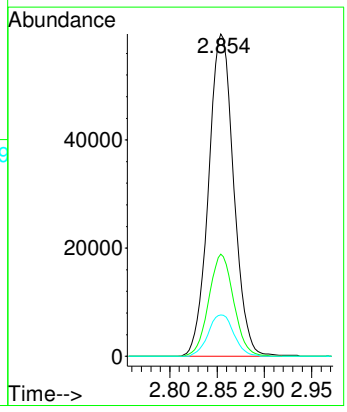


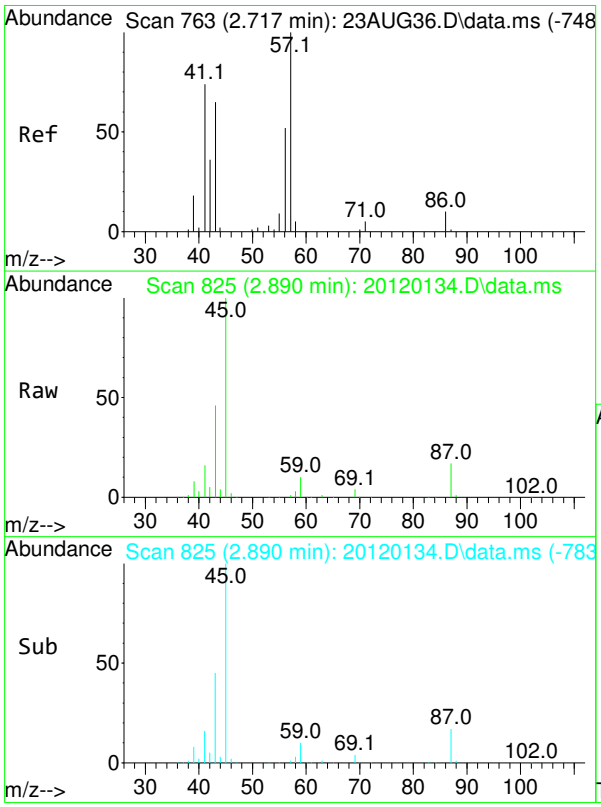


#27
1,1-Dichloroethane
Concen: 21.13 ug/L
RT: 2.854 min Scan# 812
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 63 Resp: 109854

Ion	Ratio	Lower	Upper
63	100		
65	31.5	1.9	61.9
83	13.1	0.0	42.8

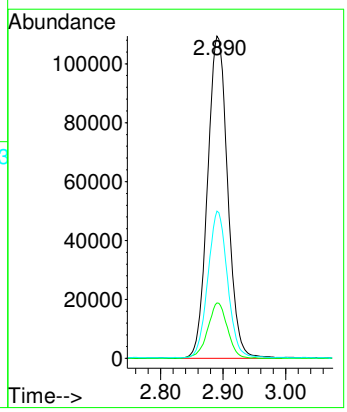


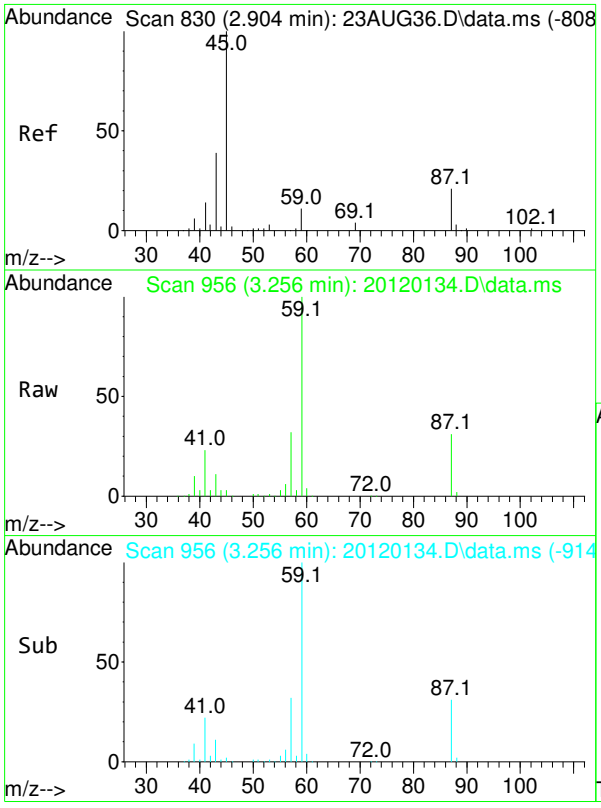


#28
Diisopropyl ether
Concen: 24.67 ug/L
RT: 2.890 min Scan# 825
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 45 Resp: 244664

Ion	Ratio	Lower	Upper
45	100		
87	17.0	0.0	46.8
43	44.2	91.3	151.3#

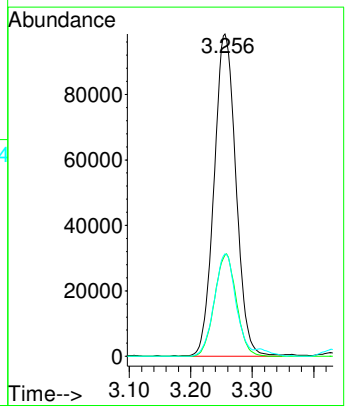


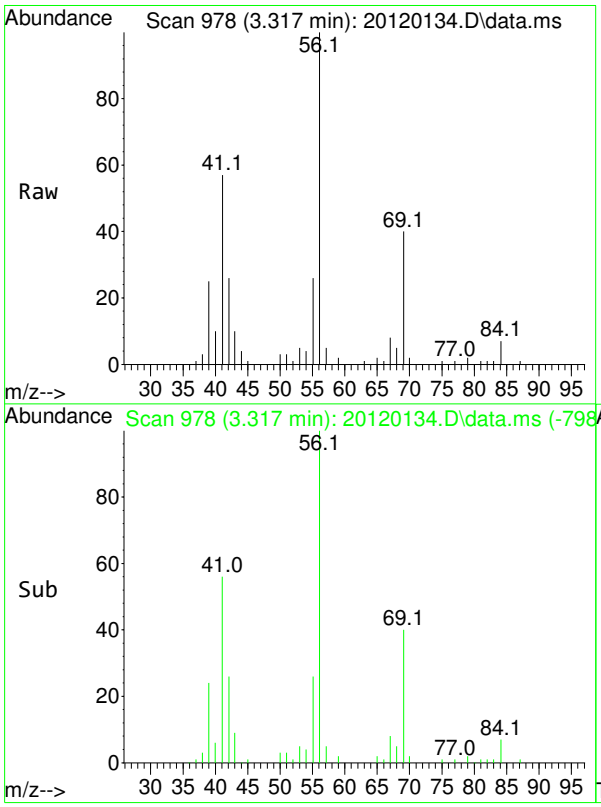


#30
Ethyl tert butyl ether
Concen: 31.79 ug/L
RT: 3.256 min Scan# 956
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 59 Resp: 243760

Ion	Ratio	Lower	Upper
59	100		
87	31.6	0.7	60.7
57	31.6	1.0	61.0

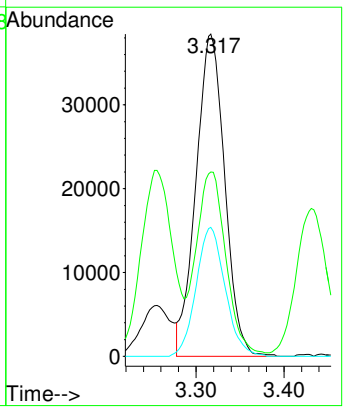


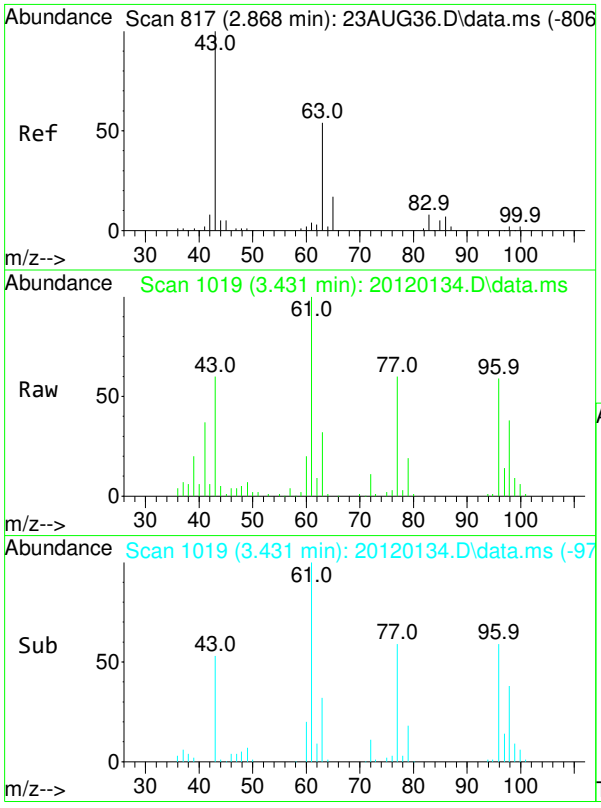


#31
Methylcyclopentane
Concen: 17.47 ug/L
RT: 3.317 min Scan# 978
Delta R.T. 0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 56 Resp: 87633

Ion	Ratio	Lower	Upper
56	100		
41	56.8	26.6	86.6
69	40.4	7.8	67.8

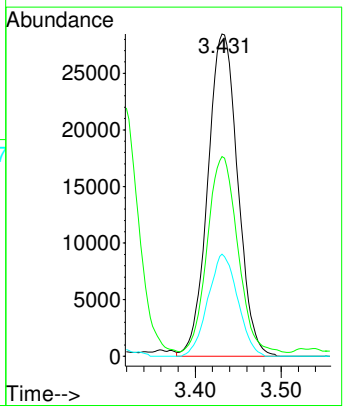


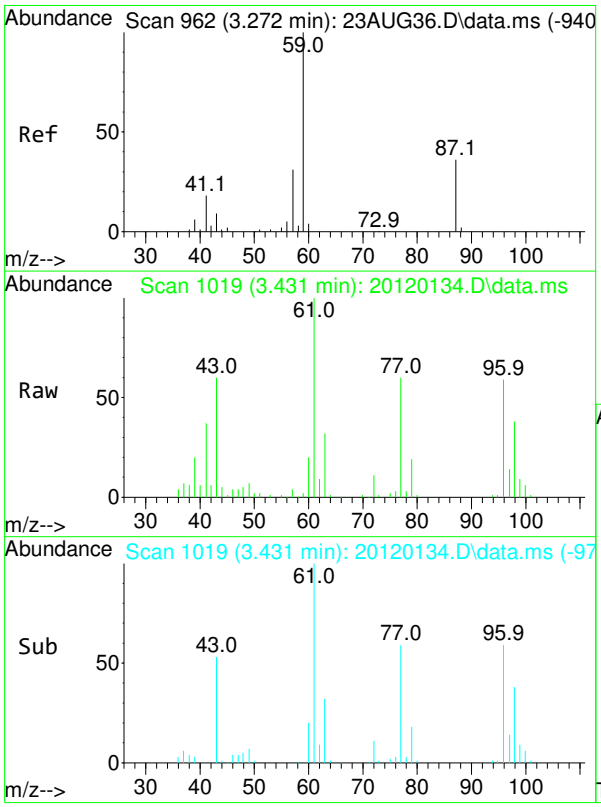


#32
2,2-Dichloropropane
Concen: 19.33 ug/L
RT: 3.431 min Scan# 1019
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 77 Resp: 69156

Ion	Ratio	Lower	Upper
77	100		
41	61.4	32.8	92.8
79	31.4	2.4	62.4

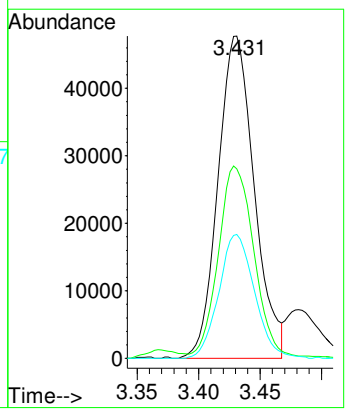


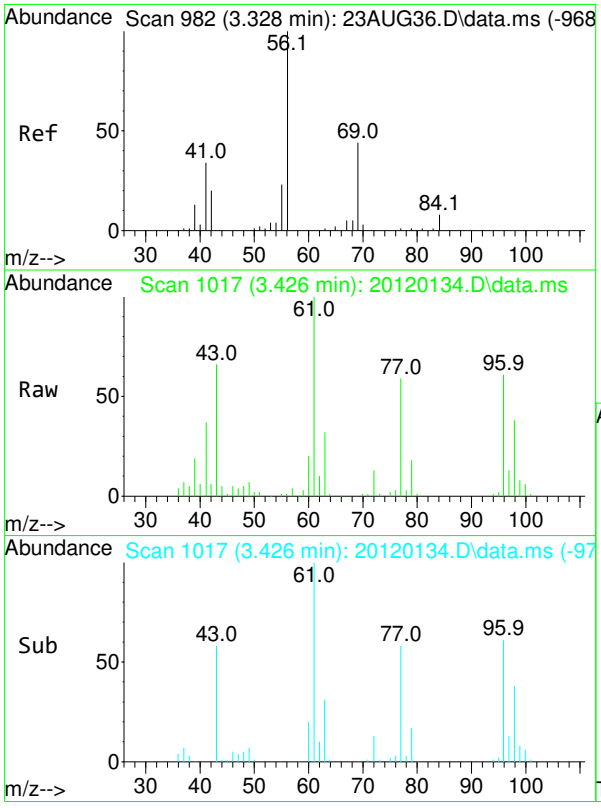


#33
cis-1,2-Dichloroethene
Concen: 21.24 ug/L
RT: 3.431 min Scan# 1019
Delta R.T. 0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 61 Resp: 97893

Ion	Ratio	Lower	Upper
61	100		
96	59.4	28.2	88.2
98	37.8	7.7	67.7

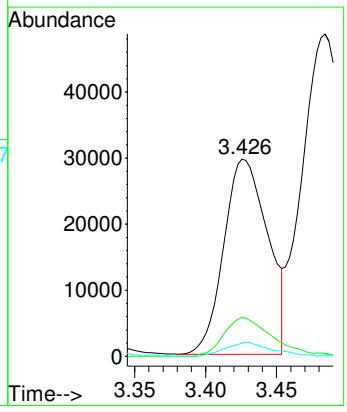


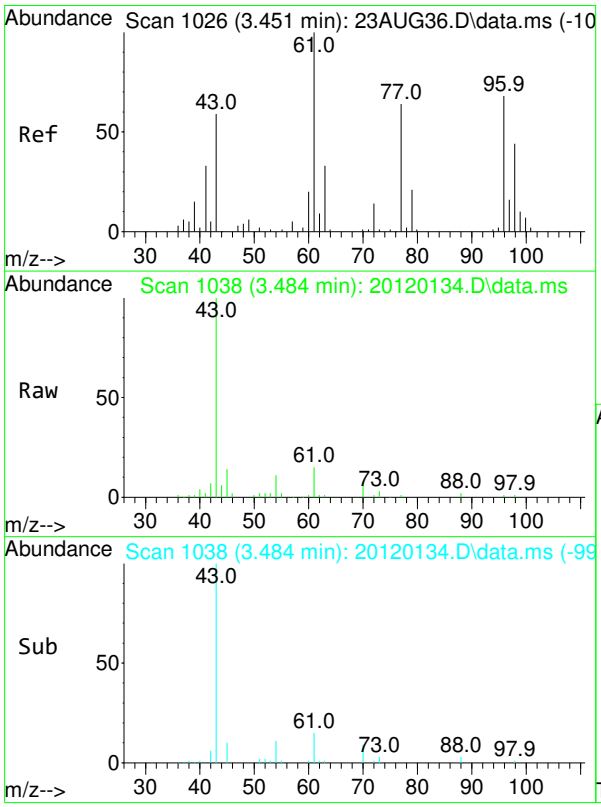


#34
2-Butanone
Concen: 18.84 ug/L
RT: 3.426 min Scan# 1017
Delta R.T. -0.005 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 63689

Ion	Ratio	Lower	Upper
43	100		
72	22.2	0.0	51.0
57	7.6	0.0	37.1

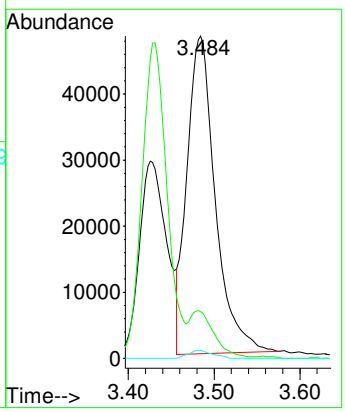


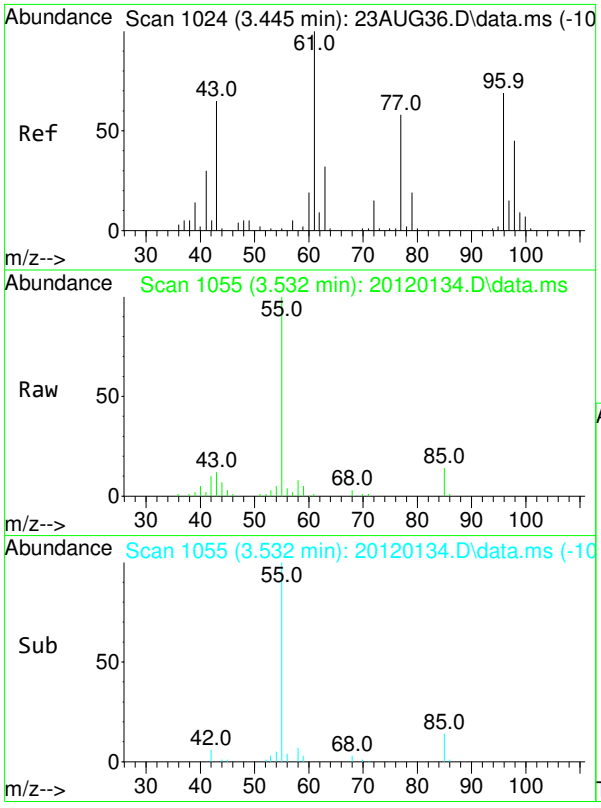


#35
Ethyl Acetate
Concen: 16.63 ug/L
RT: 3.484 min Scan# 1038
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 110265

Ion	Ratio	Lower	Upper
43	100		
61	12.4	0.0	42.4
88	2.2	0.0	32.1

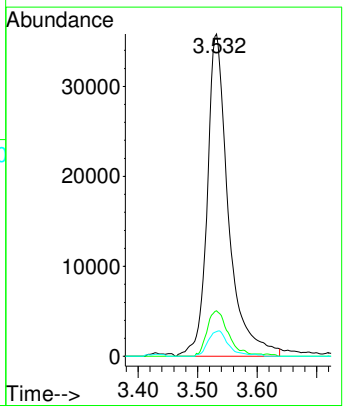


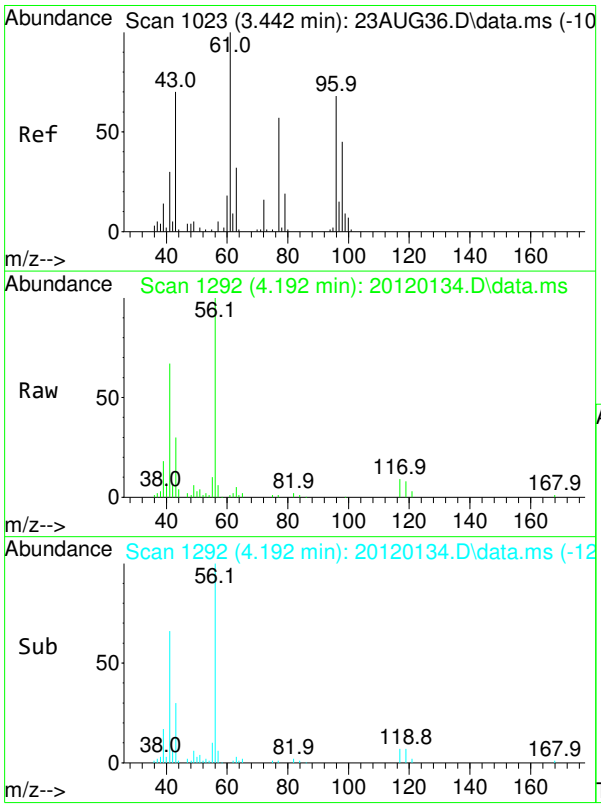


#36
Methyl acrylate
Concen: 19.26 ug/L
RT: 3.532 min Scan# 1055
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 55 Resp: 88823

Ion	Ratio	Lower	Upper
55	100		
85	14.3	0.0	44.3
58	7.6	0.0	38.4

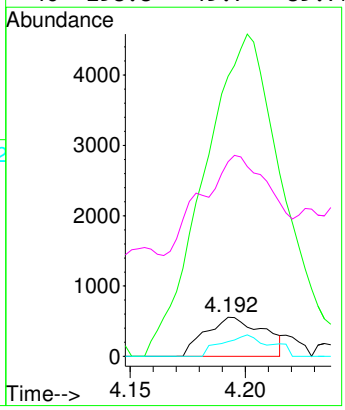


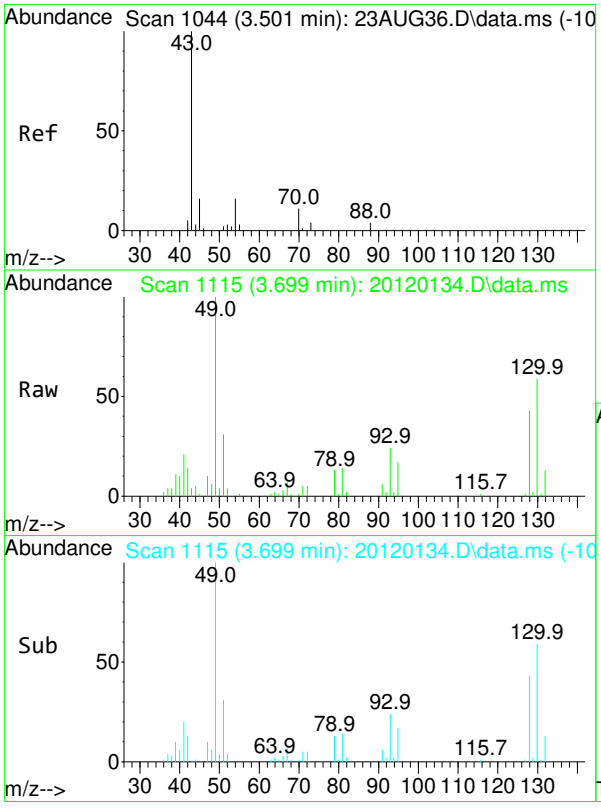


#37
Propionitrile
Concen: 3.24 ug/L
RT: 4.192 min Scan# 1292
Delta R.T. 0.080 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 54 Resp: 971

Ion	Ratio	Lower	Upper
54	100		
55	989.7	422.8	482.8#
52	37.1	0.0	50.3
40	298.8	49.7	89.7#

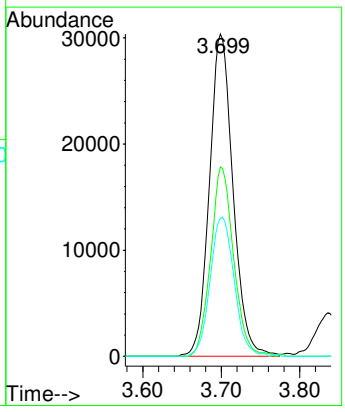


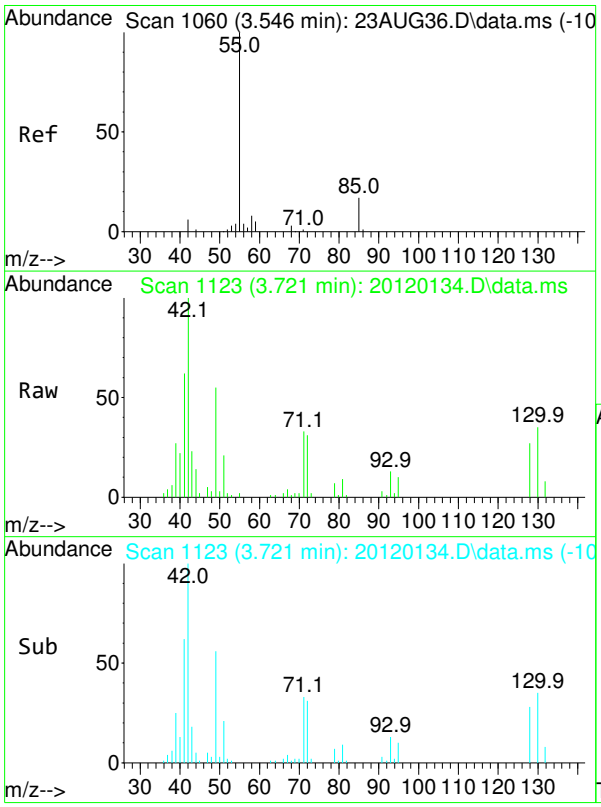


#38
Bromochloromethane
Concen: 21.87 ug/L
RT: 3.699 min Scan# 1115
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 49 Resp: 63482

Ion	Ratio	Lower	Upper
49	100		
130	57.2	25.3	85.3
128	43.9	13.4	73.4

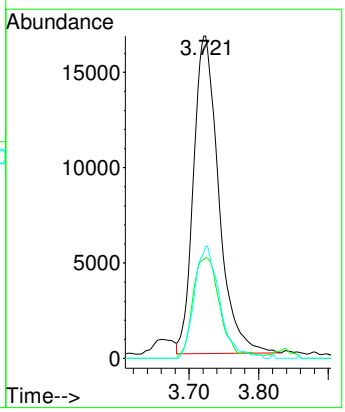


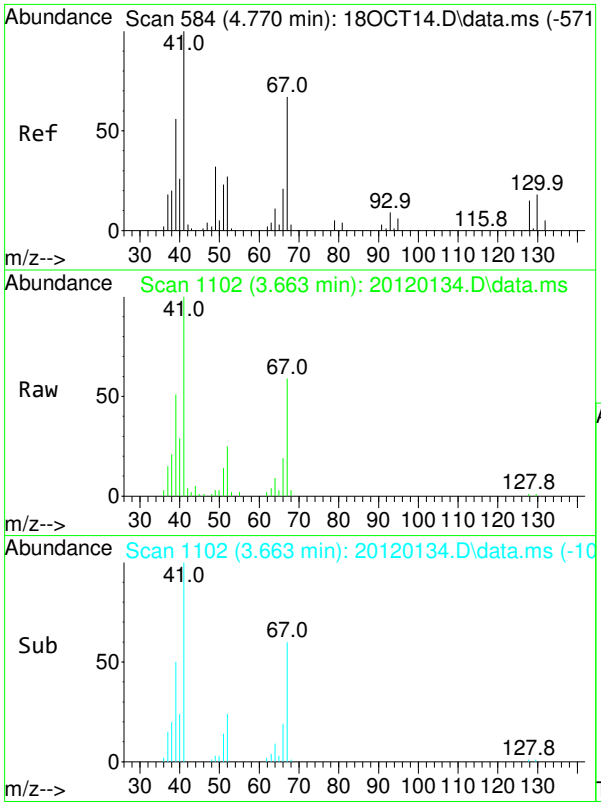


#39
Tetrahydrofuran
Concen: 18.37 ug/L
RT: 3.721 min Scan# 1123
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 42 Resp: 41944

Ion	Ratio	Lower	Upper
42	100		
72	33.1	3.4	63.4
71	35.5	4.3	64.3

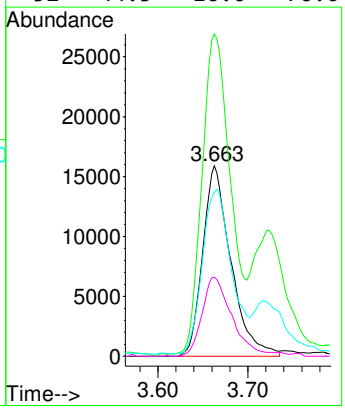


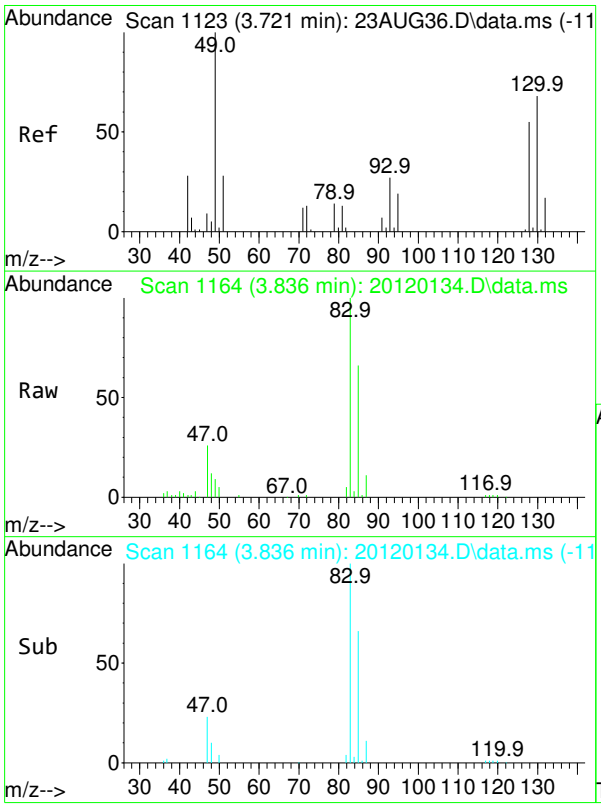


#40
Methacrylonitrile
Concen: 18.53 ug/L
RT: 3.663 min Scan# 1102
Delta R.T. -0.005 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 67 Resp: 34709

Ion	Ratio	Lower	Upper
67	100		
41	170.8	143.5	203.5
39	89.4	60.6	120.6
52	44.5	16.0	76.0

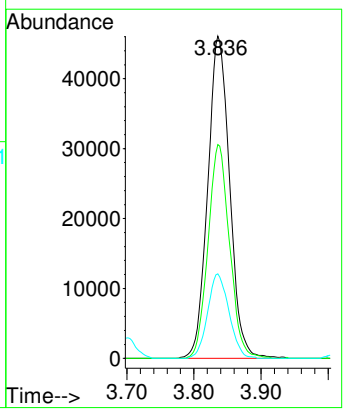


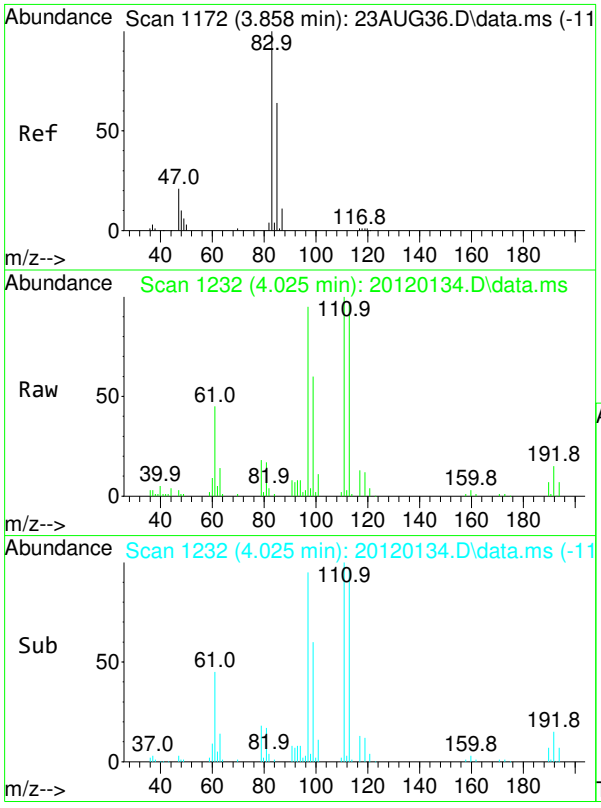


#41
Chloroform
Concen: 19.70 ug/L
RT: 3.836 min Scan# 1164
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 83 Resp: 104538

Ion	Ratio	Lower	Upper
83	100		
85	65.1	34.6	94.6
47	25.7	0.0	56.8

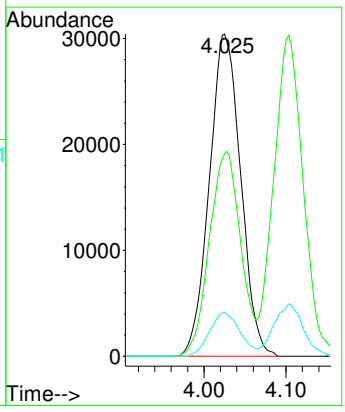


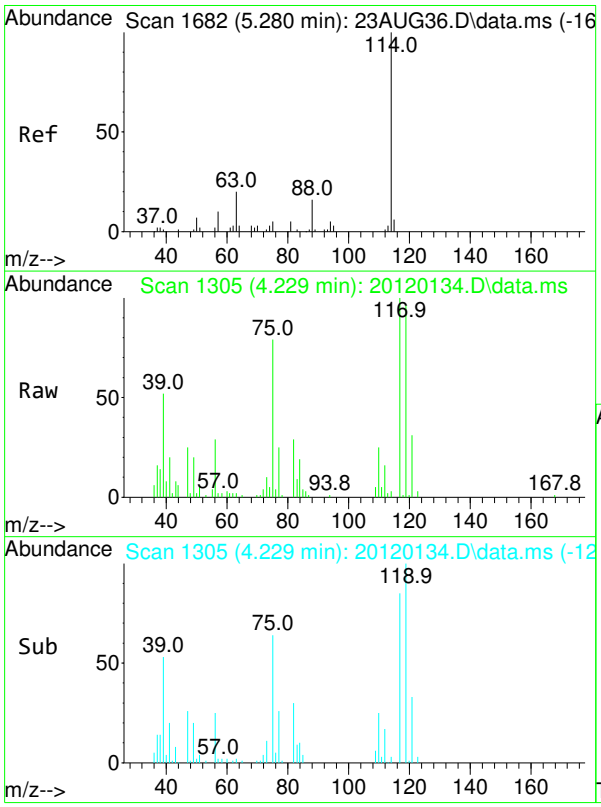


#44
1,1,1-Trichloroethane
Concen: 22.22 ug/L
RT: 4.025 min Scan# 1232
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 97 Resp: 80735

Ion	Ratio	Lower	Upper
97	100		
99	63.7	34.0	94.0
117	13.3	0.0	43.5

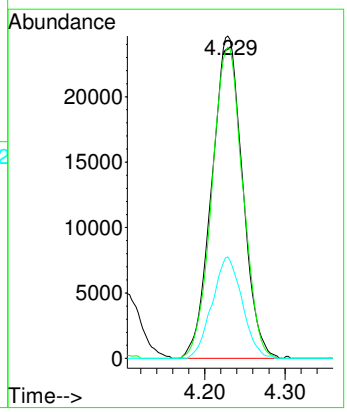


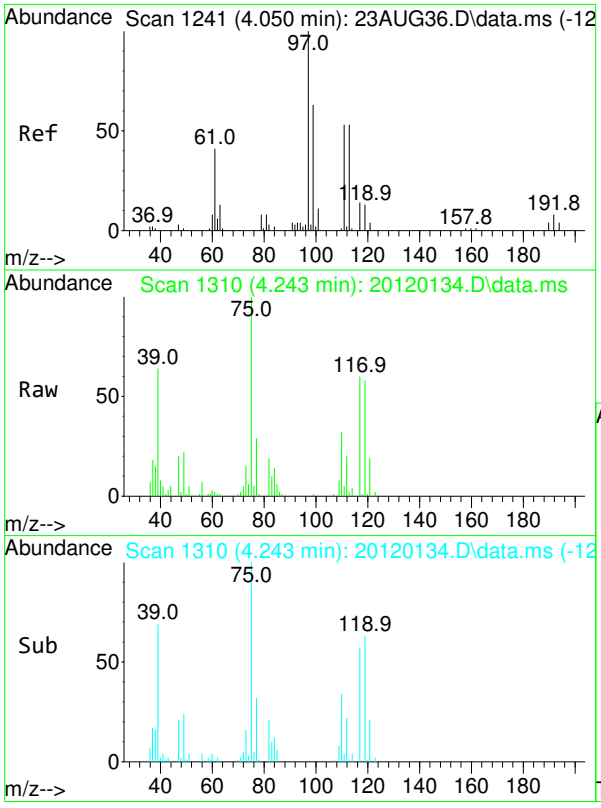


#46
Carbon tetrachloride
Concen: 20.73 ug/L
RT: 4.229 min Scan# 1305
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:117 Resp: 65416

Ion	Ratio	Lower	Upper
117	100		
119	96.9	65.9	125.9
121	30.7	1.1	61.1

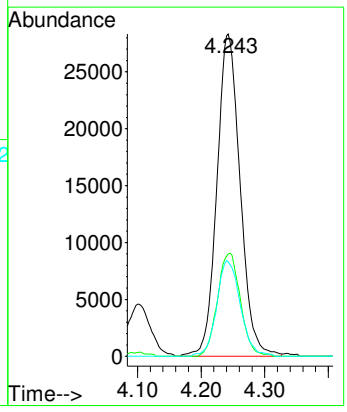


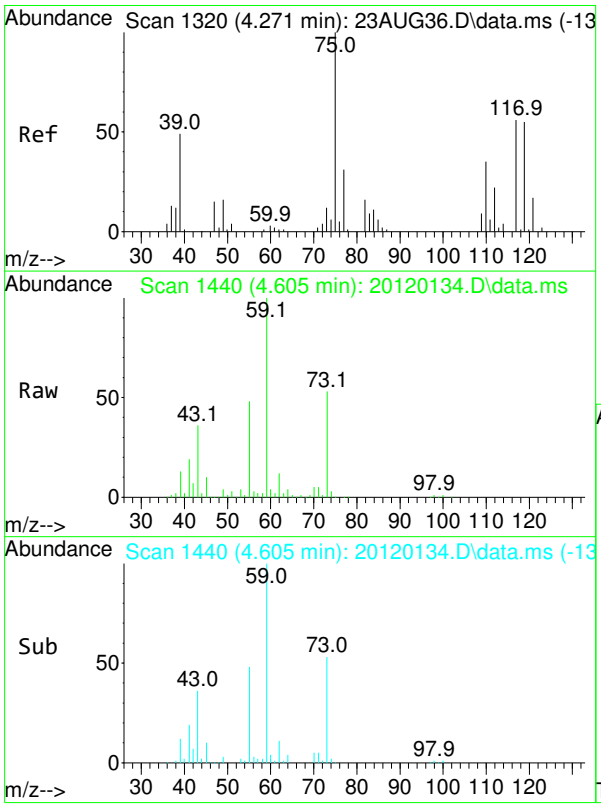


#47
1,1-Dichloropropene
Concen: 21.52 ug/L
RT: 4.243 min Scan# 1310
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 75 Resp: 71951

Ion	Ratio	Lower	Upper
75	100		
110	31.4	1.1	61.1
77	30.3	0.8	60.8

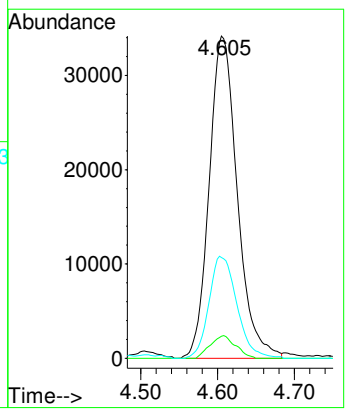


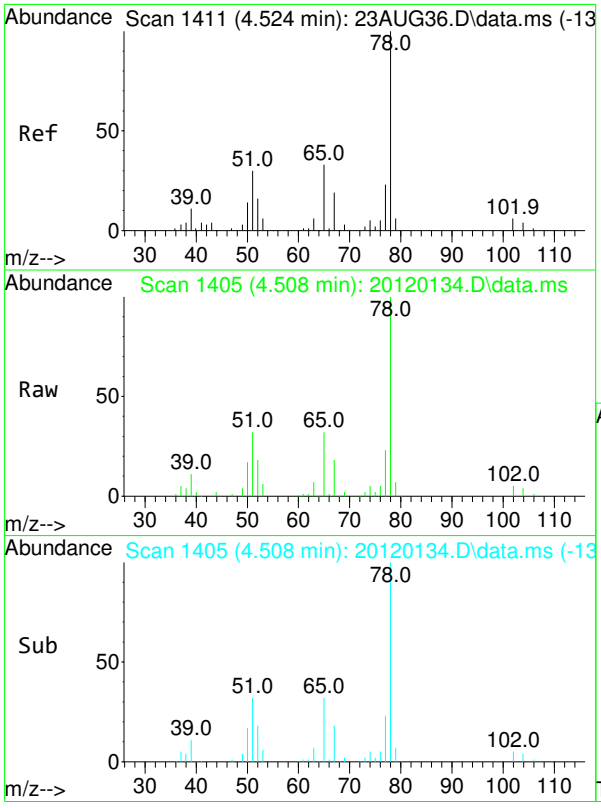


#49
1,2-Dichloroethane
Concen: 21.81 ug/L
RT: 4.605 min Scan# 1440
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 62 Resp: 86806

Ion	Ratio	Lower	Upper
62	100		
98	6.4	0.0	36.5
64	31.6	0.9	60.9

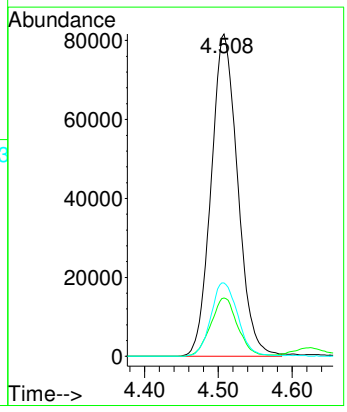


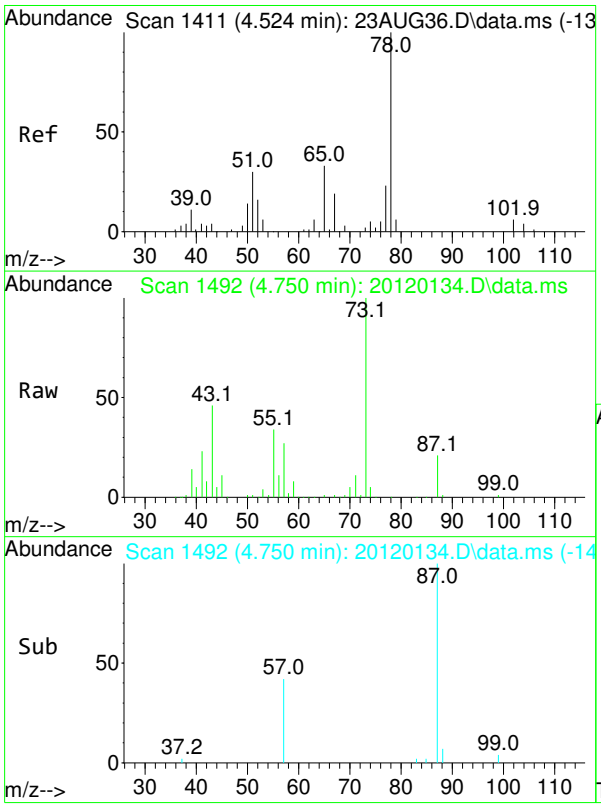


#50
Benzene
Concen: 22.01 ug/L
RT: 4.508 min Scan# 1405
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 78 Resp: 204186

Ion	Ratio	Lower	Upper
78	100		
52	18.5	0.0	48.7
77	23.1	0.0	53.7

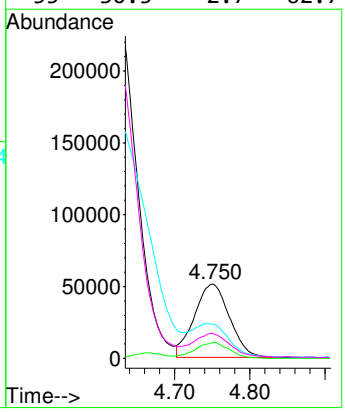


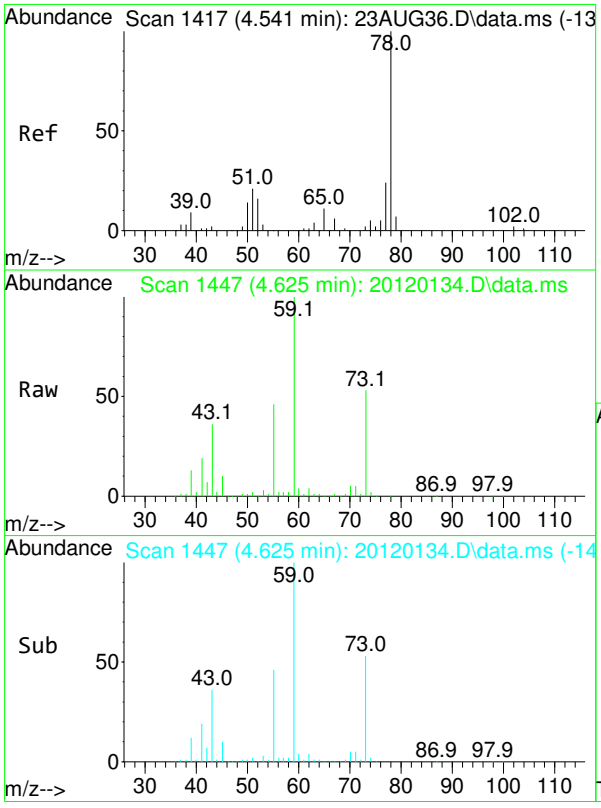


#51
Tertiaryamylmethylether
Concen: 25.58 ug/L
RT: 4.750 min Scan# 1492
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 73 Resp: 165405

Ion	Ratio	Lower	Upper
73	100		
87	21.2	0.0	50.5
43	0.0	0.0	30.0
55	30.5	2.7	62.7

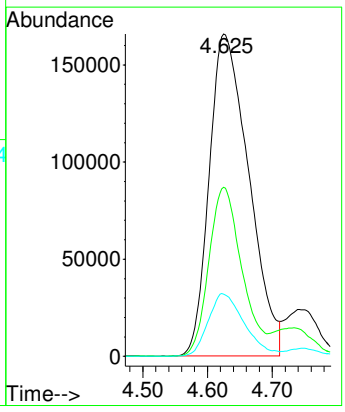


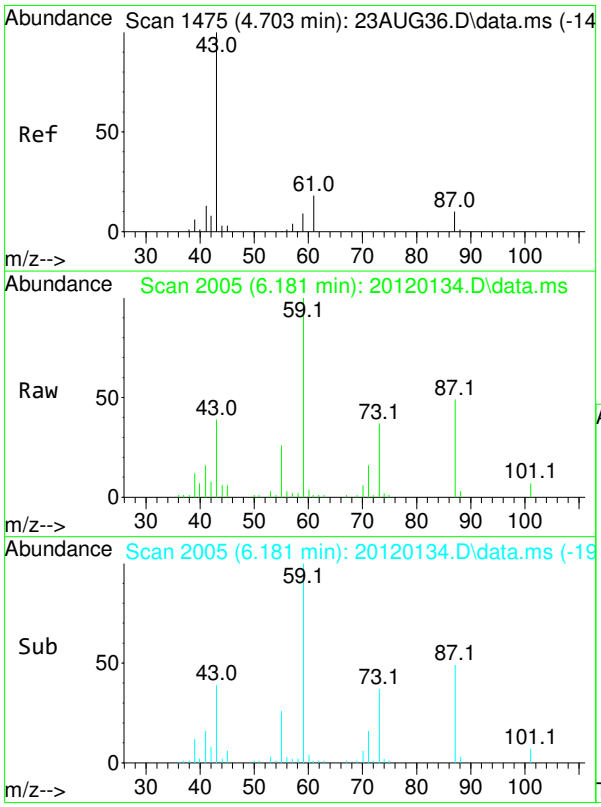


#52
Isobutyl Alcohol
Concen: 88.21 ug/L
RT: 4.625 min Scan# 1447
Delta R.T. -0.044 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 703168

Ion	Ratio	Lower	Upper
43	100		
41	43.7	0.0	41.2#
42	17.7	0.0	38.2

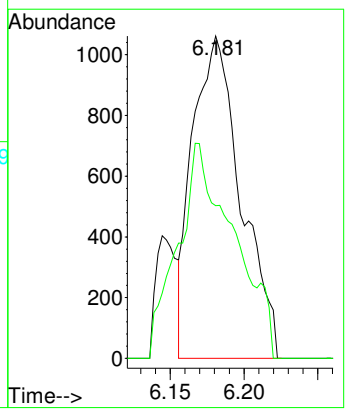


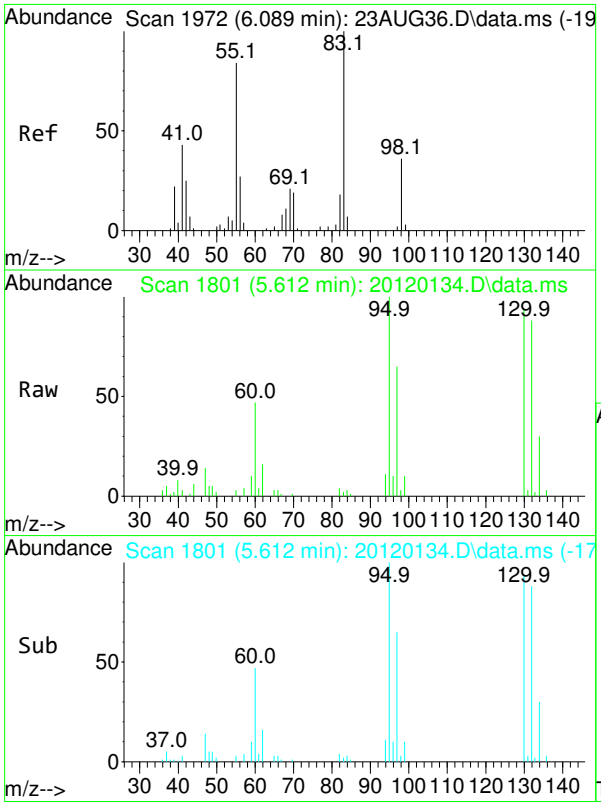


#54
1,4-Dioxane
Concen: 28.94 ug/L
RT: 6.181 min Scan# 2005
Delta R.T. -0.095 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 88 Resp: 2423

Ion	Ratio	Lower	Upper
88	100		
58	77.2	43.1	103.1

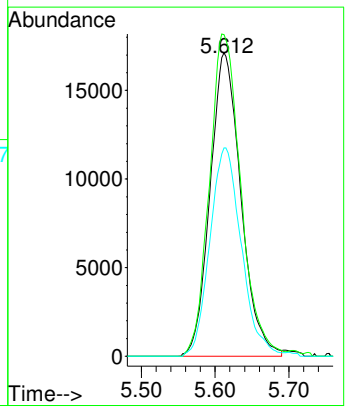


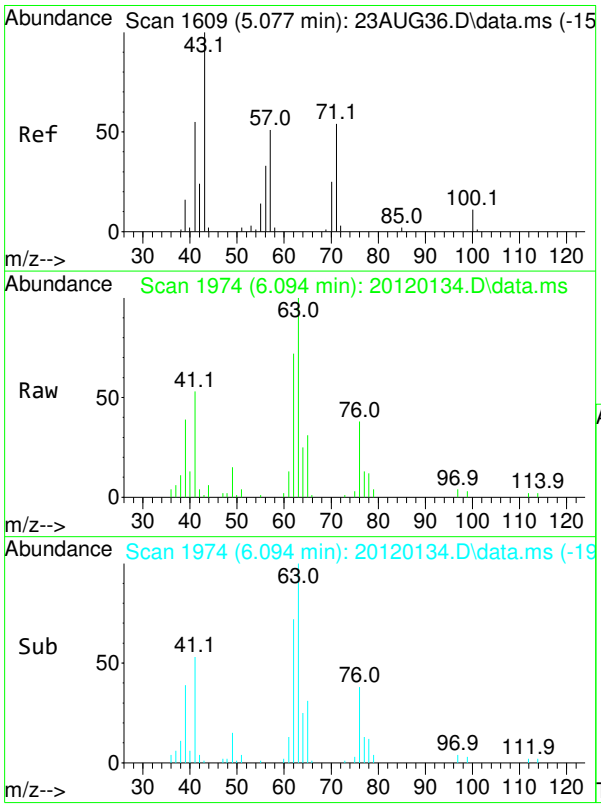


#57
Trichloroethene
Concen: 22.36 ug/L
RT: 5.612 min Scan# 1801
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:130 Resp: 49610

Ion	Ratio	Lower	Upper
130	100		
95	108.1	80.9	140.9
97	70.3	41.9	101.9

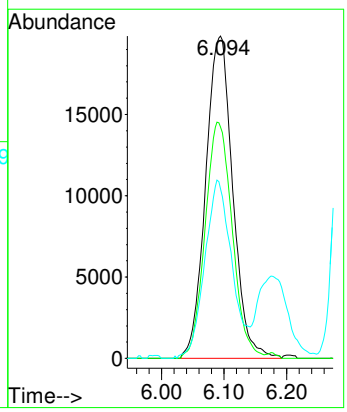


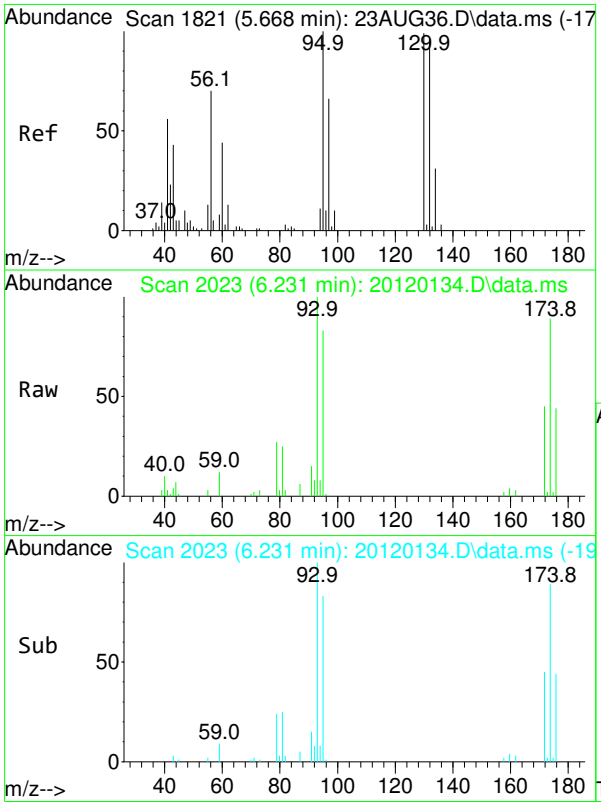


#58
1,2-Dichloropropane
Concen: 19.04 ug/L
RT: 6.094 min Scan# 1974
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 63 Resp: 59753

Ion	Ratio	Lower	Upper
63	100		
62	73.2	46.4	106.4
41	55.4	20.9	80.9

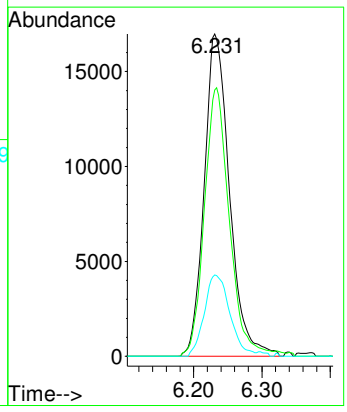


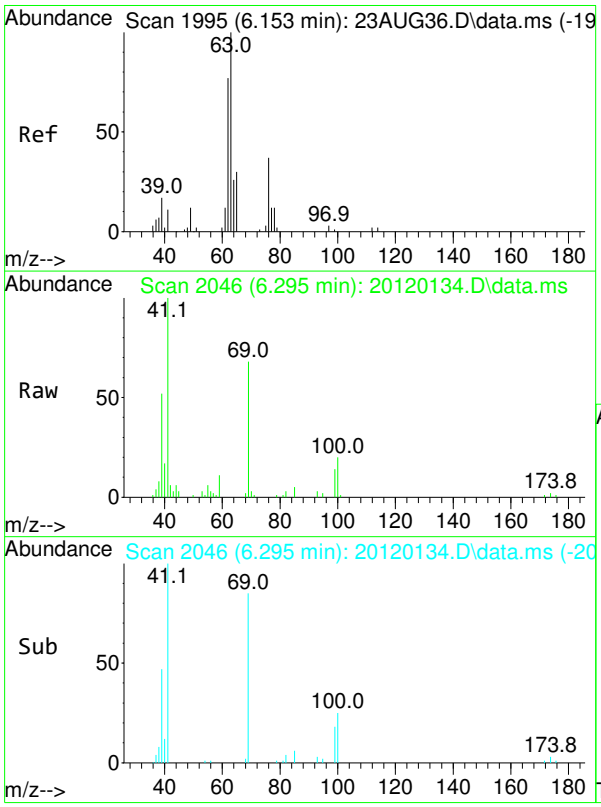


#59
Dibromomethane
Concen: 21.54 ug/L
RT: 6.231 min Scan# 2023
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 93 Resp: 43821

Ion	Ratio	Lower	Upper
93	100		
95	81.9	52.1	112.1
81	25.4	0.0	55.4

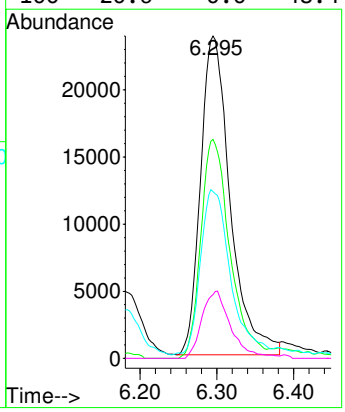


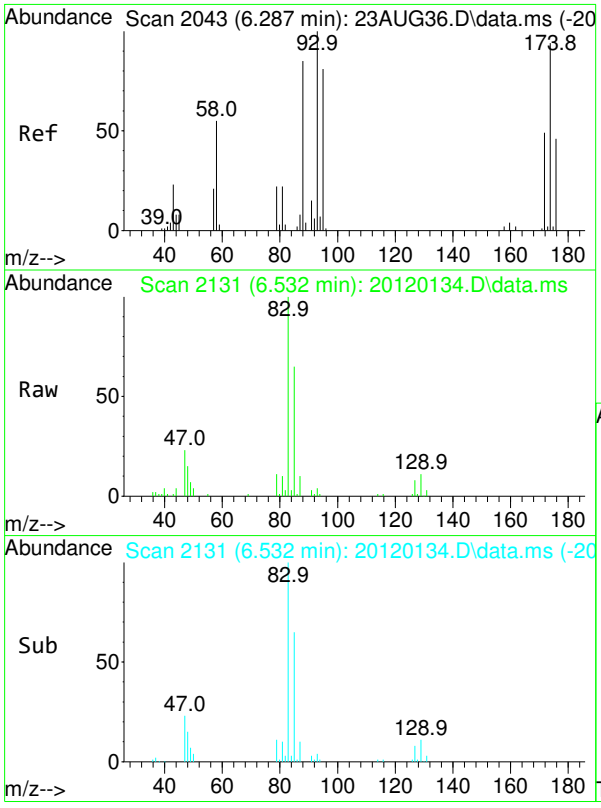


#60
Methyl methacrylate
Concen: 16.35 ug/L
RT: 6.295 min Scan# 2046
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 41 Resp: 63765

Ion	Ratio	Lower	Upper
41	100		
69	67.1	32.4	92.4
39	52.1	20.2	80.2
100	20.6	0.0	48.4

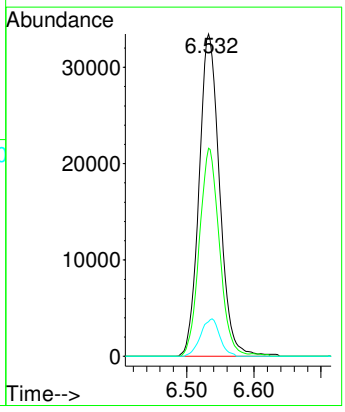


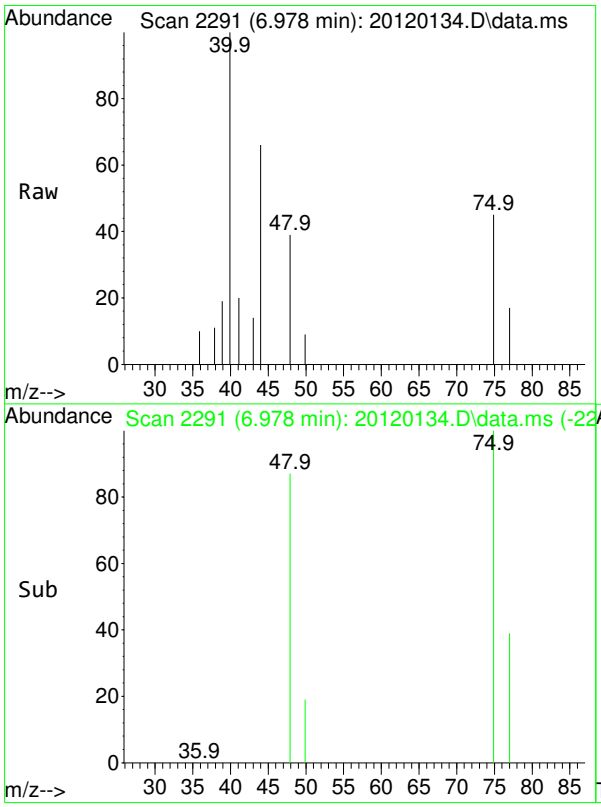


#61
Bromodichloromethane
Concen: 20.95 ug/L
RT: 6.532 min Scan# 2131
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 83 Resp: 71053

Ion	Ratio	Lower	Upper
83	100		
85	63.1	33.7	93.7
129	10.9	0.0	41.0

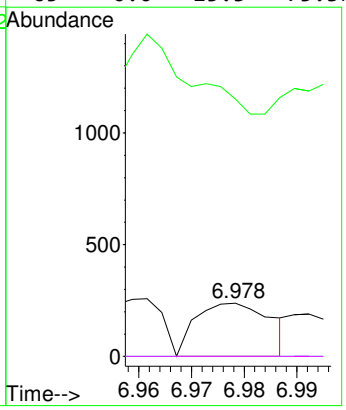


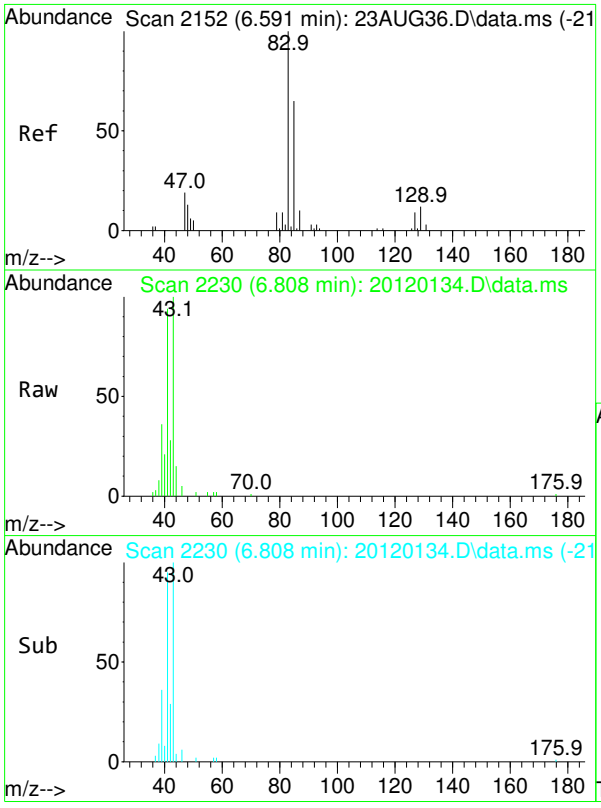


#62
2-Chloroethyl vinyl ether
Concen: 0.43 ug/L
RT: 6.978 min Scan# 2291
Delta R.T. 0.050 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 235

Ion	Ratio	Lower	Upper
43	100		
44	120.9	51.7	111.7#
63	0.0	111.6	171.6#
65	0.0	15.3	75.3#

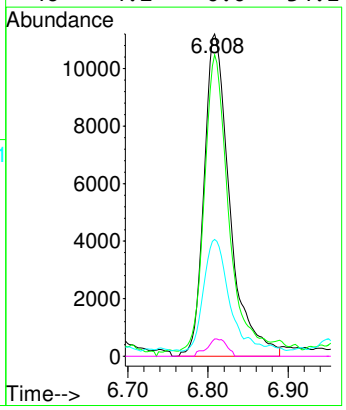


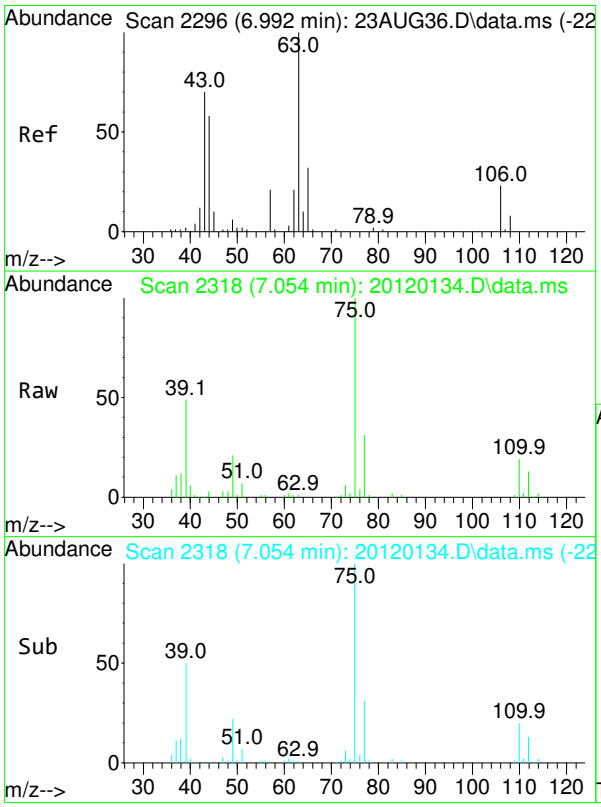


#63
2-Nitropropane
Concen: 18.69 ug/L
RT: 6.808 min Scan# 2230
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 24917

Ion	Ratio	Lower	Upper
43	100		
41	86.6	59.2	119.2
39	34.4	5.6	65.6
46	4.2	0.0	34.1

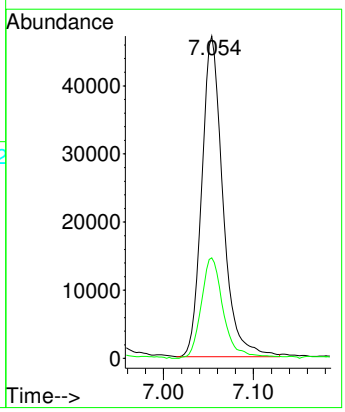


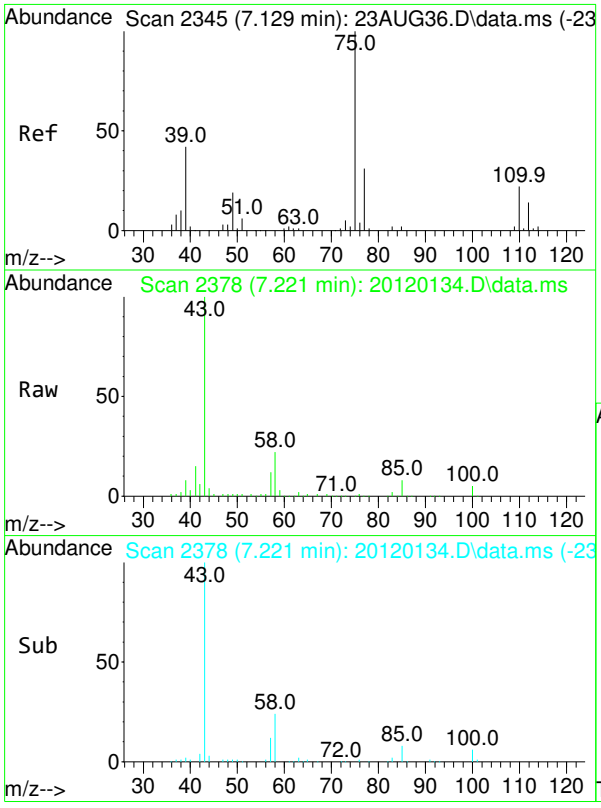


#64
cis-1,3-Dichloropropene
Concen: 19.97 ug/L
RT: 7.054 min Scan# 2318
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 75 Resp: 76658

Ion	Ratio	Lower	Upper
75	100		
77	33.3	1.3	61.3

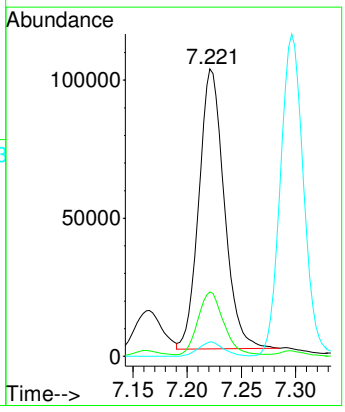


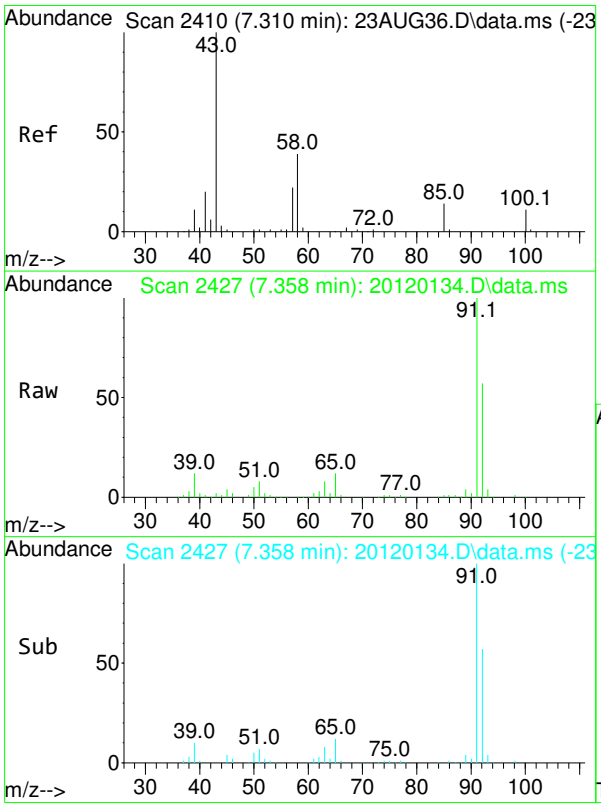


#66
4-Methyl-2-pentanone
Concen: 30.33 ug/L
RT: 7.221 min Scan# 2378
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 164036

Ion	Ratio	Lower	Upper
43	100		
58	23.9	13.4	53.4
100	5.2	0.0	27.3

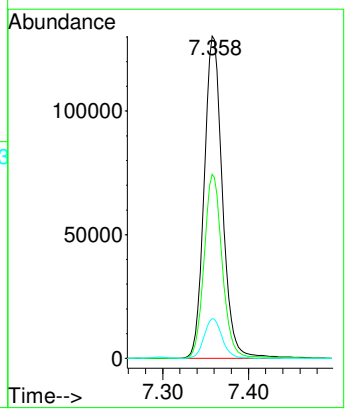


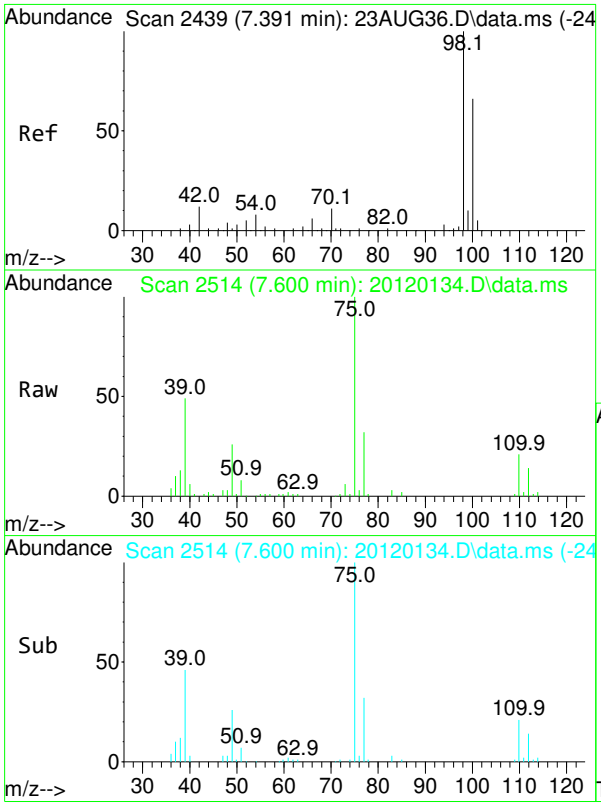


#68
Toluene
Concen: 21.40 ug/L
RT: 7.358 min Scan# 2427
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 192878

Ion	Ratio	Lower	Upper
91	100		
92	57.0	28.3	88.3
65	12.3	0.0	43.2

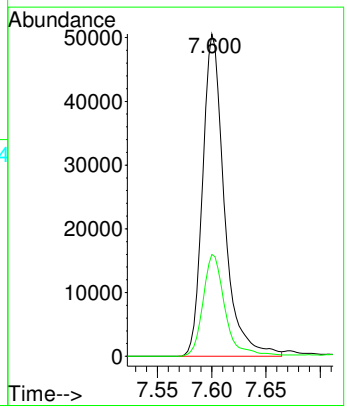


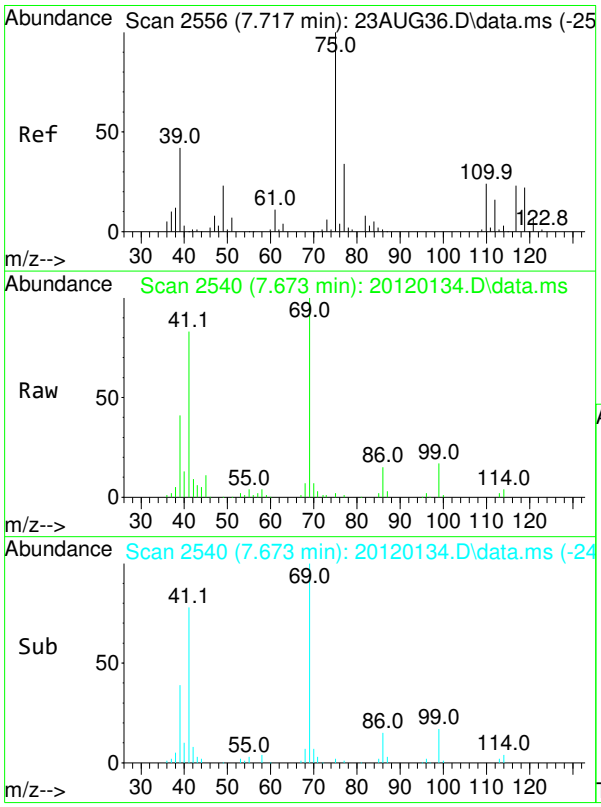


#69
trans-1,3-Dichloropropene
Concen: 19.58 ug/L
RT: 7.600 min Scan# 2514
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 75 Resp: 70323

Ion	Ratio	Lower	Upper
75	100		
77	32.1	3.4	63.4

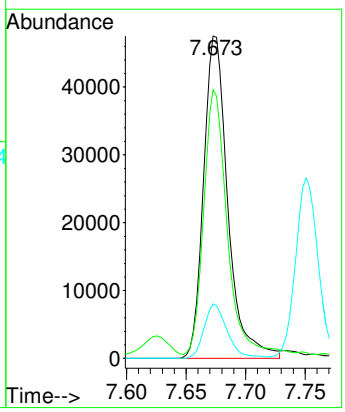


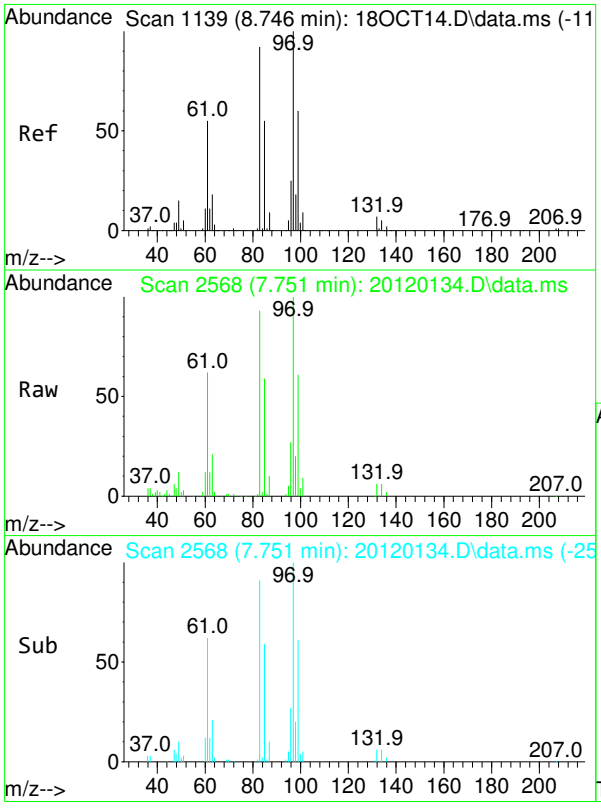


#71
Ethyl methacrylate
Concen: 17.23 ug/L
RT: 7.673 min Scan# 2540
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 69 Resp: 67398

Ion	Ratio	Lower	Upper
69	100		
41	78.5	53.5	113.5
99	16.1	0.0	46.2

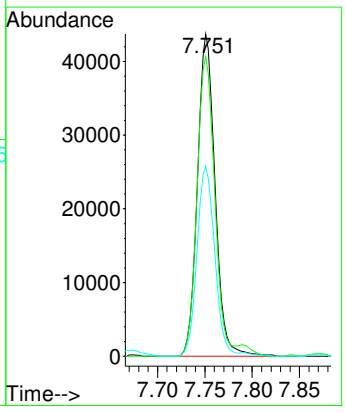


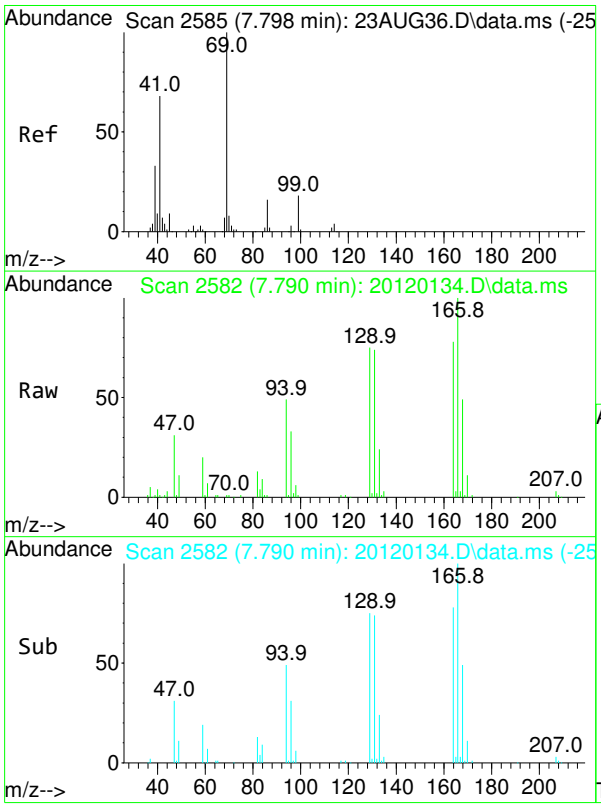


#72
1,1,2-Trichloroethane
Concen: 20.76 ug/L
RT: 7.751 min Scan# 2568
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 97 Resp: 56737

Ion	Ratio	Lower	Upper
97	100		
83	92.6	67.3	127.3
85	59.1	32.8	92.8

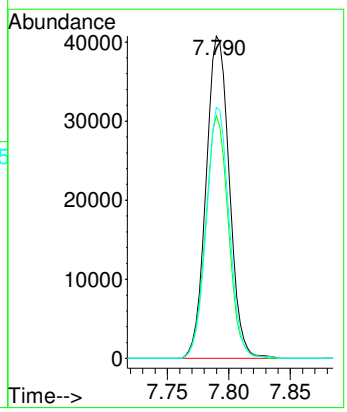


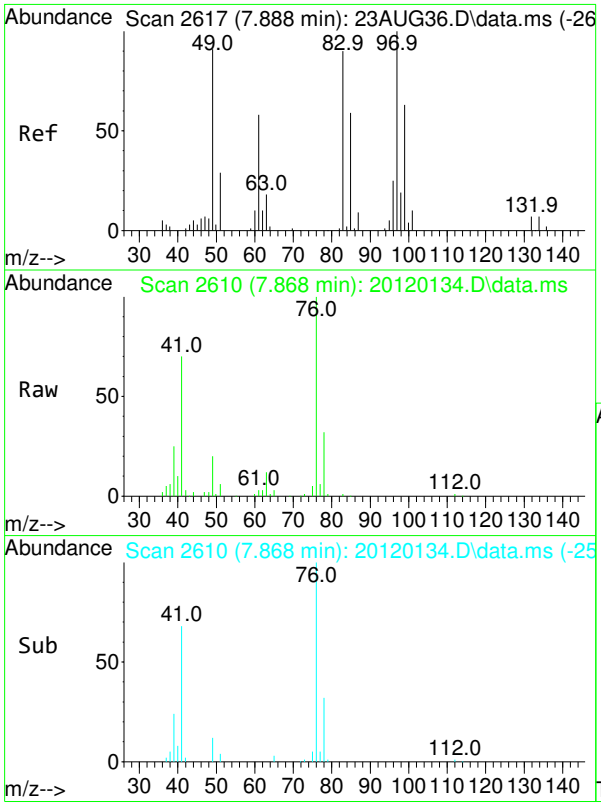


#73
Tetrachloroethene
Concen: 22.72 ug/L
RT: 7.790 min Scan# 2582
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:166 Resp: 53570

Ion	Ratio	Lower	Upper
166	100		
129	73.8	47.2	107.2
164	76.5	47.2	107.2

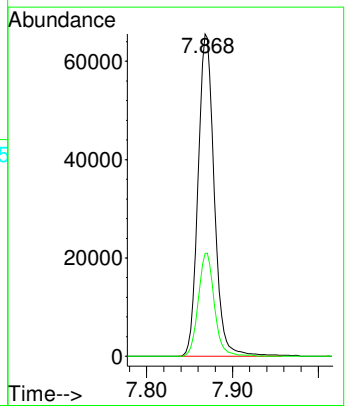


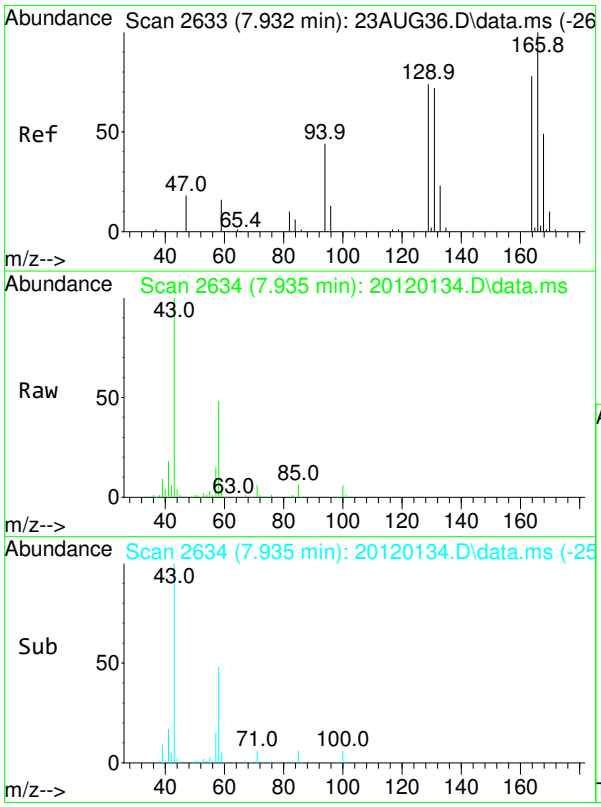


#74
1,3-Dichloropropane
Concen: 19.74 ug/L
RT: 7.868 min Scan# 2610
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 76 Resp: 86387

Ion	Ratio	Lower	Upper
76	100		
78	31.8	4.7	64.7

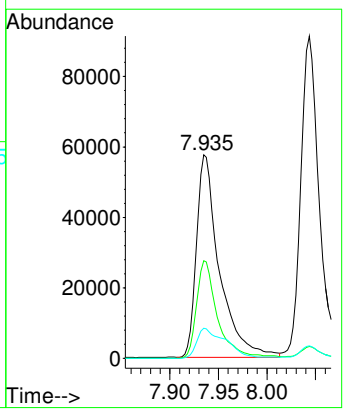


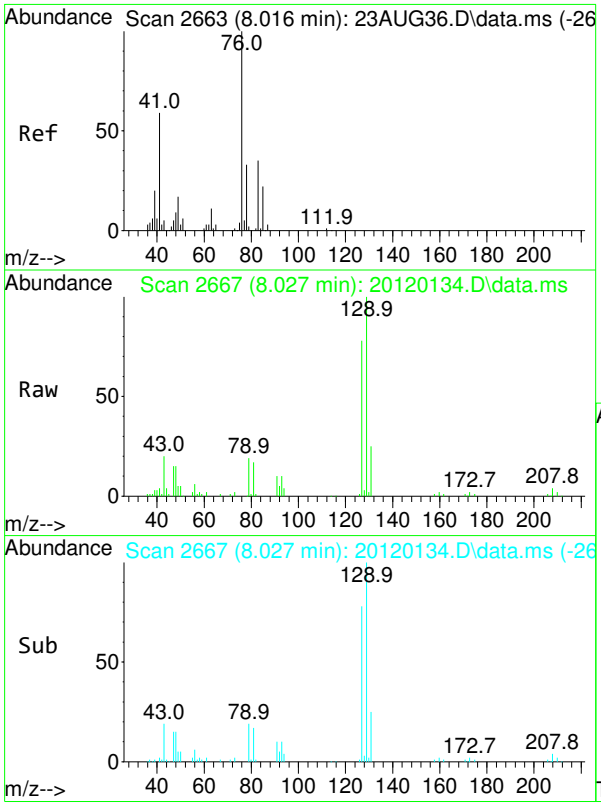


#75
2-Hexanone
Concen: 20.25 ug/L
RT: 7.935 min Scan# 2634
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 94036

Ion	Ratio	Lower	Upper
43	100		
58	44.6	18.9	78.9
57	19.1	0.0	44.5

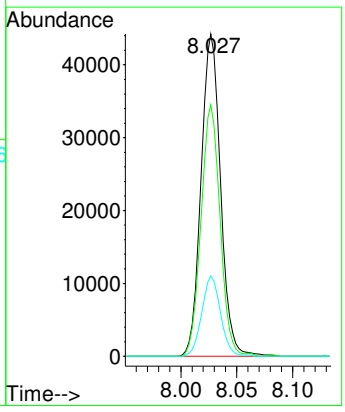


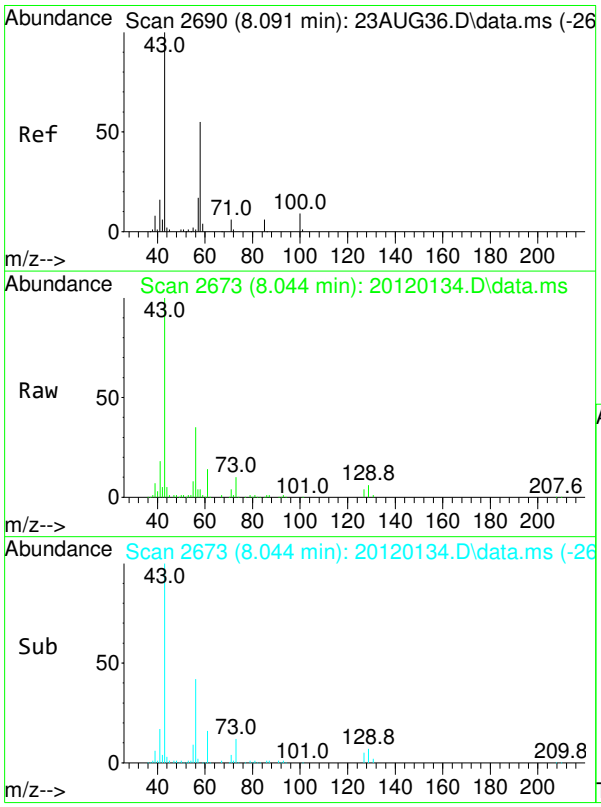


#76
Chlorodibromomethane
Concen: 19.25 ug/L
RT: 8.027 min Scan# 2667
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:129 Resp: 53582

Ion	Ratio	Lower	Upper
129	100		
127	76.2	45.9	105.9
131	24.0	0.0	54.2

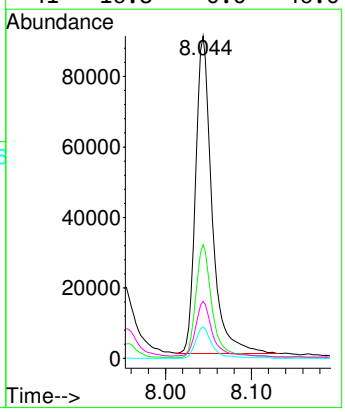


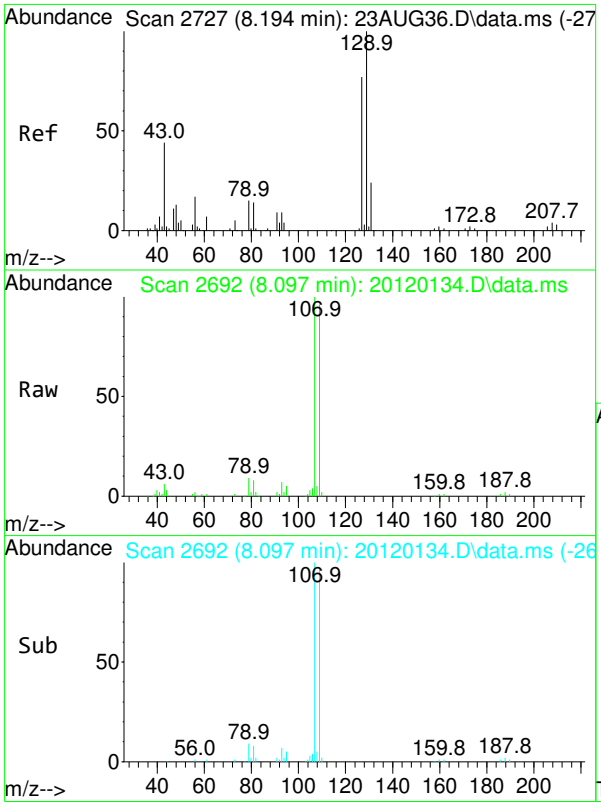


#77
Butyl acetate
Concen: 15.70 ug/L
RT: 8.044 min Scan# 2673
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 120317

Ion	Ratio	Lower	Upper
43	100		
56	35.6	4.8	64.8
73	10.0	0.0	38.9
41	16.8	0.0	46.0

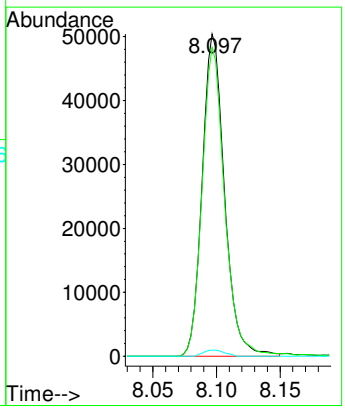


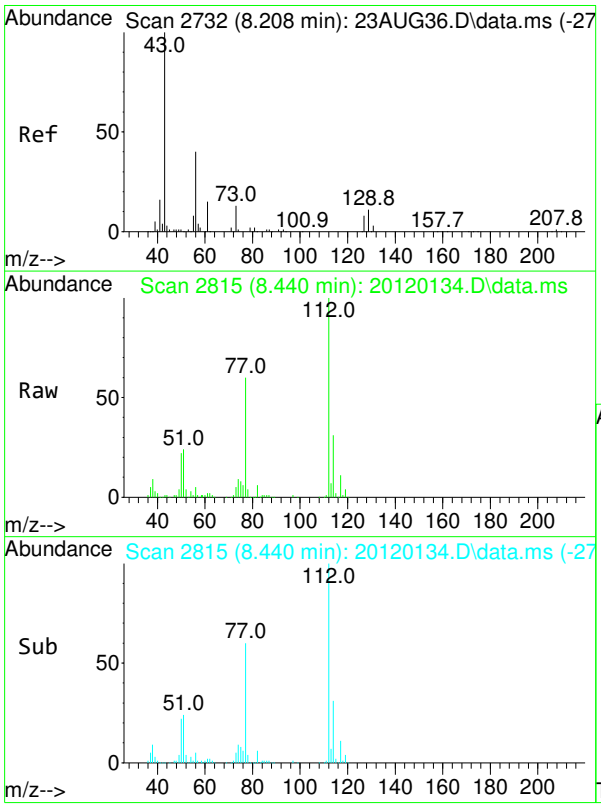


#78
1,2-Dibromoethane
Concen: 20.44 ug/L
RT: 8.097 min Scan# 2692
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:107 Resp: 61679

Ion	Ratio	Lower	Upper
107	100		
109	96.7	64.3	124.3
188	1.8	0.0	32.1

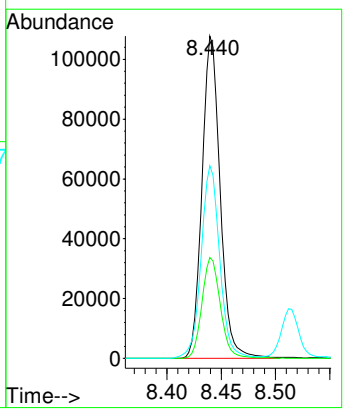


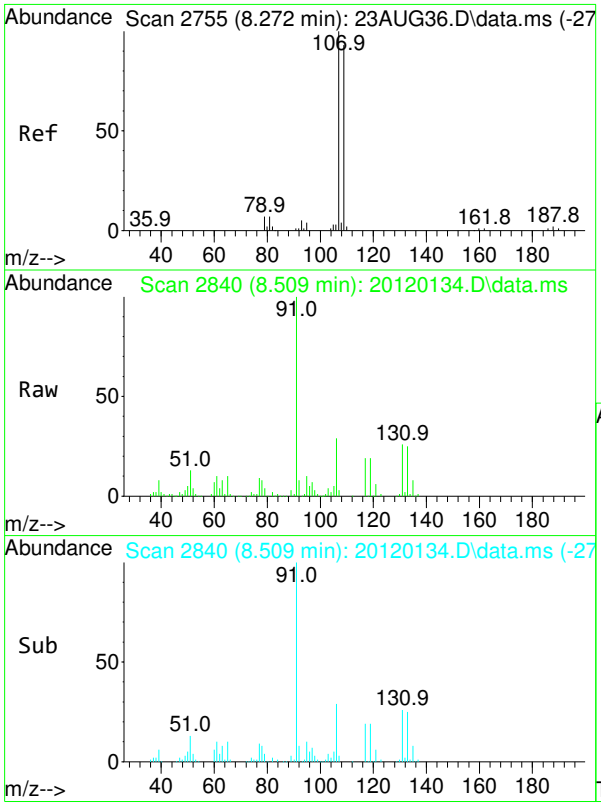


#79
Chlorobenzene
Concen: 21.24 ug/L
RT: 8.440 min Scan# 2815
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:112 Resp: 125158

Ion	Ratio	Lower	Upper
112	100		
114	31.7	1.7	61.7
77	61.5	32.3	92.3

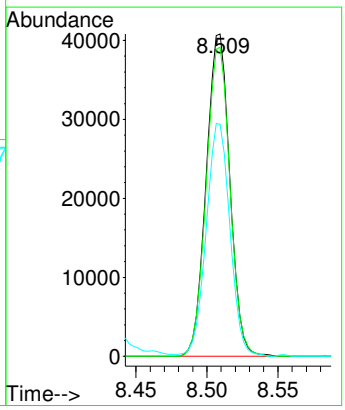


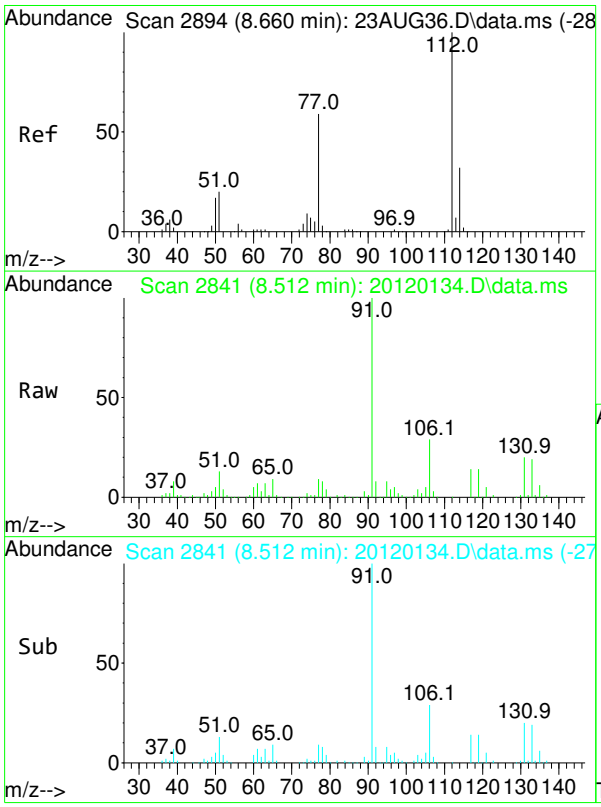


#80
1,1,1,2-Tetrachloroethane
Concen: 21.01 ug/L
RT: 8.509 min Scan# 2840
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:131 Resp: 47254

Ion	Ratio	Lower	Upper
131	100		
133	96.5	67.3	127.3
119	72.9	42.2	102.2

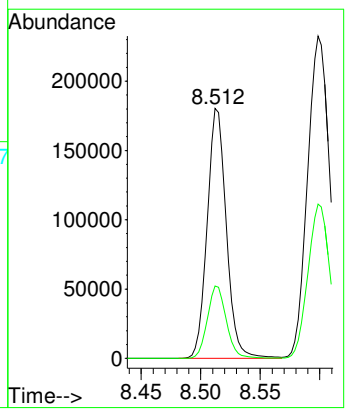


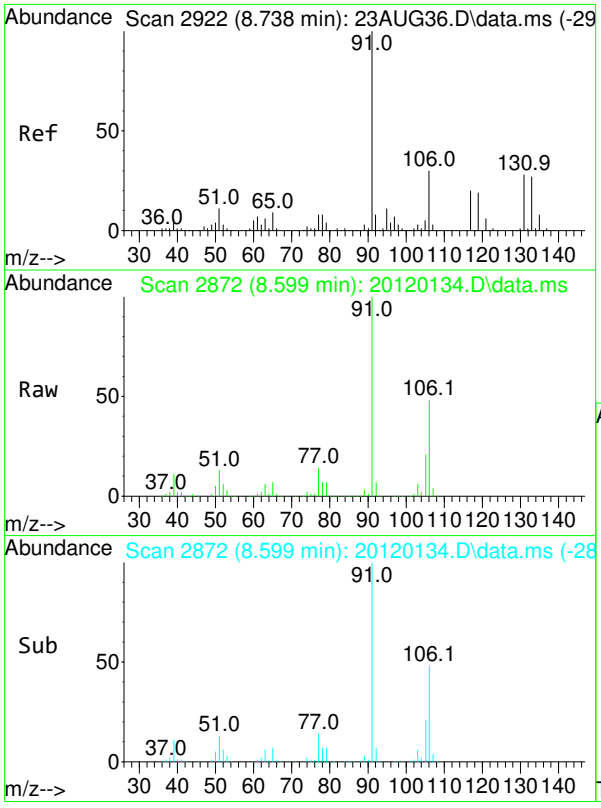


#81
Ethylbenzene
Concen: 20.88 ug/L
RT: 8.512 min Scan# 2841
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 201970

Ion	Ratio	Lower	Upper
91	100		
106	28.6	0.0	58.2

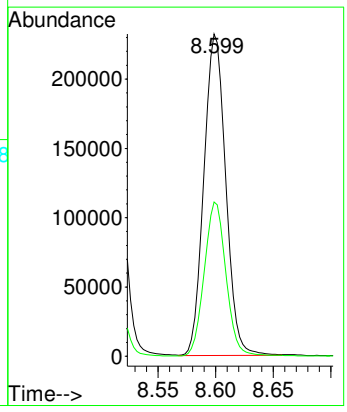


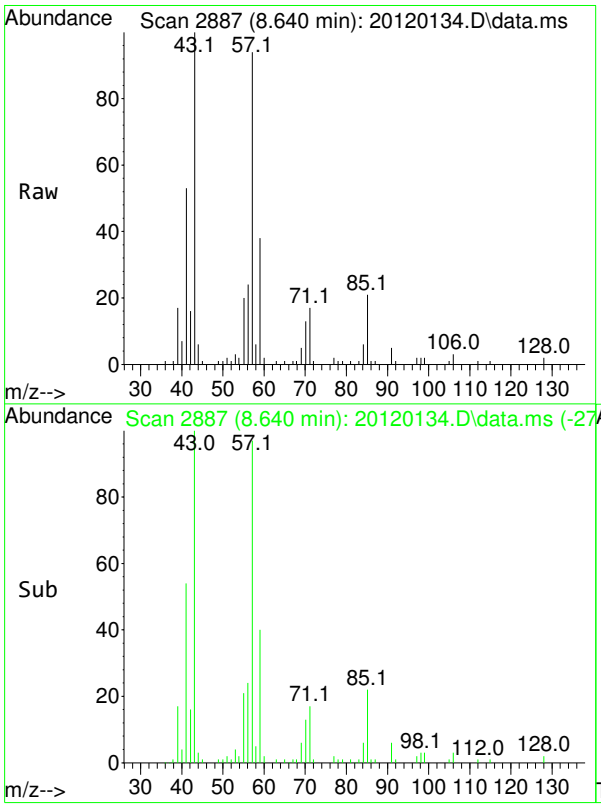


#82
m/p-Xylene
Concen: 41.80 ug/L
RT: 8.599 min Scan# 2872
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 306822

Ion	Ratio	Lower	Upper
91	100		
106	47.7	15.7	75.7

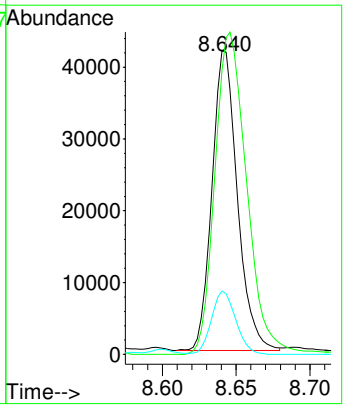


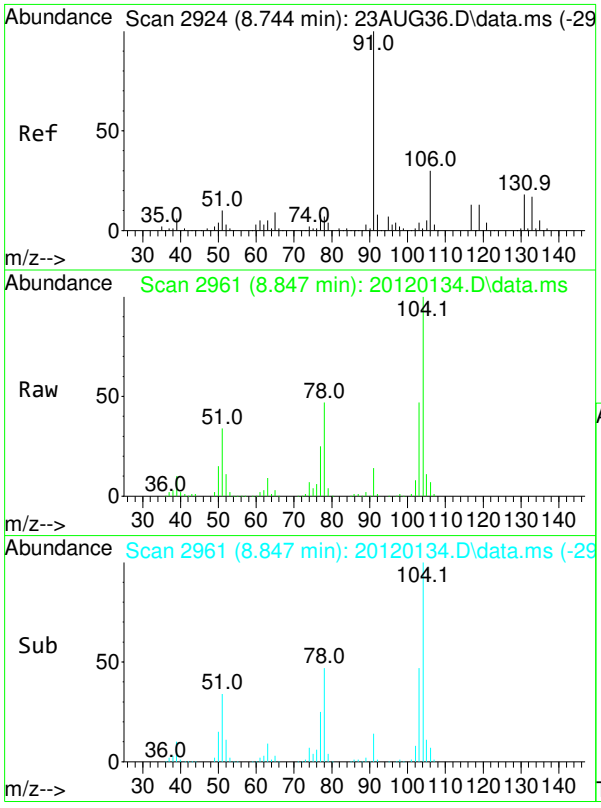


#83
Nonane
Concen: 27.25 ug/L
RT: 8.640 min Scan# 2887
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 49984

Ion	Ratio	Lower	Upper
43	100		
57	134.8	47.0	107.0#
85	20.3	0.0	52.2

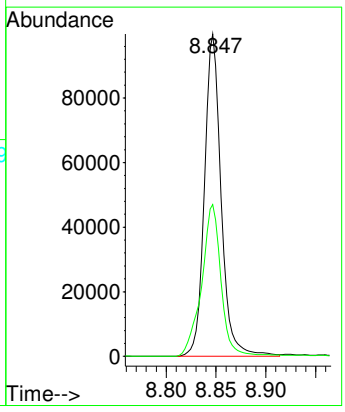


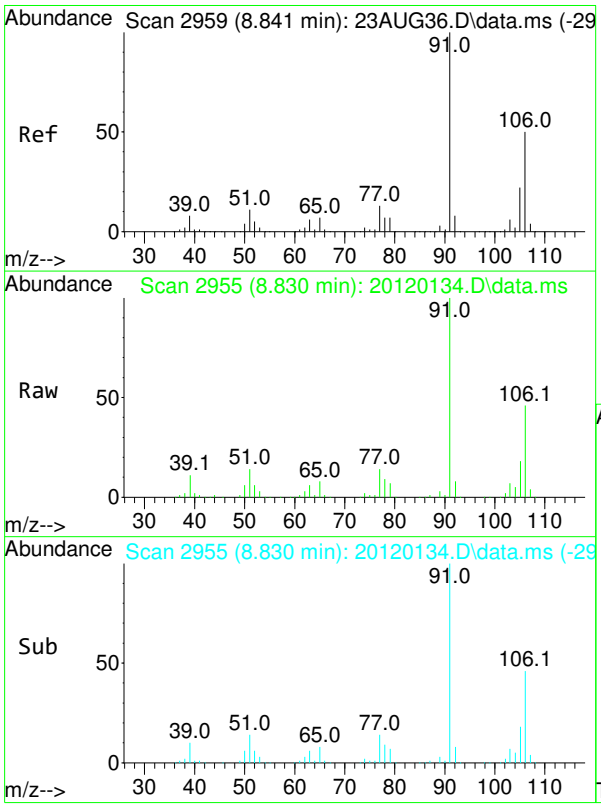


#84
Styrene
Concen: 23.36 ug/L
RT: 8.847 min Scan# 2961
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:104 Resp: 116006

Ion	Ratio	Lower	Upper
104	100		
78	54.5	25.5	85.5

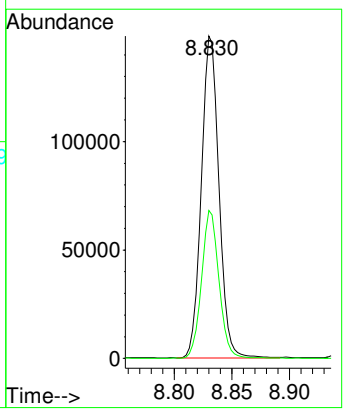


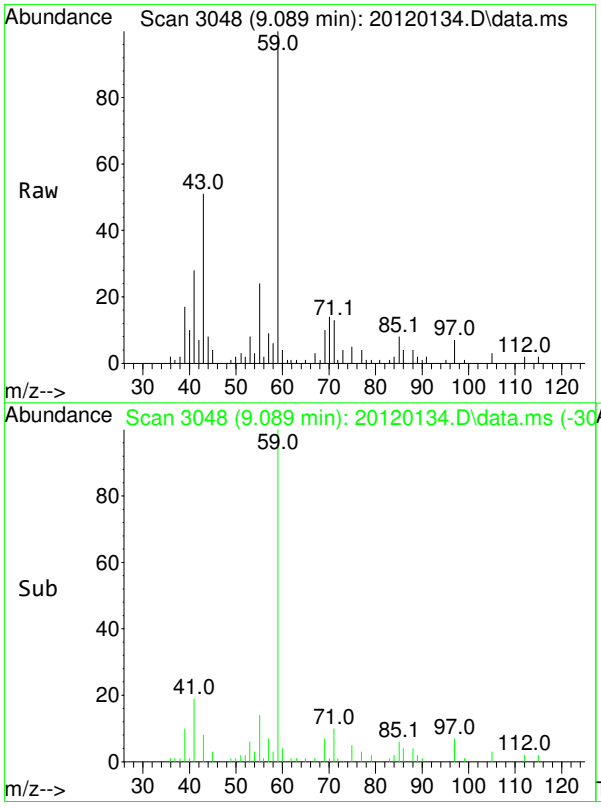


#85
o-Xylene
Concen: 21.12 ug/L
RT: 8.830 min Scan# 2955
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 157833

Ion	Ratio	Lower	Upper
91	100		
106	45.7	14.5	74.5

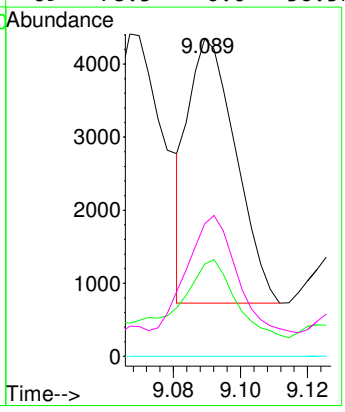


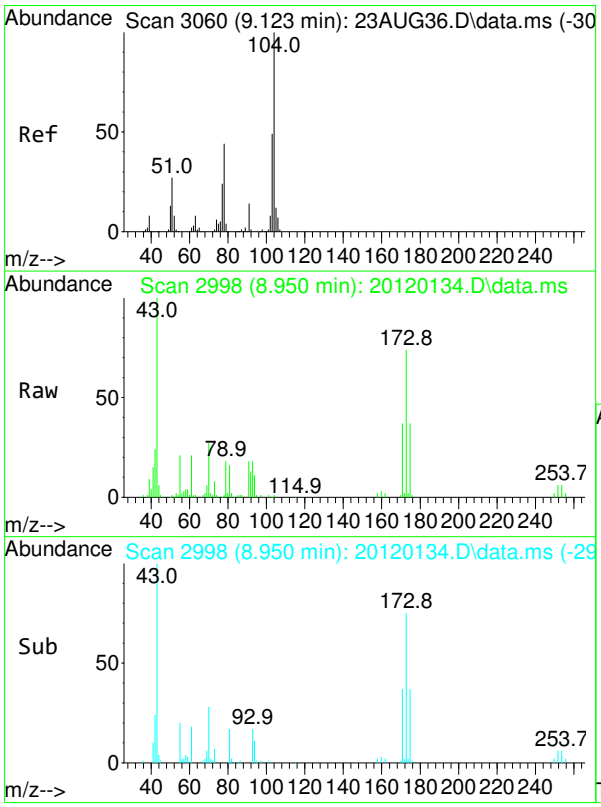


#86
Cyclohexanone
Concen: 9.03 ug/L
RT: 9.089 min Scan# 3048
Delta R.T. -0.009 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 55 Resp: 3573

Ion	Ratio	Lower	Upper
55	100		
42	33.9	38.8	98.8#
98	0.0	1.4	61.4#
69	78.5	0.0	56.5#

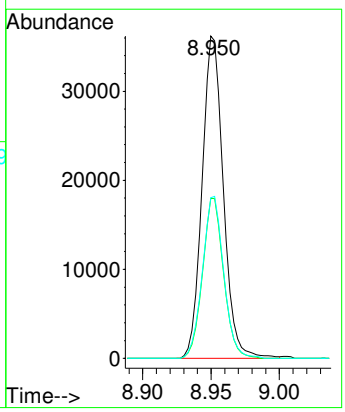


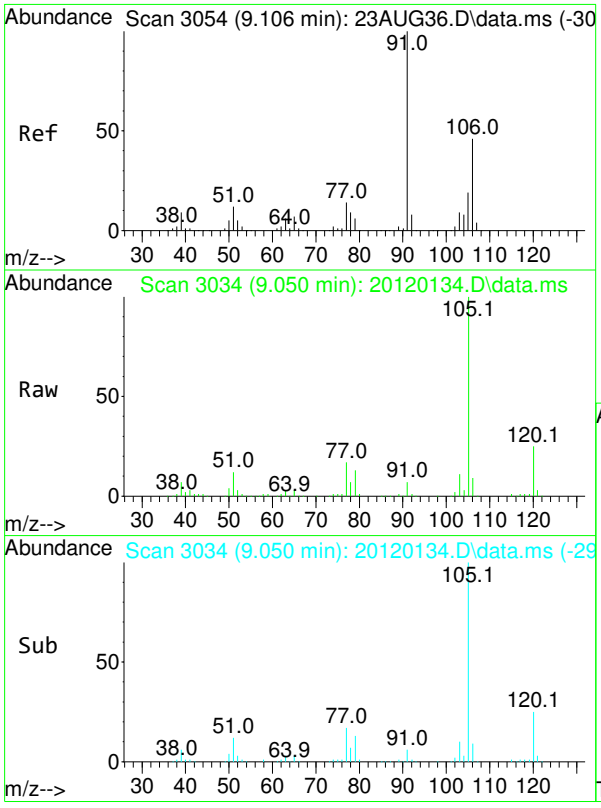


#87
Bromoform
Concen: 16.69 ug/L
RT: 8.950 min Scan# 2998
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:173 Resp: 39378

Ion	Ratio	Lower	Upper
173	100		
175	49.1	19.1	79.1
171	50.4	21.2	81.2

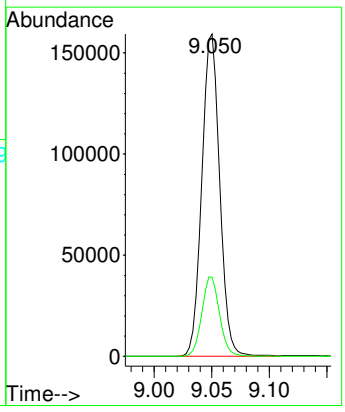


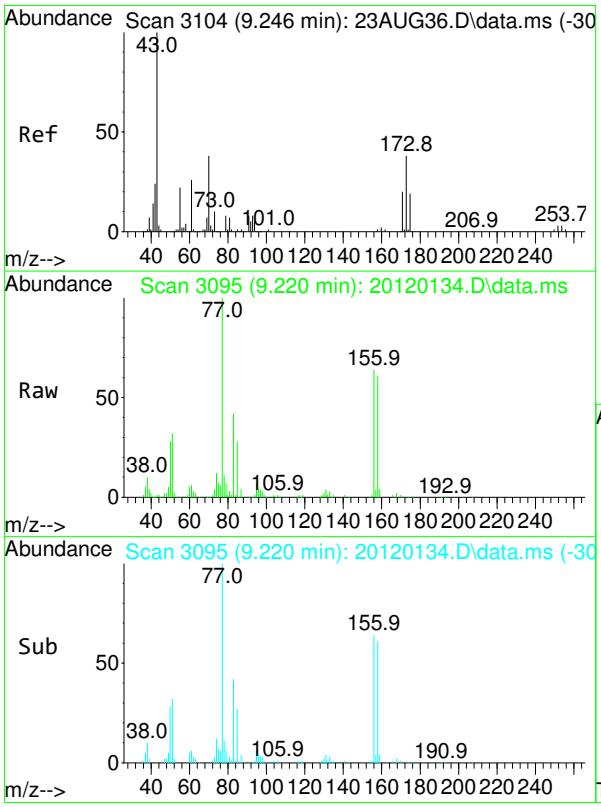


#88
Isopropylbenzene
Concen: 21.98 ug/L
RT: 9.050 min Scan# 3034
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:105 Resp: 172684

Ion	Ratio	Lower	Upper
105	100		
120	24.3	0.0	54.5

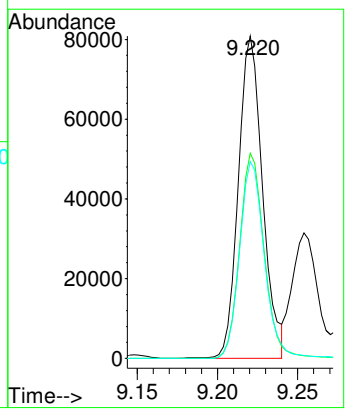


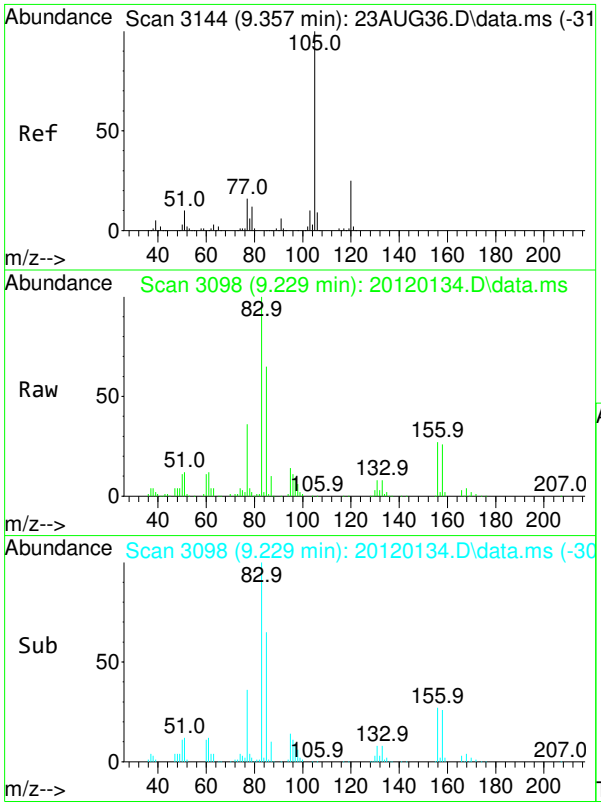


#90
Bromobenzene
Concen: 20.19 ug/L
RT: 9.220 min Scan# 3095
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 77 Resp: 84743

Ion	Ratio	Lower	Upper
77	100		
156	64.8	30.9	90.9
158	62.8	30.4	90.4

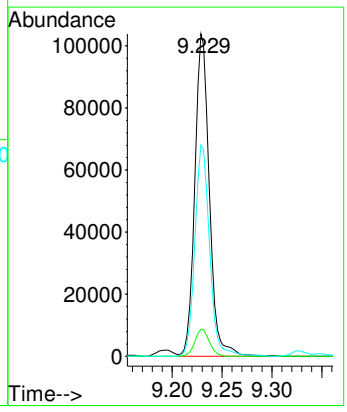


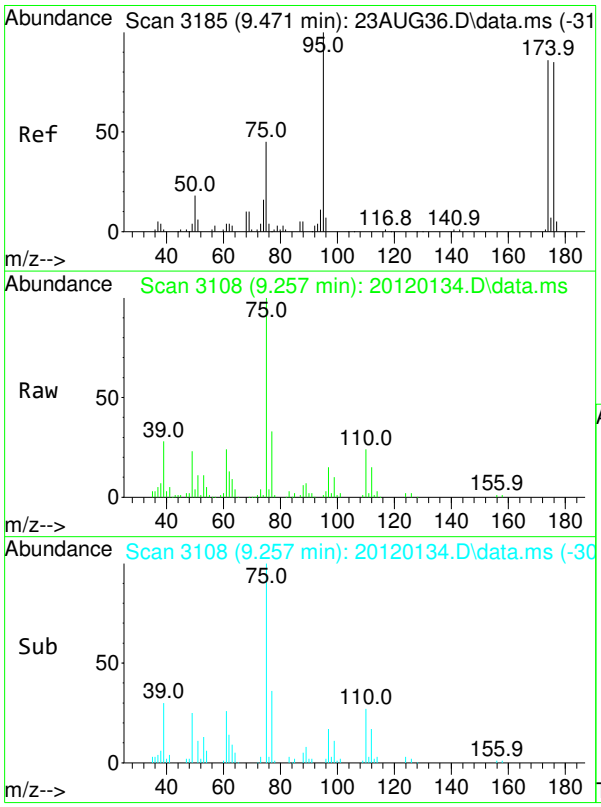


#91
1,1,2,2-Tetrachloroethane
Concen: 19.02 ug/L
RT: 9.229 min Scan# 3098
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 83 Resp: 105313

Ion	Ratio	Lower	Upper
83	100		
131	8.3	0.0	40.2
85	66.9	34.5	94.5

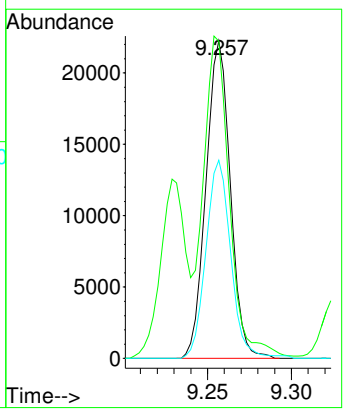


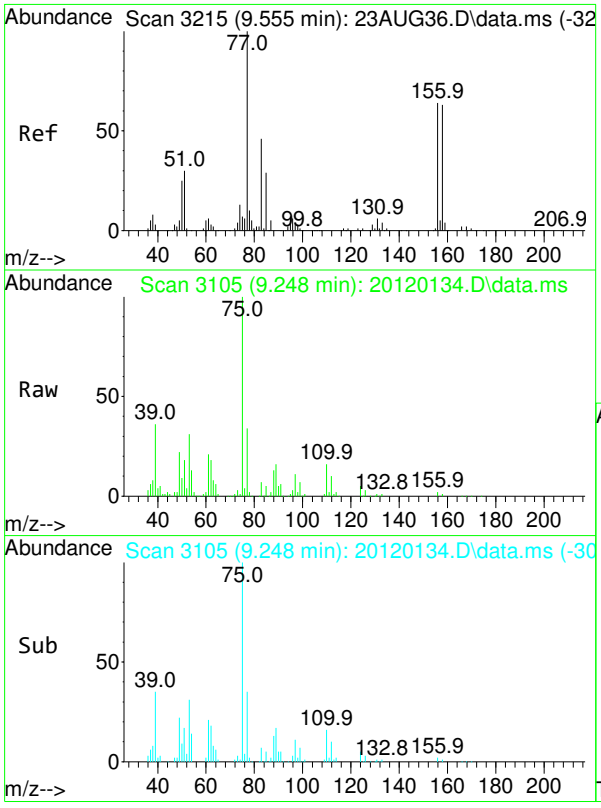


#92
1,2,3-Trichloropropane
Concen: 19.54 ug/L
RT: 9.257 min Scan# 3108
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:110 Resp: 22494

Ion	Ratio	Lower	Upper
110	100		
61	109.4	82.7	142.7
112	63.7	34.0	94.0

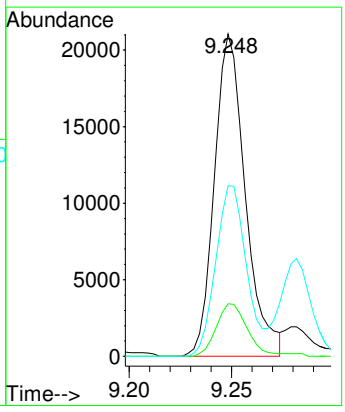


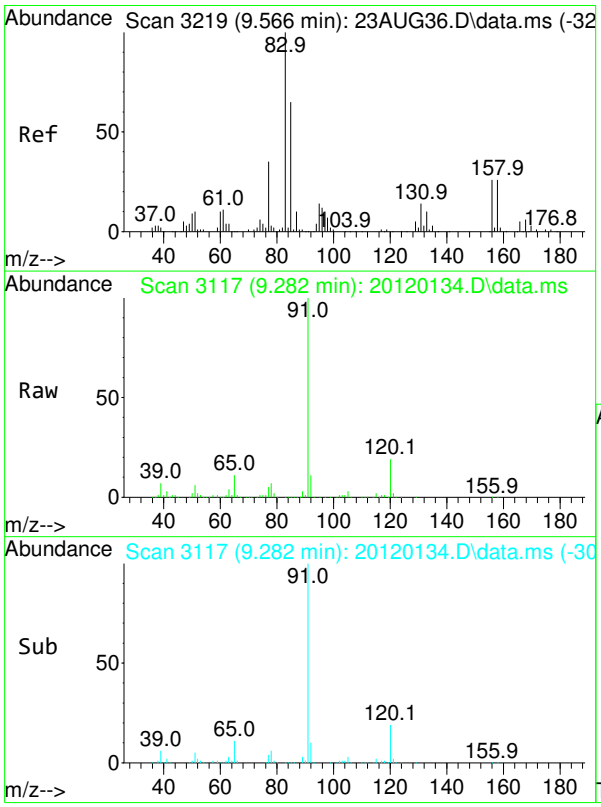


#93
trans-1,4-Dichloro-2-butene
Concen: 16.08 ug/L
RT: 9.248 min Scan# 3105
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 53 Resp: 22016

Ion	Ratio	Lower	Upper
53	100		
124	16.4	0.0	48.4
89	52.1	31.5	91.5

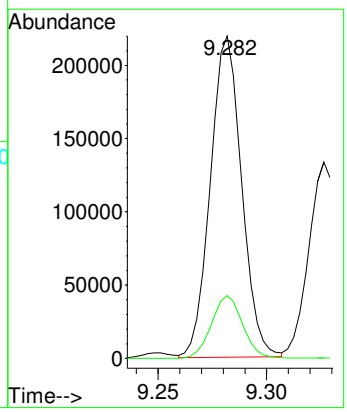


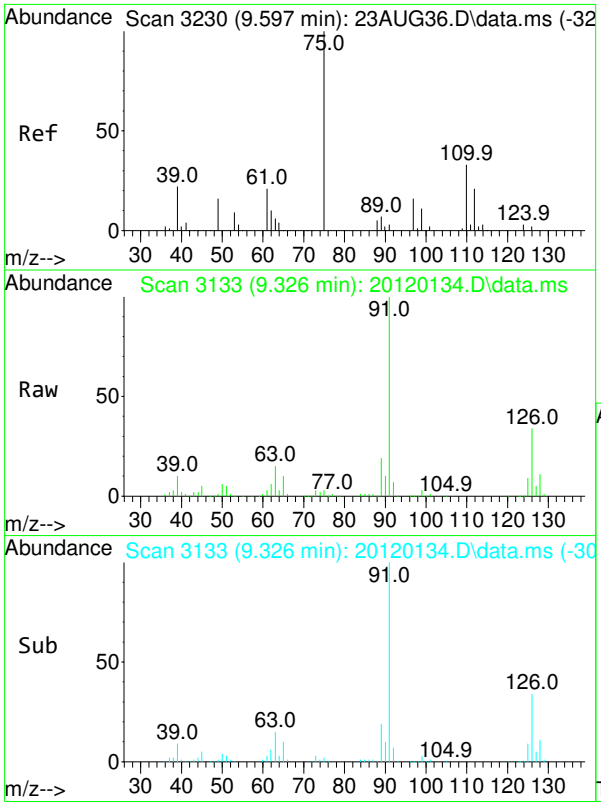


#94
n-Propylbenzene
Concen: 21.92 ug/L
RT: 9.282 min Scan# 3117
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 220131

Ion	Ratio	Lower	Upper
91	100		
120	19.6	0.0	49.5

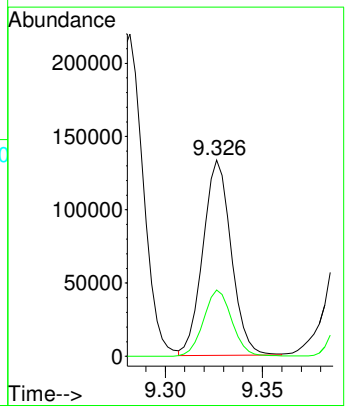


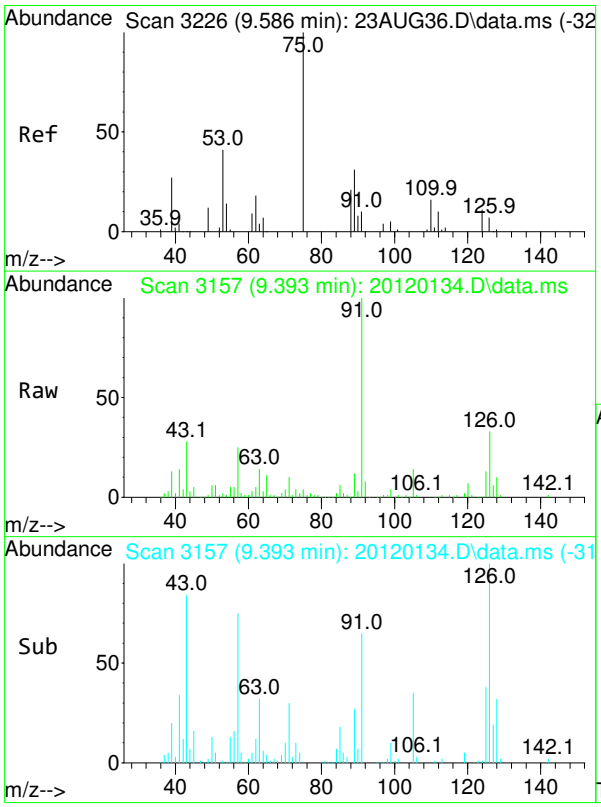


#95
2-Chlorotoluene
Concen: 20.45 ug/L
RT: 9.326 min Scan# 3133
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 134994

Ion	Ratio	Lower	Upper
91	100		
126	34.3	3.1	63.1

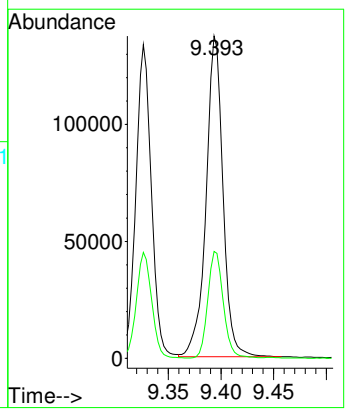


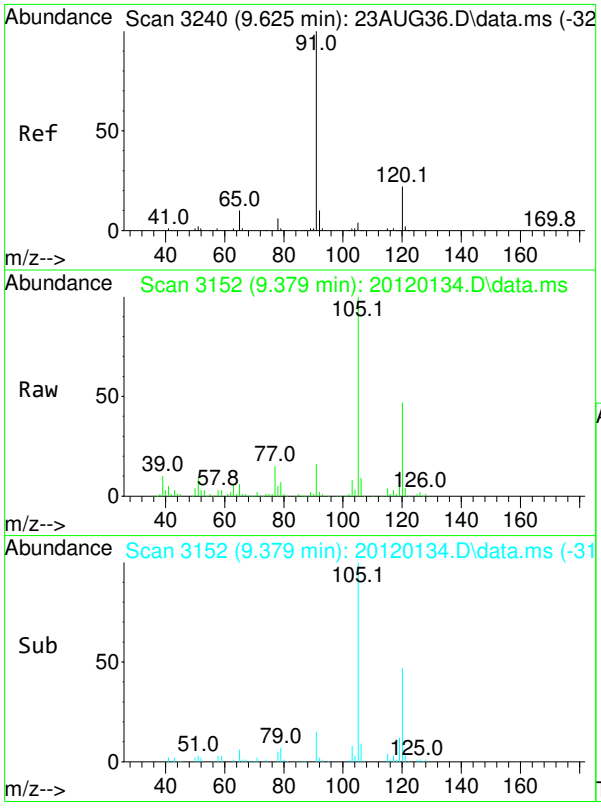


#96
4-Chlorotoluene
Concen: 20.38 ug/L
RT: 9.393 min Scan# 3157
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 152950

Ion	Ratio	Lower	Upper
91	100		
126	30.5	0.0	59.5

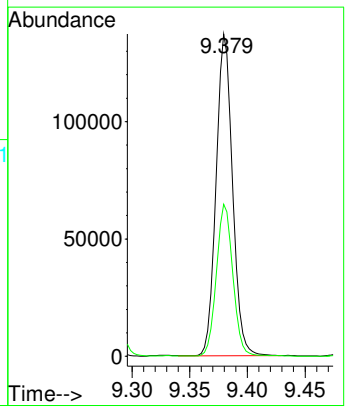


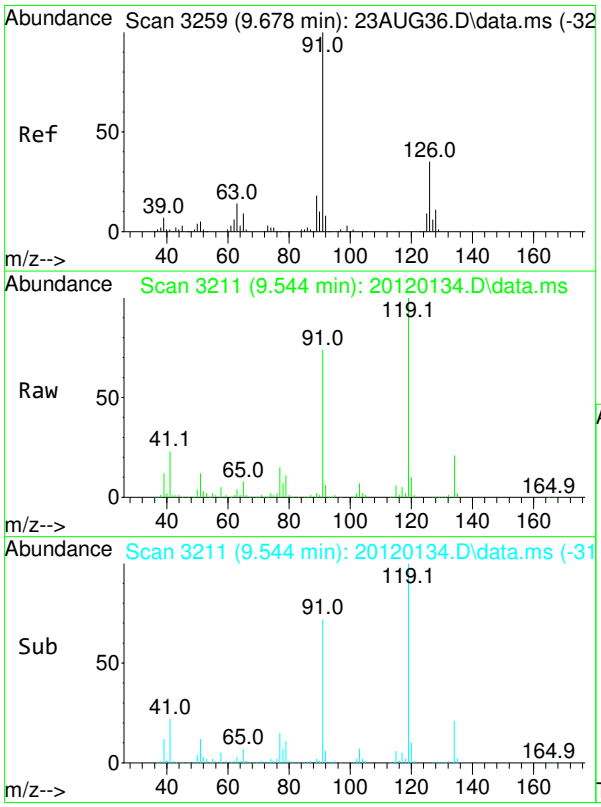


#97
1,3,5-Trimethylbenzene
Concen: 22.03 ug/L
RT: 9.379 min Scan# 3152
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:105 Resp: 136497

Ion	Ratio	Lower	Upper
105	100		
120	47.6	16.8	76.8

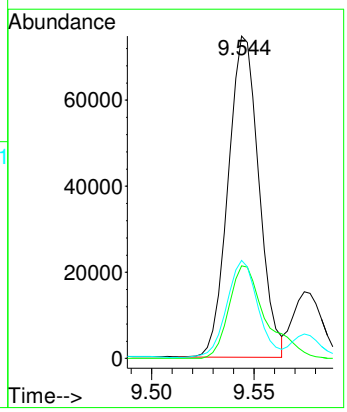


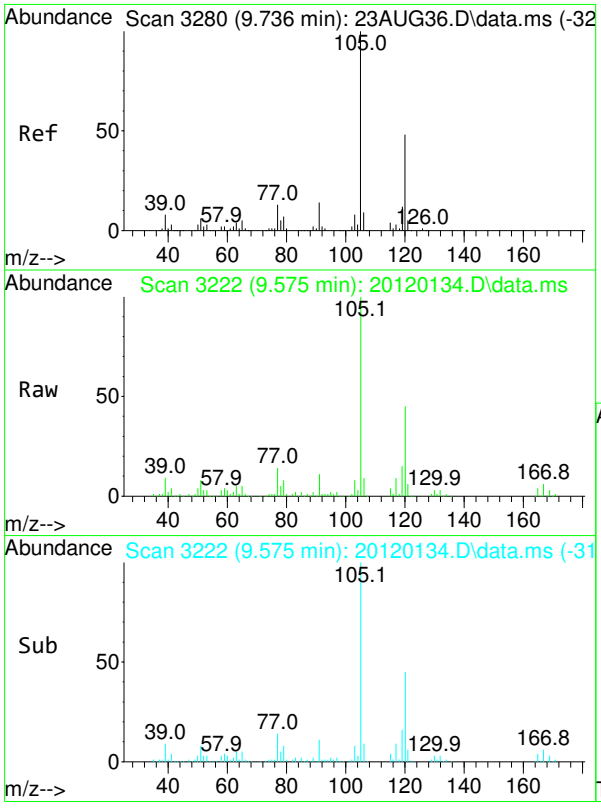


#98
tert-Butylbenzene
Concen: 20.63 ug/L
RT: 9.544 min Scan# 3211
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 77792

Ion	Ratio	Lower	Upper
91	100		
134	34.6	0.0	56.4
41	30.7	9.8	49.8

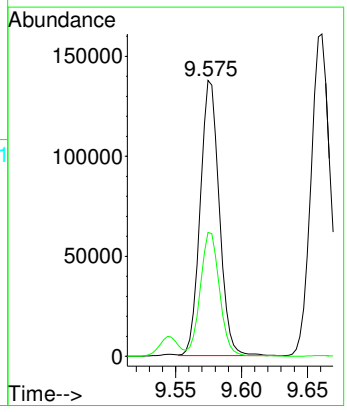


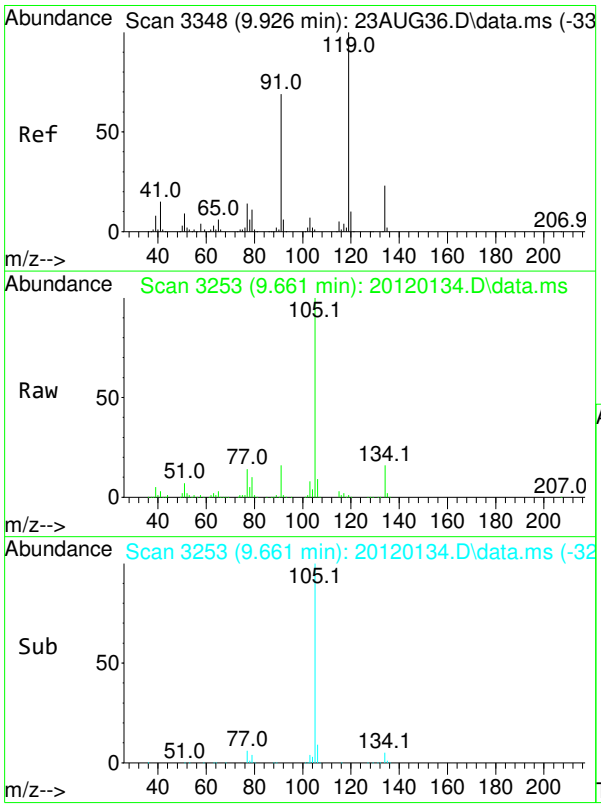


#99
1,2,4-Trimethylbenzene
Concen: 22.19 ug/L
RT: 9.575 min Scan# 3222
Delta R.T. -0.002 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:105 Resp: 138247

Ion	Ratio	Lower	Upper
105	100		
120	45.6	14.7	74.7

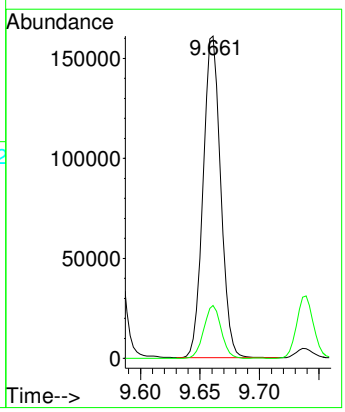


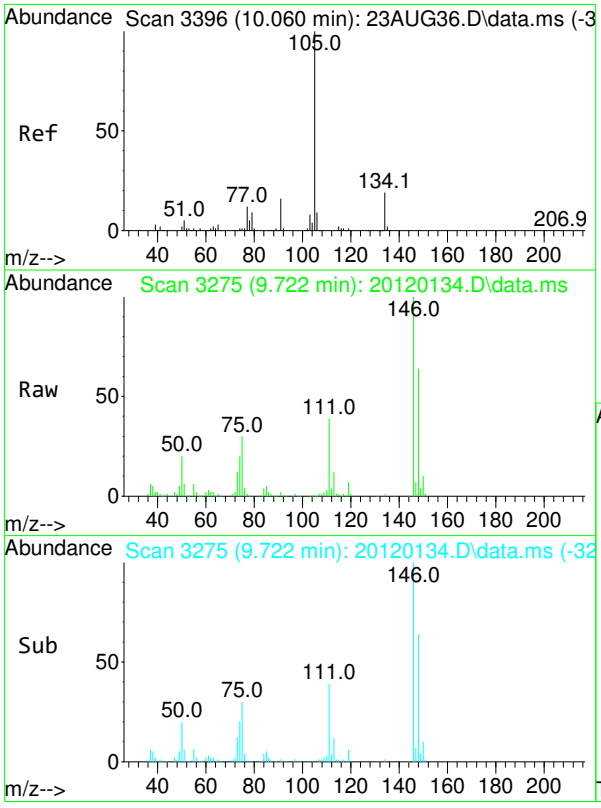


#100
sec-Butylbenzene
Concen: 22.75 ug/L
RT: 9.661 min Scan# 3253
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:105 Resp: 165082

Ion	Ratio	Lower	Upper
105	100		
134	16.3	0.0	45.7

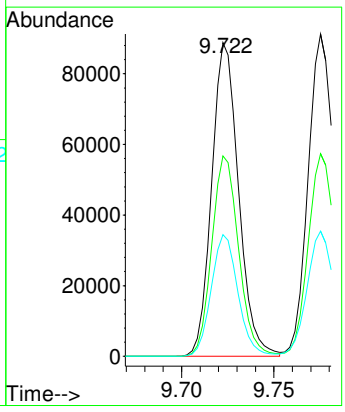


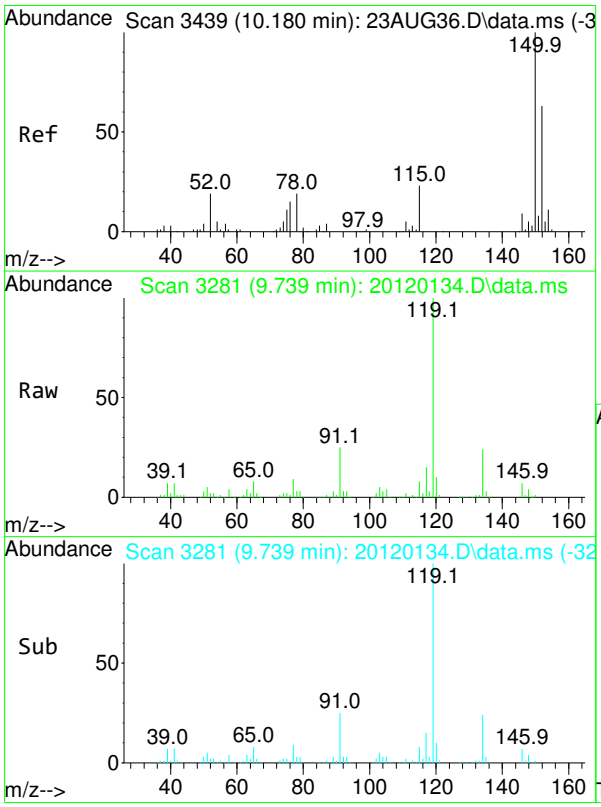


#102
1,3-Dichlorobenzene
Concen: 20.67 ug/L
RT: 9.722 min Scan# 3275
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:146 Resp: 90313

Ion	Ratio	Lower	Upper
146	100		
148	63.8	35.2	95.2
111	38.6	10.9	70.9

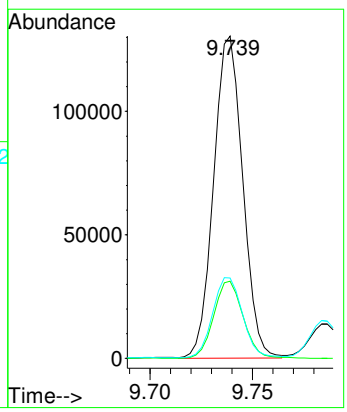


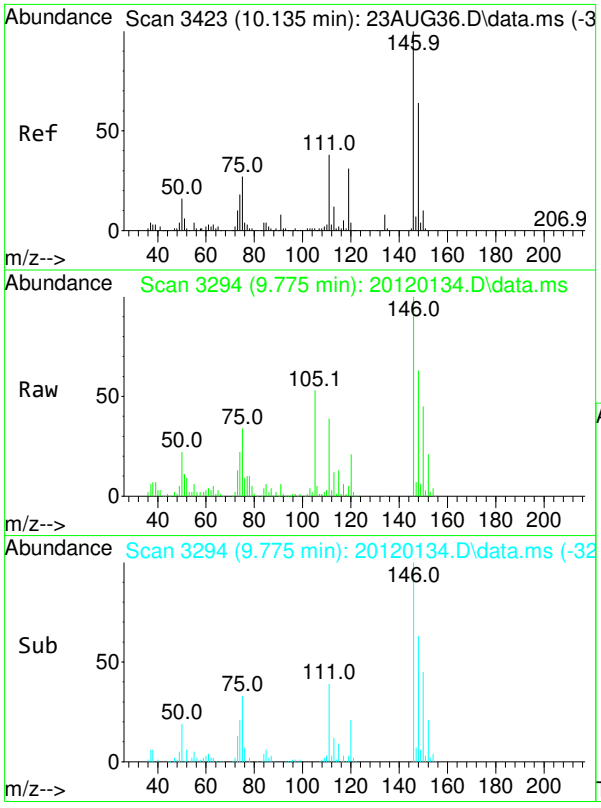


#103
p-Isopropyltoluene
Concen: 22.26 ug/L
RT: 9.739 min Scan# 3281
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:119 Resp: 128218

Ion	Ratio	Lower	Upper
119	100		
134	24.4	0.0	53.9
91	25.5	0.0	55.8

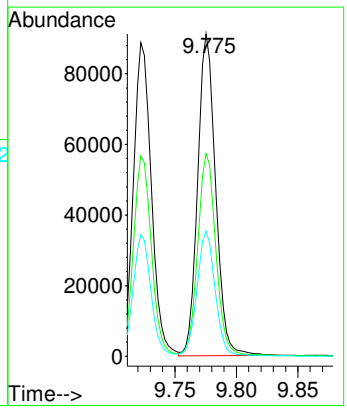


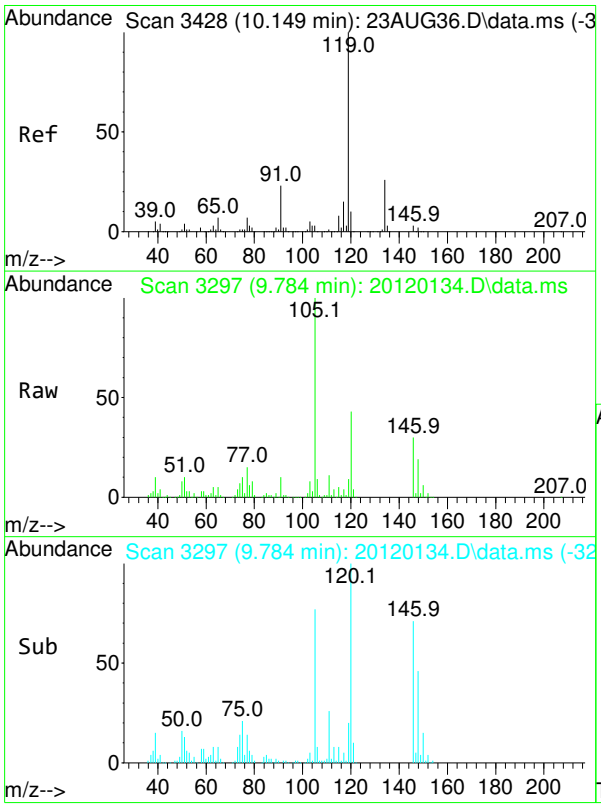


#104
1,4-Dichlorobenzene
Concen: 20.75 ug/L
RT: 9.775 min Scan# 3294
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:146 Resp: 92599

Ion	Ratio	Lower	Upper
146	100		
148	63.8	34.2	94.2
111	39.4	9.2	69.2

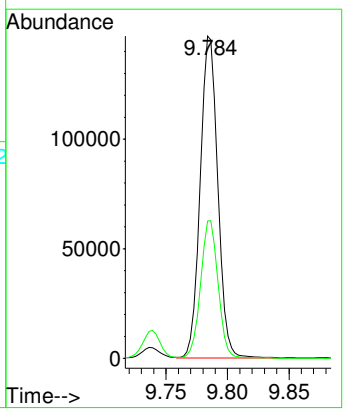


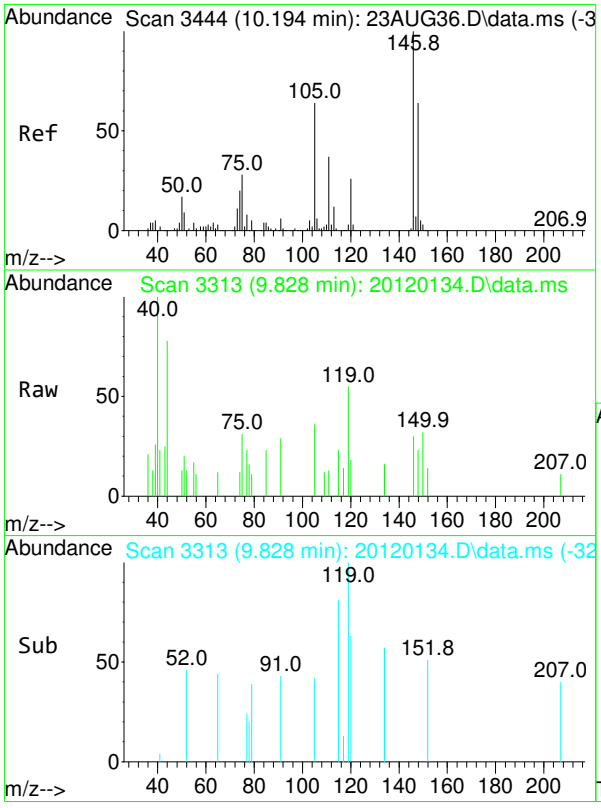


#105
1,2,3-Trimethylbenzene
Concen: 19.84 ug/L
RT: 9.784 min Scan# 3297
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:105 Resp: 145695

Ion	Ratio	Lower	Upper
105	100		
120	42.3	12.1	72.1

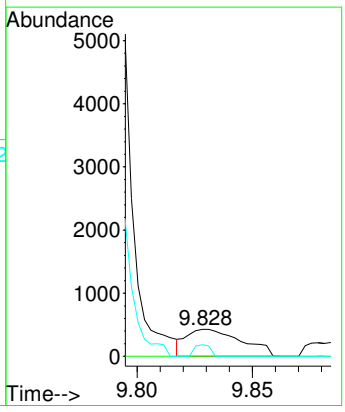


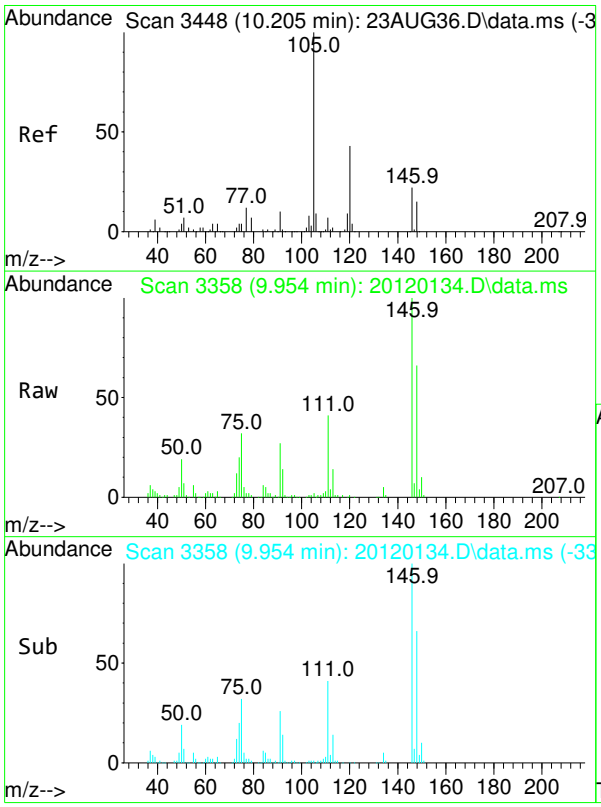


#106
Benzyl chloride
Concen: 0.36 ug/L
RT: 9.828 min Scan# 3313
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 713

Ion	Ratio	Lower	Upper
91	100		
126	0.0	0.0	48.9
65	12.1	0.0	43.6

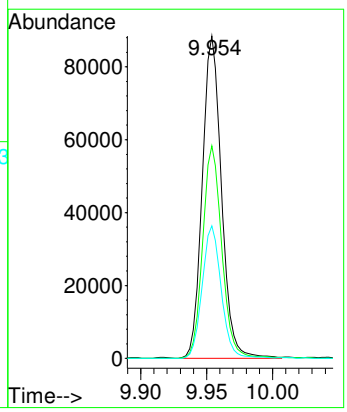


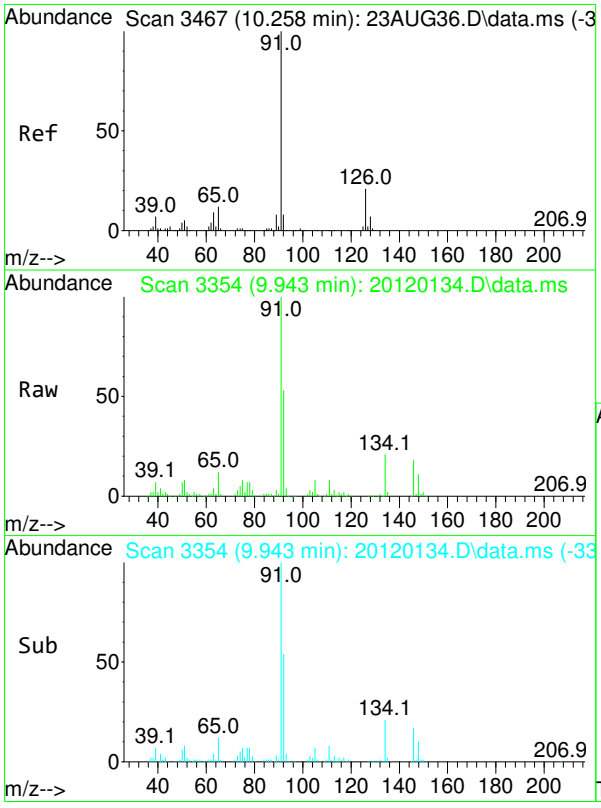


#107
1,2-Dichlorobenzene
Concen: 19.56 ug/L
RT: 9.954 min Scan# 3358
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:146 Resp: 89705

Ion	Ratio	Lower	Upper
146	100		
148	65.8	34.0	94.0
111	40.8	11.7	71.7

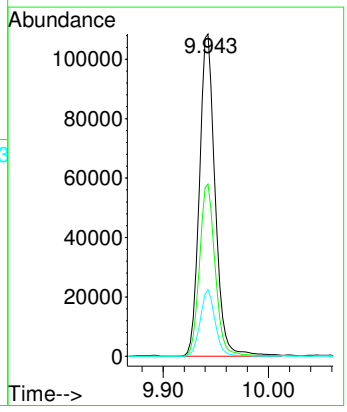


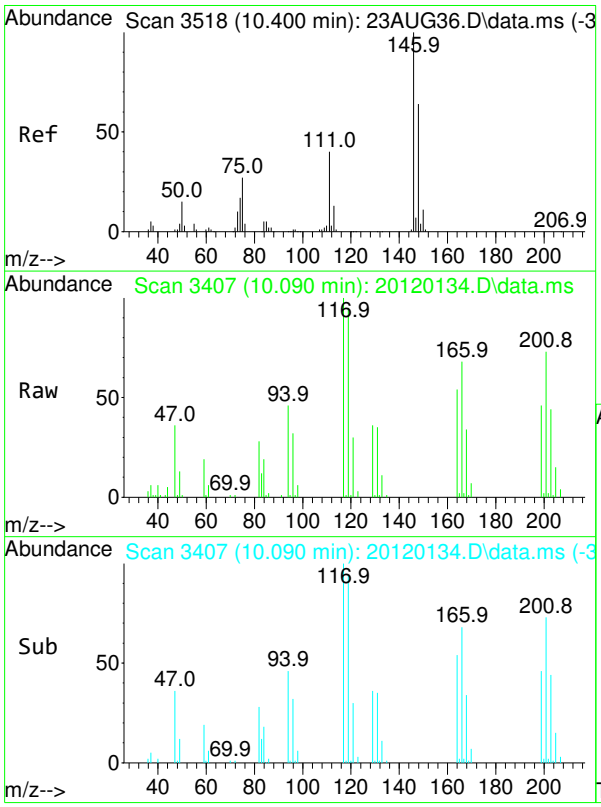


#108
n-Butylbenzene
Concen: 19.58 ug/L
RT: 9.943 min Scan# 3354
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 91 Resp: 112820

Ion	Ratio	Lower	Upper
91	100		
92	53.2	23.9	83.9
134	19.7	0.0	49.1

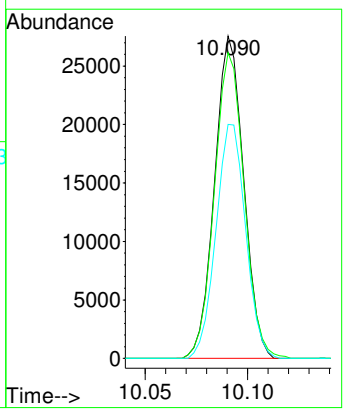


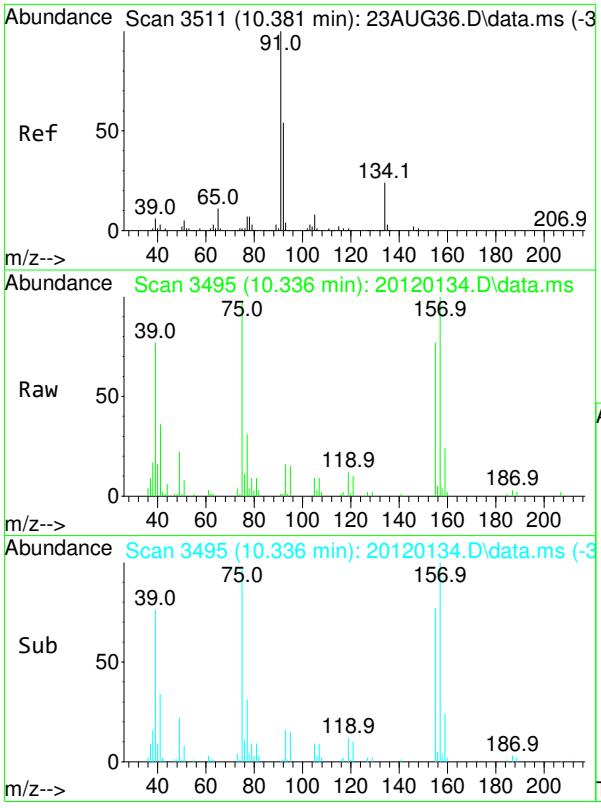


#109
Hexachloroethane
Concen: 20.37 ug/L
RT: 10.090 min Scan# 3407
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:117 Resp: 27095

Ion	Ratio	Lower	Upper
117	100		
119	97.0	67.6	127.6
201	74.2	40.8	100.8

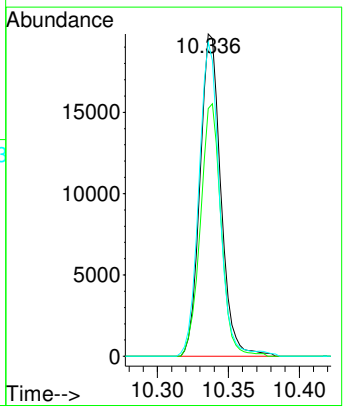


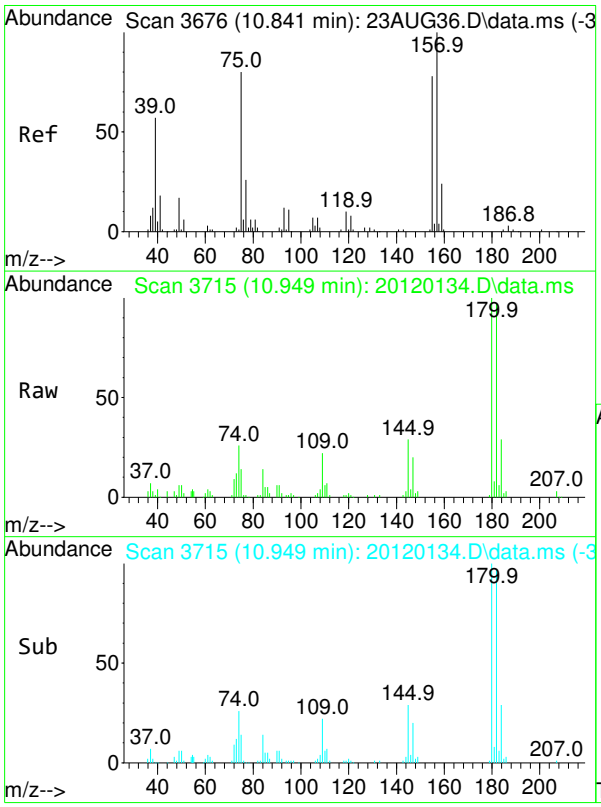


#110
1,2-Dibromo-3-chloropropane
Concen: 17.80 ug/L
RT: 10.336 min Scan# 3495
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:157 Resp: 20210

Ion	Ratio	Lower	Upper
157	100		
155	77.4	46.7	106.7
75	95.5	69.3	129.3

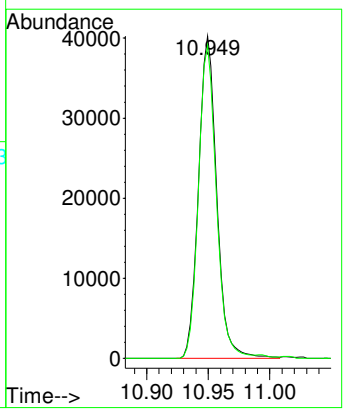


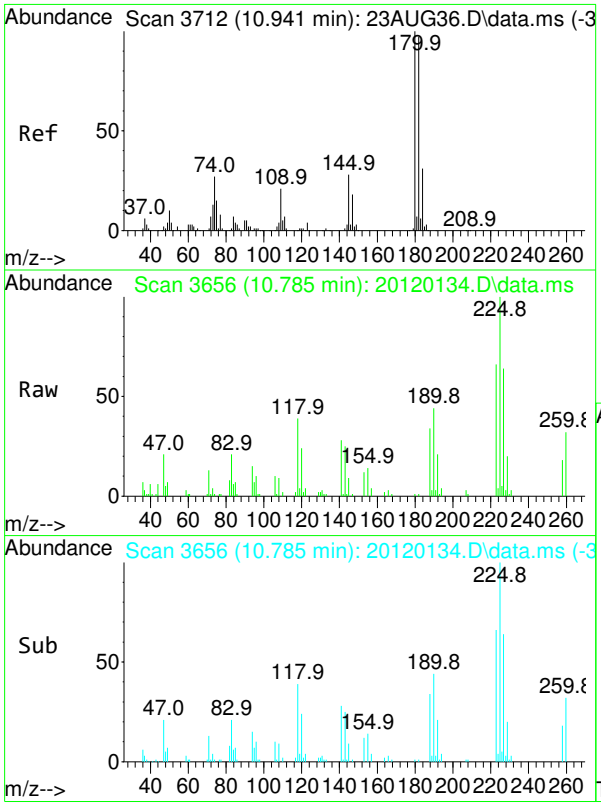


#112
1,2,4-Trichlorobenzene
Concen: 15.55 ug/L
RT: 10.949 min Scan# 3715
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:180 Resp: 41549

Ion	Ratio	Lower	Upper
180	100		
182	95.0	65.7	125.7

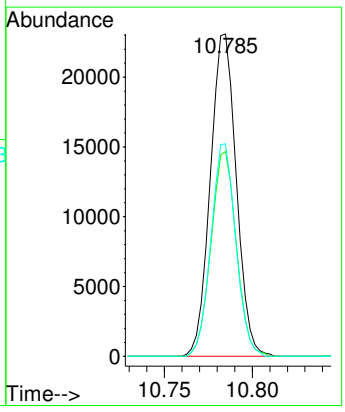


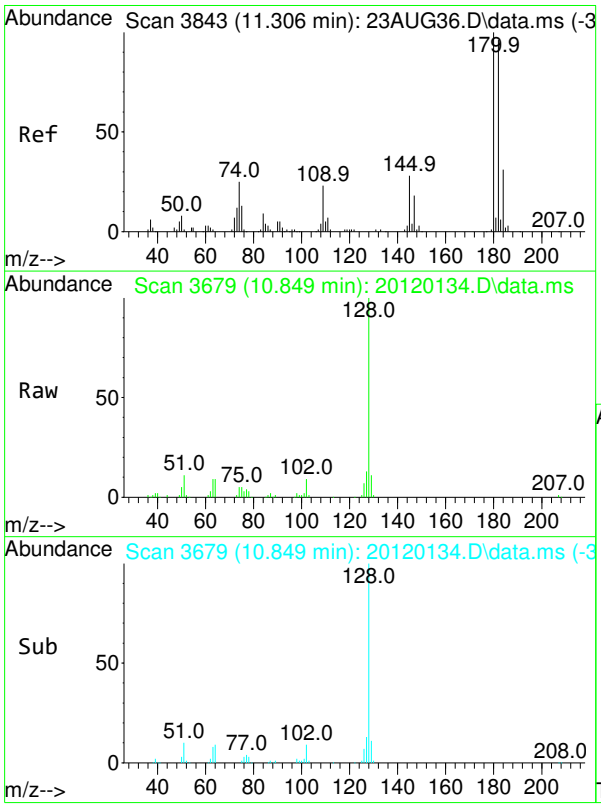


#113
Hexachlorobutadiene
Concen: 23.78 ug/L
RT: 10.785 min Scan# 3656
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:225 Resp: 23722

Ion	Ratio	Lower	Upper
225	100		
227	61.9	33.7	93.7
223	63.1	31.7	91.7

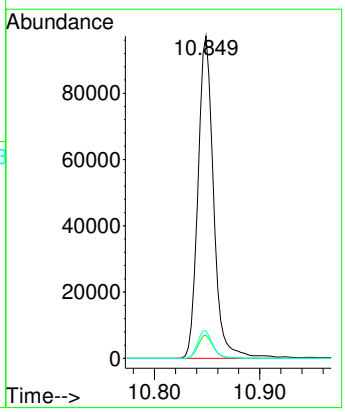


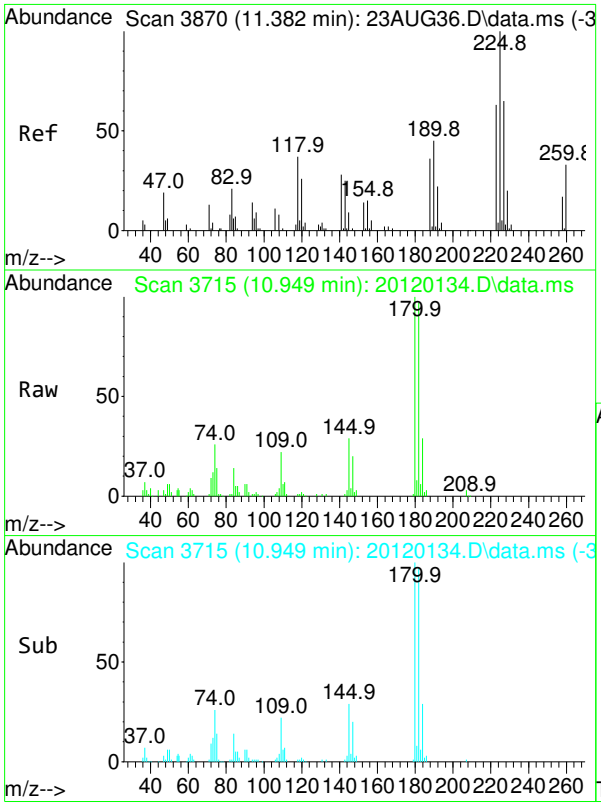


#114
Naphthalene
Concen: 9.93 ug/L
RT: 10.849 min Scan# 3679
Delta R.T. -0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:128 Resp: 100180

Ion	Ratio	Lower	Upper
128	100		
126	7.1	0.0	37.2
102	8.4	0.0	38.7

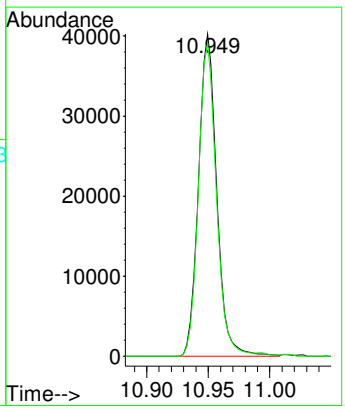


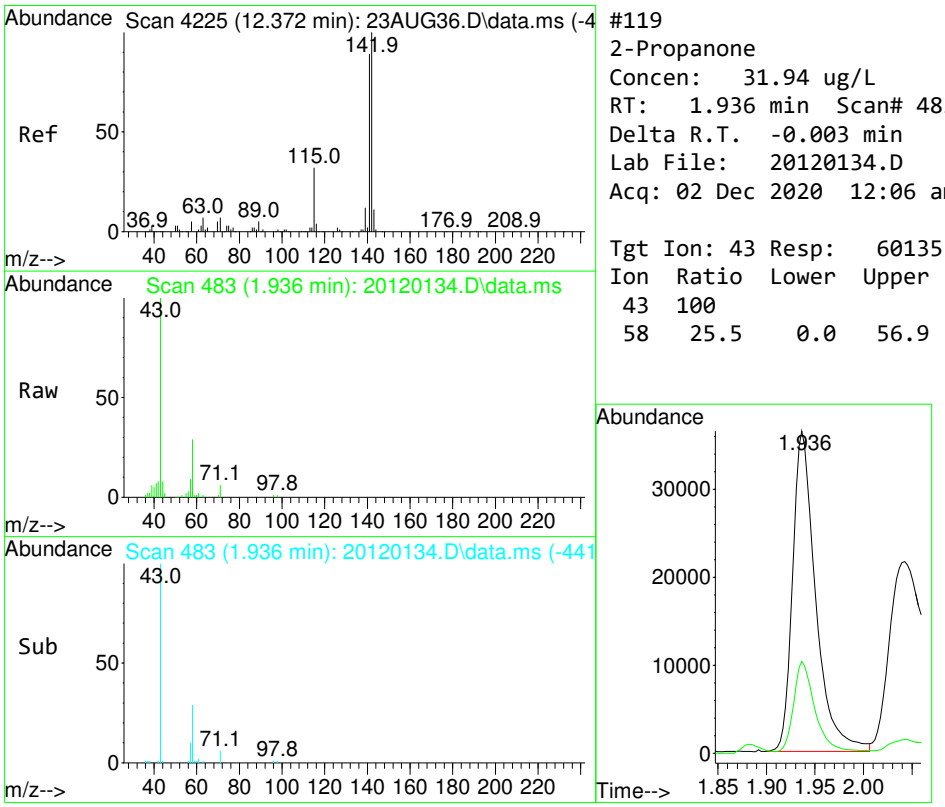


#115
1,2,3-Trichlorobenzene
Concen: 15.55 ug/L
RT: 10.949 min Scan# 3715
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion:180 Resp: 41549

Ion	Ratio	Lower	Upper
180	100		
182	95.0	65.7	125.7

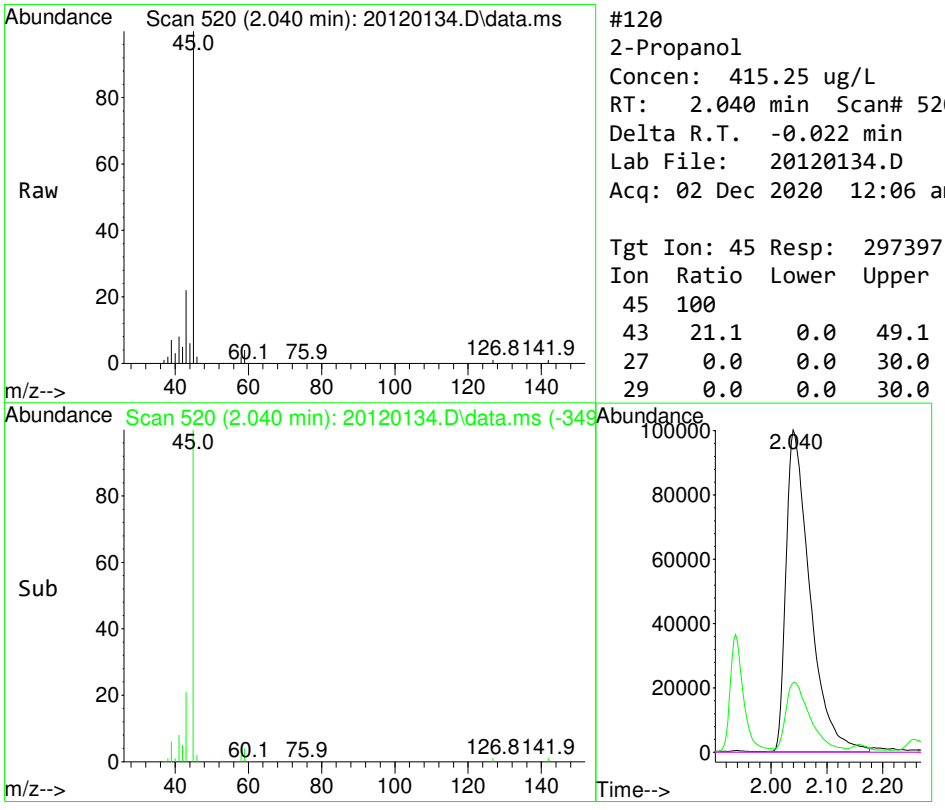




#119
2-Propanone
Concen: 31.94 ug/L
RT: 1.936 min Scan# 483
Delta R.T. -0.003 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 60135

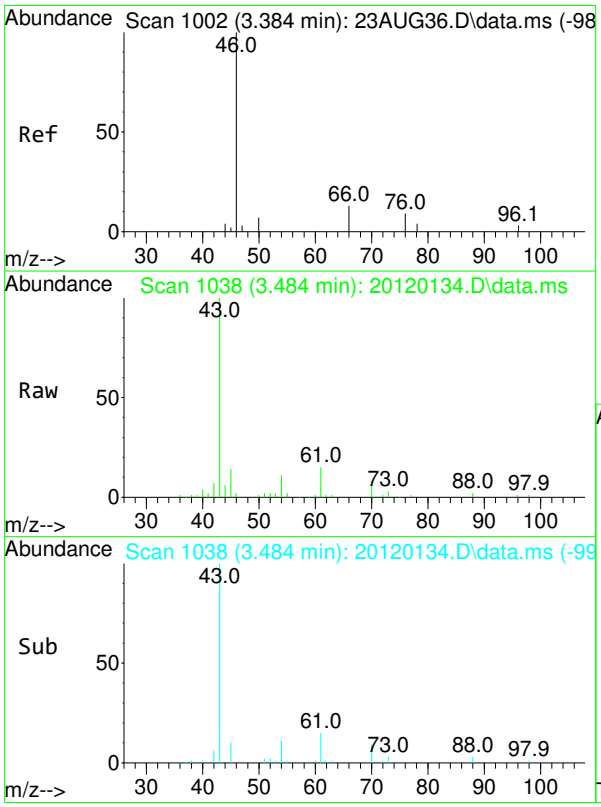
Ion	Ratio	Lower	Upper
43	100		
58	25.5	0.0	56.9



#120
2-Propanol
Concen: 415.25 ug/L
RT: 2.040 min Scan# 520
Delta R.T. -0.022 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 45 Resp: 297397

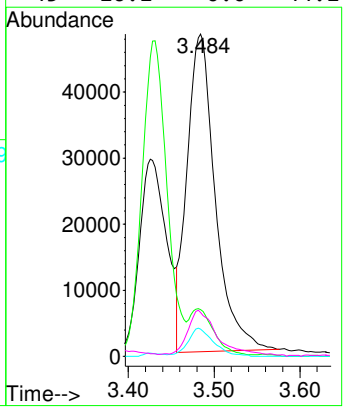
Ion	Ratio	Lower	Upper
45	100		
43	21.1	0.0	49.1
27	0.0	0.0	30.0
29	0.0	0.0	30.0

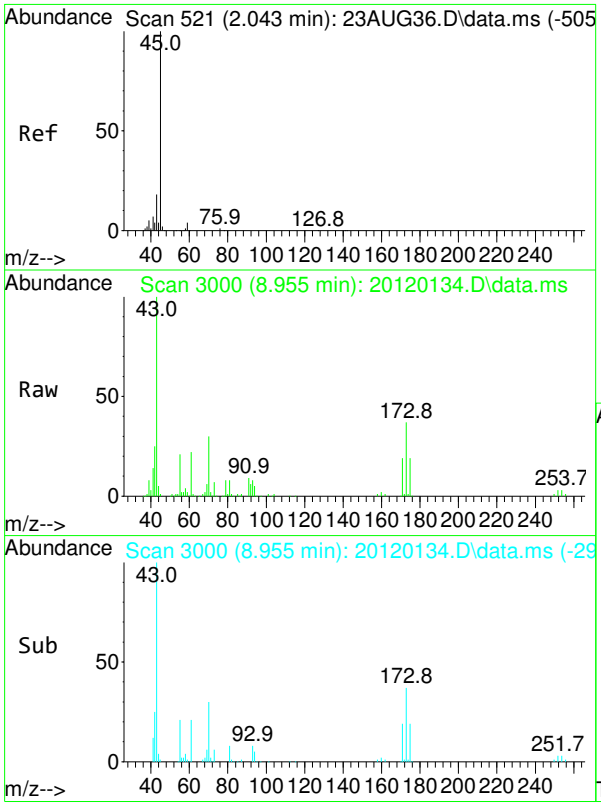


#121
Acetic Ether
Concen: 18.93 ug/L
RT: 3.484 min Scan# 1038
Delta R.T. 0.000 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 110265

Ion	Ratio	Lower	Upper
43	100		
61	12.4	0.0	42.4
70	8.2	0.0	37.5
45	16.1	0.0	44.1

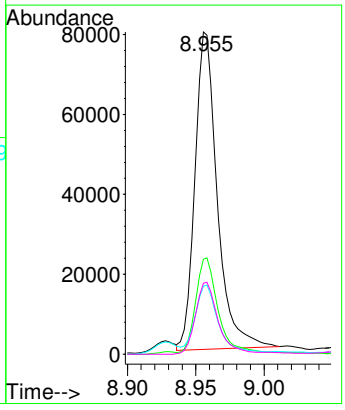




#123
Amyl Acetate
Concen: 16.17 ug/L
RT: 8.955 min Scan# 3000
Delta R.T. -0.001 min
Lab File: 20120134.D
Acq: 02 Dec 2020 12:06 am

Tgt Ion: 43 Resp: 90766

Ion	Ratio	Lower	Upper
43	100		
70	31.1	0.0	58.6
55	21.5	0.0	50.6
61	23.9	0.0	52.5



1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120135.D
Acq On : 02 Dec 2020 12:22 am
Operator : MF
Sample : 20111985-06A MSD
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 07:42:35 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.103	168	136026	20.00	ug/L		0.00
43) 1,4-Difluorobenzene	5.236	114	211656	20.00	ug/L		0.00
65) Chlorobenzene-d5	8.423	117	198464	20.00	ug/L		0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	104859	20.00	ug/L		0.00
118) Ethyl-d5-Acetate-d3	3.367	46	93892	20.00	ug/L		0.00
System Monitoring Compounds							
45) Dibromofluoromethane	4.037	111	91769	20.86	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 104.30%				
48) 1,2-Dichloroethane-d4	4.491	65	104436	20.24	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 101.20%				
67) Toluene-d8	7.296	98	264153	20.73	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 103.65%				
89) Bromofluorobenzene	9.148	95	97130	20.35	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 101.75%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.019	85	50510	29.87	ug/L		99
3) Chloromethane	1.117	50	70257	14.36	ug/L		100
4) Vinyl chloride	1.181	62	62958	23.58	ug/L		98
5) Bromomethane	1.365	96	28701	152.97	ug/L		99
6) Chloroethane	1.429	64	30370	36.02	ug/L		89
7) Dichlorofluoromethane	1.552	67	87355	17.59	ug/L		92
8) Trichlorofluoromethane	1.577	101	68929	19.98	ug/L		98
9) Ethanol	1.702	45	100241	266.21	ug/L		68
10) Ethyl ether	1.750	59	45408	19.82	ug/L		100
11) Acrolein	2.341	56	68548	Below Cal			98
12) 1,1-Dichloroethene	1.906	61	85009	22.29	ug/L		99
15) Acetone	1.937	43	59388	28.73	ug/L		96
17) Carbon disulfide	2.068	76	153978	22.81	ug/L		99
18) Allyl chloride	2.163	41	82615	15.69	ug/L		87
19) Methyl acetate	2.160	43	3187	0.58	ug/L	#	13
20) Acetonitrile	2.466	41	148842	78.21	ug/L		99
21) Methylene chloride	2.257	49	87971	18.55	ug/L		99
22) trans-1,2-Dichloroethene	2.475	61	86122	20.77	ug/L		99
23) t-Butanol	3.256	59	244395	163.82	ug/L		98
24) Acrylonitrile	2.441	53	46868	22.31	ug/L		93
25) Methyl tert-butyl ether	2.466	73	530191	76.78	ug/L		99
26) Hexane	2.706	57	687	0.31	ug/L	#	49
27) 1,1-Dichloroethane	2.854	63	107842	21.32	ug/L		98
28) Diisopropyl ether	2.890	45	246592	25.56	ug/L	#	40
29) Vinyl acetate	2.896	86	60	0.77	ug/L	#	1
30) Ethyl tert butyl ether	3.256	59	244395	32.76	ug/L		98
31) Methylcyclopentane	3.314	56	88028	18.04	ug/L		95
32) 2,2-Dichloropropane	3.431	77	66930	19.23	ug/L		98
33) cis-1,2-Dichloroethene	3.429	61	96016	21.41	ug/L		99
34) 2-Butanone	3.426	43	62441	18.98	ug/L		100
35) Ethyl Acetate	3.482	43	109534	16.98	ug/L		97
36) Methyl acrylate	3.529	55	87480	19.49	ug/L		99
37) Propionitrile	4.190	54	980	3.36	ug/L	#	1
38) Bromochloromethane	3.702	49	62559	22.16	ug/L		97
39) Tetrahydrofuran	3.724	42	40290	18.13	ug/L		97

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120135.D
Acq On : 02 Dec 2020 12:22 am
Operator : MF
Sample : 20111985-06A MSD
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 07:42:35 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
40) Methacrylonitrile	3.663	67	34925	19.16	ug/L		96
41) Chloroform	3.839	83	101995	19.76	ug/L		99
42) Cyclohexane	4.098	56	3292	Below Cal		#	1
44) 1,1,1-Trichloroethane	4.025	97	77320	21.74	ug/L		98
46) Carbon tetrachloride	4.229	117	64094	20.75	ug/L		98
47) 1,1-Dichloropropene	4.243	75	69258	21.16	ug/L		99
49) 1,2-Dichloroethane	4.605	62	84623	21.72	ug/L		98
50) Benzene	4.511	78	200357	22.06	ug/L		99
51) Tertiaryamylmethylether	4.750	73	166131	26.25	ug/L	#	96
52) Isobutyl Alcohol	4.625	43	697686	89.42	ug/L	#	39
53) Heptane	5.024	43	265	Below Cal		#	44
54) 1,4-Dioxane	6.173	88	1646	20.09	ug/L		85
57) Trichloroethene	5.615	130	49097	22.61	ug/L		97
58) 1,2-Dichloropropane	6.092	63	59626	19.42	ug/L		98
59) Dibromomethane	6.231	93	42903	21.54	ug/L		98
60) Methyl methacrylate	6.295	41	62277	16.31	ug/L		95
61) Bromodichloromethane	6.532	83	69789	21.02	ug/L		99
62) 2-Chloroethyl vinyl ether	6.898	43	139	0.37	ug/L	#	1
63) 2-Nitropropane	6.811	43	24853	19.05	ug/L		95
64) cis-1,3-Dichloropropene	7.054	75	75431	20.07	ug/L		98
66) 4-Methyl-2-pentanone	7.221	43	163520	31.59	ug/L		85
68) Toluene	7.358	91	186153	21.64	ug/L		100
69) trans-1,3-Dichloropropene	7.600	75	70221	20.48	ug/L		98
71) Ethyl methacrylate	7.673	69	69035	18.46	ug/L		94
72) 1,1,2-Trichloroethane	7.751	97	55643	21.33	ug/L		98
73) Tetrachloroethene	7.793	166	51870	23.04	ug/L		97
74) 1,3-Dichloropropane	7.868	76	83594	20.01	ug/L		96
75) 2-Hexanone	7.935	43	95673	21.57	ug/L		91
76) Chlorodibromomethane	8.027	129	53479	20.13	ug/L		98
77) Butyl acetate	8.044	43	120166	16.41	ug/L		98
78) 1,2-Dibromoethane	8.097	107	61444	21.33	ug/L		99
79) Chlorobenzene	8.440	112	122963	21.86	ug/L		99
80) 1,1,1,2-Tetrachloroethane	8.507	131	46520	21.67	ug/L		100
81) Ethylbenzene	8.512	91	197736	21.42	ug/L		99
82) m/p-Xylene	8.599	91	308767	44.07	ug/L		99
83) Nonane	8.643	43	52608	30.06	ug/L	#	51
84) Styrene	8.847	104	113547	23.96	ug/L		98
85) o-Xylene	8.833	91	155188	21.76	ug/L		100
86) Cyclohexanone	9.087	55	3685	9.75	ug/L	#	42
87) Bromoform	8.950	173	41150	18.25	ug/L		99
88) Isopropylbenzene	9.050	105	172950	23.06	ug/L		100
90) Bromobenzene	9.221	77	85576	21.37	ug/L		97
91) 1,1,2,2-Tetrachloroethane	9.232	83	105723	20.00	ug/L		99
92) 1,2,3-Trichloropropane	9.257	110	22499	20.48	ug/L		99
93) trans-1,4-Dichloro-2-b...	9.248	53	22528	17.24	ug/L		92
94) n-Propylbenzene	9.282	91	220162	22.96	ug/L		99
95) 2-Chlorotoluene	9.327	91	134386	21.33	ug/L		97
96) 4-Chlorotoluene	9.393	91	155302	21.67	ug/L		98
97) 1,3,5-Trimethylbenzene	9.380	105	139471	23.59	ug/L		99
98) tert-Butylbenzene	9.544	91	76863	21.35	ug/L		92
99) 1,2,4-Trimethylbenzene	9.578	105	136549	22.96	ug/L		100
100) sec-Butylbenzene	9.661	105	164343	23.73	ug/L		99
102) 1,3-Dichlorobenzene	9.723	146	87982	20.61	ug/L		99

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120135.D
Acq On : 02 Dec 2020 12:22 am
Operator : MF
Sample : 20111985-06A MSD
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 07:42:35 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
103) p-Isopropyltoluene	9.739	119	126629	22.50	ug/L	100
104) 1,4-Dichlorobenzene	9.776	146	92619	21.24	ug/L	99
105) 1,2,3-Trimethylbenzene	9.784	105	146184	20.37	ug/L	99
106) Benzyl chloride	9.834	91	323	0.30	ug/L #	62
107) 1,2-Dichlorobenzene	9.954	146	93537	20.88	ug/L	97
108) n-Butylbenzene	9.943	91	116280	20.66	ug/L	100
109) Hexachloroethane	10.091	117	27867	21.39	ug/L	97
110) 1,2-Dibromo-3-chloropr...	10.339	157	20179	18.19	ug/L	97
112) 1,2,4-Trichlorobenzene	10.950	180	42091	16.12	ug/L	99
113) Hexachlorobutadiene	10.785	225	23722	24.34	ug/L	99
114) Naphthalene	10.849	128	103695	10.50	ug/L	100
115) 1,2,3-Trichlorobenzene	10.950	180	42091	16.12	ug/L	99
119) 2-Propanone	1.937	43	59388	31.52	ug/L	96
120) 2-Propanol	2.040	45	279273	389.41	ug/L #	96
121) Acetic Ether	3.482	43	108673	18.64	ug/L	98
123) Amyl Acetate	8.958	43	92421	16.43	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

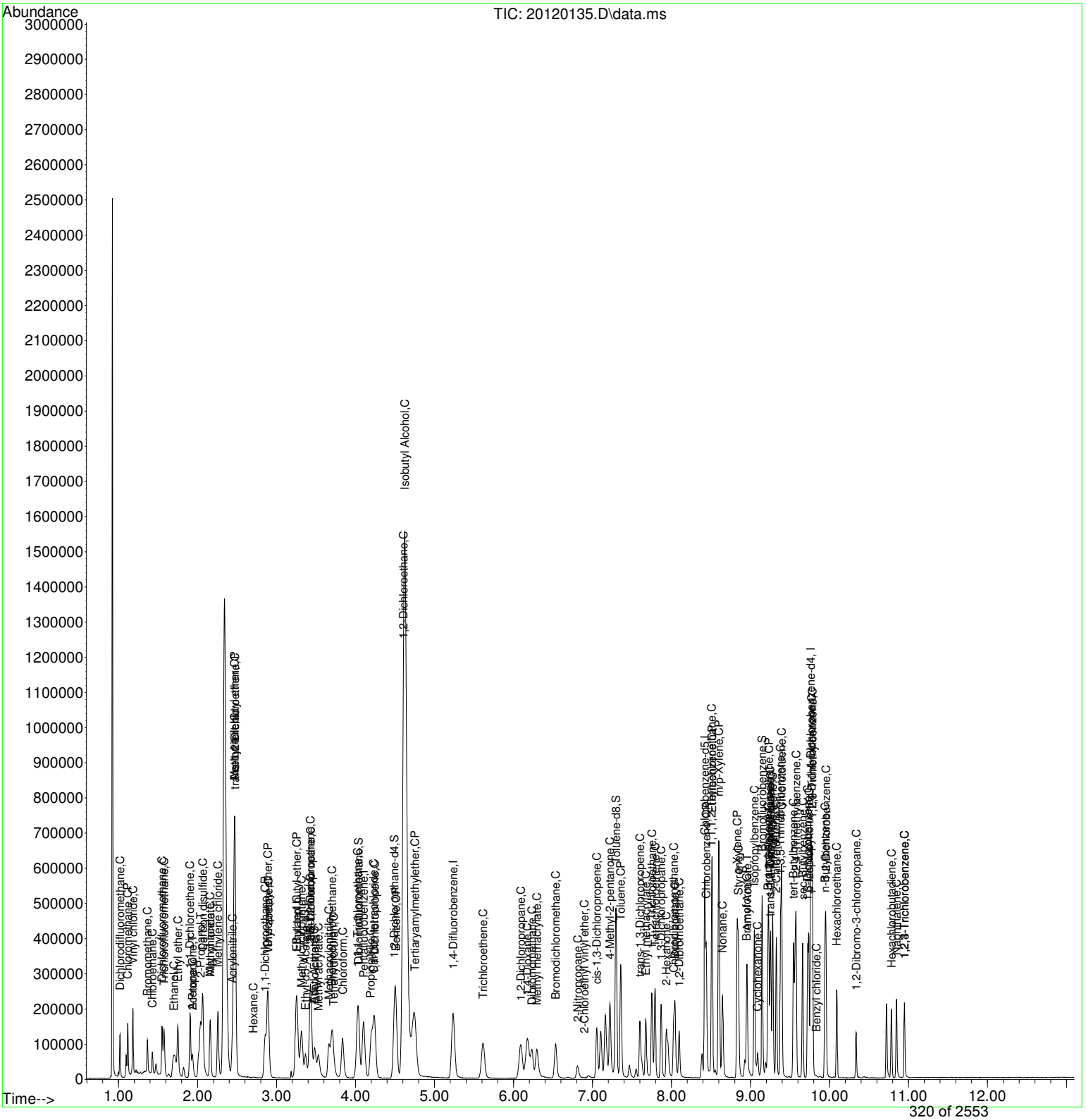
Quantitation Report (QT Reviewed)

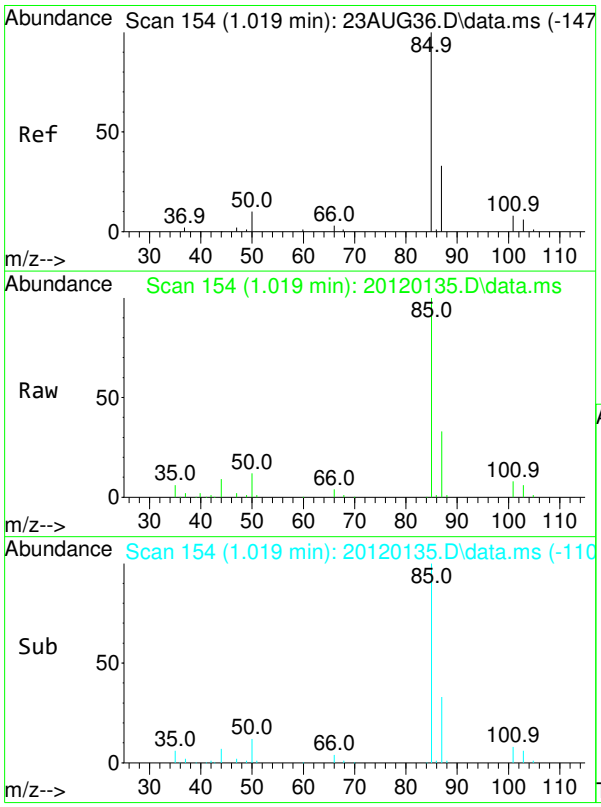
1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120135.D
Acq On : 02 Dec 2020 12:22 am
Operator : MF
Sample : 20111985-06A MSD
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 07:42:35 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

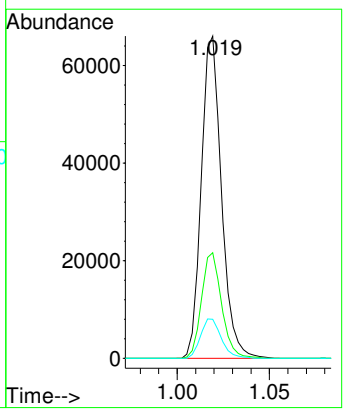


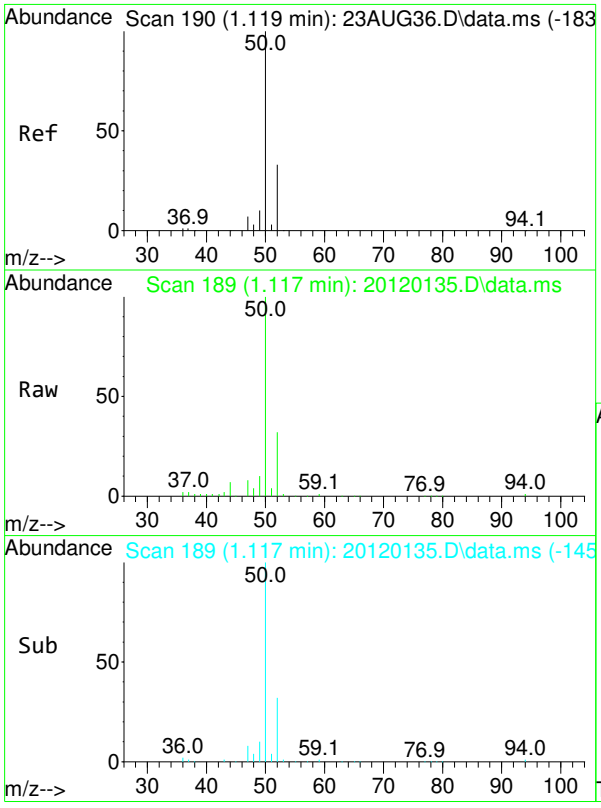


#2
Dichlorodifluoromethane
Concen: 29.87 ug/L
RT: 1.019 min Scan# 154
Delta R.T. 0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 85 Resp: 50510

Ion	Ratio	Lower	Upper
85	100		
87	32.6	2.2	62.2
50	12.6	0.0	42.7

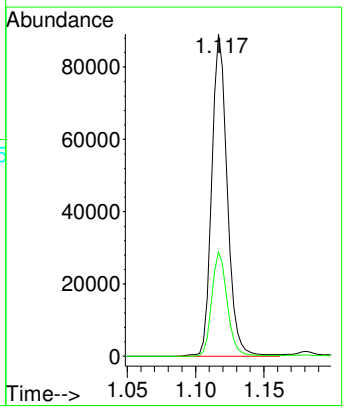


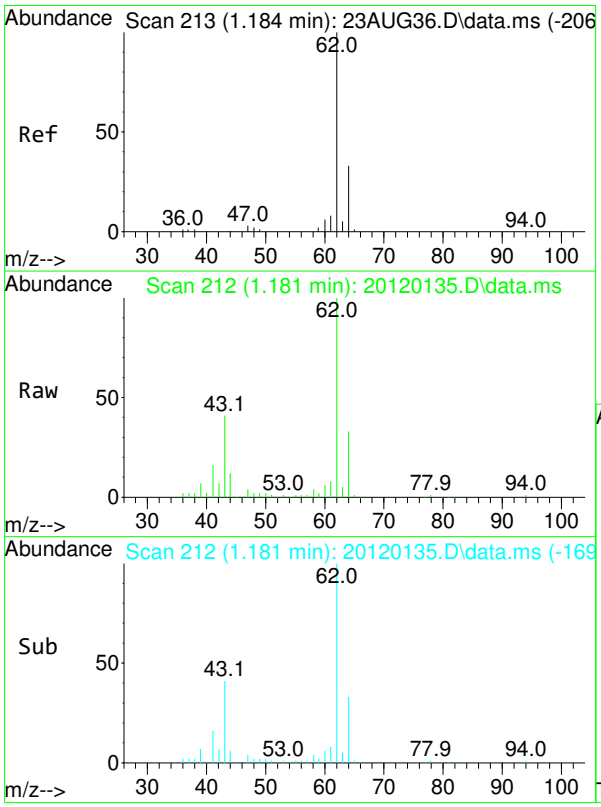


#3
Chloromethane
Concen: 14.36 ug/L
RT: 1.117 min Scan# 189
Delta R.T. 0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 50 Resp: 70257

Ion	Ratio	Lower	Upper
50	100		
52	32.5	2.4	62.4

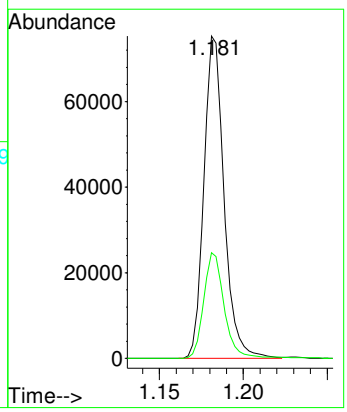


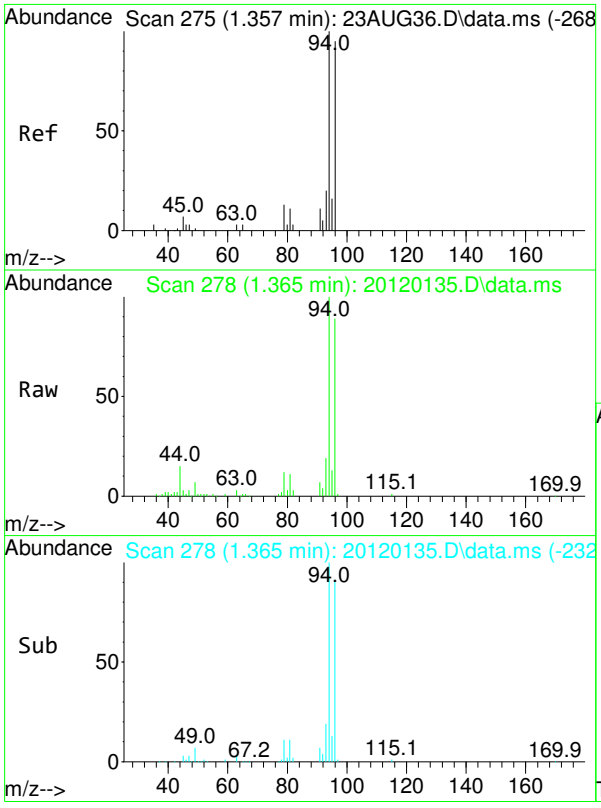


#4
Vinyl chloride
Concen: 23.58 ug/L
RT: 1.181 min Scan# 212
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 62 Resp: 62958

Ion	Ratio	Lower	Upper
62	100		
64	33.5	2.3	62.3

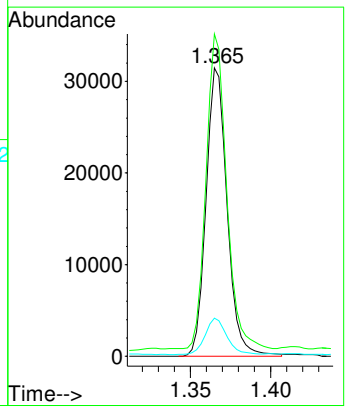


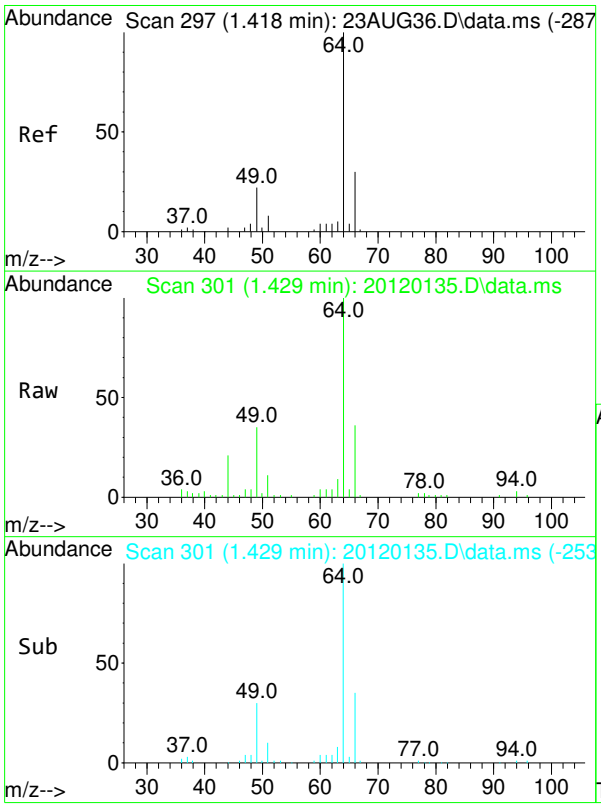


#5
Bromomethane
Concen: 152.97 ug/L
RT: 1.365 min Scan# 278
Delta R.T. 0.009 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 96 Resp: 28701

Ion	Ratio	Lower	Upper
96	100		
94	107.5	77.8	137.8
79	12.9	0.0	45.3

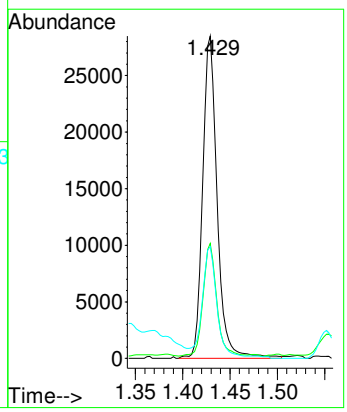


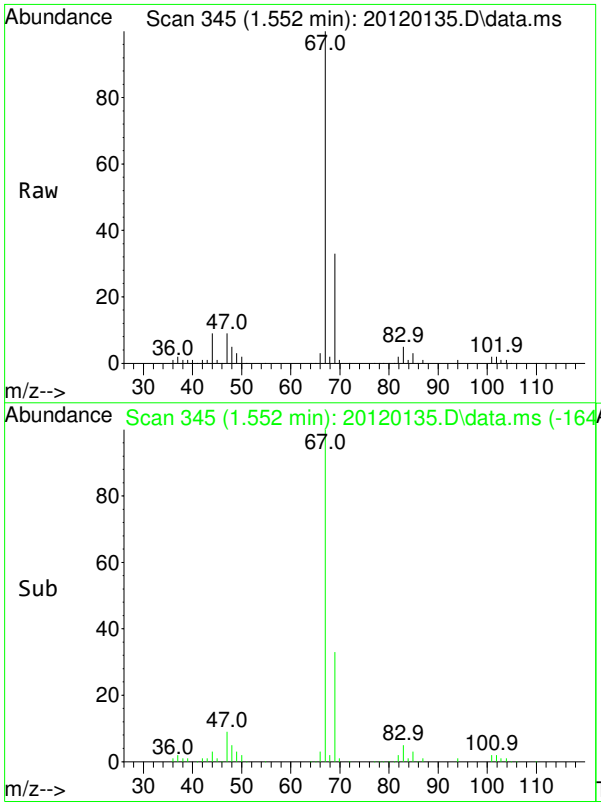


#6
Chloroethane
Concen: 36.02 ug/L
RT: 1.429 min Scan# 301
Delta R.T. 0.014 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 64 Resp: 30370

Ion	Ratio	Lower	Upper
64	100		
66	32.8	2.1	62.1
49	32.8	14.5	74.5

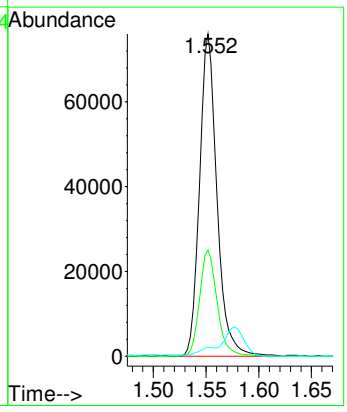


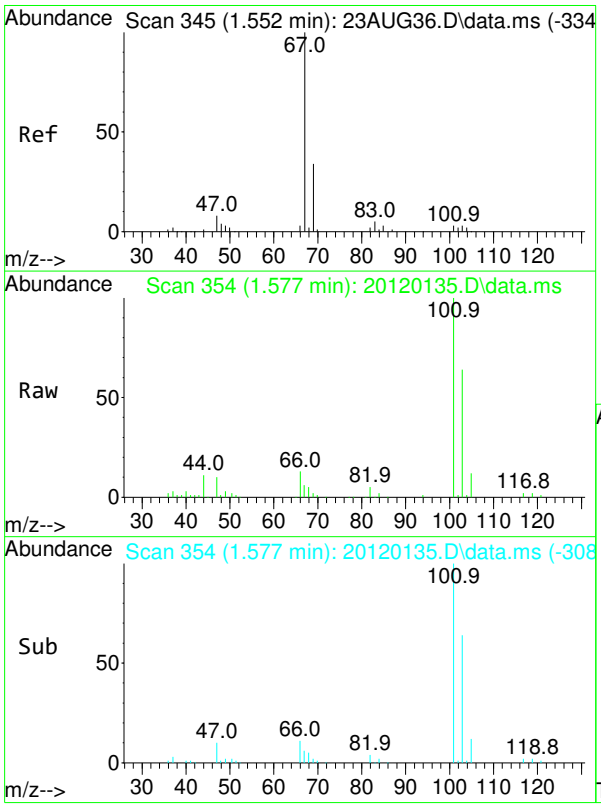


#7
Dichlorofluoromethane
Concen: 17.59 ug/L
RT: 1.552 min Scan# 345
Delta R.T. 0.006 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 67 Resp: 87355

Ion	Ratio	Lower	Upper
67	100		
69	33.3	2.3	62.3
66	2.1	0.0	41.5

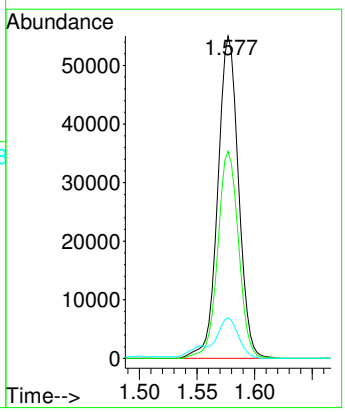


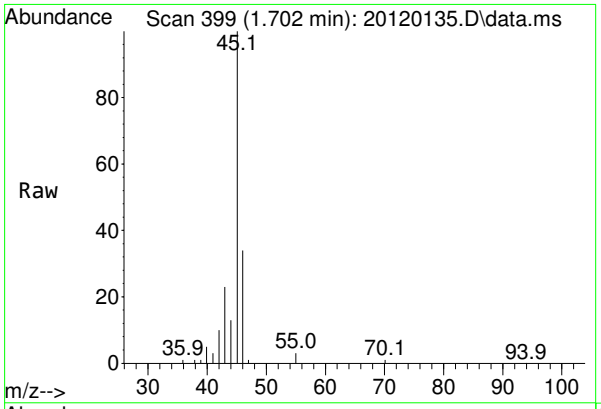


#8
Trichlorofluoromethane
Concen: 19.98 ug/L
RT: 1.577 min Scan# 354
Delta R.T. 0.009 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:101 Resp: 68929

Ion	Ratio	Lower	Upper
101	100		
103	64.6	35.0	95.0
66	12.6	0.0	46.7

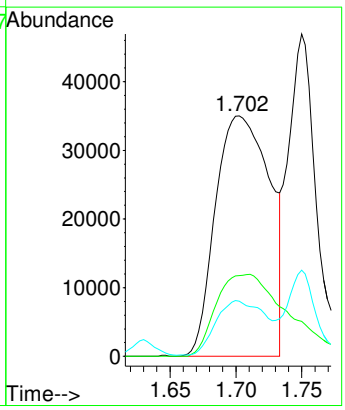


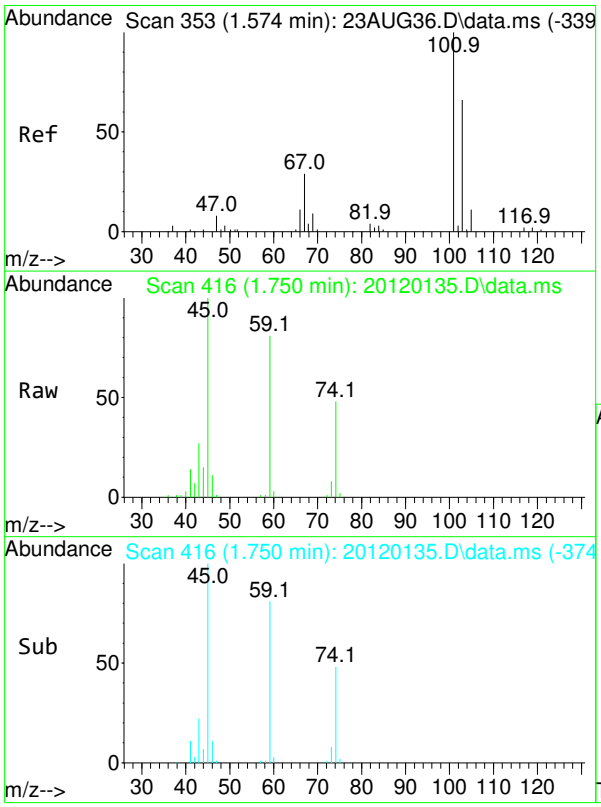


#9
Ethanol
Concen: 266.21 ug/L
RT: 1.702 min Scan# 399
Delta R.T. -0.048 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 45 Resp: 100241

Ion	Ratio	Lower	Upper
45	100		
46	45.3	0.0	55.2
43	20.1	0.0	43.1

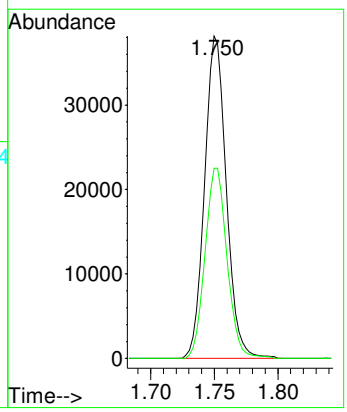


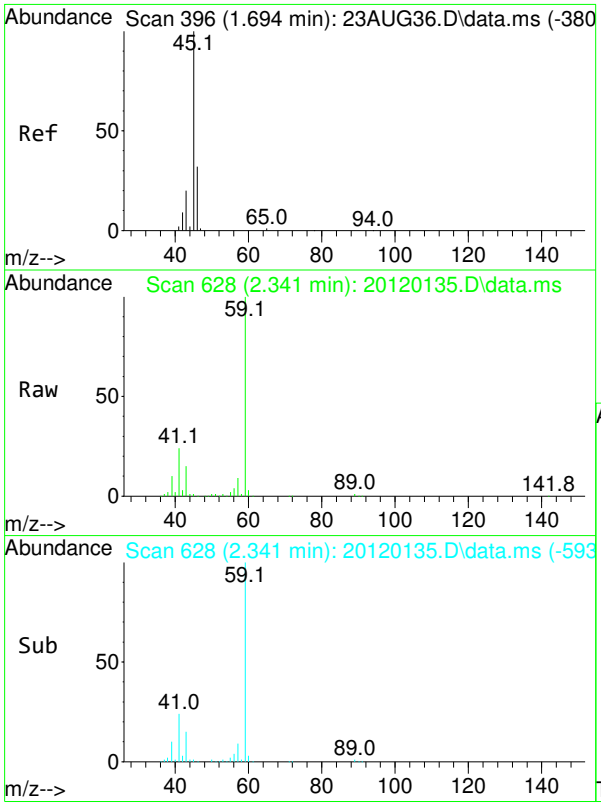


#10
Ethyl ether
Concen: 19.82 ug/L
RT: 1.750 min Scan# 416
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 59 Resp: 45408

Ion	Ratio	Lower	Upper
59	100		
74	59.9	29.5	89.5

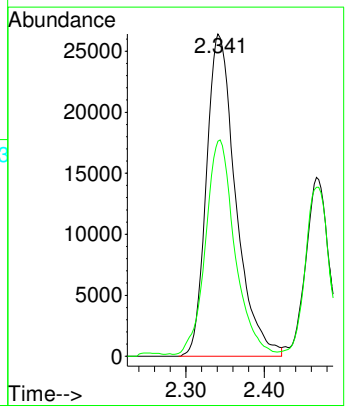


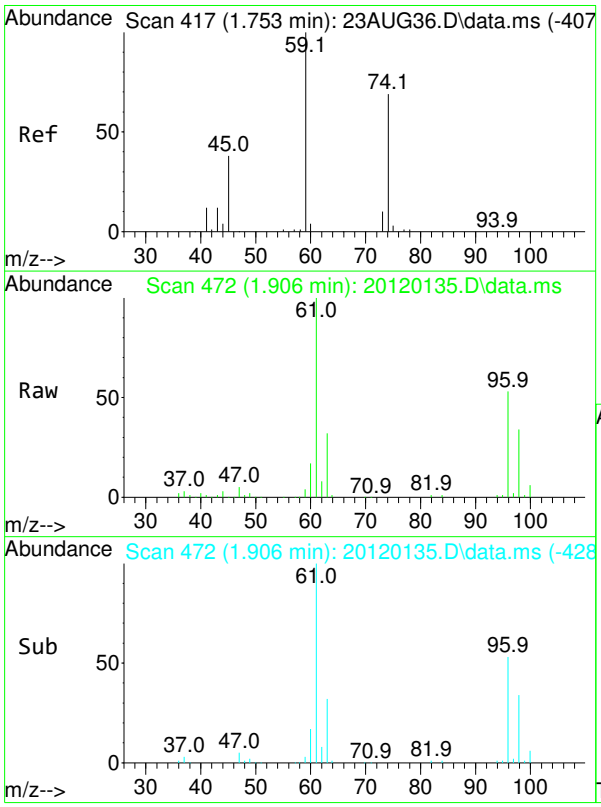


#11
Acrolein
Concen: Below Cal
RT: 2.341 min Scan# 628
Delta R.T. -0.022 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 56 Resp: 68548

Ion	Ratio	Lower	Upper
56	100		
55	66.0	37.7	97.7

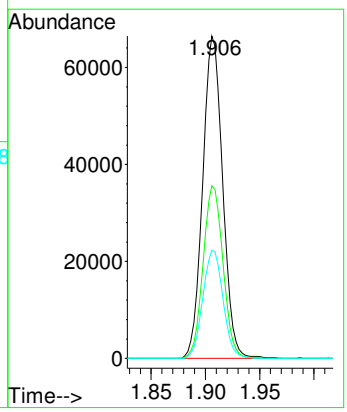


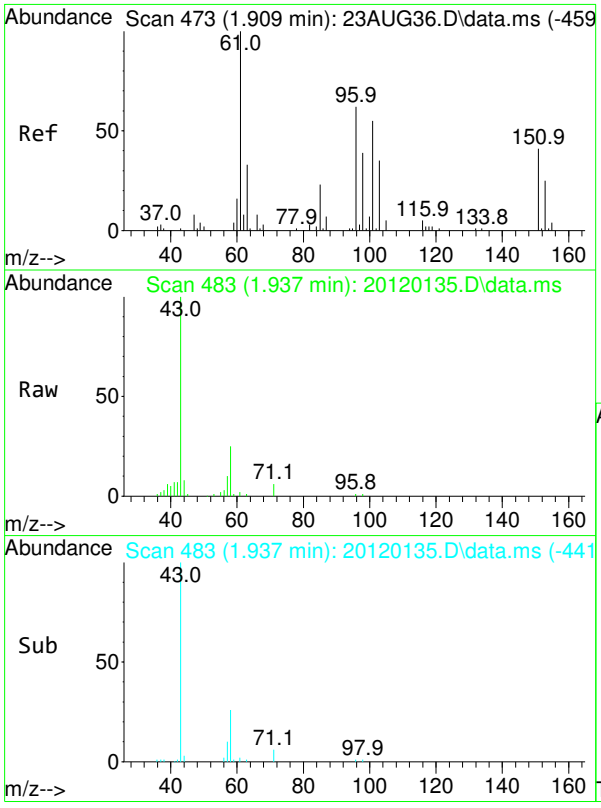


#12
1,1-Dichloroethene
Concen: 22.29 ug/L
RT: 1.906 min Scan# 472
Delta R.T. 0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 61 Resp: 85009

Ion	Ratio	Lower	Upper
61	100		
96	53.3	22.2	82.2
98	33.9	3.4	63.4

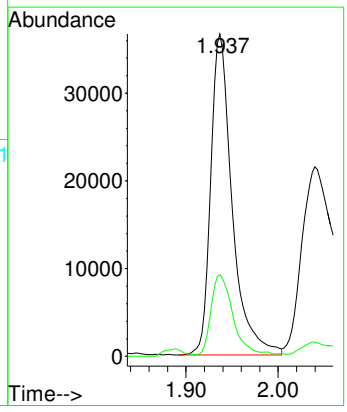


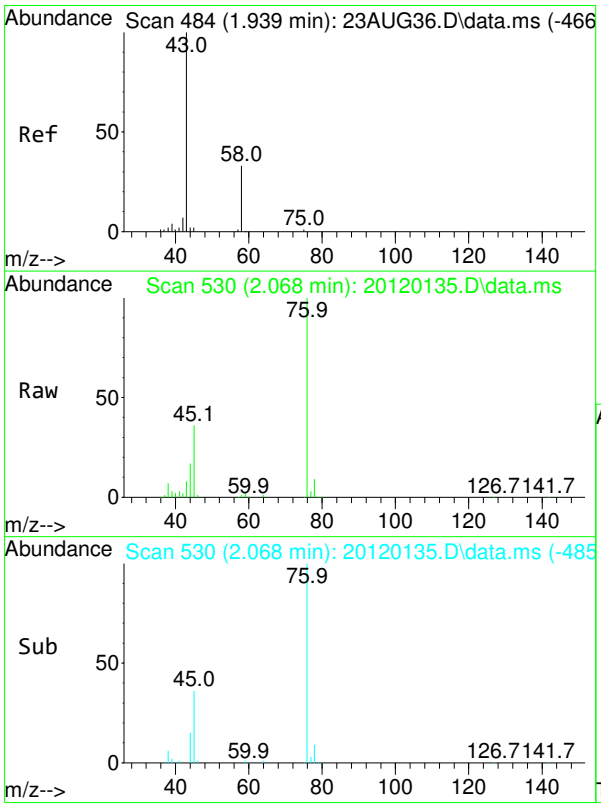


#15
Acetone
Concen: 28.73 ug/L
RT: 1.937 min Scan# 483
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 59388

Ion	Ratio	Lower	Upper
43	100		
58	24.8	0.0	56.9

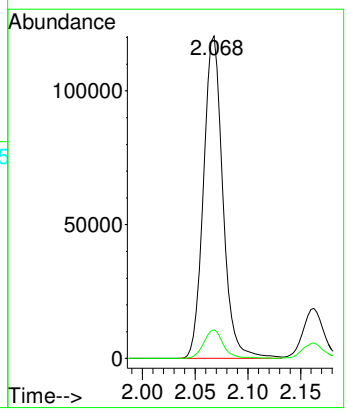


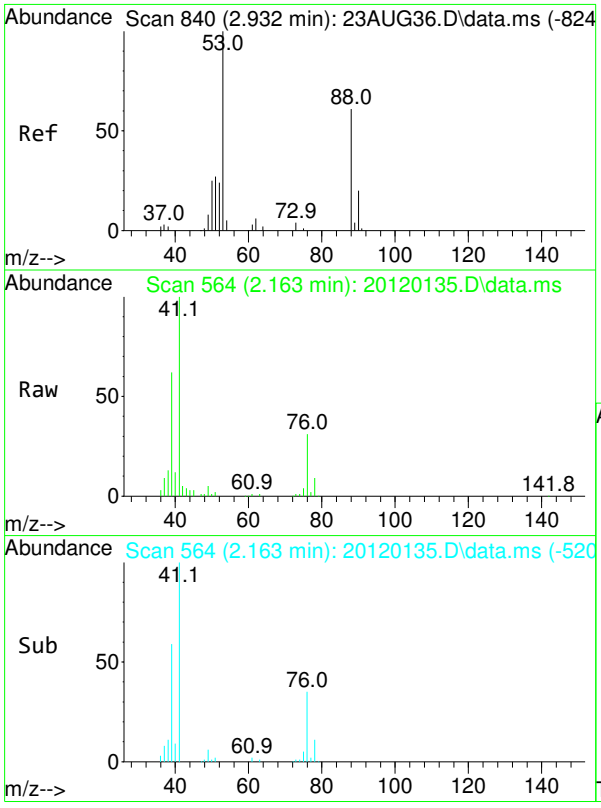


#17
Carbon disulfide
Concen: 22.81 ug/L
RT: 2.068 min Scan# 530
Delta R.T. 0.006 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 76 Resp: 153978

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	39.3

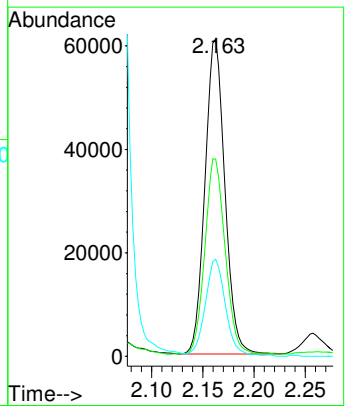


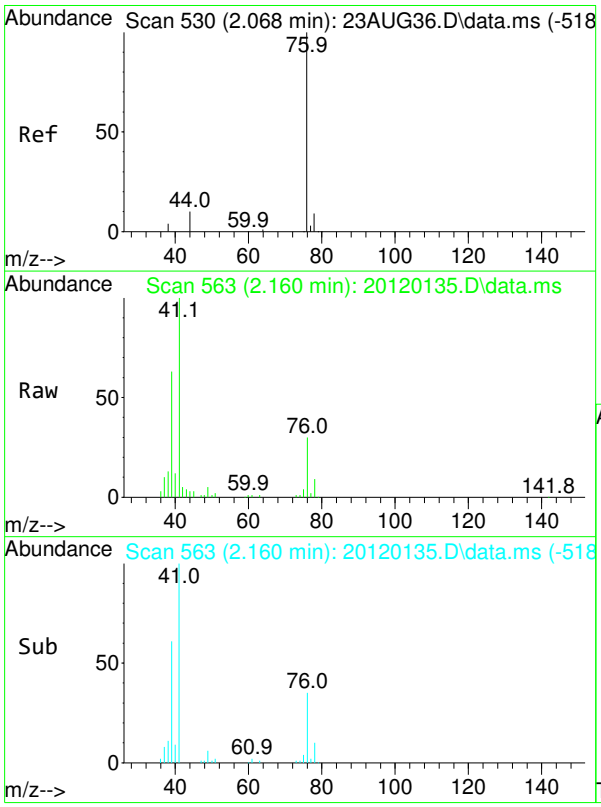


#18
Allyl chloride
Concen: 15.69 ug/L
RT: 2.163 min Scan# 564
Delta R.T. 0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 41 Resp: 82615

Ion	Ratio	Lower	Upper
41	100		
39	63.3	24.2	84.2
76	30.5	0.0	53.2

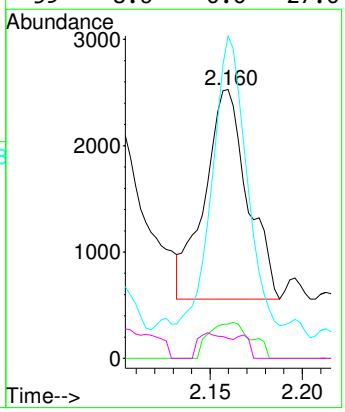


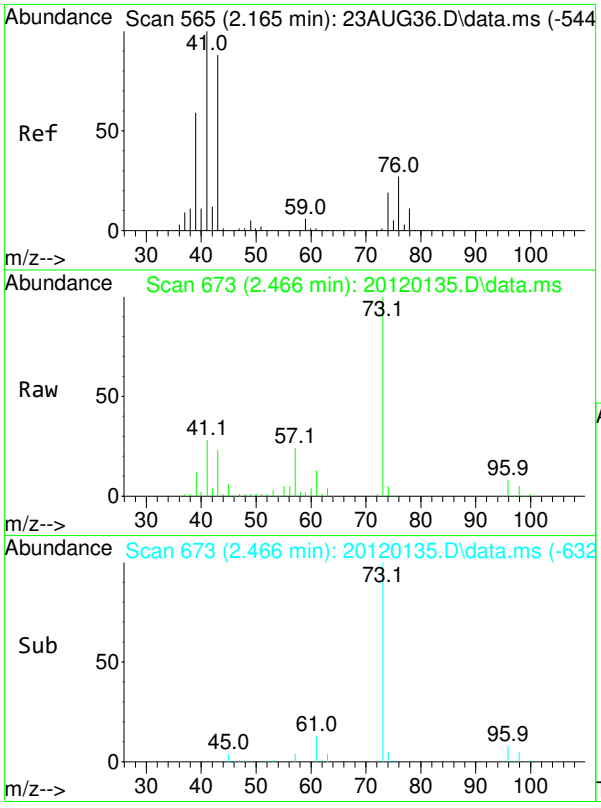


#19
Methyl acetate
Concen: 0.58 ug/L
RT: 2.160 min Scan# 563
Delta R.T. 0.006 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 3187

Ion	Ratio	Lower	Upper
43	100		
74	16.9	0.0	46.2
42	107.4	0.0	43.3#
59	8.6	0.0	27.0

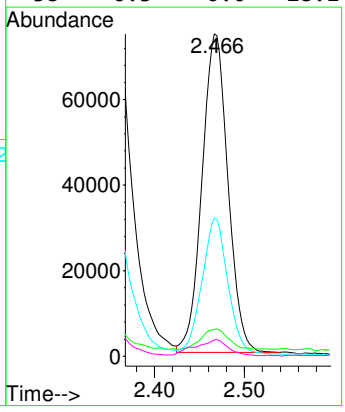


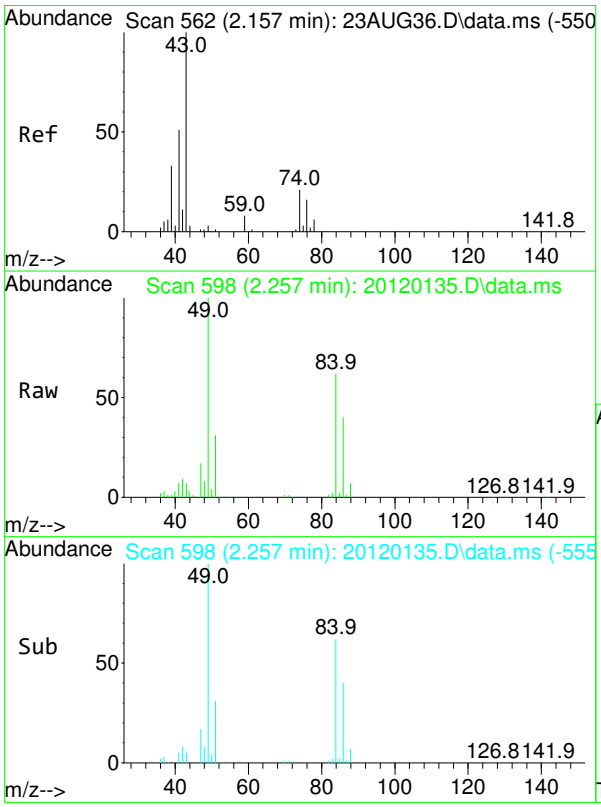


#20
Acetonitrile
Concen: 78.21 ug/L
RT: 2.466 min Scan# 673
Delta R.T. -0.006 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 41 Resp: 148842

Ion	Ratio	Lower	Upper
41	100		
40	6.6	0.0	37.4
39	43.0	13.1	73.1
38	6.3	0.0	28.1

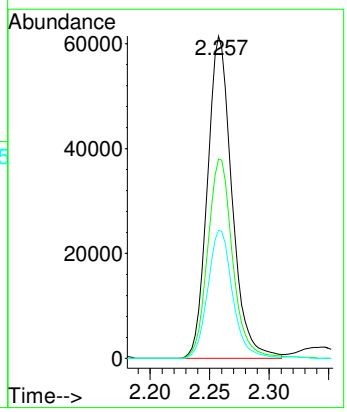


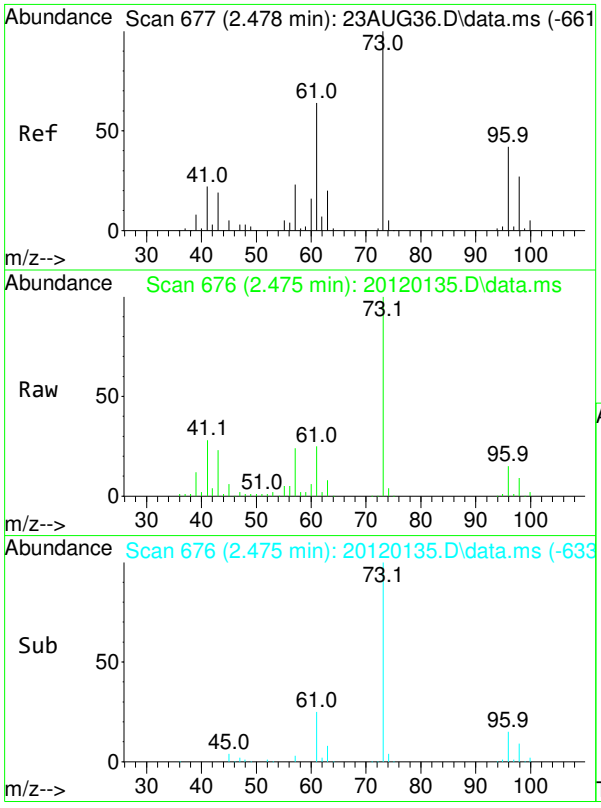


#21
Methylene chloride
Concen: 18.55 ug/L
RT: 2.257 min Scan# 598
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 49 Resp: 87971

Ion	Ratio	Lower	Upper
49	100		
84	63.1	31.8	91.8
86	40.1	9.7	69.7

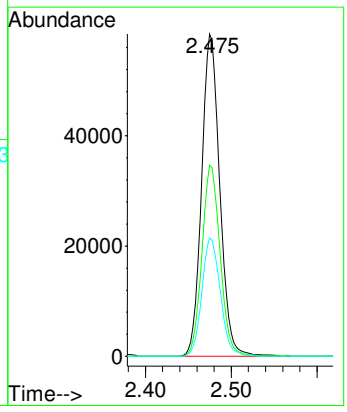


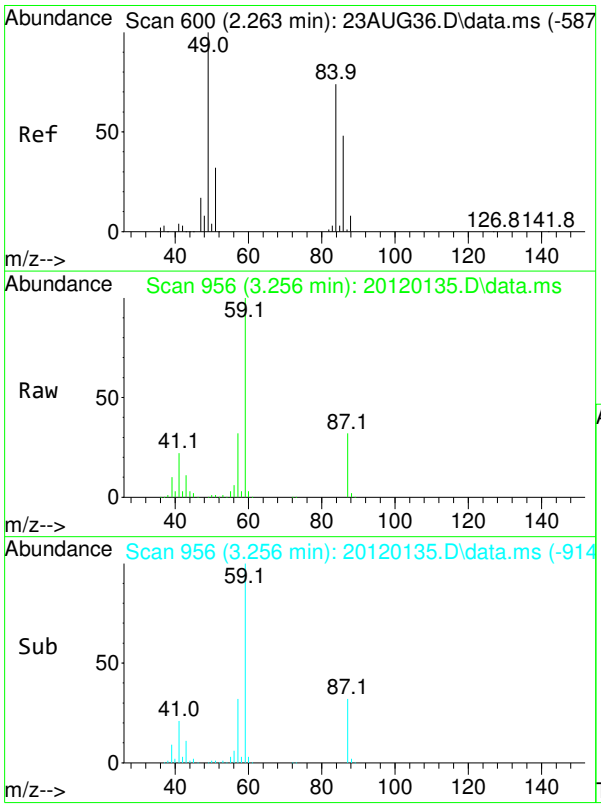


#22
trans-1,2-Dichloroethene
Concen: 20.77 ug/L
RT: 2.475 min Scan# 676
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 61 Resp: 86122

Ion	Ratio	Lower	Upper
61	100		
96	59.3	27.9	87.9
98	37.2	7.0	67.0

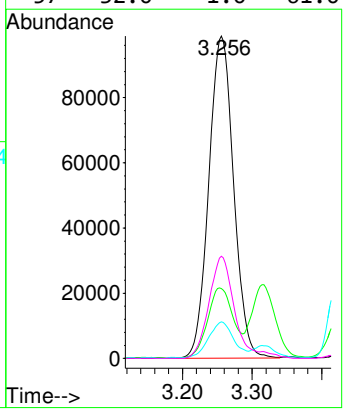


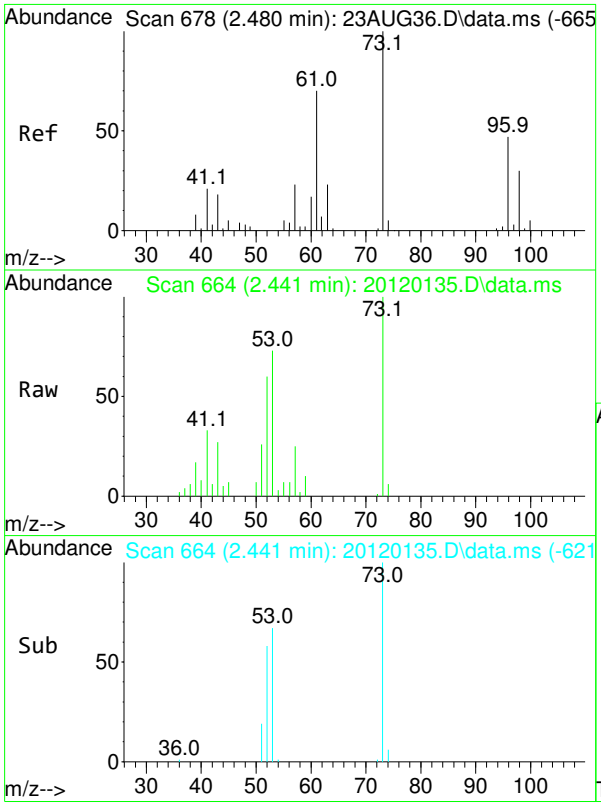


#23
t-Butanol
Concen: 163.82 ug/L
RT: 3.256 min Scan# 956
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 59 Resp: 244395

Ion	Ratio	Lower	Upper
59	100		
41	22.9	0.0	51.3
43	11.4	0.0	40.7
57	32.0	1.0	61.0

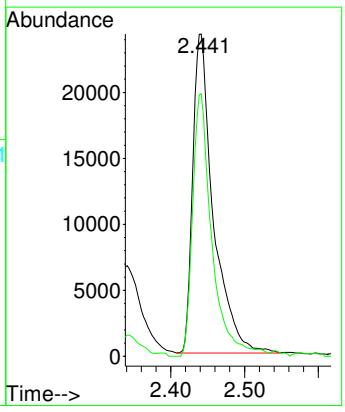


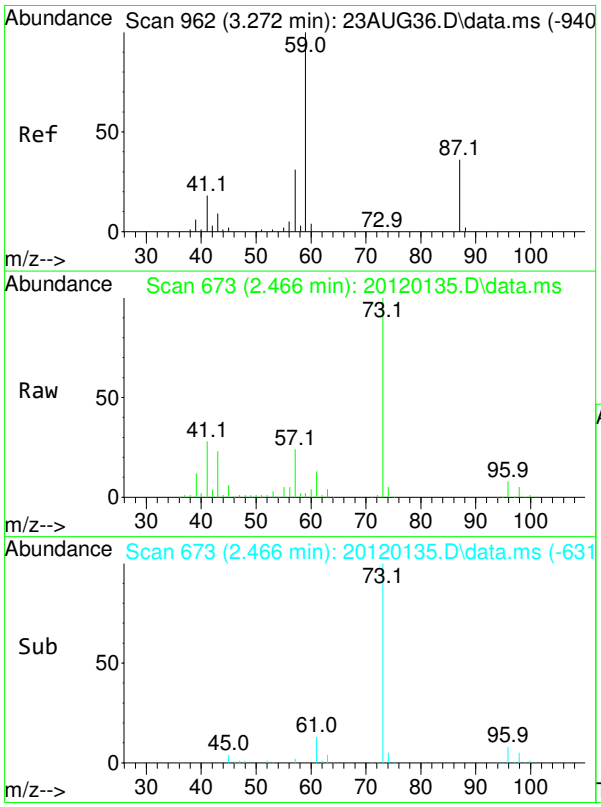


#24
Acrylonitrile
Concen: 22.31 ug/L
RT: 2.441 min Scan# 664
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 53 Resp: 46868

Ion	Ratio	Lower	Upper
53	100		
52	76.9	53.0	113.0

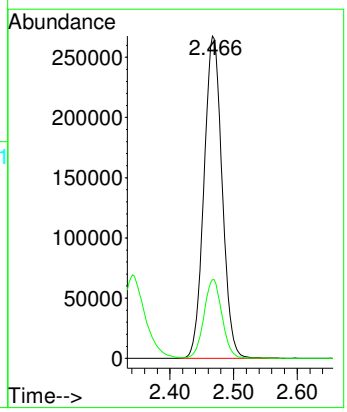


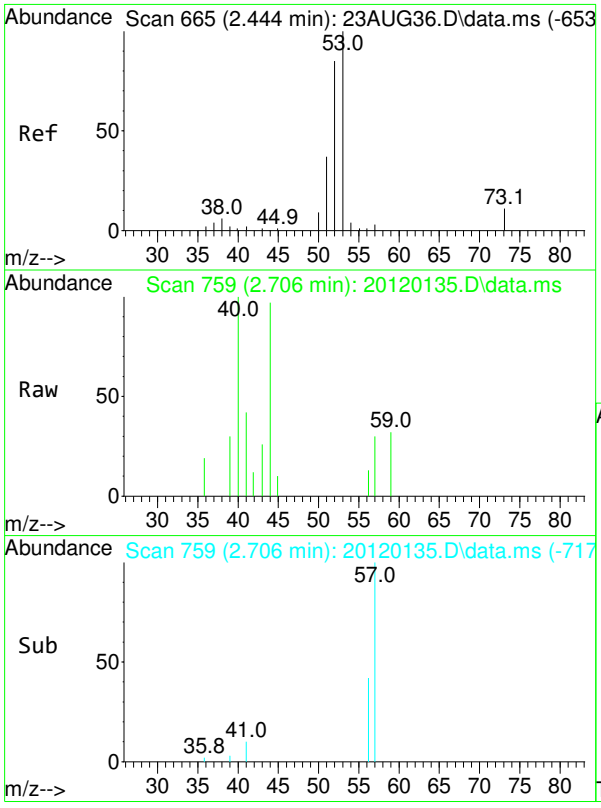


#25
Methyl tert-butyl ether
Concen: 76.78 ug/L
RT: 2.466 min Scan# 673
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 73 Resp: 530191

Ion	Ratio	Lower	Upper
73	100		
57	24.2	0.0	54.6

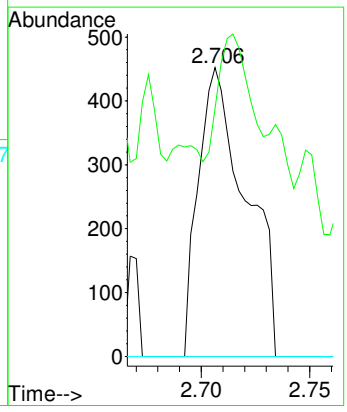


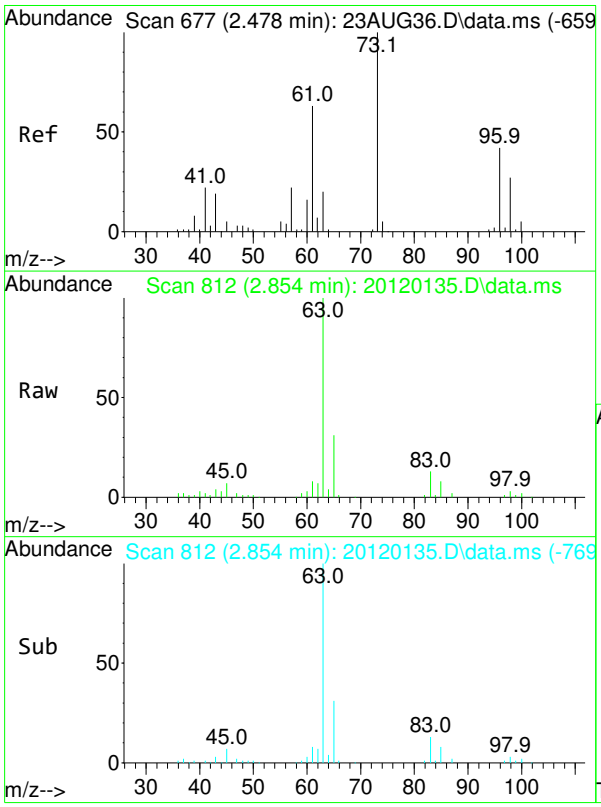


#26
Hexane
Concen: 0.31 ug/L
RT: 2.706 min Scan# 759
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 57 Resp: 687

Ion	Ratio	Lower	Upper
57	100		
43	27.9	44.0	104.0#
86	0.0	0.0	39.8

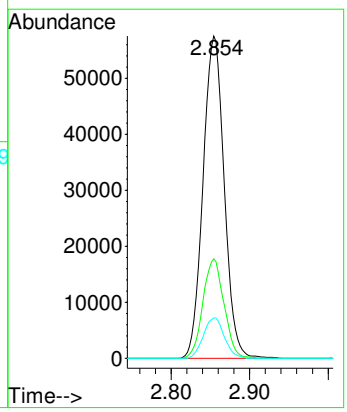


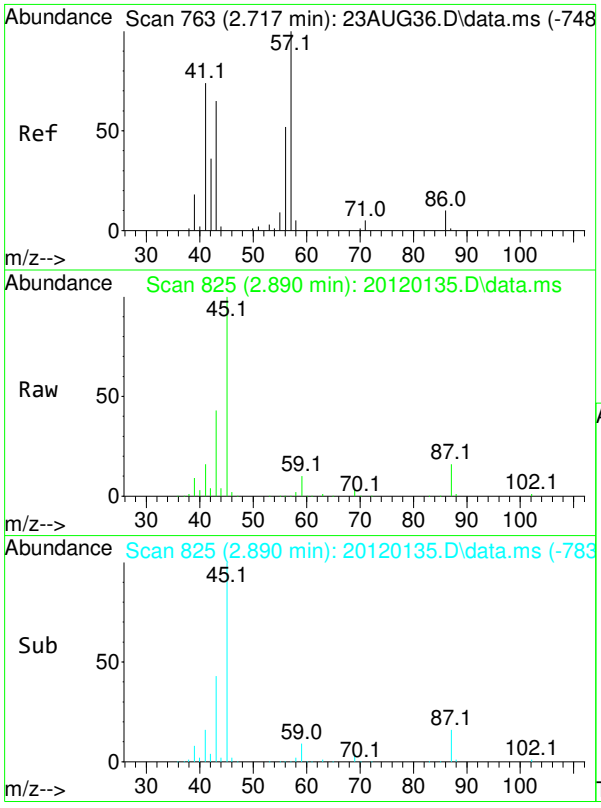


#27
1,1-Dichloroethane
Concen: 21.32 ug/L
RT: 2.854 min Scan# 812
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 63 Resp: 107842

Ion	Ratio	Lower	Upper
63	100		
65	30.8	1.9	61.9
83	12.5	0.0	42.8

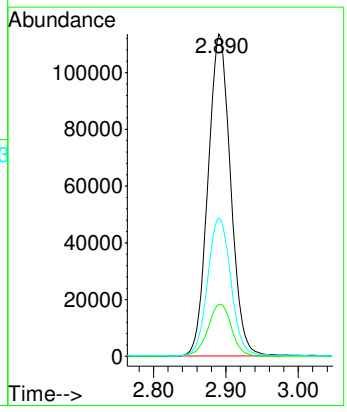


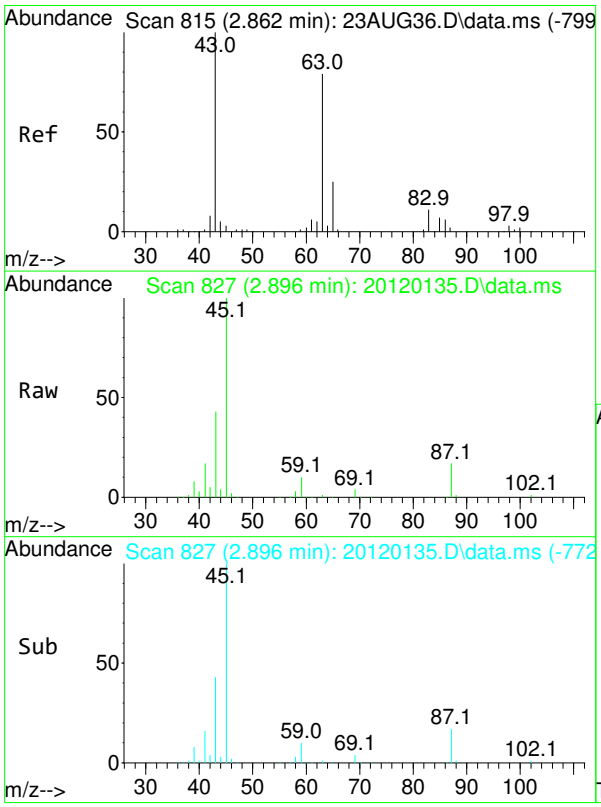


#28
Diisopropyl ether
Concen: 25.56 ug/L
RT: 2.890 min Scan# 825
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 45 Resp: 246592

Ion	Ratio	Lower	Upper
45	100		
87	17.1	0.0	46.8
43	44.4	91.3	151.3#

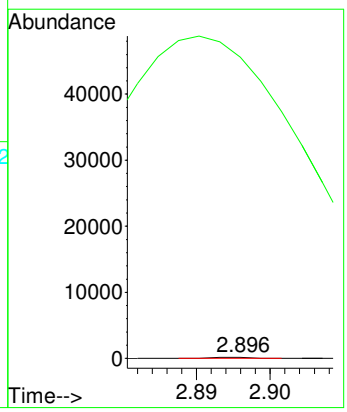


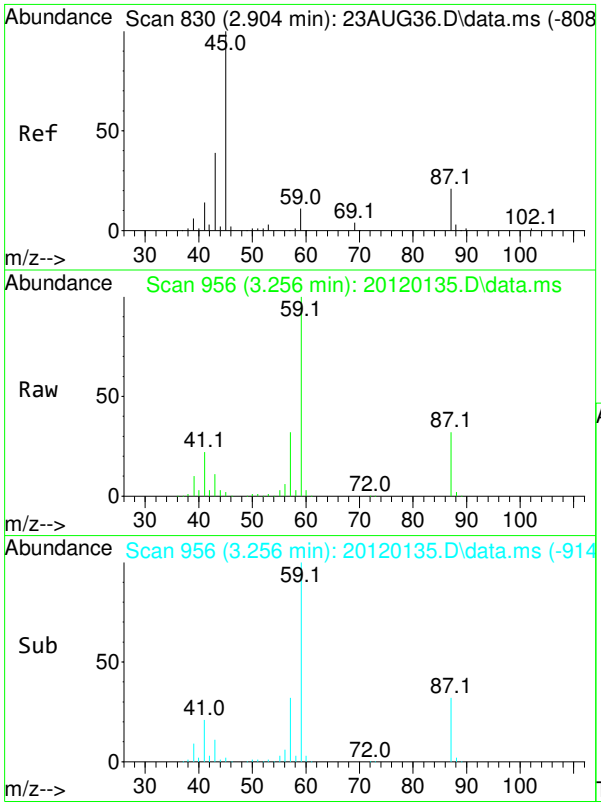


#29
Vinyl acetate
Concen: 0.77 ug/L
RT: 2.896 min Scan# 827
Delta R.T. 0.034 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 86 Resp: 60

Ion	Ratio	Lower	Upper
86	100		
43	182361.7	3110.6	3170.6#

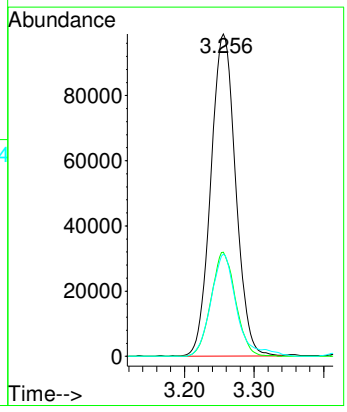


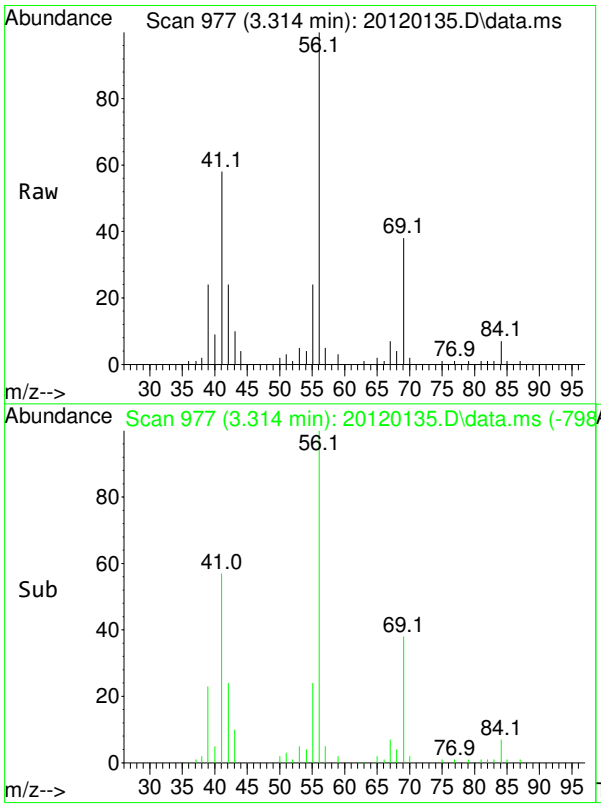


#30
Ethyl tert butyl ether
Concen: 32.76 ug/L
RT: 3.256 min Scan# 956
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 59 Resp: 244395

Ion	Ratio	Lower	Upper
59	100		
87	32.1	0.7	60.7
57	32.0	1.0	61.0

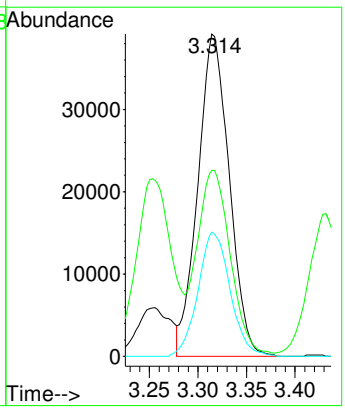


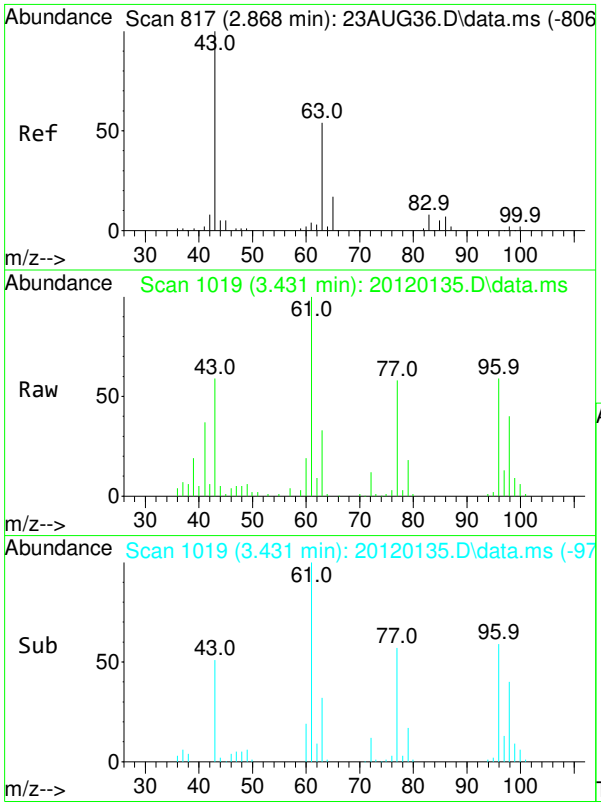


#31
Methylcyclopentane
Concen: 18.04 ug/L
RT: 3.314 min Scan# 977
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 56 Resp: 88028

Ion	Ratio	Lower	Upper
56	100		
41	60.8	26.6	86.6
69	39.5	7.8	67.8

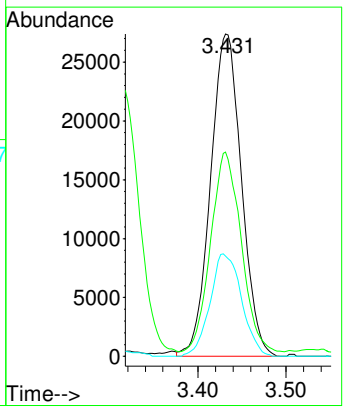


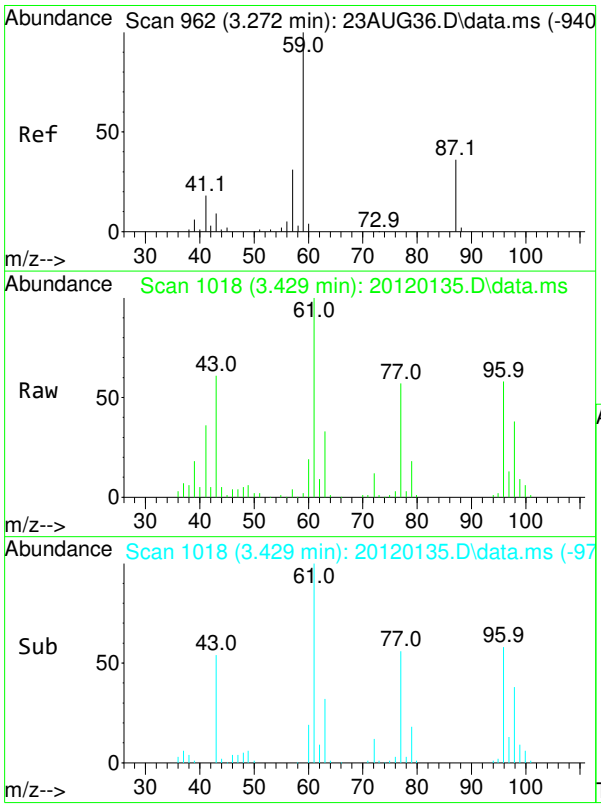


#32
2,2-Dichloropropane
Concen: 19.23 ug/L
RT: 3.431 min Scan# 1019
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 77 Resp: 66930

Ion	Ratio	Lower	Upper
77	100		
41	60.8	32.8	92.8
79	32.4	2.4	62.4

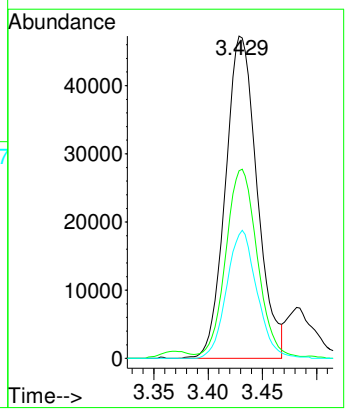


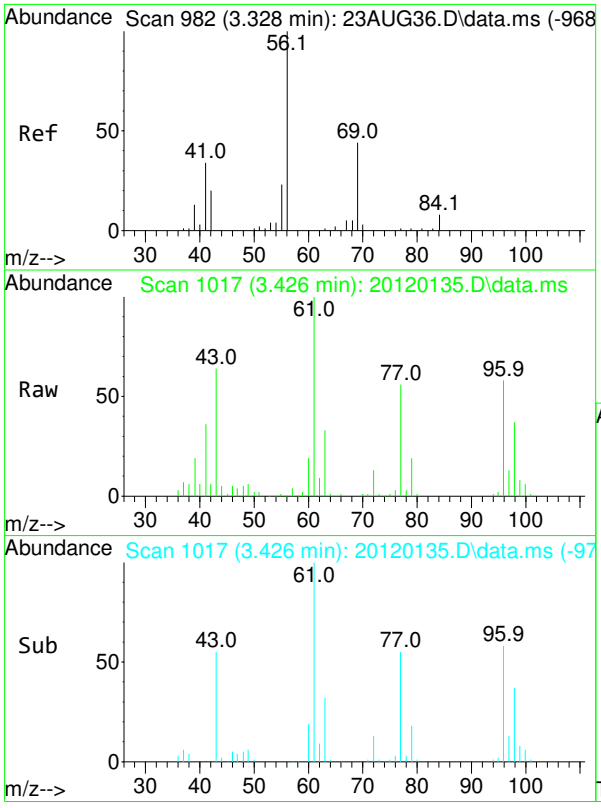


#33
cis-1,2-Dichloroethene
Concen: 21.41 ug/L
RT: 3.429 min Scan# 1018
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 61 Resp: 96016

Ion	Ratio	Lower	Upper
61	100		
96	57.8	28.2	88.2
98	38.0	7.7	67.7

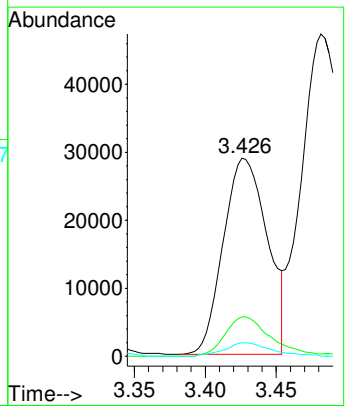


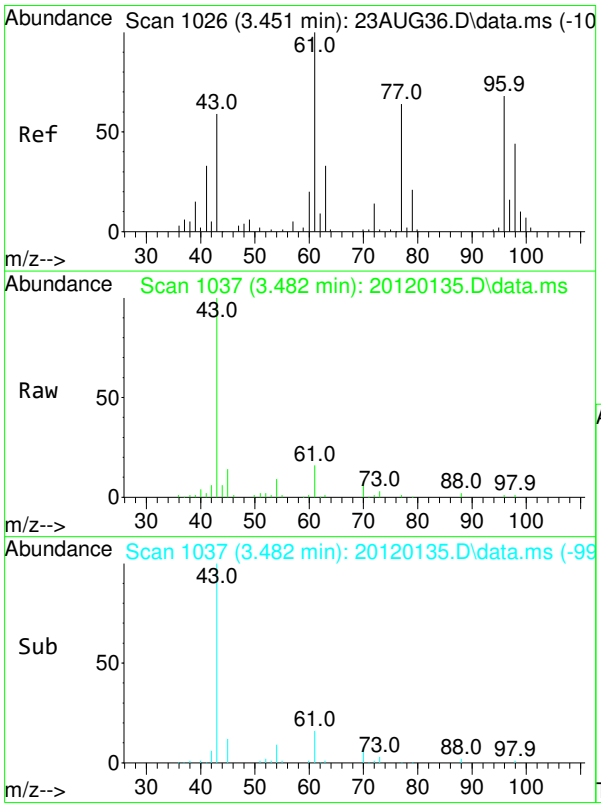


#34
2-Butanone
Concen: 18.98 ug/L
RT: 3.426 min Scan# 1017
Delta R.T. -0.005 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 62441

Ion	Ratio	Lower	Upper
43	100		
72	20.8	0.0	51.0
57	7.3	0.0	37.1

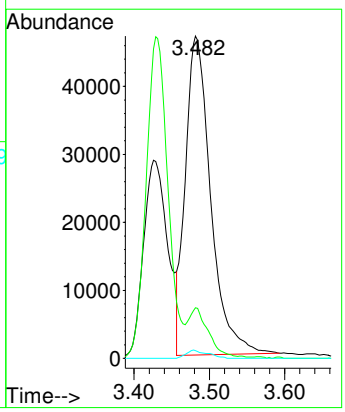


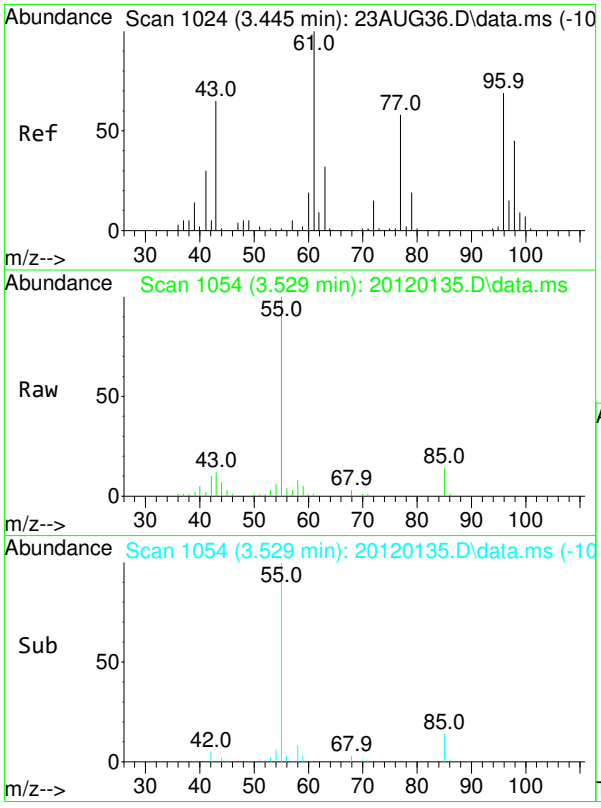


#35
Ethyl Acetate
Concen: 16.98 ug/L
RT: 3.482 min Scan# 1037
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 109534

Ion	Ratio	Lower	Upper
43	100		
61	11.0	0.0	42.4
88	2.2	0.0	32.1

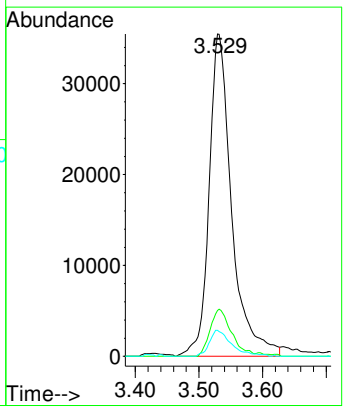


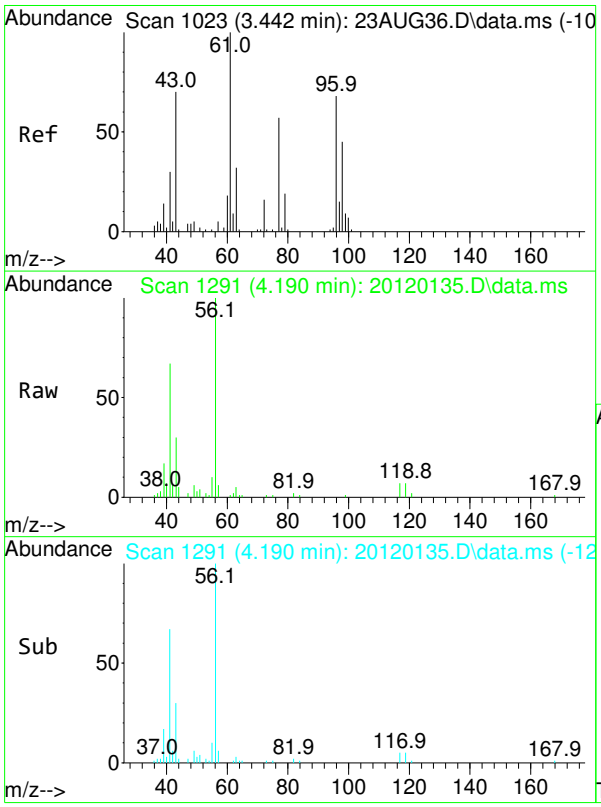


#36
Methyl acrylate
Concen: 19.49 ug/L
RT: 3.529 min Scan# 1054
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 55 Resp: 87480

Ion	Ratio	Lower	Upper
55	100		
85	13.9	0.0	44.3
58	8.0	0.0	38.4

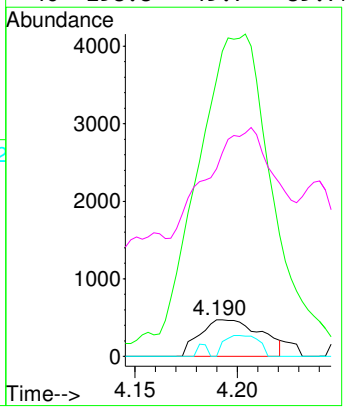


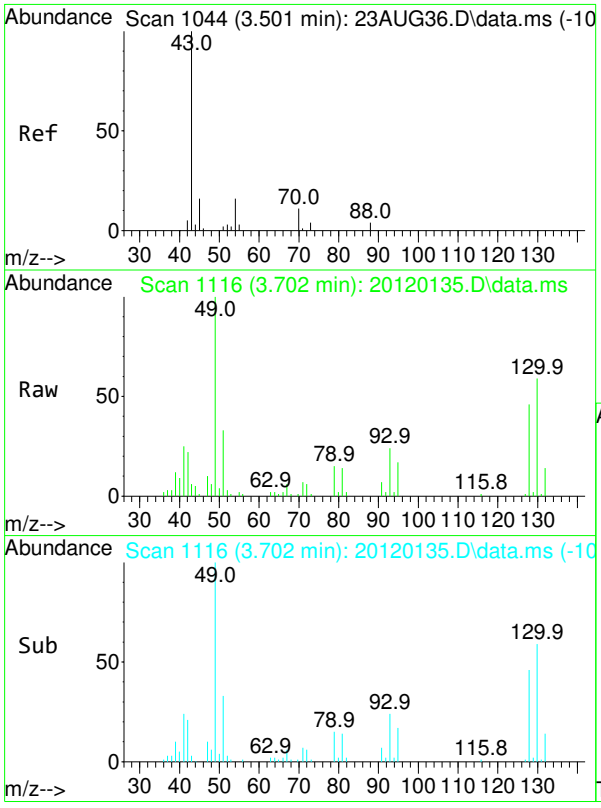


#37
Propionitrile
Concen: 3.36 ug/L
RT: 4.190 min Scan# 1291
Delta R.T. 0.078 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 54 Resp: 980

Ion	Ratio	Lower	Upper
54	100		
55	920.5	422.8	482.8#
52	32.0	0.0	50.3
40	298.8	49.7	89.7#

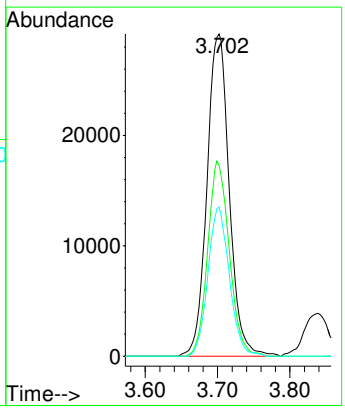


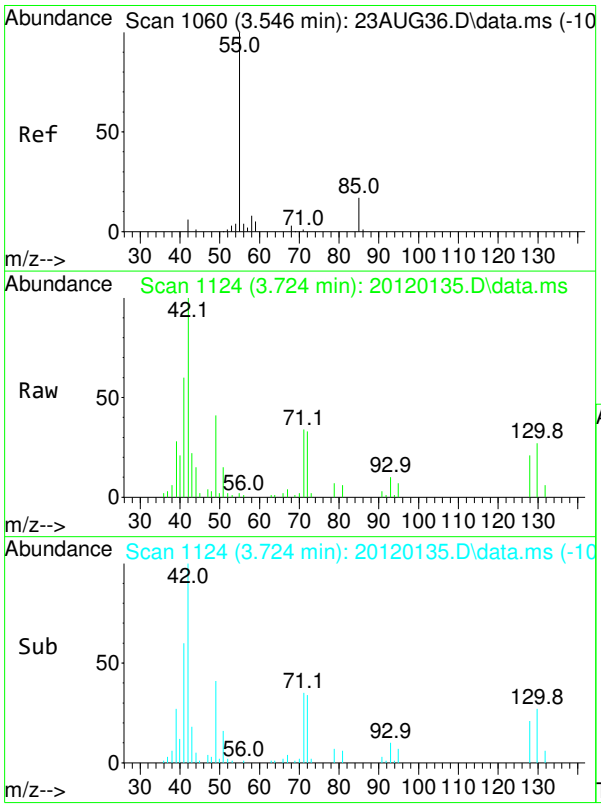


#38
Bromochloromethane
Concen: 22.16 ug/L
RT: 3.702 min Scan# 1116
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 49 Resp: 62559

Ion	Ratio	Lower	Upper
49	100		
130	58.6	25.3	85.3
128	44.7	13.4	73.4

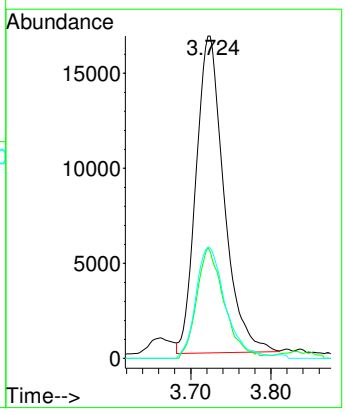


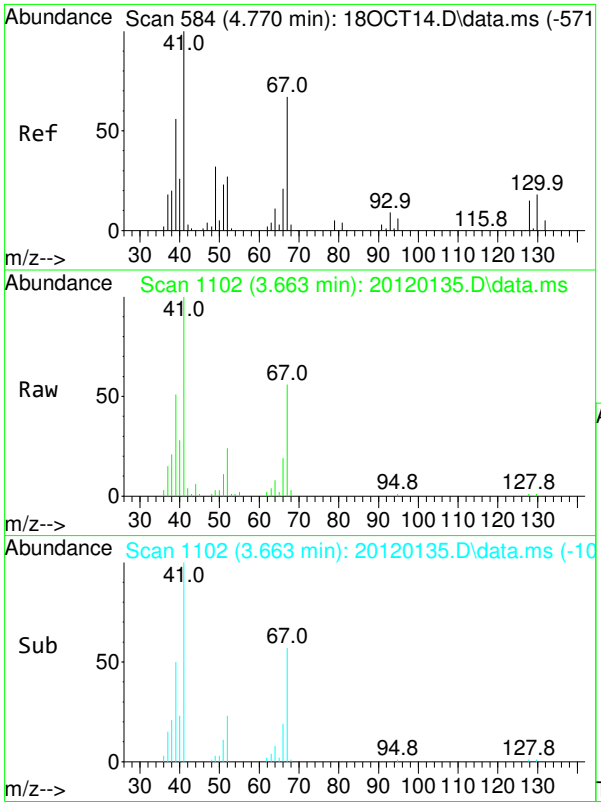


#39
Tetrahydrofuran
Concen: 18.13 ug/L
RT: 3.724 min Scan# 1124
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 42 Resp: 40290

Ion	Ratio	Lower	Upper
42	100		
72	34.1	3.4	63.4
71	37.0	4.3	64.3

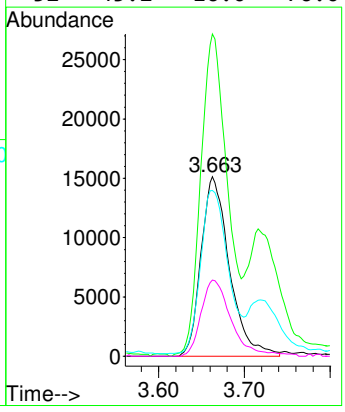


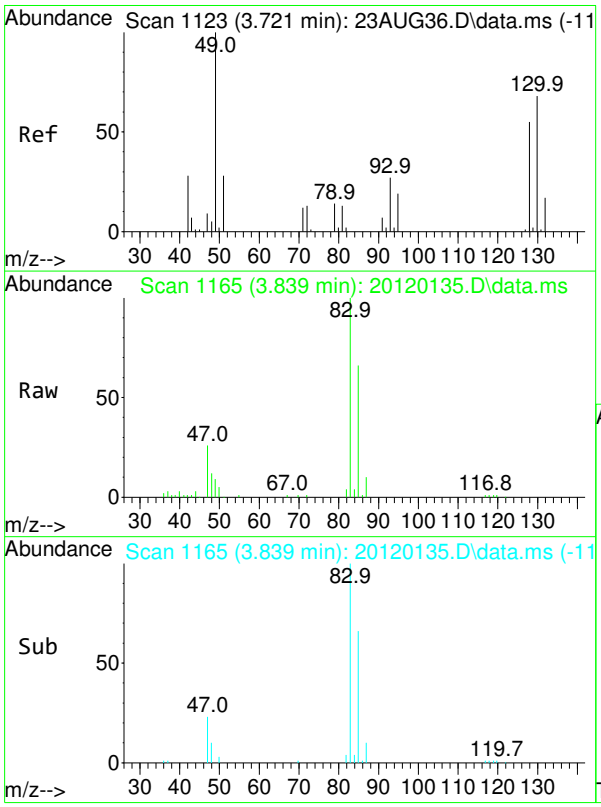


#40
Methacrylonitrile
Concen: 19.16 ug/L
RT: 3.663 min Scan# 1102
Delta R.T. -0.005 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 67 Resp: 34925

Ion	Ratio	Lower	Upper
67	100		
41	167.1	143.5	203.5
39	88.0	60.6	120.6
52	45.2	16.0	76.0

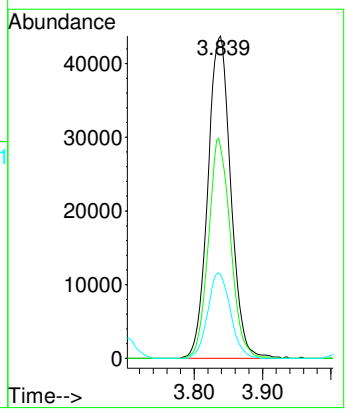


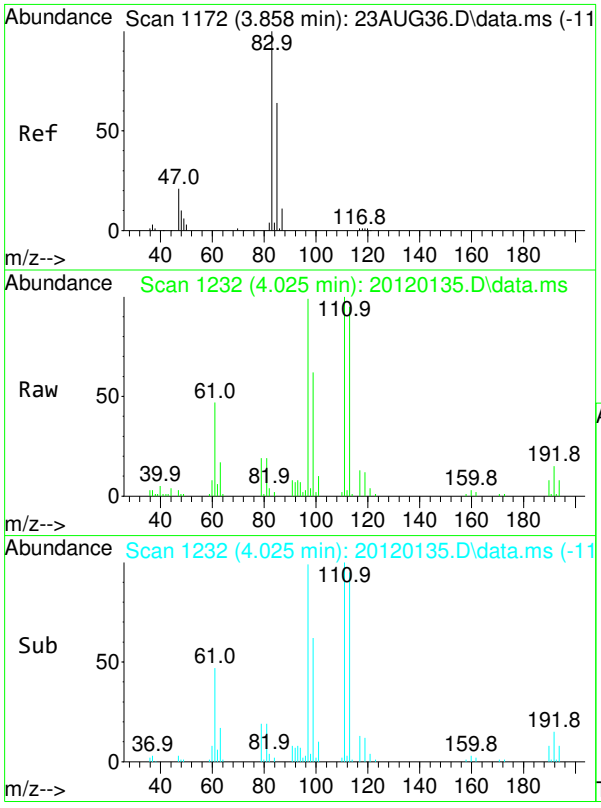


#41
Chloroform
Concen: 19.76 ug/L
RT: 3.839 min Scan# 1165
Delta R.T. 0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 83 Resp: 101995

Ion	Ratio	Lower	Upper
83	100		
85	65.5	34.6	94.6
47	26.3	0.0	56.8

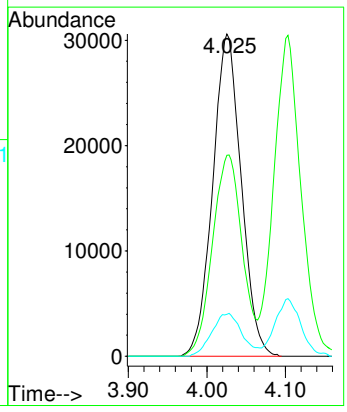


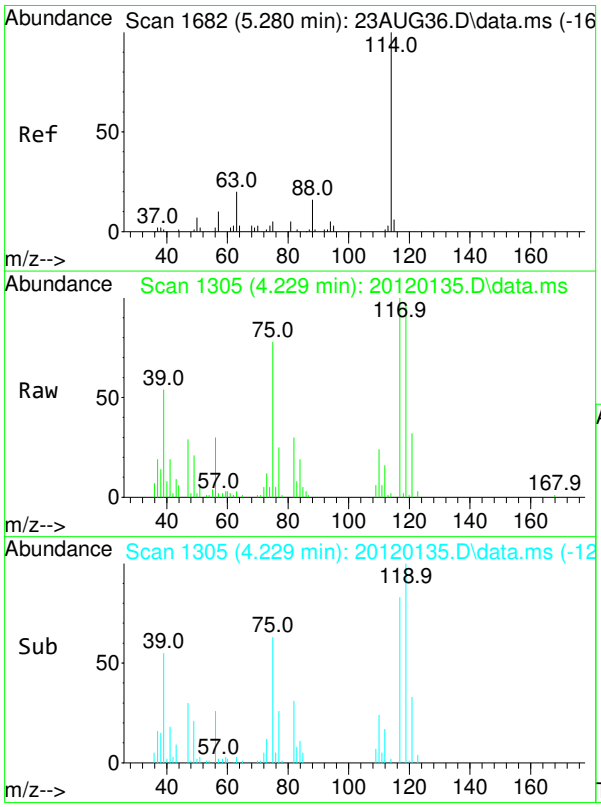


#44
1,1,1-Trichloroethane
Concen: 21.74 ug/L
RT: 4.025 min Scan# 1232
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 97 Resp: 77320

Ion	Ratio	Lower	Upper
97	100		
99	65.3	34.0	94.0
117	14.2	0.0	43.5

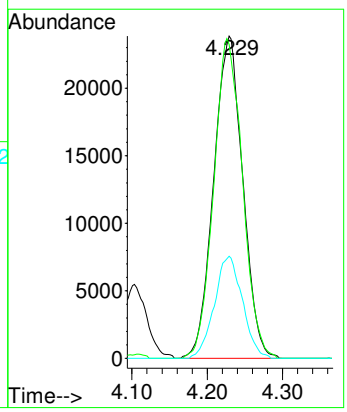


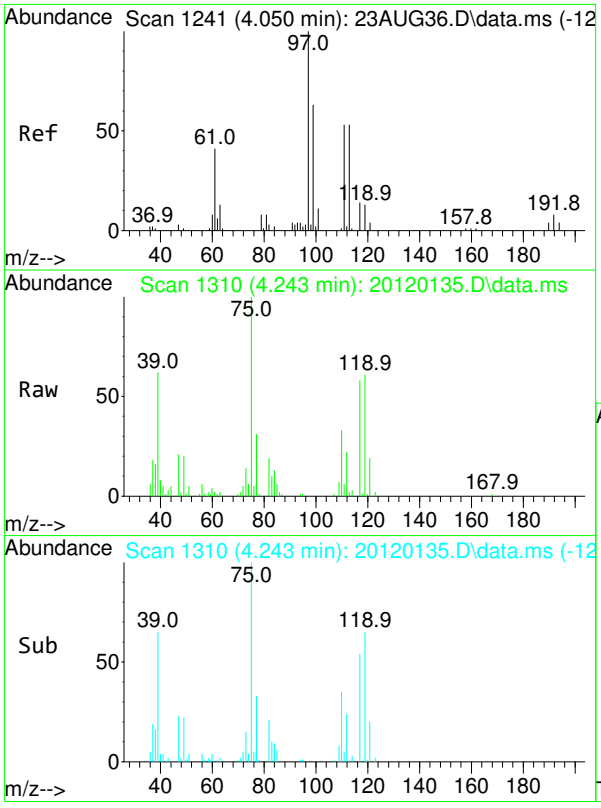


#46
Carbon tetrachloride
Concen: 20.75 ug/L
RT: 4.229 min Scan# 1305
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:117 Resp: 64094

Ion	Ratio	Lower	Upper
117	100		
119	98.1	65.9	125.9
121	30.6	1.1	61.1

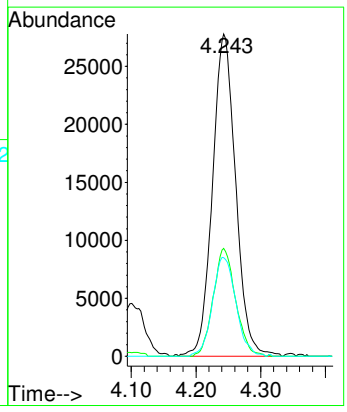


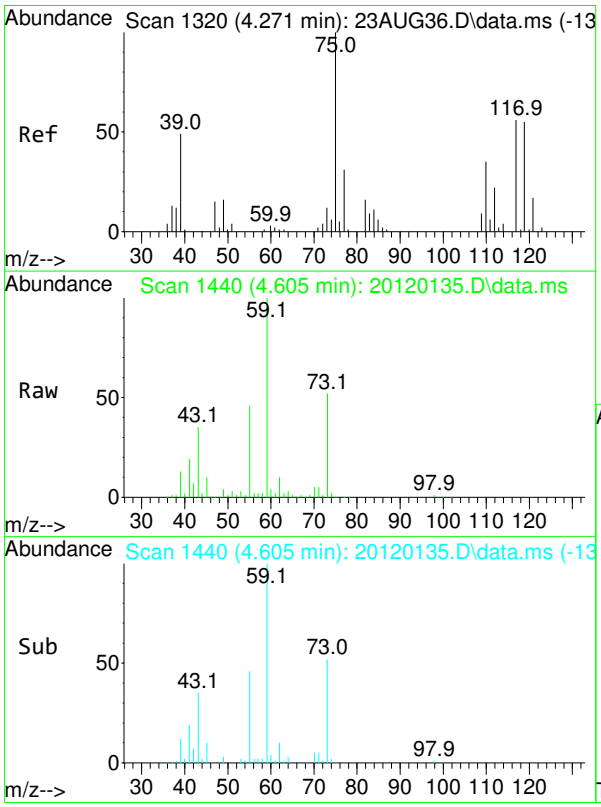


#47
1,1-Dichloropropene
Concen: 21.16 ug/L
RT: 4.243 min Scan# 1310
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 75 Resp: 69258

Ion	Ratio	Lower	Upper
75	100		
110	32.3	1.1	61.1
77	31.1	0.8	60.8

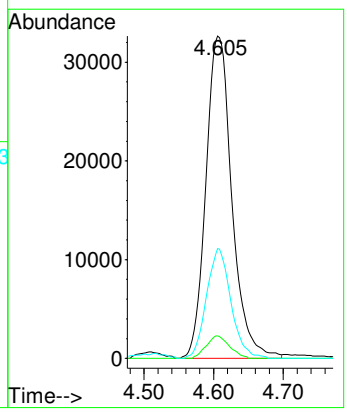


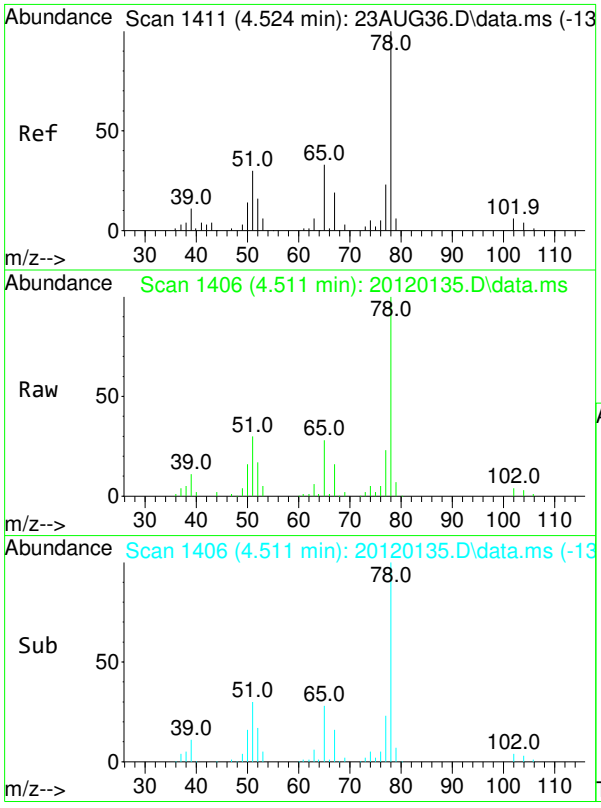


#49
1,2-Dichloroethane
Concen: 21.72 ug/L
RT: 4.605 min Scan# 1440
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 62 Resp: 84623

Ion	Ratio	Lower	Upper
62	100		
98	6.3	0.0	36.5
64	32.0	0.9	60.9

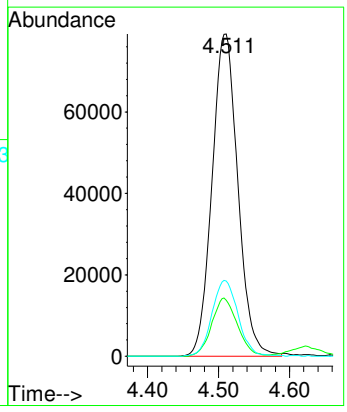


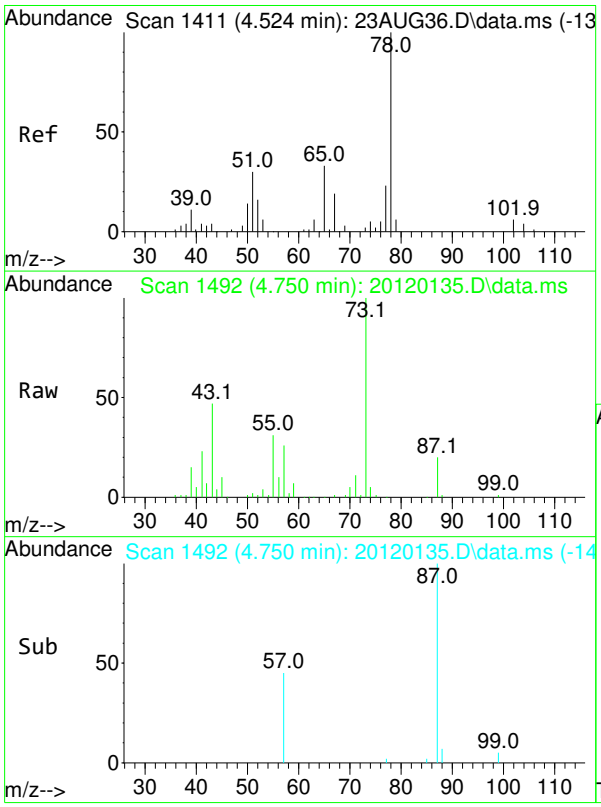


#50
Benzene
Concen: 22.06 ug/L
RT: 4.511 min Scan# 1406
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 78 Resp: 200357

Ion	Ratio	Lower	Upper
78	100		
52	18.0	0.0	48.7
77	23.9	0.0	53.7

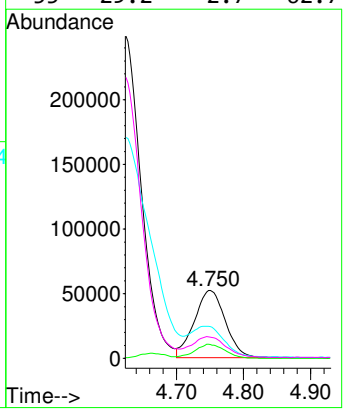


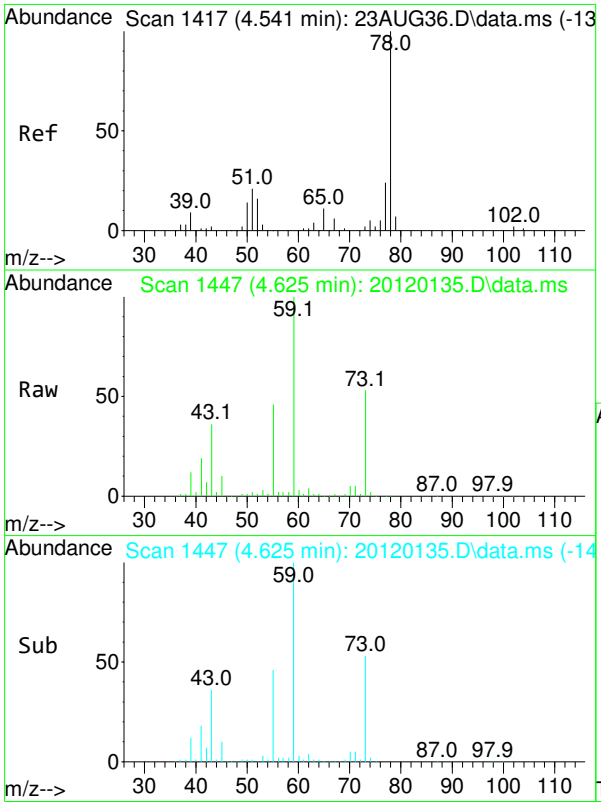


#51
Tertiaryamylmethylether
Concen: 26.25 ug/L
RT: 4.750 min Scan# 1492
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 73 Resp: 166131

Ion	Ratio	Lower	Upper
73	100		
87	20.9	0.0	50.5
43	0.0	0.0	30.0
55	29.2	2.7	62.7

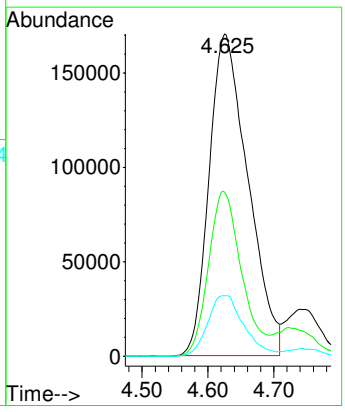


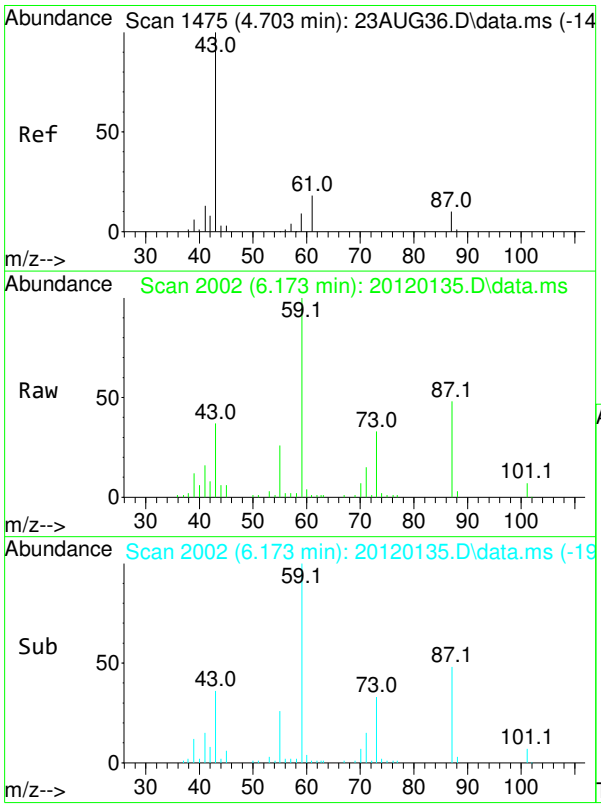


#52
Isobutyl Alcohol
Concen: 89.42 ug/L
RT: 4.625 min Scan# 1447
Delta R.T. -0.044 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 697686

Ion	Ratio	Lower	Upper
43	100		
41	43.8	0.0	41.2#
42	17.6	0.0	38.2

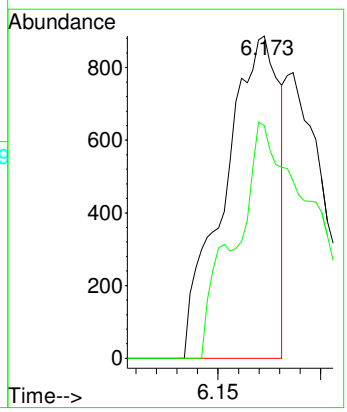


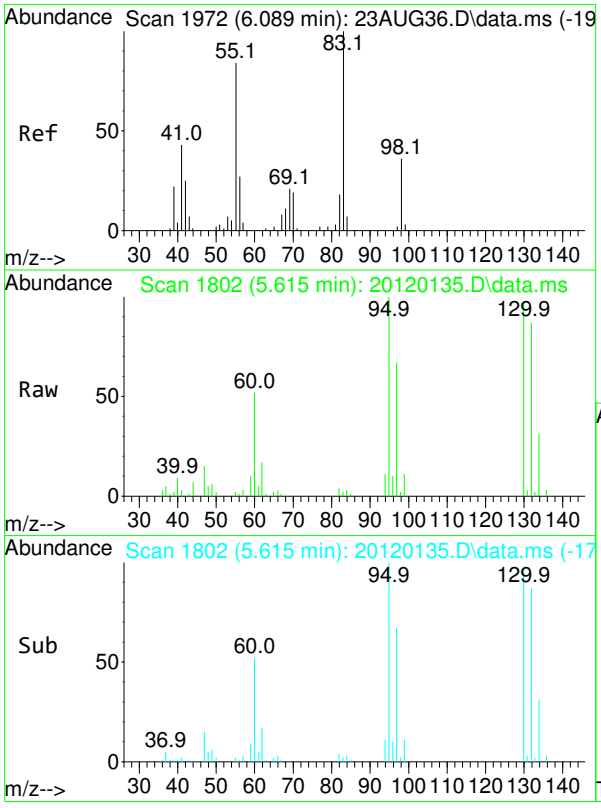


#54
1,4-Dioxane
Concen: 20.09 ug/L
RT: 6.173 min Scan# 2002
Delta R.T. -0.103 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 88 Resp: 1646

Ion	Ratio	Lower	Upper
88	100		
58	86.1	43.1	103.1

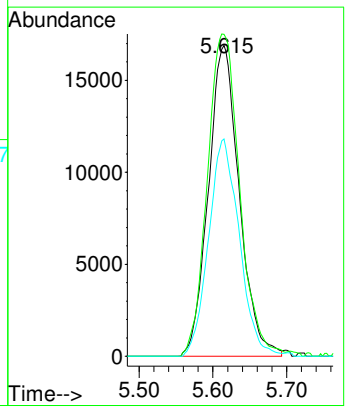


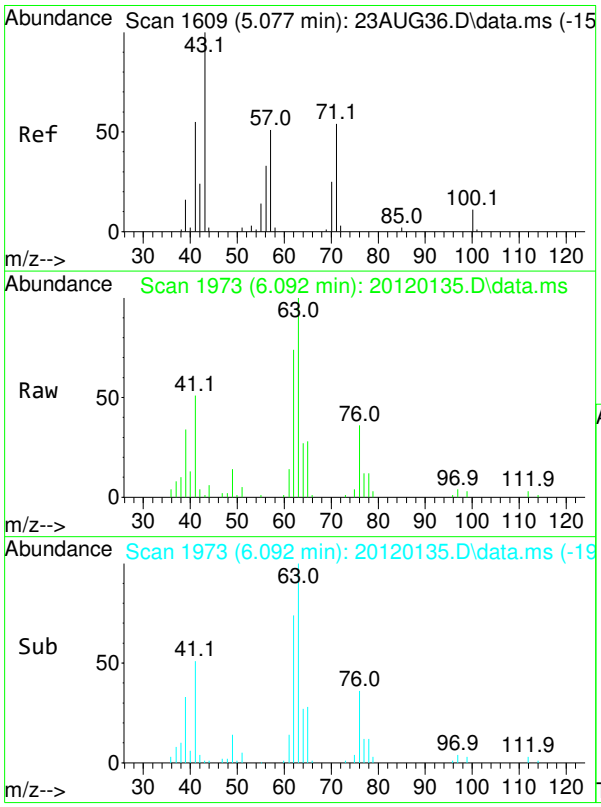


#57
Trichloroethene
Concen: 22.61 ug/L
RT: 5.615 min Scan# 1802
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:130 Resp: 49097

Ion	Ratio	Lower	Upper
130	100		
95	108.3	80.9	140.9
97	69.6	41.9	101.9

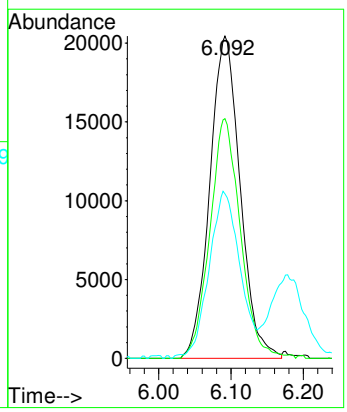


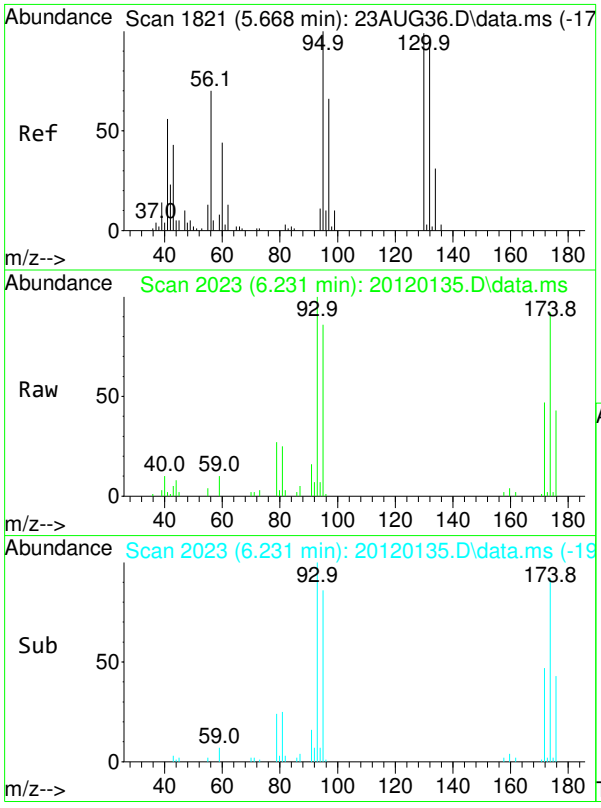


#58
1,2-Dichloropropane
Concen: 19.42 ug/L
RT: 6.092 min Scan# 1973
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 63 Resp: 59626

Ion	Ratio	Lower	Upper
63	100		
62	74.7	46.4	106.4
41	53.0	20.9	80.9

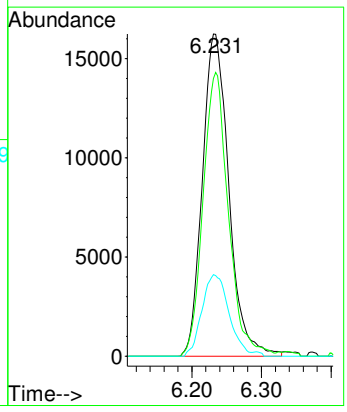


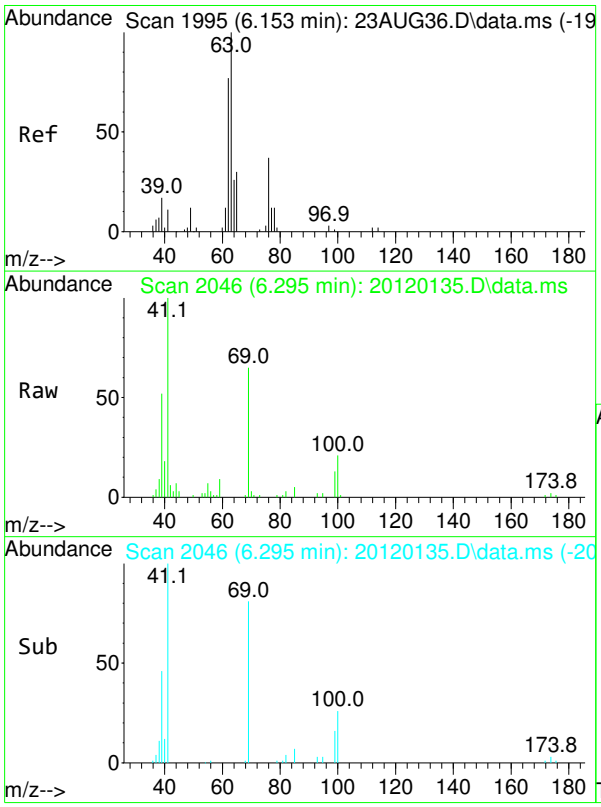


#59
Dibromomethane
Concen: 21.54 ug/L
RT: 6.231 min Scan# 2023
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 93 Resp: 42903

Ion	Ratio	Lower	Upper
93	100		
95	84.2	52.1	112.1
81	25.7	0.0	55.4

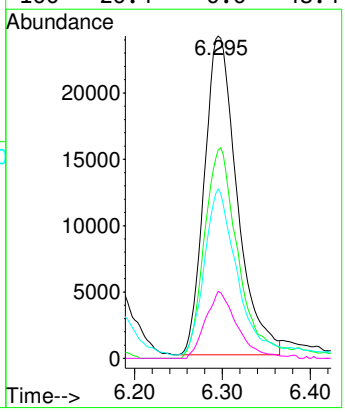


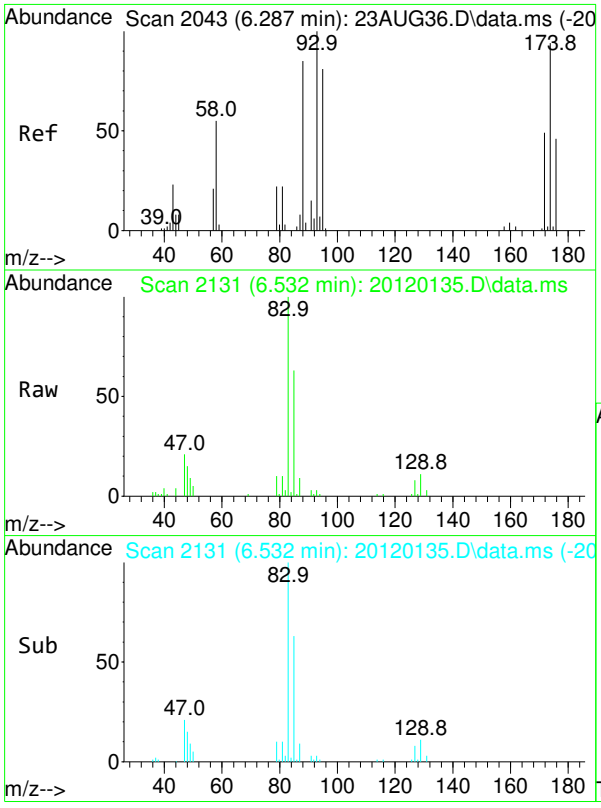


#60
Methyl methacrylate
Concen: 16.31 ug/L
RT: 6.295 min Scan# 2046
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 41 Resp: 62277

Ion	Ratio	Lower	Upper
41	100		
69	67.9	32.4	92.4
39	51.5	20.2	80.2
100	20.4	0.0	48.4

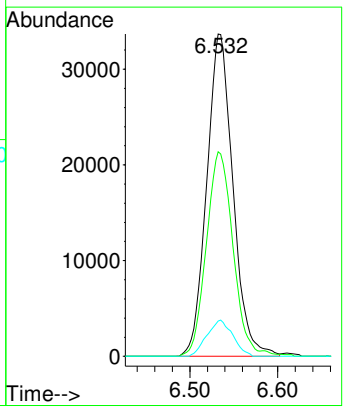


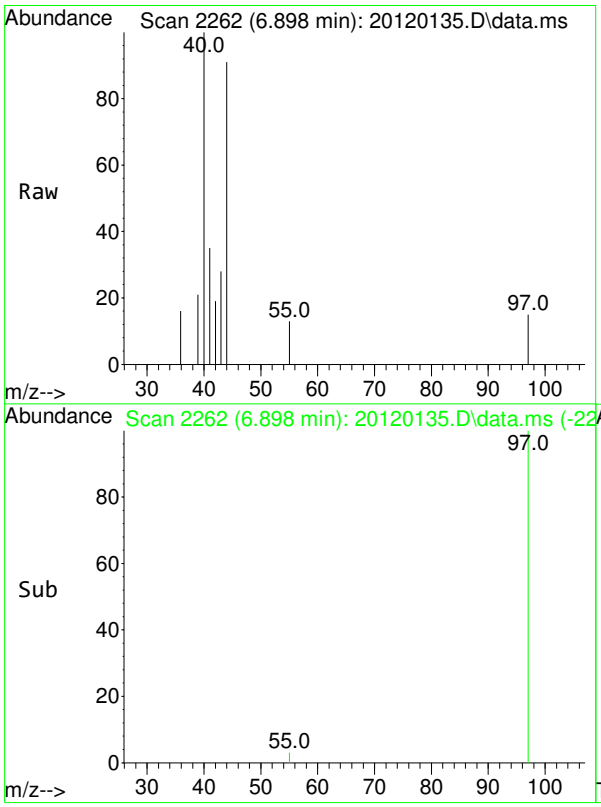


#61
Bromodichloromethane
Concen: 21.02 ug/L
RT: 6.532 min Scan# 2131
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 83 Resp: 69789

Ion	Ratio	Lower	Upper
83	100		
85	64.8	33.7	93.7
129	11.1	0.0	41.0

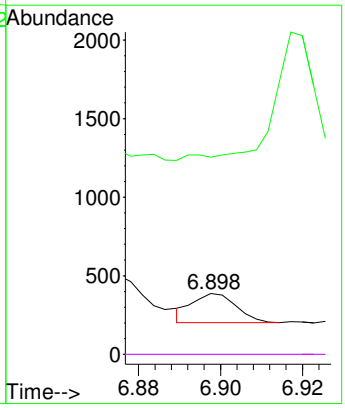


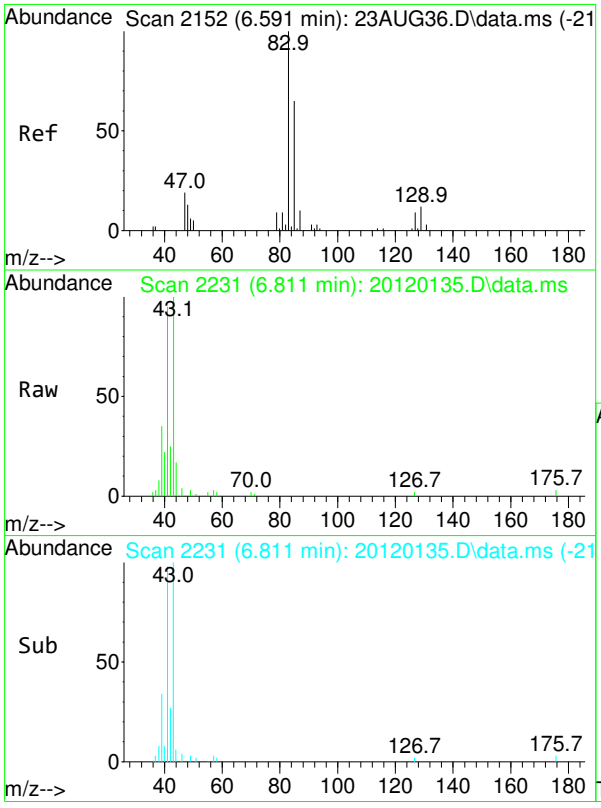


#62
2-Chloroethyl vinyl ether
Concen: 0.37 ug/L
RT: 6.898 min Scan# 2262
Delta R.T. -0.030 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 139

Ion	Ratio	Lower	Upper
43	100		
44	680.6	51.7	111.7#
63	0.0	111.6	171.6#
65	0.0	15.3	75.3#

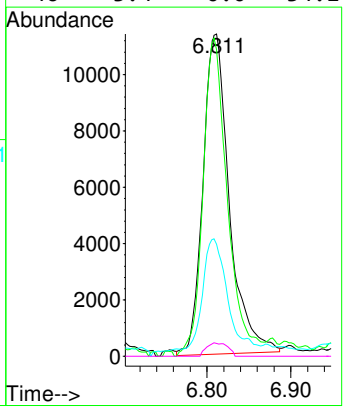


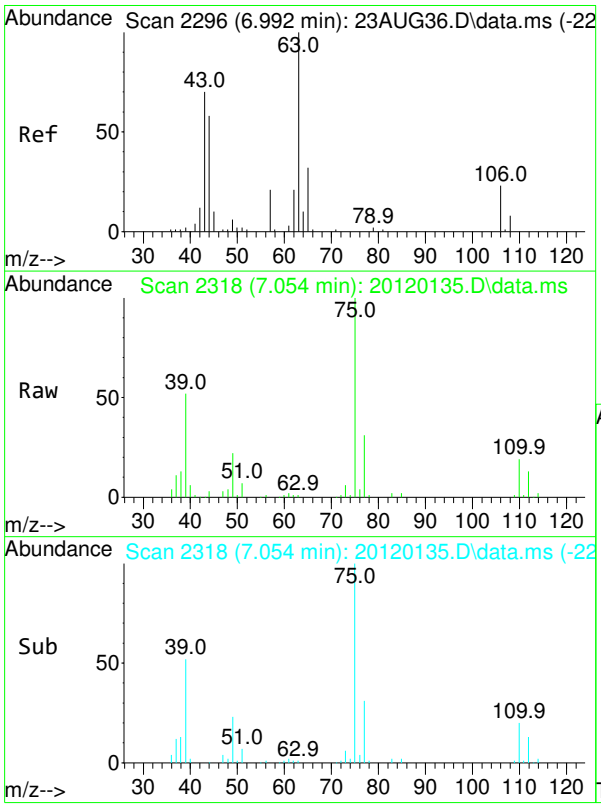


#63
2-Nitropropane
Concen: 19.05 ug/L
RT: 6.811 min Scan# 2231
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 24853

Ion	Ratio	Lower	Upper
43	100		
41	92.3	59.2	119.2
39	30.9	5.6	65.6
46	3.4	0.0	34.1

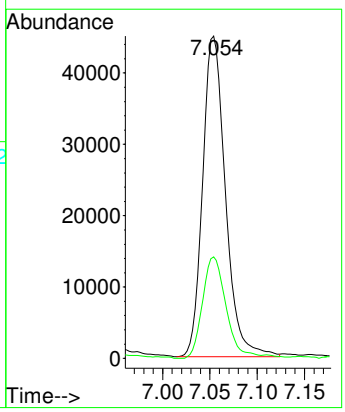


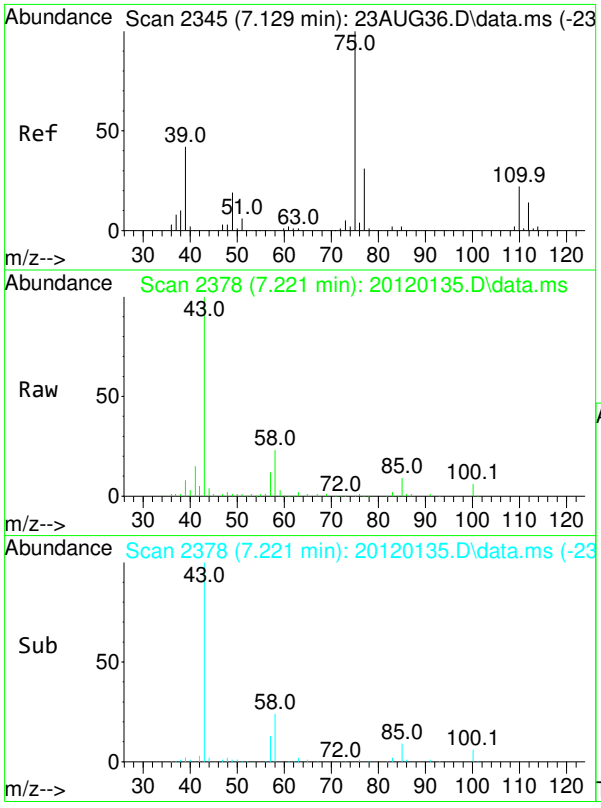


#64
cis-1,3-Dichloropropene
Concen: 20.07 ug/L
RT: 7.054 min Scan# 2318
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 75 Resp: 75431

Ion	Ratio	Lower	Upper
75	100		
77	32.5	1.3	61.3

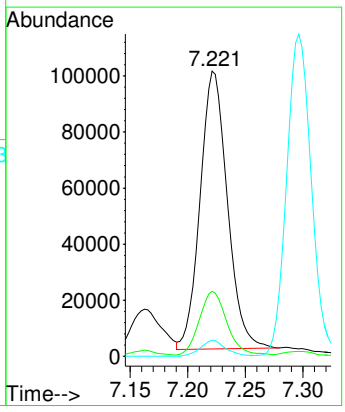


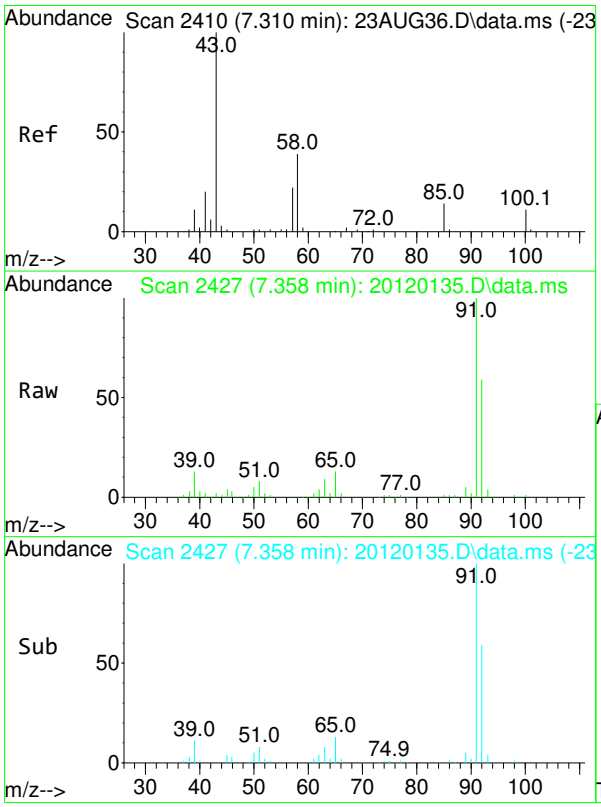


#66
4-Methyl-2-pentanone
Concen: 31.59 ug/L
RT: 7.221 min Scan# 2378
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 163520

Ion	Ratio	Lower	Upper
43	100		
58	23.6	13.4	53.4
100	5.4	0.0	27.3

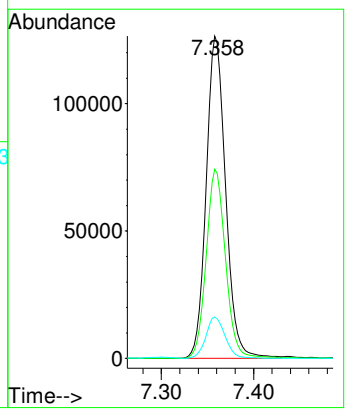


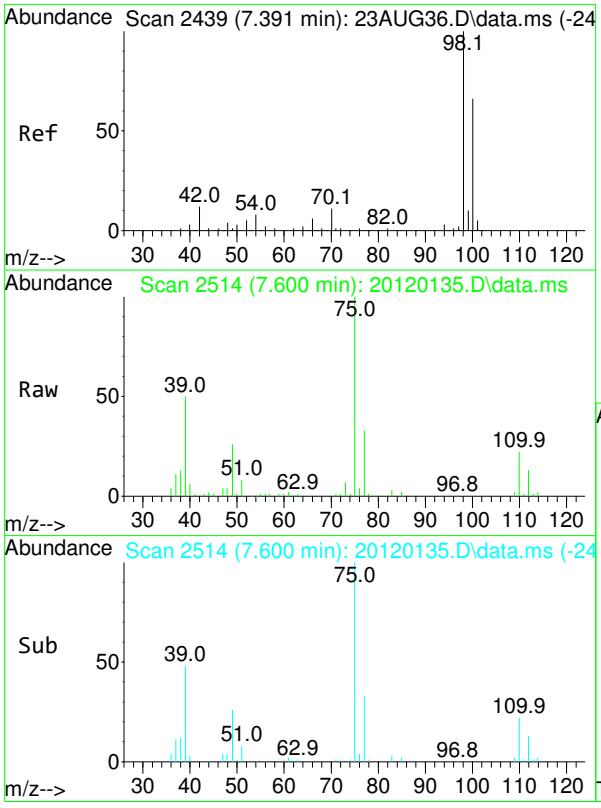


#68
Toluene
Concen: 21.64 ug/L
RT: 7.358 min Scan# 2427
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 186153

Ion	Ratio	Lower	Upper
91	100		
92	58.4	28.3	88.3
65	12.8	0.0	43.2

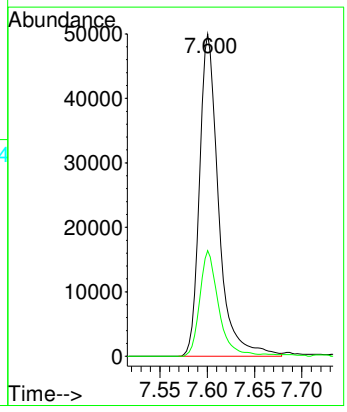


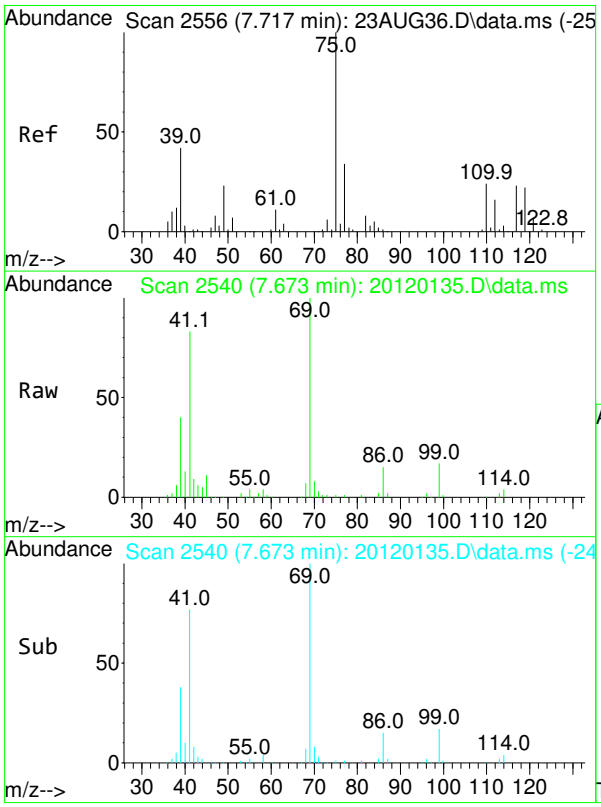


#69
trans-1,3-Dichloropropene
Concen: 20.48 ug/L
RT: 7.600 min Scan# 2514
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 75 Resp: 70221

Ion	Ratio	Lower	Upper
75	100		
77	32.2	3.4	63.4

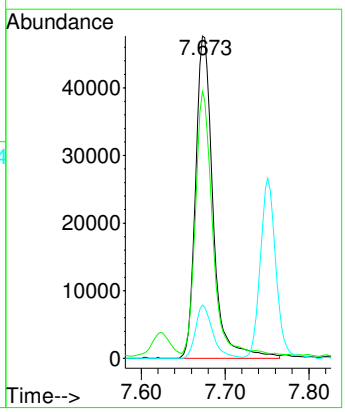


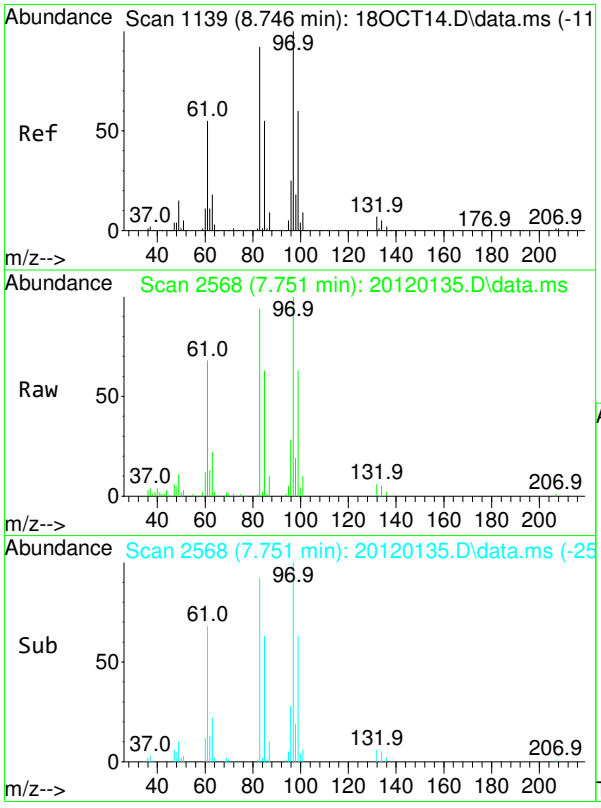


#71
Ethyl methacrylate
Concen: 18.46 ug/L
RT: 7.673 min Scan# 2540
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 69 Resp: 69035

Ion	Ratio	Lower	Upper
69	100		
41	77.2	53.5	113.5
99	16.2	0.0	46.2

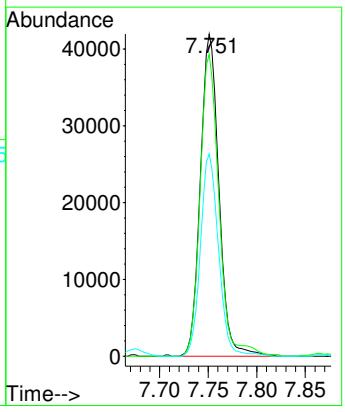


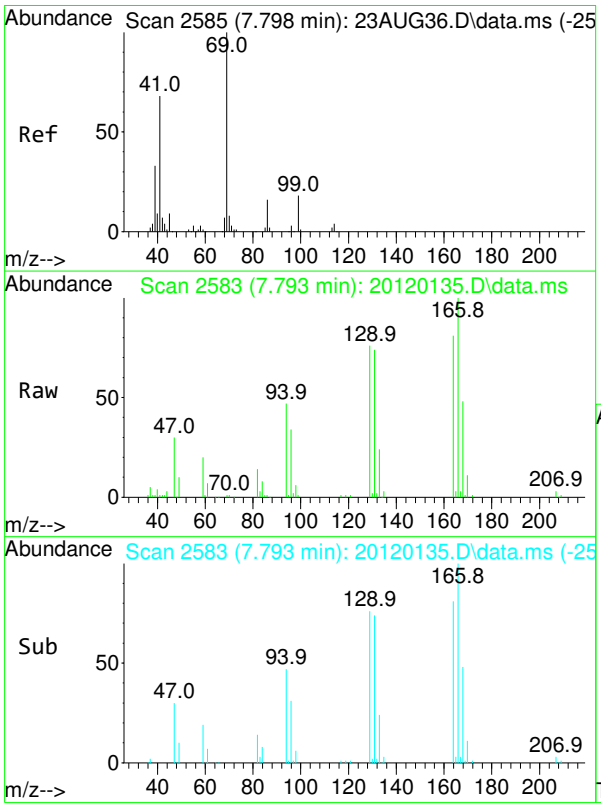


#72
1,1,2-Trichloroethane
Concen: 21.33 ug/L
RT: 7.751 min Scan# 2568
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 97 Resp: 55643

Ion	Ratio	Lower	Upper
97	100		
83	95.4	67.3	127.3
85	61.4	32.8	92.8

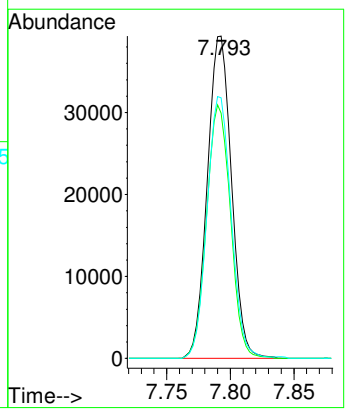


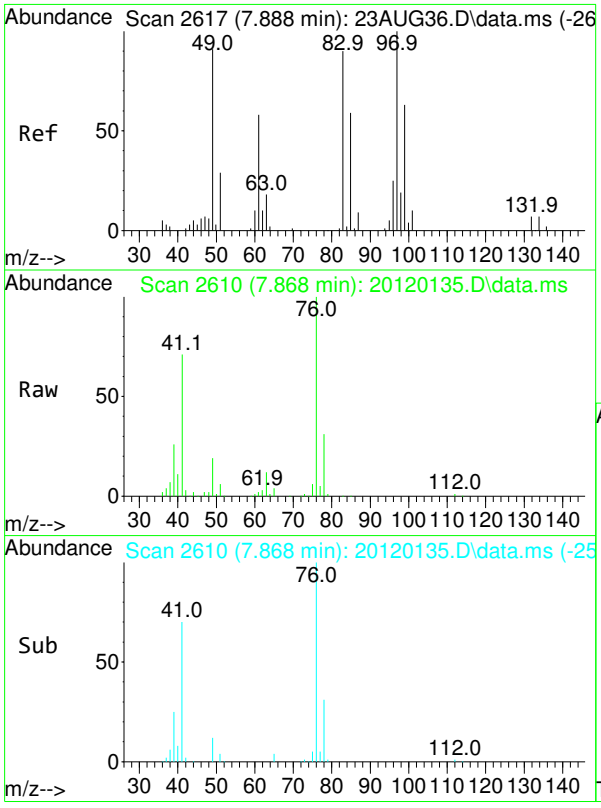


#73
Tetrachloroethene
Concen: 23.04 ug/L
RT: 7.793 min Scan# 2583
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:166 Resp: 51870

Ion	Ratio	Lower	Upper
166	100		
129	77.8	47.2	107.2
164	81.2	47.2	107.2

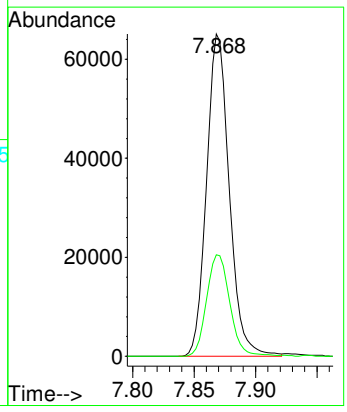


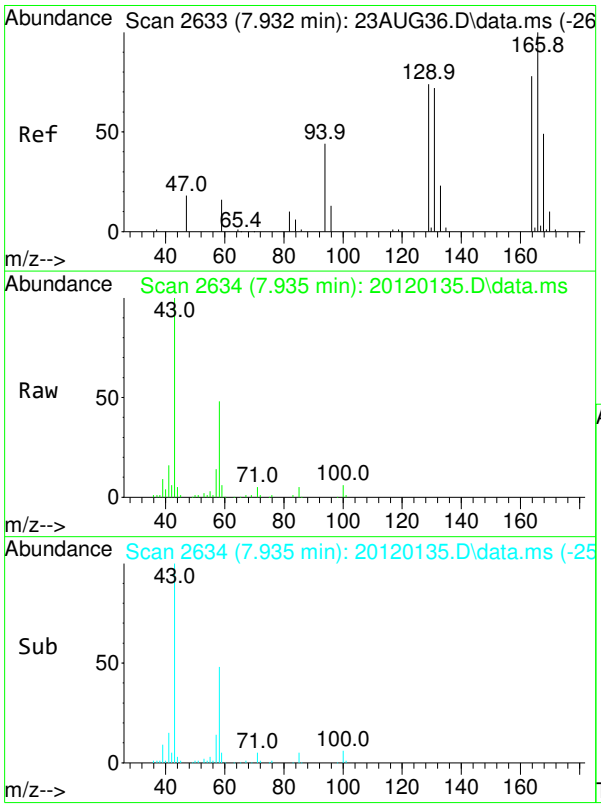


#74
1,3-Dichloropropane
Concen: 20.01 ug/L
RT: 7.868 min Scan# 2610
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 76 Resp: 83594

Ion	Ratio	Lower	Upper
76	100		
78	32.2	4.7	64.7

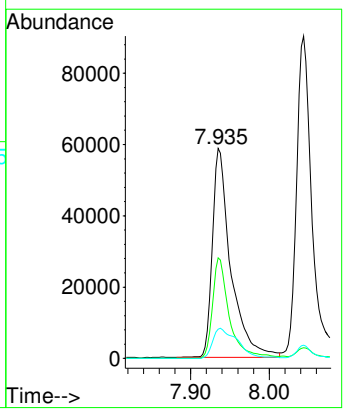


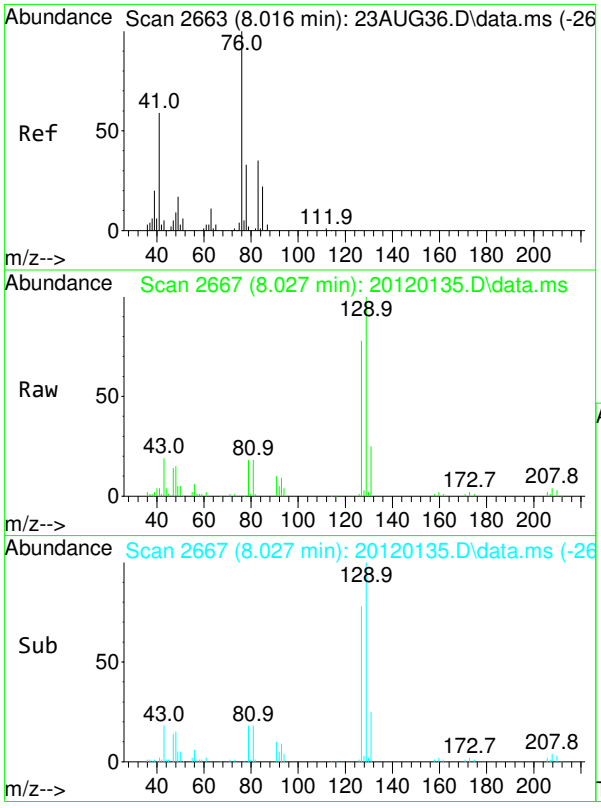


#75
2-Hexanone
Concen: 21.57 ug/L
RT: 7.935 min Scan# 2634
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 95673

Ion	Ratio	Lower	Upper
43	100		
58	43.7	18.9	78.9
57	19.6	0.0	44.5

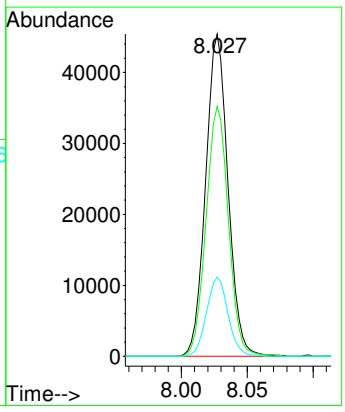


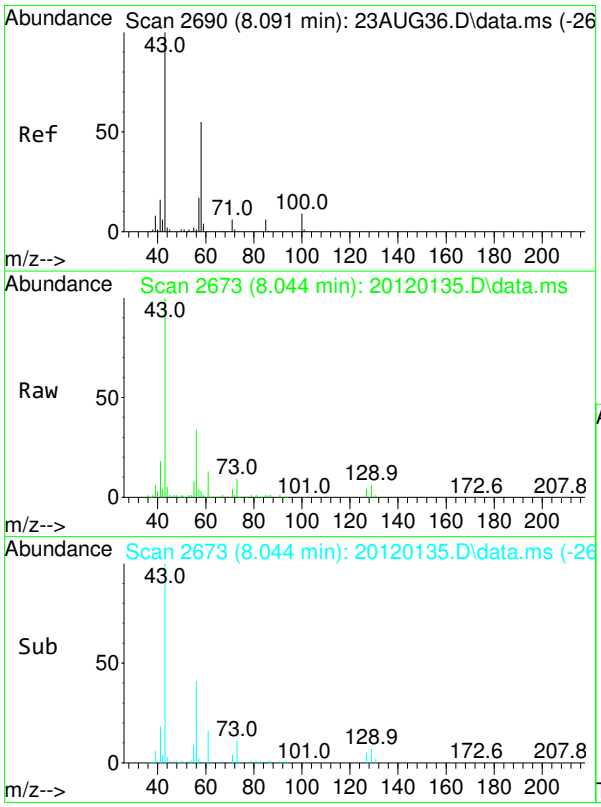


#76
Chlorodibromomethane
Concen: 20.13 ug/L
RT: 8.027 min Scan# 2667
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:129 Resp: 53479

Ion	Ratio	Lower	Upper
129	100		
127	77.9	45.9	105.9
131	23.8	0.0	54.2

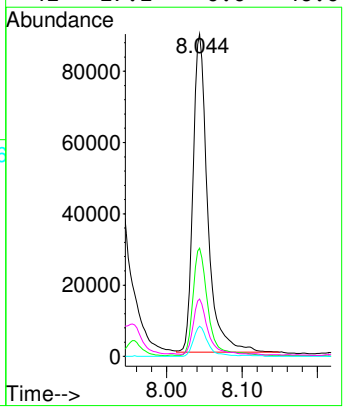


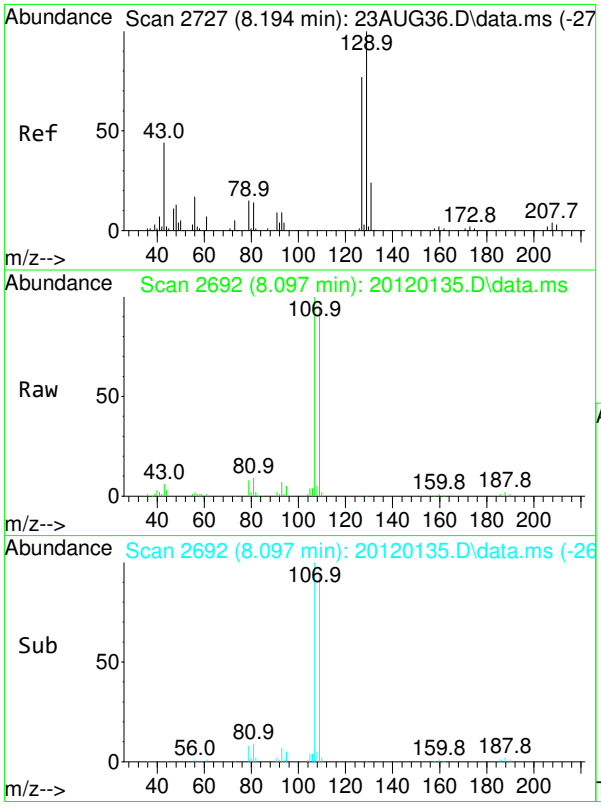


#77
Butyl acetate
Concen: 16.41 ug/L
RT: 8.044 min Scan# 2673
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 120166

Ion	Ratio	Lower	Upper
43	100		
56	34.0	4.8	64.8
73	9.4	0.0	38.9
41	17.1	0.0	46.0

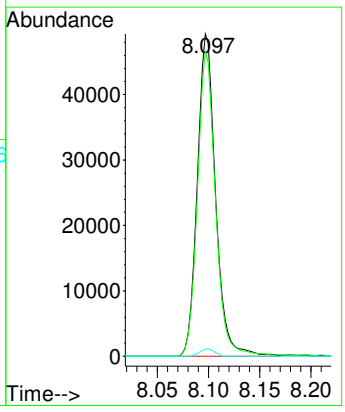


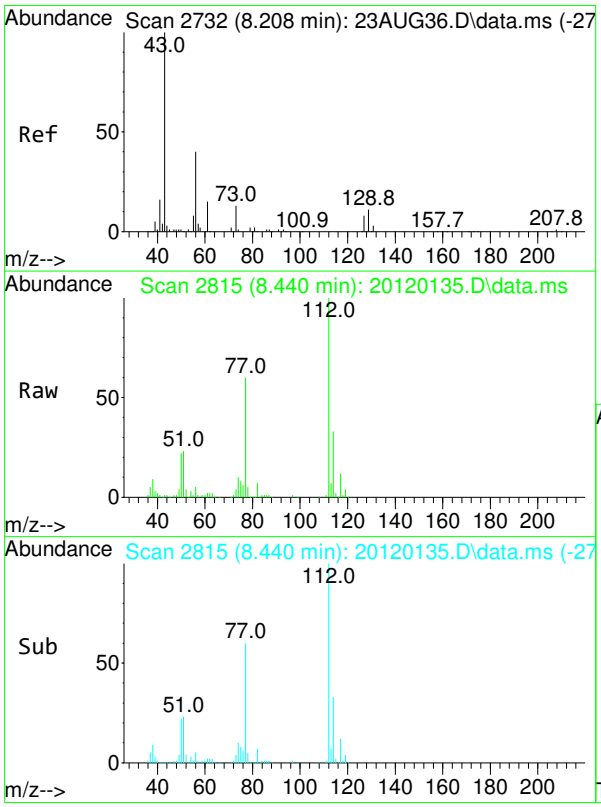


#78
1,2-Dibromoethane
Concen: 21.33 ug/L
RT: 8.097 min Scan# 2692
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:107 Resp: 61444

Ion	Ratio	Lower	Upper
107	100		
109	93.6	64.3	124.3
188	1.9	0.0	32.1

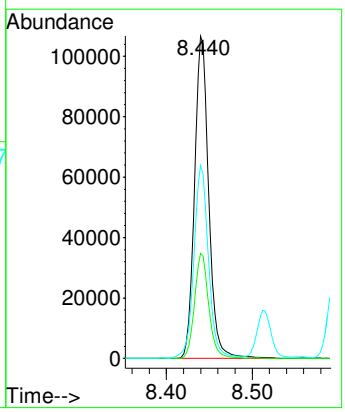


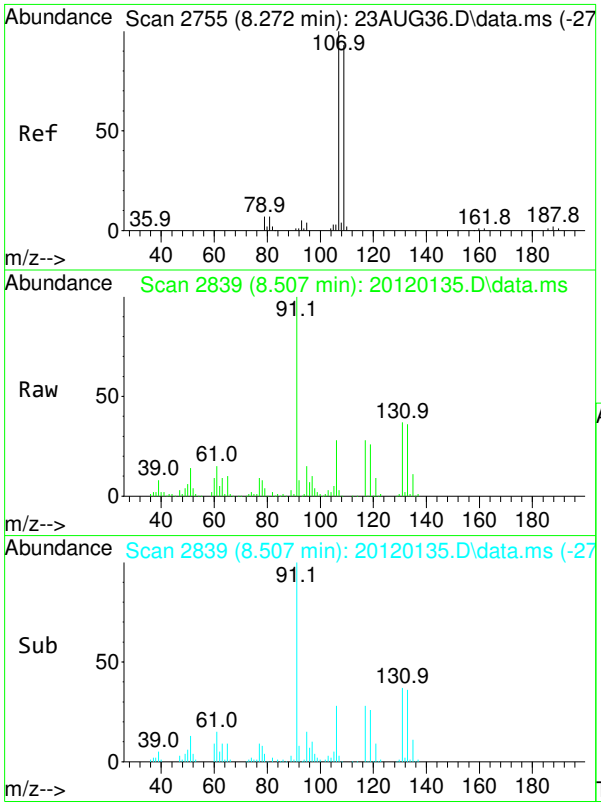


#79
Chlorobenzene
Concen: 21.86 ug/L
RT: 8.440 min Scan# 2815
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:112 Resp: 122963

Ion	Ratio	Lower	Upper
112	100		
114	32.5	1.7	61.7
77	62.0	32.3	92.3

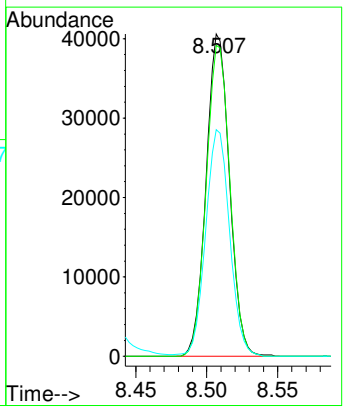


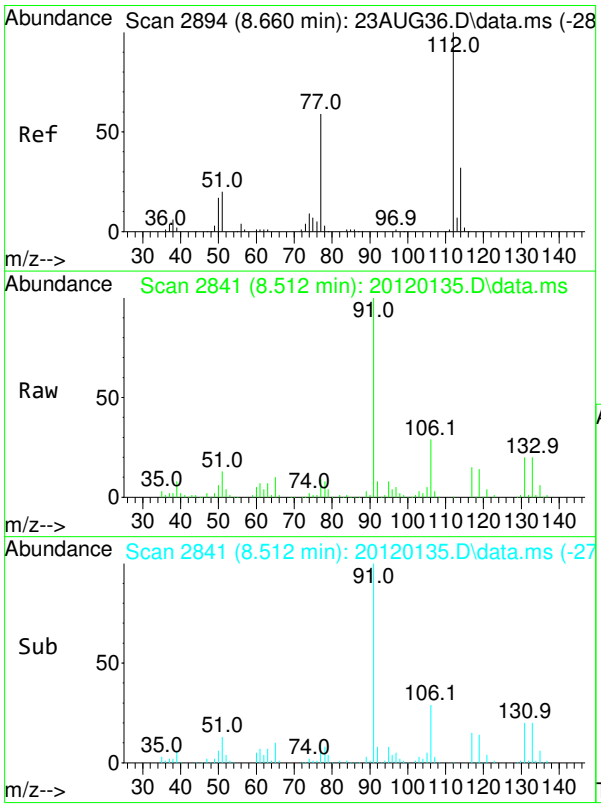


#80
1,1,1,2-Tetrachloroethane
Concen: 21.67 ug/L
RT: 8.507 min Scan# 2839
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:131 Resp: 46520

Ion	Ratio	Lower	Upper
131	100		
133	97.7	67.3	127.3
119	72.2	42.2	102.2

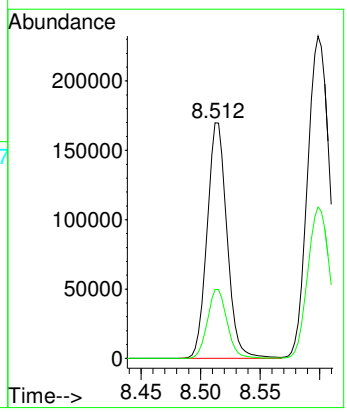


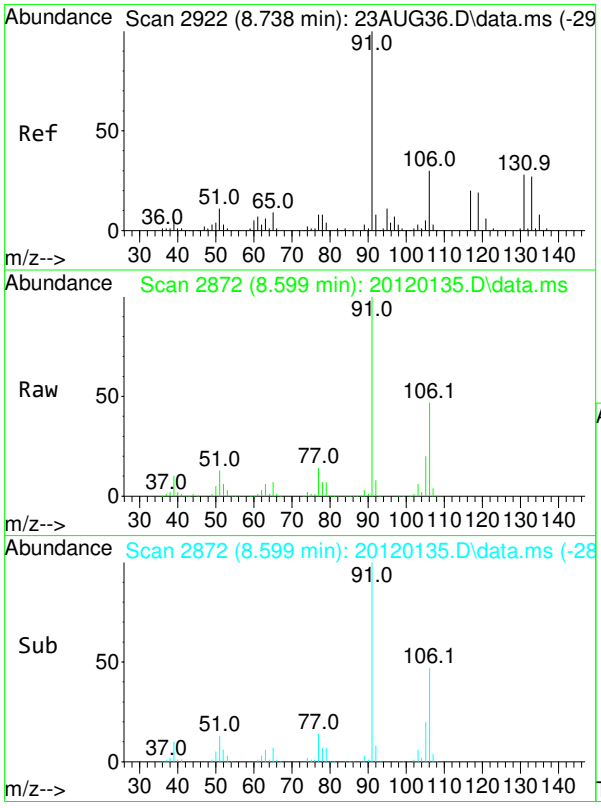


#81
Ethylbenzene
Concen: 21.42 ug/L
RT: 8.512 min Scan# 2841
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 197736

Ion	Ratio	Lower	Upper
91	100		
106	29.0	0.0	58.2

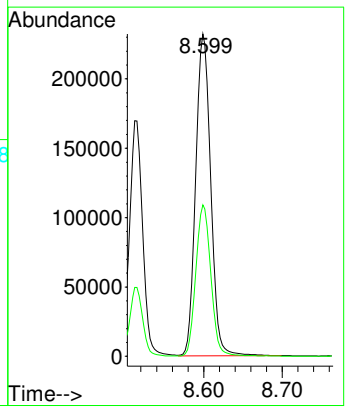


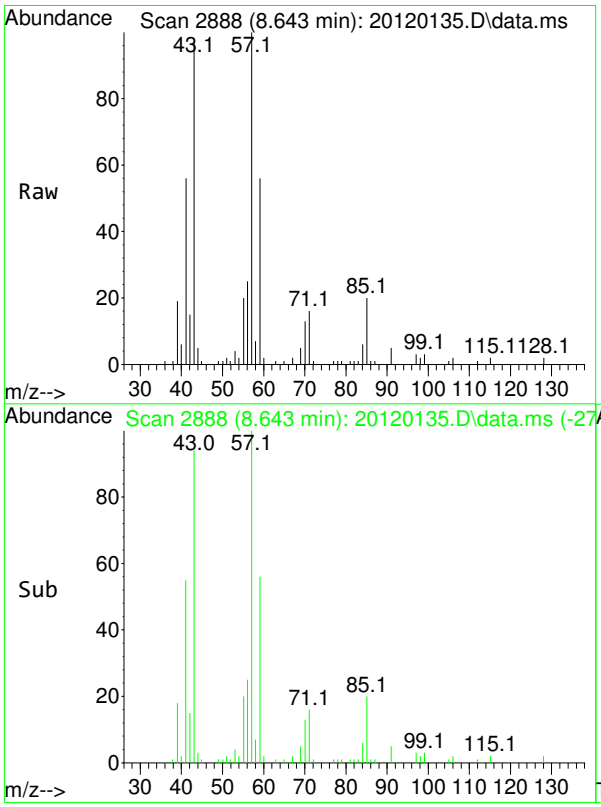


#82
m/p-Xylene
Concen: 44.07 ug/L
RT: 8.599 min Scan# 2872
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 308767

Ion	Ratio	Lower	Upper
91	100		
106	46.6	15.7	75.7

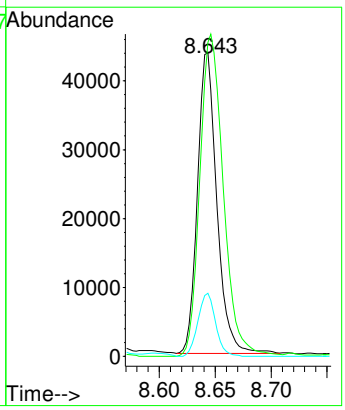


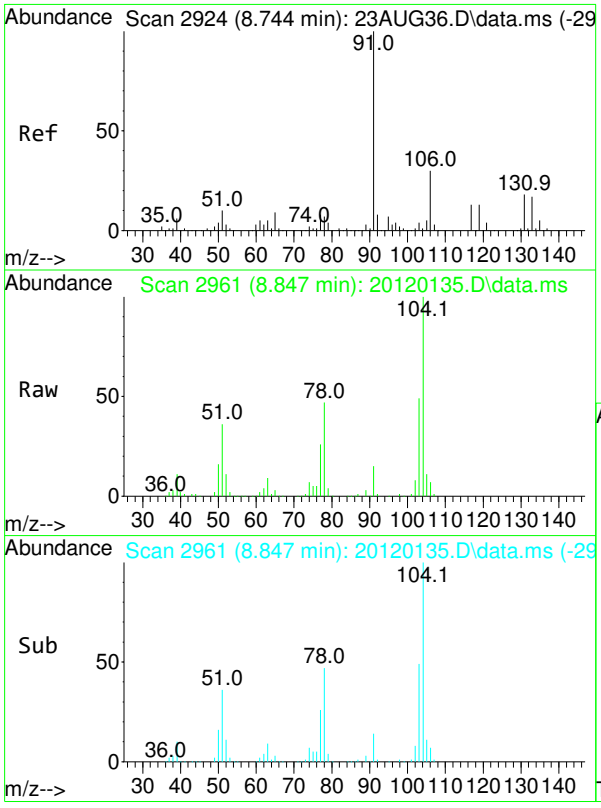


#83
Nonane
Concen: 30.06 ug/L
RT: 8.643 min Scan# 2888
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 52608

Ion	Ratio	Lower	Upper
43	100		
57	129.7	47.0	107.0#
85	19.2	0.0	52.2

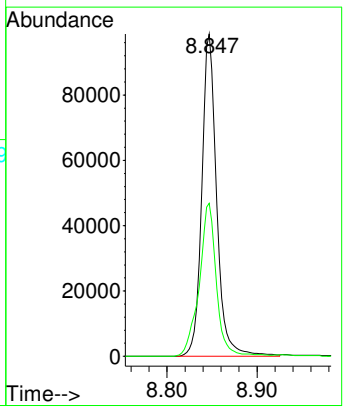


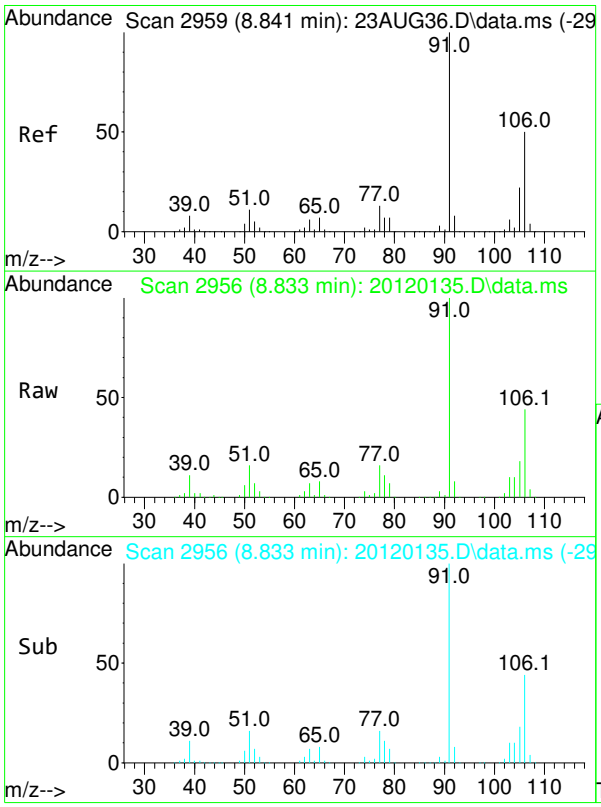


#84
Styrene
Concen: 23.96 ug/L
RT: 8.847 min Scan# 2961
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:104 Resp: 113547

Ion	Ratio	Lower	Upper
104	100		
78	54.1	25.5	85.5

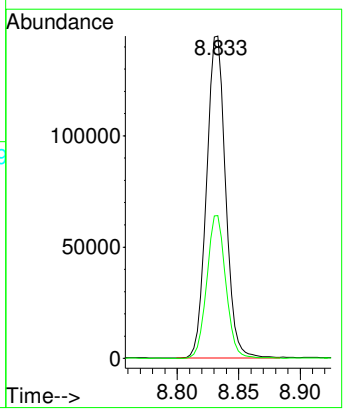


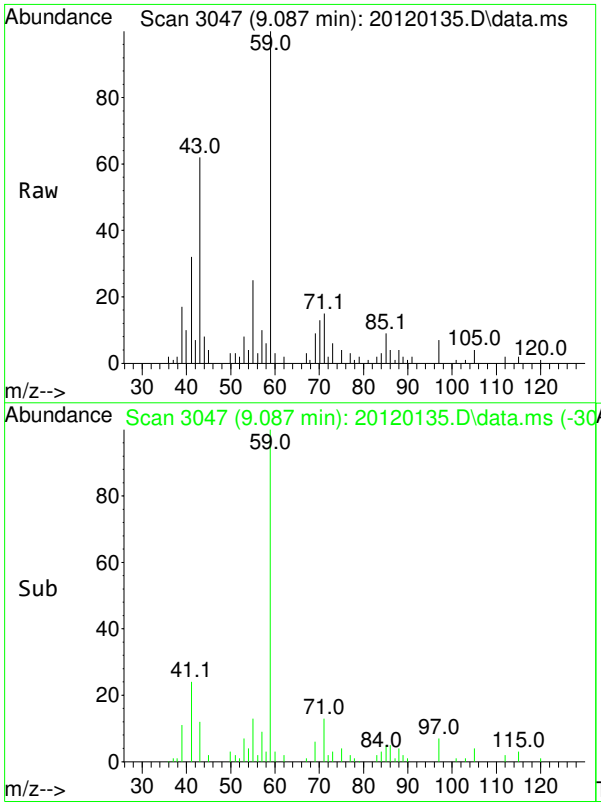


#85
o-Xylene
Concen: 21.76 ug/L
RT: 8.833 min Scan# 2956
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 155188

Ion	Ratio	Lower	Upper
91	100		
106	44.6	14.5	74.5

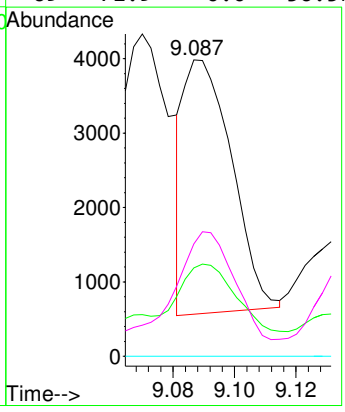


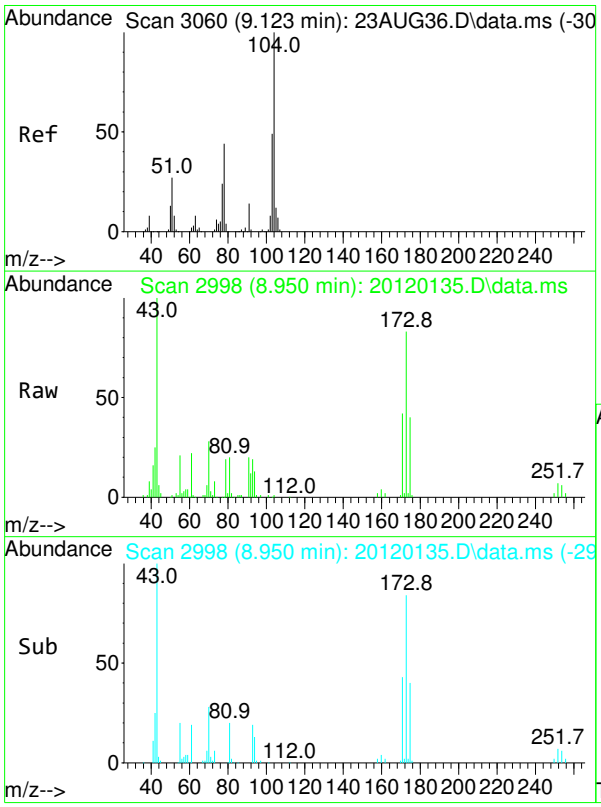


#86
Cyclohexanone
Concen: 9.75 ug/L
RT: 9.087 min Scan# 3047
Delta R.T. -0.011 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 55 Resp: 3685

Ion	Ratio	Lower	Upper
55	100		
42	31.2	38.8	98.8#
98	0.0	1.4	61.4#
69	71.9	0.0	56.5#

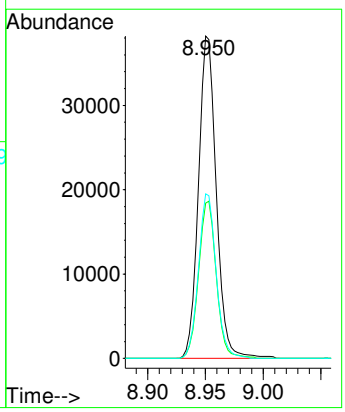


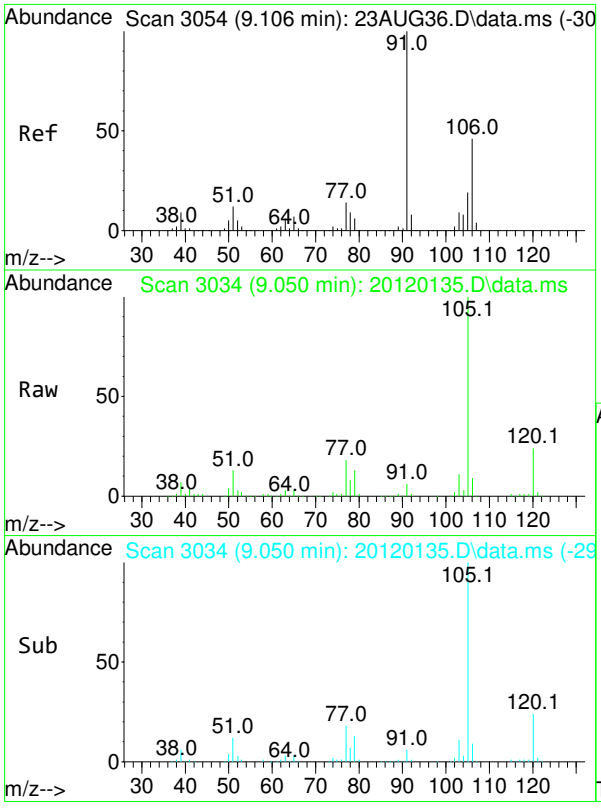


#87
Bromoform
Concen: 18.25 ug/L
RT: 8.950 min Scan# 2998
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:173 Resp: 41150

Ion	Ratio	Lower	Upper
173	100		
175	48.4	19.1	79.1
171	50.7	21.2	81.2

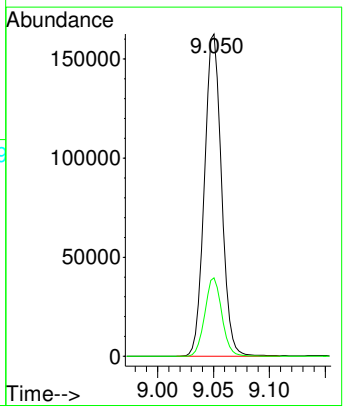


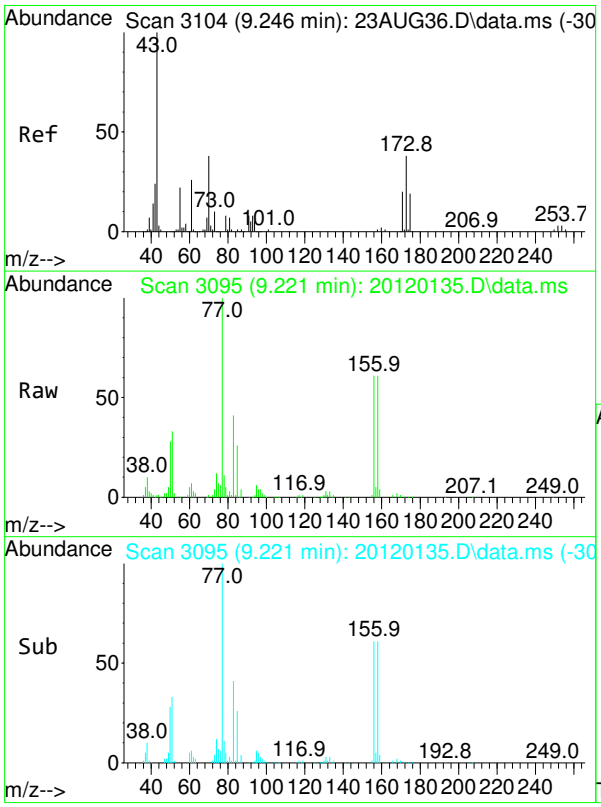


#88
Isopropylbenzene
Concen: 23.06 ug/L
RT: 9.050 min Scan# 3034
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:105 Resp: 172950

Ion	Ratio	Lower	Upper
105	100		
120	24.3	0.0	54.5

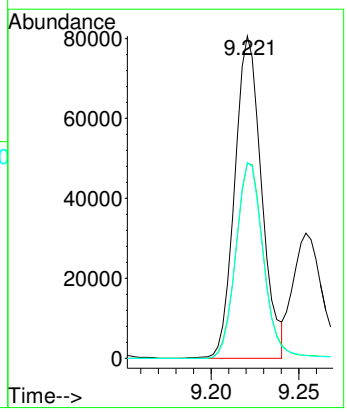


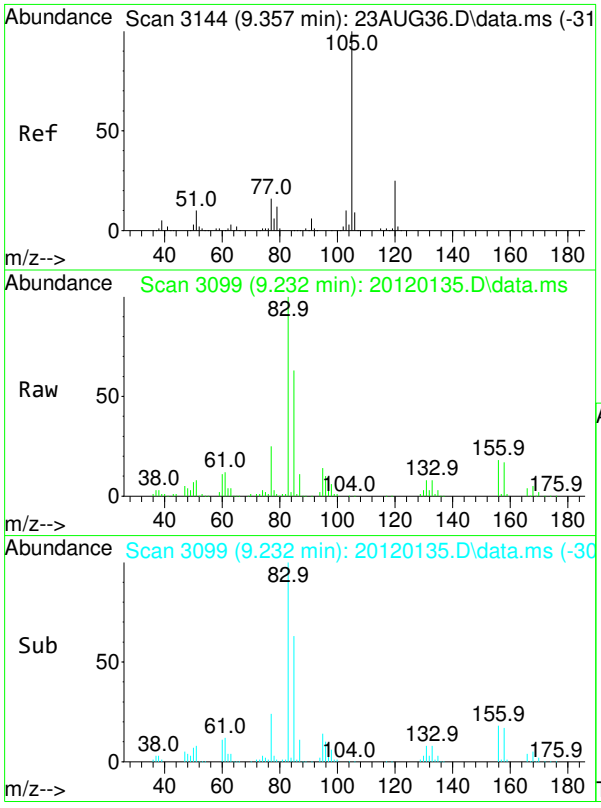


#90
Bromobenzene
Concen: 21.37 ug/L
RT: 9.221 min Scan# 3095
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 77 Resp: 85576

Ion	Ratio	Lower	Upper
77	100		
156	63.1	30.9	90.9
158	62.4	30.4	90.4

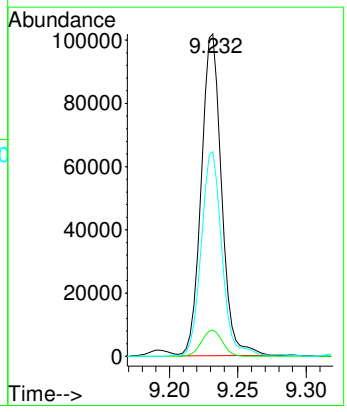


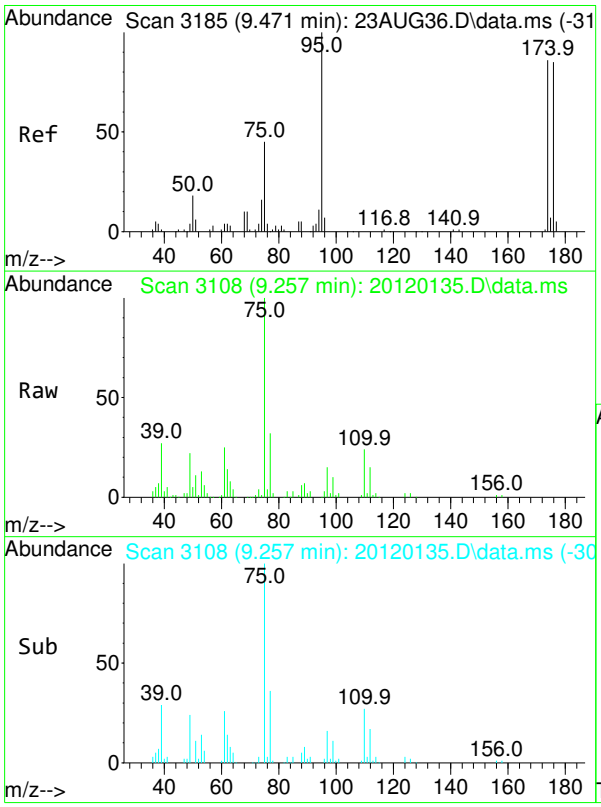


#91
1,1,2,2-Tetrachloroethane
Concen: 20.00 ug/L
RT: 9.232 min Scan# 3099
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 83 Resp: 105723

Ion	Ratio	Lower	Upper
83	100		
131	8.4	0.0	40.2
85	65.0	34.5	94.5

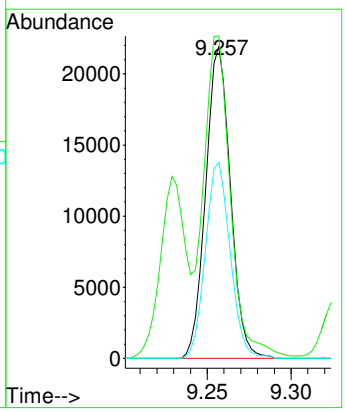


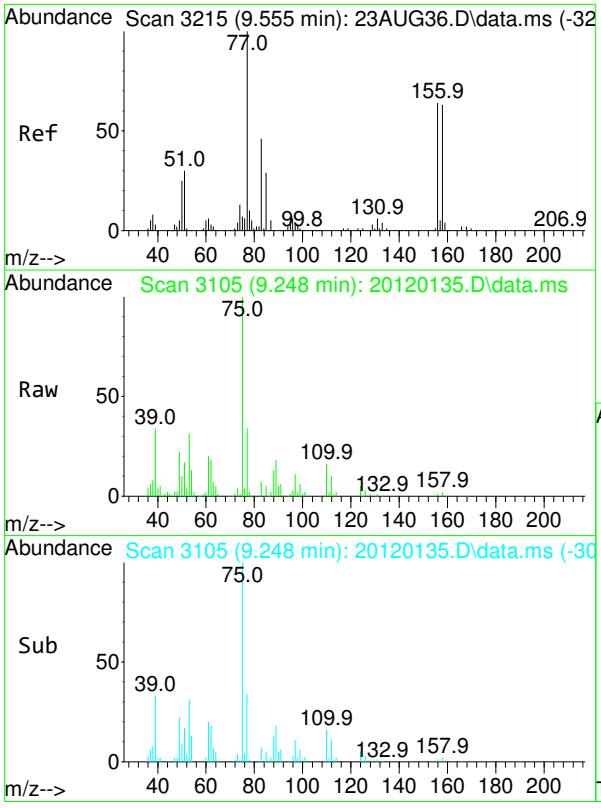


#92
1,2,3-Trichloropropane
Concen: 20.48 ug/L
RT: 9.257 min Scan# 3108
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:110 Resp: 22499

Ion	Ratio	Lower	Upper
110	100		
61	112.4	82.7	142.7
112	63.2	34.0	94.0

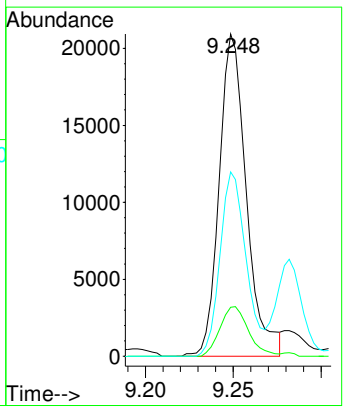


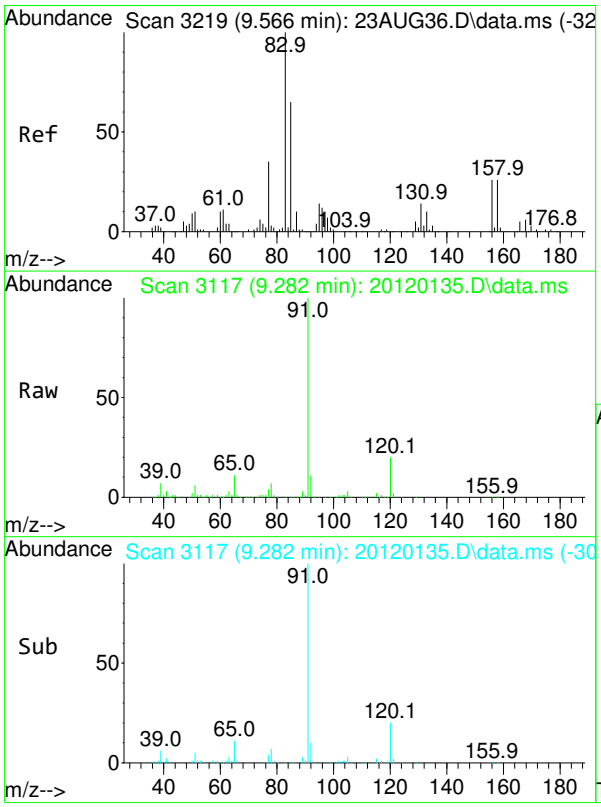


#93
trans-1,4-Dichloro-2-butene
Concen: 17.24 ug/L
RT: 9.248 min Scan# 3105
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 53 Resp: 22528

Ion	Ratio	Lower	Upper
53	100		
124	16.2	0.0	48.4
89	55.1	31.5	91.5

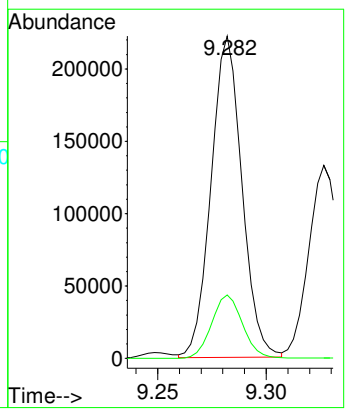


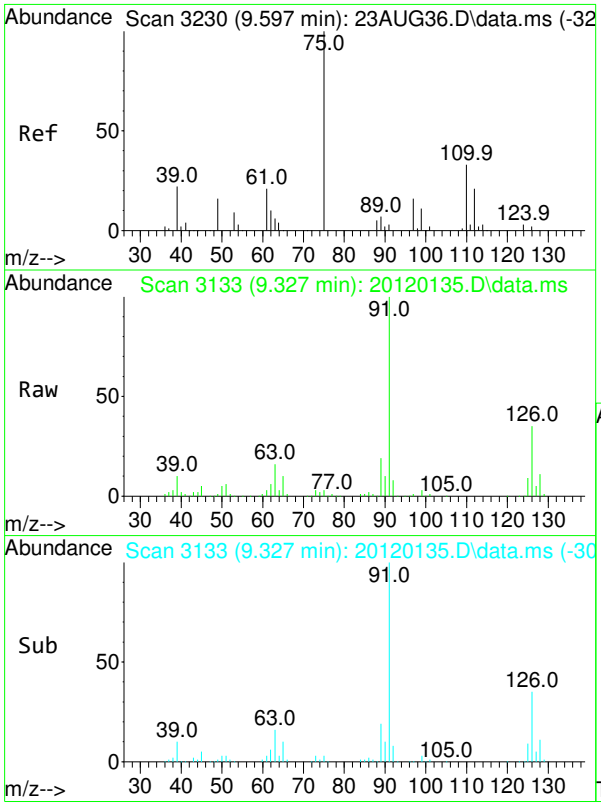


#94
n-Propylbenzene
Concen: 22.96 ug/L
RT: 9.282 min Scan# 3117
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 220162

Ion	Ratio	Lower	Upper
91	100		
120	19.9	0.0	49.5

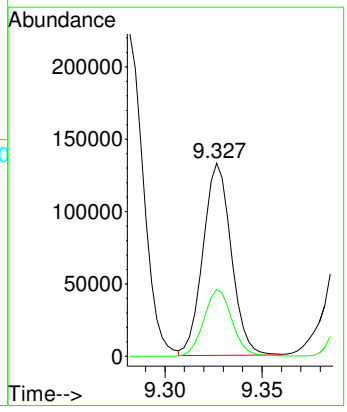


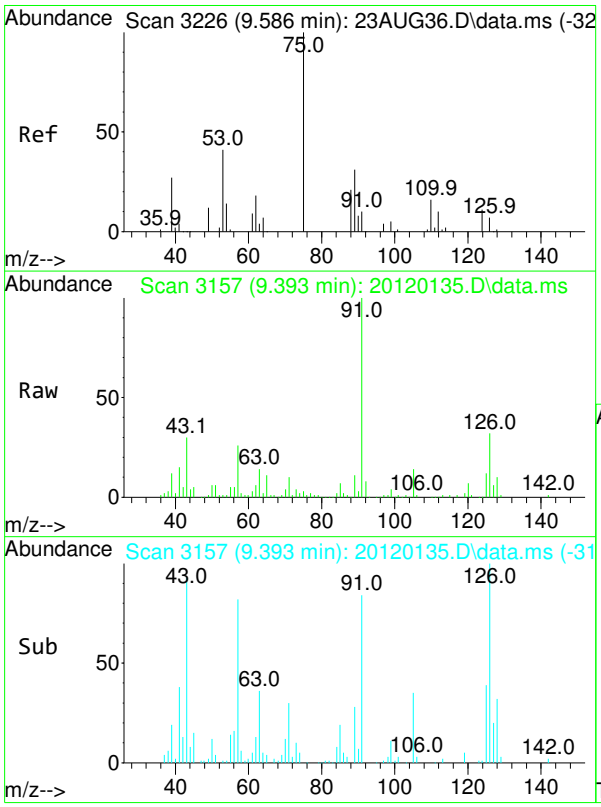


#95
2-Chlorotoluene
Concen: 21.33 ug/L
RT: 9.327 min Scan# 3133
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 134386

Ion	Ratio	Lower	Upper
91	100		
126	35.0	3.1	63.1

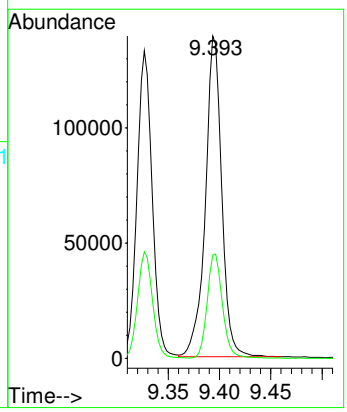


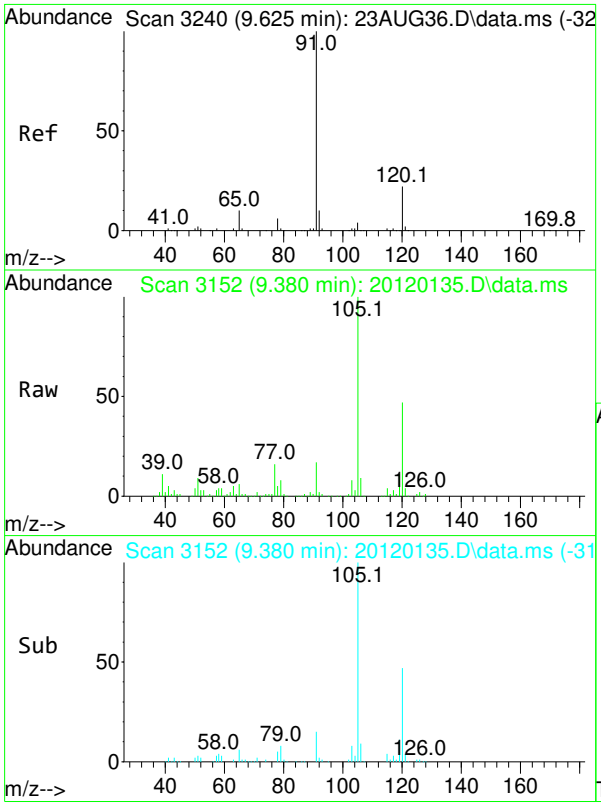


#96
4-Chlorotoluene
Concen: 21.67 ug/L
RT: 9.393 min Scan# 3157
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 155302

Ion	Ratio	Lower	Upper
91	100		
126	30.7	0.0	59.5

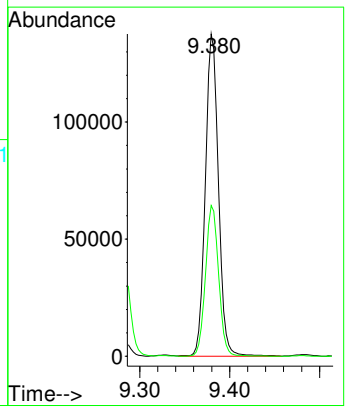


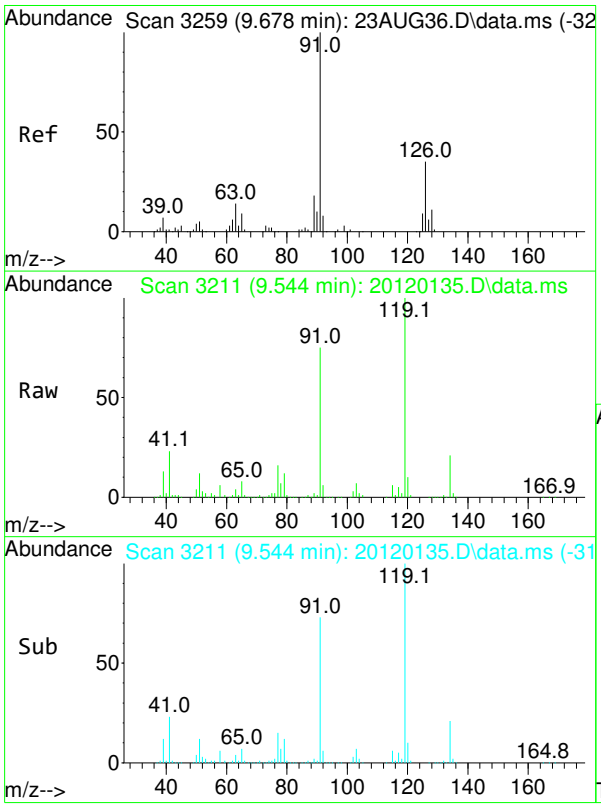


#97
1,3,5-Trimethylbenzene
Concen: 23.59 ug/L
RT: 9.380 min Scan# 3152
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:105 Resp: 139471

Ion	Ratio	Lower	Upper
105	100		
120	47.1	16.8	76.8

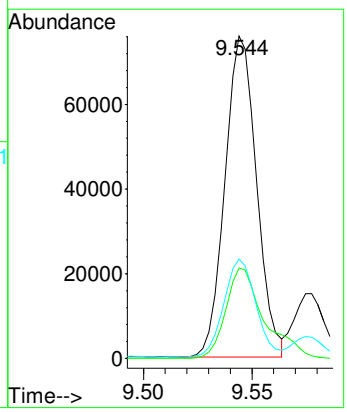


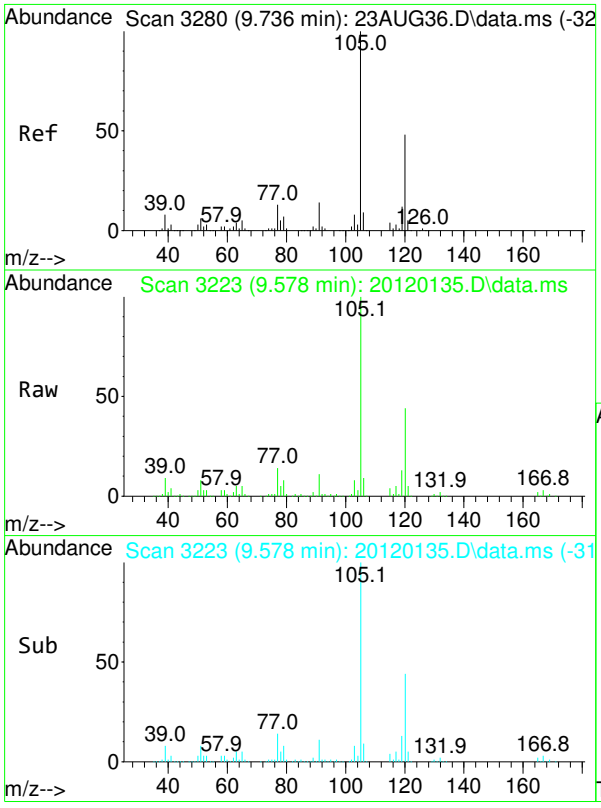


#98
tert-Butylbenzene
Concen: 21.35 ug/L
RT: 9.544 min Scan# 3211
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 76863

Ion	Ratio	Lower	Upper
91	100		
134	34.2	0.0	56.4
41	31.2	9.8	49.8

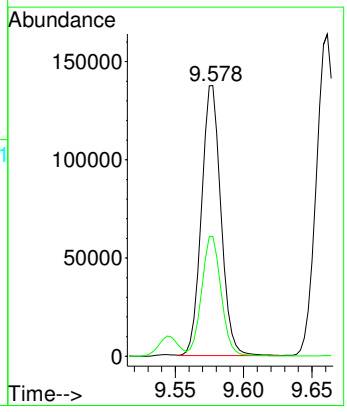


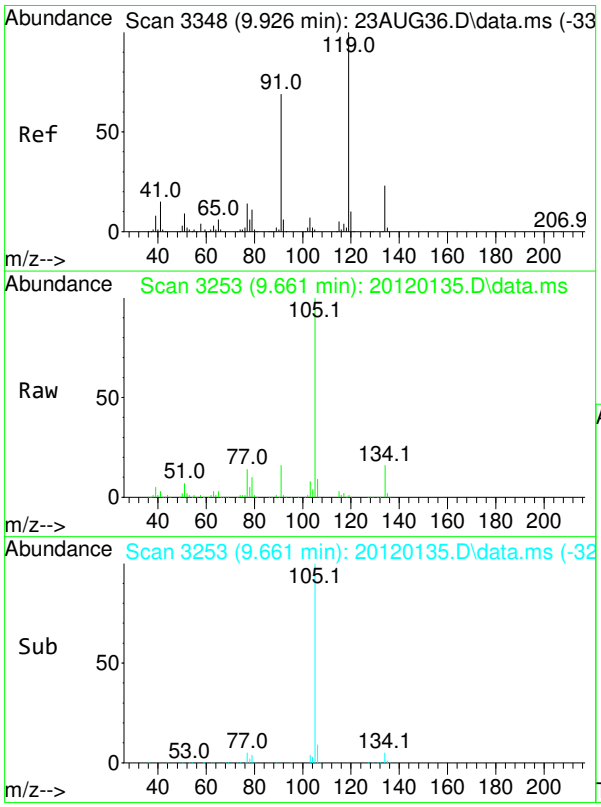


#99
1,2,4-Trimethylbenzene
Concen: 22.96 ug/L
RT: 9.578 min Scan# 3223
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:105 Resp: 136549

Ion	Ratio	Lower	Upper
105	100		
120	44.9	14.7	74.7

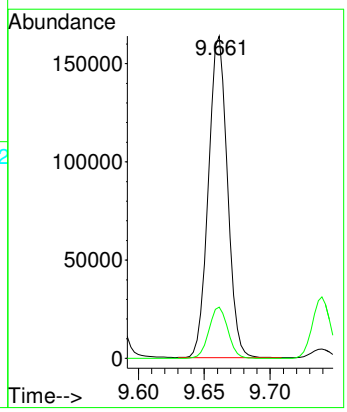


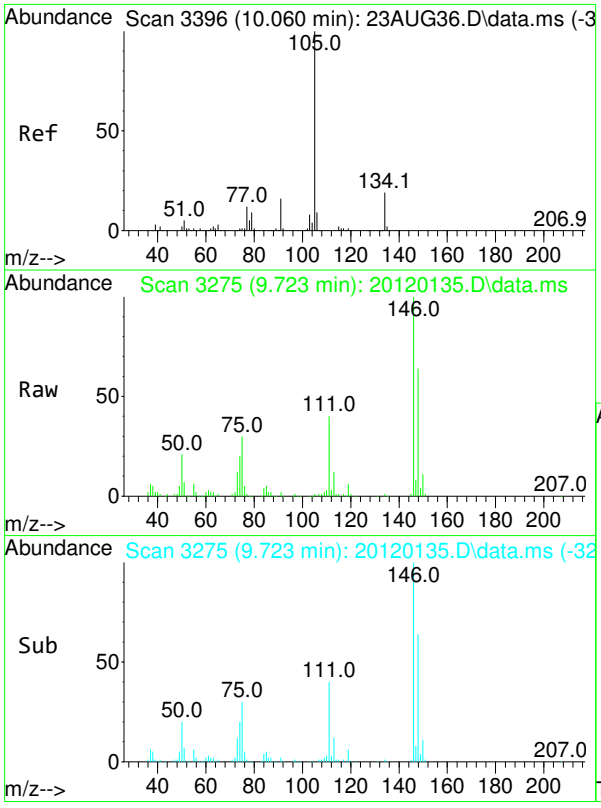


#100
sec-Butylbenzene
Concen: 23.73 ug/L
RT: 9.661 min Scan# 3253
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:105 Resp: 164343

Ion	Ratio	Lower	Upper
105	100		
134	15.9	0.0	45.7

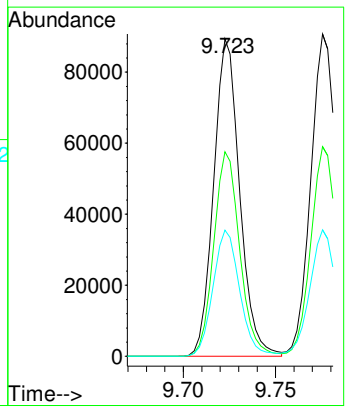


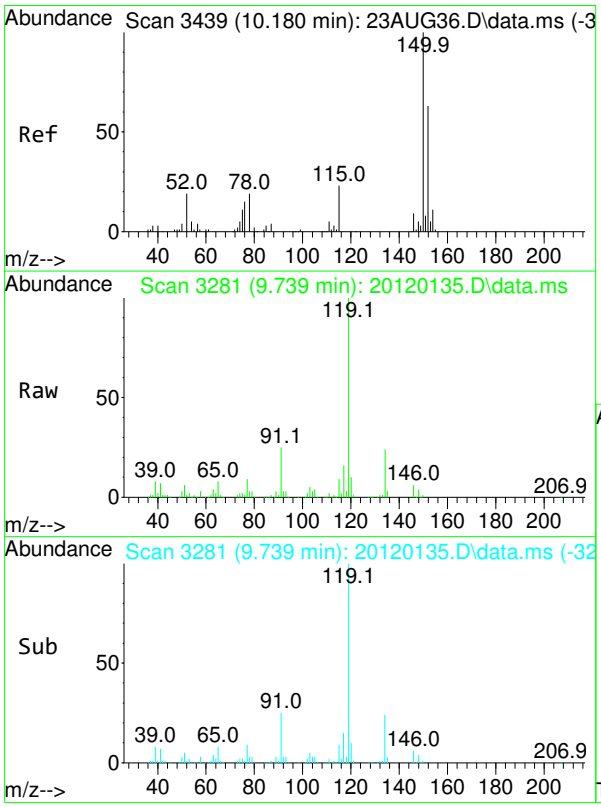


#102
1,3-Dichlorobenzene
Concen: 20.61 ug/L
RT: 9.723 min Scan# 3275
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:146 Resp: 87982

Ion	Ratio	Lower	Upper
146	100		
148	64.3	35.2	95.2
111	40.8	10.9	70.9

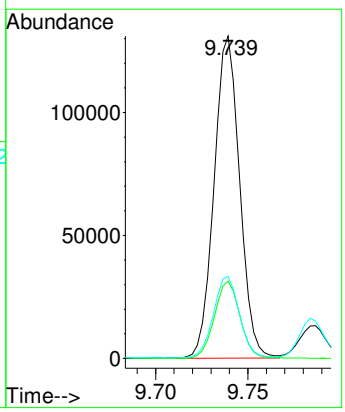


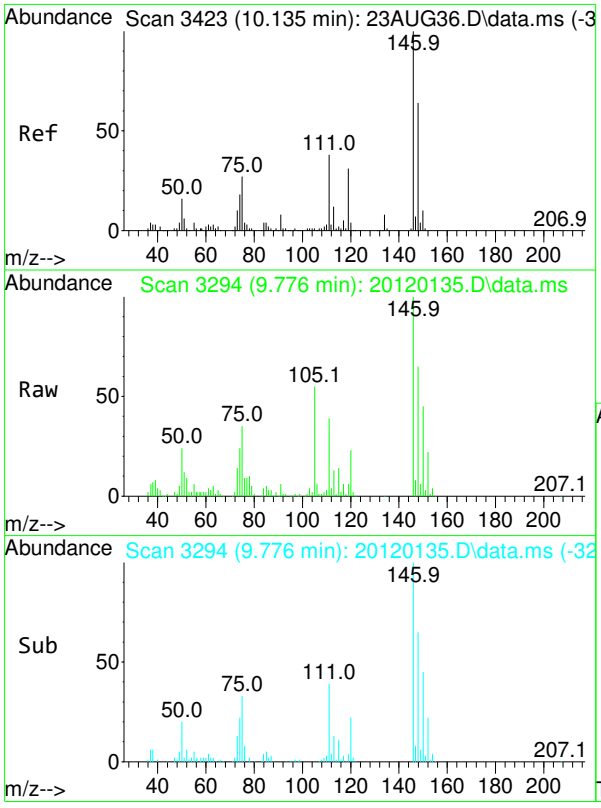


#103
p-Isopropyltoluene
Concen: 22.50 ug/L
RT: 9.739 min Scan# 3281
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:119 Resp: 126629

Ion	Ratio	Lower	Upper
119	100		
134	24.0	0.0	53.9
91	25.6	0.0	55.8

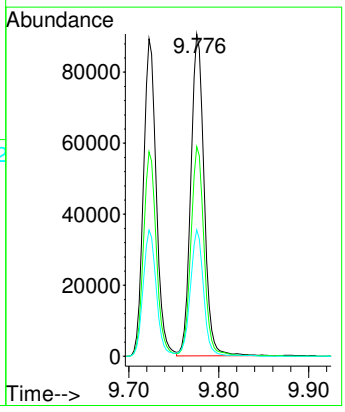


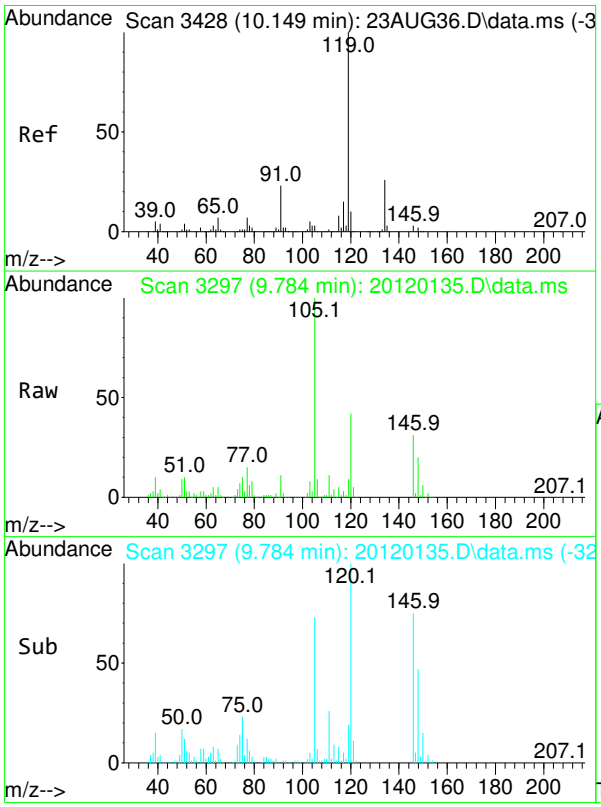


#104
1,4-Dichlorobenzene
Concen: 21.24 ug/L
RT: 9.776 min Scan# 3294
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:146 Resp: 92619

Ion	Ratio	Lower	Upper
146	100		
148	63.7	34.2	94.2
111	38.2	9.2	69.2

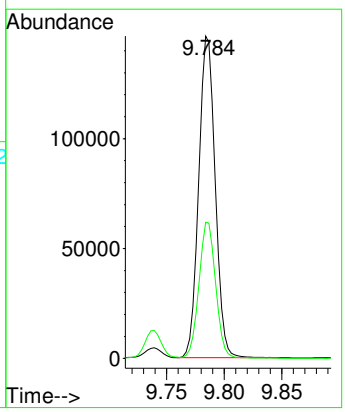


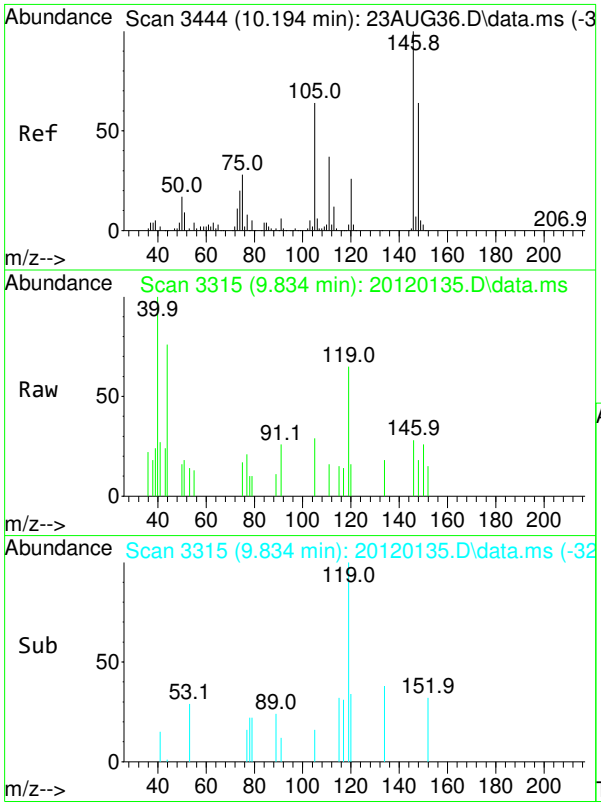


#105
1,2,3-Trimethylbenzene
Concen: 20.37 ug/L
RT: 9.784 min Scan# 3297
Delta R.T. -0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:105 Resp: 146184

Ion	Ratio	Lower	Upper
105	100		
120	42.7	12.1	72.1

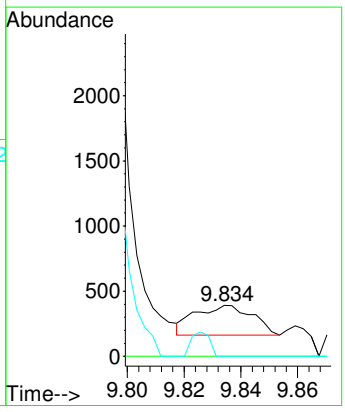


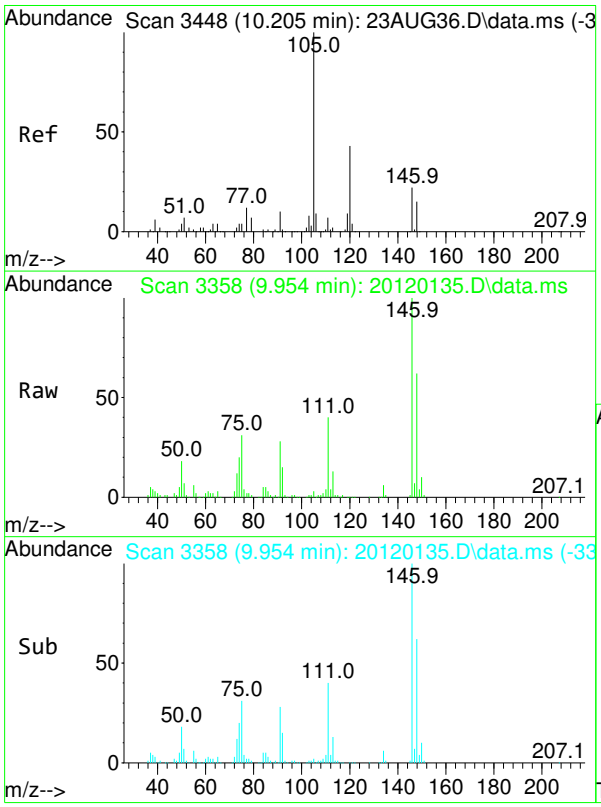


#106
Benzyl chloride
Concen: 0.30 ug/L
RT: 9.834 min Scan# 3315
Delta R.T. 0.003 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 323

Ion	Ratio	Lower	Upper
91	100		
126	0.0	0.0	48.9
65	26.3	0.0	43.6

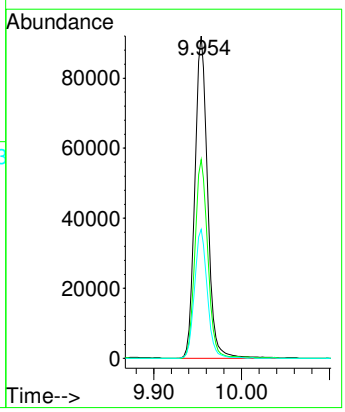


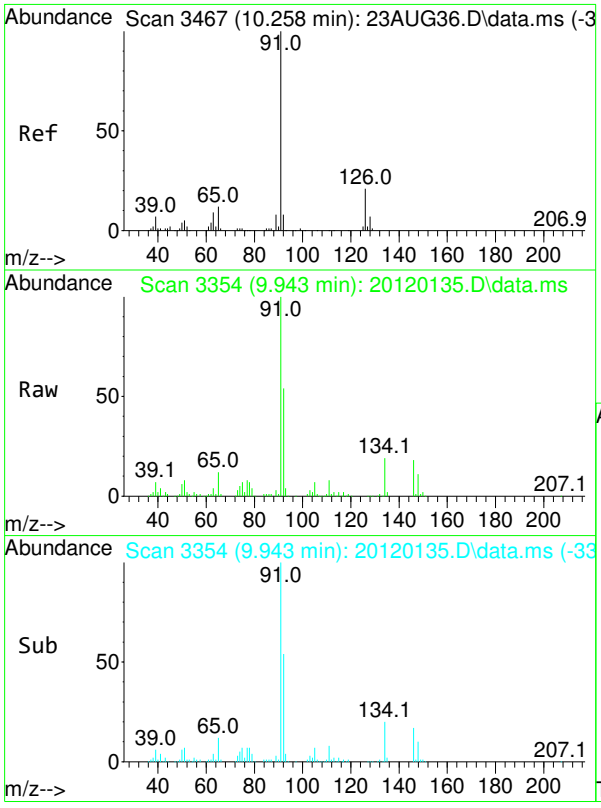


#107
1,2-Dichlorobenzene
Concen: 20.88 ug/L
RT: 9.954 min Scan# 3358
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:146 Resp: 93537

Ion	Ratio	Lower	Upper
146	100		
148	61.8	34.0	94.0
111	40.0	11.7	71.7

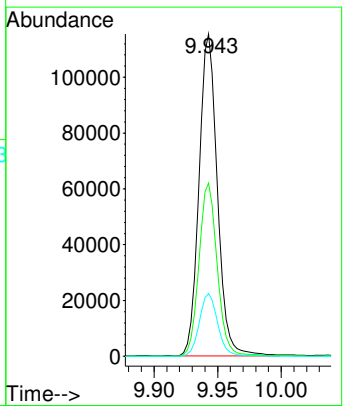


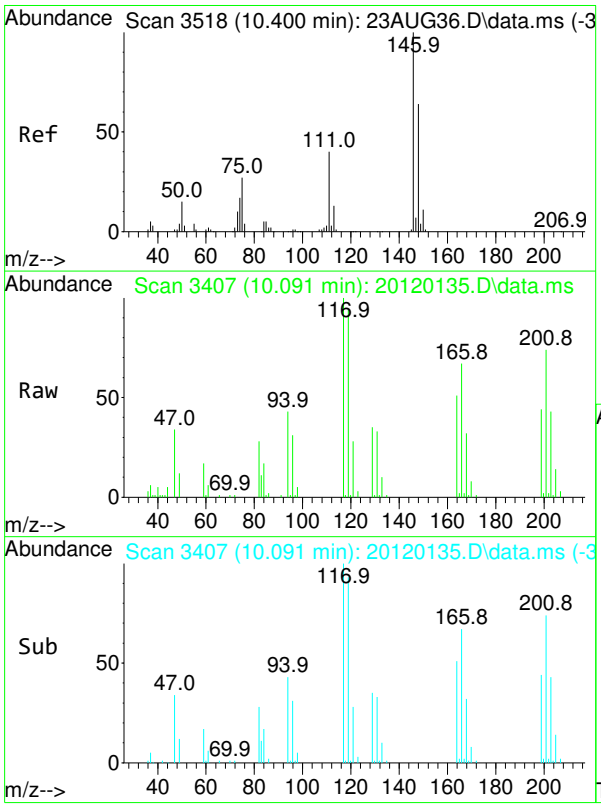


#108
n-Butylbenzene
Concen: 20.66 ug/L
RT: 9.943 min Scan# 3354
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 91 Resp: 116280

Ion	Ratio	Lower	Upper
91	100		
92	53.7	23.9	83.9
134	19.6	0.0	49.1

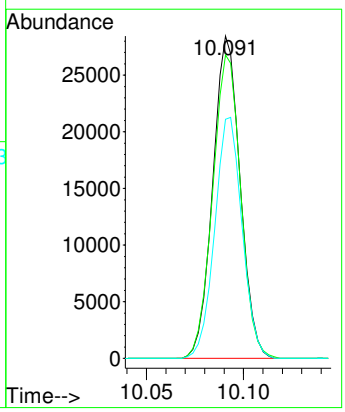


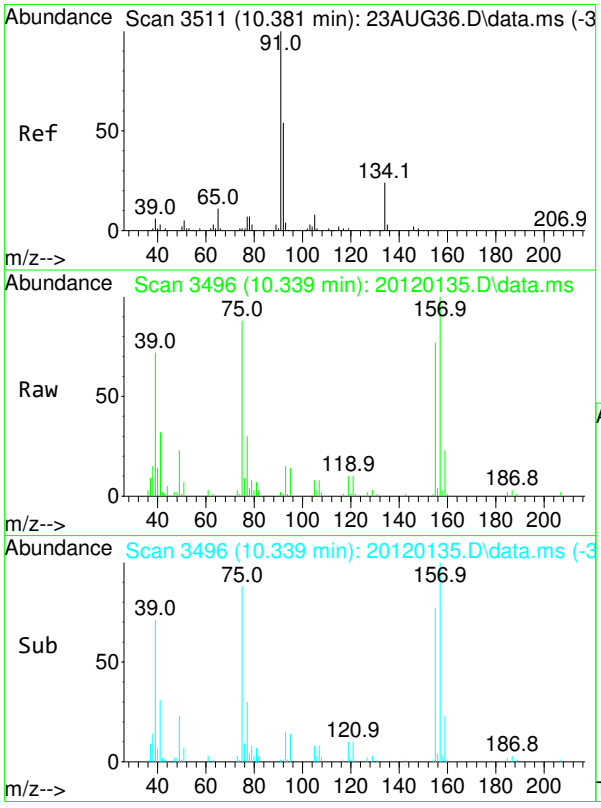


#109
Hexachloroethane
Concen: 21.39 ug/L
RT: 10.091 min Scan# 3407
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:117 Resp: 27867

Ion	Ratio	Lower	Upper
117	100		
119	96.8	67.6	127.6
201	75.2	40.8	100.8

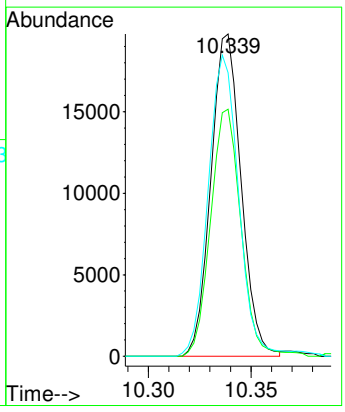


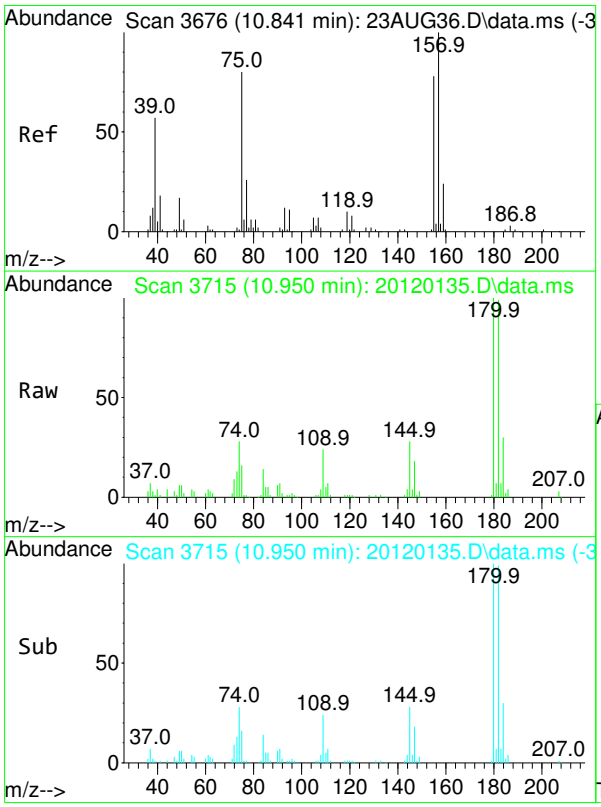


#110
1,2-Dibromo-3-chloropropane
Concen: 18.19 ug/L
RT: 10.339 min Scan# 3496
Delta R.T. -0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:157 Resp: 20179

Ion	Ratio	Lower	Upper
157	100		
155	77.0	46.7	106.7
75	95.0	69.3	129.3

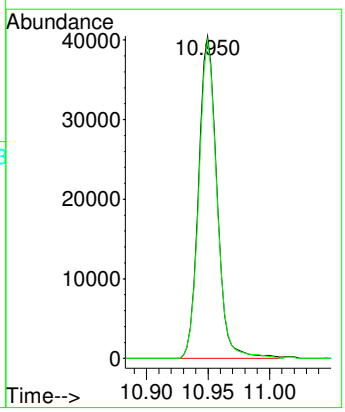


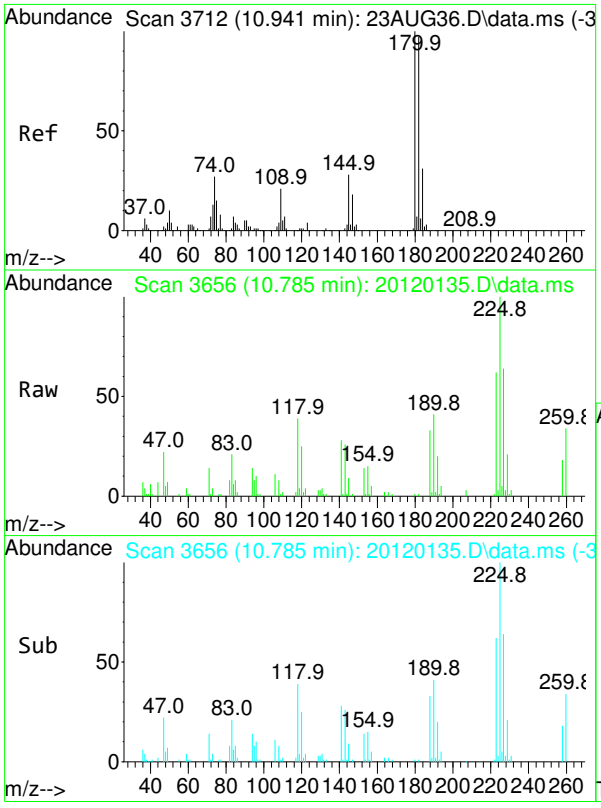


#112
1,2,4-Trichlorobenzene
Concen: 16.12 ug/L
RT: 10.950 min Scan# 3715
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:180 Resp: 42091

Ion	Ratio	Lower	Upper
180	100		
182	97.1	65.7	125.7

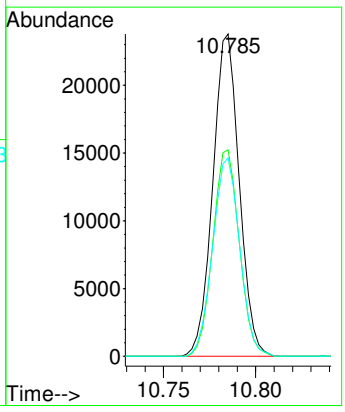


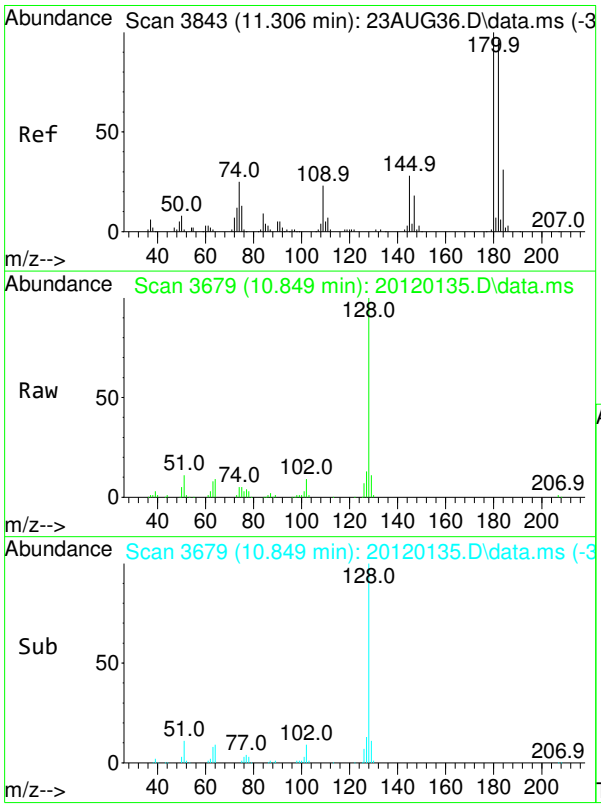


#113
Hexachlorobutadiene
Concen: 24.34 ug/L
RT: 10.785 min Scan# 3656
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:225 Resp: 23722

Ion	Ratio	Lower	Upper
225	100		
227	64.2	33.7	93.7
223	63.1	31.7	91.7

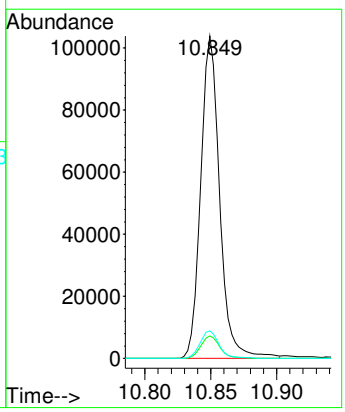


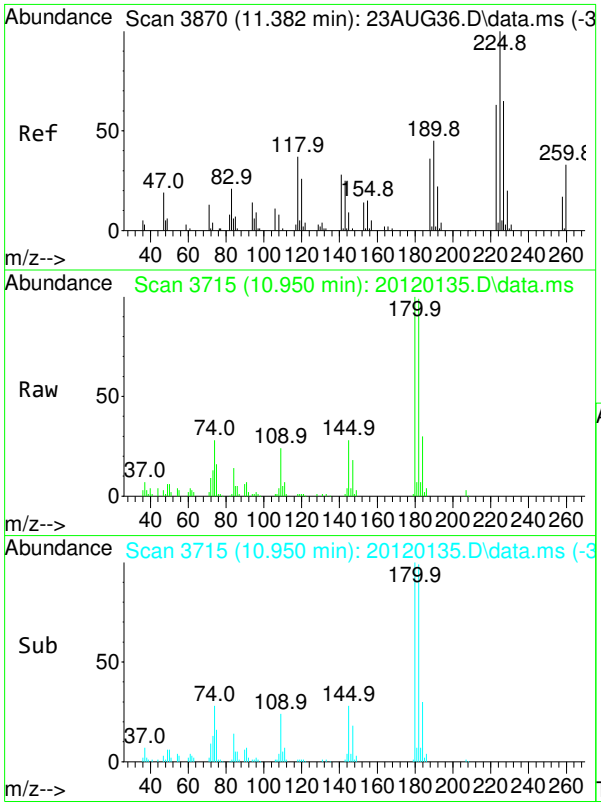


#114
Naphthalene
Concen: 10.50 ug/L
RT: 10.849 min Scan# 3679
Delta R.T. 0.000 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:128 Resp: 103695

Ion	Ratio	Lower	Upper
128	100		
126	7.0	0.0	37.2
102	8.6	0.0	38.7

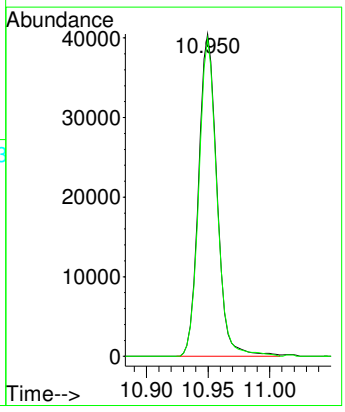


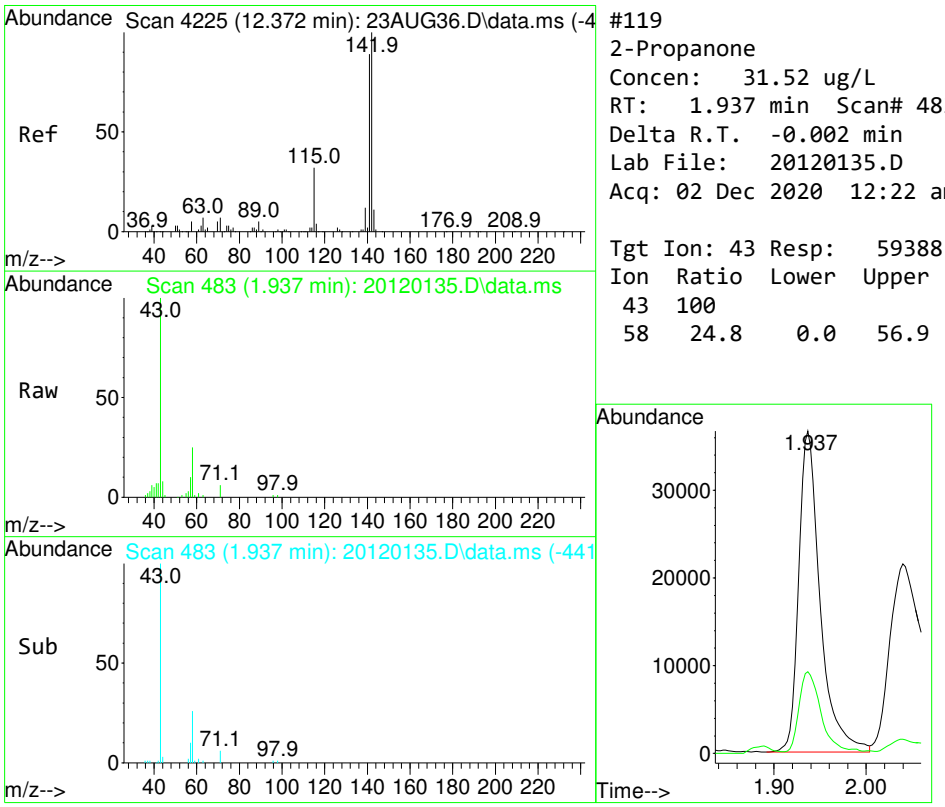


#115
1,2,3-Trichlorobenzene
Concen: 16.12 ug/L
RT: 10.950 min Scan# 3715
Delta R.T. 0.001 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion:180 Resp: 42091

Ion	Ratio	Lower	Upper
180	100		
182	97.1	65.7	125.7

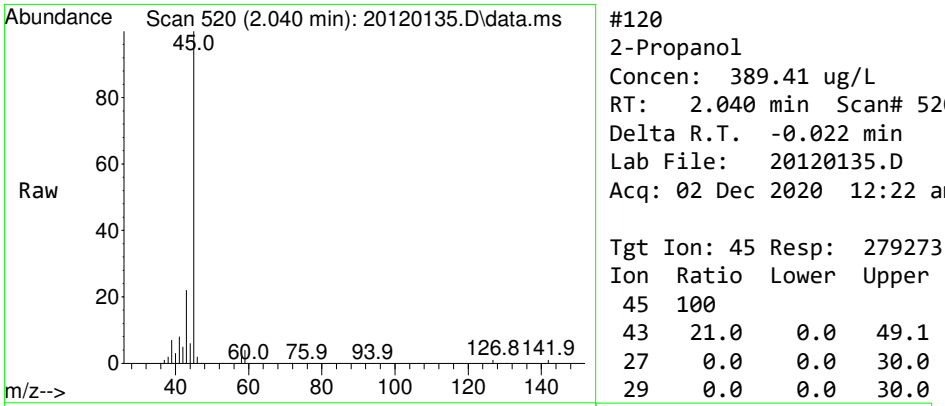




#119
2-Propanone
Concen: 31.52 ug/L
RT: 1.937 min Scan# 483
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 59388

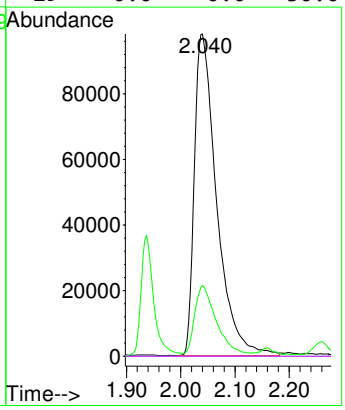
Ion	Ratio	Lower	Upper
43	100		
58	24.8	0.0	56.9

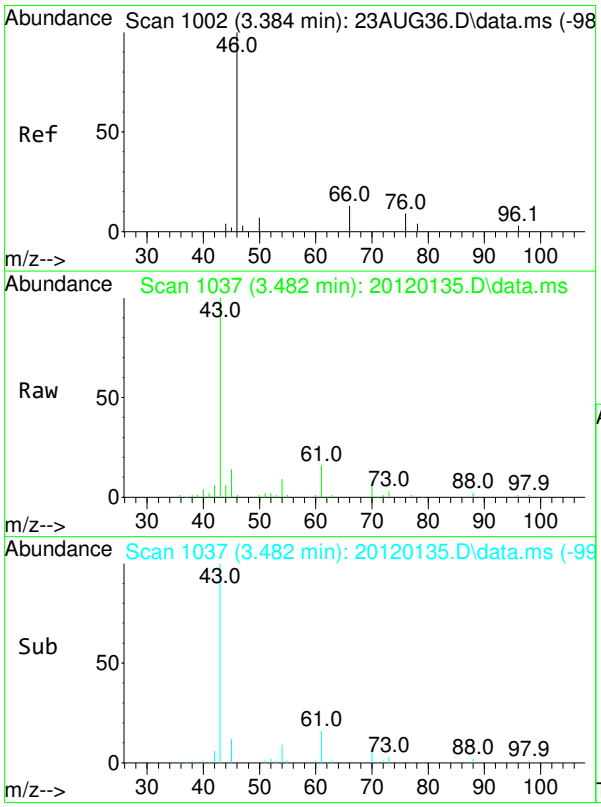


#120
2-Propanol
Concen: 389.41 ug/L
RT: 2.040 min Scan# 520
Delta R.T. -0.022 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 45 Resp: 279273

Ion	Ratio	Lower	Upper
45	100		
43	21.0	0.0	49.1
27	0.0	0.0	30.0
29	0.0	0.0	30.0

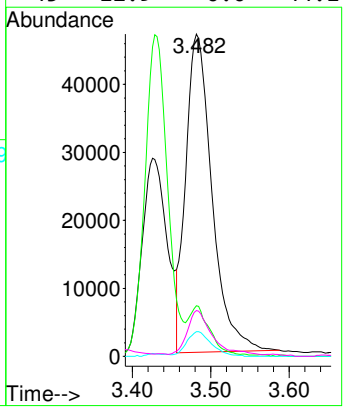


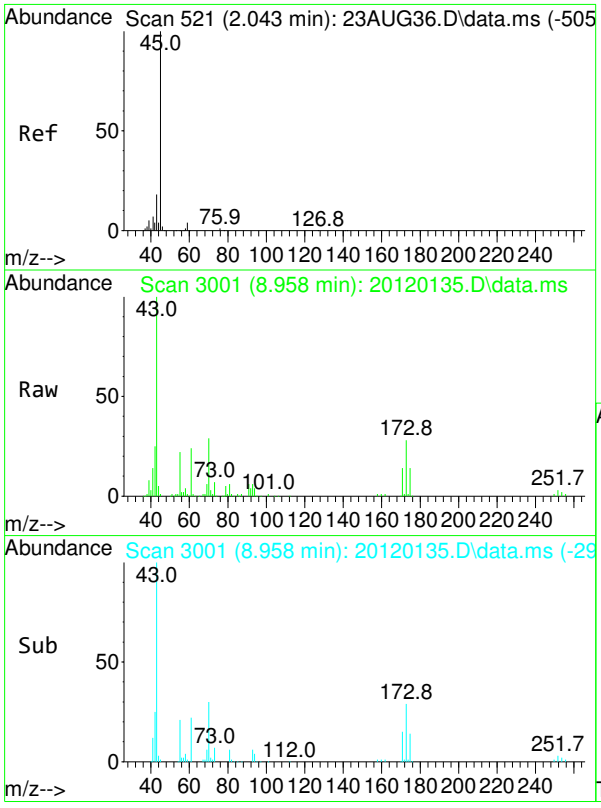


#121
Acetic Ether
Concen: 18.64 ug/L
RT: 3.482 min Scan# 1037
Delta R.T. -0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 108673

Ion	Ratio	Lower	Upper
43	100		
61	11.0	0.0	42.4
70	7.4	0.0	37.5
45	12.9	0.0	44.1

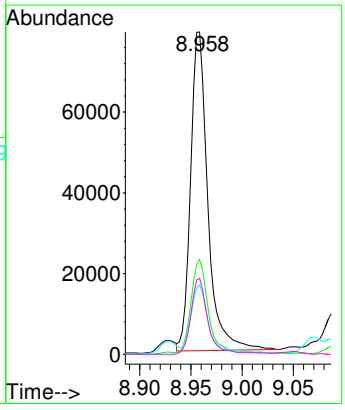




#123
Amyl Acetate
Concen: 16.43 ug/L
RT: 8.958 min Scan# 3001
Delta R.T. 0.002 min
Lab File: 20120135.D
Acq: 02 Dec 2020 12:22 am

Tgt Ion: 43 Resp: 92421

Ion	Ratio	Lower	Upper
43	100		
70	29.5	0.0	58.6
55	22.0	0.0	50.6
61	22.9	0.0	52.5



Quantitation Report (QT Reviewed)

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120112.D
Acq On : 01 Dec 2020 06:04 pm
Operator : MF
Sample : VBLKW1-201201
Misc : IS 200-21532
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 02 07:39:35 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.103	168	164252	20.00	ug/L		0.00
43) 1,4-Difluorobenzene	5.235	114	251152	20.00	ug/L		0.00
65) Chlorobenzene-d5	8.423	117	223931	20.00	ug/L		0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	94241	20.00	ug/L		0.00
118) Ethyl-d5-Acetate-d3	3.367	46	92638	20.00	ug/L		0.00
System Monitoring Compounds							
45) Dibromofluoromethane	4.036	111	104656	20.04	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 100.20%				
48) 1,2-Dichloroethane-d4	4.494	65	115671	18.89	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 94.45%				
67) Toluene-d8	7.296	98	290059	20.17	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.85%				
89) Bromofluorobenzene	9.148	95	98214	18.24	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 91.20%				
Target Compounds							Qvalue
3) Chloromethane	1.117	50	2312	0.42	ug/L		97
6) Chloroethane	1.407	64	180	Below Cal		#	36
7) Dichlorofluoromethane	1.552	67	131	Below Cal		#	36
9) Ethanol	1.744	45	76	Below Cal		#	56
15) Acetone	1.936	43	8030	2.56	ug/L		91
19) Methyl acetate	2.154	43	175	Below Cal		#	50
21) Methylene chloride	2.263	49	266	Below Cal		#	55
32) 2,2-Dichloropropane	3.364	77	447	Below Cal		#	27
35) Ethyl Acetate	3.490	43	93	Below Cal		#	72
42) Cyclohexane	4.100	56	3145	Below Cal		#	1
50) Benzene	4.519	78	240	Below Cal		#	59
68) Toluene	7.369	91	179	Below Cal		#	64
79) Chlorobenzene	8.442	112	145	Below Cal		#	1
90) Bromobenzene	9.220	77	181	Below Cal		#	20
104) 1,4-Dichlorobenzene	9.778	146	396	Below Cal		#	1
119) 2-Propanone	1.936	43	8030	3.66	ug/L		91
120) 2-Propanol	2.034	45	11320	6.30	ug/L	#	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

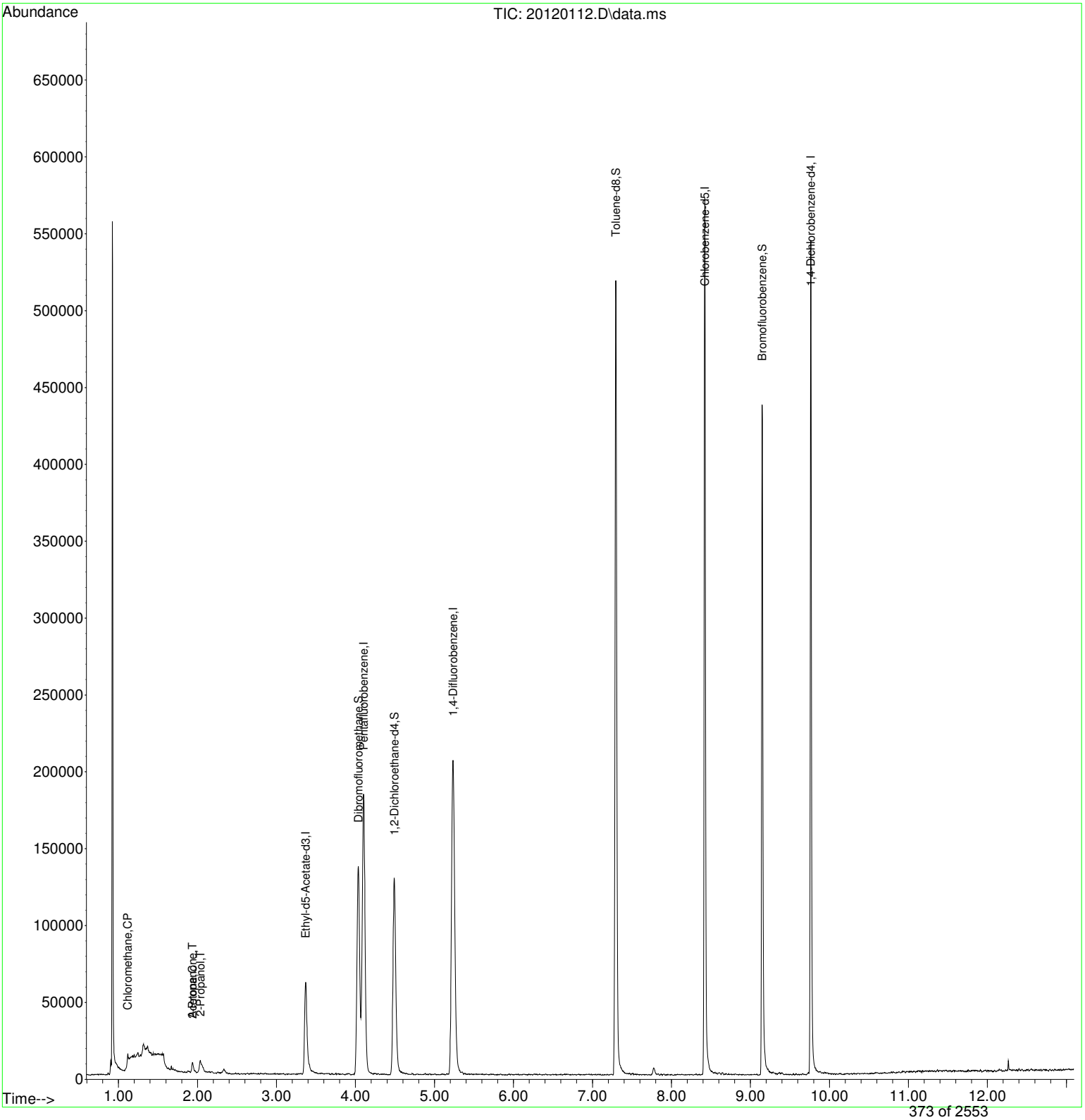
Quantitation Report (QT Reviewed)

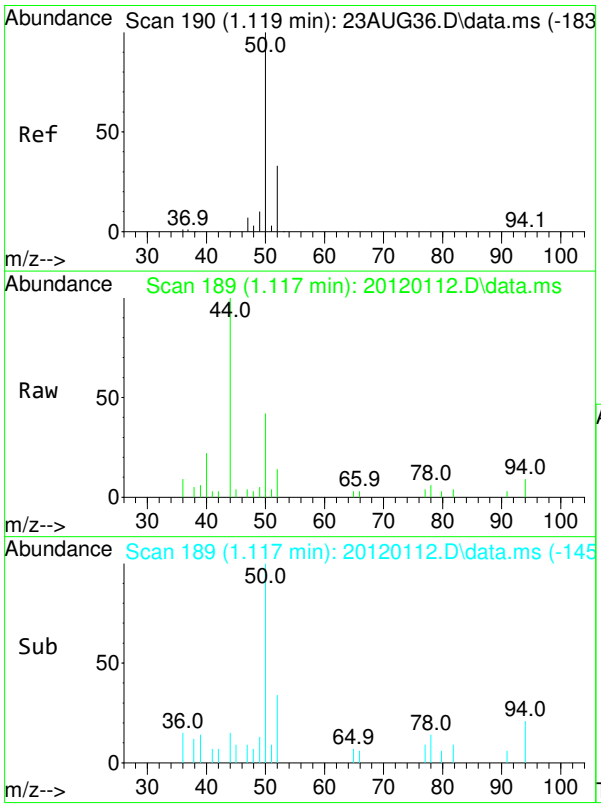
1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120112.D
Acq On : 01 Dec 2020 06:04 pm
Operator : MF
Sample : VBLKW1-201201
Misc : IS 200-21532
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 02 07:39:35 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

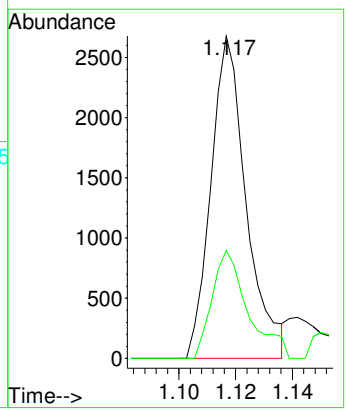


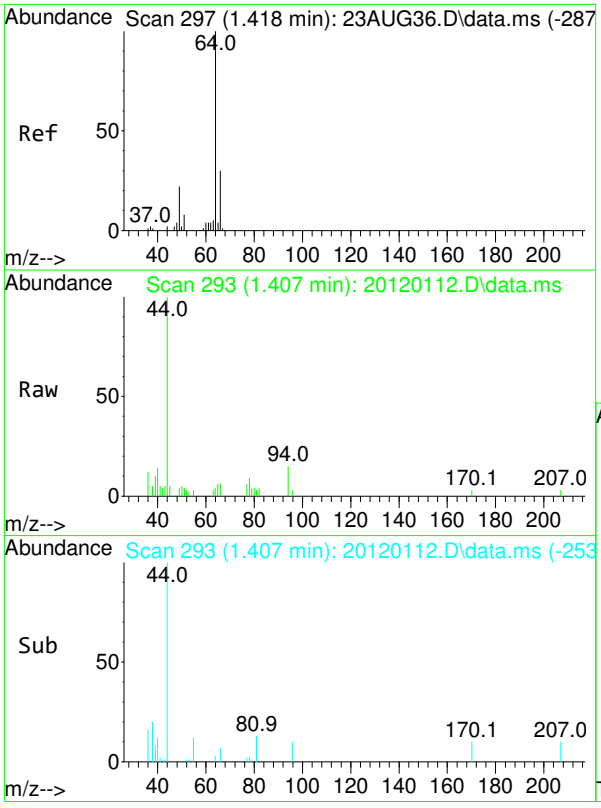


#3
Chloromethane
Concen: 0.42 ug/L
RT: 1.117 min Scan# 189
Delta R.T. 0.003 min
Lab File: 20120112.D
Acq: 01 Dec 2020 06:04 pm

Tgt Ion: 50 Resp: 2312

Ion	Ratio	Lower	Upper
50	100		
52	34.0	2.4	62.4

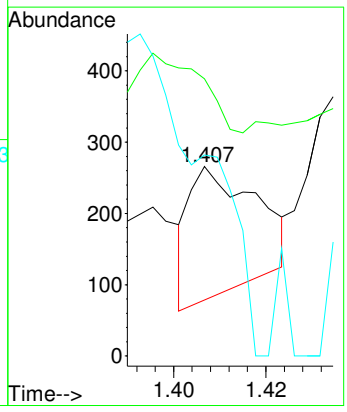


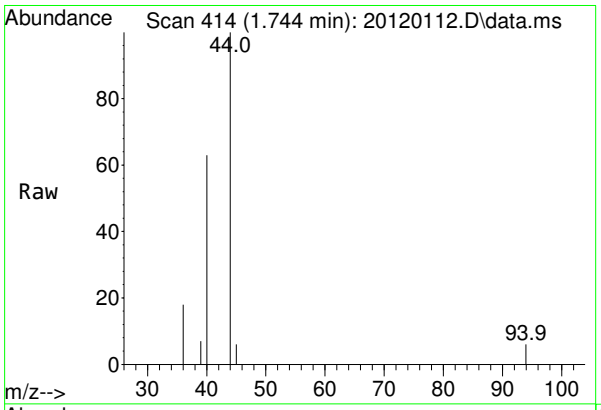


#6
Chloroethane
Concen: Below Cal
RT: 1.407 min Scan# 293
Delta R.T. -0.008 min
Lab File: 20120112.D
Acq: 01 Dec 2020 06:04 pm

Tgt Ion: 64 Resp: 180

Ion	Ratio	Lower	Upper
64	100		
66	0.0	2.1	62.1#
49	0.0	14.5	74.5#

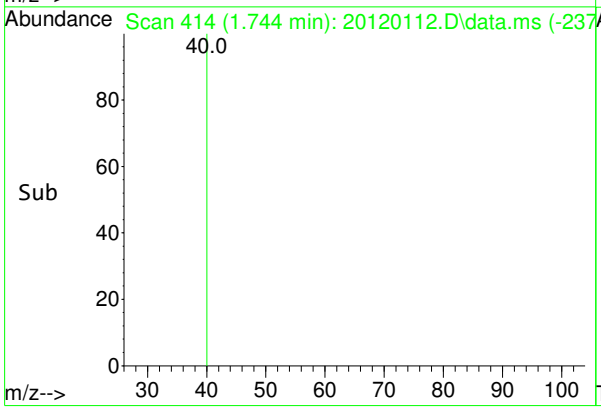


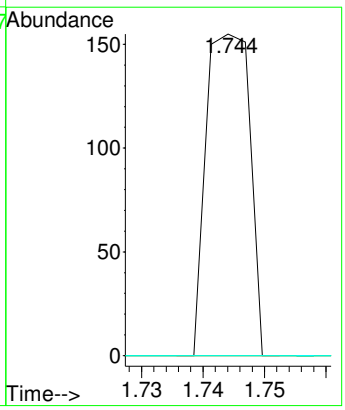


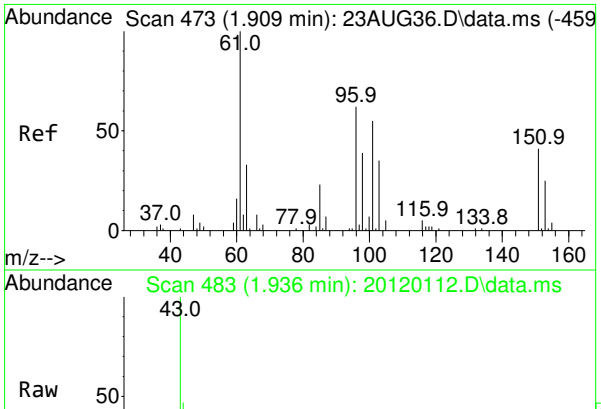
#9
Ethanol
Concen: Below Cal
RT: 1.744 min Scan# 414
Delta R.T. -0.006 min
Lab File: 20120112.D
Acq: 01 Dec 2020 06:04 pm

Tgt Ion: 45 Resp: 76

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	55.2
43	0.0	0.0	43.1



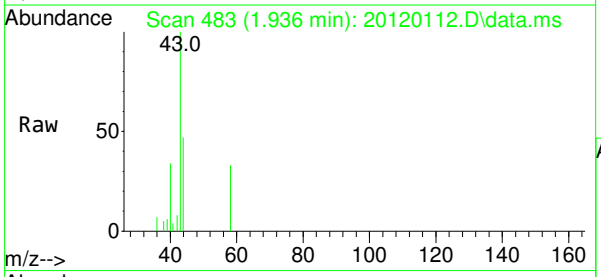


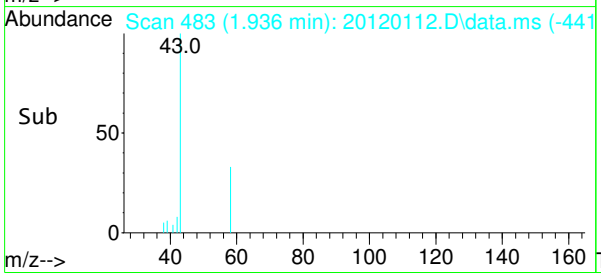


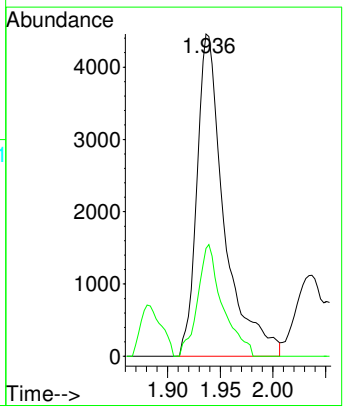
#15
Acetone
Concen: 2.56 ug/L
RT: 1.936 min Scan# 483
Delta R.T. -0.003 min
Lab File: 20120112.D
Acq: 01 Dec 2020 06:04 pm

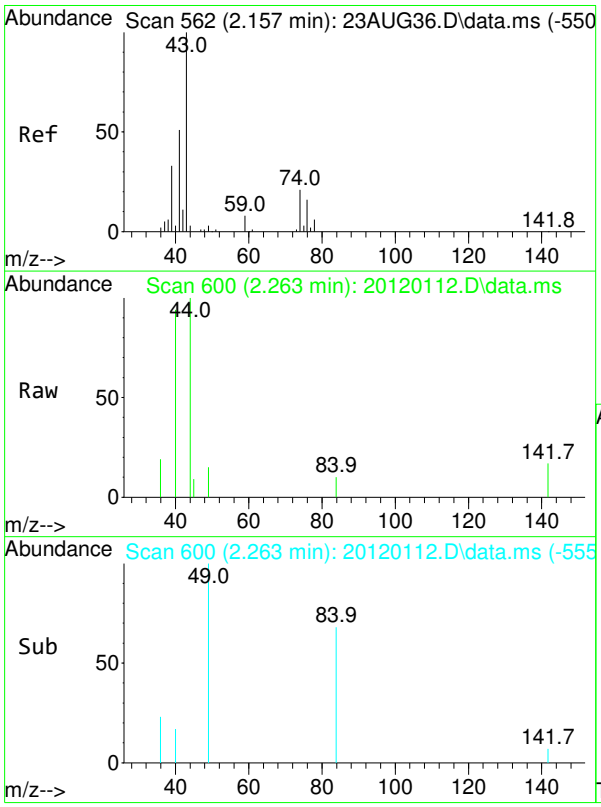
Tgt Ion: 43 Resp: 8030

Ion	Ratio	Lower	Upper
43	100		
58	31.7	0.0	56.9





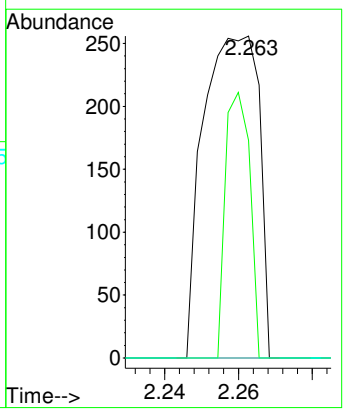


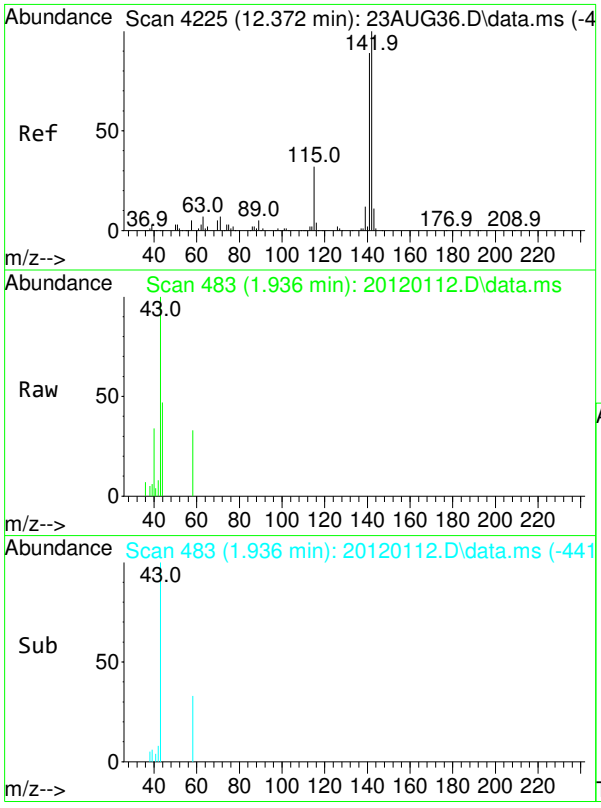


#21
Methylene chloride
Concen: Below Cal
RT: 2.263 min Scan# 600
Delta R.T. 0.006 min
Lab File: 20120112.D
Acq: 01 Dec 2020 06:04 pm

Tgt Ion: 49 Resp: 266

Ion	Ratio	Lower	Upper
49	100		
84	36.5	31.8	91.8
86	0.0	9.7	69.7#

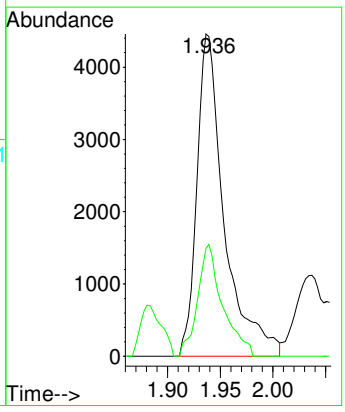


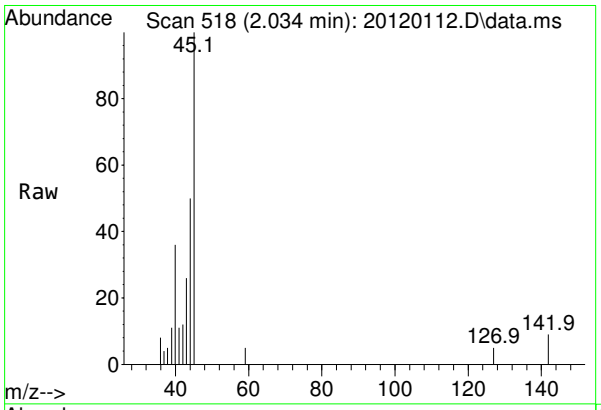


#119
2-Propanone
Concen: 3.66 ug/L
RT: 1.936 min Scan# 483
Delta R.T. -0.003 min
Lab File: 20120112.D
Acq: 01 Dec 2020 06:04 pm

Tgt Ion: 43 Resp: 8030

Ion	Ratio	Lower	Upper
43	100		
58	31.7	0.0	56.9

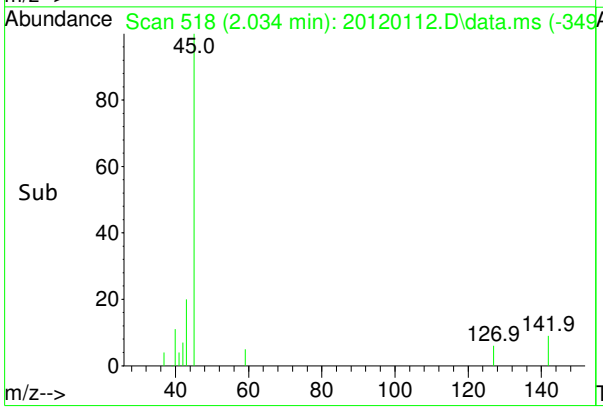


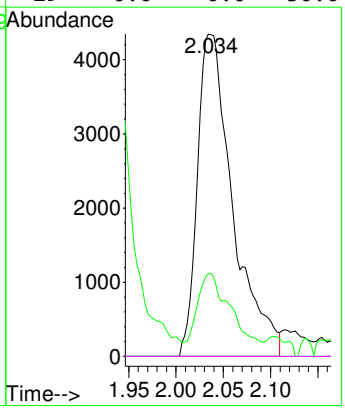


#120
2-Propanol
Concen: 6.30 ug/L
RT: 2.034 min Scan# 518
Delta R.T. -0.028 min
Lab File: 20120112.D
Acq: 01 Dec 2020 06:04 pm

Tgt Ion: 45 Resp: 11320

Ion	Ratio	Lower	Upper
45	100		
43	20.7	0.0	49.1
27	0.0	0.0	30.0
29	0.0	0.0	30.0





1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120109.D
Acq On : 01 Dec 2020 05:14 pm
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 07:39:21 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.095	168	172145	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.230	114	260788	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.420	117	238485	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	129304	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.367	46	100397	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.031	111	104889	19.35	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 96.75%			
48) 1,2-Dichloroethane-d4	4.488	65	113865	17.91	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 89.55%			
67) Toluene-d8	7.293	98	315277	20.59	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 102.95%			
89) Bromofluorobenzene	9.148	95	115317	20.11	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 100.55%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.019	85	61851	28.90	ug/L	98
3) Chloromethane	1.117	50	118102	19.07	ug/L	99
4) Vinyl chloride	1.181	62	74622	22.06	ug/L	100
5) Bromomethane	1.362	96	6623	25.70	ug/L	98
6) Chloroethane	1.421	64	10697	9.28	ug/L #	45
7) Dichlorofluoromethane	1.549	67	98055	15.57	ug/L	99
8) Trichlorofluoromethane	1.571	101	74540	17.05	ug/L	99
9) Ethanol	1.750	45	189903	402.42	ug/L	89
10) Ethyl ether	1.750	59	49415	17.04	ug/L	96
11) Acrolein	2.363	56	2391	9.63	ug/L	78
12) 1,1-Dichloroethene	1.903	61	92816	19.21	ug/L	96
15) Acetone	1.939	43	50329	19.21	ug/L	96
17) Carbon disulfide	2.062	76	172710	20.22	ug/L	100
18) Allyl chloride	2.157	41	85062	12.76	ug/L	88
19) Methyl acetate	2.073	43	61062	9.78	ug/L #	73
20) Acetonitrile	2.469	41	43638	17.86	ug/L	97
21) Methylene chloride	2.254	49	98123	16.29	ug/L	94
22) trans-1,2-Dichloroethene	2.472	61	91021	17.35	ug/L	94
23) t-Butanol	3.253	59	167412	88.43	ug/L	96
24) Acrylonitrile	2.438	53	48053	18.08	ug/L	100
25) Methyl tert-butyl ether	2.466	73	164600	18.78	ug/L	98
26) Hexane	2.709	57	793	0.28	ug/L #	85
27) 1,1-Dichloroethane	2.851	63	116950	18.25	ug/L	99
28) Diisopropyl ether	2.890	45	206147	16.85	ug/L #	38
30) Ethyl tert butyl ether	3.253	59	167412	17.69	ug/L	95
31) Methylcyclopentane	3.311	56	93498	15.14	ug/L	98
32) 2,2-Dichloropropane	3.428	77	81316	18.46	ug/L	94
33) cis-1,2-Dichloroethene	3.426	61	104422	18.38	ug/L	95
34) 2-Butanone	3.428	43	68849	16.52	ug/L	97
35) Ethyl Acetate	3.481	43	131987	16.16	ug/L	99
36) Methyl acrylate	3.529	55	94973	16.75	ug/L	98
37) Propionitrile	4.173	54	147	0.40	ug/L #	1
38) Bromochloromethane	3.696	49	59645	16.64	ug/L	89
39) Tetrahydrofuran	3.721	42	44530	15.79	ug/L	92
40) Methacrylonitrile	3.663	67	40194	17.44	ug/L	90

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120109.D
Acq On : 01 Dec 2020 05:14 pm
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 07:39:21 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Chloroform	3.833	83	112770	17.26	ug/L		99
42) Cyclohexane	4.100	56	3269	Below Cal		#	1
44) 1,1,1-Trichloroethane	4.020	97	85159	19.44	ug/L		100
46) Carbon tetrachloride	4.223	117	71091	18.68	ug/L		100
47) 1,1-Dichloropropene	4.237	75	76130	18.88	ug/L		98
49) 1,2-Dichloroethane	4.600	62	85145	17.74	ug/L		99
50) Benzene	4.505	78	224223	20.02	ug/L		98
51) Tertiaryamylmethylether	4.747	73	149641	19.18	ug/L	#	100
52) Isobutyl Alcohol	4.664	43	177452	18.46	ug/L		96
54) 1,4-Dioxane	6.178	88	3358	33.26	ug/L		70
57) Trichloroethene	5.606	130	56020	20.94	ug/L		95
58) 1,2-Dichloropropane	6.086	63	64283	16.99	ug/L		98
59) Dibromomethane	6.228	93	47713	19.44	ug/L		98
60) Methyl methacrylate	6.292	41	69988	14.90	ug/L		94
61) Bromodichloromethane	6.529	83	76408	18.68	ug/L		98
62) 2-Chloroethyl vinyl ether	6.931	43	69	0.32	ug/L	#	1
63) 2-Nitropropane	6.808	43	26246	16.33	ug/L		94
64) cis-1,3-Dichloropropene	7.051	75	86460	18.67	ug/L		99
66) 4-Methyl-2-pentanone	7.224	43	185508	29.93	ug/L		84
68) Toluene	7.358	91	212982	20.60	ug/L		99
69) trans-1,3-Dichloropropene	7.600	75	81802	19.85	ug/L		98
71) Ethyl methacrylate	7.673	69	79556	17.72	ug/L		94
72) 1,1,2-Trichloroethane	7.751	97	61588	19.64	ug/L		96
73) Tetrachloroethene	7.790	166	61507	22.74	ug/L		98
74) 1,3-Dichloropropane	7.868	76	93766	18.68	ug/L		95
75) 2-Hexanone	7.935	43	90998	17.13	ug/L		96
76) Chlorodibromomethane	8.024	129	61506	19.27	ug/L		98
77) Butyl acetate	8.044	43	145006	16.48	ug/L		97
78) 1,2-Dibromoethane	8.097	107	70399	20.34	ug/L		99
79) Chlorobenzene	8.440	112	140827	20.83	ug/L		97
80) 1,1,1,2-Tetrachloroethane	8.506	131	53319	20.67	ug/L		99
81) Ethylbenzene	8.512	91	222366	20.04	ug/L		97
82) m/p-Xylene	8.598	91	344767	40.95	ug/L		97
83) Nonane	8.640	43	54784	26.04	ug/L		95
84) Styrene	8.847	104	130563	22.93	ug/L		98
85) o-Xylene	8.830	91	176373	20.58	ug/L		97
86) Cyclohexanone	9.103	55	794	1.75	ug/L	#	29
87) Bromoform	8.950	173	47719	17.62	ug/L		99
88) Isopropylbenzene	9.050	105	200061	22.20	ug/L		100
90) Bromobenzene	9.220	77	93454	19.41	ug/L		92
91) 1,1,2,2-Tetrachloroethane	9.232	83	120678	19.00	ug/L		99
92) 1,2,3-Trichloropropane	9.257	110	25620	19.41	ug/L		92
93) trans-1,4-Dichloro-2-b...	9.248	53	25309	16.11	ug/L		99
94) n-Propylbenzene	9.282	91	250083	21.71	ug/L		98
95) 2-Chlorotoluene	9.326	91	150229	19.84	ug/L		97
96) 4-Chlorotoluene	9.393	91	178501	20.73	ug/L		98
97) 1,3,5-Trimethylbenzene	9.379	105	158683	22.33	ug/L		98
98) tert-Butylbenzene	9.544	91	91304	21.10	ug/L		89
99) 1,2,4-Trimethylbenzene	9.577	105	156033	21.83	ug/L		96
100) sec-Butylbenzene	9.661	105	189567	22.78	ug/L		98
102) 1,3-Dichlorobenzene	9.722	146	105999	20.14	ug/L		98
103) p-Isopropyltoluene	9.739	119	152587	21.98	ug/L		98
104) 1,4-Dichlorobenzene	9.775	146	112471	20.91	ug/L		98

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120109.D
Acq On : 01 Dec 2020 05:14 pm
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 07:39:21 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

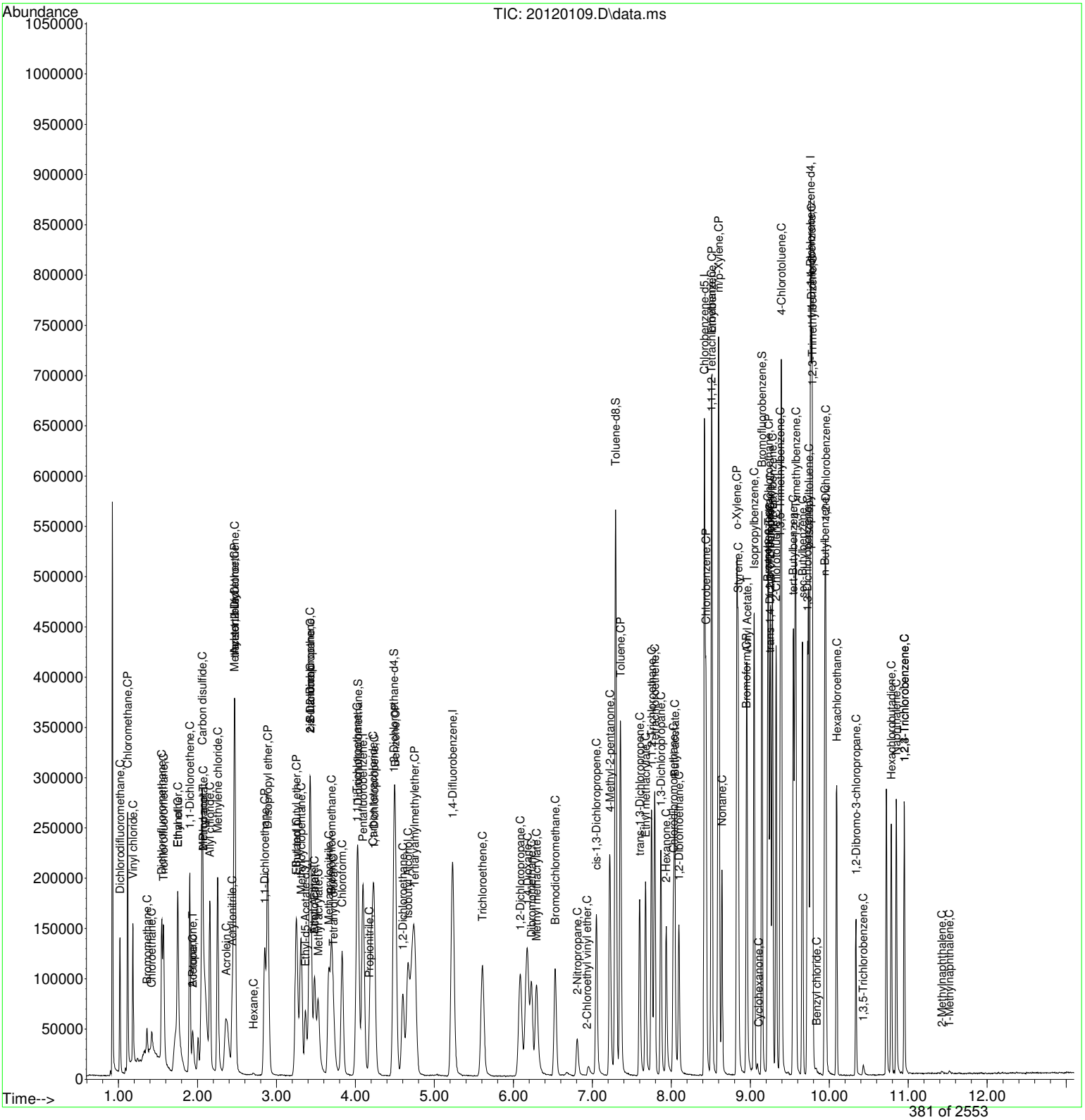
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,2,3-Trimethylbenzene	9.786	105	172380	19.48	ug/L	97
106) Benzyl chloride	9.839	91	679	0.34	ug/L	85
107) 1,2-Dichlorobenzene	9.954	146	107832	19.52	ug/L	99
108) n-Butylbenzene	9.943	91	139262	20.06	ug/L	98
109) Hexachloroethane	10.093	117	33174	20.68	ug/L	96
110) 1,2-Dibromo-3-chloropr...	10.339	157	25581	18.70	ug/L	93
111) 1,3,5-Trichlorobenzene	10.428	180	1621	0.49	ug/L	90
112) 1,2,4-Trichlorobenzene	10.952	180	55582	17.26	ug/L	98
113) Hexachlorobutadiene	10.785	225	32280	26.88	ug/L	99
114) Naphthalene	10.849	128	130690	10.72	ug/L	99
115) 1,2,3-Trichlorobenzene	10.952	180	55582	17.26	ug/L	98
116) 2-Methylnaphthalene	11.423	142	1039	1.19	ug/L	88
117) 1-Methylnaphthalene	11.518	142	1500	1.12	ug/L	84
119) 2-Propanone	1.939	43	50329	25.08	ug/L	96
120) 2-Propanol	2.073	45	319090	416.10	ug/L #	97
121) Acetic Ether	3.481	43	131987	21.12	ug/L	98
123) Amyl Acetate	8.958	43	123869	20.31	ug/L	96

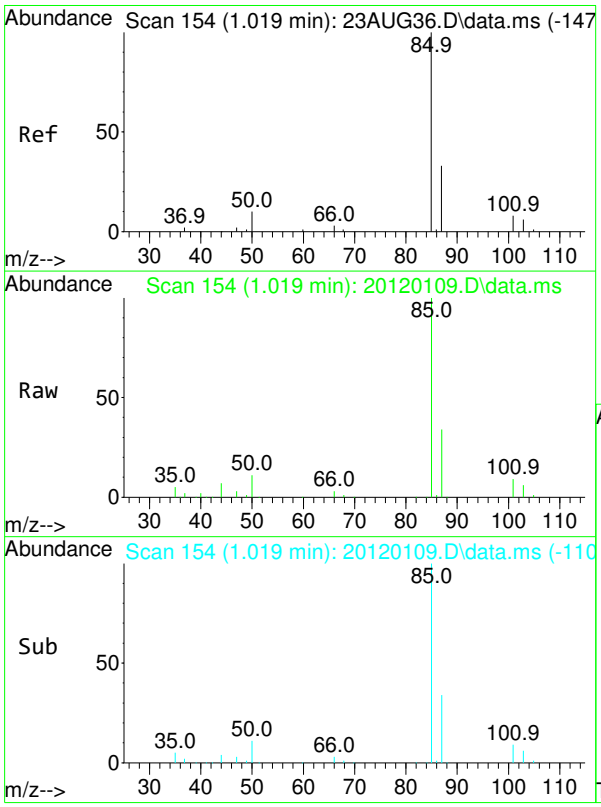
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/02/20
2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120109.D
Acq On : 01 Dec 2020 05:14 pm
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 07:39:21 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

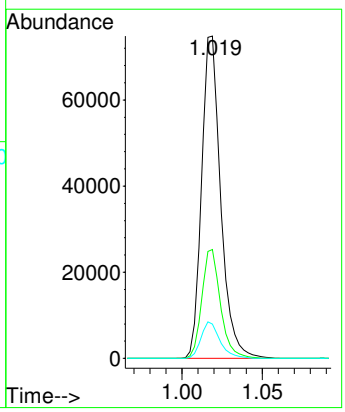


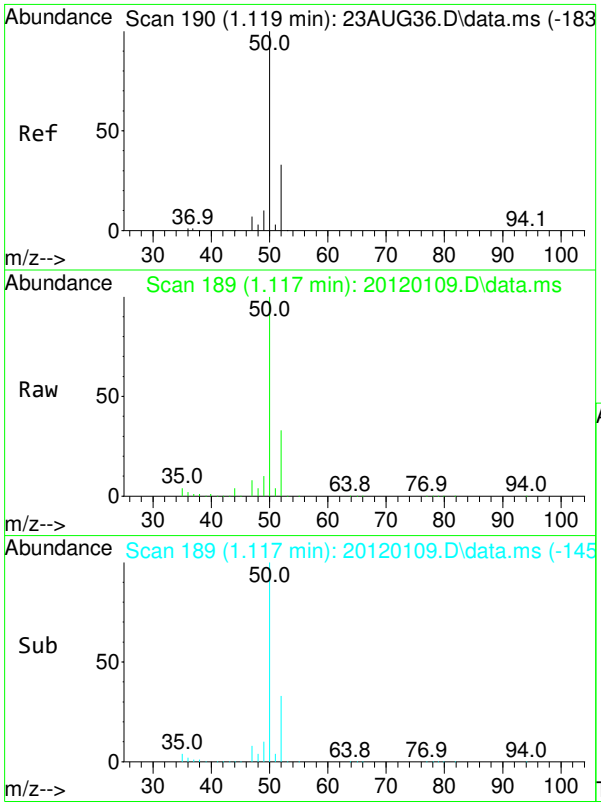


#2
Dichlorodifluoromethane
Concen: 28.90 ug/L
RT: 1.019 min Scan# 154
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 85 Resp: 61851

Ion	Ratio	Lower	Upper
85	100		
87	33.0	2.2	62.2
50	11.3	0.0	42.7

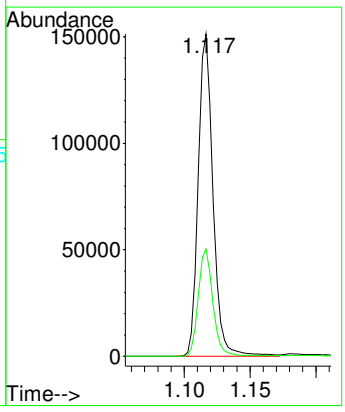


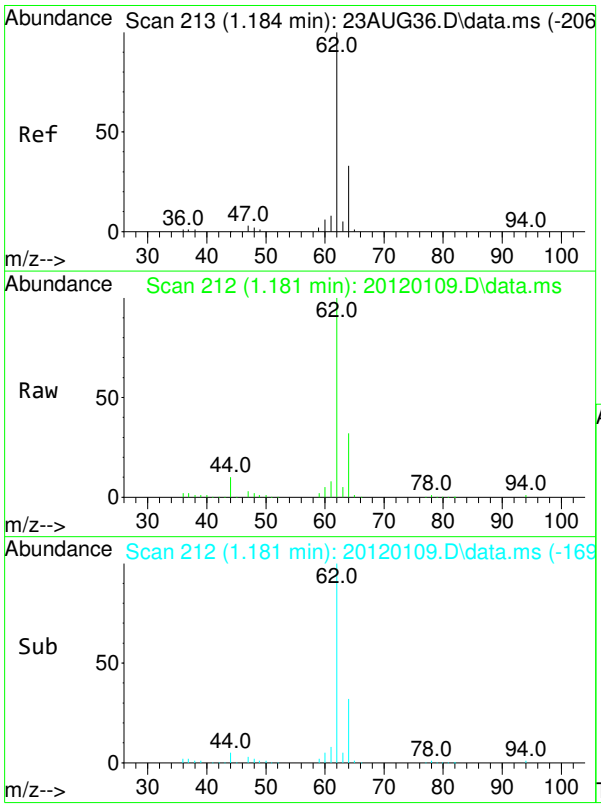


#3
Chloromethane
Concen: 19.07 ug/L
RT: 1.117 min Scan# 189
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 50 Resp: 118102

Ion	Ratio	Lower	Upper
50	100		
52	33.1	2.4	62.4

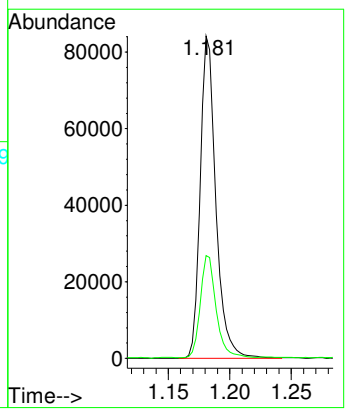


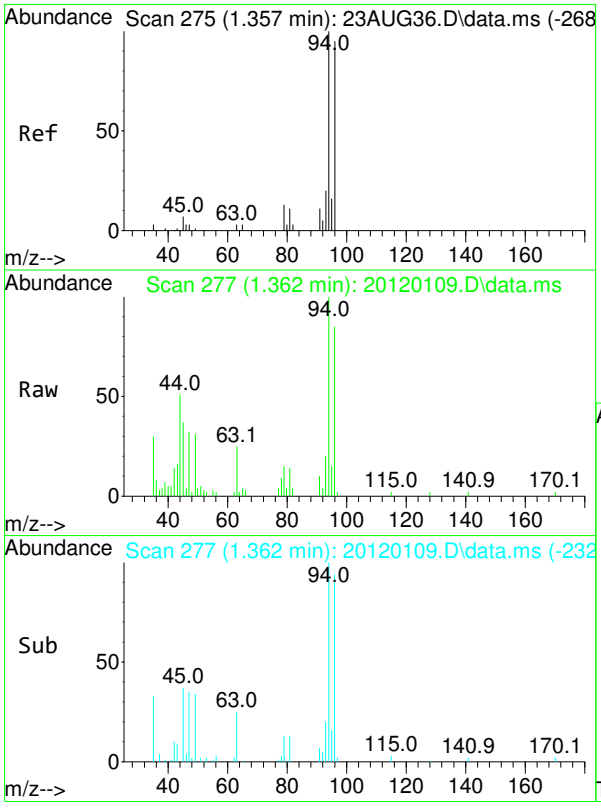


#4
Vinyl chloride
Concen: 22.06 ug/L
RT: 1.181 min Scan# 212
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 62 Resp: 74622

Ion	Ratio	Lower	Upper
62	100		
64	32.1	2.3	62.3

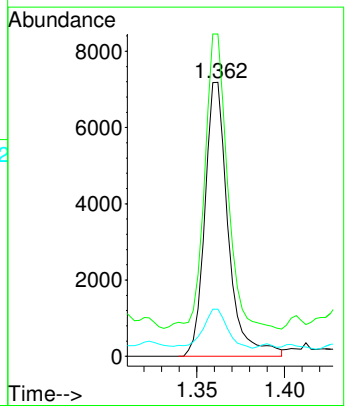


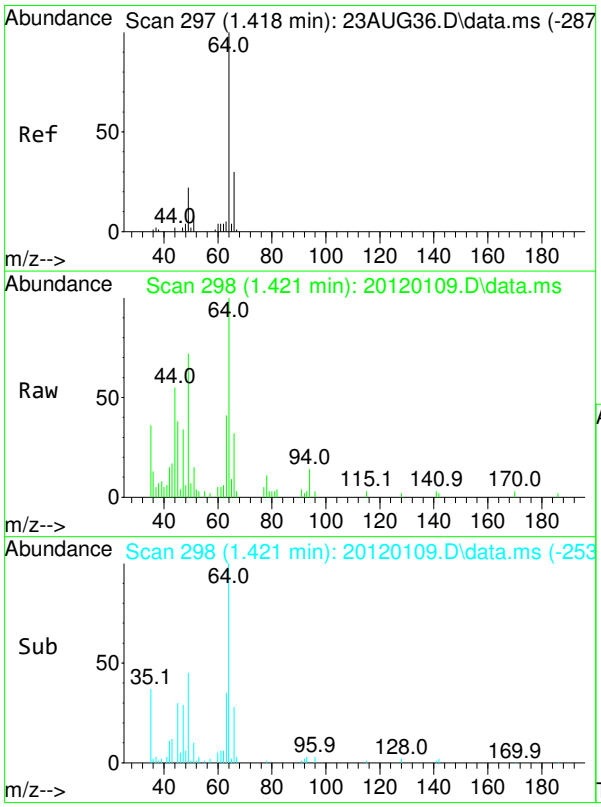


#5
Bromomethane
Concen: 25.70 ug/L
RT: 1.362 min Scan# 277
Delta R.T. 0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 96 Resp: 6623

Ion	Ratio	Lower	Upper
96	100		
94	105.4	77.8	137.8
79	14.8	0.0	45.3

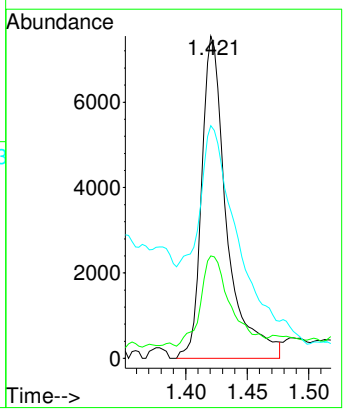


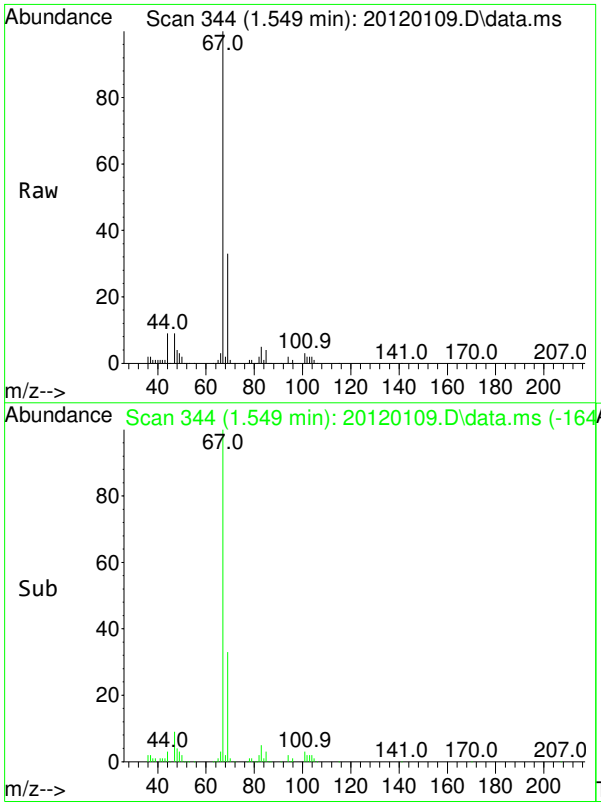


#6
Chloroethane
Concen: 9.28 ug/L
RT: 1.421 min Scan# 298
Delta R.T. 0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 64 Resp: 10697

Ion	Ratio	Lower	Upper
64	100		
66	33.5	2.1	62.1
49	105.1	14.5	74.5#

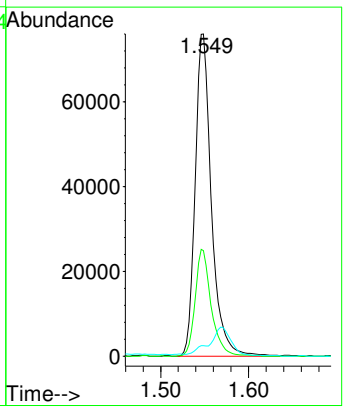


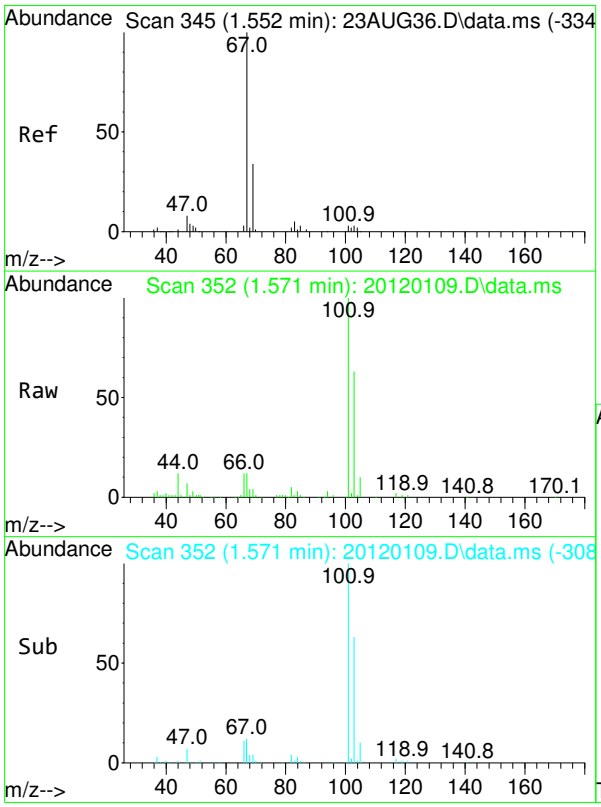


#7
Dichlorofluoromethane
Concen: 15.57 ug/L
RT: 1.549 min Scan# 344
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 67 Resp: 98055

Ion	Ratio	Lower	Upper
67	100		
69	32.8	2.3	62.3
66	11.7	0.0	41.5

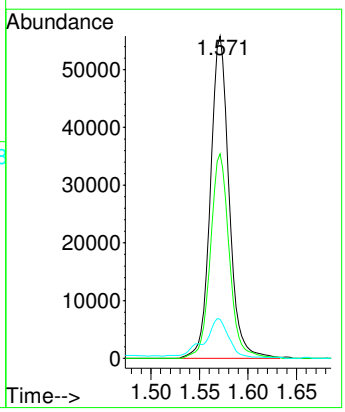


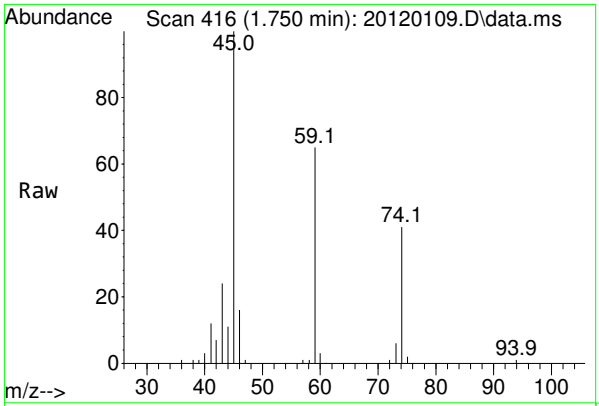


#8
Trichlorofluoromethane
Concen: 17.05 ug/L
RT: 1.571 min Scan# 352
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:101 Resp: 74540

Ion	Ratio	Lower	Upper
101	100		
103	64.4	35.0	95.0
66	15.4	0.0	46.7

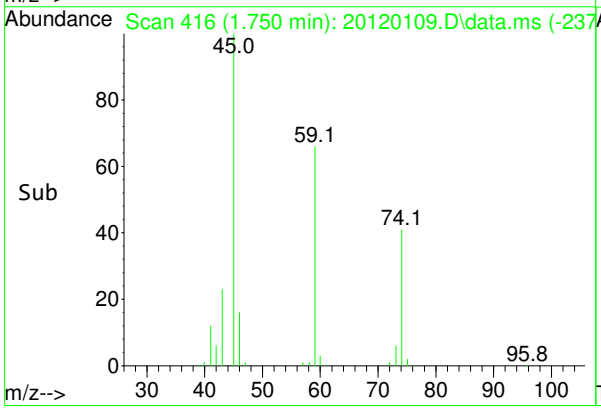


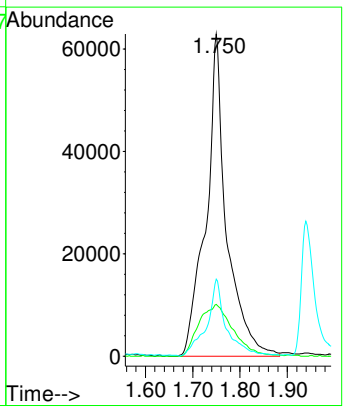


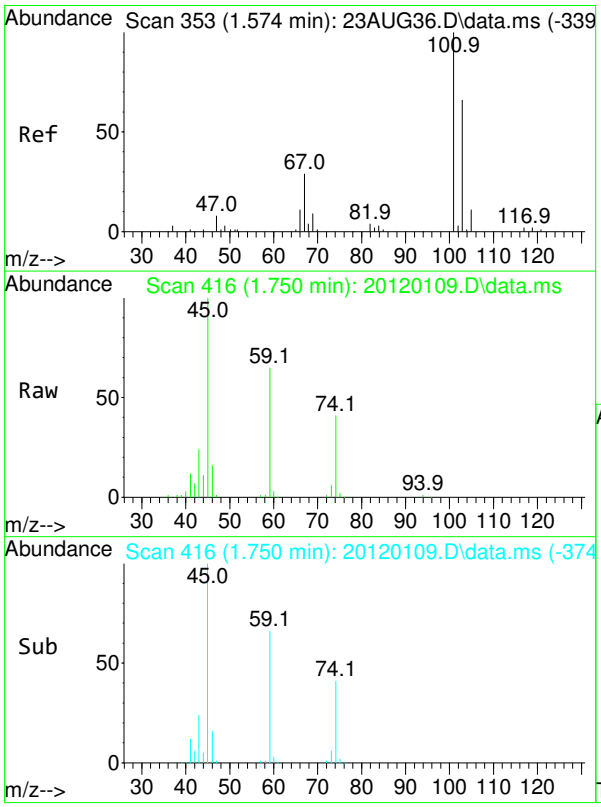
#9
Ethanol
Concen: 402.42 ug/L
RT: 1.750 min Scan# 416
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 45 Resp: 189903

Ion	Ratio	Lower	Upper
45	100		
46	26.8	0.0	55.2
43	22.9	0.0	43.1



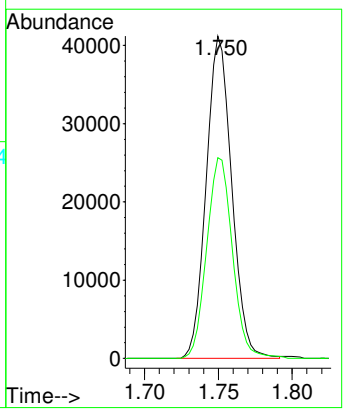


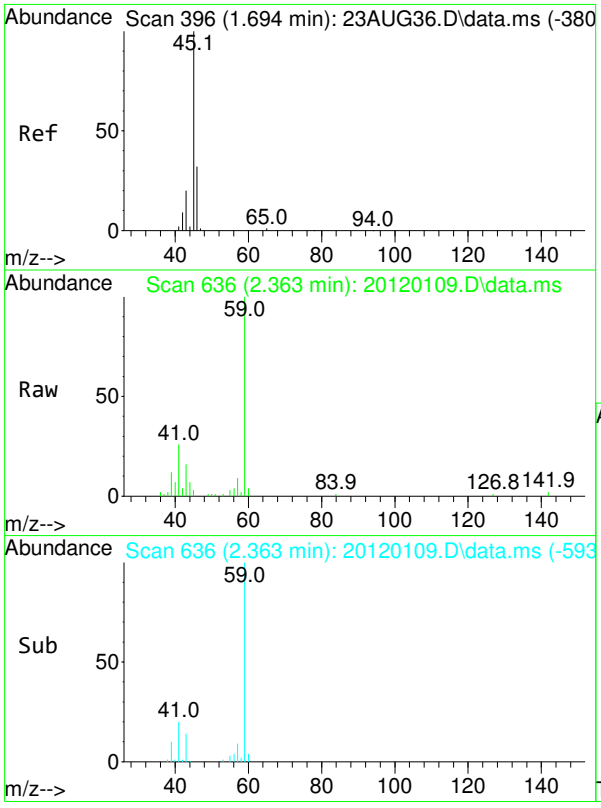


#10
Ethyl ether
Concen: 17.04 ug/L
RT: 1.750 min Scan# 416
Delta R.T. -0.002 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 59 Resp: 49415

Ion	Ratio	Lower	Upper
59	100		
74	62.8	29.5	89.5

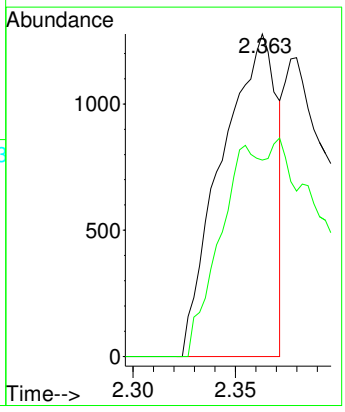


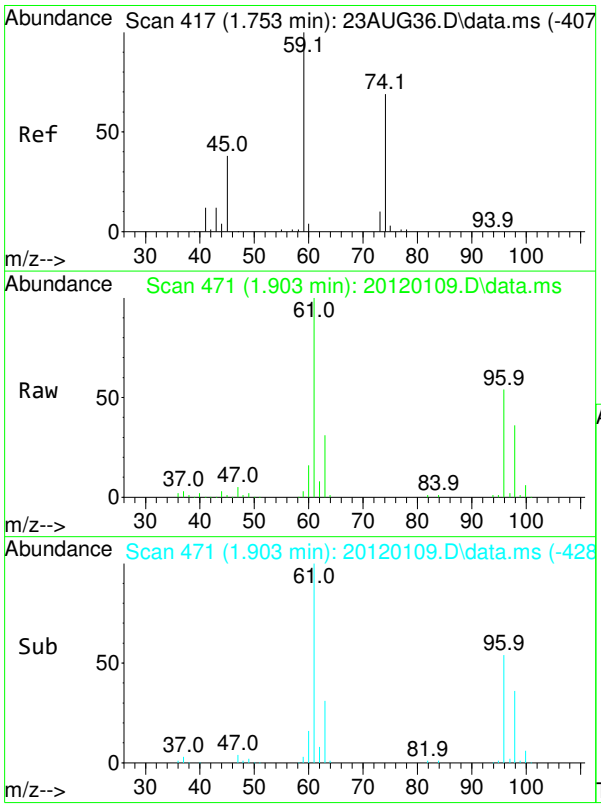


#11
Acrolein
Concen: 9.63 ug/L
RT: 2.363 min Scan# 636
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 56 Resp: 2391

Ion	Ratio	Lower	Upper
56	100		
55	50.0	37.7	97.7

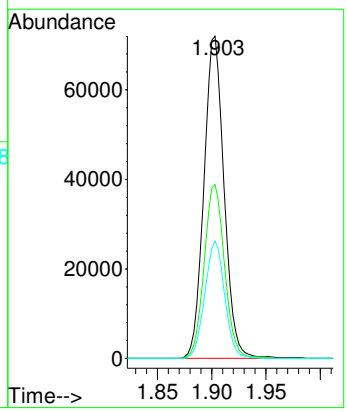


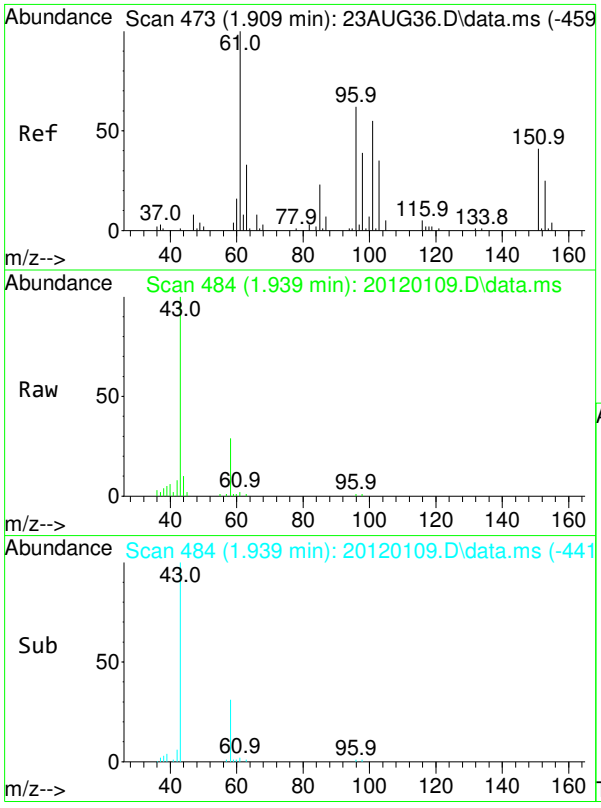


#12
1,1-Dichloroethene
Concen: 19.21 ug/L
RT: 1.903 min Scan# 471
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 61 Resp: 92816

Ion	Ratio	Lower	Upper
61	100		
96	54.7	22.2	82.2
98	35.8	3.4	63.4

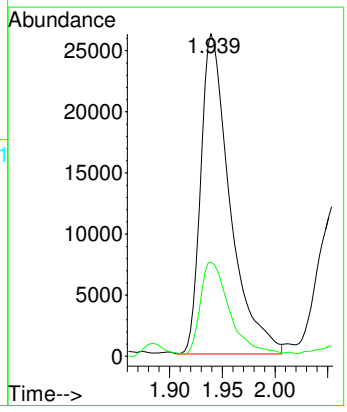


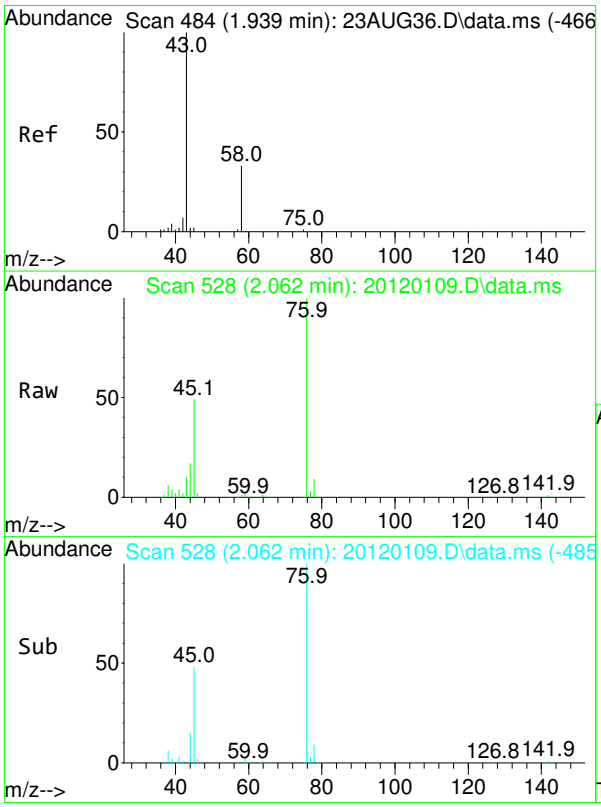


#15
Acetone
Concen: 19.21 ug/L
RT: 1.939 min Scan# 484
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 50329

Ion	Ratio	Lower	Upper
43	100		
58	28.9	0.0	56.9

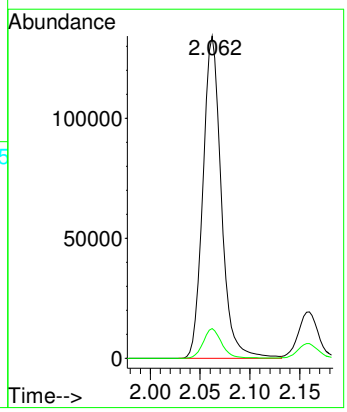


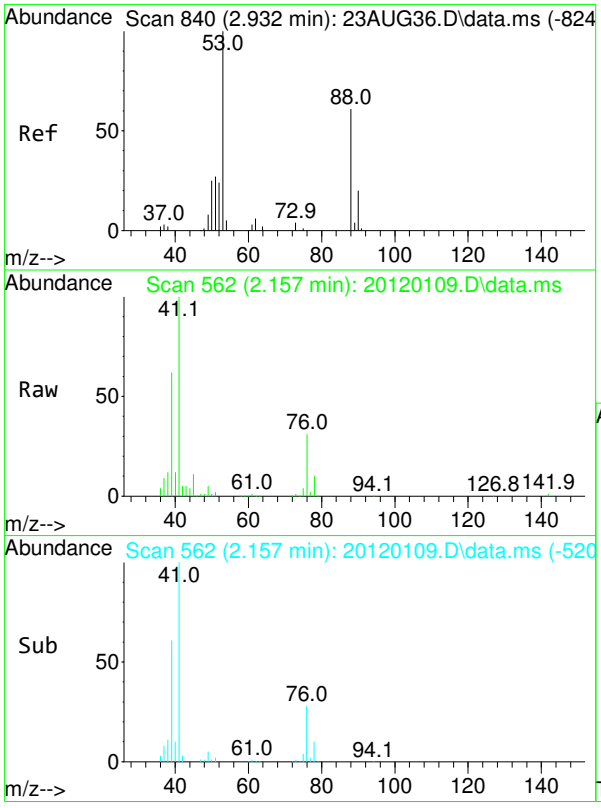


#17
Carbon disulfide
Concen: 20.22 ug/L
RT: 2.062 min Scan# 528
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 76 Resp: 172710

Ion	Ratio	Lower	Upper
76	100		
78	9.5	0.0	39.3

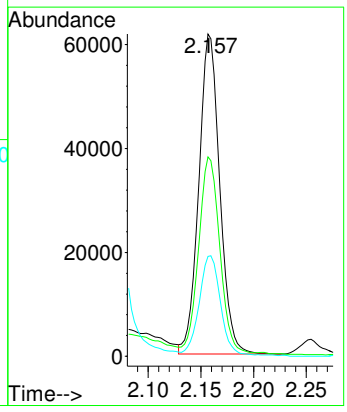


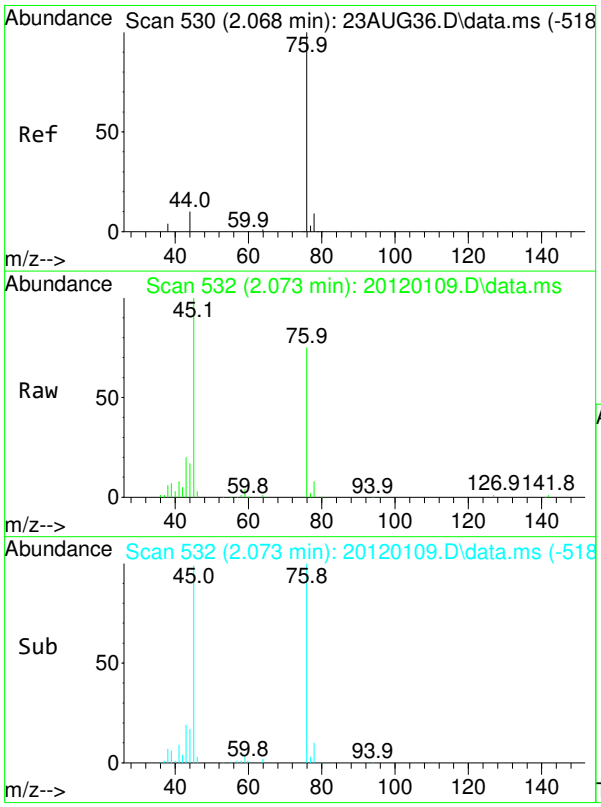


#18
Allyl chloride
Concen: 12.76 ug/L
RT: 2.157 min Scan# 562
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 41 Resp: 85062

Ion	Ratio	Lower	Upper
41	100		
39	61.3	24.2	84.2
76	31.2	0.0	53.2

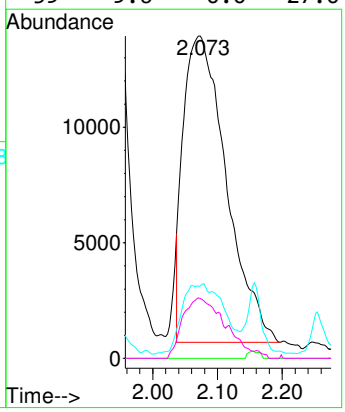


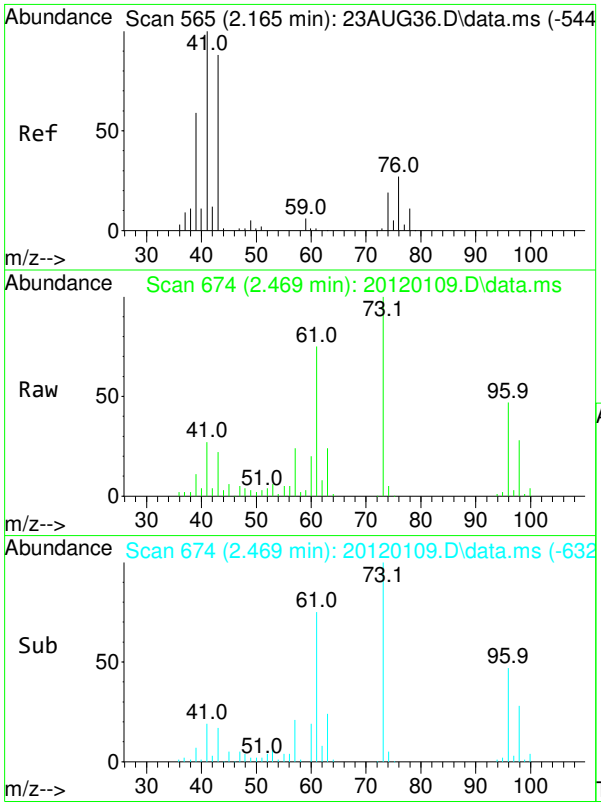


#19
Methyl acetate
Concen: 9.78 ug/L
RT: 2.073 min Scan# 532
Delta R.T. -0.081 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 61062

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.0	46.2
42	3.7	0.0	43.3
59	9.6	0.0	27.0

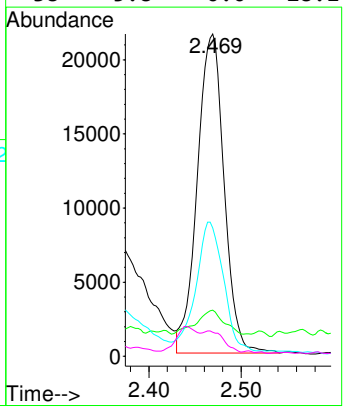


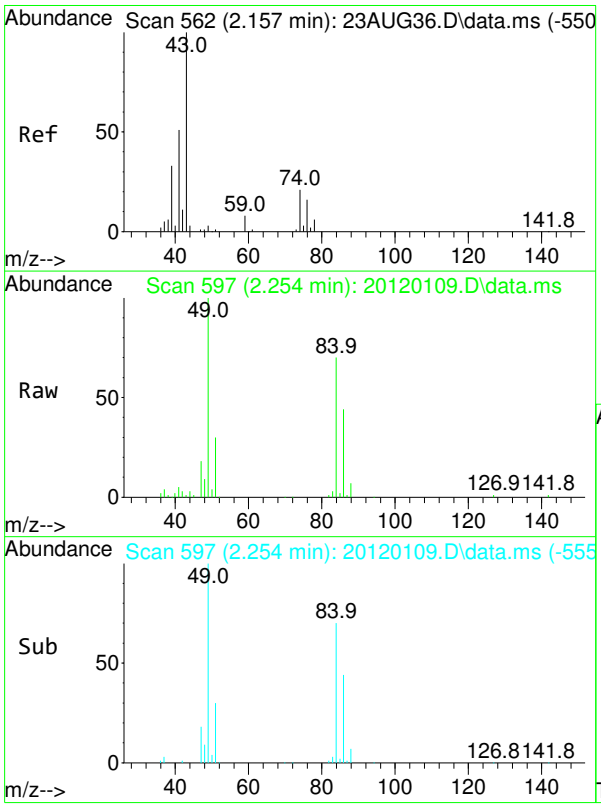


#20
Acetonitrile
Concen: 17.86 ug/L
RT: 2.469 min Scan# 674
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 41 Resp: 43638

Ion	Ratio	Lower	Upper
41	100		
40	7.6	0.0	37.4
39	41.4	13.1	73.1
38	5.8	0.0	28.1

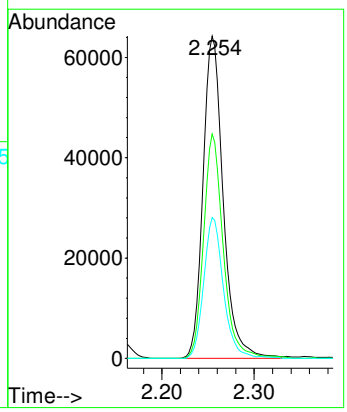


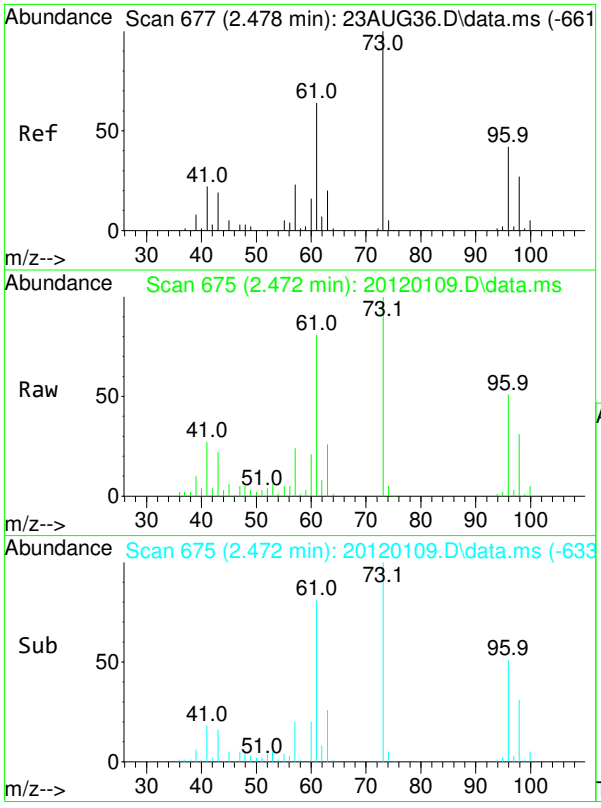


#21
Methylene chloride
Concen: 16.29 ug/L
RT: 2.254 min Scan# 597
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 49 Resp: 98123

Ion	Ratio	Lower	Upper
49	100		
84	67.2	31.8	91.8
86	42.5	9.7	69.7

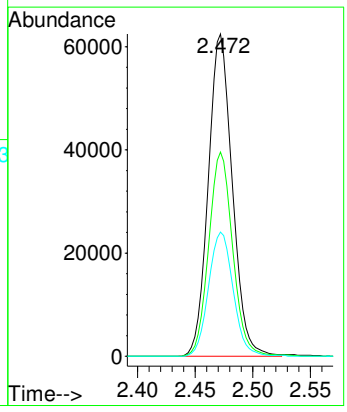


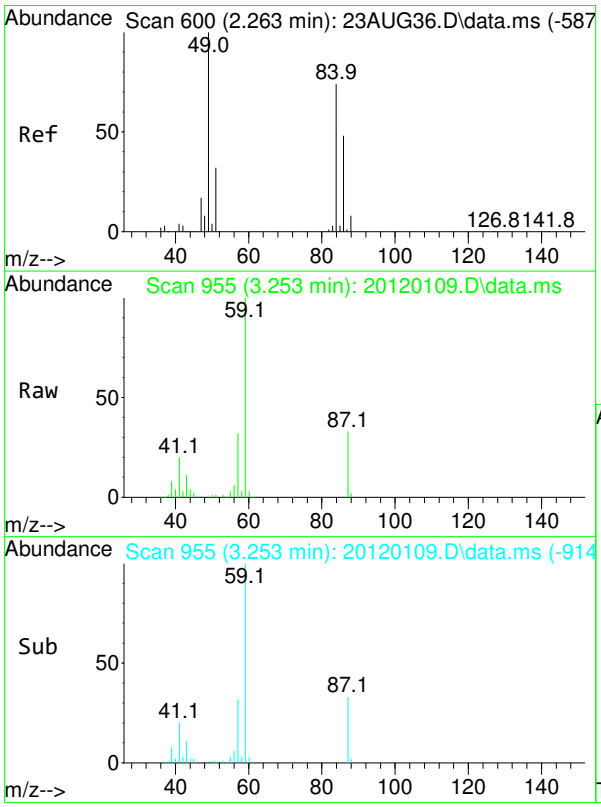


#22
trans-1,2-Dichloroethene
Concen: 17.35 ug/L
RT: 2.472 min Scan# 675
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 61 Resp: 91021

Ion	Ratio	Lower	Upper
61	100		
96	63.2	27.9	87.9
98	39.4	7.0	67.0

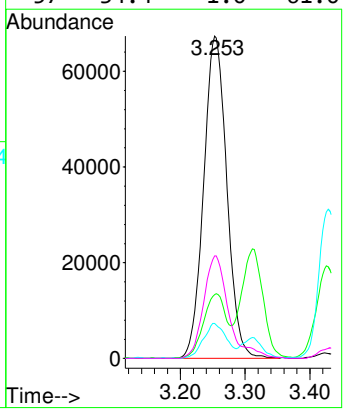


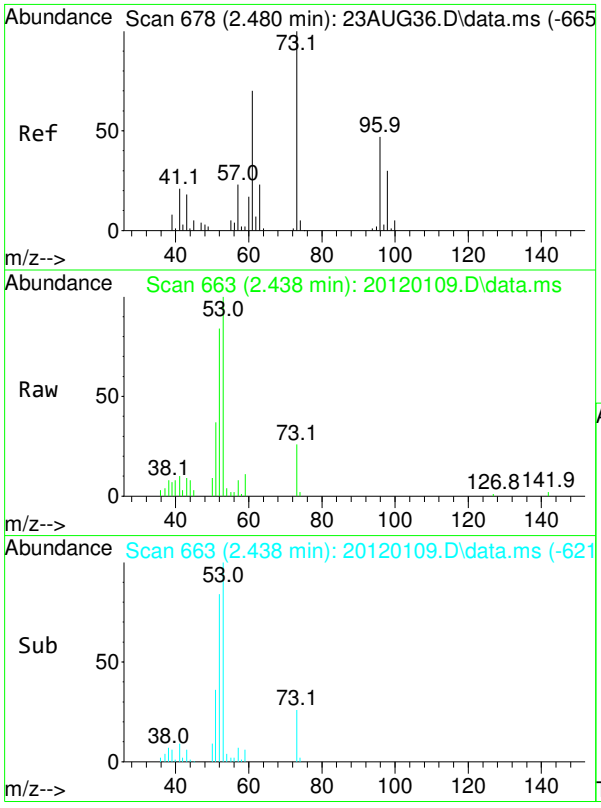


#23
t-Butanol
Concen: 88.43 ug/L
RT: 3.253 min Scan# 955
Delta R.T. -0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 59 Resp: 167412

Ion	Ratio	Lower	Upper
59	100		
41	19.7	0.0	51.3
43	10.9	0.0	40.7
57	34.4	1.0	61.0

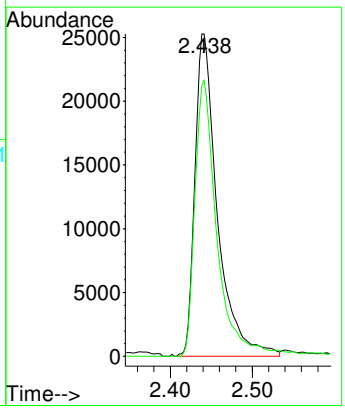


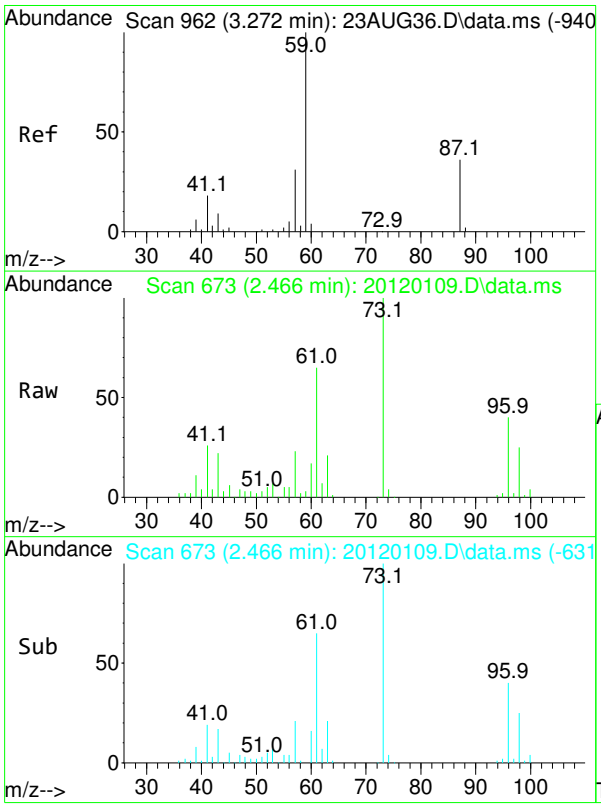


#24
Acrylonitrile
Concen: 18.08 ug/L
RT: 2.438 min Scan# 663
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 53 Resp: 48053

Ion	Ratio	Lower	Upper
53	100		
52	82.7	53.0	113.0

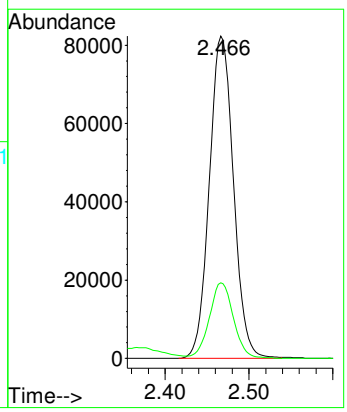


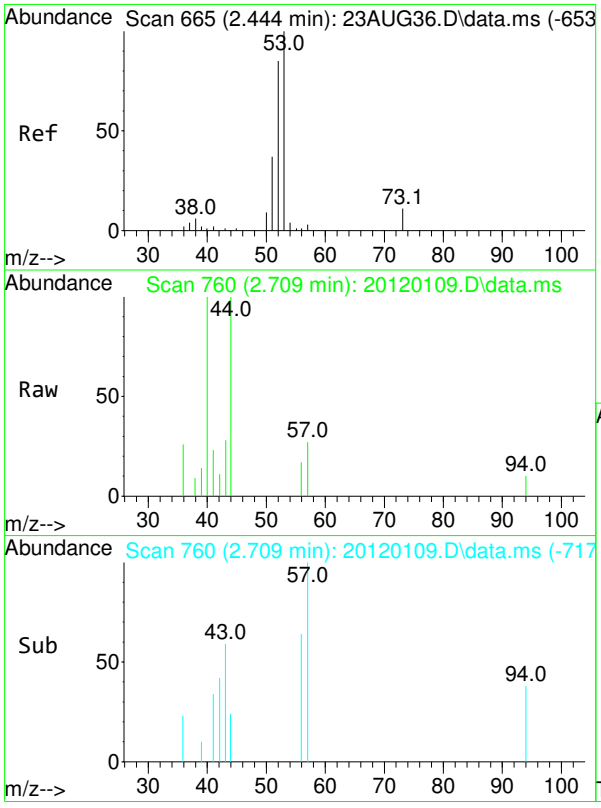


#25
Methyl tert-butyl ether
Concen: 18.78 ug/L
RT: 2.466 min Scan# 673
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 73 Resp: 164600

Ion	Ratio	Lower	Upper
73	100		
57	23.6	0.0	54.6

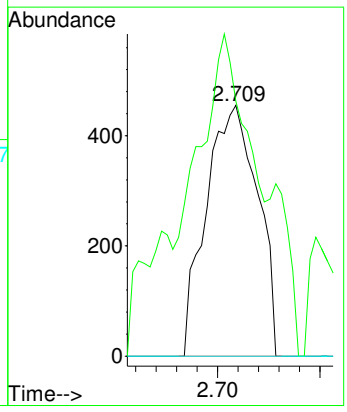


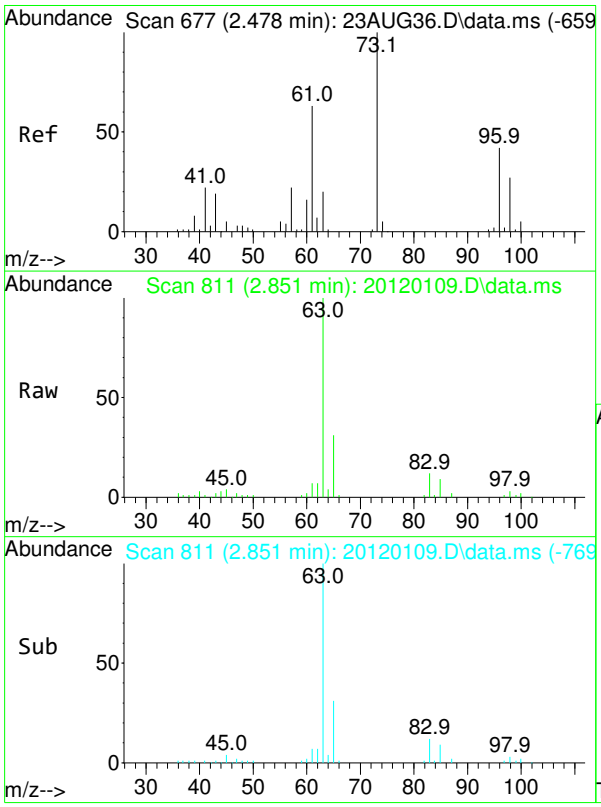


#26
Hexane
Concen: 0.28 ug/L
RT: 2.709 min Scan# 760
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 57 Resp: 793

Ion	Ratio	Lower	Upper
57	100		
43	85.5	44.0	104.0
86	0.0	0.0	39.8

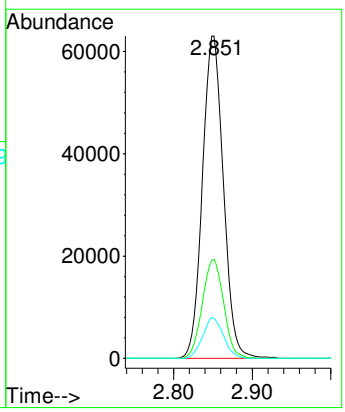


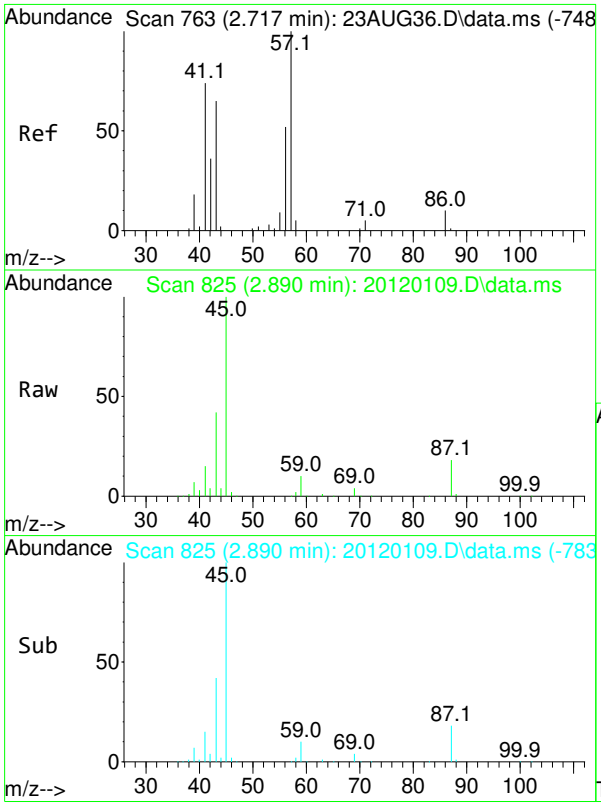


#27
1,1-Dichloroethane
Concen: 18.25 ug/L
RT: 2.851 min Scan# 811
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 63 Resp: 116950

Ion	Ratio	Lower	Upper
63	100		
65	31.3	1.9	61.9
83	12.6	0.0	42.8

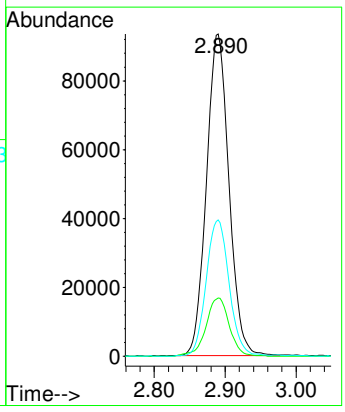


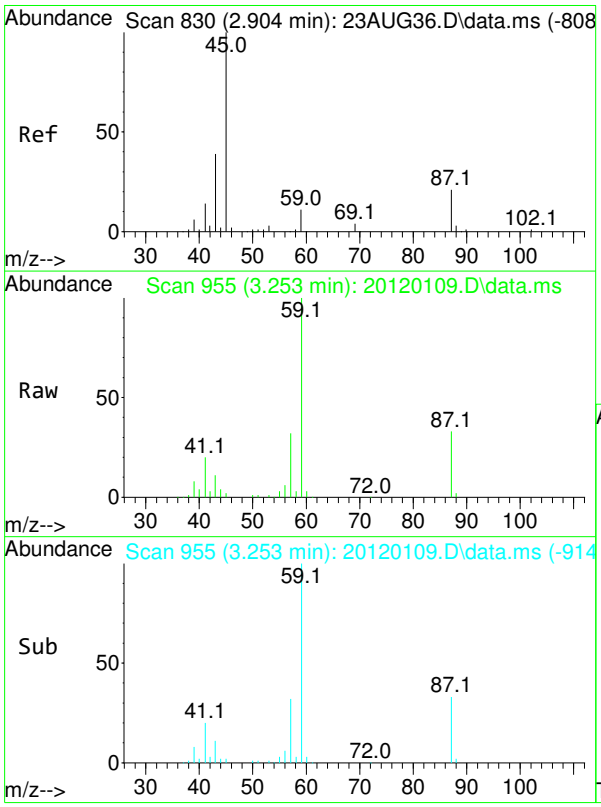


#28
Diisopropyl ether
Concen: 16.85 ug/L
RT: 2.890 min Scan# 825
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 45 Resp: 206147

Ion	Ratio	Lower	Upper
45	100		
87	18.9	0.0	46.8
43	43.5	91.3	151.3#

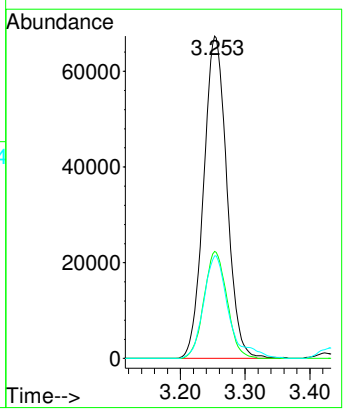


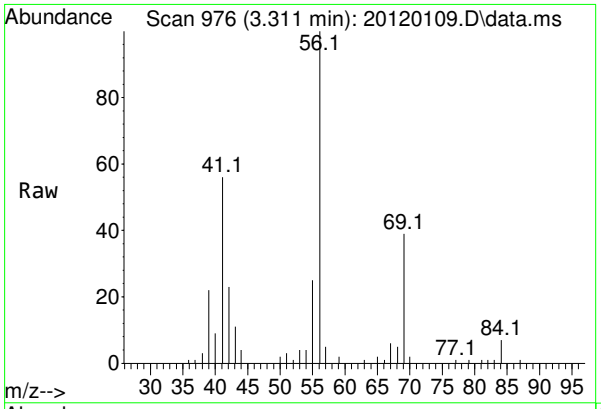


#30
Ethyl tert butyl ether
Concen: 17.69 ug/L
RT: 3.253 min Scan# 955
Delta R.T. -0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 59 Resp: 167412

Ion	Ratio	Lower	Upper
59	100		
87	33.1	0.7	60.7
57	34.4	1.0	61.0

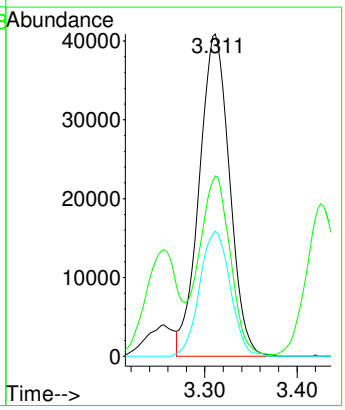


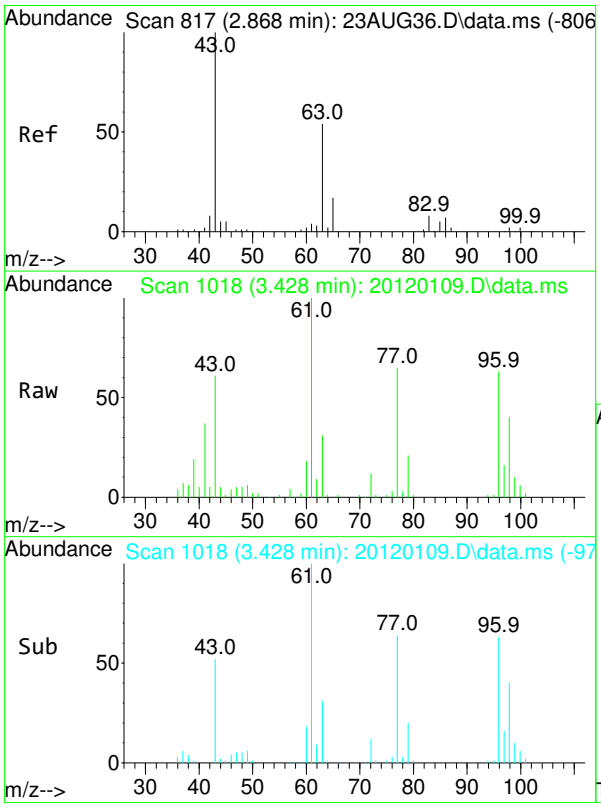


#31
Methylcyclopentane
Concen: 15.14 ug/L
RT: 3.311 min Scan# 976
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 56 Resp: 93498

Ion	Ratio	Lower	Upper
56	100		
41	55.8	26.6	86.6
69	39.2	7.8	67.8

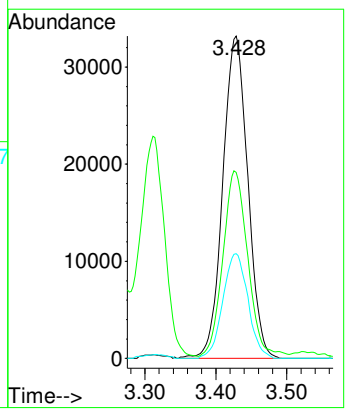


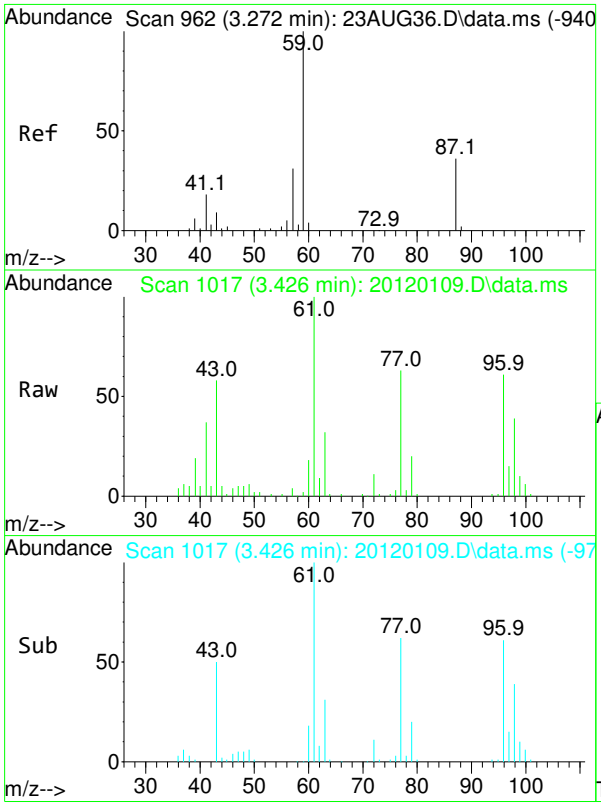


#32
2,2-Dichloropropane
Concen: 18.46 ug/L
RT: 3.428 min Scan# 1018
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 77 Resp: 81316

Ion	Ratio	Lower	Upper
77	100		
41	56.3	32.8	92.8
79	32.6	2.4	62.4

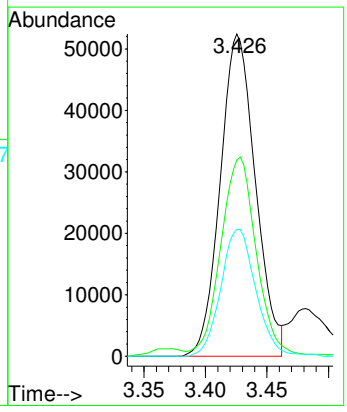


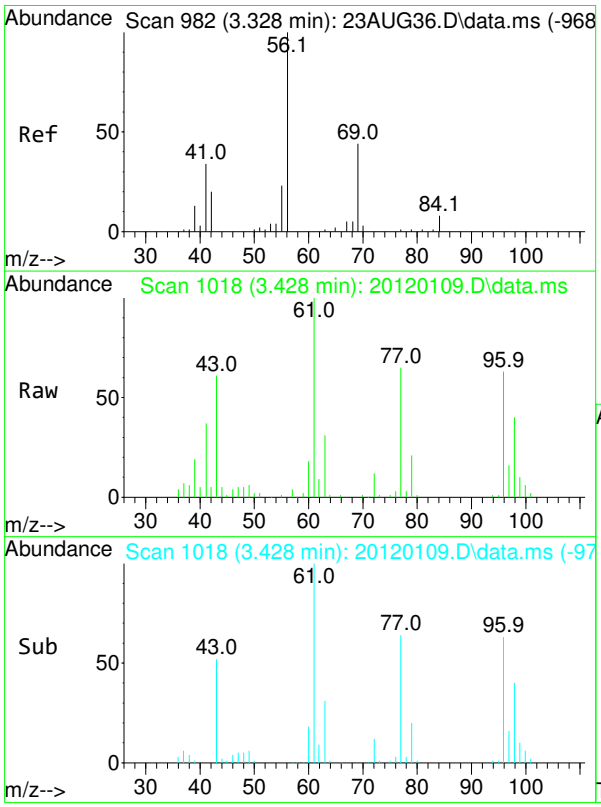


#33
cis-1,2-Dichloroethene
Concen: 18.38 ug/L
RT: 3.426 min Scan# 1017
Delta R.T. -0.002 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 61 Resp: 104422

Ion	Ratio	Lower	Upper
61	100		
96	63.0	28.2	88.2
98	39.3	7.7	67.7

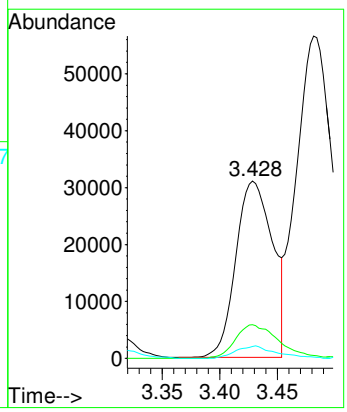


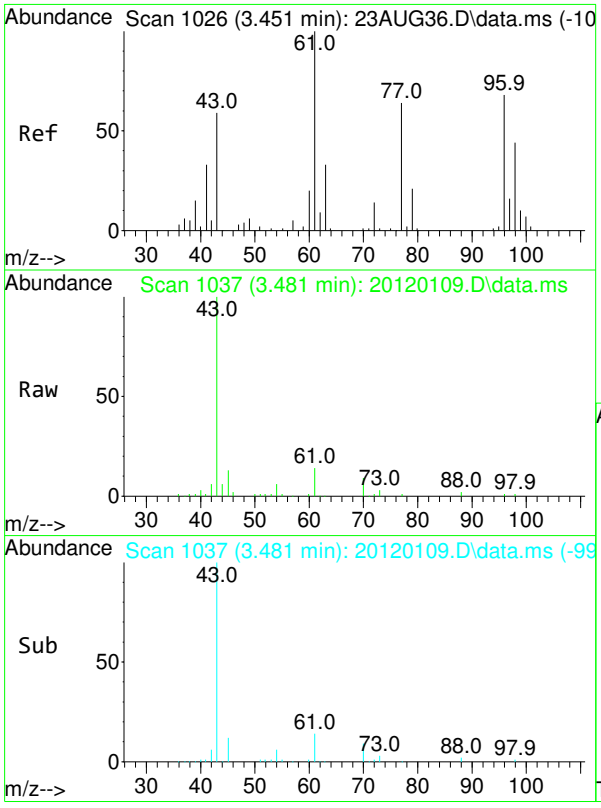


#34
2-Butanone
Concen: 16.52 ug/L
RT: 3.428 min Scan# 1018
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 68849

Ion	Ratio	Lower	Upper
43	100		
72	22.5	0.0	51.0
57	7.8	0.0	37.1

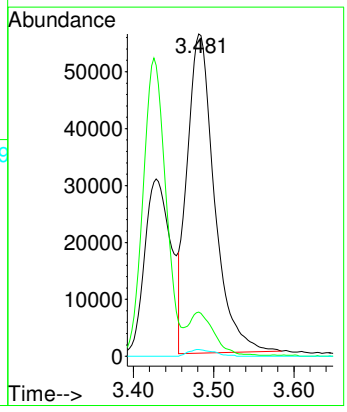


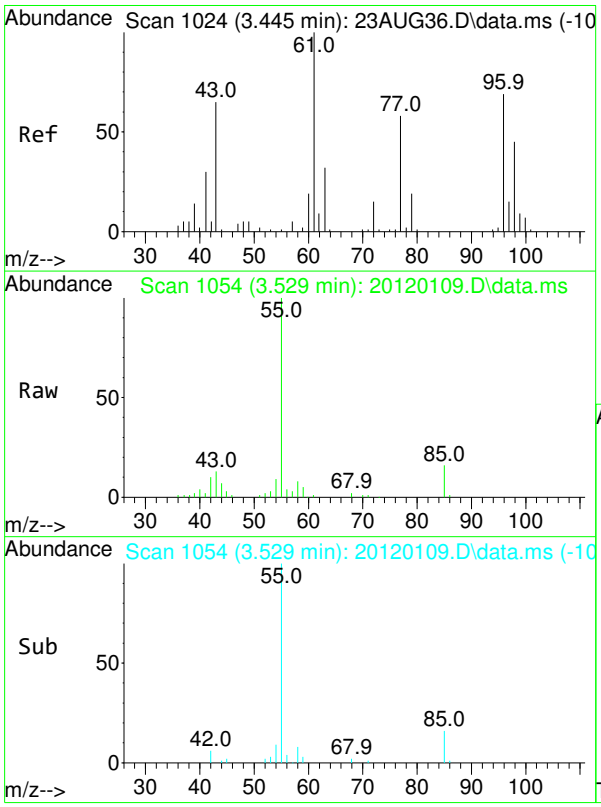


#35
Ethyl Acetate
Concen: 16.16 ug/L
RT: 3.481 min Scan# 1037
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 131987

Ion	Ratio	Lower	Upper
43	100		
61	11.7	0.0	42.4
88	2.1	0.0	32.1

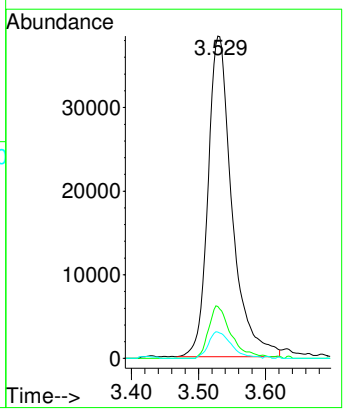


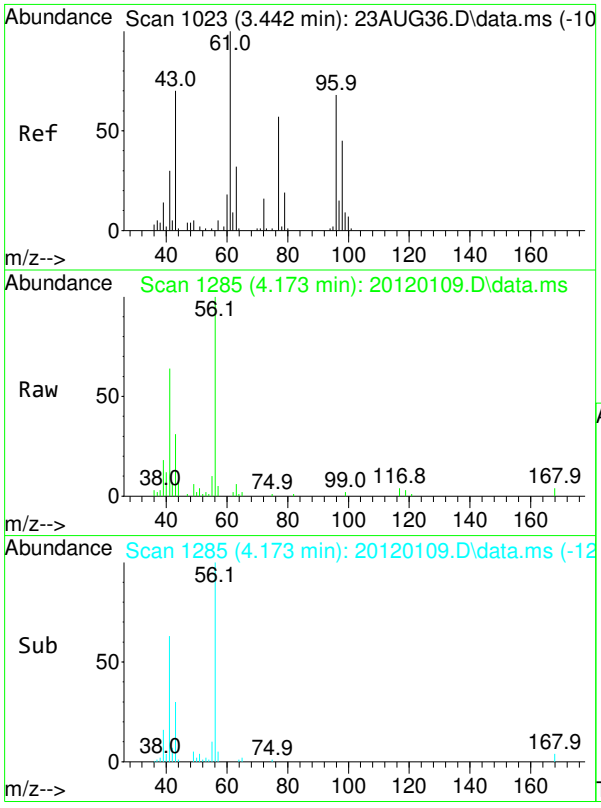


#36
Methyl acrylate
Concen: 16.75 ug/L
RT: 3.529 min Scan# 1054
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 55 Resp: 94973

Ion	Ratio	Lower	Upper
55	100		
85	15.4	0.0	44.3
58	8.0	0.0	38.4

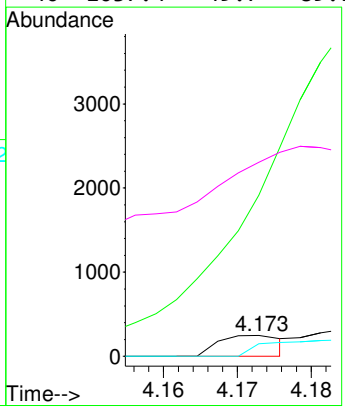


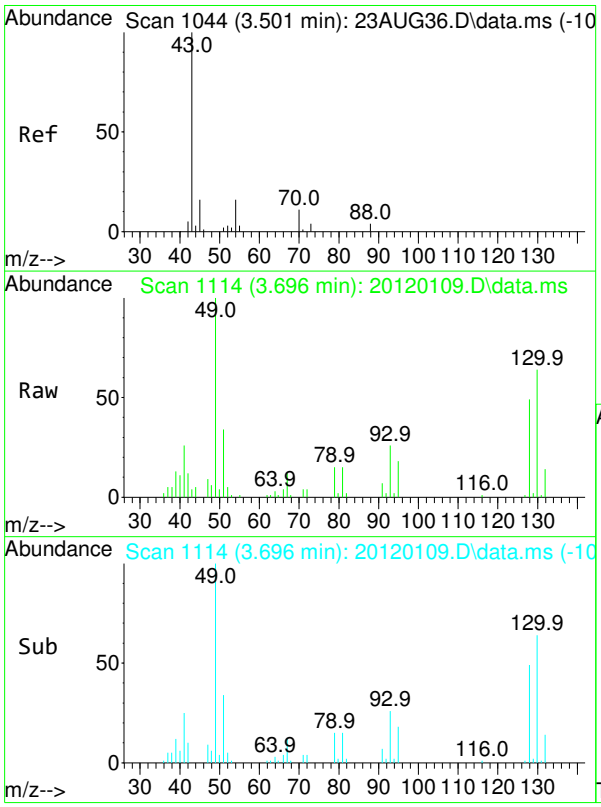


#37
Propionitrile
Concen: 0.40 ug/L
RT: 4.173 min Scan# 1285
Delta R.T. 0.061 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 54 Resp: 147

Ion	Ratio	Lower	Upper
54	100		
55	0.0	422.8	482.8#
52	0.0	0.0	50.3
40	1037.4	49.7	89.7#

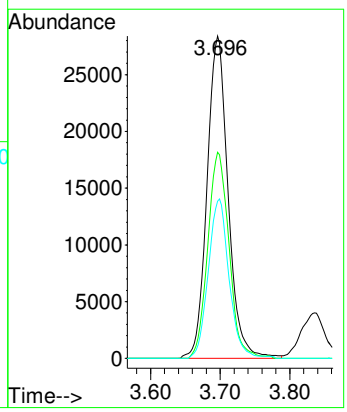


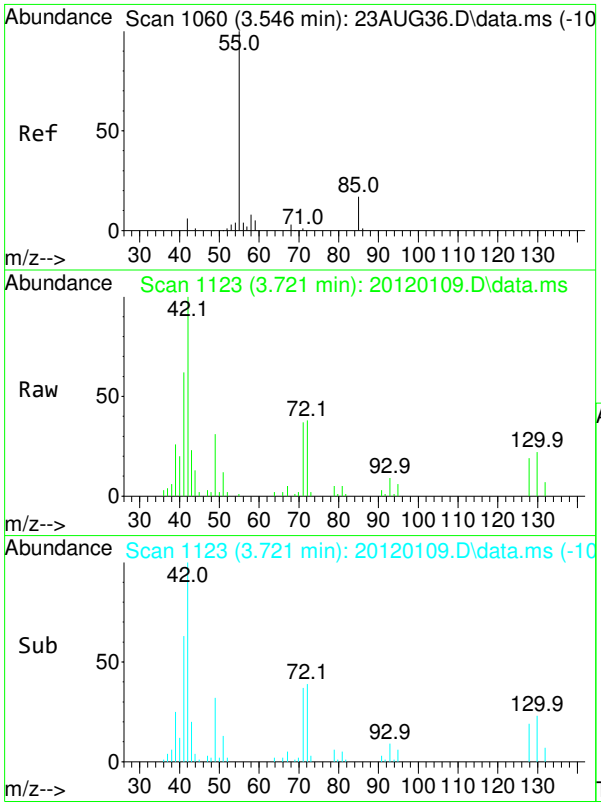


#38
Bromochloromethane
Concen: 16.64 ug/L
RT: 3.696 min Scan# 1114
Delta R.T. -0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 49 Resp: 59645

Ion	Ratio	Lower	Upper
49	100		
130	64.2	25.3	85.3
128	49.0	13.4	73.4

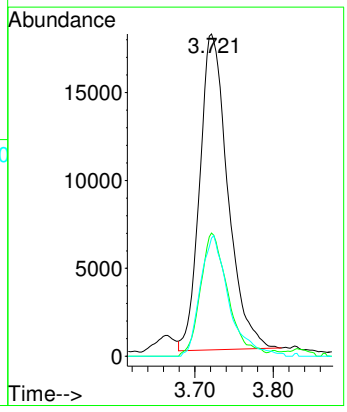


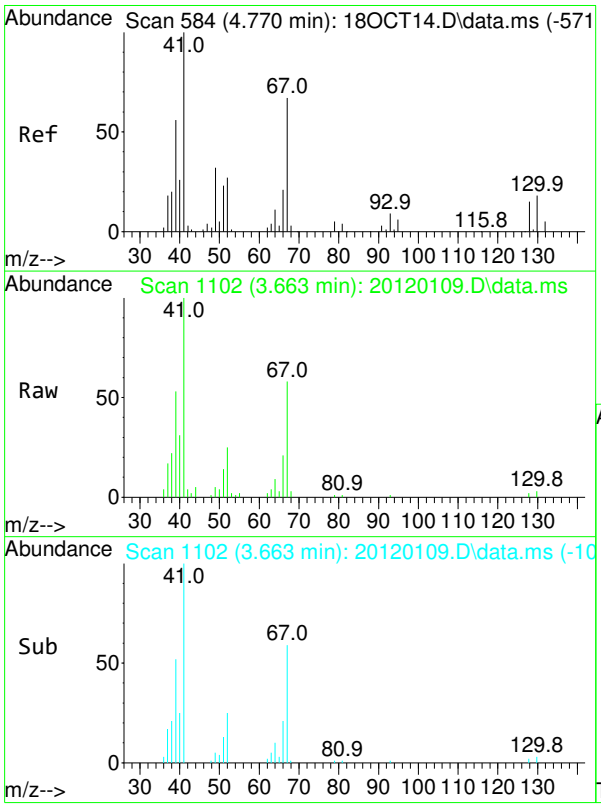


#39
Tetrahydrofuran
Concen: 15.79 ug/L
RT: 3.721 min Scan# 1123
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 42 Resp: 44530

Ion	Ratio	Lower	Upper
42	100		
72	38.4	3.4	63.4
71	38.9	4.3	64.3

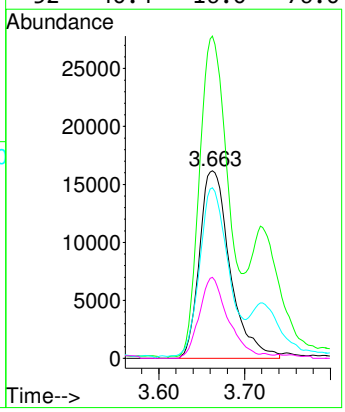


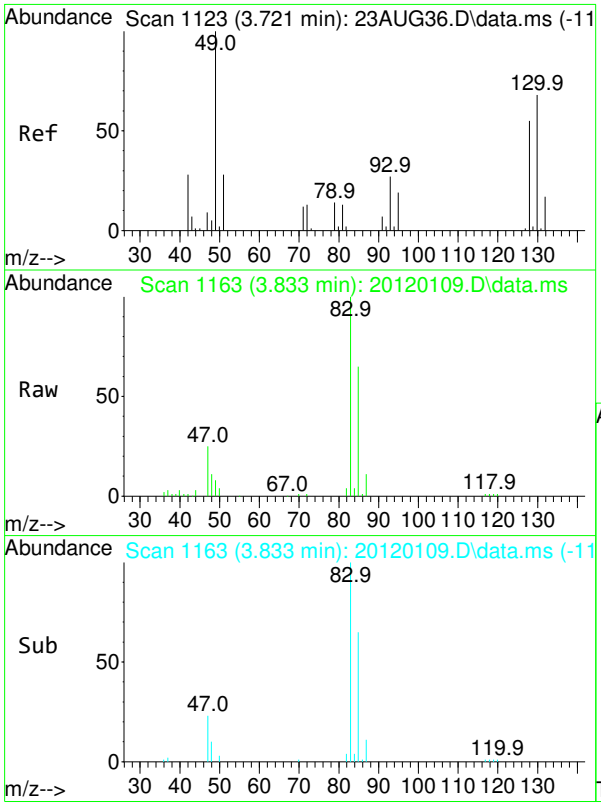


#40
Methacrylonitrile
Concen: 17.44 ug/L
RT: 3.663 min Scan# 1102
Delta R.T. -0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 67 Resp: 40194

Ion	Ratio	Lower	Upper
67	100		
41	156.8	143.5	203.5
39	84.3	60.6	120.6
52	40.4	16.0	76.0

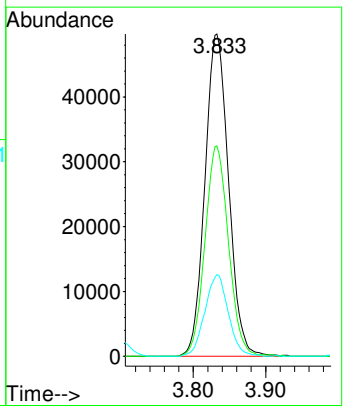


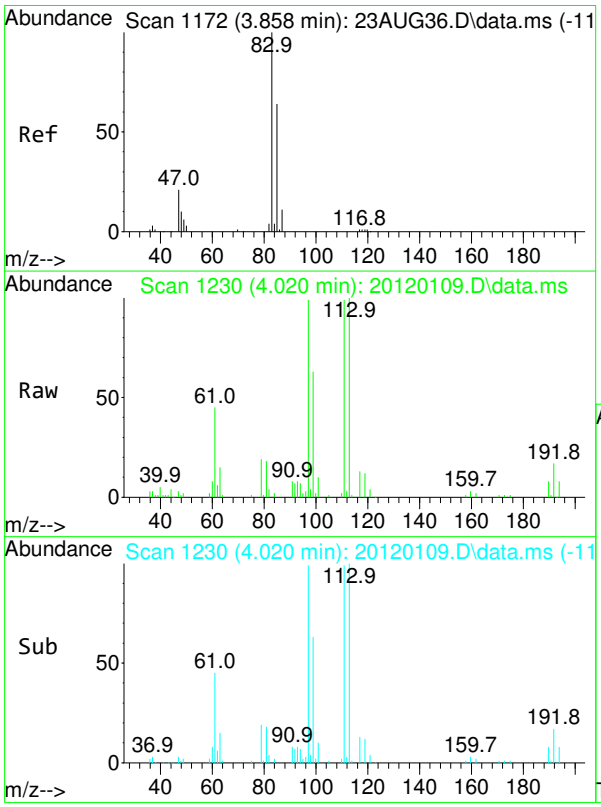


#41
Chloroform
Concen: 17.26 ug/L
RT: 3.833 min Scan# 1163
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 83 Resp: 112770

Ion	Ratio	Lower	Upper
83	100		
85	65.0	34.6	94.6
47	25.2	0.0	56.8

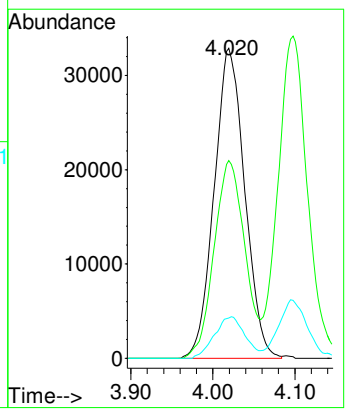


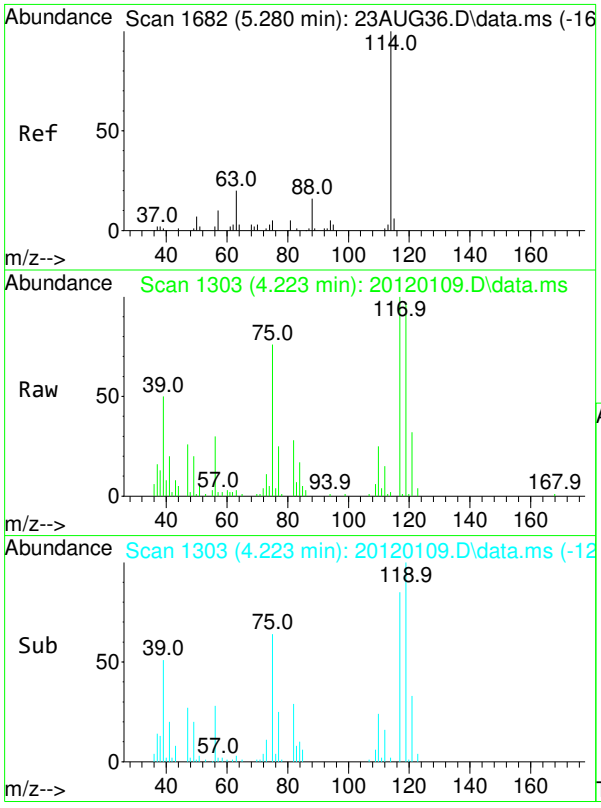


#44
1,1,1-Trichloroethane
Concen: 19.44 ug/L
RT: 4.020 min Scan# 1230
Delta R.T. -0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 97 Resp: 85159

Ion	Ratio	Lower	Upper
97	100		
99	64.4	34.0	94.0
117	13.5	0.0	43.5

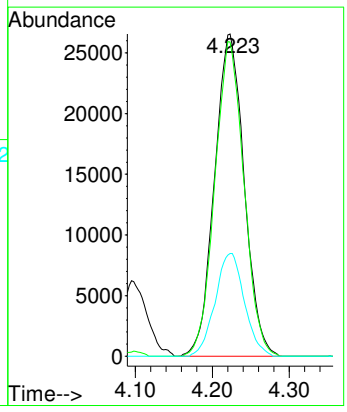


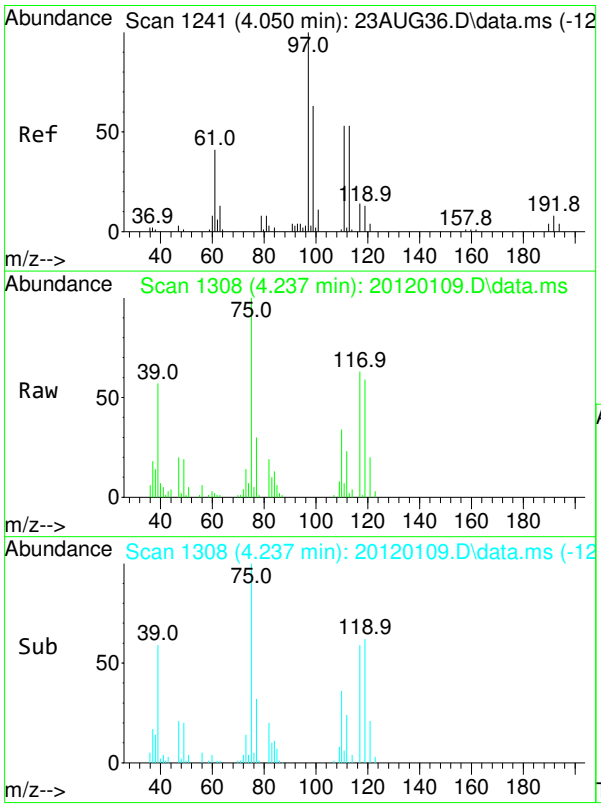


#46
Carbon tetrachloride
Concen: 18.68 ug/L
RT: 4.223 min Scan# 1303
Delta R.T. -0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:117 Resp: 71091

Ion	Ratio	Lower	Upper
117	100		
119	95.8	65.9	125.9
121	31.6	1.1	61.1

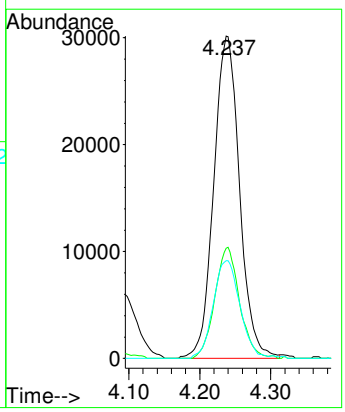


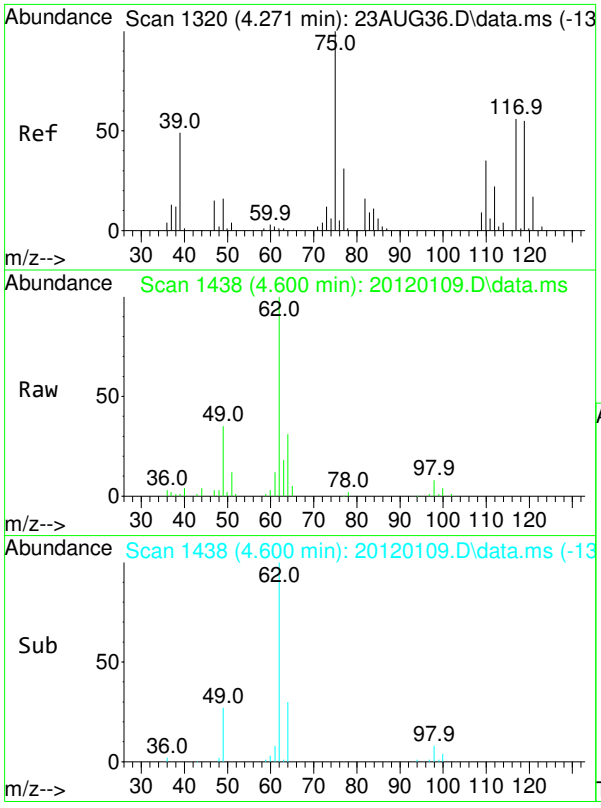


#47
1,1-Dichloropropene
Concen: 18.88 ug/L
RT: 4.237 min Scan# 1308
Delta R.T. -0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 75 Resp: 76130

Ion	Ratio	Lower	Upper
75	100		
110	32.9	1.1	61.1
77	31.5	0.8	60.8

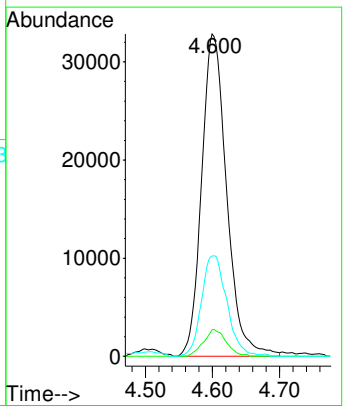


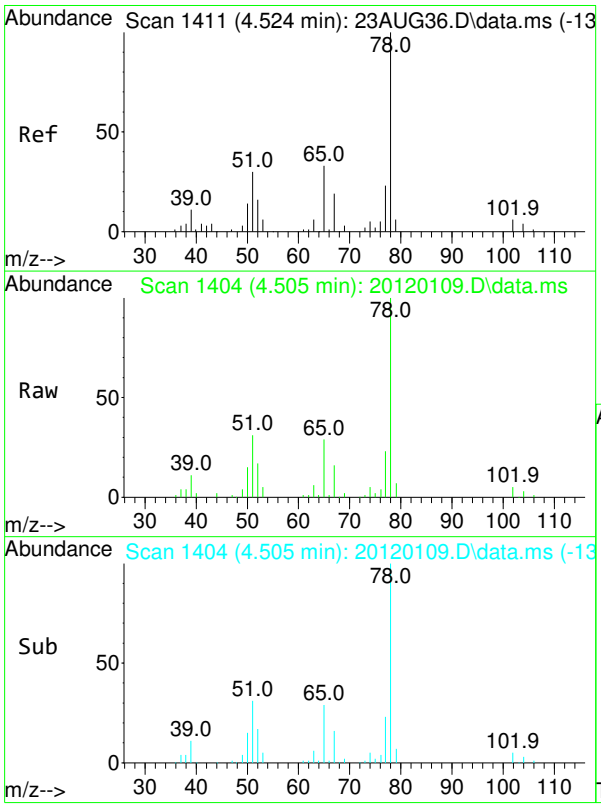


#49
1,2-Dichloroethane
Concen: 17.74 ug/L
RT: 4.600 min Scan# 1438
Delta R.T. -0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 62 Resp: 85145

Ion	Ratio	Lower	Upper
62	100		
98	7.5	0.0	36.5
64	31.5	0.9	60.9

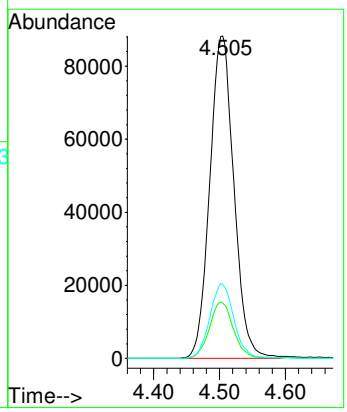


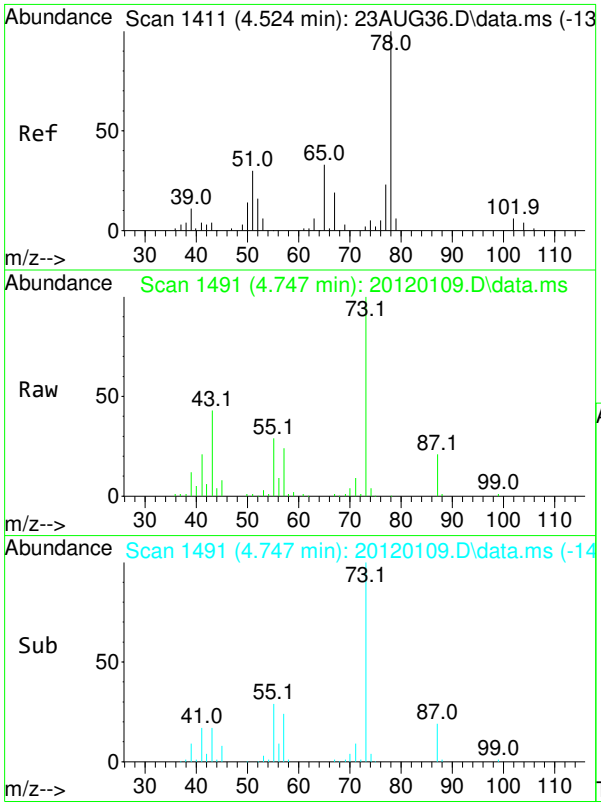


#50
Benzene
Concen: 20.02 ug/L
RT: 4.505 min Scan# 1404
Delta R.T. -0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 78 Resp: 224223

Ion	Ratio	Lower	Upper
78	100		
52	17.5	0.0	48.7
77	23.1	0.0	53.7

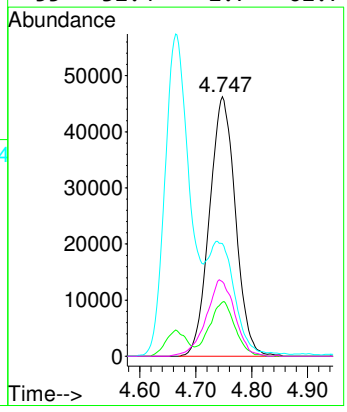


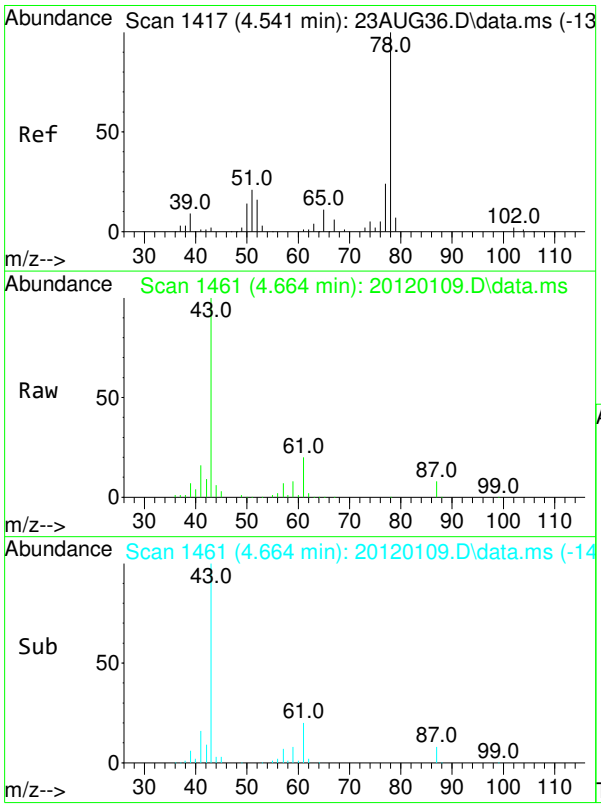


#51
Tertiaryamylmethylether
Concen: 19.18 ug/L
RT: 4.747 min Scan# 1491
Delta R.T. -0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 73 Resp: 149641

Ion	Ratio	Lower	Upper
73	100		
87	20.5	0.0	50.5
43	0.0	0.0	30.0
55	32.4	2.7	62.7

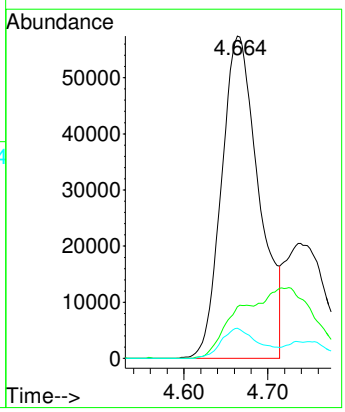


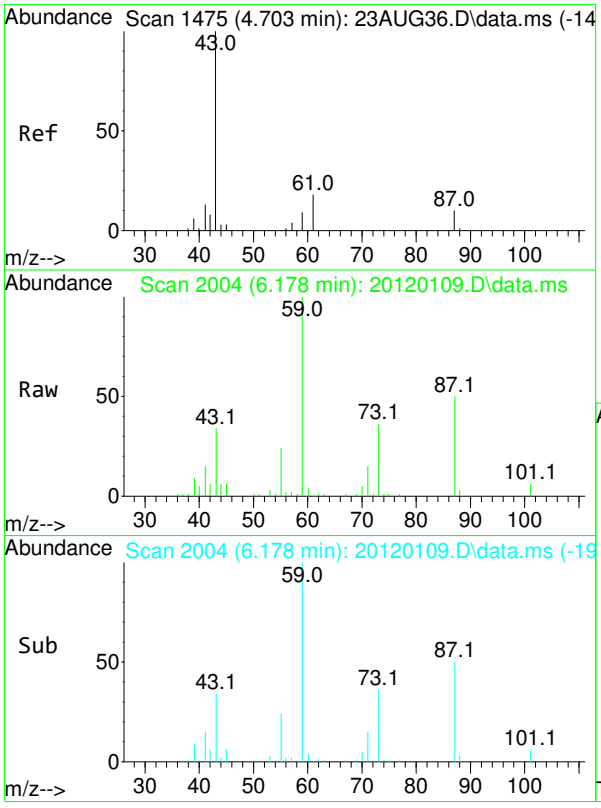


#52
Isobutyl Alcohol
Concen: 18.46 ug/L
RT: 4.664 min Scan# 1461
Delta R.T. -0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 177452

Ion	Ratio	Lower	Upper
43	100		
41	12.9	0.0	41.2
42	9.5	0.0	38.2

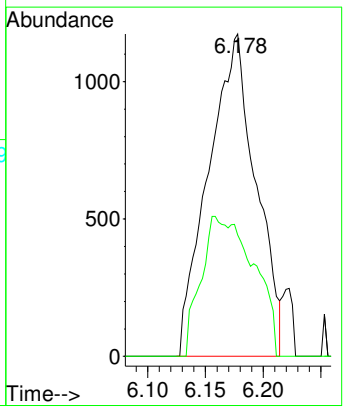


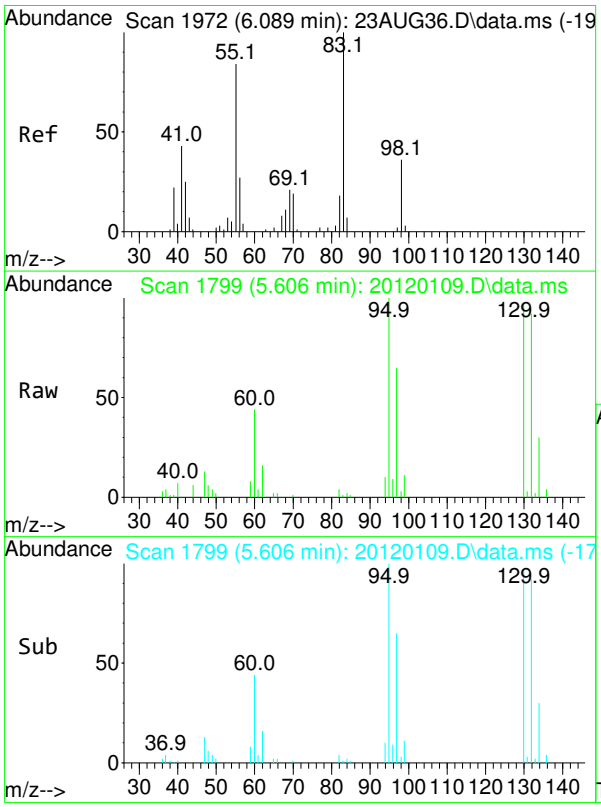


#54
1,4-Dioxane
Concen: 33.26 ug/L
RT: 6.178 min Scan# 2004
Delta R.T. -0.098 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 88 Resp: 3358

Ion	Ratio	Lower	Upper
88	100		
58	47.9	43.1	103.1

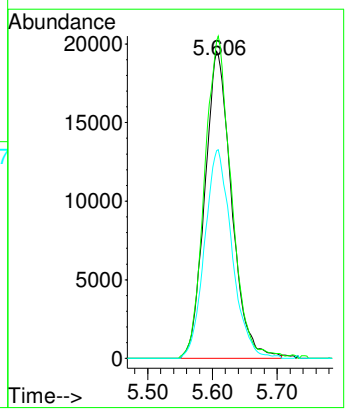


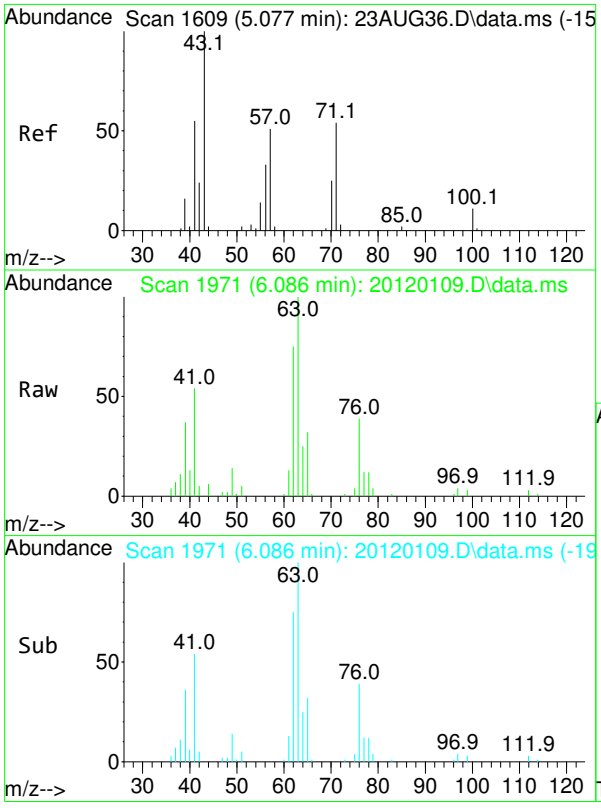


#57
Trichloroethene
Concen: 20.94 ug/L
RT: 5.606 min Scan# 1799
Delta R.T. -0.009 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:130 Resp: 56020

Ion	Ratio	Lower	Upper
130	100		
95	105.0	80.9	140.9
97	69.3	41.9	101.9

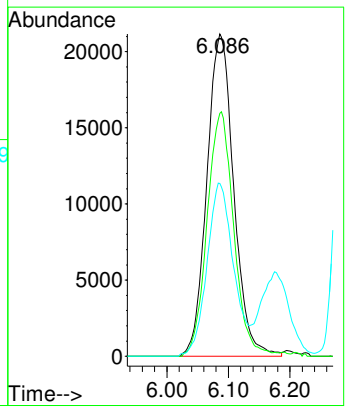


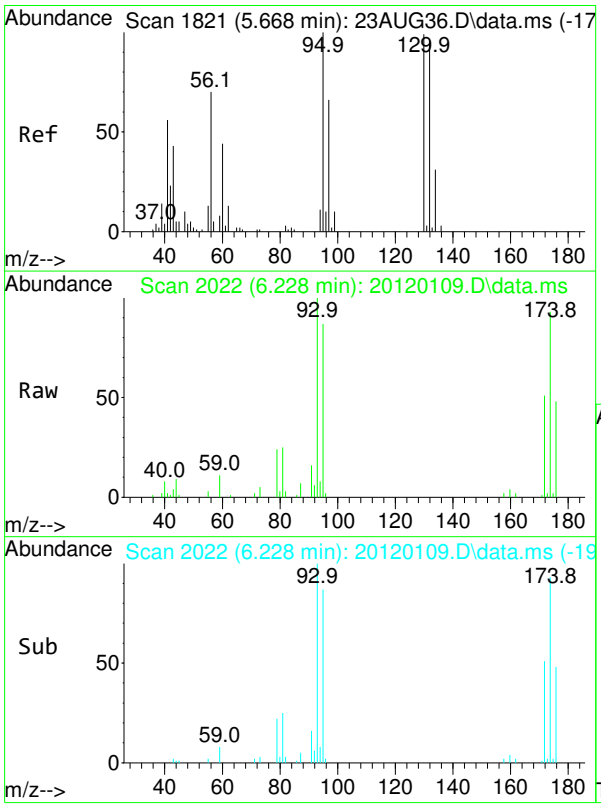


#58
1,2-Dichloropropane
Concen: 16.99 ug/L
RT: 6.086 min Scan# 1971
Delta R.T. -0.008 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 63 Resp: 64283

Ion	Ratio	Lower	Upper
63	100		
62	74.9	46.4	106.4
41	52.6	20.9	80.9

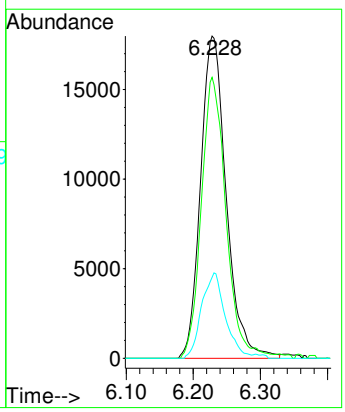


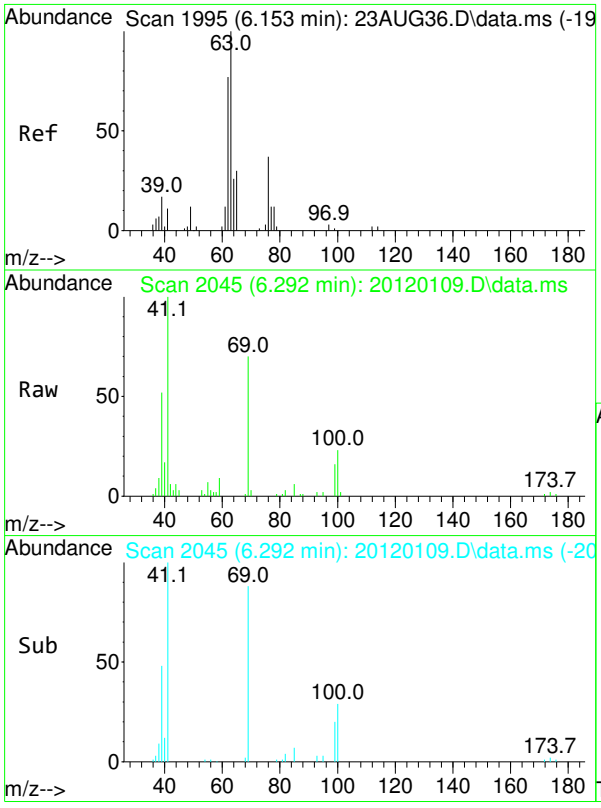


#59
Dibromomethane
Concen: 19.44 ug/L
RT: 6.228 min Scan# 2022
Delta R.T. -0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 93 Resp: 47713

Ion	Ratio	Lower	Upper
93	100		
95	83.8	52.1	112.1
81	24.5	0.0	55.4

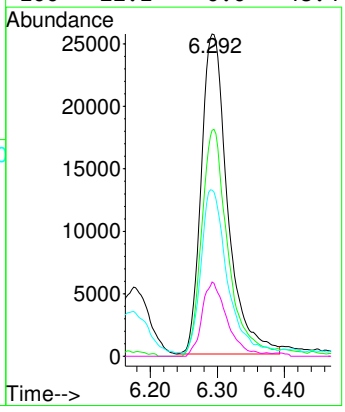


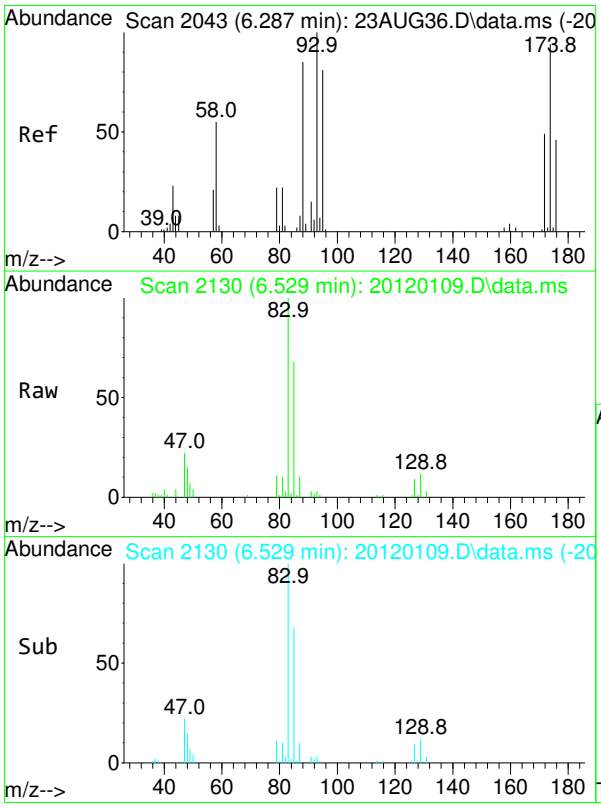


#60
Methyl methacrylate
Concen: 14.90 ug/L
RT: 6.292 min Scan# 2045
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 41 Resp: 69988

Ion	Ratio	Lower	Upper
41	100		
69	70.2	32.4	92.4
39	50.3	20.2	80.2
100	22.1	0.0	48.4

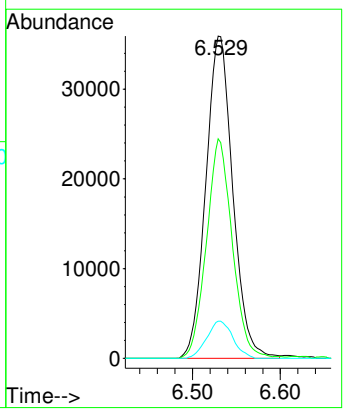


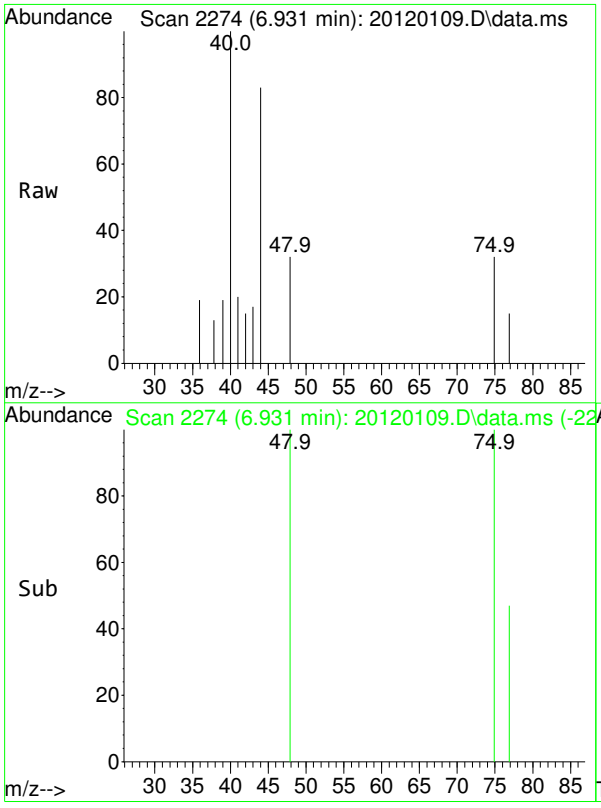


#61
Bromodichloromethane
Concen: 18.68 ug/L
RT: 6.529 min Scan# 2130
Delta R.T. -0.006 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 83 Resp: 76408

Ion	Ratio	Lower	Upper
83	100		
85	65.2	33.7	93.7
129	11.3	0.0	41.0

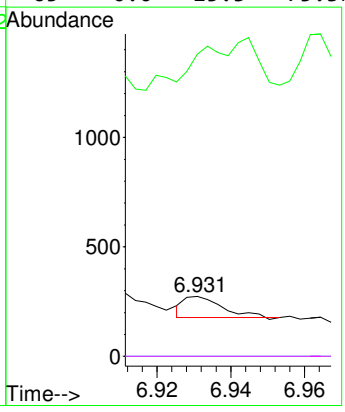


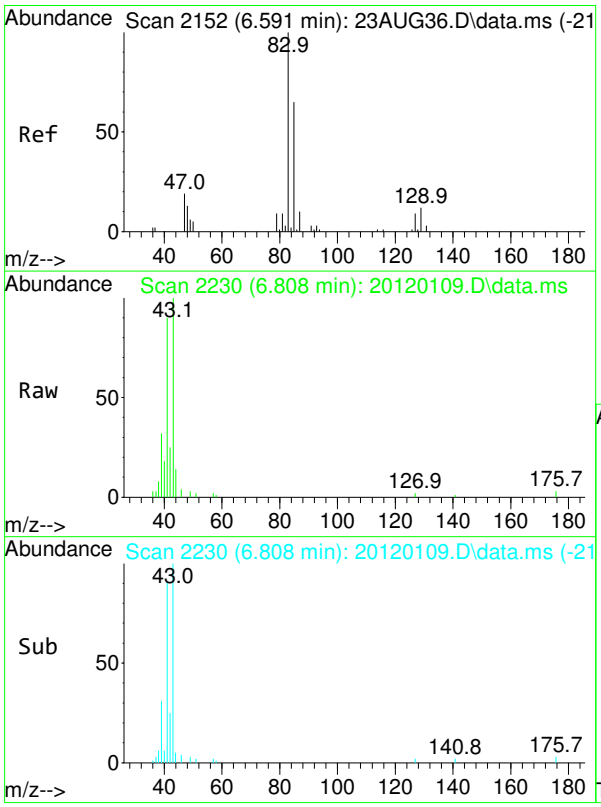


#62
2-Chloroethyl vinyl ether
Concen: 0.32 ug/L
RT: 6.931 min Scan# 2274
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 69

Ion	Ratio	Lower	Upper
43	100		
44	230.4	51.7	111.7#
63	0.0	111.6	171.6#
65	0.0	15.3	75.3#

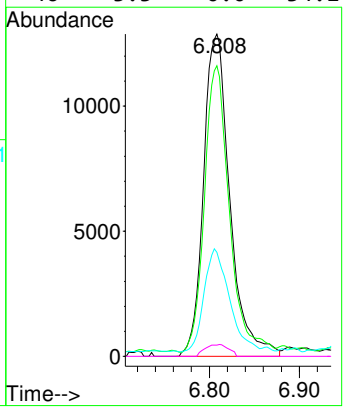


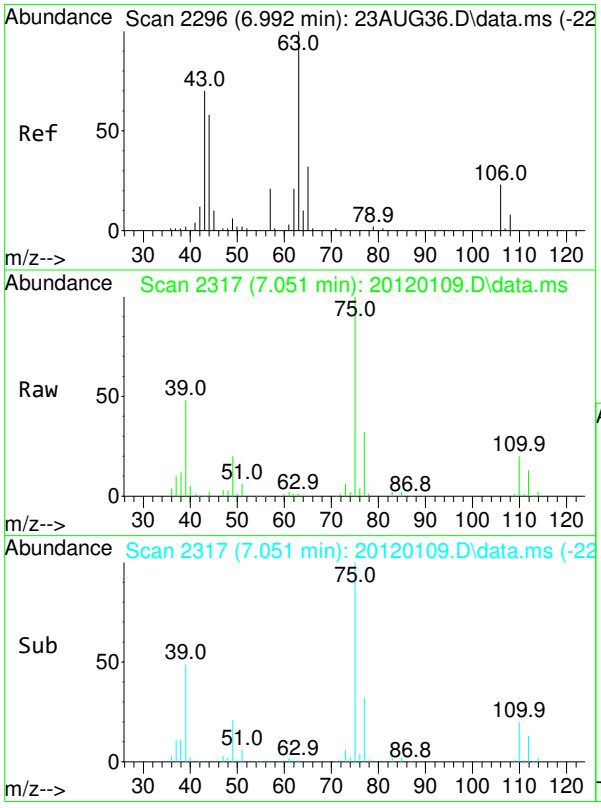


#63
2-Nitropropane
Concen: 16.33 ug/L
RT: 6.808 min Scan# 2230
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 26246

Ion	Ratio	Lower	Upper
43	100		
41	83.7	59.2	119.2
39	30.6	5.6	65.6
46	3.3	0.0	34.1

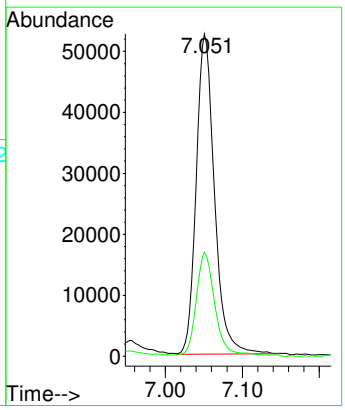


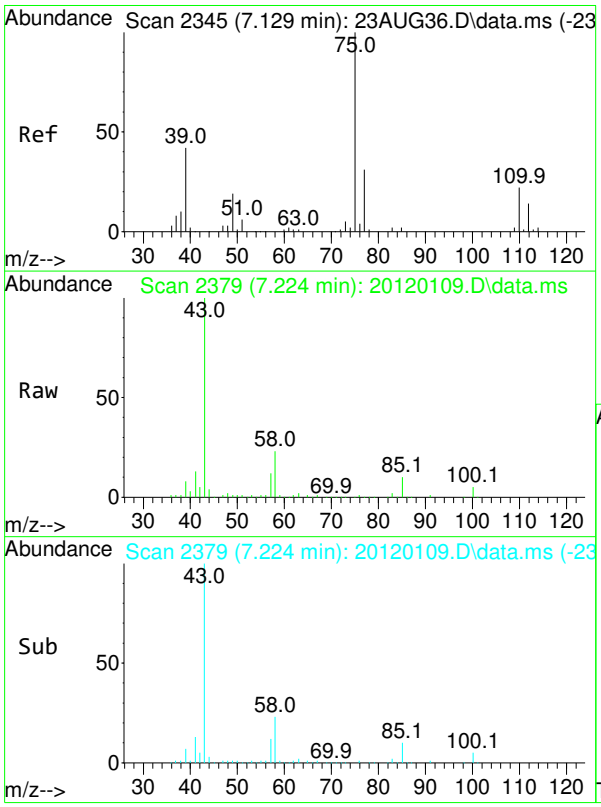


#64
cis-1,3-Dichloropropene
Concen: 18.67 ug/L
RT: 7.051 min Scan# 2317
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 75 Resp: 86460

Ion	Ratio	Lower	Upper
75	100		
77	32.1	1.3	61.3

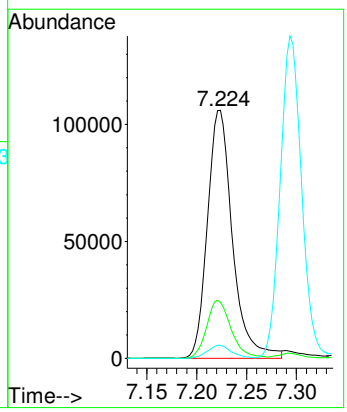


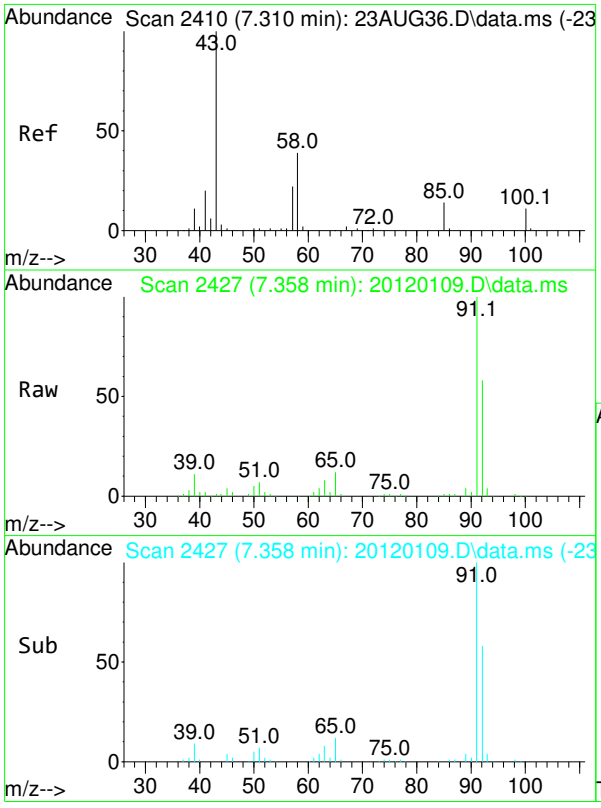


#66
4-Methyl-2-pentanone
Concen: 29.93 ug/L
RT: 7.224 min Scan# 2379
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 185508

Ion	Ratio	Lower	Upper
43	100		
58	22.9	13.4	53.4
100	5.2	0.0	27.3

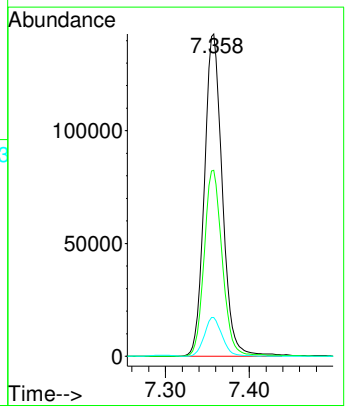


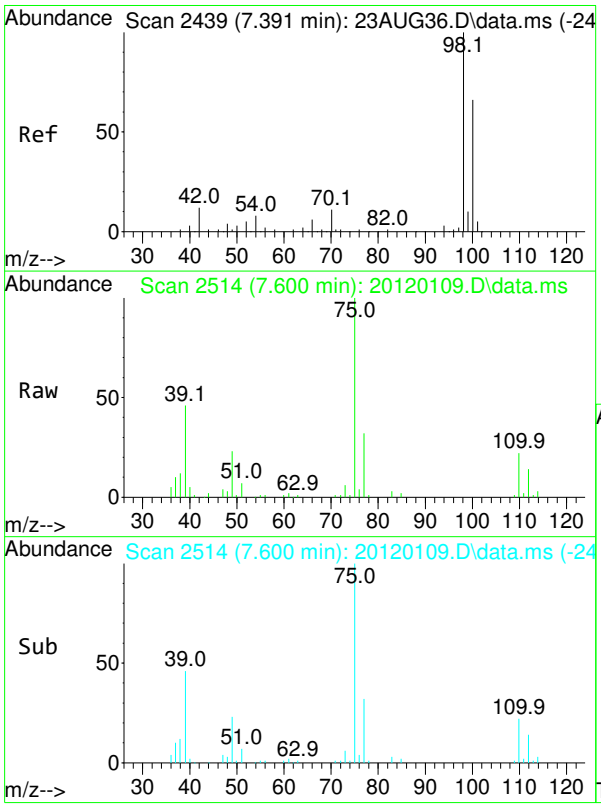


#68
Toluene
Concen: 20.60 ug/L
RT: 7.358 min Scan# 2427
Delta R.T. -0.002 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 212982

Ion	Ratio	Lower	Upper
91	100		
92	58.5	28.3	88.3
65	12.0	0.0	43.2

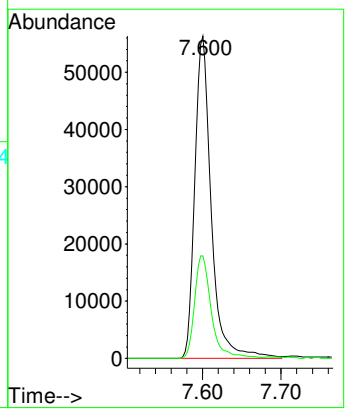


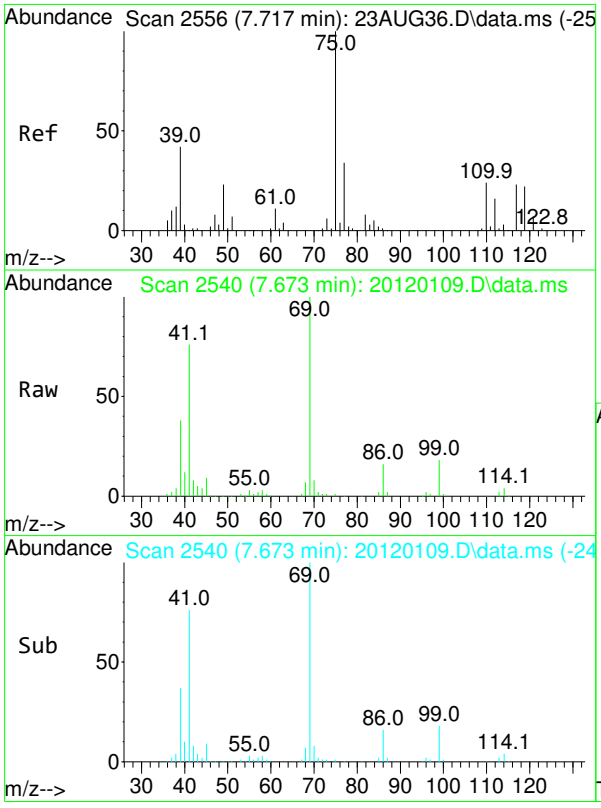


#69
trans-1,3-Dichloropropene
Concen: 19.85 ug/L
RT: 7.600 min Scan# 2514
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 75 Resp: 81802

Ion	Ratio	Lower	Upper
75	100		
77	32.5	3.4	63.4

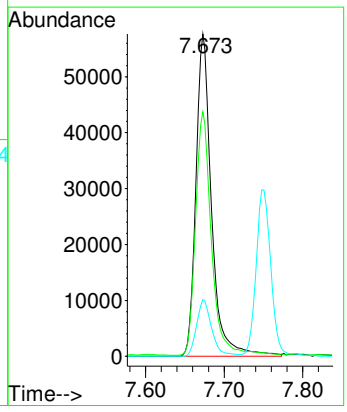


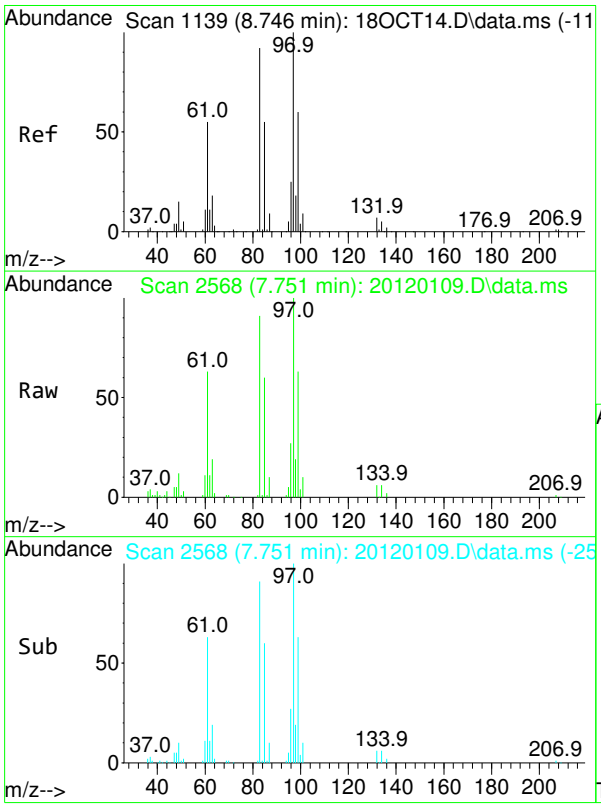


#71
Ethyl methacrylate
Concen: 17.72 ug/L
RT: 7.673 min Scan# 2540
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 69 Resp: 79556

Ion	Ratio	Lower	Upper
69	100		
41	77.2	53.5	113.5
99	17.1	0.0	46.2

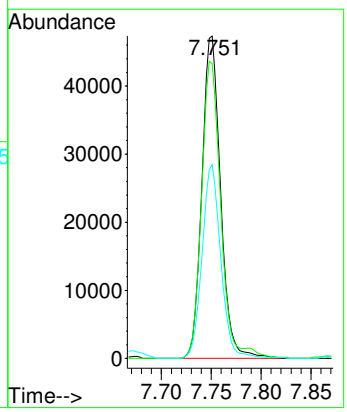


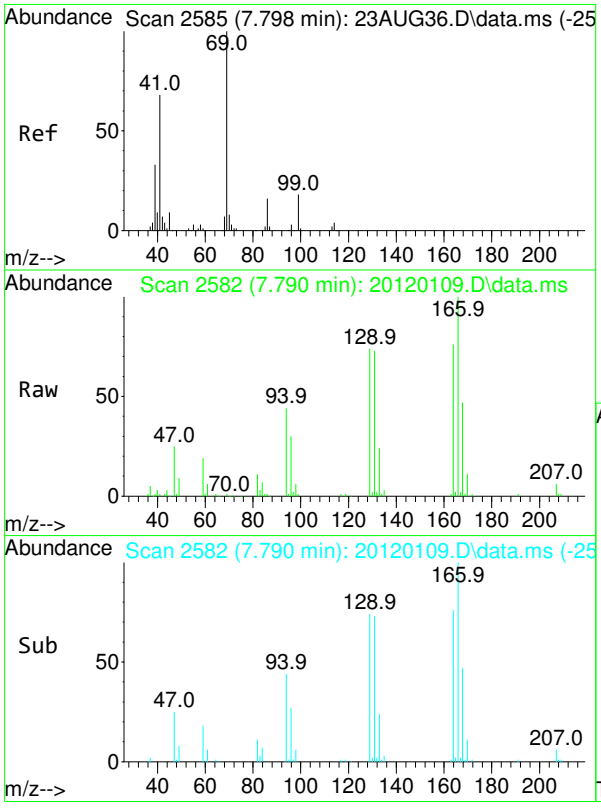


#72
1,1,2-Trichloroethane
Concen: 19.64 ug/L
RT: 7.751 min Scan# 2568
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 97 Resp: 61588

Ion	Ratio	Lower	Upper
97	100		
83	92.4	67.3	127.3
85	60.3	32.8	92.8

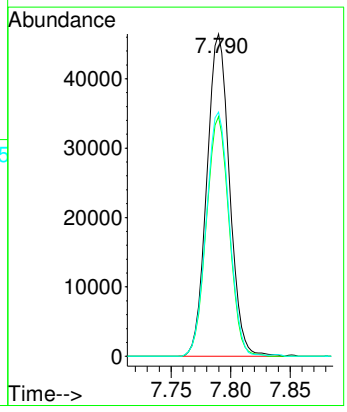


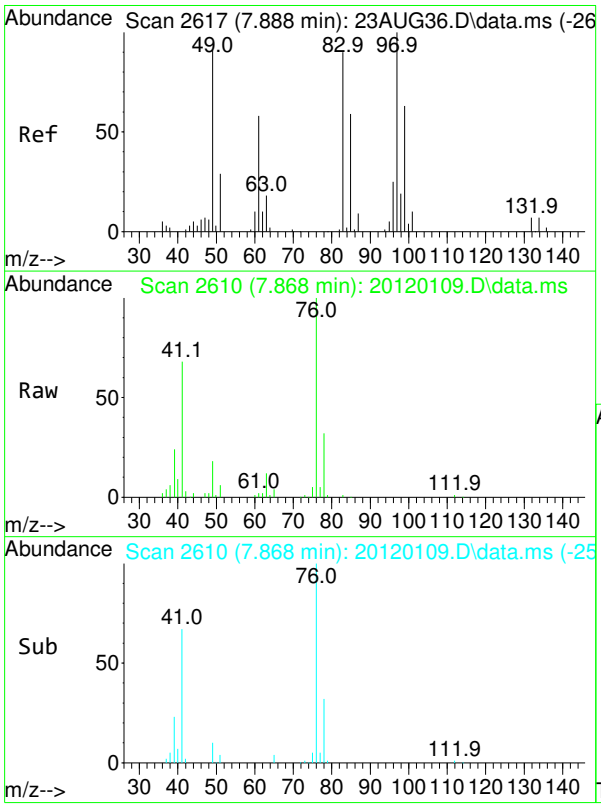


#73
Tetrachloroethene
Concen: 22.74 ug/L
RT: 7.790 min Scan# 2582
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:166 Resp: 61507

Ion	Ratio	Lower	Upper
166	100		
129	74.5	47.2	107.2
164	77.2	47.2	107.2

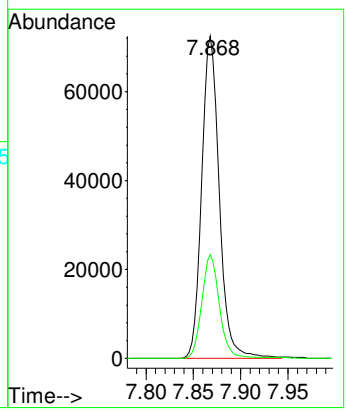


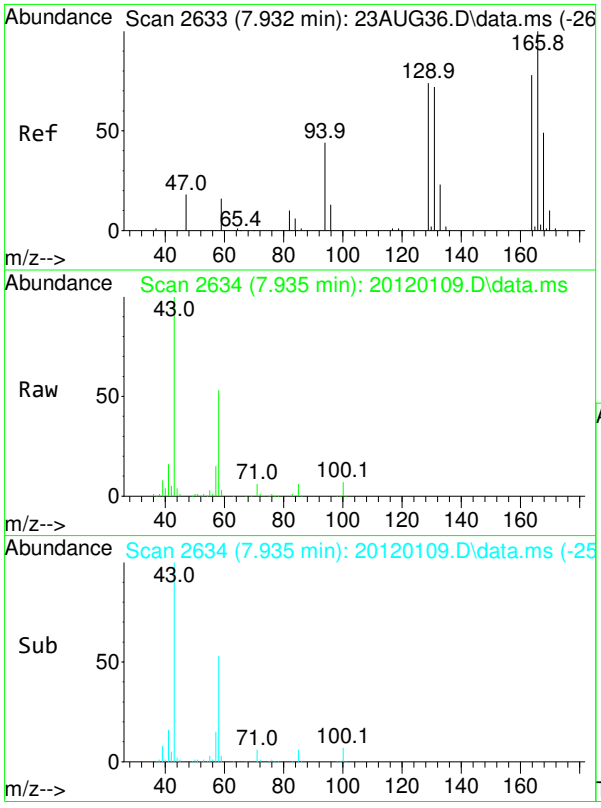


#74
1,3-Dichloropropane
Concen: 18.68 ug/L
RT: 7.868 min Scan# 2610
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 76 Resp: 93766

Ion	Ratio	Lower	Upper
76	100		
78	32.1	4.7	64.7

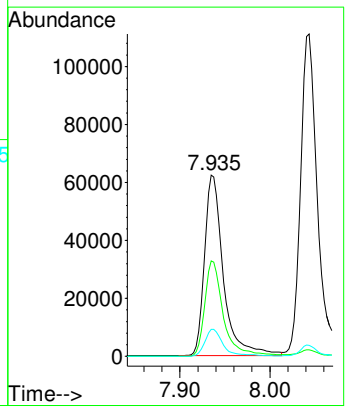


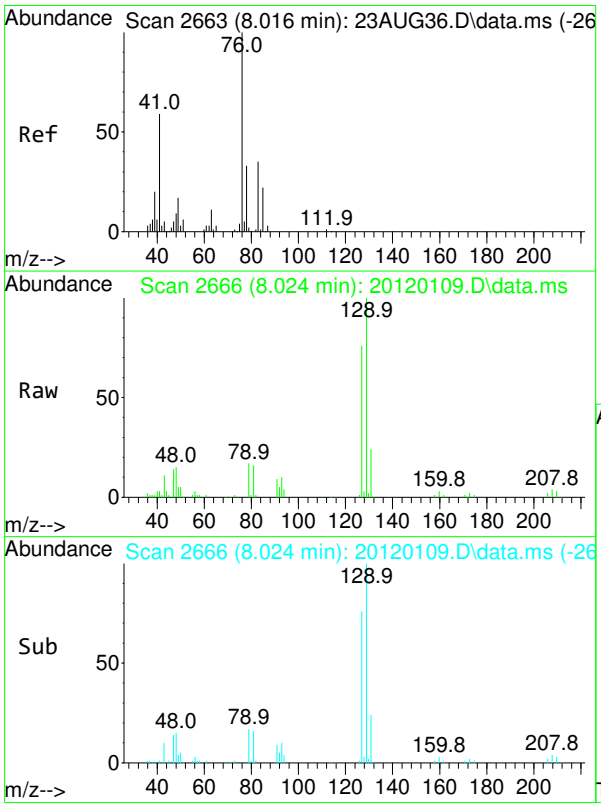


#75
2-Hexanone
Concen: 17.13 ug/L
RT: 7.935 min Scan# 2634
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 90998

Ion	Ratio	Lower	Upper
43	100		
58	52.3	18.9	78.9
57	14.9	0.0	44.5

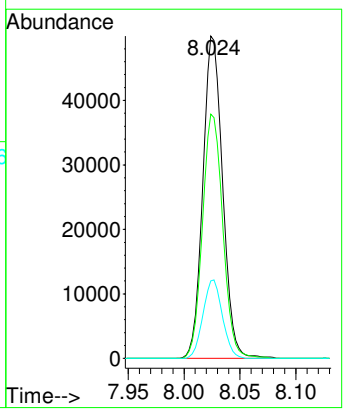


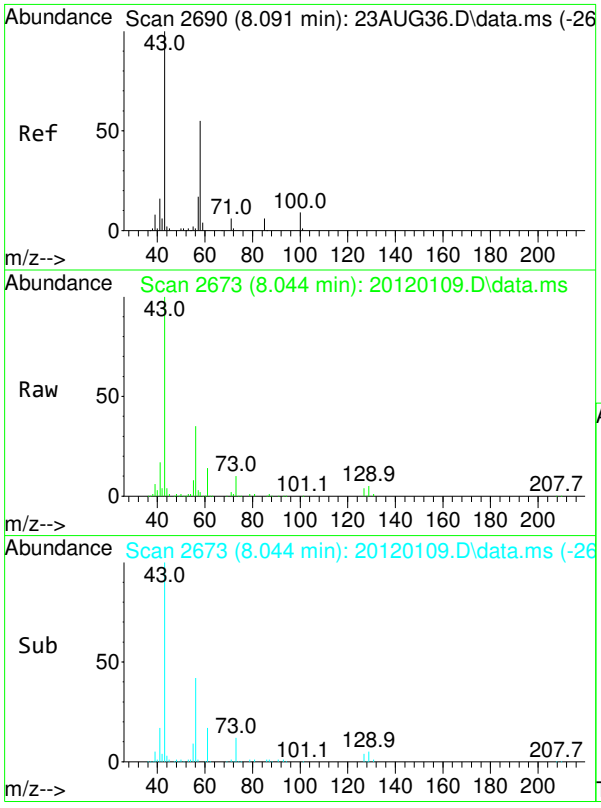


#76
Chlorodibromomethane
Concen: 19.27 ug/L
RT: 8.024 min Scan# 2666
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:129 Resp: 61506

Ion	Ratio	Lower	Upper
129	100		
127	77.8	45.9	105.9
131	23.9	0.0	54.2

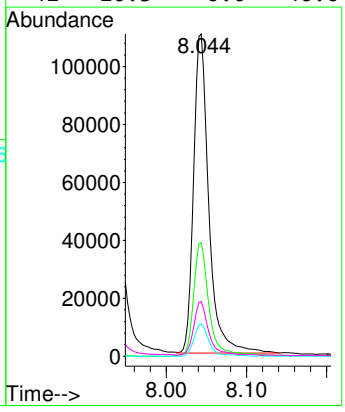


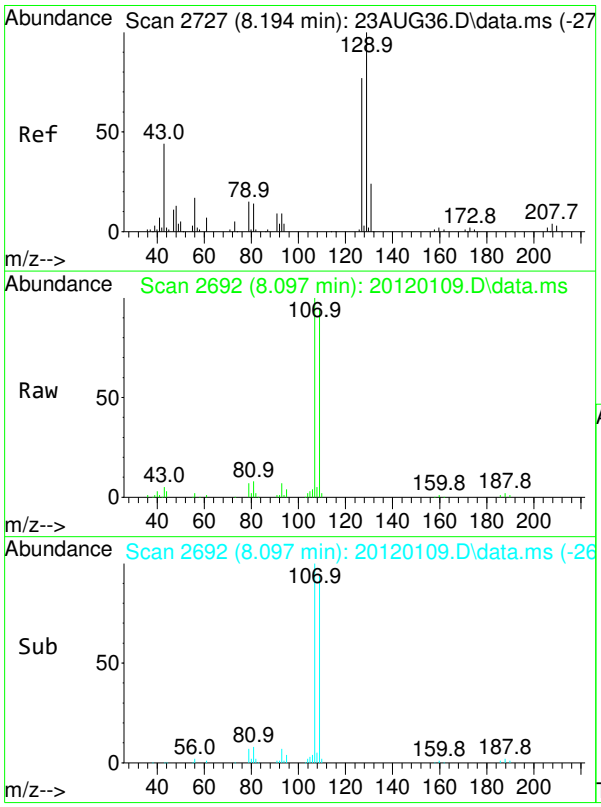


#77
Butyl acetate
Concen: 16.48 ug/L
RT: 8.044 min Scan# 2673
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 145006

Ion	Ratio	Lower	Upper
43	100		
56	36.7	4.8	64.8
73	10.2	0.0	38.9
41	16.3	0.0	46.0

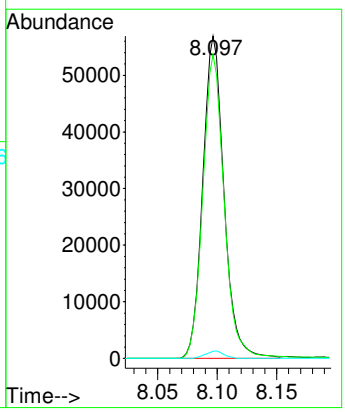


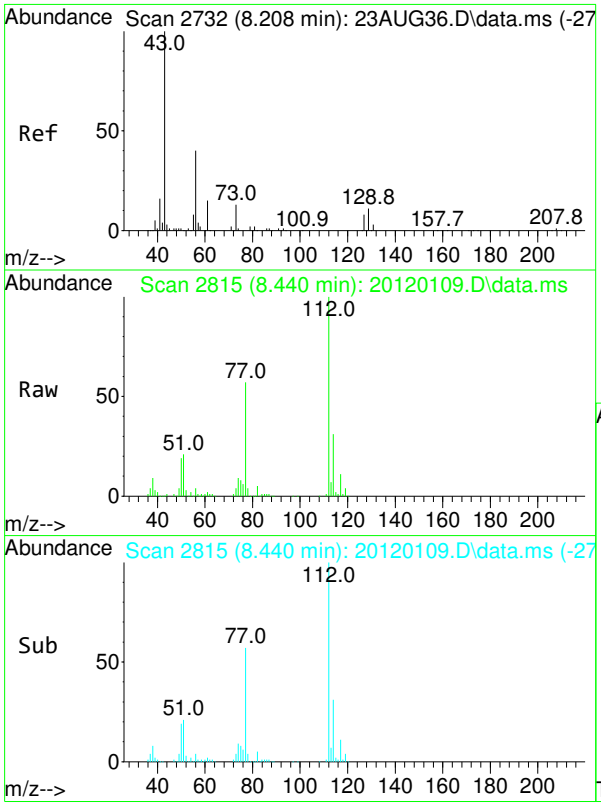


#78
1,2-Dibromoethane
Concen: 20.34 ug/L
RT: 8.097 min Scan# 2692
Delta R.T. -0.002 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:107 Resp: 70399

Ion	Ratio	Lower	Upper
107	100		
109	95.5	64.3	124.3
188	1.9	0.0	32.1

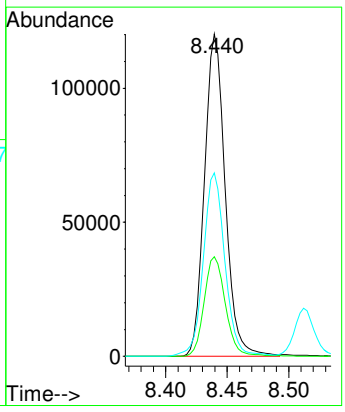


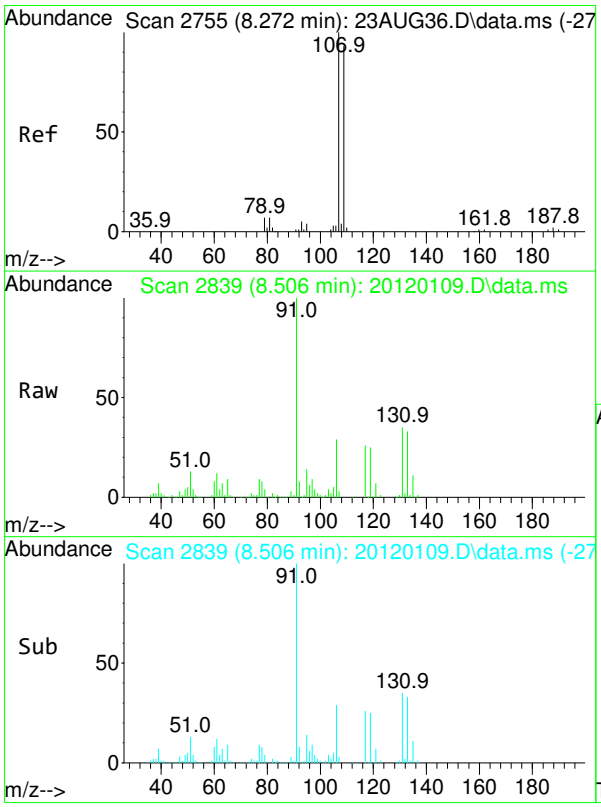


#79
Chlorobenzene
Concen: 20.83 ug/L
RT: 8.440 min Scan# 2815
Delta R.T. -0.002 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:112 Resp: 140827

Ion	Ratio	Lower	Upper
112	100		
114	31.7	1.7	61.7
77	59.4	32.3	92.3

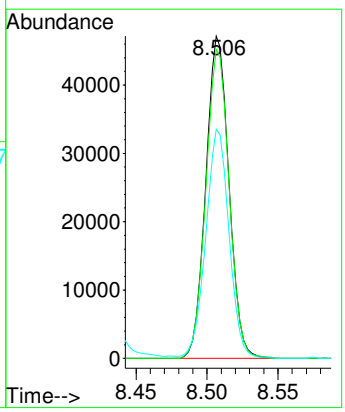


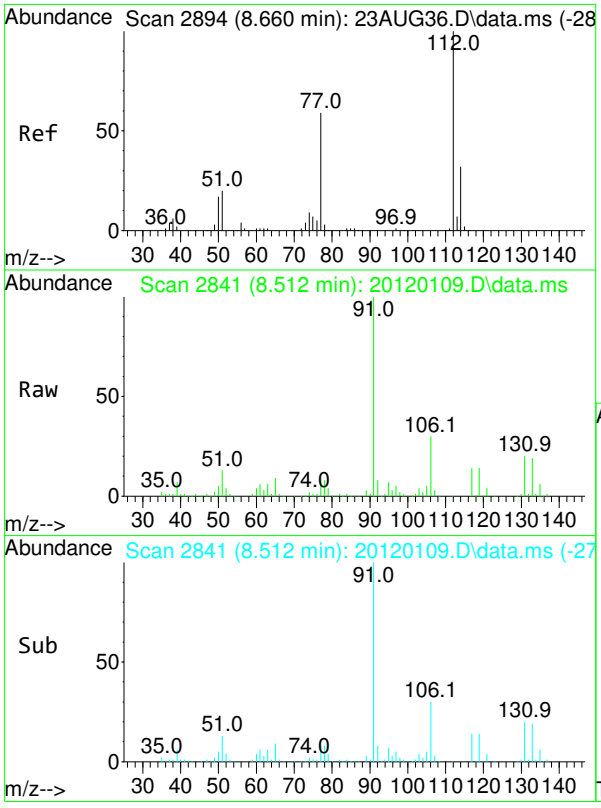


#80
1,1,1,2-Tetrachloroethane
Concen: 20.67 ug/L
RT: 8.506 min Scan# 2839
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:131 Resp: 53319

Ion	Ratio	Lower	Upper
131	100		
133	96.6	67.3	127.3
119	72.0	42.2	102.2

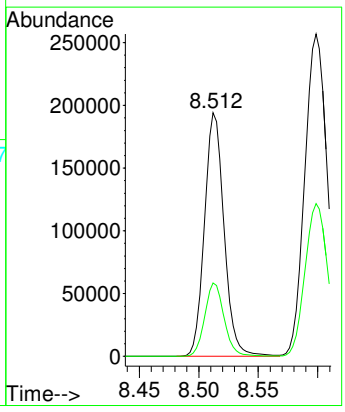


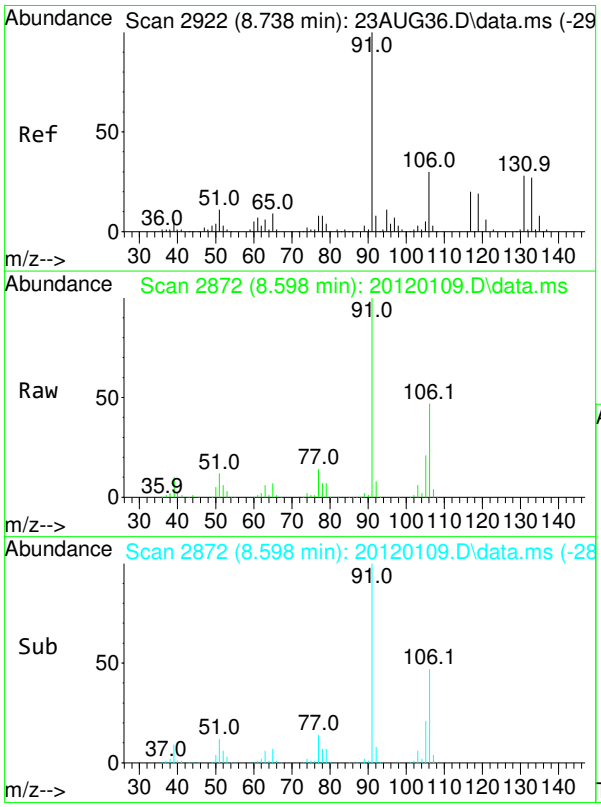


#81
Ethylbenzene
Concen: 20.04 ug/L
RT: 8.512 min Scan# 2841
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 222366

Ion	Ratio	Lower	Upper
91	100		
106	29.9	0.0	58.2

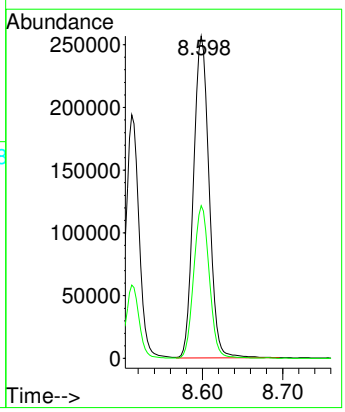


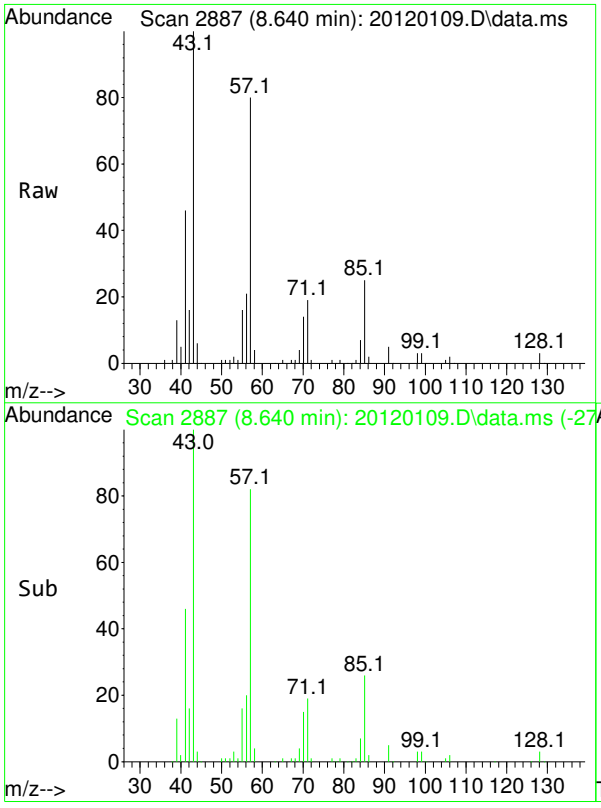


#82
m/p-Xylene
Concen: 40.95 ug/L
RT: 8.598 min Scan# 2872
Delta R.T. -0.001 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 344767

Ion	Ratio	Lower	Upper
91	100		
106	47.5	15.7	75.7

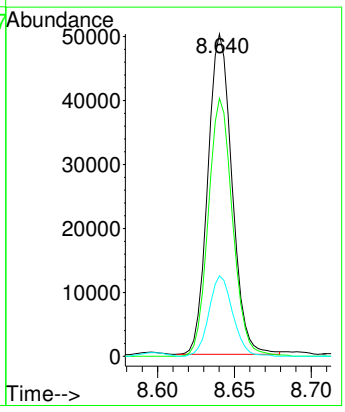


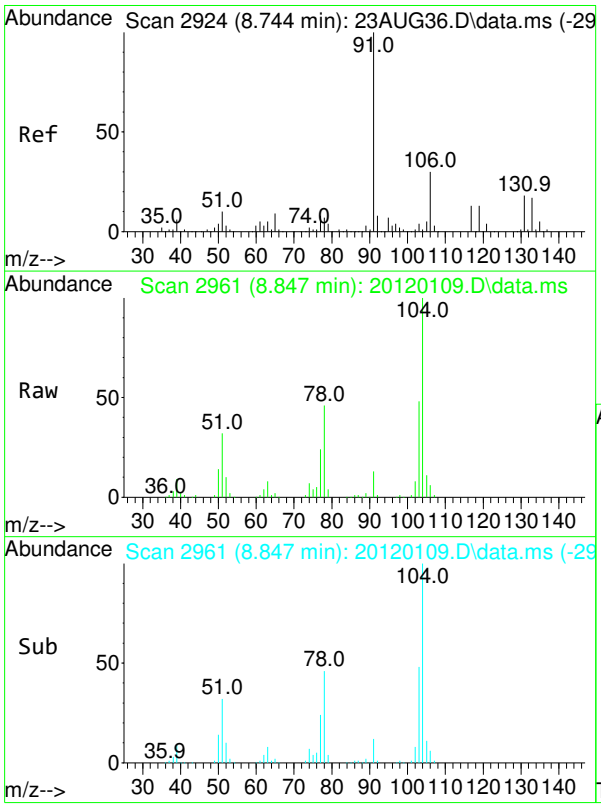


#83
Nonane
Concen: 26.04 ug/L
RT: 8.640 min Scan# 2887
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 54784

Ion	Ratio	Lower	Upper
43	100		
57	80.9	47.0	107.0
85	24.9	0.0	52.2

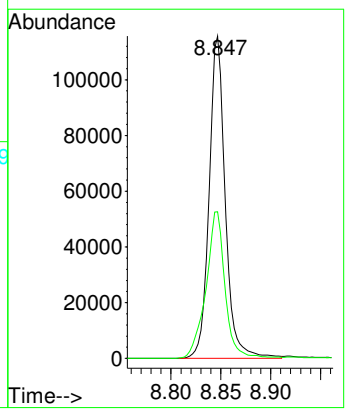


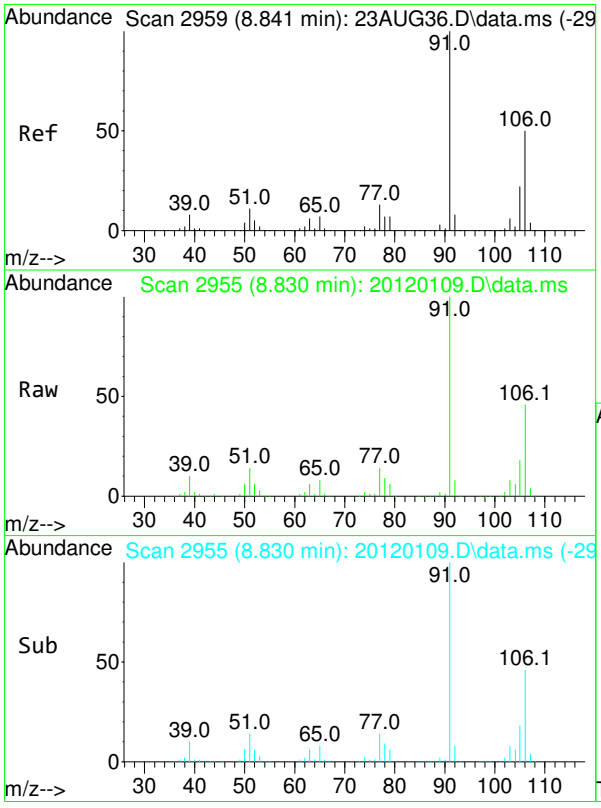


#84
Styrene
Concen: 22.93 ug/L
RT: 8.847 min Scan# 2961
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:104 Resp: 130563

Ion	Ratio	Lower	Upper
104	100		
78	53.8	25.5	85.5

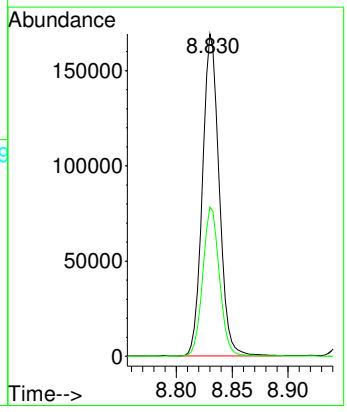


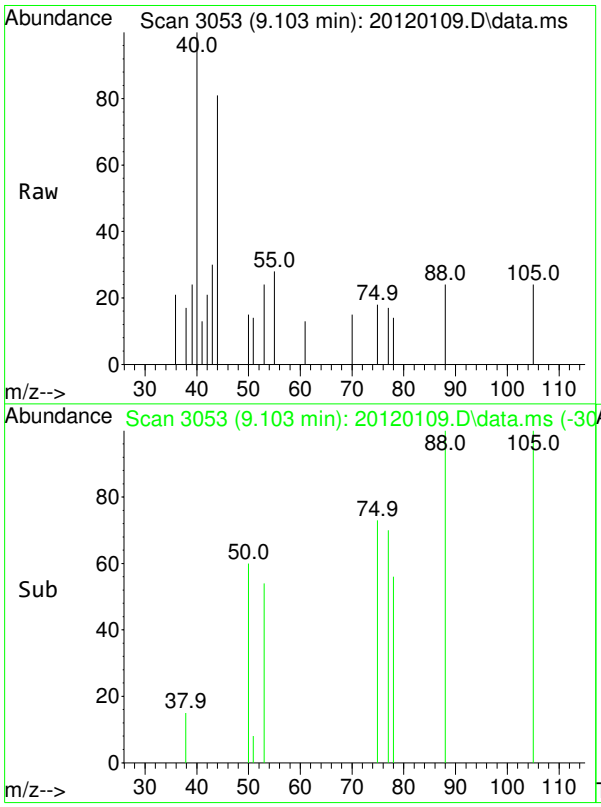


#85
o-Xylene
Concen: 20.58 ug/L
RT: 8.830 min Scan# 2955
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 176373

Ion	Ratio	Lower	Upper
91	100		
106	46.5	14.5	74.5

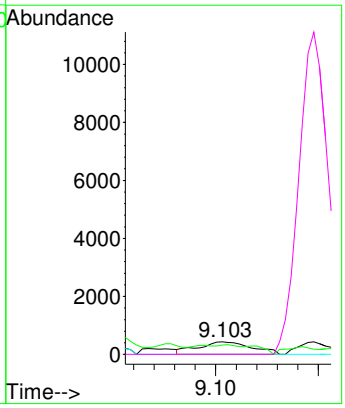


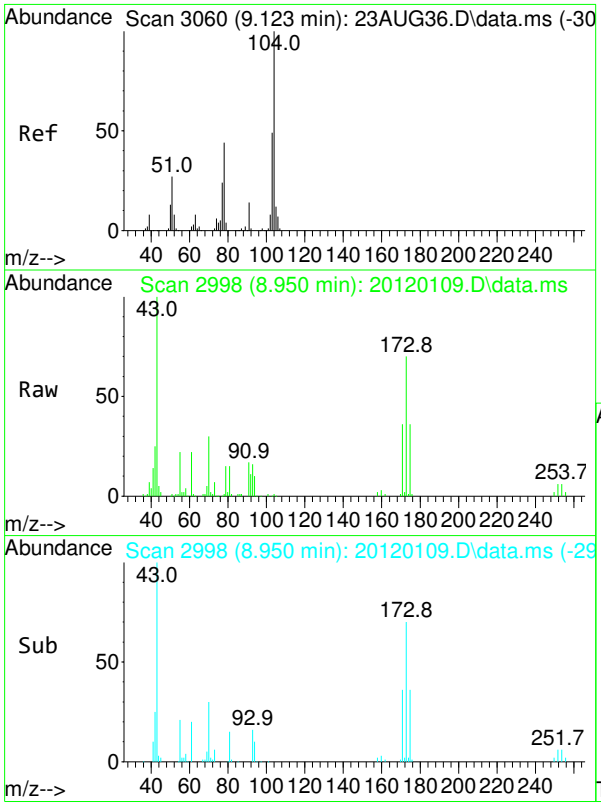


#86
Cyclohexanone
Concen: 1.75 ug/L
RT: 9.103 min Scan# 3053
Delta R.T. 0.005 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 55 Resp: 794

Ion	Ratio	Lower	Upper
55	100		
42	0.0	38.8	98.8#
98	0.0	1.4	61.4#
69	0.0	0.0	56.5

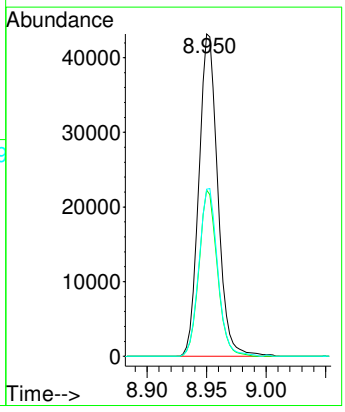


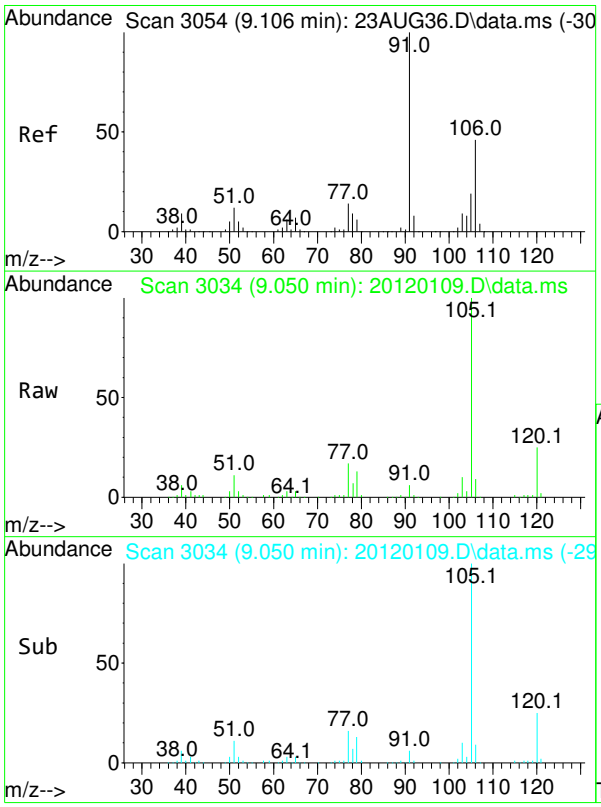


#87
Bromoform
Concen: 17.62 ug/L
RT: 8.950 min Scan# 2998
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:173 Resp: 47719

Ion	Ratio	Lower	Upper
173	100		
175	49.9	19.1	79.1
171	51.8	21.2	81.2

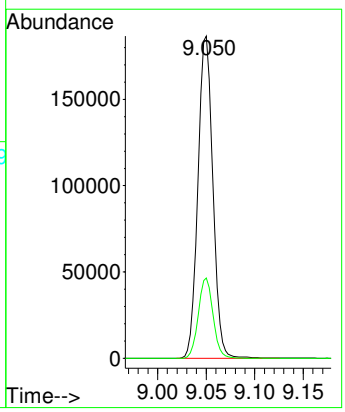


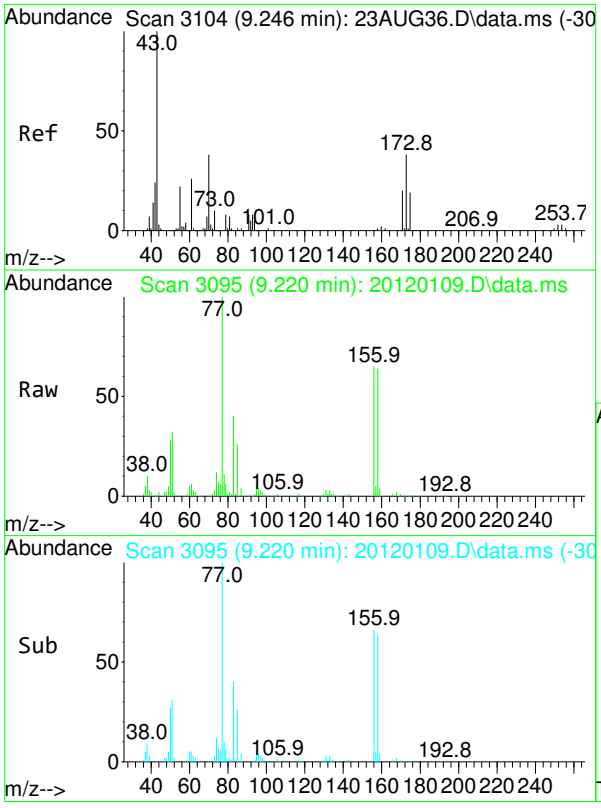


#88
Isopropylbenzene
Concen: 22.20 ug/L
RT: 9.050 min Scan# 3034
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:105 Resp: 200061

Ion	Ratio	Lower	Upper
105	100		
120	24.6	0.0	54.5

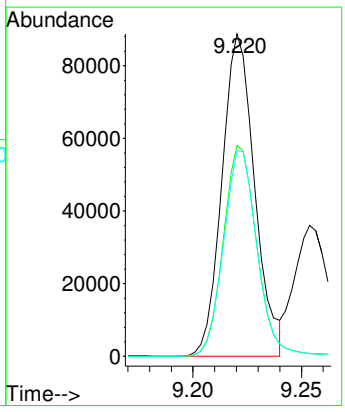


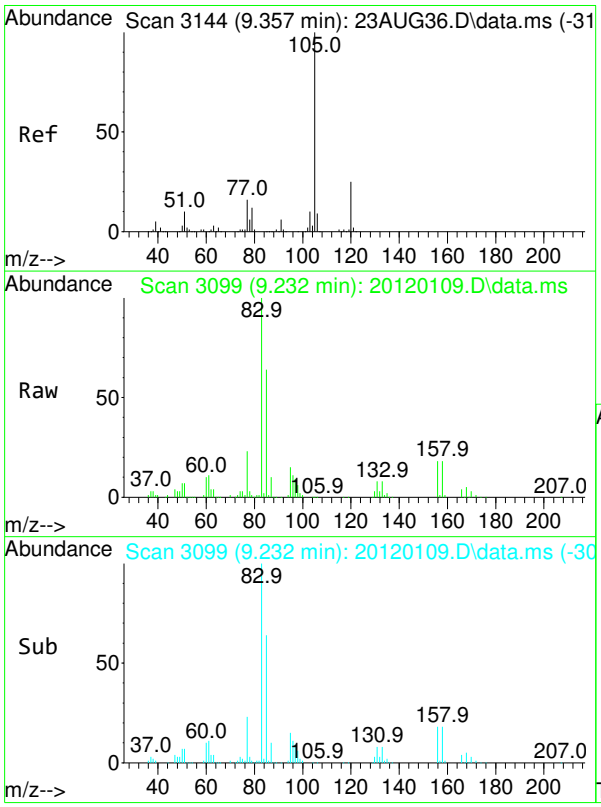


#90
Bromobenzene
Concen: 19.41 ug/L
RT: 9.220 min Scan# 3095
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 77 Resp: 93454

Ion	Ratio	Lower	Upper
77	100		
156	67.3	30.9	90.9
158	66.0	30.4	90.4

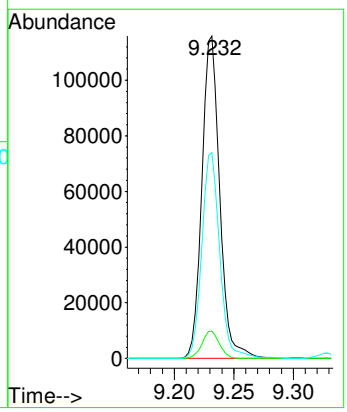


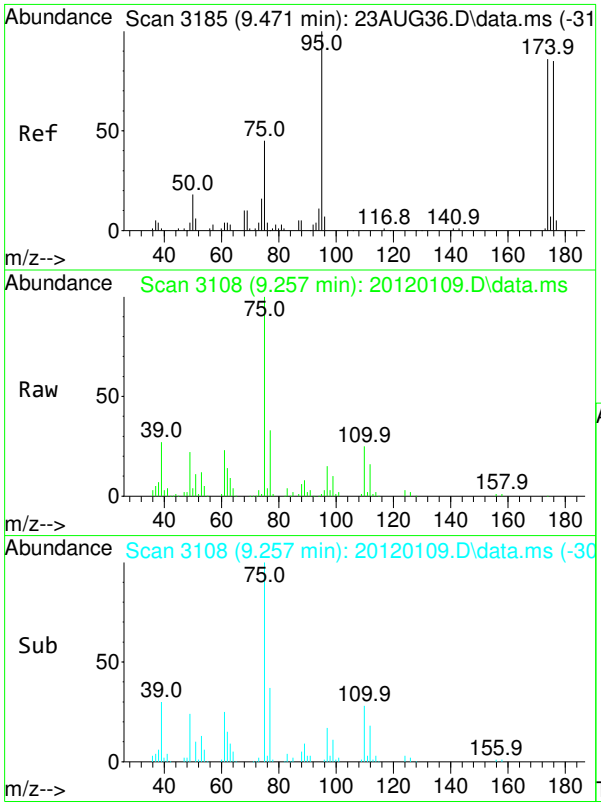


#91
1,1,2,2-Tetrachloroethane
Concen: 19.00 ug/L
RT: 9.232 min Scan# 3099
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 83 Resp: 120678

Ion	Ratio	Lower	Upper
83	100		
131	8.3	0.0	40.2
85	64.1	34.5	94.5

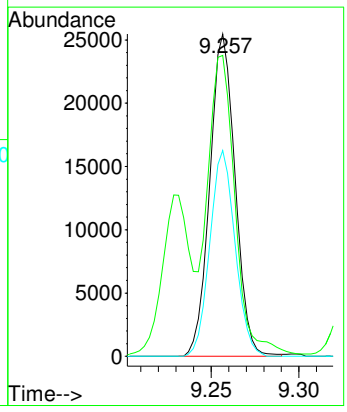


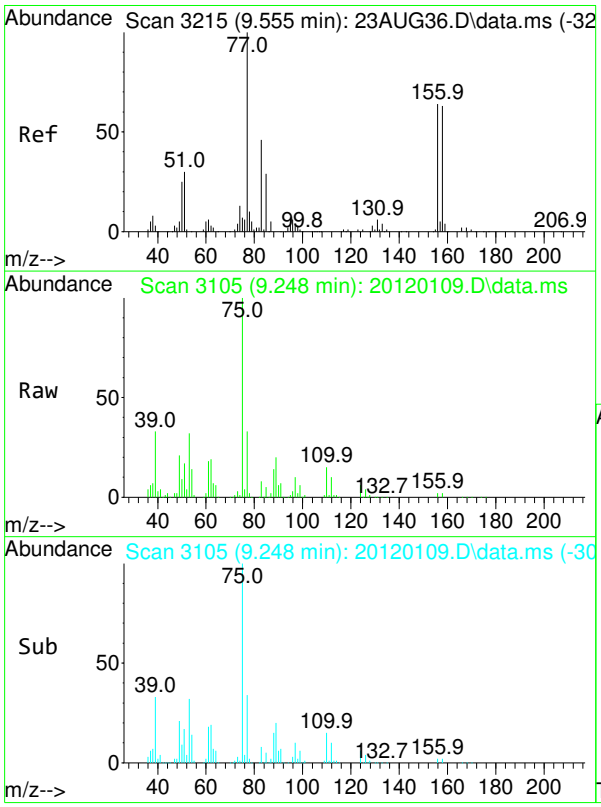


#92
1,2,3-Trichloropropane
Concen: 19.41 ug/L
RT: 9.257 min Scan# 3108
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:110 Resp: 25620

Ion	Ratio	Lower	Upper
110	100		
61	99.4	82.7	142.7
112	63.6	34.0	94.0

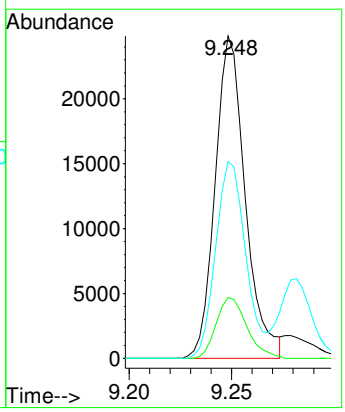


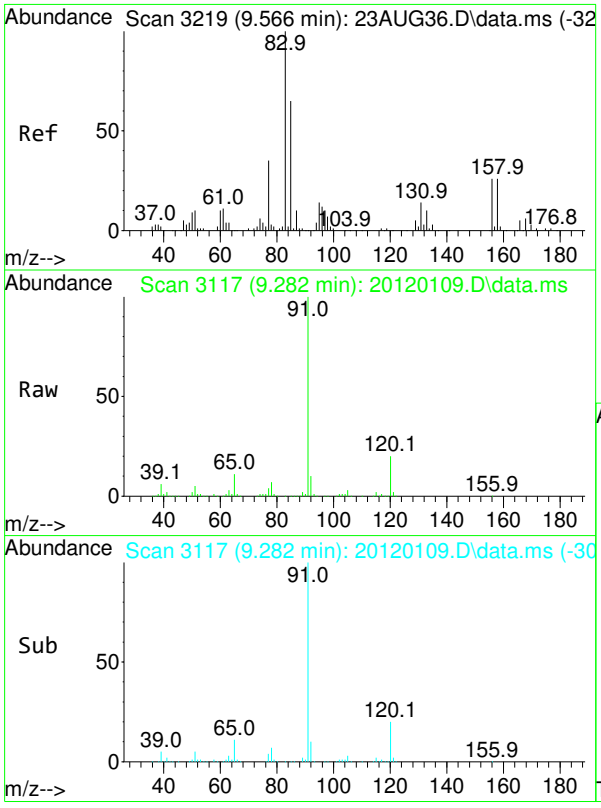


#93
trans-1,4-Dichloro-2-butene
Concen: 16.11 ug/L
RT: 9.248 min Scan# 3105
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 53 Resp: 25309

Ion	Ratio	Lower	Upper
53	100		
124	19.2	0.0	48.4
89	61.6	31.5	91.5

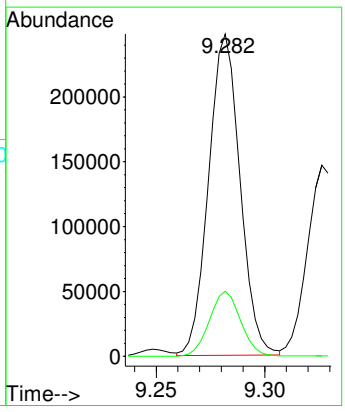


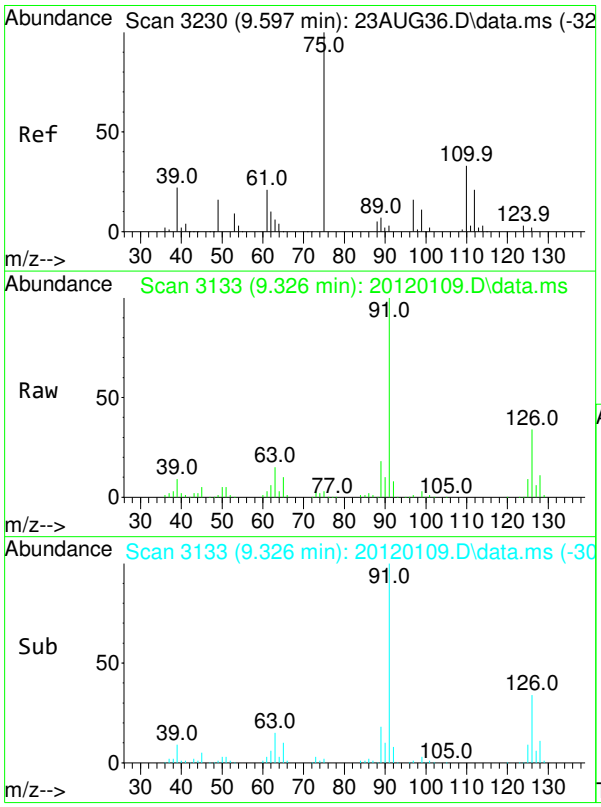


#94
n-Propylbenzene
Concen: 21.71 ug/L
RT: 9.282 min Scan# 3117
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 250083

Ion	Ratio	Lower	Upper
91	100		
120	20.3	0.0	49.5

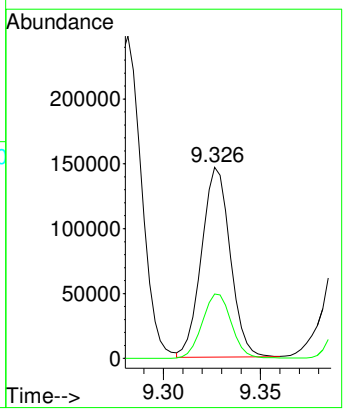


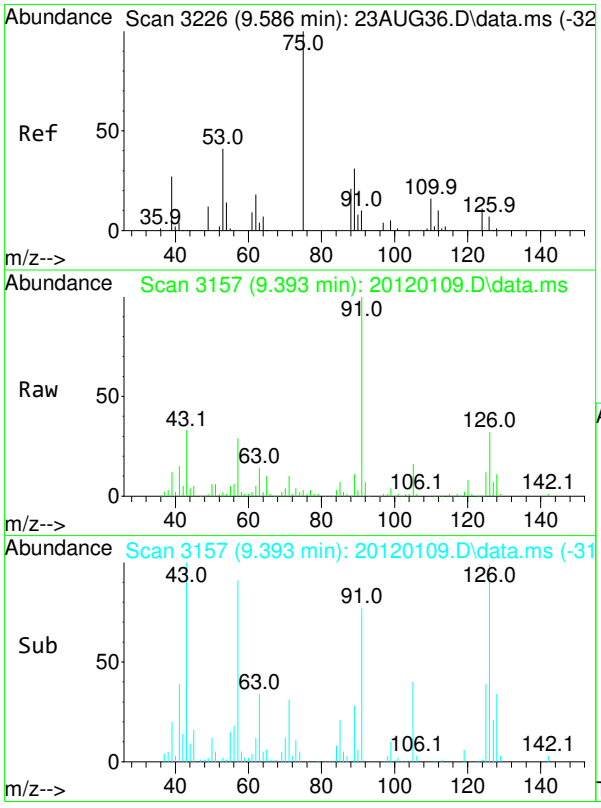


#95
2-Chlorotoluene
Concen: 19.84 ug/L
RT: 9.326 min Scan# 3133
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 150229

Ion	Ratio	Lower	Upper
91	100		
126	34.7	3.1	63.1

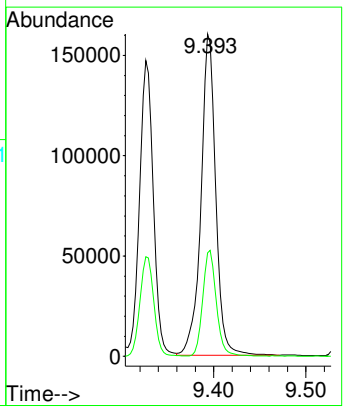


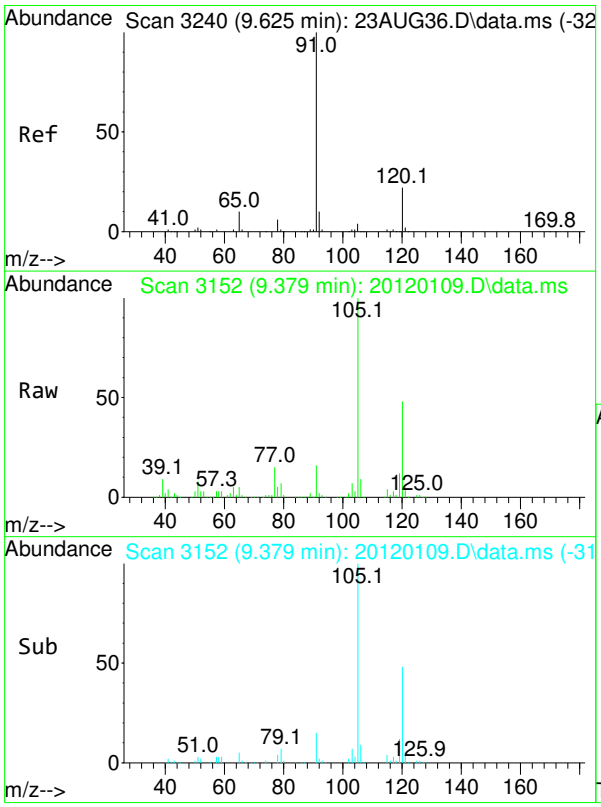


#96
4-Chlorotoluene
Concen: 20.73 ug/L
RT: 9.393 min Scan# 3157
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 178501

Ion	Ratio	Lower	Upper
91	100		
126	30.7	0.0	59.5

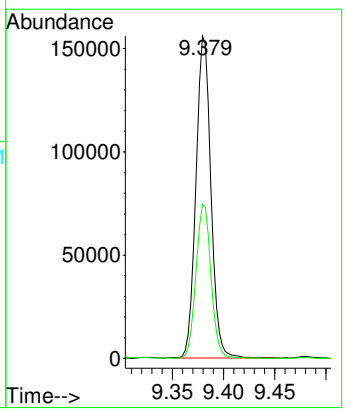


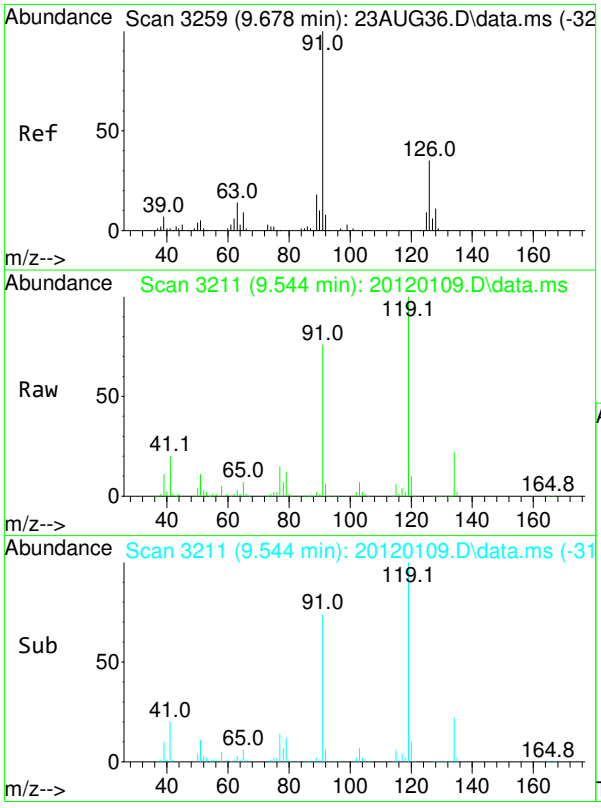


#97
1,3,5-Trimethylbenzene
Concen: 22.33 ug/L
RT: 9.379 min Scan# 3152
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:105 Resp: 158683

Ion	Ratio	Lower	Upper
105	100		
120	48.5	16.8	76.8

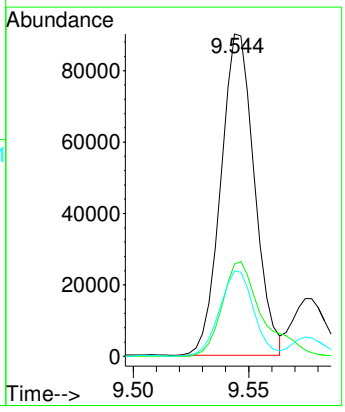


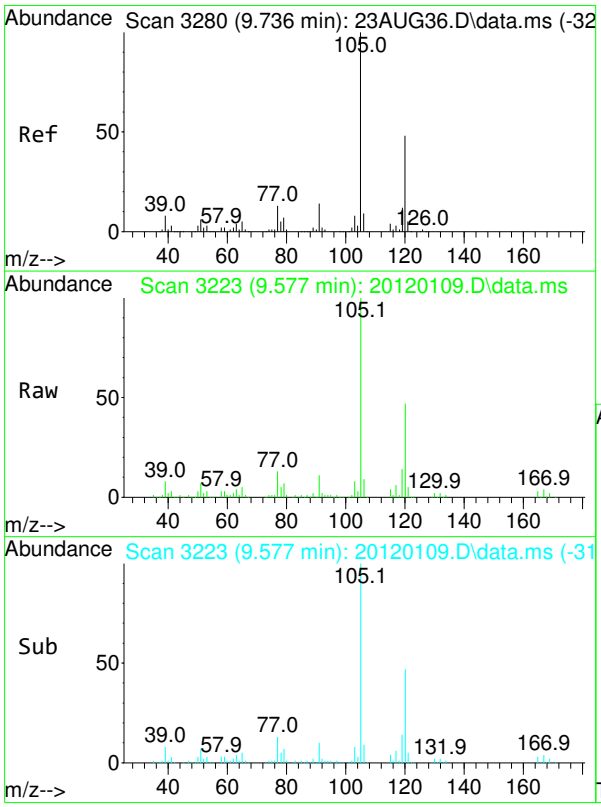


#98
tert-Butylbenzene
Concen: 21.10 ug/L
RT: 9.544 min Scan# 3211
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 91304

Ion	Ratio	Lower	Upper
91	100		
134	35.2	0.0	56.4
41	27.1	9.8	49.8

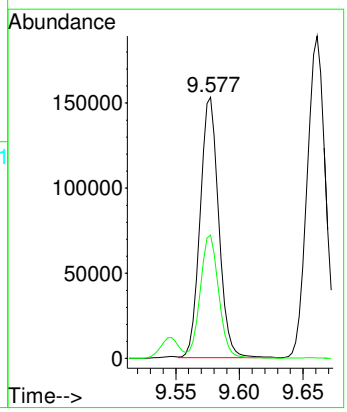


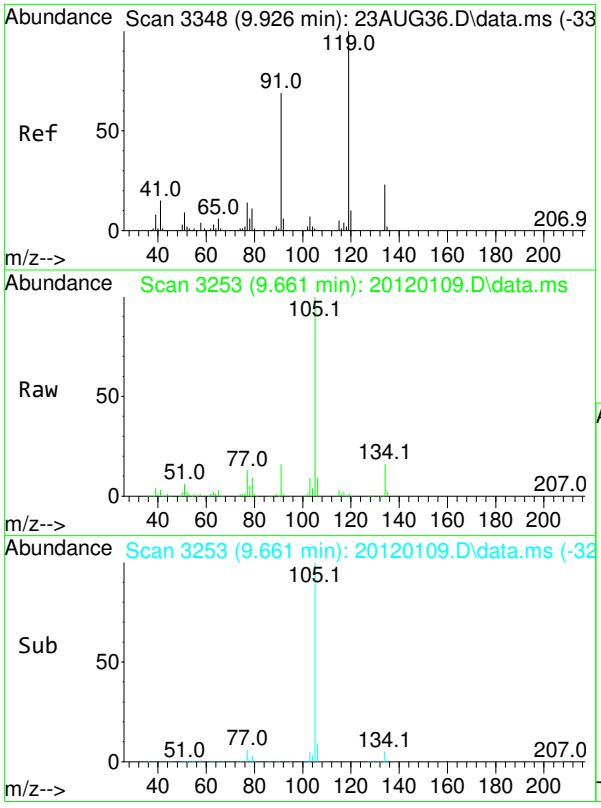


#99
1,2,4-Trimethylbenzene
Concen: 21.83 ug/L
RT: 9.577 min Scan# 3223
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:105 Resp: 156033

Ion	Ratio	Lower	Upper
105	100		
120	47.3	14.7	74.7

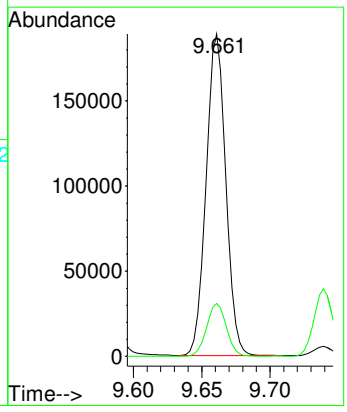


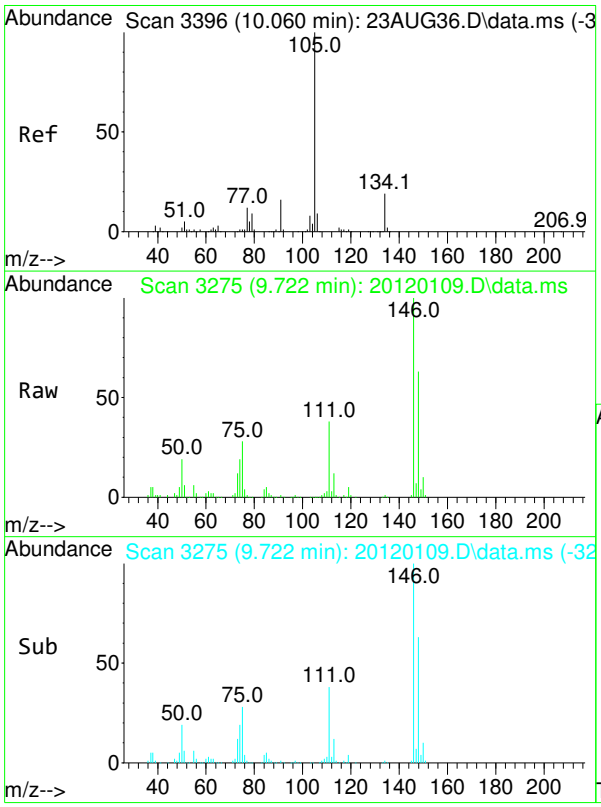


#100
sec-Butylbenzene
Concen: 22.78 ug/L
RT: 9.661 min Scan# 3253
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:105 Resp: 189567

Ion	Ratio	Lower	Upper
105	100		
134	16.5	0.0	45.7

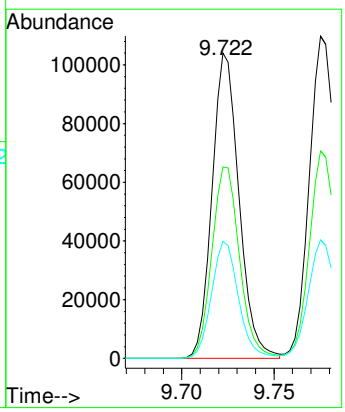


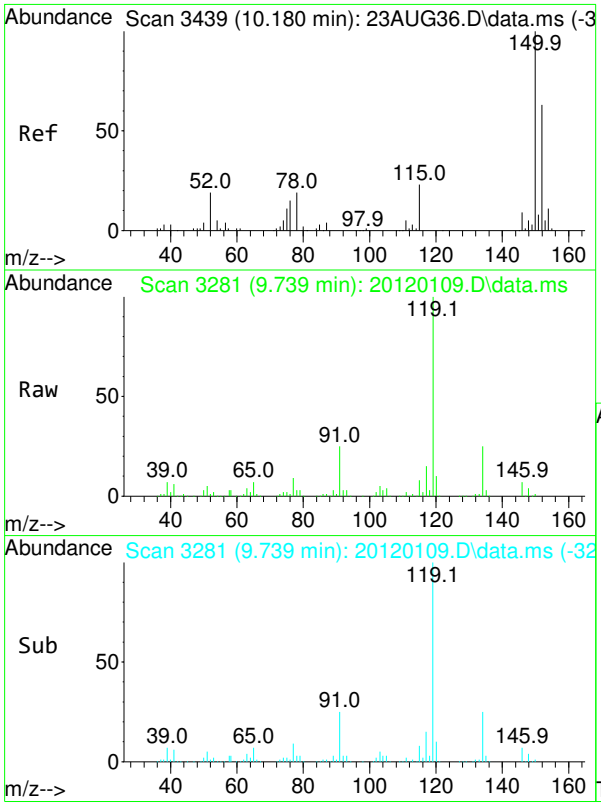


#102
1,3-Dichlorobenzene
Concen: 20.14 ug/L
RT: 9.722 min Scan# 3275
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:146 Resp: 105999

Ion	Ratio	Lower	Upper
146	100		
148	64.3	35.2	95.2
111	38.3	10.9	70.9

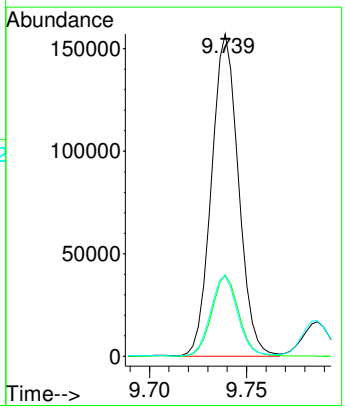


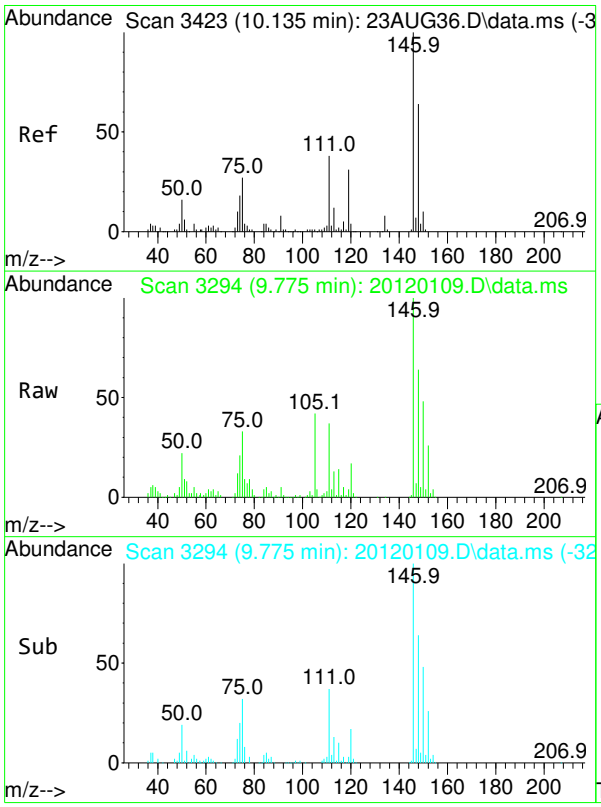


#103
p-Isopropyltoluene
Concen: 21.98 ug/L
RT: 9.739 min Scan# 3281
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:119 Resp: 152587

Ion	Ratio	Lower	Upper
119	100		
134	25.1	0.0	53.9
91	24.7	0.0	55.8

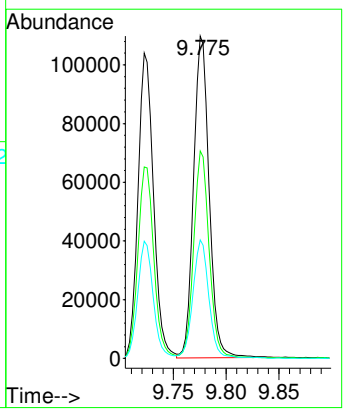


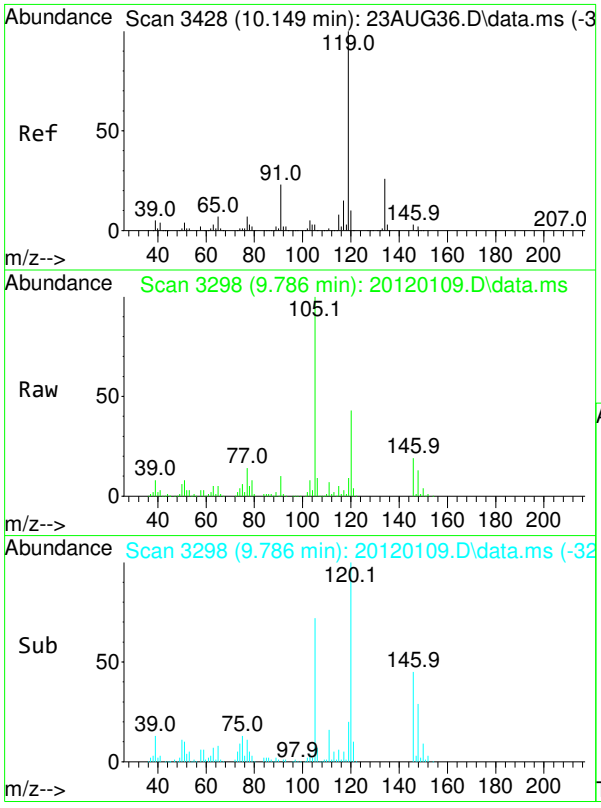


#104
1,4-Dichlorobenzene
Concen: 20.91 ug/L
RT: 9.775 min Scan# 3294
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:146 Resp: 112471

Ion	Ratio	Lower	Upper
146	100		
148	63.4	34.2	94.2
111	36.9	9.2	69.2

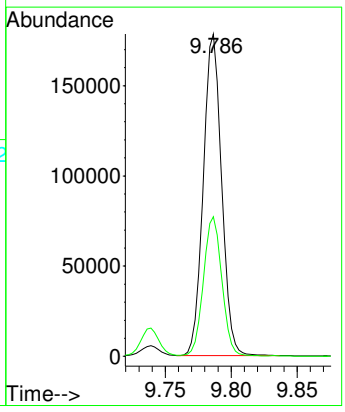


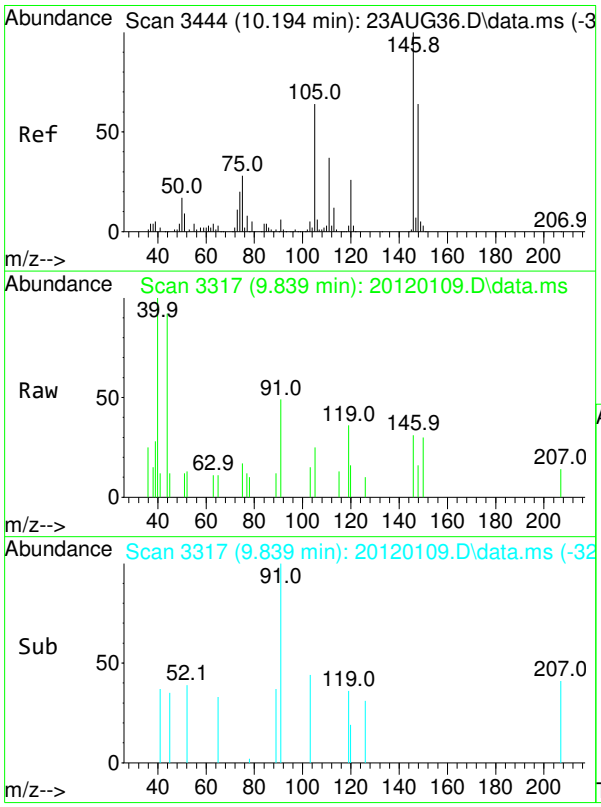


#105
1,2,3-Trimethylbenzene
Concen: 19.48 ug/L
RT: 9.786 min Scan# 3298
Delta R.T. -0.001 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:105 Resp: 172380

Ion	Ratio	Lower	Upper
105	100		
120	43.9	12.1	72.1

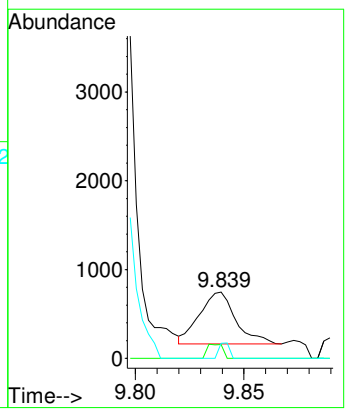


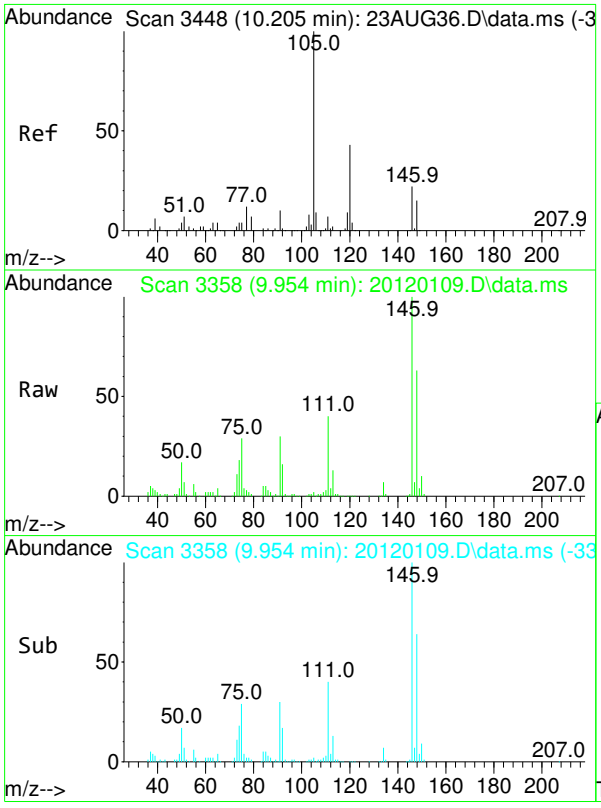


#106
Benzyl chloride
Concen: 0.34 ug/L
RT: 9.839 min Scan# 3317
Delta R.T. 0.008 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 679

Ion	Ratio	Lower	Upper
91	100		
126	11.6	0.0	48.9
65	8.4	0.0	43.6

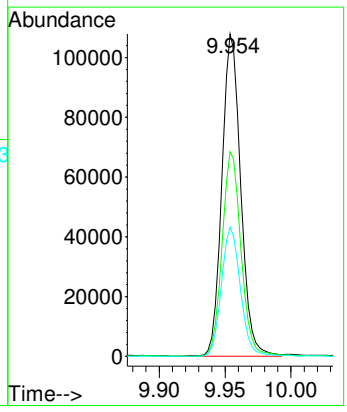


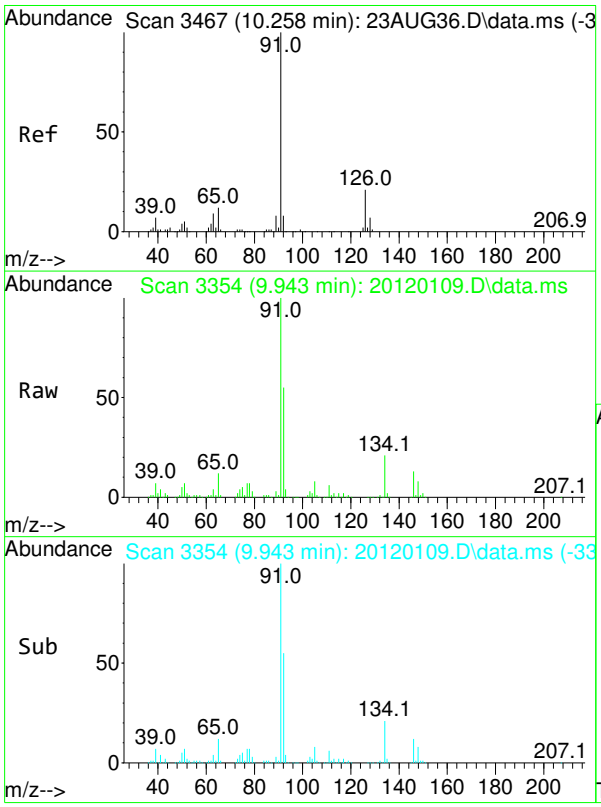


#107
1,2-Dichlorobenzene
Concen: 19.52 ug/L
RT: 9.954 min Scan# 3358
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:146 Resp: 107832

Ion	Ratio	Lower	Upper
146	100		
148	64.2	34.0	94.0
111	40.6	11.7	71.7

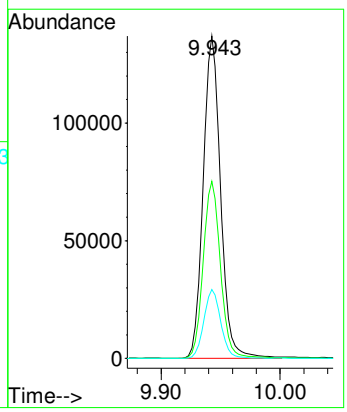


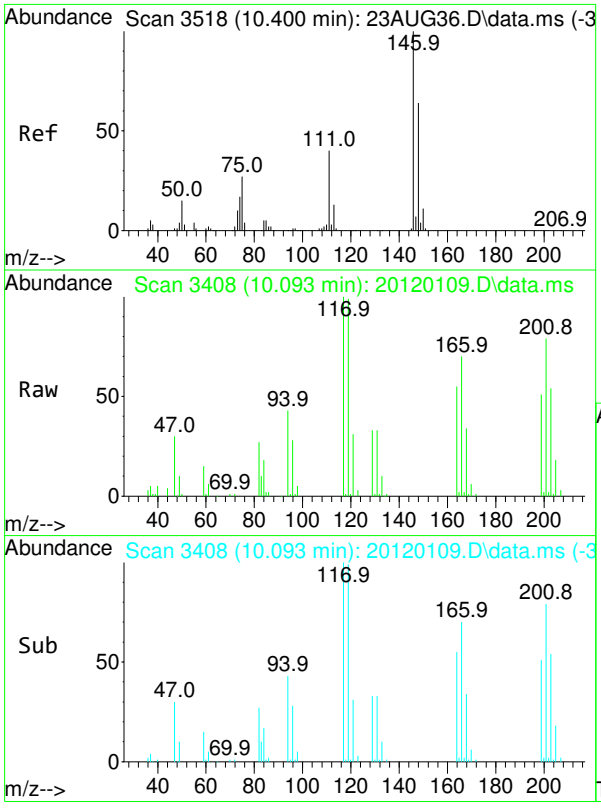


#108
n-Butylbenzene
Concen: 20.06 ug/L
RT: 9.943 min Scan# 3354
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 91 Resp: 139262

Ion	Ratio	Lower	Upper
91	100		
92	54.6	23.9	83.9
134	20.8	0.0	49.1

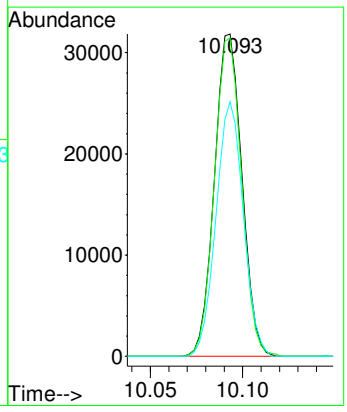


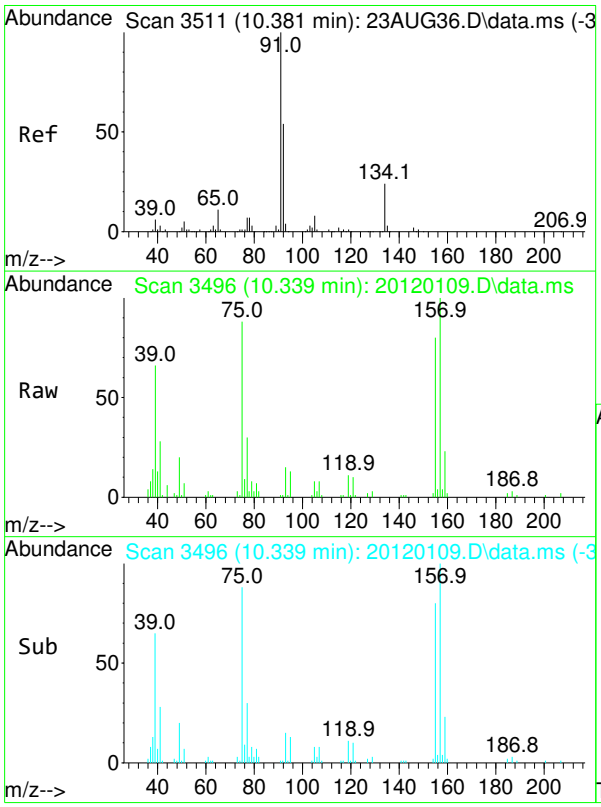


#109
Hexachloroethane
Concen: 20.68 ug/L
RT: 10.093 min Scan# 3408
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:117 Resp: 33174

Ion	Ratio	Lower	Upper
117	100		
119	97.2	67.6	127.6
201	78.6	40.8	100.8

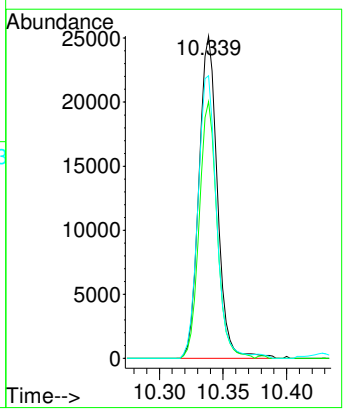


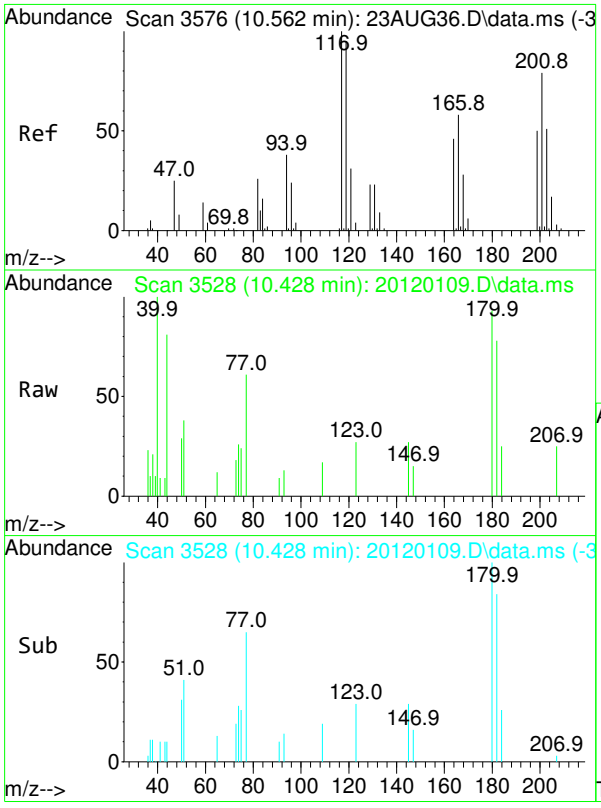


#110
1,2-Dibromo-3-chloropropane
Concen: 18.70 ug/L
RT: 10.339 min Scan# 3496
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:157 Resp: 25581

Ion	Ratio	Lower	Upper
157	100		
155	76.7	46.7	106.7
75	87.7	69.3	129.3

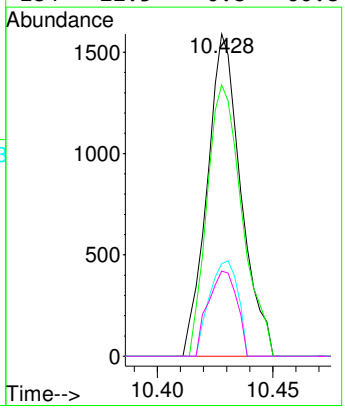


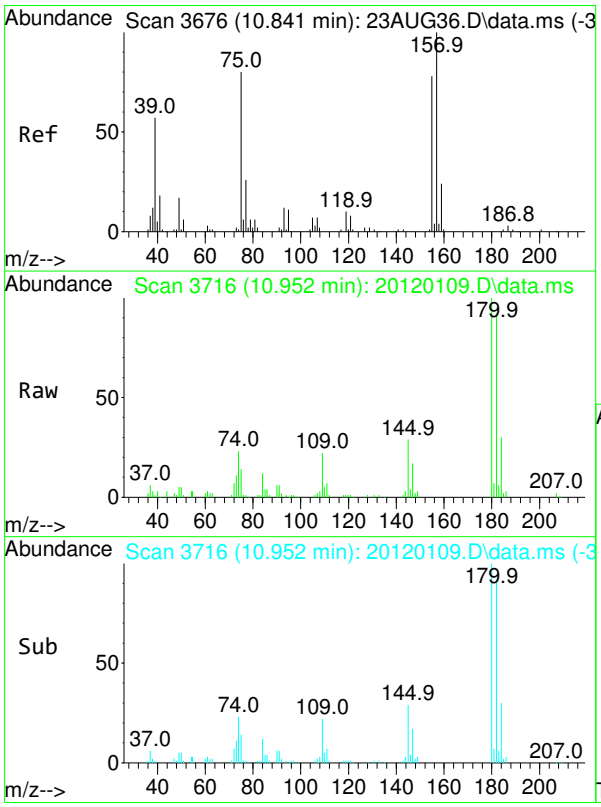


#111
1,3,5-Trichlorobenzene
Concen: 0.49 ug/L
RT: 10.428 min Scan# 3528
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:180 Resp: 1621

Ion	Ratio	Lower	Upper
180	100		
182	87.3	66.8	126.8
145	25.0	0.0	58.5
184	22.5	0.8	60.8

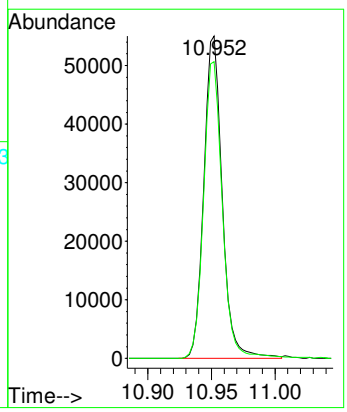


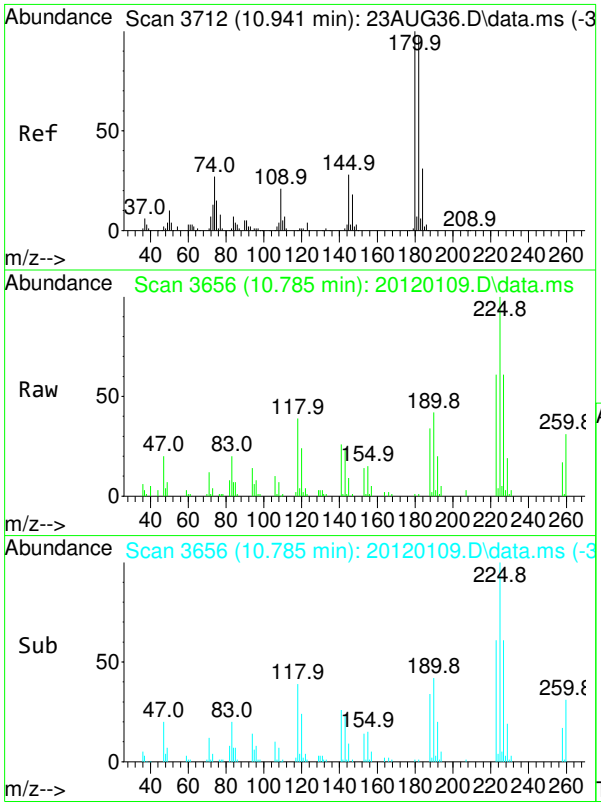


#112
1,2,4-Trichlorobenzene
Concen: 17.26 ug/L
RT: 10.952 min Scan# 3716
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:180 Resp: 55582

Ion	Ratio	Lower	Upper
180	100		
182	94.0	65.7	125.7

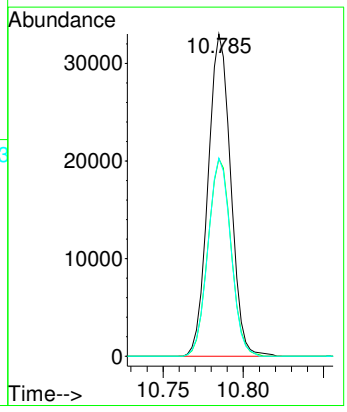


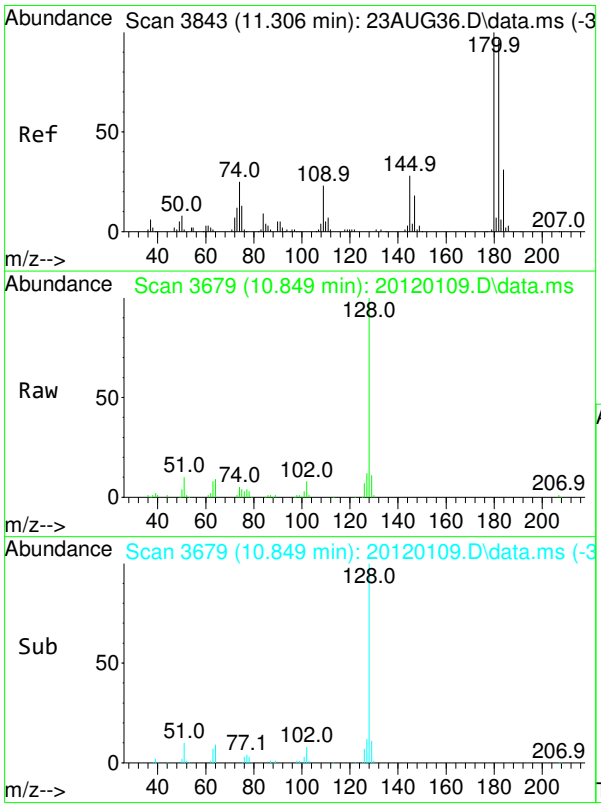


#113
Hexachlorobutadiene
Concen: 26.88 ug/L
RT: 10.785 min Scan# 3656
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:225 Resp: 32280

Ion	Ratio	Lower	Upper
225	100		
227	62.7	33.7	93.7
223	62.2	31.7	91.7

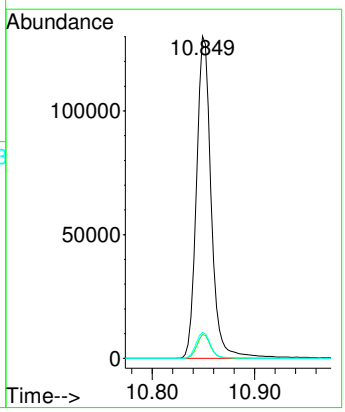


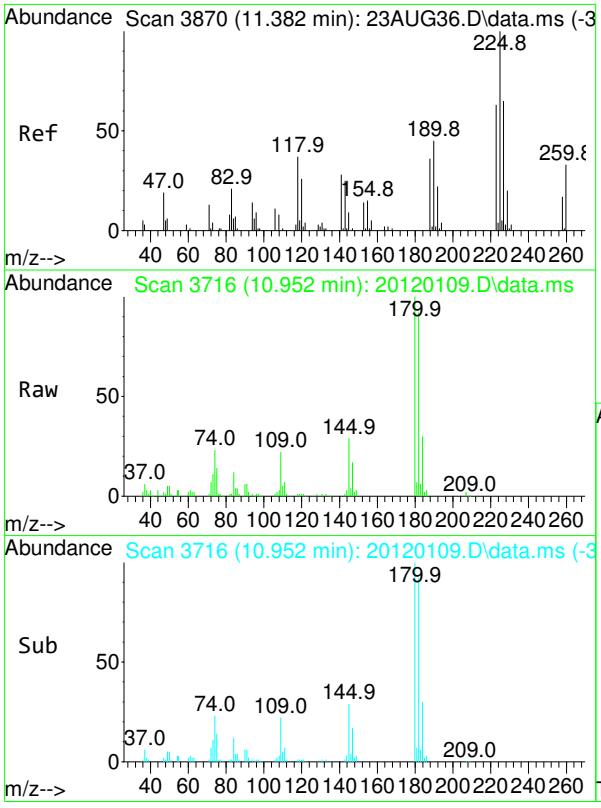


#114
Naphthalene
Concen: 10.72 ug/L
RT: 10.849 min Scan# 3679
Delta R.T. -0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:128 Resp: 130690

Ion	Ratio	Lower	Upper
128	100		
126	6.9	0.0	37.2
102	8.1	0.0	38.7

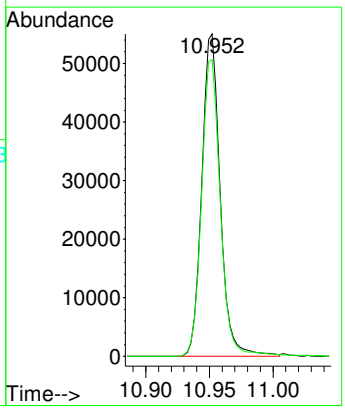


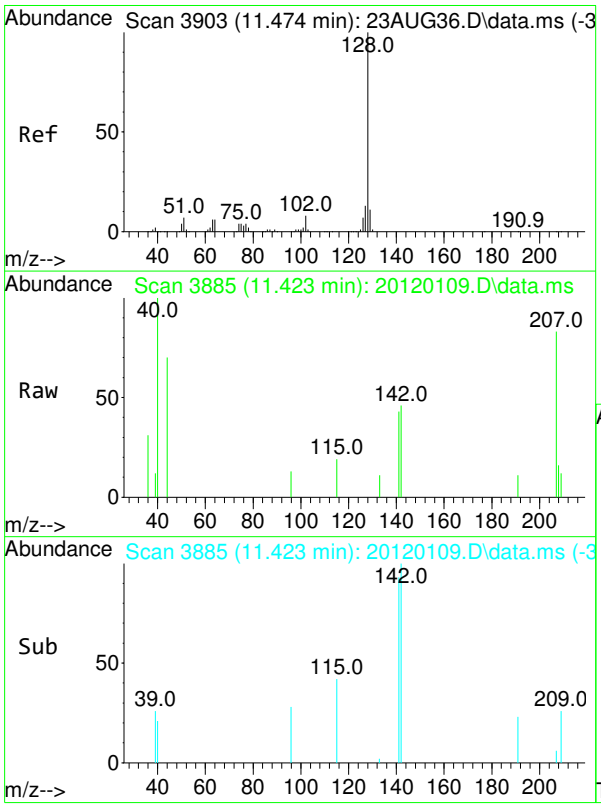


#115
1,2,3-Trichlorobenzene
Concen: 17.26 ug/L
RT: 10.952 min Scan# 3716
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:180 Resp: 55582

Ion	Ratio	Lower	Upper
180	100		
182	94.0	65.7	125.7

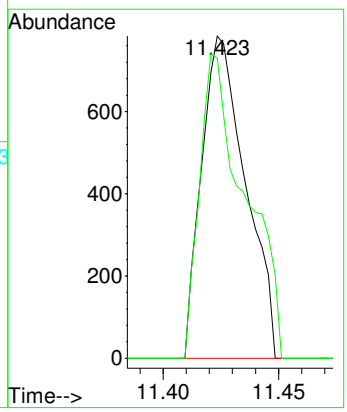


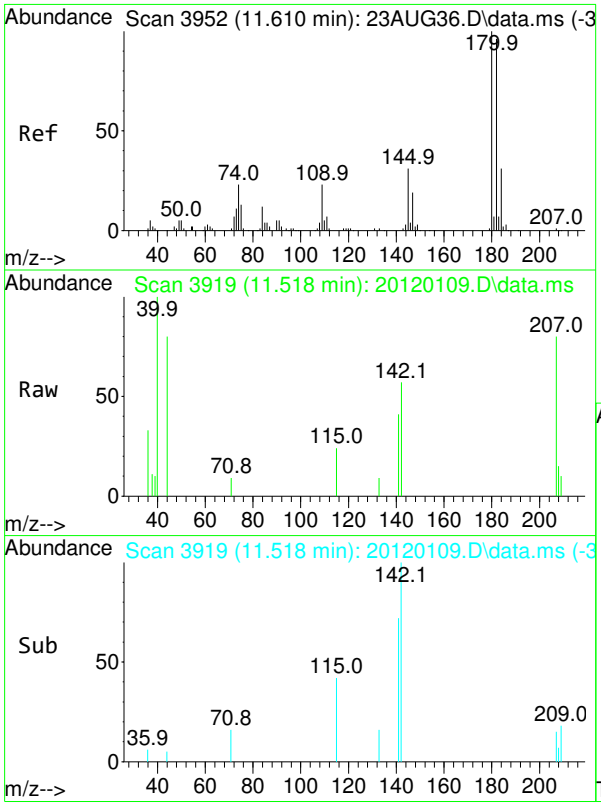


#116
2-Methylnaphthalene
Concen: 1.19 ug/L
RT: 11.423 min Scan# 3885
Delta R.T. 0.008 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:142 Resp: 1039

Ion	Ratio	Lower	Upper
142	100		
141	98.0	57.3	117.3

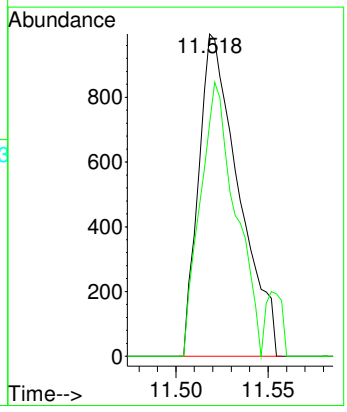


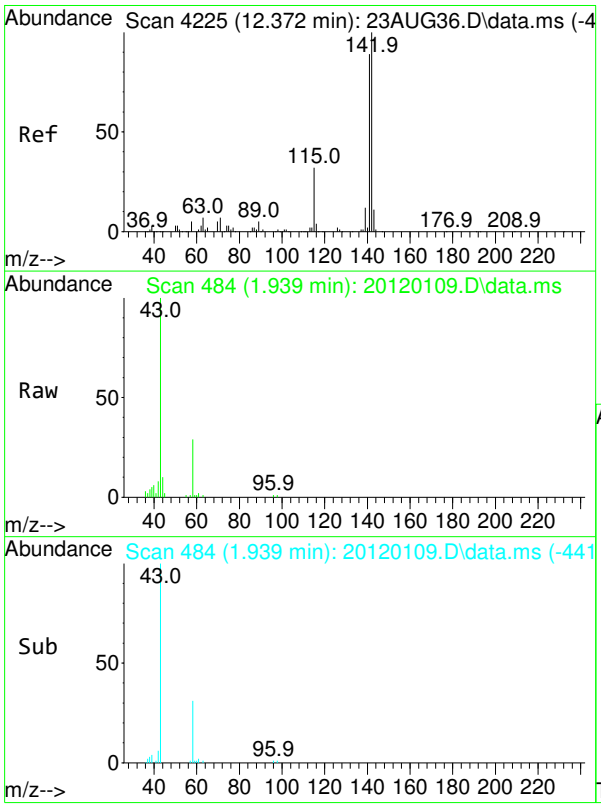


#117
1-Methylnaphthalene
Concen: 1.12 ug/L
RT: 11.518 min Scan# 3919
Delta R.T. 0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion:142 Resp: 1500

Ion	Ratio	Lower	Upper
142	100		
141	74.9	60.2	120.2

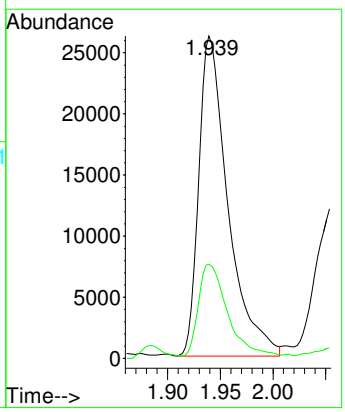


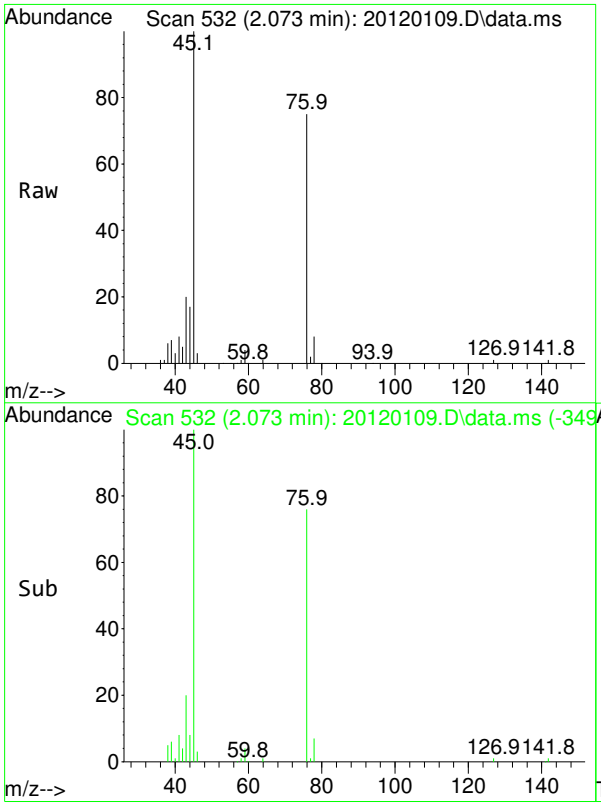


#119
2-Propanone
Concen: 25.08 ug/L
RT: 1.939 min Scan# 484
Delta R.T. 0.000 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 50329

Ion	Ratio	Lower	Upper
43	100		
58	28.9	0.0	56.9

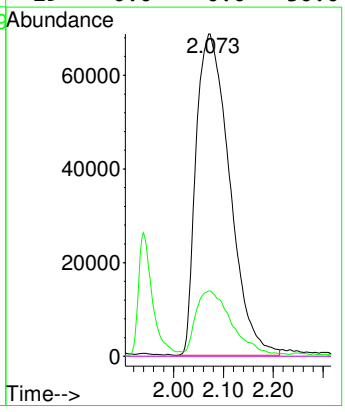


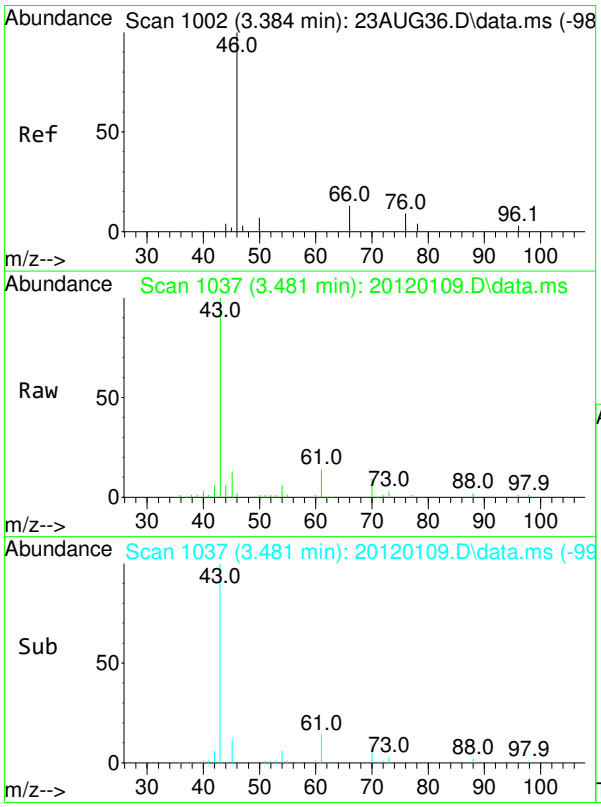


#120
2-Propanol
Concen: 416.10 ug/L
RT: 2.073 min Scan# 532
Delta R.T. 0.011 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 45 Resp: 319090

Ion	Ratio	Lower	Upper
45	100		
43	20.3	0.0	49.1
27	0.0	0.0	30.0
29	0.0	0.0	30.0

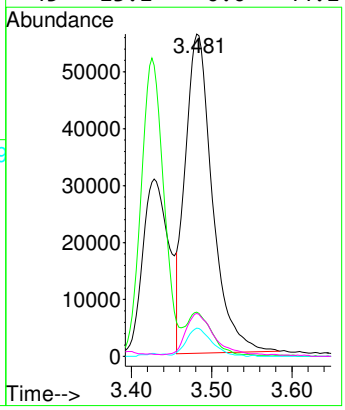


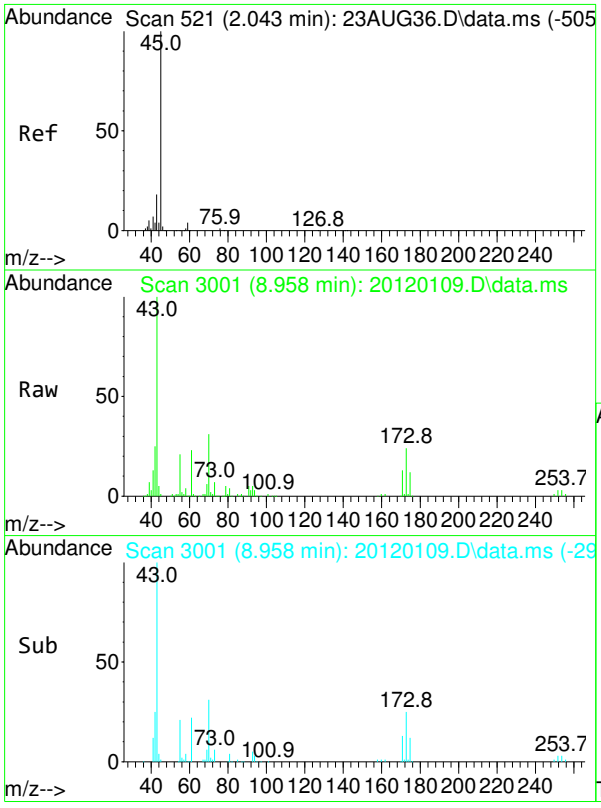


#121
Acetic Ether
Concen: 21.12 ug/L
RT: 3.481 min Scan# 1037
Delta R.T. -0.003 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 131987

Ion	Ratio	Lower	Upper
43	100		
61	11.7	0.0	42.4
70	8.4	0.0	37.5
45	13.1	0.0	44.1

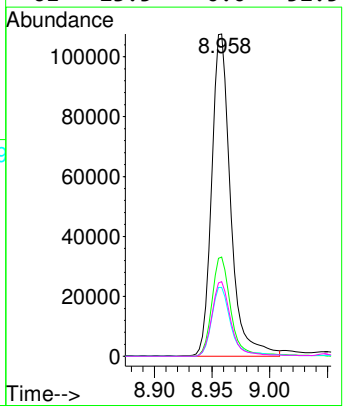




#123
Amyl Acetate
Concen: 20.31 ug/L
RT: 8.958 min Scan# 3001
Delta R.T. 0.002 min
Lab File: 20120109.D
Acq: 01 Dec 2020 05:14 pm

Tgt Ion: 43 Resp: 123869

Ion	Ratio	Lower	Upper
43	100		
70	31.2	0.0	58.6
55	22.2	0.0	50.6
61	23.5	0.0	52.5



Response Factor Report VMS7

Method Path : C:\MSDCHEM\1\Methods\
Method File : VMS7-201103-WS.M
Title : 8260 Global Optimization
Last Update : Wed Nov 04 09:59:32 2020
Response Via : Initial Calibration

Calibration Files
1 =20110319.D 2 =20110320.D 3 =20110321.D 4 =20110322.D 5 =20110323.D 6 =20110324.D 7 =20110325.D 8 =20110326.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------									
2)	C	Dichlorodifluo...	0.374	0.382	0.330	0.268	0.261	0.251	0.255	0.238	0.295	19.73#
3)	CP	Chloromethane	0.897	0.784	0.552	0.589	0.638	0.750	0.749	0.703	0.708	15.90
4)	C	Vinyl chloride	0.640	0.572	0.442	0.406	0.418	0.386	0.406	0.378	0.456	21.13
5)	C	Bromomethane		0.102	0.094	0.053	0.045	0.026	0.029	0.027	0.054#	59.65#
6)	C	Chloroethane		0.236	0.092	0.139	0.127	0.133	0.108	0.106	0.135#	35.60#
7)	C	Dichlorofluoro...	1.100	1.107	0.790	0.767	0.728	0.734	0.723	0.719	0.833	20.20#
8)	C	Trichlorofluor...	0.654	0.679	0.567	0.490	0.508	0.505	0.517	0.496	0.552	13.55#
9)	C	Ethanol	0.102	0.093	0.065	0.060	0.056	0.052	0.056	0.054	0.067#	28.82#
10)	C	Ethyl ether	0.404	0.379	0.347	0.332	0.299	0.305	0.322	0.306	0.337	11.27#
11)	C	Acrolein		0.012	0.011	0.031	0.032	0.027	0.029	0.027	0.024#	36.70#
12)	C	1,1-Dichloroet...	0.704	0.679	0.598	0.554	0.538	0.545	0.586	0.549	0.594	10.72
13)	C	1,1,2-Trichlor...	0.287	0.235	0.205	0.197	0.198	0.202	0.212	0.196	0.217	14.38#
14)	C	Methyl iodide									0.000#	-1.00
15)	C	Acetone	0.928	0.667	0.452	0.327	0.309	0.289	0.337	0.320	0.454	50.42#
16)	C	Chloroprene	0.620	0.585	0.514	0.501	0.491	0.509	0.556	0.511	0.536	8.63#
17)	C	Carbon disulfide	1.200	1.083	0.913	0.883	0.869	0.927	1.057	1.007	0.992	11.66#
18)	C	Allyl chloride	0.907	0.774	0.805	0.683	0.717	0.749	0.806	0.753	0.774	8.77#
19)	C	Methyl acetate	0.996	0.718	0.783	0.697	0.685	0.669	0.757	0.720	0.753	13.95#
20)	C	Acetonitrile	0.493	0.422	0.384	0.302	0.277	0.261	0.294	0.278	0.339	24.85#
21)	C	Methylene chlo...	1.475	1.296	0.821	0.732	0.690	0.683	0.722	0.663	0.885	35.71#
22)	C	trans-1,2-Dich...	0.797	0.694	0.579	0.546	0.539	0.561	0.604	0.559	0.610	14.80#
23)	C	t-Butanol	0.296	0.266	0.230	0.213	0.210	0.200	0.230	0.220	0.233	13.74#
24)	C	Acrylonitrile	0.349	0.292	0.286	0.293	0.297	0.307	0.329	0.316	0.309	7.03#
25)	CP	Methyl tert-bu...	1.294	1.250	0.997	0.991	0.956	0.918	1.065	1.028	1.062	12.91#
26)	C	Hexane		0.393	0.317	0.316	0.306	0.318	0.341	0.311	0.329	9.25#
27)	CP	1,1-Dichloroet...	1.071	0.922	0.793	0.758	0.722	0.722	0.774	0.726	0.811	15.29
28)	CP	Diisopropyl ether	1.839	1.666	1.505	1.391	1.345	1.310	1.500	1.408	1.495	11.93#
29)	C	Vinyl acetate			0.030	0.042	0.053	0.050	0.065	0.067	0.051#	26.98#
30)	CP	Ethyl tert but...	1.478	1.330	1.150	1.066	1.049	1.002	1.149	1.101	1.166	13.74#
31)	C	Methylcyclopen...	0.862	0.865	0.656	0.653	0.653	0.683	0.720	0.649	0.717	12.96#
32)	C	2,2-Dichloropr...	0.762	0.635	0.551	0.519	0.491	0.494	0.537	0.497	0.561	16.76#
33)	C	cis-1,2-Dichlo...	0.894	0.776	0.707	0.660	0.639	0.634	0.689	0.647	0.706	12.66#
34)	C	2-Butanone	0.879	0.683	0.391	0.400	0.419	0.439	0.511	0.488	0.526	32.44#
35)	C	Ethyl Acetate	1.466	1.124	0.896	0.996	0.984	0.872	0.993	0.933	1.033	18.51#
36)	C	Methyl acrylate	0.460	0.575	0.547	0.582	0.591	0.632	0.692	0.666	0.593	12.22#
37)	C	Propionitrile			0.045	0.045	0.045	0.043	0.042	0.036	0.043#	8.32#

1st /S/ MF 11/04/20
2nd /S/ JS 11/04/20

Method Path : C:\MSDCHEM\1\Methods\
Method File : VMS7-201103-WS.M

38)	C	Bromochloromet...	0.578	0.521	0.494	0.461	0.444	0.414	0.431	0.395	0.467	12.99#
39)	C	Tetrahydrofuran	0.630	0.563	0.362	0.295	0.353	0.321	0.329	0.317	0.396	31.95#
40)	C	Methacrylonitrile	0.171	0.255	0.194	0.235	0.251	0.262	0.281	0.268	0.240	15.98#
41)	C	Chloroform	0.892	0.877	0.728	0.728	0.708	0.705	0.746	0.689	0.759	10.46
42)	C	Cyclohexane	1.771	1.357	0.763	0.587	0.522	0.497	0.544	0.491	0.817	59.06#
43)	I	1,4-Difluorobenzene	----------ISTD----------									
44)	C	1,1,1-Trichlor...	0.383	0.407	0.327	0.298	0.309	0.320	0.335	0.310	0.336	11.46#
45)	S	Dibromofluorom...	0.406	0.414	0.419	0.413	0.415	0.428	0.416	0.415	0.416	1.50
46)	C	Carbon tetrach...	0.315	0.342	0.252	0.253	0.270	0.300	0.317	0.286	0.292	11.14#
47)	C	1,1-Dichloropr...	0.343	0.379	0.290	0.281	0.282	0.296	0.315	0.287	0.309	11.30#
48)	S	1,2-Dichloroet...	0.491	0.505	0.499	0.499	0.490	0.478	0.470	0.467	0.488	2.89
49)	C	1,2-Dichloroet...	0.424	0.430	0.373	0.360	0.336	0.344	0.353	0.324	0.368	10.68#
50)	CP	Benzene	1.306	1.148	0.882	0.870	0.839	0.838	0.902	0.830	0.952	18.56#
51)	CP	Tertiaryamylme...	0.722	0.713	0.575	0.546	0.560	0.554	0.628	0.600	0.612	11.46#
52)	C	Isobutyl Alcohol	0.698	0.735	0.703	0.670	0.706	0.735	0.842	0.809	0.737	8.02#
53)	C	Heptane	0.313	0.312	0.214	0.192	0.167	0.191	0.205	0.183	0.222	25.94#
54)	C	1,4-Dioxane	0.008	0.008	0.008	0.007	0.008	0.008	0.008	0.008	0.008#	4.04#
55)	C	Methylcyclohexane	0.248	0.221	0.202	0.202	0.204	0.225	0.243	0.222	0.221	8.11#
56)	C	n-Butanol	0.004	0.003	0.005	0.006	0.006	0.006	0.006	0.006	0.005#	22.73#
57)	C	Trichloroethene	0.213	0.240	0.195	0.189	0.193	0.198	0.212	0.201	0.205	7.99#
58)	C	1,2-Dichloropr...	0.366	0.342	0.267	0.273	0.263	0.265	0.283	0.262	0.290	13.95
59)	C	Dibromomethane	0.222	0.171	0.173	0.189	0.185	0.189	0.193	0.183	0.188#	8.24#
60)	C	Methyl methacr...	0.234	0.286	0.280	0.285	0.321	0.357	0.383	0.361	0.313	16.14#
61)	C	Bromodichlorom...	0.344	0.324	0.283	0.298	0.298	0.307	0.339	0.316	0.314	6.76#
62)	C	2-Chloroethyl ...	0.048	0.109	0.139	0.123	0.127	0.148	0.160	0.154	0.126#	28.31#
63)	C	2-Nitropropane	0.176	0.148	0.101	0.090	0.093	0.112	0.130	0.128	0.122#	24.09#
64)	C	cis-1,3-Dichlo...	0.339	0.369	0.327	0.316	0.338	0.368	0.402	0.380	0.355	8.29#
65)	I	Chlorobenzene-d5	----------ISTD----------									
66)	C	4-Methyl-2-pen...	0.729	0.610	0.475	0.444	0.489	0.511	0.607	0.585	0.556	16.90#
67)	S	Toluene-d8	1.297	1.303	1.252	1.292	1.283	1.308	1.260	1.279	1.284	1.58
68)	CP	Toluene	1.212	1.080	0.830	0.842	0.833	0.840	0.903	0.852	0.924	15.52
69)	C	trans-1,3-Dich...	0.313	0.339	0.308	0.288	0.336	0.370	0.414	0.396	0.346	12.80#
70)	C	Chloropicrin									0.000#	-1.00
71)	C	Ethyl methacry...	0.246	0.232	0.279	0.284	0.309	0.367	0.400	0.383	0.312	20.45#
72)	C	1,1,2-Trichlor...	0.297	0.297	0.246	0.256	0.249	0.251	0.265	0.242	0.263	8.43#
73)	C	Tetrachloroethene	0.267	0.250	0.205	0.205	0.214	0.229	0.234	0.211	0.227	10.02#
74)	C	1,3-Dichloropr...	0.461	0.505	0.387	0.399	0.403	0.402	0.415	0.397	0.421	9.69#
75)	C	2-Hexanone	0.295	0.329	0.280	0.323	0.374	0.413	0.479	0.459	0.369	20.26#
76)	C	Chlorodibromom...	0.265	0.260	0.229	0.246	0.257	0.284	0.307	0.293	0.268	9.61#
77)	C	Butyl acetate	0.314	0.448	0.492	0.527	0.618	0.685	0.799	0.761	0.581	28.50#
78)	C	1,2-Dibromoethane	0.318	0.312	0.276	0.269	0.278	0.290	0.300	0.279	0.290	6.17#
79)	CP	Chlorobenzene	0.715	0.707	0.569	0.553	0.555	0.540	0.593	0.558	0.599	11.84
80)	C	1,1,1,2-Tetrac...	0.236	0.237	0.202	0.197	0.199	0.209	0.231	0.220	0.216	7.80#
81)	CP	Ethylbenzene	1.029	1.075	0.820	0.851	0.868	0.897	0.982	0.923	0.930	9.69
82)	CP	m/p-Xylene	0.801	0.789	0.630	0.621	0.655	0.701	0.753	0.699	0.706	9.81#
83)	C	Nonane	0.222	0.238	0.185	0.151	0.168	0.164	0.188	0.174	0.186#	15.83#

1st /S/ MF 11/04/20
2nd /S/ JS 11/04/20

Method Path : C:\MSDCHEM\1\Methods\
Method File : VMS7-201103-WS.M

84)	C	Styrene	0.516	0.409	0.438	0.455	0.482	0.526	0.523	0.473	0.478	8.93#
85)	CP	o-Xylene	0.790	0.771	0.643	0.643	0.690	0.721	0.772	0.721	0.719	7.97#
86)	C	Cyclohexanone	0.035	0.039	0.032	0.037	0.039	0.038	0.044	0.041	0.038#	9.22#
87)	CP	Bromoform	0.174	0.189	0.156	0.169	0.181	0.213	0.241	0.235	0.195	16.11
88)	C	Isopropylbenzene	0.806	0.823	0.672	0.687	0.719	0.743	0.826	0.770	0.756	7.99#
89)	S	Bromofluoroben...	0.462	0.479	0.467	0.479	0.494	0.496	0.486	0.486	0.481	2.50
90)	C	Bromobenzene	0.580	0.532	0.393	0.395	0.385	0.401	0.416	0.395	0.437	17.16#
91)	CP	1,1,2,2-Tetrac...	0.600	0.589	0.510	0.501	0.508	0.508	0.538	0.508	0.533	7.47
92)	C	1,2,3-Trichlor...	0.133	0.110	0.112	0.099	0.105	0.107	0.114	0.105	0.111#	9.20#
93)	C	trans-1,4-Dich...	0.127	0.116	0.108	0.126	0.141	0.141	0.153	0.142	0.132#	11.42#
94)	C	n-Propylbenzene	1.037	1.037	0.847	0.876	0.927	0.983	1.053	0.968	0.966	8.00#
95)	C	2-Chlorotoluene	0.802	0.692	0.572	0.568	0.584	0.611	0.650	0.600	0.635	12.53#
96)	C	4-Chlorotoluene	0.816	0.883	0.603	0.636	0.680	0.700	0.755	0.704	0.722	12.81#
97)	C	1,3,5-Trimethy...	0.605	0.640	0.538	0.546	0.566	0.608	0.651	0.612	0.596	6.98#
98)	C	tert-Butylbenzene	0.403	0.422	0.321	0.338	0.330	0.348	0.383	0.357	0.363	9.96#
99)	C	1,2,4-Trimethy...	0.616	0.592	0.531	0.545	0.572	0.615	0.685	0.640	0.599	8.46#
100)	C	sec-Butylbenzene	0.716	0.775	0.636	0.626	0.650	0.703	0.770	0.709	0.698	8.21#
101)	I	1,4-Dichlorobenzen...	----------ISTD----------									
102)	C	1,3-Dichlorobe...	1.006	0.912	0.756	0.731	0.736	0.751	0.835	0.785	0.814	12.10#
103)	C	p-Isopropyltol...	1.150	1.191	0.946	0.944	0.995	1.053	1.202	1.107	1.074	9.77#
104)	C	1,4-Dichlorobe...	1.179	0.912	0.863	0.828	0.817	0.798	0.880	0.808	0.886	14.10#
105)	C	1,2,3-Trimethy...	1.621	1.560	1.260	1.235	1.233	1.291	1.438	1.310	1.369	11.14#
106)	C	Benzyl chloride	0.937	1.037	0.874	0.878	0.972	1.129	1.337	1.277	1.055	16.78#
107)	C	1,2-Dichlorobe...	1.028	0.973	0.818	0.795	0.771	0.784	0.861	0.805	0.855	11.14#
108)	C	n-Butylbenzene	1.208	1.062	0.958	0.934	0.975	1.087	1.240	1.126	1.074	10.64#
109)	C	Hexachloroethane	0.379	0.317	0.206	0.212	0.227	0.249	0.302	0.282	0.272	21.99#
110)	C	1,2-Dibromo-3-...	0.219	0.222	0.183	0.186	0.199	0.216	0.240	0.229	0.212	9.67#
111)	C	1,3,5-Trichlor...	0.640	0.529	0.476	0.451	0.472	0.477	0.538	0.498	0.510	11.77#
112)	C	1,2,4-Trichlor...	0.534	0.537	0.440	0.464	0.446	0.493	0.553	0.517	0.498	8.80#
113)	C	Hexachlorobuta...	0.275	0.261	0.199	0.181	0.173	0.172	0.198	0.183	0.205	19.50#
114)	C	Naphthalene	1.258	1.396	1.243	1.296	1.515	1.782	2.077	1.950	1.565	21.04#
115)	C	1,2,3-Trichlor...	0.534	0.537	0.440	0.464	0.446	0.493	0.553	0.517	0.498	8.80#
116)	C	2-Methylnaphth...		0.095	0.217	0.222	0.325	0.591	0.823	0.839	0.444	68.67#
117)	C	1-Methylnaphth...		0.207	0.302	0.280	0.411	0.649	0.836	0.839	0.504	53.29#
118)	I	Ethyl-d5-Acetate-d3	----------ISTD----------									
119)	T	2-Propanone	1.341	0.945	0.625	0.455	0.411	0.386	0.443	0.438	0.630	54.13
120)	T	2-Propanol		0.282	0.185	0.159	0.149	0.154	0.164	0.163	0.179#	25.99
121)	T	Acetic Ether	0.182	0.960	1.174	1.444	1.210	1.161	1.350	1.278	1.095	36.15
122)	T	Isopropyl Acetate	0.059	0.086	0.223	0.313	0.348	0.374	0.453	0.443	0.287	52.69
123)	T	Amyl Acetate	0.610	0.841	1.022	1.008	1.086	1.243	1.507	1.467	1.098	27.58

(#) = Out of Range

1st /S/ MF 11/04/20
2nd /S/ JS 11/04/20

Partial Calibration Report VMS7

Method Path : C:\MSDCHEM\1\Methods\
Method File : VMS7-201103-WS.M
Title : 8260 Global Optimization
Last Update : Wed Nov 04 09:59:32 2020
Response Via : Initial Calibration

Calibration Files
1 =20110319 2 =20110320 3 =20110321 4 =20110322 5 =20110323 6 =20110324 7 =20110325
8 =20110326

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Pentafluorobenzene	----------ISTD----------				
2)	C	Dichlorodifluoro...	Lin	0.0039	0.2460	-----	0.9985
3)	CP	Chloromethane	Lin	-0.0010	0.7206	-----	0.9971
4)	C	Vinyl chloride	Lin	0.0054	0.3881	-----	0.9989
5)	C	Bromomethane	Quad	0.0056	0.0254	0.0002	0.9951
6)	C	Chloroethane	Quad	0.0014	0.1336	-0.0058	0.9940
7)	C	Dichlorofluorome...	Lin	0.0090	0.7200	-----	0.9999
8)	C	Trichlorofluorom...	Lin	0.0038	0.5033	-----	0.9995
9)	C	Ethanol	Lin	0.0212	0.0538	-----	0.9990
11)	C	Acrolein	Quad	-0.0007	0.0307	-0.0008	0.9956
12)	C	1,1-Dichloroethene	Lin	0.0028	0.5583	-----	0.9989
14)	C	Methyl iodide	Quad	-----	-----	-----	0.0000
15)	C	Acetone	Quad	0.0125	0.2833	0.0083	0.9974
19)	C	Methyl acetate	Lin	0.0026	0.7197	-----	0.9979
20)	C	Acetonitrile	Lin	0.0048	0.2786	-----	0.9977
21)	C	Methylene chloride	Lin	0.0162	0.6799	-----	0.9985
23)	C	t-Butanol	Lin	0.0057	0.2186	-----	0.9976
25)	CP	Methyl tert-buty...	Lin	0.0038	1.0143	-----	0.9971
27)	CP	1,1-Dichloroethane	Lin	0.0057	0.7383	-----	0.9989
28)	CP	Diisopropyl ether	Lin	0.0065	1.4137	-----	0.9976
29)	C	Vinyl acetate	Quad	-0.0014	0.0479	0.0040	0.9973
30)	CP	Ethyl tert butyl...	Lin	0.0057	1.0932	-----	0.9976
32)	C	2,2-Dichloropropane	Lin	0.0042	0.5073	-----	0.9985
33)	C	cis-1,2-Dichloro...	Lin	0.0039	0.6557	-----	0.9988
34)	C	2-Butanone	Lin	0.0037	0.4798	-----	0.9943
35)	C	Ethyl Acetate	Lin	0.0073	0.9399	-----	0.9977
36)	C	Methyl acrylate	Lin	-0.0057	0.6657	-----	0.9983
38)	C	Bromochloromethane	Lin	0.0044	0.4111	-----	0.9982
39)	C	Tetrahydrofuran	Lin	0.0060	0.3200	-----	0.9989
40)	C	Methacrylonitrile	Lin	-0.0025	0.2706	-----	0.9985
42)	C	Cyclohexane	Lin	0.0249	0.5009	-----	0.9974
43)	I	1,4-Difluorobenzene	----------ISTD----------				
50)	CP	Benzene	Lin	0.0080	0.8509	-----	0.9984
51)	CP	Tertiaryamylmeth...	Lin	0.0012	0.5971	-----	0.9977
53)	C	Heptane	Lin	0.0026	0.1893	-----	0.9963
56)	C	n-Butanol	Lin	-0.0006	0.0059	-----	0.9979
60)	C	Methyl methacrylate	Lin	-0.0041	0.3658	-----	0.9978
62)	C	2-Chloroethyl vi...	Lin	-0.0022	0.1543	-----	0.9977
63)	C	2-Nitropropane	Lin	-0.0001	0.1234	-----	0.9921
65)	I	Chlorobenzene-d5	----------ISTD----------				
66)	C	4-Methyl-2-penta...	Quad	0.0032	0.4821	0.0238	0.9975
68)	CP	Toluene	Lin	0.0049	0.8623	-----	0.9988
70)	C	Chloropicrin	Quad	-----	-----	-----	0.0000
71)	C	Ethyl methacrylate	Lin	-0.0056	0.3828	-----	0.9967
75)	C	2-Hexanone	Lin	-0.0066	0.4532	-----	0.9948
77)	C	Butyl acetate	Lin	-0.0137	0.7547	-----	0.9950
79)	CP	Chlorobenzene	Lin	0.0027	0.5644	-----	0.9986
83)	C	Nonane	Lin	0.0008	0.1758	-----	0.9968
87)	CP	Bromoform	Lin	-0.0028	0.2303	-----	0.9948
90)	C	Bromobenzene	Lin	0.0029	0.4009	-----	0.9992

Partial Calibration Report VMS7

Method Path : C:\MSDCHEM\1\Methods\
Method File : VMS7-201103-WS.M
Title : 8260 Global Optimization

101)	I	1,4-Dichlorobenz...		----------ISTD----------			
104)	C	1,4-Dichlorobenzene	Lin	0.0046	0.8274	-----	0.9981
106)	C	Benzyl chloride	Lin	-0.0158	1.2553	-----	0.9930
109)	C	Hexachloroethane	Quad	0.0016	0.2345	0.0117	0.9953
113)	C	Hexachlorobutadiene	Lin	0.0016	0.1845	-----	0.9969
114)	C	Naphthalene	Lin	-0.0297	1.9408	-----	0.9934
116)	C	2-Methylnaphthalene	Quad	-0.0179	0.4301	0.0901	0.9932
117)	C	1-Methylnaphthalene	Quad	-0.0176	0.5154	0.0723	0.9943
118)	I	Ethyl-d5-Acetate-d3		----------ISTD----------			
119)	T	2-Propanone	Quad	0.0192	0.3655	0.0150	0.9985
120)	T	2-Propanol	Quad	0.0765	0.1451	0.0002	0.9996
121)	T	Acetic Ether	Quad	-0.0131	1.2462	0.0106	0.9968
122)	T	Isopropyl Acetate	Quad	-0.0077	0.3572	0.0197	0.9976
123)	T	Amyl Acetate	Quad	-0.0125	1.1548	0.0715	0.9974

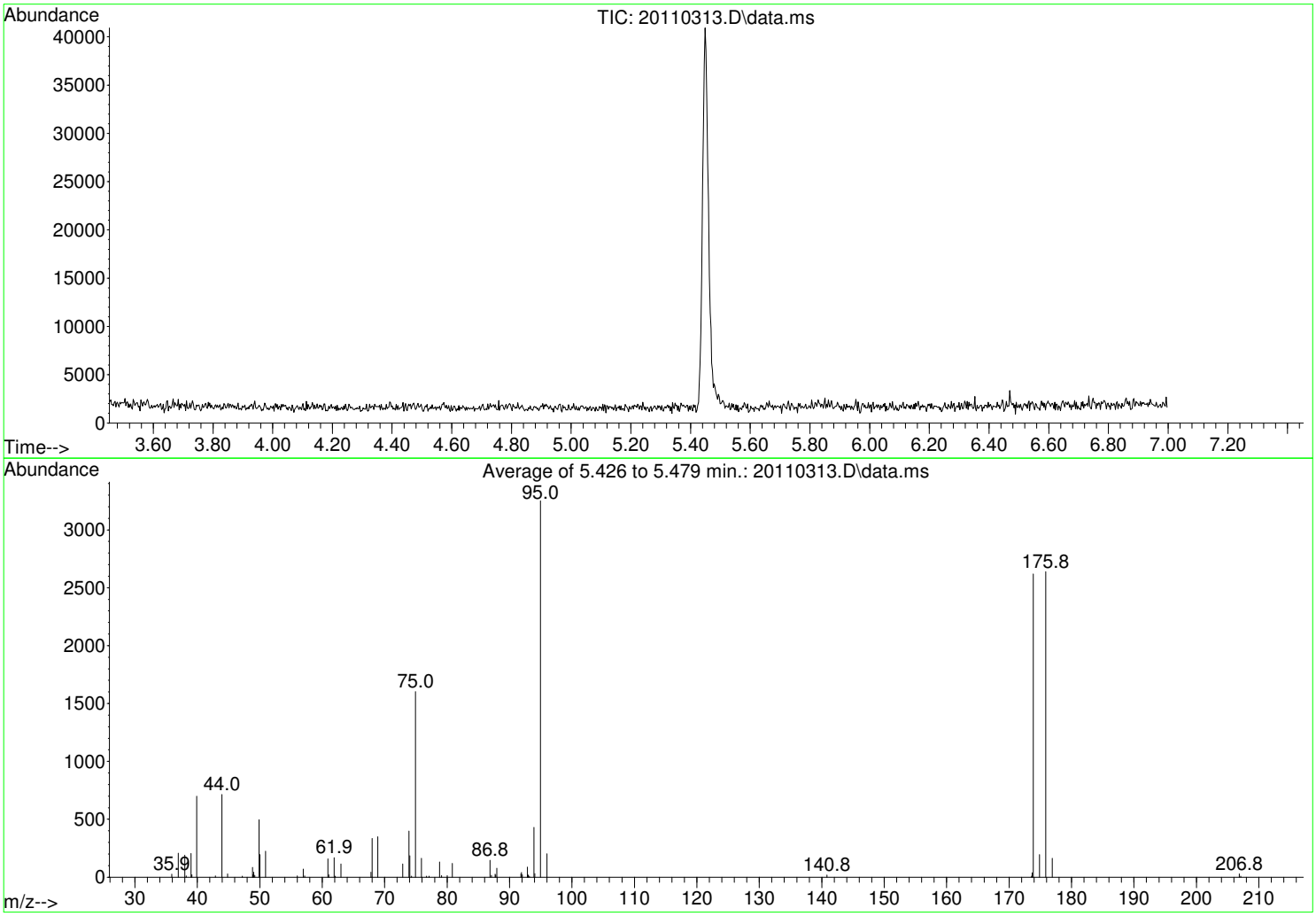
1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110313.D
Acq On : 03 Nov 2020 02:28 pm
Operator : MF
Sample : BFB_TUNE1-201103
Misc : IS 200-21532
ALS Vial : 1 Sample Multiplier: 1

Integration File: 8260.P

Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Title : 8260 Global Optimization
Last Update : Wed Nov 04 09:36:06 2020



Spectrum Information: Average of 5.426 to 5.479 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	496	PASS
75	95	30	60	49.3	1604	PASS
95	95	100	100	100.0	3251	PASS
96	95	5	9	6.3	203	PASS
173	174	0.00	2	0.4	9	PASS
174	95	50	120	80.6	2619	PASS
175	174	5	9	7.4	194	PASS
176	174	95	101	100.8	2640	PASS
177	176	5	9	6.2	163	PASS

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110318.D
Acq On : 03 Nov 2020 03:54 pm
Operator : MF
Sample : VBLKW1-201103
Misc : 200-21588
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 04 08:51:45 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.106	168	143048	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.241	114	229219	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	212118	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	99860	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.370	46	99395	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.039	111	96082	20.24	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 101.20%			
48) 1,2-Dichloroethane-d4	4.497	65	115430	21.17	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 105.85%			
67) Toluene-d8	7.299	98	265269	19.23	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 96.15%			
89) Bromofluorobenzene	9.151	95	96311	18.75	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 93.75%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D. d		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	1.365	96	205	Below Cal	#	1
6) Chloroethane	1.412	64	201	No Calib	#	
7) Dichlorofluoromethane	1.318	67	54	0.01 ug/L	#	1
8) Trichlorofluoromethane	0.000		0	N.D.		
9) Ethanol	1.739	45	91	Below Cal	#	1
10) Ethyl ether	0.000		0	N.D.		
11) Acrolein	0.000		0	N.D.		
12) 1,1-Dichloroethene	0.000		0	N.D.		
13) 1,1,2-Trichlorotrifluo...	0.000		0	N.D.		
14) Methyl iodide	2.012	142	279	No Calib	#	
15) Acetone	1.942	43	1400	Below Cal		66
16) Chloroprene	0.000		0	N.D.		
17) Carbon disulfide	2.068	76	192	N.D.		
18) Allyl chloride	2.110	41	57	Below Cal	#	1
19) Methyl acetate	2.163	43	184	Below Cal	#	67
20) Acetonitrile	0.000		0	N.D.		
21) Methylene chloride	2.260	49	457	Below Cal		59
22) trans-1,2-Dichloroethene	0.000		0	N.D.		
23) t-Butanol	3.362	59	179	0.06 ug/L	#	1
24) Acrylonitrile	0.000		0	N.D.		
25) Methyl tert-butyl ether	0.000		0	N.D.		
26) Hexane	0.000		0	N.D.		
27) 1,1-Dichloroethane	0.000		0	N.D.		
28) Diisopropyl ether	0.000		0	N.D.		
29) Vinyl acetate	0.000		0	N.D.		
30) Ethyl tert butyl ether	3.362	59	179	0.01 ug/L	#	43
31) Methylcyclopentane	0.000		0	N.D.		
32) 2,2-Dichloropropane	0.000		0	N.D. d		
33) cis-1,2-Dichloroethene	3.362	61	178	N.D.		
34) 2-Butanone	3.423	43	122	Below Cal	#	61
35) Ethyl Acetate	3.476	43	214	Below Cal	#	73
36) Methyl acrylate	0.000		0	N.D.		

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110318.D
Acq On : 03 Nov 2020 03:54 pm
Operator : MF
Sample : VBLKW1-201103
Misc : 200-21588
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 04 08:51:45 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
37) Propionitrile	0.000		0	N.D.	
38) Bromochloromethane	0.000		0	N.D.	
39) Tetrahydrofuran	3.738	42	78	Below Cal #	40
40) Methacrylonitrile	0.000		0	N.D.	
41) Chloroform	0.000		0	N.D.	
42) Cyclohexane	4.109	56	3082	0.09 ug/L #	1
44) 1,1,1-Trichloroethane	0.000		0	N.D.	
46) Carbon tetrachloride	0.000		0	N.D.	
47) 1,1-Dichloropropene	0.000		0	N.D.	
49) 1,2-Dichloroethane	0.000		0	N.D.	
50) Benzene	0.000		0	N.D.	
51) Tertiaryamylmethylether	0.000		0	N.D.	
52) Isobutyl Alcohol	0.000		0	N.D.	
53) Heptane	0.000		0	N.D.	
54) 1,4-Dioxane	0.000		0	N.D.	
55) Methylcyclohexane	0.000		0	N.D.	
56) n-Butanol	0.000		0	N.D.	
57) Trichloroethene	0.000		0	N.D.	
58) 1,2-Dichloropropane	0.000		0	N.D.	
59) Dibromomethane	0.000		0	N.D.	
60) Methyl methacrylate	0.000		0	N.D.	
61) Bromodichloromethane	0.000		0	N.D.	
62) 2-Chloroethyl vinyl ether	0.000		0	N.D.	
63) 2-Nitropropane	0.000		0	N.D.	
64) cis-1,3-Dichloropropene	0.000		0	N.D.	
66) 4-Methyl-2-pentanone	7.221	43	195	N.D.	
68) Toluene	0.000		0	N.D.	
69) trans-1,3-Dichloropropene	0.000		0	N.D. d	
70) Chloropicrin	0.000		0	N.D.	
71) Ethyl methacrylate	0.000		0	N.D.	
72) 1,1,2-Trichloroethane	0.000		0	N.D.	
73) Tetrachloroethene	0.000		0	N.D.	
74) 1,3-Dichloropropane	0.000		0	N.D.	
75) 2-Hexanone	0.000		0	N.D.	
76) Chlorodibromomethane	0.000		0	N.D.	
77) Butyl acetate	0.000		0	N.D.	
78) 1,2-Dibromoethane	0.000		0	N.D.	
79) Chlorobenzene	0.000		0	N.D.	
80) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
81) Ethylbenzene	8.426	91	444	N.D.	
82) m/p-Xylene	8.618	91	85	N.D.	
83) Nonane	8.635	43	81	Below Cal #	19
84) Styrene	0.000		0	N.D.	
85) o-Xylene	0.000		0	N.D.	
86) Cyclohexanone	9.148	55	171	Below Cal #	1
87) Bromoform	0.000		0	N.D.	
88) Isopropylbenzene	0.000		0	N.D.	
90) Bromobenzene	0.000		0	N.D. d	
91) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
92) 1,2,3-Trichloropropane	0.000		0	N.D.	
93) trans-1,4-Dichloro-2-b...	0.000		0	N.D.	
94) n-Propylbenzene	0.000		0	N.D.	
95) 2-Chlorotoluene	0.000		0	N.D.	

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110318.D
Acq On : 03 Nov 2020 03:54 pm
Operator : MF
Sample : VBLKW1-201103
Misc : 200-21588
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 04 08:51:45 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

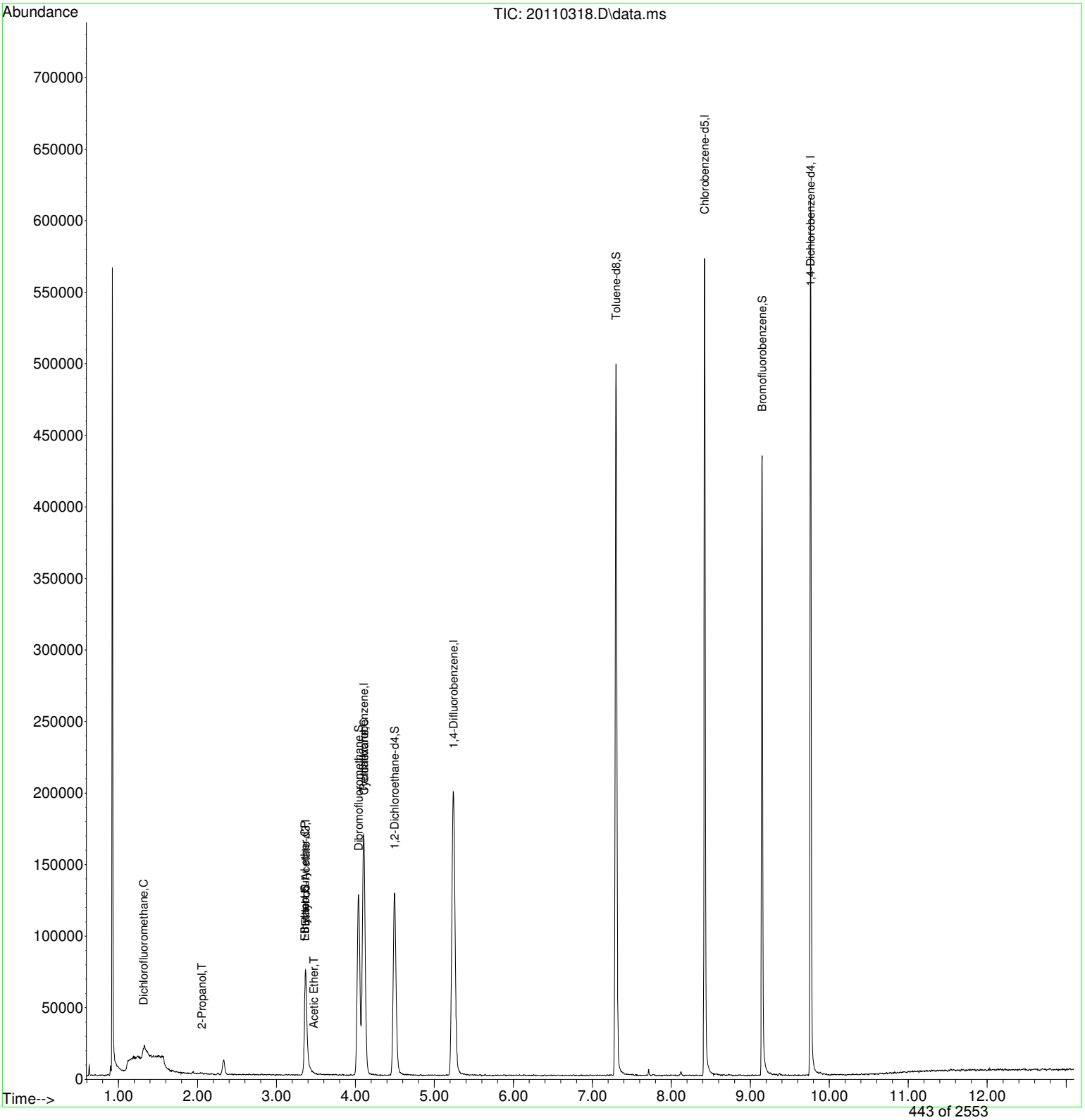
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
96)	4-Chlorotoluene	0.000		0	N.D.	
97)	1,3,5-Trimethylbenzene	0.000		0	N.D.	
98)	tert-Butylbenzene	0.000		0	N.D.	
99)	1,2,4-Trimethylbenzene	0.000		0	N.D.	
100)	sec-Butylbenzene	0.000		0	N.D.	
102)	1,3-Dichlorobenzene	0.000		0	N.D.	
103)	p-Isopropyltoluene	0.000		0	N.D.	
104)	1,4-Dichlorobenzene	0.000		0	N.D.	
105)	1,2,3-Trimethylbenzene	0.000		0	N.D.	
106)	Benzyl chloride	0.000		0	N.D. d	
107)	1,2-Dichlorobenzene	0.000		0	N.D.	
108)	n-Butylbenzene	0.000		0	N.D.	
109)	Hexachloroethane	0.000		0	N.D.	
110)	1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
111)	1,3,5-Trichlorobenzene	0.000		0	N.D.	
112)	1,2,4-Trichlorobenzene	0.000		0	N.D.	
113)	Hexachlorobutadiene	0.000		0	N.D.	
114)	Naphthalene	0.000		0	N.D.	
115)	1,2,3-Trichlorobenzene	0.000		0	N.D.	
116)	2-Methylnaphthalene	0.000		0	N.D.	
117)	1-Methylnaphthalene	0.000		0	N.D.	
119)	2-Propanone	1.942	43	1400	Below Cal	66
120)	2-Propanol	2.057	45	93	5.93 ug/L #	59
121)	Acetic Ether	3.476	43	214	0.32 ug/L #	70
122)	Isopropyl Acetate	0.000		0	N.D.	
123)	Amyl Acetate	0.000		0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20
2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110318.D
Acq On : 03 Nov 2020 03:54 pm
Operator : MF
Sample : VBLKW1-201103
Misc : 200-21588
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 04 08:51:45 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110319.D
Acq On : 03 Nov 2020 04:19 pm
Operator : MF
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 04 08:51:48 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.100	168	141409	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.235	114	228884	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	207043	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	100906	20.00	ug/L	# 0.00
118) Ethyl-d5-Acetate-d3	3.370	46	97859	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.036	111	92952	19.61	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 98.05%			
48) 1,2-Dichloroethane-d4	4.491	65	112400	20.64	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 103.20%			
67) Toluene-d8	7.296	98	268606	19.95	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 99.75%			
89) Bromofluorobenzene	9.148	95	95627	19.07	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 95.35%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.016	85	1059	N.D.		
3) Chloromethane	1.117	50	2538	0.53	ug/L	91
4) Vinyl chloride	1.181	62	1810	N.D.		
5) Bromomethane	1.362	96	541	N.D.		
6) Chloroethane	1.421	64	726	No Calib		
7) Dichlorofluoromethane	1.549	67	3111	0.37	ug/L	92
8) Trichlorofluoromethane	1.571	101	1851	N.D.		
9) Ethanol	1.755	45	5764m	19.16	ug/L	
10) Ethyl ether	1.752	59	1143	N.D.		
11) Acrolein	0.000		0	N.D.		
12) 1,1-Dichloroethene	1.900	61	1990	N.D.		
13) 1,1,2-Trichlorotrifluo...	1.903	151	812	0.34	ug/L	92
14) Methyl iodide	2.009	142	1842	No Calib		
15) Acetone	1.956	43	2625	Below Cal		87
16) Chloroprene	2.918	53	1754	0.29	ug/L	87
17) Carbon disulfide	2.062	76	3395	N.D.		
18) Allyl chloride	2.157	41	2564	0.22	ug/L	83
19) Methyl acetate	2.160	43	2818	0.02	ug/L	77
20) Acetonitrile	2.469	41	1394	0.27	ug/L #	72
21) Methylene chloride	2.254	49	4171	Below Cal		93
22) trans-1,2-Dichloroethene	2.472	61	2253	N.D.		
23) t-Butanol	3.255	59	4181	1.45	ug/L	79
24) Acrylonitrile	2.466	53	988	N.D.		
25) Methyl tert-butyl ether	2.461	73	3661	N.D.		
26) Hexane	2.709	57	1691	N.D.		
27) 1,1-Dichloroethane	2.851	63	3029	N.D.		
28) Diisopropyl ether	2.890	45	5200	0.28	ug/L	84
29) Vinyl acetate	0.000		0	N.D.		
30) Ethyl tert butyl ether	3.255	59	4181	0.29	ug/L	89
31) Methylcyclopentane	3.311	56	2437	0.34	ug/L #	42
32) 2,2-Dichloropropane	3.431	77	2155	0.46	ug/L	81
33) cis-1,2-Dichloroethene	3.431	61	2528	N.D.		
34) 2-Butanone	3.445	43	2486	N.D.		
35) Ethyl Acetate	3.506	43	4145m	0.07	ug/L	
36) Methyl acrylate	3.562	55	1302m	0.59	ug/L	

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110319.D
Acq On : 03 Nov 2020 04:19 pm
Operator : MF
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 04 08:51:48 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
37) Propionitrile	0.000		0	N.D.	
38) Bromochloromethane	3.704	49	1634	N.D.	
39) Tetrahydrofuran	3.727	42	1782	N.D.	
40) Methacrylonitrile	3.690	67	483m	0.74 ug/L	
41) Chloroform	3.836	83	2523	N.D.	
42) Cyclohexane	4.100	56	5009	0.41 ug/L #	25
44) 1,1,1-Trichloroethane	4.014	97	1754	N.D.	
46) Carbon tetrachloride	4.229	117	1440	N.D.	
47) 1,1-Dichloropropene	4.243	75	1570	N.D.	
49) 1,2-Dichloroethane	4.616	62	1941	N.D.	
50) Benzene	4.510	78	5977	N.D.	
51) Tertiaryamylmethylether	4.750	73	3306	0.27 ug/L #	89
52) Isobutyl Alcohol	4.689	43	3195	0.21 ug/L	98
53) Heptane	5.043	43	1433m	0.25 ug/L	
54) 1,4-Dioxane	6.317	88	3788m	39.29 ug/L	
55) Methylcyclohexane	6.019	83	1136	0.28 ug/L #	71
56) n-Butanol	5.029	56	164	4.49 ug/L #	56
57) Trichloroethene	5.612	130	974	N.D.	
58) 1,2-Dichloropropane	6.100	63	1677	N.D.	
59) Dibromomethane	6.242	93	1014	N.D.	
60) Methyl methacrylate	6.329	41	1072m	0.52 ug/L	
61) Bromodichloromethane	6.535	83	1574	N.D.	
62) 2-Chloroethyl vinyl ether	6.936	43	222	0.35 ug/L #	27
63) 2-Nitropropane	6.814	43	804m	0.38 ug/L	
64) cis-1,3-Dichloropropene	7.059	75	1551	N.D.	
66) 4-Methyl-2-pentanone	7.235	43	3018	N.D.	
68) Toluene	7.366	91	5020	N.D.	
69) trans-1,3-Dichloropropene	7.614	75	1297	N.D.	
70) Chloropicrin	0.000		0	N.D.	
71) Ethyl methacrylate	7.687	69	1017	0.54 ug/L #	52
72) 1,1,2-Trichloroethane	7.754	97	1230	N.D.	
73) Tetrachloroethene	7.793	166	1106	N.D.	
74) 1,3-Dichloropropane	7.871	76	1907	N.D.	
75) 2-Hexanone	7.960	43	1221	N.D.	
76) Chlorodibromomethane	8.030	129	1096	N.D.	
77) Butyl acetate	8.060	43	1302	0.47 ug/L #	83
78) 1,2-Dibromoethane	8.102	107	1316	N.D.	
79) Chlorobenzene	8.442	112	2959	N.D.	
80) 1,1,1,2-Tetrachloroethane	8.506	131	978	N.D.	
81) Ethylbenzene	8.518	91	4260	N.D.	
82) m/p-Xylene	8.604	91	6633	0.57 ug/L	92
83) Nonane	8.646	43	918	0.01 ug/L	76
84) Styrene	8.855	104	2136	N.D.	
85) o-Xylene	8.836	91	3272	N.D.	
86) Cyclohexanone	9.103	55	724	Below Cal	66
87) Bromoform	8.955	173	722	0.53 ug/L	89
88) Isopropylbenzene	9.050	105	3338	N.D.	
90) Bromobenzene	9.223	77	2402	N.D.	
91) 1,1,2,2-Tetrachloroethane	9.232	83	2486	N.D.	
92) 1,2,3-Trichloropropane	9.257	110	550	N.D.	
93) trans-1,4-Dichloro-2-b...	9.257	53	525	0.51 ug/L #	56
94) n-Propylbenzene	9.284	91	4295	N.D.	
95) 2-Chlorotoluene	9.329	91	3322	N.D.	

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110319.D
Acq On : 03 Nov 2020 04:19 pm
Operator : MF
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 04 08:51:48 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

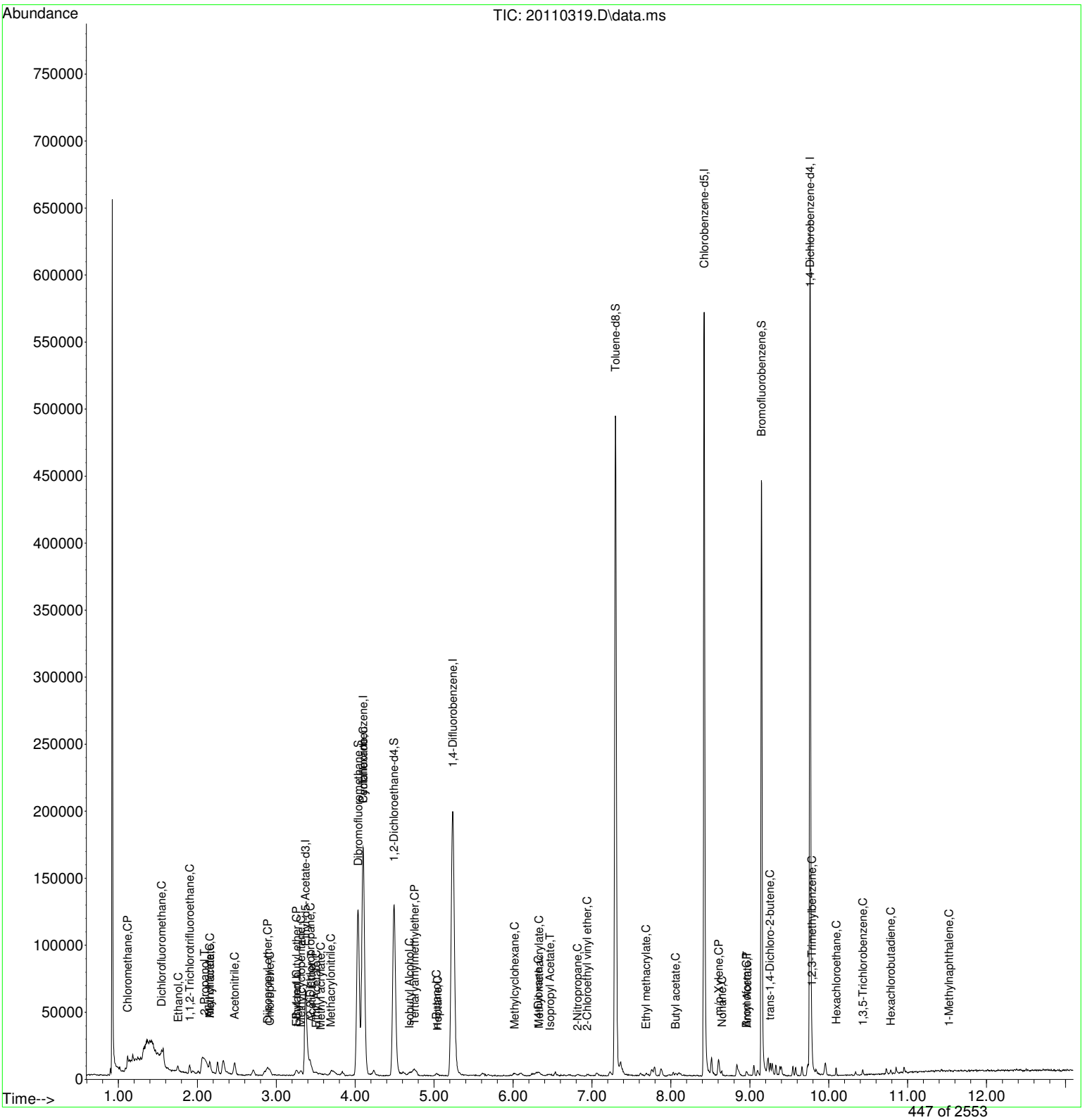
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
96) 4-Chlorotoluene	9.402	91	3378	N.D.	
97) 1,3,5-Trimethylbenzene	9.382	105	2506	N.D.	
98) tert-Butylbenzene	9.547	91	1668	N.D.	
99) 1,2,4-Trimethylbenzene	9.580	105	2549	N.D.	
100) sec-Butylbenzene	9.661	105	2965	N.D.	
102) 1,3-Dichlorobenzene	9.728	146	2030	N.D.	
103) p-Isopropyltoluene	9.742	119	2321	N.D.	
104) 1,4-Dichlorobenzene	9.778	146	2380	N.D.	
105) 1,2,3-Trimethylbenzene	9.786	105	3271	0.30 ug/L	94
106) Benzyl chloride	9.839	91	1891	N.D.	
107) 1,2-Dichlorobenzene	9.957	146	2075	N.D.	
108) n-Butylbenzene	9.948	91	2438	N.D.	
109) Hexachloroethane	10.093	117	765	0.54 ug/L #	68
110) 1,2-Dibromo-3-chloropr...	10.344	157	441	N.D.	
111) 1,3,5-Trichlorobenzene	10.431	180	1291	0.30 ug/L	92
112) 1,2,4-Trichlorobenzene	10.955	180	1078	N.D.	
113) Hexachlorobutadiene	10.785	225	554	0.34 ug/L	85
114) Naphthalene	10.857	128	2539	N.D.	
115) 1,2,3-Trichlorobenzene	10.955	180	1078	N.D.	
116) 2-Methylnaphthalene	11.437	142	89	N.D.	
117) 1-Methylnaphthalene	11.521	142	365	0.22 ug/L	89
119) 2-Propanone	1.956	43	2625	Below Cal	87
120) 2-Propanol	2.090	45	36702	26.73 ug/L #	68
121) Acetic Ether	3.445	43	356	0.32 ug/L #	64
122) Isopropyl Acetate	6.465	61	115	0.34 ug/L #	1
123) Amyl Acetate	8.967	43	1194	0.26 ug/L	74

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20
2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110319.D
Acq On : 03 Nov 2020 04:19 pm
Operator : MF
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 04 08:51:48 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110320.D
Acq On : 03 Nov 2020 04:36 pm
Operator : MF
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 04 08:51:51 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.106	168	140729	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.238	114	223653	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	202205	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	99096	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.373	46	99403	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.036	111	92563	19.99	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 99.95%			
48) 1,2-Dichloroethane-d4	4.494	65	112971	21.23	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 106.15%			
67) Toluene-d8	7.299	98	263482	20.04	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.20%			
89) Bromofluorobenzene	9.151	95	96871	19.78	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 98.90%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.016	85	1614	0.55	ug/L	93
3) Chloromethane	1.117	50	3310	0.63	ug/L	98
4) Vinyl chloride	1.181	62	2417	0.51	ug/L	91
5) Bromomethane	1.359	96	432	Below Cal	#	79
6) Chloroethane	1.421	64	998	No Calib		
7) Dichlorofluoromethane	1.549	67	4673	0.57	ug/L	93
8) Trichlorofluoromethane	1.568	101	2866	0.51	ug/L	90
9) Ethanol	1.750	45	7868m	34.13	ug/L	
10) Ethyl ether	1.755	59	1602	N.D.		
11) Acrolein	2.377	56	51	No Calib	#	
12) 1,1-Dichloroethene	1.903	61	2866	N.D.		
13) 1,1,2-Trichlorotrifluo...	1.903	151	991	0.41	ug/L	91
14) Methyl iodide	2.009	142	2174	No Calib		
15) Acetone	1.948	43	2818	N.D.		
16) Chloroprene	2.924	53	2471	0.41	ug/L	91
17) Carbon disulfide	2.062	76	4572	N.D.		
18) Allyl chloride	2.162	41	3268	0.30	ug/L	94
19) Methyl acetate	2.162	43	3032	0.05	ug/L #	93
20) Acetonitrile	2.466	41	1783	0.38	ug/L	90
21) Methylene chloride	2.257	49	5473	Below Cal		93
22) trans-1,2-Dichloroethene	2.475	61	2928	N.D.		
23) t-Butanol	3.261	59	5613	1.96	ug/L	93
24) Acrylonitrile	2.461	53	1234	N.D.		
25) Methyl tert-butyl ether	2.472	73	5276	N.D.		
26) Hexane	2.715	57	1659	N.D.		
27) 1,1-Dichloroethane	2.857	63	3894	N.D.		
28) Diisopropyl ether	2.896	45	7032	0.39	ug/L	81
29) Vinyl acetate	0.000		0	N.D.		
30) Ethyl tert butyl ether	3.261	59	5613	0.39	ug/L	97
31) Methylcyclopentane	3.317	56	3651	0.52	ug/L	81
32) 2,2-Dichloropropane	3.437	77	2681m	0.56	ug/L	
33) cis-1,2-Dichloroethene	3.431	61	3277	N.D.		
34) 2-Butanone	3.445	43	2884	N.D.		
35) Ethyl Acetate	3.504	43	4747m	0.12	ug/L	
36) Methyl acrylate	3.565	55	2426m	0.73	ug/L	

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110320.D
Acq On : 03 Nov 2020 04:36 pm
Operator : MF
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 04 08:51:51 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
37) Propionitrile	0.000		0	N.D.	
38) Bromochloromethane	3.702	49	2200	N.D.	
39) Tetrahydrofuran	3.735	42	2378m	0.61 ug/L	
40) Methacrylonitrile	3.685	67	1076m	0.92 ug/L	
41) Chloroform	3.838	83	3702	N.D.	
42) Cyclohexane	4.112	56	5731m	0.53 ug/L	
44) 1,1,1-Trichloroethane	4.025	97	2728	N.D.	
46) Carbon tetrachloride	4.229	117	2297	0.66 ug/L	82
47) 1,1-Dichloropropene	4.246	75	2541	N.D.	
49) 1,2-Dichloroethane	4.614	62	2885	N.D.	
50) Benzene	4.513	78	7701	N.D.	
51) Tertiaryamylmethylether	4.750	73	4781	0.40 ug/L #	69
52) Isobutyl Alcohol	4.681	43	4933m	0.33 ug/L	
53) Heptane	5.037	43	2096m	0.42 ug/L	
54) 1,4-Dioxane	6.298	88	5406m	50.40 ug/L	
55) Methylcyclohexane	6.027	83	1484m	0.37 ug/L	
56) n-Butanol	5.040	56	201	4.82 ug/L #	1
57) Trichloroethene	5.612	130	1611m	0.56 ug/L	
58) 1,2-Dichloropropane	6.111	63	2292	N.D.	
59) Dibromomethane	6.239	93	1147	0.51 ug/L	80
60) Methyl methacrylate	6.334	41	1922m	0.65 ug/L	
61) Bromodichloromethane	6.541	83	2172	0.58 ug/L #	88
62) 2-Chloroethyl vinyl ether	6.948	43	734	0.53 ug/L #	74
63) 2-Nitropropane	6.819	43	991m	0.49 ug/L	
64) cis-1,3-Dichloropropene	7.065	75	2476	0.57 ug/L	85
66) 4-Methyl-2-pentanone	7.235	43	3703	N.D.	
68) Toluene	7.363	91	6552	N.D.	
69) trans-1,3-Dichloropropene	7.611	75	2058	0.60 ug/L	88
70) Chloropicrin	0.000		0	N.D.	
71) Ethyl methacrylate	7.692	69	1406	0.61 ug/L #	58
72) 1,1,2-Trichloroethane	7.754	97	1802	N.D.	
73) Tetrachloroethene	7.795	166	1519	N.D.	
74) 1,3-Dichloropropane	7.876	76	3066	N.D.	
75) 2-Hexanone	7.966	43	1996m	0.54 ug/L	
76) Chlorodibromomethane	8.030	129	1576	0.57 ug/L	97
77) Butyl acetate	8.060	43	2718m	0.58 ug/L	
78) 1,2-Dibromoethane	8.102	107	1892	0.55 ug/L #	99
79) Chlorobenzene	8.442	112	4290	N.D.	
80) 1,1,1,2-Tetrachloroethane	8.512	131	1439	N.D.	
81) Ethylbenzene	8.518	91	6520	N.D.	
82) m/p-Xylene	8.604	91	9569	0.85 ug/L	95
83) Nonane	8.646	43	1443	0.16 ug/L	79
84) Styrene	8.855	104	2481	N.D.	
85) o-Xylene	8.836	91	4677	N.D.	
86) Cyclohexanone	9.106	55	1184	Below Cal	85
87) Bromoform	8.958	173	1145	0.65 ug/L	89
88) Isopropylbenzene	9.050	105	4995	N.D.	
90) Bromobenzene	9.223	77	3226	N.D.	
91) 1,1,2,2-Tetrachloroethane	9.234	83	3570	N.D.	
92) 1,2,3-Trichloropropane	9.259	110	670	N.D.	
93) trans-1,4-Dichloro-2-b...	9.259	53	704	0.59 ug/L #	43
94) n-Propylbenzene	9.285	91	6290	N.D.	
95) 2-Chlorotoluene	9.332	91	4195	N.D.	

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110320.D
Acq On : 03 Nov 2020 04:36 pm
Operator : MF
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 04 08:51:51 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

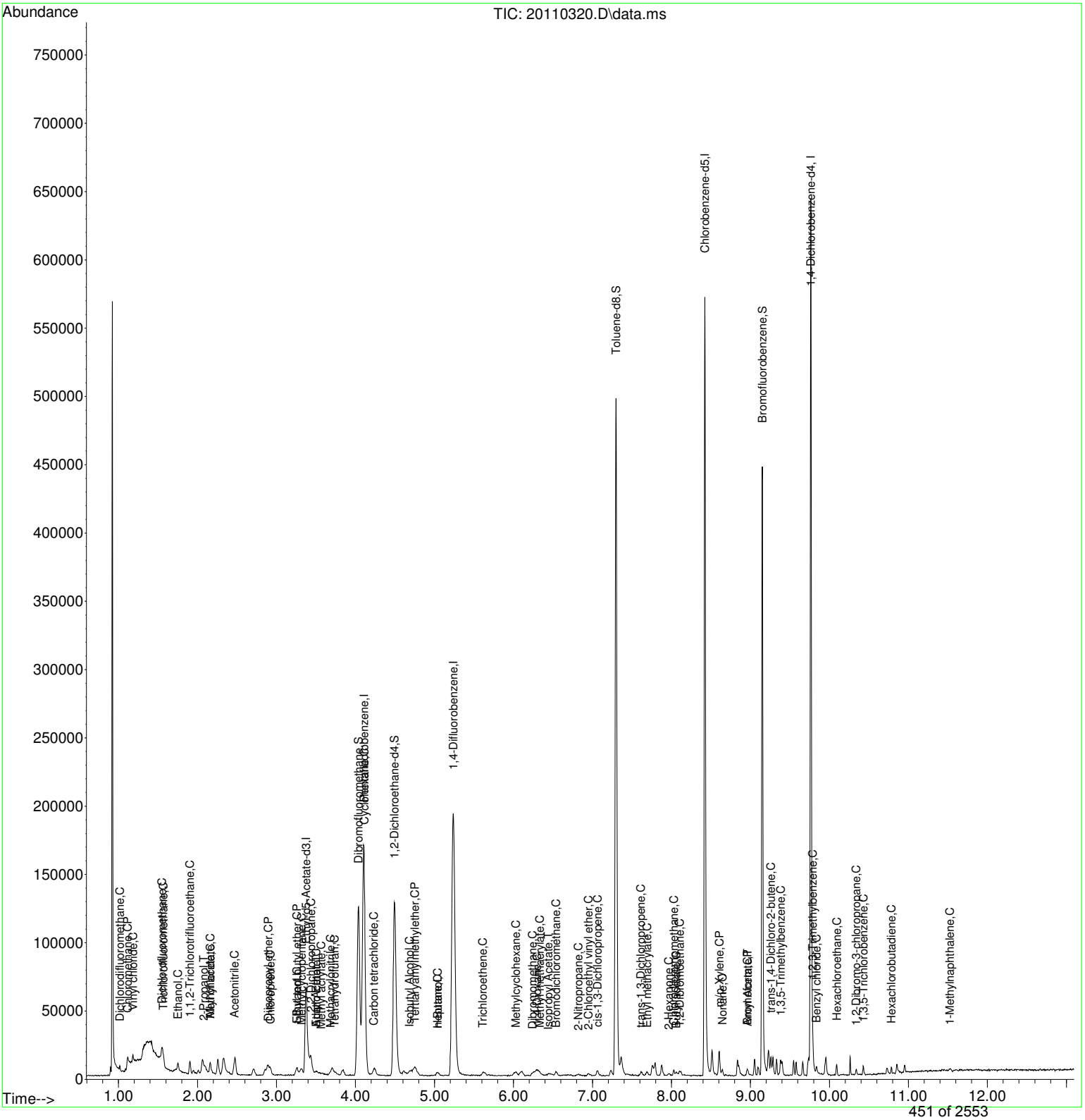
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
96) 4-Chlorotoluene	9.402	91	5355	N.D.	
97) 1,3,5-Trimethylbenzene	9.382	105	3882	0.52 ug/L	99
98) tert-Butylbenzene	9.547	91	2558	N.D.	
99) 1,2,4-Trimethylbenzene	9.580	105	3589	N.D.	
100) sec-Butylbenzene	9.661	105	4701	N.D.	
102) 1,3-Dichlorobenzene	9.731	146	2712	N.D.	
103) p-Isopropyltoluene	9.739	119	3540	N.D.	
104) 1,4-Dichlorobenzene	9.731	146	2712	N.D.	
105) 1,2,3-Trimethylbenzene	9.787	105	4638	0.43 ug/L	98
106) Benzyl chloride	9.837	91	3083	0.55 ug/L	91
107) 1,2-Dichlorobenzene	9.959	146	2893	N.D.	
108) n-Butylbenzene	9.945	91	3158	N.D.	
109) Hexachloroethane	10.093	117	941	0.62 ug/L	85
110) 1,2-Dibromo-3-chloropr...	10.339	157	660	0.62 ug/L	89
111) 1,3,5-Trichlorobenzene	10.431	180	1574	0.37 ug/L	94
112) 1,2,4-Trichlorobenzene	10.955	180	1595	N.D.	
113) Hexachlorobutadiene	10.785	225	776	0.49 ug/L	76
114) Naphthalene	10.855	128	4150	N.D.	
115) 1,2,3-Trichlorobenzene	10.955	180	1595	N.D.	
116) 2-Methylnaphthalene	11.426	142	281	N.D.	
117) 1-Methylnaphthalene	11.521	142	615	0.26 ug/L	75
119) 2-Propanone	1.948	43	2818	Below Cal	69
120) 2-Propanol	2.079	45	16802	15.28 ug/L #	83
121) Acetic Ether	3.504	43	2862	0.47 ug/L #	80
122) Isopropyl Acetate	6.440	61	257	0.36 ug/L #	1
123) Amyl Acetate	8.967	43	2508	0.33 ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20
2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110320.D
Acq On : 03 Nov 2020 04:36 pm
Operator : MF
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 04 08:51:51 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110321.D
Acq On : 03 Nov 2020 05:06 pm
Operator : MF
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 04 08:51:54 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.100	168	138825	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.235	114	221366	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	208645	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	102694	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.370	46	100394	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.034	111	92670	20.22	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 101.10%			
48) 1,2-Dichloroethane-d4	4.491	65	110471	20.98	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 104.90%			
67) Toluene-d8	7.296	98	261132	19.25	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 96.25%			
89) Bromofluorobenzene	9.148	95	97373	19.27	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 96.35%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.019	85	4583	1.58	ug/L	95
3) Chloromethane	1.117	50	7658	1.17	ug/L	85
4) Vinyl chloride	1.181	62	6139	1.31	ug/L	98
5) Bromomethane	1.362	96	1311	2.40	ug/L	87
6) Chloroethane	1.421	64	1276	No Calib	#	
7) Dichlorofluoromethane	1.546	67	10970	1.35	ug/L	89
8) Trichlorofluoromethane	1.571	101	7869	1.42	ug/L	99
9) Ethanol	1.750	45	18164	106.37	ug/L #	20
10) Ethyl ether	1.752	59	4821	1.35	ug/L	94
11) Acrolein	2.355	56	152	No Calib	#	
12) 1,1-Dichloroethene	1.903	61	8305	1.27	ug/L	97
13) 1,1,2-Trichlorotrifluo...	1.903	151	2844	1.20	ug/L	98
14) Methyl iodide	2.006	142	4051	No Calib		
15) Acetone	1.942	43	6271	0.95	ug/L	94
16) Chloroprene	2.921	53	7129	1.19	ug/L	96
17) Carbon disulfide	2.062	76	12668	1.08	ug/L	91
18) Allyl chloride	2.157	41	11179	1.24	ug/L	99
19) Methyl acetate	2.160	43	10875	0.95	ug/L	98
20) Acetonitrile	2.466	41	5329m	1.43	ug/L	
21) Methylene chloride	2.254	49	11399	0.63	ug/L	99
22) trans-1,2-Dichloroethene	2.472	61	8043	1.21	ug/L	98
23) t-Butanol	3.253	59	15965	5.65	ug/L	92
24) Acrylonitrile	2.452	53	3969	1.18	ug/L	98
25) Methyl tert-butyl ether	2.469	73	13847	1.07	ug/L	96
26) Hexane	2.709	57	4395	1.08	ug/L	90
27) 1,1-Dichloroethane	2.851	63	11003	1.32	ug/L	97
28) Diisopropyl ether	2.890	45	20899	1.16	ug/L	87
29) Vinyl acetate	2.873	86	421	1.10	ug/L #	1
30) Ethyl tert butyl ether	3.253	59	15965	1.13	ug/L	98
31) Methylcyclopentane	3.314	56	9106	1.30	ug/L	92
32) 2,2-Dichloropropane	3.431	77	7648	1.41	ug/L	98
33) cis-1,2-Dichloroethene	3.431	61	9820	1.32	ug/L	96
34) 2-Butanone	3.445	43	5428	0.71	ug/L	76
35) Ethyl Acetate	3.490	43	12434m	0.82	ug/L	
36) Methyl acrylate	3.543	55	7594m	1.41	ug/L	

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110321.D
Acq On : 03 Nov 2020 05:06 pm
Operator : MF
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 04 08:51:54 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Propionitrile	4.103	54	631m	1.89	ug/L		
38) Bromochloromethane	3.702	49	6856	1.41	ug/L		96
39) Tetrahydrofuran	3.732	42	5031	1.34	ug/L	#	55
40) Methacrylonitrile	3.685	67	2689	1.43	ug/L	#	77
41) Chloroform	3.838	83	10110	1.32	ug/L		99
42) Cyclohexane	4.109	56	10596	1.36	ug/L	#	72
44) 1,1,1-Trichloroethane	4.022	97	7231	1.31	ug/L		91
46) Carbon tetrachloride	4.232	117	5569	1.27	ug/L		97
47) 1,1-Dichloropropene	4.245	75	6421	1.21	ug/L		99
49) 1,2-Dichloroethane	4.605	62	8266	1.37	ug/L		97
50) Benzene	4.508	78	19535	1.23	ug/L		96
51) Tertiaryamylmethylether	4.753	73	12729	1.07	ug/L	#	59
52) Isobutyl Alcohol	4.672	43	15561	1.04	ug/L	#	80
53) Heptane	5.032	43	4739	1.08	ug/L		69
54) 1,4-Dioxane	6.292	88	16818m	125.90	ug/L		
55) Methylcyclohexane	6.013	83	4470m	1.14	ug/L		
56) n-Butanol	5.037	56	1155	12.60	ug/L	#	57
57) Trichloroethene	5.617	130	4311	1.25	ug/L		98
58) 1,2-Dichloropropane	6.097	63	5921	1.30	ug/L	#	34
59) Dibromomethane	6.239	93	3836	1.28	ug/L		91
60) Methyl methacrylate	6.312	41	6207	1.30	ug/L		97
61) Bromodichloromethane	6.532	83	6260	1.29	ug/L		98
62) 2-Chloroethyl vinyl ether	6.939	43	3081	1.36	ug/L	#	73
63) 2-Nitropropane	6.817	43	2232m	1.21	ug/L		
64) cis-1,3-Dichloropropene	7.056	75	7246	1.24	ug/L		92
66) 4-Methyl-2-pentanone	7.226	43	9919	1.01	ug/L		96
68) Toluene	7.363	91	17321	1.17	ug/L		99
69) trans-1,3-Dichloropropene	7.609	75	6427	1.21	ug/L		95
70) Chloropicrin	0.000		0	N.D.			
71) Ethyl methacrylate	7.681	69	5814	1.25	ug/L		97
72) 1,1,2-Trichloroethane	7.754	97	5130	1.20	ug/L		96
73) Tetrachloroethene	7.790	166	4267	1.09	ug/L		98
74) 1,3-Dichloropropane	7.871	76	8070	1.19	ug/L		100
75) 2-Hexanone	7.952	43	5844m	1.01	ug/L		
76) Chlorodibromomethane	8.027	129	4778	1.18	ug/L		98
77) Butyl acetate	8.052	43	10267	1.13	ug/L		95
78) 1,2-Dibromoethane	8.099	107	5762	1.30	ug/L	#	91
79) Chlorobenzene	8.442	112	11862	1.24	ug/L		81
80) 1,1,1,2-Tetrachloroethane	8.507	131	4205	1.21	ug/L		91
81) Ethylbenzene	8.515	91	17099	1.12	ug/L		99
82) m/p-Xylene	8.601	91	26296	2.26	ug/L		98
83) Nonane	8.643	43	3867	0.79	ug/L		82
84) Styrene	8.850	104	9130	1.14	ug/L		100
85) o-Xylene	8.833	91	13419	1.12	ug/L		98
86) Cyclohexanone	9.103	55	3346	Below Cal			83
87) Bromoform	8.953	173	3258	1.16	ug/L		96
88) Isopropylbenzene	9.050	105	14011	1.11	ug/L		98
90) Bromobenzene	9.223	77	8202	1.19	ug/L		97
91) 1,1,2,2-Tetrachloroethane	9.232	83	10646	1.27	ug/L		98
92) 1,2,3-Trichloropropane	9.259	110	2344	1.35	ug/L		95
93) trans-1,4-Dichloro-2-b...	9.254	53	2258	1.20	ug/L		75
94) n-Propylbenzene	9.285	91	17669	1.09	ug/L		98
95) 2-Chlorotoluene	9.329	91	11934	1.15	ug/L		99

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110321.D
Acq On : 03 Nov 2020 05:06 pm
Operator : MF
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 04 08:51:54 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

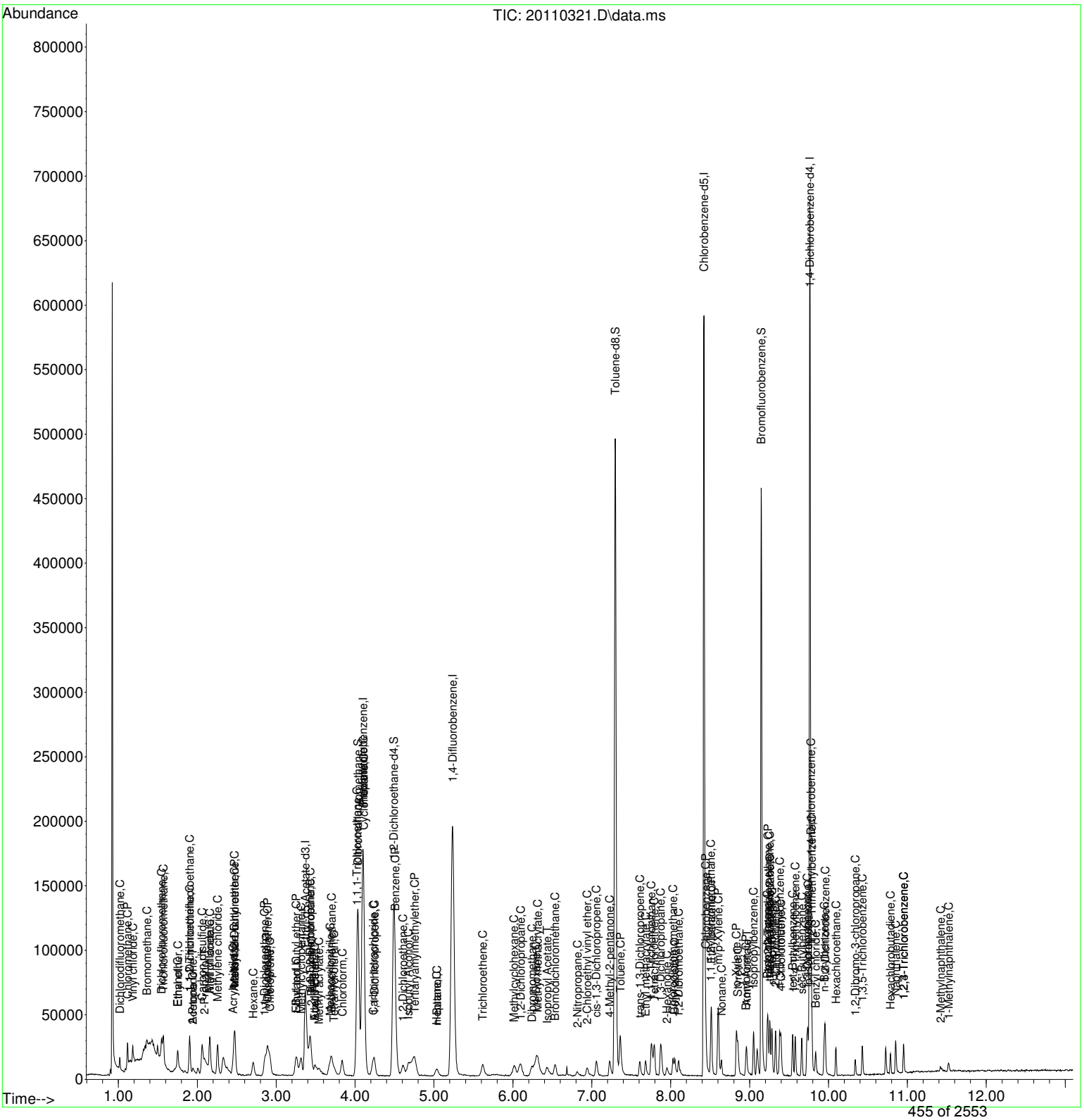
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96) 4-Chlorotoluene	9.399	91	12578	1.09	ug/L		98
97) 1,3,5-Trimethylbenzene	9.382	105	11231	1.19	ug/L		98
98) tert-Butylbenzene	9.547	91	6705	1.12	ug/L		86
99) 1,2,4-Trimethylbenzene	9.577	105	11071	1.08	ug/L		98
100) sec-Butylbenzene	9.661	105	13266	1.12	ug/L		98
102) 1,3-Dichlorobenzene	9.728	146	7767	1.17	ug/L		98
103) p-Isopropyltoluene	9.739	119	9719	1.08	ug/L		98
104) 1,4-Dichlorobenzene	9.778	146	8864	1.23	ug/L		92
105) 1,2,3-Trimethylbenzene	9.786	105	12938	1.16	ug/L		99
106) Benzyl chloride	9.837	91	8979	1.06	ug/L		96
107) 1,2-Dichlorobenzene	9.957	146	8404	1.19	ug/L		99
108) n-Butylbenzene	9.945	91	9836	0.99	ug/L		95
109) Hexachloroethane	10.093	117	2112	1.09	ug/L		95
110) 1,2-Dibromo-3-chloropr...	10.339	157	1877	1.24	ug/L		98
111) 1,3,5-Trichlorobenzene	10.428	180	4892	1.12	ug/L		98
112) 1,2,4-Trichlorobenzene	10.952	180	4520	1.02	ug/L		99
113) Hexachlorobutadiene	10.785	225	2041	1.23	ug/L		91
114) Naphthalene	10.852	128	12766	0.83	ug/L		100
115) 1,2,3-Trichlorobenzene	10.952	180	4520	1.02	ug/L		99
116) 2-Methylnaphthalene	11.421	142	2229	0.57	ug/L		80
117) 1-Methylnaphthalene	11.521	142	3101	0.62	ug/L		89
119) 2-Propanone	1.942	43	6271	0.23	ug/L		94
120) 2-Propanol	2.090	45	37200	26.48	ug/L	#	77
121) Acetic Ether	3.490	43	11783	0.99	ug/L		84
122) Isopropyl Acetate	6.435	61	2235	0.73	ug/L	#	47
123) Amyl Acetate	8.964	43	10265	0.79	ug/L		90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20
2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110321.D
Acq On : 03 Nov 2020 05:06 pm
Operator : MF
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 04 08:51:54 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



455 of 2553

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110322.D
Acq On : 03 Nov 2020 05:23 pm
Operator : MF
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 04 08:51:57 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.103	168	138392	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.238	114	222732	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	206058	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	105003	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.373	46	99536	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.036	111	92036	19.96	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 99.80%			
48) 1,2-Dichloroethane-d4	4.494	65	111161	20.98	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 104.90%			
67) Toluene-d8	7.299	98	266329	19.87	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 99.35%			
89) Bromofluorobenzene	9.148	95	98714	19.78	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 98.90%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.016	85	7424	2.57	ug/L	98
3) Chloromethane	1.117	50	16291	2.26	ug/L	99
4) Vinyl chloride	1.181	62	11239	2.41	ug/L	97
5) Bromomethane	1.356	96	1471	2.85	ug/L #	89
6) Chloroethane	1.418	64	3857	No Calib	#	
7) Dichlorofluoromethane	1.546	67	21220	2.61	ug/L	92
8) Trichlorofluoromethane	1.571	101	13562	2.45	ug/L	88
9) Ethanol	1.750	45	33252m	206.89	ug/L	
10) Ethyl ether	1.752	59	9201	2.58	ug/L	94
11) Acrolein	2.360	56	865	No Calib		
12) 1,1-Dichloroethene	1.903	61	15345	2.36	ug/L	96
13) 1,1,2-Trichlorotrifluo...	1.906	151	5453	2.31	ug/L	96
14) Methyl iodide	2.009	142	6235	No Calib		
15) Acetone	1.942	43	9052	1.70	ug/L	99
16) Chloroprene	2.924	53	13879	2.33	ug/L	96
17) Carbon disulfide	2.062	76	24435	2.09	ug/L	100
18) Allyl chloride	2.160	41	18894	2.16	ug/L	98
19) Methyl acetate	2.157	43	19297	1.91	ug/L	94
20) Acetonitrile	2.466	41	8358	2.32	ug/L #	95
21) Methylene chloride	2.257	49	20269	1.76	ug/L	99
22) trans-1,2-Dichloroethene	2.475	61	15109	2.28	ug/L	98
23) t-Butanol	3.258	59	29496	10.48	ug/L	93
24) Acrylonitrile	2.447	53	8109	2.41	ug/L	93
25) Methyl tert-butyl ether	2.469	73	27425	2.13	ug/L	100
26) Hexane	2.712	57	8741	2.15	ug/L	96
27) 1,1-Dichloroethane	2.854	63	20976	2.52	ug/L	99
28) Diisopropyl ether	2.893	45	38499	2.15	ug/L	97
29) Vinyl acetate	2.871	86	1158	2.11	ug/L #	7
30) Ethyl tert butyl ether	3.258	59	29496	2.10	ug/L	98
31) Methylcyclopentane	3.320	56	18076	2.60	ug/L	95
32) 2,2-Dichloropropane	3.434	77	14364	2.57	ug/L	96
33) cis-1,2-Dichloroethene	3.431	61	18269	2.47	ug/L	99
34) 2-Butanone	3.445	43	11062	1.70	ug/L	97
35) Ethyl Acetate	3.495	43	27569m	2.19	ug/L	
36) Methyl acrylate	3.543	55	16121	2.52	ug/L	96

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110322.D
Acq On : 03 Nov 2020 05:23 pm
Operator : MF
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 04 08:51:57 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Propionitrile	4.114	54	1242	3.24	ug/L	#	1
38) Bromochloromethane	3.705	49	12750	2.62	ug/L		97
39) Tetrahydrofuran	3.735	42	8159	2.21	ug/L		93
40) Methacrylonitrile	3.671	67	6507	2.62	ug/L		91
41) Chloroform	3.838	83	20142	2.64	ug/L		97
42) Cyclohexane	4.112	56	16239	2.31	ug/L		83
44) 1,1,1-Trichloroethane	4.028	97	13279	2.38	ug/L		95
46) Carbon tetrachloride	4.229	117	11271	2.33	ug/L		93
47) 1,1-Dichloropropene	4.245	75	12538	2.36	ug/L		99
49) 1,2-Dichloroethane	4.611	62	16040	2.65	ug/L		99
50) Benzene	4.510	78	38744	2.43	ug/L		96
51) Tertiaryamylmethylether	4.759	73	24327	2.02	ug/L	#	95
52) Isobutyl Alcohol	4.681	43	29832	1.98	ug/L		89
53) Heptane	5.037	43	8549	2.02	ug/L		84
54) 1,4-Dioxane	6.287	88	32411m	227.26	ug/L		
55) Methylcyclohexane	6.025	83	8994	2.28	ug/L		84
56) n-Butanol	5.046	56	2461m	23.10	ug/L		
57) Trichloroethene	5.620	130	8441	2.30	ug/L		94
58) 1,2-Dichloropropane	6.094	63	12167	2.65	ug/L		98
59) Dibromomethane	6.242	93	8402	2.58	ug/L		92
60) Methyl methacrylate	6.301	41	12701	2.26	ug/L		96
61) Bromodichloromethane	6.538	83	13293	2.48	ug/L		94
62) 2-Chloroethyl vinyl ether	6.934	43	5460m	2.19	ug/L		
63) 2-Nitropropane	6.817	43	4005	2.20	ug/L	#	95
64) cis-1,3-Dichloropropene	7.059	75	14098	2.19	ug/L		100
66) 4-Methyl-2-pentanone	7.229	43	18296	1.89	ug/L		99
68) Toluene	7.363	91	34695	2.37	ug/L		98
69) trans-1,3-Dichloropropene	7.609	75	11873	2.01	ug/L		92
70) Chloropicrin	7.597	117	771	No Calib			
71) Ethyl methacrylate	7.678	69	11689	2.15	ug/L		91
72) 1,1,2-Trichloroethane	7.756	97	10564	2.51	ug/L		97
73) Tetrachloroethene	7.793	166	8459	2.19	ug/L		98
74) 1,3-Dichloropropane	7.874	76	16431	2.45	ug/L		98
75) 2-Hexanone	7.946	43	13318	1.95	ug/L		98
76) Chlorodibromomethane	8.030	129	10147	2.24	ug/L		98
77) Butyl acetate	8.049	43	21727	2.00	ug/L		99
78) 1,2-Dibromoethane	8.099	107	11093	2.39	ug/L		98
79) Chlorobenzene	8.442	112	22810	2.41	ug/L		95
80) 1,1,1,2-Tetrachloroethane	8.509	131	8113	2.36	ug/L		96
81) Ethylbenzene	8.515	91	35056	2.33	ug/L		100
82) m/p-Xylene	8.601	91	51213	4.45	ug/L		97
83) Nonane	8.643	43	6240	1.43	ug/L		95
84) Styrene	8.850	104	18735	2.22	ug/L		97
85) o-Xylene	8.833	91	26481	2.23	ug/L		97
86) Cyclohexanone	9.101	55	7655	3.08	ug/L		93
87) Bromoform	8.953	173	6948	2.10	ug/L		97
88) Isopropylbenzene	9.050	105	28326	2.28	ug/L		99
90) Bromobenzene	9.223	77	16269	2.38	ug/L		99
91) 1,1,2,2-Tetrachloroethane	9.232	83	20629	2.50	ug/L		97
92) 1,2,3-Trichloropropane	9.257	110	4078	2.38	ug/L		95
93) trans-1,4-Dichloro-2-b...	9.251	53	5176	2.38	ug/L		82
94) n-Propylbenzene	9.282	91	36094	2.25	ug/L		99
95) 2-Chlorotoluene	9.329	91	23409	2.28	ug/L		99

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110322.D
Acq On : 03 Nov 2020 05:23 pm
Operator : MF
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 04 08:51:57 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96) 4-Chlorotoluene	9.396	91	26220	2.30	ug/L		98
97) 1,3,5-Trimethylbenzene	9.382	105	22515	2.25	ug/L		97
98) tert-Butylbenzene	9.547	91	13941	2.35	ug/L		94
99) 1,2,4-Trimethylbenzene	9.577	105	22469	2.22	ug/L		99
100) sec-Butylbenzene	9.661	105	25779	2.20	ug/L		96
102) 1,3-Dichlorobenzene	9.725	146	15360	2.26	ug/L		97
103) p-Isopropyltoluene	9.739	119	19816	2.15	ug/L		96
104) 1,4-Dichlorobenzene	9.778	146	17396	2.37	ug/L		96
105) 1,2,3-Trimethylbenzene	9.787	105	25936	2.27	ug/L		100
106) Benzyl chloride	9.834	91	18433	1.86	ug/L		97
107) 1,2-Dichlorobenzene	9.957	146	16695	2.32	ug/L		97
108) n-Butylbenzene	9.945	91	19617	1.94	ug/L		98
109) Hexachloroethane	10.093	117	4449	2.02	ug/L		97
110) 1,2-Dibromo-3-chloropr...	10.339	157	3903	2.26	ug/L		98
111) 1,3,5-Trichlorobenzene	10.428	180	9478	2.12	ug/L		99
112) 1,2,4-Trichlorobenzene	10.952	180	9751	2.14	ug/L		92
113) Hexachlorobutadiene	10.785	225	3806	2.25	ug/L		99
114) Naphthalene	10.852	128	27216	1.72	ug/L		100
115) 1,2,3-Trichlorobenzene	10.952	180	9751	2.14	ug/L		92
116) 2-Methylnaphthalene	11.418	142	4653	0.92	ug/L		98
117) 1-Methylnaphthalene	11.518	142	5870	1.00	ug/L		91
119) 2-Propanone	1.942	43	9052	0.81	ug/L		99
120) 2-Propanol	2.076	45	63318	41.25	ug/L	#	97
121) Acetic Ether	3.495	43	28755m	2.01	ug/L		
122) Isopropyl Acetate	6.429	61	6226	1.47	ug/L	#	90
123) Amyl Acetate	8.961	43	20076	1.38	ug/L		95

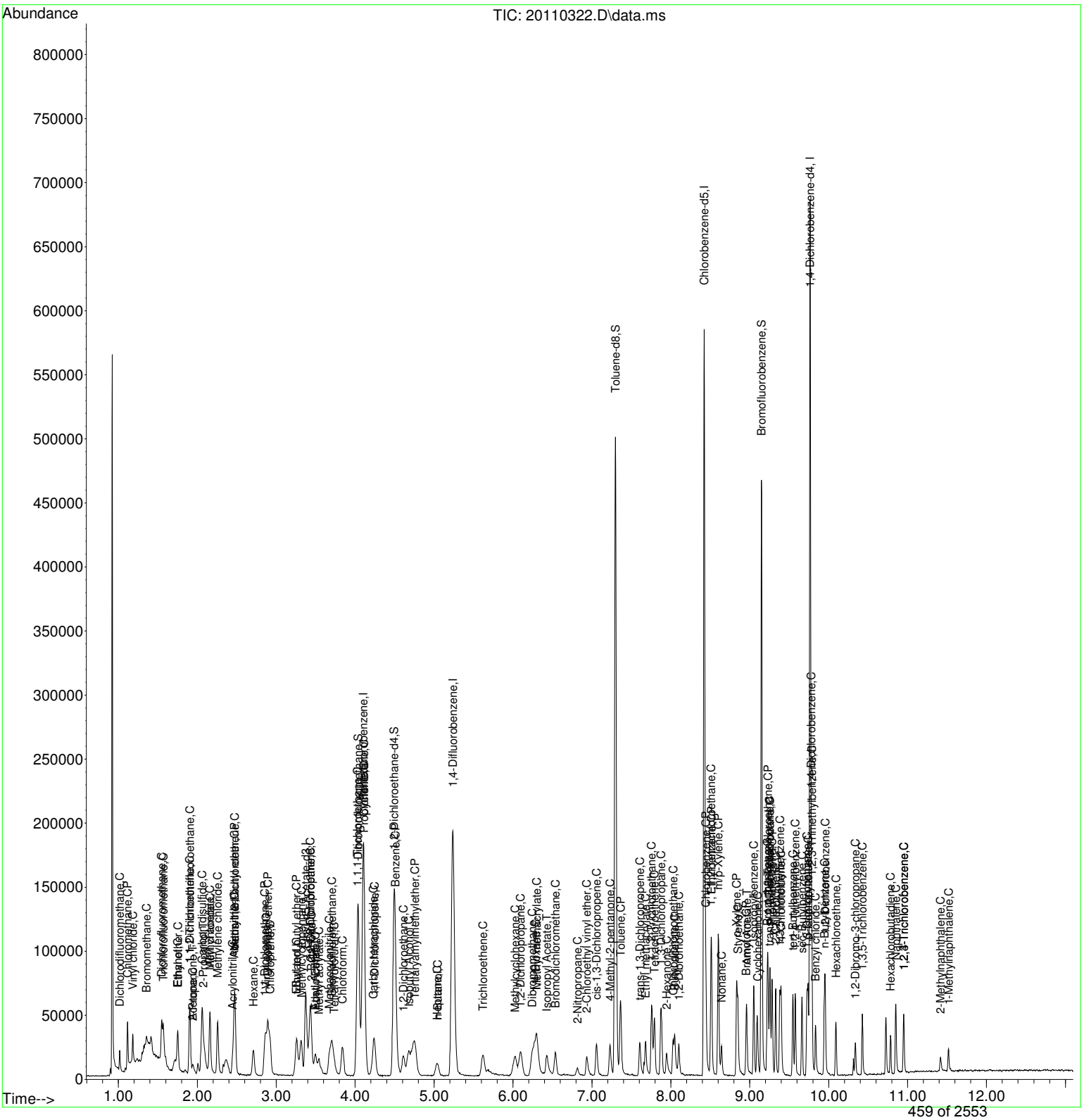
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110322.D
Acq On : 03 Nov 2020 05:23 pm
Operator : MF
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 04 08:51:57 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110323.D
Acq On : 03 Nov 2020 05:39 pm
Operator : MF
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 04 08:52:00 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.106	168	140233	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.238	114	223948	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	207140	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	107924	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.373	46	105398	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.039	111	93003	20.06	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 100.30%			
48) 1,2-Dichloroethane-d4	4.494	65	109748	20.60	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 103.00%			
67) Toluene-d8	7.299	98	265695	19.72	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 98.60%			
89) Bromofluorobenzene	9.148	95	102253	20.39	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 101.95%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.016	85	18323	6.27	ug/L	97
3) Chloromethane	1.117	50	44755	5.74	ug/L	98
4) Vinyl chloride	1.181	62	29317	6.21	ug/L	95
5) Bromomethane	1.356	96	3168	7.49	ug/L	92
6) Chloroethane	1.418	64	8928	No Calib	#	
7) Dichlorofluoromethane	1.546	67	51063	6.20	ug/L	99
8) Trichlorofluoromethane	1.568	101	35599	6.35	ug/L	97
9) Ethanol	1.750	45	77904	470.32	ug/L #	36
10) Ethyl ether	1.752	59	20971	5.80	ug/L	98
11) Acrolein	2.369	56	2255	No Calib		
12) 1,1-Dichloroethene	1.903	61	37737	5.73	ug/L	98
13) 1,1,2-Trichlorotrifluo...	1.903	151	13915	5.82	ug/L	96
14) Methyl iodide	2.006	142	12984	No Calib		
15) Acetone	1.942	43	21657	5.04	ug/L	99
16) Chloroprene	2.924	53	34458	5.71	ug/L	98
17) Carbon disulfide	2.062	76	60950	5.15	ug/L	100
18) Allyl chloride	2.160	41	50281	5.76	ug/L	98
19) Methyl acetate	2.157	43	48001	5.13	ug/L	99
20) Acetonitrile	2.469	41	19427	5.49	ug/L	97
21) Methylene chloride	2.257	49	48382	5.26	ug/L	99
22) trans-1,2-Dichloroethene	2.475	61	37759	5.63	ug/L	100
23) t-Butanol	3.258	59	73559	25.79	ug/L	97
24) Acrylonitrile	2.444	53	20853	6.12	ug/L	98
25) Methyl tert-butyl ether	2.472	73	67037	5.15	ug/L	97
26) Hexane	2.709	57	21445	5.19	ug/L	94
27) 1,1-Dichloroethane	2.854	63	50627	5.99	ug/L	100
28) Diisopropyl ether	2.893	45	94290	5.20	ug/L	99
29) Vinyl acetate	2.865	86	3740	5.57	ug/L #	90
30) Ethyl tert butyl ether	3.258	59	73559	5.16	ug/L	99
31) Methylcyclopentane	3.314	56	45783	6.49	ug/L	99
32) 2,2-Dichloropropane	3.431	77	34410	5.92	ug/L	99
33) cis-1,2-Dichloroethene	3.431	61	44825	5.98	ug/L	99
34) 2-Butanone	3.434	43	29399	4.85	ug/L	99
35) Ethyl Acetate	3.487	43	69006m	5.86	ug/L	
36) Methyl acrylate	3.537	55	41433	5.74	ug/L	99

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110323.D
Acq On : 03 Nov 2020 05:39 pm
Operator : MF
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 04 08:52:00 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) Propionitrile	4.112	54	3173	7.40	ug/L #	84
38) Bromochloromethane	3.702	49	31113	6.31	ug/L	98
39) Tetrahydrofuran	3.730	42	24744m	6.67	ug/L	
40) Methacrylonitrile	3.668	67	17575	6.00	ug/L	98
41) Chloroform	3.838	83	49626	6.41	ug/L	99
42) Cyclohexane	4.112	56	36601	5.63	ug/L	93
44) 1,1,1-Trichloroethane	4.025	97	34567	6.17	ug/L	99
46) Carbon tetrachloride	4.229	117	30269	5.83	ug/L	97
47) 1,1-Dichloropropene	4.243	75	31540	5.90	ug/L	98
49) 1,2-Dichloroethane	4.608	62	37660	6.18	ug/L	97
50) Benzene	4.510	78	93980	5.87	ug/L	99
51) Tertiaryamylmethylether	4.756	73	62696	5.19	ug/L #	96
52) Isobutyl Alcohol	4.675	43	79042	5.21	ug/L	96
53) Heptane	5.035	43	18738	4.50	ug/L	84
54) 1,4-Dioxane	6.278	88	84642	566.03	ug/L	99
55) Methylcyclohexane	6.027	83	22865	5.75	ug/L #	85
56) n-Butanol	5.029	56	6193m	52.99	ug/L	
57) Trichloroethene	5.617	130	21657	5.63	ug/L	97
58) 1,2-Dichloropropane	6.100	63	29431	6.37	ug/L	98
59) Dibromomethane	6.239	93	20770	6.07	ug/L	94
60) Methyl methacrylate	6.301	41	35933	5.70	ug/L	98
61) Bromodichloromethane	6.538	83	33394	5.90	ug/L	98
62) 2-Chloroethyl vinyl ether	6.931	43	14191	5.23	ug/L	97
63) 2-Nitropropane	6.814	43	10401	5.71	ug/L	96
64) cis-1,3-Dichloropropene	7.056	75	37850	5.47	ug/L	100
66) 4-Methyl-2-pentanone	7.227	43	50636	5.20	ug/L	100
68) Toluene	7.360	91	86290	5.86	ug/L	99
69) trans-1,3-Dichloropropene	7.603	75	34801	5.28	ug/L	99
70) Chloropicrin	7.595	117	5547	No Calib		
71) Ethyl methacrylate	7.678	69	32011	5.17	ug/L	96
72) 1,1,2-Trichloroethane	7.754	97	25770	6.08	ug/L	98
73) Tetrachloroethene	7.793	166	22187	5.73	ug/L	99
74) 1,3-Dichloropropane	7.871	76	41706	6.18	ug/L	100
75) 2-Hexanone	7.940	43	38786	5.12	ug/L	97
76) Chlorodibromomethane	8.030	129	26636	5.44	ug/L	98
77) Butyl acetate	8.046	43	63971	5.14	ug/L	99
78) 1,2-Dibromoethane	8.099	107	28767	5.93	ug/L	97
79) Chlorobenzene	8.442	112	57445	6.04	ug/L	98
80) 1,1,1,2-Tetrachloroethane	8.509	131	20654	5.97	ug/L	96
81) Ethylbenzene	8.515	91	89945	5.96	ug/L	98
82) m/p-Xylene	8.601	91	135751	11.73	ug/L	100
83) Nonane	8.643	43	17451	4.40	ug/L	92
84) Styrene	8.850	104	49953	5.64	ug/L	96
85) o-Xylene	8.833	91	71479	5.98	ug/L	97
86) Cyclohexanone	9.101	55	20190	27.73	ug/L	98
87) Bromoform	8.953	173	18706	5.04	ug/L	99
88) Isopropylbenzene	9.050	105	74498	5.96	ug/L	100
90) Bromobenzene	9.223	77	39848	5.81	ug/L	99
91) 1,1,2,2-Tetrachloroethane	9.232	83	52602	6.34	ug/L	99
92) 1,2,3-Trichloropropane	9.257	110	10845	6.30	ug/L	98
93) trans-1,4-Dichloro-2-b...	9.251	53	14627	6.16	ug/L	81
94) n-Propylbenzene	9.282	91	96053	5.96	ug/L	100
95) 2-Chlorotoluene	9.329	91	60450	5.87	ug/L	100

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110323.D
Acq On : 03 Nov 2020 05:39 pm
Operator : MF
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 04 08:52:00 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) 4-Chlorotoluene	9.396	91	70425	6.15	ug/L	97
97) 1,3,5-Trimethylbenzene	9.382	105	58659	5.59	ug/L	99
98) tert-Butylbenzene	9.547	91	34218	5.74	ug/L	97
99) 1,2,4-Trimethylbenzene	9.577	105	59205	5.81	ug/L	98
100) sec-Butylbenzene	9.661	105	67289	5.72	ug/L	99
102) 1,3-Dichlorobenzene	9.725	146	39705	5.69	ug/L	99
103) p-Isopropyltoluene	9.739	119	53672	5.67	ug/L	98
104) 1,4-Dichlorobenzene	9.778	146	44103	5.84	ug/L	97
105) 1,2,3-Trimethylbenzene	9.787	105	66539	5.67	ug/L	99
106) Benzyl chloride	9.834	91	52468	4.67	ug/L	99
107) 1,2-Dichlorobenzene	9.957	146	41623	5.62	ug/L	99
108) n-Butylbenzene	9.943	91	52596	5.06	ug/L	100
109) Hexachloroethane	10.093	117	12274	5.06	ug/L	97
110) 1,2-Dibromo-3-chloropr...	10.339	157	10730	5.62	ug/L	98
111) 1,3,5-Trichlorobenzene	10.428	180	25487	5.54	ug/L	98
112) 1,2,4-Trichlorobenzene	10.952	180	24071	5.15	ug/L	99
113) Hexachlorobutadiene	10.785	225	9353	5.37	ug/L	95
114) Naphthalene	10.849	128	81754	5.03	ug/L	100
115) 1,2,3-Trichlorobenzene	10.952	180	24071	5.15	ug/L	99
116) 2-Methylnaphthalene	11.418	142	17534	2.71	ug/L	99
117) 1-Methylnaphthalene	11.518	142	22204	3.25	ug/L	95
119) 2-Propanone	1.942	43	21657	3.12	ug/L	99
120) 2-Propanol	2.073	45	156645	88.58	ug/L #	95
121) Acetic Ether	3.487	43	63773	3.88	ug/L	96
122) Isopropyl Acetate	6.423	61	18330	3.53	ug/L	95
123) Amyl Acetate	8.958	43	57224	3.39	ug/L	98

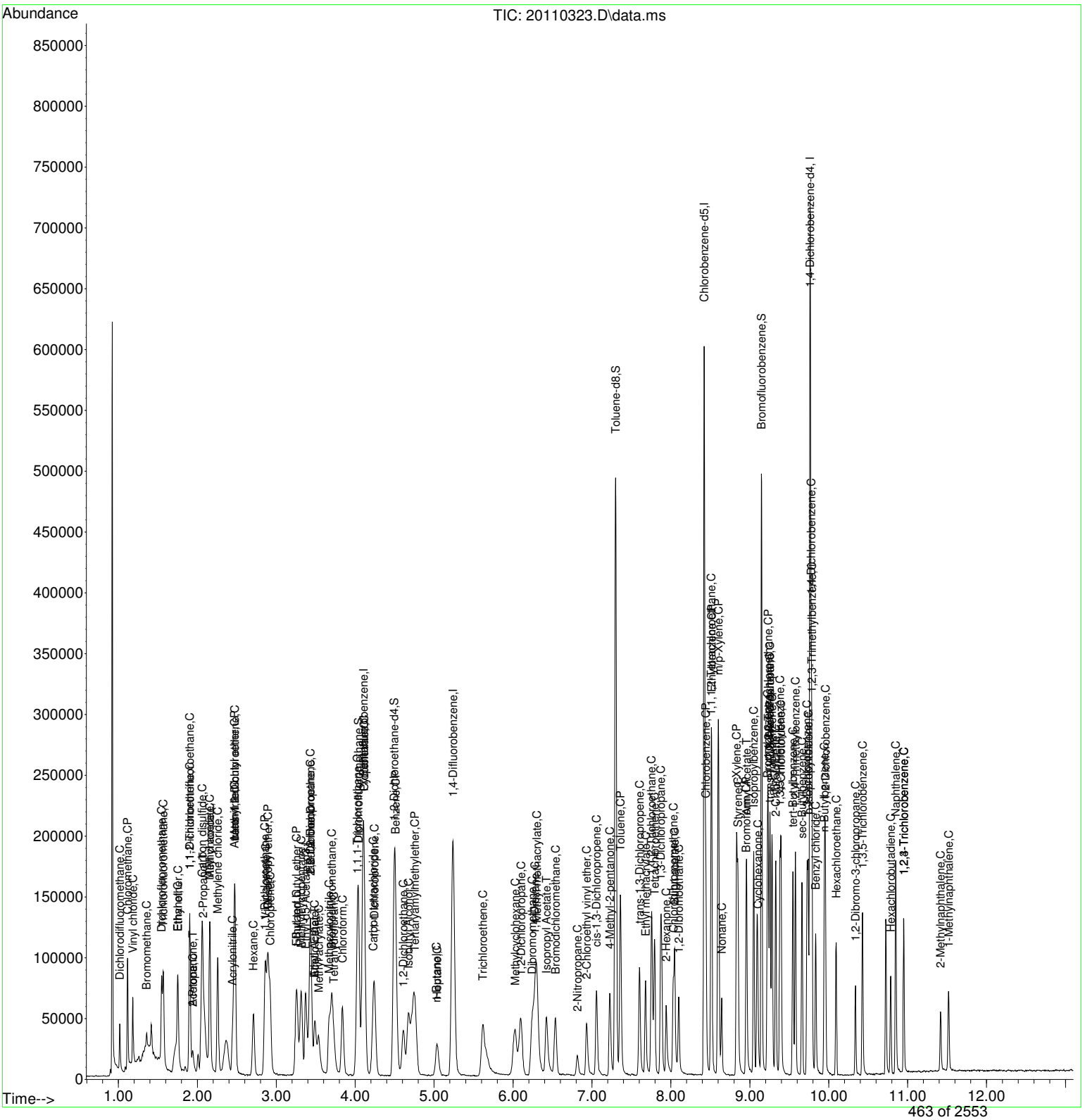
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110323.D
Acq On : 03 Nov 2020 05:39 pm
Operator : MF
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 04 08:52:00 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110324.D
Acq On : 03 Nov 2020 05:56 pm
Operator : MF
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 04 08:52:03 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.103	168	146120	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.238	114	230522	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	216019	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	114518	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.373	46	109664	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.039	111	98736	20.69	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 103.45%			
48) 1,2-Dichloroethane-d4	4.494	65	110256	20.11	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 100.55%			
67) Toluene-d8	7.299	98	282612	20.12	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.60%			
89) Bromofluorobenzene	9.148	95	107207	20.50	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 102.50%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.016	85	73494	24.12	ug/L	99
3) Chloromethane	1.114	50	219236	26.18	ug/L	99
4) Vinyl chloride	1.181	62	112769	22.91	ug/L	97
5) Bromomethane	1.356	96	7562	19.14	ug/L	96
6) Chloroethane	1.415	64	38986	No Calib		
7) Dichlorofluoromethane	1.546	67	214532	25.01	ug/L	99
8) Trichlorofluoromethane	1.568	101	147565	25.27	ug/L	99
9) Ethanol	1.750	45	301008m	1434.09	ug/L	
10) Ethyl ether	1.752	59	89186	23.69	ug/L	98
11) Acrolein	2.363	56	7888	No Calib	#	
12) 1,1-Dichloroethene	1.903	61	159355	23.23	ug/L	98
13) 1,1,2-Trichlorotrifluo...	1.906	151	59097	23.71	ug/L	97
14) Methyl iodide	2.009	142	18813	No Calib		
15) Acetone	1.939	43	84565	20.93	ug/L	97
16) Chloroprene	2.921	53	148703	23.64	ug/L	100
17) Carbon disulfide	2.062	76	270843	21.95	ug/L	100
18) Allyl chloride	2.160	41	218816	23.75	ug/L	98
19) Methyl acetate	2.154	43	195606	20.91	ug/L	100
20) Acetonitrile	2.472	41	76398	21.29	ug/L	99
21) Methylene chloride	2.257	49	199572	23.26	ug/L	98
22) trans-1,2-Dichloroethene	2.475	61	163850	23.45	ug/L	98
23) t-Butanol	3.258	59	292956	98.56	ug/L	97
24) Acrylonitrile	2.441	53	89835	25.29	ug/L	98
25) Methyl tert-butyl ether	2.469	73	268211	19.76	ug/L	99
26) Hexane	2.709	57	92872	21.59	ug/L	100
27) 1,1-Dichloroethane	2.854	63	210894	23.96	ug/L	99
28) Diisopropyl ether	2.893	45	382748	20.25	ug/L	98
29) Vinyl acetate	2.862	86	14741	19.60	ug/L #	77
30) Ethyl tert butyl ether	3.258	59	292956	19.71	ug/L	99
31) Methylcyclopentane	3.314	56	199631	27.15	ug/L	100
32) 2,2-Dichloropropane	3.431	77	144284	23.30	ug/L	98
33) cis-1,2-Dichloroethene	3.428	61	185143	23.71	ug/L	99
34) 2-Butanone	3.431	43	128312	21.08	ug/L	99
35) Ethyl Acetate	3.484	43	254697	21.52	ug/L	99
36) Methyl acrylate	3.532	55	184662	23.17	ug/L	99

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110324.D
Acq On : 03 Nov 2020 05:56 pm
Operator : MF
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 04 08:52:03 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) Propionitrile	4.112	54	12674	26.95	ug/L #	83
38) Bromochloromethane	3.702	49	121005	23.56	ug/L	98
39) Tetrahydrofuran	3.724	42	93947m	24.37	ug/L	
40) Methacrylonitrile	3.668	67	76618	23.22	ug/L	98
41) Chloroform	3.836	83	206067	25.54	ug/L	99
42) Cyclohexane	4.112	56	145359	22.62	ug/L	98
44) 1,1,1-Trichloroethane	4.025	97	147598	25.59	ug/L	99
46) Carbon tetrachloride	4.229	117	138164	25.06	ug/L	100
47) 1,1-Dichloropropene	4.243	75	136572	24.80	ug/L	99
49) 1,2-Dichloroethane	4.605	62	158589	25.29	ug/L	97
50) Benzene	4.510	78	386193	23.42	ug/L	99
51) Tertiaryamylmethylether	4.753	73	255495	20.55	ug/L #	98
52) Isobutyl Alcohol	4.669	43	338862	21.71	ug/L	100
53) Heptane	5.037	43	88057	20.89	ug/L	99
54) 1,4-Dioxane	6.276	88	353995	2253.30	ug/L	100
55) Methylcyclohexane	6.022	83	103831	25.38	ug/L	99
56) n-Butanol	5.035	56	27317	216.54	ug/L	98
57) Trichloroethene	5.615	130	91498	22.65	ug/L	98
58) 1,2-Dichloropropane	6.094	63	122123	25.67	ug/L	97
59) Dibromomethane	6.234	93	87347	24.24	ug/L	99
60) Methyl methacrylate	6.295	41	164488	24.11	ug/L	99
61) Bromodichloromethane	6.535	83	141510	23.63	ug/L	99
62) 2-Chloroethyl vinyl ether	6.928	43	68442	23.50	ug/L	99
63) 2-Nitropropane	6.811	43	51678	25.91	ug/L	98
64) cis-1,3-Dichloropropene	7.054	75	169851	23.11	ug/L	99
66) 4-Methyl-2-pentanone	7.224	43	220737	21.75	ug/L	98
68) Toluene	7.360	91	362996	23.62	ug/L	99
69) trans-1,3-Dichloropropene	7.600	75	159810	22.25	ug/L	99
70) Chloropicrin	7.595	117	27745	No Calib		
71) Ethyl methacrylate	7.676	69	158380	23.07	ug/L	99
72) 1,1,2-Trichloroethane	7.754	97	108430	24.53	ug/L	99
73) Tetrachloroethene	7.793	166	98835	24.46	ug/L	99
74) 1,3-Dichloropropane	7.871	76	173635	24.69	ug/L	100
75) 2-Hexanone	7.938	43	178575	21.62	ug/L	99
76) Chlorodibromomethane	8.027	129	122901	23.22	ug/L	99
77) Butyl acetate	8.044	43	295999	21.54	ug/L	98
78) 1,2-Dibromoethane	8.099	107	125426	24.27	ug/L	99
79) Chlorobenzene	8.442	112	233477	23.55	ug/L	99
80) 1,1,1,2-Tetrachloroethane	8.509	131	90183	24.98	ug/L	99
81) Ethylbenzene	8.515	91	387378	24.61	ug/L	99
82) m/p-Xylene	8.599	91	605733	50.19	ug/L	99
83) Nonane	8.643	43	70791	17.77	ug/L	97
84) Styrene	8.847	104	227219	24.10	ug/L	100
85) o-Xylene	8.833	91	311548	25.00	ug/L	100
86) Cyclohexanone	9.098	55	82159	137.46	ug/L	97
87) Bromoform	8.953	173	91922	22.42	ug/L	100
88) Isopropylbenzene	9.050	105	320960	24.61	ug/L	99
90) Bromobenzene	9.220	77	173050	24.20	ug/L	99
91) 1,1,2,2-Tetrachloroethane	9.232	83	219614	25.37	ug/L	99
92) 1,2,3-Trichloropropane	9.257	110	46190	25.73	ug/L	96
93) trans-1,4-Dichloro-2-b...	9.248	53	61056	23.75	ug/L	96
94) n-Propylbenzene	9.282	91	424836	25.27	ug/L	100
95) 2-Chlorotoluene	9.326	91	263896	24.57	ug/L	100

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110324.D
Acq On : 03 Nov 2020 05:56 pm
Operator : MF
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 04 08:52:03 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
96) 4-Chlorotoluene	9.393	91	302271	25.30 ug/L	99
97) 1,3,5-Trimethylbenzene	9.379	105	262731	23.49 ug/L	99
98) tert-Butylbenzene	9.547	91	150162	24.17 ug/L	98
99) 1,2,4-Trimethylbenzene	9.577	105	265897	25.04 ug/L	99
100) sec-Butylbenzene	9.661	105	303560	24.76 ug/L	99
102) 1,3-Dichlorobenzene	9.722	146	172067	23.23 ug/L	100
103) p-Isopropyltoluene	9.739	119	241282	24.03 ug/L	100
104) 1,4-Dichlorobenzene	9.775	146	182718	22.81 ug/L	99
105) 1,2,3-Trimethylbenzene	9.787	105	295705	23.77 ug/L	99
106) Benzyl chloride	9.831	91	258491	20.68 ug/L	99
107) 1,2-Dichlorobenzene	9.954	146	179509	22.83 ug/L	100
108) n-Butylbenzene	9.943	91	248862	22.54 ug/L	99
109) Hexachloroethane	10.093	117	56995	21.42 ug/L	100
110) 1,2-Dibromo-3-chloropr...	10.339	157	49419	23.53 ug/L	99
111) 1,3,5-Trichlorobenzene	10.425	180	109270	22.37 ug/L	99
112) 1,2,4-Trichlorobenzene	10.949	180	112848	22.74 ug/L	100
113) Hexachlorobutadiene	10.785	225	39363	21.31 ug/L	99
114) Naphthalene	10.849	128	408209	23.69 ug/L	100
115) 1,2,3-Trichlorobenzene	10.949	180	112848	22.74 ug/L	100
116) 2-Methylnaphthalene	11.415	142	135266	17.55 ug/L	100
117) 1-Methylnaphthalene	11.515	142	148750	19.12 ug/L	100
119) 2-Propanone	1.939	43	84565	14.51 ug/L	97
120) 2-Propanol	2.062	45	674379	349.17 ug/L #	98
121) Acetic Ether	3.484	43	254697	14.18 ug/L	99
122) Isopropyl Acetate	6.418	61	82004	14.18 ug/L	96
123) Amyl Acetate	8.956	43	272553	14.80 ug/L	99

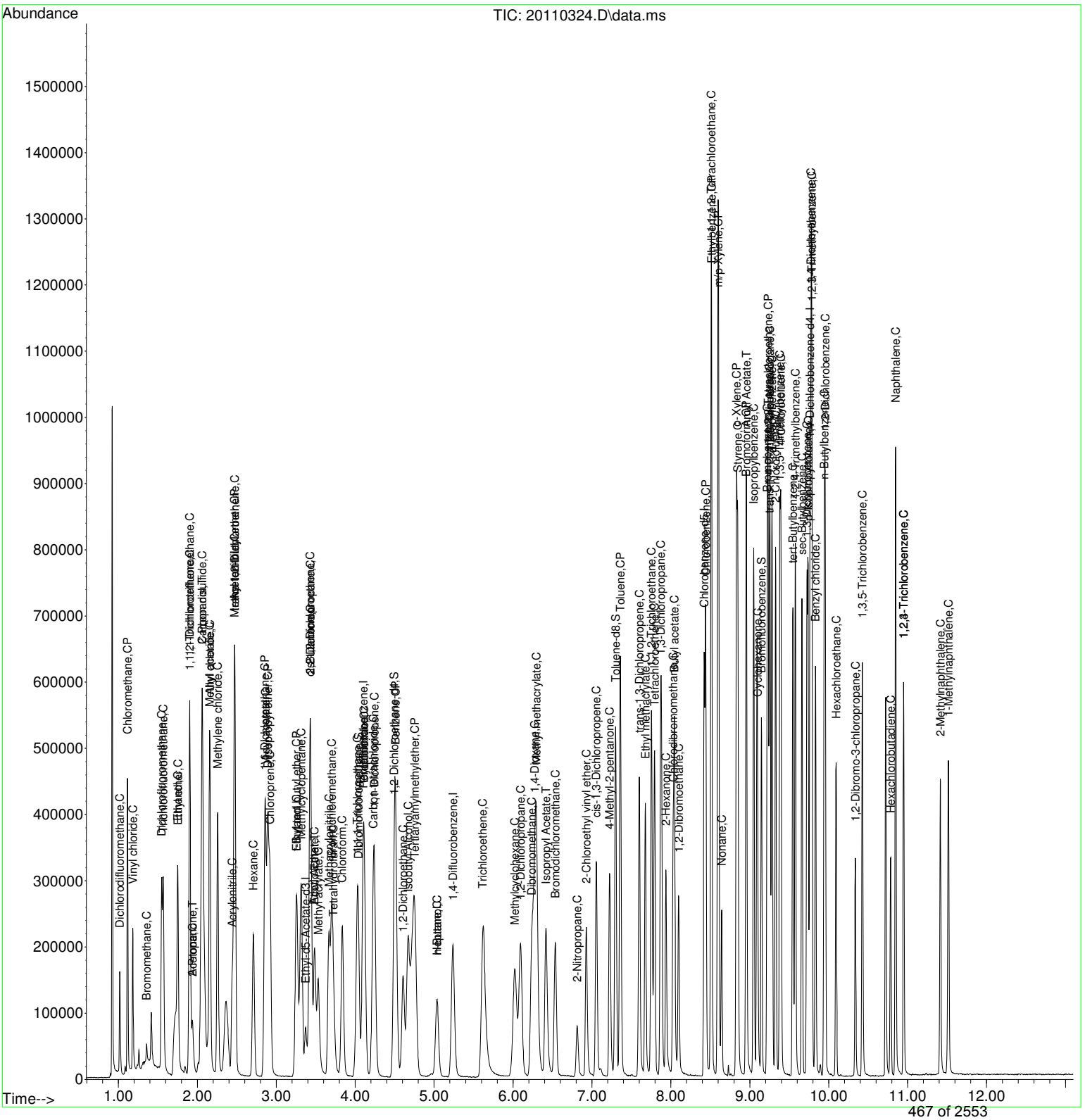
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110324.D
Acq On : 03 Nov 2020 05:56 pm
Operator : MF
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 04 08:52:03 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110325.D
Acq On : 03 Nov 2020 06:12 pm
Operator : MF
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 04 08:52:06 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.106	168	150494	20.00	ug/L		0.00
43) 1,4-Difluorobenzene	5.238	114	240719	20.00	ug/L		0.00
65) Chlorobenzene-d5	8.423	117	225461	20.00	ug/L		0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	116247	20.00	ug/L		0.00
118) Ethyl-d5-Acetate-d3	3.373	46	110675	20.00	ug/L		0.00
System Monitoring Compounds							
45) Dibromofluoromethane	4.039	111	100207	20.11	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 100.55%				
48) 1,2-Dichloroethane-d4	4.494	65	113136	19.76	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 98.80%				
67) Toluene-d8	7.299	98	284039	19.37	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 96.85%				
89) Bromofluorobenzene	9.148	95	109465	20.05	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 100.25%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.016	85	134407	42.83	ug/L		99
3) Chloromethane	1.114	50	394390	45.56	ug/L		100
4) Vinyl chloride	1.181	62	213832	42.18	ug/L		98
5) Bromomethane	1.359	96	15186	40.04	ug/L		99
6) Chloroethane	1.418	64	56788	No Calib			
7) Dichlorofluoromethane	1.546	67	380701	43.09	ug/L		100
8) Trichlorofluoromethane	1.568	101	272479	45.30	ug/L		99
9) Ethanol	1.752	45	589858	2315.81	ug/L	#	28
10) Ethyl ether	1.752	59	169444	43.71	ug/L		99
11) Acrolein	2.374	56	15137	No Calib			
12) 1,1-Dichloroethene	1.903	61	308430	43.65	ug/L		98
13) 1,1,2-Trichlorotrifluo...	1.906	151	111556	43.45	ug/L		99
14) Methyl iodide	2.015	142	31396	No Calib			
15) Acetone	1.939	43	177593m	43.44	ug/L		
16) Chloroprene	2.921	53	292925	45.21	ug/L		99
17) Carbon disulfide	2.062	76	556768	43.81	ug/L		100
18) Allyl chloride	2.160	41	424696	43.70	ug/L		98
19) Methyl acetate	2.154	43	398643	41.66	ug/L		99
20) Acetonitrile	2.469	41	154899	42.63	ug/L		99
21) Methylene chloride	2.257	49	380145	43.71	ug/L		98
22) trans-1,2-Dichloroethene	2.475	61	317957	44.19	ug/L		99
23) t-Butanol	3.258	59	605284	197.71	ug/L		99
24) Acrylonitrile	2.441	53	173527	47.42	ug/L		97
25) Methyl tert-butyl ether	2.469	73	561144	40.15	ug/L		100
26) Hexane	2.709	57	179363	40.49	ug/L		99
27) 1,1-Dichloroethane	2.854	63	407801	44.99	ug/L		99
28) Diisopropyl ether	2.893	45	790153	40.59	ug/L		95
29) Vinyl acetate	2.862	86	34067	43.32	ug/L		97
30) Ethyl tert butyl ether	3.258	59	605284	39.54	ug/L		100
31) Methylcyclopentane	3.317	56	379085	50.06	ug/L		100
32) 2,2-Dichloropropane	3.434	77	282736	43.73	ug/L		100
33) cis-1,2-Dichloroethene	3.431	61	362773	45.11	ug/L		98
34) 2-Butanone	3.431	43	269336	43.22	ug/L		99
35) Ethyl Acetate	3.484	43	522895	43.20	ug/L		98
36) Methyl acrylate	3.532	55	364377	44.01	ug/L		100

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110325.D
Acq On : 03 Nov 2020 06:12 pm
Operator : MF
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 04 08:52:06 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Propionitrile	4.114	54	22339	45.75	ug/L		94
38) Bromochloromethane	3.702	49	226989	42.91	ug/L		99
39) Tetrahydrofuran	3.724	42	173356	43.70	ug/L		99
40) Methacrylonitrile	3.665	67	147933	43.02	ug/L		97
41) Chloroform	3.838	83	393128	47.32	ug/L		99
42) Cyclohexane	4.114	56	286493	43.66	ug/L		99
44) 1,1,1-Trichloroethane	4.025	97	281897	46.81	ug/L		100
46) Carbon tetrachloride	4.229	117	267291	46.22	ug/L		100
47) 1,1-Dichloropropene	4.245	75	265476	46.17	ug/L		99
49) 1,2-Dichloroethane	4.608	62	297215	45.39	ug/L		99
50) Benzene	4.510	78	759563	44.10	ug/L		99
51) Tertiaryamylmethylether	4.756	73	529090	40.75	ug/L	#	99
52) Isobutyl Alcohol	4.669	43	709764	43.55	ug/L		99
53) Heptane	5.037	43	172304	39.23	ug/L		99
54) 1,4-Dioxane	6.278	88	662504	4026.41	ug/L		99
55) Methylcyclohexane	6.025	83	204611	47.89	ug/L		98
56) n-Butanol	5.035	56	52412	395.19	ug/L		96
57) Trichloroethene	5.615	130	178547	42.19	ug/L		97
58) 1,2-Dichloropropane	6.094	63	238474	48.01	ug/L		99
59) Dibromomethane	6.234	93	162492	43.05	ug/L		99
60) Methyl methacrylate	6.295	41	322353	44.94	ug/L		98
61) Bromodichloromethane	6.535	83	285829	45.52	ug/L		99
62) 2-Chloroethyl vinyl ether	6.928	43	135075	44.17	ug/L		97
63) 2-Nitropropane	6.811	43	109328	48.80	ug/L		99
64) cis-1,3-Dichloropropene	7.054	75	339020	43.97	ug/L		99
66) 4-Methyl-2-pentanone	7.224	43	478753	45.20	ug/L		98
68) Toluene	7.360	91	712306	44.41	ug/L		100
69) trans-1,3-Dichloropropene	7.600	75	326388	43.25	ug/L		95
70) Chloropicrin	7.595	117	209254	No Calib			
71) Ethyl methacrylate	7.676	69	315478	43.68	ug/L		100
72) 1,1,2-Trichloroethane	7.754	97	209176	45.35	ug/L		100
73) Tetrachloroethene	7.793	166	184467	43.74	ug/L		99
74) 1,3-Dichloropropane	7.871	76	327560	44.62	ug/L		99
75) 2-Hexanone	7.938	43	377594	43.52	ug/L		100
76) Chlorodibromomethane	8.027	129	242522	43.67	ug/L		100
77) Butyl acetate	8.044	43	630219	43.55	ug/L		99
78) 1,2-Dibromoethane	8.097	107	236631	43.75	ug/L		99
79) Chlorobenzene	8.442	112	468196	45.24	ug/L		99
80) 1,1,1,2-Tetrachloroethane	8.509	131	181942	48.28	ug/L		100
81) Ethylbenzene	8.515	91	774725	47.15	ug/L		100
82) m/p-Xylene	8.599	91	1188181	94.33	ug/L		100
83) Nonane	8.643	43	148274	35.90	ug/L		98
84) Styrene	8.847	104	412726	41.83	ug/L		99
85) o-Xylene	8.833	91	608838	46.82	ug/L		100
86) Cyclohexanone	9.098	55	172057	273.43	ug/L		99
87) Bromoform	8.953	173	190174	44.10	ug/L		99
88) Isopropylbenzene	9.050	105	651966	47.90	ug/L		99
90) Bromobenzene	9.220	77	328513	44.01	ug/L		98
91) 1,1,2,2-Tetrachloroethane	9.232	83	424499	46.99	ug/L		99
92) 1,2,3-Trichloropropane	9.257	110	90316	48.21	ug/L		96
93) trans-1,4-Dichloro-2-b...	9.248	53	120500	44.64	ug/L		98
94) n-Propylbenzene	9.282	91	831205	47.37	ug/L		99
95) 2-Chlorotoluene	9.326	91	513125	45.77	ug/L		99

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110325.D
Acq On : 03 Nov 2020 06:12 pm
Operator : MF
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 04 08:52:06 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96) 4-Chlorotoluene	9.393	91	595832	47.78	ug/L		100
97) 1,3,5-Trimethylbenzene	9.379	105	513570	43.86	ug/L		99
98) tert-Butylbenzene	9.547	91	302609	46.66	ug/L		100
99) 1,2,4-Trimethylbenzene	9.575	105	540481	48.76	ug/L		99
100) sec-Butylbenzene	9.661	105	607261	47.46	ug/L		100
102) 1,3-Dichlorobenzene	9.722	146	339640	45.17	ug/L		100
103) p-Isopropyltoluene	9.739	119	489218	48.00	ug/L		99
104) 1,4-Dichlorobenzene	9.775	146	357841	44.01	ug/L		99
105) 1,2,3-Trimethylbenzene	9.787	105	585096	46.33	ug/L		100
106) Benzyl chloride	9.831	91	543953	42.57	ug/L		100
107) 1,2-Dichlorobenzene	9.954	146	350467	43.90	ug/L		100
108) n-Butylbenzene	9.943	91	504357	45.01	ug/L		100
109) Hexachloroethane	10.093	117	122941	45.28	ug/L		99
110) 1,2-Dibromo-3-chloropr...	10.339	157	97546	45.50	ug/L		100
111) 1,3,5-Trichlorobenzene	10.425	180	219034	44.18	ug/L		99
112) 1,2,4-Trichlorobenzene	10.949	180	225173	44.70	ug/L		100
113) Hexachlorobutadiene	10.785	225	80603	42.99	ug/L		99
114) Naphthalene	10.846	128	844935	48.30	ug/L		100
115) 1,2,3-Trichlorobenzene	10.949	180	225173	44.70	ug/L		100
116) 2-Methylnaphthalene	11.412	142	334913	40.42	ug/L		99
117) 1-Methylnaphthalene	11.515	142	340322	41.32	ug/L		98
119) 2-Propanone	1.939	43	171795	30.11	ug/L		97
120) 2-Propanol	2.073	45	1269350	648.56	ug/L	#	99
121) Acetic Ether	3.484	43	522895	29.03	ug/L		99
122) Isopropyl Acetate	6.415	61	175463	29.82	ug/L		97
123) Amyl Acetate	8.956	43	583562	30.99	ug/L		99

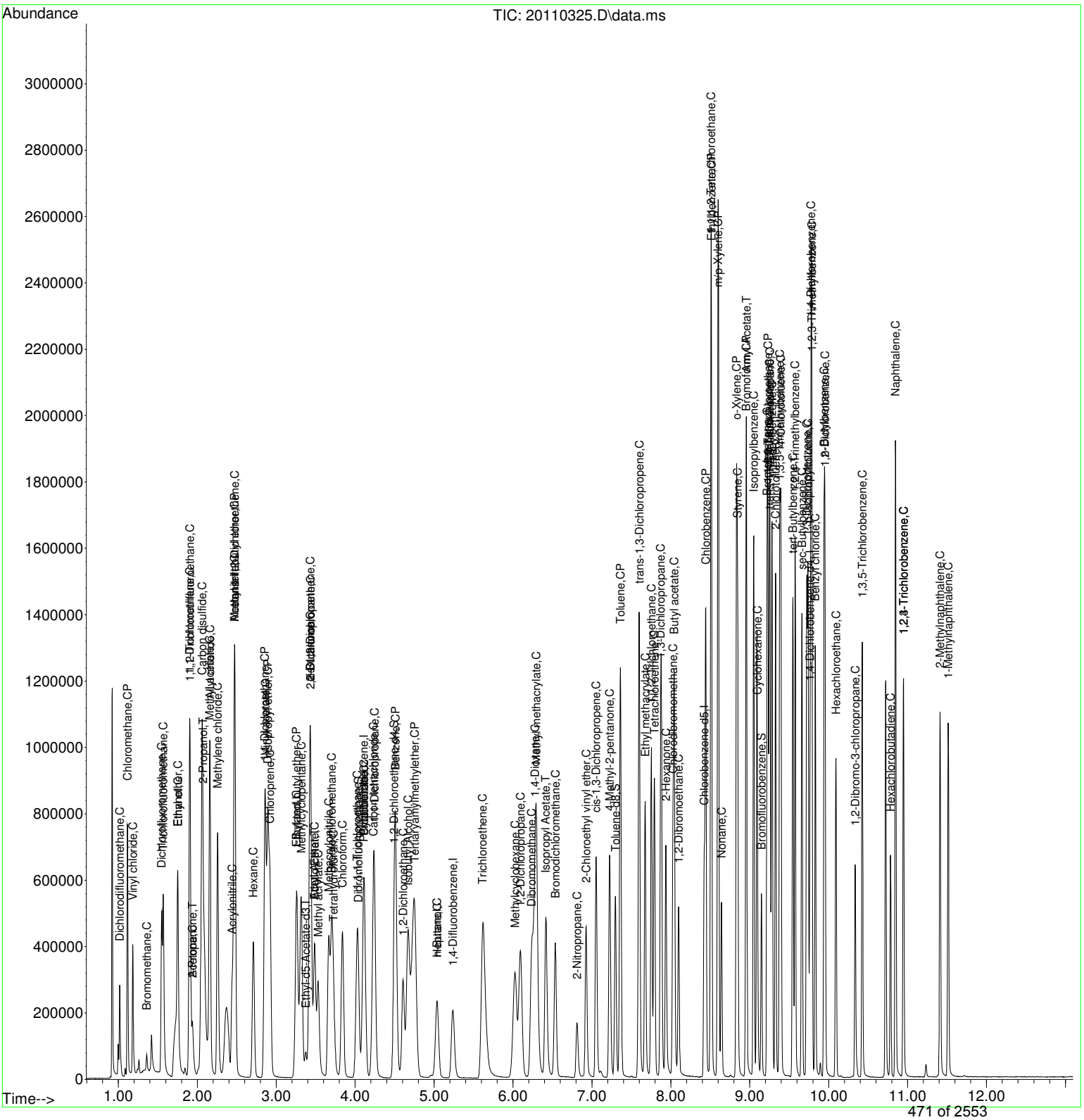
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110325.D
Acq On : 03 Nov 2020 06:12 pm
Operator : MF
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 04 08:52:06 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110326.D
Acq On : 03 Nov 2020 06:29 pm
Operator : MF
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 04 08:52:09 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.103	168	155277	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.238	114	249548	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.423	117	235461	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	121231	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.373	46	113385	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.036	111	103485	20.03	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 100.15%			
48) 1,2-Dichloroethane-d4	4.494	65	116659	19.65	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 98.25%			
67) Toluene-d8	7.299	98	301071	19.66	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 98.30%			
89) Bromofluorobenzene	9.148	95	114346	20.05	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 100.25%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.016	85	184909	57.11	ug/L	98
3) Chloromethane	1.114	50	546007	61.06	ug/L	100
4) Vinyl chloride	1.181	62	293539	56.11	ug/L	97
5) Bromomethane	1.359	96	21118	56.13	ug/L	97
6) Chloroethane	1.418	64	82483	No Calib		
7) Dichlorofluoromethane	1.549	67	558128	61.22	ug/L	100
8) Trichlorofluoromethane	1.571	101	385263	62.08	ug/L	99
9) Ethanol	1.750	45	834374	2888.12	ug/L #	34
10) Ethyl ether	1.752	59	237420	59.35	ug/L	99
11) Acrolein	2.366	56	20648	No Calib #		
12) 1,1-Dichloroethene	1.903	61	426277	58.46	ug/L	99
13) 1,1,2-Trichlorotrifluo...	1.906	151	152421	57.53	ug/L	99
14) Methyl iodide	2.015	142	50083	No Calib		
15) Acetone	1.939	43	248245	59.12	ug/L	98
16) Chloroprene	2.921	53	396522	59.31	ug/L	99
17) Carbon disulfide	2.062	76	781912	59.63	ug/L	100
18) Allyl chloride	2.160	41	584892	57.36	ug/L	97
19) Methyl acetate	2.154	43	559173	56.75	ug/L	100
20) Acetonitrile	2.469	41	215544	58.13	ug/L	98
21) Methylene chloride	2.257	49	514421	57.58	ug/L	99
22) trans-1,2-Dichloroethene	2.475	61	434141	58.48	ug/L	100
23) t-Butanol	3.258	59	854775	270.61	ug/L	99
24) Acrylonitrile	2.438	53	245163	64.94	ug/L	97
25) Methyl tert-butyl ether	2.469	73	797916	55.33	ug/L	100
26) Hexane	2.712	57	241341	52.80	ug/L	100
27) 1,1-Dichloroethane	2.854	63	563967	60.30	ug/L	99
28) Diisopropyl ether	2.893	45	1092985	54.41	ug/L	91
29) Vinyl acetate	2.859	86	51930	63.74	ug/L #	79
30) Ethyl tert butyl ether	3.258	59	854775	54.12	ug/L	99
31) Methylcyclopentane	3.317	56	503532	64.45	ug/L	99
32) 2,2-Dichloropropane	3.431	77	386178	57.41	ug/L	99
33) cis-1,2-Dichloroethene	3.431	61	501987	60.50	ug/L	98
34) 2-Butanone	3.428	43	378982	59.03	ug/L	98
35) Ethyl Acetate	3.484	43	724341	58.10	ug/L	99
36) Methyl acrylate	3.532	55	517300	60.40	ug/L	100

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110326.D
Acq On : 03 Nov 2020 06:29 pm
Operator : MF
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 04 08:52:09 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Propionitrile	4.114	54	27965	55.40	ug/L		94
38) Bromochloromethane	3.702	49	306642	56.19	ug/L		99
39) Tetrahydrofuran	3.721	42	246074	60.13	ug/L		99
40) Methacrylonitrile	3.665	67	208322	58.49	ug/L		97
41) Chloroform	3.838	83	534615	62.36	ug/L		99
42) Cyclohexane	4.114	56	381272	56.43	ug/L		99
44) 1,1,1-Trichloroethane	4.025	97	387240	62.02	ug/L		99
46) Carbon tetrachloride	4.229	117	357362	59.55	ug/L		100
47) 1,1-Dichloropropene	4.243	75	358711	60.17	ug/L		99
49) 1,2-Dichloroethane	4.608	62	404393	59.58	ug/L		100
50) Benzene	4.508	78	1035171	57.98	ug/L		100
51) Tertiaryamylmethylether	4.756	73	748099	55.58	ug/L	#	98
52) Isobutyl Alcohol	4.667	43	1009391	59.75	ug/L		98
53) Heptane	5.037	43	227756	50.05	ug/L		99
54) 1,4-Dioxane	6.278	88	953448	5583.74	ug/L		100
55) Methylcyclohexane	6.027	83	277374	62.62	ug/L		99
56) n-Butanol	5.037	56	70374	510.91	ug/L		98
57) Trichloroethene	5.615	130	250450	57.04	ug/L		98
58) 1,2-Dichloropropane	6.094	63	327224	63.54	ug/L		99
59) Dibromomethane	6.234	93	228838	58.42	ug/L		99
60) Methyl methacrylate	6.295	41	451006	60.52	ug/L		100
61) Bromodichloromethane	6.535	83	394577	60.54	ug/L		100
62) 2-Chloroethyl vinyl ether	6.925	43	191889	60.43	ug/L		95
63) 2-Nitropropane	6.811	43	159444	65.31	ug/L		97
64) cis-1,3-Dichloropropene	7.054	75	474604	59.29	ug/L		100
66) 4-Methyl-2-pentanone	7.224	43	688987	62.28	ug/L		98
68) Toluene	7.360	91	1003425	59.91	ug/L		100
69) trans-1,3-Dichloropropene	7.600	75	466654	59.11	ug/L		90
70) Chloropicrin	7.595	117	522850	No Calib			
71) Ethyl methacrylate	7.675	69	451411	59.70	ug/L		99
72) 1,1,2-Trichloroethane	7.754	97	285091	59.18	ug/L		100
73) Tetrachloroethene	7.793	166	247930	56.30	ug/L		100
74) 1,3-Dichloropropane	7.871	76	467602	60.99	ug/L		100
75) 2-Hexanone	7.938	43	540014	59.49	ug/L		100
76) Chlorodibromomethane	8.027	129	344997	59.39	ug/L		100
77) Butyl acetate	8.044	43	896371	59.18	ug/L		99
78) 1,2-Dibromoethane	8.097	107	328436	58.09	ug/L		99
79) Chlorobenzene	8.442	112	656881	60.77	ug/L		99
80) 1,1,1,2-Tetrachloroethane	8.509	131	259587	65.96	ug/L		100
81) Ethylbenzene	8.515	91	1086731	63.33	ug/L		100
82) m/p-Xylene	8.598	91	1644775	125.04	ug/L		100
83) Nonane	8.643	43	205329	47.67	ug/L		98
84) Styrene	8.847	104	556352	53.95	ug/L		100
85) o-Xylene	8.833	91	848303	62.46	ug/L		99
86) Cyclohexanone	9.098	55	240145	358.20	ug/L		99
87) Bromoform	8.953	173	276276	61.21	ug/L		100
88) Isopropylbenzene	9.050	105	906101	63.74	ug/L		99
90) Bromobenzene	9.220	77	465361	59.69	ug/L		99
91) 1,1,2,2-Tetrachloroethane	9.232	83	597752	63.35	ug/L		99
92) 1,2,3-Trichloropropane	9.257	110	123711	63.23	ug/L		97
93) trans-1,4-Dichloro-2-b...	9.248	53	166981	59.14	ug/L		96
94) n-Propylbenzene	9.282	91	1139730	62.19	ug/L		100
95) 2-Chlorotoluene	9.326	91	706816	60.37	ug/L		98

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110326.D
Acq On : 03 Nov 2020 06:29 pm
Operator : MF
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 04 08:52:09 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96) 4-Chlorotoluene	9.393	91	829042	63.65	ug/L		100
97) 1,3,5-Trimethylbenzene	9.382	105	720890	58.89	ug/L		99
98) tert-Butylbenzene	9.547	91	420184	62.04	ug/L		99
99) 1,2,4-Trimethylbenzene	9.577	105	753702	65.11	ug/L		99
100) sec-Butylbenzene	9.661	105	835101	62.50	ug/L		100
102) 1,3-Dichlorobenzene	9.722	146	476049	60.70	ug/L		99
103) p-Isopropyltoluene	9.739	119	670892	63.12	ug/L		99
104) 1,4-Dichlorobenzene	9.775	146	490062	57.79	ug/L		99
105) 1,2,3-Trimethylbenzene	9.786	105	794193	60.30	ug/L		99
106) Benzyl chloride	9.831	91	774090	58.00	ug/L		99
107) 1,2-Dichlorobenzene	9.954	146	488254	58.65	ug/L		100
108) n-Butylbenzene	9.943	91	682688	58.42	ug/L		99
109) Hexachloroethane	10.093	117	170879	60.28	ug/L		99
110) 1,2-Dibromo-3-chloropr...	10.336	157	138865	62.02	ug/L		99
111) 1,3,5-Trichlorobenzene	10.425	180	301740	58.36	ug/L		99
112) 1,2,4-Trichlorobenzene	10.949	180	313393	59.66	ug/L		99
113) Hexachlorobutadiene	10.785	225	110844	56.69	ug/L		100
114) Naphthalene	10.846	128	1181911	64.79	ug/L		100
115) 1,2,3-Trichlorobenzene	10.949	180	313393	59.66	ug/L		99
116) 2-Methylnaphthalene	11.412	142	508755	56.81	ug/L		99
117) 1-Methylnaphthalene	11.515	142	508647	57.60	ug/L		99
119) 2-Propanone	1.939	43	248245	42.74	ug/L		98
120) 2-Propanol	2.065	45	1847823	922.26	ug/L	#	100
121) Acetic Ether	3.484	43	724341	39.64	ug/L		99
122) Isopropyl Acetate	6.415	61	251045	41.62	ug/L		97
123) Amyl Acetate	8.955	43	831805	42.84	ug/L		99

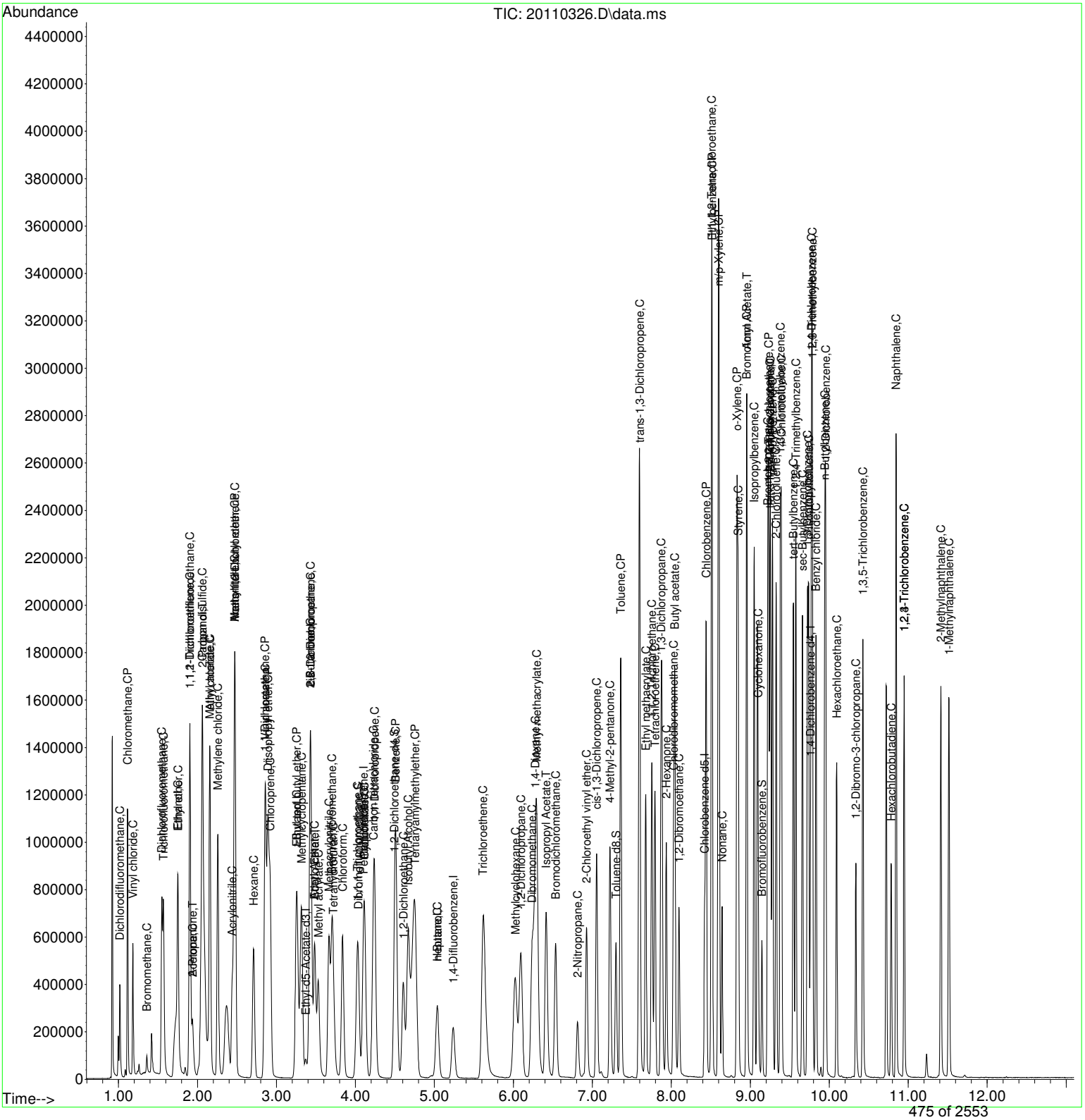
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110326.D
Acq On : 03 Nov 2020 06:29 pm
Operator : MF
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 04 08:52:09 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201020-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Mon Oct 26 16:52:50 2020
Response via : Initial Calibration



1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110328.D
Acq On : 03 Nov 2020 07:02 pm
Operator : MF
Sample : ICV
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.106	168	155193	20.00	ug/L		0.00
43) 1,4-Difluorobenzene	5.238	114	248625	20.00	ug/L		0.00
65) Chlorobenzene-d5	8.423	117	231897	20.00	ug/L		0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	119775	20.00	ug/L		0.00
118) Ethyl-d5-Acetate-d3	3.370	46	117500	20.00	ug/L		0.00
System Monitoring Compounds							
45) Dibromofluoromethane	4.036	111	105234	20.36	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 101.80%				
48) 1,2-Dichloroethane-d4	4.494	65	120265	19.84	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 99.20%				
67) Toluene-d8	7.299	98	297196	19.96	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 99.80%				
89) Bromofluorobenzene	9.148	95	115475	20.71	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 103.55%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.016	85	103131	53.71	ug/L		99
3) Chloromethane	1.117	50	191467	34.27	ug/L		98
4) Vinyl chloride	1.181	62	132241	43.64	ug/L		99
5) Bromomethane	1.359	96	12547	58.08	ug/L		99
6) Chloroethane	1.421	64	33595	34.82	ug/L		97
7) Dichlorofluoromethane	1.549	67	213753	38.01	ug/L		98
8) Trichlorofluoromethane	1.571	101	122660	31.25	ug/L		98
9) Ethanol	1.750	45	399740	950.10	ug/L		91
10) Ethyl ether	1.752	59	98544	37.70	ug/L		99
11) Acrolein	2.360	56	3689	16.28	ug/L		71
12) 1,1-Dichloroethene	1.903	61	173714	40.00	ug/L		98
13) 1,1,2-Trichlorotrifluo...	1.906	151	412	0.25	ug/L	#	60
14) Methyl iodide	2.009	142	83467	No Calib			
15) Acetone	1.939	43	97302	40.92	ug/L		98
16) Chloroprene	2.924	53	2567	0.62	ug/L		84
17) Carbon disulfide	2.062	76	331411	43.04	ug/L		99
18) Allyl chloride	2.160	41	177044	29.47	ug/L		87
19) Methyl acetate	2.235	43	142	Below Cal		#	52
20) Acetonitrile	2.469	41	85527	39.22	ug/L	#	95
21) Methylene chloride	2.257	49	195329	36.55	ug/L		99
22) trans-1,2-Dichloroethene	2.475	61	177910	37.61	ug/L		99
23) t-Butanol	3.258	59	330963	194.55	ug/L		97
24) Acrylonitrile	2.441	53	96419	40.24	ug/L		98
25) Methyl tert-butyl ether	2.469	73	314714	39.91	ug/L		99
26) Hexane	2.706	57	1541	0.60	ug/L	#	96
27) 1,1-Dichloroethane	2.854	63	228709	39.76	ug/L		100
28) Diisopropyl ether	2.893	45	415495	37.79	ug/L	#	38
29) Vinyl acetate	2.854	86	239	1.22	ug/L	#	1
30) Ethyl tert butyl ether	3.258	59	330963	38.91	ug/L		98
31) Methylcyclopentane	3.314	56	172619	31.01	ug/L		99
32) 2,2-Dichloropropane	3.431	77	149450	37.80	ug/L		98
33) cis-1,2-Dichloroethene	3.431	61	206257	40.42	ug/L		99
34) 2-Butanone	3.428	43	145811	39.01	ug/L		100
35) Ethyl Acetate	3.484	43	253894	34.66	ug/L		98
36) Methyl acrylate	3.532	55	202259	39.33	ug/L		99

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110328.D
Acq On : 03 Nov 2020 07:02 pm
Operator : MF
Sample : ICV
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Propionitrile	4.201	54	1530	4.60	ug/L	#	1
38) Bromochloromethane	3.702	49	126704	39.50	ug/L		100
39) Tetrahydrofuran	3.727	42	96220	38.37	ug/L		98
40) Methacrylonitrile	3.665	67	82915	39.67	ug/L		98
41) Chloroform	3.838	83	211643	35.93	ug/L		100
42) Cyclohexane	4.100	56	4285	0.11	ug/L	#	5
44) 1,1,1-Trichloroethane	4.028	97	154913	37.08	ug/L		99
46) Carbon tetrachloride	4.229	117	126958	34.99	ug/L		99
47) 1,1-Dichloropropene	4.243	75	141560	36.83	ug/L		99
49) 1,2-Dichloroethane	4.608	62	167781	36.67	ug/L		97
50) Benzene	4.510	78	422483	39.75	ug/L		100
51) Tertiaryamylmethylether	4.753	73	287592	38.71	ug/L	#	98
52) Isobutyl Alcohol	4.669	43	349562	38.14	ug/L		97
53) Heptane	5.049	43	615	Below Cal		#	42
54) 1,4-Dioxane	6.175	88	3692	38.35	ug/L		77
55) Methylcyclohexane	6.030	83	201	0.07	ug/L	#	57
56) n-Butanol	0.000		0	N.D.			
57) Trichloroethene	5.615	130	98626	38.66	ug/L		99
58) 1,2-Dichloropropane	6.097	63	129377	35.86	ug/L		99
59) Dibromomethane	6.237	93	91492	39.11	ug/L		99
60) Methyl methacrylate	6.298	41	155390	34.40	ug/L		97
61) Bromodichloromethane	6.535	83	152387	39.08	ug/L		98
62) 2-Chloroethyl vinyl ether	6.931	43	77	0.33	ug/L	#	27
63) 2-Nitropropane	6.814	43	55657	36.30	ug/L		98
64) cis-1,3-Dichloropropene	7.056	75	175712	39.80	ug/L		99
66) 4-Methyl-2-pentanone	7.227	43	407297	62.96	ug/L		82
68) Toluene	7.360	91	392799	39.17	ug/L		99
69) trans-1,3-Dichloropropene	7.600	75	159985	39.93	ug/L		99
70) Chloropicrin	0.000		0	N.D.			
71) Ethyl methacrylate	7.676	69	160750	36.51	ug/L		100
72) 1,1,2-Trichloroethane	7.754	97	114677	37.62	ug/L		99
73) Tetrachloroethene	7.793	166	95268	36.22	ug/L		99
74) 1,3-Dichloropropane	7.871	76	179903	36.85	ug/L		95
75) 2-Hexanone	7.938	43	205473	39.40	ug/L		99
76) Chlorodibromomethane	8.027	129	117978	38.01	ug/L		99
77) Butyl acetate	8.044	43	292747	33.82	ug/L		99
78) 1,2-Dibromoethane	8.099	107	133259	39.60	ug/L		100
79) Chlorobenzene	8.442	112	251232	38.29	ug/L		100
80) 1,1,1,2-Tetrachloroethane	8.509	131	96906	38.63	ug/L		99
81) Ethylbenzene	8.515	91	412608	38.25	ug/L		99
82) m/p-Xylene	8.599	91	635189	77.58	ug/L		100
83) Nonane	8.643	43	77913	38.13	ug/L		100
84) Styrene	8.847	104	246167	44.45	ug/L		99
85) o-Xylene	8.833	91	332123	39.85	ug/L		100
86) Cyclohexanone	9.092	55	126	0.29	ug/L	#	29
87) Bromoform	8.953	173	91091	34.36	ug/L		99
88) Isopropylbenzene	9.050	105	349407	39.87	ug/L		100
90) Bromobenzene	9.220	77	179869	38.56	ug/L		99
91) 1,1,2,2-Tetrachloroethane	9.232	83	233976	37.88	ug/L		99
92) 1,2,3-Trichloropropane	9.257	110	47731	37.18	ug/L		97
93) trans-1,4-Dichloro-2-b...	9.248	53	55277	36.19	ug/L		98
94) n-Propylbenzene	9.282	91	445589	39.78	ug/L		99
95) 2-Chlorotoluene	9.326	91	273552	37.16	ug/L		100

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

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Operator : MF
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Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
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Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96) 4-Chlorotoluene	9.393	91	313732	37.47	ug/L		100
97) 1,3,5-Trimethylbenzene	9.379	105	276813	40.06	ug/L		100
98) tert-Butylbenzene	9.547	91	159595	37.94	ug/L		93
99) 1,2,4-Trimethylbenzene	9.577	105	284894	40.99	ug/L		100
100) sec-Butylbenzene	9.661	105	317272	39.21	ug/L		99
102) 1,3-Dichlorobenzene	9.722	146	182992	37.53	ug/L		98
103) p-Isopropyltoluene	9.739	119	257578	40.06	ug/L		99
104) 1,4-Dichlorobenzene	9.775	146	186036	37.43	ug/L		99
105) 1,2,3-Trimethylbenzene	9.787	105	303494	37.03	ug/L		99
106) Benzyl chloride	9.837	91	1402	N.D.			
107) 1,2-Dichlorobenzene	9.954	146	185036	36.16	ug/L		100
108) n-Butylbenzene	9.943	91	247067	38.42	ug/L		100
109) Hexachloroethane	10.093	117	57153	37.14	ug/L		99
110) 1,2-Dibromo-3-chloropr...	10.339	157	50939	40.20	ug/L		100
111) 1,3,5-Trichlorobenzene	10.428	180	2646	0.87	ug/L		92
112) 1,2,4-Trichlorobenzene	10.949	180	114346	38.34	ug/L		99
113) Hexachlorobutadiene	10.785	225	42491	38.27	ug/L		99
114) Naphthalene	10.849	128	401056	34.81	ug/L		99
115) 1,2,3-Trichlorobenzene	10.949	180	114346	38.34	ug/L		99
116) 2-Methylnaphthalene	11.423	142	1638	1.45	ug/L		97
117) 1-Methylnaphthalene	11.518	142	1651	1.21	ug/L		92
119) 2-Propanone	1.939	43	97302	40.83	ug/L		98
120) 2-Propanol	2.070	45	680673	750.86	ug/L	#	98
121) Acetic Ether	3.484	43	252537	34.21	ug/L		99
122) Isopropyl Acetate	0.000		0	N.D.			
123) Amyl Acetate	8.958	43	267315	35.68	ug/L		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

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Sample : ICV
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ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
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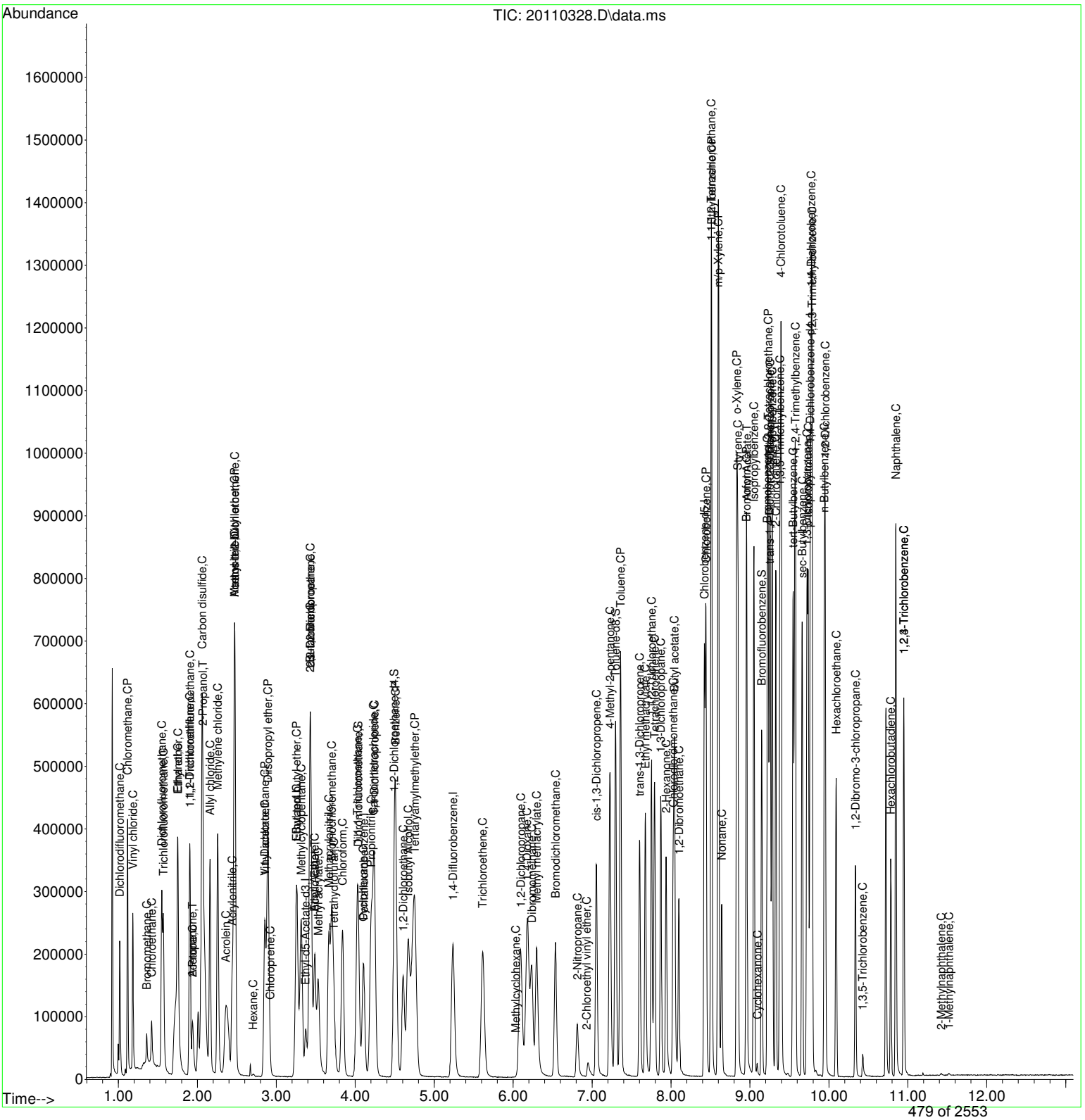

1st /S/ MF 11/04/20

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QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	20.000	20.000	0.0	106	0.00
2	C	Dichlorodifluoromethane	40.000	53.711	-34.3#	140	0.00
3	CP	Chloromethane	40.000	34.269	14.3	87	0.00
4	C	Vinyl chloride	40.000	43.639	-9.1	117	0.00
5	C	Bromomethane	40.000	58.077	-45.2#	166	0.00
6	C	Chloroethane	40.000	34.823	12.9	86	0.00
7	C	Dichlorofluoromethane	40.000	38.009	5.0	100	0.00
8	C	Trichlorofluoromethane	40.000	31.253	21.9#	83	0.00
9	C	Ethanol	800.000	950.101	-18.8	133	0.00
10	C	Ethyl ether	40.000	37.697	5.8	110	0.00
11	C	Acrolein	40.000	16.280	59.3#	47	0.00
12	C	1,1-Dichloroethene	40.000	39.996	0.0	109	0.00
13	C	1,1,2-Trichlorotrifluoroeth	40.000	0.245	99.4#	1	0.00
14	C	Methyl iodide	40.000	0.000	100.0#	0	0.00
15	C	Acetone	40.000	40.921	-2.3	115	0.00
16	C	Chloroprene	40.000	0.617	98.5#	2	0.00
17	C	Carbon disulfide	40.000	43.038	-7.6	122	0.00
18	C	Allyl chloride	40.000	29.468	26.3#	81	0.00
19	C	Methyl acetate	40.000	-0.048	100.1#	0	0.08
20	C	Acetonitrile	40.000	39.222	1.9	112	0.00
21	C	Methylene chloride	40.000	36.546	8.6	98	0.00
22	C	trans-1,2-Dichloroethene	40.000	37.606	6.0	109	0.00
23	C	t-Butanol	200.000	194.550	2.7	113	0.00
24	C	Acrylonitrile	40.000	40.237	-0.6	107	0.00
25	CP	Methyl tert-butyl ether	40.000	39.913	0.2	117	0.00
26	C	Hexane	40.000	0.604	98.5#	2	0.00
27	CP	1,1-Dichloroethane	40.000	39.764	0.6	108	0.00
28	CP	Diisopropyl ether	40.000	37.786	5.5	109	0.00
29	C	Vinyl acetate	40.000	1.223	96.9#	2	0.00
30	CP	Ethyl tert butyl ether	40.000	38.910	2.7	113	0.00
31	C	Methylcyclopentane	40.000	31.006	22.5#	86	0.00
32	C	2,2-Dichloropropane	40.000	37.798	5.5	104	0.00
33	C	cis-1,2-Dichloroethene	40.000	40.416	-1.0	111	0.00
34	C	2-Butanone	40.000	39.010	2.5	114	0.00
35	C	Ethyl Acetate	40.000	34.657	13.4	100	0.00
36	C	Methyl acrylate	40.000	39.329	1.7	110	0.00
37	C	Propionitrile	40.000	4.597	88.5#	12	0.09
38	C	Bromochloromethane	40.000	39.500	1.3	105	0.00
39	C	Tetrahydrofuran	40.000	38.368	4.1	102	0.00
40	C	Methacrylonitrile	40.000	39.669	0.8	108	0.00
41	C	Chloroform	40.000	35.931	10.2	103	0.00
42	C	Cyclohexane	40.000	0.107	99.7#	3	-0.01
43	I	1,4-Difluorobenzene	20.000	20.000	0.0	108	0.00
44	C	1,1,1-Trichloroethane	40.000	37.084	7.3	105	0.00
45	S	Dibromofluoromethane	20.000	20.359	-1.8	107	0.00
46	C	Carbon tetrachloride	40.000	34.988	12.5	92	0.00
47	C	1,1-Dichloropropene	40.000	36.827	7.9	104	0.00
48	S	1,2-Dichloroethane-d4	20.000	19.844	0.8	109	0.00

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

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Data File : 20110328.D
Acq On : 03 Nov 2020 07:02 pm
Operator : MF
Sample : ICV
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	C	1,2-Dichloroethane	40.000	36.668	8.3	106	0.00
50	CP	Benzene	40.000	39.754	0.6	109	0.00
51	CP	Tertiaryamylmethylether	40.000	38.705	3.2	113	0.00
52	C	Isobutyl Alcohol	40.000	38.141	4.6	103	0.00
53	C	Heptane	40.000	-0.012	100.0#	1	0.01
54	C	1,4-Dioxane	4000.000	38.354	99.0#	1	-0.10
55	C	Methylcyclohexane	40.000	0.073	99.8#	0	0.00
56	C	n-Butanol	400.000	0.000	100.0#	0	-5.04#
57	C	Trichloroethene	40.000	38.663	3.3	108	0.00
58	C	1,2-Dichloropropane	40.000	35.863	10.3	106	0.00
59	C	Dibromomethane	40.000	39.107	2.2	105	0.00
60	C	Methyl methacrylate	40.000	34.398	14.0	94	0.00
61	C	Bromodichloromethane	40.000	39.080	2.3	108	0.00
62	C	2-Chloroethyl vinyl ether	40.000	0.328	99.2#	0	0.00
63	C	2-Nitropropane	40.000	36.299	9.3	108	0.00
64	C	cis-1,3-Dichloropropene	40.000	39.804	0.5	103	0.00
65	I	Chlorobenzene-d5	20.000	20.000	0.0	107	0.00
66	C	4-Methyl-2-pentanone	40.000	62.959	-57.4#	185	0.00
67	S	Toluene-d8	20.000	19.959	0.2	105	0.00
68	CP	Toluene	40.000	39.175	2.1	108	0.00
69	C	trans-1,3-Dichloropropene	40.000	39.929	0.2	100	0.00
70	C	Chloropicrin	400.000	0.000	100.0#	0	-7.59#
71	C	Ethyl methacrylate	40.000	36.505	8.7	101	0.00
72	C	1,1,2-Trichloroethane	40.000	37.618	6.0	106	0.00
73	C	Tetrachloroethene	40.000	36.223	9.4	96	0.00
74	C	1,3-Dichloropropane	40.000	36.851	7.9	104	0.00
75	C	2-Hexanone	40.000	39.396	1.5	115	0.00
76	C	Chlorodibromomethane	40.000	38.007	5.0	96	0.00
77	C	Butyl acetate	40.000	33.820	15.4	99	0.00
78	C	1,2-Dibromoethane	40.000	39.598	1.0	106	0.00
79	CP	Chlorobenzene	40.000	38.295	4.3	108	0.00
80	C	1,1,1,2-Tetrachloroethane	40.000	38.625	3.4	107	0.00
81	CP	Ethylbenzene	40.000	38.245	4.4	107	0.00
82	CP	m/p-Xylene	80.000	77.582	3.0	105	0.00
83	C	Nonane	40.000	38.128	4.7	110	0.00
84	C	Styrene	40.000	44.452	-11.1	108	0.00
85	CP	o-Xylene	40.000	39.851	0.4	107	0.00
86	C	Cyclohexanone	200.000	0.285	99.9#	0	0.00
87	CP	Bromoform	40.000	34.360	14.1	99	0.00
88	C	Isopropylbenzene	40.000	39.871	0.3	109	0.00
89	S	Bromofluorobenzene	20.000	20.706	-3.5	108	0.00
90	C	Bromobenzene	40.000	38.555	3.6	104	0.00
91	CP	1,1,2,2-Tetrachloroethane	40.000	37.882	5.3	107	0.00
92	C	1,2,3-Trichloropropane	40.000	37.181	7.0	103	0.00
93	C	trans-1,4-Dichloro-2-butene	40.000	36.194	9.5	91	0.00
94	C	n-Propylbenzene	40.000	39.778	0.6	105	0.00
95	C	2-Chlorotoluene	40.000	37.162	7.1	104	0.00
96	C	4-Chlorotoluene	40.000	37.473	6.3	104	0.00

1st /S/ MF 11/04/20

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Quant Title : 8260 Global Optimization
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Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
97	C	1,3,5-Trimethylbenzene	40.000	40.062	-0.2	105	0.00
98	C	tert-Butylbenzene	40.000	37.938	5.2	106	0.00
99	C	1,2,4-Trimethylbenzene	40.000	40.992	-2.5	107	0.00
100	C	sec-Butylbenzene	40.000	39.206	2.0	105	0.00
101	I	1,4-Dichlorobenzene-d4	20.000	20.000	0.0	105	0.00
102	C	1,3-Dichlorobenzene	40.000	37.532	6.2	106	0.00
103	C	p-Isopropyltoluene	40.000	40.065	-0.2	107	0.00
104	C	1,4-Dichlorobenzene	40.000	37.433	6.4	102	0.00
105	C	1,2,3-Trimethylbenzene	40.000	37.031	7.4	103	0.00
106	C	Benzyl chloride	40.000	0.438	98.9#	1	0.00
107	C	1,2-Dichlorobenzene	40.000	36.155	9.6	103	0.00
108	C	n-Butylbenzene	40.000	38.424	3.9	99	0.00
109	C	Hexachloroethane	40.000	37.136	7.2	100	0.00
110	C	1,2-Dibromo-3-chloropropane	40.000	40.202	-0.5	103	0.00
111	C	1,3,5-Trichlorobenzene	40.000	0.866	97.8#	2	0.00
112	C	1,2,4-Trichlorobenzene	40.000	38.337	4.2	101	0.00
113	C	Hexachlorobutadiene	40.000	38.272	4.3	108	0.00
114	C	Naphthalene	40.000	34.812	13.0	98	0.00
115	C	1,2,3-Trichlorobenzene	40.000	38.337	4.2	101	0.00
116	C	2-Methylnaphthalene	40.000	1.448	96.4#	1	0.00
117	C	1-Methylnaphthalene	40.000	1.207	97.0#	1	0.00
118	I	Ethyl-d5-Acetate-d3	20.000	20.000	0.0	107	0.00
119	T	2-Propanone	40.000	40.832	-2.1	115	0.00
120	T	2-Propanol	800.000	750.860	6.1	101	0.00
121	T	Acetic Ether	40.000	34.207	14.5	99	0.00
122	T	Isopropyl Acetate	40.000	0.000	100.0#	0	-6.42#
123	T	Amyl Acetate	40.000	35.677	10.8	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 26

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110328.D
Acq On : 03 Nov 2020 07:02 pm
Operator : MF
Sample : ICV
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	106	0.00
2	C	Dichlorodifluoromethane	0.295	0.332	-12.5	140	0.00
3	CP	Chloromethane	0.708	0.617	12.9	87	0.00
4	C	Vinyl chloride	0.456	0.426	6.6	117	0.00
5	C	Bromomethane	0.054	0.040#	25.9#	166	0.00
6	C	Chloroethane	0.135	0.108#	20.0#	86	0.00
7	C	Dichlorofluoromethane	0.833	0.689	17.3	100	0.00
8	C	Trichlorofluoromethane	0.552	0.395	28.4#	83	0.00
9	C	Ethanol	0.067	0.064#	4.5	133	0.00
10	C	Ethyl ether	0.337	0.317	5.9	110	0.00
11	C	Acrolein	0.024	0.012#	50.0#	47#	0.00
12	C	1,1-Dichloroethene	0.594	0.560	5.7	109	0.00
13	C	1,1,2-Trichlorotrifluoroeth	0.217	0.001#	99.5#	1#	0.00
14	C	Methyl iodide	0.000	0.269	0.0	0#	0.00
15	C	Acetone	0.454	0.313	31.1#	115	0.00
16	C	Chloroprene	0.536	0.008#	98.5#	2#	0.00
17	C	Carbon disulfide	0.992	1.068	-7.7	122	0.00
18	C	Allyl chloride	0.774	0.570	26.4#	81	0.00
19	C	Methyl acetate	0.753	0.000#	100.0#	0#	0.08
20	C	Acetonitrile	0.339	0.276	18.6	112	0.00
21	C	Methylene chloride	0.885	0.629	28.9#	98	0.00
22	C	trans-1,2-Dichloroethene	0.610	0.573	6.1	109	0.00
23	C	t-Butanol	0.233	0.213	8.6	113	0.00
24	C	Acrylonitrile	0.309	0.311	-0.6	107	0.00
25	CP	Methyl tert-butyl ether	1.062	1.014	4.5	117	0.00
26	C	Hexane	0.329	0.005#	98.5#	2#	0.00
27	CP	1,1-Dichloroethane	0.811	0.737	9.1	108	0.00
28	CP	Diisopropyl ether	1.495	1.339	10.4	109	0.00
29	C	Vinyl acetate	0.051	0.001#	98.0#	2#	0.00
30	CP	Ethyl tert butyl ether	1.166	1.066	8.6	113	0.00
31	C	Methylcyclopentane	0.717	0.556	22.5#	86	0.00
32	C	2,2-Dichloropropane	0.561	0.481	14.3	104	0.00
33	C	cis-1,2-Dichloroethene	0.706	0.665	5.8	111	0.00
34	C	2-Butanone	0.526	0.470	10.6	114	0.00
35	C	Ethyl Acetate	1.033	0.818	20.8#	100	0.00
36	C	Methyl acrylate	0.593	0.652	-9.9	110	0.00
37	C	Propionitrile	0.043	0.005#	88.4#	12#	0.09
38	C	Bromochloromethane	0.467	0.408	12.6	105	0.00
39	C	Tetrahydrofuran	0.396	0.310	21.7#	102	0.00
40	C	Methacrylonitrile	0.240	0.267	-11.3	108	0.00
41	C	Chloroform	0.759	0.682	10.1	103	0.00
42	C	Cyclohexane	0.817	0.014#	98.3#	3#	-0.01
43	I	1,4-Difluorobenzene	1.000	1.000	0.0	108	0.00
44	C	1,1,1-Trichloroethane	0.336	0.312	7.1	105	0.00
45	S	Dibromofluoromethane	0.416	0.423	-1.7	107	0.00
46	C	Carbon tetrachloride	0.292	0.255	12.7	92	0.00
47	C	1,1-Dichloropropene	0.309	0.285	7.8	104	0.00
48	S	1,2-Dichloroethane-d4	0.488	0.484	0.8	109	0.00

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110328.D
Acq On : 03 Nov 2020 07:02 pm
Operator : MF
Sample : ICV
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	C	1,2-Dichloroethane	0.368	0.337	8.4	106	0.00
50	CP	Benzene	0.952	0.850	10.7	109	0.00
51	CP	Tertiaryamylmethylether	0.612	0.578	5.6	113	0.00
52	C	Isobutyl Alcohol	0.737	0.703	4.6	103	0.00
53	C	Heptane	0.222	0.001#	99.5#	1#	0.01
54	C	1,4-Dioxane	0.008	0.000#	100.0#	1#	-0.10
55	C	Methylcyclohexane	0.221	0.000#	100.0#	0#	0.00
56	C	n-Butanol	0.005	0.000#	100.0#	0#	-5.04#
57	C	Trichloroethene	0.205	0.198#	3.4	108	0.00
58	C	1,2-Dichloropropane	0.290	0.260	10.3	106	0.00
59	C	Dibromomethane	0.188	0.184#	2.1	105	0.00
60	C	Methyl methacrylate	0.313	0.312	0.3	94	0.00
61	C	Bromodichloromethane	0.314	0.306	2.5	108	0.00
62	C	2-Chloroethyl vinyl ether	0.126	0.000#	100.0#	0#	0.00
63	C	2-Nitropropane	0.122	0.112#	8.2	108	0.00
64	C	cis-1,3-Dichloropropene	0.355	0.353	0.6	103	0.00
65	I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00
66	C	4-Methyl-2-pentanone	0.556	0.878	-57.9#	185	0.00
67	S	Toluene-d8	1.284	1.282	0.2	105	0.00
68	CP	Toluene	0.924	0.847	8.3	108	0.00
69	C	trans-1,3-Dichloropropene	0.346	0.345	0.3	100	0.00
70	C	Chloropicrin	0.000	0.000#	0.0	0#	-7.59#
71	C	Ethyl methacrylate	0.312	0.347	-11.2	101	0.00
72	C	1,1,2-Trichloroethane	0.263	0.247	6.1	106	0.00
73	C	Tetrachloroethene	0.227	0.205	9.7	96	0.00
74	C	1,3-Dichloropropane	0.421	0.388	7.8	104	0.00
75	C	2-Hexanone	0.369	0.443	-20.1#	115	0.00
76	C	Chlorodibromomethane	0.268	0.254	5.2	96	0.00
77	C	Butyl acetate	0.581	0.631	-8.6	99	0.00
78	C	1,2-Dibromoethane	0.290	0.287	1.0	106	0.00
79	CP	Chlorobenzene	0.599	0.542	9.5	108	0.00
80	C	1,1,1,2-Tetrachloroethane	0.216	0.209	3.2	107	0.00
81	CP	Ethylbenzene	0.930	0.890	4.3	107	0.00
82	CP	m/p-Xylene	0.706	0.685	3.0	105	0.00
83	C	Nonane	0.186	0.168#	9.7	110	0.00
84	C	Styrene	0.478	0.531	-11.1	108	0.00
85	CP	o-Xylene	0.719	0.716	0.4	107	0.00
86	C	Cyclohexanone	0.038	0.000#	100.0#	0#	0.00
87	CP	Bromoform	0.195	0.196	-0.5	99	0.00
88	C	Isopropylbenzene	0.756	0.753	0.4	109	0.00
89	S	Bromofluorobenzene	0.481	0.498	-3.5	108	0.00
90	C	Bromobenzene	0.437	0.388	11.2	104	0.00
91	CP	1,1,2,2-Tetrachloroethane	0.533	0.504	5.4	107	0.00
92	C	1,2,3-Trichloropropane	0.111	0.103#	7.2	103	0.00
93	C	trans-1,4-Dichloro-2-butene	0.132	0.119#	9.8	91	0.00
94	C	n-Propylbenzene	0.966	0.961	0.5	105	0.00
95	C	2-Chlorotoluene	0.635	0.590	7.1	104	0.00
96	C	4-Chlorotoluene	0.722	0.676	6.4	104	0.00

1st /S/ MF 11/04/20

2nd /S/ JS 11/04/20

Data Path : C:\MSDCHEM\1\DATA\VMS7-201103\
Data File : 20110328.D
Acq On : 03 Nov 2020 07:02 pm
Operator : MF
Sample : ICV
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 04 10:13:35 2020
Quant Method : C:\MSDCHEM\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
97	C	1,3,5-Trimethylbenzene	0.596	0.597	-0.2	105	0.00
98	C	tert-Butylbenzene	0.363	0.344	5.2	106	0.00
99	C	1,2,4-Trimethylbenzene	0.599	0.614	-2.5	107	0.00
100	C	sec-Butylbenzene	0.698	0.684	2.0	105	0.00
101	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	105	0.00
102	C	1,3-Dichlorobenzene	0.814	0.764	6.1	106	0.00
103	C	p-Isopropyltoluene	1.074	1.075	-0.1	107	0.00
104	C	1,4-Dichlorobenzene	0.886	0.777	12.3	102	0.00
105	C	1,2,3-Trimethylbenzene	1.369	1.267	7.5	103	0.00
106	C	Benzyl chloride	1.055	0.006#	99.4#	1#	0.00
107	C	1,2-Dichlorobenzene	0.855	0.772	9.7	103	0.00
108	C	n-Butylbenzene	1.074	1.031	4.0	99	0.00
109	C	Hexachloroethane	0.272	0.239	12.1	100	0.00
110	C	1,2-Dibromo-3-chloropropane	0.212	0.213	-0.5	103	0.00
111	C	1,3,5-Trichlorobenzene	0.510	0.011#	97.8#	2#	0.00
112	C	1,2,4-Trichlorobenzene	0.498	0.477	4.2	101	0.00
113	C	Hexachlorobutadiene	0.205	0.177#	13.7	108	0.00
114	C	Naphthalene	1.565	1.674	-7.0	98	0.00
115	C	1,2,3-Trichlorobenzene	0.498	0.477	4.2	101	0.00
116	C	2-Methylnaphthalene	0.444	0.007#	98.4#	1#	0.00
117	C	1-Methylnaphthalene	0.504	0.007#	98.6#	1#	0.00
118	I	Ethyl-d5-Acetate-d3	1.000	1.000	0.0	107	0.00
119	T	2-Propanone	0.630	0.414	34.3#	115	0.00
120	T	2-Propanol	0.179	0.145#	19.0	101	0.00
121	T	Acetic Ether	1.095	1.075	1.8	99	0.00
122	T	Isopropyl Acetate	0.287	0.000#	100.0#	0#	-6.42#
123	T	Amyl Acetate	1.098	1.138	-3.6	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 29

```
  Starting sequence Tue Nov 03 10:27:18 2020

Instrument Name: VMS7
  Sequence File: C:\GCMS\1\sequence\VMS7-201103.sequence.xml
        Comment:
       Operator: MF
      Data Path: C:\MSDCHEM\1\DATA\VMS7-201103\

  Line  Type          Vials    DataFile                       Sample Name
  ------------------------------------------------------------------------
  Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
  Acquisition Method File: 7V8260.M
    1) Sample           1      20110301               blk
       Comment: IS 200-21532
    2) Sample           2      20110302               blk
       Comment: IS 200-21532
    3) Sample           3      20110303               blk
       Comment: IS 200-21532
    4) Sample           4      20110304               blk
       Comment: IS 200-21532
    5) Sample           5      20110305               blk
       Comment: IS 200-21532
    6) Sample           6      20110306               blk
       Comment: IS 200-21532
    7) Sample           7      20110307               blk
       Comment: IS 200-21532
    8) Sample           8      20110308               blk
       Comment: IS 200-21532
    9) Sample           9      20110309               blk
       Comment: IS 200-21532
   10) Sample          10      20110310               blk
       Comment: IS 200-21532
   11) Pause: ' '

  Sequence paused Tue Nov 03 13:20:04 2020

    C:\MSDCHEM\1\DATA\VMS7-201103\2020 Nov 03 1027 Quality Log.LOG
    C:\MSDCHEM\1\DATA\VMS7-201103\2020 Nov 03 1027 Sequence Log .LOG

  Resuming sequence Tue Nov 03 13:44:26 2020


Instrument Name: VMS7
  Sequence File: C:\GCMS\1\sequence\VMS7-201103.sequence.xml
        Comment:
       Operator: MF
      Data Path: C:\MSDCHEM\1\DATA\VMS7-201103\

  Line  Type          Vials    DataFile                       Sample Name
  ------------------------------------------------------------------------
```

```
Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
Acquisition Method File: 7V8260.M
 12) Sample           1      20110311              BFB_TUNE1-201103
     Comment: IS 200-21532

Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
Acquisition Method File: BFB.M
 13) Sample           1      20110312              BFB_TUNE1-201103
     Comment: IS 200-21532
Sequence Table edit performed Tue Nov 03 14:27:06 2020
 14) Sample           1      20110313              BFB_TUNE1-201103
     Comment: IS 200-21532
Sequence Table edit performed Tue Nov 03 14:37:05 2020

Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
Acquisition Method File: 7V8260.M
 15) Sample           1      20110314              BLK
     Comment: IS 200-21532
 16) Sample           2      20110315              BLK
     Comment: IS 200-21532
 17) Sample           3      20110316              BLK
     Comment: IS 200-21532
 18) Sample           4      20110317              BLK
     Comment: IS 200-21532
 19) Sample           5      20110318              VBLKW1-201103
     Comment: 200-21588
Sequence Table edit performed Tue Nov 03 16:08:24 2020
 20) Sample           6      20110319              0.4PPB
     Comment: IS 200-21532
 21) Sample           7      20110320              0.6PPB
     Comment: IS 200-21532
Sequence Table edit performed Tue Nov 03 16:55:27 2020
 22) Sample           8      20110321              2PPB
     Comment: IS 200-21532
Sequence Table edit performed Tue Nov 03 17:20:03 2020
 23) Sample           9      20110322              4PPB
     Comment: IS 200-21532
 24) Sample          10      20110323              10PPB
     Comment: IS 200-21532
 25) Sample          11      20110324              40PPB
     Comment: IS 200-21532
 26) Sample          12      20110325              70PPB
     Comment: IS 200-21532
 27) Sample          13      20110326              100PPB
     Comment: IS 200-21532
 28) Sample          14      20110327              BLK
     Comment: IS 200-21532
 29) Sample          15      20110328              ICV
     Comment: IS 200-21532
```

30) Sample 16 20110329 BLK
Comment: IS 200-21532
31) Sample 17 20110330 BFB_TUNE1-201103
Comment: 200-21588
32) Sample 18 20110331 VCCV1-201103
Comment: IS 200-21532; 40PPB 200-21629, 21625, 21630
33) Sample 19 20110332 VCCV2-201103
Comment: IS 200-21532; 40PPB 200-21629, 21625, 21630
34) Sample 20 20110333 VLCSW1-201103
Comment: IS 200-21532; 20PPB 200-21627
35) Sample 21 20110334 LCS-
Comment: IS 200-21532; 20PPB 200-21627
36) Sample 22 20110335 BLK
Comment: IS 200-21532
37) Sample 23 20110336 VBLKW1-201103
Comment: IS 200-21532
38) Sample 24 20110337 MBLK
Comment: IS 200-21532
39) Sample 25 20110338 EQB1-166990 DF20
Comment: IS 200-21532
40) Sample 26 20110339 EQB4-166990 DF20
Comment: IS 200-21532
41) Sample 27 20110340 EQB2-166990 DF20
Comment: IS 200-21532
42) Sample 28 20110341 20102656-02A
Comment: IS 200-21532
43) Sample 29 20110342 20102656-03A
Comment: IS 200-21532
44) Sample 30 20110343 20102656-20A DF20
Comment: IS 200-21532
45) Sample 31 20110344 EQB5-166990 DF20
Comment: IS 200-21532
46) Sample 32 20110345 20110087-02A DF20
Comment: IS 200-21532
47) Sample 33 20110346 20102565-16A DF20
Comment: IS 200-21532
48) Sample 34 20110347 20102565-14A DF20
Comment: IS 200-21532
49) Sample 35 20110348 20102565-18A DF20
Comment: IS 200-21532
50) Sample 36 20110349 20102565-24A DF20
Comment: IS 200-21532
51) Sample 37 20110350 20102565-08A DF20
Comment: IS 200-21532
52) Sample 38 20110351 EQB3-166990 DF20
Comment: IS 200-21532
53) Sample 39 20110352 20102565-02A DF20
Comment: IS 200-21532
54) Sample 40 20110353 20102565-10A DF20
Comment: IS 200-21532

```
 55) Sample          41      20110354              20102565-12A DF20
     Comment: IS 200-21532
 56) Sample          42      20110355              20102565-04A DF20
     Comment: IS 200-21532
 57) Sample          43      20110356              20102565-22A DF20
     Comment: IS 200-21532
 58) Sample          44      20110357              20102565-06A DF20
     Comment: IS 200-21532
 59) Sample          45      20110358              20102565-06A MS DF20
     Comment: IS 200-21532
 60) Sample          46      20110359              20102565-06A MSD DF20
     Comment: IS 200-21532
 61) Sample          47      20110360              BLK
     Comment: IS 200-21532

Sequence completed Wed Nov 04 04:03:29 2020

  C:\MSDCHEM\1\DATA\VMS7-201103\2020 Nov 03 1344 Quality Log.LOG
  C:\MSDCHEM\1\DATA\VMS7-201103\2020 Nov 03 1344 Sequence Log .LOG
```

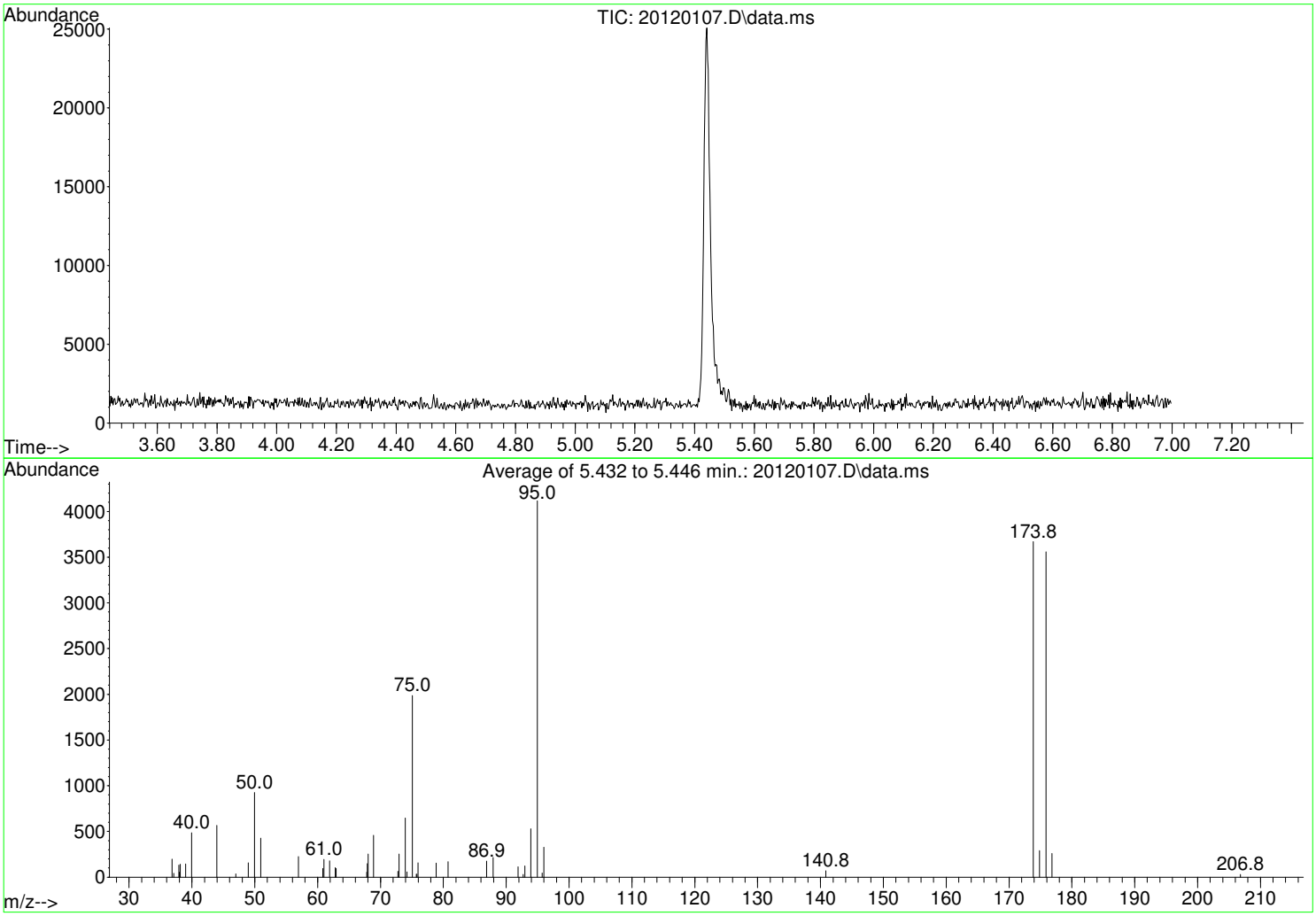
1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120107.D
Acq On : 01 Dec 2020 04:29 pm
Operator : MF
Sample : BFB_TUNE1-201201
Misc : 200-21588
ALS Vial : 1 Sample Multiplier: 1

Integration File: 8260.P

Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Title : 8260 Global Optimization
Last Update : Wed Nov 04 09:59:32 2020



Spectrum Information: Average of 5.432 to 5.446 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.5	925	PASS
75	95	30	60	48.2	1987	PASS
95	95	100	100	100.0	4117	PASS
96	95	5	9	8.0	328	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	89.1	3669	PASS
175	174	5	9	7.9	291	PASS
176	174	95	101	97.0	3558	PASS
177	176	5	9	7.3	260	PASS

Evaluate Continuing Calibration Report

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	20.000	20.000	0.0	104	0.00
2	C	Dichlorodifluoromethane	40.000	34.642	13.4	89	0.00
3	CP	Chloromethane	40.000	38.124	4.7	95	0.00
4	C	Vinyl chloride	40.000	40.221	-0.6	106	0.00
5	C	Bromomethane	40.000	45.905	-14.8	130	0.00
6	C	Chloroethane	40.000	14.436	63.9#	37	0.00
7	C	Dichlorofluoromethane	40.000	41.754	-4.4	107	0.00
8	C	Trichlorofluoromethane	40.000	41.830	-4.6	109	0.00
9	C	Ethanol	800.000	746.164	6.7	102	0.00
10	C	Ethyl ether	40.000	36.498	8.8	105	0.00
11	C	Acrolein	40.000	39.237	1.9	109	0.00
12	C	1,1-Dichloroethene	40.000	40.307	-0.8	107	0.00
13	C	1,1,2-Trichlorotrifluoroeth	40.000	42.933	-7.3	119	0.00
14	C	Methyl iodide	40.000	0.000	100.0#	0	0.00
15	C	Acetone	40.000	34.705	13.2	95	0.00
16	C	Chloroprene	40.000	39.303	1.7	107	0.00
17	C	Carbon disulfide	40.000	39.601	1.0	110	0.00
18	C	Allyl chloride	40.000	39.137	2.2	105	0.00
19	C	Methyl acetate	40.000	42.541	-6.4	119	0.00
20	C	Acetonitrile	40.000	40.363	-0.9	113	0.00
21	C	Methylene chloride	40.000	40.035	-0.1	105	0.00
22	C	trans-1,2-Dichloroethene	40.000	37.920	5.2	107	0.00
23	C	t-Butanol	200.000	196.660	1.7	112	0.00
24	C	Acrylonitrile	40.000	39.422	1.4	103	0.00
25	CP	Methyl tert-butyl ether	40.000	40.271	-0.7	116	0.00
26	C	Hexane	40.000	43.968	-9.9	118	0.00
27	CP	1,1-Dichloroethane	40.000	40.046	-0.1	107	0.00
28	CP	Diisopropyl ether	40.000	38.948	2.6	109	0.00
29	C	Vinyl acetate	40.000	39.069	2.3	111	0.00
30	CP	Ethyl tert butyl ether	40.000	39.332	1.7	112	0.00
31	C	Methylcyclopentane	40.000	39.028	2.4	106	0.00
32	C	2,2-Dichloropropane	40.000	40.364	-0.9	108	0.00
33	C	cis-1,2-Dichloroethene	40.000	39.286	1.8	106	0.00
34	C	2-Butanone	40.000	34.227	14.4	98	0.00
35	C	Ethyl Acetate	40.000	36.720	8.2	103	0.00
36	C	Methyl acrylate	40.000	37.752	5.6	103	0.00
37	C	Propionitrile	40.000	43.783	-9.5	112	0.00
38	C	Bromochloromethane	40.000	37.128	7.2	96	0.00
39	C	Tetrahydrofuran	40.000	36.251	9.4	95	0.00
40	C	Methacrylonitrile	40.000	38.333	4.2	102	0.00
41	C	Chloroform	40.000	38.312	4.2	107	0.00
42	C	Cyclohexane	40.000	41.534	-3.8	111	0.00
43	I	1,4-Difluorobenzene	20.000	20.000	0.0	102	0.00
44	C	1,1,1-Trichloroethane	40.000	40.899	-2.2	109	0.00
45	S	Dibromofluoromethane	20.000	20.111	-0.6	99	0.00
46	C	Carbon tetrachloride	40.000	43.245	-8.1	107	0.00
47	C	1,1-Dichloropropene	40.000	41.258	-3.1	110	0.00
48	S	1,2-Dichloroethane-d4	20.000	19.088	4.6	99	0.00

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	C	1,2-Dichloroethane	40.000	38.244	4.4	104	0.00
50	CP	Benzene	40.000	41.527	-3.8	108	0.00
51	CP	Tertiaryamylmethylether	40.000	40.827	-2.1	112	0.00
52	C	Isobutyl Alcohol	40.000	41.307	-3.3	105	0.00
53	C	Heptane	40.000	49.623	-24.1#	126	0.00
54	C	1,4-Dioxane	4000.000	3549.901	11.3	91	0.01
55	C	Methylcyclohexane	40.000	45.897	-14.7	115	0.00
56	C	n-Butanol	400.000	516.869	-29.2#	130	-0.01
57	C	Trichloroethene	40.000	42.716	-6.8	112	0.00
58	C	1,2-Dichloropropane	40.000	37.795	5.5	105	0.00
59	C	Dibromomethane	40.000	41.415	-3.5	105	0.00
60	C	Methyl methacrylate	40.000	37.558	6.1	97	0.00
61	C	Bromodichloromethane	40.000	40.809	-2.0	106	0.00
62	C	2-Chloroethyl vinyl ether	40.000	25.803	35.5#	67	0.00
63	C	2-Nitropropane	40.000	36.915	7.7	103	0.00
64	C	cis-1,3-Dichloropropene	40.000	43.541	-8.9	107	0.00
65	I	Chlorobenzene-d5	20.000	20.000	0.0	101	0.00
66	C	4-Methyl-2-pentanone	40.000	40.008	-0.0	105	0.00
67	S	Toluene-d8	20.000	20.291	-1.5	101	0.00
68	CP	Toluene	40.000	43.154	-7.9	112	0.00
69	C	trans-1,3-Dichloropropene	40.000	45.005	-12.5	106	0.00
70	C	Chloropicrin	400.000	0.000	100.0#	0	0.00
71	C	Ethyl methacrylate	40.000	39.168	2.1	102	0.00
72	C	1,1,2-Trichloroethane	40.000	40.850	-2.1	108	0.00
73	C	Tetrachloroethene	40.000	43.269	-8.2	108	0.00
74	C	1,3-Dichloropropane	40.000	40.426	-1.1	107	0.00
75	C	2-Hexanone	40.000	37.396	6.5	103	0.00
76	C	Chlorodibromomethane	40.000	46.082	-15.2	109	0.00
77	C	Butyl acetate	40.000	37.957	5.1	105	0.00
78	C	1,2-Dibromoethane	40.000	43.141	-7.9	109	0.00
79	CP	Chlorobenzene	40.000	44.054	-10.1	116	0.00
80	C	1,1,1,2-Tetrachloroethane	40.000	43.859	-9.6	115	0.00
81	CP	Ethylbenzene	40.000	42.569	-6.4	112	0.00
82	CP	m/p-Xylene	80.000	86.024	-7.5	109	0.00
83	C	Nonane	40.000	36.352	9.1	99	0.00
84	C	Styrene	40.000	49.414	-23.5#	113	0.00
85	CP	o-Xylene	40.000	43.939	-9.8	111	0.00
86	C	Cyclohexanone	200.000	239.654	-19.8	121	0.00
87	CP	Bromoform	40.000	41.700	-4.3	113	0.00
88	C	Isopropylbenzene	40.000	45.971	-14.9	118	0.00
89	S	Bromofluorobenzene	20.000	20.652	-3.3	101	0.00
90	C	Bromobenzene	40.000	41.585	-4.0	105	0.00
91	CP	1,1,2,2-Tetrachloroethane	40.000	39.355	1.6	104	0.00
92	C	1,2,3-Trichloropropane	40.000	41.103	-2.8	107	0.00
93	C	trans-1,4-Dichloro-2-butene	40.000	41.828	-4.6	98	0.00
94	C	n-Propylbenzene	40.000	45.147	-12.9	112	0.00
95	C	2-Chlorotoluene	40.000	41.529	-3.8	109	0.00
96	C	4-Chlorotoluene	40.000	42.550	-6.4	111	0.00

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
97	C	1,3,5-Trimethylbenzene	40.000	46.056	-15.1	114	0.00
98	C	tert-Butylbenzene	40.000	44.282	-10.7	117	0.00
99	C	1,2,4-Trimethylbenzene	40.000	48.061	-20.2#	118	0.00
100	C	sec-Butylbenzene	40.000	47.913	-19.8	120	0.00
101	I	1,4-Dichlorobenzene-d4	20.000	20.000	0.0	102	0.00
102	C	1,3-Dichlorobenzene	40.000	41.870	-4.7	115	0.00
103	C	p-Isopropyltoluene	40.000	47.672	-19.2	123	0.00
104	C	1,4-Dichlorobenzene	40.000	42.701	-6.8	113	0.00
105	C	1,2,3-Trimethylbenzene	40.000	41.682	-4.2	112	0.00
106	C	Benzyl chloride	40.000	36.360	9.1	102	0.00
107	C	1,2-Dichlorobenzene	40.000	40.732	-1.8	113	0.00
108	C	n-Butylbenzene	40.000	46.978	-17.4	118	0.00
109	C	Hexachloroethane	40.000	44.586	-11.5	119	0.00
110	C	1,2-Dibromo-3-chloropropane	40.000	43.165	-7.9	108	0.00
111	C	1,3,5-Trichlorobenzene	40.000	44.540	-11.3	121	0.00
112	C	1,2,4-Trichlorobenzene	40.000	40.476	-1.2	104	0.00
113	C	Hexachlorobutadiene	40.000	50.233	-25.6#	138	0.00
114	C	Naphthalene	40.000	32.082	19.8	88	0.00
115	C	1,2,3-Trichlorobenzene	40.000	40.476	-1.2	104	0.00
116	C	2-Methylnaphthalene	40.000	22.765	43.1#	51	0.00
117	C	1-Methylnaphthalene	40.000	24.808	38.0#	57	0.00
118	I	Ethyl-d5-Acetate-d3	20.000	20.000	0.0	93	0.00
119	T	2-Propanone	40.000	38.981	2.5	95	0.00
120	T	2-Propanol	800.000	779.172	2.6	91	0.01
121	T	Acetic Ether	40.000	40.953	-2.4	103	0.00
122	T	Isopropyl Acetate	40.000	44.761	-11.9	111	0.00
123	T	Amyl Acetate	40.000	41.866	-4.7	102	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 11

Evaluate Continuing Calibration Report

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	104	0.00
2	C	Dichlorodifluoromethane	0.295	0.215	27.1#	89	0.00
3	CP	Chloromethane	0.708	0.686	3.1	95	0.00
4	C	Vinyl chloride	0.456	0.393	13.8	106	0.00
5	C	Bromomethane	0.054	0.032#	40.7#	130	0.00
6	C	Chloroethane	0.135	0.047#	65.2#	37#	0.00
7	C	Dichlorofluoromethane	0.833	0.756	9.2	107	0.00
8	C	Trichlorofluoromethane	0.552	0.528	4.3	109	0.00
9	C	Ethanol	0.067	0.051#	23.9#	102	0.00
10	C	Ethyl ether	0.337	0.307	8.9	105	0.00
11	C	Acrolein	0.024	0.028#	-16.7	109	0.00
12	C	1,1-Dichloroethene	0.594	0.564	5.1	107	0.00
13	C	1,1,2-Trichlorotrifluoroeth	0.217	0.232	-6.9	119	0.00
14	C	Methyl iodide	0.000	0.075#	0.0	0#	0.00
15	C	Acetone	0.454	0.265	41.6#	95	0.00
16	C	Chloroprene	0.536	0.527	1.7	107	0.00
17	C	Carbon disulfide	0.992	0.982	1.0	110	0.00
18	C	Allyl chloride	0.774	0.758	2.1	105	0.00
19	C	Methyl acetate	0.753	0.767	-1.9	119	0.00
20	C	Acetonitrile	0.339	0.284	16.2	113	0.00
21	C	Methylene chloride	0.885	0.689	22.1#	105	0.00
22	C	trans-1,2-Dichloroethene	0.610	0.578	5.2	107	0.00
23	C	t-Butanol	0.233	0.216	7.3	112	0.00
24	C	Acrylonitrile	0.309	0.304	1.6	103	0.00
25	CP	Methyl tert-butyl ether	1.062	1.023	3.7	116	0.00
26	C	Hexane	0.329	0.361	-9.7	118	0.00
27	CP	1,1-Dichloroethane	0.811	0.742	8.5	107	0.00
28	CP	Diisopropyl ether	1.495	1.380	7.7	109	0.00
29	C	Vinyl acetate	0.051	0.054#	-5.9	111	0.00
30	CP	Ethyl tert butyl ether	1.166	1.078	7.5	112	0.00
31	C	Methylcyclopentane	0.717	0.700	2.4	106	0.00
32	C	2,2-Dichloropropane	0.561	0.514	8.4	108	0.00
33	C	cis-1,2-Dichloroethene	0.706	0.646	8.5	106	0.00
34	C	2-Butanone	0.526	0.412	21.7#	98	0.00
35	C	Ethyl Acetate	1.033	0.866	16.2	103	0.00
36	C	Methyl acrylate	0.593	0.625	-5.4	103	0.00
37	C	Propionitrile	0.043	0.047#	-9.3	112	0.00
38	C	Bromochloromethane	0.467	0.384	17.8	96	0.00
39	C	Tetrahydrofuran	0.396	0.293	26.0#	95	0.00
40	C	Methacrylonitrile	0.240	0.258	-7.5	102	0.00
41	C	Chloroform	0.759	0.727	4.2	107	0.00
42	C	Cyclohexane	0.817	0.533	34.8#	111	0.00
43	I	1,4-Difluorobenzene	1.000	1.000	0.0	102	0.00
44	C	1,1,1-Trichloroethane	0.336	0.344	-2.4	109	0.00
45	S	Dibromofluoromethane	0.416	0.418	-0.5	99	0.00
46	C	Carbon tetrachloride	0.292	0.316	-8.2	107	0.00
47	C	1,1-Dichloropropene	0.309	0.319	-3.2	110	0.00
48	S	1,2-Dichloroethane-d4	0.488	0.465	4.7	99	0.00

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	C	1,2-Dichloroethane	0.368	0.352	4.3	104	0.00
50	CP	Benzene	0.952	0.887	6.8	108	0.00
51	CP	Tertiaryamylmethylether	0.612	0.610	0.3	112	0.00
52	C	Isobutyl Alcohol	0.737	0.761	-3.3	105	0.00
53	C	Heptane	0.222	0.236	-6.3	126	0.00
54	C	1,4-Dioxane	0.008	0.007#	12.5	91	0.01
55	C	Methylcyclohexane	0.221	0.254	-14.9	115	0.00
56	C	n-Butanol	0.005	0.008#	-60.0#	130	-0.01
57	C	Trichloroethene	0.205	0.219	-6.8	112	0.00
58	C	1,2-Dichloropropane	0.290	0.274	5.5	105	0.00
59	C	Dibromomethane	0.188	0.195#	-3.7	105	0.00
60	C	Methyl methacrylate	0.313	0.341	-8.9	97	0.00
61	C	Bromodichloromethane	0.314	0.320	-1.9	106	0.00
62	C	2-Chloroethyl vinyl ether	0.126	0.098#	22.2#	67	0.00
63	C	2-Nitropropane	0.122	0.114#	6.6	103	0.00
64	C	cis-1,3-Dichloropropene	0.355	0.387	-9.0	107	0.00
65	I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00
66	C	4-Methyl-2-pentanone	0.556	0.531	4.5	105	0.00
67	S	Toluene-d8	1.284	1.303	-1.5	101	0.00
68	CP	Toluene	0.924	0.933	-1.0	112	0.00
69	C	trans-1,3-Dichloropropene	0.346	0.389	-12.4	106	0.00
70	C	Chloropicrin	0.000	0.002#	0.0	0#	0.00
71	C	Ethyl methacrylate	0.312	0.372	-19.2	102	0.00
72	C	1,1,2-Trichloroethane	0.263	0.269	-2.3	108	0.00
73	C	Tetrachloroethene	0.227	0.245	-7.9	108	0.00
74	C	1,3-Dichloropropane	0.421	0.426	-1.2	107	0.00
75	C	2-Hexanone	0.369	0.420	-13.8	103	0.00
76	C	Chlorodibromomethane	0.268	0.308	-14.9	109	0.00
77	C	Butyl acetate	0.581	0.709	-22.0#	105	0.00
78	C	1,2-Dibromoethane	0.290	0.313	-7.9	109	0.00
79	CP	Chlorobenzene	0.599	0.623	-4.0	116	0.00
80	C	1,1,1,2-Tetrachloroethane	0.216	0.237	-9.7	115	0.00
81	CP	Ethylbenzene	0.930	0.990	-6.5	112	0.00
82	CP	m/p-Xylene	0.706	0.759	-7.5	109	0.00
83	C	Nonane	0.186	0.160#	14.0	99	0.00
84	C	Styrene	0.478	0.590	-23.4#	113	0.00
85	CP	o-Xylene	0.719	0.790	-9.9	111	0.00
86	C	Cyclohexanone	0.038	0.046#	-21.1#	121	0.00
87	CP	Bromoform	0.195	0.239	-22.6#	113	0.00
88	C	Isopropylbenzene	0.756	0.869	-14.9	118	0.00
89	S	Bromofluorobenzene	0.481	0.497	-3.3	101	0.00
90	C	Bromobenzene	0.437	0.418	4.3	105	0.00
91	CP	1,1,2,2-Tetrachloroethane	0.533	0.524	1.7	104	0.00
92	C	1,2,3-Trichloropropane	0.111	0.114#	-2.7	107	0.00
93	C	trans-1,4-Dichloro-2-butene	0.132	0.138#	-4.5	98	0.00
94	C	n-Propylbenzene	0.966	1.090	-12.8	112	0.00
95	C	2-Chlorotoluene	0.635	0.659	-3.8	109	0.00
96	C	4-Chlorotoluene	0.722	0.768	-6.4	111	0.00

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Min. RRF : 0.200 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
97	C	1,3,5-Trimethylbenzene	0.596	0.686	-15.1	114	0.00
98	C	tert-Butylbenzene	0.363	0.402	-10.7	117	0.00
99	C	1,2,4-Trimethylbenzene	0.599	0.720	-20.2#	118	0.00
100	C	sec-Butylbenzene	0.698	0.836	-19.8	120	0.00
101	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00
102	C	1,3-Dichlorobenzene	0.814	0.852	-4.7	115	0.00
103	C	p-Isopropyltoluene	1.074	1.279	-19.1	123	0.00
104	C	1,4-Dichlorobenzene	0.886	0.886	0.0	113	0.00
105	C	1,2,3-Trimethylbenzene	1.369	1.426	-4.2	112	0.00
106	C	Benzyl chloride	1.055	1.133	-7.4	102	0.00
107	C	1,2-Dichlorobenzene	0.855	0.870	-1.8	113	0.00
108	C	n-Butylbenzene	1.074	1.261	-17.4	118	0.00
109	C	Hexachloroethane	0.272	0.291	-7.0	119	0.00
110	C	1,2-Dibromo-3-chloropropane	0.212	0.228	-7.5	108	0.00
111	C	1,3,5-Trichlorobenzene	0.510	0.568	-11.4	121	0.00
112	C	1,2,4-Trichlorobenzene	0.498	0.504	-1.2	104	0.00
113	C	Hexachlorobutadiene	0.205	0.233	-13.7	138	0.00
114	C	Naphthalene	1.565	1.542	1.5	88	0.00
115	C	1,2,3-Trichlorobenzene	0.498	0.504	-1.2	104	0.00
116	C	2-Methylnaphthalene	0.444	0.294	33.8#	51	0.00
117	C	1-Methylnaphthalene	0.504	0.366	27.4#	57	0.00
118	I	Ethyl-d5-Acetate-d3	1.000	1.000	0.0	93	0.00
119	T	2-Propanone	0.630	0.394	37.5#	95	0.00
120	T	2-Propanol	0.179	0.150#	16.2	91	0.01
121	T	Acetic Ether	1.095	1.292	-18.0	103	0.00
122	T	Isopropyl Acetate	0.287	0.445	-55.1#	111	0.00
123	T	Amyl Acetate	1.098	1.359	-23.8#	102	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 18

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.098	168	151756	20.00	ug/L	0.00
43) 1,4-Difluorobenzene	5.230	114	234726	20.00	ug/L	0.00
65) Chlorobenzene-d5	8.420	117	218121	20.00	ug/L	0.00
101) 1,4-Dichlorobenzene-d4	9.764	152	116430	20.00	ug/L	0.00
118) Ethyl-d5-Acetate-d3	3.367	46	101813	20.00	ug/L	0.00
System Monitoring Compounds						
45) Dibromofluoromethane	4.031	111	98143	20.11	ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 100.55%			
48) 1,2-Dichloroethane-d4	4.485	65	109215	19.09	ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 95.45%			
67) Toluene-d8	7.293	98	284197	20.29	ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 101.45%			
89) Bromofluorobenzene	9.148	95	108328	20.65	ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 103.25%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.019	85	65252	34.64	ug/L	99
3) Chloromethane	1.117	50	208305	38.12	ug/L	99
4) Vinyl chloride	1.181	62	119247	40.22	ug/L	99
5) Bromomethane	1.362	96	9833	45.90	ug/L	99
6) Chloroethane	1.421	64	14390	14.44	ug/L #	36
7) Dichlorofluoromethane	1.546	67	229479	41.75	ug/L	99
8) Trichlorofluoromethane	1.571	101	160338	41.83	ug/L	100
9) Ethanol	1.750	45	307673	746.16	ug/L	91
10) Ethyl ether	1.750	59	93296	36.50	ug/L	99
11) Acrolein	2.371	56	8591	39.24	ug/L	98
12) 1,1-Dichloroethene	1.903	61	171186	40.31	ug/L	97
13) 1,1,2-Trichlorotrifluo...	1.903	151	70549	42.93	ug/L	98
15) Acetone	1.939	43	80302	34.70	ug/L	96
16) Chloroprene	2.918	53	159830	39.30	ug/L	99
17) Carbon disulfide	2.062	76	298188	39.60	ug/L	100
18) Allyl chloride	2.157	41	229926	39.14	ug/L	98
19) Methyl acetate	2.151	43	232727	42.54	ug/L	99
20) Acetonitrile	2.466	41	86046	40.36	ug/L	98
21) Methylene chloride	2.254	49	209001	40.03	ug/L	97
22) trans-1,2-Dichloroethene	2.472	61	175422	37.92	ug/L	97
23) t-Butanol	3.253	59	327133	196.66	ug/L	99
24) Acrylonitrile	2.438	53	92376	39.42	ug/L	100
25) Methyl tert-butyl ether	2.466	73	310502	40.27	ug/L	98
26) Hexane	2.706	57	109635	43.97	ug/L	99
27) 1,1-Dichloroethane	2.848	63	225222	40.05	ug/L	100
28) Diisopropyl ether	2.890	45	418753	38.95	ug/L	93
29) Vinyl acetate	2.857	86	16310	39.07	ug/L #	77
30) Ethyl tert butyl ether	3.253	59	327133	39.33	ug/L	98
31) Methylcyclopentane	3.311	56	212473	39.03	ug/L	99
32) 2,2-Dichloropropane	3.426	77	156016	40.36	ug/L	97
33) cis-1,2-Dichloroethene	3.426	61	196068	39.29	ug/L	100
34) 2-Butanone	3.426	43	125167	34.23	ug/L	98
35) Ethyl Acetate	3.479	43	262988	36.72	ug/L	98
36) Methyl acrylate	3.526	55	189814	37.75	ug/L	100
37) Propionitrile	4.112	54	14251	43.78	ug/L	96

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) Bromochloromethane	3.696	49	116498	37.13	ug/L		96
39) Tetrahydrofuran	3.721	42	88948	36.25	ug/L		96
40) Methacrylonitrile	3.660	67	78336	38.33	ug/L		95
41) Chloroform	3.833	83	220675	38.31	ug/L		99
42) Cyclohexane	4.109	56	161644	41.53	ug/L		98
44) 1,1,1-Trichloroethane	4.020	97	161296	40.90	ug/L		99
46) Carbon tetrachloride	4.223	117	148146	43.24	ug/L		100
47) 1,1-Dichloropropene	4.237	75	149726	41.26	ug/L		99
49) 1,2-Dichloroethane	4.602	62	165212	38.24	ug/L		98
50) Benzene	4.502	78	416568	41.53	ug/L		99
51) Tertiaryamylmethylether	4.747	73	286385	40.83	ug/L	#	99
52) Isobutyl Alcohol	4.661	43	357416	41.31	ug/L		98
53) Heptane	5.029	43	110868	49.62	ug/L		97
54) 1,4-Dioxane	6.287	88	322611	3549.90	ug/L		98
55) Methylcyclohexane	6.016	83	119025	45.90	ug/L		99
56) n-Butanol	5.023	56	35600	516.87	ug/L		96
57) Trichloroethene	5.609	130	102874	42.72	ug/L		98
58) 1,2-Dichloropropane	6.086	63	128723	37.79	ug/L		96
59) Dibromomethane	6.225	93	91475	41.42	ug/L		99
60) Methyl methacrylate	6.290	41	160272	37.56	ug/L		97
61) Bromodichloromethane	6.529	83	150234	40.81	ug/L		99
62) 2-Chloroethyl vinyl ether	6.923	43	46192	25.80	ug/L		97
63) 2-Nitropropane	6.805	43	53437	36.91	ug/L		99
64) cis-1,3-Dichloropropene	7.051	75	181463	43.54	ug/L		99
66) 4-Methyl-2-pentanone	7.221	43	231797	40.01	ug/L		98
68) Toluene	7.358	91	406887	43.15	ug/L		99
69) trans-1,3-Dichloropropene	7.597	75	169612	45.00	ug/L		97
71) Ethyl methacrylate	7.673	69	162317	39.17	ug/L		98
72) 1,1,2-Trichloroethane	7.751	97	117133	40.85	ug/L		98
73) Tetrachloroethene	7.790	166	107037	43.27	ug/L		99
74) 1,3-Dichloropropane	7.868	76	185631	40.43	ug/L		99
75) 2-Hexanone	7.935	43	183379	37.40	ug/L		97
76) Chlorodibromomethane	8.024	129	134546	46.08	ug/L		99
77) Butyl acetate	8.041	43	309405	37.96	ug/L		98
78) 1,2-Dibromoethane	8.097	107	136560	43.14	ug/L		100
79) Chlorobenzene	8.440	112	271755	44.05	ug/L		98
80) 1,1,1,2-Tetrachloroethane	8.506	131	103499	43.86	ug/L		98
81) Ethylbenzene	8.512	91	431970	42.57	ug/L		97
82) m/p-Xylene	8.598	91	662465	86.02	ug/L		97
83) Nonane	8.640	43	69880	36.35	ug/L		97
84) Styrene	8.847	104	257385	49.41	ug/L		98
85) o-Xylene	8.830	91	344439	43.94	ug/L		99
86) Cyclohexanone	9.098	55	99533	239.65	ug/L		96
87) Bromoform	8.950	173	104114	41.70	ug/L		98
88) Isopropylbenzene	9.047	105	378928	45.97	ug/L		100
90) Bromobenzene	9.220	77	182427	41.58	ug/L		94
91) 1,1,2,2-Tetrachloroethane	9.232	83	228636	39.35	ug/L		99
92) 1,2,3-Trichloropropane	9.257	110	49631	41.10	ug/L		99
93) trans-1,4-Dichloro-2-b...	9.248	53	60087	41.83	ug/L		94
94) n-Propylbenzene	9.282	91	475689	45.15	ug/L		99
95) 2-Chlorotoluene	9.326	91	287538	41.53	ug/L		98
96) 4-Chlorotoluene	9.393	91	335076	42.55	ug/L		99
97) 1,3,5-Trimethylbenzene	9.379	105	299325	46.06	ug/L		99

1st /S/ BG 12/02/20

2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
98)	tert-Butylbenzene	9.544	91	175217	44.28	ug/L		97
99)	1,2,4-Trimethylbenzene	9.575	105	314182	48.06	ug/L		100
100)	sec-Butylbenzene	9.661	105	364704	47.91	ug/L		98
102)	1,3-Dichlorobenzene	9.722	146	198440	41.87	ug/L		98
103)	p-Isopropyltoluene	9.739	119	297923	47.67	ug/L		99
104)	1,4-Dichlorobenzene	9.775	146	206212	42.70	ug/L		99
105)	1,2,3-Trimethylbenzene	9.786	105	332078	41.68	ug/L		99
106)	Benzyl chloride	9.831	91	263863	36.36	ug/L		98
107)	1,2-Dichlorobenzene	9.954	146	202641	40.73	ug/L		99
108)	n-Butylbenzene	9.943	91	293627	46.98	ug/L		99
109)	Hexachloroethane	10.093	117	67790	44.59	ug/L		96
110)	1,2-Dibromo-3-chloropr...	10.339	157	53166	43.17	ug/L		96
111)	1,3,5-Trichlorobenzene	10.425	180	132316	44.54	ug/L		96
112)	1,2,4-Trichlorobenzene	10.949	180	117354	40.48	ug/L		99
113)	Hexachlorobutadiene	10.785	225	54154	50.23	ug/L		99
114)	Naphthalene	10.849	128	359009	32.08	ug/L		100
115)	1,2,3-Trichlorobenzene	10.949	180	117354	40.48	ug/L		99
116)	2-Methylnaphthalene	11.415	142	68503	22.77	ug/L		100
117)	1-Methylnaphthalene	11.518	142	85340	24.81	ug/L		100
119)	2-Propanone	1.939	43	80302	38.98	ug/L		96
120)	2-Propanol	2.076	45	612809	779.17	ug/L	#	94
121)	Acetic Ether	3.479	43	262988	40.95	ug/L		99
122)	Isopropyl Acetate	6.409	61	90636	44.76	ug/L		94
123)	Amyl Acetate	8.955	43	276743	41.87	ug/L		97

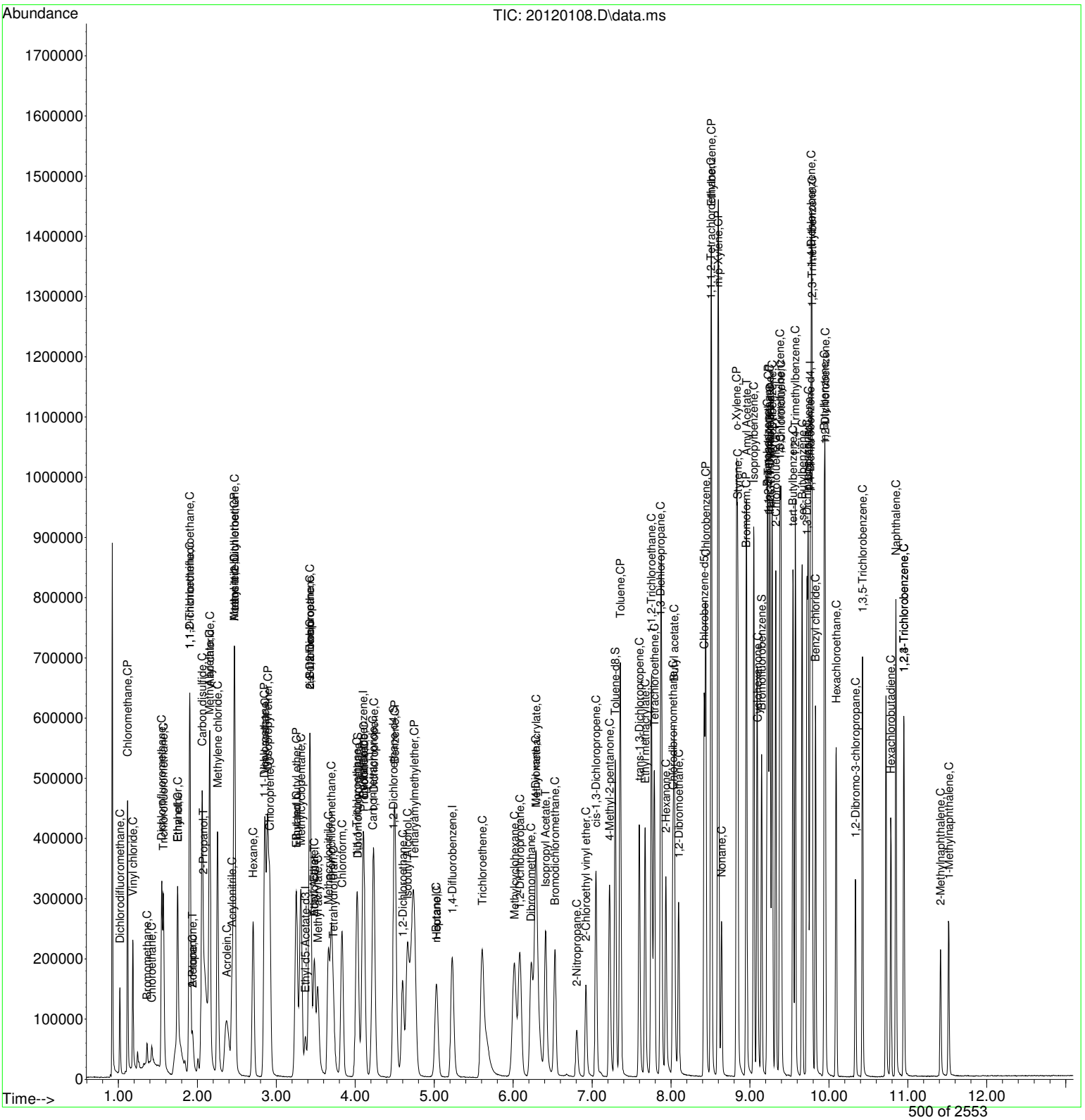
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/02/20

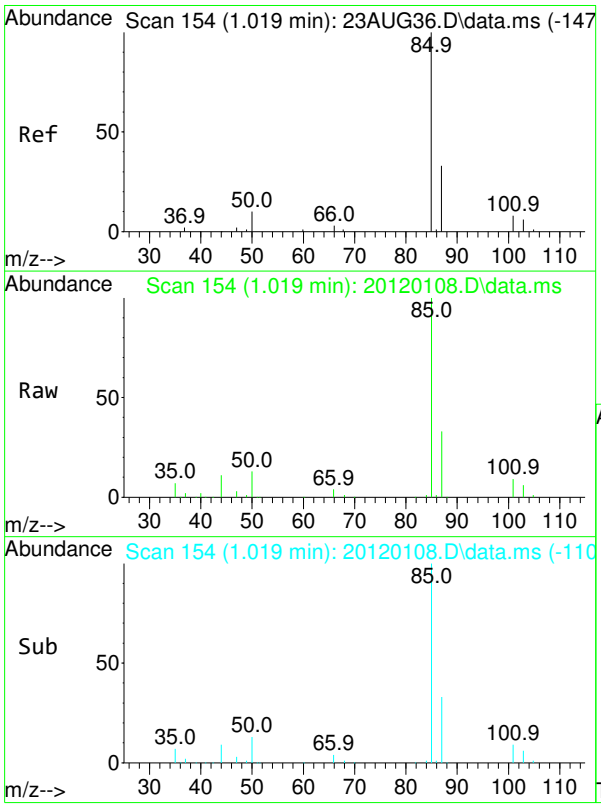
2nd /S/ JS 12/02/20

Data Path : \\Nahllwx091\1\DATA\VMS7-201201\
Data File : 20120108.D
Acq On : 01 Dec 2020 04:48 pm
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 07:39:15 2020
Quant Method : \\Nahllwx091\1\Methods\VMS7-201103-WS.M
Quant Title : 8260 Global Optimization
QLast Update : Wed Nov 04 09:59:32 2020
Response via : Initial Calibration



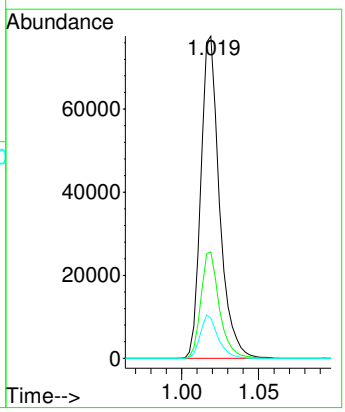
500 of 2553

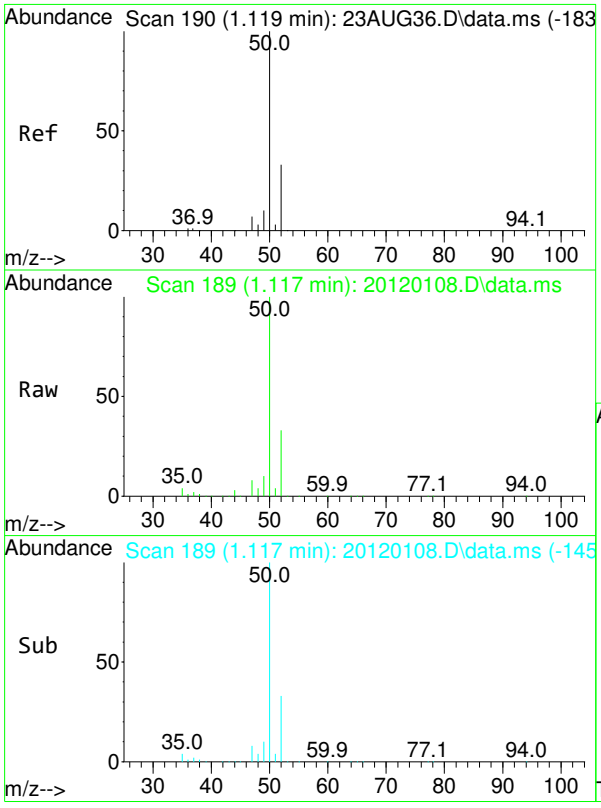


#2
Dichlorodifluoromethane
Concen: 34.64 ug/L
RT: 1.019 min Scan# 154
Delta R.T. 0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 85 Resp: 65252

Ion	Ratio	Lower	Upper
85	100		
87	32.8	2.2	62.2
50	12.8	0.0	42.7

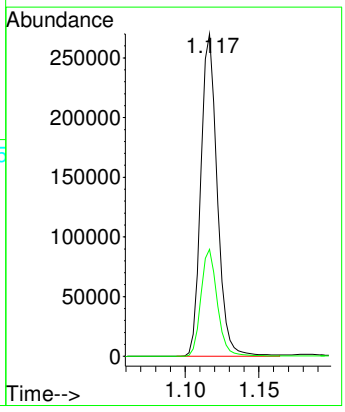


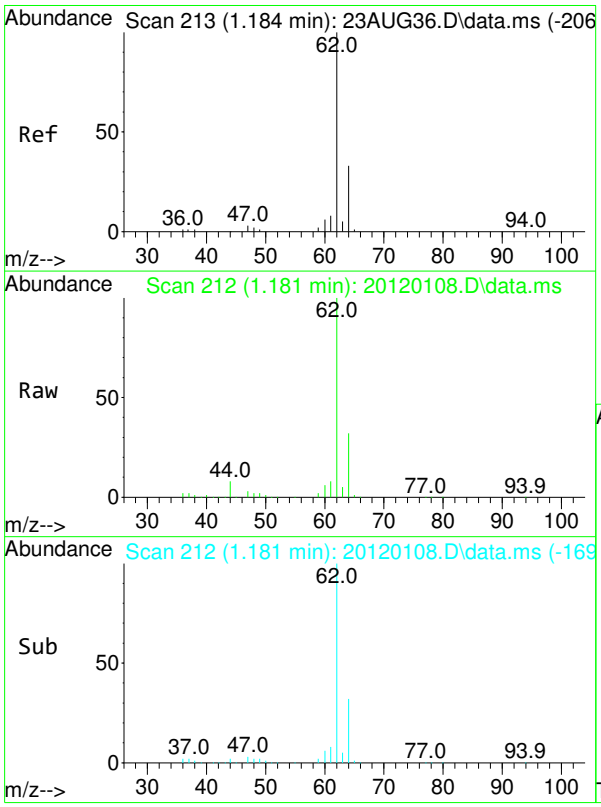


#3
Chloromethane
Concen: 38.12 ug/L
RT: 1.117 min Scan# 189
Delta R.T. 0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 50 Resp: 208305

Ion	Ratio	Lower	Upper
50	100		
52	33.2	2.4	62.4

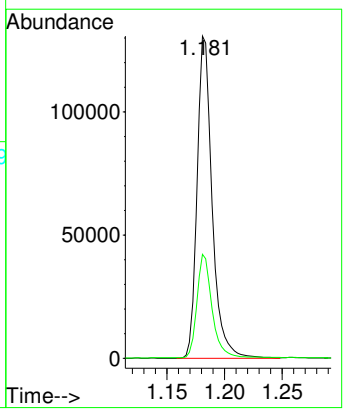


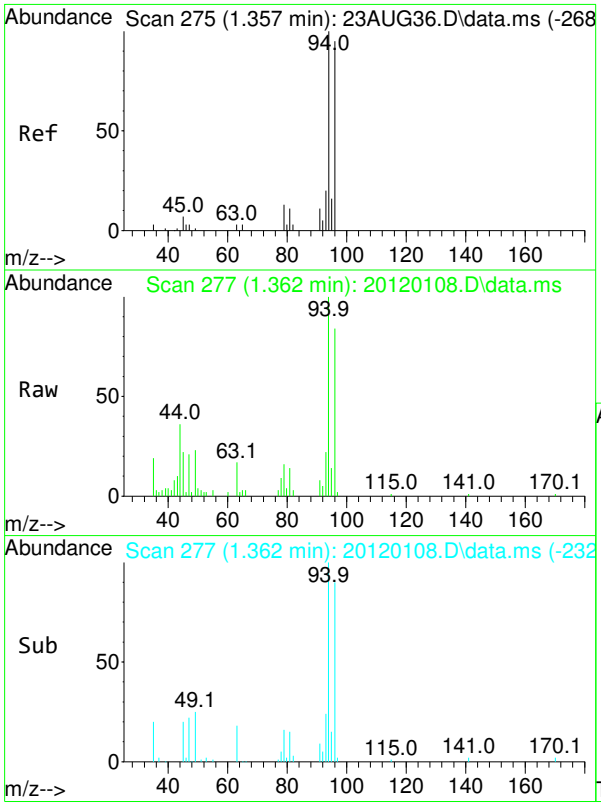


#4
Vinyl chloride
Concen: 40.22 ug/L
RT: 1.181 min Scan# 212
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 62 Resp: 119247

Ion	Ratio	Lower	Upper
62	100		
64	32.0	2.3	62.3

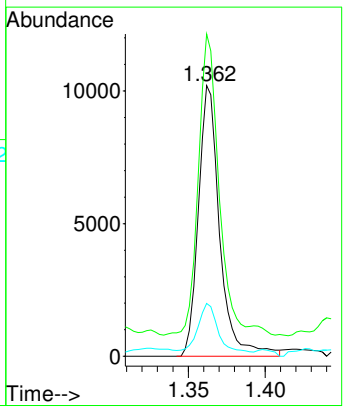


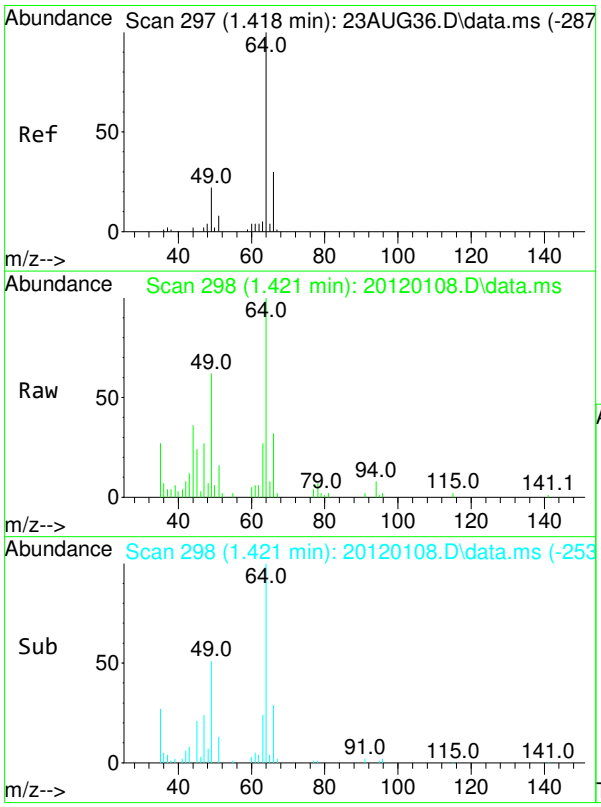


#5
Bromomethane
Concen: 45.90 ug/L
RT: 1.362 min Scan# 277
Delta R.T. 0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 96 Resp: 9833

Ion	Ratio	Lower	Upper
96	100		
94	106.4	77.8	137.8
79	16.1	0.0	45.3

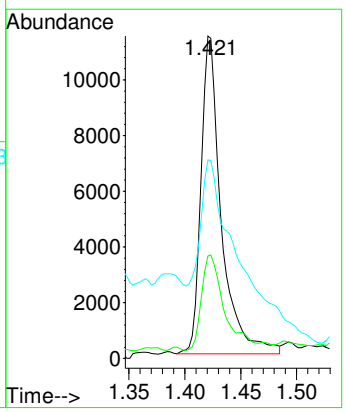


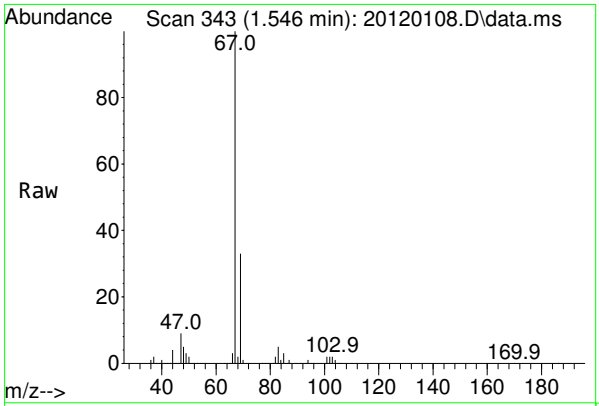


#6
Chloroethane
Concen: 14.44 ug/L
RT: 1.421 min Scan# 298
Delta R.T. 0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 64 Resp: 14390

Ion	Ratio	Lower	Upper
64	100		
66	33.7	2.1	62.1
49	114.6	14.5	74.5#

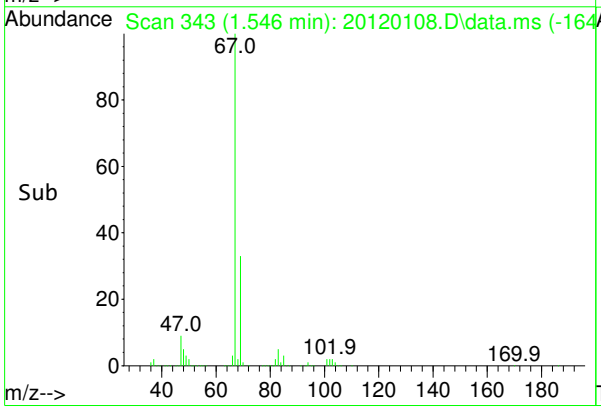


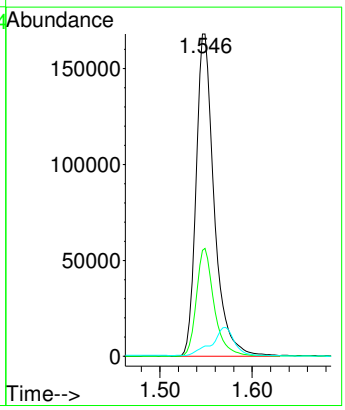


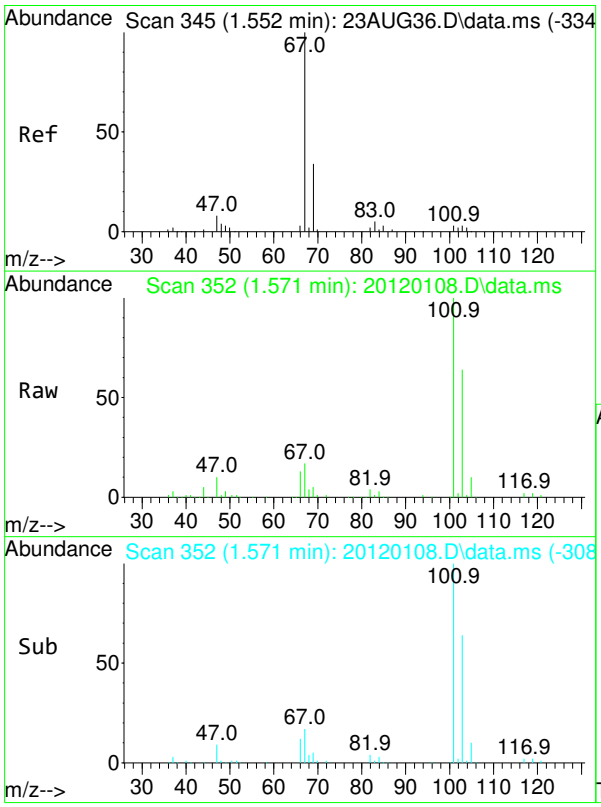
#7
Dichlorofluoromethane
Concen: 41.75 ug/L
RT: 1.546 min Scan# 343
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 67 Resp: 229479

Ion	Ratio	Lower	Upper
67	100		
69	33.1	2.3	62.3
66	11.8	0.0	41.5



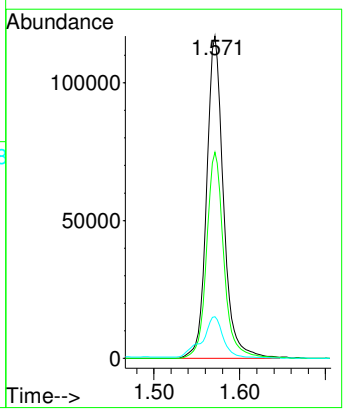


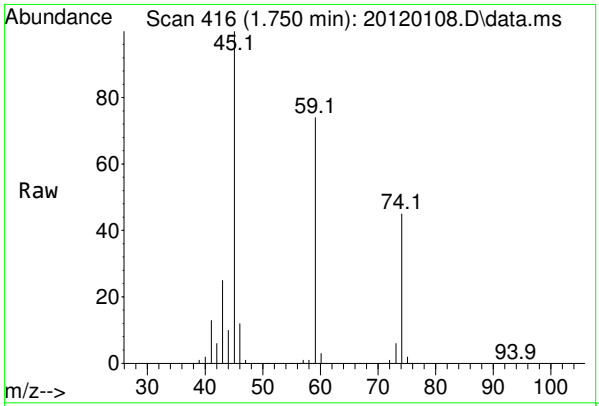


#8
Trichlorofluoromethane
Concen: 41.83 ug/L
RT: 1.571 min Scan# 352
Delta R.T. 0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:101 Resp: 160338

Ion	Ratio	Lower	Upper
101	100		
103	65.4	35.0	95.0
66	17.0	0.0	46.7

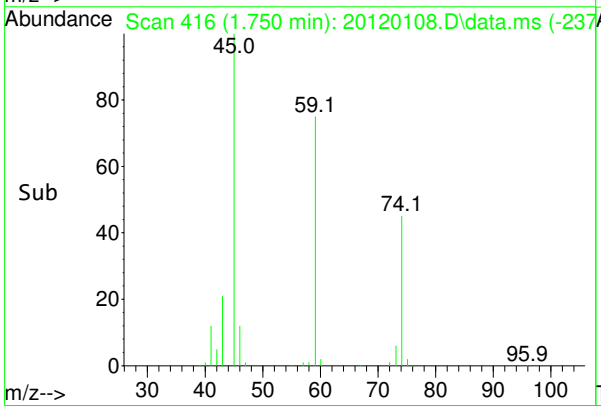


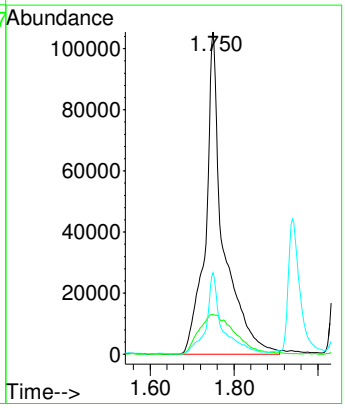


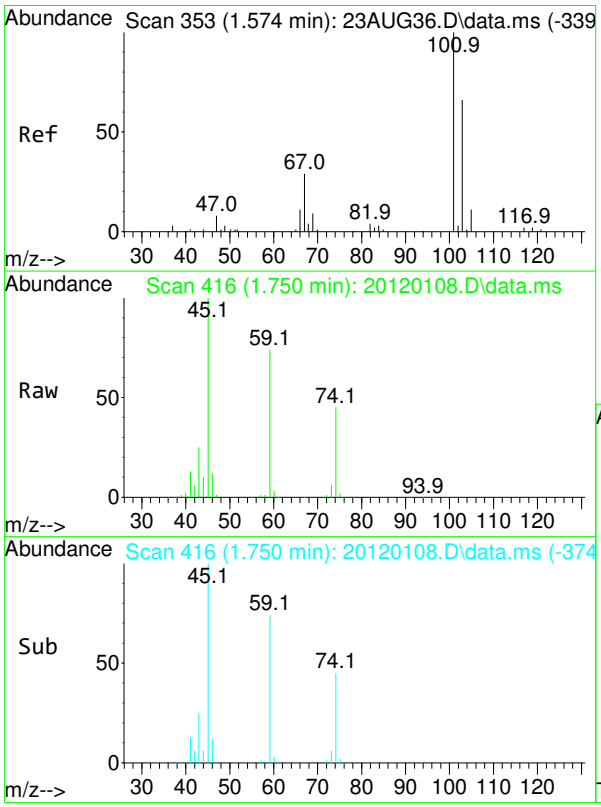
#9
Ethanol
Concen: 746.16 ug/L
RT: 1.750 min Scan# 416
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 45 Resp: 307673

Ion	Ratio	Lower	Upper
45	100		
46	25.2	0.0	55.2
43	23.0	0.0	43.1



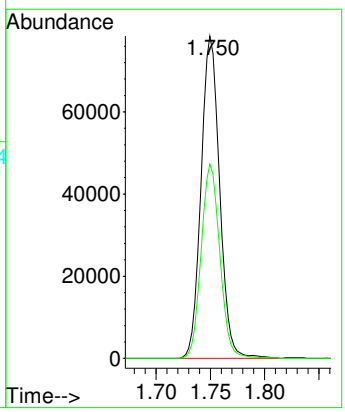


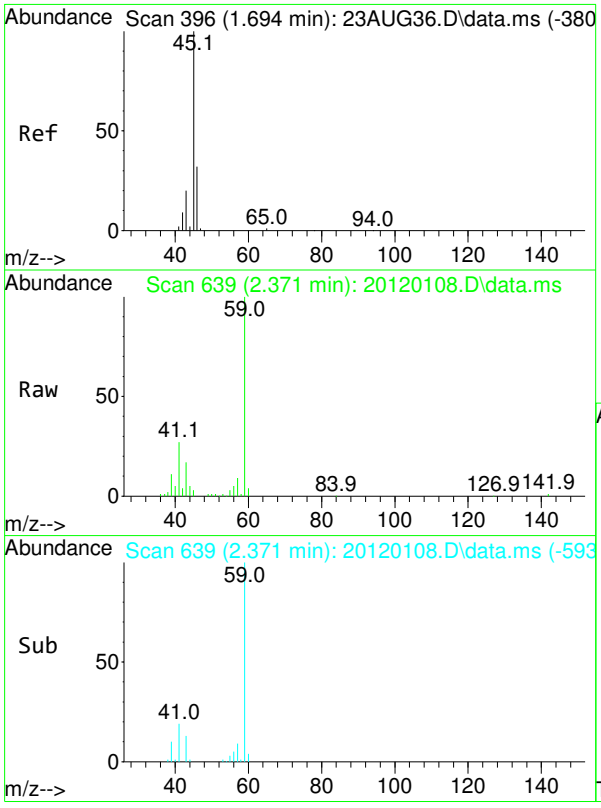


#10
Ethyl ether
Concen: 36.50 ug/L
RT: 1.750 min Scan# 416
Delta R.T. -0.002 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 59 Resp: 93296

Ion	Ratio	Lower	Upper
59	100		
74	60.5	29.5	89.5

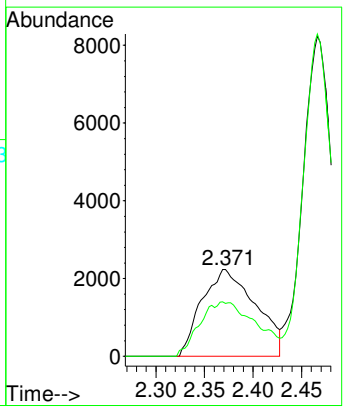


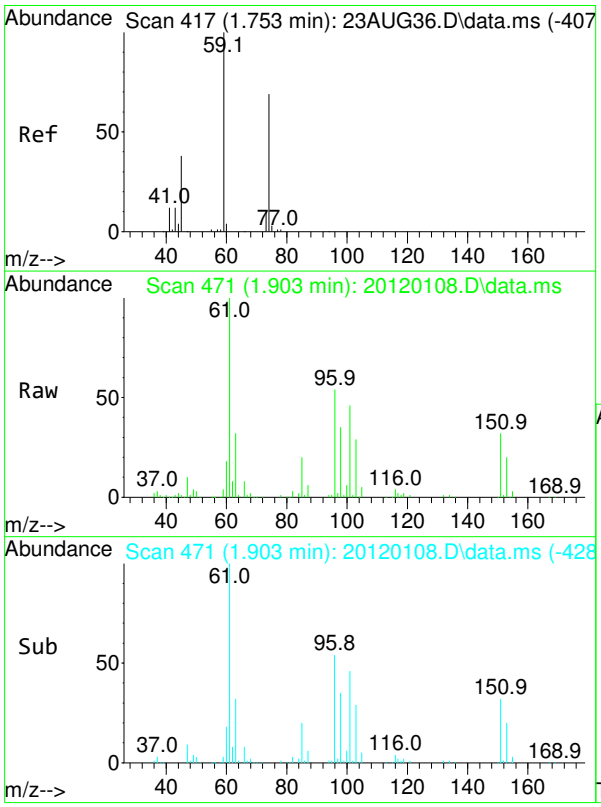


#11
Acrolein
Concen: 39.24 ug/L
RT: 2.371 min Scan# 639
Delta R.T. 0.008 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 56 Resp: 8591

Ion	Ratio	Lower	Upper
56	100		
55	65.8	37.7	97.7

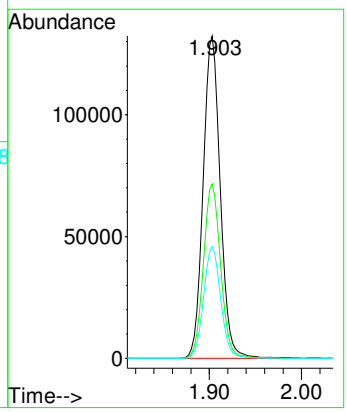


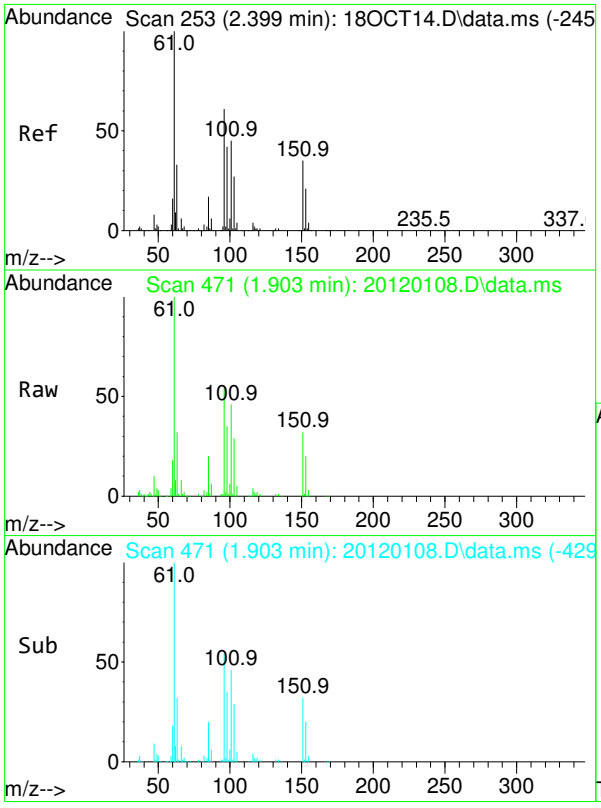


#12
1,1-Dichloroethene
Concen: 40.31 ug/L
RT: 1.903 min Scan# 471
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 61 Resp: 171186

Ion	Ratio	Lower	Upper
61	100		
96	54.5	22.2	82.2
98	34.8	3.4	63.4

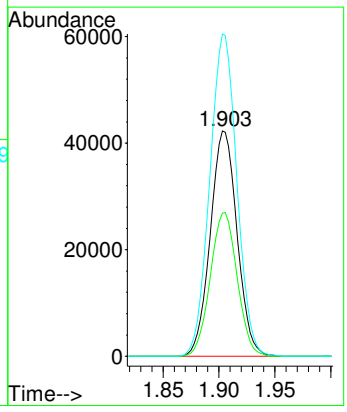


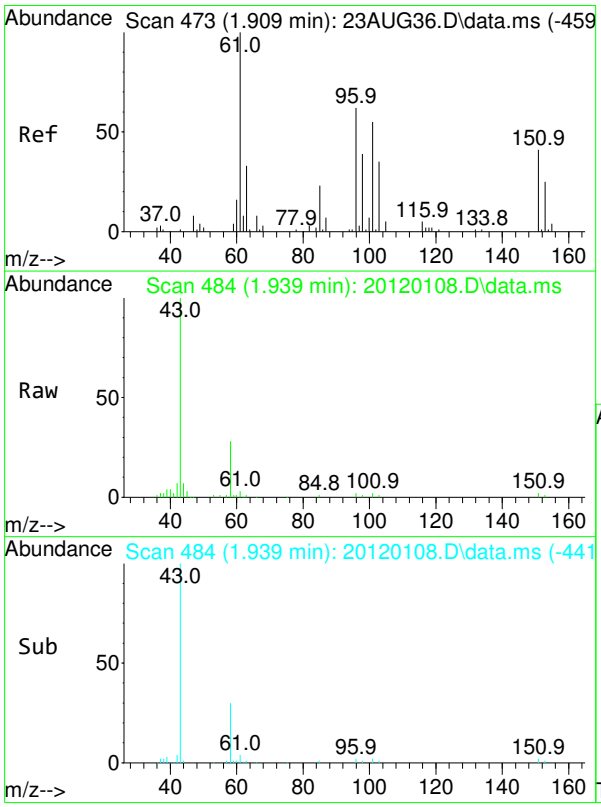


#13
1,1,2-Trichlorotrifluoroethane
Concen: 42.93 ug/L
RT: 1.903 min Scan# 471
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:151 Resp: 70549

Ion	Ratio	Lower	Upper
151	100		
153	63.8	33.5	93.5
101	144.3	117.2	177.2

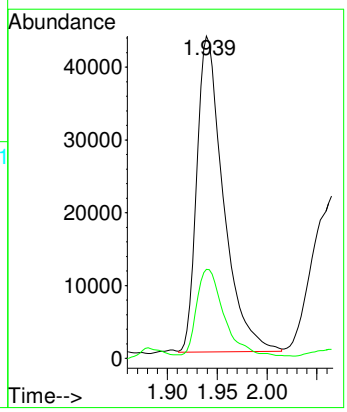


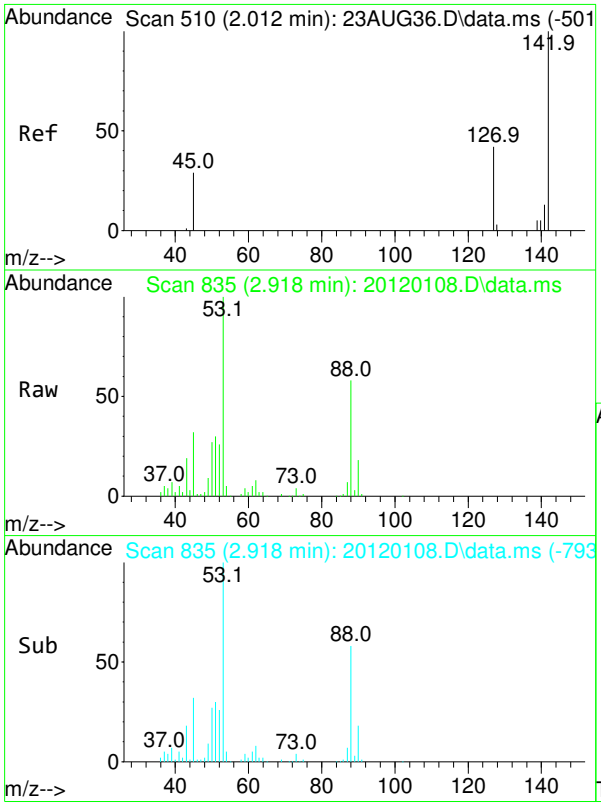


#15
Acetone
Concen: 34.70 ug/L
RT: 1.939 min Scan# 484
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 80302

Ion	Ratio	Lower	Upper
43	100		
58	29.1	0.0	56.9

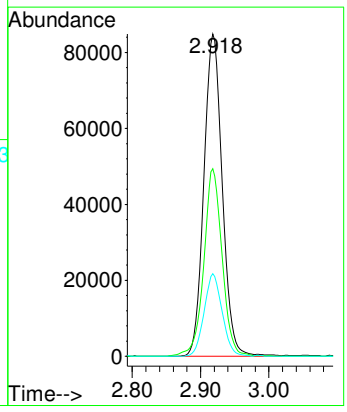


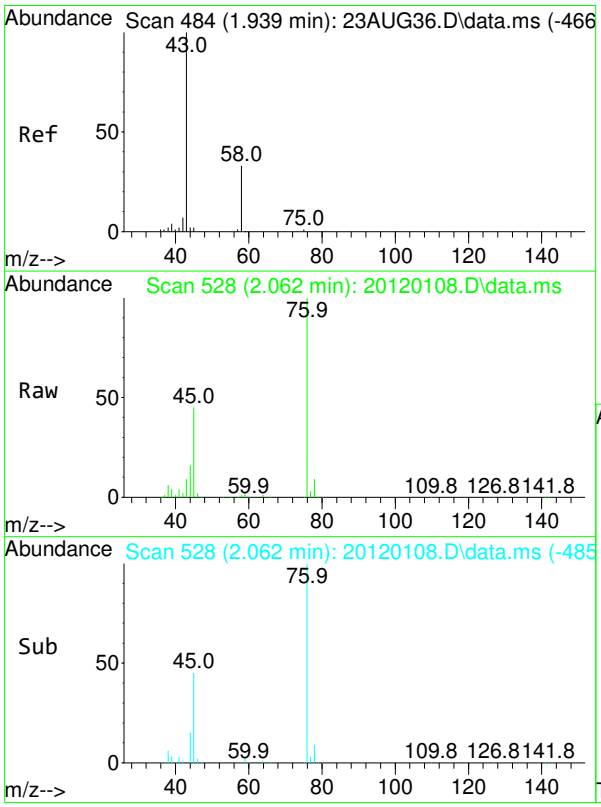


#16
Chloroprene
Concen: 39.30 ug/L
RT: 2.918 min Scan# 835
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 53 Resp: 159830

Ion	Ratio	Lower	Upper
53	100		
88	57.9	26.5	86.5
52	25.1	0.0	55.0

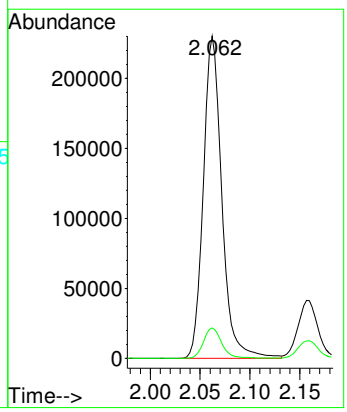


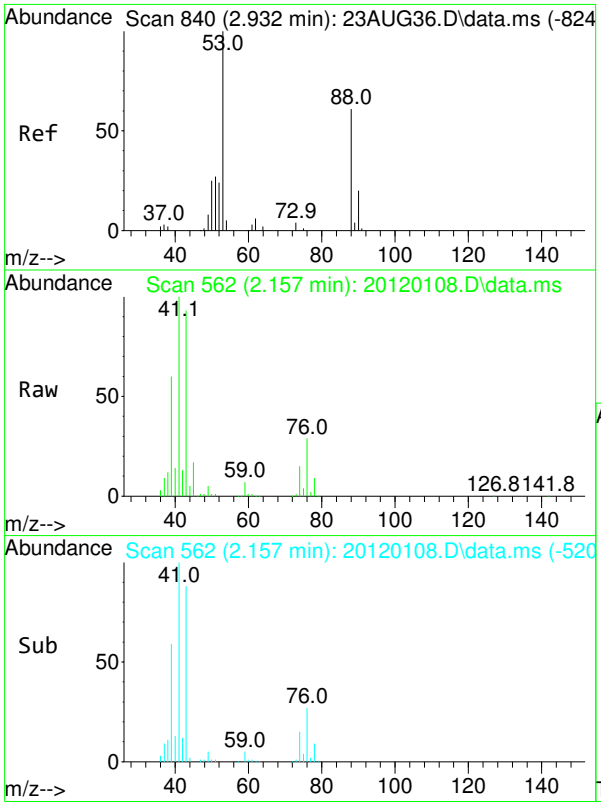


#17
Carbon disulfide
Concen: 39.60 ug/L
RT: 2.062 min Scan# 528
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 76 Resp: 298188

Ion	Ratio	Lower	Upper
76	100		
78	9.4	0.0	39.3

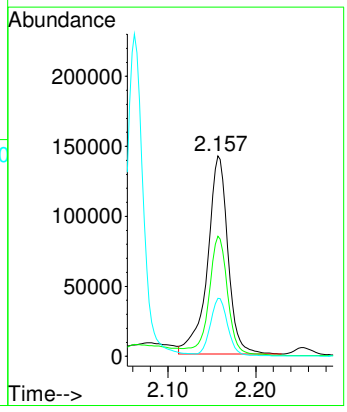


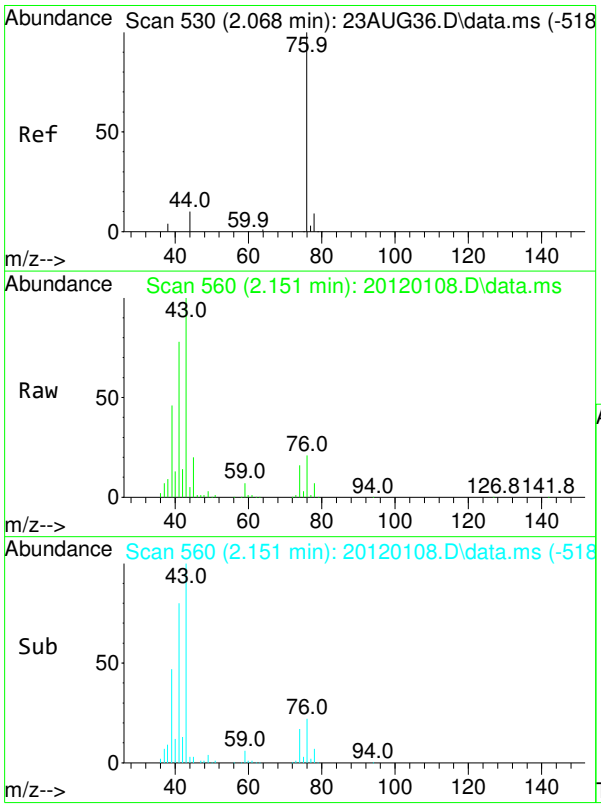


#18
Allyl chloride
Concen: 39.14 ug/L
RT: 2.157 min Scan# 562
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 41 Resp: 229926

Ion	Ratio	Lower	Upper
41	100		
39	54.7	24.2	84.2
76	24.8	0.0	53.2

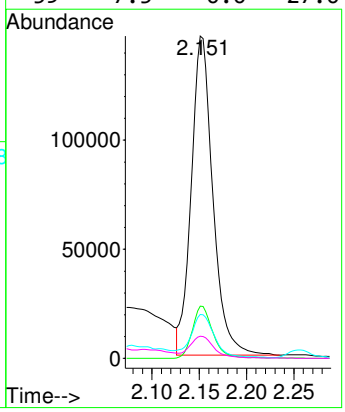


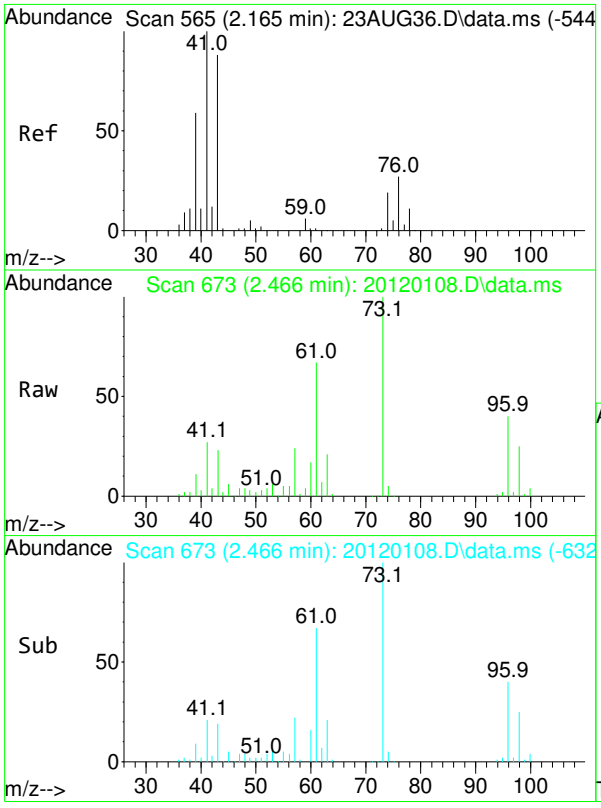


#19
Methyl acetate
Concen: 42.54 ug/L
RT: 2.151 min Scan# 560
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 232727

Ion	Ratio	Lower	Upper
43	100		
74	15.6	0.0	46.2
42	13.8	0.0	43.3
59	7.5	0.0	27.0

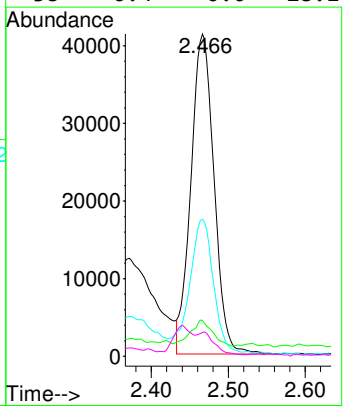


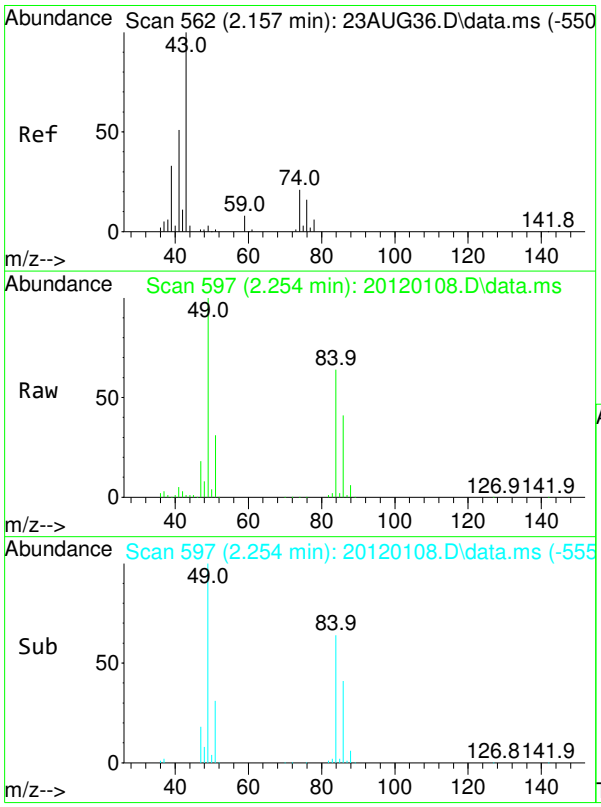


#20
Acetonitrile
Concen: 40.36 ug/L
RT: 2.466 min Scan# 673
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 41 Resp: 86046

Ion	Ratio	Lower	Upper
41	100		
40	7.7	0.0	37.4
39	42.2	13.1	73.1
38	6.4	0.0	28.1

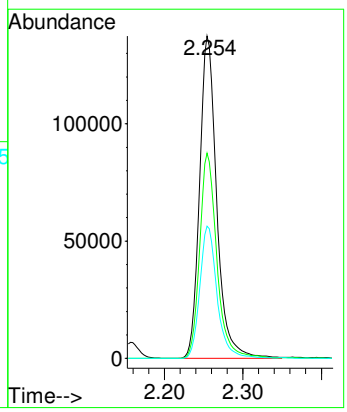


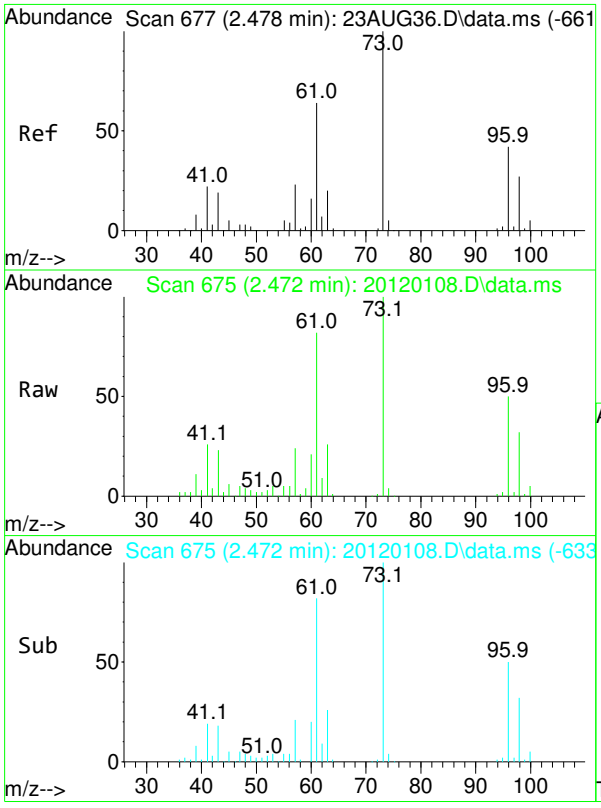


#21
Methylene chloride
Concen: 40.03 ug/L
RT: 2.254 min Scan# 597
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 49 Resp: 209001

Ion	Ratio	Lower	Upper
49	100		
84	63.7	31.8	91.8
86	41.3	9.7	69.7

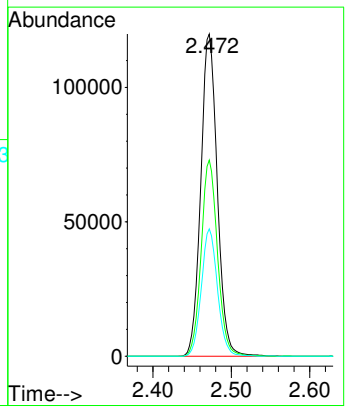


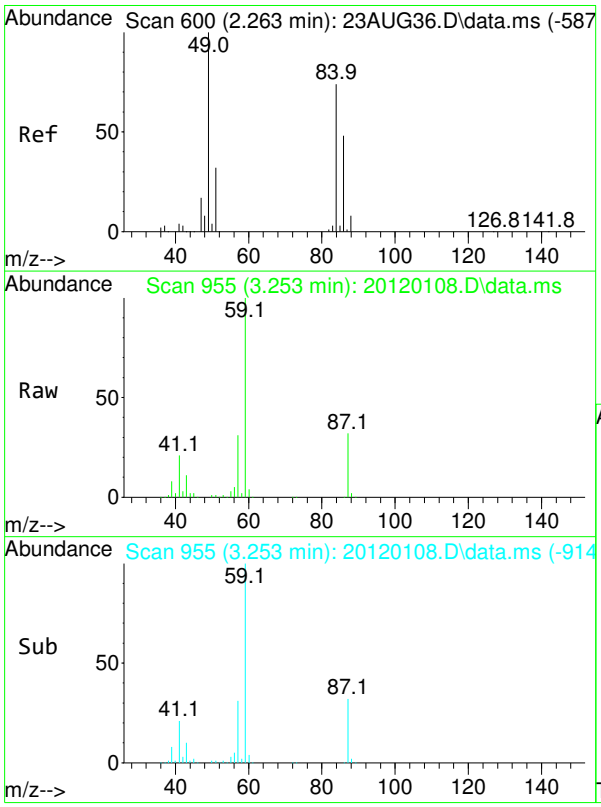


#22
trans-1,2-Dichloroethene
Concen: 37.92 ug/L
RT: 2.472 min Scan# 675
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 61 Resp: 175422

Ion	Ratio	Lower	Upper
61	100		
96	60.3	27.9	87.9
98	38.7	7.0	67.0

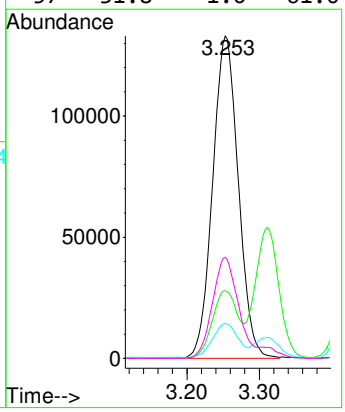


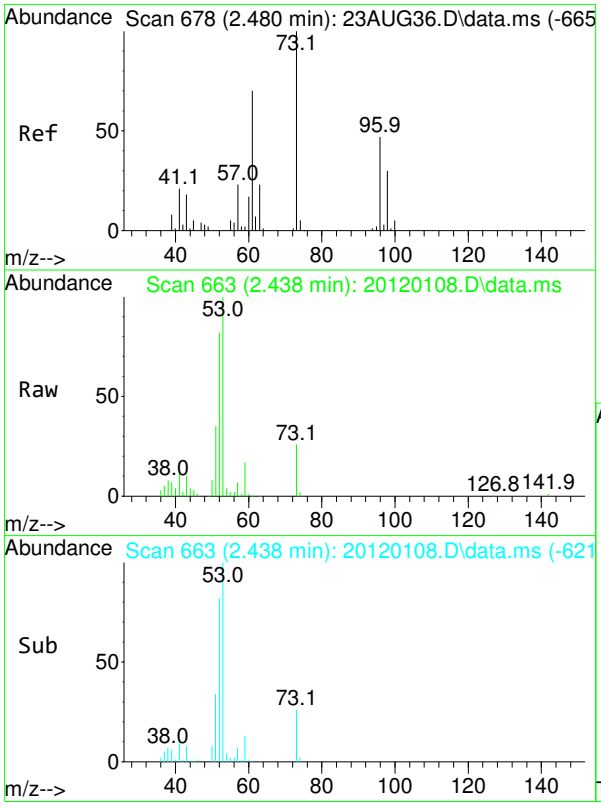


#23
t-Butanol
Concen: 196.66 ug/L
RT: 3.253 min Scan# 955
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 59 Resp: 327133

Ion	Ratio	Lower	Upper
59	100		
41	20.9	0.0	51.3
43	10.4	0.0	40.7
57	31.8	1.0	61.0

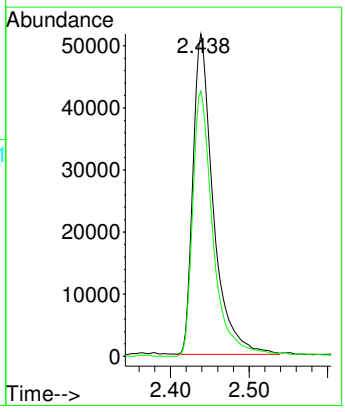


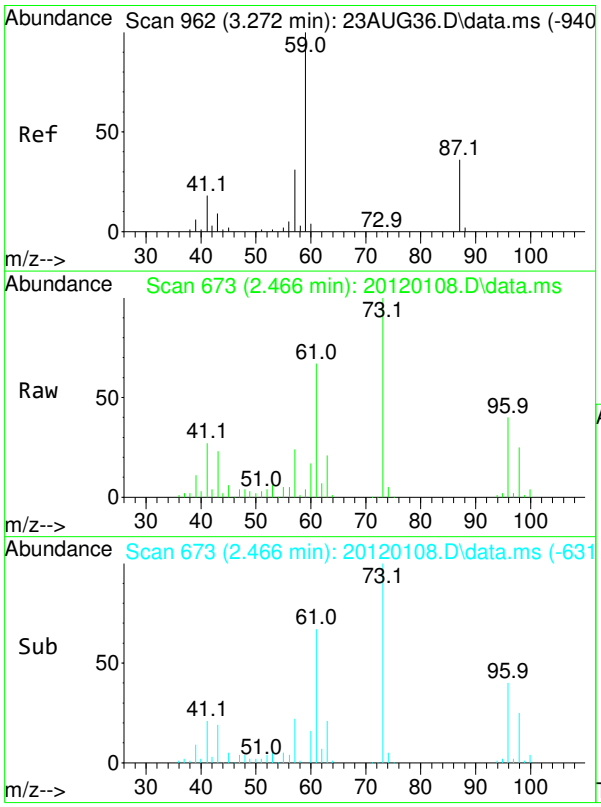


#24
Acrylonitrile
Concen: 39.42 ug/L
RT: 2.438 min Scan# 663
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 53 Resp: 92376

Ion	Ratio	Lower	Upper
53	100		
52	83.2	53.0	113.0

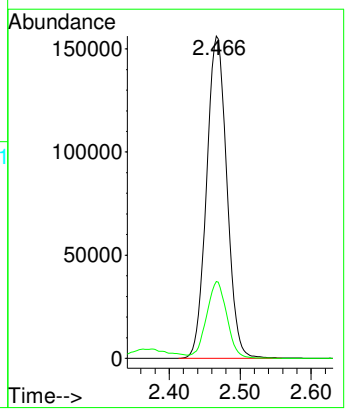


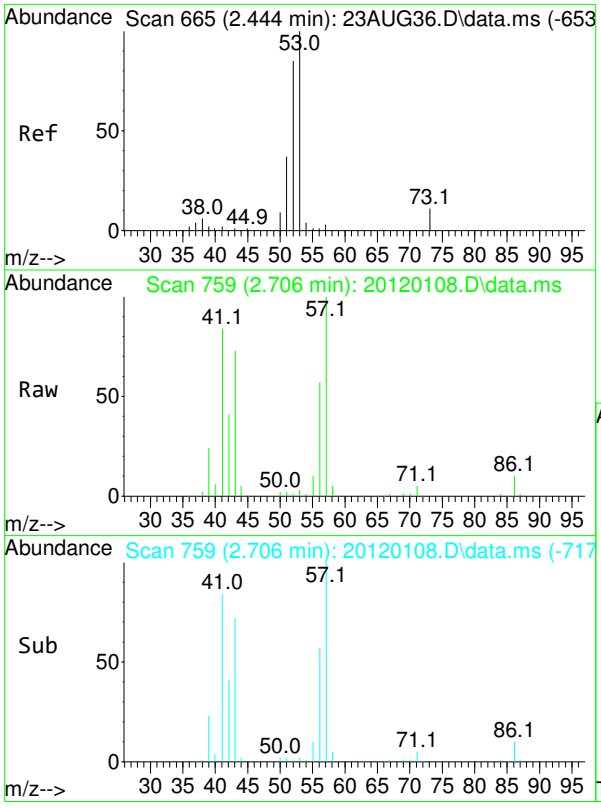


#25
Methyl tert-butyl ether
Concen: 40.27 ug/L
RT: 2.466 min Scan# 673
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 73 Resp: 310502

Ion	Ratio	Lower	Upper
73	100		
57	23.7	0.0	54.6

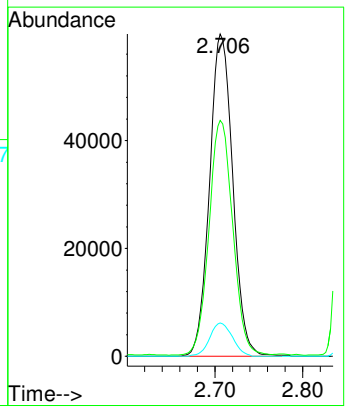


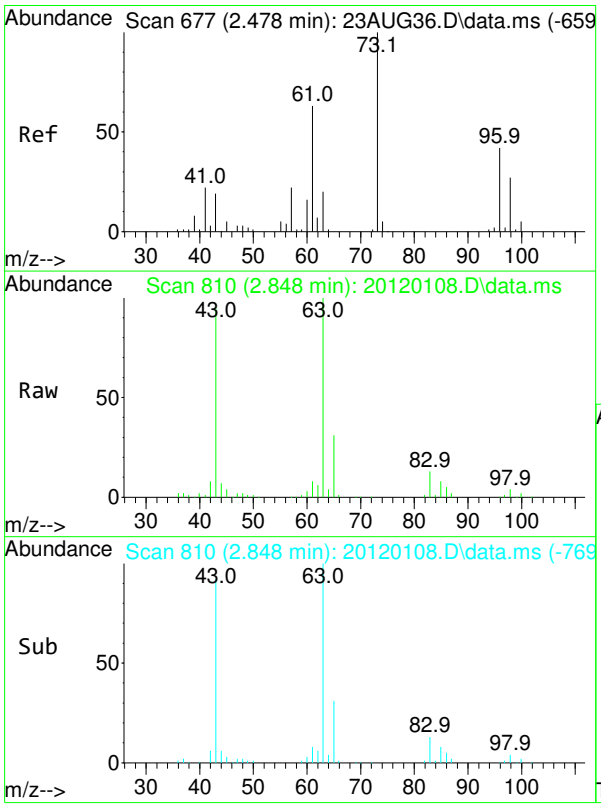


#26
Hexane
Concen: 43.97 ug/L
RT: 2.706 min Scan# 759
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 57 Resp: 109635

Ion	Ratio	Lower	Upper
57	100		
43	74.4	44.0	104.0
86	10.2	0.0	39.8

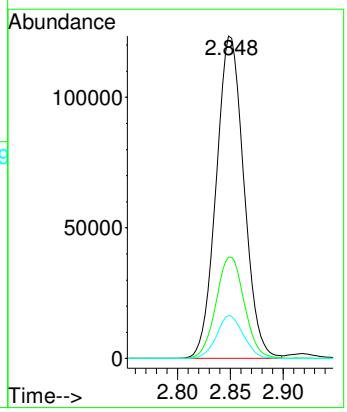


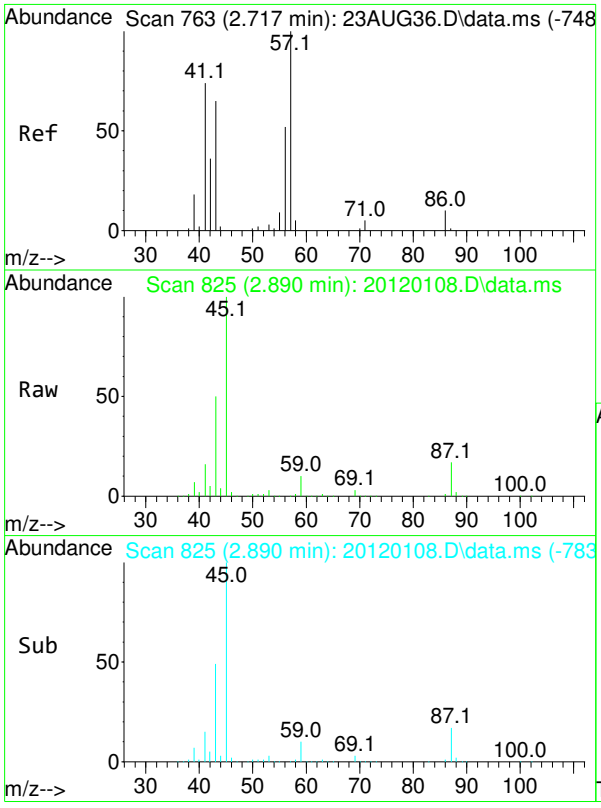


#27
1,1-Dichloroethane
Concen: 40.05 ug/L
RT: 2.848 min Scan# 810
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 63 Resp: 225222

Ion	Ratio	Lower	Upper
63	100		
65	32.1	1.9	61.9
83	12.9	0.0	42.8

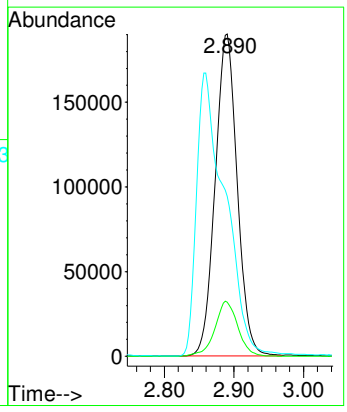


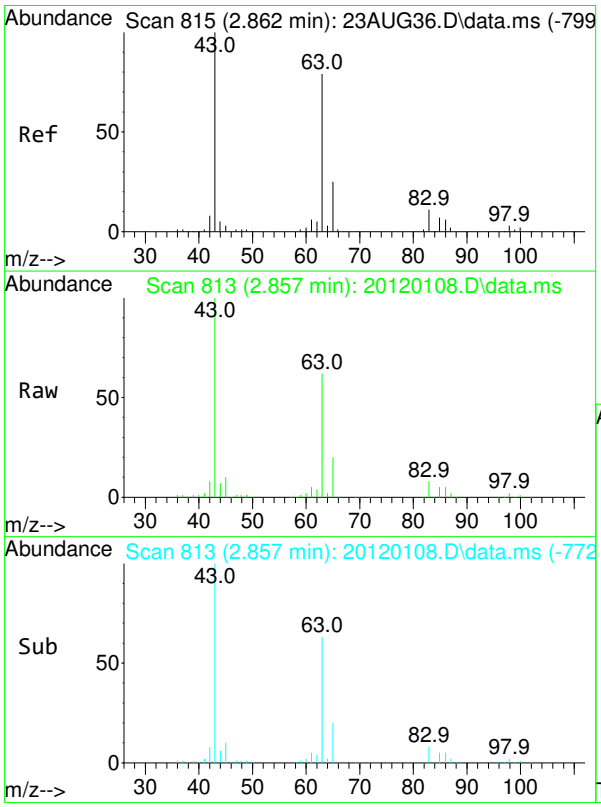


#28
Diisopropyl ether
Concen: 38.95 ug/L
RT: 2.890 min Scan# 825
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 45 Resp: 418753

Ion	Ratio	Lower	Upper
45	100		
87	18.0	0.0	46.8
43	113.2	91.3	151.3

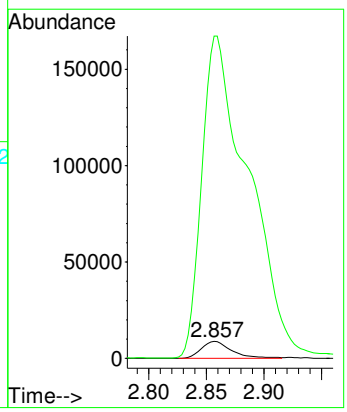


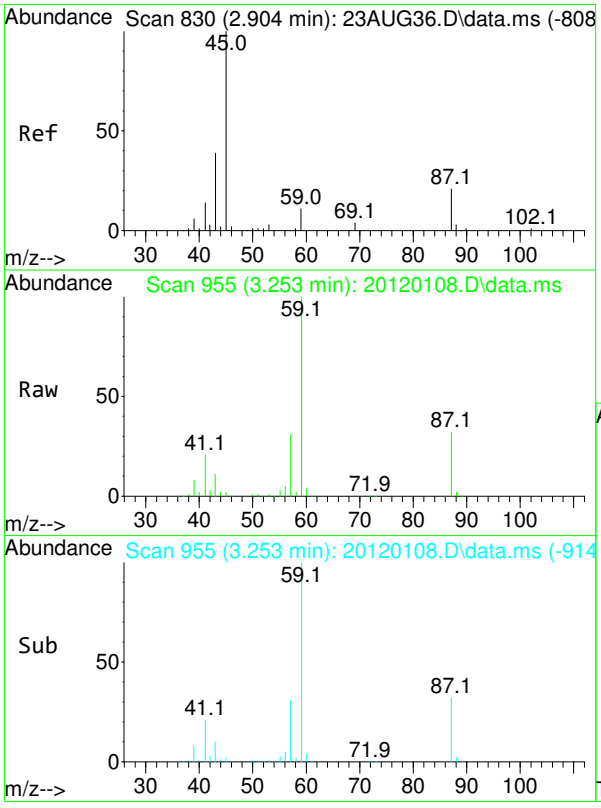


#29
Vinyl acetate
Concen: 39.07 ug/L
RT: 2.857 min Scan# 813
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 86 Resp: 16310

Ion	Ratio	Lower	Upper
86	100		
43	2904.4	3110.6	3170.6#

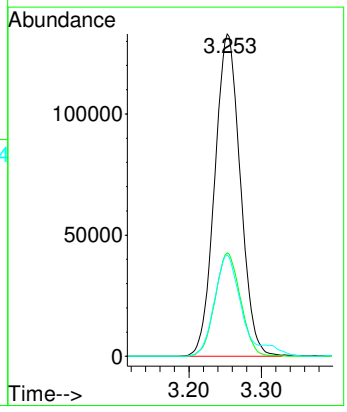


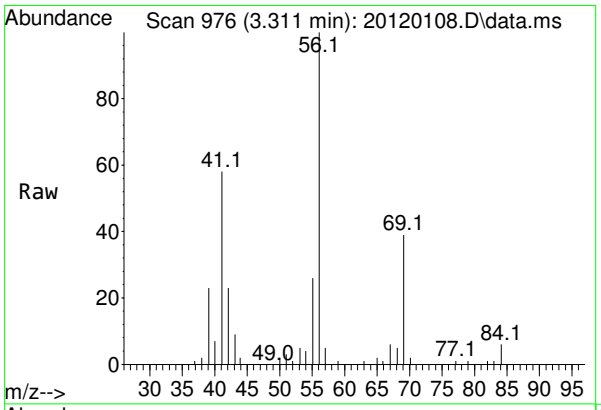


#30
Ethyl tert butyl ether
Concen: 39.33 ug/L
RT: 3.253 min Scan# 955
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 59 Resp: 327133

Ion	Ratio	Lower	Upper
59	100		
87	32.0	0.7	60.7
57	31.8	1.0	61.0

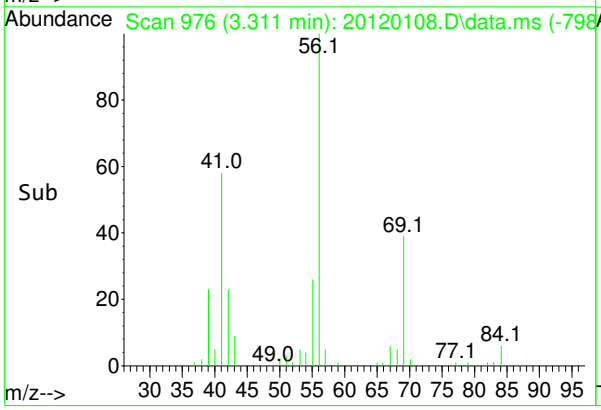


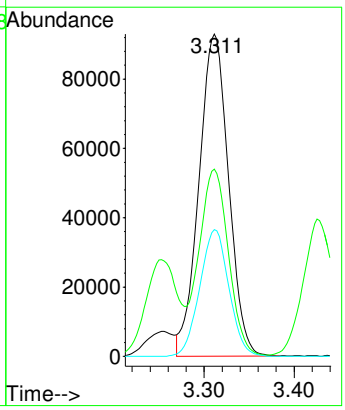


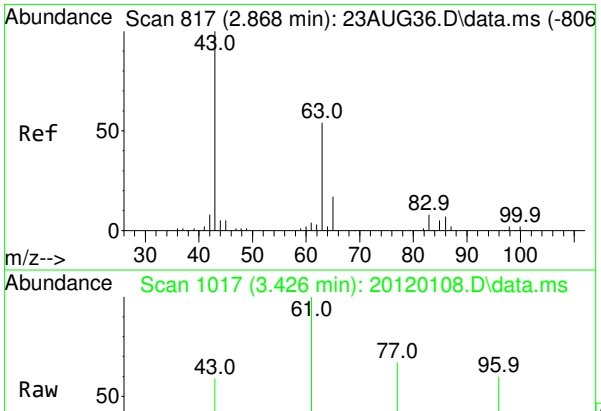
#31
Methylcyclopentane
Concen: 39.03 ug/L
RT: 3.311 min Scan# 976
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 56 Resp: 212473

Ion	Ratio	Lower	Upper
56	100		
41	56.8	26.6	86.6
69	38.8	7.8	67.8



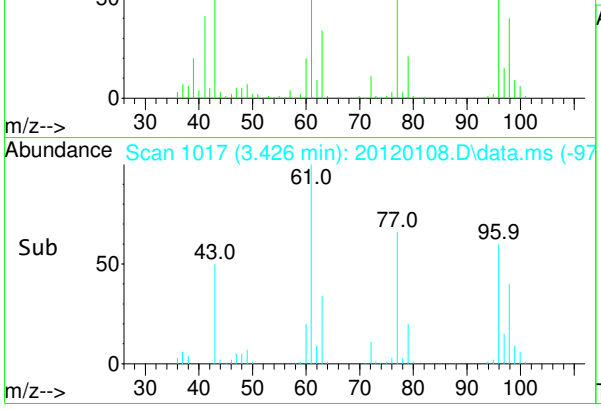


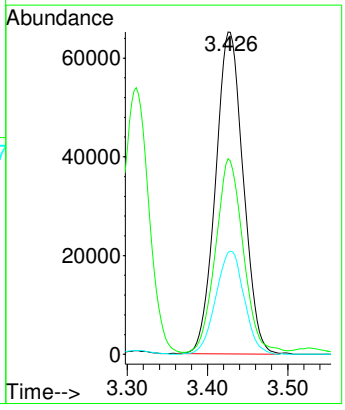


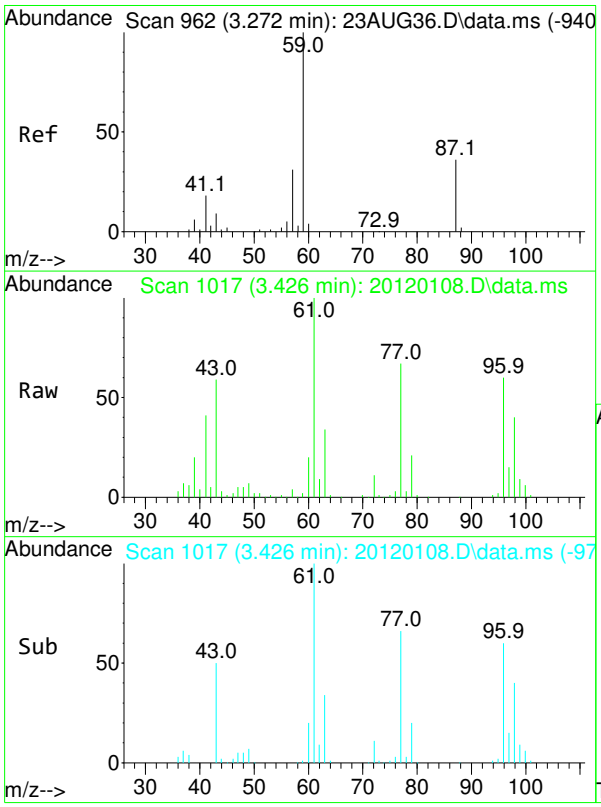
#32
2,2-Dichloropropane
Concen: 40.36 ug/L
RT: 3.426 min Scan# 1017
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 77 Resp: 156016

Ion	Ratio	Lower	Upper
77	100		
41	59.9	32.8	92.8
79	32.9	2.4	62.4



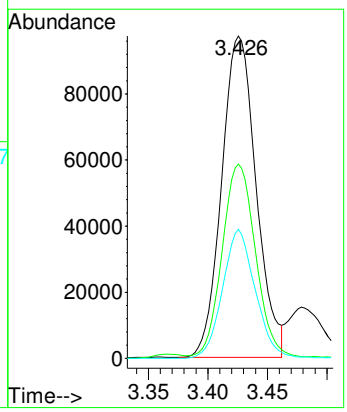


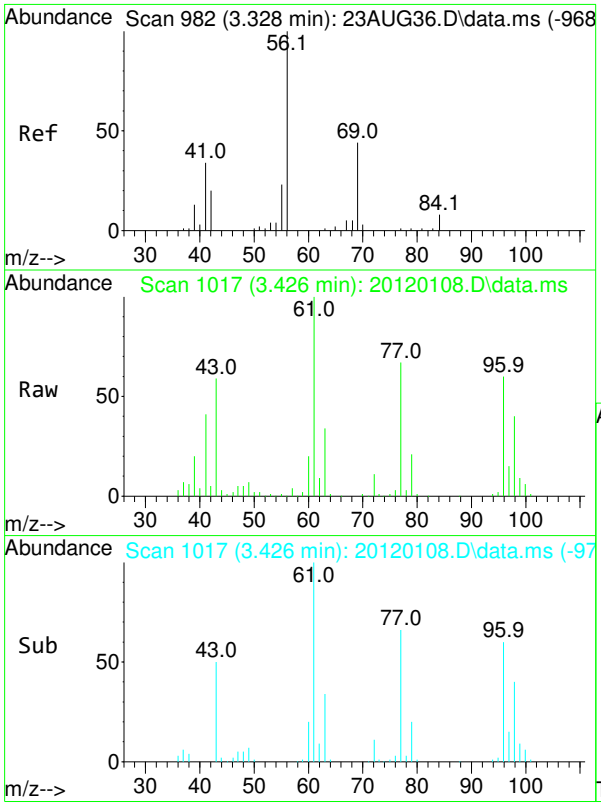


#33
cis-1,2-Dichloroethene
Concen: 39.29 ug/L
RT: 3.426 min Scan# 1017
Delta R.T. -0.002 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 61 Resp: 196068

Ion	Ratio	Lower	Upper
61	100		
96	58.0	28.2	88.2
98	38.1	7.7	67.7

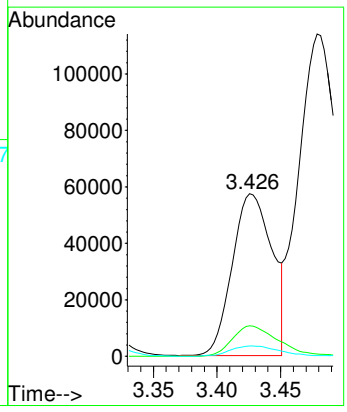


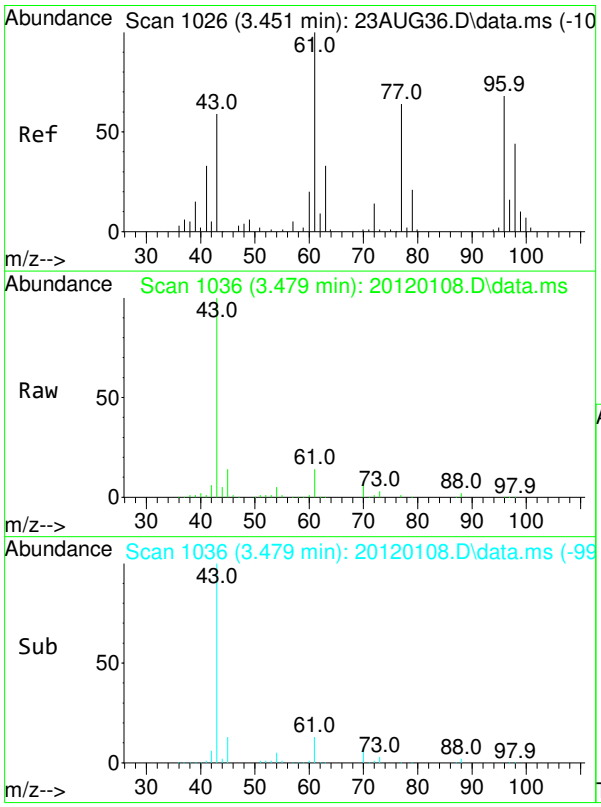


#34
2-Butanone
Concen: 34.23 ug/L
RT: 3.426 min Scan# 1017
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 125167

Ion	Ratio	Lower	Upper
43	100		
72	22.2	0.0	51.0
57	7.9	0.0	37.1

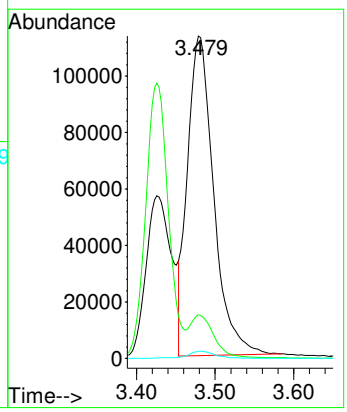


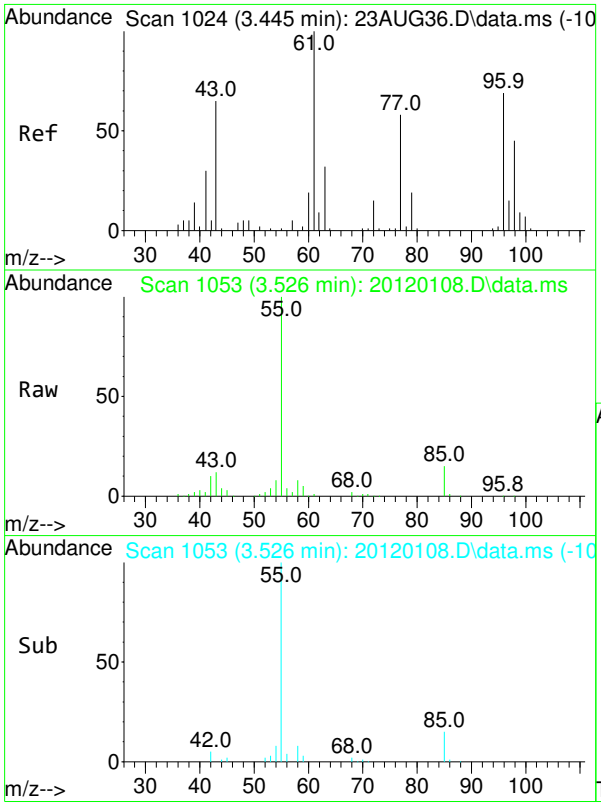


#35
Ethyl Acetate
Concen: 36.72 ug/L
RT: 3.479 min Scan# 1036
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 262988

Ion	Ratio	Lower	Upper
43	100		
61	11.4	0.0	42.4
88	2.2	0.0	32.1

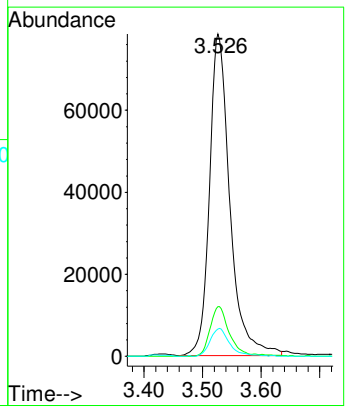


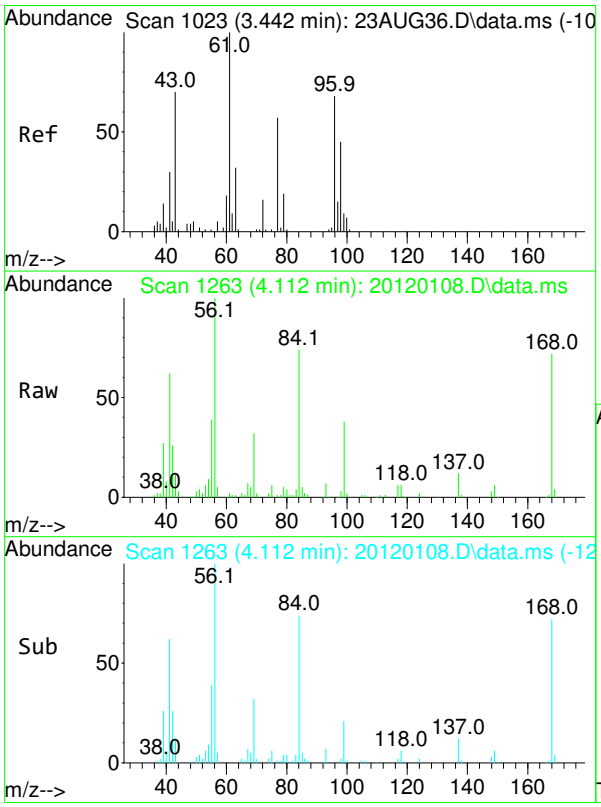


#36
Methyl acrylate
Concen: 37.75 ug/L
RT: 3.526 min Scan# 1053
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 55 Resp: 189814

Ion	Ratio	Lower	Upper
55	100		
85	14.3	0.0	44.3
58	8.2	0.0	38.4

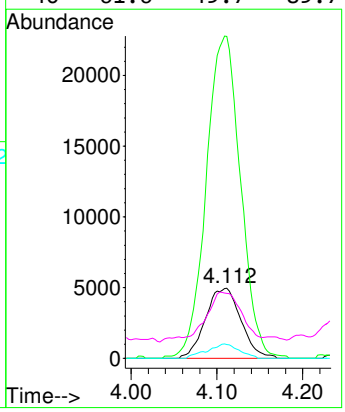


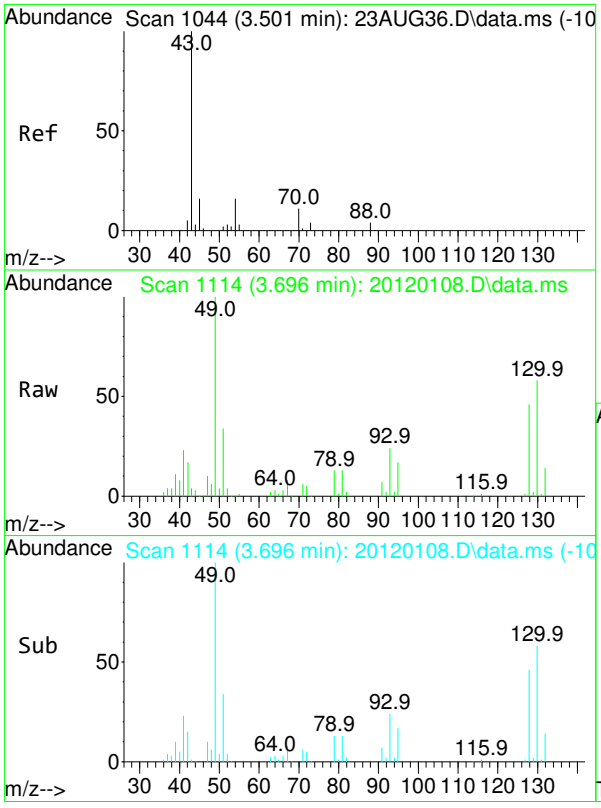


#37
Propionitrile
Concen: 43.78 ug/L
RT: 4.112 min Scan# 1263
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 54 Resp: 14251

Ion	Ratio	Lower	Upper
54	100		
55	443.5	422.8	482.8
52	18.8	0.0	50.3
40	61.6	49.7	89.7

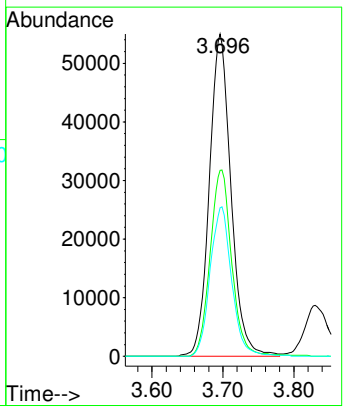


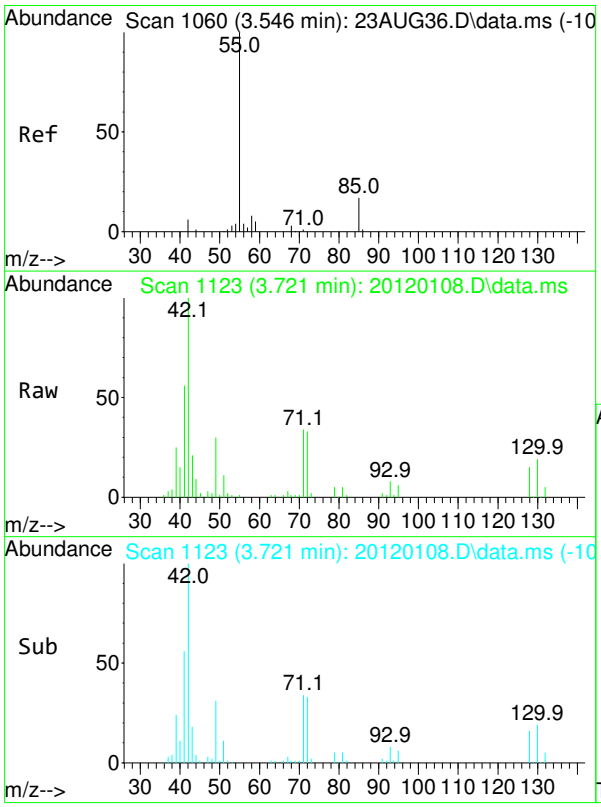


#38
Bromochloromethane
Concen: 37.13 ug/L
RT: 3.696 min Scan# 1114
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 49 Resp: 116498

Ion	Ratio	Lower	Upper
49	100		
130	57.5	25.3	85.3
128	46.1	13.4	73.4

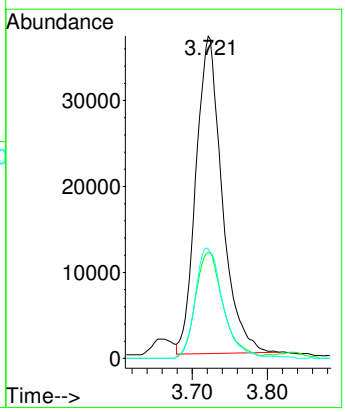


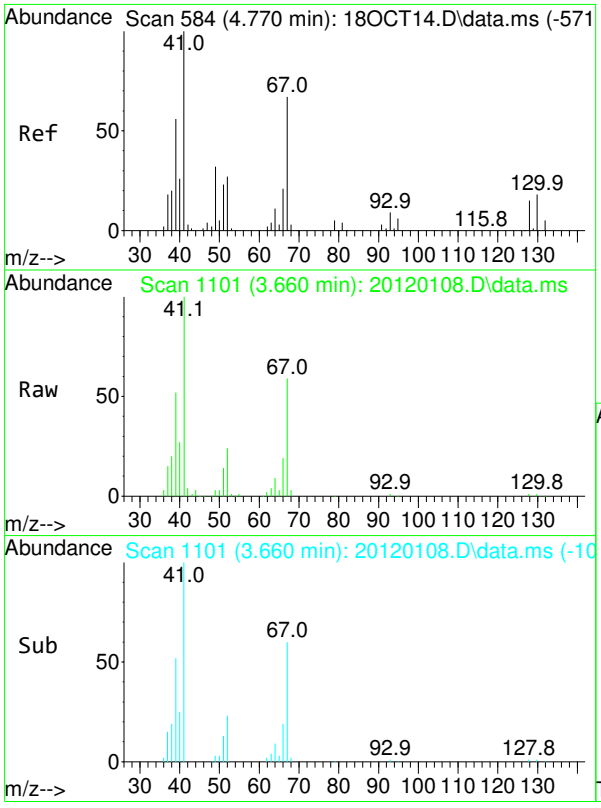


#39
Tetrahydrofuran
Concen: 36.25 ug/L
RT: 3.721 min Scan# 1123
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 42 Resp: 88948

Ion	Ratio	Lower	Upper
42	100		
72	35.6	3.4	63.4
71	36.8	4.3	64.3

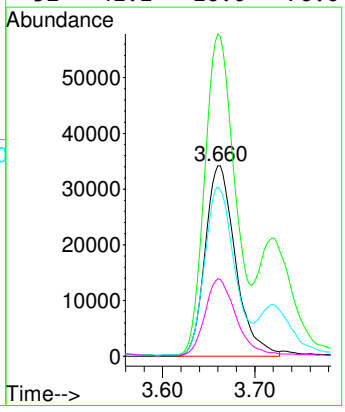


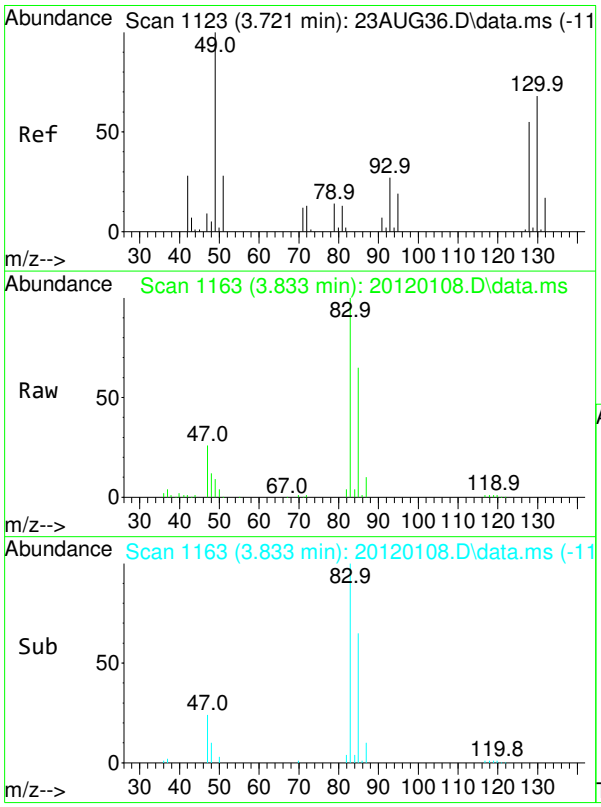


#40
Methacrylonitrile
Concen: 38.33 ug/L
RT: 3.660 min Scan# 1101
Delta R.T. -0.008 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 67 Resp: 78336

Ion	Ratio	Lower	Upper
67	100		
41	168.0	143.5	203.5
39	86.7	60.6	120.6
52	41.1	16.0	76.0

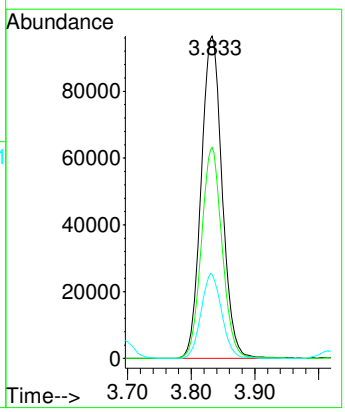


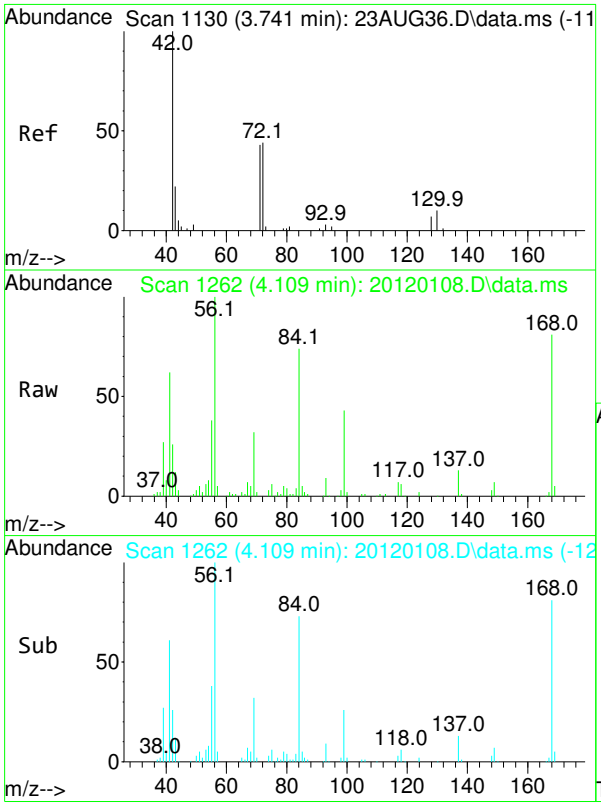


#41
Chloroform
Concen: 38.31 ug/L
RT: 3.833 min Scan# 1163
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 83 Resp: 220675

Ion	Ratio	Lower	Upper
83	100		
85	64.7	34.6	94.6
47	25.9	0.0	56.8

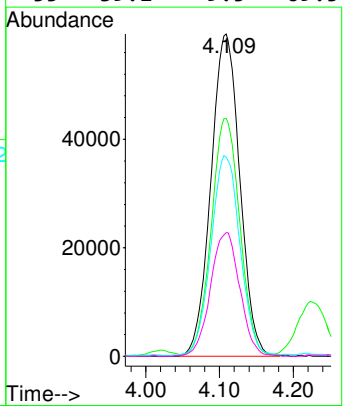


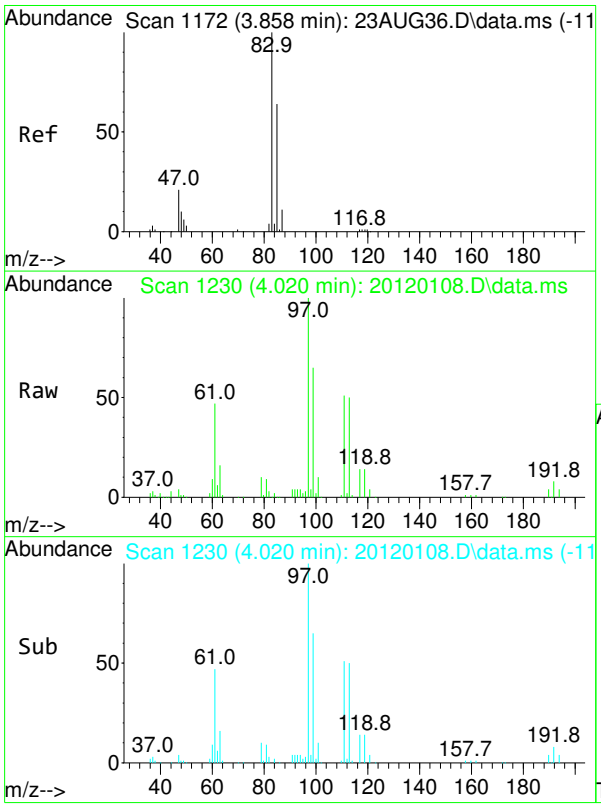


#42
Cyclohexane
Concen: 41.53 ug/L
RT: 4.109 min Scan# 1262
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 56 Resp: 161644

Ion	Ratio	Lower	Upper
56	100		
84	71.8	39.9	99.9
41	62.2	34.4	94.4
55	39.1	9.5	69.5

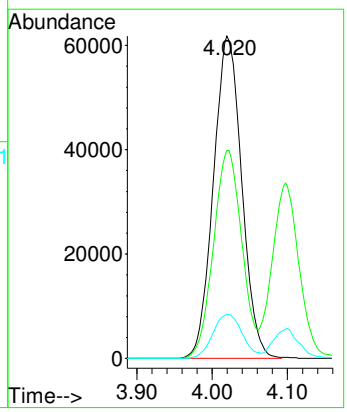


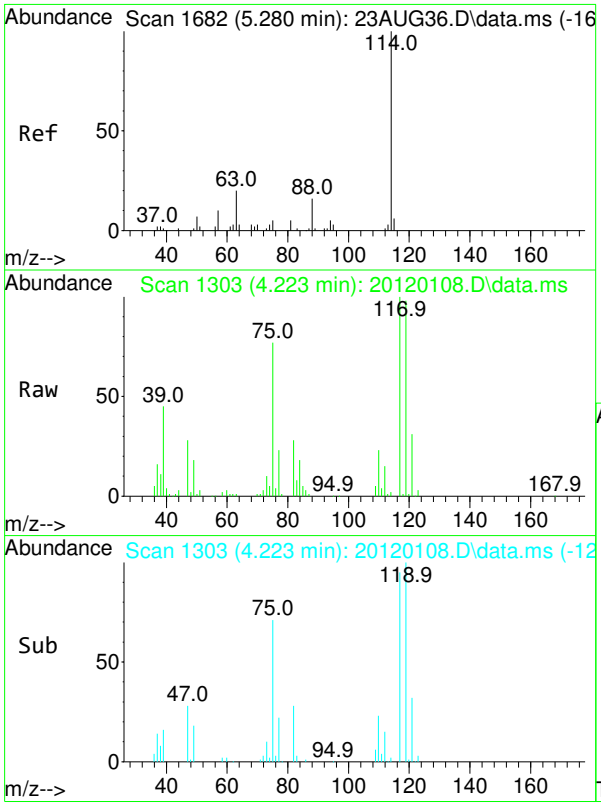


#44
1,1,1-Trichloroethane
Concen: 40.90 ug/L
RT: 4.020 min Scan# 1230
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 97 Resp: 161296

Ion	Ratio	Lower	Upper
97	100		
99	64.9	34.0	94.0
117	14.3	0.0	43.5

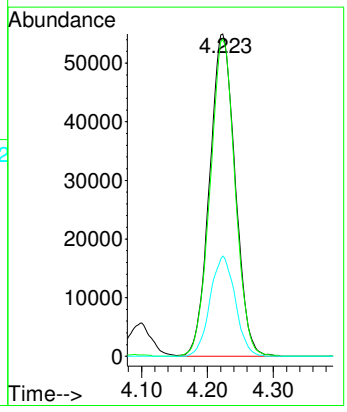


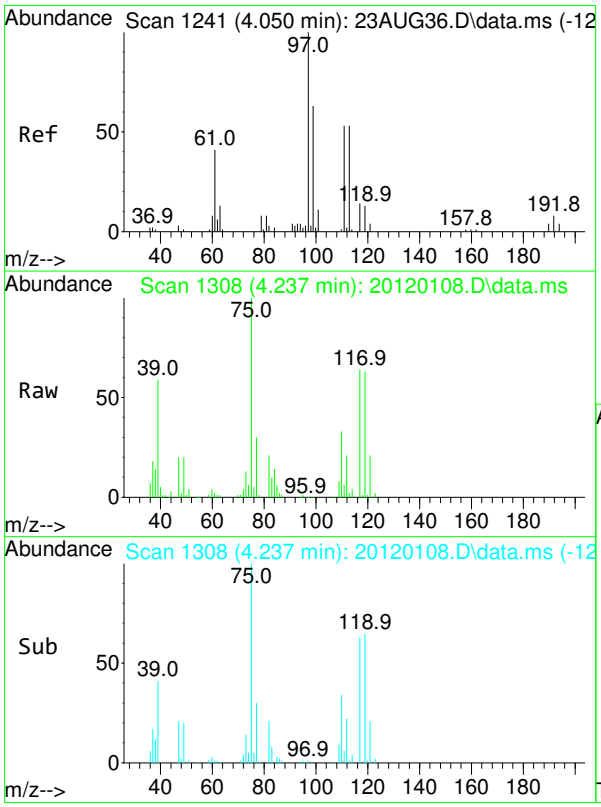


#46
Carbon tetrachloride
Concen: 43.24 ug/L
RT: 4.223 min Scan# 1303
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:117 Resp: 148146

Ion	Ratio	Lower	Upper
117	100		
119	96.1	65.9	125.9
121	30.6	1.1	61.1

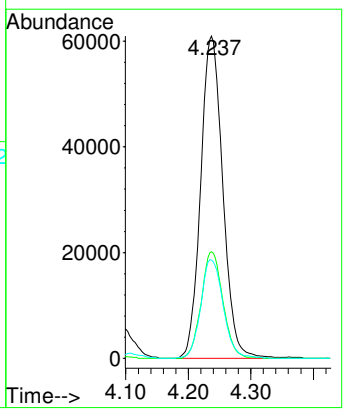


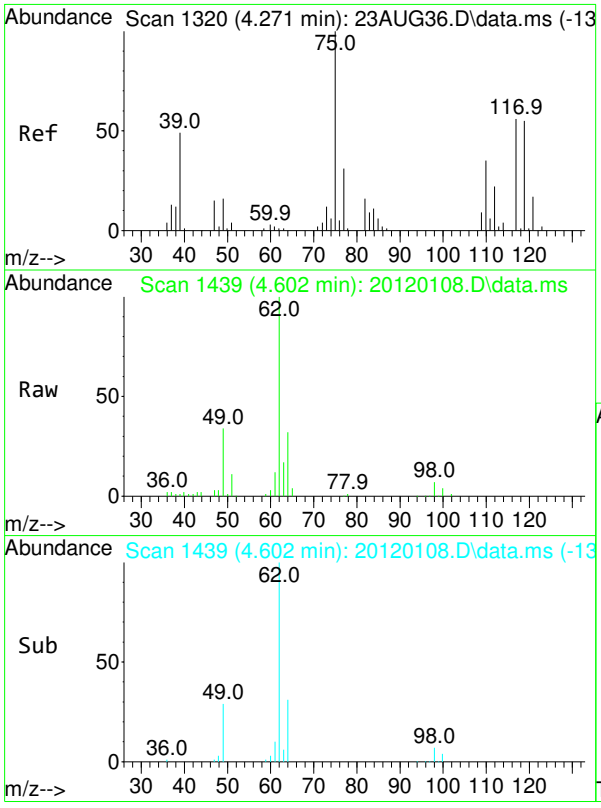


#47
1,1-Dichloropropene
Concen: 41.26 ug/L
RT: 4.237 min Scan# 1308
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 75 Resp: 149726

Ion	Ratio	Lower	Upper
75	100		
110	32.4	1.1	61.1
77	31.1	0.8	60.8

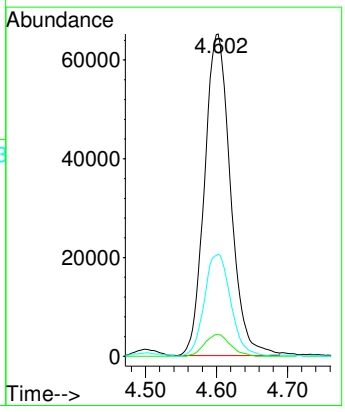


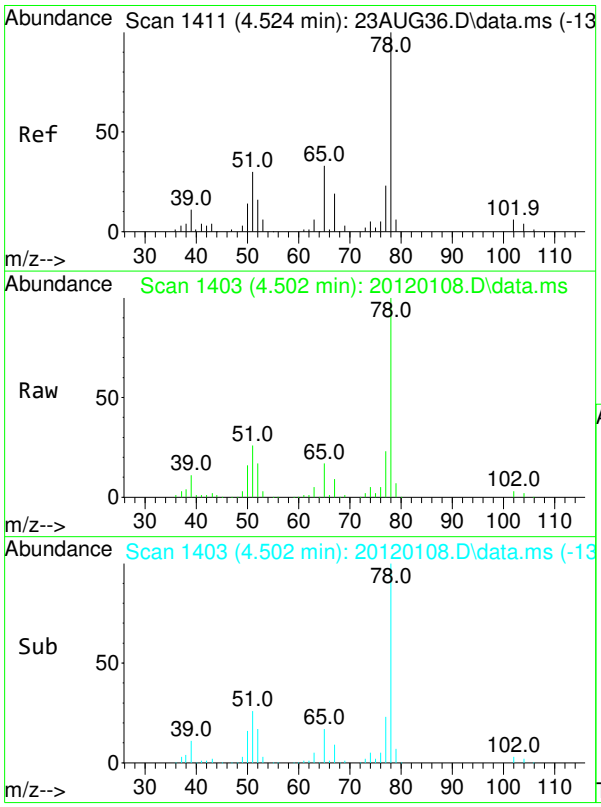


#49
1,2-Dichloroethane
Concen: 38.24 ug/L
RT: 4.602 min Scan# 1439
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 62 Resp: 165212

Ion	Ratio	Lower	Upper
62	100		
98	6.8	0.0	36.5
64	32.4	0.9	60.9

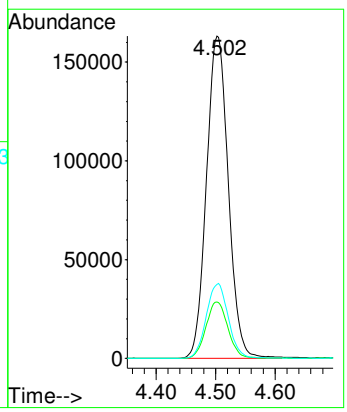


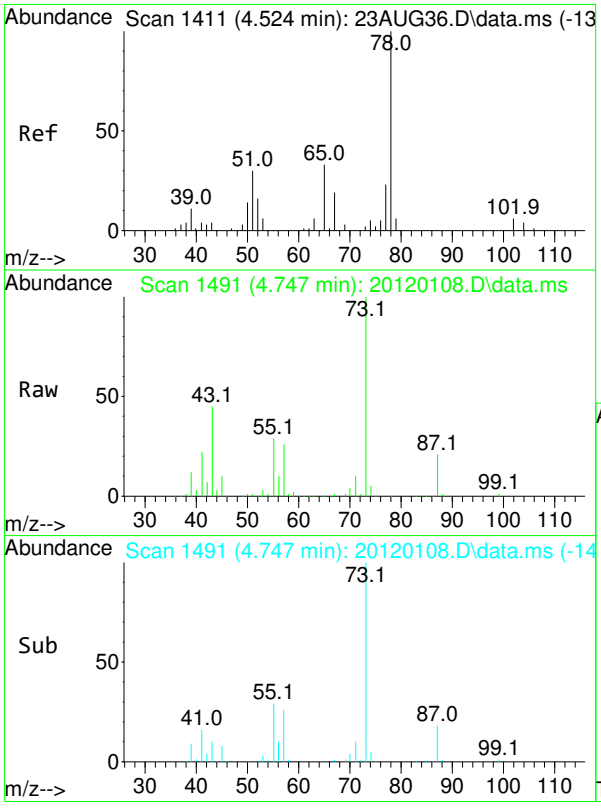


#50
Benzene
Concen: 41.53 ug/L
RT: 4.502 min Scan# 1403
Delta R.T. -0.008 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 78 Resp: 416568

Ion	Ratio	Lower	Upper
78	100		
52	17.7	0.0	48.7
77	23.5	0.0	53.7

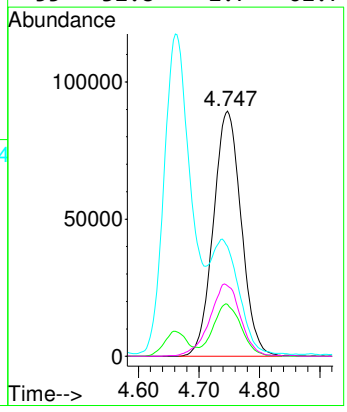


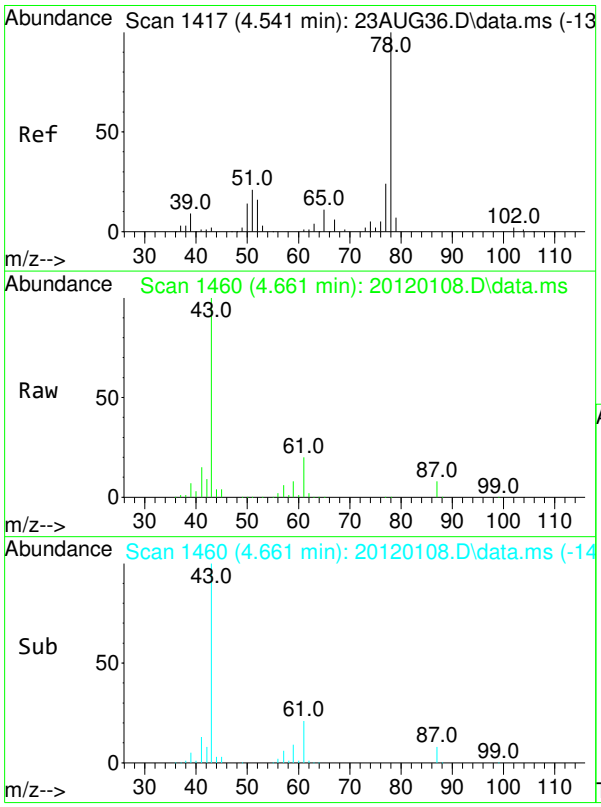


#51
Tertiaryamylmethylether
Concen: 40.83 ug/L
RT: 4.747 min Scan# 1491
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 73 Resp: 286385

Ion	Ratio	Lower	Upper
73	100		
87	21.4	0.0	50.5
43	0.0	0.0	30.0
55	32.8	2.7	62.7

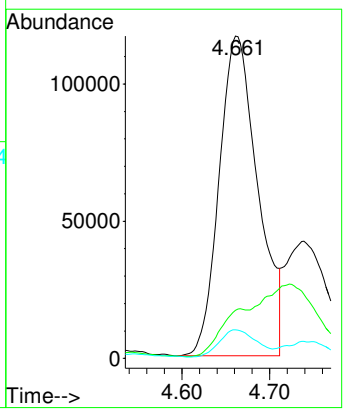


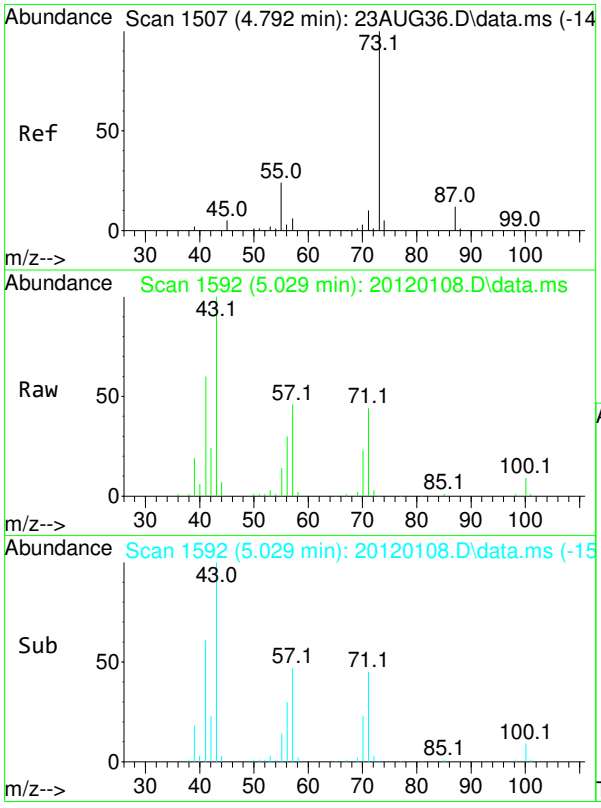


#52
Isobutyl Alcohol
Concen: 41.31 ug/L
RT: 4.661 min Scan# 1460
Delta R.T. -0.008 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 357416

Ion	Ratio	Lower	Upper
43	100		
41	10.2	0.0	41.2
42	8.1	0.0	38.2

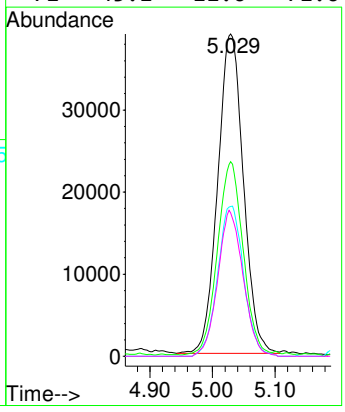


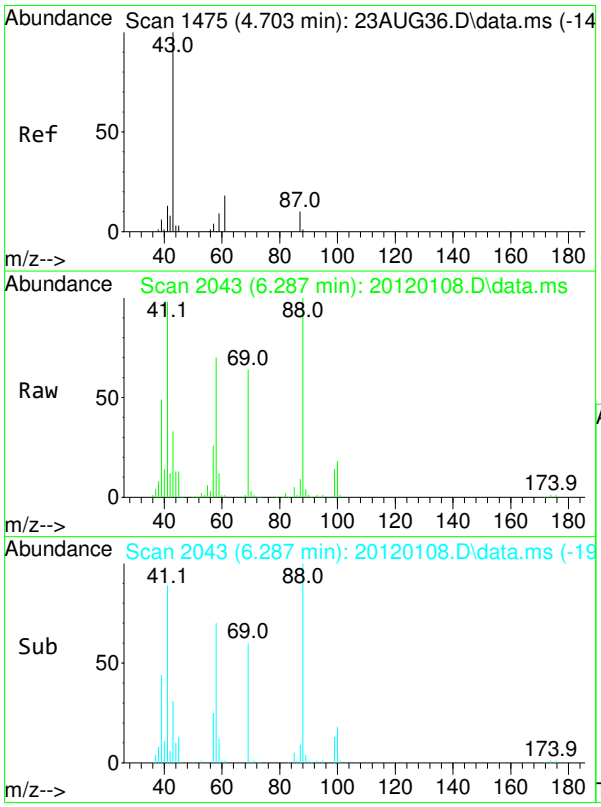


#53
Heptane
Concen: 49.62 ug/L
RT: 5.029 min Scan# 1592
Delta R.T. -0.008 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 110868

Ion	Ratio	Lower	Upper
43	100		
41	60.3	29.2	89.2
57	47.8	15.8	75.8
71	45.1	11.6	71.6

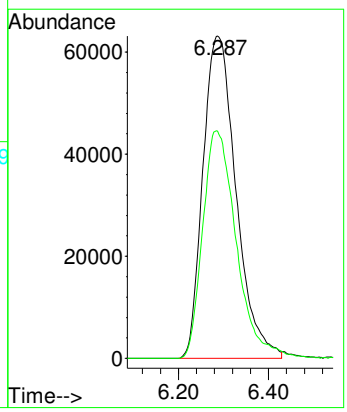


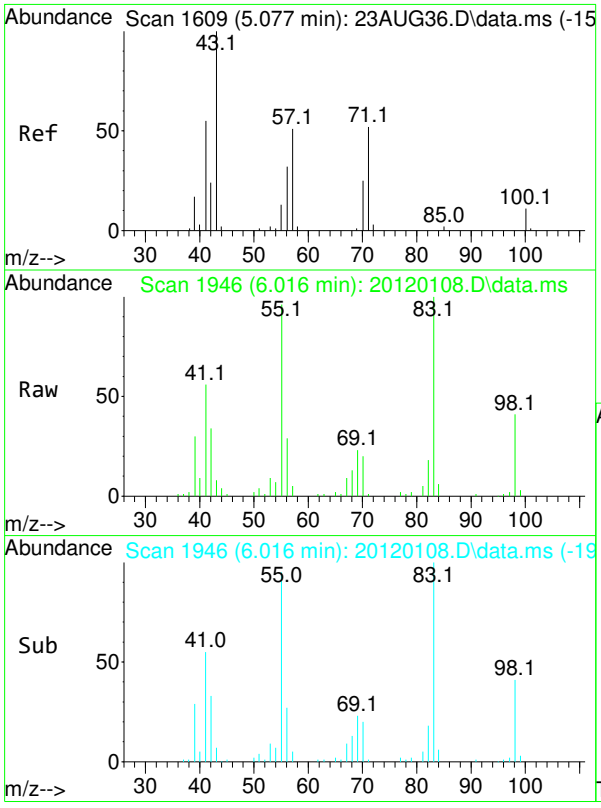


#54
1,4-Dioxane
Concen: 3549.90 ug/L
RT: 6.287 min Scan# 2043
Delta R.T. 0.011 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 88 Resp: 322611

Ion	Ratio	Lower	Upper
88	100		
58	71.8	43.1	103.1

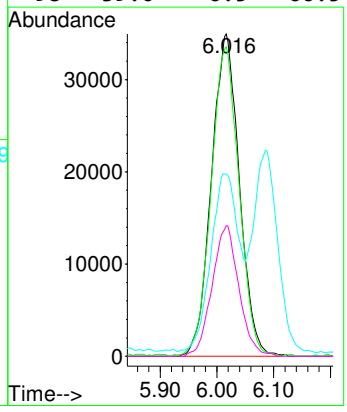


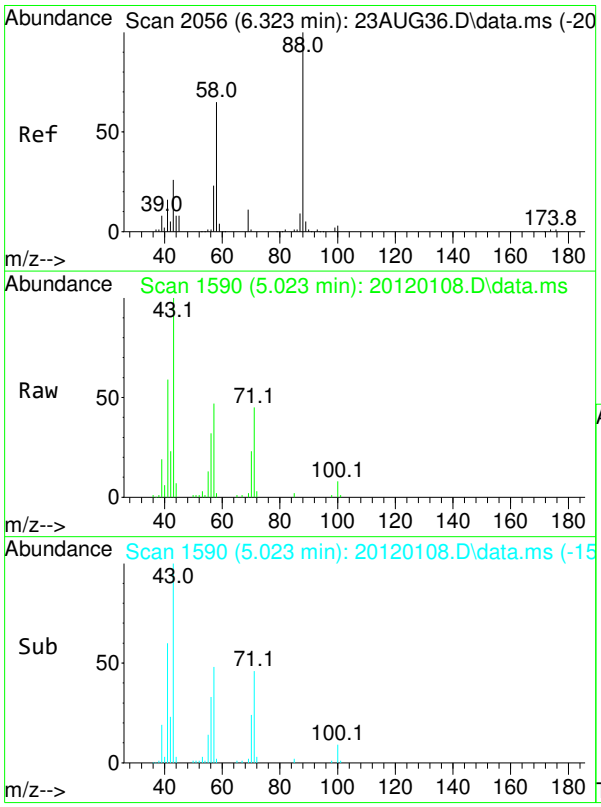


#55
Methylcyclohexane
Concen: 45.90 ug/L
RT: 6.016 min Scan# 1946
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 83 Resp: 119025

Ion	Ratio	Lower	Upper
83	100		
55	96.3	65.9	125.9
41	55.2	25.5	85.5
98	39.0	6.5	66.5

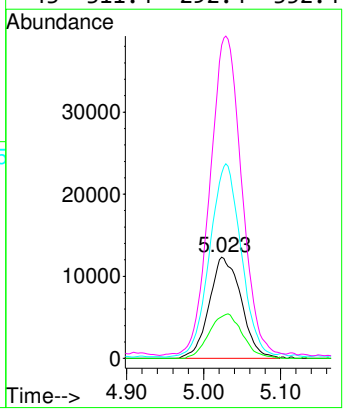


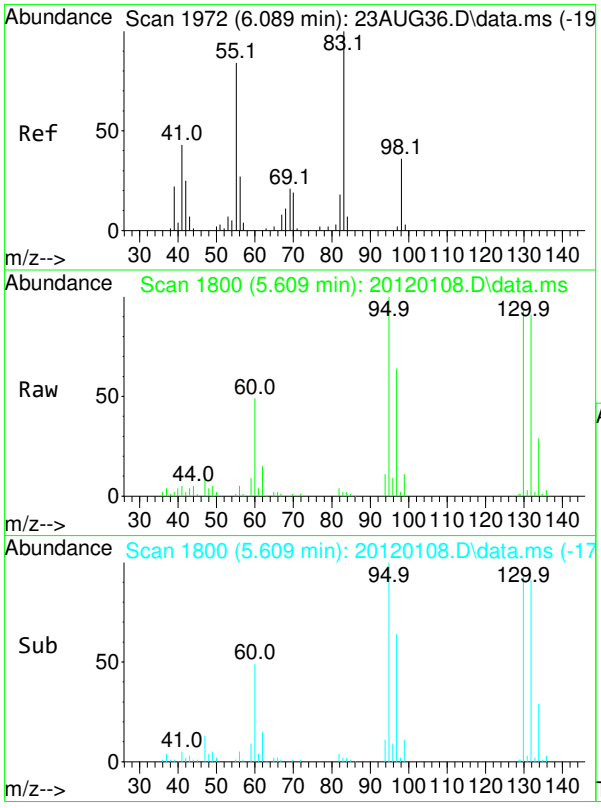


#56
n-Butanol
Concen: 516.87 ug/L
RT: 5.023 min Scan# 1590
Delta R.T. -0.012 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 56 Resp: 35600

Ion	Ratio	Lower	Upper
56	100		
55	45.9	17.7	77.7
41	187.9	161.0	221.0
43	311.4	292.4	352.4

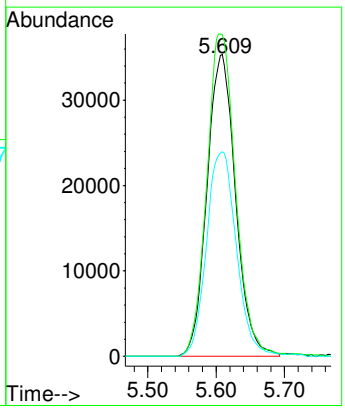


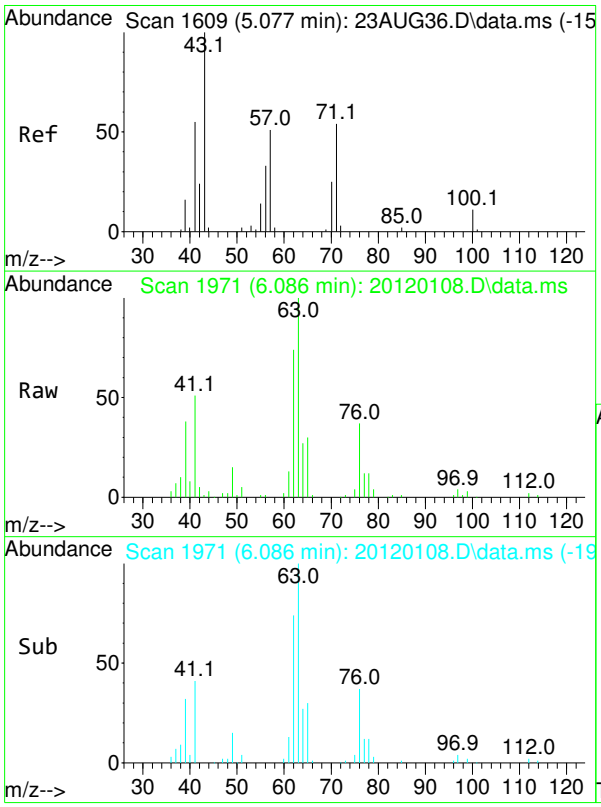


#57
Trichloroethene
Concen: 42.72 ug/L
RT: 5.609 min Scan# 1800
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:130 Resp: 102874

Ion	Ratio	Lower	Upper
130	100		
95	107.9	80.9	140.9
97	70.6	41.9	101.9

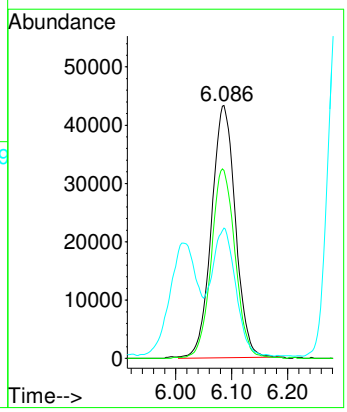


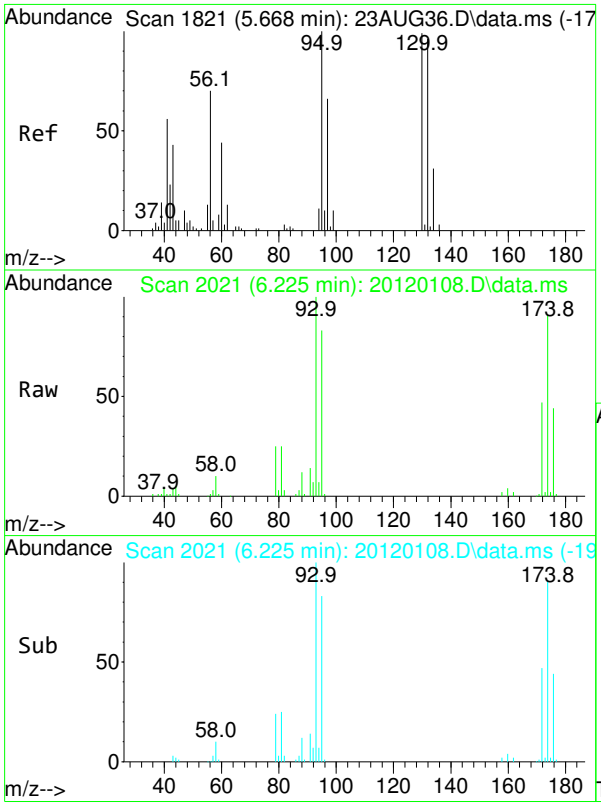


#58
1,2-Dichloropropane
Concen: 37.79 ug/L
RT: 6.086 min Scan# 1971
Delta R.T. -0.008 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 63 Resp: 128723

Ion	Ratio	Lower	Upper
63	100		
62	75.3	46.4	106.4
41	44.8	20.9	80.9

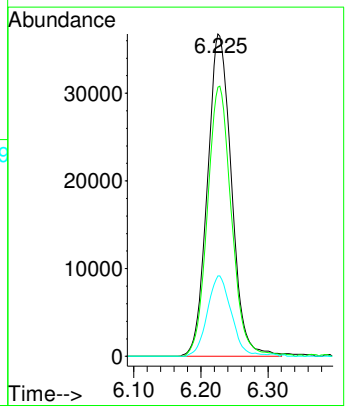


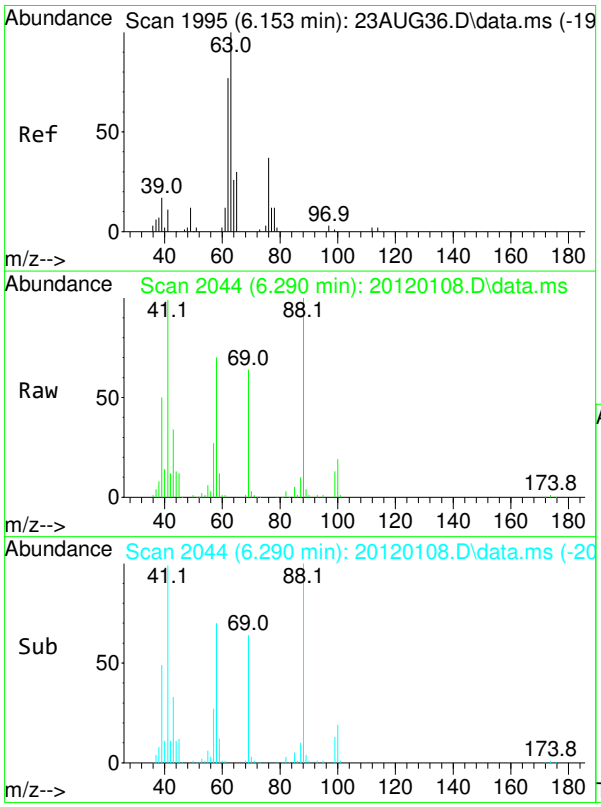


#59
Dibromomethane
Concen: 41.42 ug/L
RT: 6.225 min Scan# 2021
Delta R.T. -0.009 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 93 Resp: 91475

Ion	Ratio	Lower	Upper
93	100		
95	83.6	52.1	112.1
81	24.9	0.0	55.4

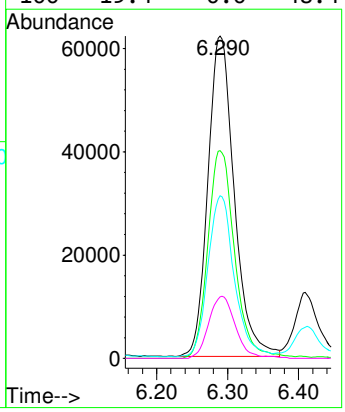


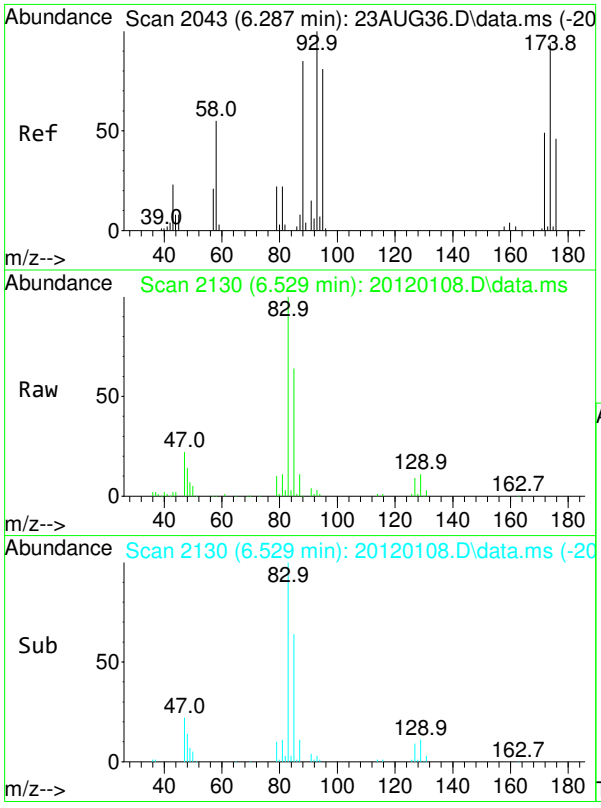


#60
Methyl methacrylate
Concen: 37.56 ug/L
RT: 6.290 min Scan# 2044
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 41 Resp: 160272

Ion	Ratio	Lower	Upper
41	100		
69	66.0	32.4	92.4
39	50.2	20.2	80.2
100	19.4	0.0	48.4

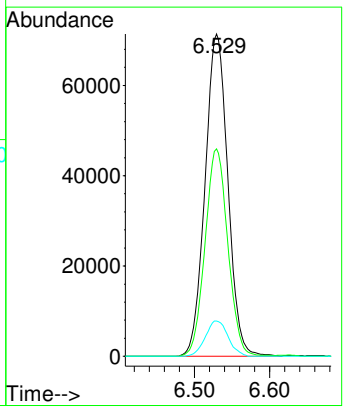


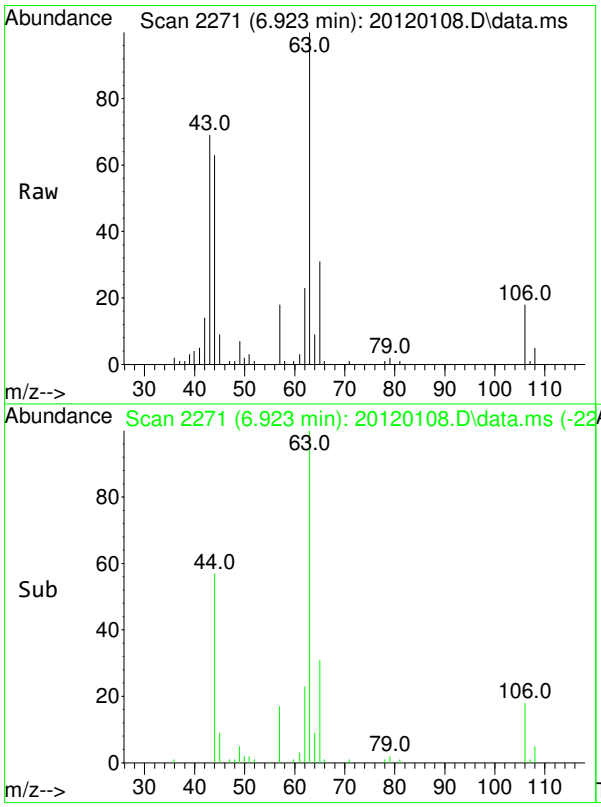


#61
Bromodichloromethane
Concen: 40.81 ug/L
RT: 6.529 min Scan# 2130
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 83 Resp: 150234

Ion	Ratio	Lower	Upper
83	100		
85	64.5	33.7	93.7
129	11.0	0.0	41.0

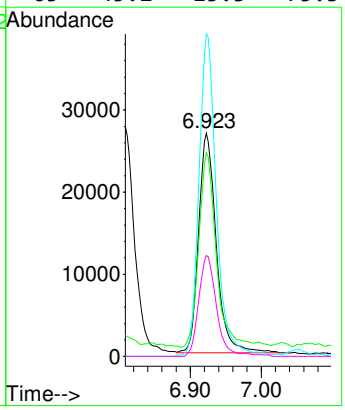


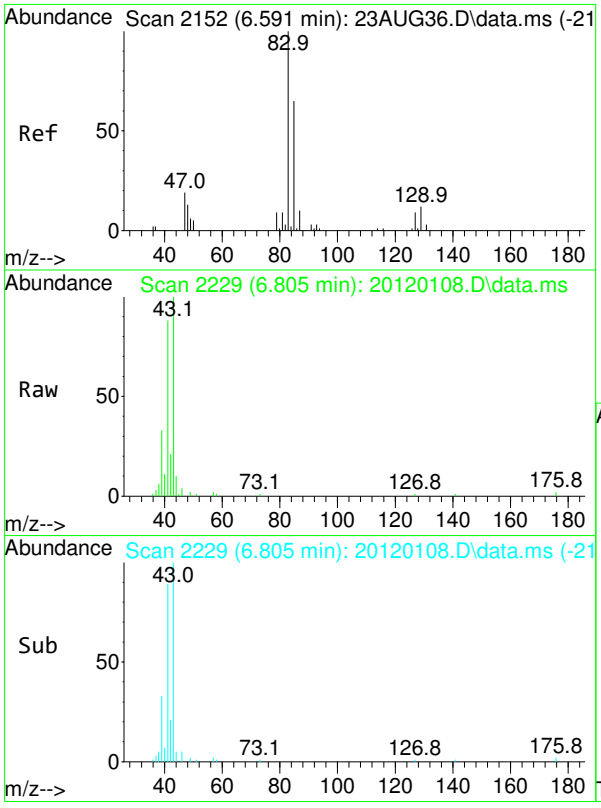


#62
2-Chloroethyl vinyl ether
Concen: 25.80 ug/L
RT: 6.923 min Scan# 2271
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 46192

Ion	Ratio	Lower	Upper
43	100		
44	87.0	51.7	111.7
63	144.0	111.6	171.6
65	45.2	15.3	75.3

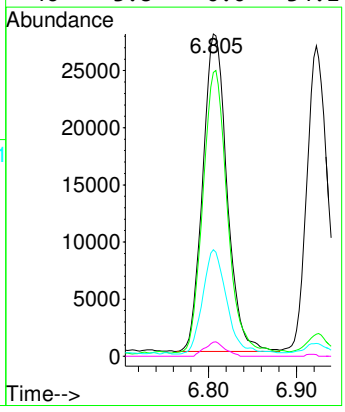


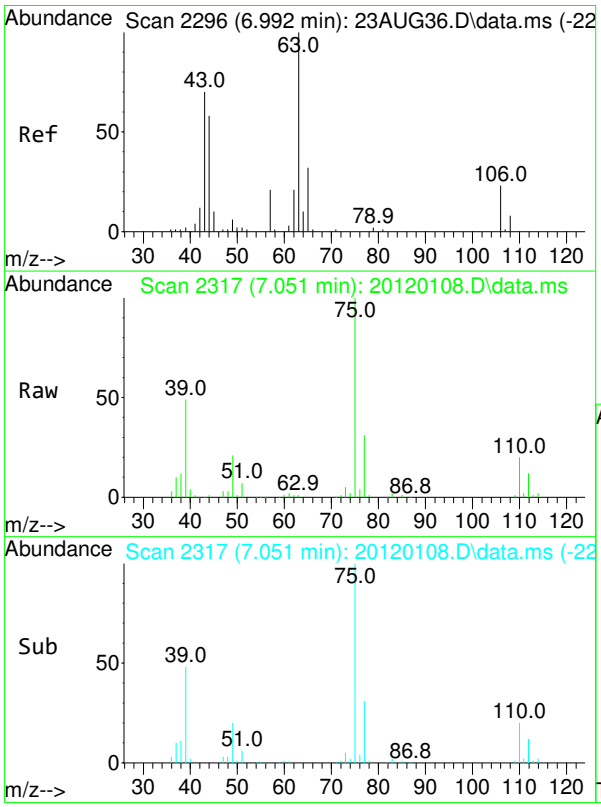


#63
2-Nitropropane
Concen: 36.91 ug/L
RT: 6.805 min Scan# 2229
Delta R.T. -0.006 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 53437

Ion	Ratio	Lower	Upper
43	100		
41	89.4	59.2	119.2
39	32.9	5.6	65.6
46	3.8	0.0	34.1

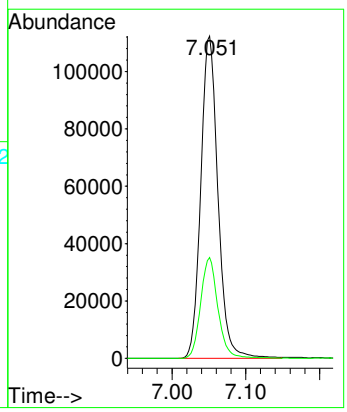


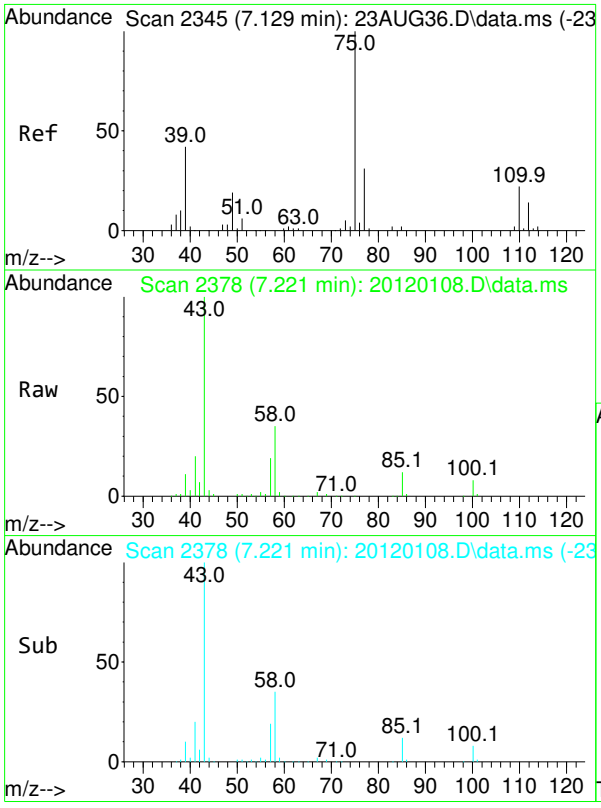


#64
cis-1,3-Dichloropropene
Concen: 43.54 ug/L
RT: 7.051 min Scan# 2317
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 75 Resp: 181463

Ion	Ratio	Lower	Upper
75	100		
77	31.6	1.3	61.3

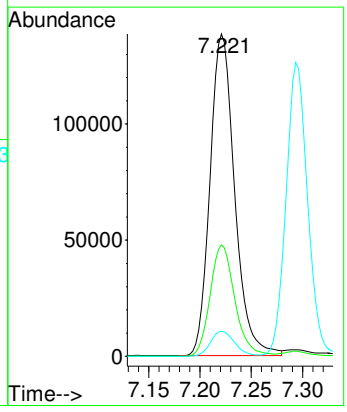


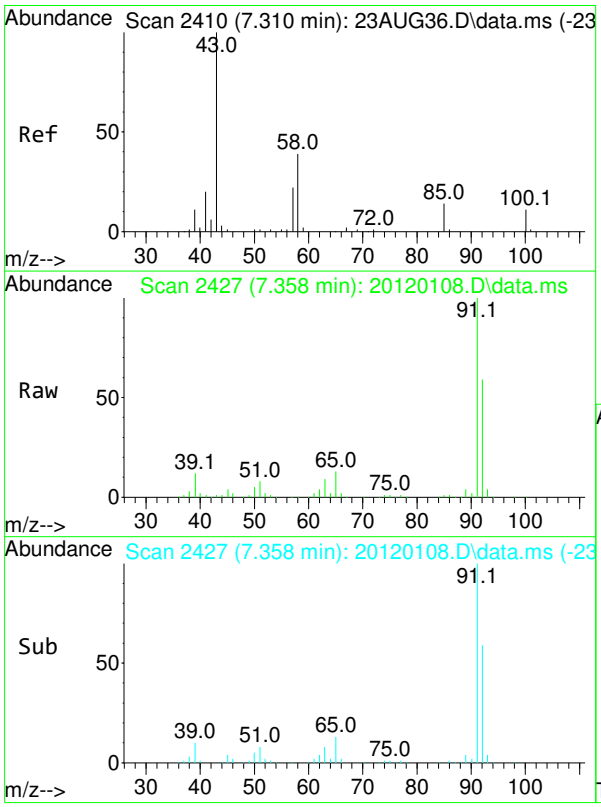


#66
4-Methyl-2-pentanone
Concen: 40.01 ug/L
RT: 7.221 min Scan# 2378
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 231797

Ion	Ratio	Lower	Upper
43	100		
58	34.7	13.4	53.4
100	7.7	0.0	27.3

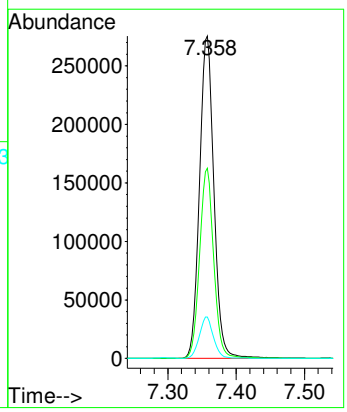


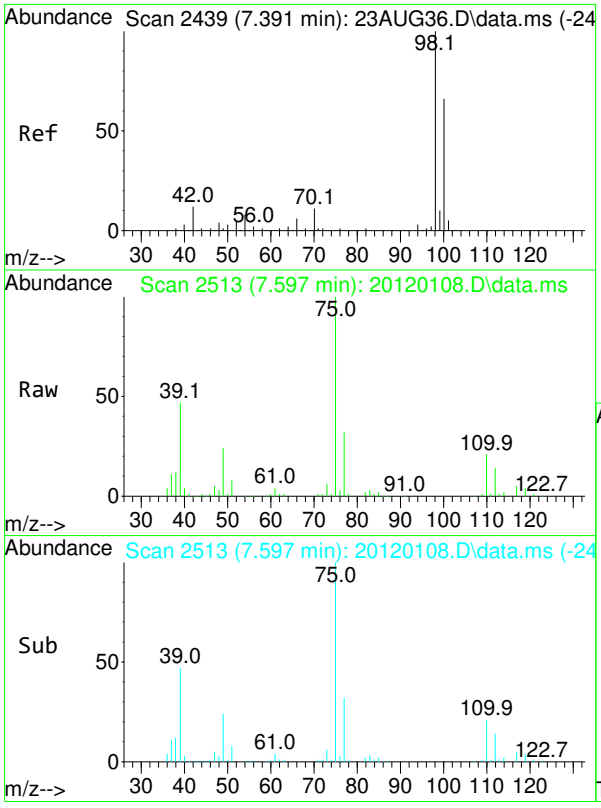


#68
Toluene
Concen: 43.15 ug/L
RT: 7.358 min Scan# 2427
Delta R.T. -0.002 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 406887

Ion	Ratio	Lower	Upper
91	100		
92	57.5	28.3	88.3
65	12.5	0.0	43.2

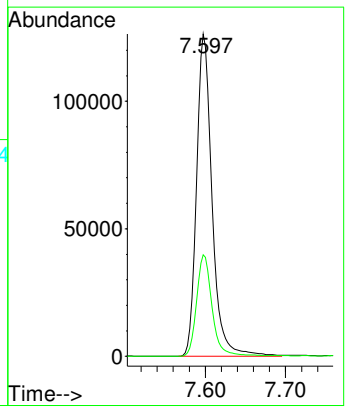


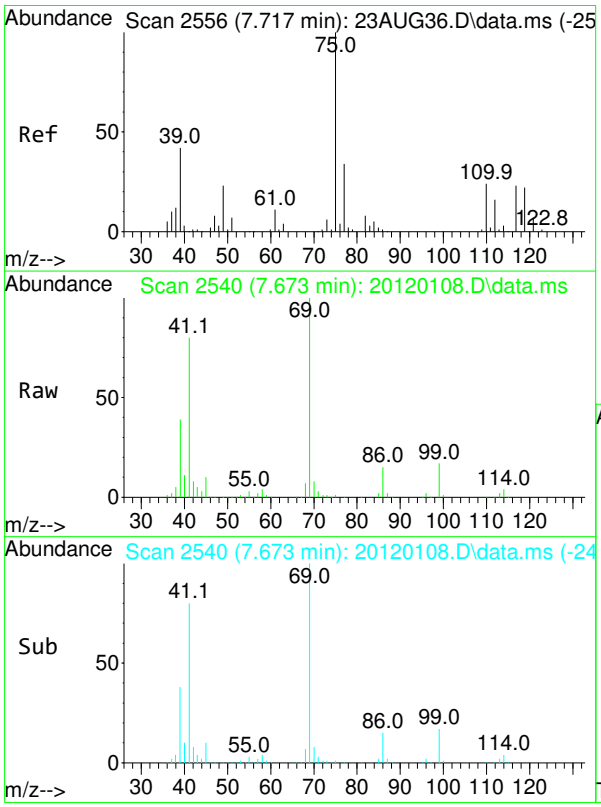


#69
trans-1,3-Dichloropropene
Concen: 45.00 ug/L
RT: 7.597 min Scan# 2513
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 75 Resp: 169612

Ion	Ratio	Lower	Upper
75	100		
77	31.6	3.4	63.4

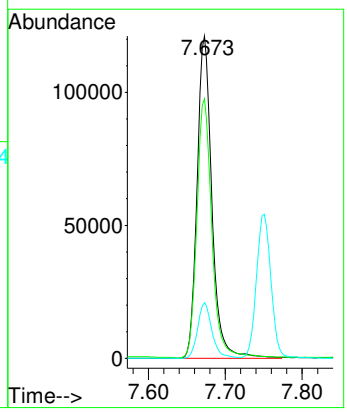


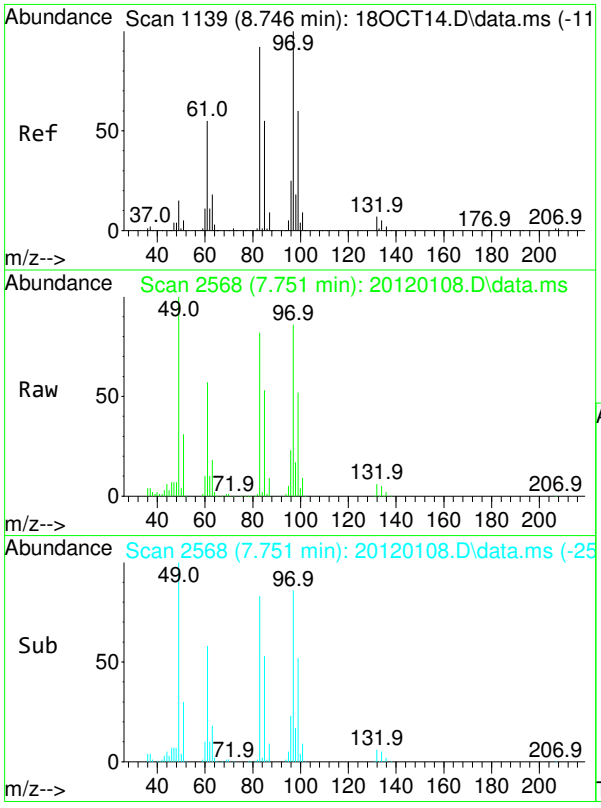


#71
Ethyl methacrylate
Concen: 39.17 ug/L
RT: 7.673 min Scan# 2540
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 69 Resp: 162317

Ion	Ratio	Lower	Upper
69	100		
41	81.5	53.5	113.5
99	16.8	0.0	46.2

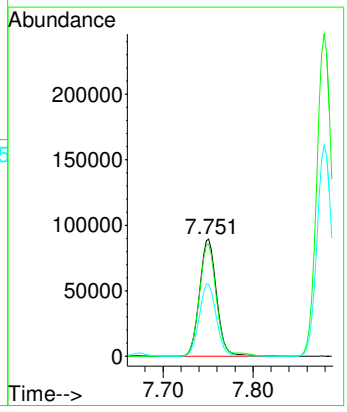


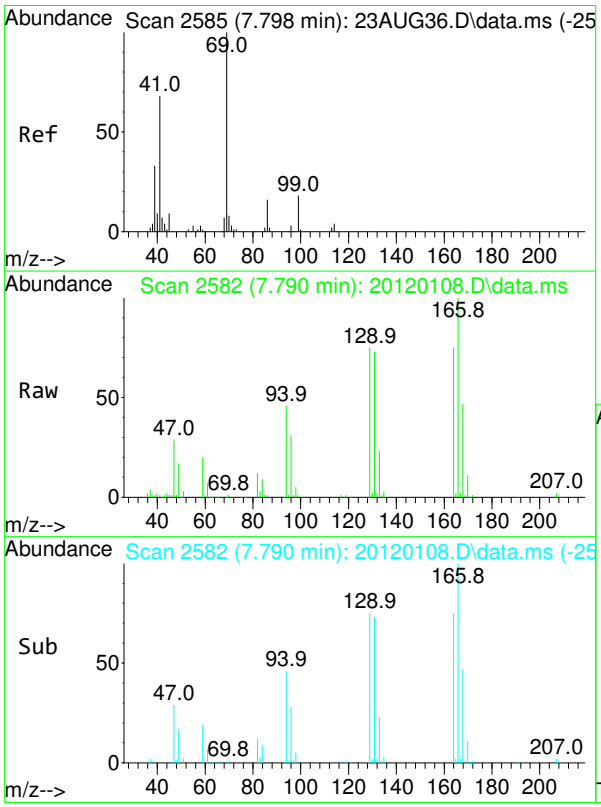


#72
1,1,2-Trichloroethane
Concen: 40.85 ug/L
RT: 7.751 min Scan# 2568
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 97 Resp: 117133

Ion	Ratio	Lower	Upper
97	100		
83	94.8	67.3	127.3
85	62.0	32.8	92.8

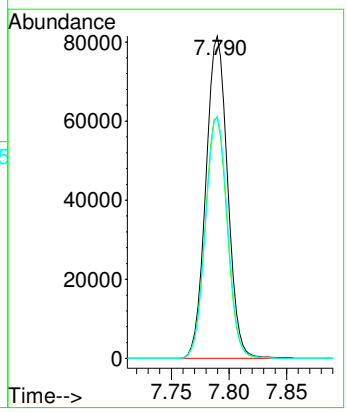


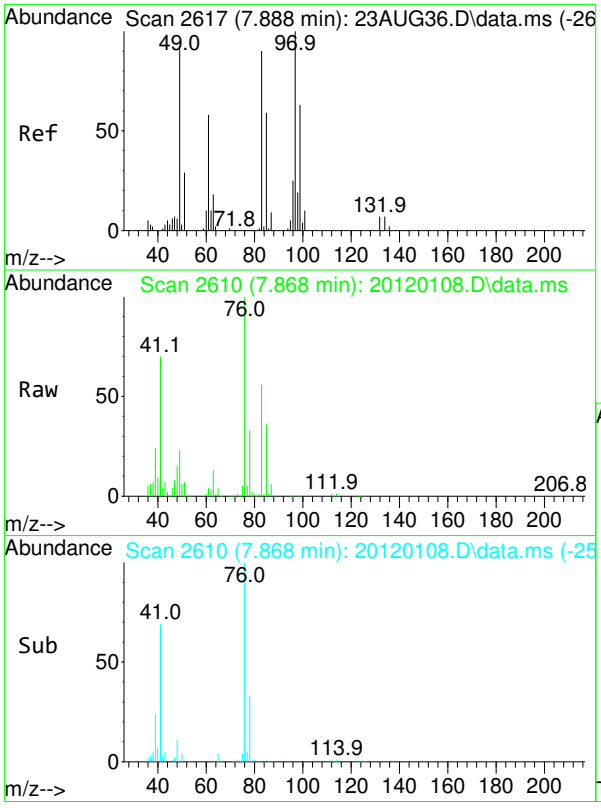


#73
Tetrachloroethene
Concen: 43.27 ug/L
RT: 7.790 min Scan# 2582
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:166 Resp: 107037

Ion	Ratio	Lower	Upper
166	100		
129	75.8	47.2	107.2
164	76.2	47.2	107.2

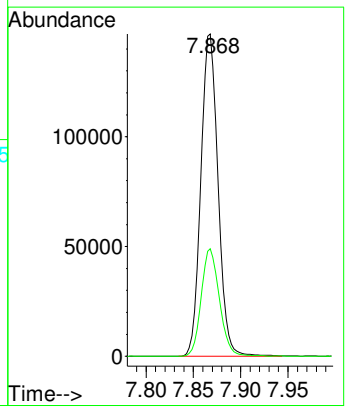


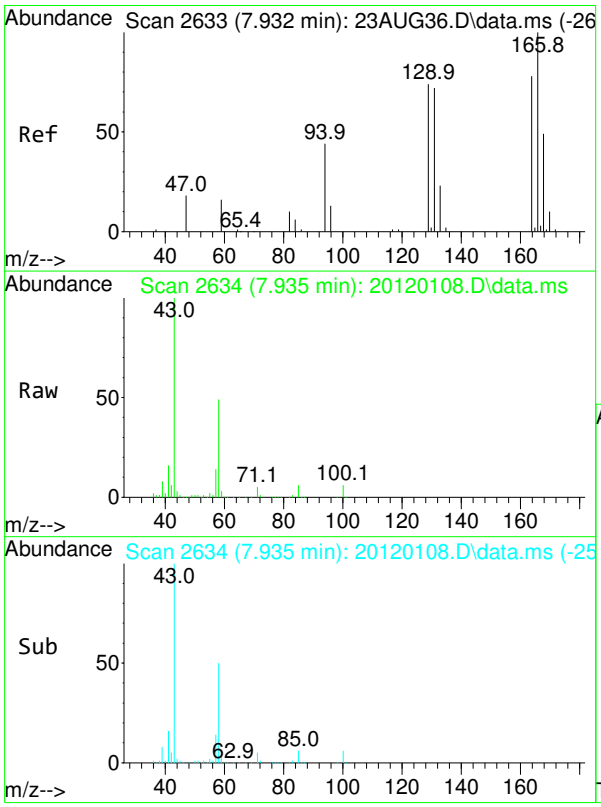


#74
1,3-Dichloropropane
Concen: 40.43 ug/L
RT: 7.868 min Scan# 2610
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 76 Resp: 185631

Ion	Ratio	Lower	Upper
76	100		
78	35.3	4.7	64.7

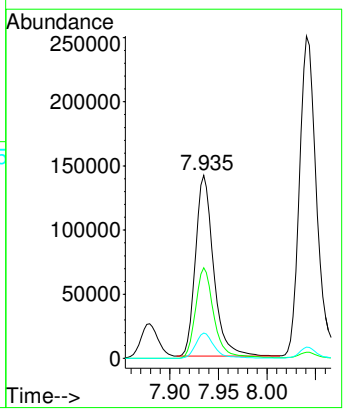


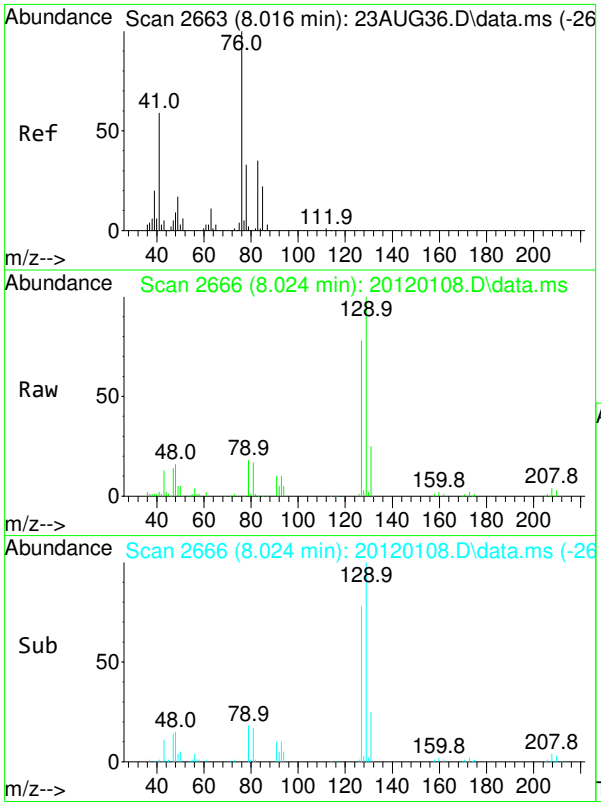


#75
2-Hexanone
Concen: 37.40 ug/L
RT: 7.935 min Scan# 2634
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 183379

Ion	Ratio	Lower	Upper
43	100		
58	51.2	18.9	78.9
57	14.7	0.0	44.5

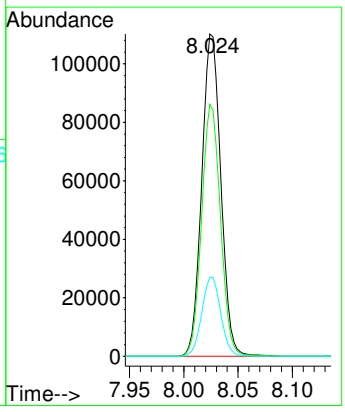


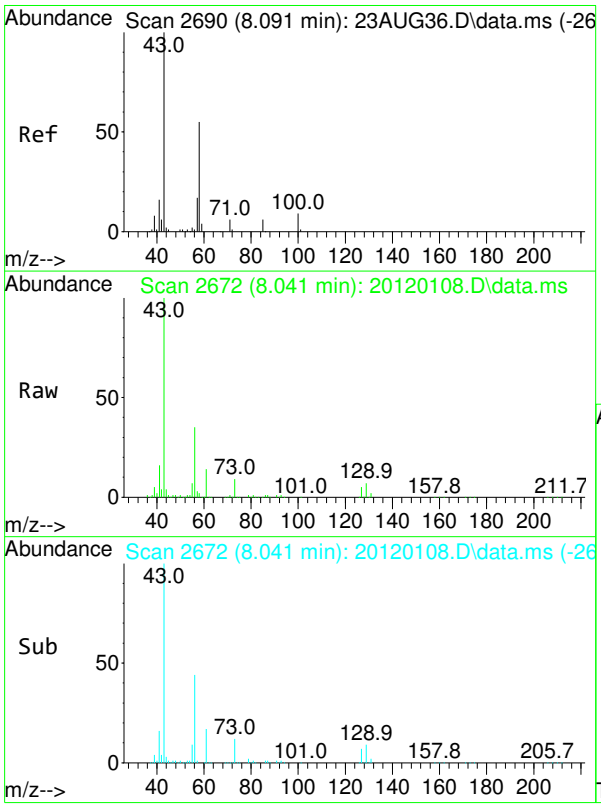


#76
Chlorodibromomethane
Concen: 46.08 ug/L
RT: 8.024 min Scan# 2666
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:129 Resp: 134546

Ion	Ratio	Lower	Upper
129	100		
127	77.3	45.9	105.9
131	24.3	0.0	54.2

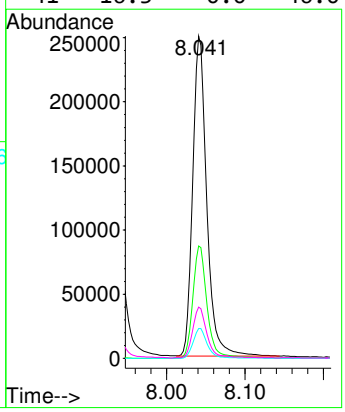


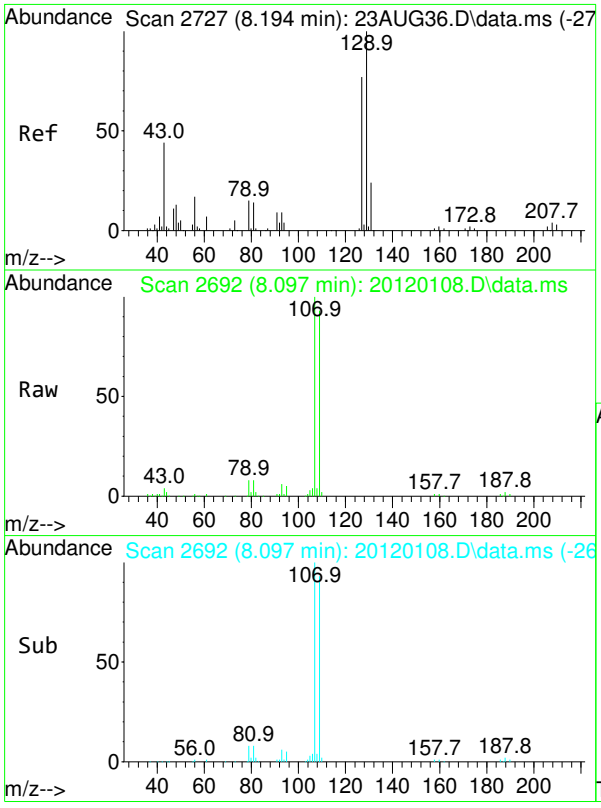


#77
Butyl acetate
Concen: 37.96 ug/L
RT: 8.041 min Scan# 2672
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 309405

Ion	Ratio	Lower	Upper
43	100		
56	36.1	4.8	64.8
73	9.5	0.0	38.9
41	16.3	0.0	46.0

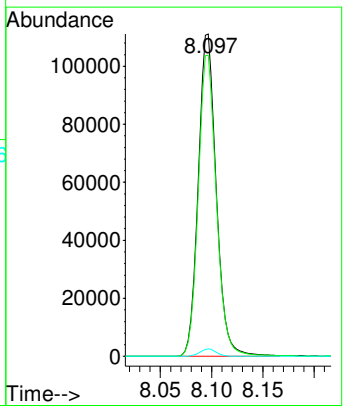


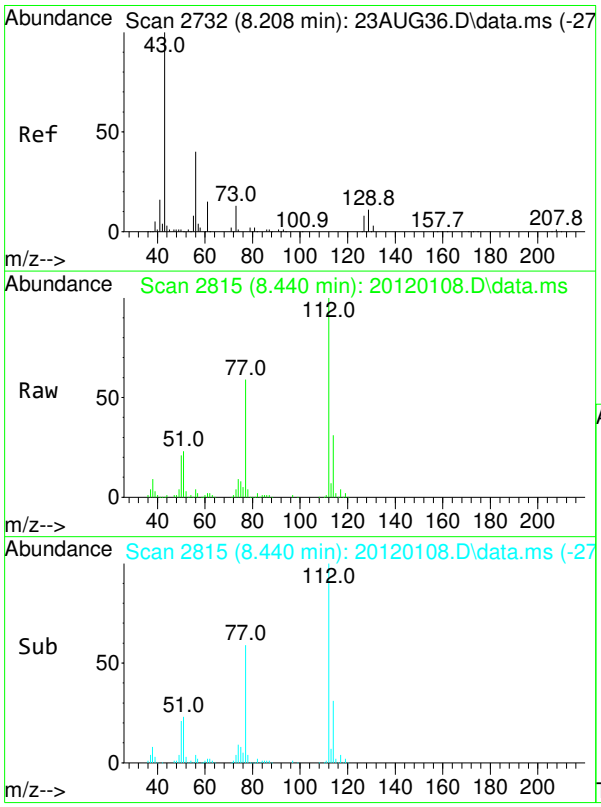


#78
1,2-Dibromoethane
Concen: 43.14 ug/L
RT: 8.097 min Scan# 2692
Delta R.T. -0.002 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:107 Resp: 136560

Ion	Ratio	Lower	Upper
107	100		
109	94.2	64.3	124.3
188	2.1	0.0	32.1

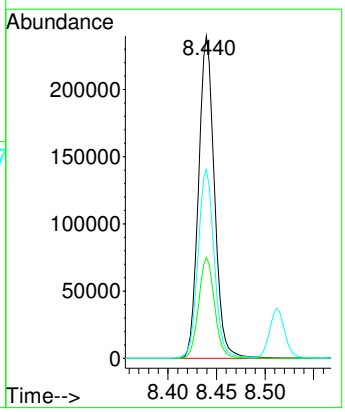


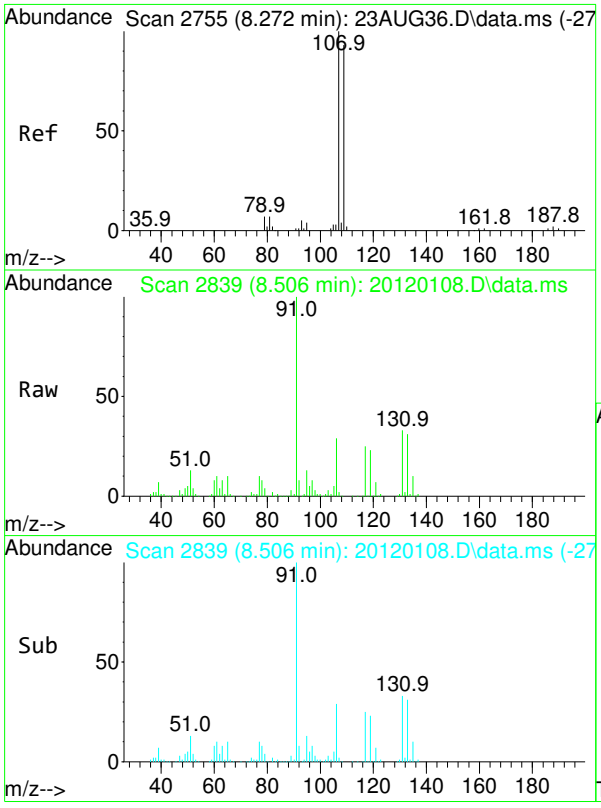


#79
Chlorobenzene
Concen: 44.05 ug/L
RT: 8.440 min Scan# 2815
Delta R.T. -0.002 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:112 Resp: 271755

Ion	Ratio	Lower	Upper
112	100		
114	31.4	1.7	61.7
77	60.1	32.3	92.3

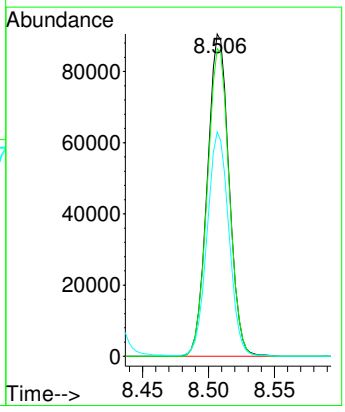


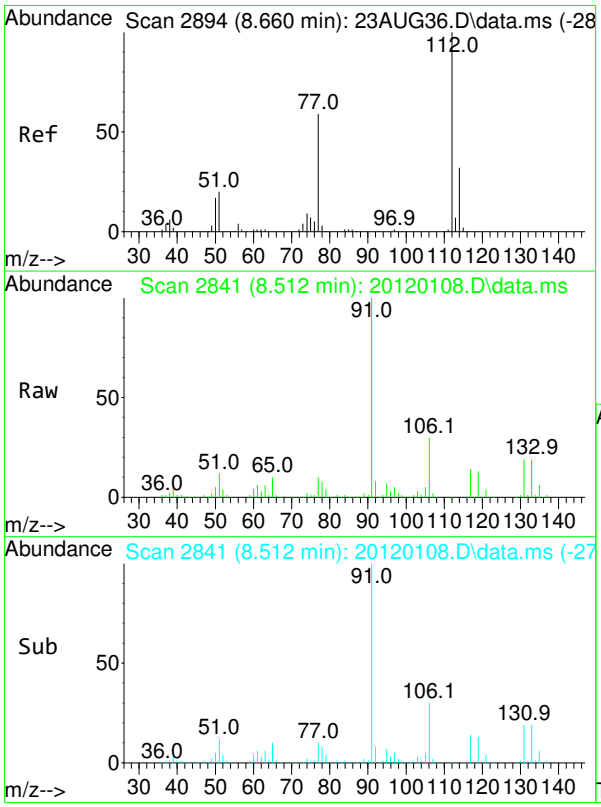


#80
1,1,1,2-Tetrachloroethane
Concen: 43.86 ug/L
RT: 8.506 min Scan# 2839
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:131 Resp: 103499

Ion	Ratio	Lower	Upper
131	100		
133	96.2	67.3	127.3
119	70.1	42.2	102.2

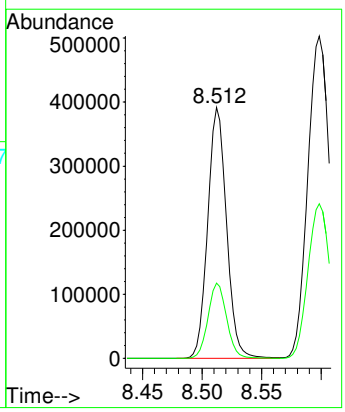


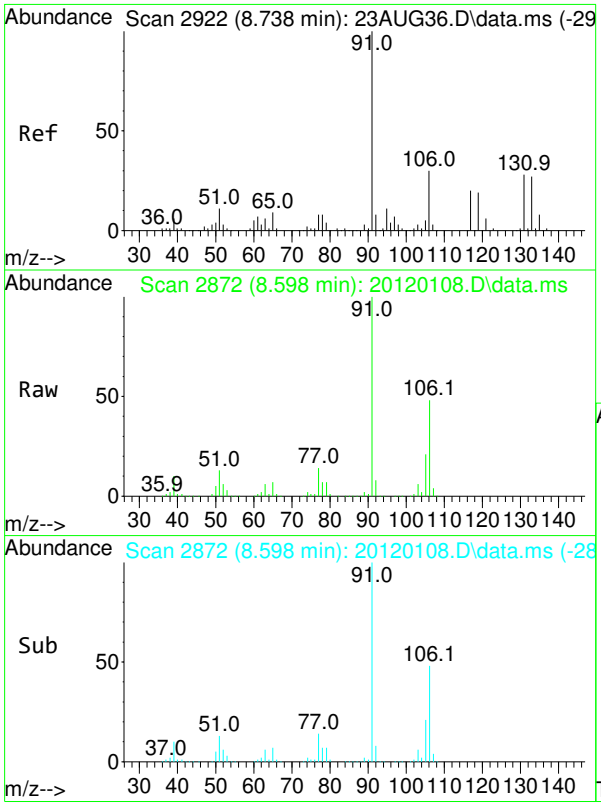


#81
Ethylbenzene
Concen: 42.57 ug/L
RT: 8.512 min Scan# 2841
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 431970

Ion	Ratio	Lower	Upper
91	100		
106	29.7	0.0	58.2

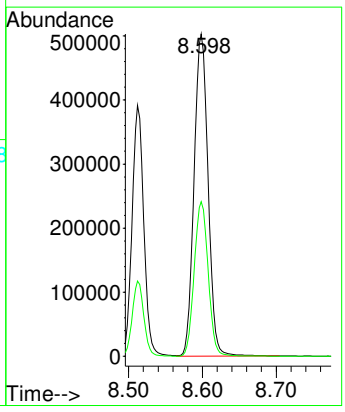


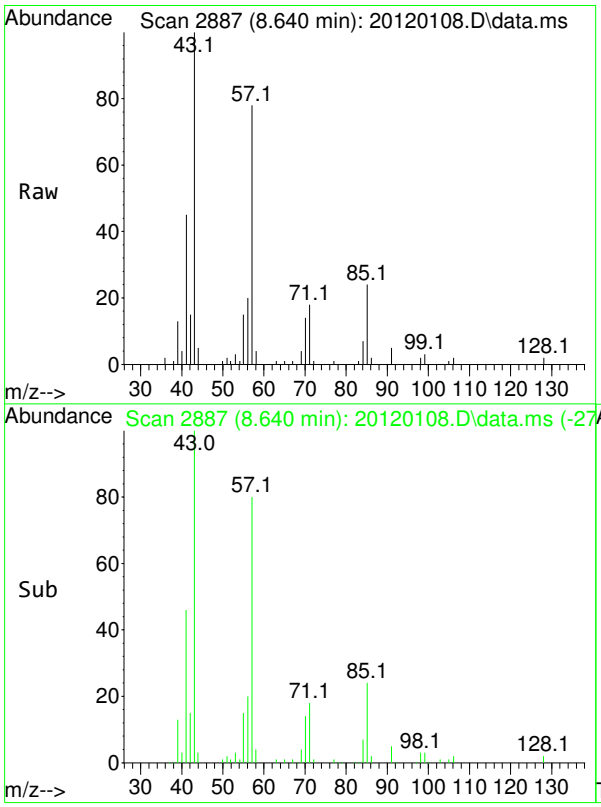


#82
m/p-Xylene
Concen: 86.02 ug/L
RT: 8.598 min Scan# 2872
Delta R.T. -0.001 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 662465

Ion	Ratio	Lower	Upper
91	100		
106	47.6	15.7	75.7

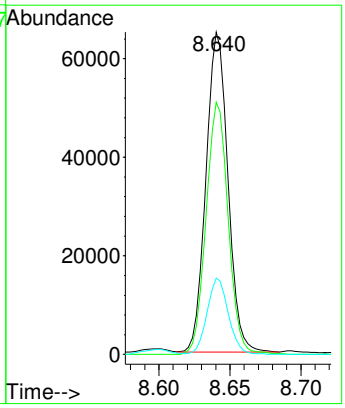


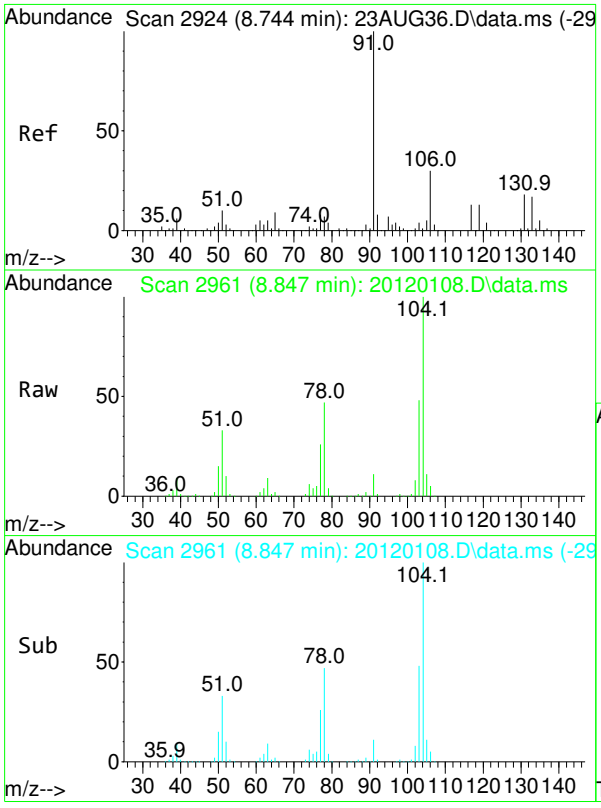


#83
Nonane
Concen: 36.35 ug/L
RT: 8.640 min Scan# 2887
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 69880

Ion	Ratio	Lower	Upper
43	100		
57	79.3	47.0	107.0
85	23.1	0.0	52.2

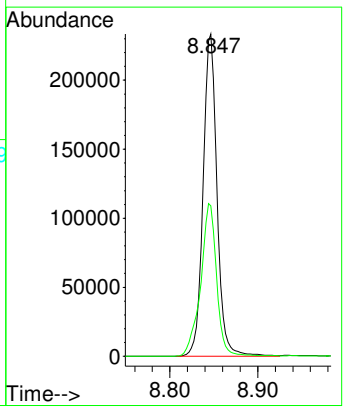


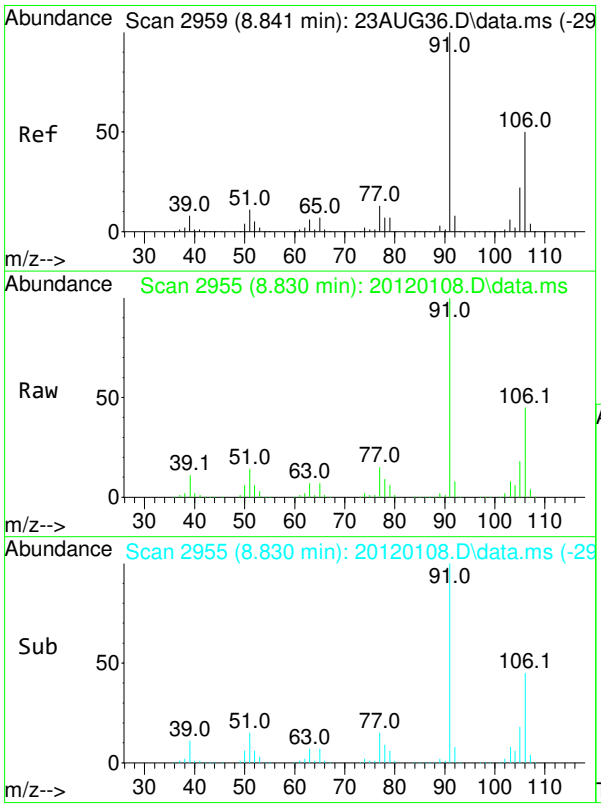


#84
Styrene
Concen: 49.41 ug/L
RT: 8.847 min Scan# 2961
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:104 Resp: 257385

Ion	Ratio	Lower	Upper
104	100		
78	54.3	25.5	85.5

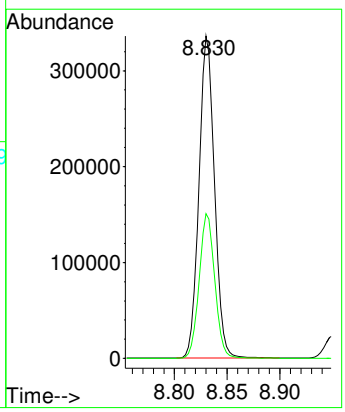


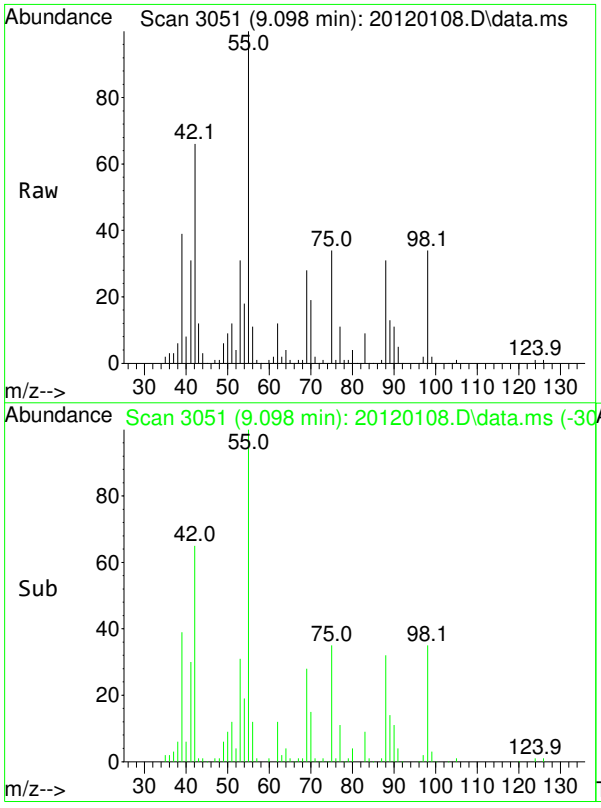


#85
o-Xylene
Concen: 43.94 ug/L
RT: 8.830 min Scan# 2955
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 344439

Ion	Ratio	Lower	Upper
91	100		
106	45.2	14.5	74.5

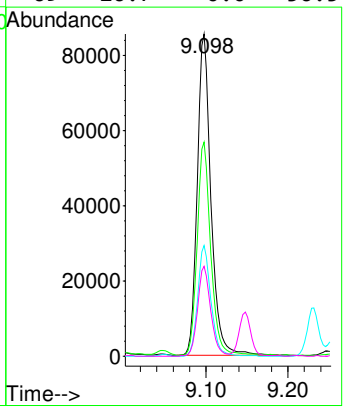


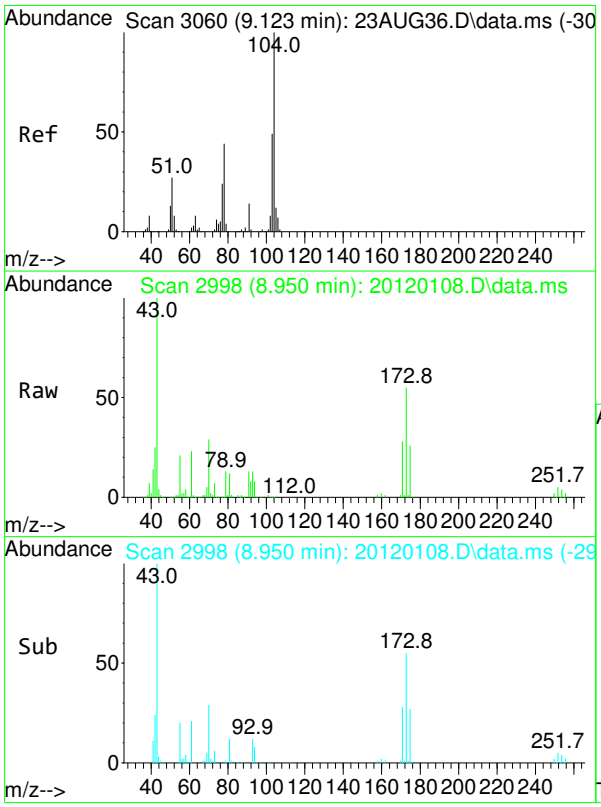


#86
Cyclohexanone
Concen: 239.65 ug/L
RT: 9.098 min Scan# 3051
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 55 Resp: 99533

Ion	Ratio	Lower	Upper
55	100		
42	64.9	38.8	98.8
98	33.5	1.4	61.4
69	26.7	0.0	56.5

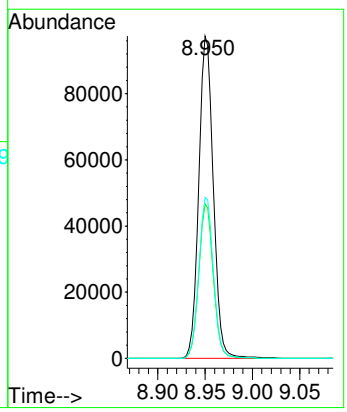


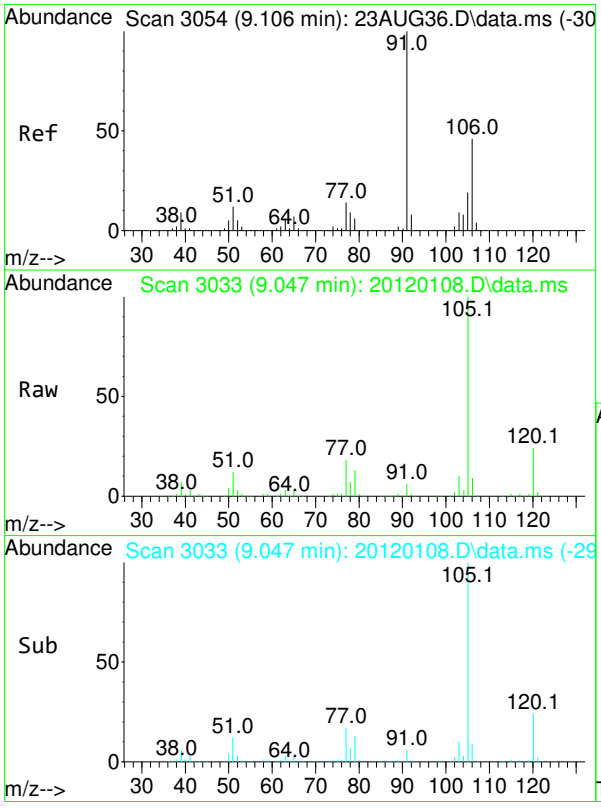


#87
Bromoform
Concen: 41.70 ug/L
RT: 8.950 min Scan# 2998
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:173 Resp: 104114

Ion	Ratio	Lower	Upper
173	100		
175	47.6	19.1	79.1
171	50.4	21.2	81.2

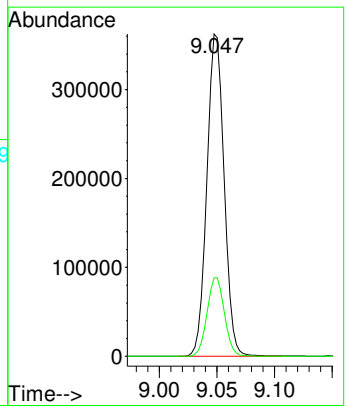


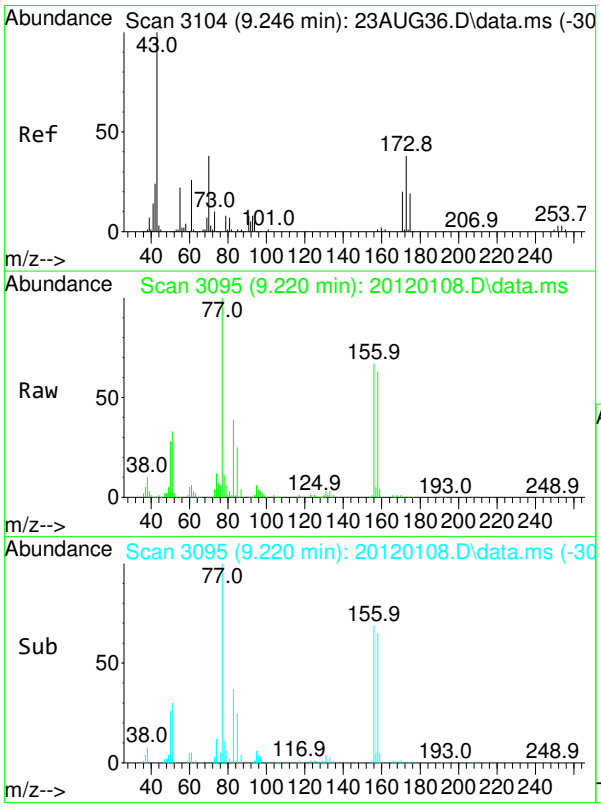


#88
Isopropylbenzene
Concen: 45.97 ug/L
RT: 9.047 min Scan# 3033
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:105 Resp: 378928

Ion	Ratio	Lower	Upper
105	100		
120	24.6	0.0	54.5

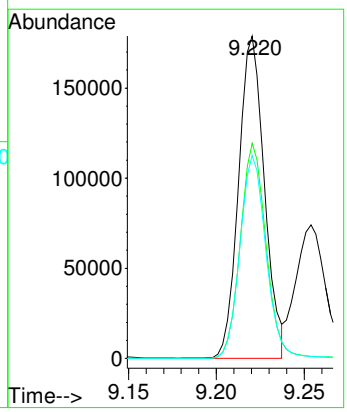


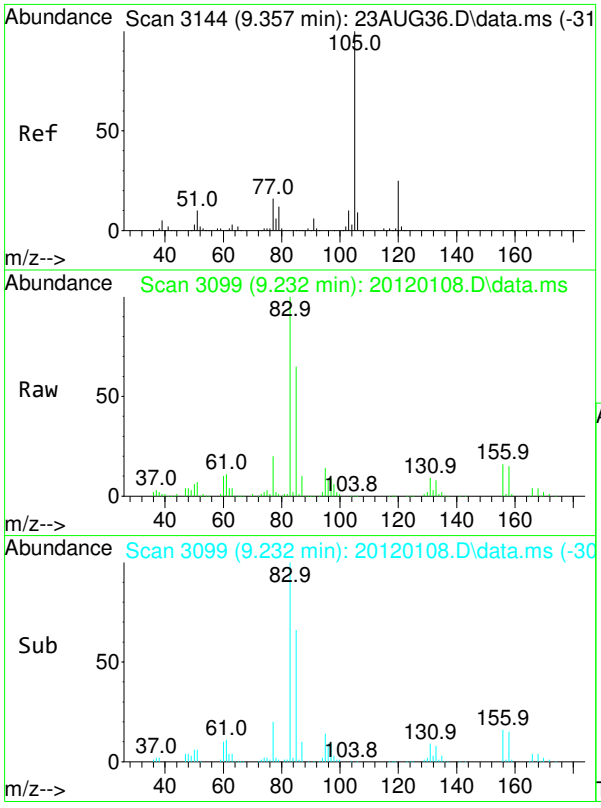


#90
Bromobenzene
Concen: 41.58 ug/L
RT: 9.220 min Scan# 3095
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 77 Resp: 182427

Ion	Ratio	Lower	Upper
77	100		
156	66.8	30.9	90.9
158	64.0	30.4	90.4

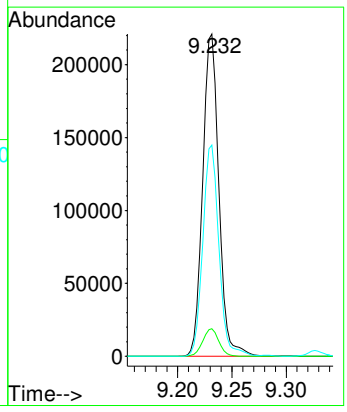


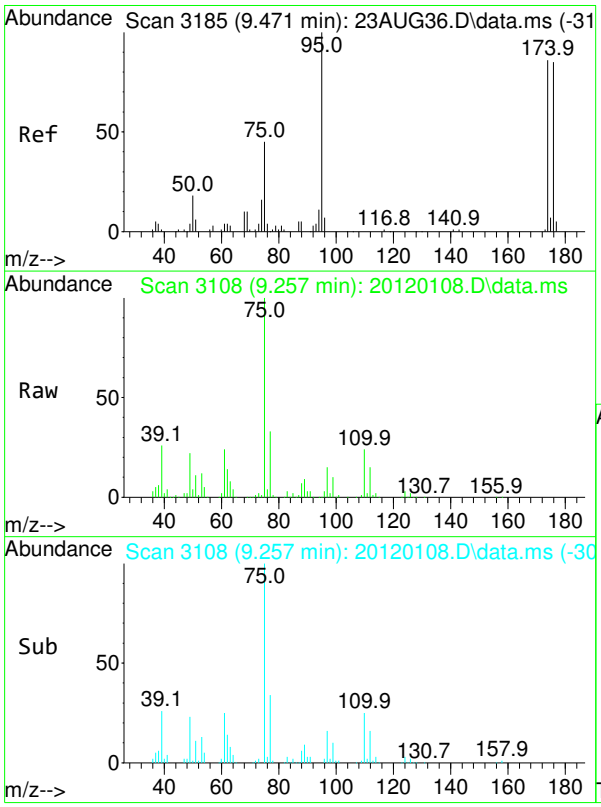


#91
1,1,2,2-Tetrachloroethane
Concen: 39.35 ug/L
RT: 9.232 min Scan# 3099
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 83 Resp: 228636

Ion	Ratio	Lower	Upper
83	100		
131	8.6	0.0	40.2
85	65.2	34.5	94.5

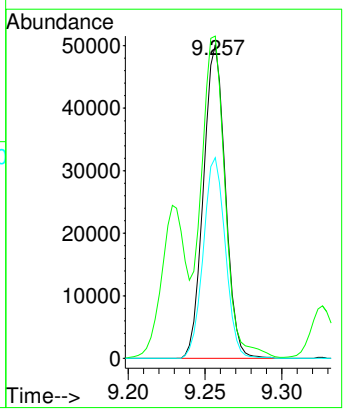


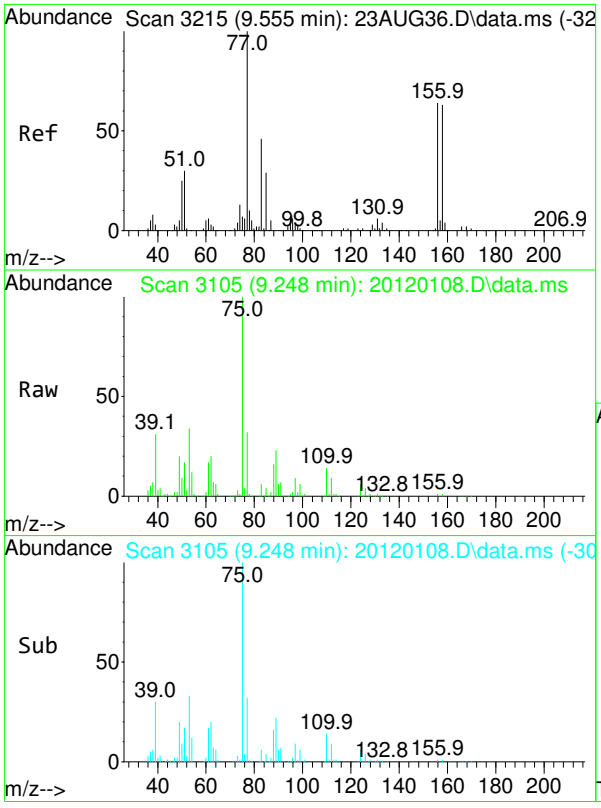


#92
1,2,3-Trichloropropane
Concen: 41.10 ug/L
RT: 9.257 min Scan# 3108
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:110 Resp: 49631

Ion	Ratio	Lower	Upper
110	100		
61	111.2	82.7	142.7
112	64.4	34.0	94.0

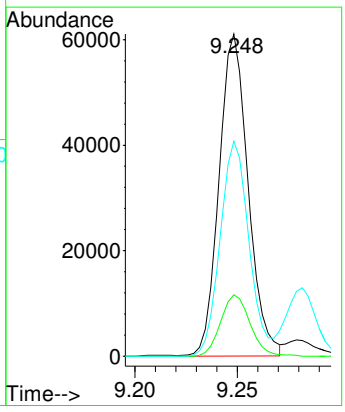


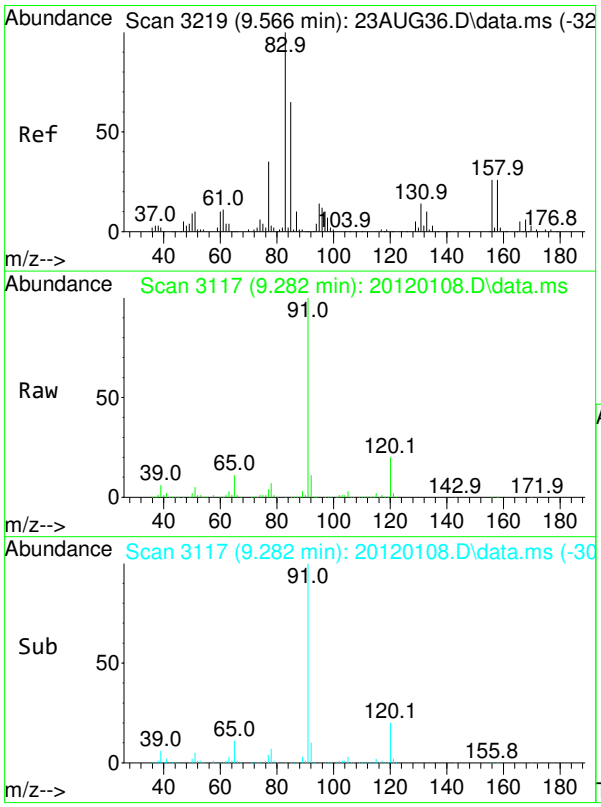


#93
trans-1,4-Dichloro-2-butene
Concen: 41.83 ug/L
RT: 9.248 min Scan# 3105
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 53 Resp: 60087

Ion	Ratio	Lower	Upper
53	100		
124	19.4	0.0	48.4
89	66.6	31.5	91.5

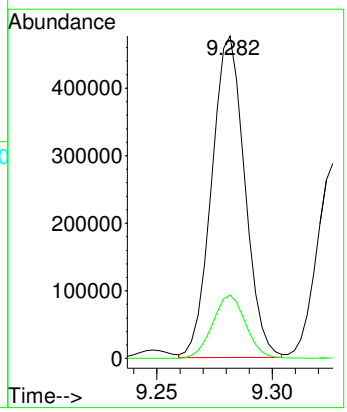


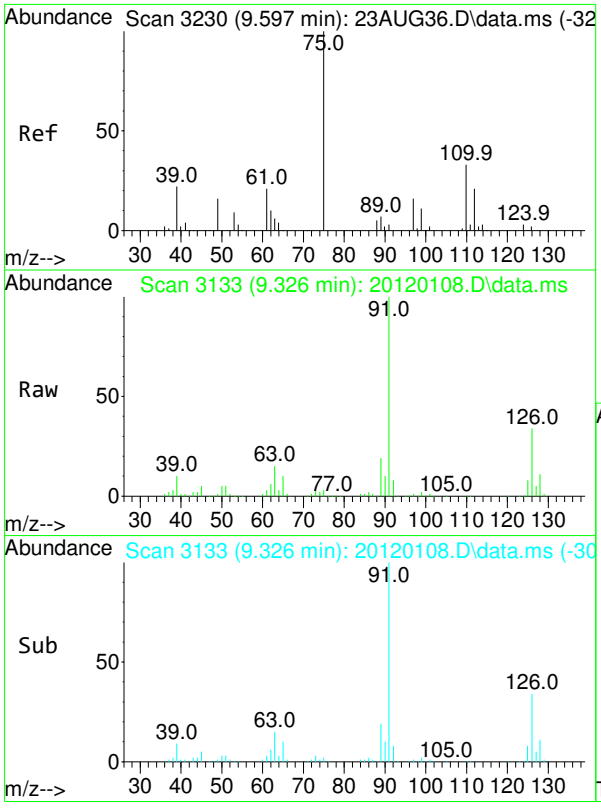


#94
n-Propylbenzene
Concen: 45.15 ug/L
RT: 9.282 min Scan# 3117
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 475689

Ion	Ratio	Lower	Upper
91	100		
120	19.8	0.0	49.5

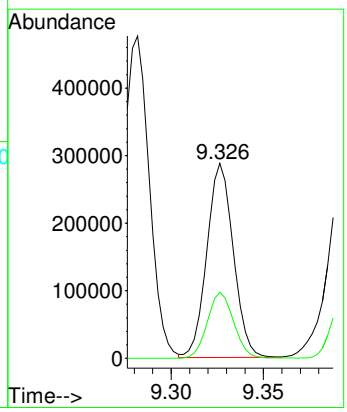


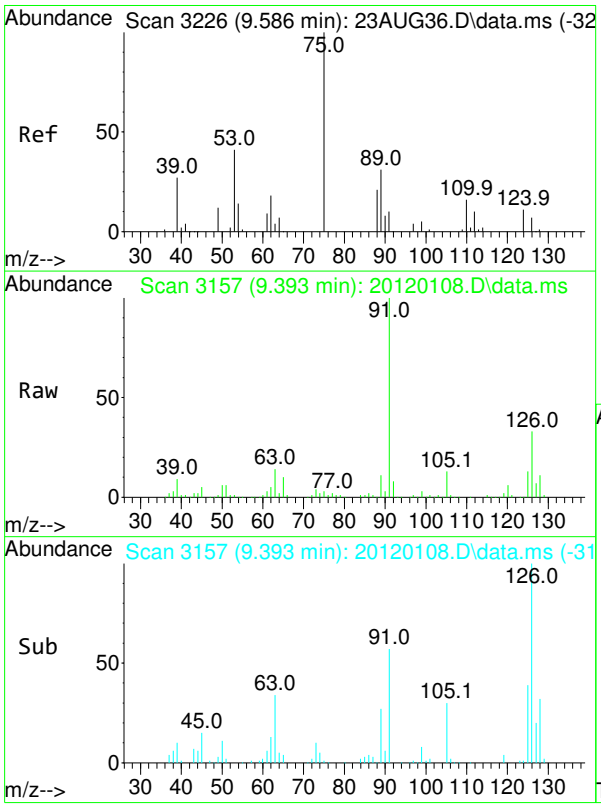


#95
2-Chlorotoluene
Concen: 41.53 ug/L
RT: 9.326 min Scan# 3133
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 287538

Ion	Ratio	Lower	Upper
91	100		
126	34.0	3.1	63.1

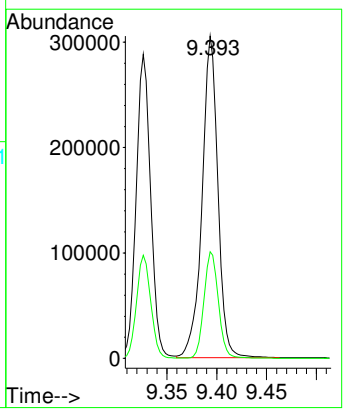


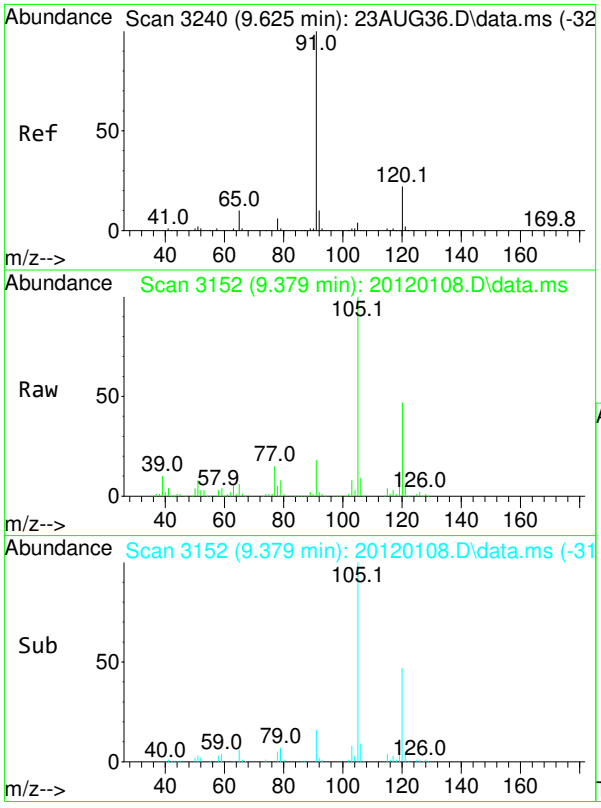


#96
4-Chlorotoluene
Concen: 42.55 ug/L
RT: 9.393 min Scan# 3157
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 335076

Ion	Ratio	Lower	Upper
91	100		
126	30.1	0.0	59.5

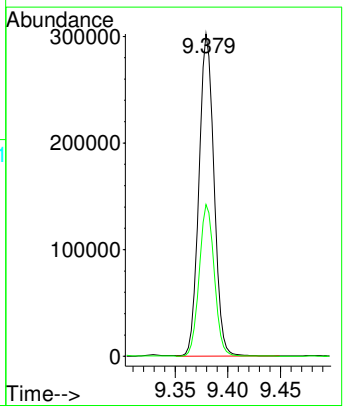


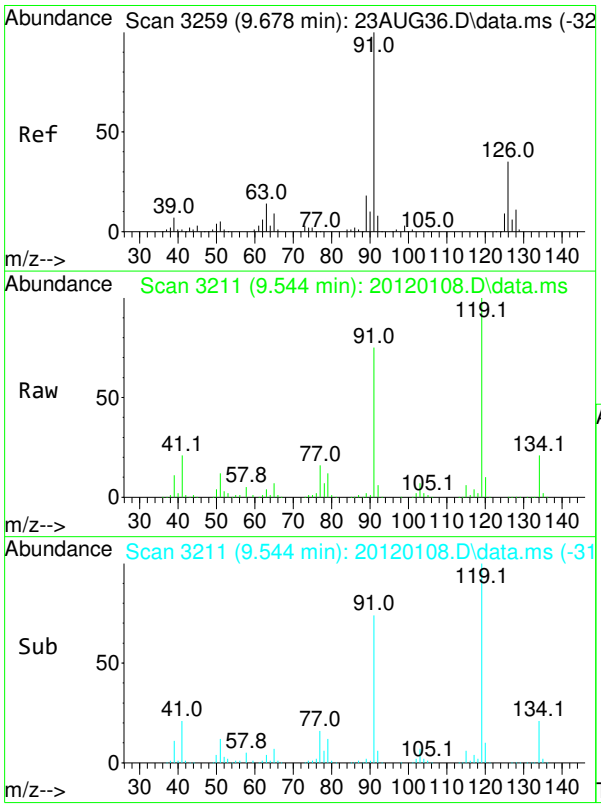


#97
1,3,5-Trimethylbenzene
Concen: 46.06 ug/L
RT: 9.379 min Scan# 3152
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:105 Resp: 299325

Ion	Ratio	Lower	Upper
105	100		
120	47.1	16.8	76.8

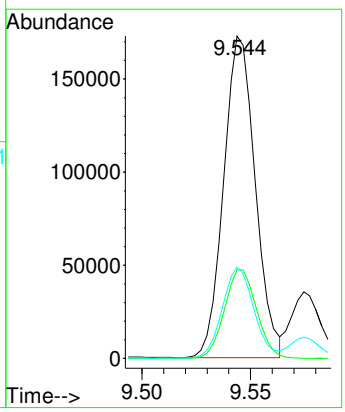


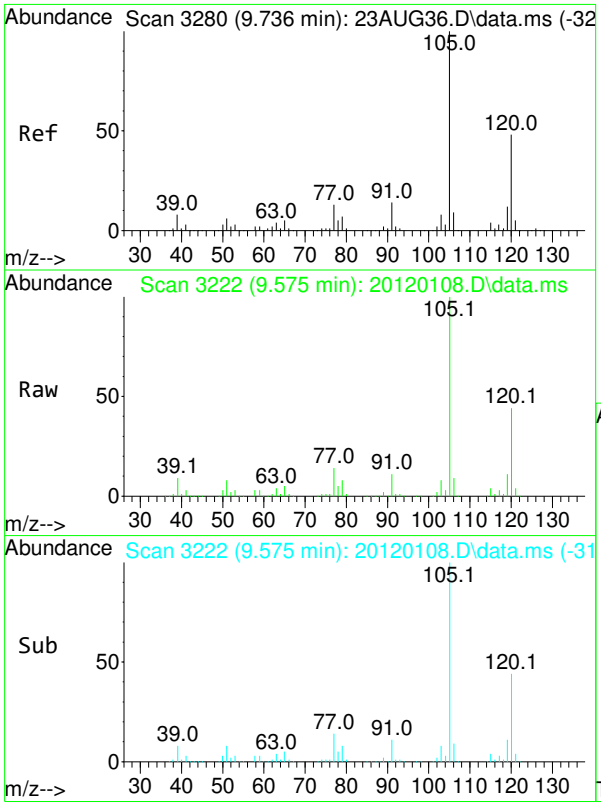


#98
tert-Butylbenzene
Concen: 44.28 ug/L
RT: 9.544 min Scan# 3211
Delta R.T. -0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 175217

Ion	Ratio	Lower	Upper
91	100		
134	28.0	0.0	56.4
41	28.5	9.8	49.8

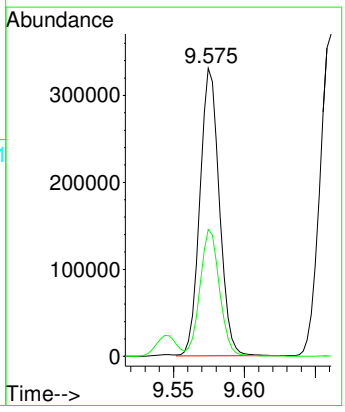


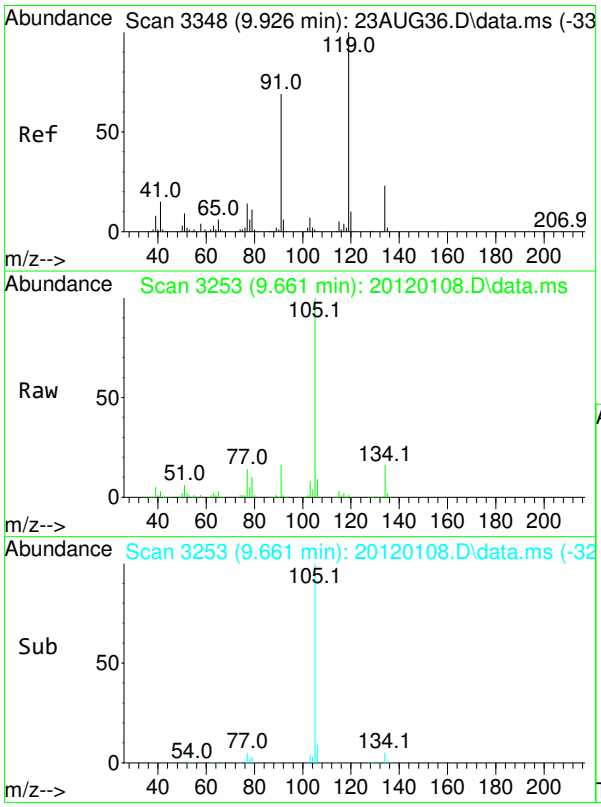


#99
1,2,4-Trimethylbenzene
Concen: 48.06 ug/L
RT: 9.575 min Scan# 3222
Delta R.T. -0.002 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:105 Resp: 314182

Ion	Ratio	Lower	Upper
105	100		
120	44.4	14.7	74.7

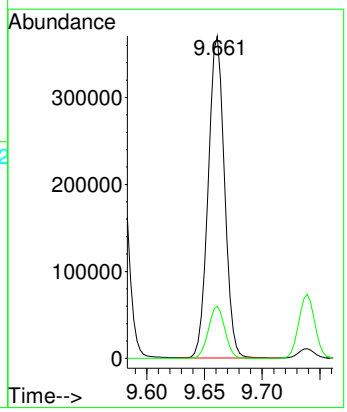


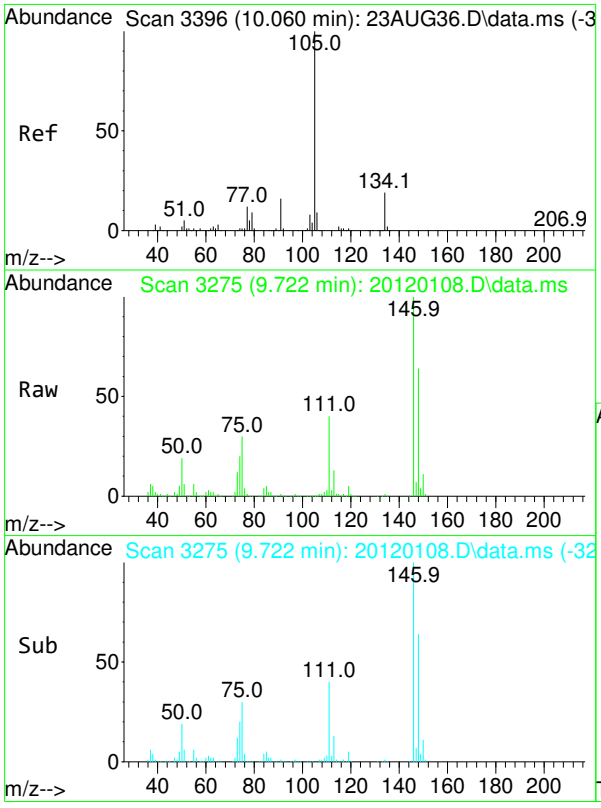


#100
sec-Butylbenzene
Concen: 47.91 ug/L
RT: 9.661 min Scan# 3253
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:105 Resp: 364704

Ion	Ratio	Lower	Upper
105	100		
134	16.4	0.0	45.7

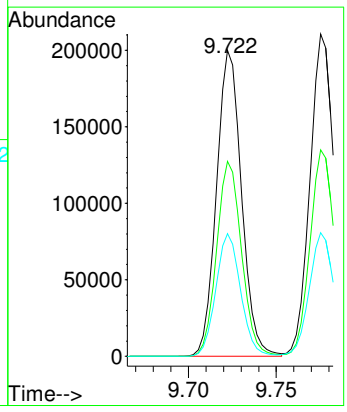


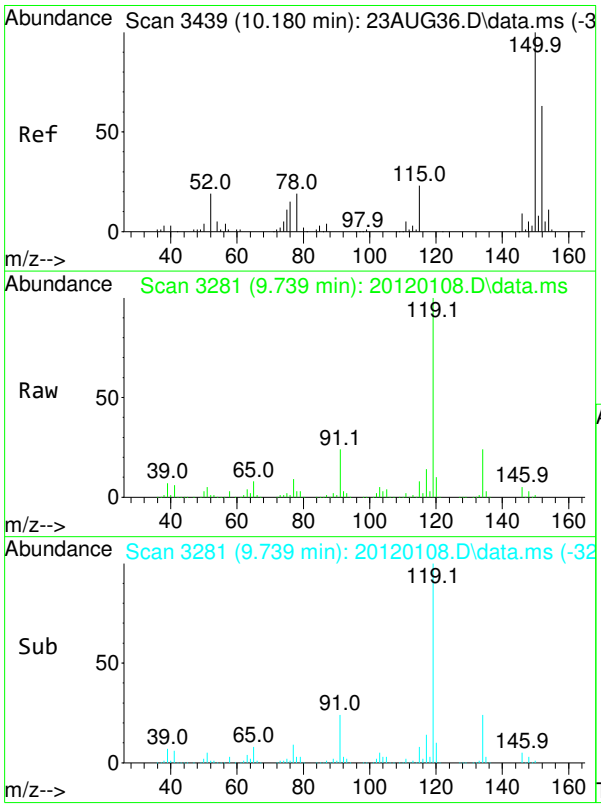


#102
1,3-Dichlorobenzene
Concen: 41.87 ug/L
RT: 9.722 min Scan# 3275
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:146 Resp: 198440

Ion	Ratio	Lower	Upper
146	100		
148	63.4	35.2	95.2
111	39.7	10.9	70.9

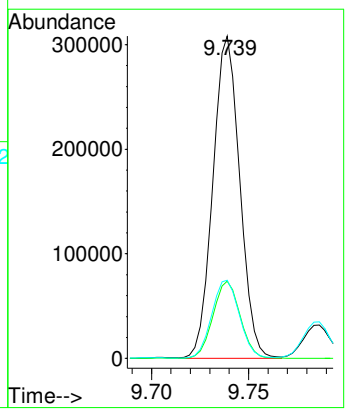


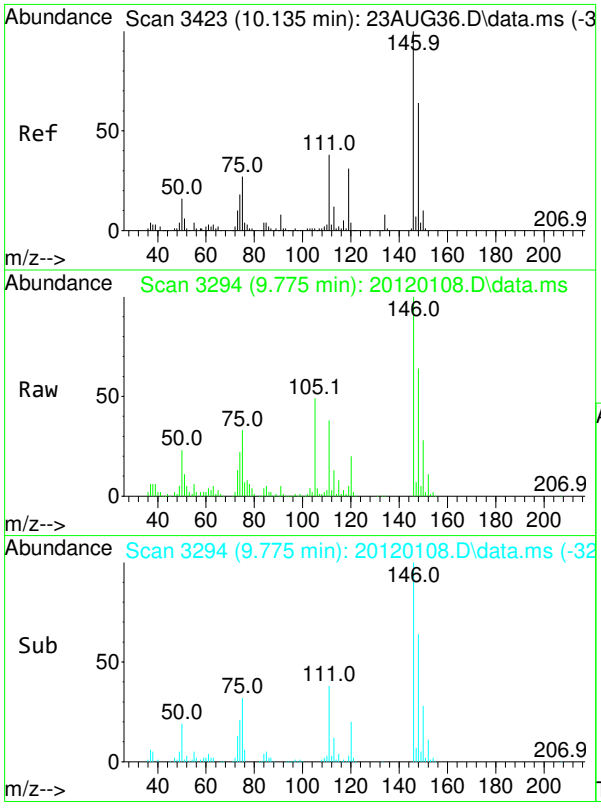


#103
p-Isopropyltoluene
Concen: 47.67 ug/L
RT: 9.739 min Scan# 3281
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:119 Resp: 297923

Ion	Ratio	Lower	Upper
119	100		
134	24.2	0.0	53.9
91	24.6	0.0	55.8

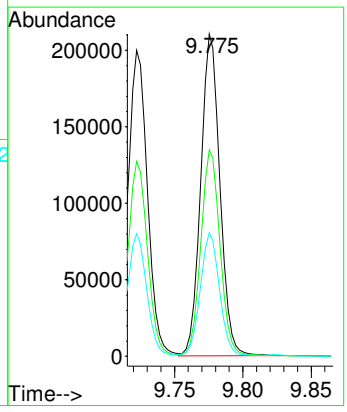


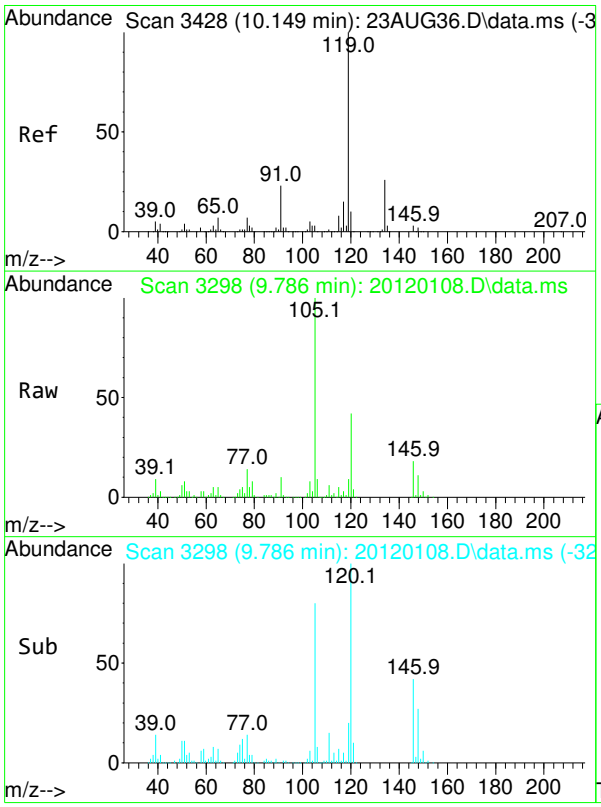


#104
1,4-Dichlorobenzene
Concen: 42.70 ug/L
RT: 9.775 min Scan# 3294
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:146 Resp: 206212

Ion	Ratio	Lower	Upper
146	100		
148	64.7	34.2	94.2
111	38.9	9.2	69.2

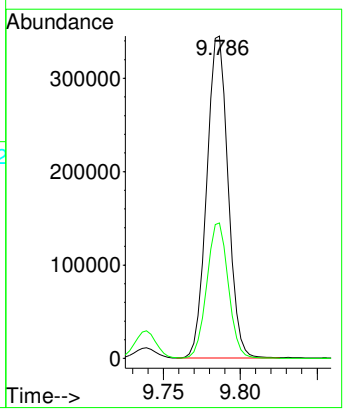


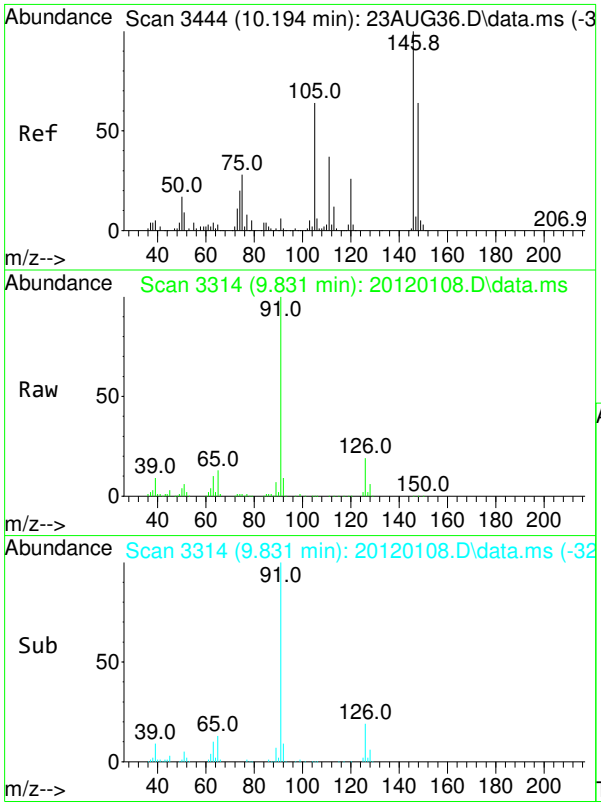


#105
1,2,3-Trimethylbenzene
Concen: 41.68 ug/L
RT: 9.786 min Scan# 3298
Delta R.T. -0.001 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:105 Resp: 332078

Ion	Ratio	Lower	Upper
105	100		
120	42.6	12.1	72.1

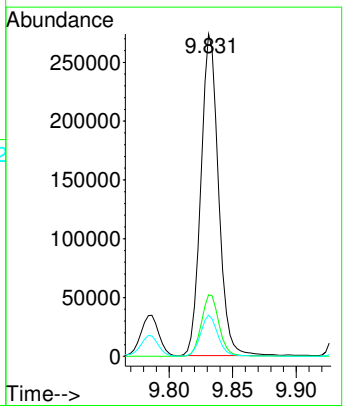


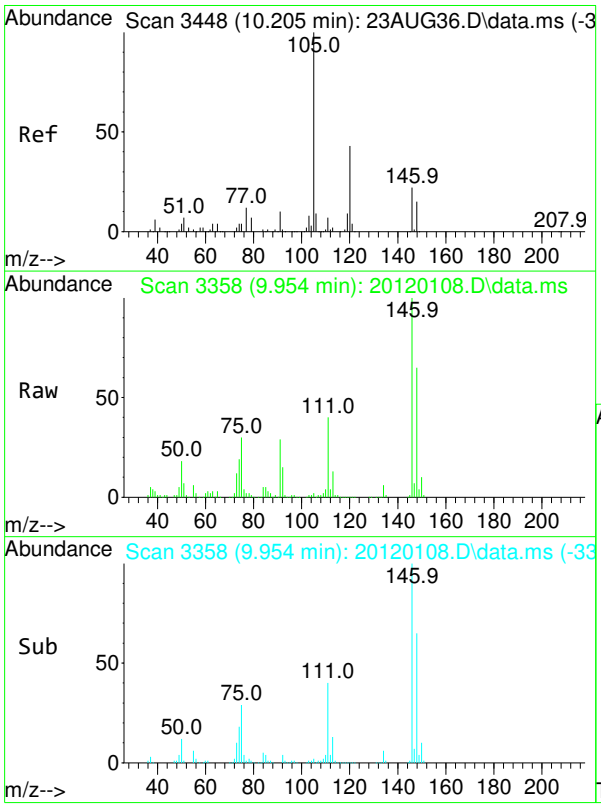


#106
Benzyl chloride
Concen: 36.36 ug/L
RT: 9.831 min Scan# 3314
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 263863

Ion	Ratio	Lower	Upper
91	100		
126	19.2	0.0	48.9
65	12.5	0.0	43.6

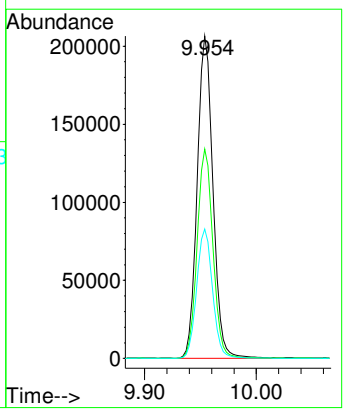


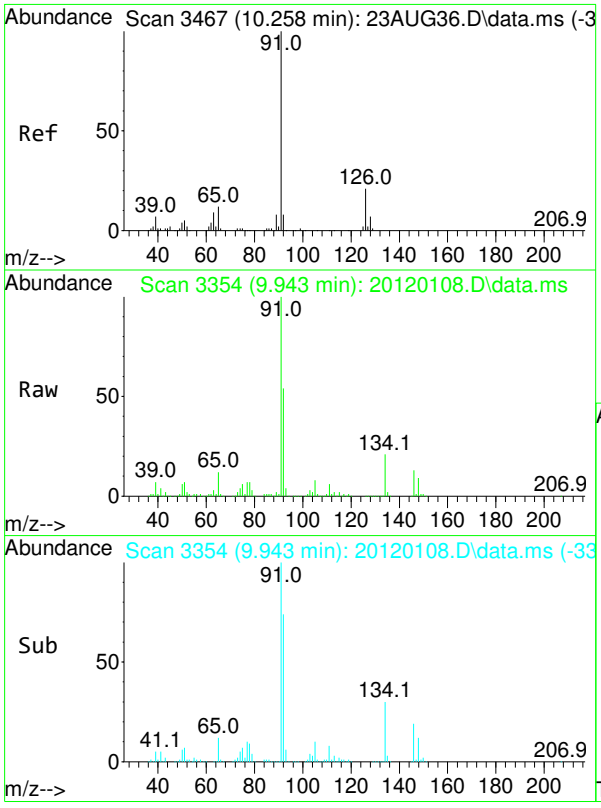


#107
1,2-Dichlorobenzene
Concen: 40.73 ug/L
RT: 9.954 min Scan# 3358
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:146 Resp: 202641

Ion	Ratio	Lower	Upper
146	100		
148	64.7	34.0	94.0
111	40.4	11.7	71.7

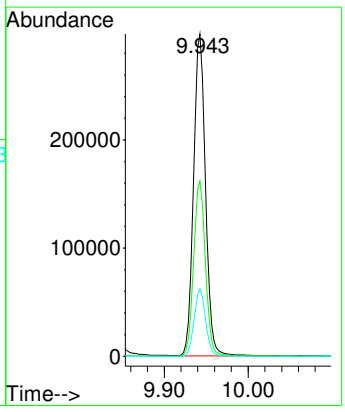


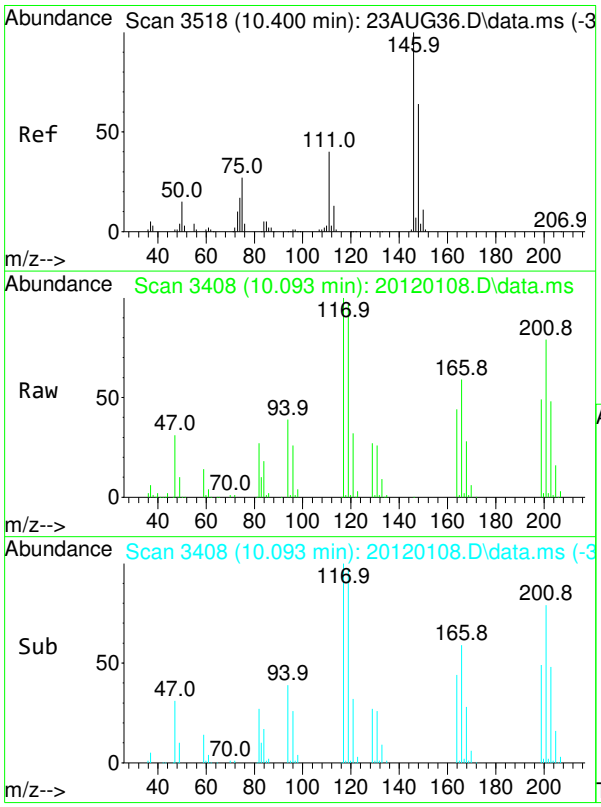


#108
n-Butylbenzene
Concen: 46.98 ug/L
RT: 9.943 min Scan# 3354
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 91 Resp: 293627

Ion	Ratio	Lower	Upper
91	100		
92	53.8	23.9	83.9
134	20.4	0.0	49.1

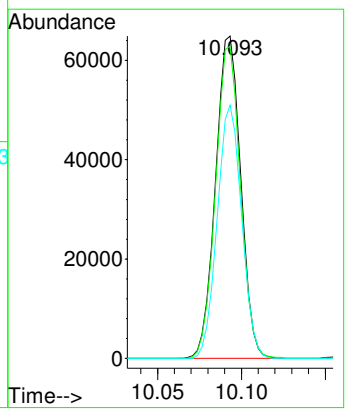


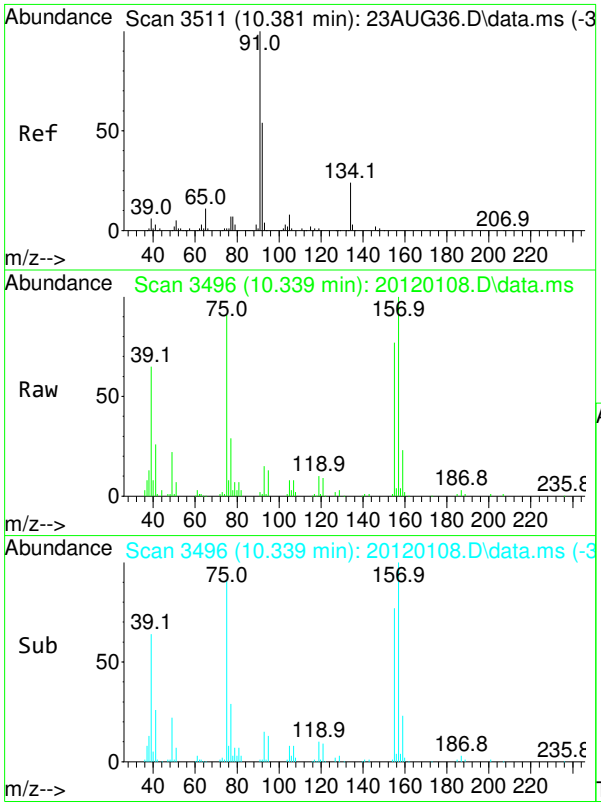


#109
Hexachloroethane
Concen: 44.59 ug/L
RT: 10.093 min Scan# 3408
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:117 Resp: 67790

Ion	Ratio	Lower	Upper
117	100		
119	95.6	67.6	127.6
201	76.3	40.8	100.8

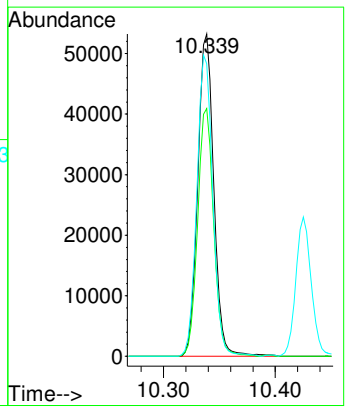


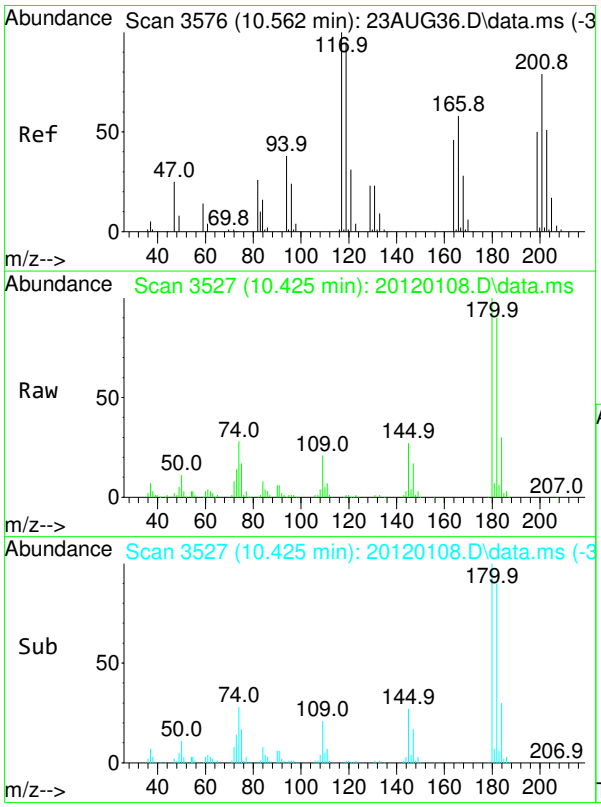


#110
1,2-Dibromo-3-chloropropane
Concen: 43.17 ug/L
RT: 10.339 min Scan# 3496
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:157 Resp: 53166

Ion	Ratio	Lower	Upper
157	100		
155	76.8	46.7	106.7
75	93.1	69.3	129.3

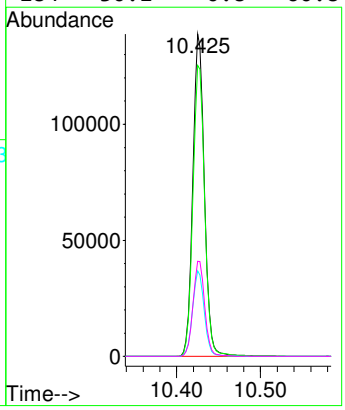


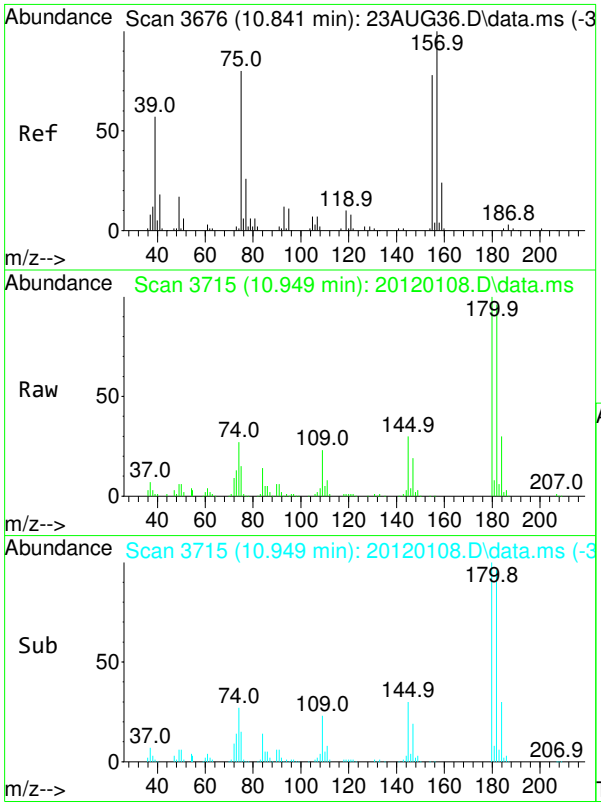


#111
1,3,5-Trichlorobenzene
Concen: 44.54 ug/L
RT: 10.425 min Scan# 3527
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:180 Resp: 132316

Ion	Ratio	Lower	Upper
180	100		
182	92.0	66.8	126.8
145	26.9	0.0	58.5
184	30.1	0.8	60.8

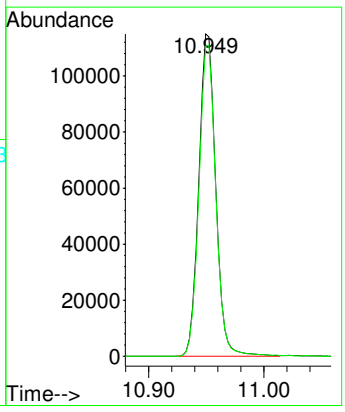


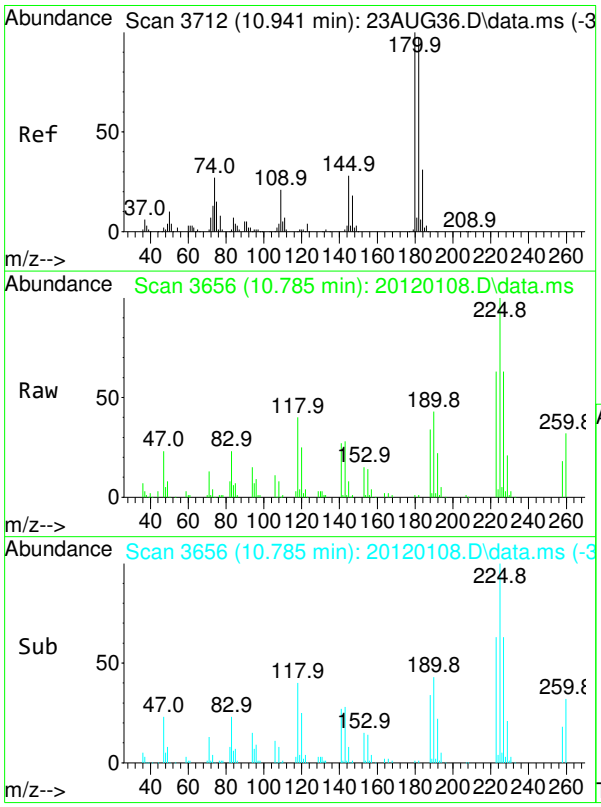


#112
1,2,4-Trichlorobenzene
Concen: 40.48 ug/L
RT: 10.949 min Scan# 3715
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:180 Resp: 117354

Ion	Ratio	Lower	Upper
180	100		
182	96.5	65.7	125.7

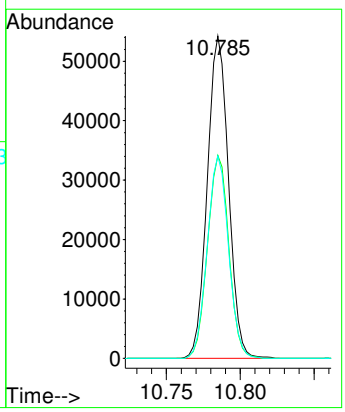


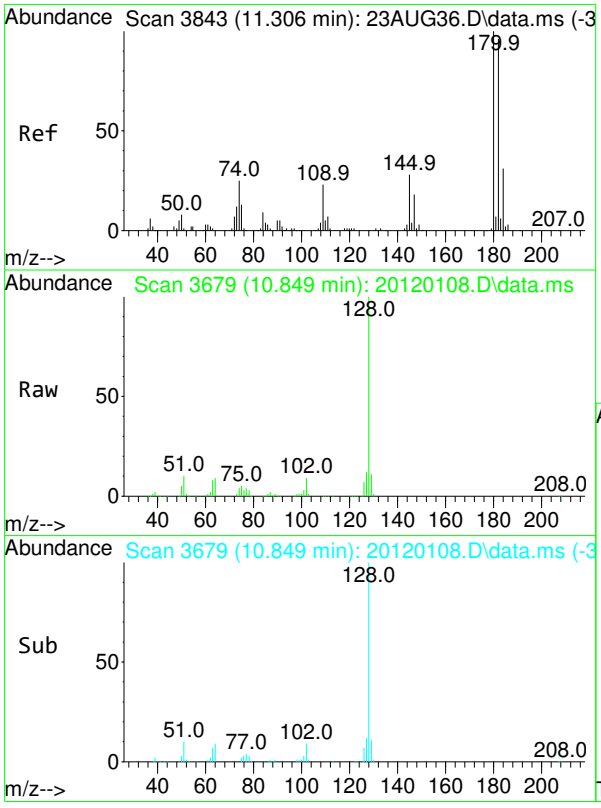


#113
Hexachlorobutadiene
Concen: 50.23 ug/L
RT: 10.785 min Scan# 3656
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:225 Resp: 54154

Ion	Ratio	Lower	Upper
225	100		
227	63.1	33.7	93.7
223	62.9	31.7	91.7

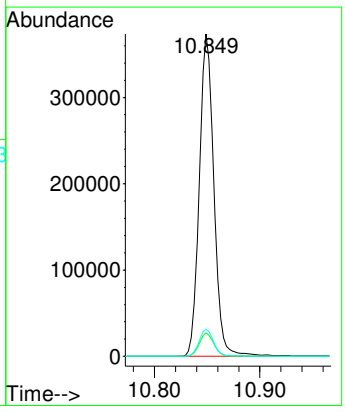


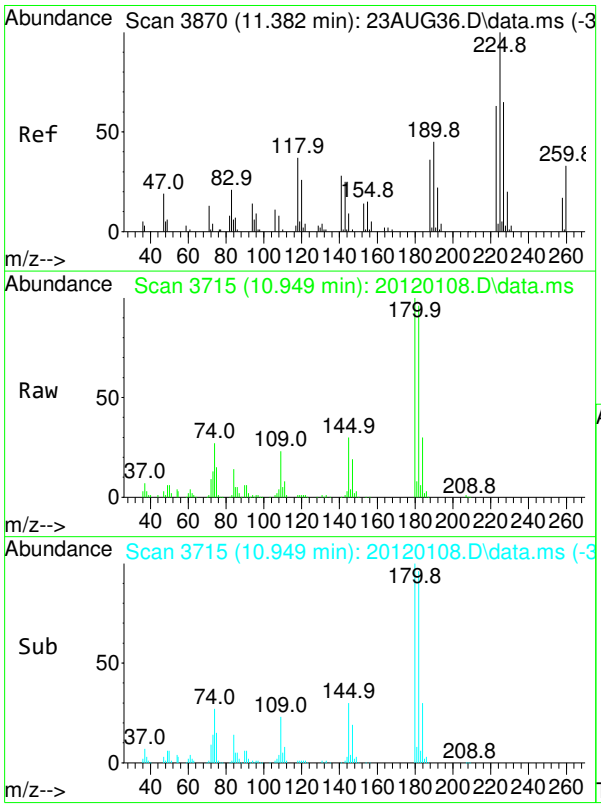


#114
Naphthalene
Concen: 32.08 ug/L
RT: 10.849 min Scan# 3679
Delta R.T. -0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:128 Resp: 359009

Ion	Ratio	Lower	Upper
128	100		
126	7.2	0.0	37.2
102	8.5	0.0	38.7

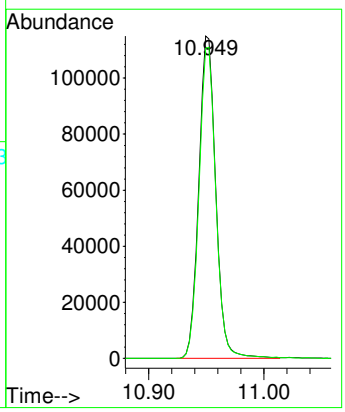


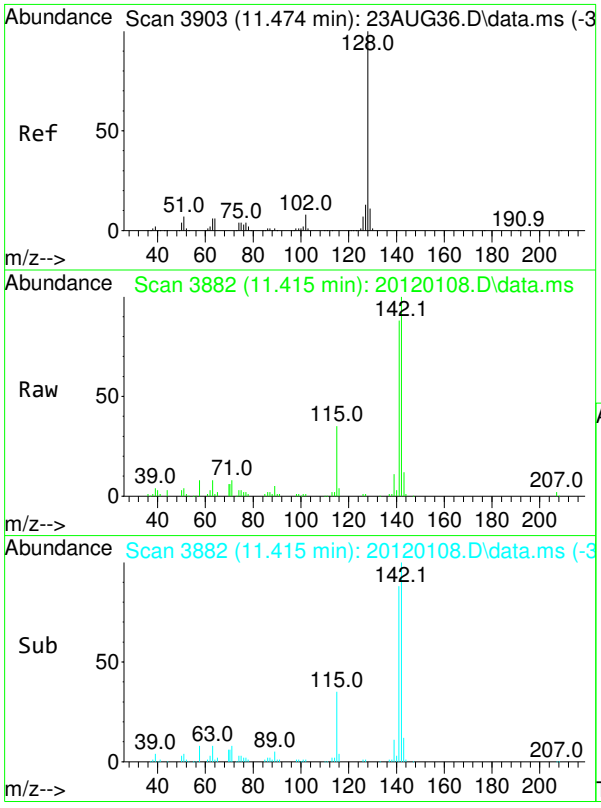


#115
1,2,3-Trichlorobenzene
Concen: 40.48 ug/L
RT: 10.949 min Scan# 3715
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:180 Resp: 117354

Ion	Ratio	Lower	Upper
180	100		
182	96.5	65.7	125.7

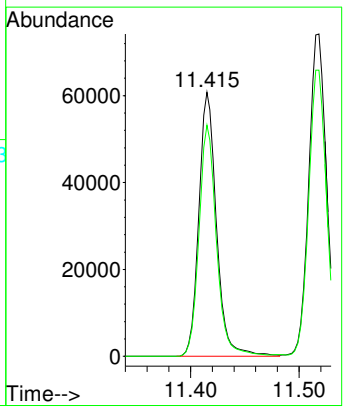


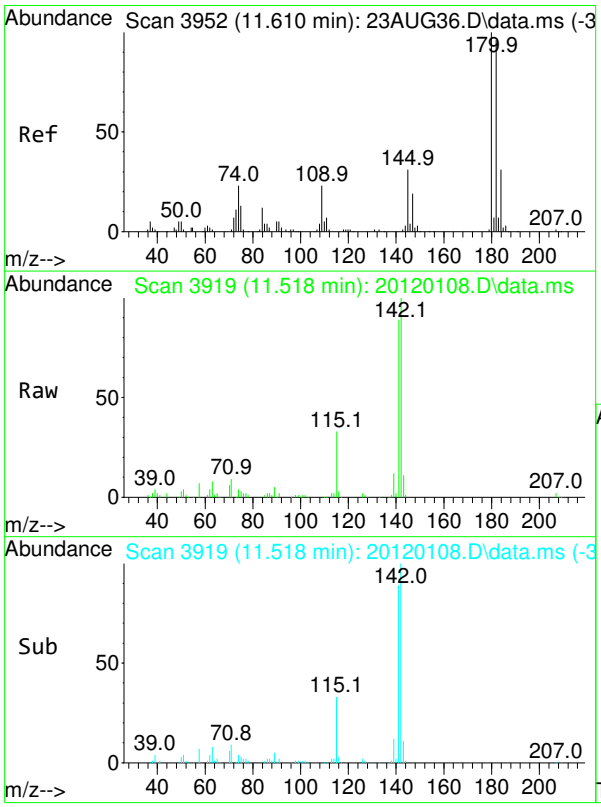


#116
2-Methylnaphthalene
Concen: 22.77 ug/L
RT: 11.415 min Scan# 3882
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:142 Resp: 68503

Ion	Ratio	Lower	Upper
142	100		
141	86.9	57.3	117.3

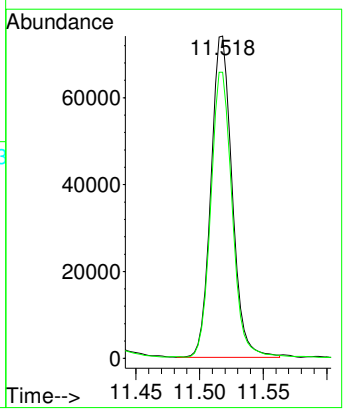


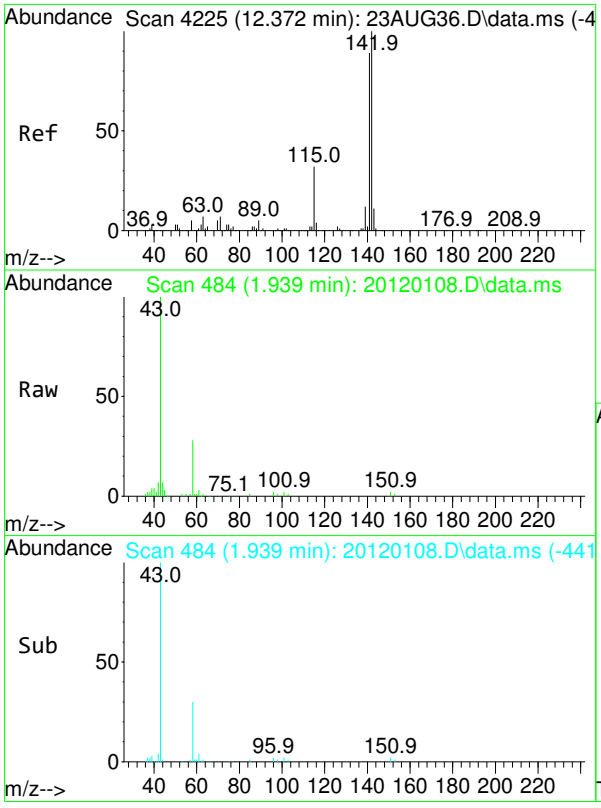


#117
1-Methylnaphthalene
Concen: 24.81 ug/L
RT: 11.518 min Scan# 3919
Delta R.T. 0.003 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion:142 Resp: 85340

Ion	Ratio	Lower	Upper
142	100		
141	89.8	60.2	120.2

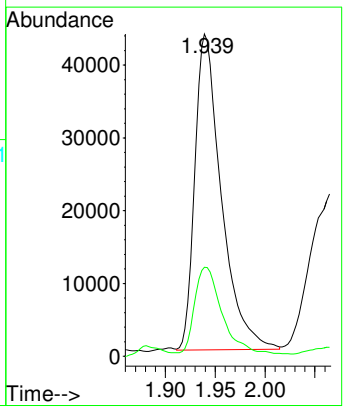


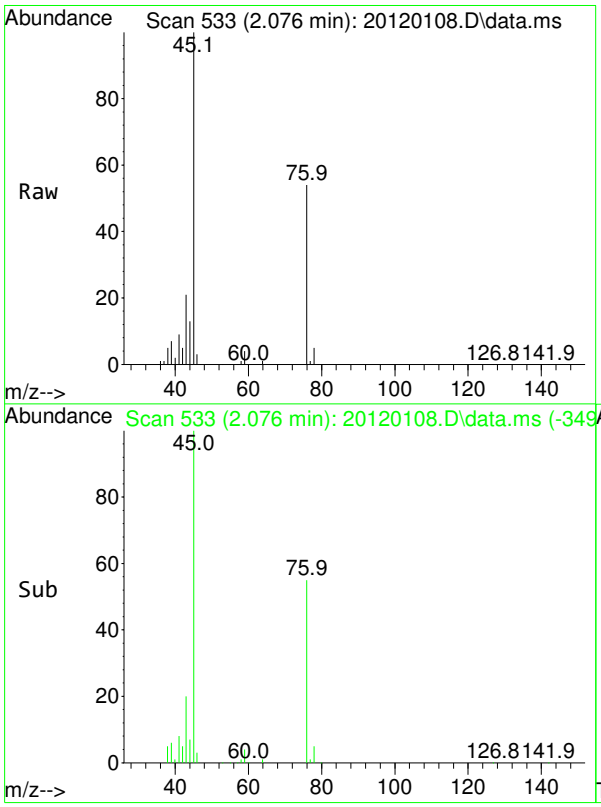


#119
2-Propanone
Concen: 38.98 ug/L
RT: 1.939 min Scan# 484
Delta R.T. 0.000 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 80302

Ion	Ratio	Lower	Upper
43	100		
58	29.1	0.0	56.9

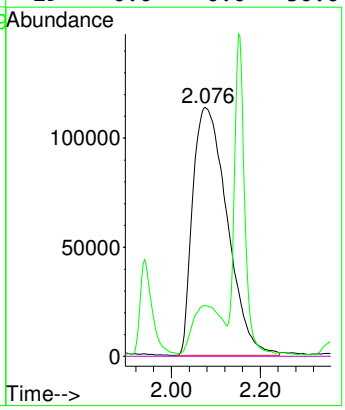


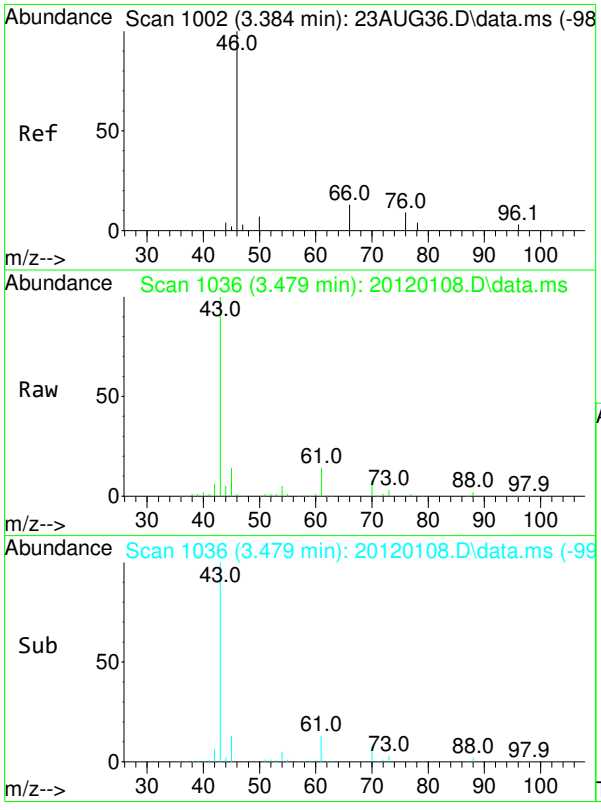


#120
2-Propanol
Concen: 779.17 ug/L
RT: 2.076 min Scan# 533
Delta R.T. 0.014 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 45 Resp: 612809

Ion	Ratio	Lower	Upper
45	100		
43	16.3	0.0	49.1
27	0.0	0.0	30.0
29	0.0	0.0	30.0

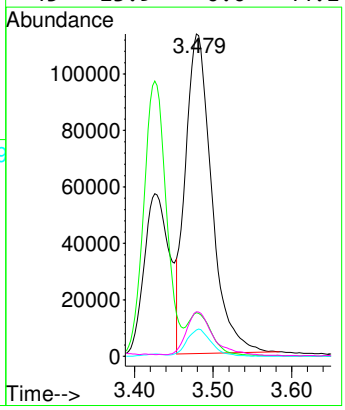


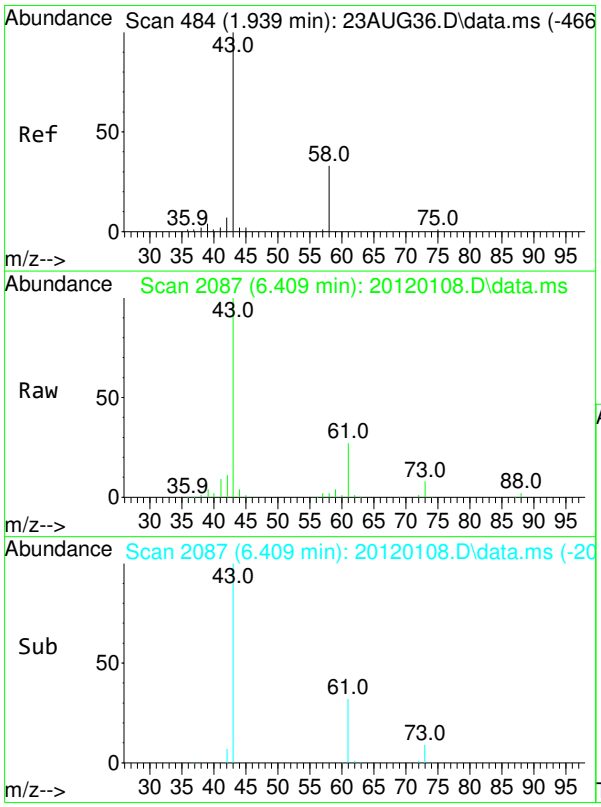


#121
Acetic Ether
Concen: 40.95 ug/L
RT: 3.479 min Scan# 1036
Delta R.T. -0.005 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 262988

Ion	Ratio	Lower	Upper
43	100		
61	11.4	0.0	42.4
70	8.0	0.0	37.5
45	13.9	0.0	44.1

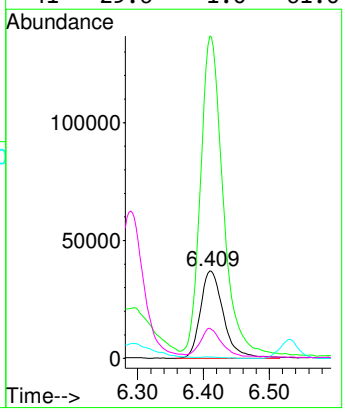


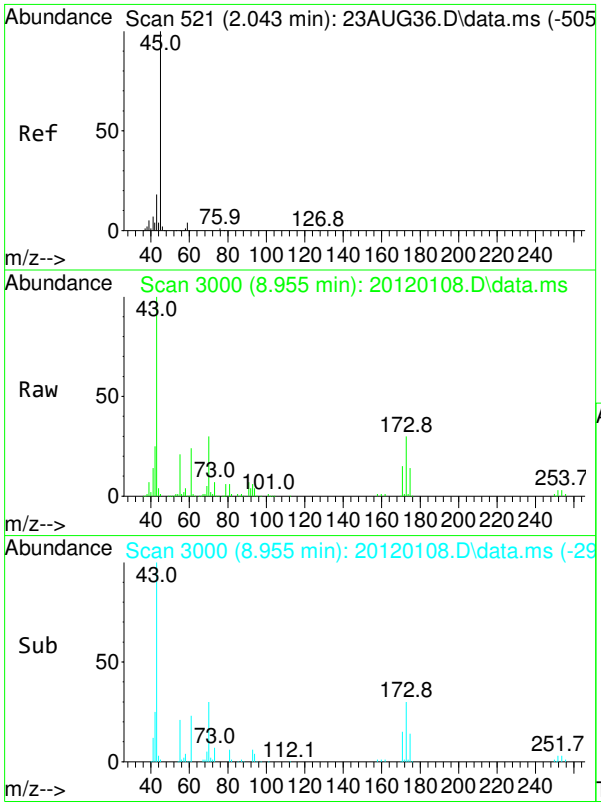


#122
Isopropyl Acetate
Concen: 44.76 ug/L
RT: 6.409 min Scan# 2087
Delta R.T. -0.009 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 61 Resp: 90636

Ion	Ratio	Lower	Upper
61	100		
43	348.4	333.3	393.3
87	0.7	0.0	30.4
41	29.6	1.0	61.0

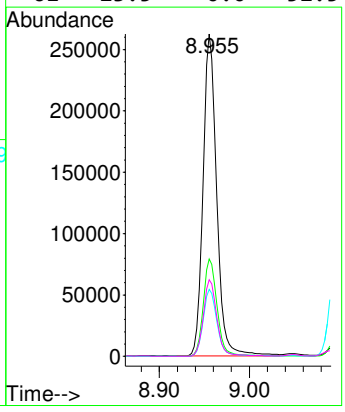




#123
Amyl Acetate
Concen: 41.87 ug/L
RT: 8.955 min Scan# 3000
Delta R.T. -0.001 min
Lab File: 20120108.D
Acq: 01 Dec 2020 04:48 pm

Tgt Ion: 43 Resp: 276743

Ion	Ratio	Lower	Upper
43	100		
70	30.7	0.0	58.6
55	21.5	0.0	50.6
61	23.5	0.0	52.5



1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112749.D
Acq On : 28 Nov 2020 1:14 am
Operator : js
Sample : 20111764-04A DF20
Misc : IS 200-21532
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 28 12:03:05 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.989	168	243350	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.121	114	400026	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	375338	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	199889	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	127365	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	130030	20.34	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 101.70%				
50) 1,2-Dichloroethane-d4	4.369	65	159335	20.56	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 102.80%				
69) Toluene-d8	7.843	98	470972	20.27	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 101.35%				
91) Bromofluorobenzene	9.992	95	190034	20.14	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 100.70%				
Target Compounds							Qvalue
3) Dichlorofluoromethane	1.368	67	284	Below Cal		#	1
5) 1,3-Butadiene	1.146	54	395	19.08	ug/L	#	1
6) Vinyl chloride	1.095	62	426	Below Cal		#	43
7) Bromomethane	1.267	96	2363	Below Cal		#	57
8) Chloroethane	1.332	64	1752	0.58	ug/L	#	59
10) Ethanol	1.582	45	3302	Below Cal			93
12) Acrolein	1.726	56	702	Below Cal		#	47
16) Acetone	1.826	43	4887	0.61	ug/L		83
18) Carbon disulfide	1.941	76	945	Below Cal		#	1
19) 2-Propanol	1.926	45	3075	Below Cal			87
20) Allyl chloride	2.027	41	943	Below Cal		#	57
21) Methyl acetate	2.041	43	27012	2.59	ug/L		98
22) Acetonitrile	2.027	41	943	Below Cal		#	19
23) Methylene chloride	2.141	49	15215	1.43	ug/L		98
25) t-Butanol	2.213	59	3157	Below Cal		#	35
28) Hexane	2.578	57	730	Below Cal		#	62
32) Methylcyclopentane	3.158	56	94	Below Cal		#	23
34) 2,2-Dichloropropane	3.352	77	1285	Below Cal		#	61
37) Ethyl Acetate	3.316	43	3524	Below Cal		#	69
38) Methyl acrylate	3.402	55	909	Below Cal		#	64
42) Methacrylonitrile	3.595	41	1844	Below Cal		#	50
43) Chloroform	3.703	83	269	Below Cal		#	26
44) Cyclohexane	3.982	56	5651	Below Cal		#	43
51) 1,2-Dichloroethane	4.491	62	96	Below Cal		#	1
52) Benzene	4.376	78	243227	9.84	ug/L		100
54) Isobutyl Alcohol	4.577	43	1534	Below Cal		#	44
55) Heptane	4.913	43	573	Below Cal		#	31
58) n-Butanol	5.551	56	1373	3.65	ug/L	#	59
59) Trichloroethene	5.486	130	3567	0.33	ug/L		84
60) 1,2-Dichloropropane	5.952	63	296	Below Cal		#	1
62) Methyl methacrylate	6.253	41	16060	1.72	ug/L		94
64) 2-Chloroethyl vinyl ether	7.298	43	201	Below Cal		#	1
68) 4-Methyl-2-pentanone	7.728	43	1395	Below Cal		#	39
70) Toluene	7.922	91	71720	2.54	ug/L		97
77) 2-Hexanone	8.717	43	515	Below Cal		#	1
79) Butyl acetate	8.767	43	910	Below Cal		#	3
83) Ethylbenzene	9.304	91	2746	Below Cal		#	65
84) m/p-Xylene	9.397	91	10792	Below Cal			94
85) Nonane	9.454	43	1018	Below Cal		#	32
86) Styrene	9.669	104	2231	Below Cal		#	69

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112749.D
Acq On : 28 Nov 2020 1:14 am
Operator : js
Sample : 20111764-04A DF20
Misc : IS 200-21532
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 28 12:03:05 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

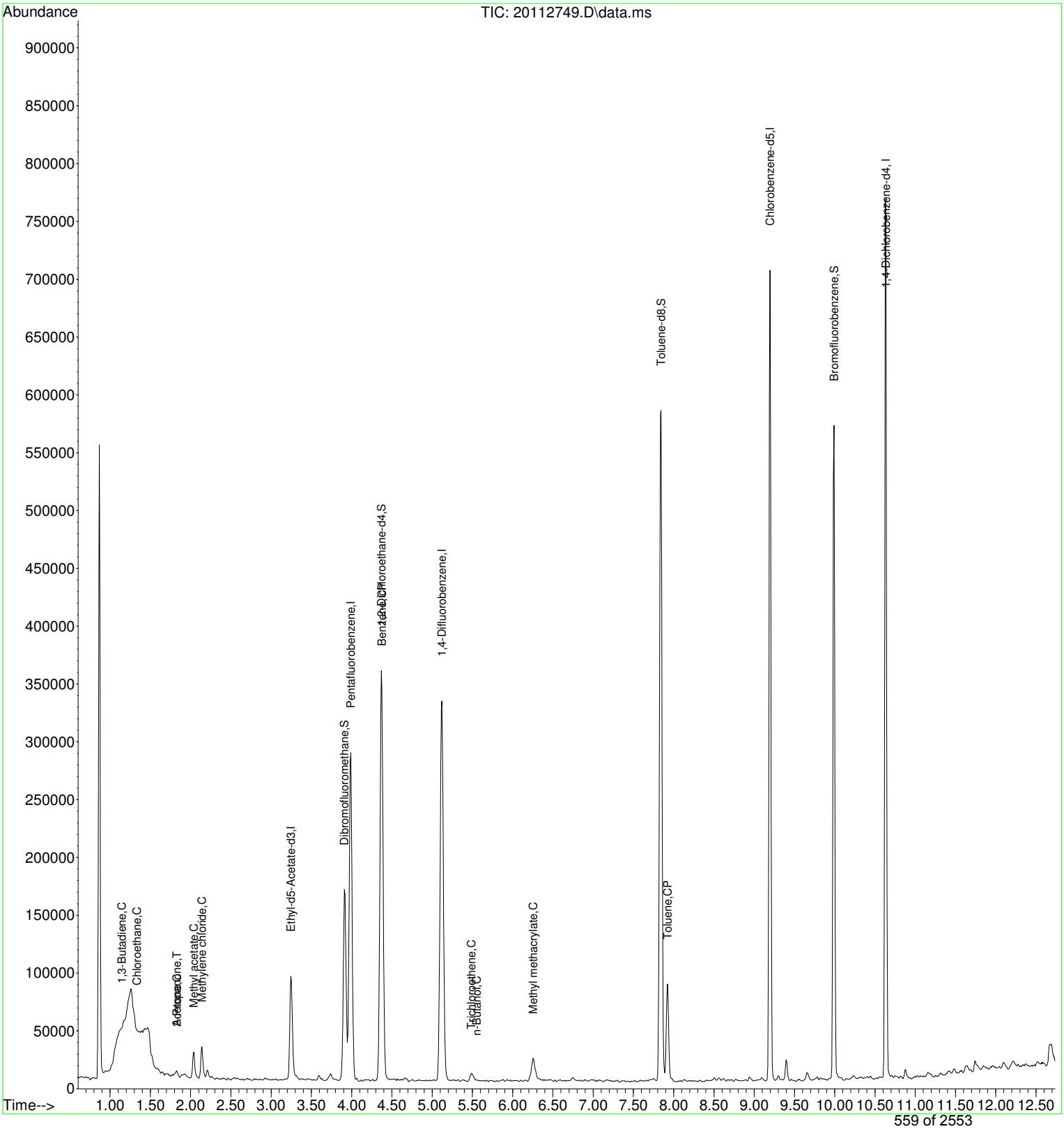
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
87) o-Xylene	9.655	91	3250	Below Cal		79
88) Cyclohexanone	9.891	55	1053	Below Cal	#	45
90) Isopropylbenzene	9.884	105	196	Below Cal	#	47
92) Bromobenzene	10.070	77	382	Below Cal	#	21
93) 1,1,2,2-Tetrachloroethane	10.049	83	299	Below Cal	#	25
96) n-Propylbenzene	10.135	91	1217	Below Cal	#	52
97) 2-Chlorotoluene	10.135	91	1217	Below Cal	#	38
98) 4-Chlorotoluene	10.249	91	929	Below Cal	#	42
99) 1,3,5-Trimethylbenzene	10.235	105	902	Below Cal	#	59
100) tert-Butylbenzene	10.421	91	484	Below Cal	#	15
101) 1,2,4-Trimethylbenzene	10.443	105	1420	Below Cal	#	58
102) sec-Butylbenzene	10.529	105	221	Below Cal	#	55
104) 1,3-Dichlorobenzene	10.643	146	243	Below Cal	#	1
105) p-Isopropyltoluene	10.615	119	540	Below Cal	#	1
106) 1,4-Dichlorobenzene	10.643	146	243	Below Cal	#	1
107) 1,2,3-Trimethylbenzene	10.658	105	640	Below Cal	#	74
108) Benzyl chloride	10.249	91	929	Below Cal	#	27
110) n-Butylbenzene	10.822	91	1340	Below Cal	#	52
114) 1,2,4-Trichlorobenzene	11.618	180	241	Below Cal	#	1
116) Naphthalene	11.739	128	4442	Below Cal		87
117) 1,2,3-Trichlorobenzene	11.840	180	92	Below Cal		98
118) 2-Methylnaphthalene	12.291	142	615	Below Cal	#	1
119) 1-Methylnaphthalene	12.384	142	572	Below Cal	#	1
121) 2-Propanone	1.826	43	4887	0.59 ug/L	#	83
122) Isopropyl Alcohol	1.926	45	3075	Below Cal	#	87
125) Amyl Acetate	9.820	43	133	Below Cal	#	1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

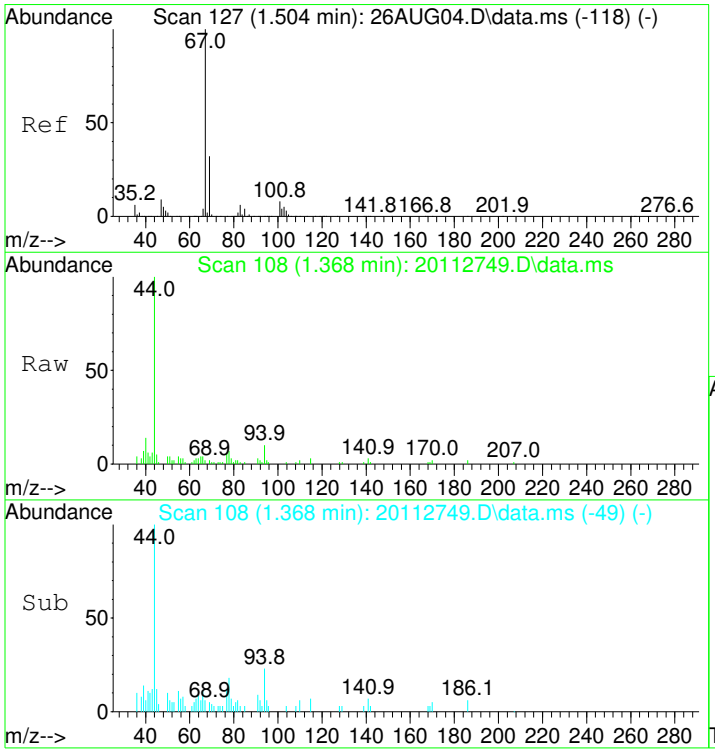
1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112749.D
Acq On : 28 Nov 2020 1:14 am
Operator : js
Sample : 20111764-04A DF20
Misc : IS 200-21532
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 28 12:03:05 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration



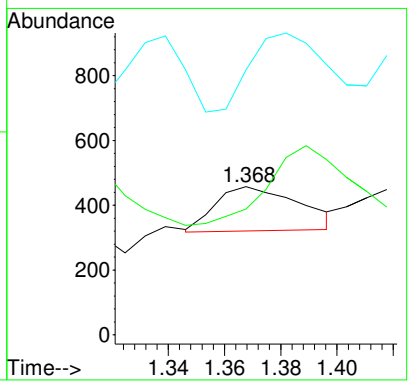
559 of 2553

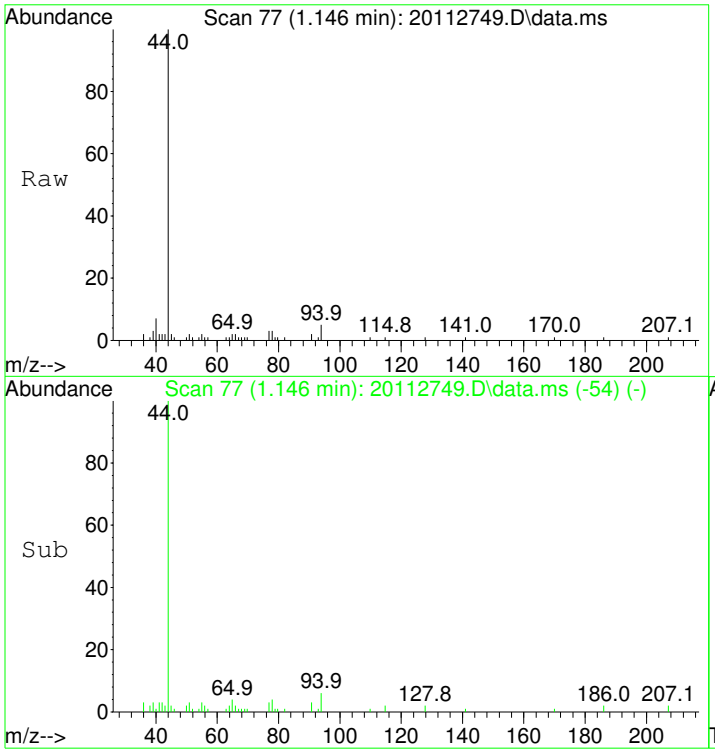


#3
Dichlorofluoromethane
Concen: Below Cal
RT: 1.368 min Scan# 108
Delta R.T. -0.078 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 67 Resp: 284

Ion	Ratio	Lower	Upper
67	100		
69	231.7	23.7	44.1#
66	161.6	8.1	15.0#

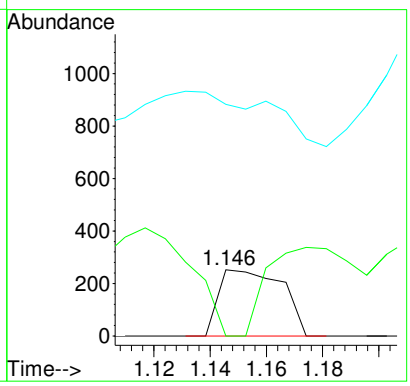


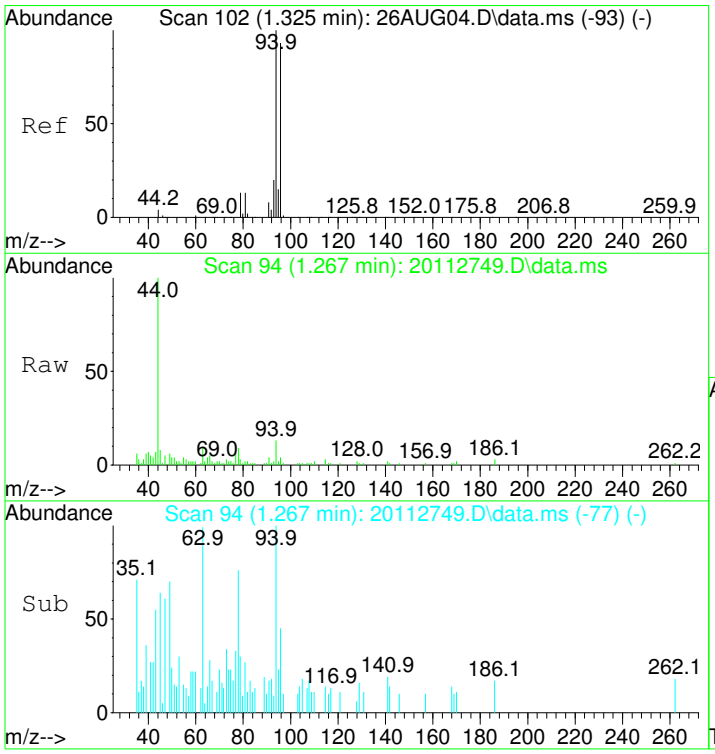


#5
1,3-Butadiene
Concen: 19.08 ug/L
RT: 1.146 min Scan# 77
Delta R.T. 0.015 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 54 Resp: 395

Ion	Ratio	Lower	Upper
54	100		
53	191.6	0.0	30.0#
39	0.0	322.9	382.9#

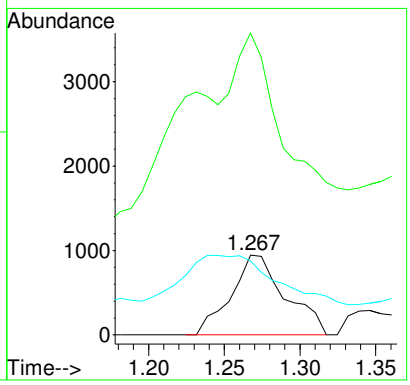


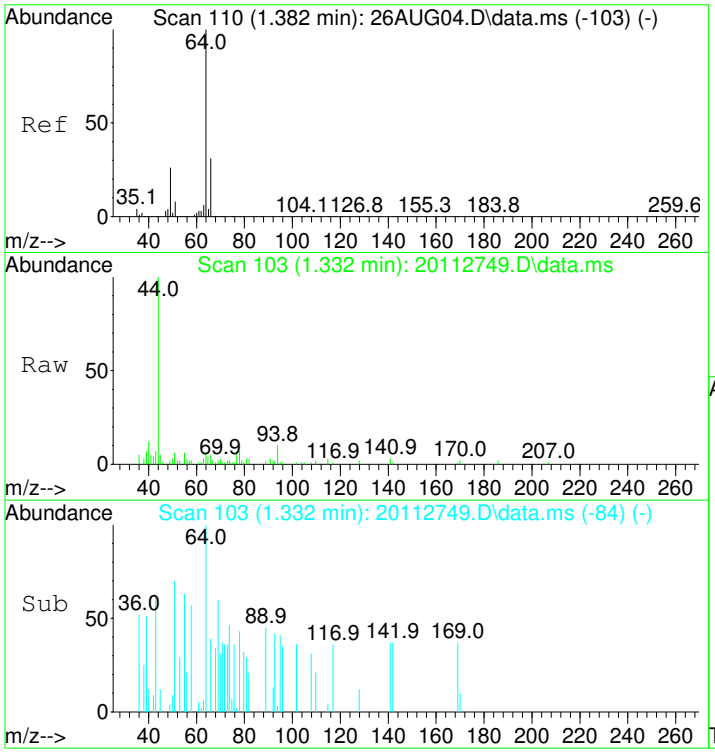


#7
Bromomethane
Concen: Below Cal
RT: 1.267 min Scan# 94
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 96 Resp: 2363

Ion	Ratio	Lower	Upper
96	100		
94	184.6	103.4	163.4#
79	0.0	0.0	49.6

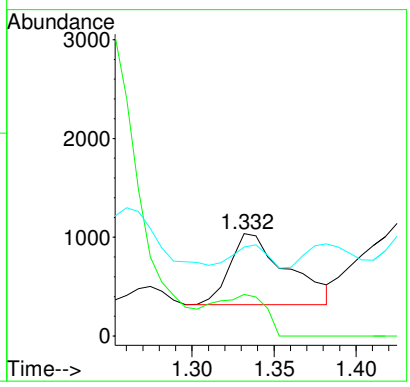


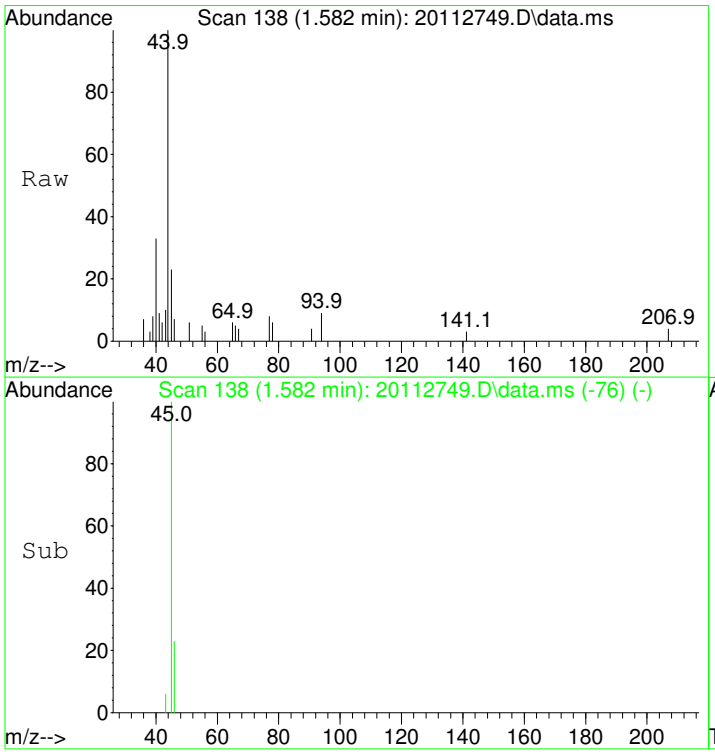


#8
Chloroethane
Concen: 0.58 ug/L
RT: 1.332 min Scan# 103
Delta R.T. 0.015 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 64 Resp: 1752

Ion	Ratio	Lower	Upper
64	100		
49	52.7	0.0	41.3#
66	18.7	0.0	52.2

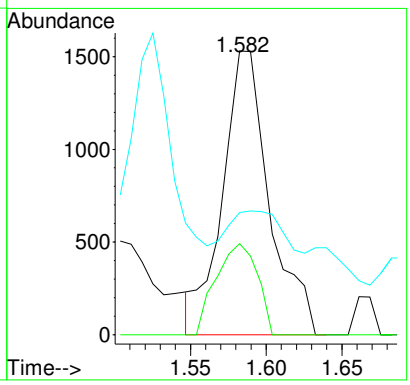


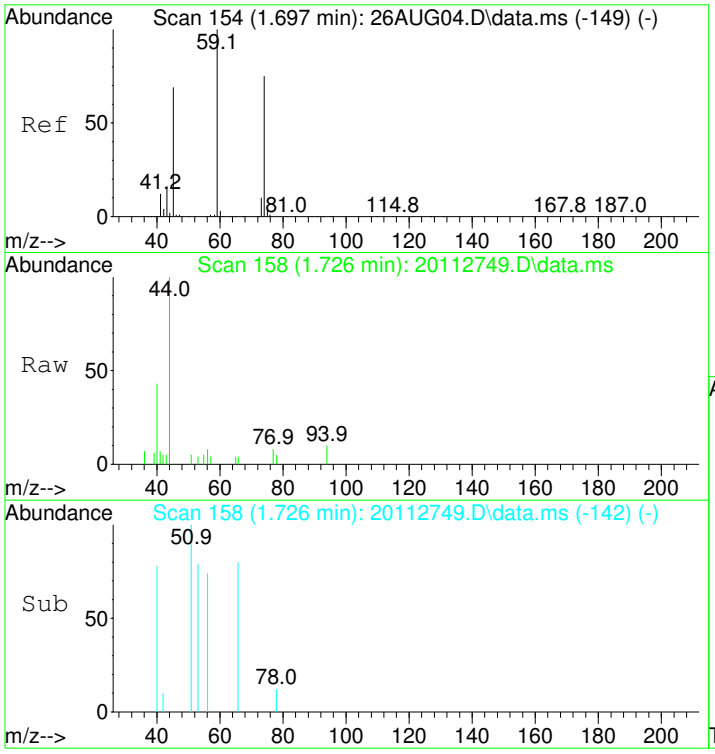


#10
Ethanol
Concen: Below Cal
RT: 1.582 min Scan# 138
Delta R.T. -0.058 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 45 Resp: 3302

Ion	Ratio	Lower	Upper
45	100		
46	28.2	0.0	57.3
43	15.8	0.0	52.4

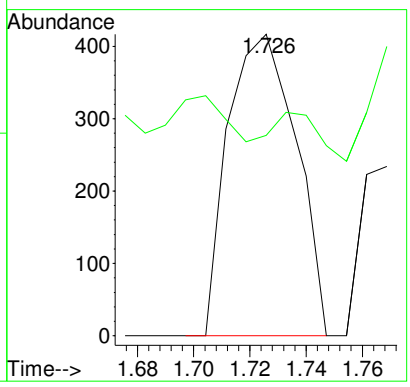


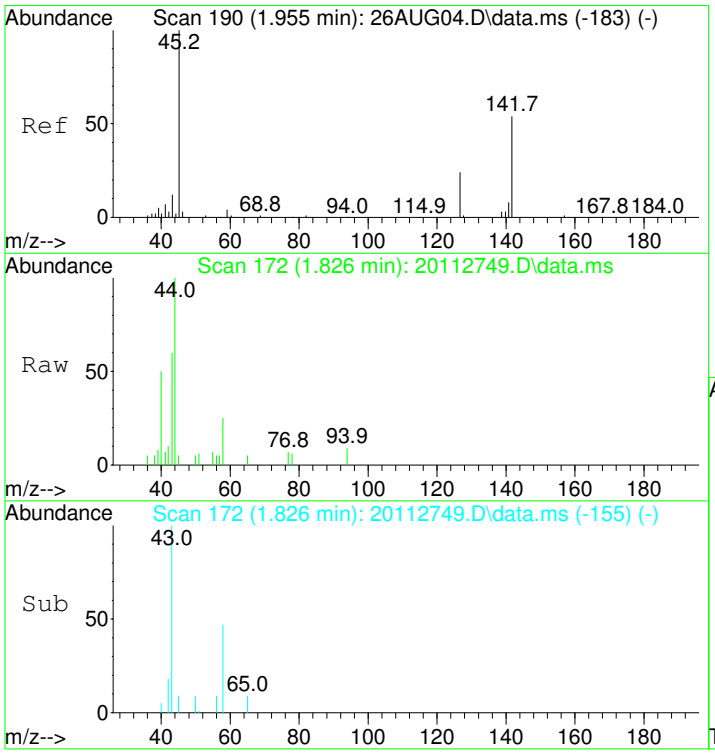


#12
Acrolein
Concen: Below Cal
RT: 1.726 min Scan# 158
Delta R.T. -0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 56 Resp: 702

Ion	Ratio	Lower	Upper
56	100		
55	11.7	17.3	77.3#

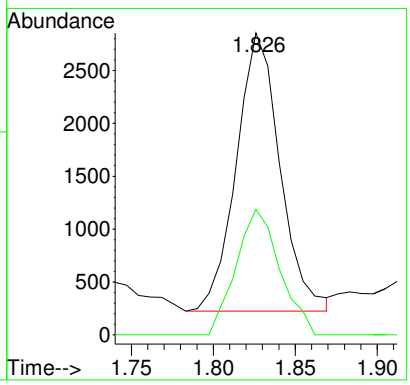


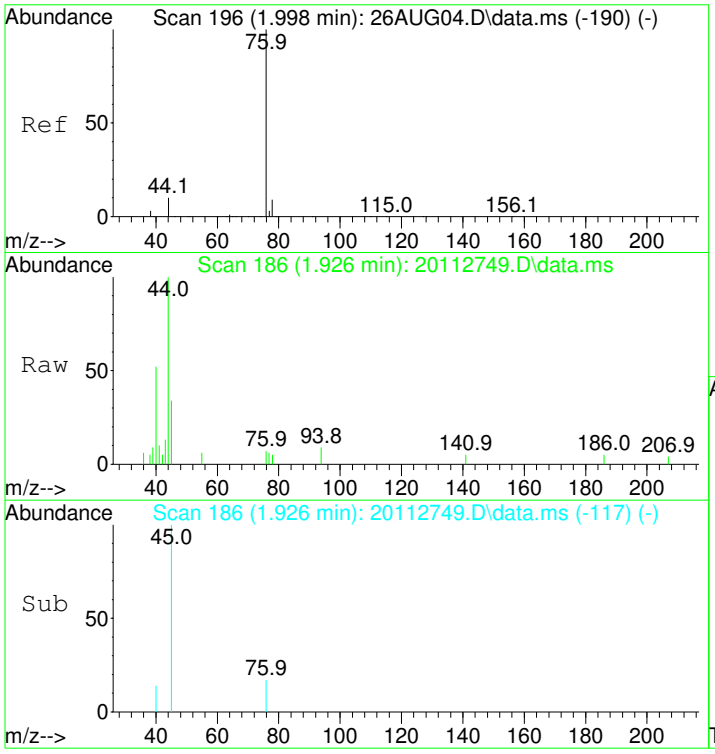


#16
Acetone
Concen: 0.61 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 4887

Ion	Ratio	Lower	Upper
43	100		
58	45.0	5.2	65.2

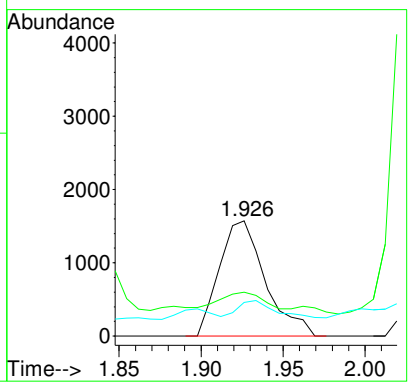


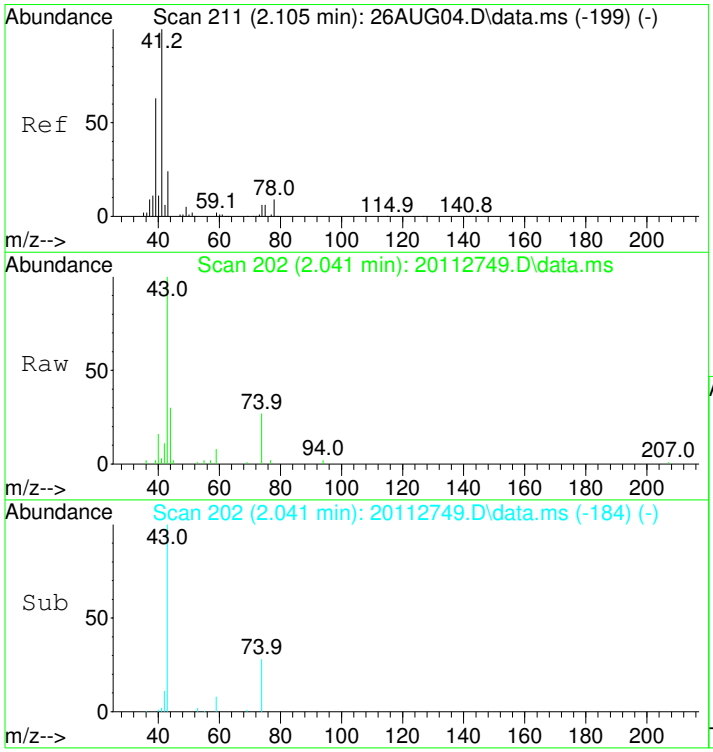


#19
2-Propanol
Concen: Below Cal
RT: 1.926 min Scan# 186
Delta R.T. -0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 45 Resp: 3075

Ion	Ratio	Lower	Upper
45	100		
43	12.7	0.0	48.2
41	12.7	0.0	37.1

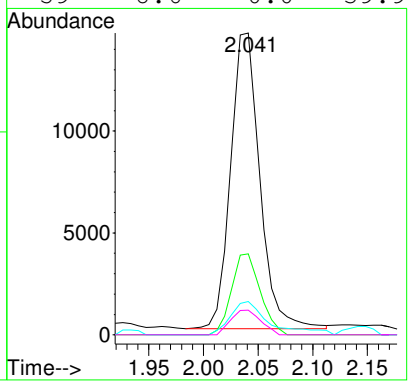


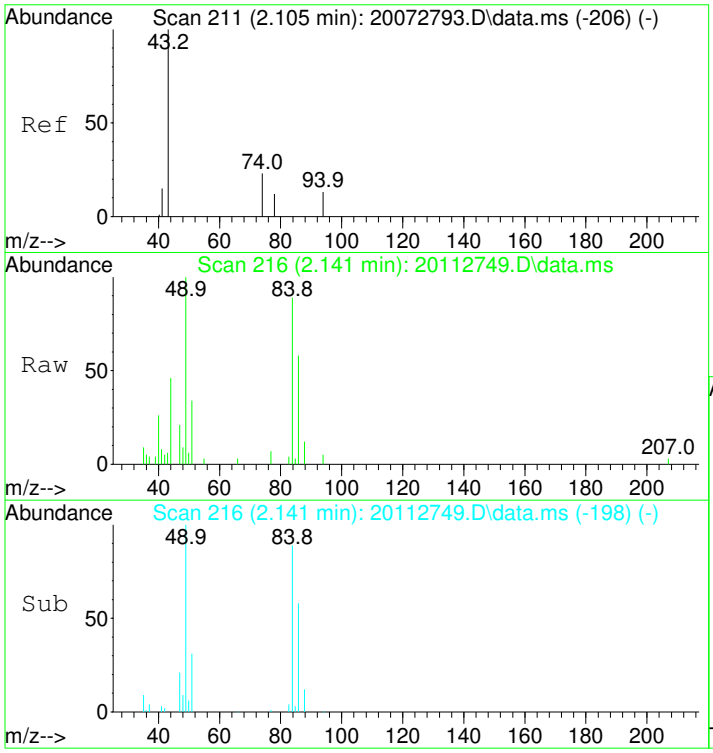


#21
Methyl acetate
Concen: 2.59 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 27012

Ion	Ratio	Lower	Upper
43	100		
74	26.9	0.0	56.2
42	15.1	0.0	44.2
59	8.6	0.0	39.9

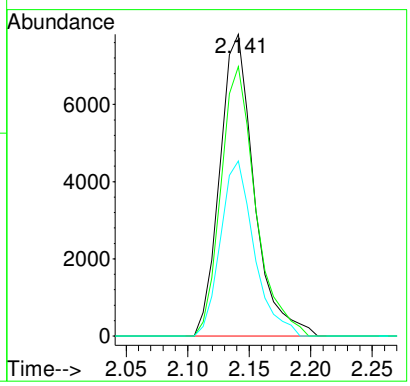


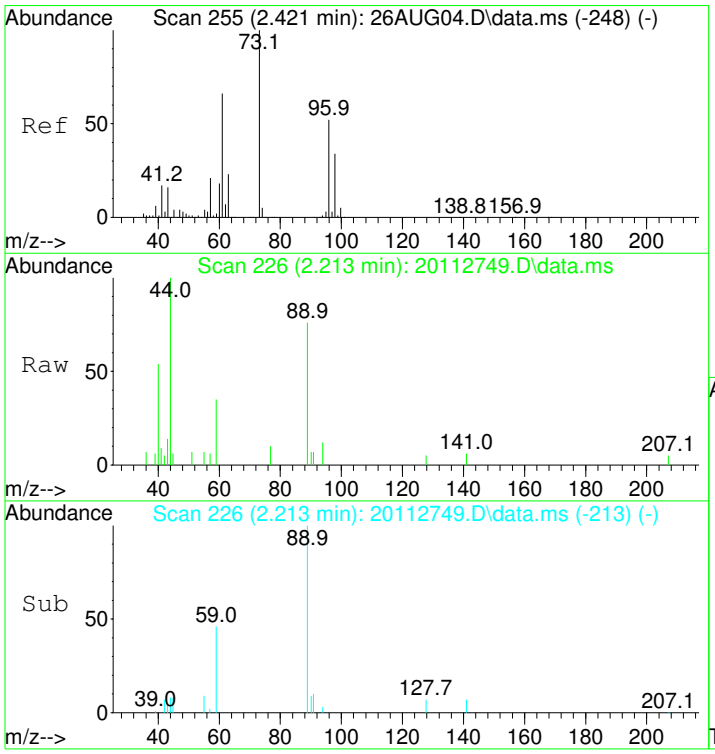


#23
Methylene chloride
Concen: 1.43 ug/L
RT: 2.141 min Scan# 216
Delta R.T. 0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 49 Resp: 15215

Ion	Ratio	Lower	Upper
49	100		
84	89.7	57.4	117.4
86	56.8	27.7	87.7

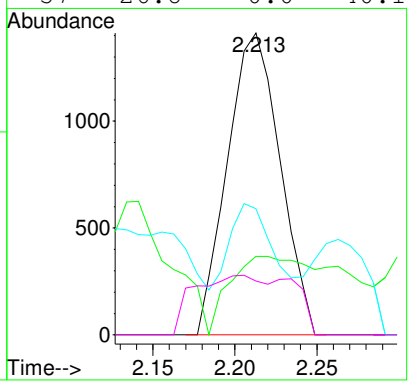


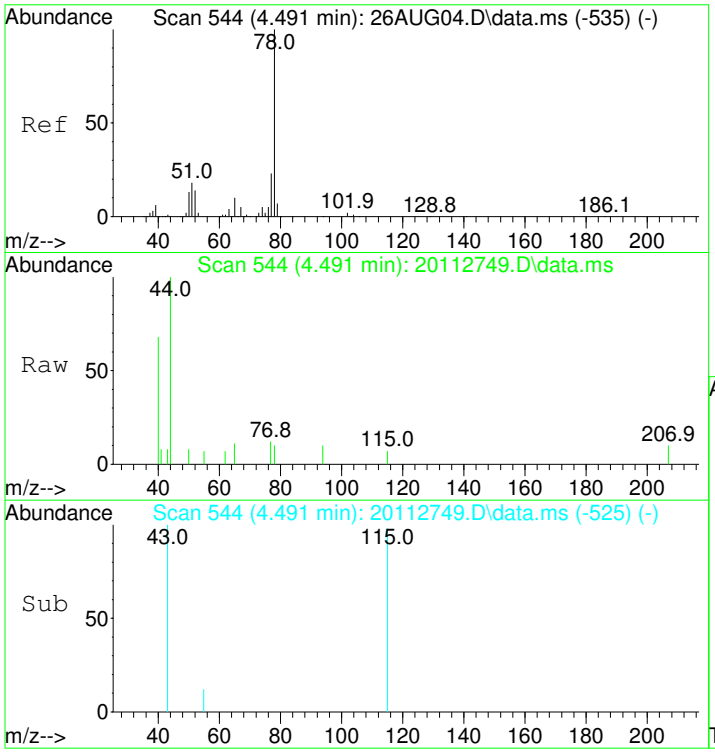


#25
t-Butanol
Concen: Below Cal
RT: 2.213 min Scan# 226
Delta R.T. -0.028 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 59 Resp: 3157

Ion	Ratio	Lower	Upper
59	100		
41	57.8	0.0	46.1#
43	25.8	0.0	41.4
57	26.8	0.0	40.1

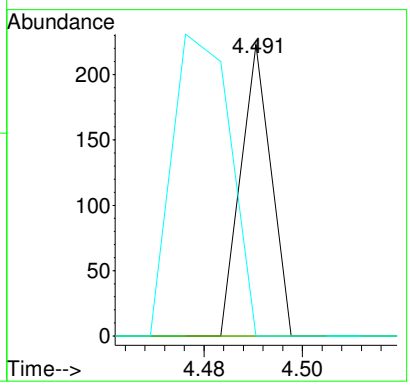


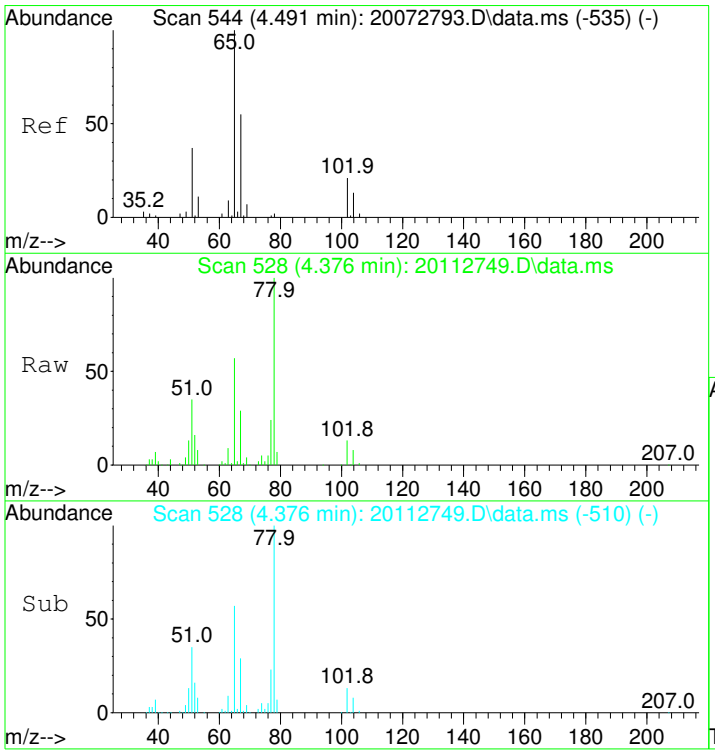


#51
1,2-Dichloroethane
Concen: Below Cal
RT: 4.491 min Scan# 544
Delta R.T. 0.015 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 62 Resp: 96

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.0
64	197.9	13.9	53.9#

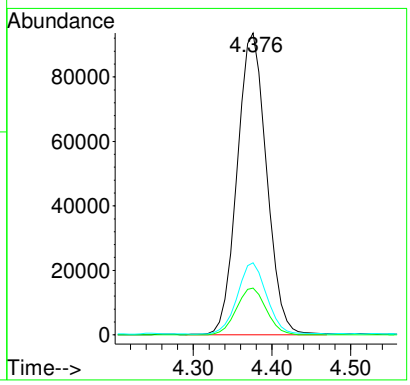


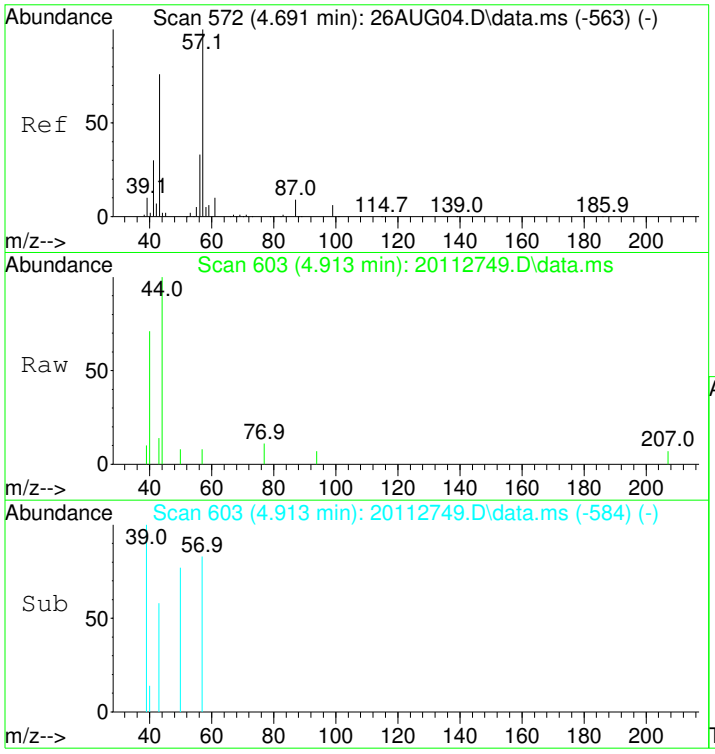


#52
Benzene
Concen: 9.84 ug/L
RT: 4.376 min Scan# 528
Delta R.T. 0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 78 Resp: 243227

Ion	Ratio	Lower	Upper
78	100		
52	15.7	0.0	35.8
77	23.5	3.7	43.7

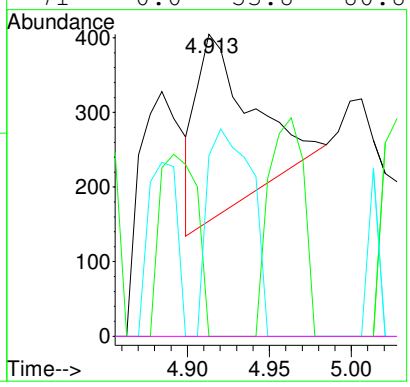


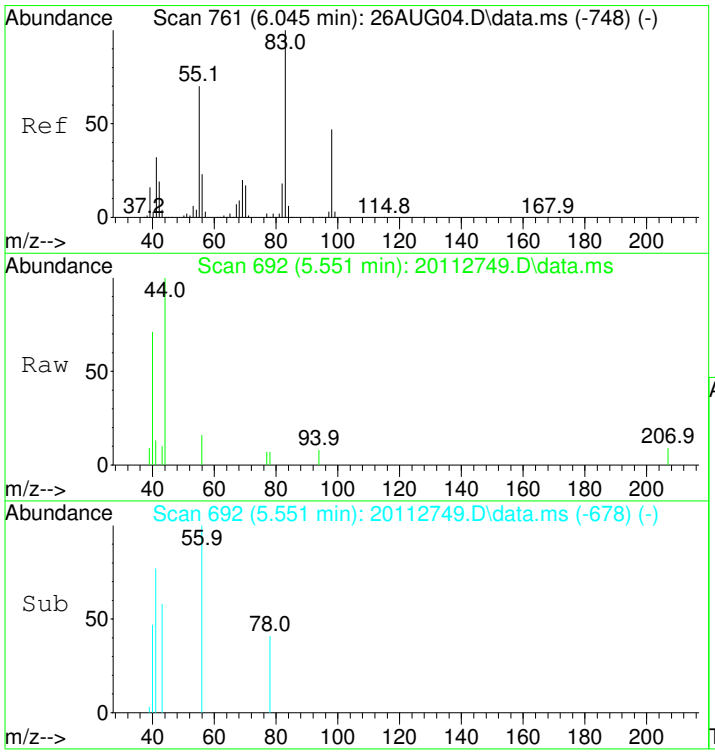


#55
Heptane
Concen: Below Cal
RT: 4.913 min Scan# 603
Delta R.T. 0.014 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 573

Ion	Ratio	Lower	Upper
43	100		
41	0.0	46.8	70.2#
57	92.0	47.5	71.3#
71	0.0	53.8	80.8#

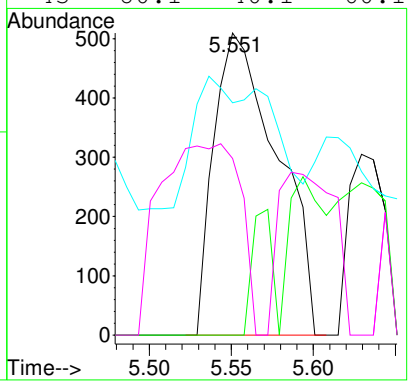


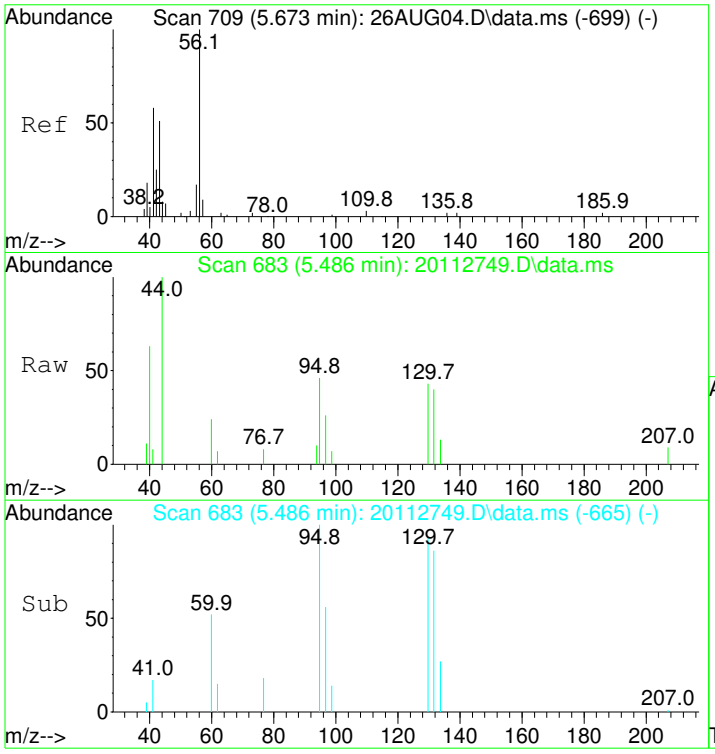


#58
n-Butanol
Concen: 3.65 ug/L
RT: 5.551 min Scan# 692
Delta R.T. -0.021 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 56 Resp: 1373

Ion	Ratio	Lower	Upper
56	100		
55	12.9	15.4	23.2#
41	26.8	50.9	76.3#
43	80.1	40.1	60.1#

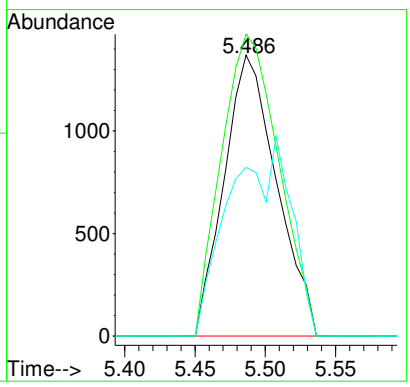


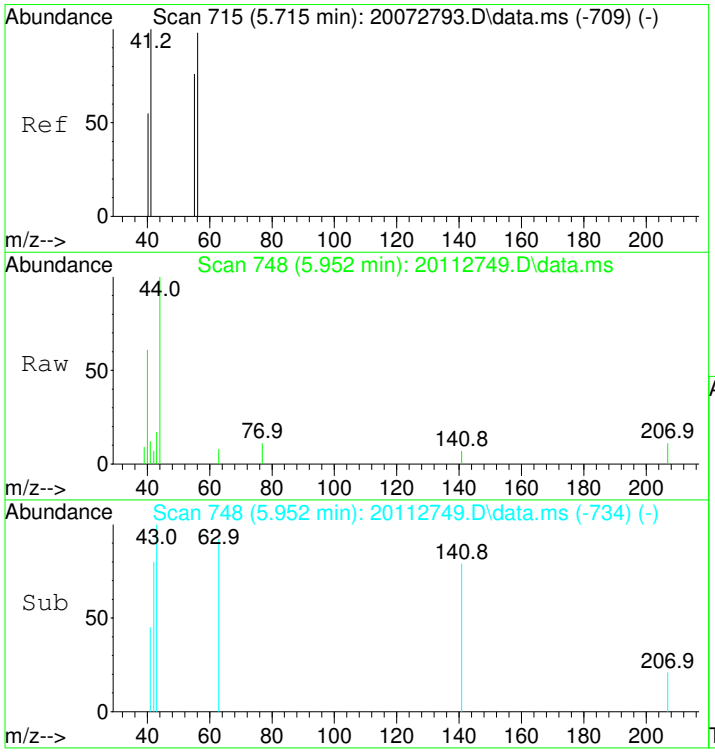


#59
Trichloroethene
Concen: 0.33 ug/L
RT: 5.486 min Scan# 683
Delta R.T. 0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:130 Resp: 3567

Ion	Ratio	Lower	Upper
130	100		
95	117.3	82.7	122.7
97	52.9	47.6	87.6

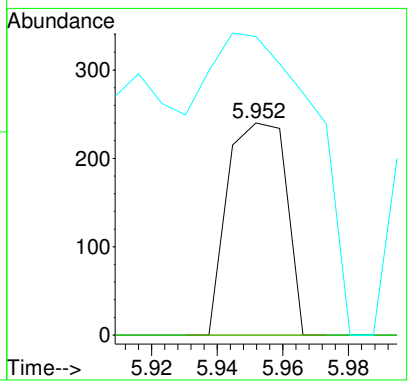


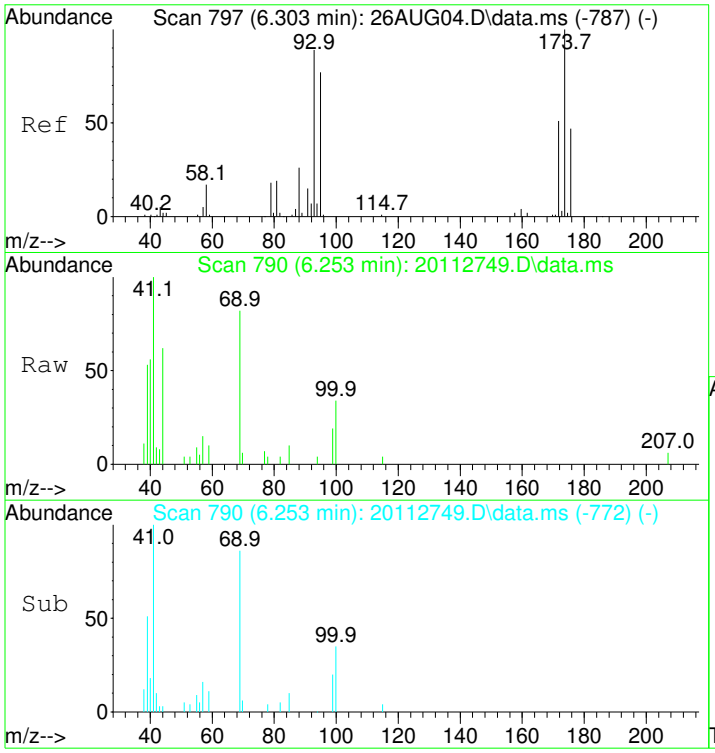


#60
1,2-Dichloropropane
Concen: Below Cal
RT: 5.952 min Scan# 748
Delta R.T. -0.021 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 63 Resp: 296

Ion	Ratio	Lower	Upper
63	100		
62	0.0	51.5	91.5#
41	261.1	26.1	66.1#

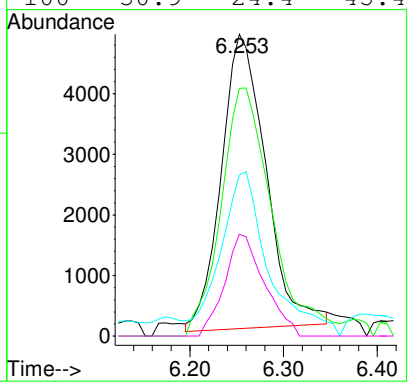


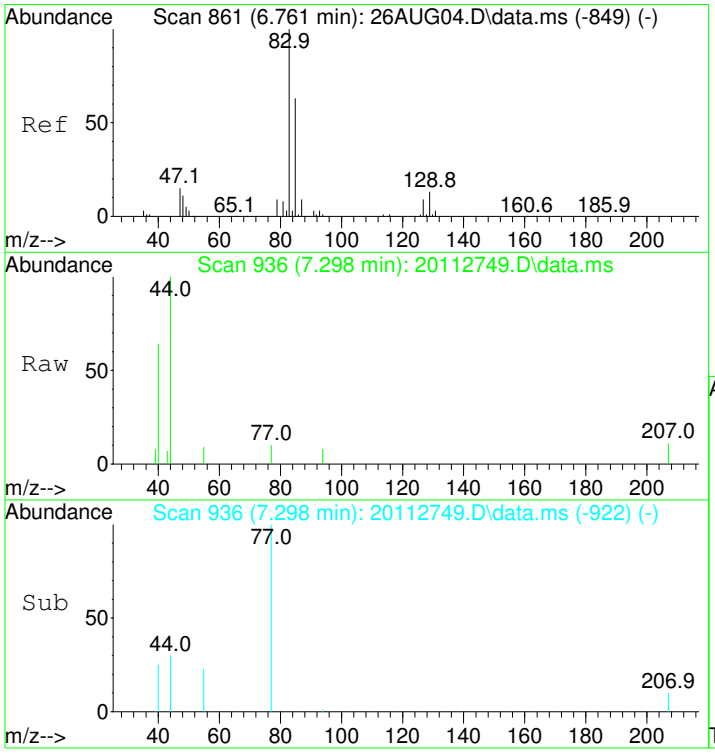


#62
Methyl methacrylate
Concen: 1.72 ug/L
RT: 6.253 min Scan# 790
Delta R.T. 0.008 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 41 Resp: 16060

Ion	Ratio	Lower	Upper
41	100		
69	95.3	72.2	108.4
39	46.8	41.1	61.7
100	30.9	24.4	45.4

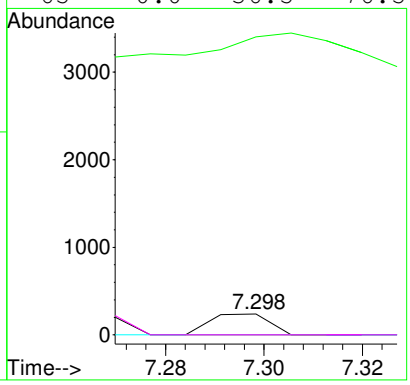


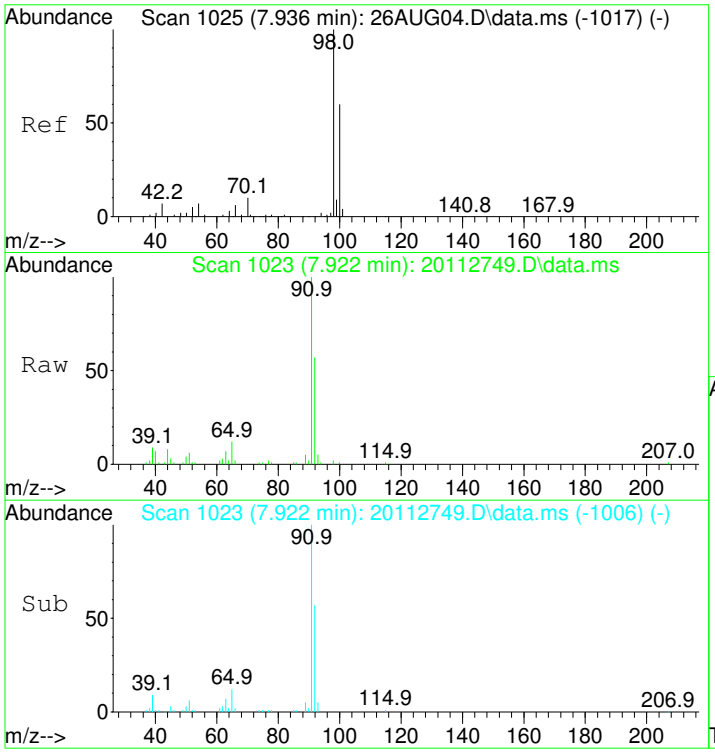


#64
2-Chloroethyl vinyl ether
Concen: Below Cal
RT: 7.298 min Scan# 936
Delta R.T. -0.022 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 201

Ion	Ratio	Lower	Upper
43	100		
44	1368.7	51.0	111.0#
63	0.0	141.4	201.4#
65	0.0	36.5	76.5#

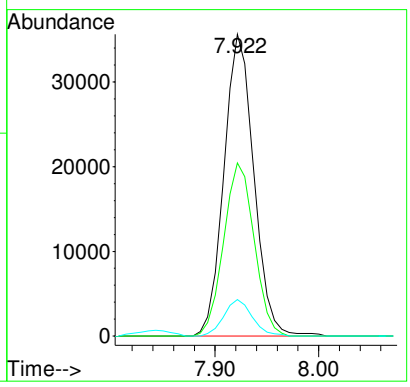


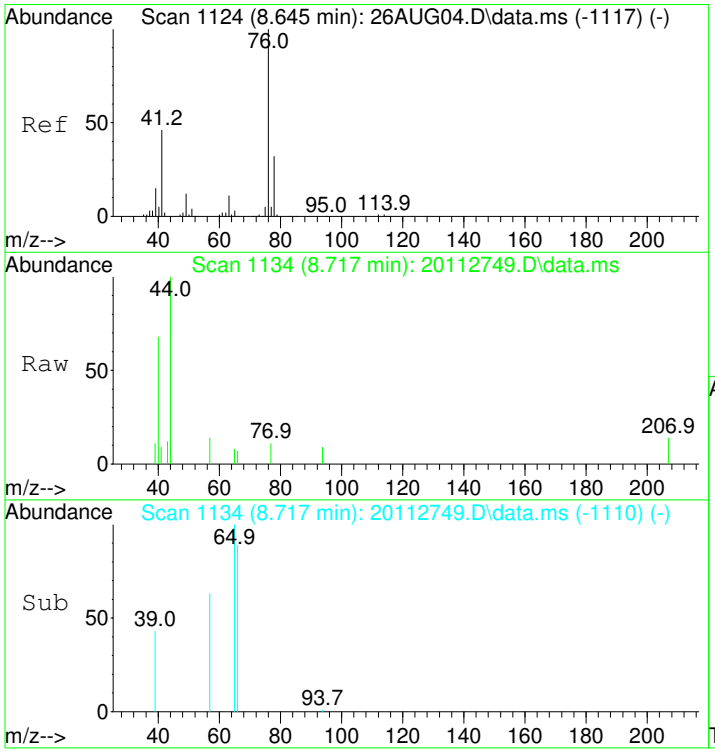


#70
Toluene
Concen: 2.54 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 71720

Ion	Ratio	Lower	Upper
91	100		
92	58.4	40.7	80.7
65	11.6	0.0	31.5

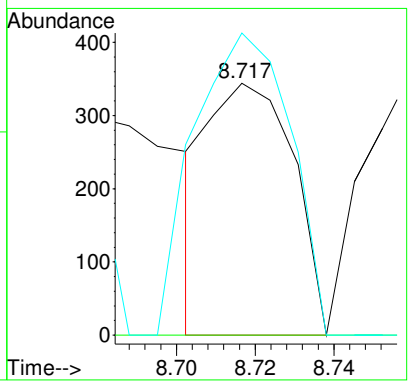


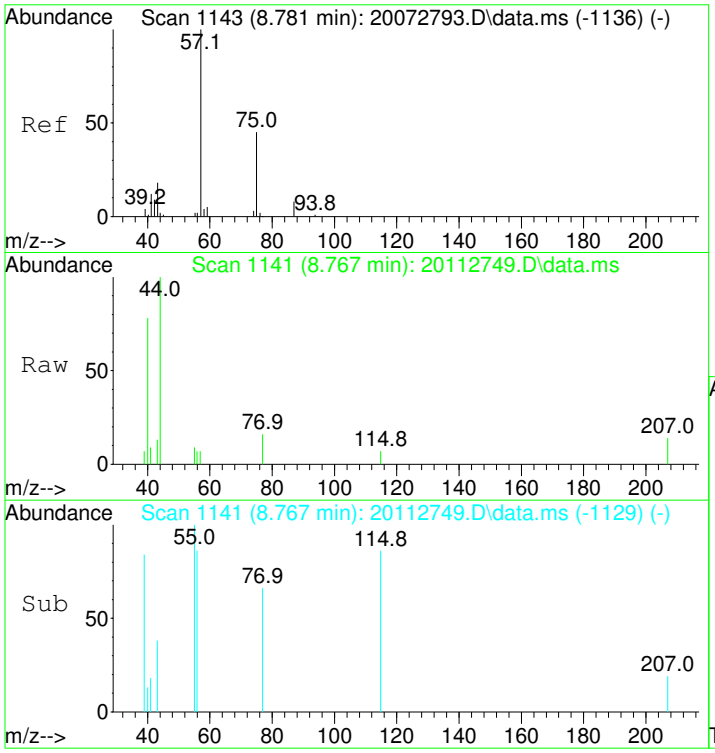


#77
2-Hexanone
Concen: Below Cal
RT: 8.717 min Scan# 1134
Delta R.T. 0.051 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 515

Ion	Ratio	Lower	Upper
43	100		
58	0.0	42.3	82.3#
57	136.9	1.0	41.0#

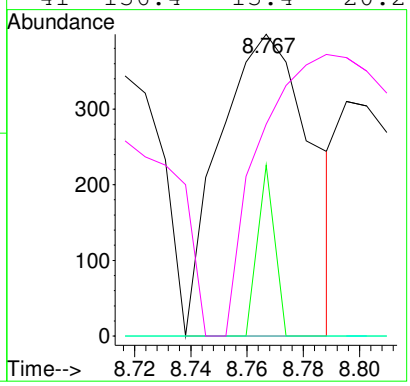


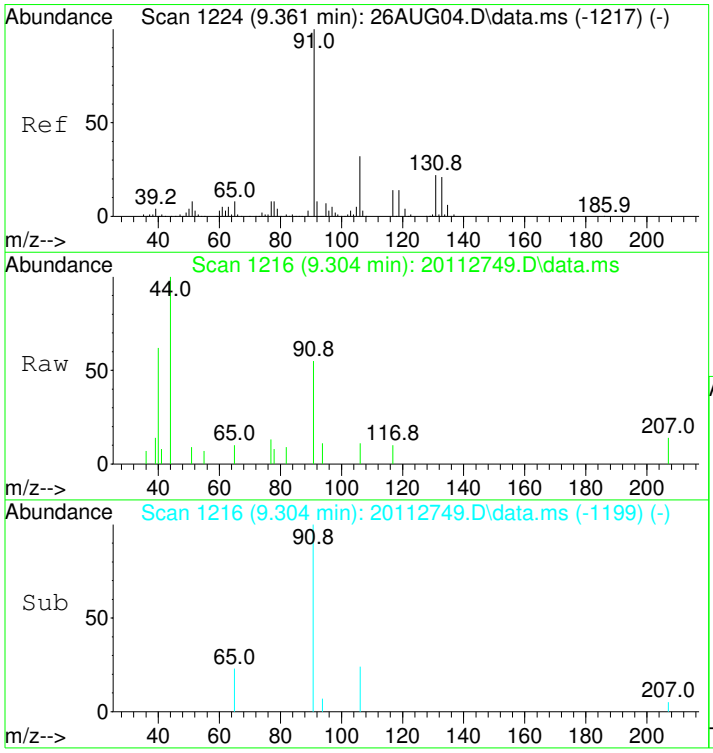


#79
Butyl acetate
Concen: Below Cal
RT: 8.767 min Scan# 1141
Delta R.T. -0.036 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 910

Ion	Ratio	Lower	Upper
43	100		
56	10.7	38.0	57.0#
73	0.0	15.0	22.4#
41	136.4	13.4	20.2#

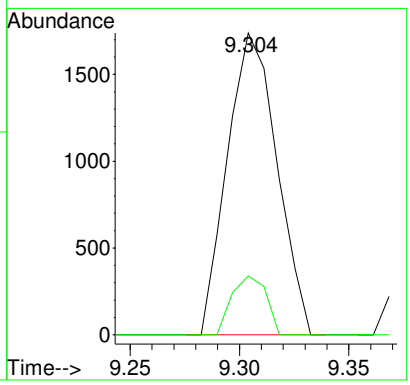


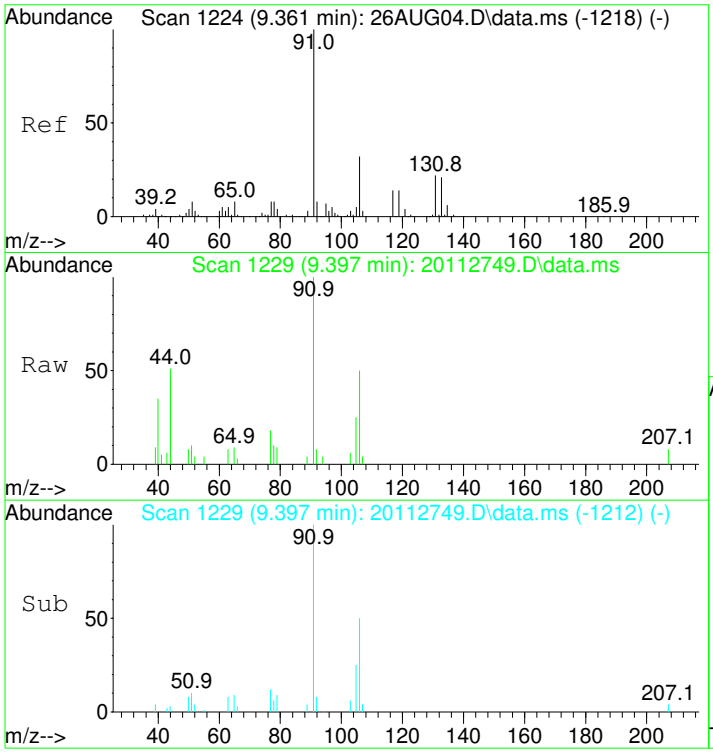


#83
Ethylbenzene
Concen: Below Cal
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 2746

Ion	Ratio	Lower	Upper
91	100		
106	13.5	13.6	53.6#

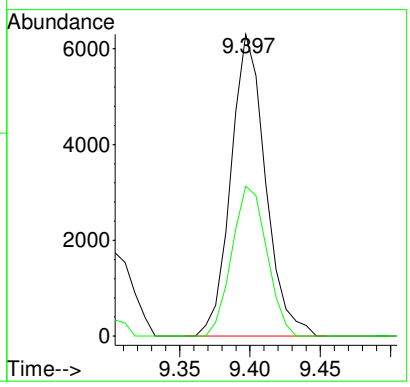


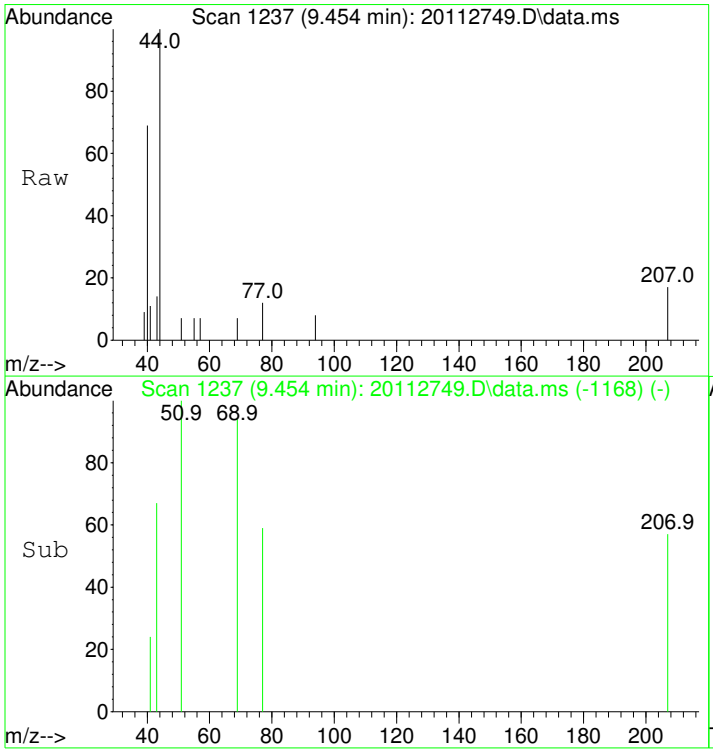


#84
m/p-Xylene
Concen: Below Cal
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 10792

Ion	Ratio	Lower	Upper
91	100		
106	50.0	34.2	74.2

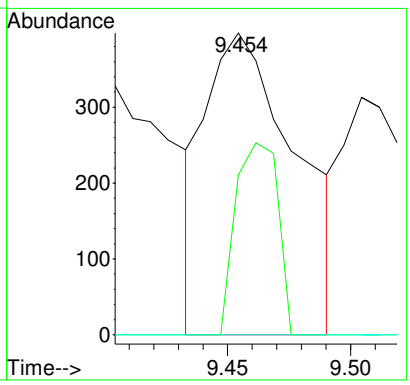


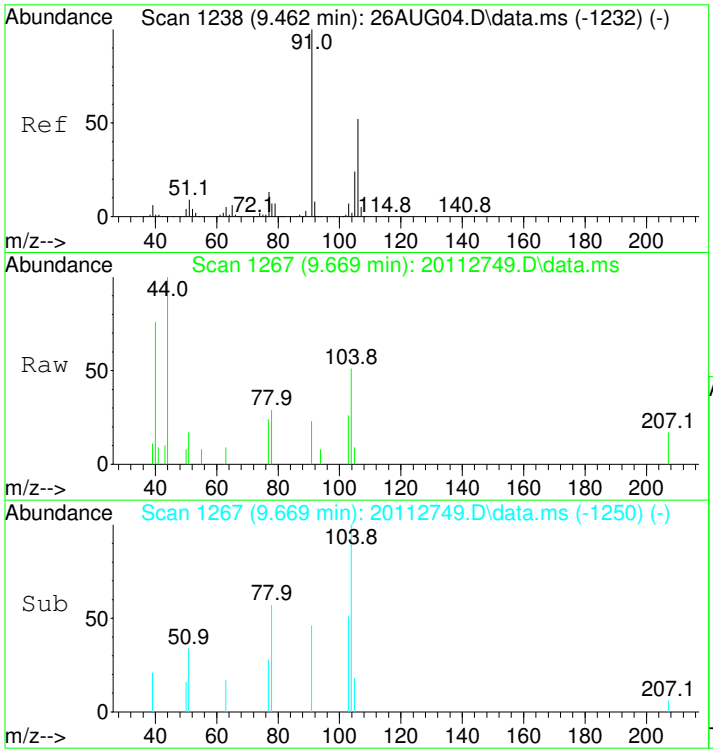


#85
Nonane
Concen: Below Cal
RT: 9.454 min Scan# 1237
Delta R.T. -0.008 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 1018

Ion	Ratio	Lower	Upper
43	100		
57	29.7	67.9	127.9#
85	0.0	10.4	70.4#

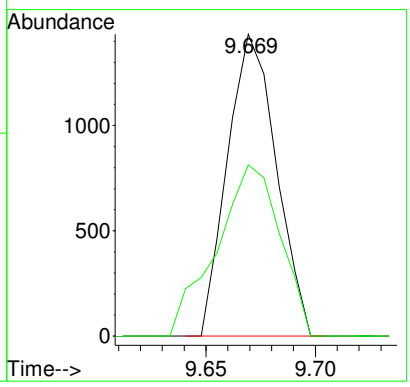


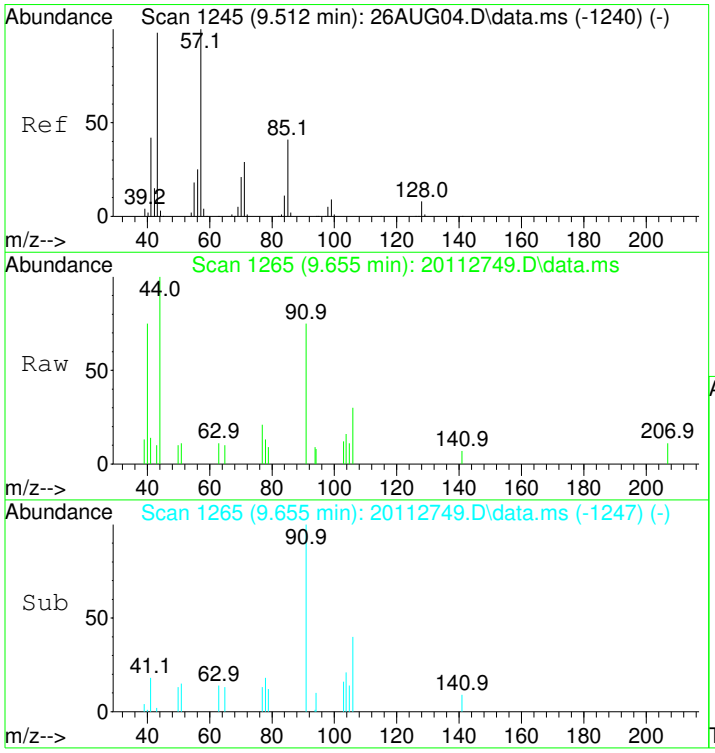


#86
Styrene
Concen: Below Cal
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:104 Resp: 2231

Ion	Ratio	Lower	Upper
104	100		
78	74.2	32.3	72.3#

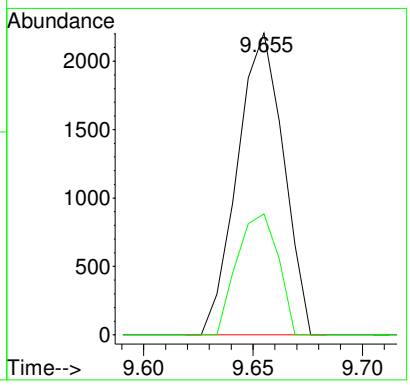


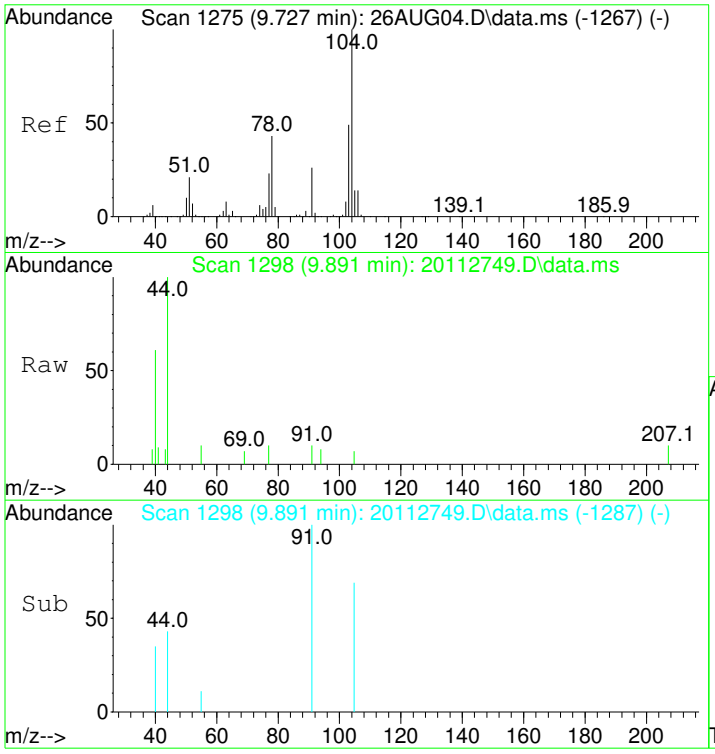


#87
o-Xylene
Concen: Below Cal
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 3250

Ion	Ratio	Lower	Upper
91	100		
106	35.8	30.3	70.3

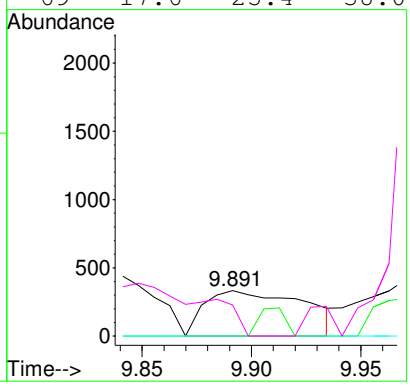


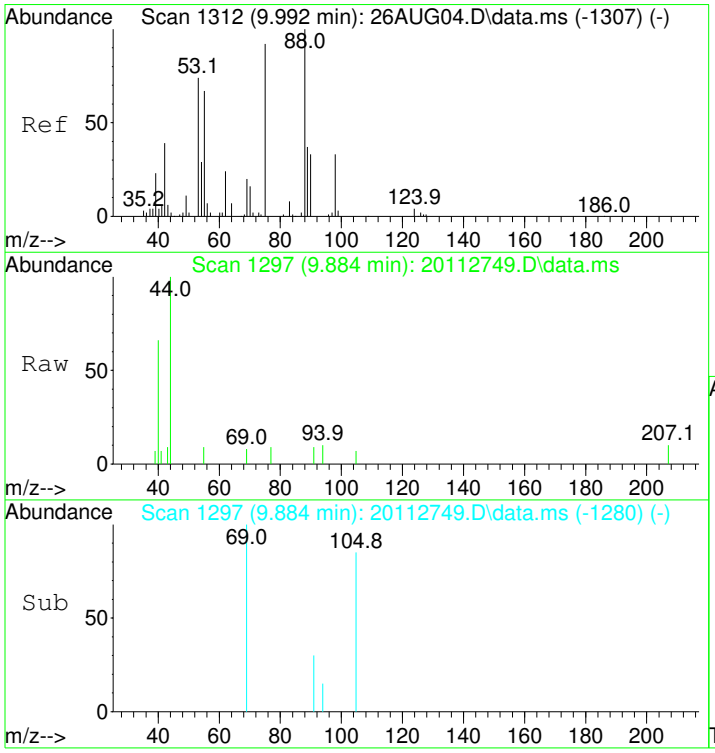


#88
Cyclohexanone
Concen: Below Cal
RT: 9.891 min Scan# 1298
Delta R.T. -0.043 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 55 Resp: 1053

Ion	Ratio	Lower	Upper
55	100		
42	16.6	48.0	72.0#
98	0.0	38.2	57.2#
69	17.6	25.4	38.0#

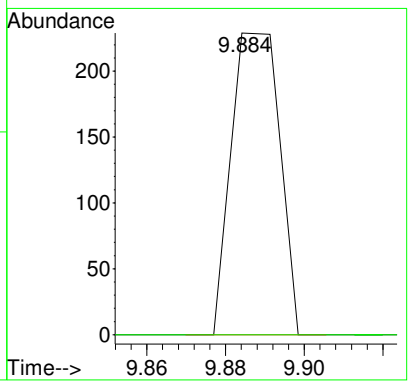


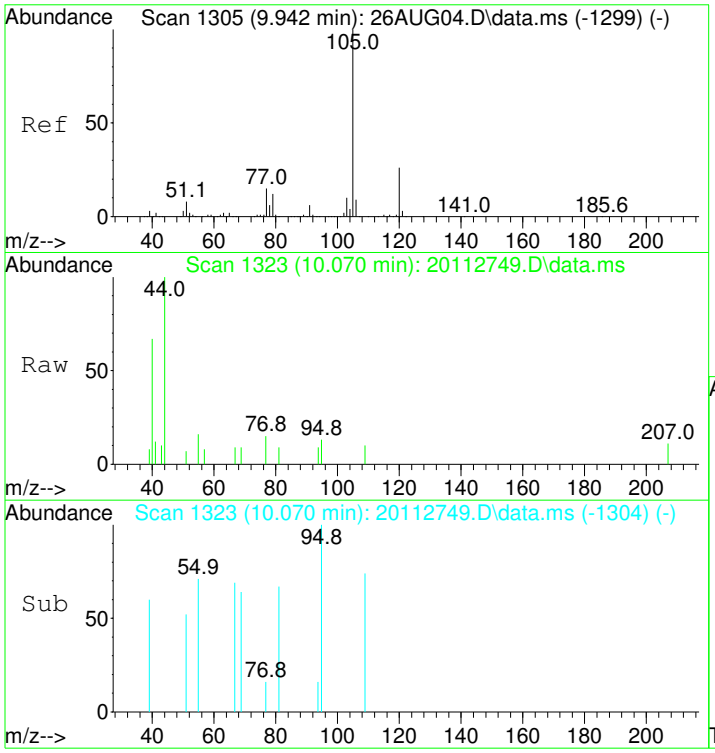


#90
Isopropylbenzene
Concen: Below Cal
RT: 9.884 min Scan# 1297
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:105 Resp: 196

Ion	Ratio	Lower	Upper
105	100		
120	0.0	8.0	48.0#

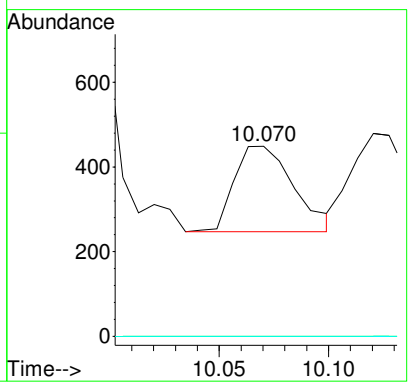


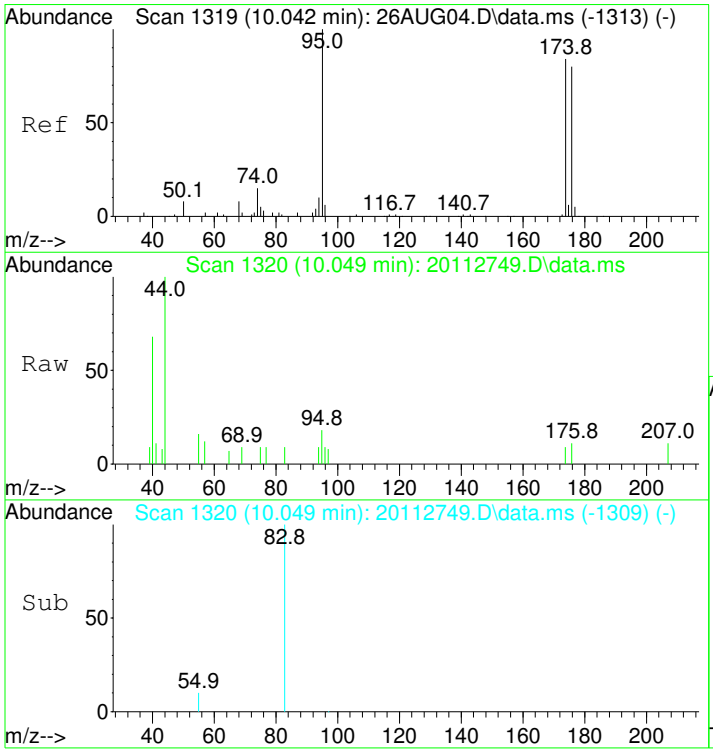


#92
Bromobenzene
Concen: Below Cal
RT: 10.070 min Scan# 1323
Delta R.T. 0.014 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 77 Resp: 382

Ion	Ratio	Lower	Upper
77	100		
156	0.0	40.2	80.2#
158	0.0	38.1	78.1#

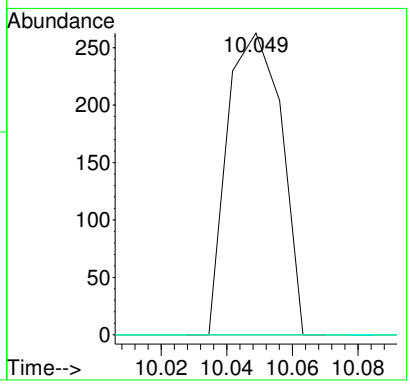


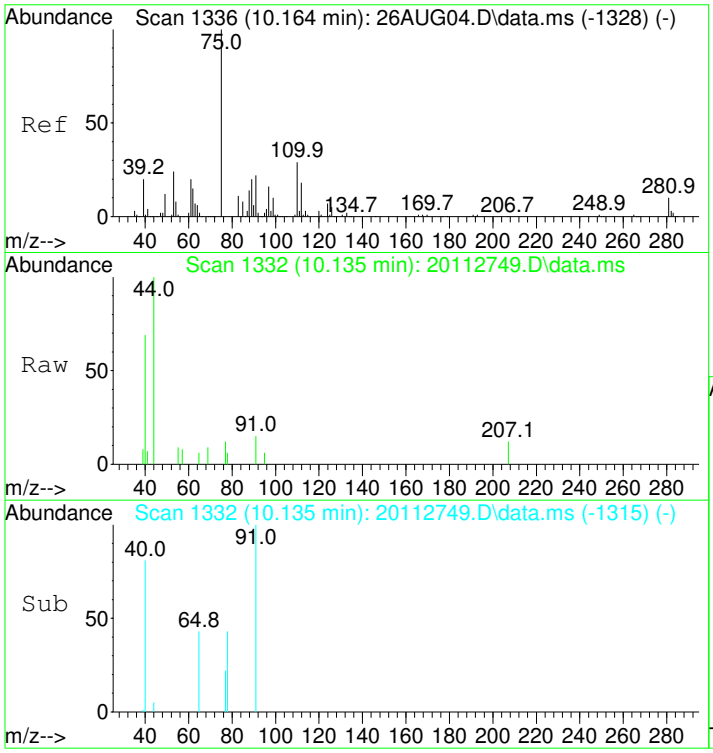


#93
1,1,2,2-Tetrachloroethane
Concen: Below Cal
RT: 10.049 min Scan# 1320
Delta R.T. -0.043 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 83 Resp: 299

Ion	Ratio	Lower	Upper
83	100		
131	0.0	0.0	35.0
85	0.0	46.4	86.4#

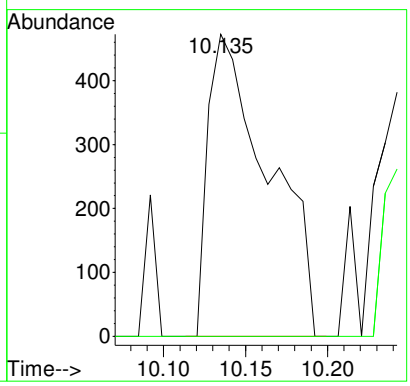


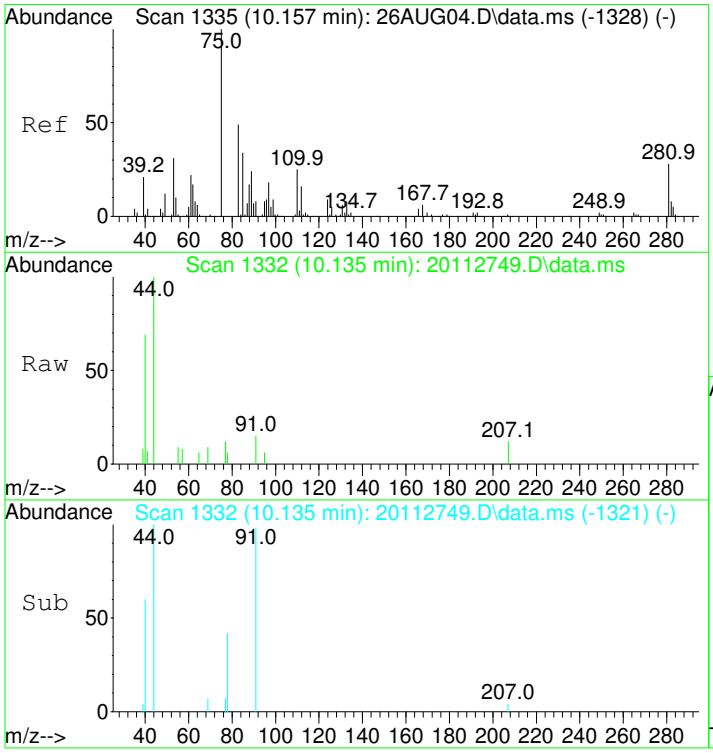


#96
n-Propylbenzene
Concen: Below Cal
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 1217

Ion	Ratio	Lower	Upper
91	100		
120	0.0	3.7	43.7#

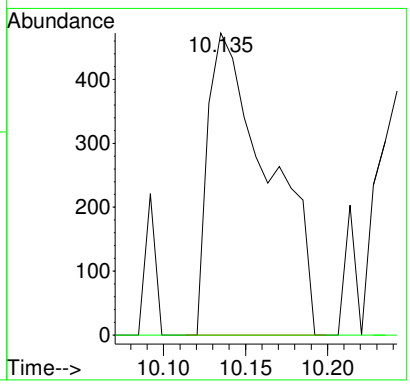


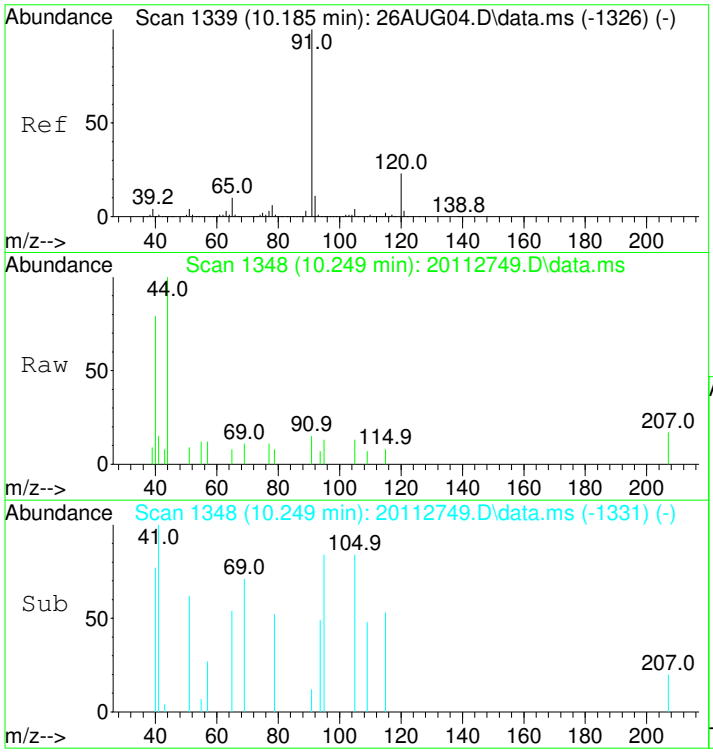


#97
2-Chlorotoluene
Concen: Below Cal
RT: 10.135 min Scan# 1332
Delta R.T. -0.043 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 1217

Ion	Ratio	Lower	Upper
91	100		
126	0.0	17.3	57.3#

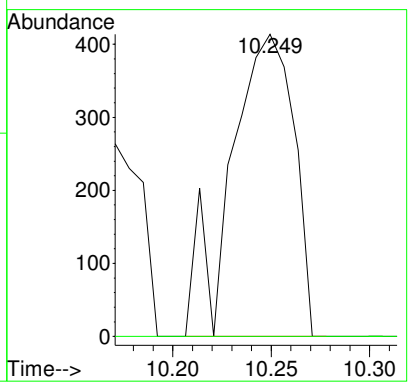


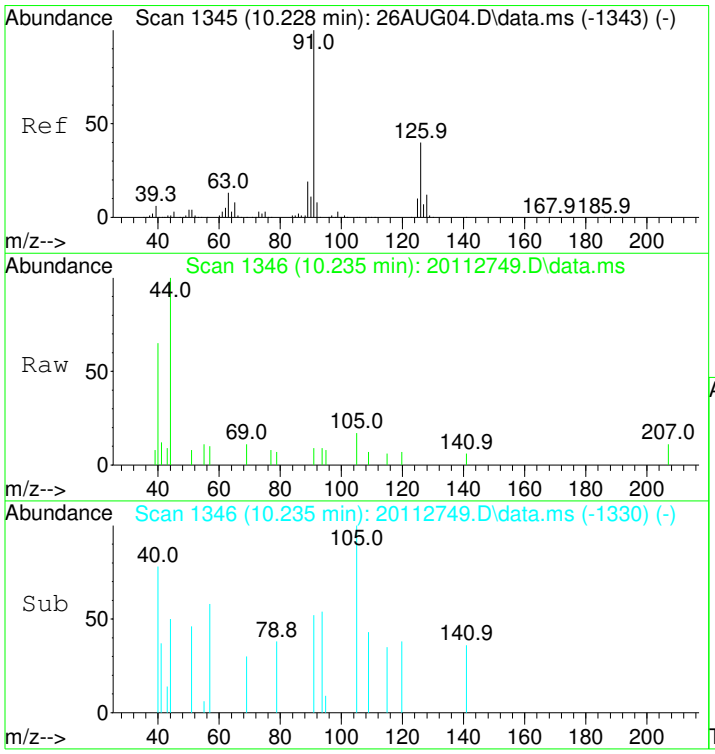


#98
4-Chlorotoluene
Concen: Below Cal
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 929

Ion	Ratio	Lower	Upper
91	100		
126	0.0	12.4	52.4#

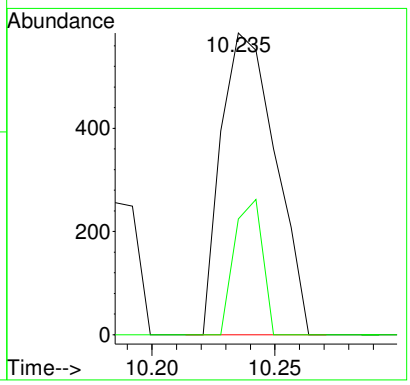


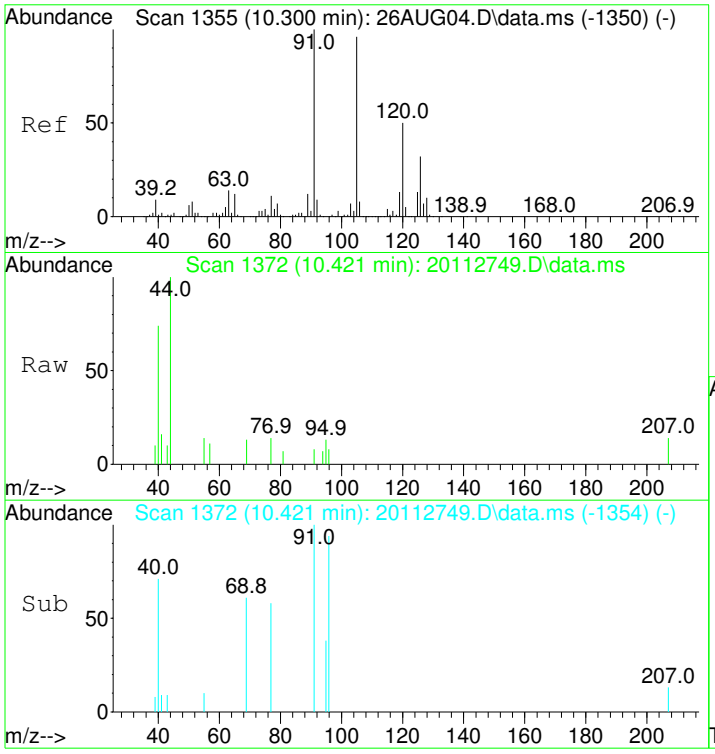


#99
1,3,5-Trimethylbenzene
Concen: Below Cal
RT: 10.235 min Scan# 1346
Delta R.T. -0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:105 Resp: 902

Ion	Ratio	Lower	Upper
105	100		
120	23.2	31.9	71.9#

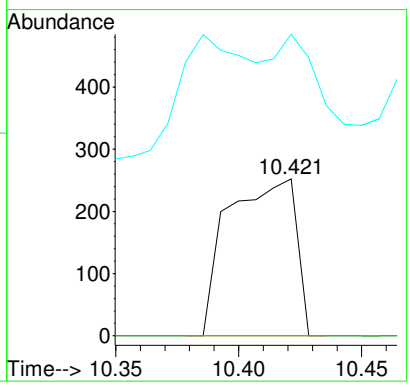


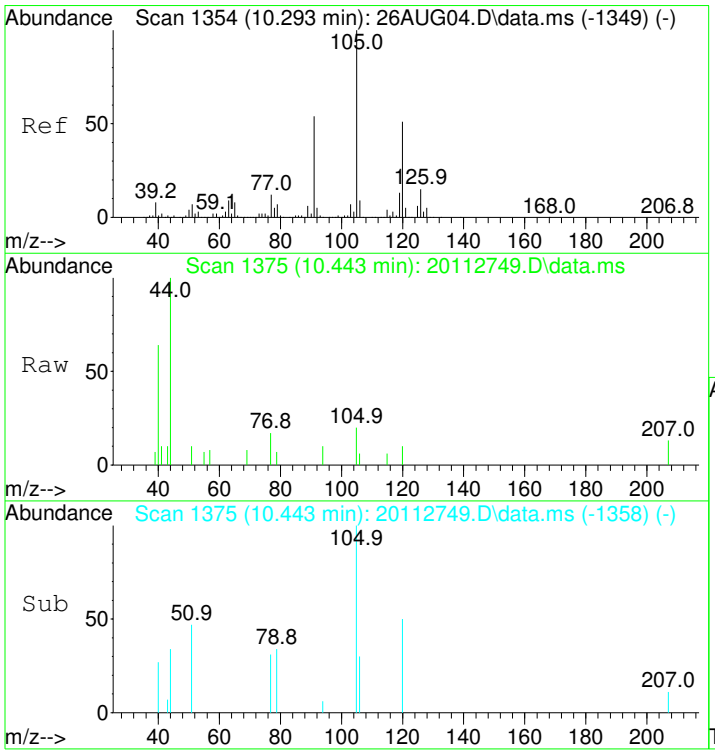


#100
tert-Butylbenzene
Concen: Below Cal
RT: 10.421 min Scan# 1372
Delta R.T. 0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 484

Ion	Ratio	Lower	Upper
91	100		
134	0.0	9.7	49.7#
41	78.9	0.0	39.3#

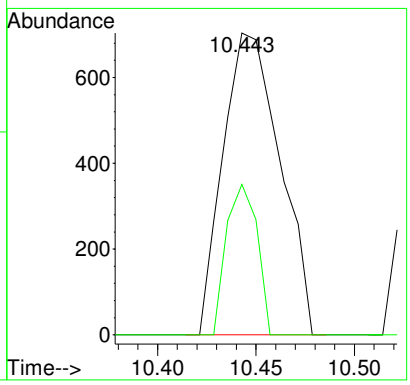


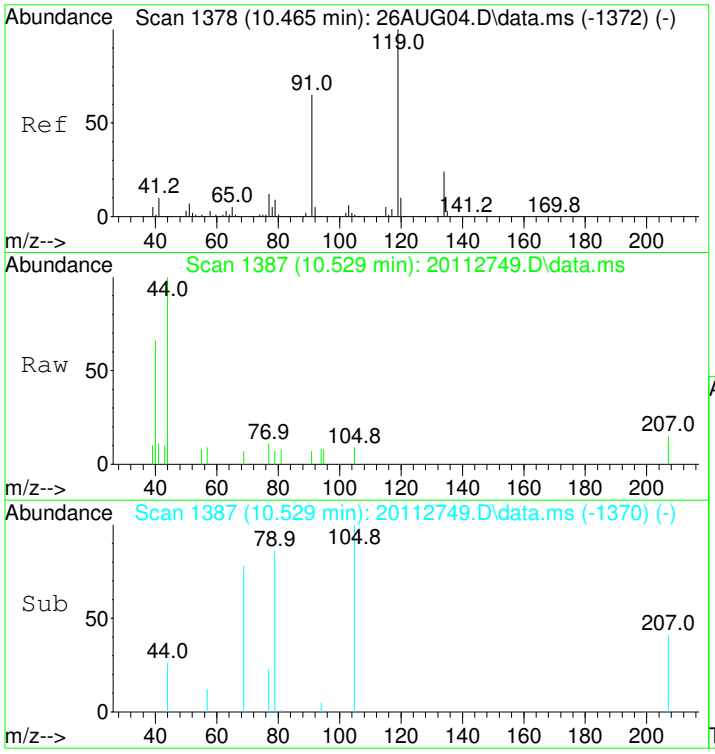


#101
1,2,4-Trimethylbenzene
Concen: Below Cal
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:105 Resp: 1420

Ion	Ratio	Lower	Upper
105	100		
120	26.8	37.7	77.7#

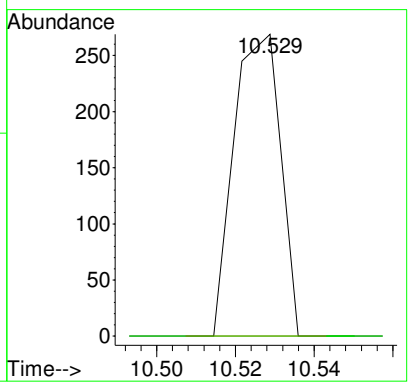


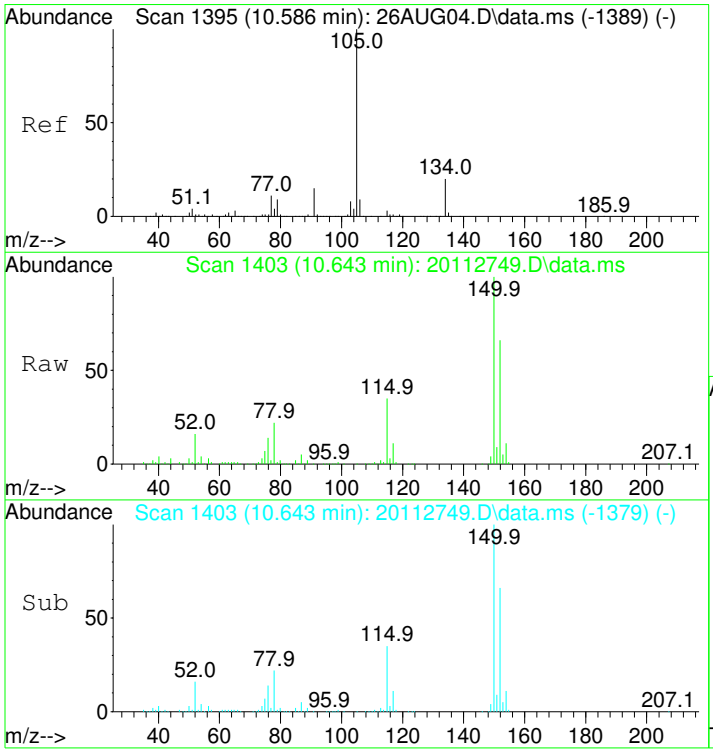


#102
sec-Butylbenzene
Concen: Below Cal
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:105 Resp: 221

Ion	Ratio	Lower	Upper
105	100		
134	0.0	1.1	41.1#

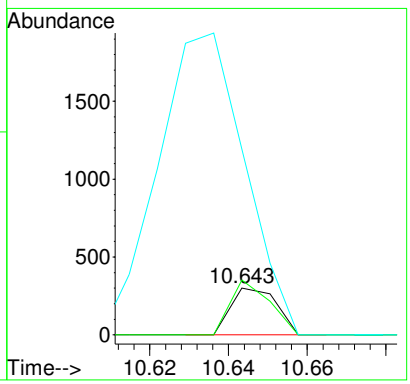


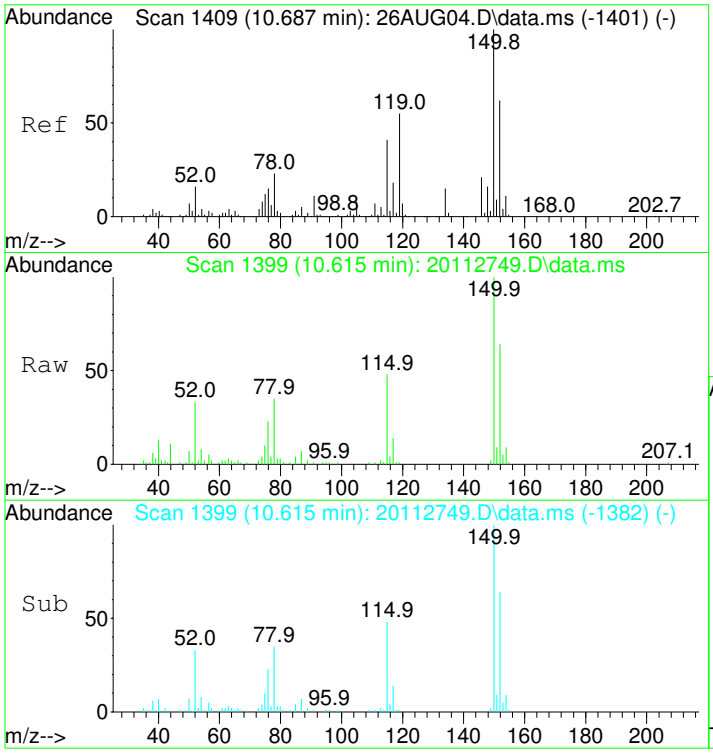


#104
1,3-Dichlorobenzene
Concen: Below Cal
RT: 10.643 min Scan# 1403
Delta R.T. 0.050 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:146 Resp: 243

Ion	Ratio	Lower	Upper
146	100		
148	100.4	46.5	86.5#
111	1300.0	22.6	62.6#

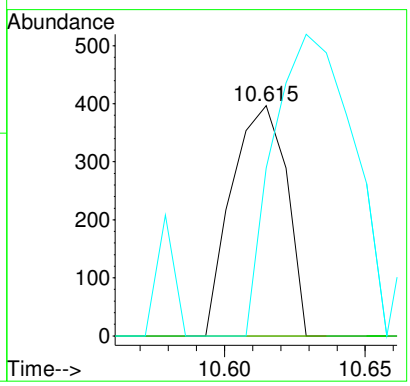


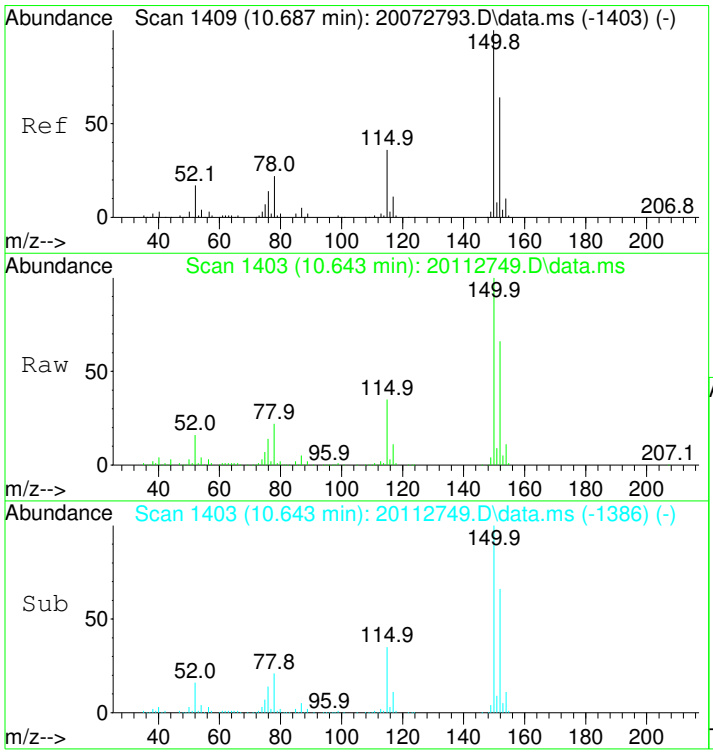


#105
p-Isopropyltoluene
Concen: Below Cal
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:119 Resp: 540

Ion	Ratio	Lower	Upper
119	100		
134	0.0	8.1	48.1#
91	189.1	5.2	45.2#

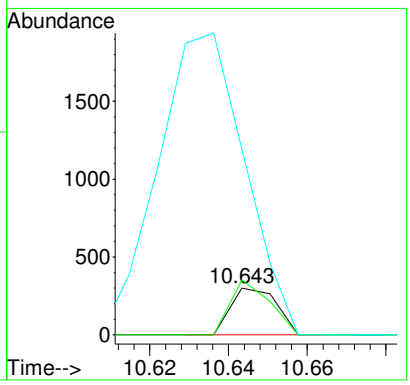


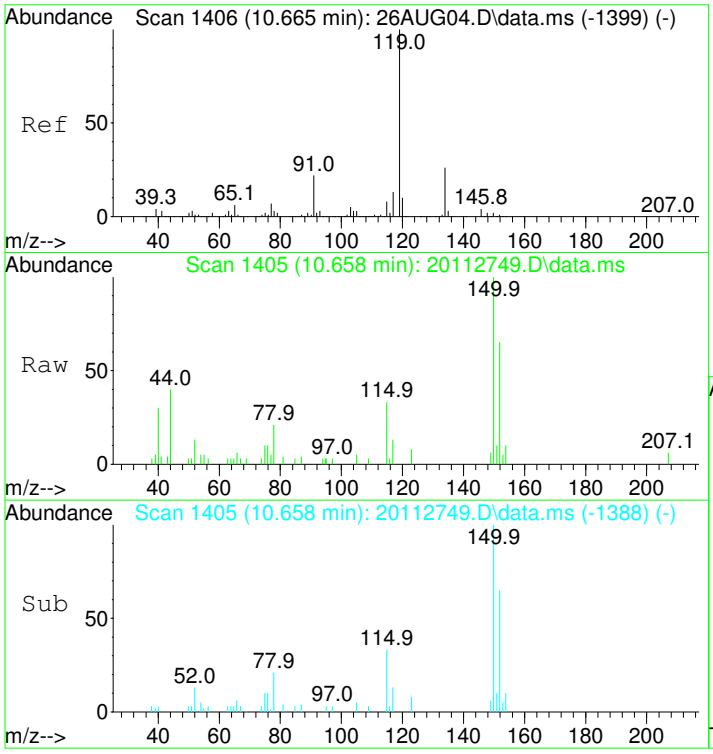


#106
1,4-Dichlorobenzene
Concen: Below Cal
RT: 10.643 min Scan# 1403
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:146 Resp: 243

Ion	Ratio	Lower	Upper
146	100		
148	100.4	37.3	97.3#
111	1300.0	12.5	72.5#

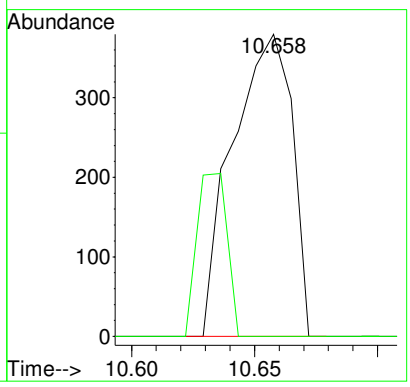


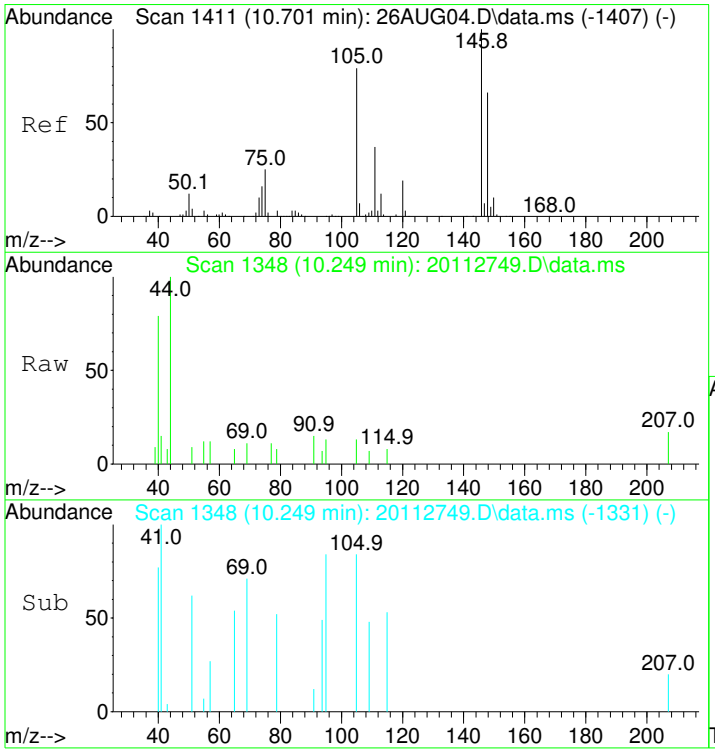


#107
1,2,3-Trimethylbenzene
Concen: Below Cal
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:105 Resp: 640

Ion	Ratio	Lower	Upper
105	100		
120	27.3	35.5	53.3#

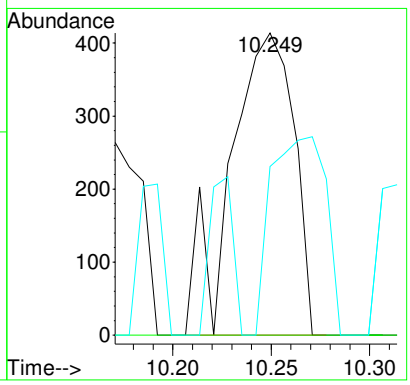


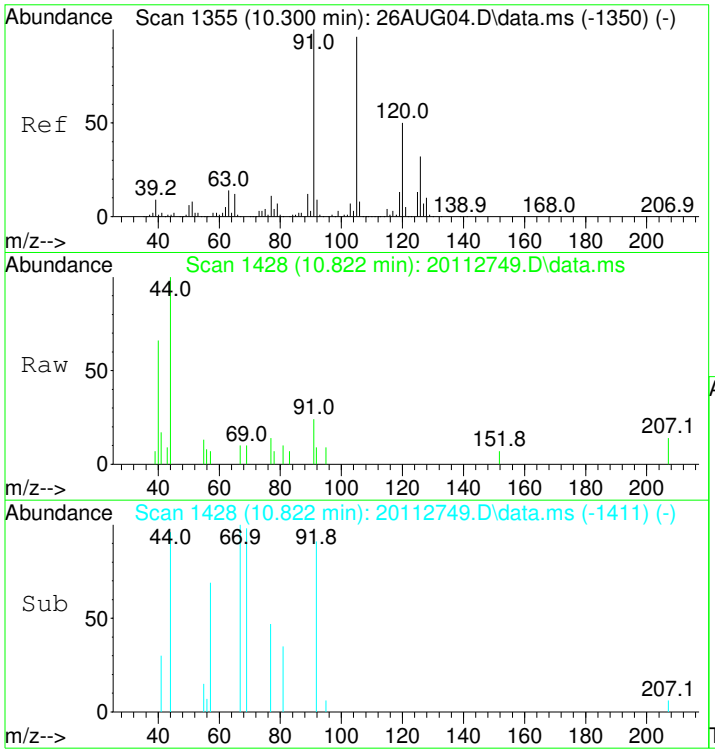


#108
Benzyl chloride
Concen: Below Cal
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 929

Ion	Ratio	Lower	Upper
91	100		
126	0.0	12.4	52.4#
65	56.9	0.0	33.3#

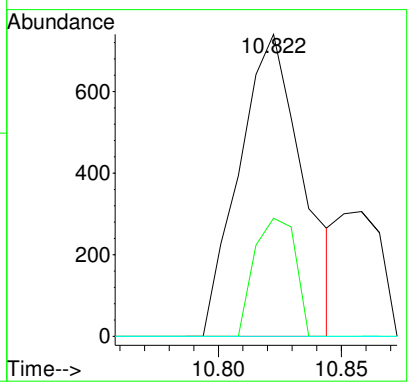


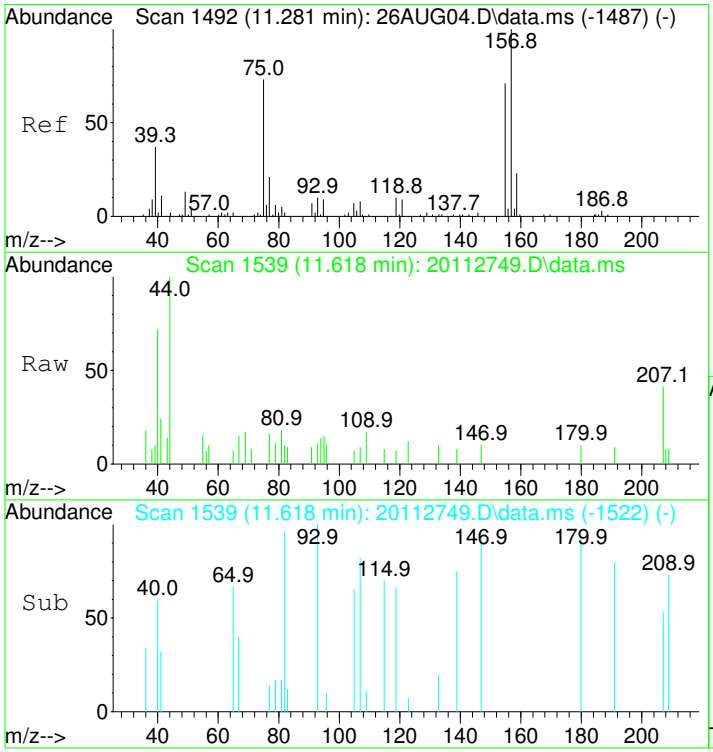


#110
n-Butylbenzene
Concen: Below Cal
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 91 Resp: 1340

Ion	Ratio	Lower	Upper
91	100		
92	25.0	39.3	79.3#
134	0.0	7.5	47.5#

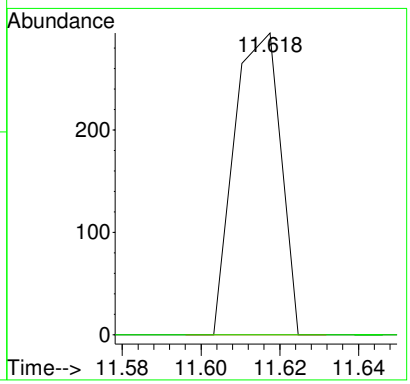


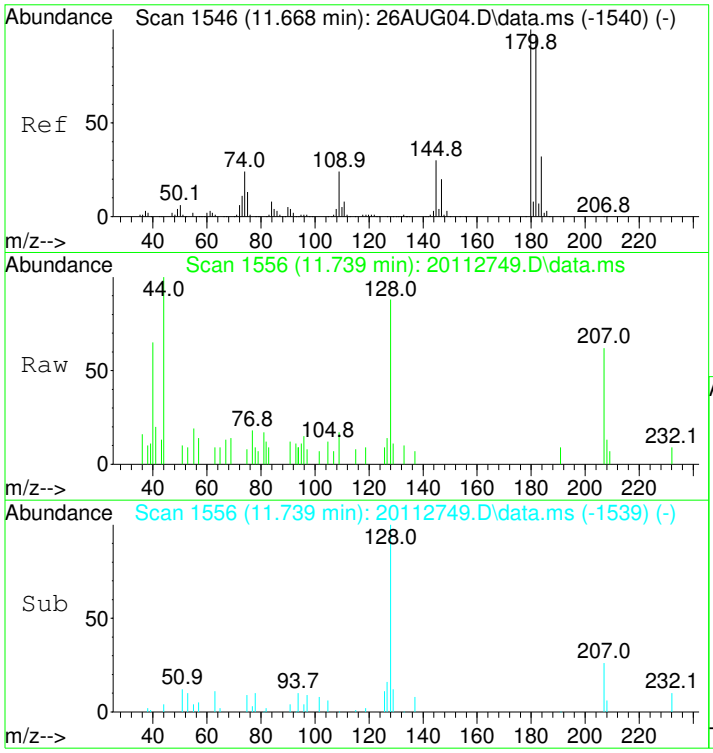


#114
1,2,4-Trichlorobenzene
Concen: Below Cal
RT: 11.618 min Scan# 1539
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:180 Resp: 241

Ion	Ratio	Lower	Upper
180	100		
182	0.0	76.7	116.7#

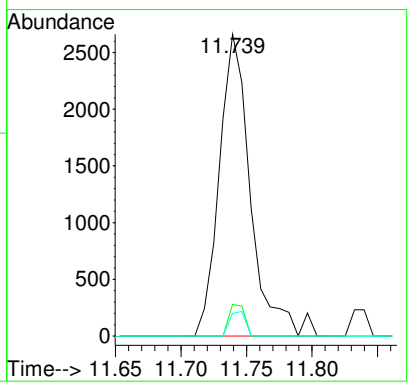


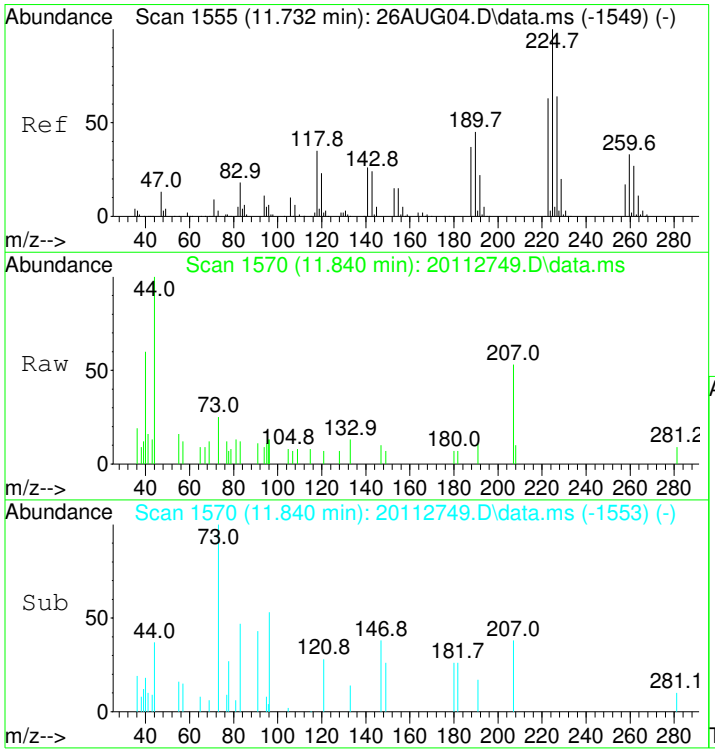


#116
Naphthalene
Concen: Below Cal
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:128 Resp: 4442

Ion	Ratio	Lower	Upper
128	100		
126	5.2	0.0	28.2
102	4.1	0.0	30.0

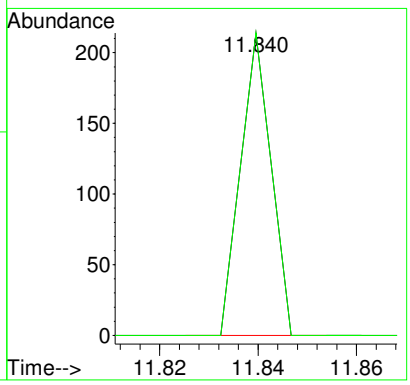


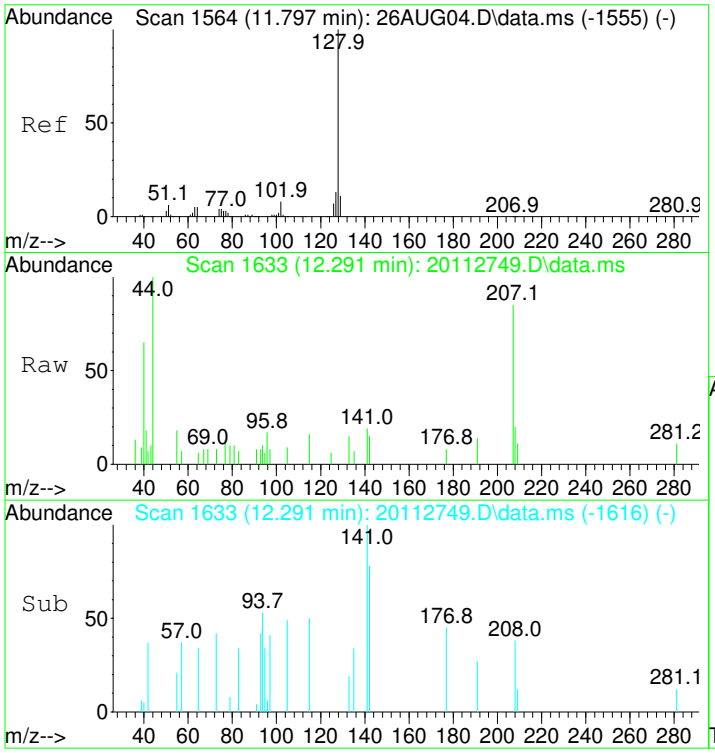


#117
1,2,3-Trichlorobenzene
Concen: Below Cal
RT: 11.840 min Scan# 1570
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:180 Resp: 92

Ion	Ratio	Lower	Upper
180	100		
182	100.0	78.4	118.4

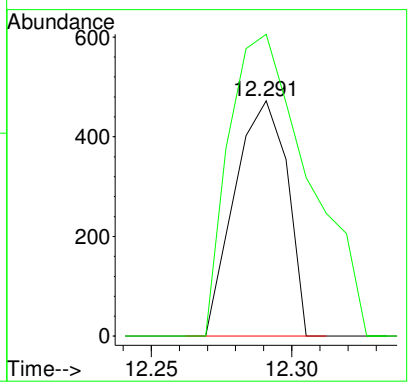


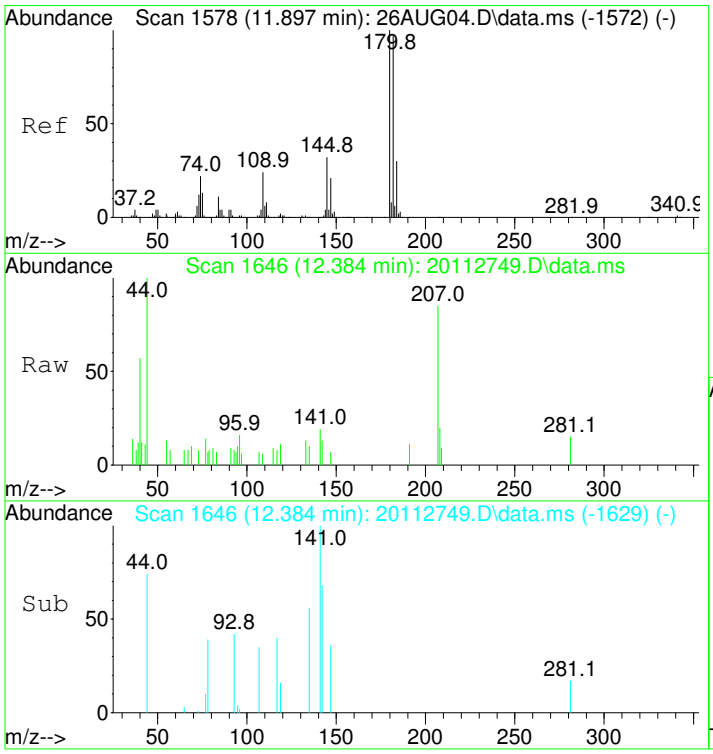


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:142 Resp: 615

Ion	Ratio	Lower	Upper
142	100		
141	195.4	65.0	105.0#

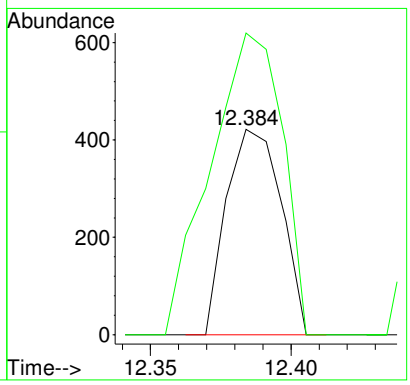


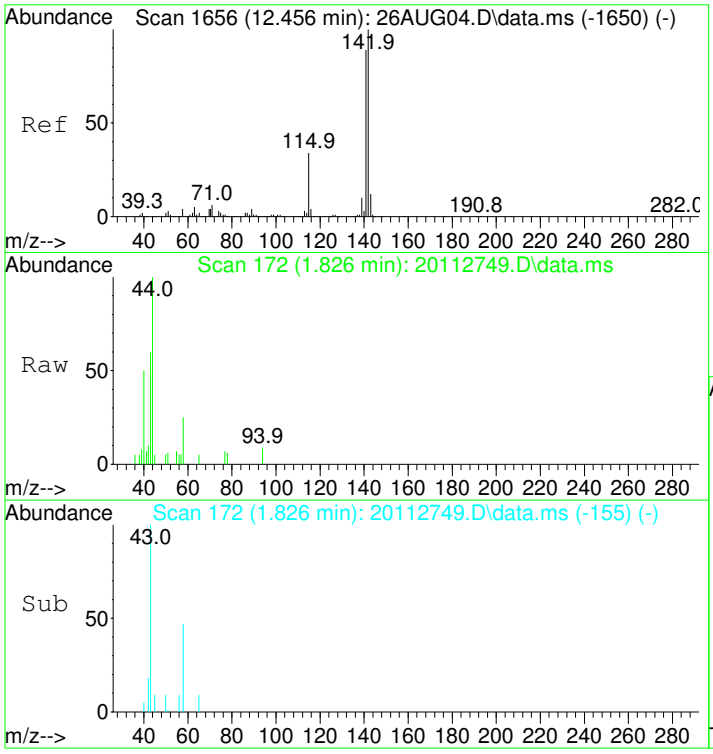


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.384 min Scan# 1646
Delta R.T. -0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion:142 Resp: 572

Ion	Ratio	Lower	Upper
142	100		
141	193.0	69.8	104.8#

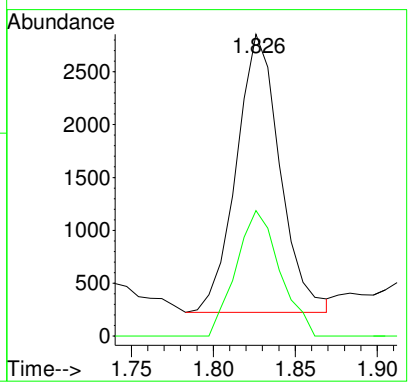


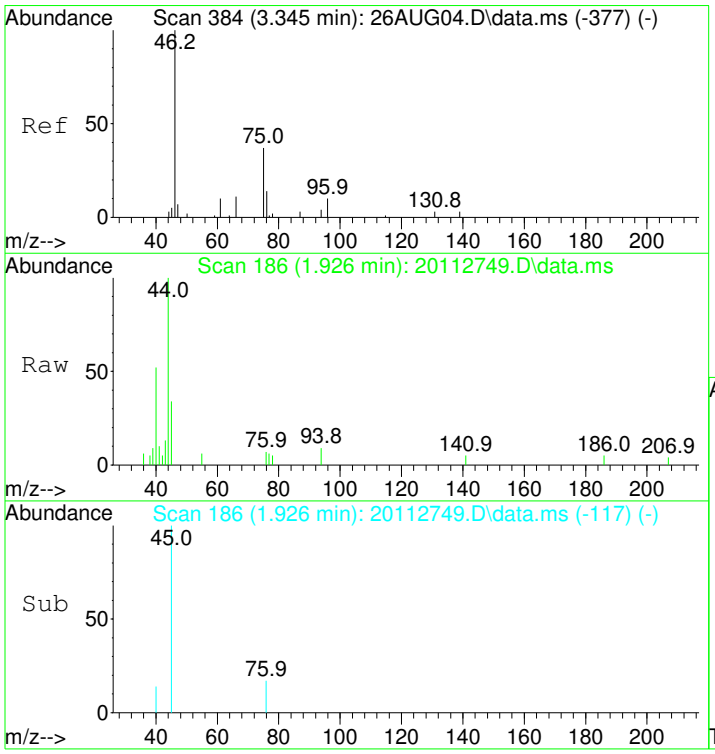


#121
2-Propanone
Concen: 0.59 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 4887

Ion	Ratio	Lower	Upper
43	100		
58	45.0	28.2	42.2#

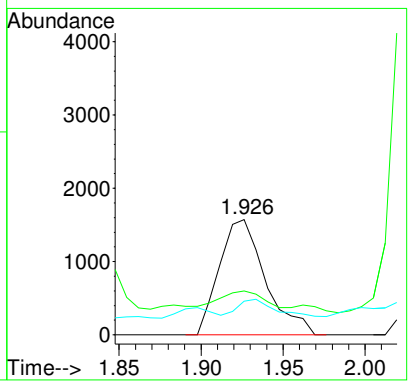


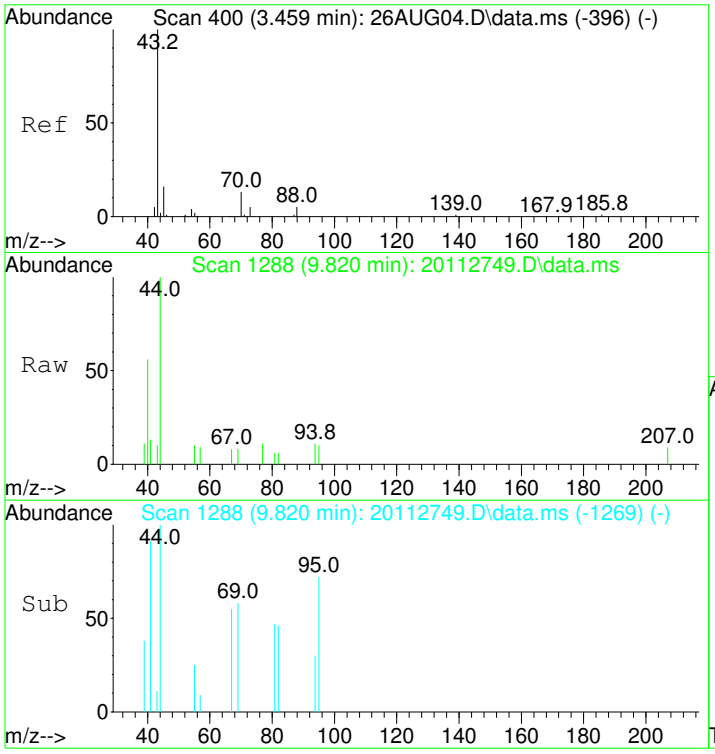


#122
Isopropyl Alcohol
Concen: Below Cal
RT: 1.926 min Scan# 186
Delta R.T. -0.007 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 45 Resp: 3075

Ion	Ratio	Lower	Upper
45	100		
43	12.7	14.6	21.8#
41	12.7	5.7	8.5#

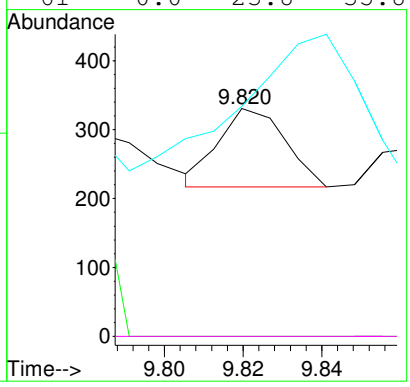




#125
Amyl Acetate
Concen: Below Cal
RT: 9.820 min Scan# 1288
Delta R.T. 0.014 min
Lab File: 20112749.D
Acq: 28 Nov 2020 1:14 am

Tgt Ion: 43 Resp: 133

Ion	Ratio	Lower	Upper
43	100		
70	0.0	39.8	59.6#
55	982.7	21.8	32.8#
61	0.0	23.8	35.8#



1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112750.D
Acq On : 28 Nov 2020 1:30 am
Operator : js
Sample : 20111800-04F MS DF500
Misc : IS 200-21532
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Nov 28 12:03:08 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.989	168	233855	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.121	114	403849	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.196	117	368789	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	183506	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	124948	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	126091	19.54	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 97.70%				
50) 1,2-Dichloroethane-d4	4.369	65	152250	19.46	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 97.30%				
69) Toluene-d8	7.843	98	456839	20.01	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.05%				
91) Bromofluorobenzene	9.984	95	240347	25.93	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 129.65%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.959	85	157335	26.45	ug/L		99
3) Dichlorofluoromethane	1.461	67	219514	16.39	ug/L		98
4) Chloromethane	1.052	50	219741	17.03	ug/L		97
5) 1,3-Butadiene	1.131	54	1602	80.52	ug/L	#	55
6) Vinyl chloride	1.110	62	177057	22.53	ug/L		100
7) Bromomethane	1.274	96	86508	71.29	ug/L		82
8) Chloroethane	1.339	64	93237	27.97	ug/L		75
9) Trichlorofluoromethane	1.475	101	161275	17.41	ug/L		99
10) Ethanol	1.582	45	233896	350.55	ug/L		83
11) Ethyl ether	1.640	59	115258	20.58	ug/L		96
12) Acrolein	1.726	56	807	Below Cal		#	1
13) 1,1-Dichloroethene	1.790	61	205773	23.77	ug/L		99
16) Acetone	1.826	43	90559	23.38	ug/L		98
17) Chloroprene	2.757	53	309	Below Cal		#	1
18) Carbon disulfide	1.941	76	397660	22.98	ug/L		100
19) 2-Propanol	1.912	45	553038	417.54	ug/L		97
20) Allyl chloride	2.041	41	168665	16.97	ug/L		92
22) Acetonitrile	2.041	41	168665	16.96	ug/L		91
23) Methylene chloride	2.141	49	165800	18.22	ug/L		98
24) trans-1,2-Dichloroethene	2.349	61	187707	22.02	ug/L		98
25) t-Butanol	2.220	59	286201	109.01	ug/L		97
26) Acrylonitrile	2.320	53	97747	21.70	ug/L		100
27) Methyl tert-butyl ether	2.342	73	430243	22.17	ug/L		97
28) Hexane	2.578	57	1863	Below Cal		#	78
29) 1,1-Dichloroethane	2.728	63	254182	20.75	ug/L		99
30) Diisopropyl ether	2.764	45	393004	21.86	ug/L	#	49
31) Vinyl acetate	2.728	86	709	0.39	ug/L	#	1
32) Methylcyclopentane	3.173	56	250241	18.63	ug/L		82
33) Ethyl tert butyl ether	3.130	59	425439	20.75	ug/L		99
34) 2,2-Dichloropropane	3.302	77	173016	17.08	ug/L		99
35) cis-1,2-Dichloroethene	3.302	61	213921	20.71	ug/L		97
36) 2-Butanone	3.309	43	136158	22.90	ug/L		98
37) Ethyl Acetate	3.359	43	241579	20.94	ug/L		98
38) Methyl acrylate	3.409	55	215627	20.94	ug/L		99
40) Bromochloromethane	3.574	49	111625	20.84	ug/L		98
41) Tetrahydrofuran	3.588	42	89876	20.53	ug/L		98
42) Methacrylonitrile	3.545	41	176882	20.43	ug/L		98
43) Chloroform	3.717	83	249763	19.94	ug/L		98
44) Cyclohexane	3.982	56	4430	Below Cal		#	5
46) 1,1,1-Trichloroethane	3.889	97	214195	21.51	ug/L		100

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112750.D
Acq On : 28 Nov 2020 1:30 am
Operator : js
Sample : 20111800-04F MS DF500
Misc : IS 200-21532
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Nov 28 12:03:08 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
48) Carbon tetrachloride	4.089	117	158720	18.58 ug/L		98
49) 1,1-Dichloropropene	4.111	75	193980	23.08 ug/L		94
51) 1,2-Dichloroethane	4.483	62	195111	20.89 ug/L		98
52) Benzene	4.376	78	542141	22.22 ug/L		99
53) Tertiaryamylmethylether	4.627	73	404692	21.84 ug/L	#	79
54) Isobutyl Alcohol	4.562	43	403207	21.18 ug/L		98
55) Heptane	4.935	43	128	Below Cal	#	1
58) n-Butanol	5.522	56	960174	1595.76 ug/L		99
59) Trichloroethene	5.486	130	142407	20.87 ug/L		99
60) 1,2-Dichloropropane	5.980	63	149456	21.78 ug/L		98
61) Dibromomethane	6.145	93	96057	19.81 ug/L		100
62) Methyl methacrylate	6.253	41	162038	20.50 ug/L		98
63) Bromodichloromethane	6.589	83	193861	20.85 ug/L		100
64) 2-Chloroethyl vinyl ether	7.313	43	341	Below Cal	#	1
65) 2-Nitropropane	7.126	43	75084	20.54 ug/L		97
66) cis-1,3-Dichloropropene	7.506	75	226497	19.80 ug/L		100
68) 4-Methyl-2-pentanone	7.764	43	378267	34.95 ug/L		78
70) Toluene	7.922	91	563275	23.50 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	212163	20.60 ug/L		96
73) Ethyl methacrylate	8.358	69	244395	21.79 ug/L		100
74) 1,1,2-Trichloroethane	8.437	97	142353	21.66 ug/L		97
75) Tetrachloroethene	8.459	166	136869	22.69 ug/L		99
76) 1,3-Dichloropropane	8.573	76	231146	21.18 ug/L		98
77) 2-Hexanone	8.666	43	194366	22.57 ug/L		98
78) Chlorodibromomethane	8.752	129	138601	19.28 ug/L		99
79) Butyl acetate	8.803	43	314611	23.15 ug/L		99
80) 1,2-Dibromoethane	8.824	107	154808	22.80 ug/L		96
81) Chlorobenzene	9.218	112	350769	22.77 ug/L		98
82) 1,1,1,2-Tetrachloroethane	9.297	131	123245	20.66 ug/L		96
83) Ethylbenzene	9.304	91	580138	20.82 ug/L		97
84) m/p-Xylene	9.404	91	903215	40.70 ug/L		96
85) Nonane	9.461	43	82632	25.12 ug/L		95
86) Styrene	9.669	104	391224	20.80 ug/L		99
87) o-Xylene	9.655	91	514053	20.99 ug/L		96
88) Cyclohexanone	9.913	55	2442	Below Cal	#	37
89) Bromoform	9.777	173	99045	18.02 ug/L		99
90) Isopropylbenzene	9.891	105	587660	20.89 ug/L		97
92) Bromobenzene	10.063	77	246169	21.55 ug/L		99
93) 1,1,2,2-Tetrachloroethane	10.092	83	246746	22.73 ug/L		98
94) 1,2,3-Trichloropropane	10.113	110	68268	19.94 ug/L		94
95) trans-1,4-Dichloro-2-b...	10.106	53	64997	18.02 ug/L		98
96) n-Propylbenzene	10.135	91	695424	20.35 ug/L		99
97) 2-Chlorotoluene	10.178	91	403434	23.67 ug/L		96
98) 4-Chlorotoluene	10.249	91	465953	20.02 ug/L		98
99) 1,3,5-Trimethylbenzene	10.242	105	484638	20.27 ug/L		98
100) tert-Butylbenzene	10.414	91	336238	22.48 ug/L		96
101) 1,2,4-Trimethylbenzene	10.443	105	474017	19.09 ug/L		97
102) sec-Butylbenzene	10.529	105	590217	20.37 ug/L		97
104) 1,3-Dichlorobenzene	10.593	146	281558	22.39 ug/L		98
105) p-Isopropyltoluene	10.615	119	501483	24.44 ug/L		97
106) 1,4-Dichlorobenzene	10.643	146	260610	21.50 ug/L		99
107) 1,2,3-Trimethylbenzene	10.658	105	477833	23.24 ug/L		98
108) Benzyl chloride	10.249	91	465953	20.49 ug/L		98
109) 1,2-Dichlorobenzene	10.830	146	268628	21.87 ug/L		99
110) n-Butylbenzene	10.822	91	433441	19.58 ug/L		97
111) Hexachloroethane	10.966	117	83136	17.93 ug/L		99
112) 1,2-Dibromo-3-chloropr...	11.224	157	74119	21.60 ug/L		98
114) 1,2,4-Trichlorobenzene	11.610	180	184954	19.86 ug/L		99

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112750.D
Acq On : 28 Nov 2020 1:30 am
Operator : js
Sample : 20111800-04F MS DF500
Misc : IS 200-21532
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Nov 28 12:03:08 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

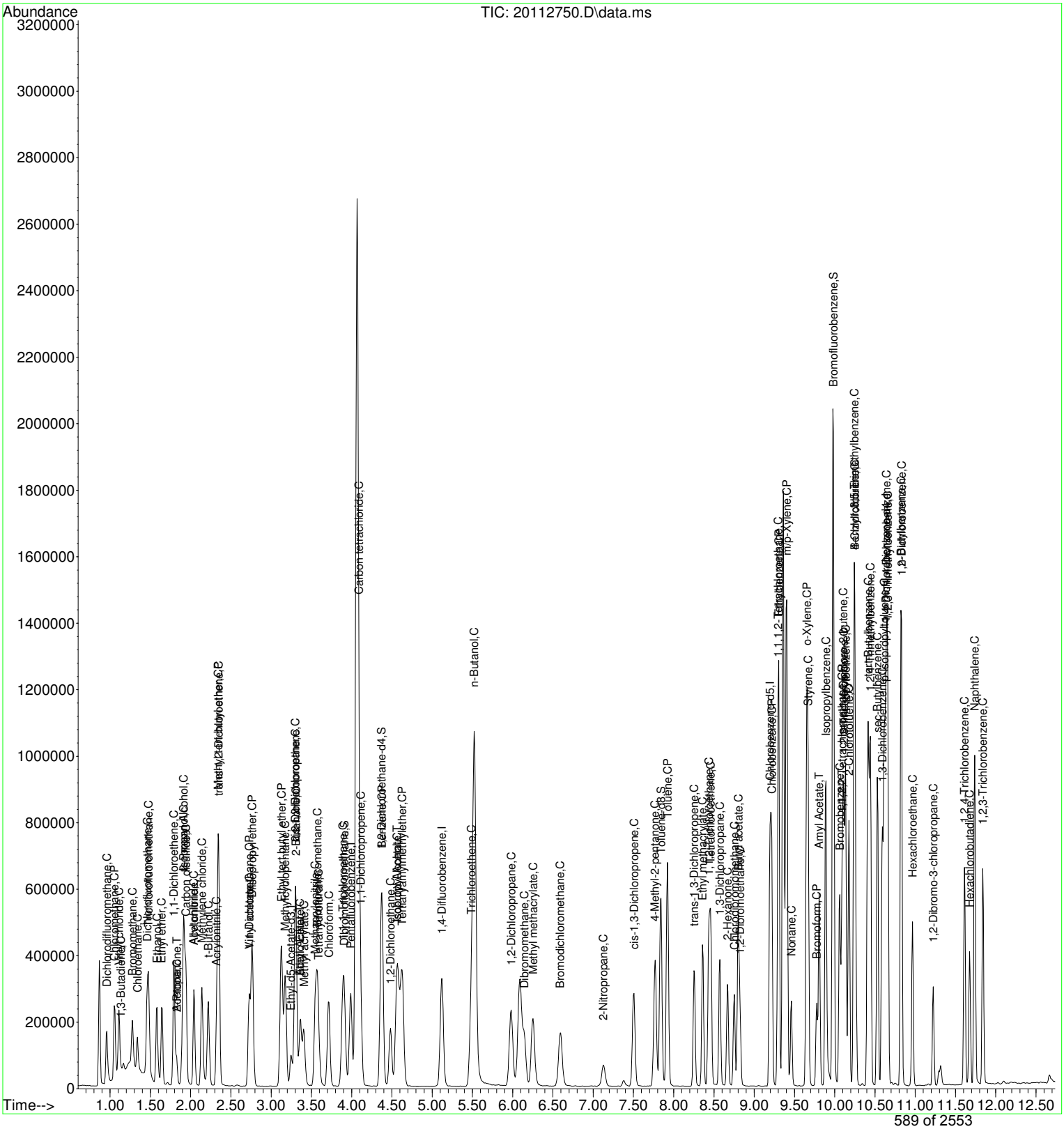
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) Hexachlorobutadiene	11.675	225	62726	19.90	ug/L	99
116) Naphthalene	11.739	128	699669	19.47	ug/L	98
117) 1,2,3-Trichlorobenzene	11.840	180	172713	19.39	ug/L	99
118) 2-Methylnaphthalene	12.291	142	800	Below Cal		89
119) 1-Methylnaphthalene	12.291	142	654	Below Cal		91
121) 2-Propanone	1.826	43	90559	23.21	ug/L	98
122) Isopropyl Alcohol	1.912	45	553038	418.46	ug/L	97
123) Acetic Ether	3.359	43	240929	20.10	ug/L	99
124) Isopropyl Acetate	4.562	61	81250	18.81	ug/L	98
125) Amyl Acetate	9.805	43	283435	17.65	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

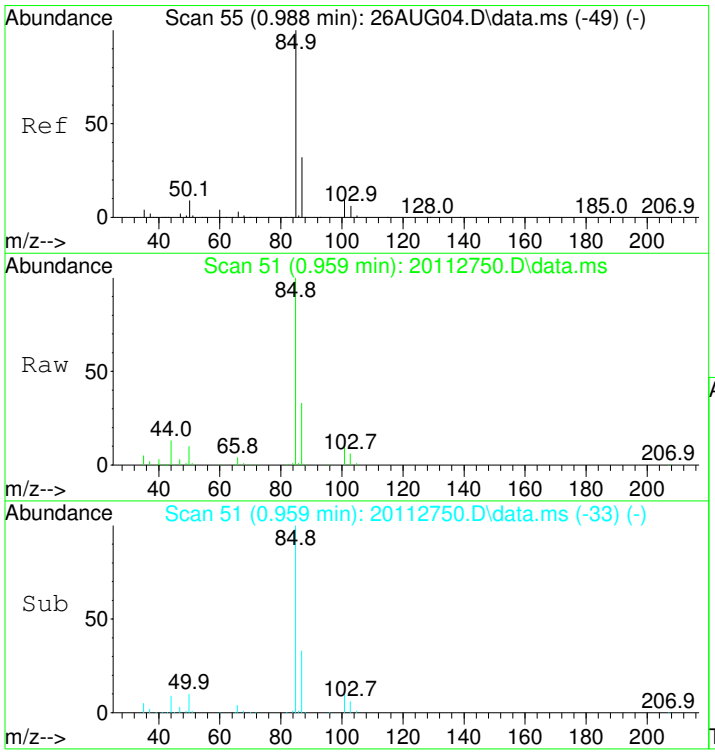
1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112750.D
Acq On : 28 Nov 2020 1:30 am
Operator : js
Sample : 20111800-04F MS DF500
Misc : IS 200-21532
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Nov 28 12:03:08 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration



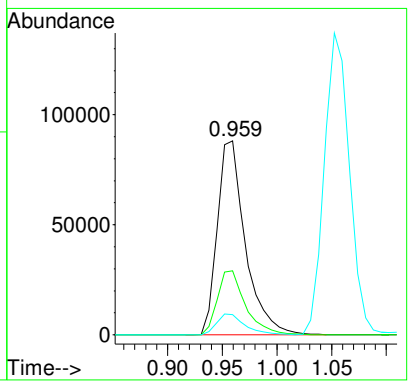
589 of 2553

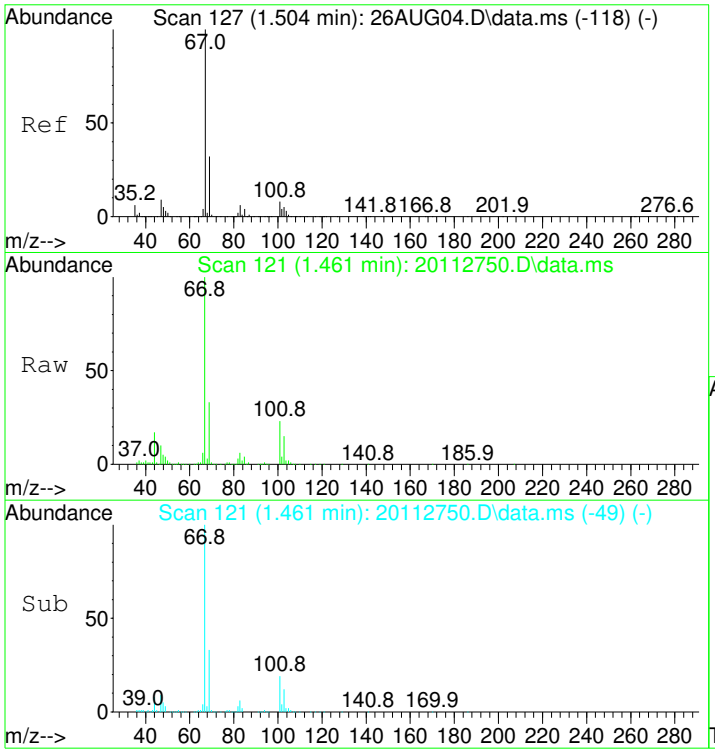


#2
Dichlorodifluoromethane
Concen: 26.45 ug/L
RT: 0.959 min Scan# 51
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 85 Resp: 157335

Ion	Ratio	Lower	Upper
85	100		
87	33.2	3.6	63.6
50	10.9	0.0	40.5

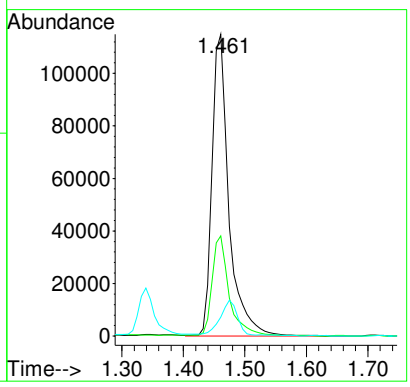


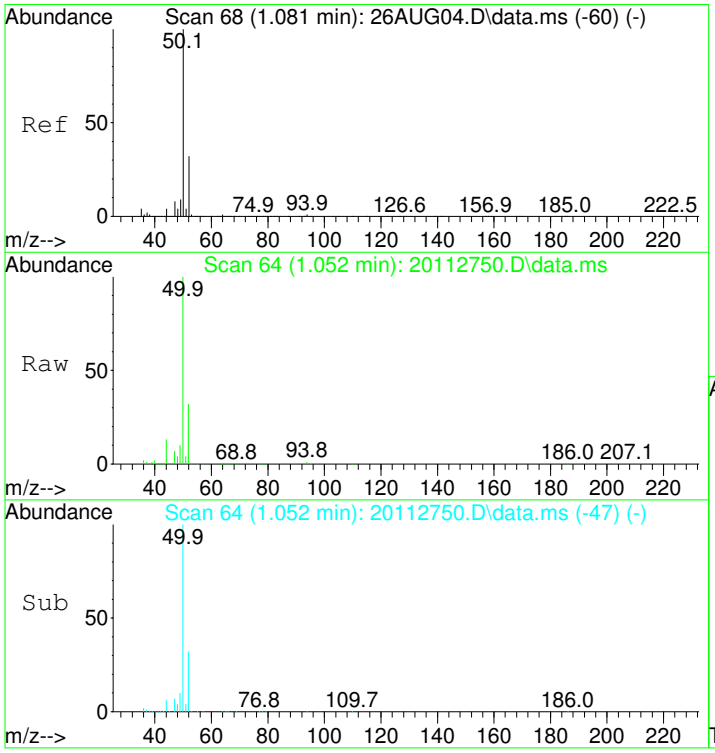


#3
Dichlorofluoromethane
Concen: 16.39 ug/L
RT: 1.461 min Scan# 121
Delta R.T. 0.015 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 67 Resp: 219514

Ion	Ratio	Lower	Upper
67	100		
69	33.0	23.7	44.1
66	13.1	8.1	15.0

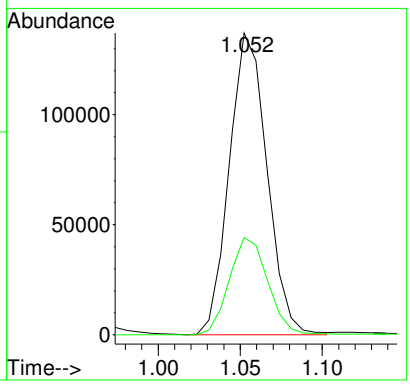


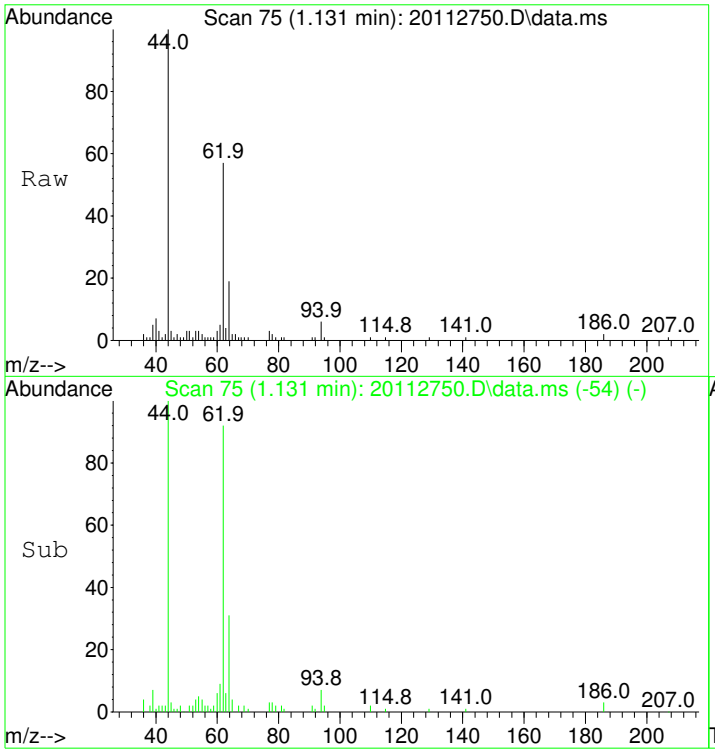


#4
Chloromethane
Concen: 17.03 ug/L
RT: 1.052 min Scan# 64
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 50 Resp: 219741

Ion	Ratio	Lower	Upper
50	100		
52	33.0	4.9	64.9

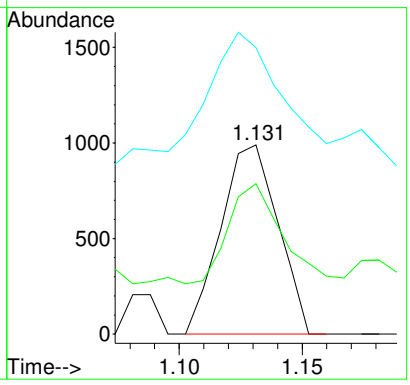


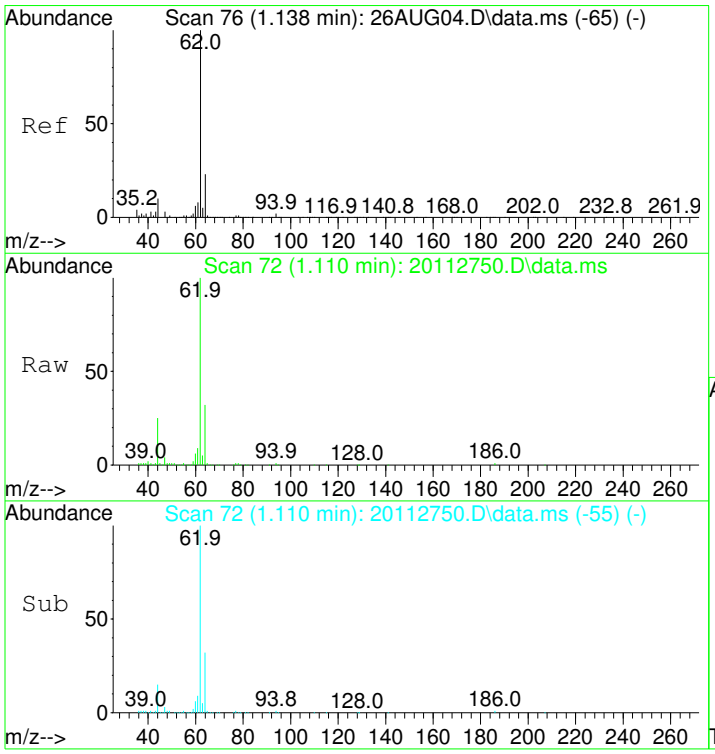


#5
1,3-Butadiene
Concen: 80.52 ug/L
RT: 1.131 min Scan# 75
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 54 Resp: 1602

Ion	Ratio	Lower	Upper
54	100		
53	63.2	0.0	30.0#
39	450.7	322.9	382.9#

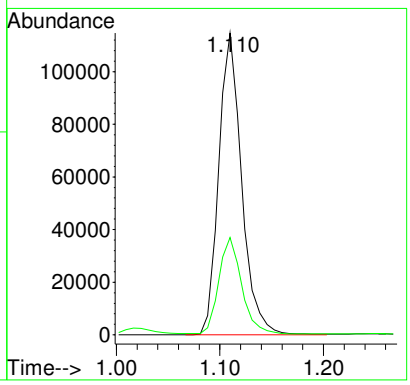


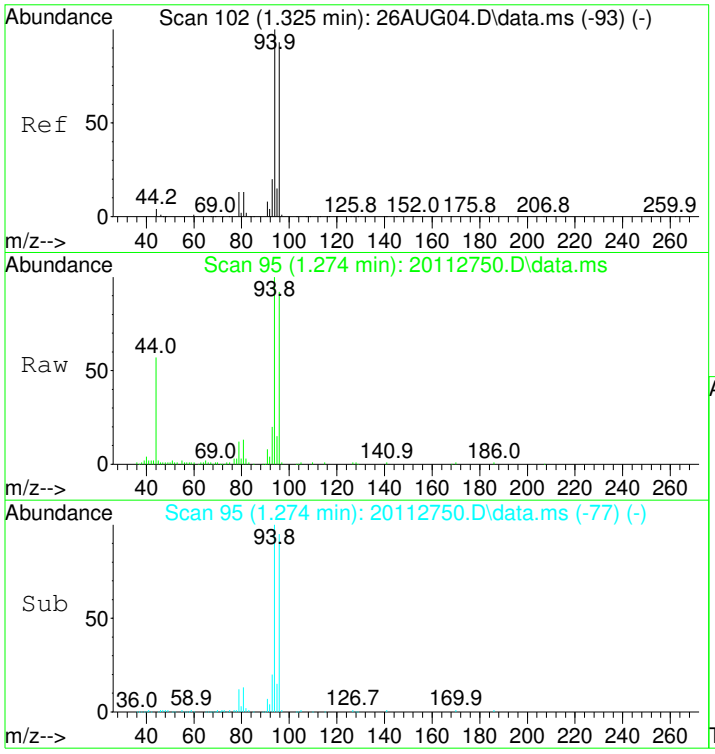


#6
Vinyl chloride
Concen: 22.53 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 62 Resp: 177057

Ion	Ratio	Lower	Upper
62	100		
64	31.8	1.9	61.9

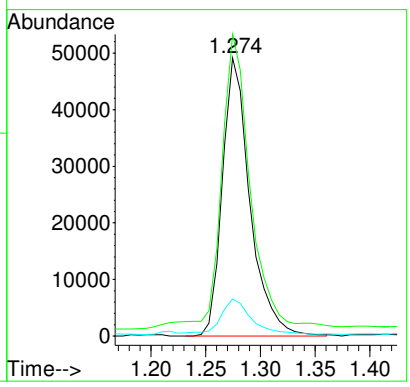


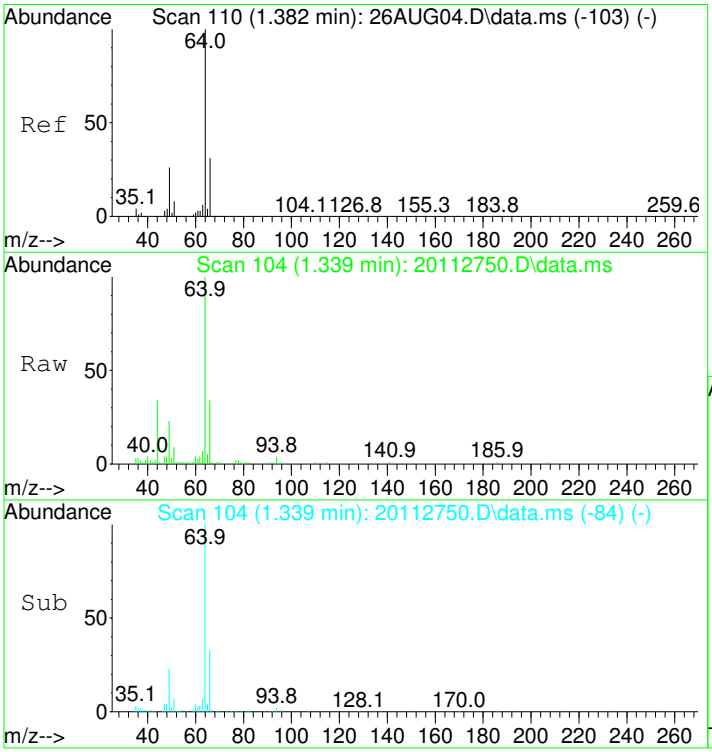


#7
Bromomethane
Concen: 71.29 ug/L
RT: 1.274 min Scan# 95
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 96 Resp: 86508

Ion	Ratio	Lower	Upper
96	100		
94	111.8	103.4	163.4
79	13.6	0.0	49.6

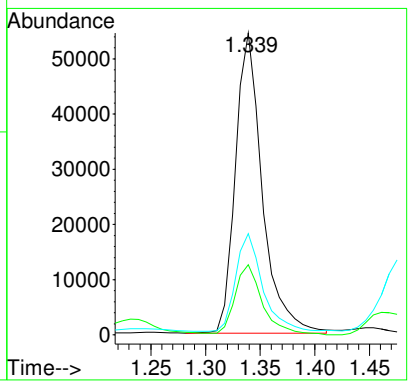


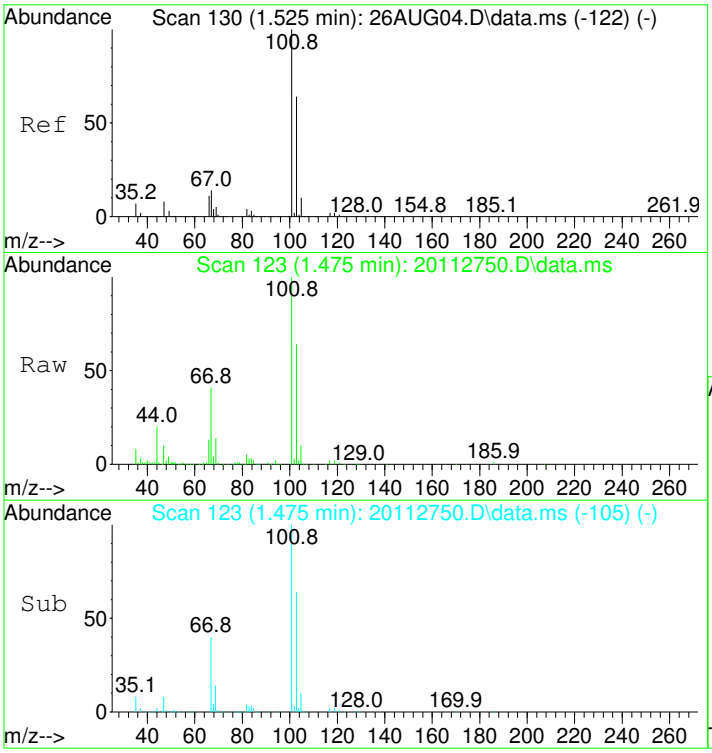


#8
Chloroethane
Concen: 27.97 ug/L
RT: 1.339 min Scan# 104
Delta R.T. 0.022 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 64 Resp: 93237

Ion	Ratio	Lower	Upper
64	100		
49	24.1	0.0	41.3
66	32.2	0.0	52.2

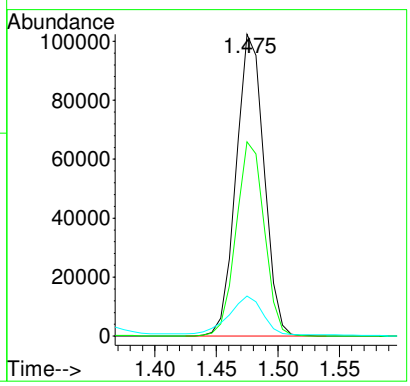


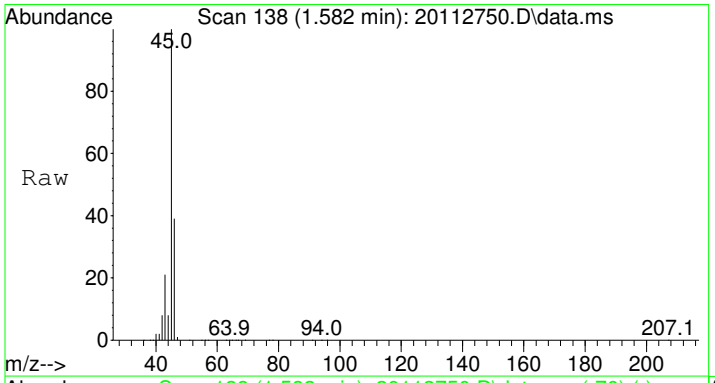


#9
Trichlorofluoromethane
Concen: 17.41 ug/L
RT: 1.475 min Scan# 123
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:101 Resp: 161275

Ion	Ratio	Lower	Upper
101	100		
103	64.8	45.1	85.1
66	16.1	0.0	35.4

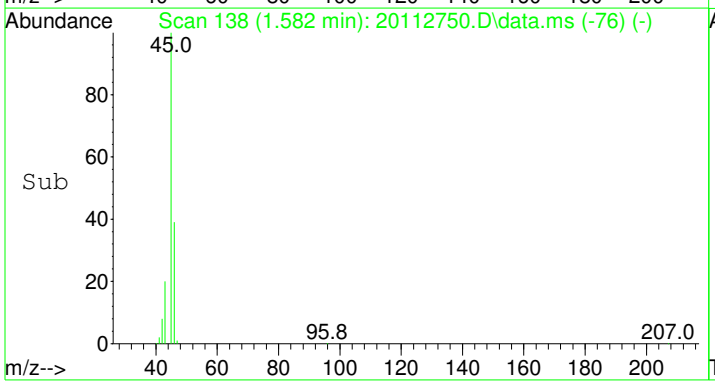


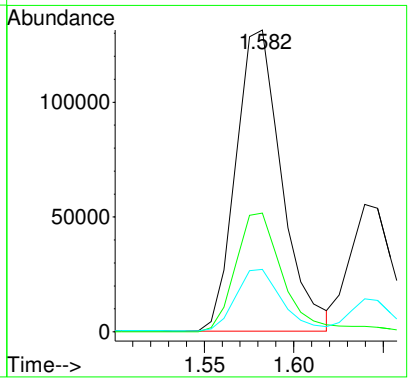


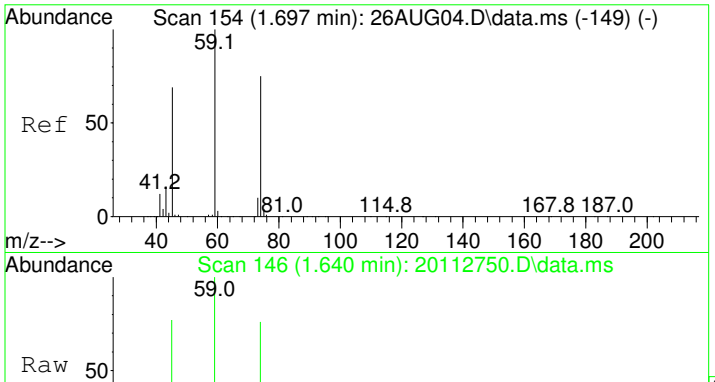
#10
Ethanol
Concen: 350.55 ug/L
RT: 1.582 min Scan# 138
Delta R.T. -0.058 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 45 Resp: 233896

Ion	Ratio	Lower	Upper
45	100		
46	41.9	0.0	57.3
43	20.6	0.0	52.4



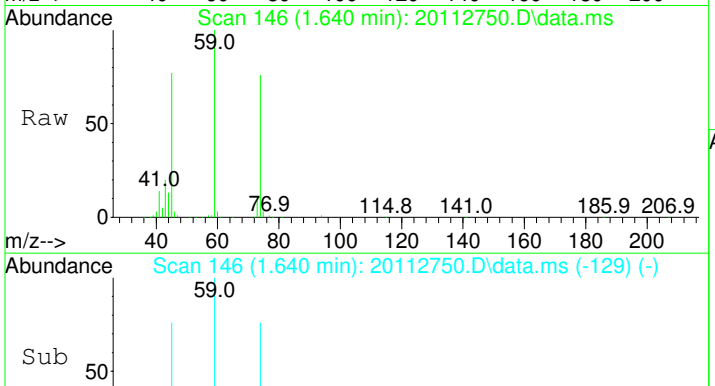


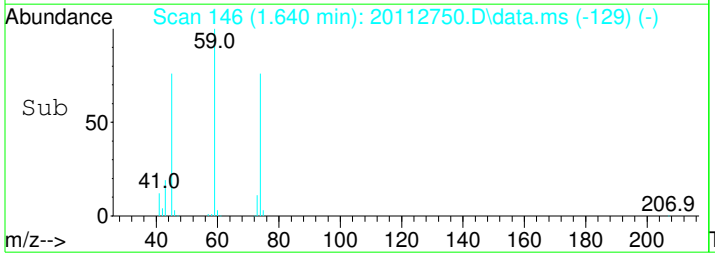


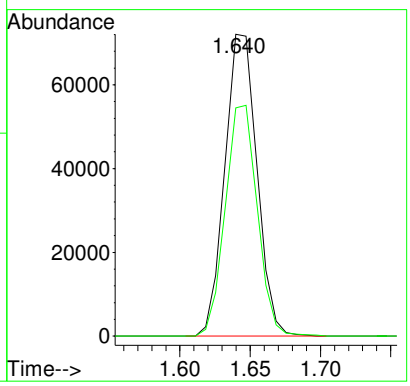
#11
Ethyl ether
Concen: 20.58 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

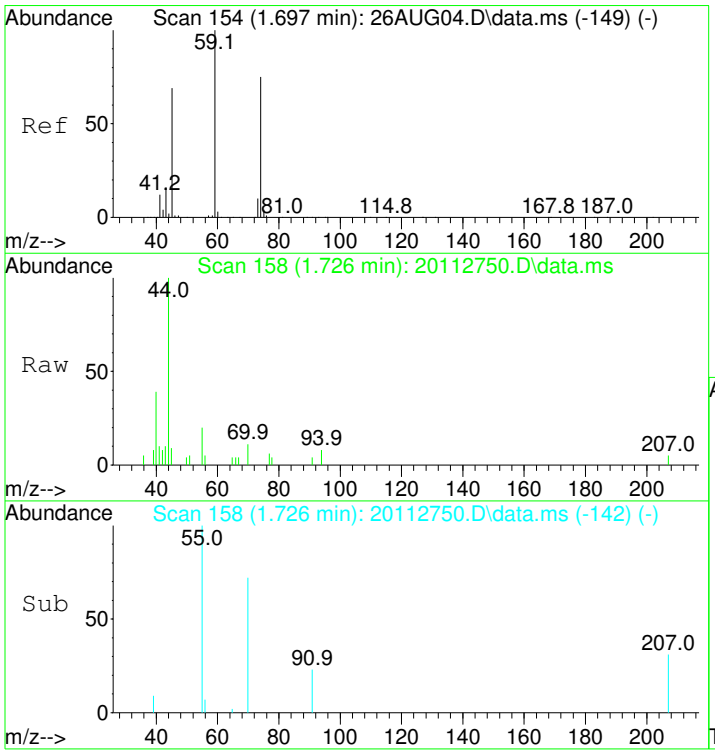
Tgt Ion: 59 Resp: 115258

Ion	Ratio	Lower	Upper
59	100		
74	76.1	42.6	102.6





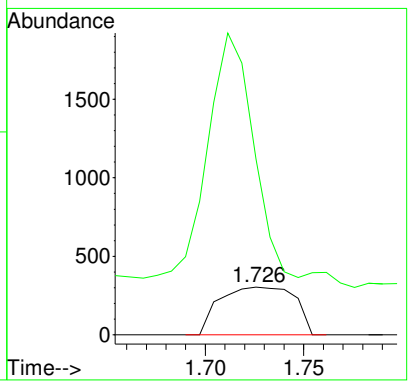


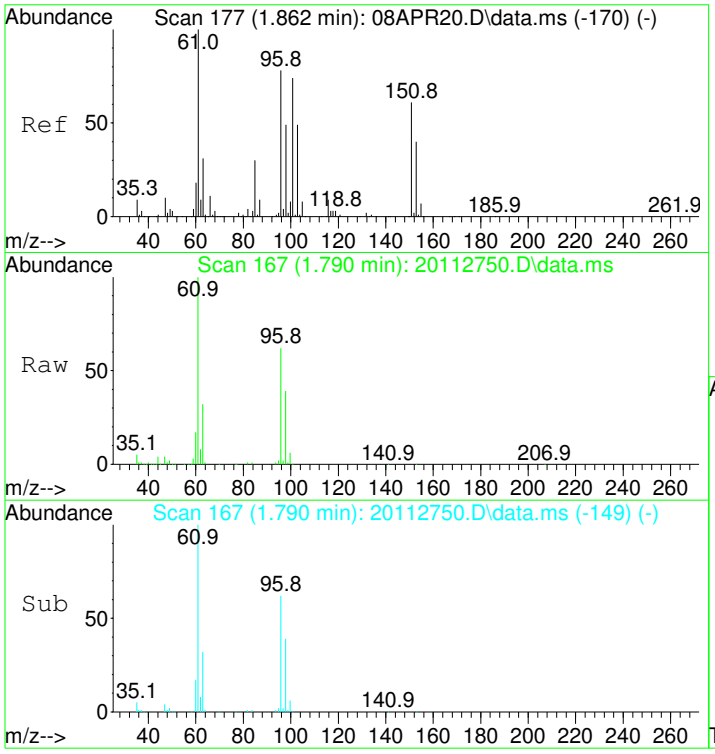


#12
Acrolein
Concen: Below Cal
RT: 1.726 min Scan# 158
Delta R.T. -0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 56 Resp: 807

Ion	Ratio	Lower	Upper
56	100		
55	315.2	17.3	77.3#

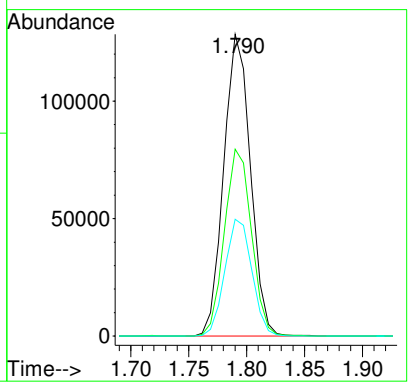


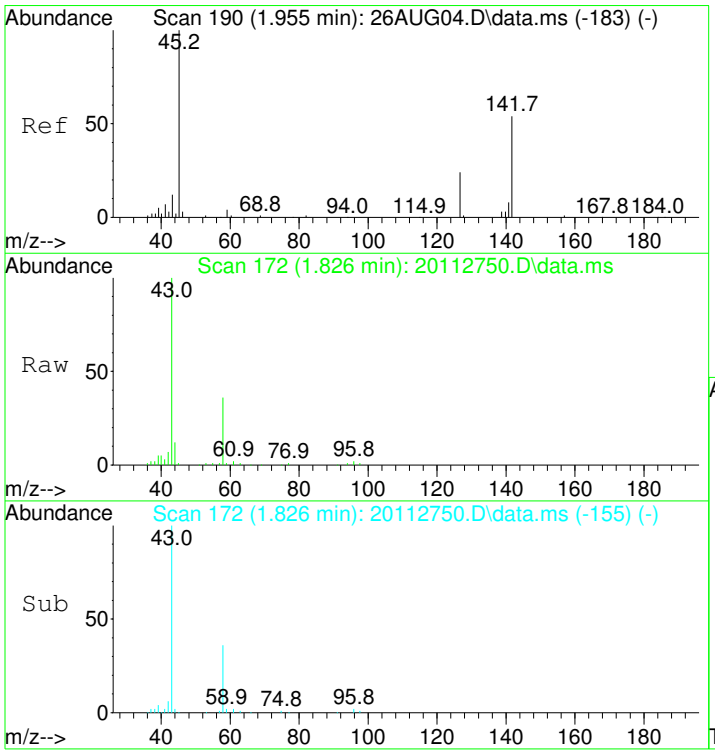


#13
1,1-Dichloroethene
Concen: 23.77 ug/L
RT: 1.790 min Scan# 167
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 61 Resp: 205773

Ion	Ratio	Lower	Upper
61	100		
96	62.8	32.6	92.6
98	39.1	10.4	70.4

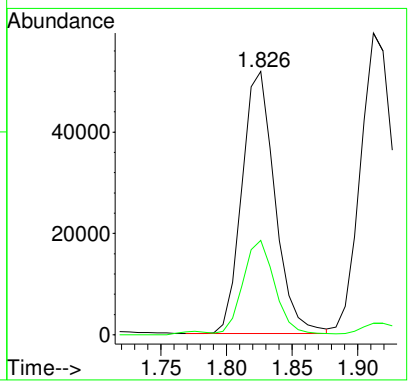


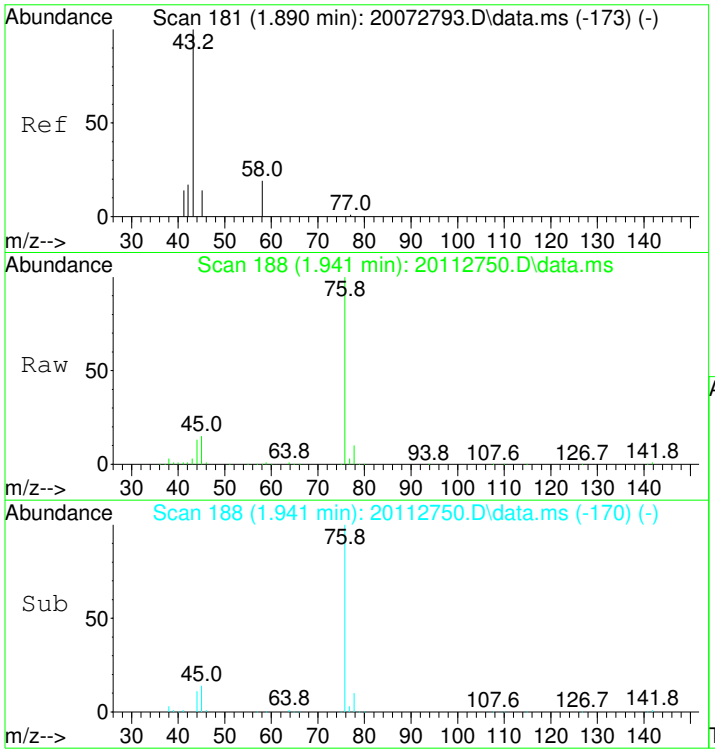


#16
Acetone
Concen: 23.38 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 90559

Ion	Ratio	Lower	Upper
43	100		
58	34.3	5.2	65.2

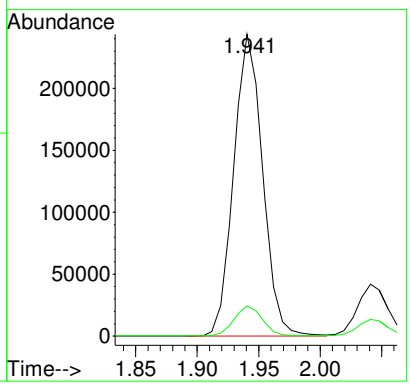


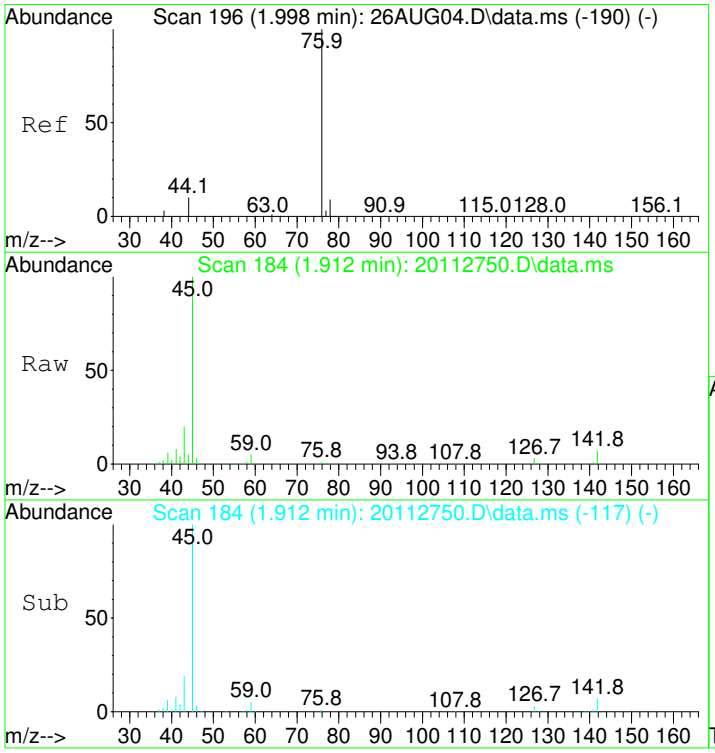


#18
Carbon disulfide
Concen: 22.98 ug/L
RT: 1.941 min Scan# 188
Delta R.T. 0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 76 Resp: 397660

Ion	Ratio	Lower	Upper
76	100		
78	9.6	0.0	39.5

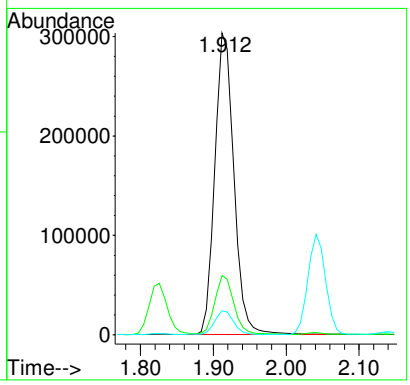


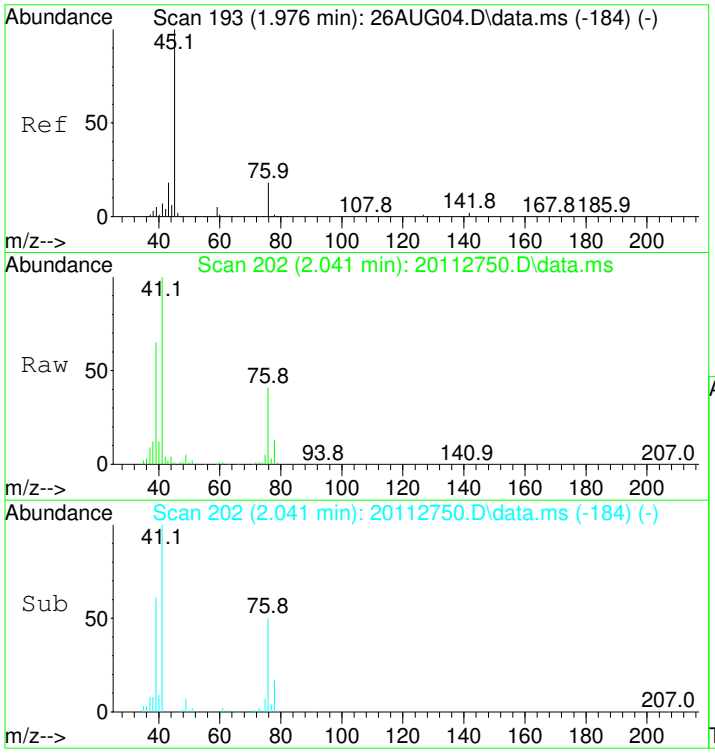


#19
2-Propanol
Concen: 417.54 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.021 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 45 Resp: 553038

Ion	Ratio	Lower	Upper
45	100		
43	19.5	0.0	48.2
41	7.7	0.0	37.1

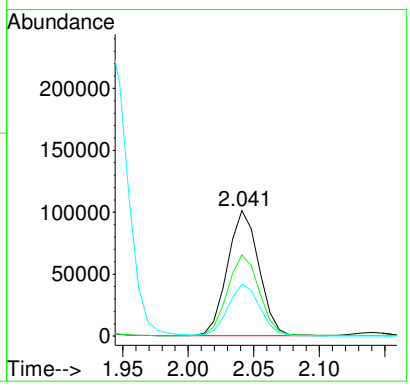


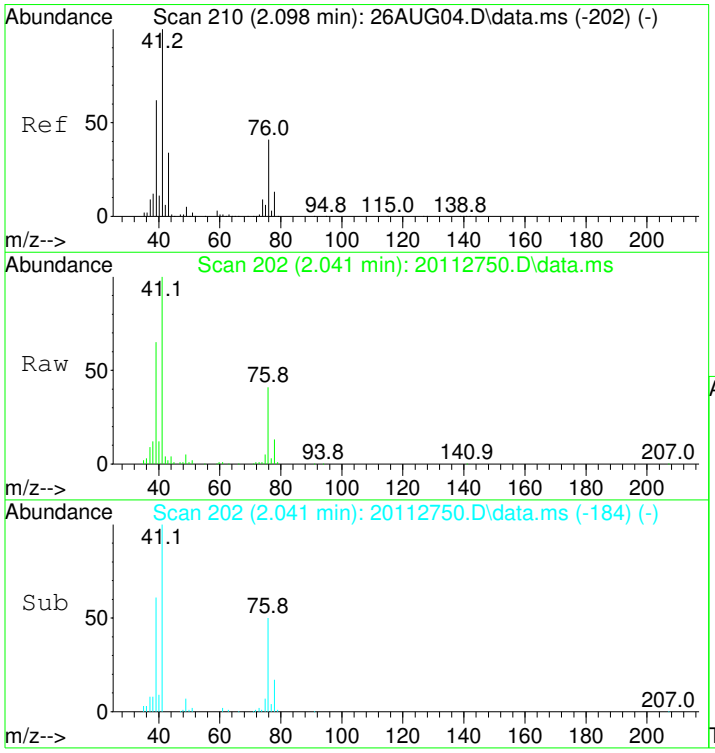


#20
Allyl chloride
Concen: 16.97 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 41 Resp: 168665

Ion	Ratio	Lower	Upper
41	100		
39	64.9	29.0	89.0
76	42.1	7.3	67.3

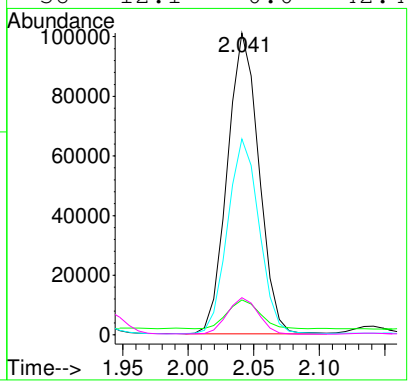


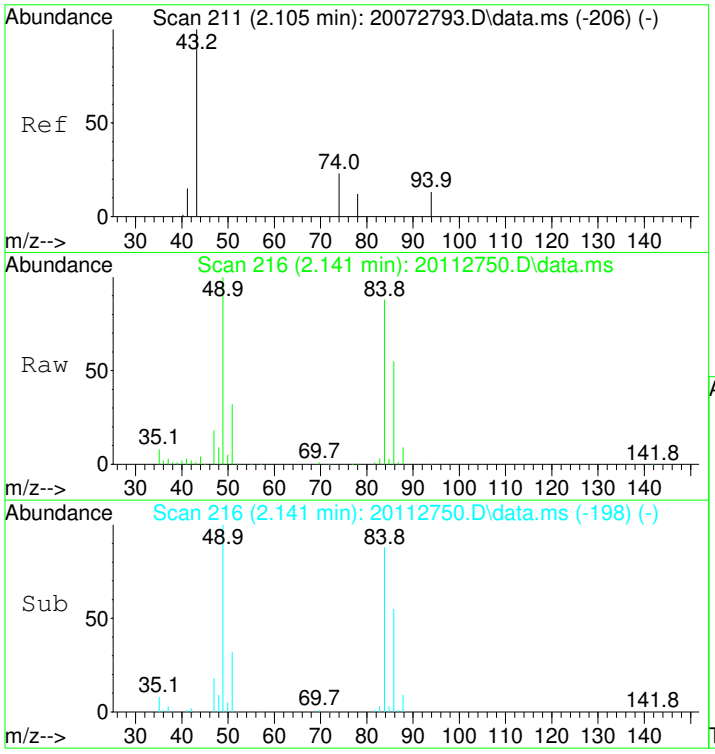


#22
Acetonitrile
Concen: 16.96 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 41 Resp: 168665

Ion	Ratio	Lower	Upper
41	100		
40	9.6	0.0	47.5
39	64.9	29.0	89.0
38	12.1	0.0	42.4

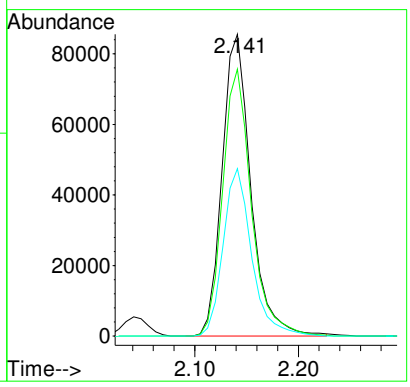


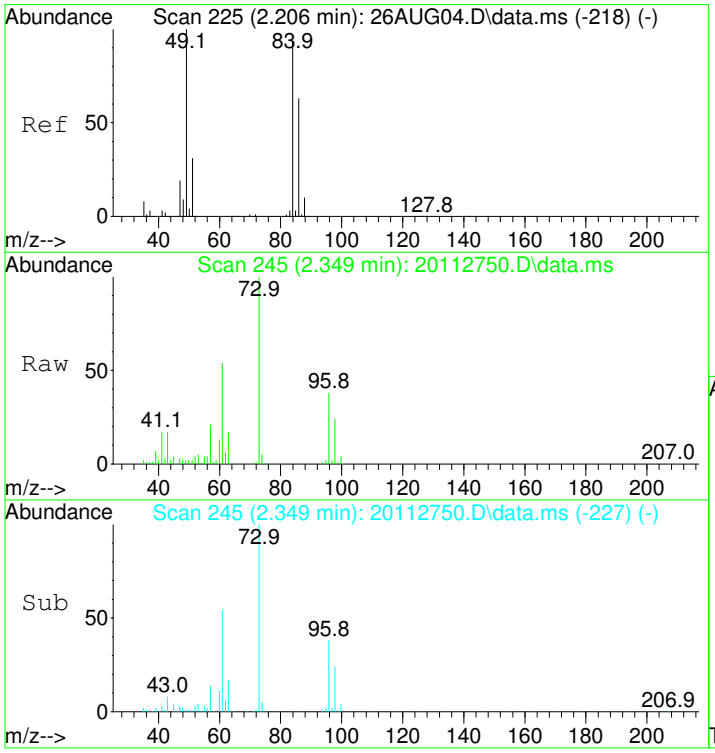


#23
Methylene chloride
Concen: 18.22 ug/L
RT: 2.141 min Scan# 216
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 49 Resp: 165800

Ion	Ratio	Lower	Upper
49	100		
84	88.3	57.4	117.4
86	54.9	27.7	87.7

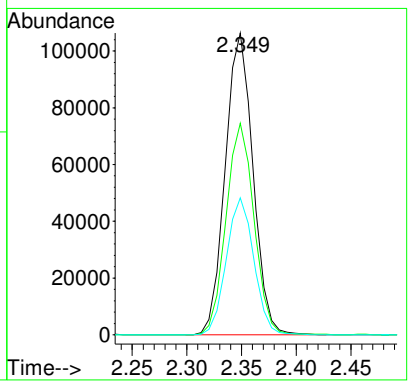


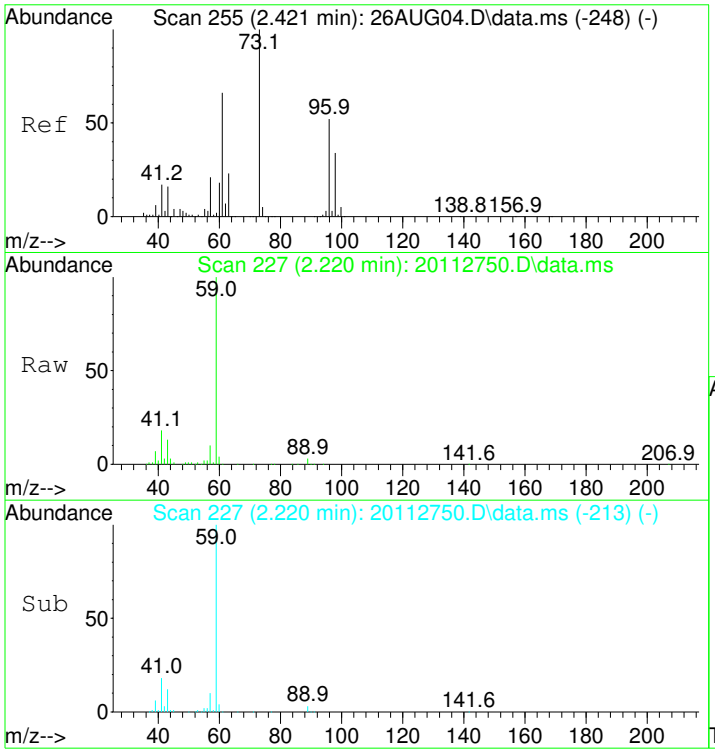


#24
trans-1,2-Dichloroethene
Concen: 22.02 ug/L
RT: 2.349 min Scan# 245
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 61 Resp: 187707

Ion	Ratio	Lower	Upper
61	100		
96	70.6	42.3	102.3
98	45.0	16.1	76.1

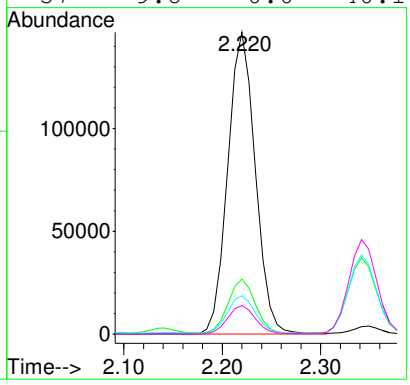


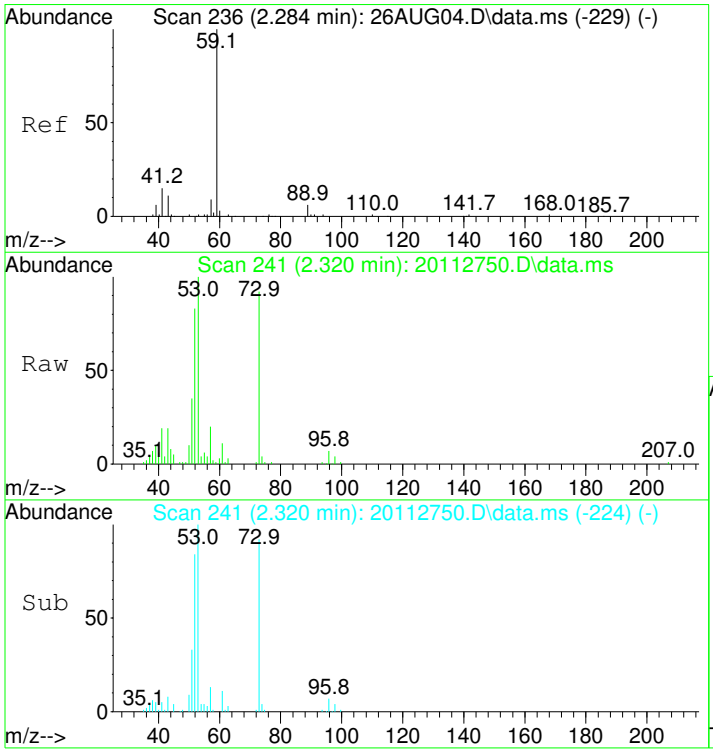


#25
t-Butanol
Concen: 109.01 ug/L
RT: 2.220 min Scan# 227
Delta R.T. -0.021 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 59 Resp: 286201

Ion	Ratio	Lower	Upper
59	100		
41	17.5	0.0	46.1
43	12.4	0.0	41.4
57	9.8	0.0	40.1

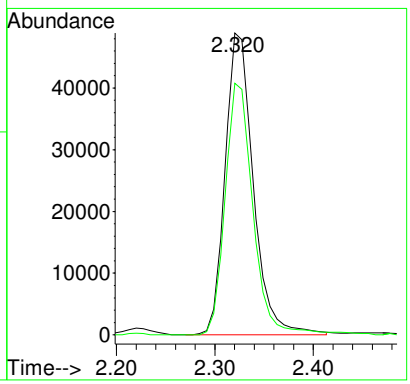


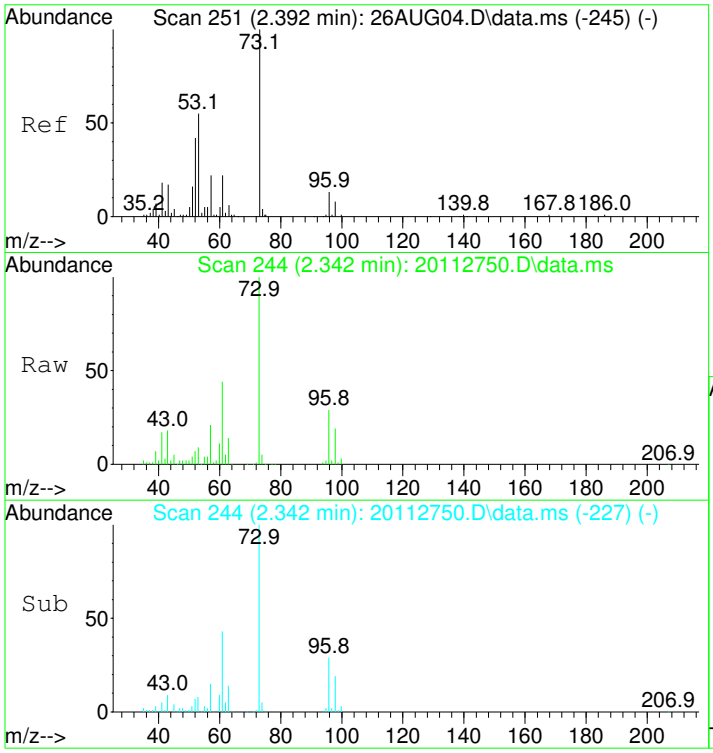


#26
Acrylonitrile
Concen: 21.70 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 53 Resp: 97747

Ion	Ratio	Lower	Upper
53	100		
52	81.7	51.9	111.9

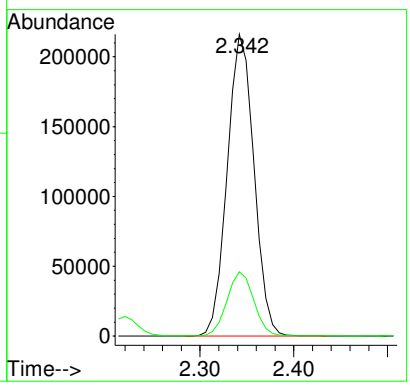


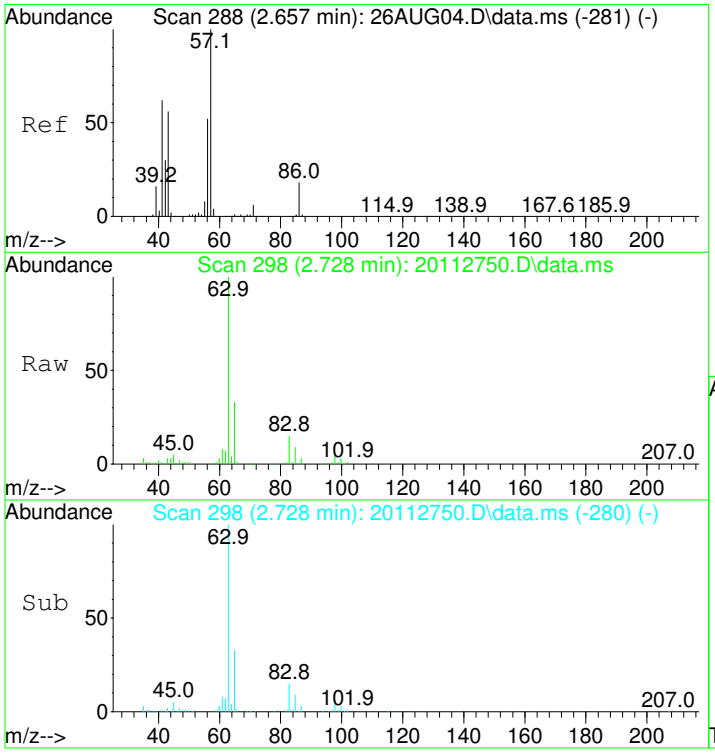


#27
Methyl tert-butyl ether
Concen: 22.17 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 73 Resp: 430243

Ion	Ratio	Lower	Upper
73	100		
57	21.1	0.0	52.4

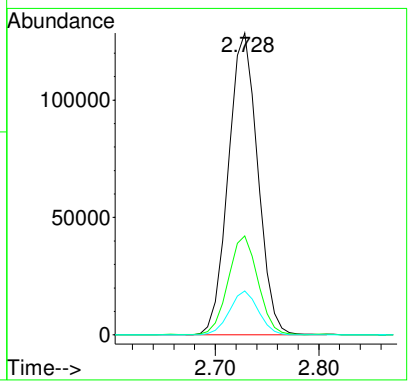


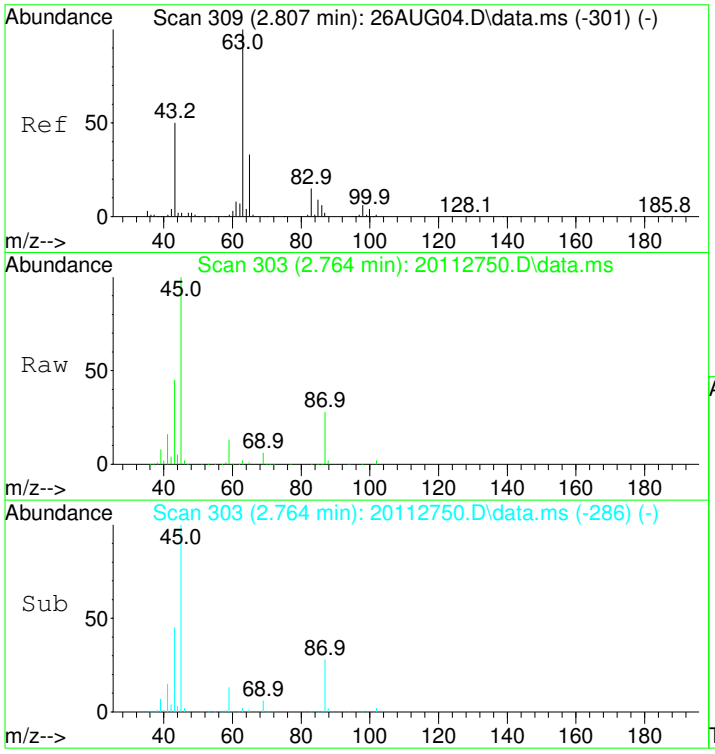


#29
1,1-Dichloroethane
Concen: 20.75 ug/L
RT: 2.728 min Scan# 298
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 63 Resp: 254182

Ion	Ratio	Lower	Upper
63	100		
65	33.1	2.8	62.8
83	14.3	0.0	43.7

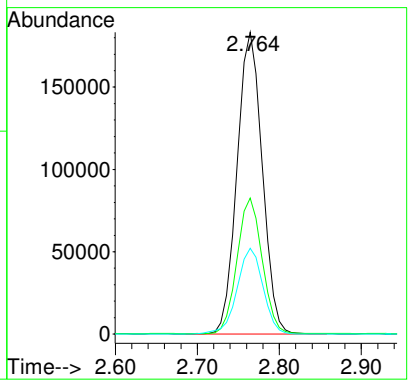


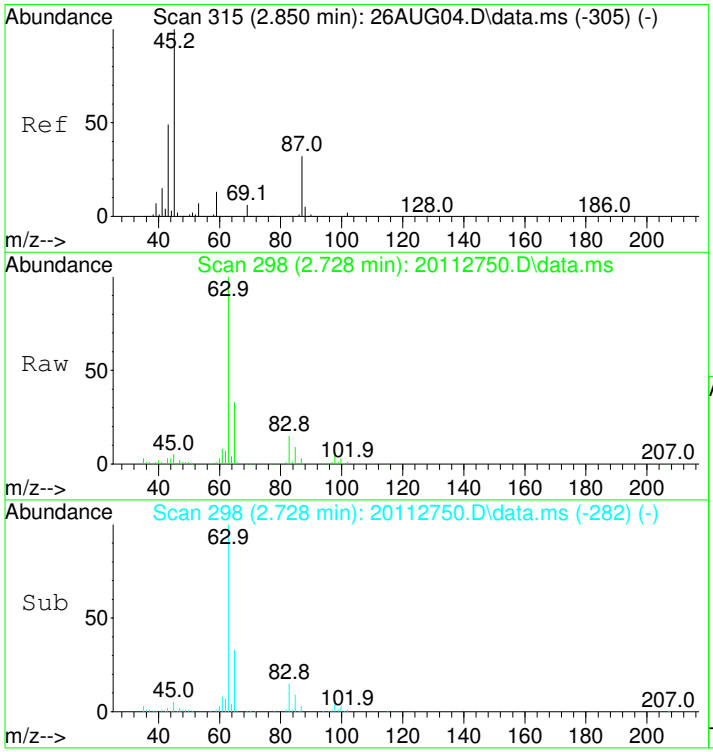


#30
Diisopropyl ether
Concen: 21.86 ug/L
RT: 2.764 min Scan# 303
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 45 Resp: 393004

Ion	Ratio	Lower	Upper
45	100		
43	44.5	79.6	147.8#
87	29.2	22.1	41.1

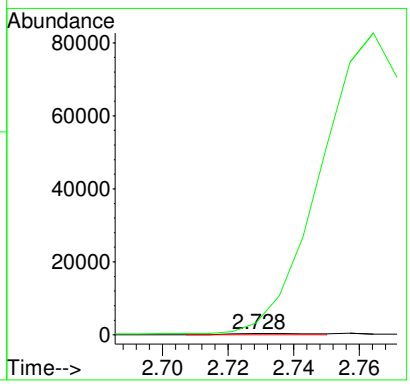


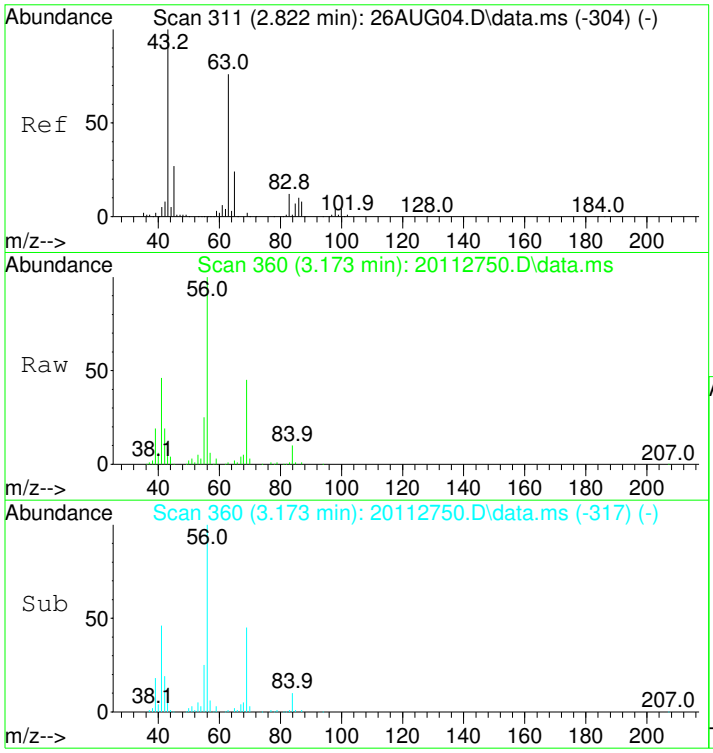


#31
Vinyl acetate
Concen: 0.39 ug/L
RT: 2.728 min Scan# 298
Delta R.T. -0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 86 Resp: 709

Ion	Ratio	Lower	Upper
86	100		
43	24679.8	1480.0	1540.0#

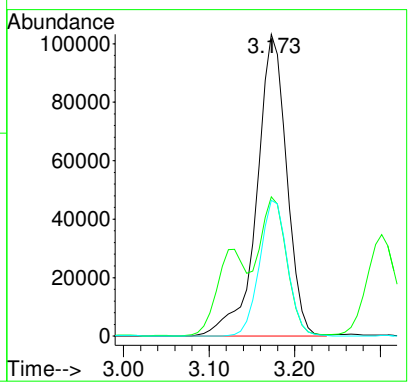


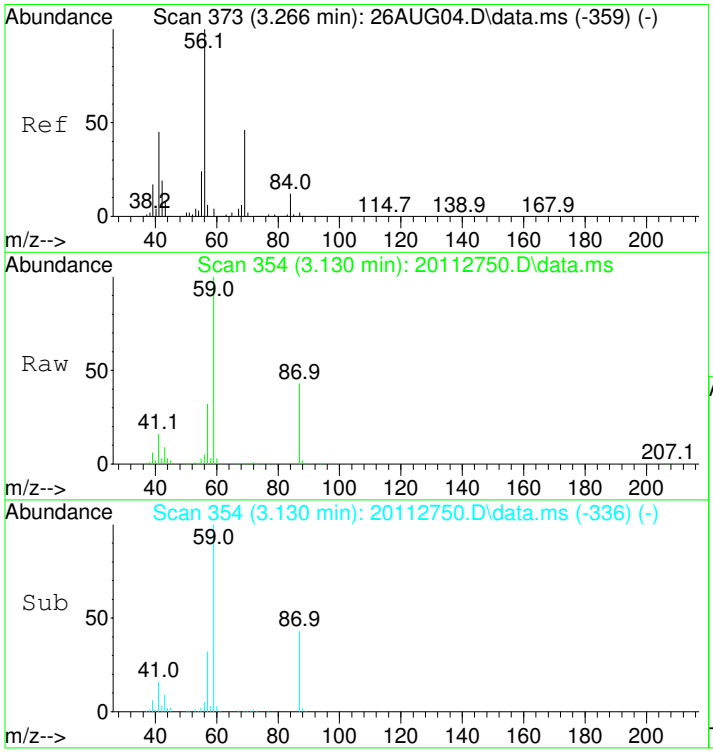


#32
Methylcyclopentane
Concen: 18.63 ug/L
RT: 3.173 min Scan# 360
Delta R.T. 0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 56 Resp: 250241

Ion	Ratio	Lower	Upper
56	100		
41	43.7	36.7	96.7
69	41.9	11.3	71.3

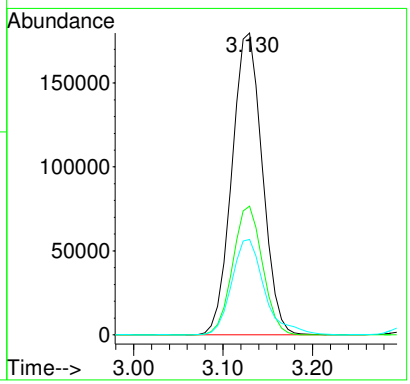


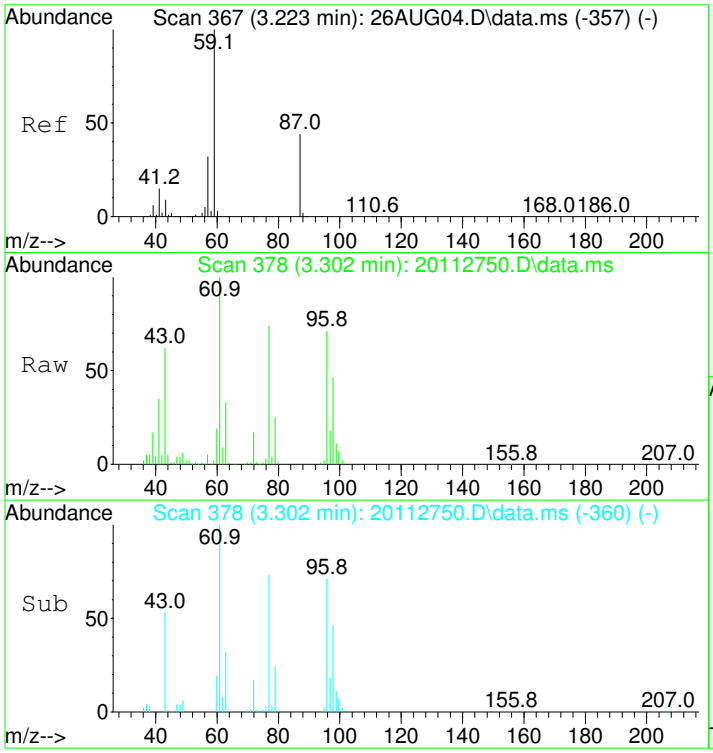


#33
Ethyl tert butyl ether
Concen: 20.75 ug/L
RT: 3.130 min Scan# 354
Delta R.T. 0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 59 Resp: 425439

Ion	Ratio	Lower	Upper
59	100		
87	41.6	12.5	72.5
57	34.1	4.4	64.4

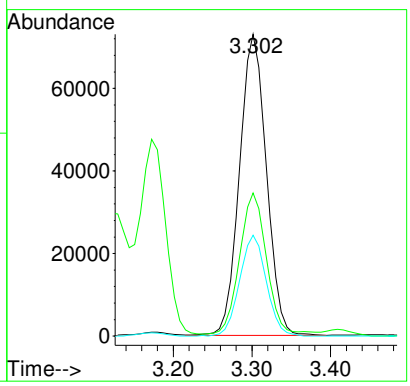


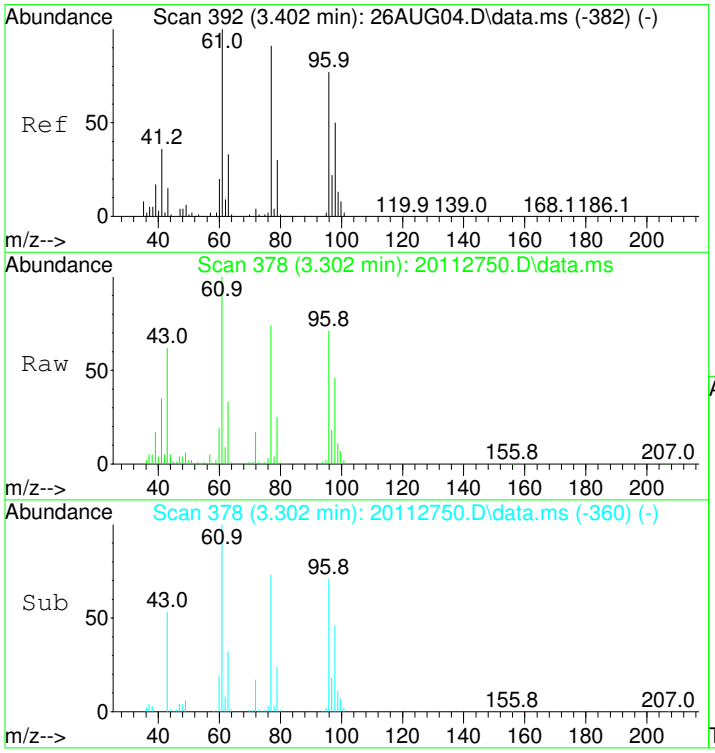


#34
2,2-Dichloropropane
Concen: 17.08 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 77 Resp: 173016

Ion	Ratio	Lower	Upper
77	100		
41	46.8	16.4	76.4
79	33.2	2.4	62.4

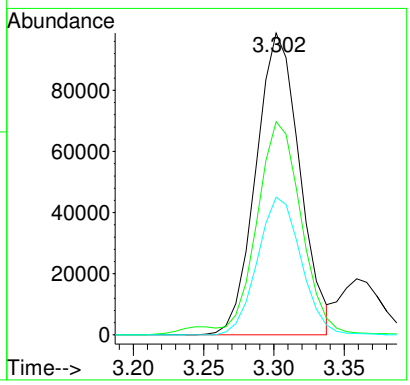


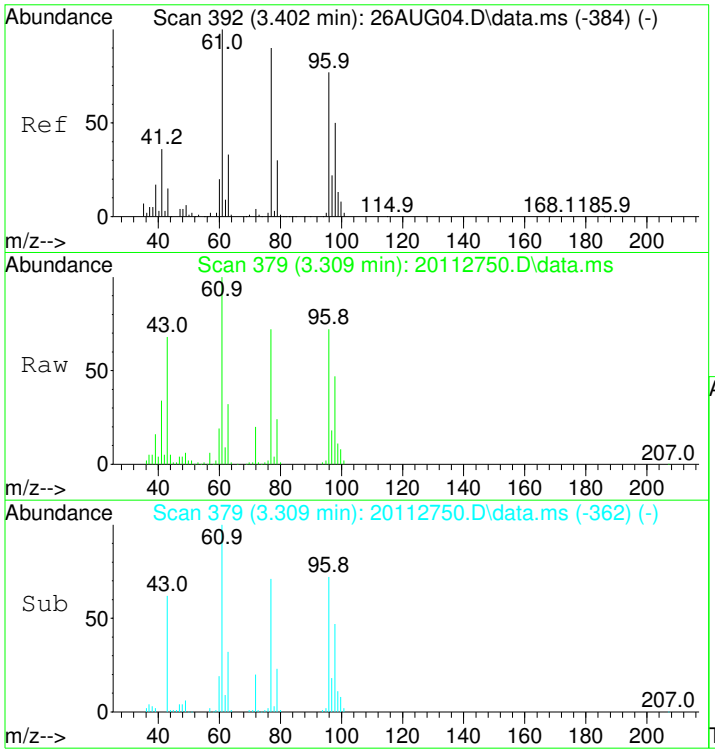


#35
cis-1,2-Dichloroethene
Concen: 20.71 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 61 Resp: 213921

Ion	Ratio	Lower	Upper
61	100		
96	73.5	39.5	99.5
98	45.3	14.9	74.9

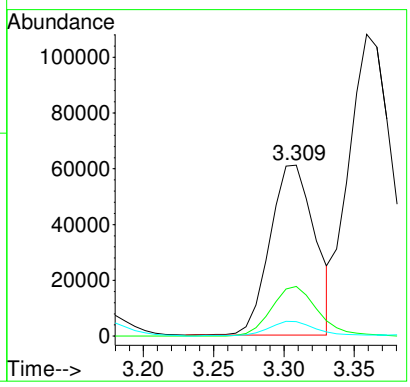


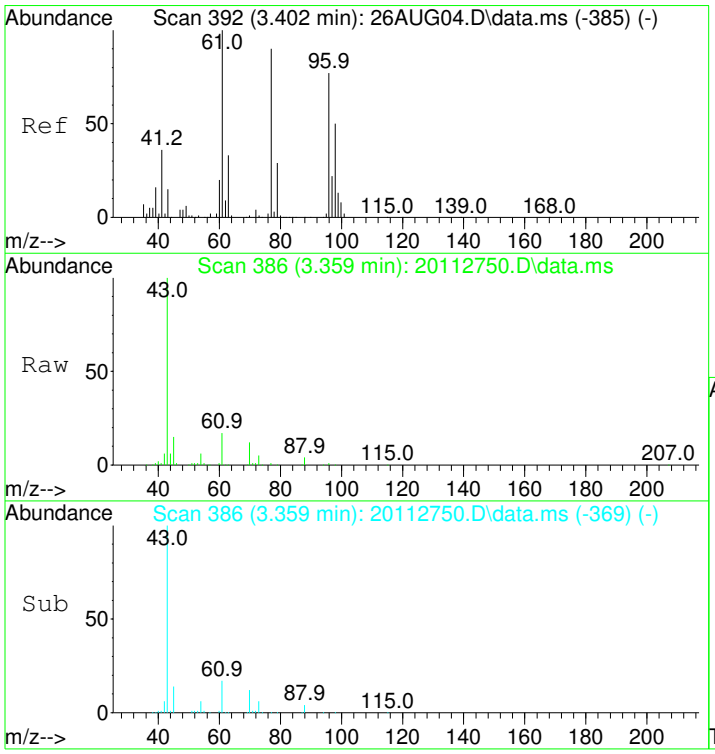


#36
2-Butanone
Concen: 22.90 ug/L
RT: 3.309 min Scan# 379
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 136158

Ion	Ratio	Lower	Upper
43	100		
72	30.1	11.0	51.0
57	9.6	0.0	28.7

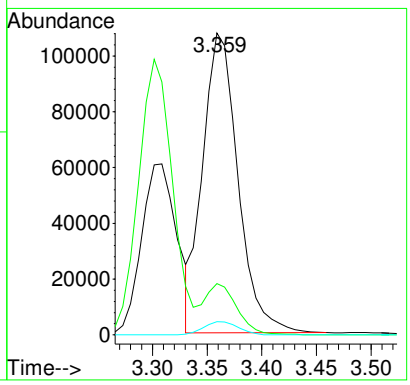


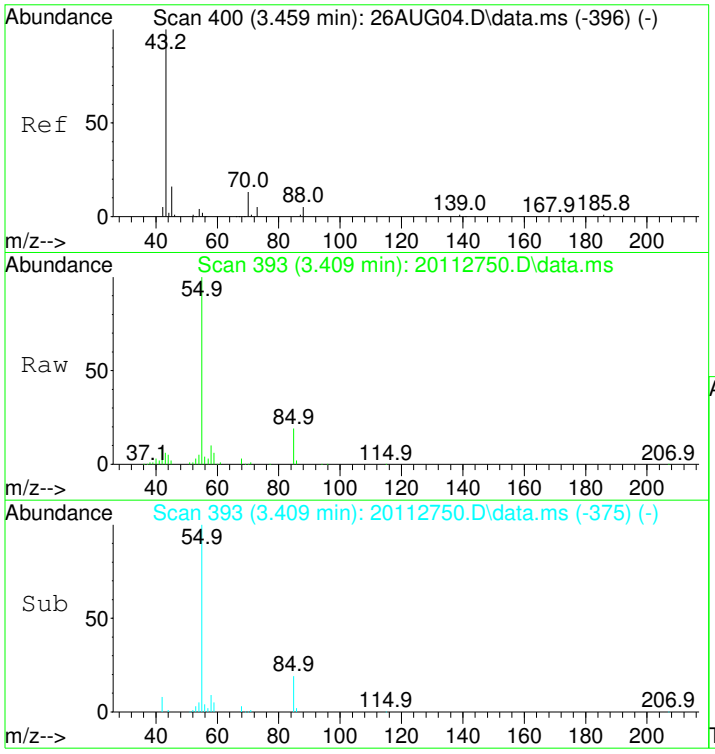


#37
Ethyl Acetate
Concen: 20.94 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 241579

Ion	Ratio	Lower	Upper
43	100		
61	14.1	0.0	34.9
88	4.3	0.0	24.3

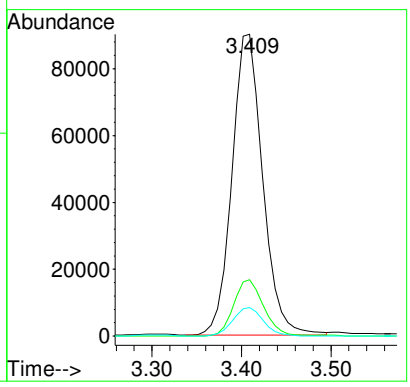


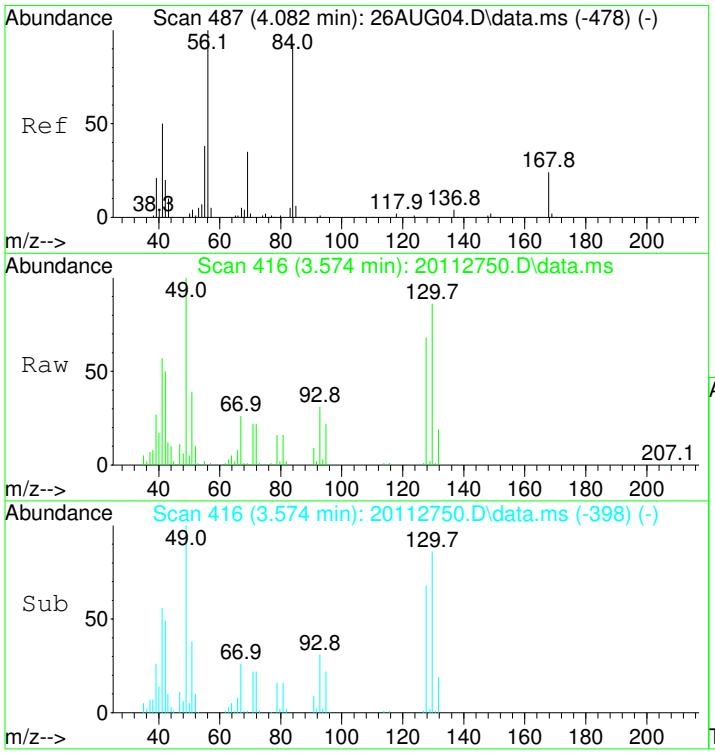


#38
Methyl acrylate
Concen: 20.94 ug/L
RT: 3.409 min Scan# 393
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 55 Resp: 215627

Ion	Ratio	Lower	Upper
55	100		
85	18.3	14.4	21.6
58	9.4	7.4	11.2

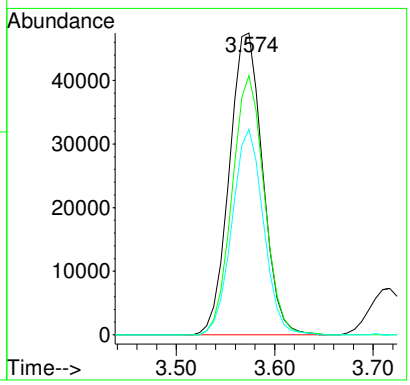


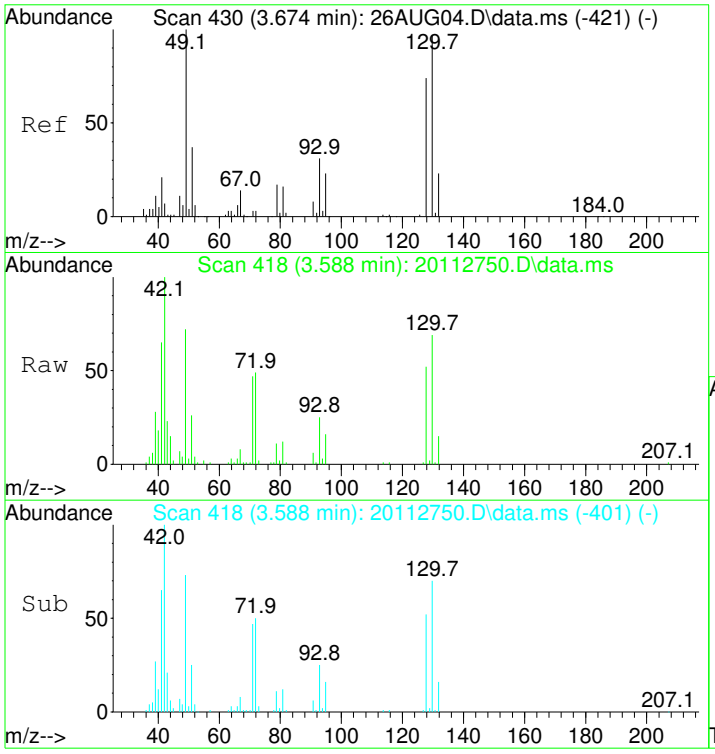


#40
Bromochloromethane
Concen: 20.84 ug/L
RT: 3.574 min Scan# 416
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 49 Resp: 111625

Ion	Ratio	Lower	Upper
49	100		
130	82.7	60.4	100.4
128	64.3	43.3	83.3

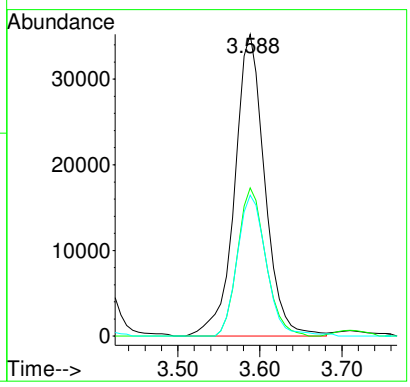


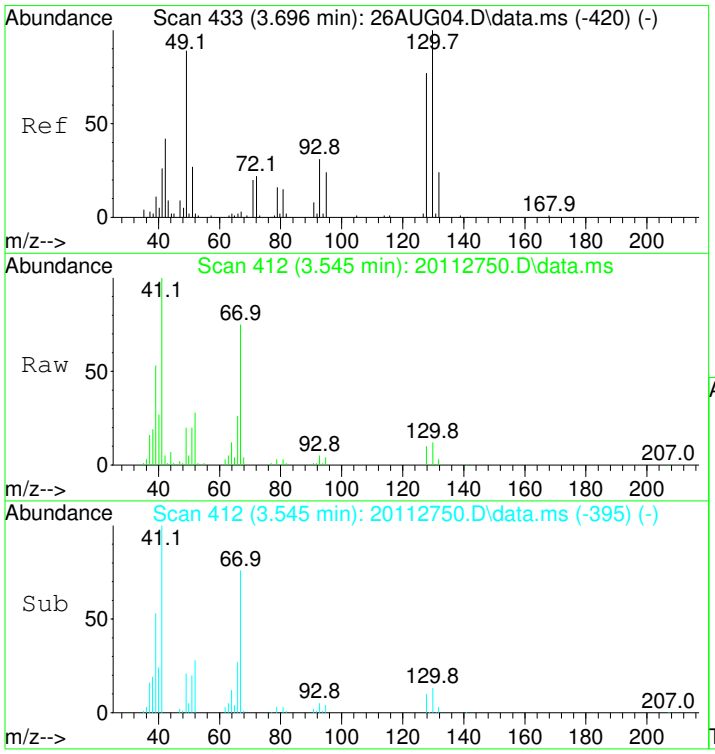


#41
Tetrahydrofuran
Concen: 20.53 ug/L
RT: 3.588 min Scan# 418
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 42 Resp: 89876

Ion	Ratio	Lower	Upper
42	100		
72	45.8	27.6	67.6
71	45.2	26.5	66.5

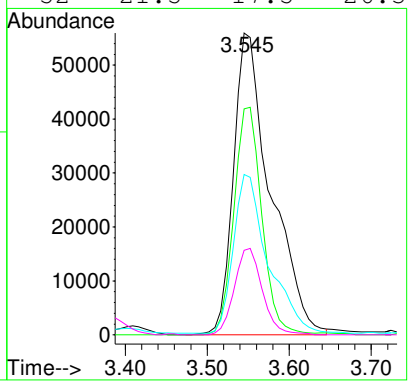


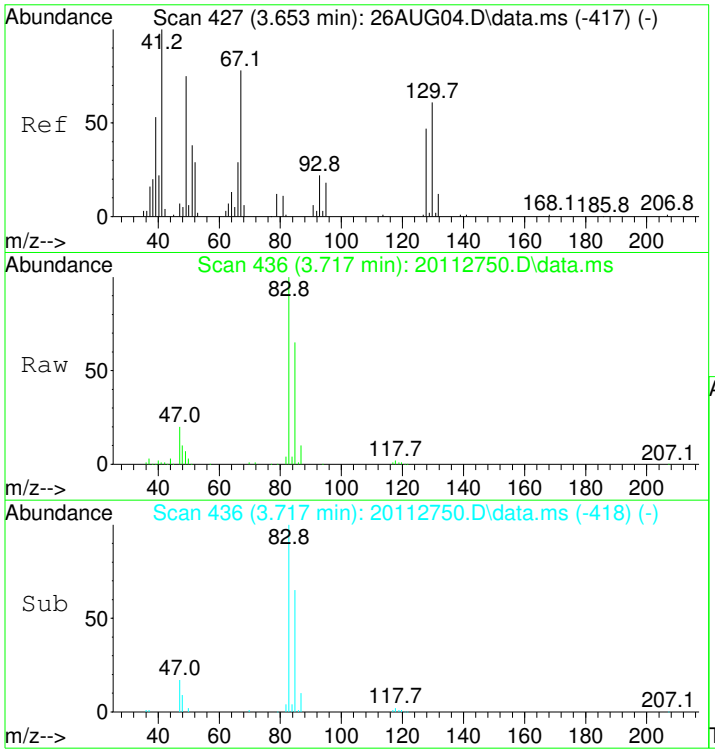


#42
Methacrylonitrile
Concen: 20.43 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 41 Resp: 176882

Ion	Ratio	Lower	Upper
41	100		
67	56.5	47.8	71.6
39	48.9	38.6	57.8
52	21.5	17.5	26.3

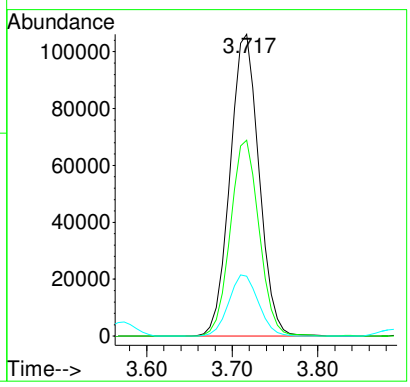


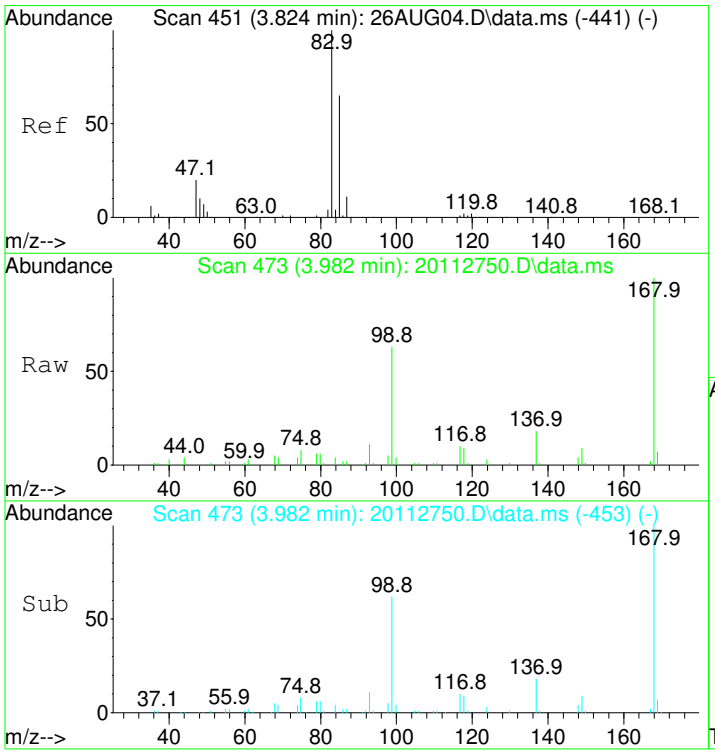


#43
Chloroform
Concen: 19.94 ug/L
RT: 3.717 min Scan# 436
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 83 Resp: 249763

Ion	Ratio	Lower	Upper
83	100		
85	64.4	46.1	86.1
47	20.8	1.2	41.2

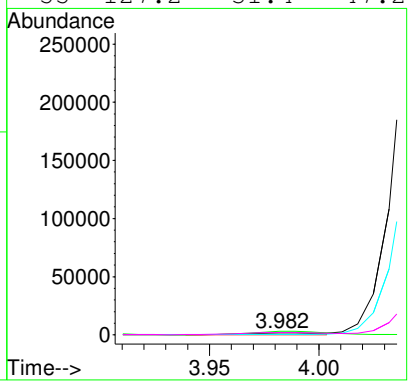


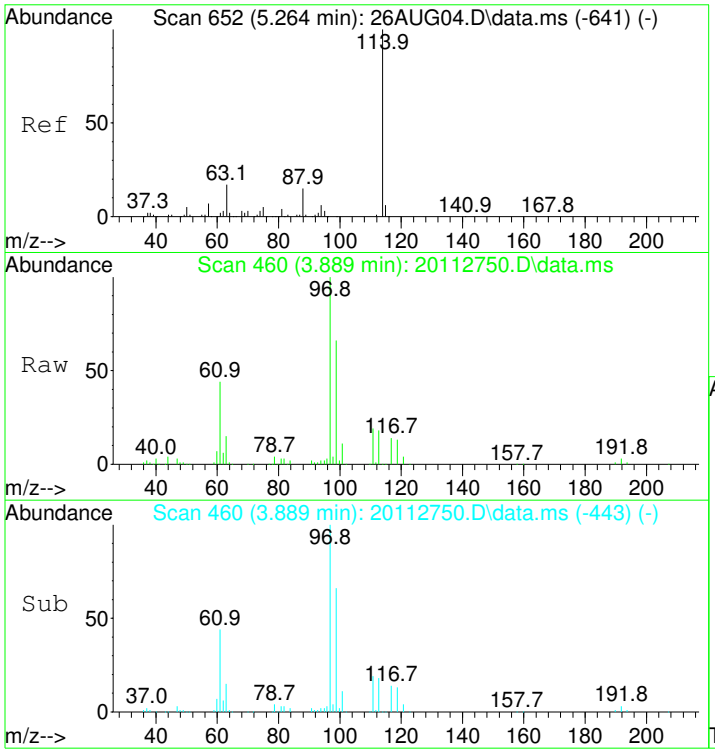


#44
Cyclohexane
Concen: Below Cal
RT: 3.982 min Scan# 473
Delta R.T. 0.021 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 56 Resp: 4430

Ion	Ratio	Lower	Upper
56	100		
84	173.8	69.5	104.3#
41	9.2	39.4	59.0#
55	127.2	31.4	47.2#

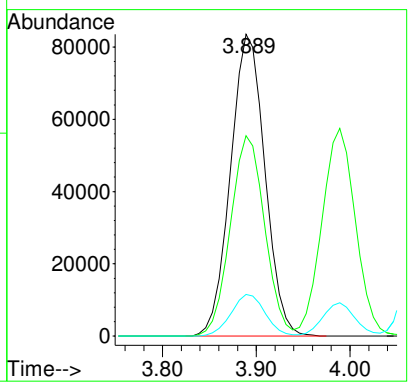


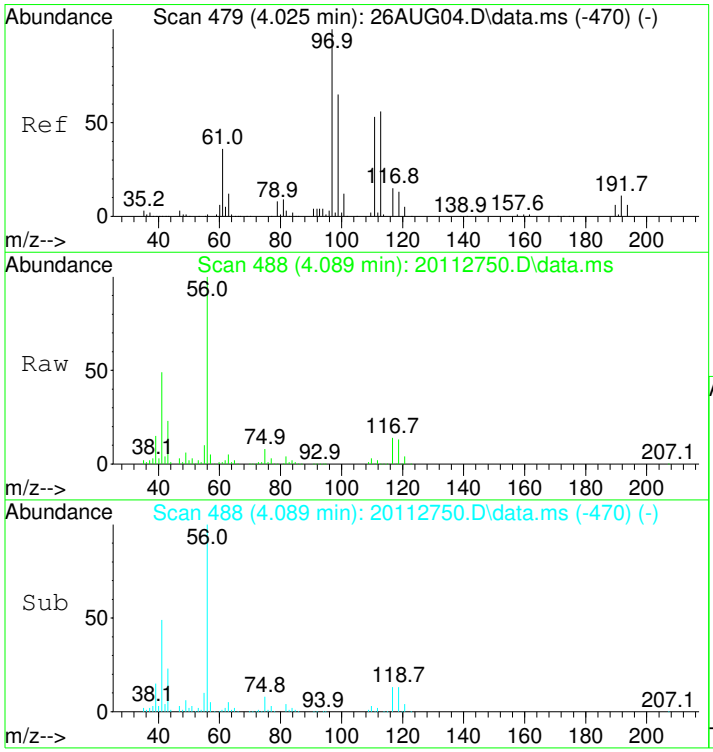


#46
1,1,1-Trichloroethane
Concen: 21.51 ug/L
RT: 3.889 min Scan# 460
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 97 Resp: 214195

Ion	Ratio	Lower	Upper
97	100		
99	65.9	45.8	85.8
117	13.7	0.0	33.4

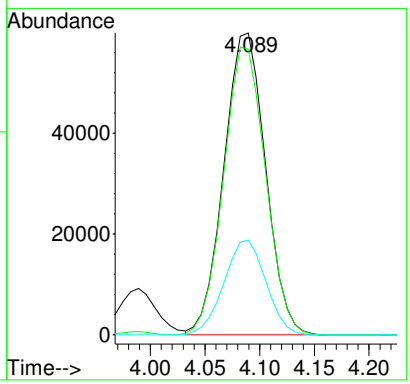


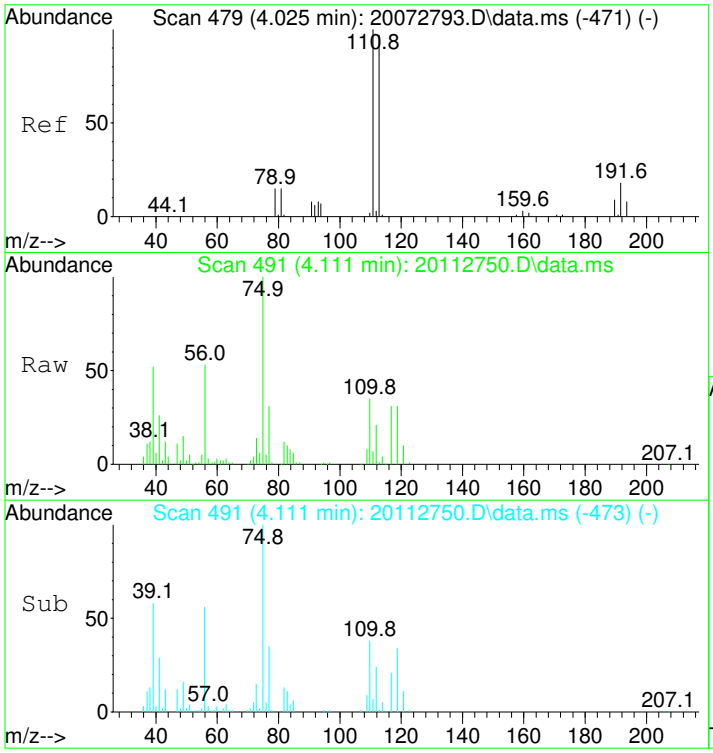


#48
Carbon tetrachloride
Concen: 18.58 ug/L
RT: 4.089 min Scan# 488
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:117 Resp: 158720

Ion	Ratio	Lower	Upper
117	100		
119	96.0	78.7	118.7
121	31.5	11.8	51.8

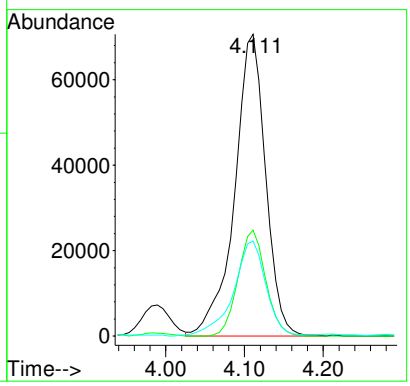


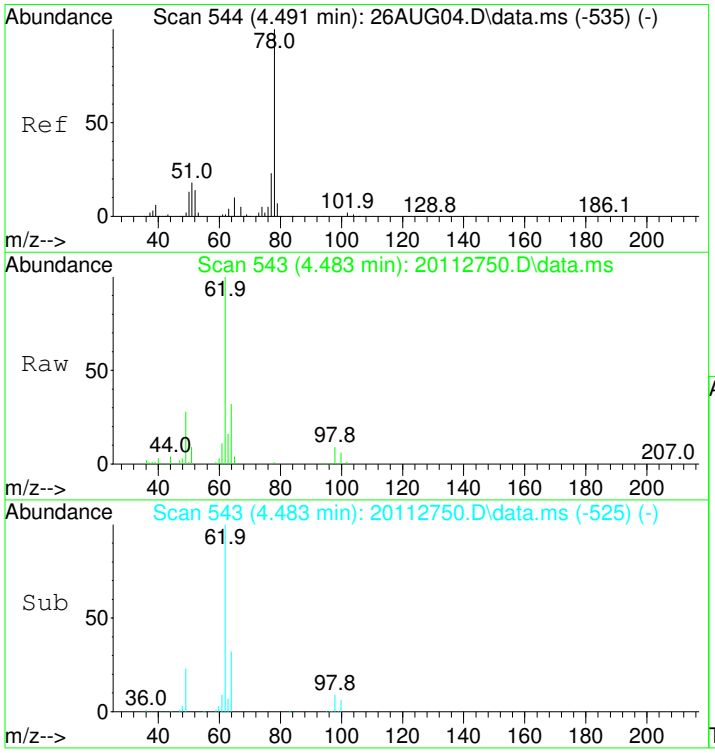


#49
1,1-Dichloropropene
Concen: 23.08 ug/L
RT: 4.111 min Scan# 491
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 75 Resp: 193980

Ion	Ratio	Lower	Upper
75	100		
110	31.2	16.0	56.0
77	33.4	11.0	51.0

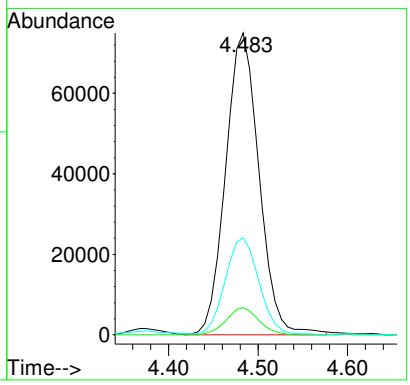


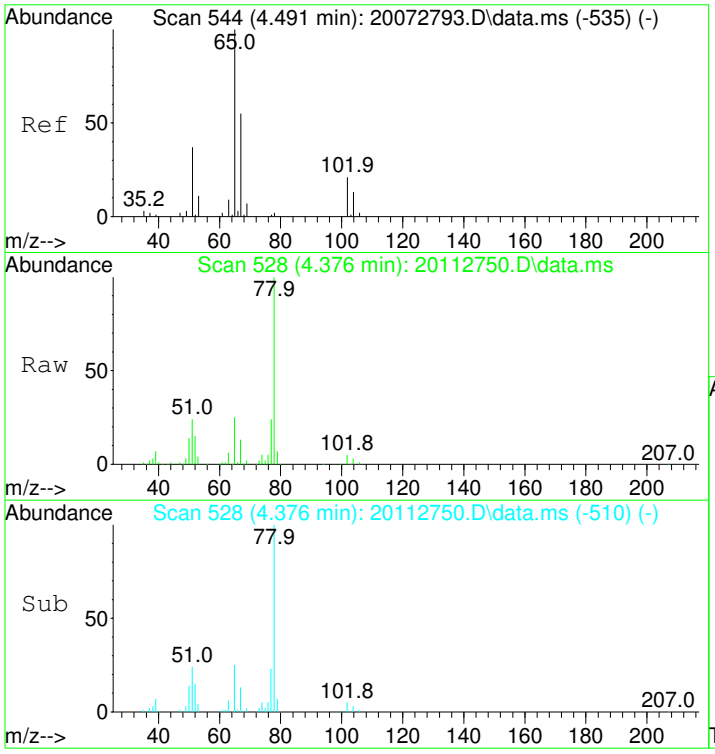


#51
1,2-Dichloroethane
Concen: 20.89 ug/L
RT: 4.483 min Scan# 543
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 62 Resp: 195111

Ion	Ratio	Lower	Upper
62	100		
98	8.7	0.0	29.0
64	32.5	13.9	53.9

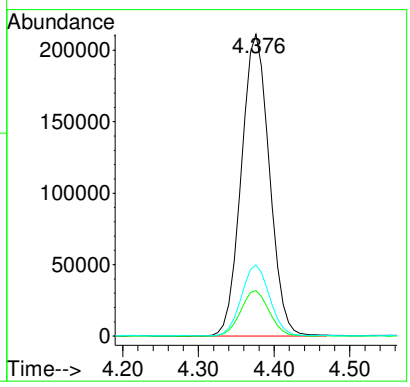


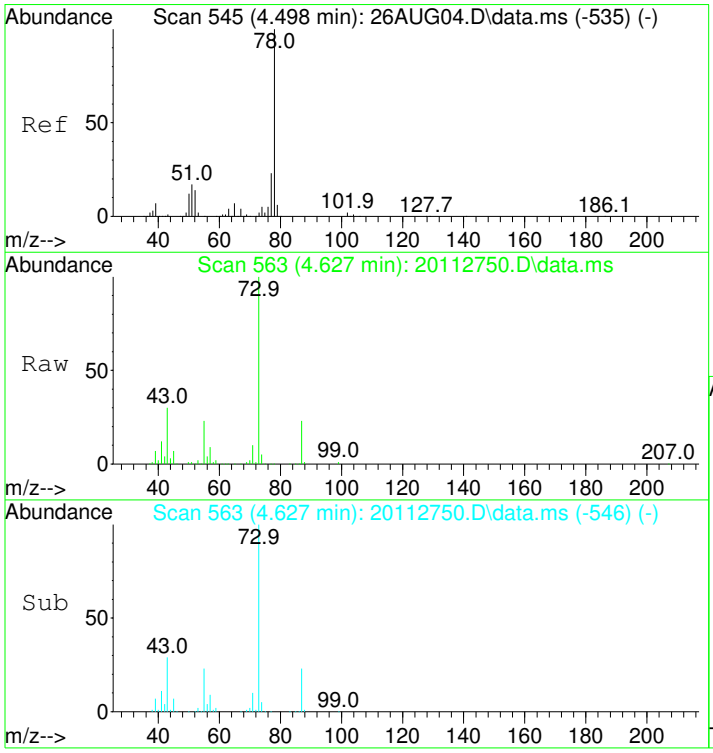


#52
Benzene
Concen: 22.22 ug/L
RT: 4.376 min Scan# 528
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 78 Resp: 542141

Ion	Ratio	Lower	Upper
78	100		
52	15.3	0.0	35.8
77	23.4	3.7	43.7

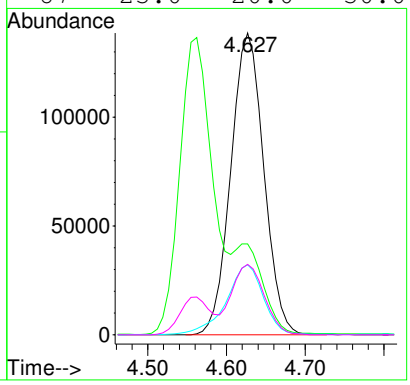


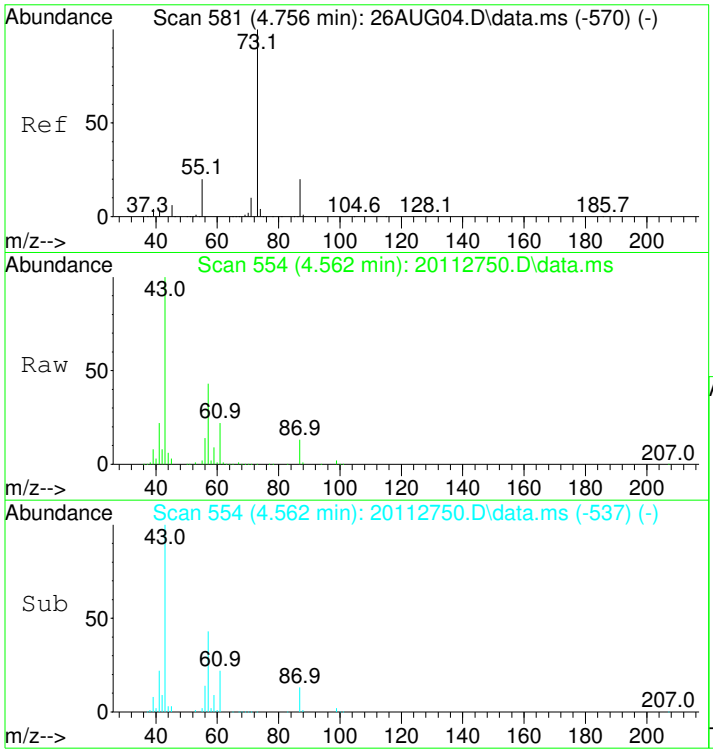


#53
Tertiaryamylmethylether
Concen: 21.84 ug/L
RT: 4.627 min Scan# 563
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 73 Resp: 404692

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	25.4	21.0	31.6
87	23.0	20.0	30.0

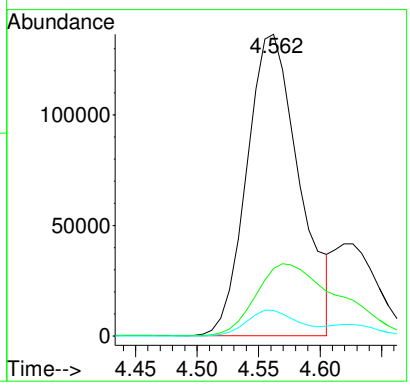


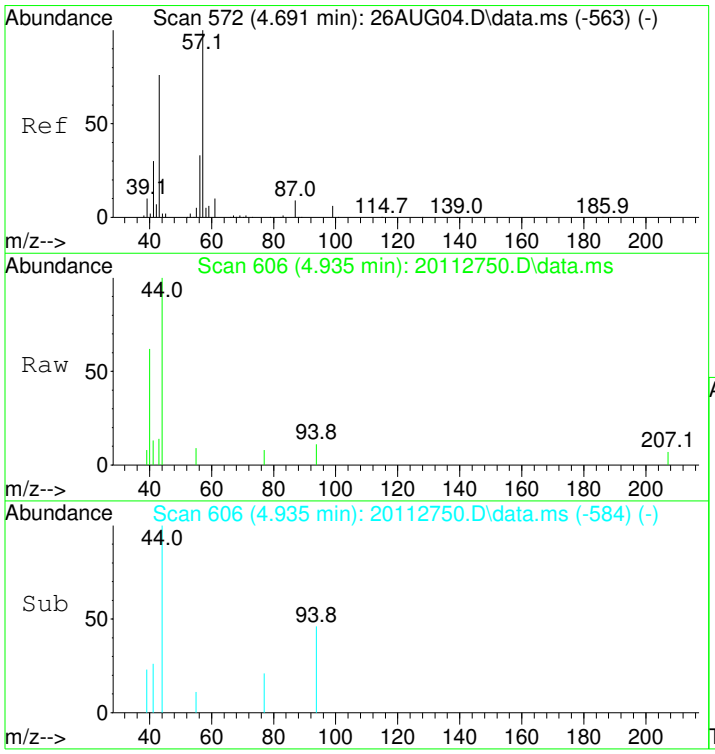


#54
Isobutyl Alcohol
Concen: 21.18 ug/L
RT: 4.562 min Scan# 554
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 403207

Ion	Ratio	Lower	Upper
43	100		
41	37.4	30.7	46.1
42	8.5	6.4	9.6

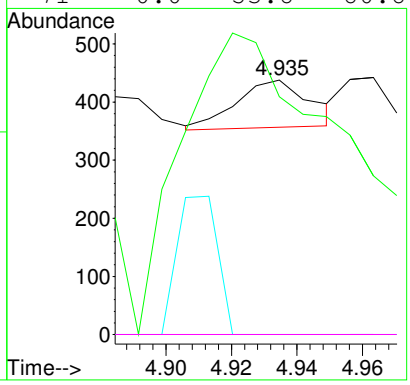


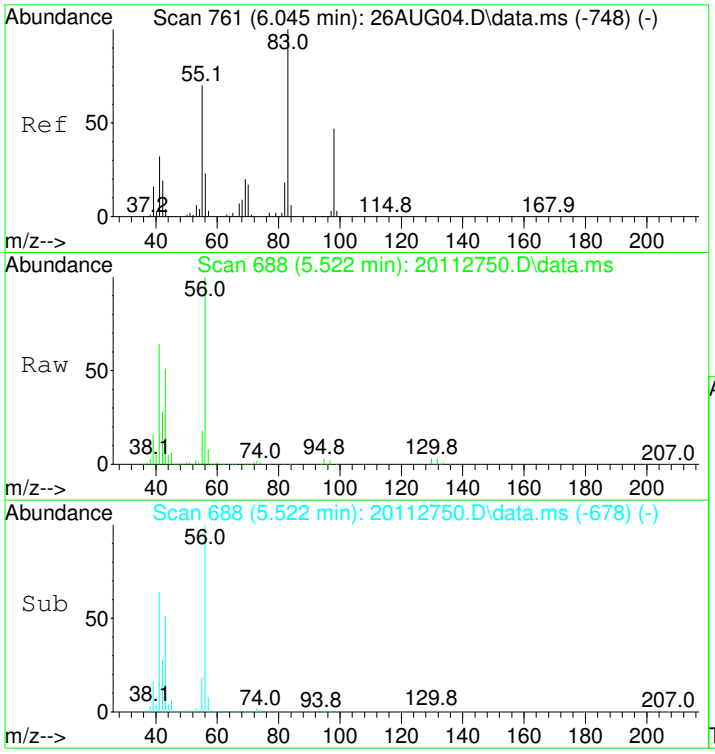


#55
Heptane
Concen: Below Cal
RT: 4.935 min Scan# 606
Delta R.T. 0.036 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 128

Ion	Ratio	Lower	Upper
43	100		
41	1607.8	46.8	70.2#
57	159.4	47.5	71.3#
71	0.0	53.8	80.8#

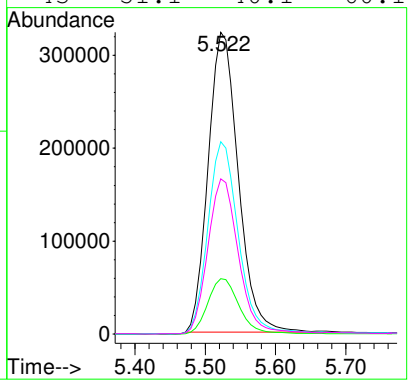


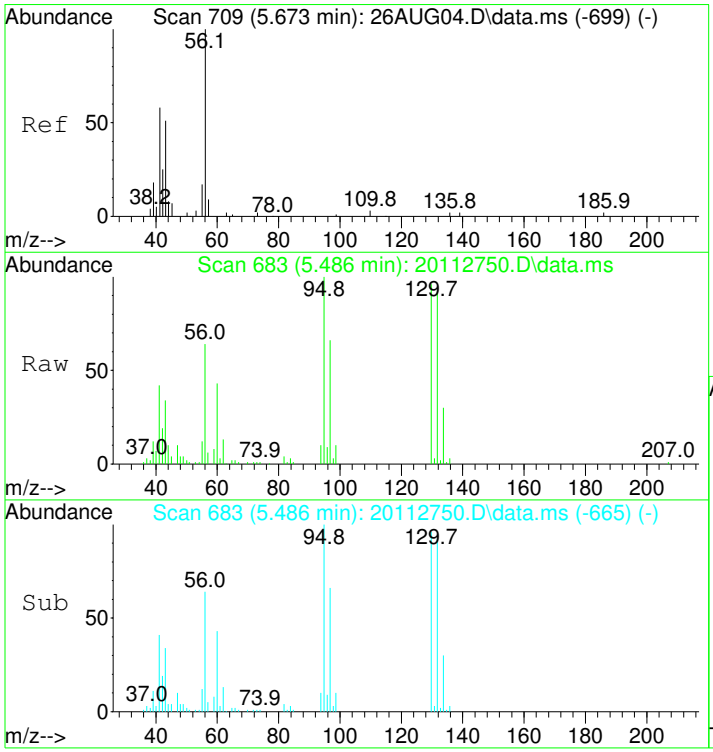


#58
n-Butanol
Concen: 1595.76 ug/L
RT: 5.522 min Scan# 688
Delta R.T. -0.050 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 56 Resp: 960174

Ion	Ratio	Lower	Upper
56	100		
55	18.6	15.4	23.2
41	63.2	50.9	76.3
43	51.1	40.1	60.1

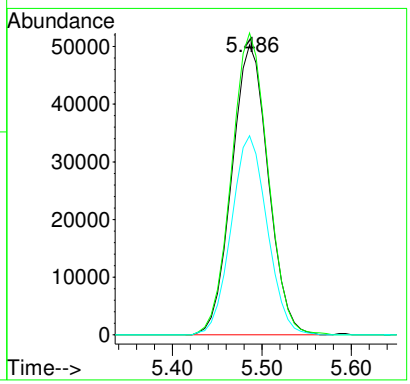


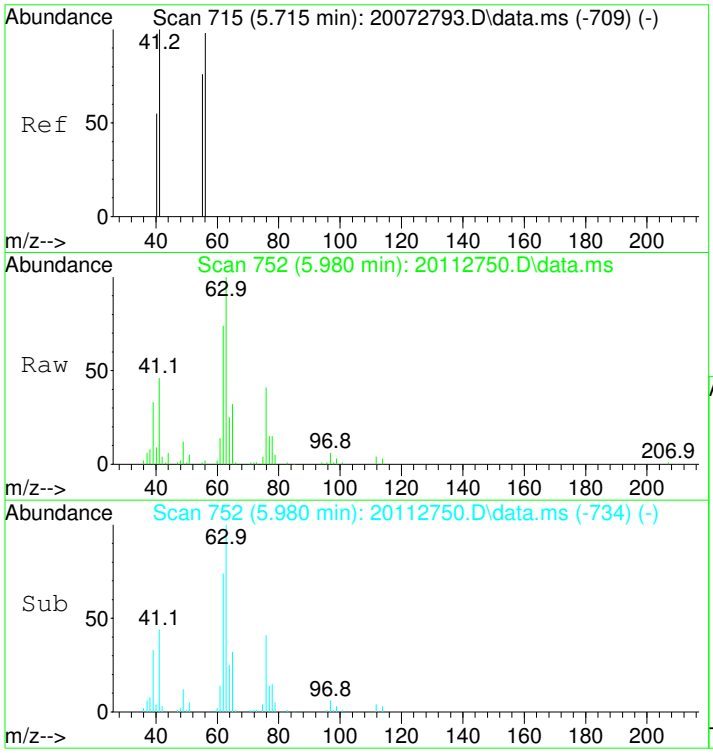


#59
Trichloroethene
Concen: 20.87 ug/L
RT: 5.486 min Scan# 683
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:130 Resp: 142407

Ion	Ratio	Lower	Upper
130	100		
95	104.1	82.7	122.7
97	67.7	47.6	87.6

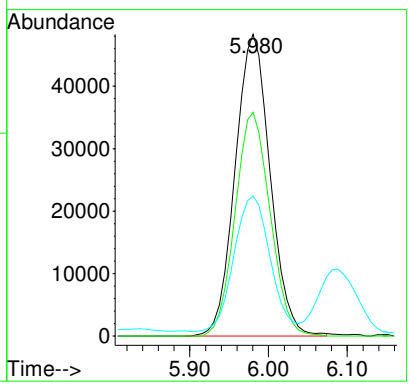


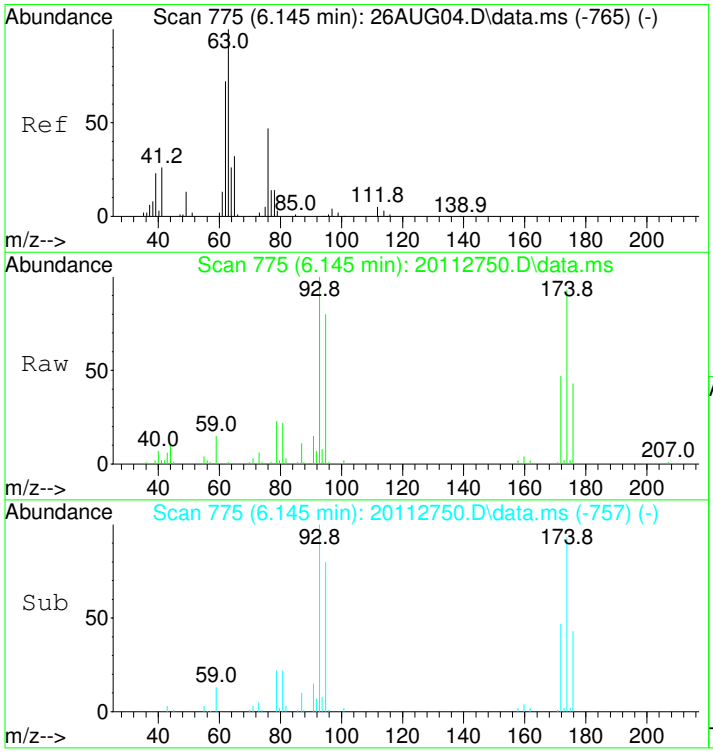


#60
1,2-Dichloropropane
Concen: 21.78 ug/L
RT: 5.980 min Scan# 752
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 63 Resp: 149456

Ion	Ratio	Lower	Upper
63	100		
62	74.0	51.5	91.5
41	46.0	26.1	66.1

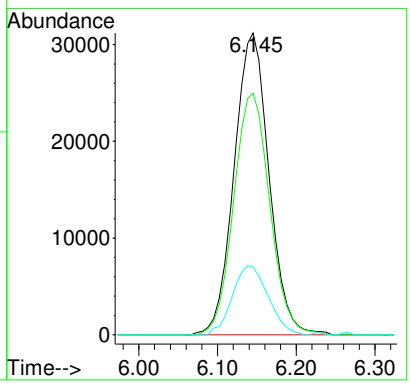


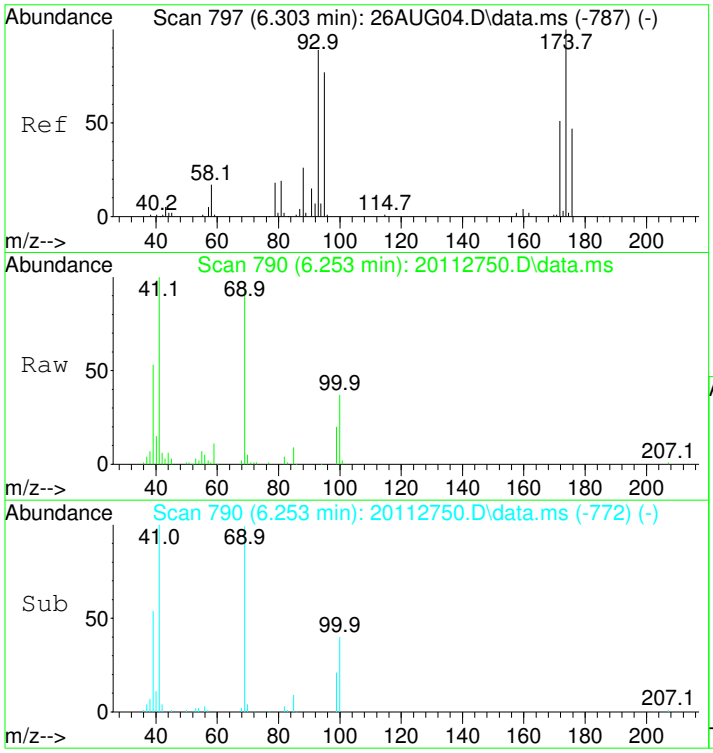


#61
Dibromomethane
Concen: 19.81 ug/L
RT: 6.145 min Scan# 775
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 93 Resp: 96057

Ion	Ratio	Lower	Upper
93	100		
95	82.7	63.0	103.0
81	23.4	3.4	43.4

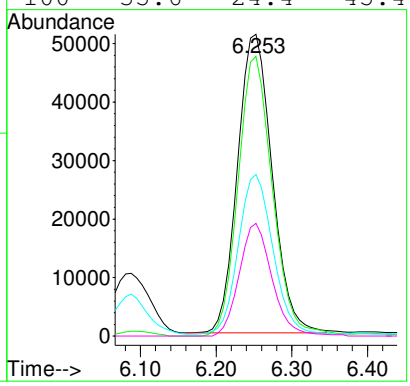


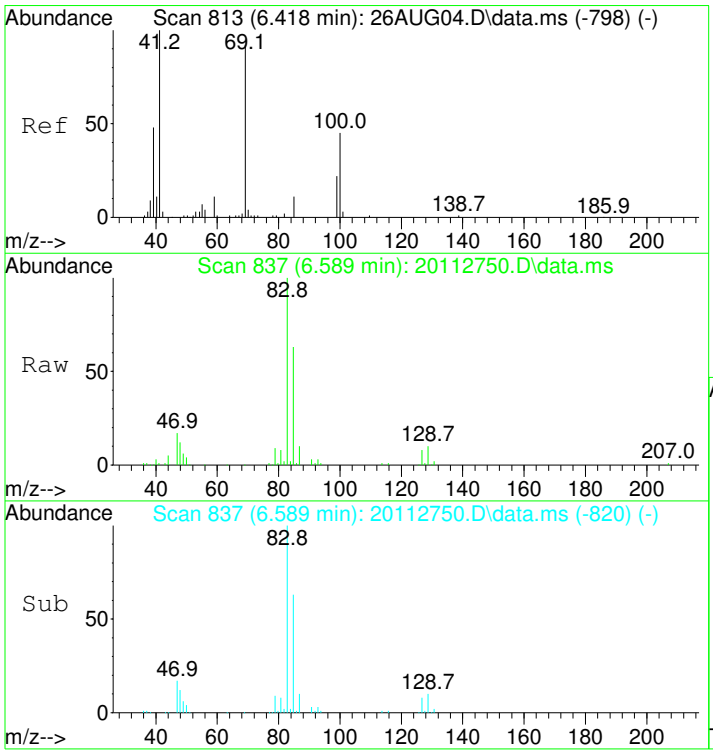


#62
Methyl methacrylate
Concen: 20.50 ug/L
RT: 6.253 min Scan# 790
Delta R.T. 0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 41 Resp: 162038

Ion	Ratio	Lower	Upper
41	100		
69	92.7	72.2	108.4
39	52.9	41.1	61.7
100	35.6	24.4	45.4

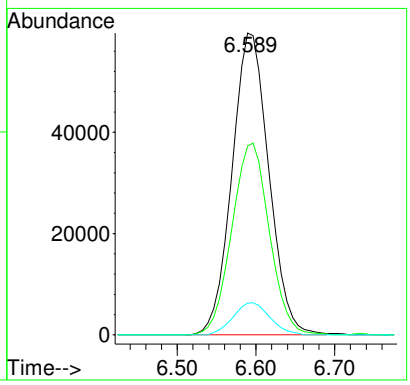


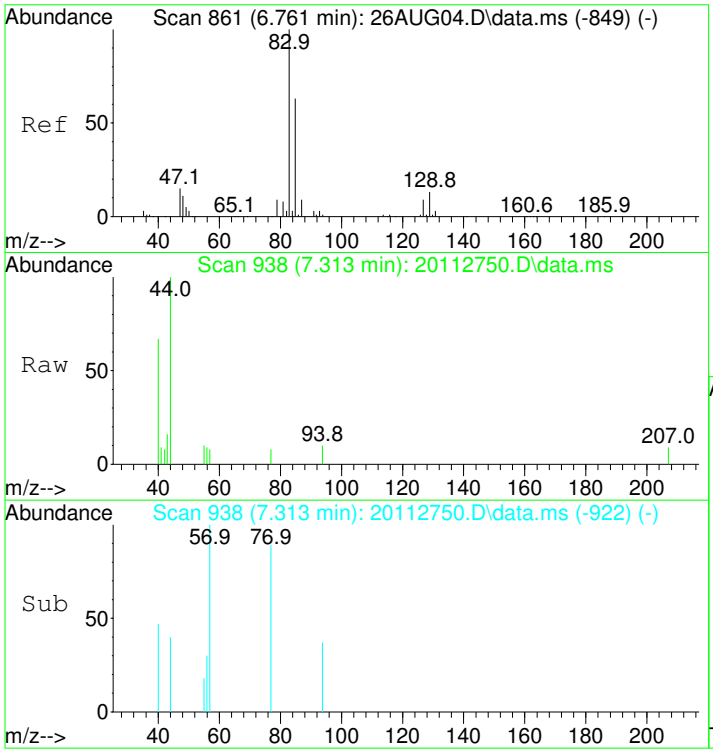


#63
Bromodichloromethane
Concen: 20.85 ug/L
RT: 6.589 min Scan# 837
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 83 Resp: 193861

Ion	Ratio	Lower	Upper
83	100		
85	64.6	44.3	84.3
129	10.6	0.0	31.0

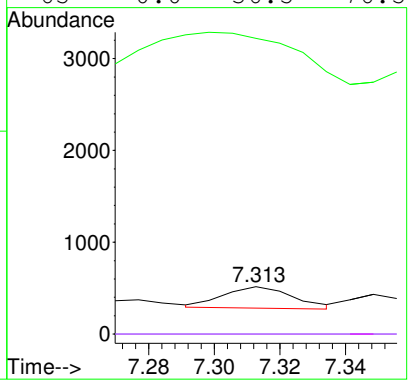


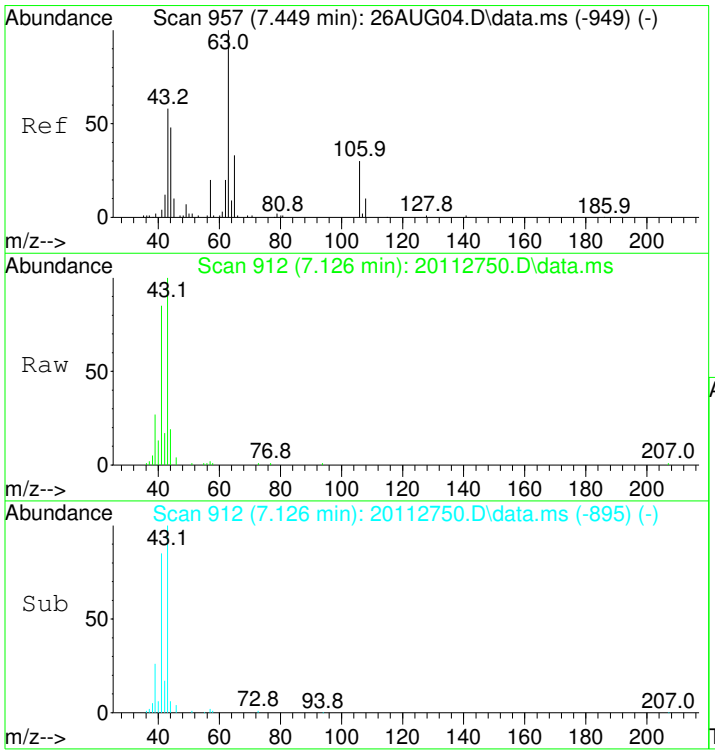


#64
2-Chloroethyl vinyl ether
Concen: Below Cal
RT: 7.313 min Scan# 938
Delta R.T. -0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 341

Ion	Ratio	Lower	Upper
43	100		
44	527.0	51.0	111.0#
63	0.0	141.4	201.4#
65	0.0	36.5	76.5#

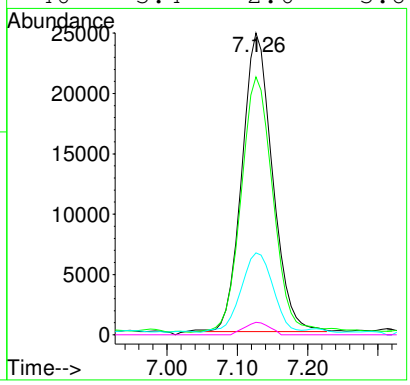


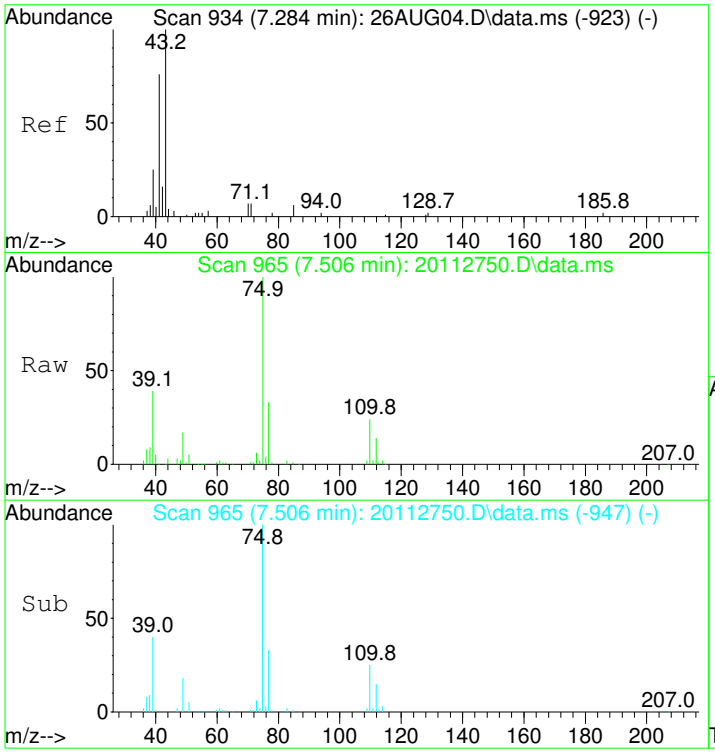


#65
2-Nitropropane
Concen: 20.54 ug/L
RT: 7.126 min Scan# 912
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 75084

Ion	Ratio	Lower	Upper
43	100		
41	88.5	67.9	101.9
39	27.9	21.8	32.8
46	3.4	2.6	3.8

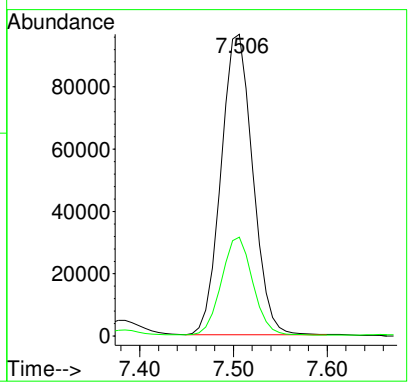


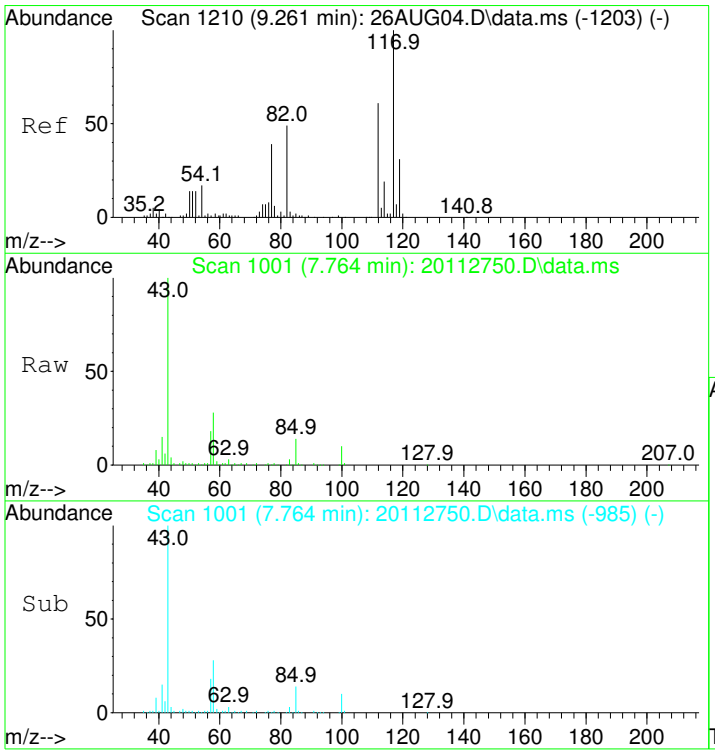


#66
cis-1,3-Dichloropropene
Concen: 19.80 ug/L
RT: 7.506 min Scan# 965
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 75 Resp: 226497

Ion	Ratio	Lower	Upper
75	100		
77	32.1	11.9	51.9

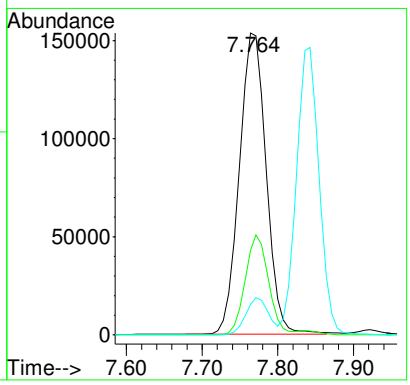


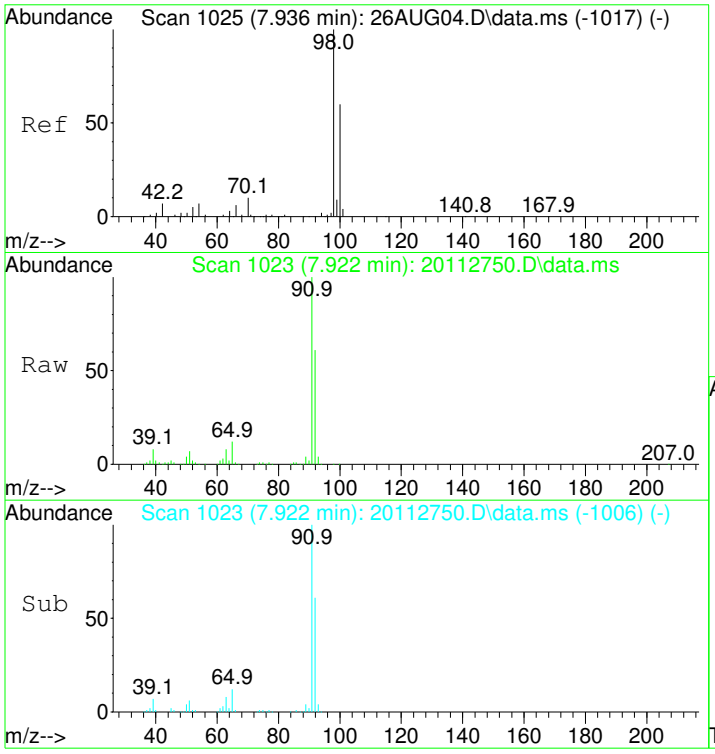


#68
4-Methyl-2-pentanone
Concen: 34.95 ug/L
RT: 7.764 min Scan# 1001
Delta R.T. -0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 378267

Ion	Ratio	Lower	Upper
43	100		
58	28.7	25.4	65.4
100	10.5	0.0	36.2

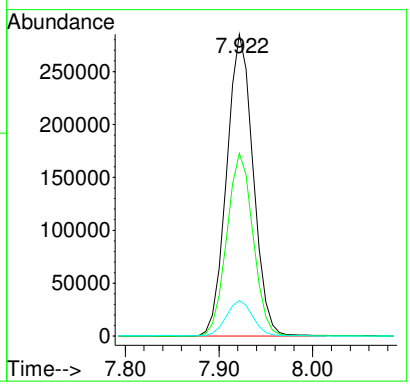


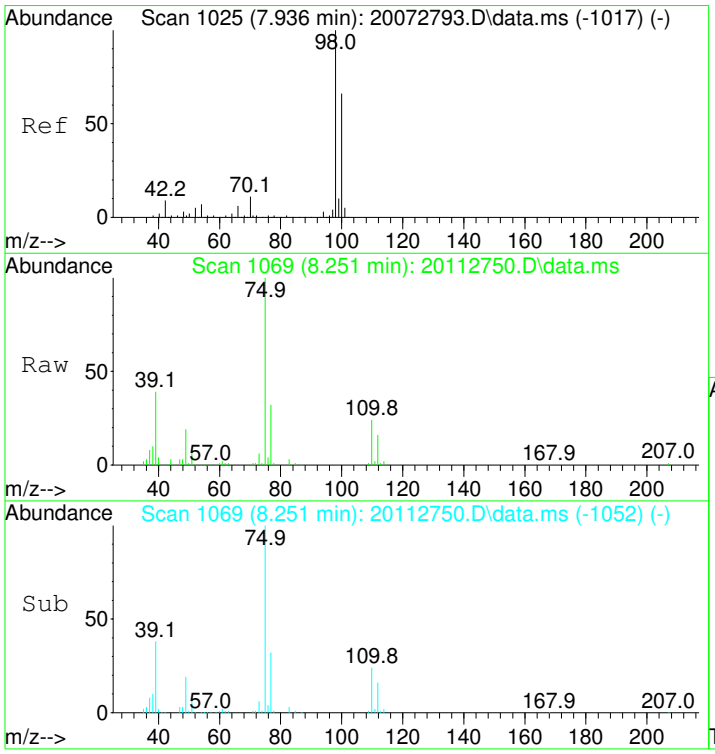


#70
Toluene
Concen: 23.50 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 563275

Ion	Ratio	Lower	Upper
91	100		
92	60.1	40.7	80.7
65	11.9	0.0	31.5

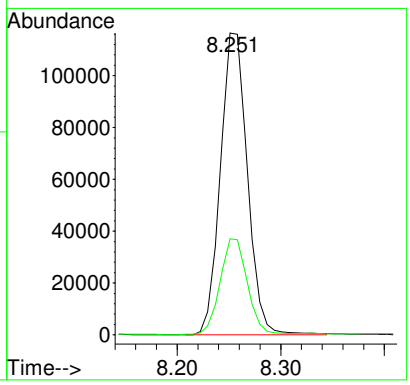


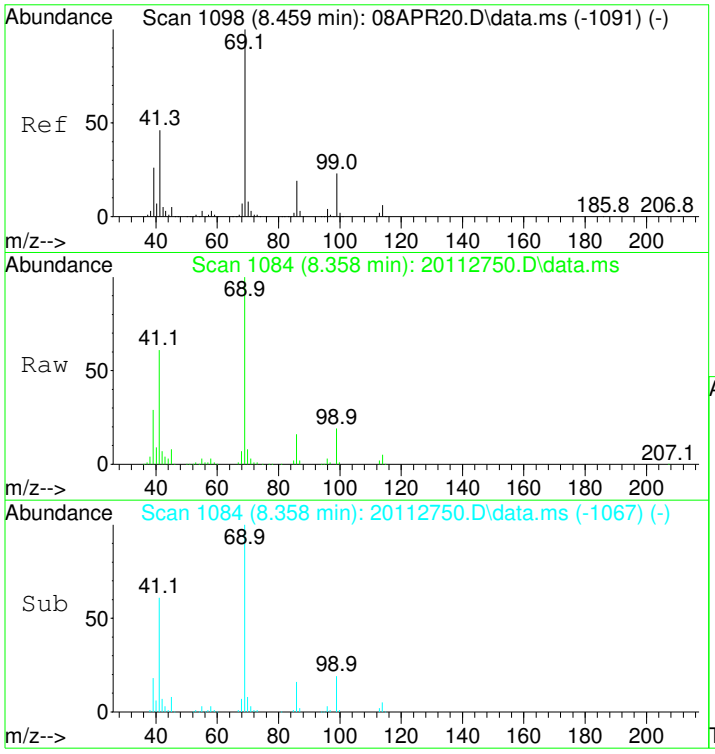


#71
trans-1,3-Dichloropropene
Concen: 20.60 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 75 Resp: 212163

Ion	Ratio	Lower	Upper
75	100		
77	32.5	15.0	55.0

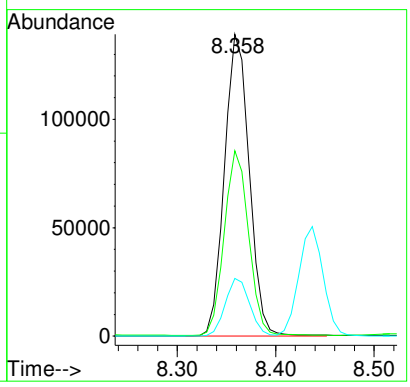


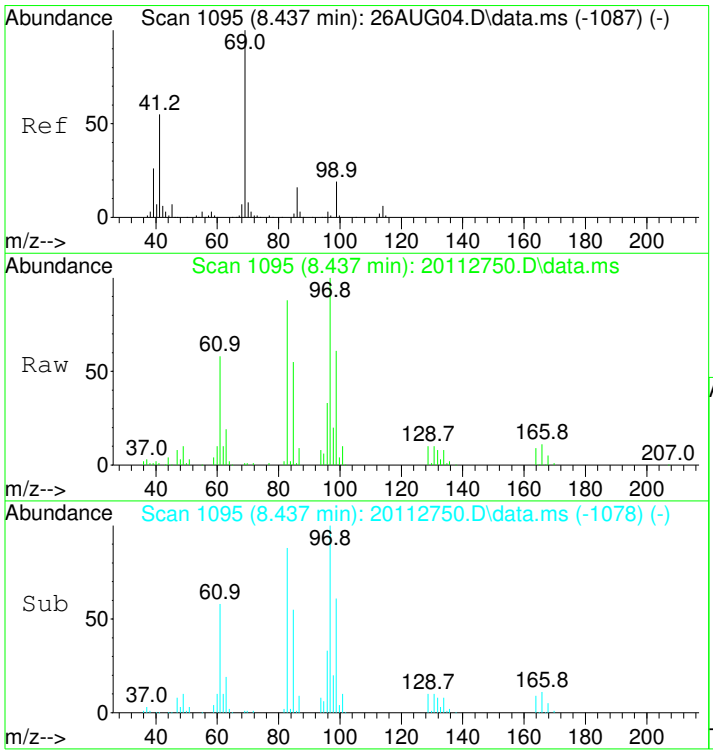


#73
Ethyl methacrylate
Concen: 21.79 ug/L
RT: 8.358 min Scan# 1084
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 69 Resp: 244395

Ion	Ratio	Lower	Upper
69	100		
41	59.9	39.9	79.9
99	18.8	0.0	39.7

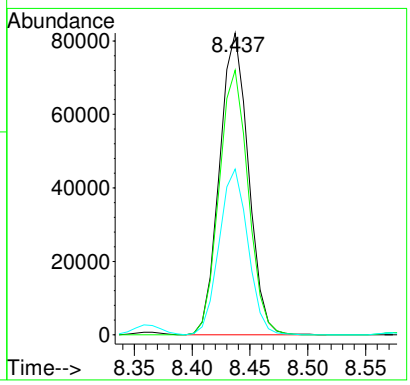


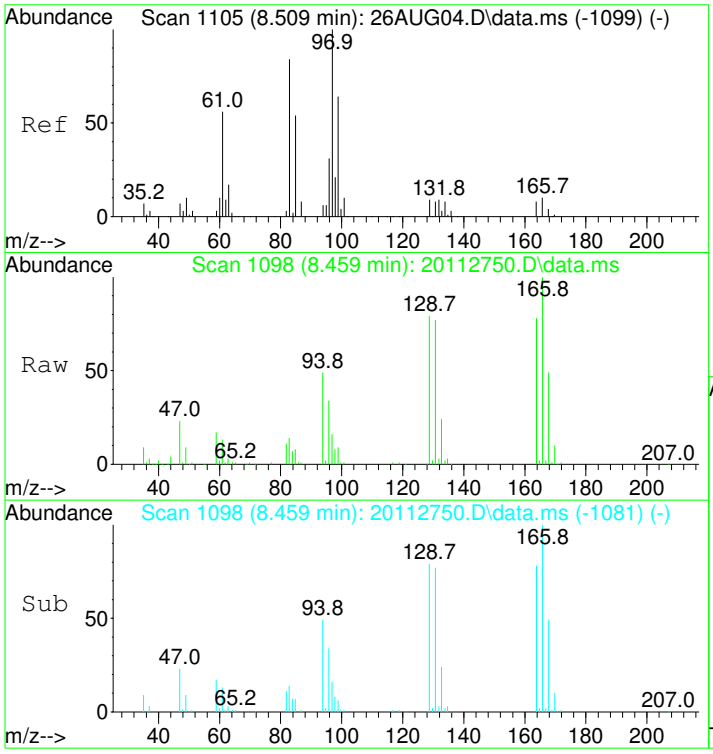


#74
1,1,2-Trichloroethane
Concen: 21.66 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 97 Resp: 142353

Ion	Ratio	Lower	Upper
97	100		
83	88.4	66.1	106.1
85	54.8	36.8	76.8

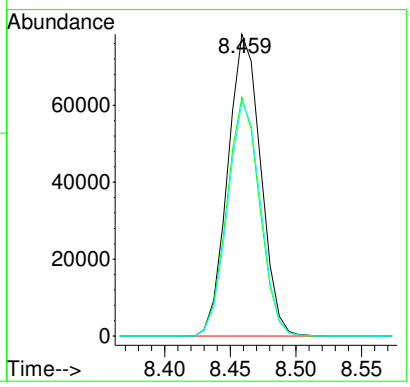


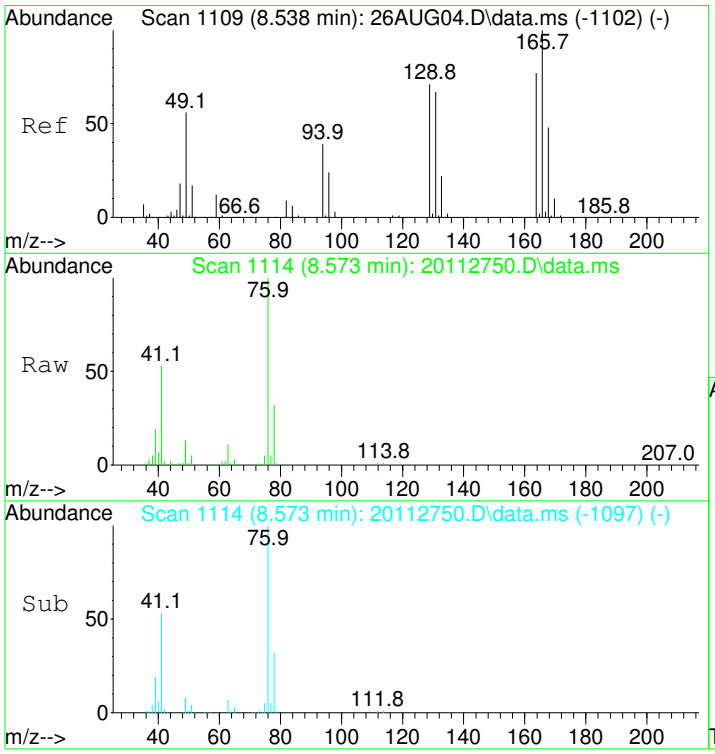


#75
Tetrachloroethene
Concen: 22.69 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:166 Resp: 136869

Ion	Ratio	Lower	Upper
166	100		
129	78.3	59.1	99.1
164	77.9	59.1	99.1

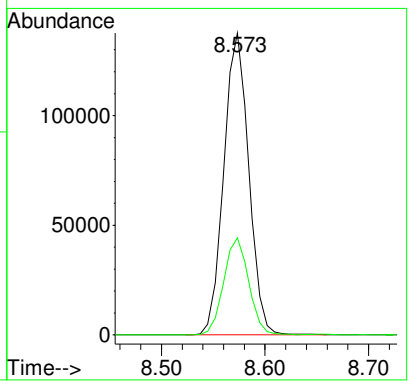


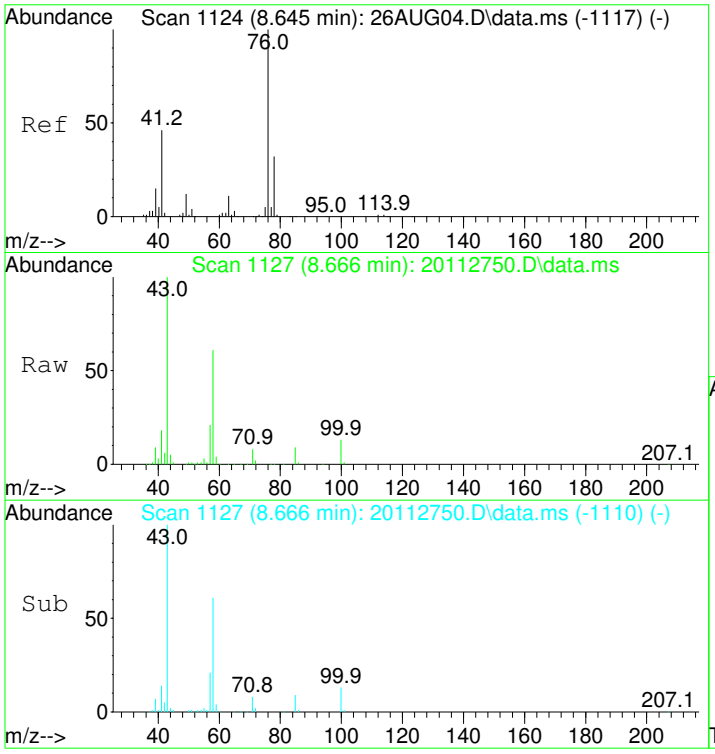


#76
1,3-Dichloropropane
Concen: 21.18 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 76 Resp: 231146

Ion	Ratio	Lower	Upper
76	100		
78	32.2	13.2	53.2

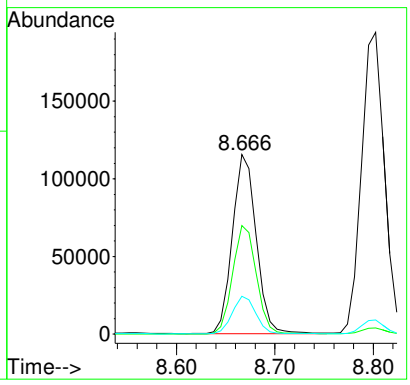


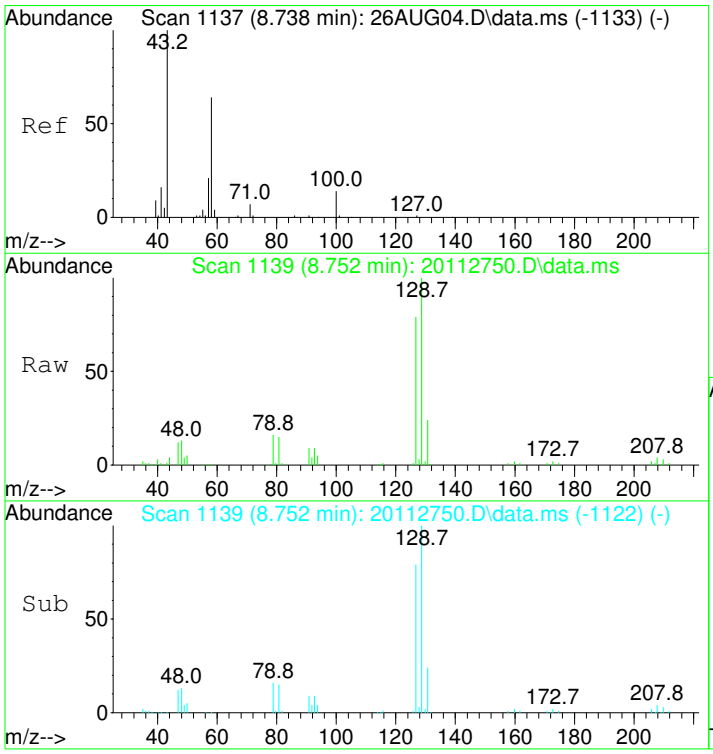


#77
2-Hexanone
Concen: 22.57 ug/L
RT: 8.666 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 194366

Ion	Ratio	Lower	Upper
43	100		
58	60.7	42.3	82.3
57	21.0	1.0	41.0

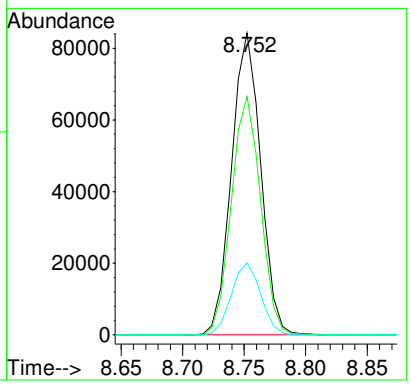


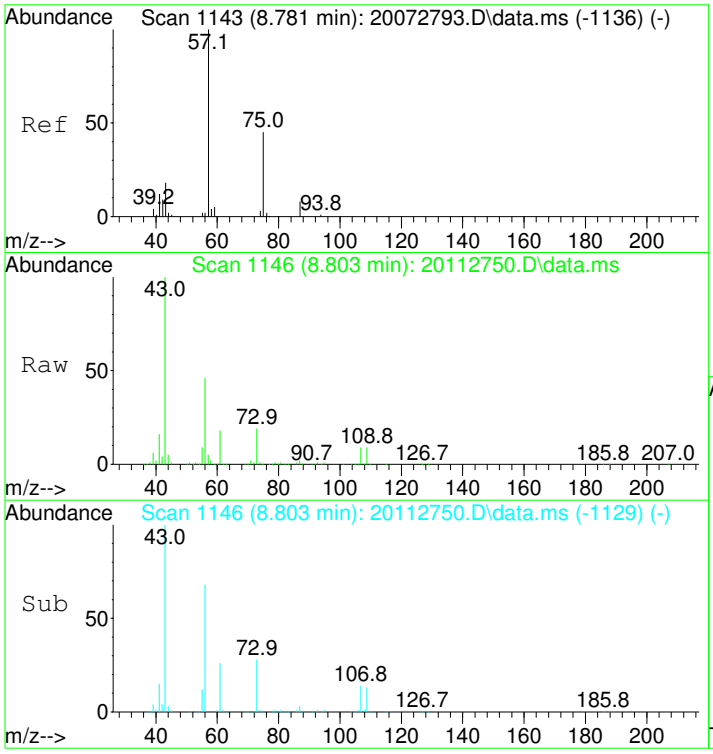


#78
Chlorodibromomethane
Concen: 19.28 ug/L
RT: 8.752 min Scan# 1139
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:129 Resp: 138601

Ion	Ratio	Lower	Upper
129	100		
127	79.0	57.8	97.8
131	23.8	4.2	44.2

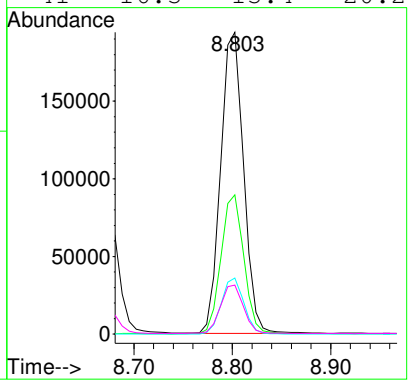


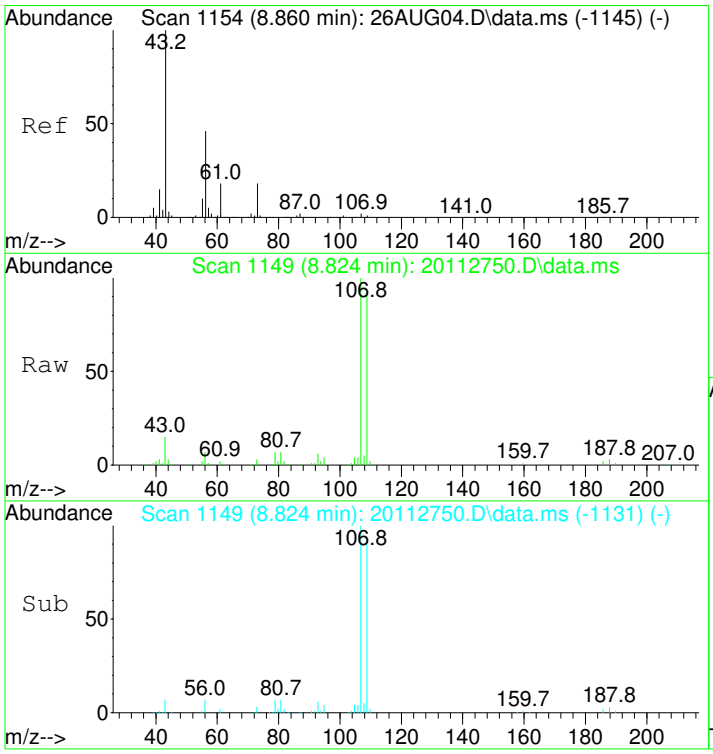


#79
Butyl acetate
Concen: 23.15 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 314611

Ion	Ratio	Lower	Upper
43	100		
56	46.5	38.0	57.0
73	18.3	15.0	22.4
41	16.3	13.4	20.2

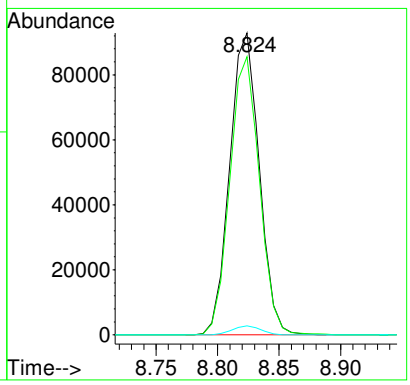


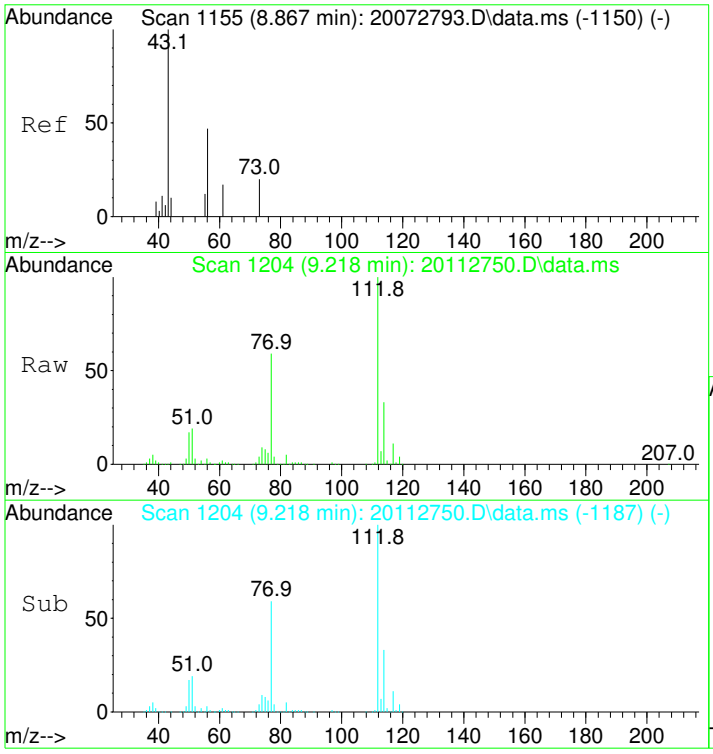


#80
1,2-Dibromoethane
Concen: 22.80 ug/L
RT: 8.824 min Scan# 1149
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:107 Resp: 154808

Ion	Ratio	Lower	Upper
107	100		
109	92.3	76.6	116.6
188	2.9	0.0	22.9

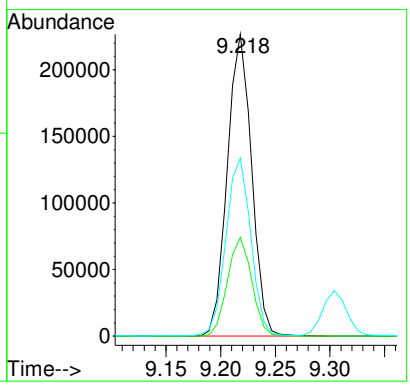


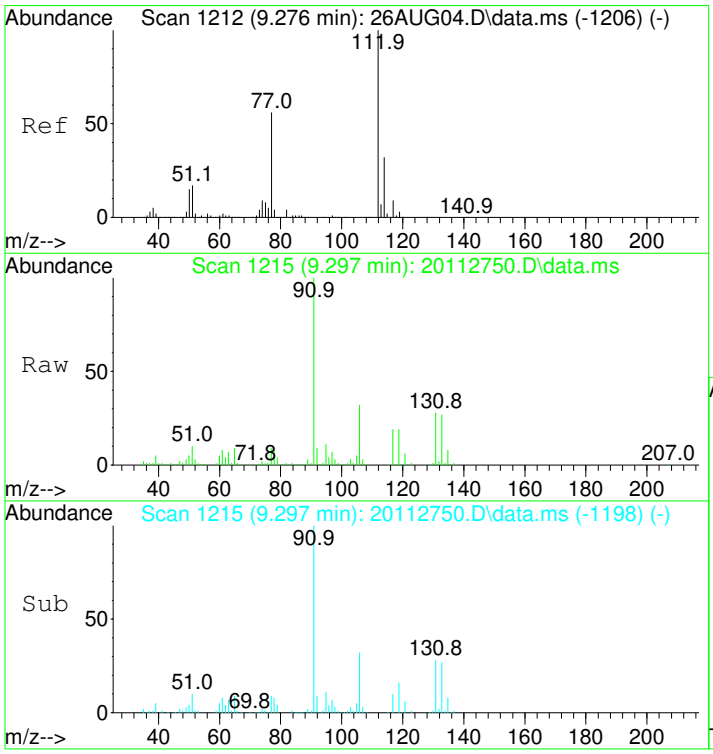


#81
Chlorobenzene
Concen: 22.77 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:112 Resp: 350769

Ion	Ratio	Lower	Upper
112	100		
114	32.7	13.6	53.6
77	60.2	41.7	81.7

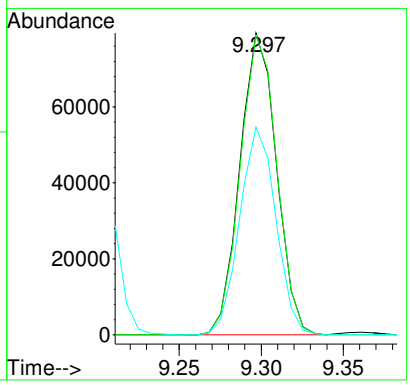


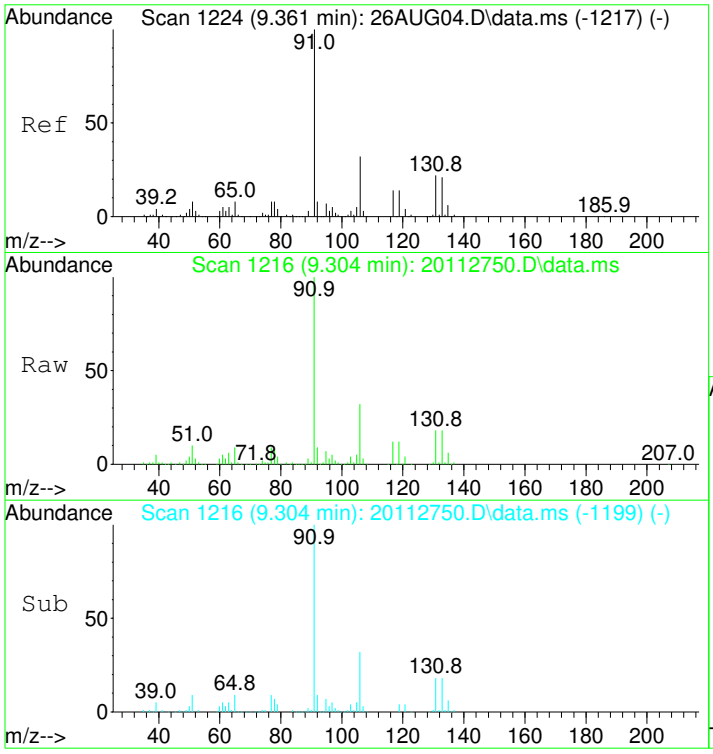


#82
1,1,1,2-Tetrachloroethane
Concen: 20.66 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:131 Resp: 123245

Ion	Ratio	Lower	Upper
131	100		
133	99.3	74.4	114.4
119	68.3	45.7	85.7

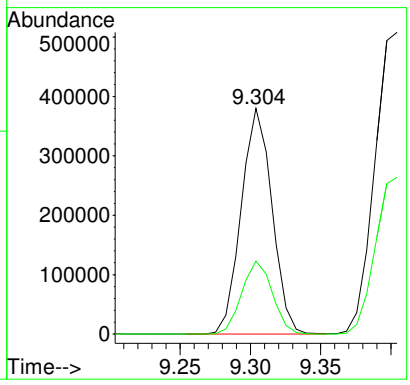


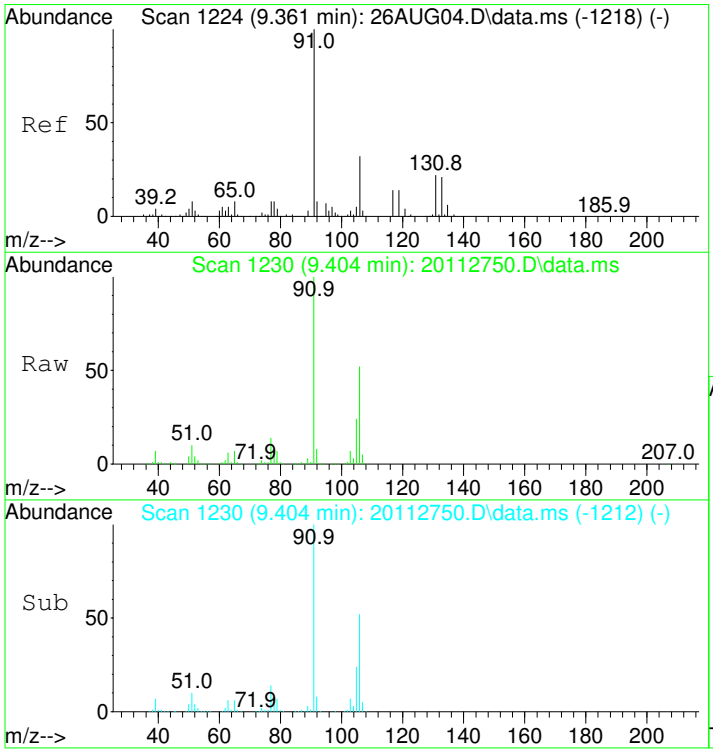


#83
Ethylbenzene
Concen: 20.82 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 580138

Ion	Ratio	Lower	Upper
91	100		
106	32.1	13.6	53.6

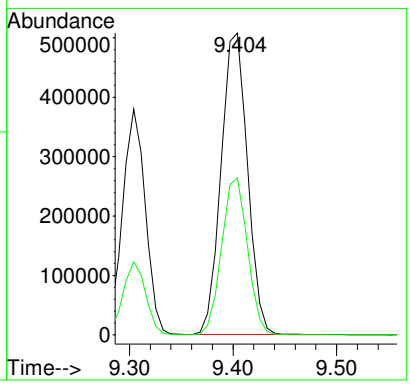


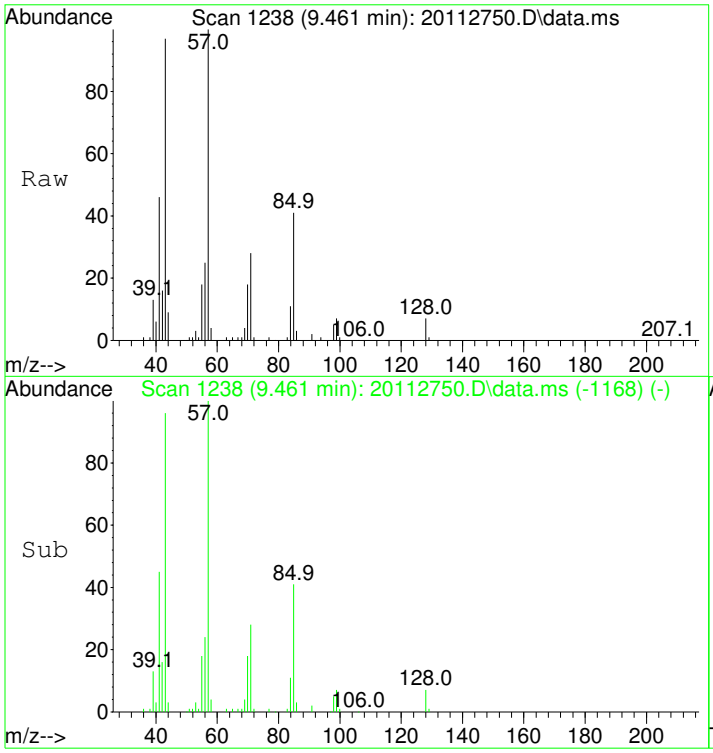


#84
m/p-Xylene
Concen: 40.70 ug/L
RT: 9.404 min Scan# 1230
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 903215

Ion	Ratio	Lower	Upper
91	100		
106	51.1	34.2	74.2

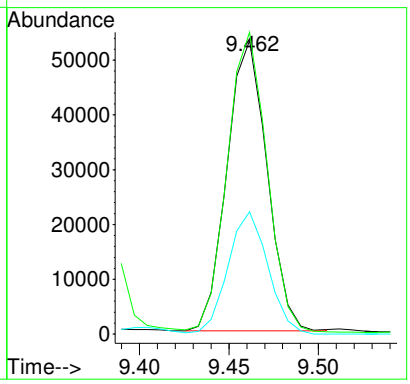


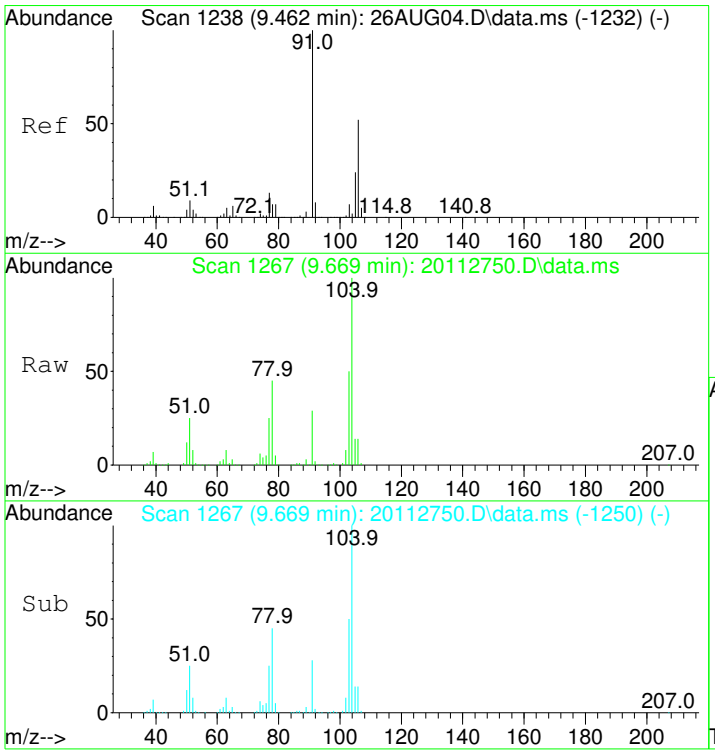


#85
Nonane
Concen: 25.12 ug/L
RT: 9.461 min Scan# 1238
Delta R.T. -0.001 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 82632

Ion	Ratio	Lower	Upper
43	100		
57	103.3	67.9	127.9
85	42.0	10.4	70.4

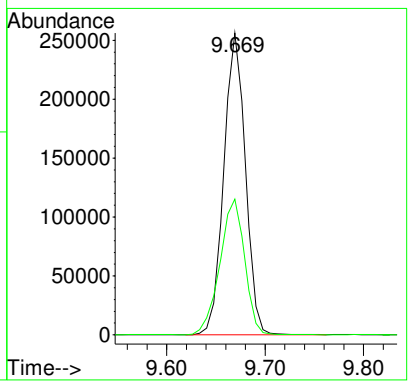


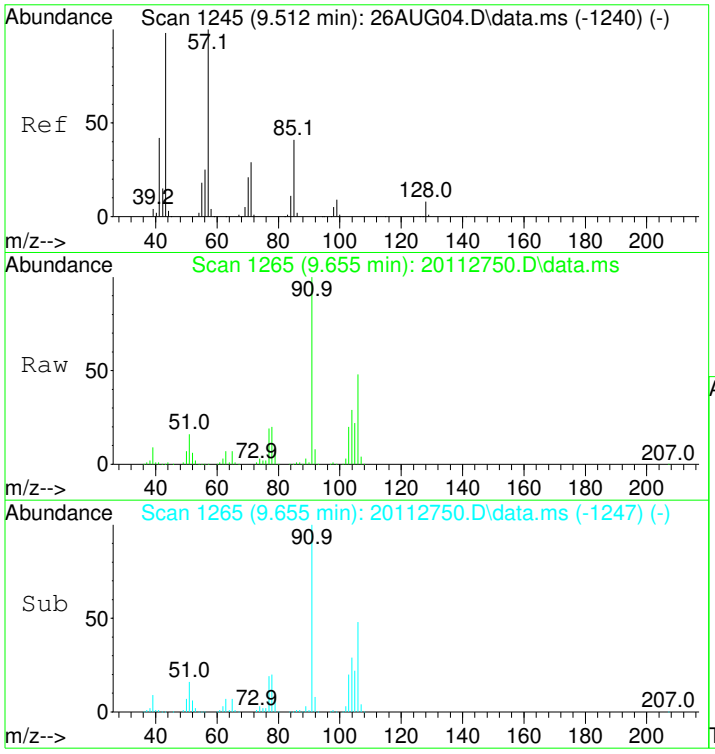


#86
Styrene
Concen: 20.80 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:104 Resp: 391224

Ion	Ratio	Lower	Upper
104	100		
78	51.7	32.3	72.3

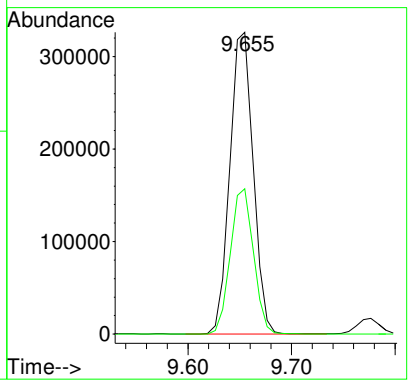


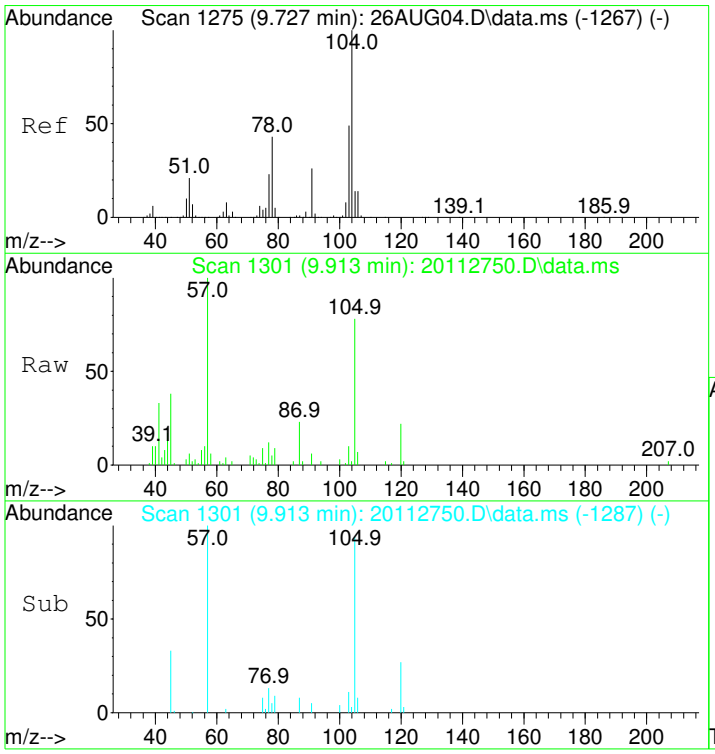


#87
o-Xylene
Concen: 20.99 ug/L
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 514053

Ion	Ratio	Lower	Upper
91	100		
106	47.7	30.3	70.3

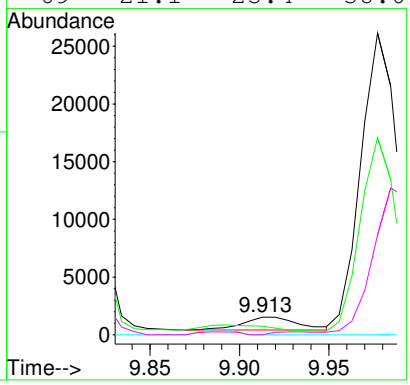


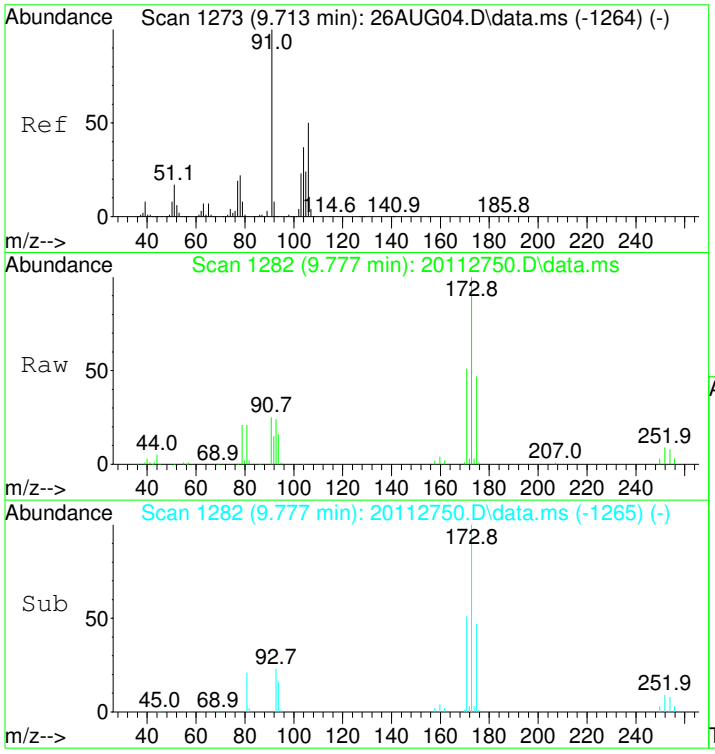


#88
Cyclohexanone
Concen: Below Cal
RT: 9.913 min Scan# 1301
Delta R.T. -0.021 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 55 Resp: 2442

Ion	Ratio	Lower	Upper
55	100		
42	0.0	48.0	72.0#
98	0.0	38.2	57.2#
69	21.1	25.4	38.0#

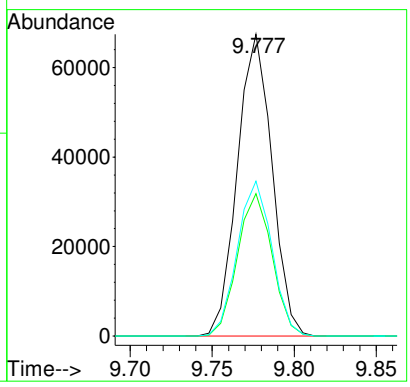


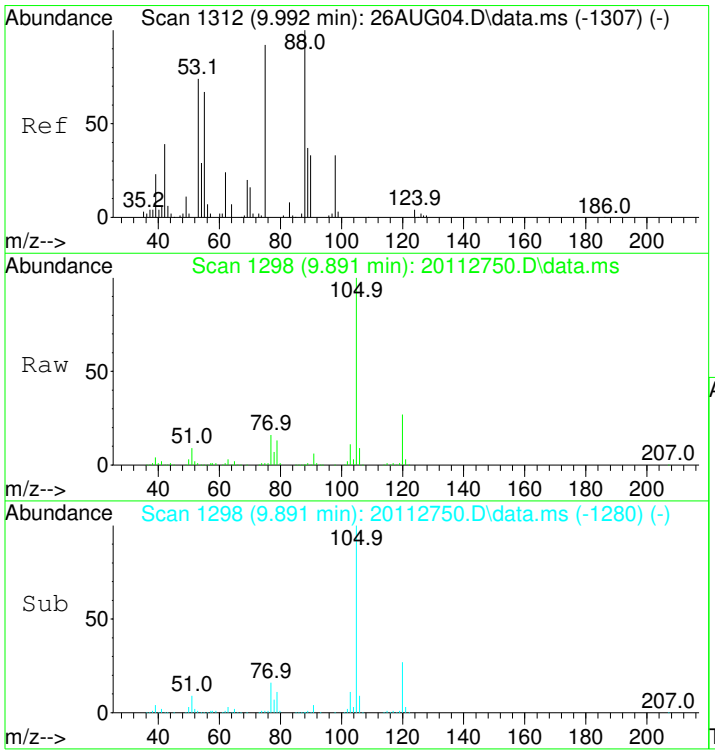


#89
Bromoform
Concen: 18.02 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:173 Resp: 99045

Ion	Ratio	Lower	Upper
173	100		
175	47.3	28.4	68.4
171	51.4	31.7	71.7

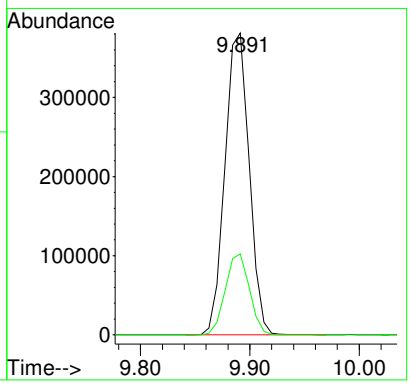


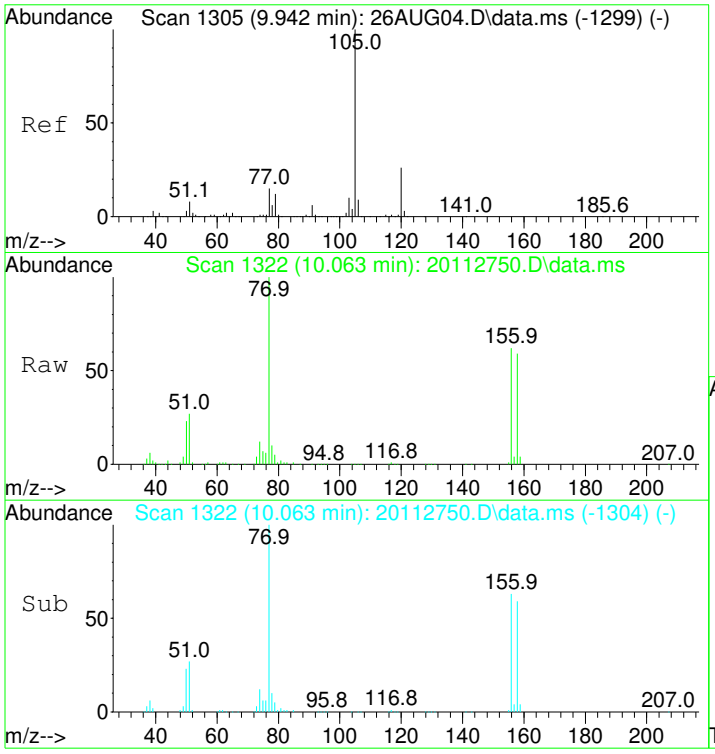


#90
Isopropylbenzene
Concen: 20.89 ug/L
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:105 Resp: 587660

Ion	Ratio	Lower	Upper
105	100		
120	26.6	8.0	48.0

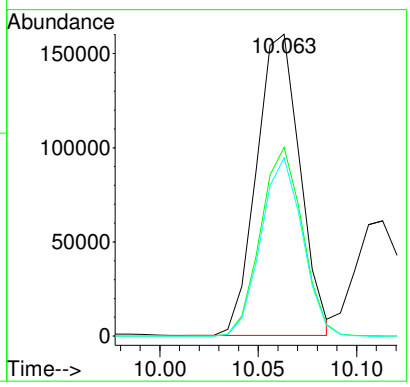


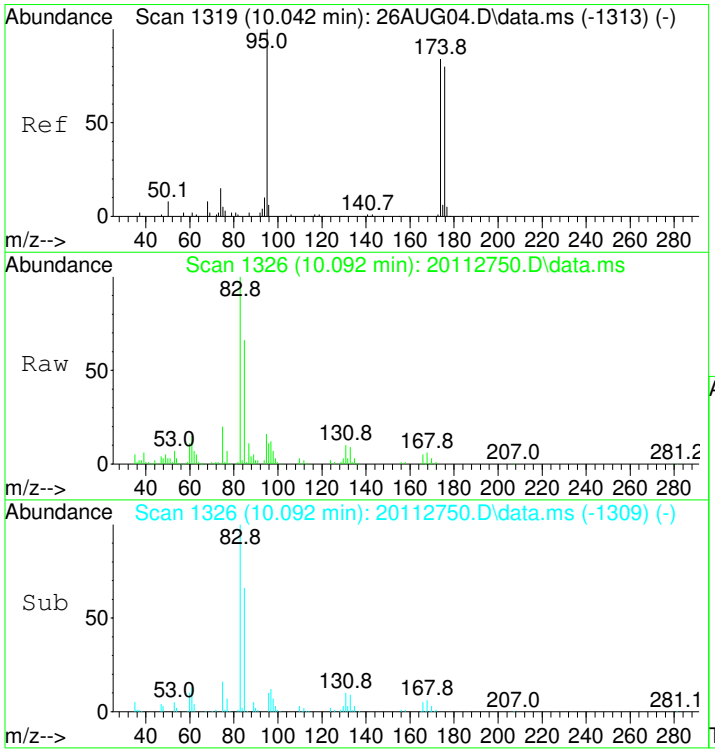


#92
Bromobenzene
Concen: 21.55 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 77 Resp: 246169

Ion	Ratio	Lower	Upper
77	100		
156	60.4	40.2	80.2
158	56.5	38.1	78.1

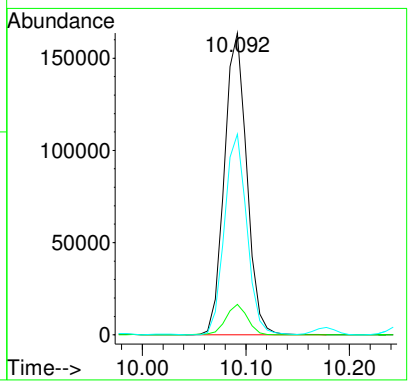


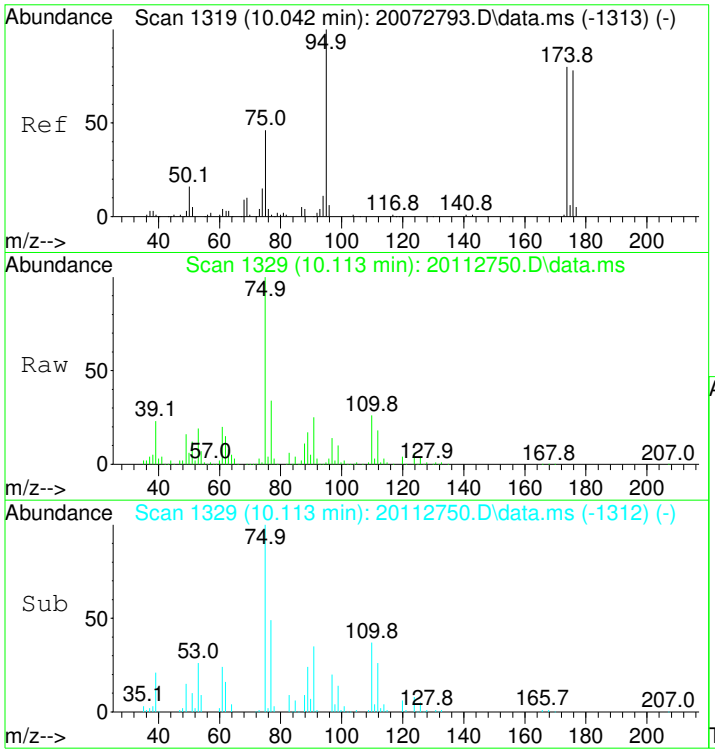


#93
1,1,2,2-Tetrachloroethane
Concen: 22.73 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 83 Resp: 246746

Ion	Ratio	Lower	Upper
83	100		
131	9.9	0.0	35.0
85	66.4	46.4	86.4

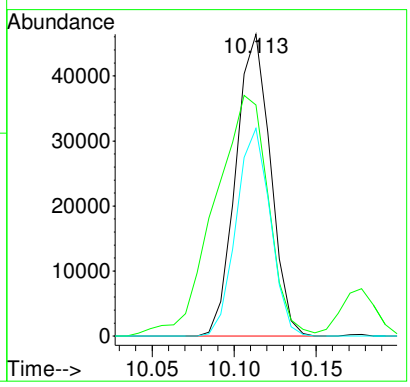


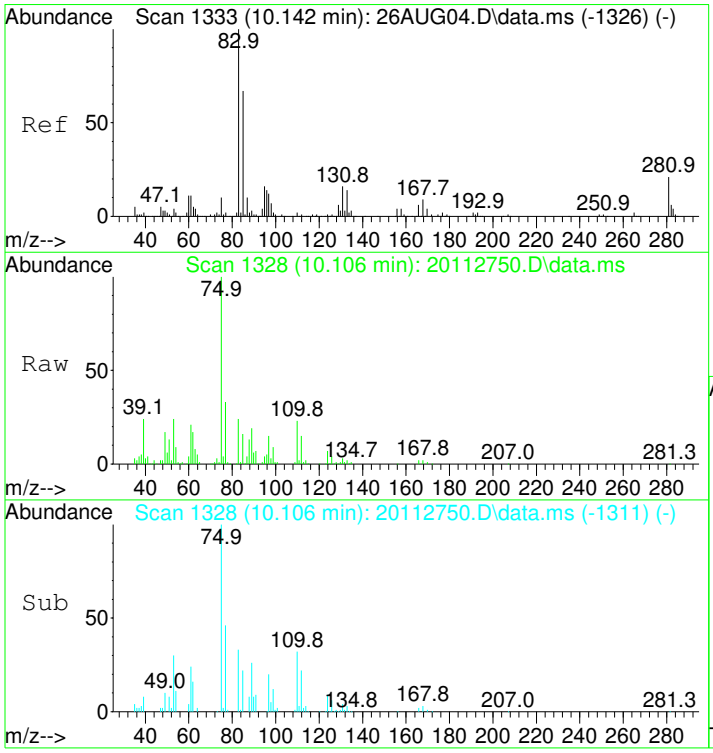


#94
1,2,3-Trichloropropane
Concen: 19.94 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:110 Resp: 68268

Ion	Ratio	Lower	Upper
110	100		
61	123.8	97.0	137.0
112	67.7	44.1	84.1

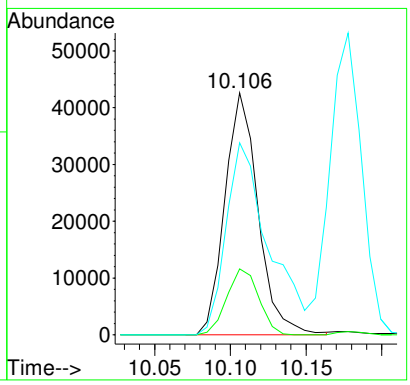


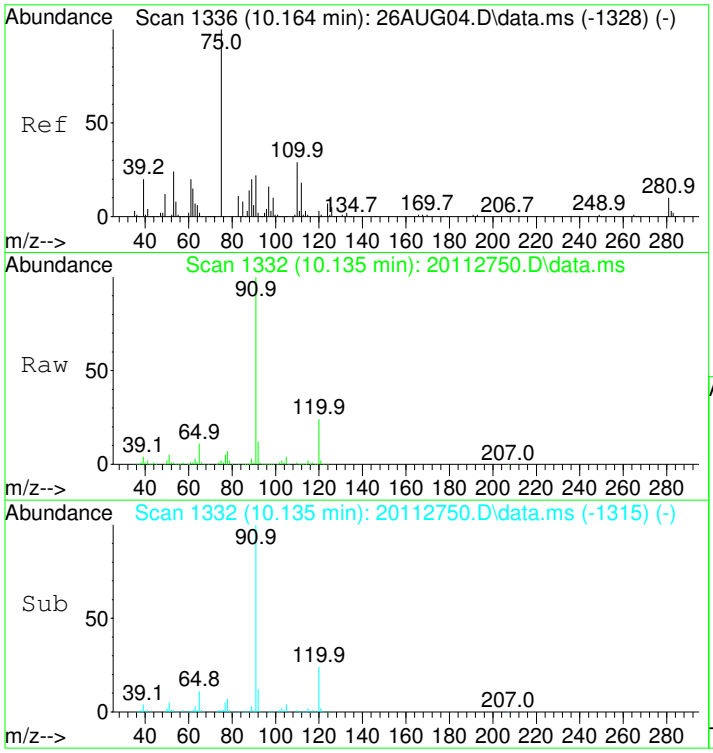


#95
trans-1,4-Dichloro-2-butene
Concen: 18.02 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 53 Resp: 64997

Ion	Ratio	Lower	Upper
53	100		
124	26.2	7.2	47.2
89	100.9	79.3	119.3

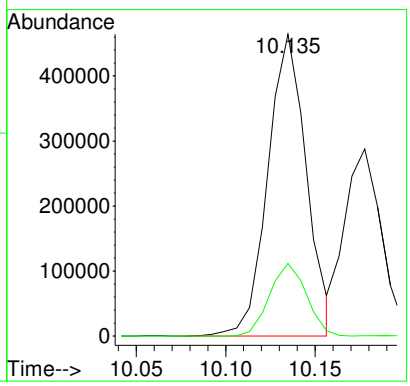


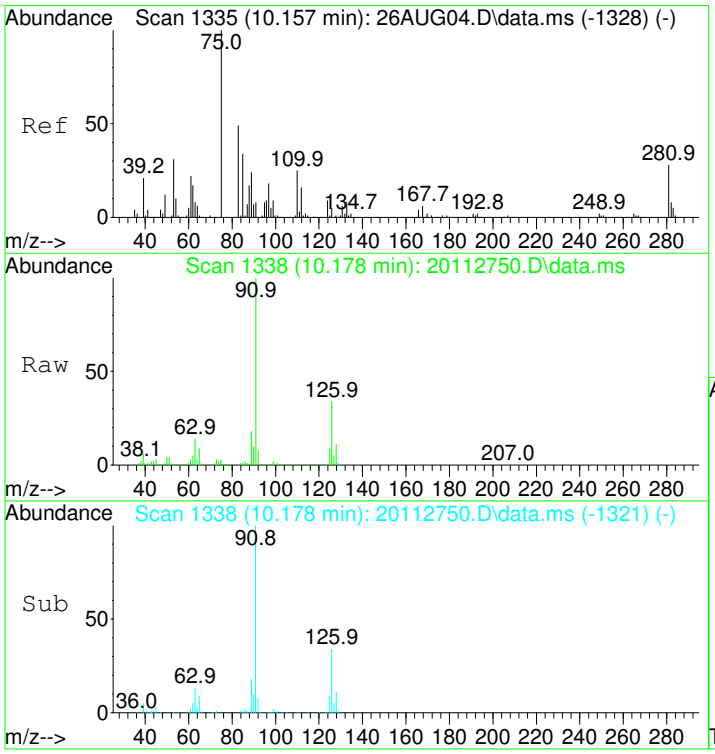


#96
n-Propylbenzene
Concen: 20.35 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 695424

Ion	Ratio	Lower	Upper
91	100		
120	23.0	3.7	43.7

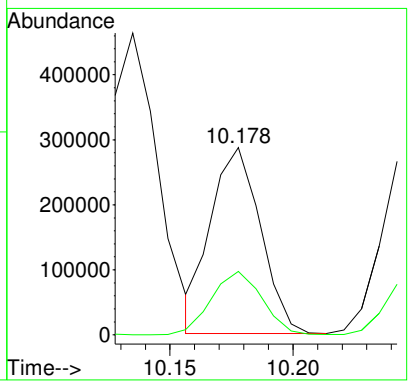


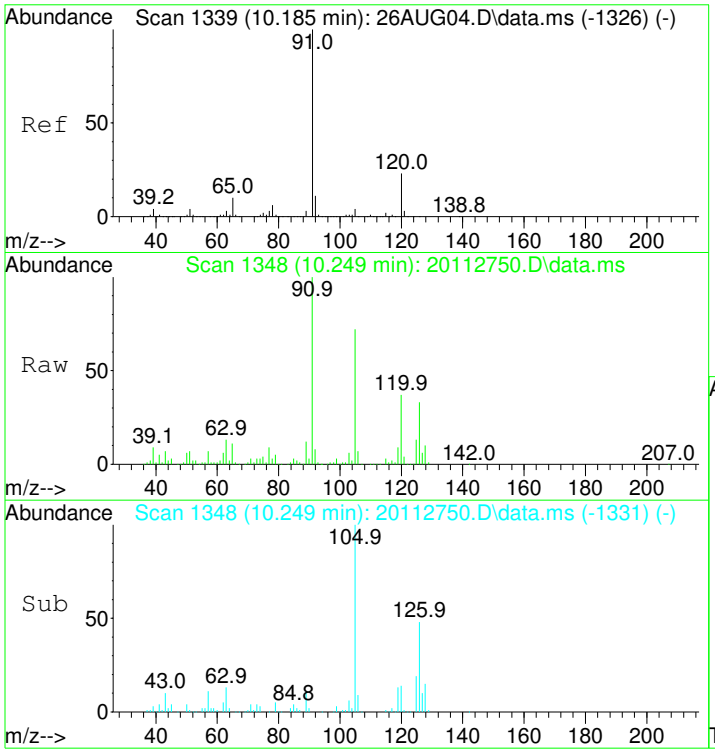


#97
2-Chlorotoluene
Concen: 23.67 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 403434

Ion	Ratio	Lower	Upper
91	100		
126	34.9	17.3	57.3

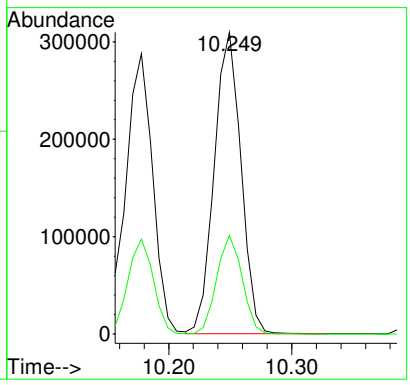


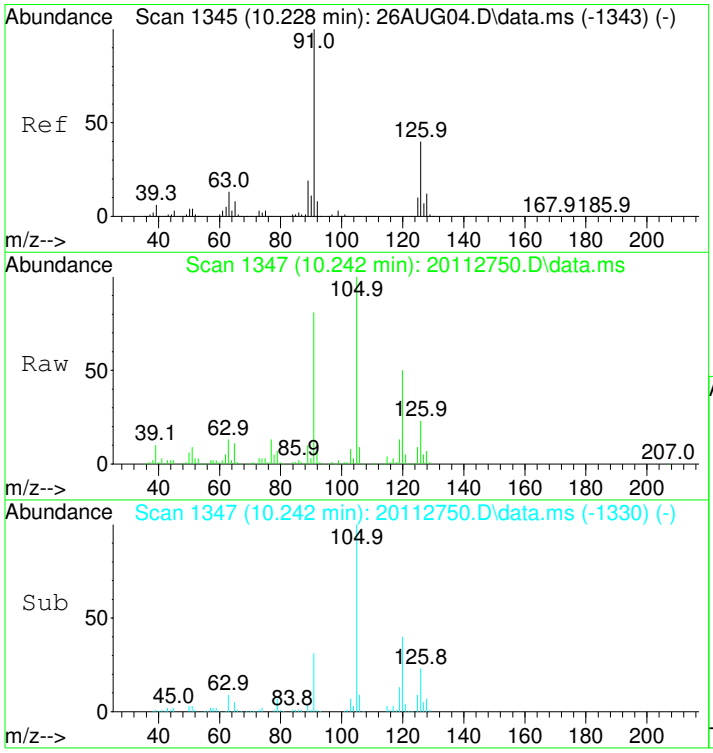


#98
4-Chlorotoluene
Concen: 20.02 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 465953

Ion	Ratio	Lower	Upper
91	100		
126	31.3	12.4	52.4

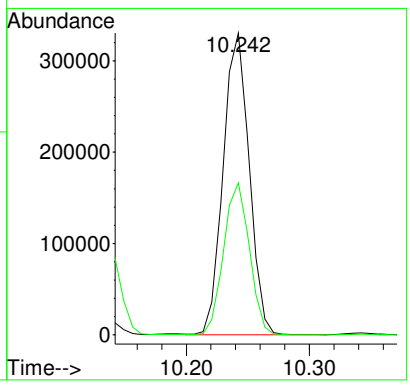


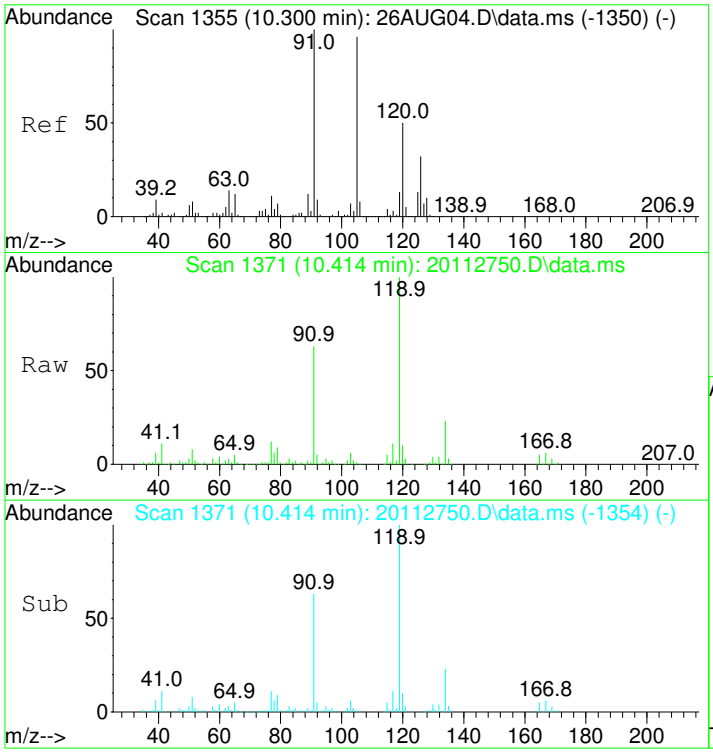


#99
1,3,5-Trimethylbenzene
Concen: 20.27 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:105 Resp: 484638

Ion	Ratio	Lower	Upper
105	100		
120	50.2	31.9	71.9

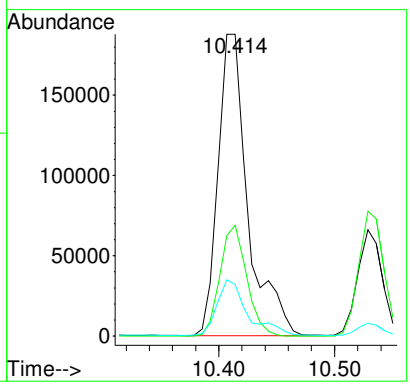


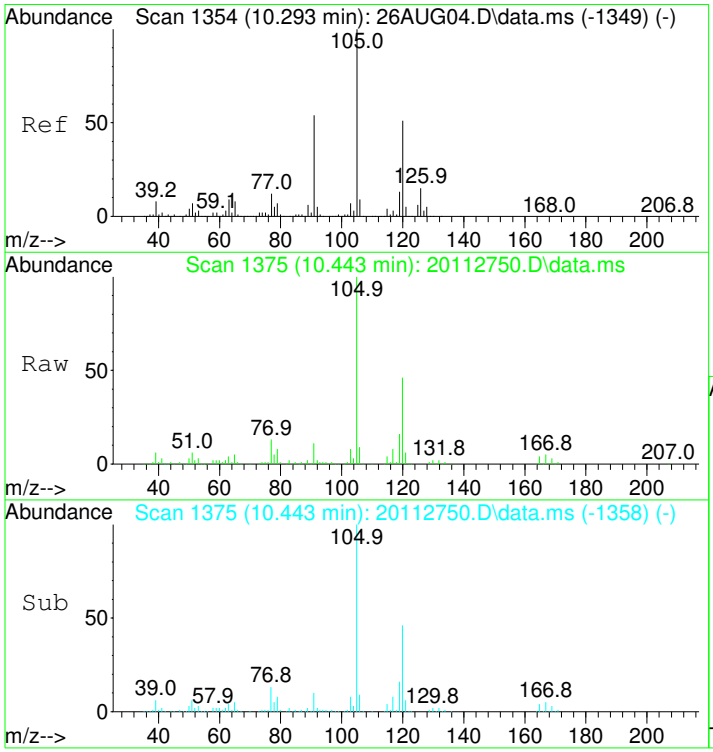


#100
tert-Butylbenzene
Concen: 22.48 ug/L
RT: 10.414 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 336238

Ion	Ratio	Lower	Upper
91	100		
134	32.8	9.7	49.7
41	18.7	0.0	39.3

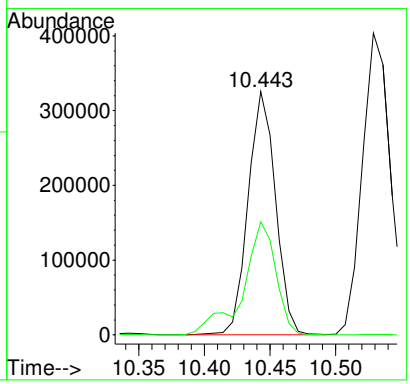


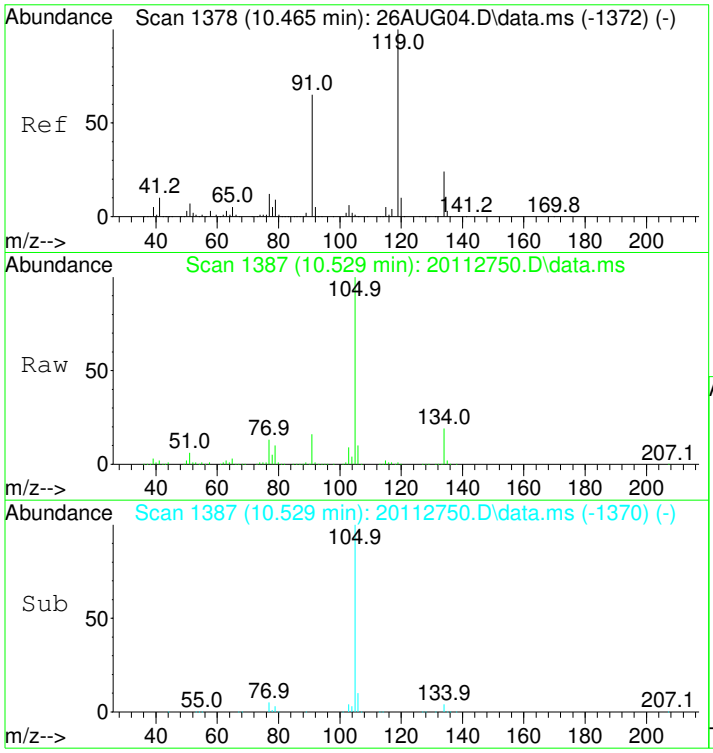


#101
1,2,4-Trimethylbenzene
Concen: 19.09 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:105 Resp: 474017

Ion	Ratio	Lower	Upper
105	100		
120	55.4	37.7	77.7

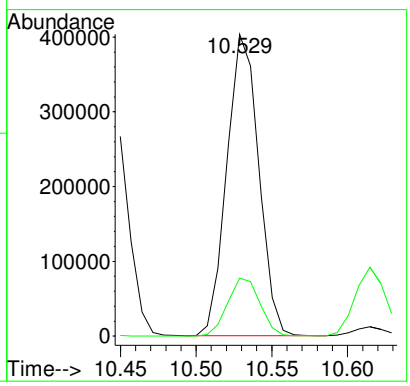


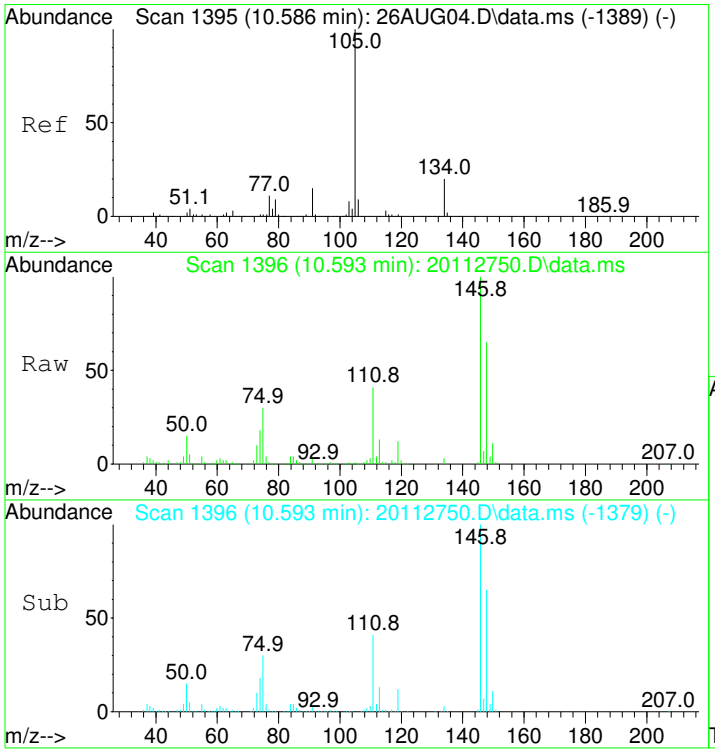


#102
sec-Butylbenzene
Concen: 20.37 ug/L
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:105 Resp: 590217

Ion	Ratio	Lower	Upper
105	100		
134	19.6	1.1	41.1

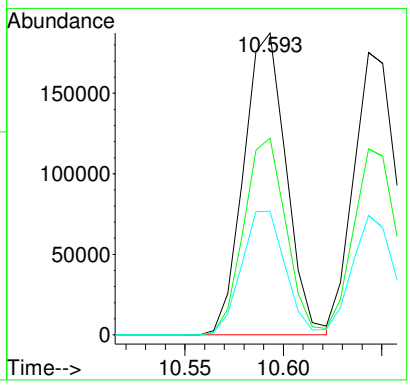


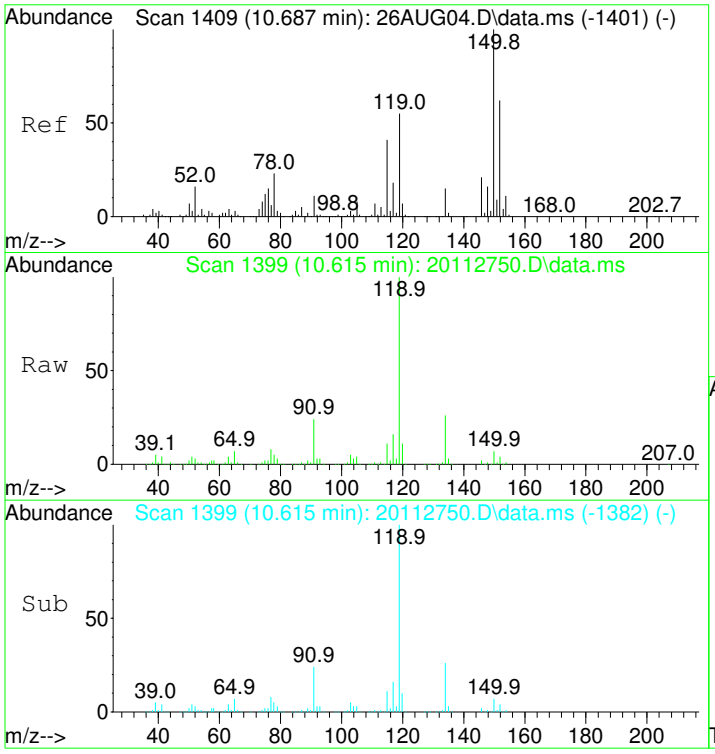


#104
1,3-Dichlorobenzene
Concen: 22.39 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:146 Resp: 281558

Ion	Ratio	Lower	Upper
146	100		
148	64.9	46.5	86.5
111	41.9	22.6	62.6

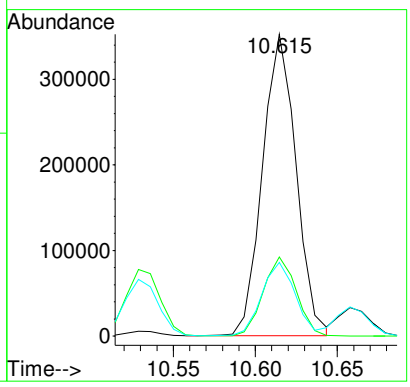


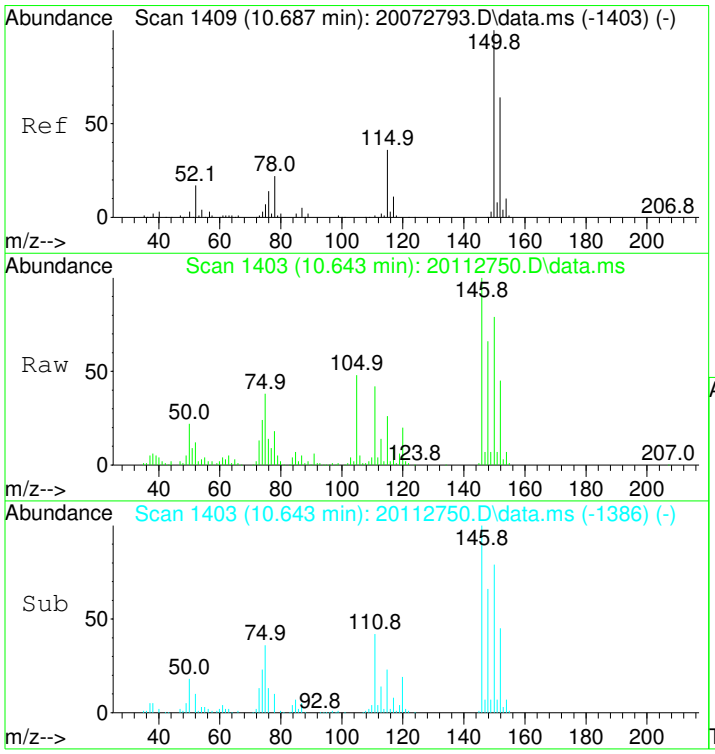


#105
p-Isopropyltoluene
Concen: 24.44 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:119 Resp: 501483

Ion	Ratio	Lower	Upper
119	100		
134	25.9	8.1	48.1
91	24.1	5.2	45.2

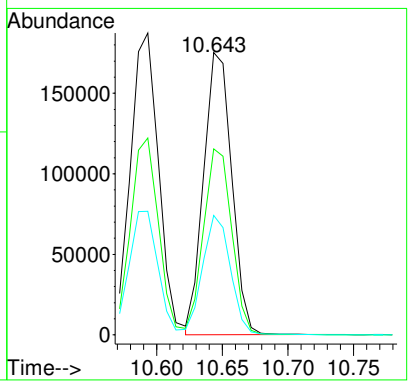


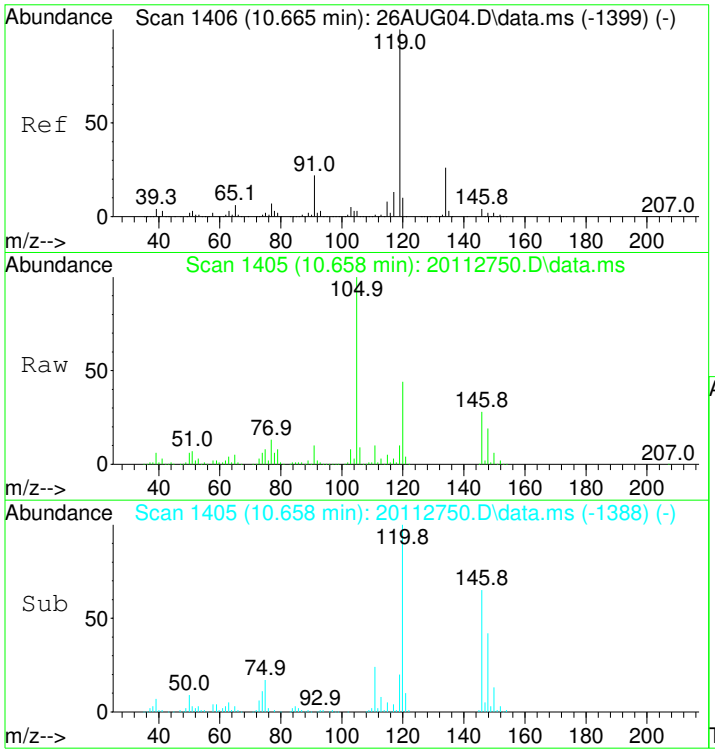


#106
1,4-Dichlorobenzene
Concen: 21.50 ug/L
RT: 10.643 min Scan# 1403
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:146 Resp: 260610

Ion	Ratio	Lower	Upper
146	100		
148	66.2	37.3	97.3
111	42.4	12.5	72.5

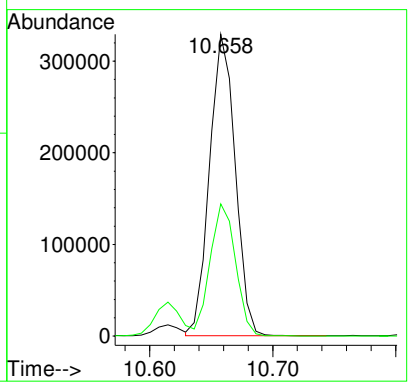


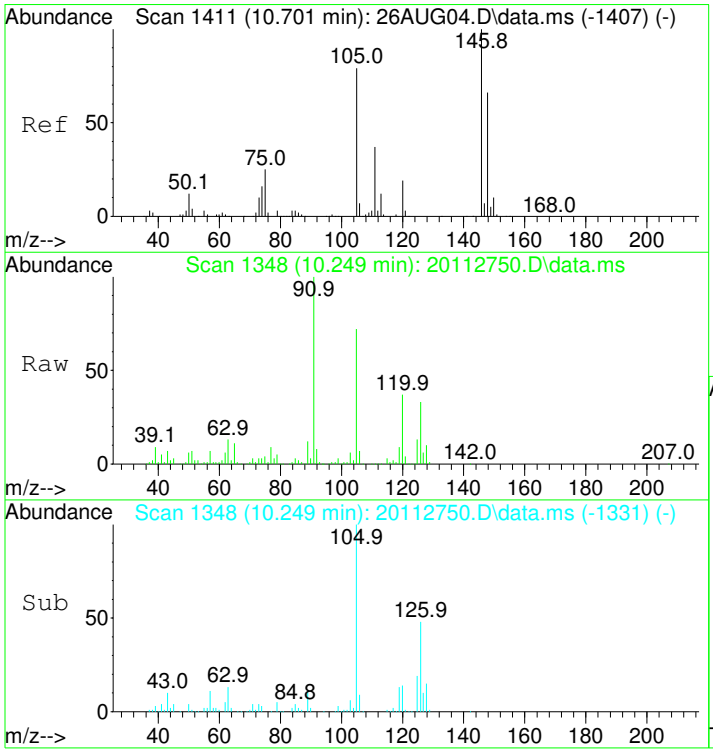


#107
1,2,3-Trimethylbenzene
Concen: 23.24 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:105 Resp: 477833

Ion	Ratio	Lower	Upper
105	100		
120	43.3	35.5	53.3

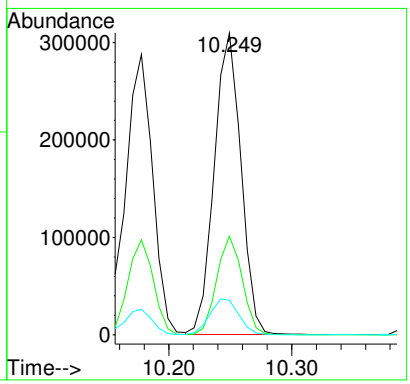


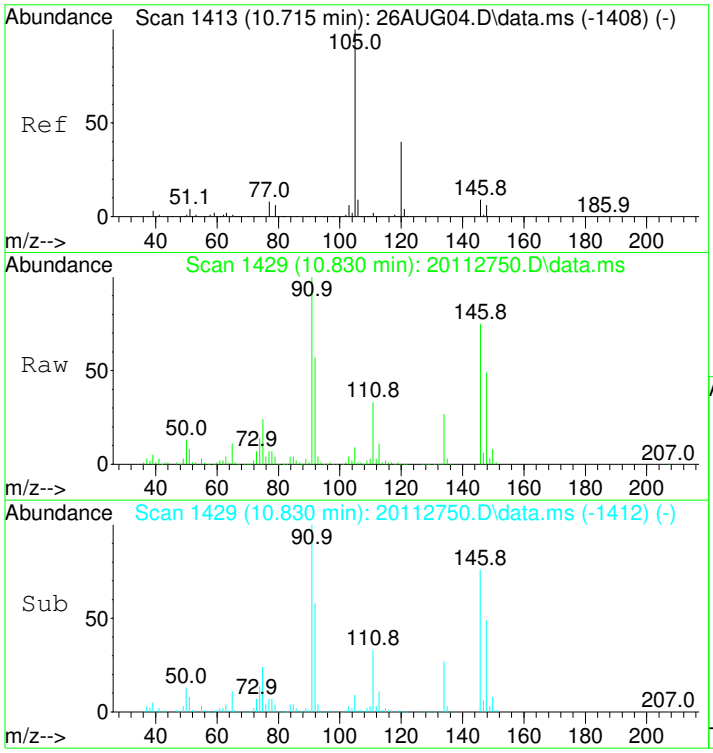


#108
Benzyl chloride
Concen: 20.49 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 465953

Ion	Ratio	Lower	Upper
91	100		
126	31.3	12.4	52.4
65	13.1	0.0	33.3

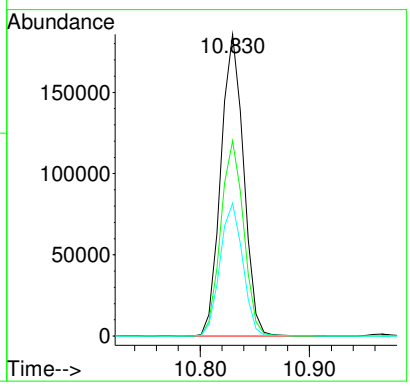


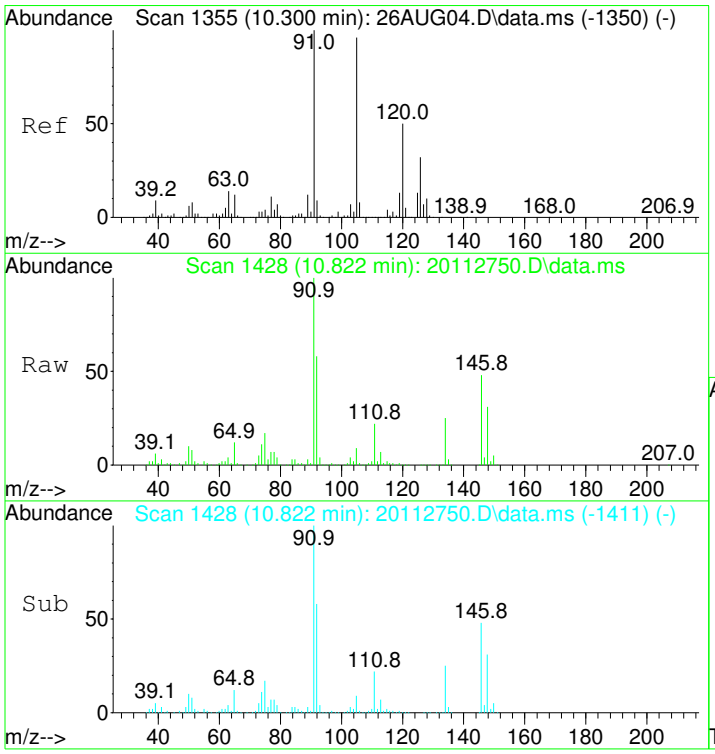


#109
1,2-Dichlorobenzene
Concen: 21.87 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:146 Resp: 268628

Ion	Ratio	Lower	Upper
146	100		
148	64.8	45.6	85.6
111	44.2	24.1	64.1

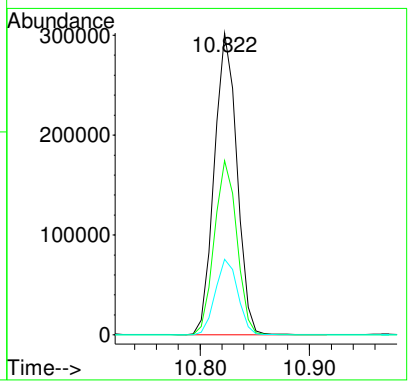


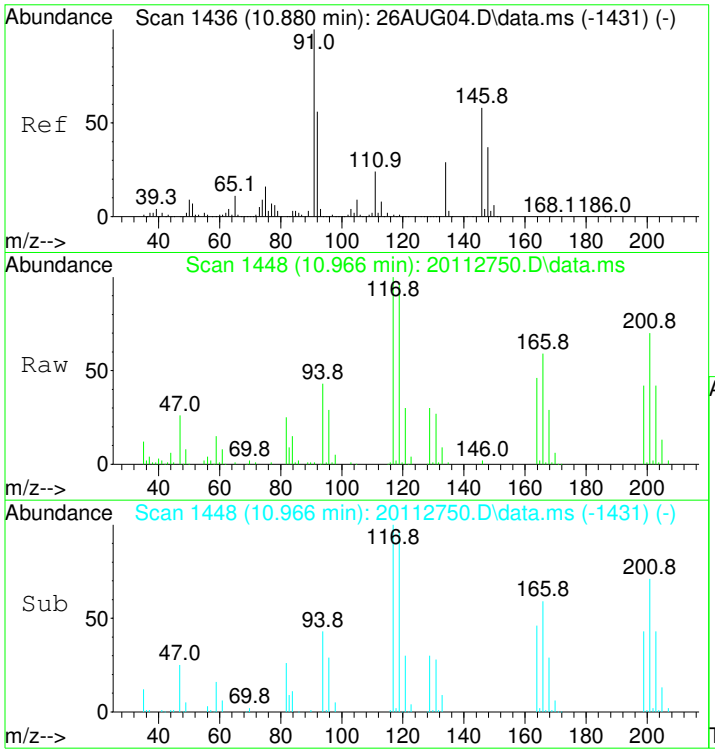


#110
n-Butylbenzene
Concen: 19.58 ug/L
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 91 Resp: 433441

Ion	Ratio	Lower	Upper
91	100		
92	57.5	39.3	79.3
134	25.0	7.5	47.5

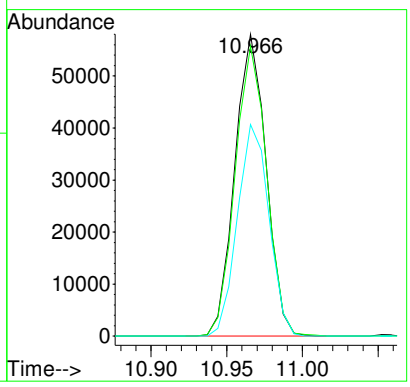


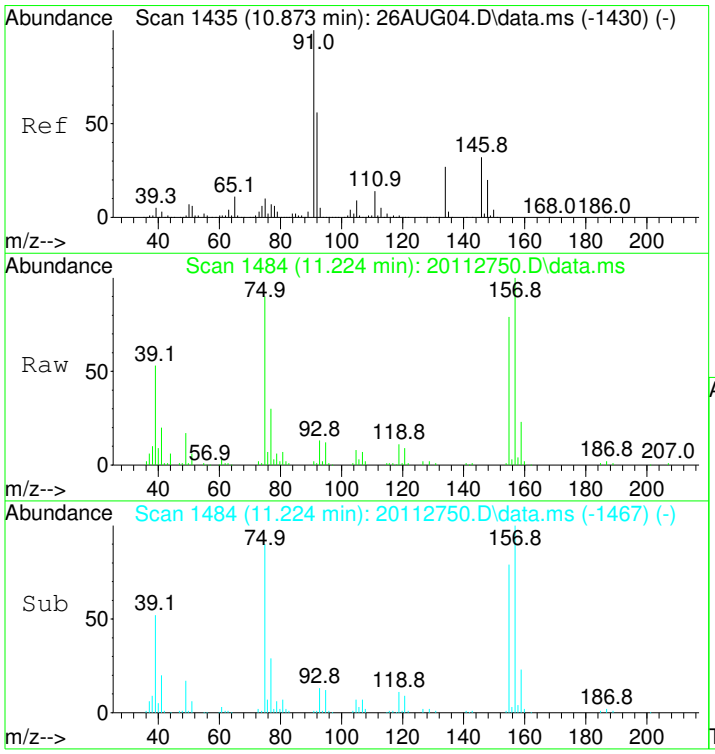


#111
Hexachloroethane
Concen: 17.93 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:117 Resp: 83136

Ion	Ratio	Lower	Upper
117	100		
119	96.7	75.9	115.9
201	70.6	49.2	89.2

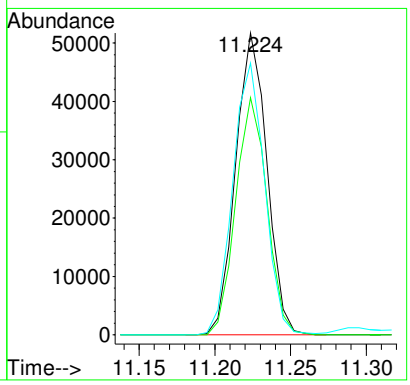


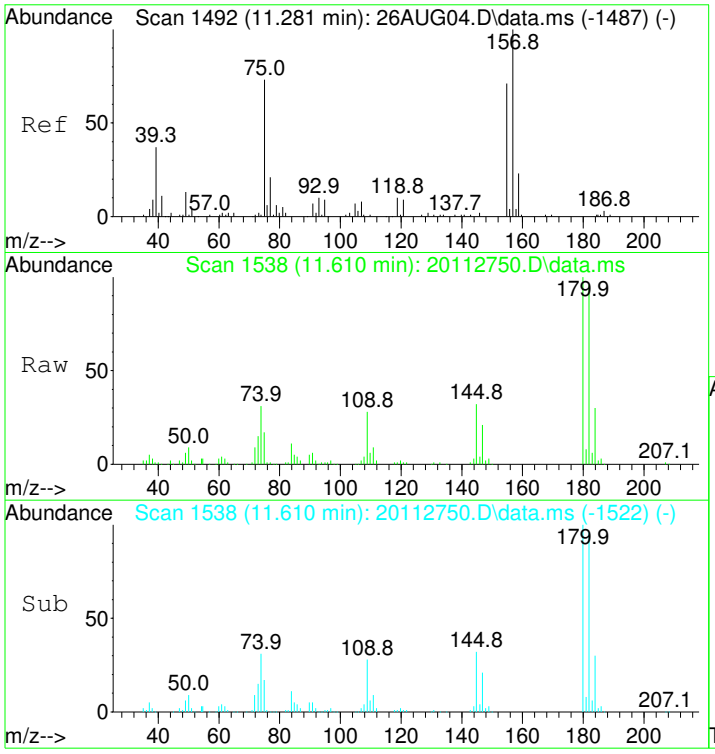


#112
1,2-Dibromo-3-chloropropane
Concen: 21.60 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:157 Resp: 74119

Ion	Ratio	Lower	Upper
157	100		
155	78.3	54.4	94.4
75	91.5	72.1	112.1

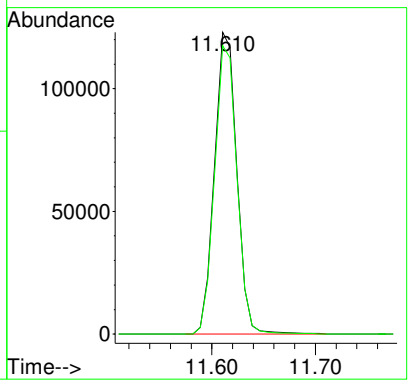


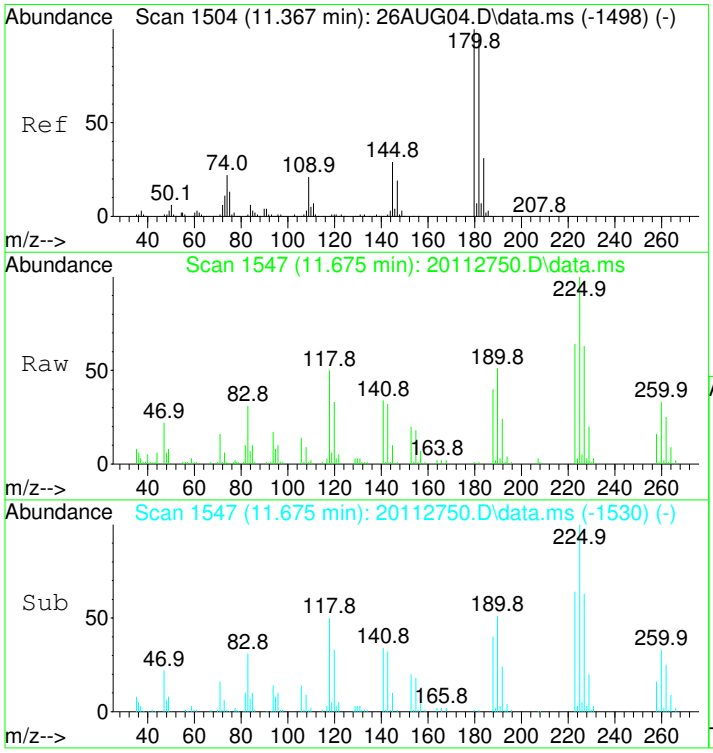


#114
1,2,4-Trichlorobenzene
Concen: 19.86 ug/L
RT: 11.610 min Scan# 1538
Delta R.T. -0.008 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:180 Resp: 184954

Ion	Ratio	Lower	Upper
180	100		
182	95.9	76.7	116.7

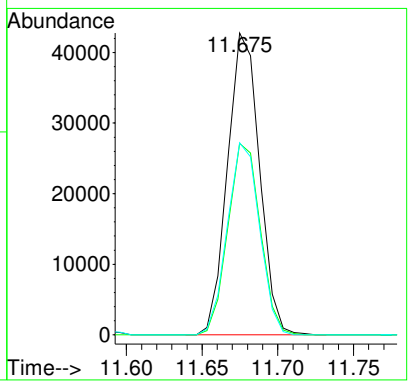


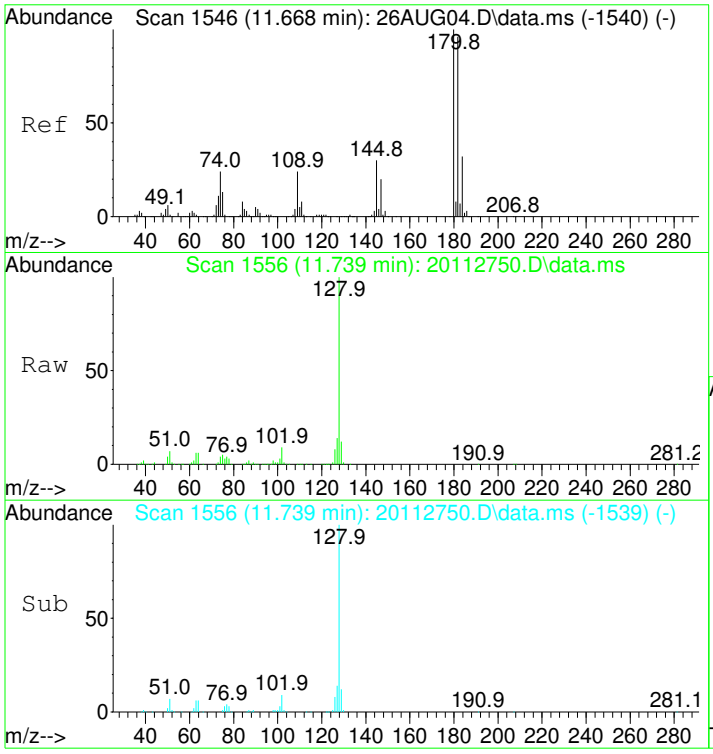


#115
Hexachlorobutadiene
Concen: 19.90 ug/L
RT: 11.675 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:225 Resp: 62726

Ion	Ratio	Lower	Upper
225	100		
227	64.2	50.9	76.3
223	63.9	50.5	75.7

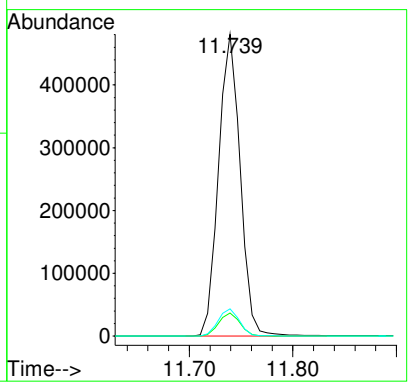


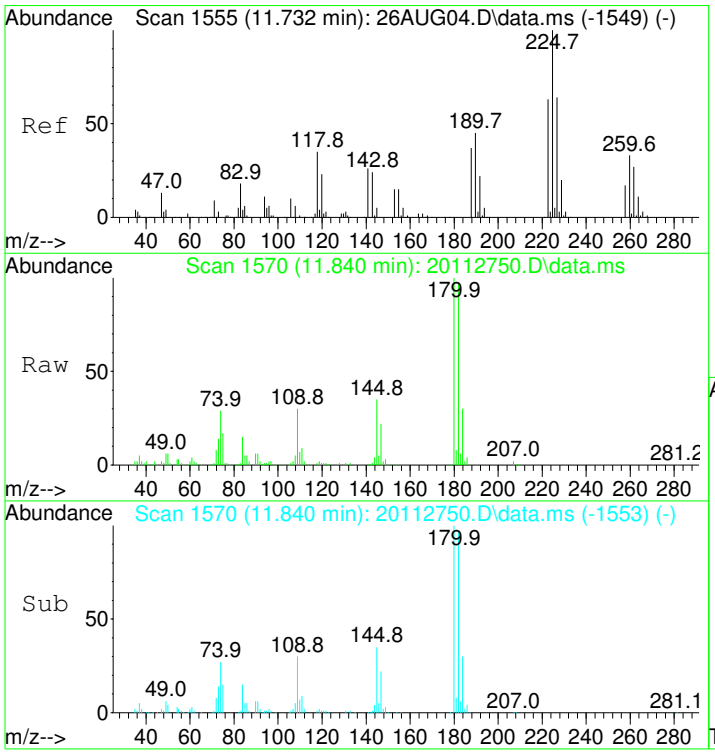


#116
Naphthalene
Concen: 19.47 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:128 Resp: 699669

Ion	Ratio	Lower	Upper
128	100		
126	7.6	0.0	28.2
102	8.9	0.0	30.0

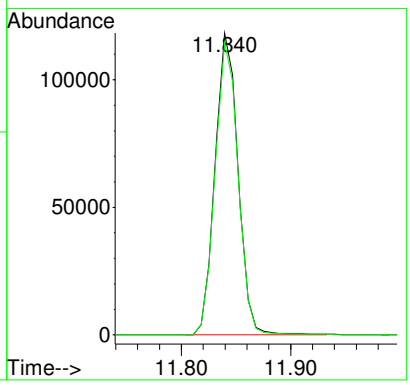


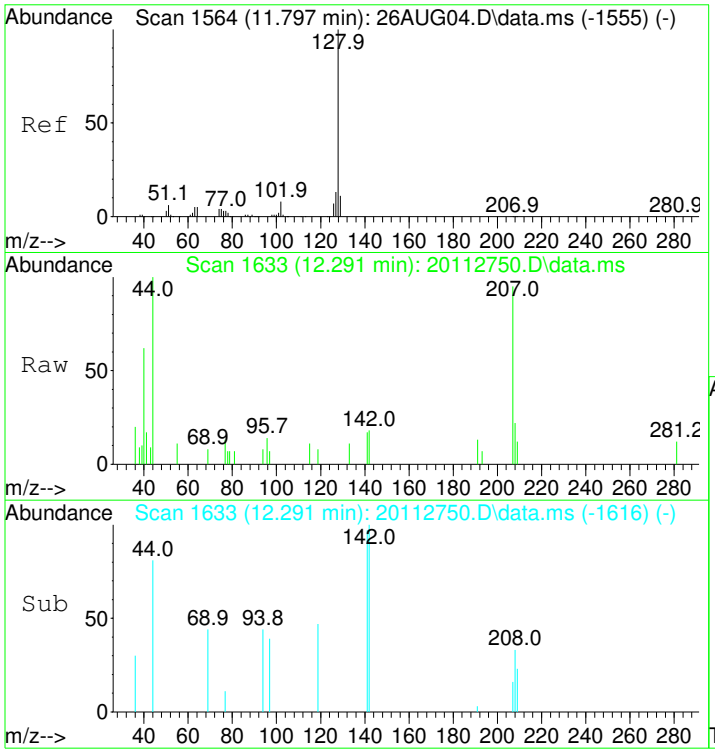


#117
1,2,3-Trichlorobenzene
Concen: 19.39 ug/L
RT: 11.840 min Scan# 1570
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:180 Resp: 172713

Ion	Ratio	Lower	Upper
180	100		
182	97.0	78.4	118.4

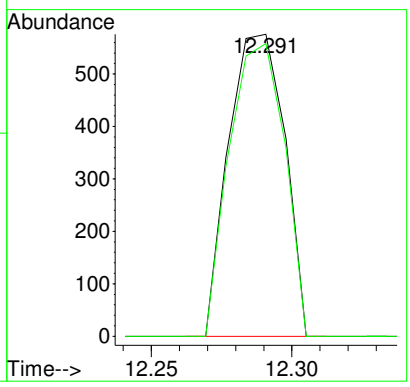


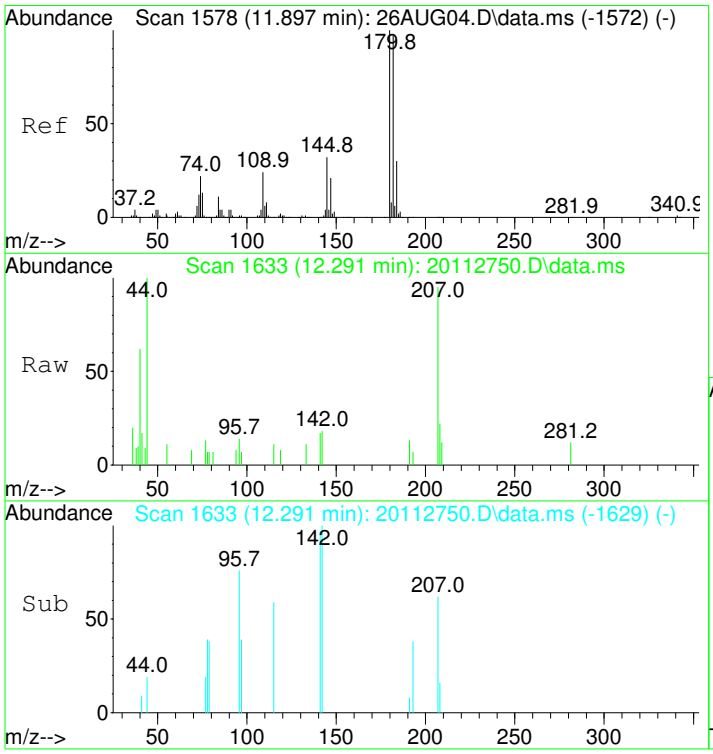


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:142 Resp: 800

Ion	Ratio	Lower	Upper
142	100		
141	95.4	65.0	105.0

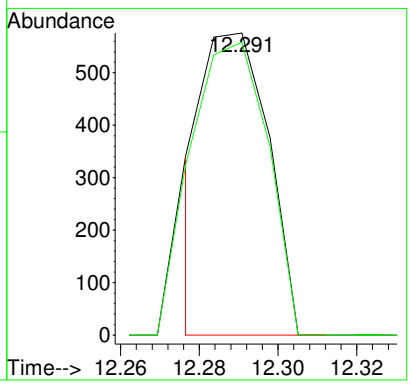


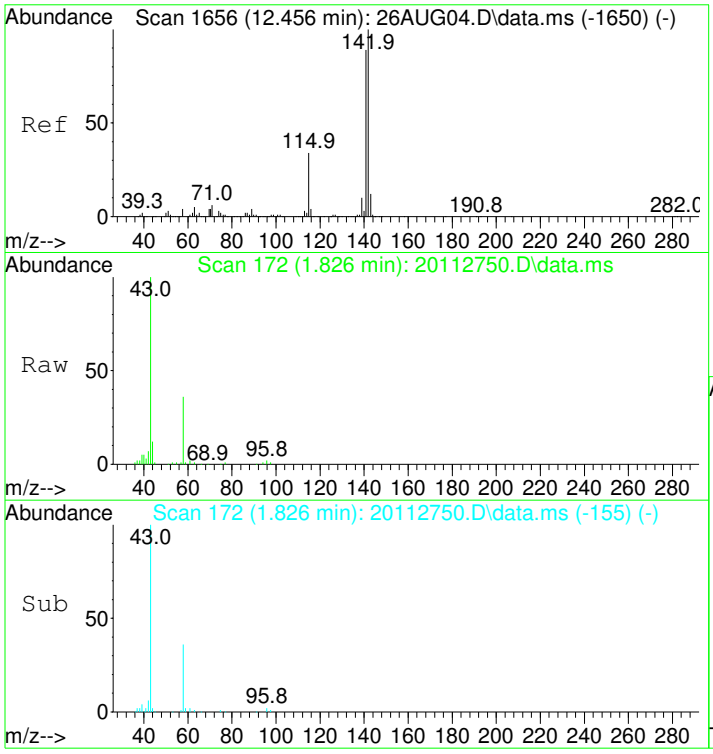


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.093 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion:142 Resp: 654

Ion	Ratio	Lower	Upper
142	100		
141	95.4	69.8	104.8

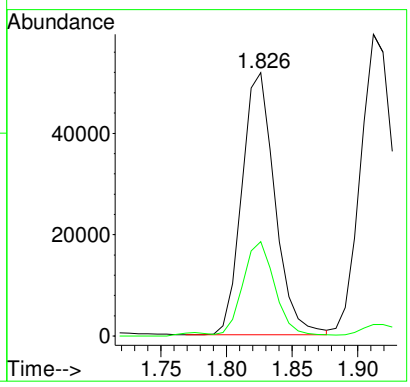


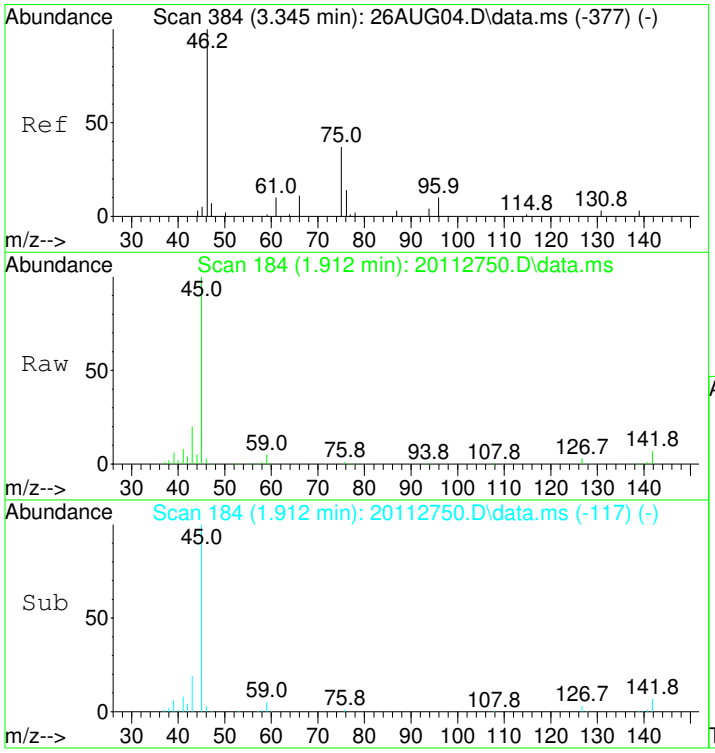


#121
2-Propanone
Concen: 23.21 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 90559

Ion	Ratio	Lower	Upper
43	100		
58	34.3	28.2	42.2

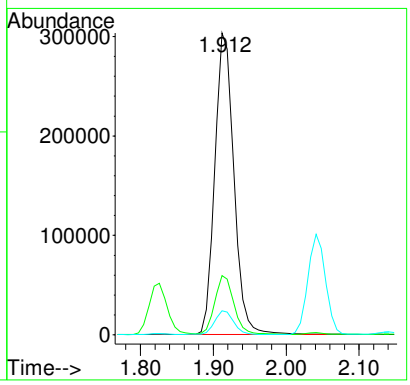


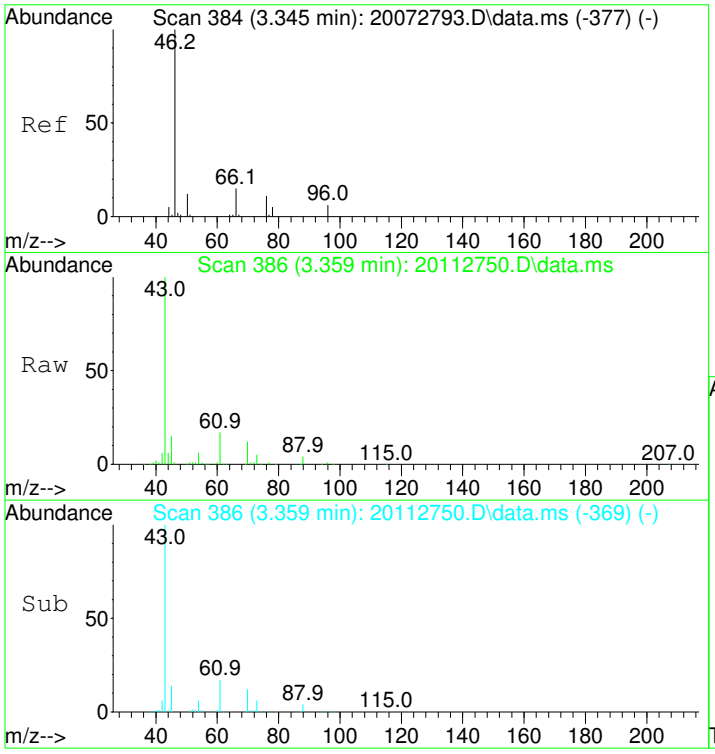


#122
Isopropyl Alcohol
Concen: 418.46 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.022 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 45 Resp: 553038

Ion	Ratio	Lower	Upper
45	100		
43	19.5	14.6	21.8
41	7.7	5.7	8.5

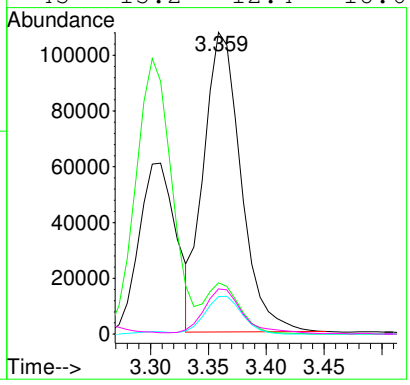


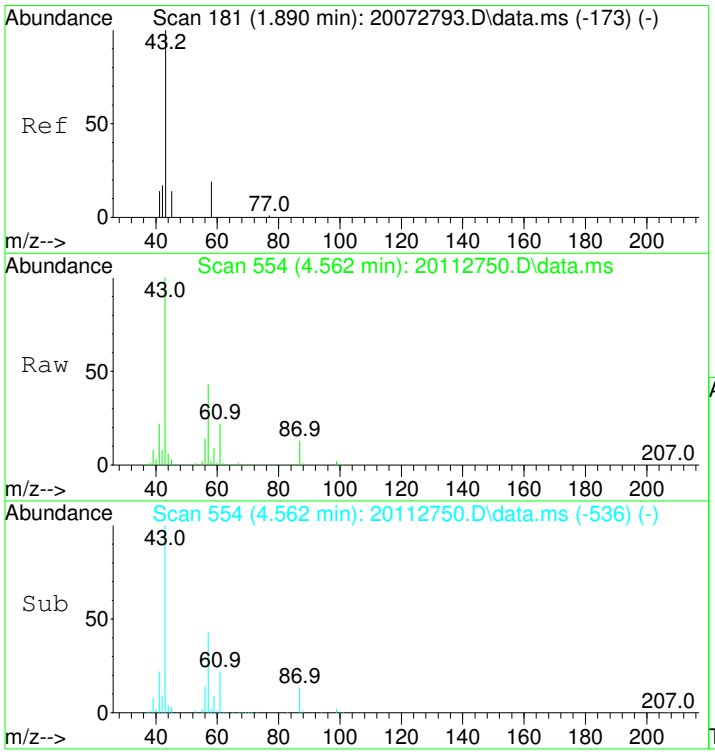


#123
Acetic Ether
Concen: 20.10 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 240929

Ion	Ratio	Lower	Upper
43	100		
61	14.1	11.9	17.9
70	12.6	9.7	14.5
45	15.2	12.4	18.6

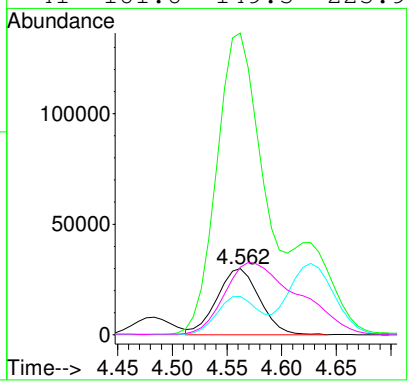


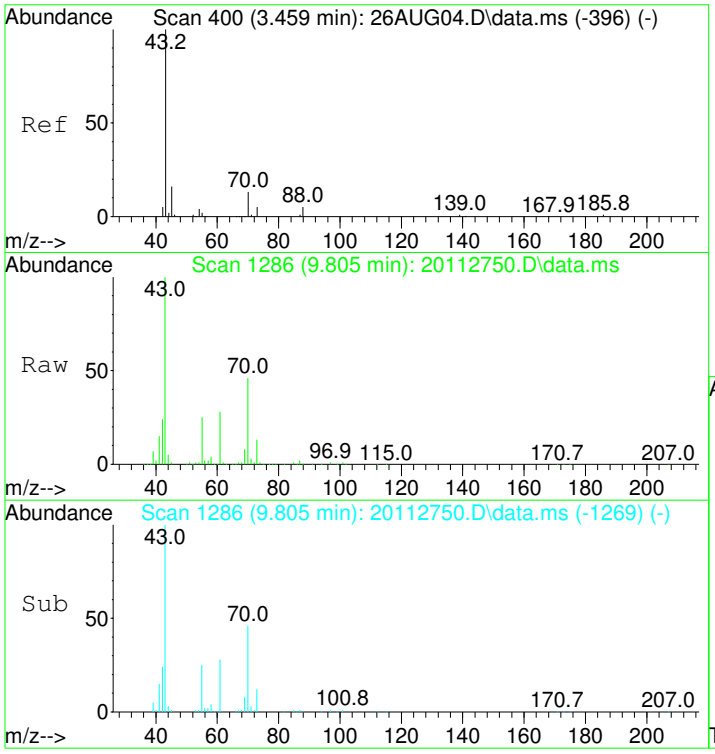


#124
Isopropyl Acetate
Concen: 18.81 ug/L
RT: 4.562 min Scan# 554
Delta R.T. 0.007 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 61 Resp: 81250

Ion	Ratio	Lower	Upper
61	100		
43	496.3	392.6	589.0
87	60.1	46.2	69.2
41	181.8	149.3	223.9

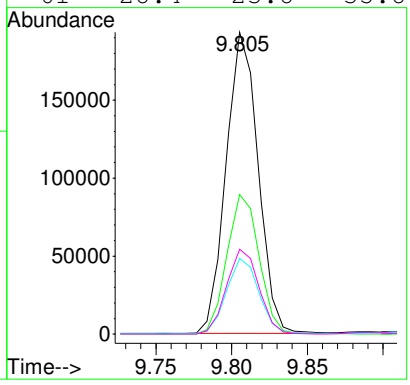




#125
Amyl Acetate
Concen: 17.65 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. -0.000 min
Lab File: 20112750.D
Acq: 28 Nov 2020 1:30 am

Tgt Ion: 43 Resp: 283435

Ion	Ratio	Lower	Upper
43	100		
70	46.9	39.8	59.6
55	25.3	21.8	32.8
61	28.4	23.8	35.8



1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112751.D
Acq On : 28 Nov 2020 1:46 am
Operator : js
Sample : 20111800-04F MSD DF500
Misc : IS 200-21532
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 28 12:03:11 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.989	168	236925	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.121	114	405142	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	377825	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	186593	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	129273	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	128145	19.79	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 98.95%				
50) 1,2-Dichloroethane-d4	4.369	65	157607	20.08	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 100.40%				
69) Toluene-d8	7.843	98	470414	20.11	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.55%				
91) Bromofluorobenzene	9.984	95	240367	25.31	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 126.55%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	157441	26.13	ug/L		99
3) Dichlorofluoromethane	1.461	67	216857	15.98	ug/L		99
4) Chloromethane	1.052	50	215351	16.46	ug/L		98
5) 1,3-Butadiene	1.131	54	1932	95.85	ug/L	#	1
6) Vinyl chloride	1.110	62	171093	21.48	ug/L		97
7) Bromomethane	1.275	96	88800	72.00	ug/L		84
8) Chloroethane	1.339	64	93274	27.64	ug/L		74
9) Trichlorofluoromethane	1.475	101	160245	17.07	ug/L		98
10) Ethanol	1.583	45	231642	342.46	ug/L		81
11) Ethyl ether	1.640	59	118847	20.95	ug/L		99
12) Acrolein	1.733	56	499	Below Cal		#	1
13) 1,1-Dichloroethene	1.790	61	204624	23.32	ug/L		100
16) Acetone	1.826	43	91929	23.42	ug/L		95
17) Chloroprene	2.772	53	196	Below Cal		#	1
18) Carbon disulfide	1.941	76	405340	23.12	ug/L		99
19) 2-Propanol	1.912	45	548302	408.34	ug/L		98
20) Allyl chloride	2.041	41	165435	16.43	ug/L		90
21) Methyl acetate	2.041	43	2103	Below Cal		#	1
22) Acetonitrile	2.041	41	165435	16.41	ug/L		91
23) Methylene chloride	2.141	49	167852	18.21	ug/L		97
24) trans-1,2-Dichloroethene	2.349	61	187539	21.71	ug/L		100
25) t-Butanol	2.220	59	282462	106.15	ug/L		98
26) Acrylonitrile	2.320	53	96371	21.11	ug/L		99
27) Methyl tert-butyl ether	2.342	73	440436	22.41	ug/L		98
28) Hexane	2.578	57	2482	Below Cal		#	62
29) 1,1-Dichloroethane	2.729	63	257173	20.72	ug/L		100
30) Diisopropyl ether	2.764	45	398309	21.86	ug/L	#	49
31) Vinyl acetate	2.729	86	542	0.27	ug/L	#	1
32) Methylcyclopentane	3.173	56	249623	18.34	ug/L		82
33) Ethyl tert butyl ether	3.130	59	429109	20.66	ug/L		98
34) 2,2-Dichloropropane	3.302	77	174890	17.04	ug/L		99
35) cis-1,2-Dichloroethene	3.302	61	212482	20.30	ug/L		95
36) 2-Butanone	3.309	43	133008	22.06	ug/L		97
37) Ethyl Acetate	3.359	43	238007	20.36	ug/L		98
38) Methyl acrylate	3.409	55	221673	21.25	ug/L		100
40) Bromochloromethane	3.574	49	116587	21.49	ug/L		98
41) Tetrahydrofuran	3.588	42	90906	20.49	ug/L		99
42) Methacrylonitrile	3.545	41	171081	19.49	ug/L		98
43) Chloroform	3.717	83	250279	19.72	ug/L		99
44) Cyclohexane	3.989	56	4860	Below Cal		#	28

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112751.D
Acq On : 28 Nov 2020 1:46 am
Operator : js
Sample : 20111800-04F MSD DF500
Misc : IS 200-21532
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 28 12:03:11 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
46) 1,1,1-Trichloroethane	3.889	97	221923	22.23 ug/L		100
48) Carbon tetrachloride	4.089	117	159828	18.65 ug/L		98
49) 1,1-Dichloropropene	4.111	75	194685	23.09 ug/L		96
51) 1,2-Dichloroethane	4.483	62	194999	20.81 ug/L		97
52) Benzene	4.376	78	533120	21.77 ug/L		100
53) Tertiaryamylmethylether	4.627	73	413014	22.22 ug/L	#	79
54) Isobutyl Alcohol	4.562	43	410171	21.48 ug/L		98
55) Heptane	4.935	43	952	Below Cal	#	1
58) n-Butanol	5.522	56	950421	1576.82 ug/L		99
59) Trichloroethene	5.486	130	146508	21.41 ug/L		98
60) 1,2-Dichloropropane	5.980	63	152631	22.18 ug/L		99
61) Dibromomethane	6.145	93	99685	20.50 ug/L		99
62) Methyl methacrylate	6.253	41	168025	21.21 ug/L		98
63) Bromodichloromethane	6.596	83	195577	20.96 ug/L		99
64) 2-Chloroethyl vinyl ether	7.392	43	1181	Below Cal	#	1
65) 2-Nitropropane	7.127	43	77492	21.12 ug/L		98
66) cis-1,3-Dichloropropene	7.506	75	228191	19.89 ug/L		100
68) 4-Methyl-2-pentanone	7.764	43	381799	34.43 ug/L		76
70) Toluene	7.922	91	567733	23.12 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	220994	20.95 ug/L		96
73) Ethyl methacrylate	8.358	69	242278	21.07 ug/L		99
74) 1,1,2-Trichloroethane	8.437	97	139583	20.72 ug/L		96
75) Tetrachloroethene	8.459	166	137294	22.21 ug/L		99
76) 1,3-Dichloropropane	8.573	76	235372	21.05 ug/L		99
77) 2-Hexanone	8.666	43	195485	22.15 ug/L		100
78) Chlorodibromomethane	8.752	129	144268	19.60 ug/L		98
79) Butyl acetate	8.803	43	309361	22.20 ug/L		99
80) 1,2-Dibromoethane	8.824	107	153276	21.98 ug/L		100
81) Chlorobenzene	9.218	112	349633	22.14 ug/L		98
82) 1,1,1,2-Tetrachloroethane	9.297	131	132678	21.72 ug/L		99
83) Ethylbenzene	9.304	91	582562	20.37 ug/L		97
84) m/p-Xylene	9.404	91	902909	39.61 ug/L		96
85) Nonane	9.462	43	87138	25.88 ug/L		98
86) Styrene	9.669	104	389641	20.17 ug/L		99
87) o-Xylene	9.655	91	510393	20.29 ug/L		98
88) Cyclohexanone	9.913	55	2415	Below Cal	#	79
89) Bromoform	9.777	173	100651	17.88 ug/L		99
90) Isopropylbenzene	9.891	105	589652	20.42 ug/L		97
92) Bromobenzene	10.063	77	246624	21.06 ug/L		99
93) 1,1,2,2-Tetrachloroethane	10.092	83	243180	21.84 ug/L		97
94) 1,2,3-Trichloropropane	10.113	110	71250	20.32 ug/L		99
95) trans-1,4-Dichloro-2-b...	10.106	53	63042	17.03 ug/L		97
96) n-Propylbenzene	10.135	91	694743	19.80 ug/L		98
97) 2-Chlorotoluene	10.178	91	406761	23.29 ug/L		96
98) 4-Chlorotoluene	10.249	91	467858	19.59 ug/L		98
99) 1,3,5-Trimethylbenzene	10.242	105	489435	19.96 ug/L		95
100) tert-Butylbenzene	10.414	91	338868	22.10 ug/L		96
101) 1,2,4-Trimethylbenzene	10.443	105	472038	18.51 ug/L		98
102) sec-Butylbenzene	10.529	105	601035	20.24 ug/L		96
104) 1,3-Dichlorobenzene	10.593	146	278739	21.79 ug/L		99
105) p-Isopropyltoluene	10.615	119	493861	23.66 ug/L		98
106) 1,4-Dichlorobenzene	10.643	146	265525	21.55 ug/L		97
107) 1,2,3-Trimethylbenzene	10.658	105	490101	23.45 ug/L		97
108) Benzyl chloride	10.249	91	467858	20.21 ug/L		99
109) 1,2-Dichlorobenzene	10.830	146	263227	21.06 ug/L		100
110) n-Butylbenzene	10.822	91	434820	19.30 ug/L		96
111) Hexachloroethane	10.966	117	86391	18.33 ug/L		99
112) 1,2-Dibromo-3-chloropr...	11.224	157	72474	20.76 ug/L		92

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112751.D
Acq On : 28 Nov 2020 1:46 am
Operator : js
Sample : 20111800-04F MSD DF500
Misc : IS 200-21532
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 28 12:03:11 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

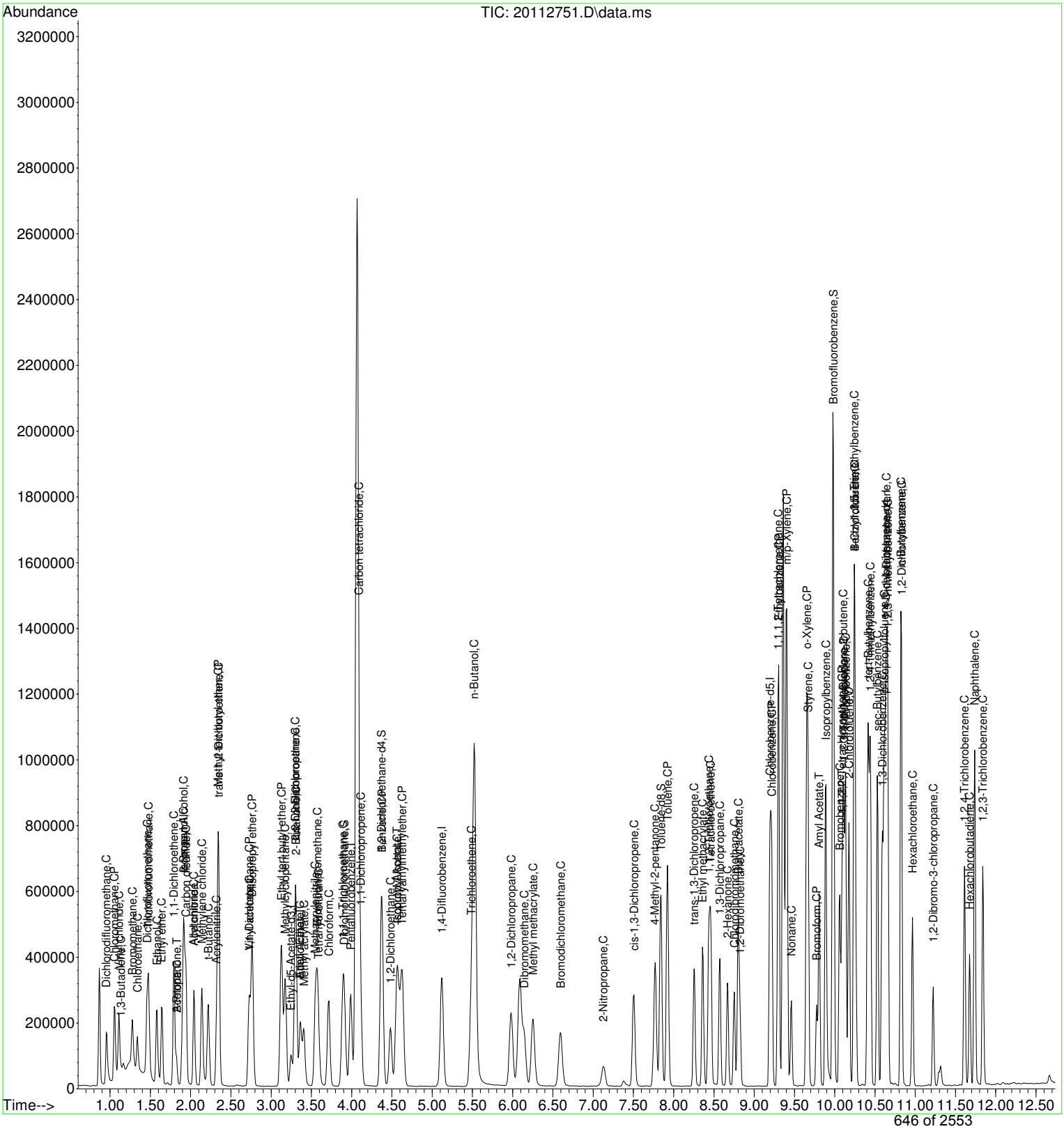
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
114) 1,2,4-Trichlorobenzene	11.610	180	185858	19.62	ug/L		98
115) Hexachlorobutadiene	11.675	225	63698	19.88	ug/L		98
116) Naphthalene	11.739	128	723202	19.82	ug/L		97
117) 1,2,3-Trichlorobenzene	11.840	180	179259	19.80	ug/L		99
118) 2-Methylnaphthalene	12.291	142	758	Below Cal		#	58
119) 1-Methylnaphthalene	12.391	142	256	Below Cal		#	1
121) 2-Propanone	1.826	43	91929	22.76	ug/L		95
122) Isopropyl Alcohol	1.912	45	548302	400.38	ug/L		98
123) Acetic Ether	3.359	43	237164	19.10	ug/L		98
124) Isopropyl Acetate	4.562	61	81333	18.18	ug/L		96
125) Amyl Acetate	9.805	43	280589	16.85	ug/L		97

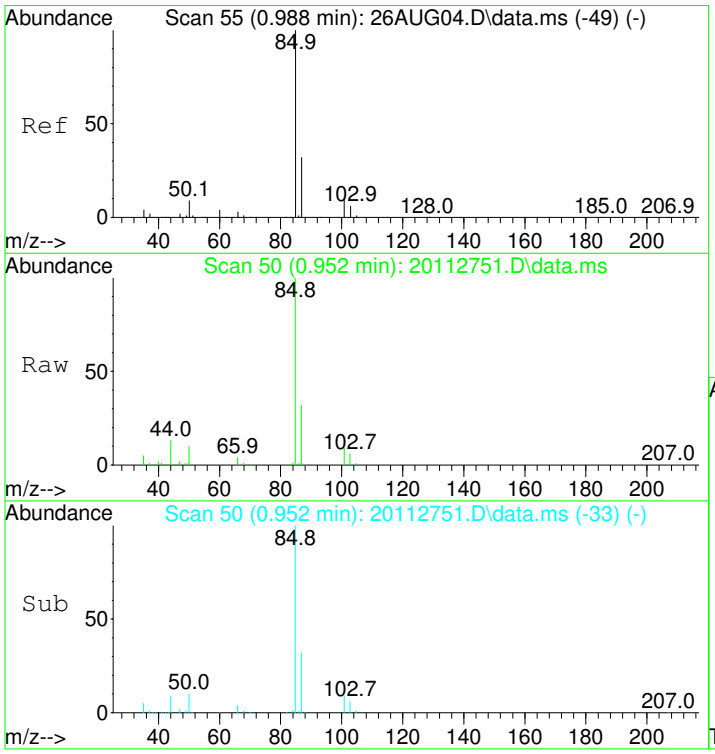
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112751.D
Acq On : 28 Nov 2020 1:46 am
Operator : js
Sample : 20111800-04F MSD DF500
Misc : IS 200-21532
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 28 12:03:11 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

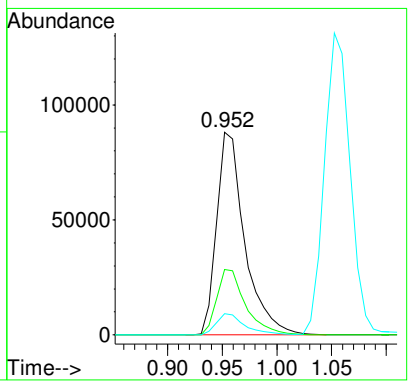


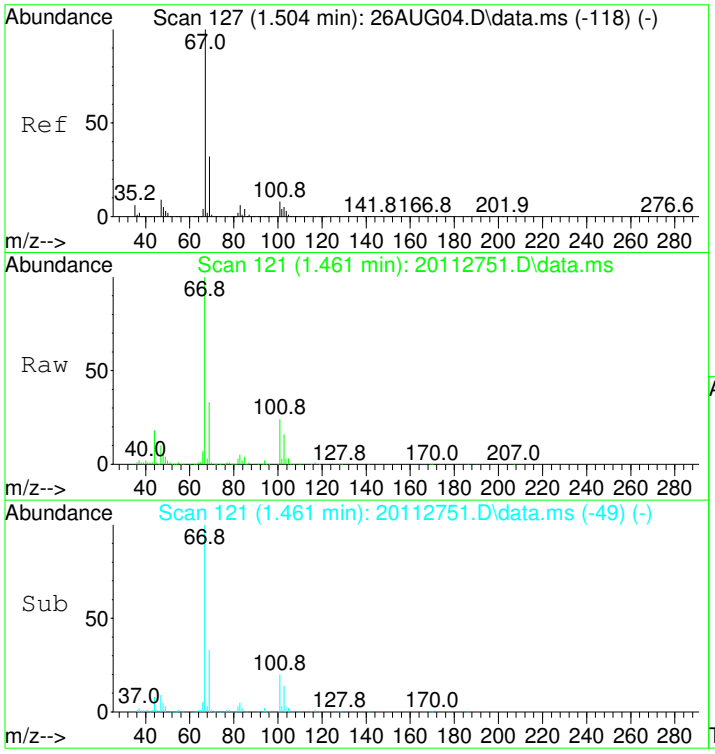


#2
Dichlorodifluoromethane
Concen: 26.13 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 85 Resp: 157441

Ion	Ratio	Lower	Upper
85	100		
87	33.1	3.6	63.6
50	10.7	0.0	40.5

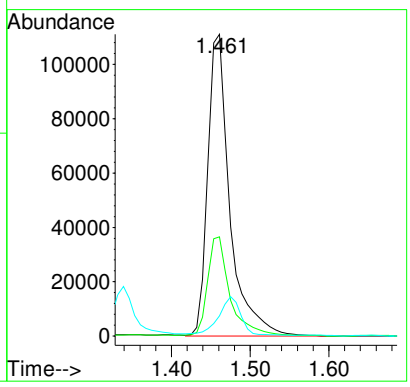


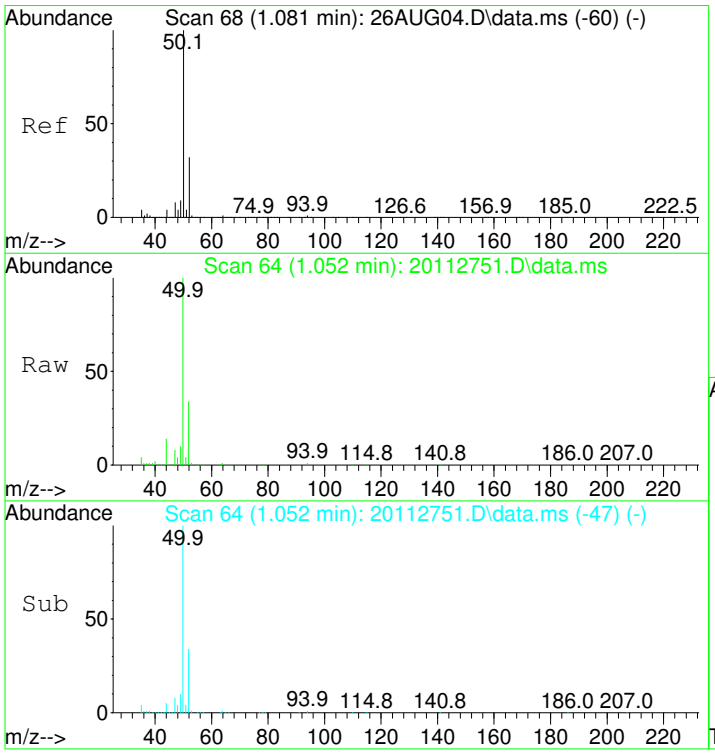


#3
Dichlorofluoromethane
Concen: 15.98 ug/L
RT: 1.461 min Scan# 121
Delta R.T. 0.015 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 67 Resp: 216857

Ion	Ratio	Lower	Upper
67	100		
69	33.9	23.7	44.1
66	12.9	8.1	15.0

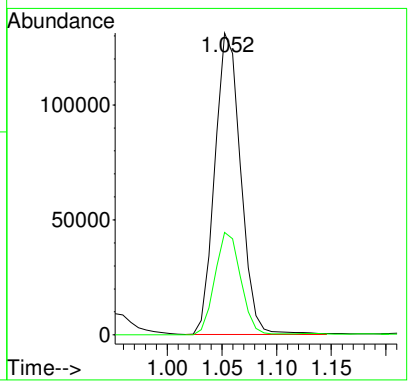


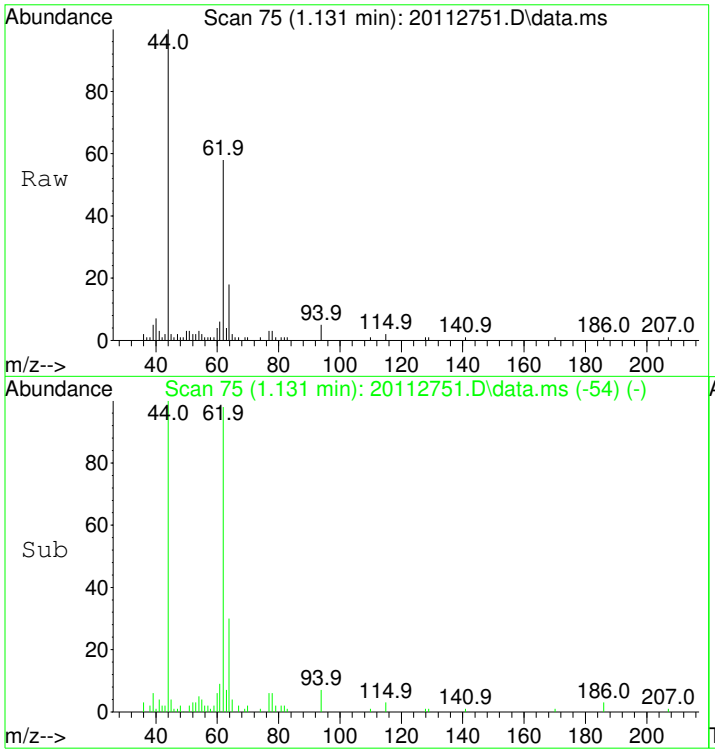


#4
Chloromethane
Concen: 16.46 ug/L
RT: 1.052 min Scan# 64
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 50 Resp: 215351

Ion	Ratio	Lower	Upper
50	100		
52	34.0	4.9	64.9

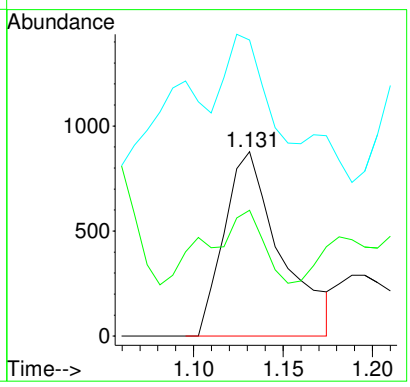


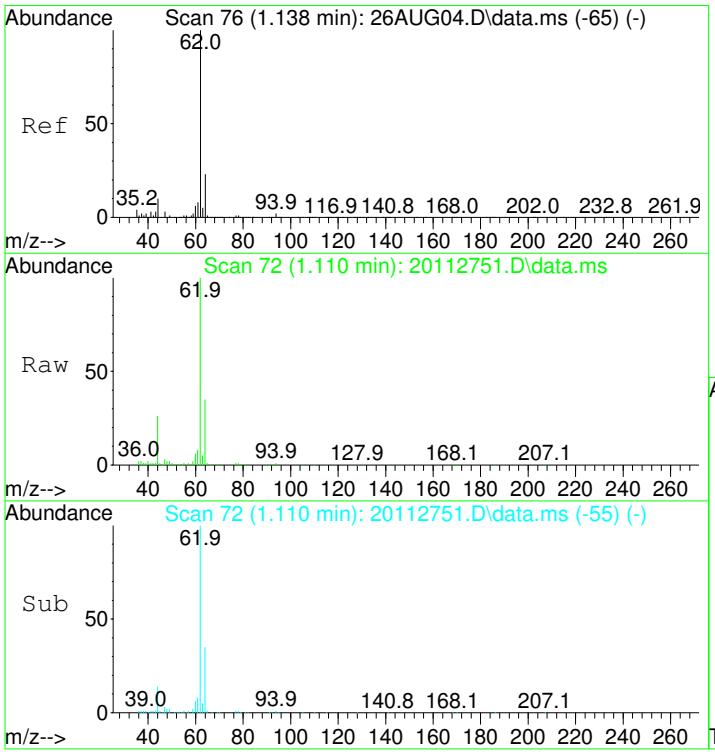


#5
1,3-Butadiene
Concen: 95.85 ug/L
RT: 1.131 min Scan# 75
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 54 Resp: 1932

Ion	Ratio	Lower	Upper
54	100		
53	52.4	0.0	30.0#
39	53.9	322.9	382.9#

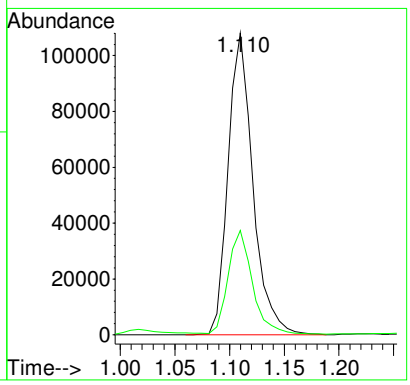


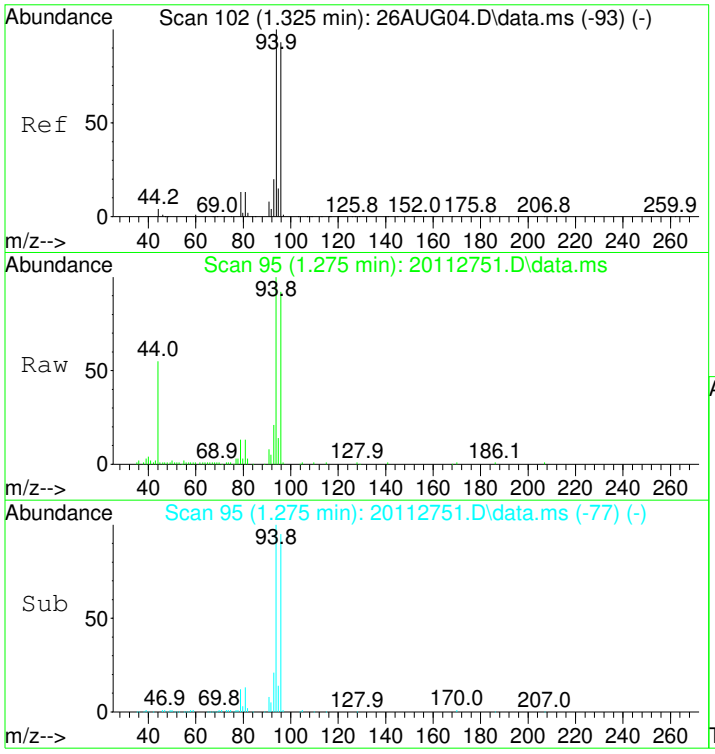


#6
Vinyl chloride
Concen: 21.48 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 62 Resp: 171093

Ion	Ratio	Lower	Upper
62	100		
64	33.3	1.9	61.9

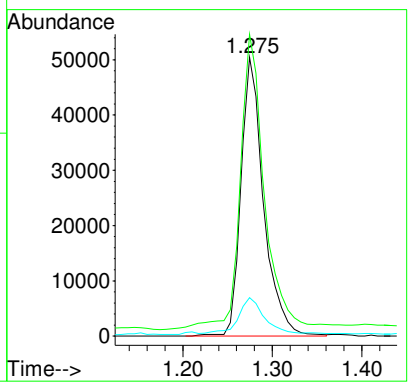


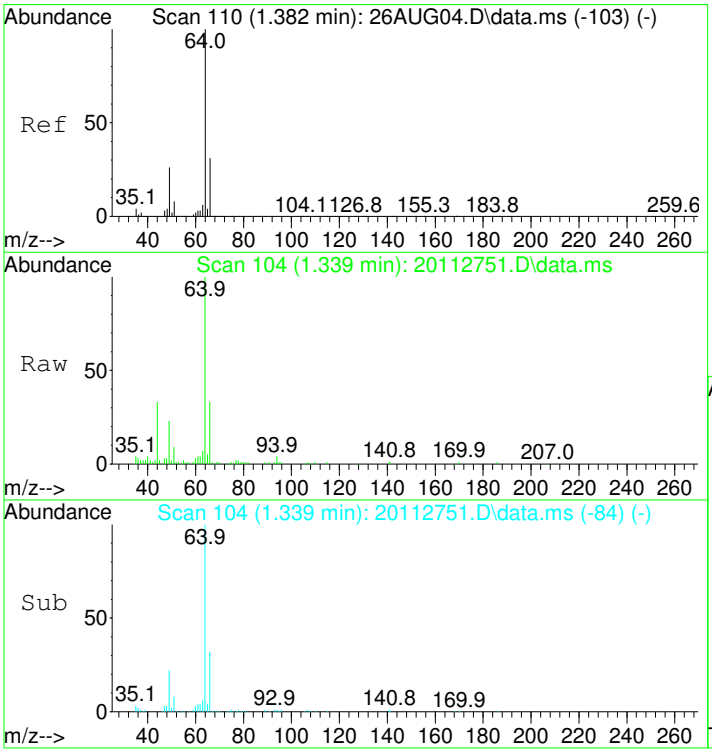


#7
Bromomethane
Concen: 72.00 ug/L
RT: 1.275 min Scan# 95
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 96 Resp: 88800

Ion	Ratio	Lower	Upper
96	100		
94	114.0	103.4	163.4
79	14.4	0.0	49.6

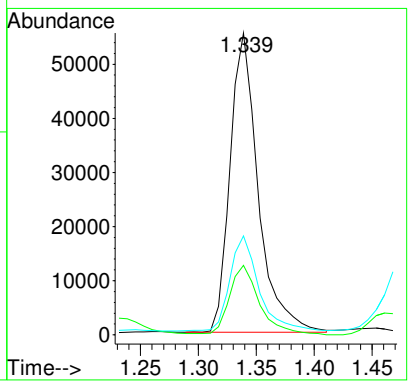


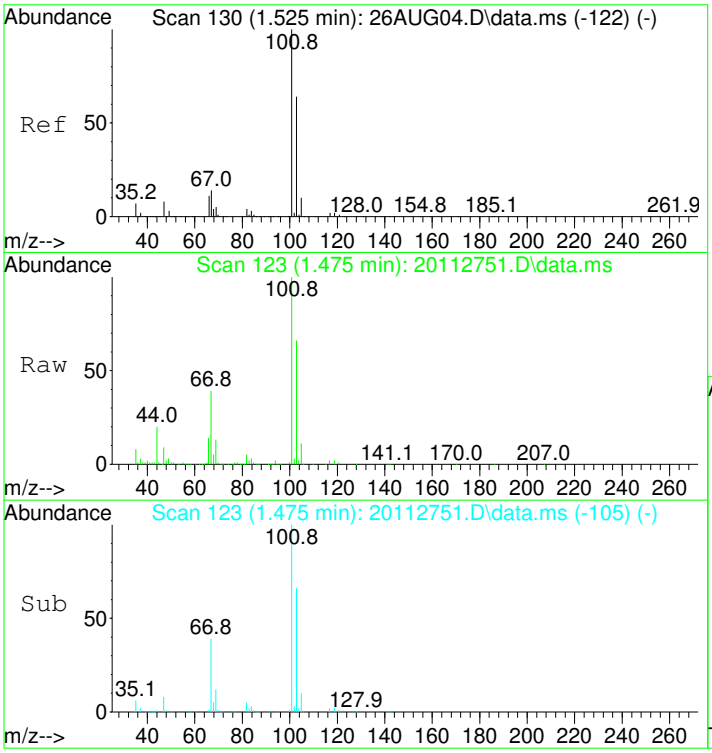


#8
Chloroethane
Concen: 27.64 ug/L
RT: 1.339 min Scan# 104
Delta R.T. 0.022 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 64 Resp: 93274

Ion	Ratio	Lower	Upper
64	100		
49	24.9	0.0	41.3
66	32.5	0.0	52.2

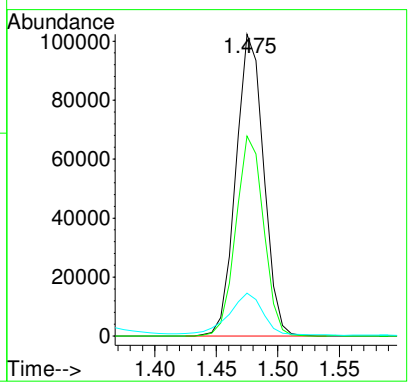


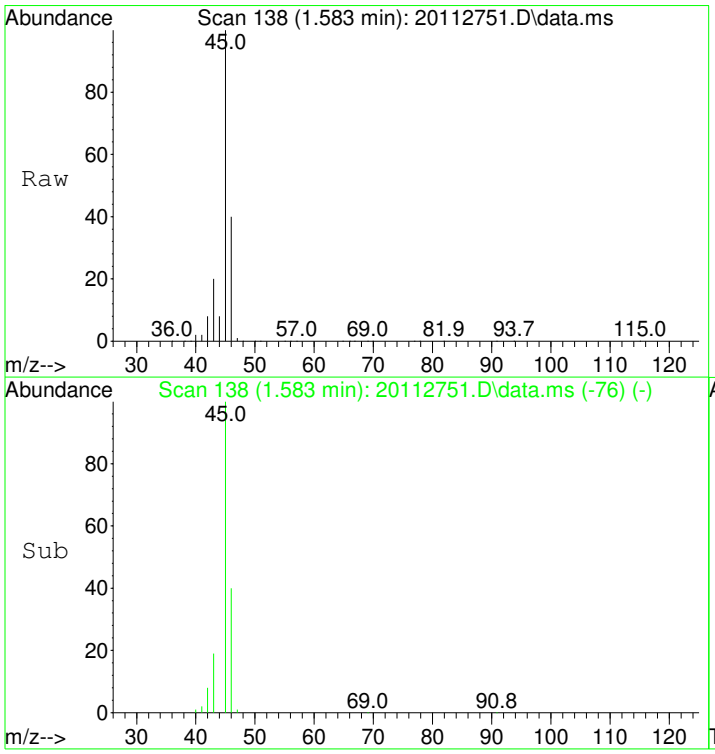


#9
Trichlorofluoromethane
Concen: 17.07 ug/L
RT: 1.475 min Scan# 123
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:101 Resp: 160245

Ion	Ratio	Lower	Upper
101	100		
103	66.1	45.1	85.1
66	17.5	0.0	35.4

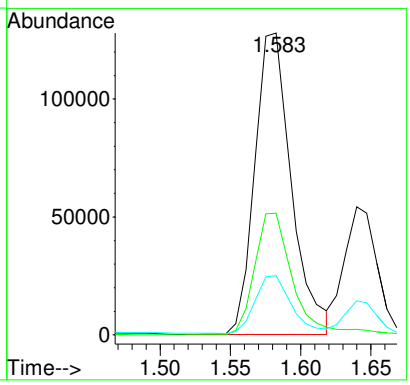


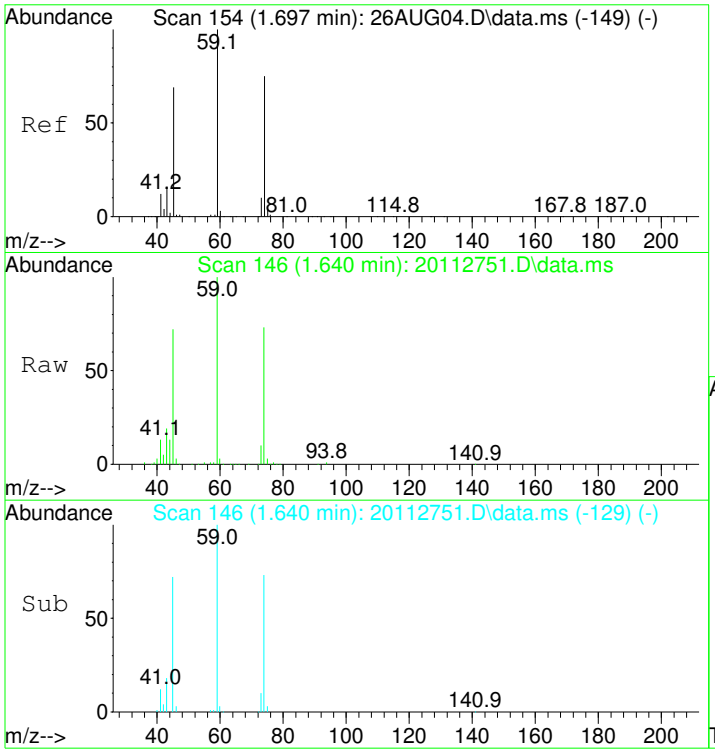


#10
Ethanol
Concen: 342.46 ug/L
RT: 1.583 min Scan# 138
Delta R.T. -0.057 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 45 Resp: 231642

Ion	Ratio	Lower	Upper
45	100		
46	42.7	0.0	57.3
43	19.0	0.0	52.4

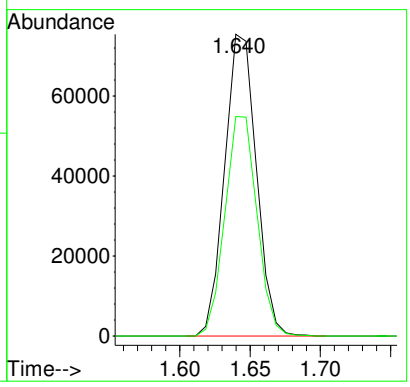


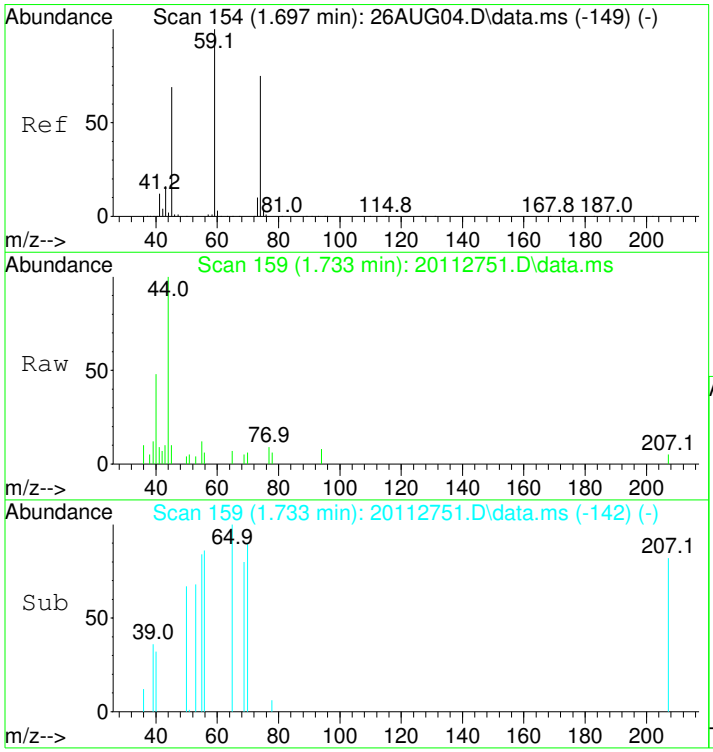


#11
Ethyl ether
Concen: 20.95 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 59 Resp: 118847

Ion	Ratio	Lower	Upper
59	100		
74	73.6	42.6	102.6

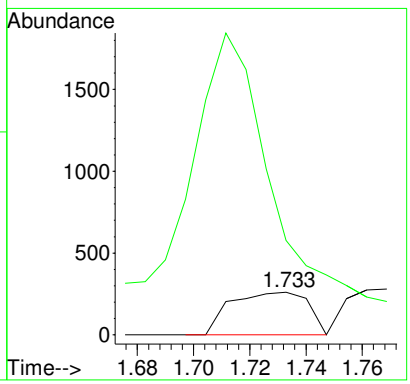


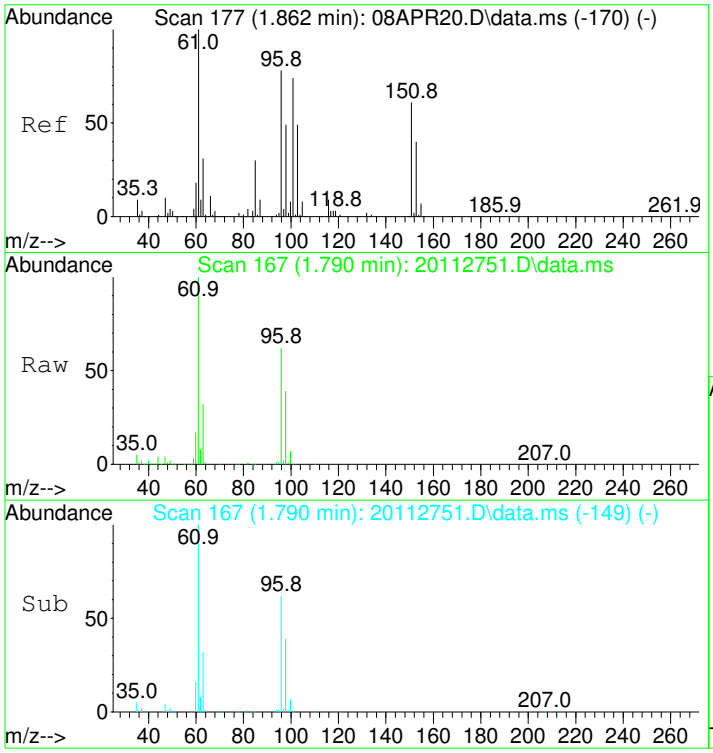


#12
Acrolein
Concen: Below Cal
RT: 1.733 min Scan# 159
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 56 Resp: 499

Ion	Ratio	Lower	Upper
56	100		
55	601.8	17.3	77.3#

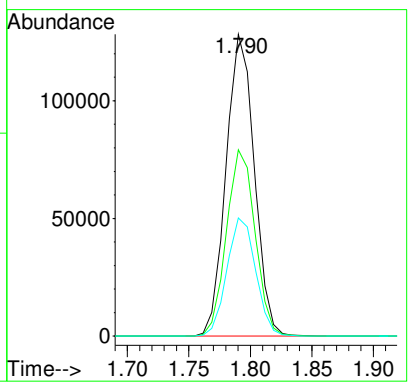


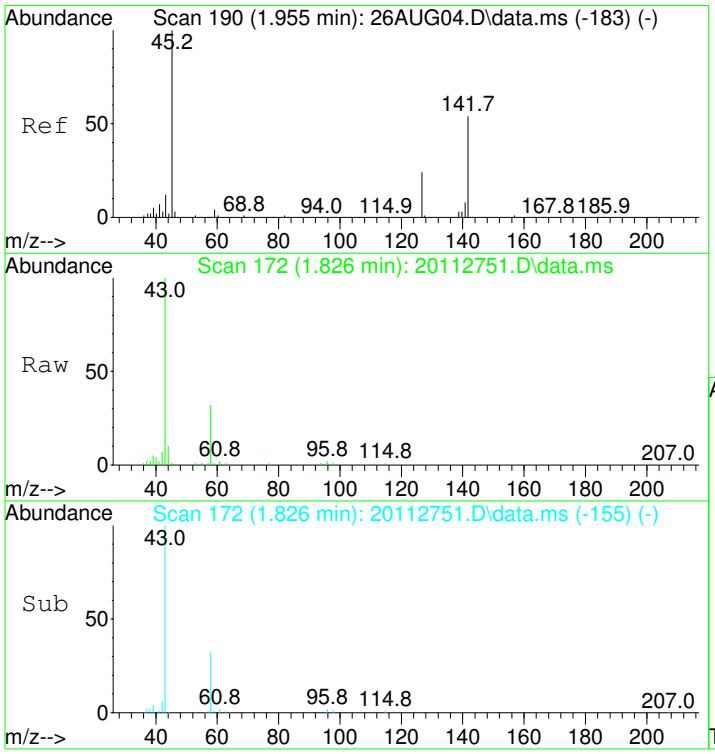


#13
1,1-Dichloroethene
Concen: 23.32 ug/L
RT: 1.790 min Scan# 167
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 61 Resp: 204624

Ion	Ratio	Lower	Upper
61	100		
96	62.5	32.6	92.6
98	39.8	10.4	70.4

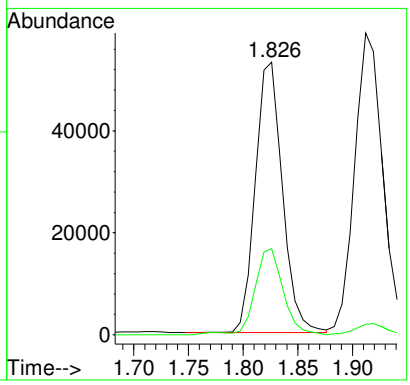


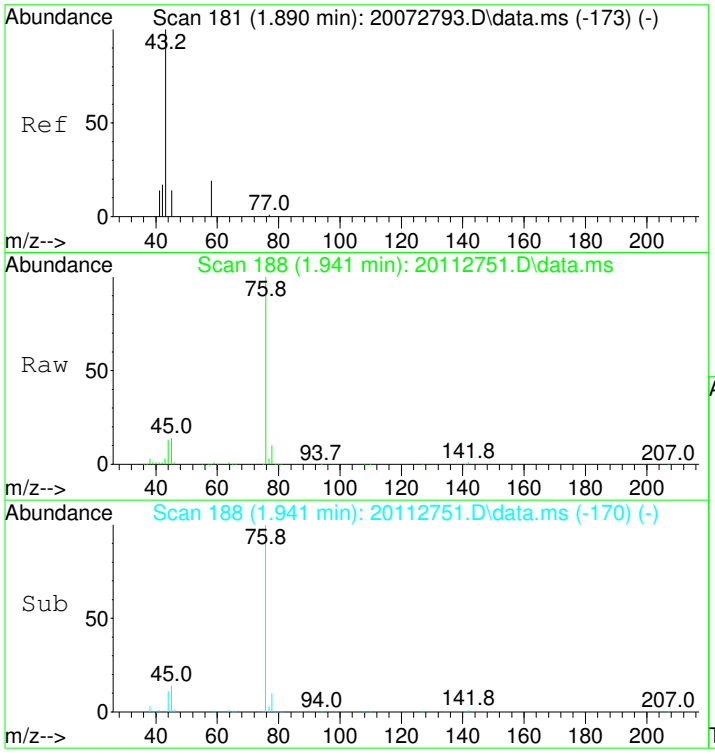


#16
Acetone
Concen: 23.42 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 91929

Ion	Ratio	Lower	Upper
43	100		
58	32.3	5.2	65.2

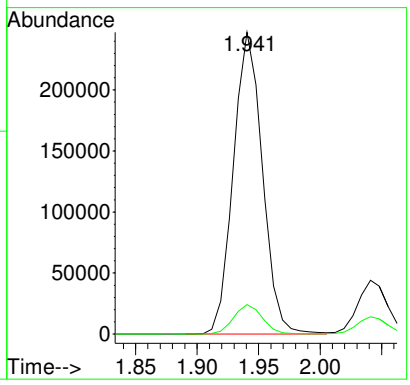


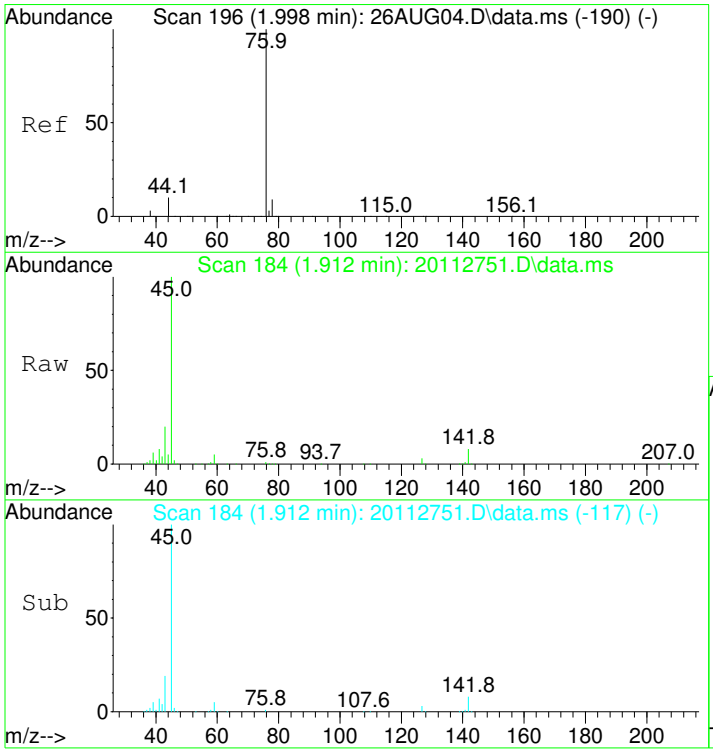


#18
Carbon disulfide
Concen: 23.12 ug/L
RT: 1.941 min Scan# 188
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 76 Resp: 405340

Ion	Ratio	Lower	Upper
76	100		
78	9.8	0.0	39.5

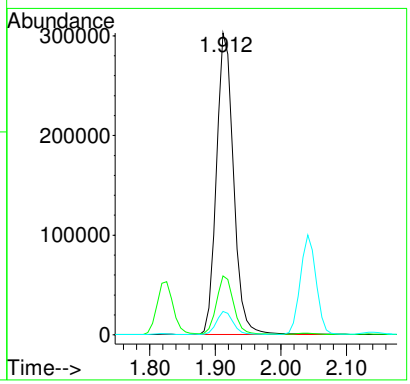


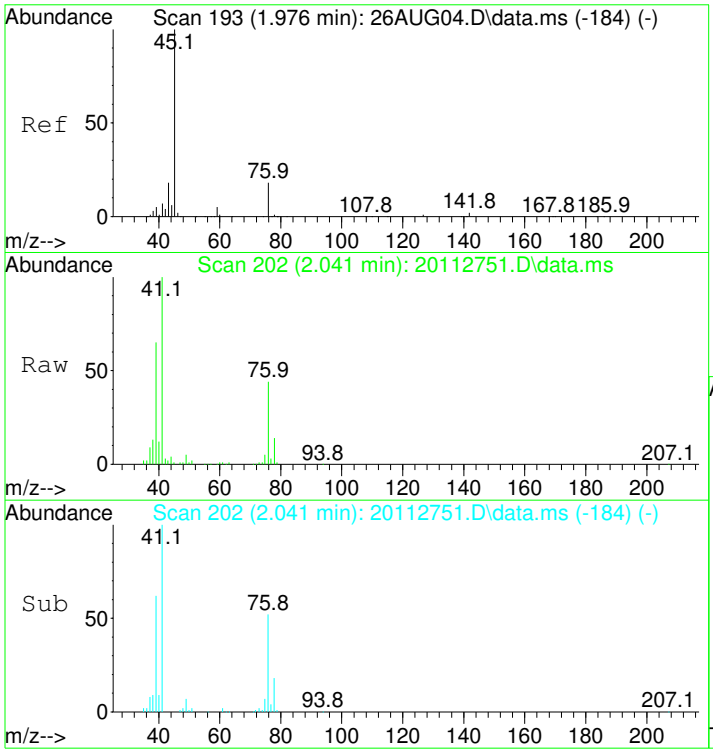


#19
2-Propanol
Concen: 408.34 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.021 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 45 Resp: 548302

Ion	Ratio	Lower	Upper
45	100		
43	19.4	0.0	48.2
41	7.5	0.0	37.1

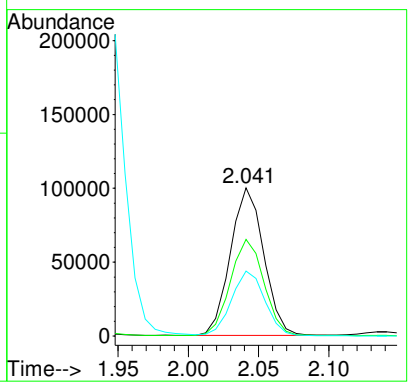


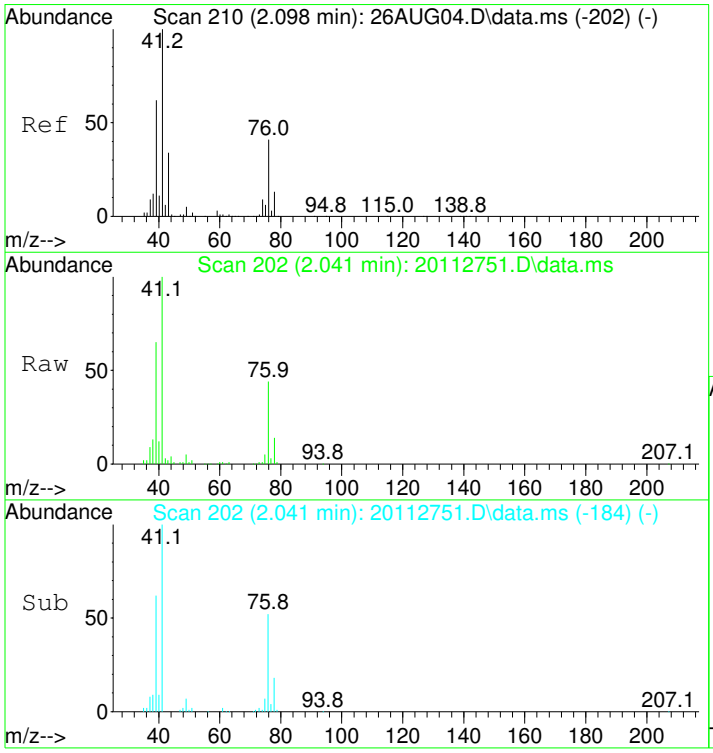


#20
Allyl chloride
Concen: 16.43 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 41 Resp: 165435

Ion	Ratio	Lower	Upper
41	100		
39	65.6	29.0	89.0
76	44.7	7.3	67.3

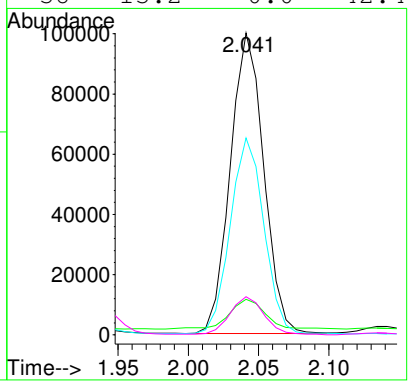


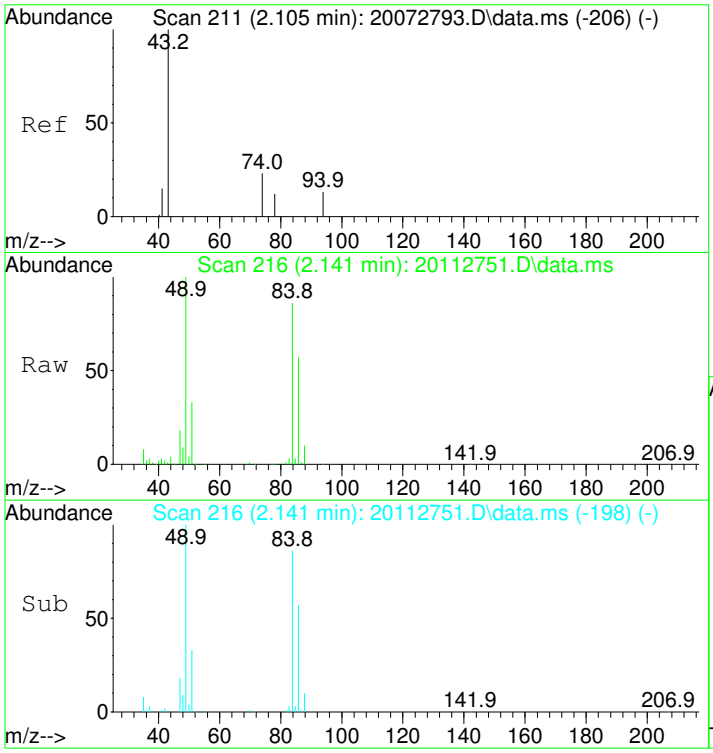


#22
Acetonitrile
Concen: 16.41 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 41 Resp: 165435

Ion	Ratio	Lower	Upper
41	100		
40	10.6	0.0	47.5
39	65.6	29.0	89.0
38	13.2	0.0	42.4

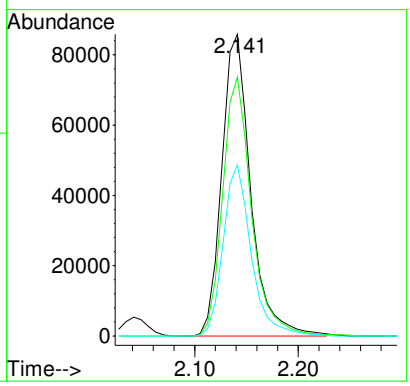


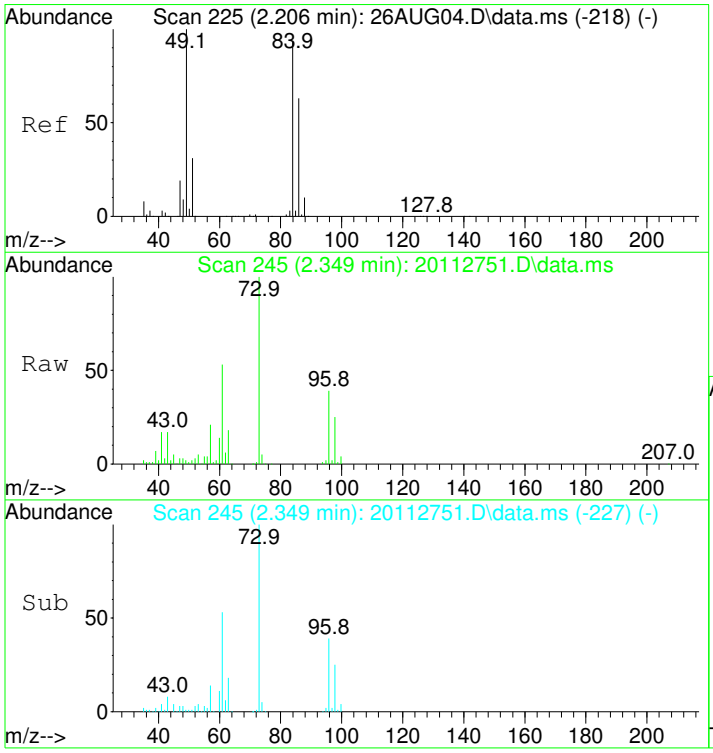


#23
Methylene chloride
Concen: 18.21 ug/L
RT: 2.141 min Scan# 216
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 49 Resp: 167852

Ion	Ratio	Lower	Upper
49	100		
84	85.1	57.4	117.4
86	54.9	27.7	87.7

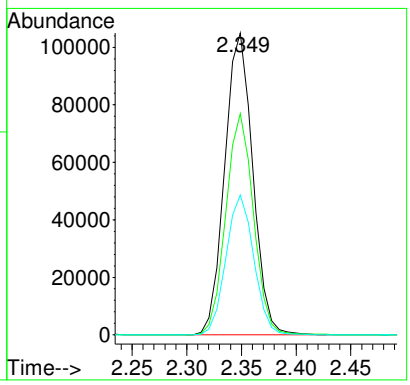


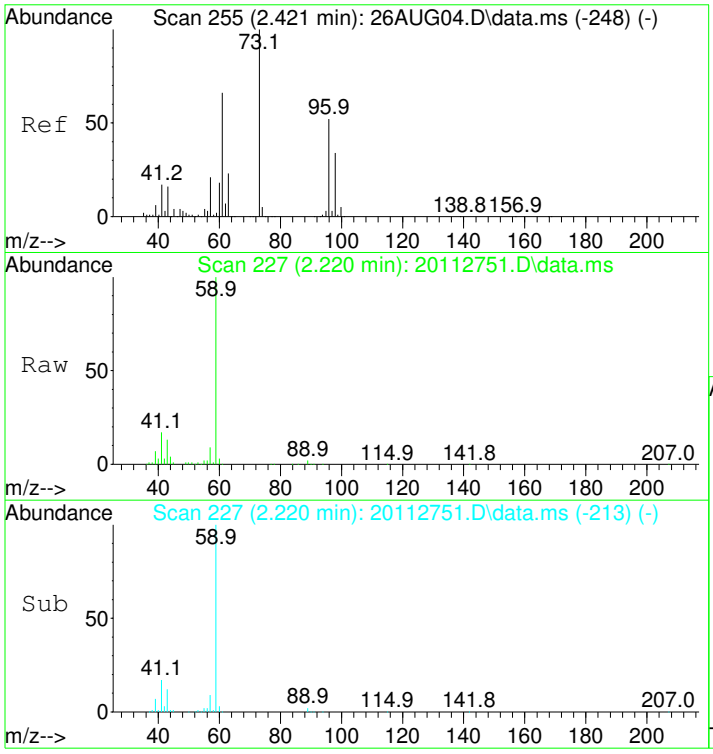


#24
trans-1,2-Dichloroethene
Concen: 21.71 ug/L
RT: 2.349 min Scan# 245
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 61 Resp: 187539

Ion	Ratio	Lower	Upper
61	100		
96	72.0	42.3	102.3
98	45.8	16.1	76.1

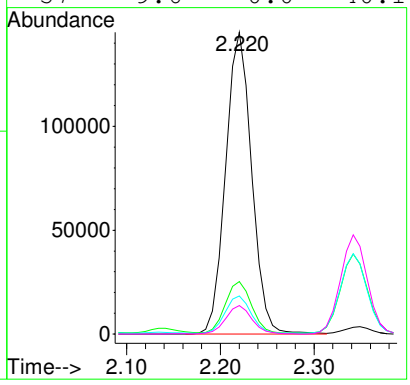


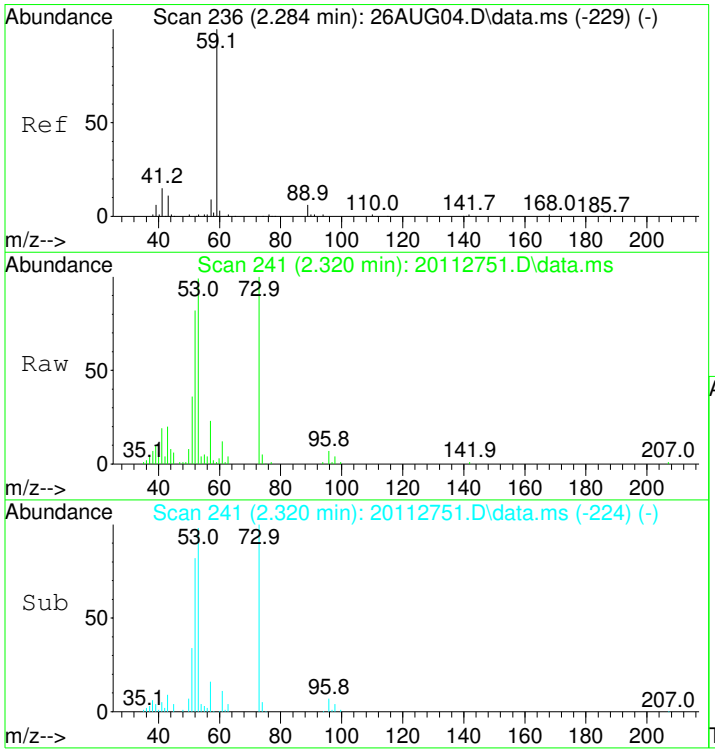


#25
t-Butanol
Concen: 106.15 ug/L
RT: 2.220 min Scan# 227
Delta R.T. -0.021 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 59 Resp: 282462

Ion	Ratio	Lower	Upper
59	100		
41	17.0	0.0	46.1
43	12.2	0.0	41.4
57	9.6	0.0	40.1

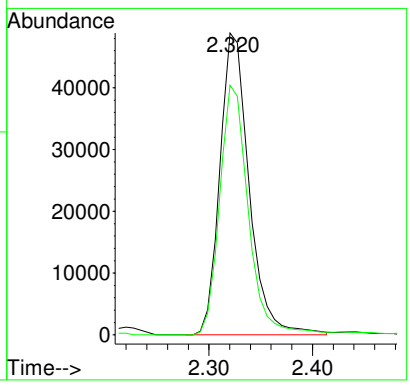


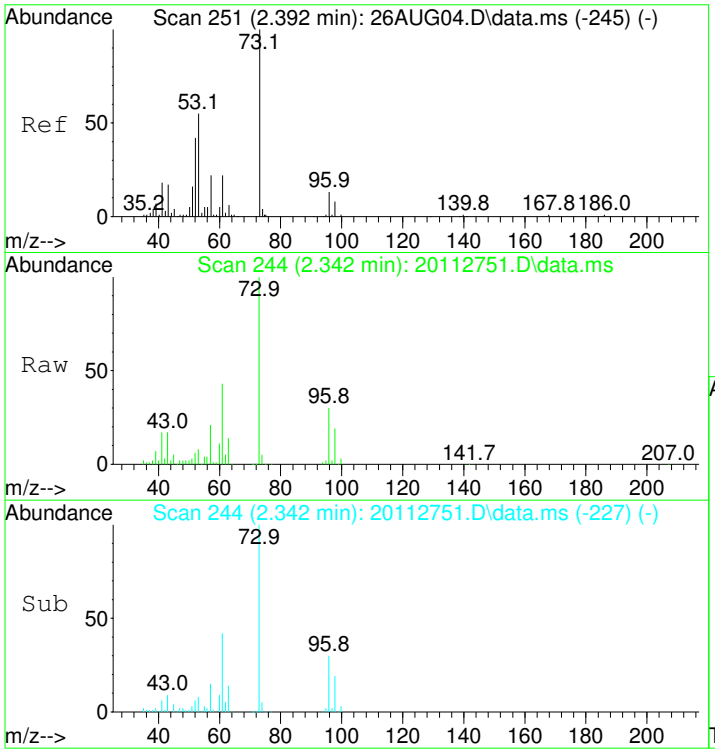


#26
Acrylonitrile
Concen: 21.11 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 53 Resp: 96371

Ion	Ratio	Lower	Upper
53	100		
52	80.8	51.9	111.9

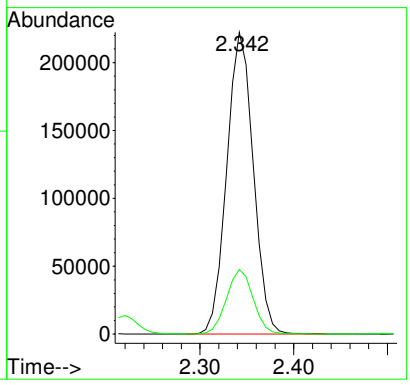


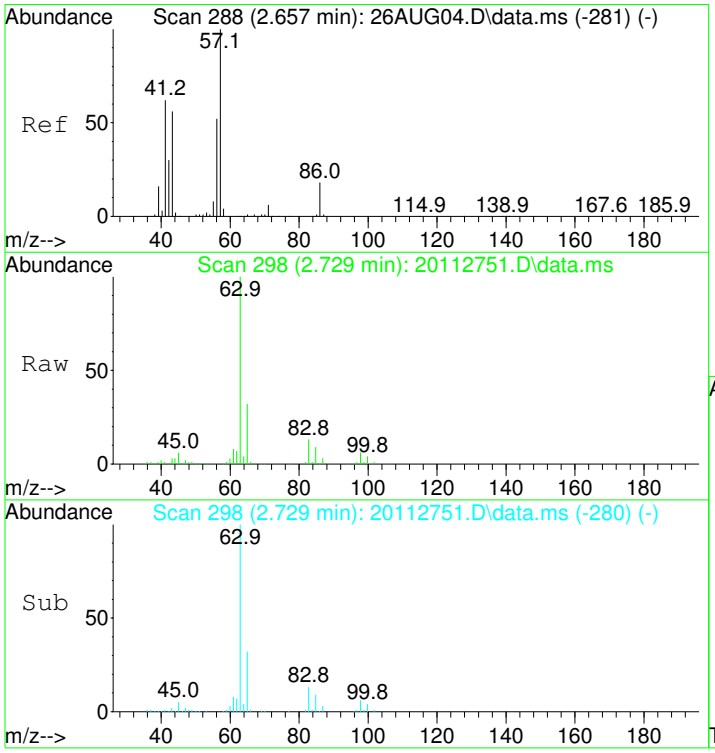


#27
Methyl tert-butyl ether
Concen: 22.41 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 73 Resp: 440436

Ion	Ratio	Lower	Upper
73	100		
57	21.5	0.0	52.4

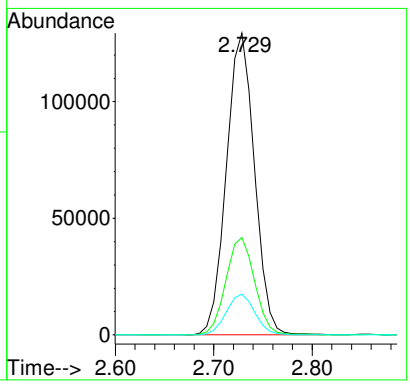


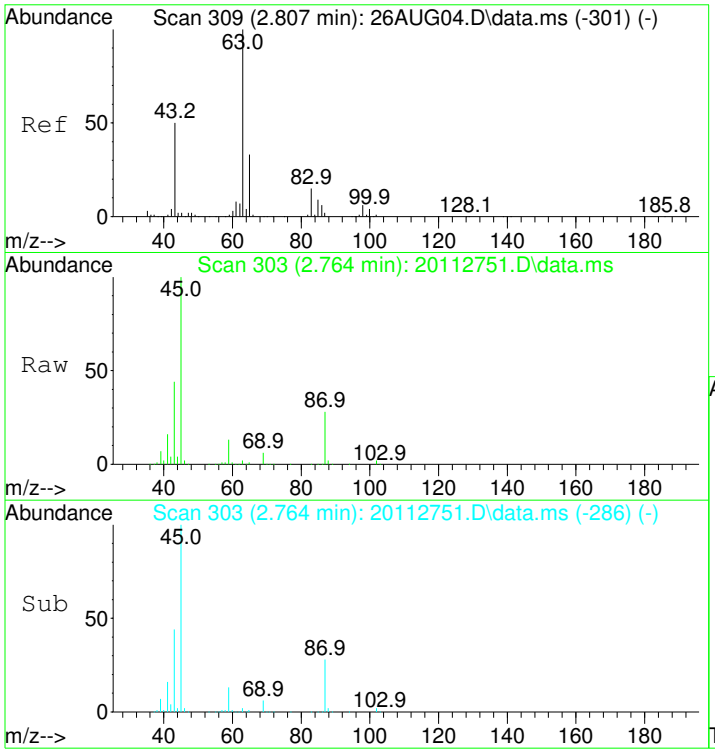


#29
1,1-Dichloroethane
Concen: 20.72 ug/L
RT: 2.729 min Scan# 298
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 63 Resp: 257173

Ion	Ratio	Lower	Upper
63	100		
65	33.0	2.8	62.8
83	13.7	0.0	43.7

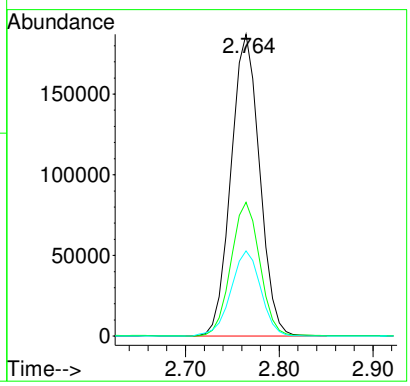


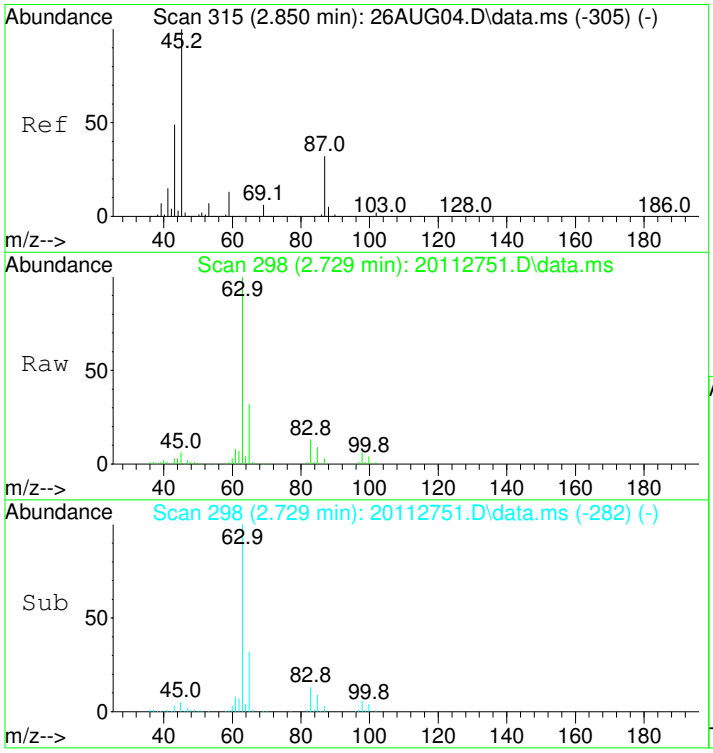


#30
Diisopropyl ether
Concen: 21.86 ug/L
RT: 2.764 min Scan# 303
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 45 Resp: 398309

Ion	Ratio	Lower	Upper
45	100		
43	44.8	79.6	147.8#
87	29.5	22.1	41.1

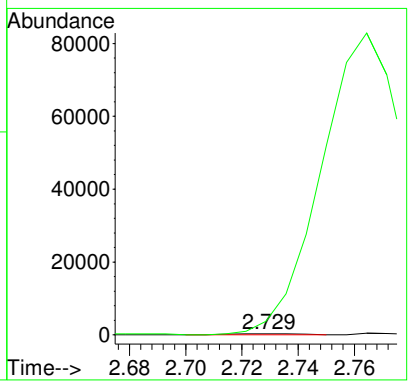


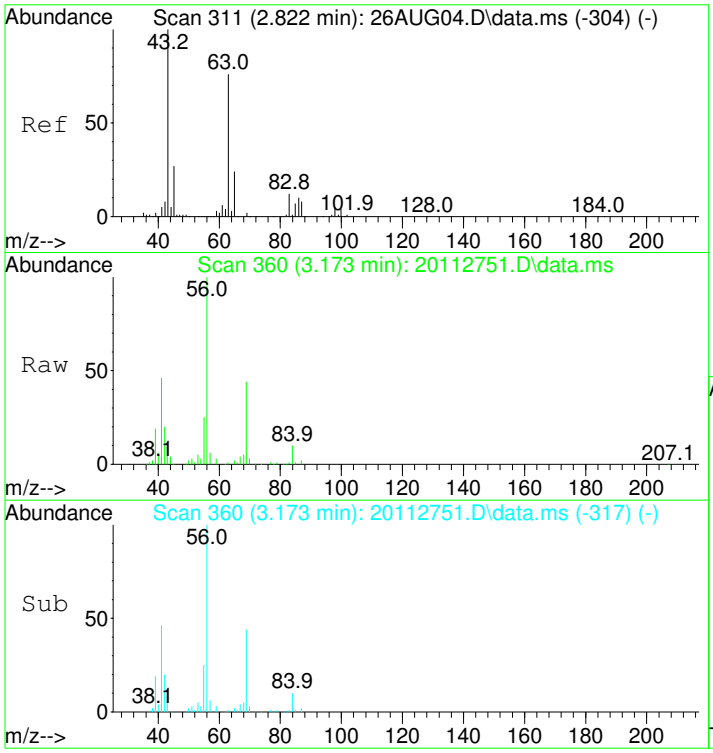


#31
Vinyl acetate
Concen: 0.27 ug/L
RT: 2.729 min Scan# 298
Delta R.T. -0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 86 Resp: 542

Ion	Ratio	Lower	Upper
86	100		
43	0.0	1480.0	1540.0#

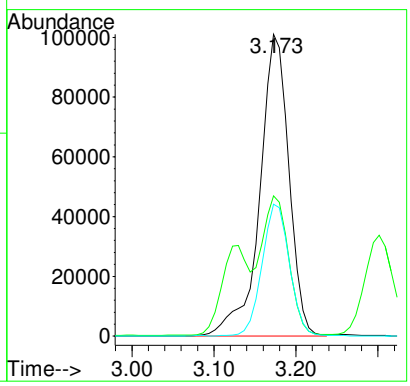


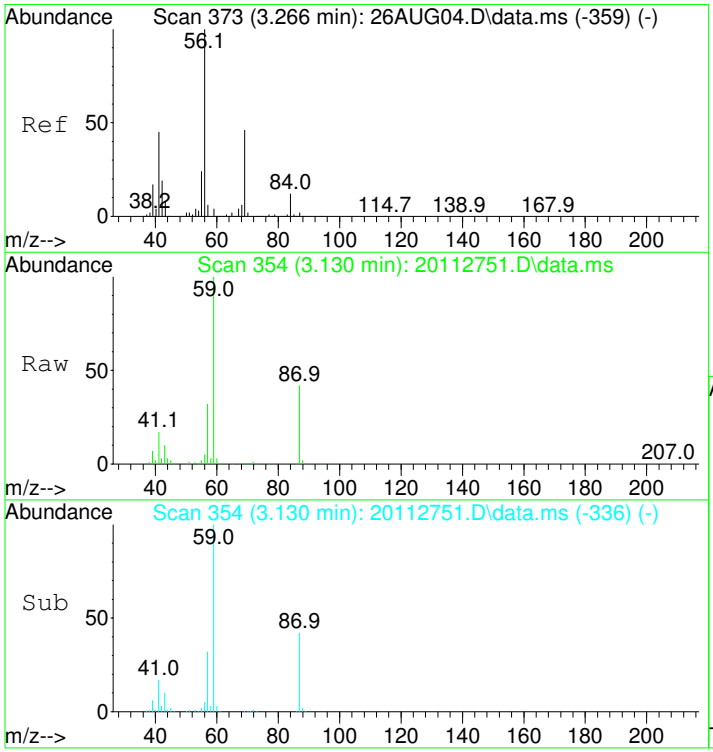


#32
Methylcyclopentane
Concen: 18.34 ug/L
RT: 3.173 min Scan# 360
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 56 Resp: 249623

Ion	Ratio	Lower	Upper
56	100		
41	44.1	36.7	96.7
69	41.2	11.3	71.3

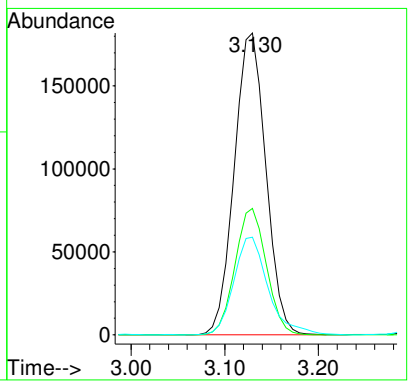


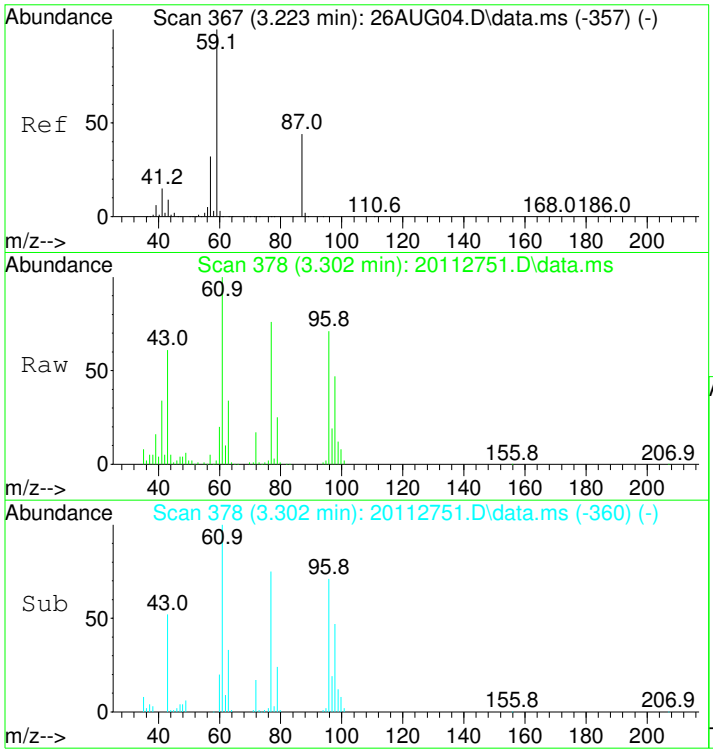


#33
Ethyl tert butyl ether
Concen: 20.66 ug/L
RT: 3.130 min Scan# 354
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 59 Resp: 429109

Ion	Ratio	Lower	Upper
59	100		
87	41.5	12.5	72.5
57	35.2	4.4	64.4

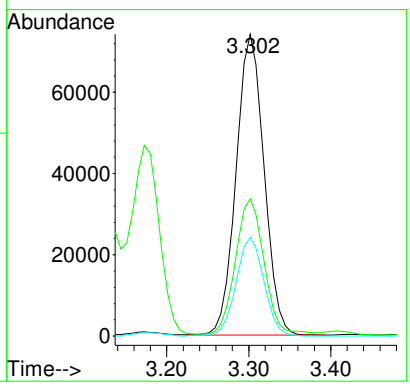


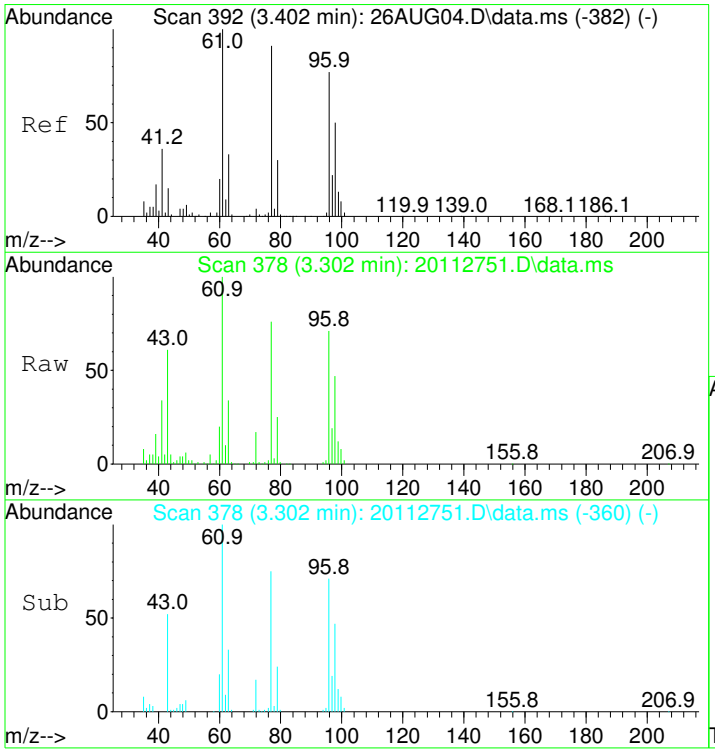


#34
2,2-Dichloropropane
Concen: 17.04 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 77 Resp: 174890

Ion	Ratio	Lower	Upper
77	100		
41	45.6	16.4	76.4
79	32.8	2.4	62.4

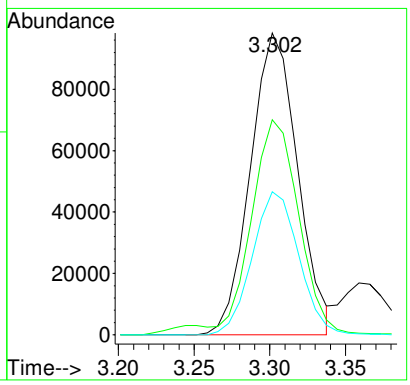


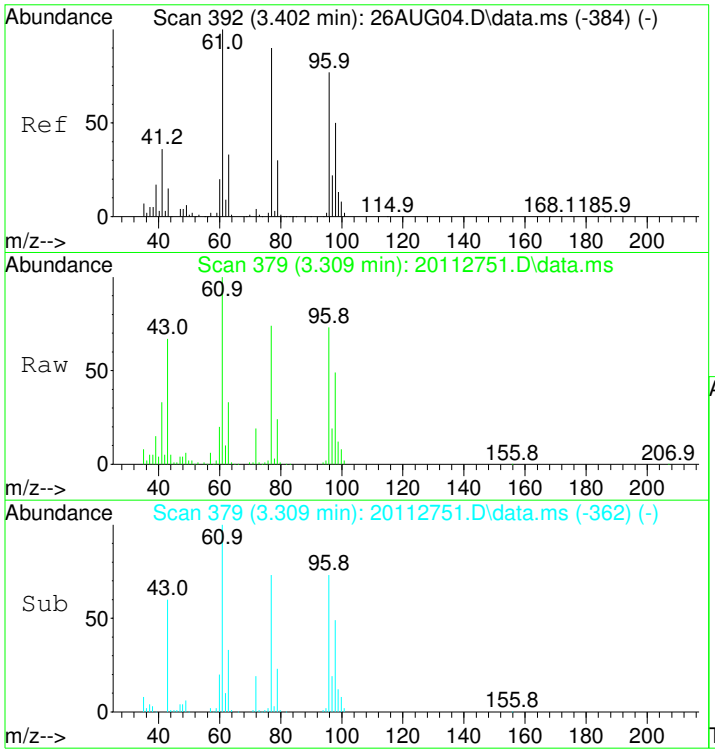


#35
cis-1,2-Dichloroethene
Concen: 20.30 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 61 Resp: 212482

Ion	Ratio	Lower	Upper
61	100		
96	74.2	39.5	99.5
98	46.8	14.9	74.9

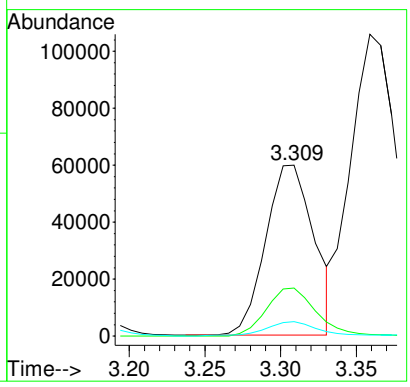


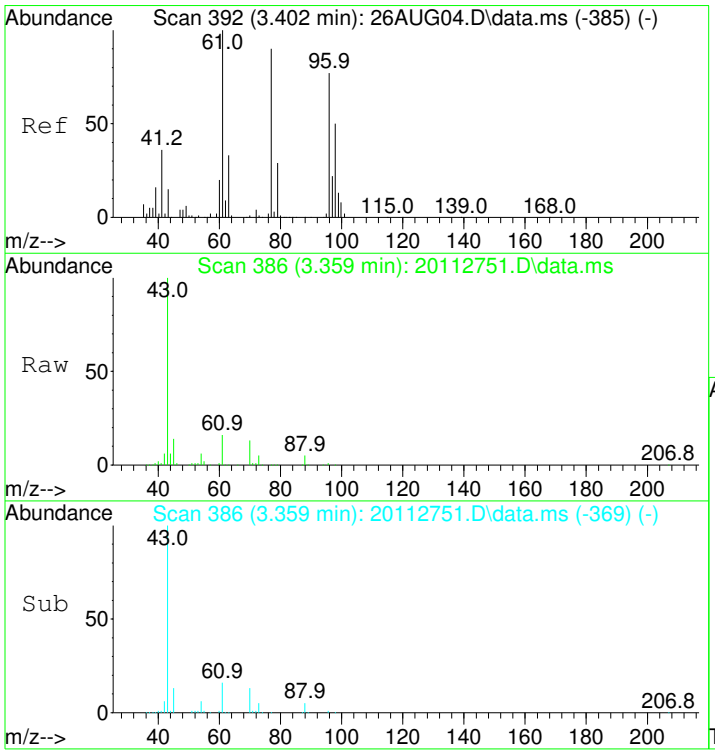


#36
2-Butanone
Concen: 22.06 ug/L
RT: 3.309 min Scan# 379
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 133008

Ion	Ratio	Lower	Upper
43	100		
72	29.4	11.0	51.0
57	9.5	0.0	28.7

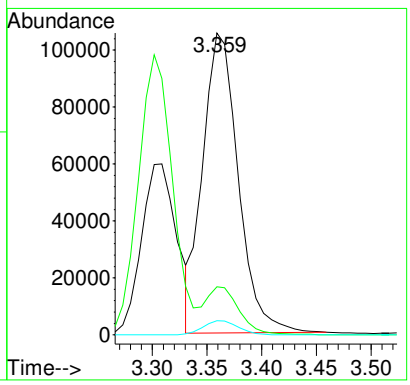


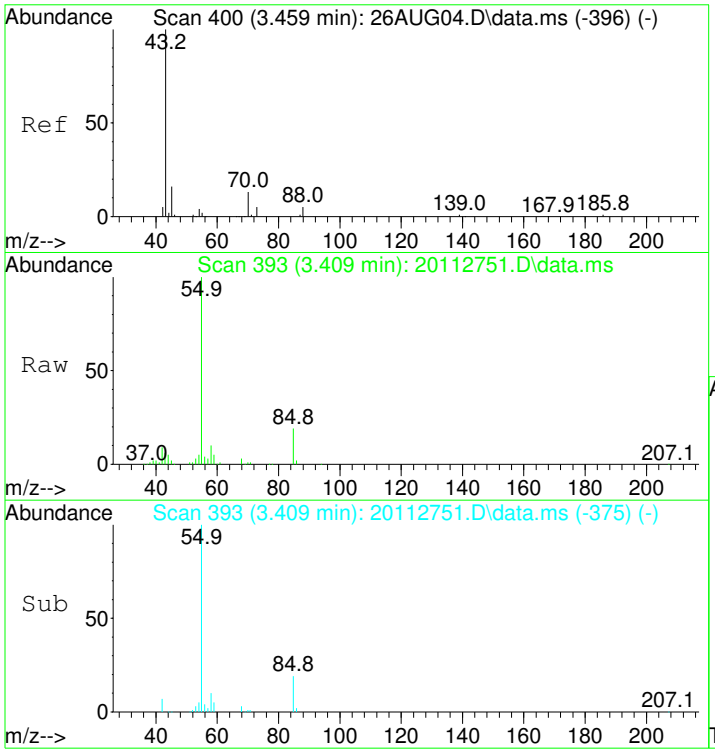


#37
Ethyl Acetate
Concen: 20.36 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 238007

Ion	Ratio	Lower	Upper
43	100		
61	14.0	0.0	34.9
88	4.6	0.0	24.3

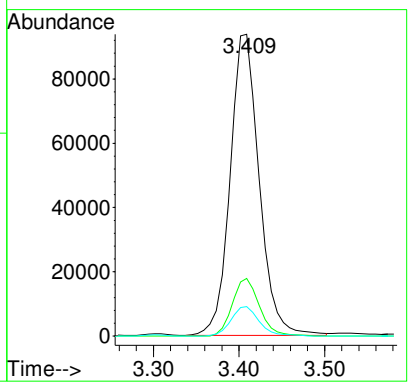


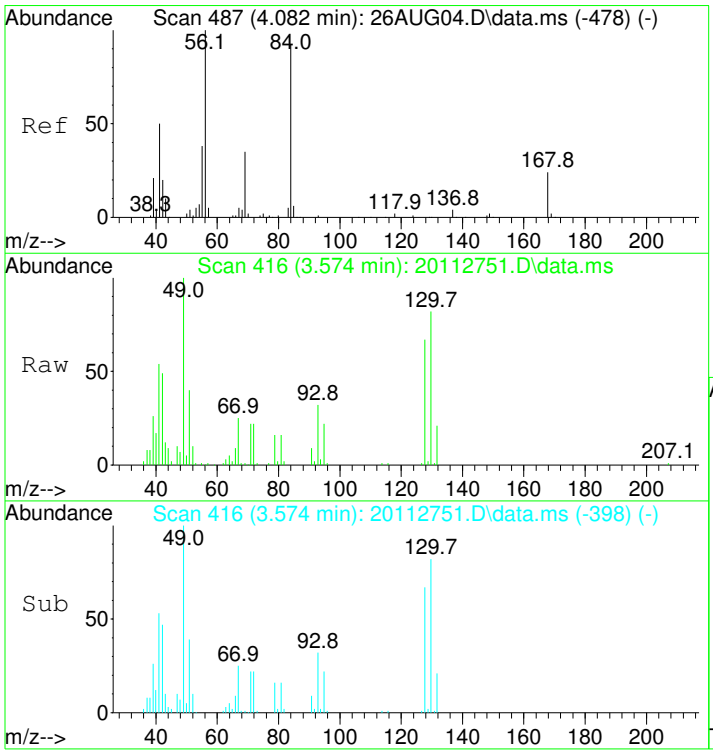


#38
Methyl acrylate
Concen: 21.25 ug/L
RT: 3.409 min Scan# 393
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 55 Resp: 221673

Ion	Ratio	Lower	Upper
55	100		
85	17.8	14.4	21.6
58	9.6	7.4	11.2

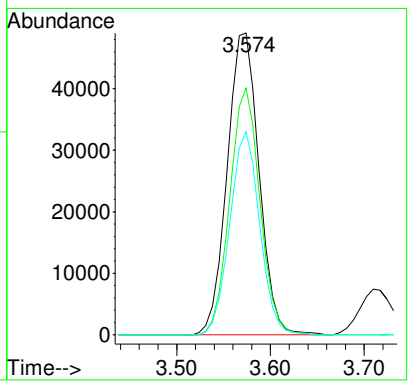


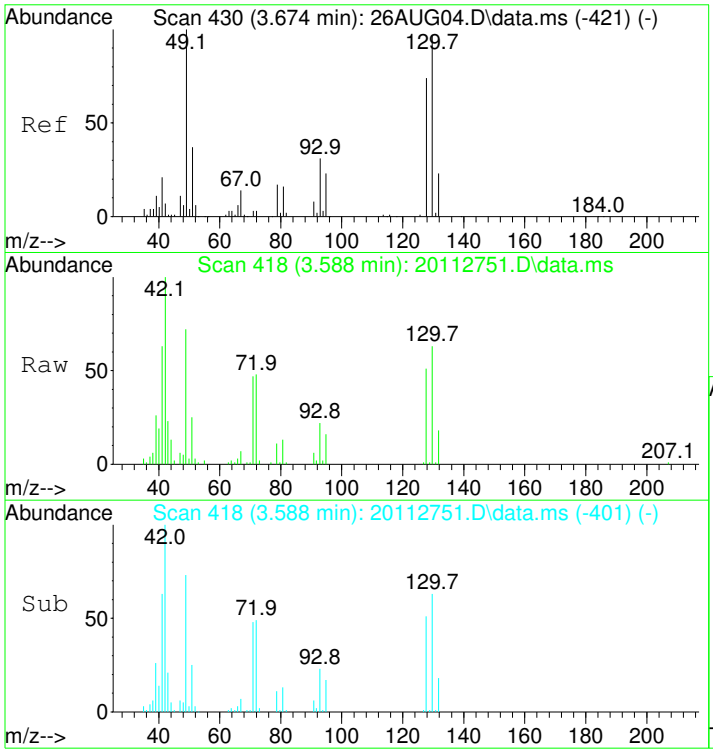


#40
Bromochloromethane
Concen: 21.49 ug/L
RT: 3.574 min Scan# 416
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 49 Resp: 116587

Ion	Ratio	Lower	Upper
49	100		
130	77.3	60.4	100.4
128	63.1	43.3	83.3

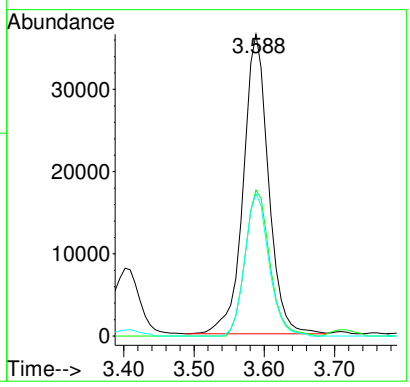


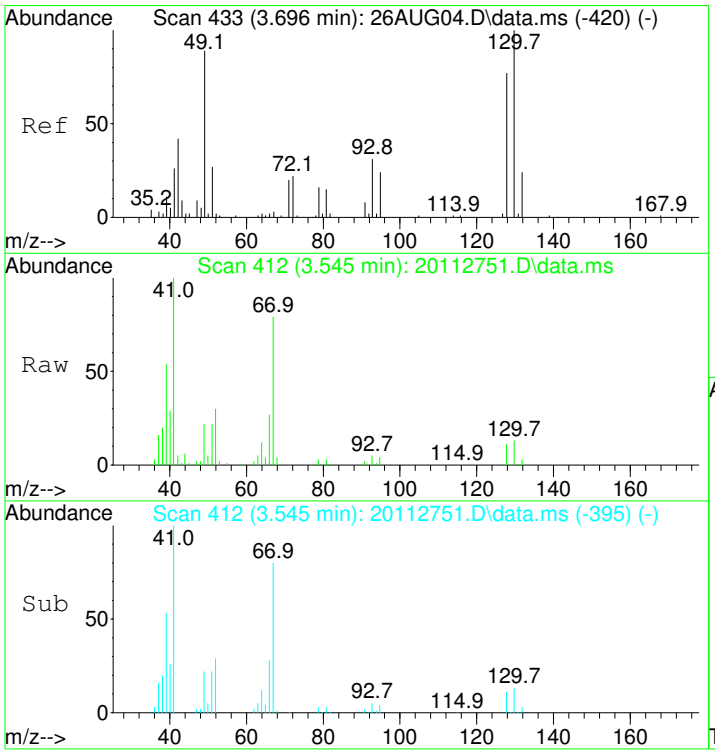


#41
Tetrahydrofuran
Concen: 20.49 ug/L
RT: 3.588 min Scan# 418
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 42 Resp: 90906

Ion	Ratio	Lower	Upper
42	100		
72	47.6	27.6	67.6
71	45.7	26.5	66.5

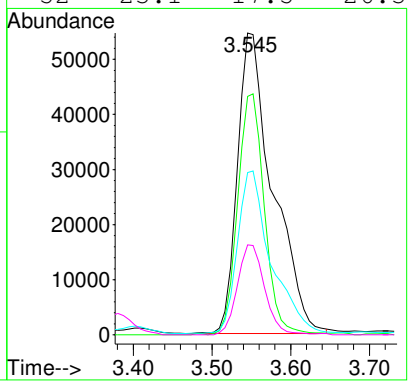


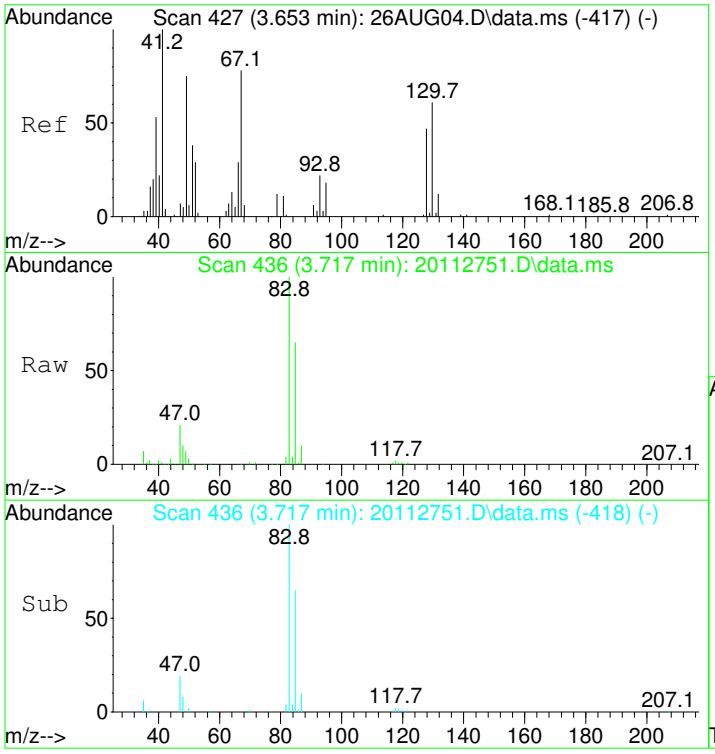


#42
Methacrylonitrile
Concen: 19.49 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 41 Resp: 171081

Ion	Ratio	Lower	Upper
41	100		
67	60.5	47.8	71.6
39	50.9	38.6	57.8
52	23.1	17.5	26.3

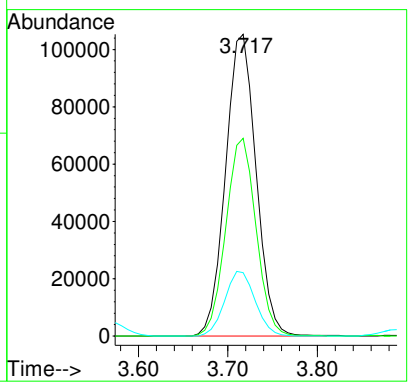


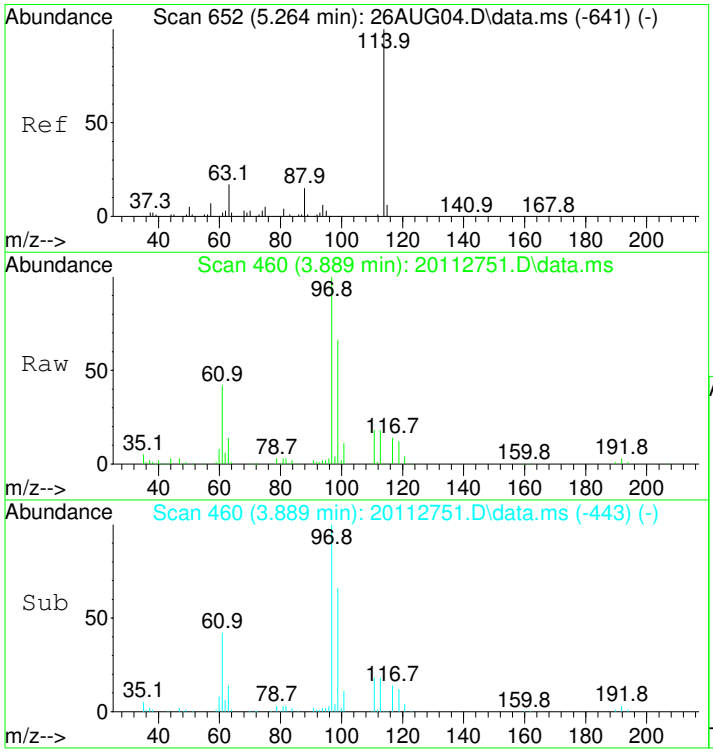


#43
Chloroform
Concen: 19.72 ug/L
RT: 3.717 min Scan# 436
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 83 Resp: 250279

Ion	Ratio	Lower	Upper
83	100		
85	64.9	46.1	86.1
47	21.4	1.2	41.2

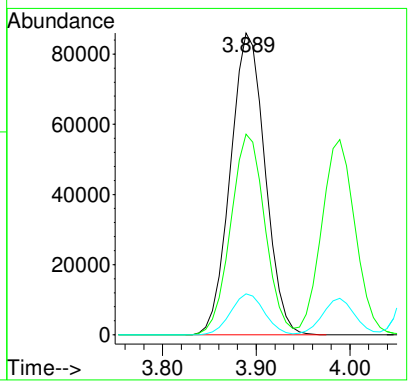


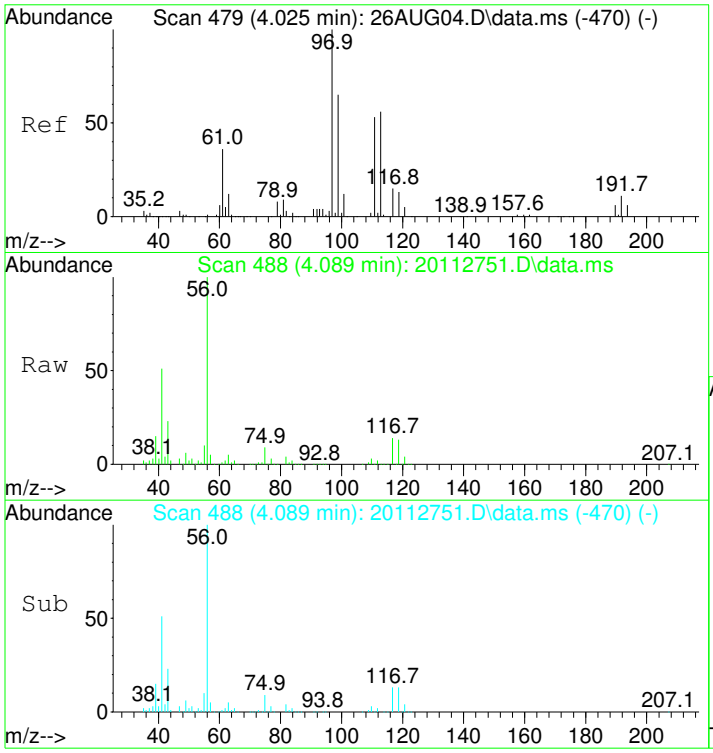


#46
1,1,1-Trichloroethane
Concen: 22.23 ug/L
RT: 3.889 min Scan# 460
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 97 Resp: 221923

Ion	Ratio	Lower	Upper
97	100		
99	65.7	45.8	85.8
117	13.3	0.0	33.4

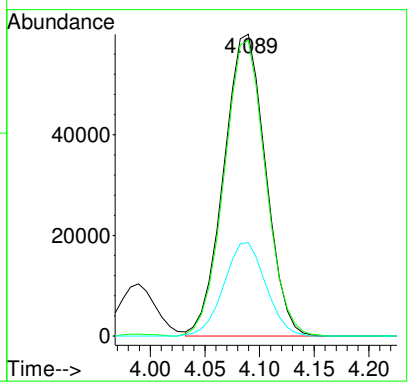


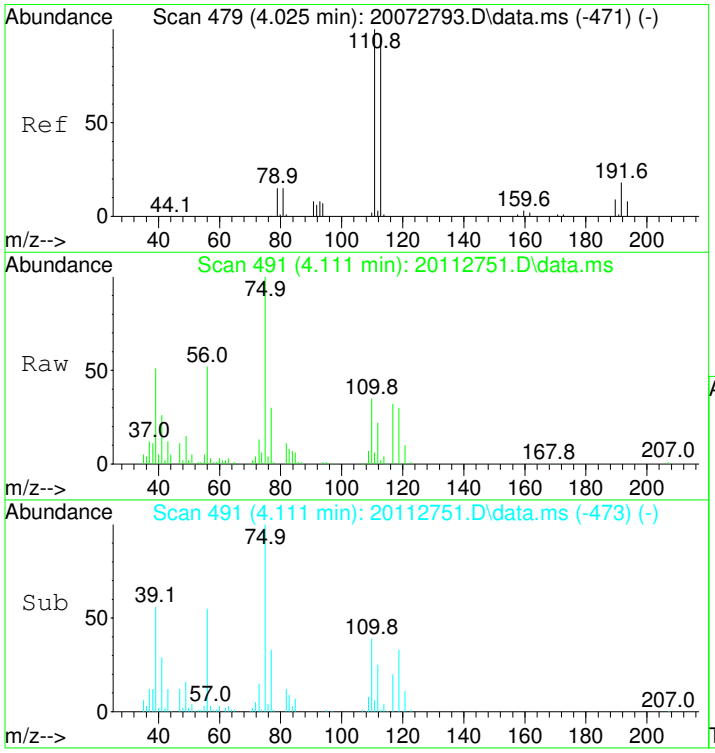


#48
Carbon tetrachloride
Concen: 18.65 ug/L
RT: 4.089 min Scan# 488
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:117 Resp: 159828

Ion	Ratio	Lower	Upper
117	100		
119	97.1	78.7	118.7
121	31.0	11.8	51.8

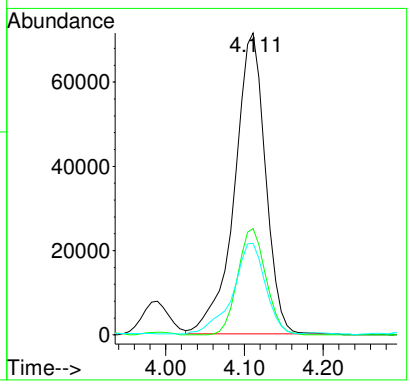


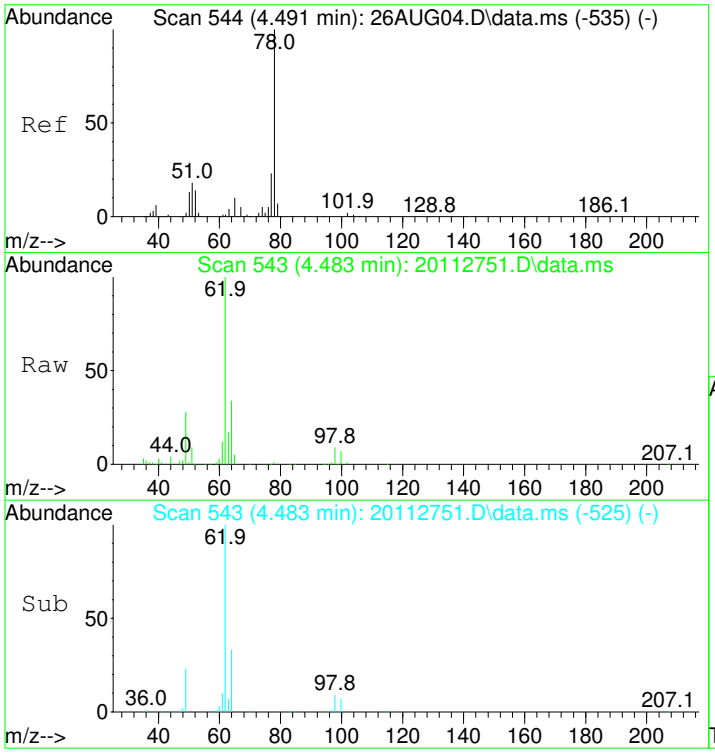


#49
1,1-Dichloropropene
Concen: 23.09 ug/L
RT: 4.111 min Scan# 491
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 75 Resp: 194685

Ion	Ratio	Lower	Upper
75	100		
110	32.3	16.0	56.0
77	31.7	11.0	51.0

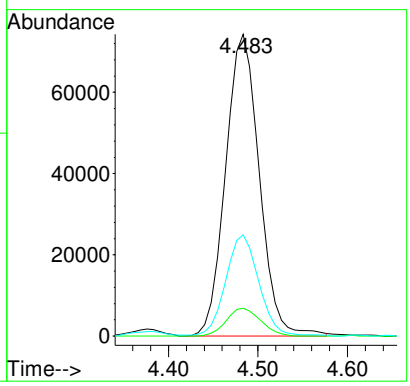


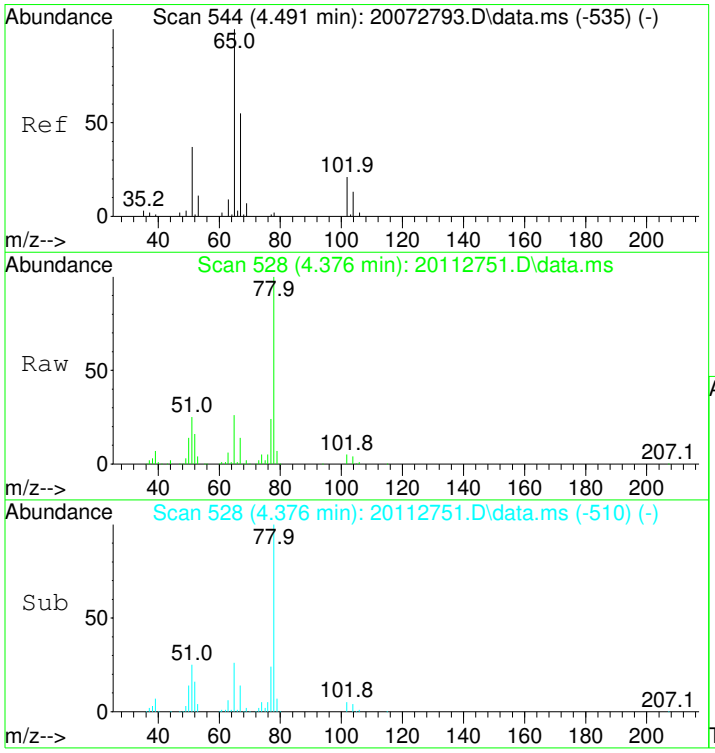


#51
1,2-Dichloroethane
Concen: 20.81 ug/L
RT: 4.483 min Scan# 543
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 62 Resp: 194999

Ion	Ratio	Lower	Upper
62	100		
98	9.4	0.0	29.0
64	31.9	13.9	53.9

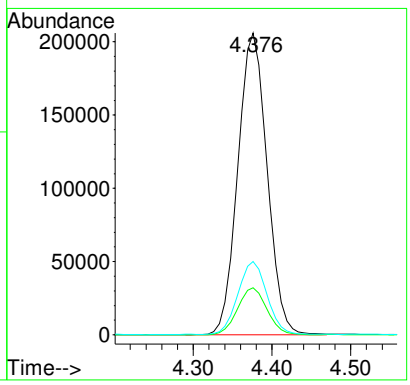


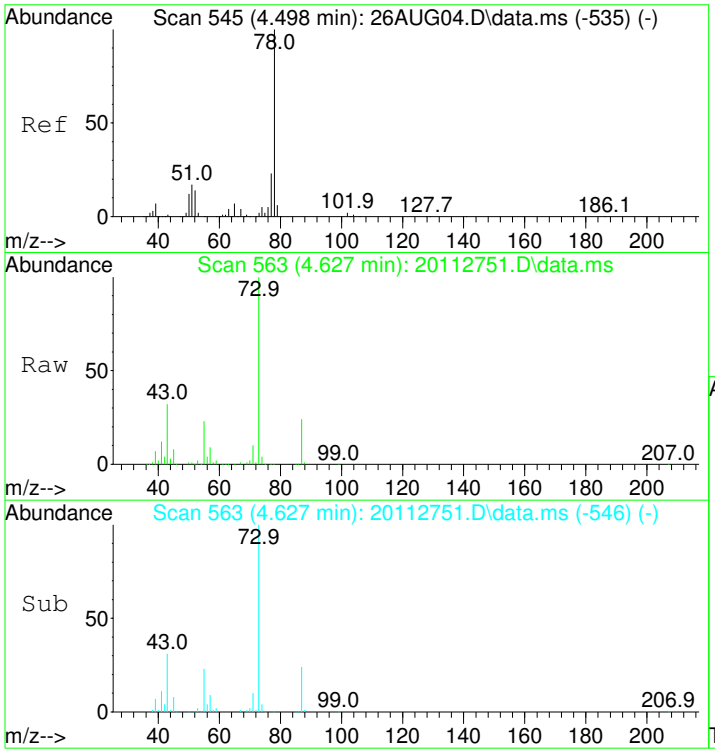


#52
Benzene
Concen: 21.77 ug/L
RT: 4.376 min Scan# 528
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 78 Resp: 533120

Ion	Ratio	Lower	Upper
78	100		
52	15.6	0.0	35.8
77	23.9	3.7	43.7

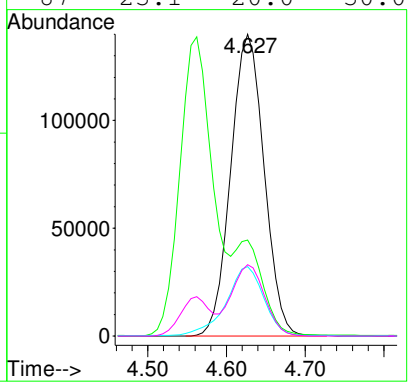


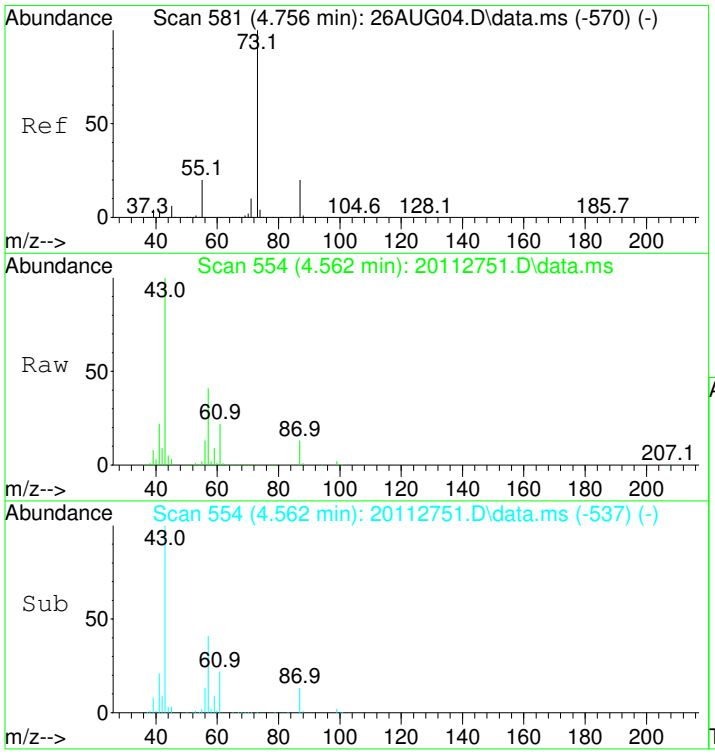


#53
Tertiaryamylmethylether
Concen: 22.22 ug/L
RT: 4.627 min Scan# 563
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 73 Resp: 413014

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	25.4	21.0	31.6
87	23.1	20.0	30.0

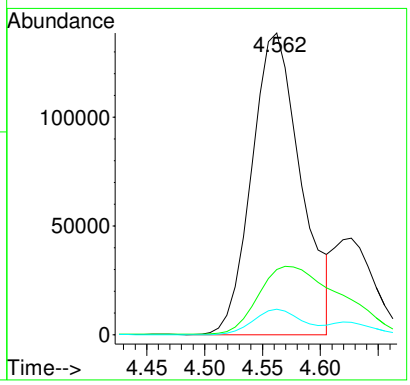


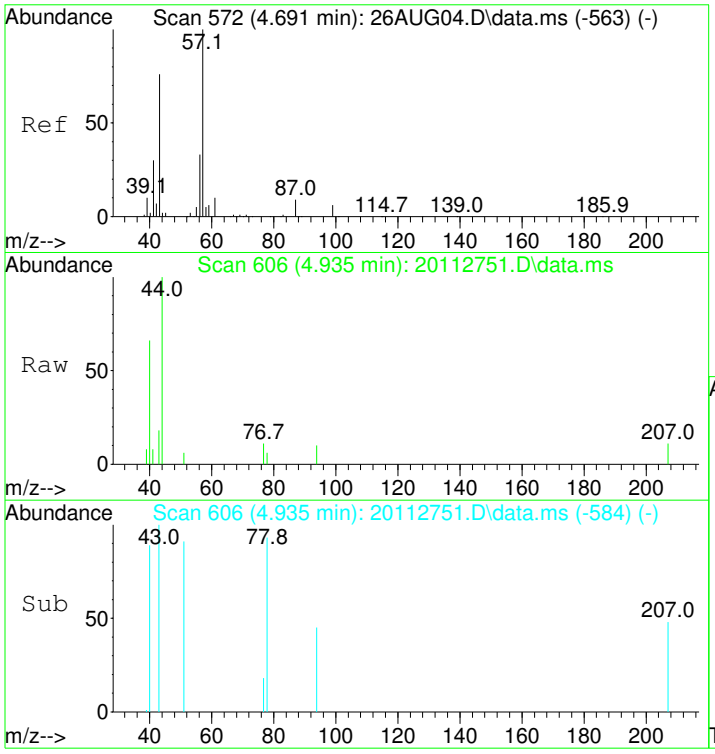


#54
Isobutyl Alcohol
Concen: 21.48 ug/L
RT: 4.562 min Scan# 554
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 410171

Ion	Ratio	Lower	Upper
43	100		
41	37.3	30.7	46.1
42	8.4	6.4	9.6

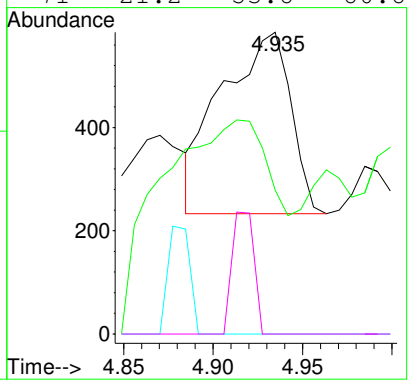


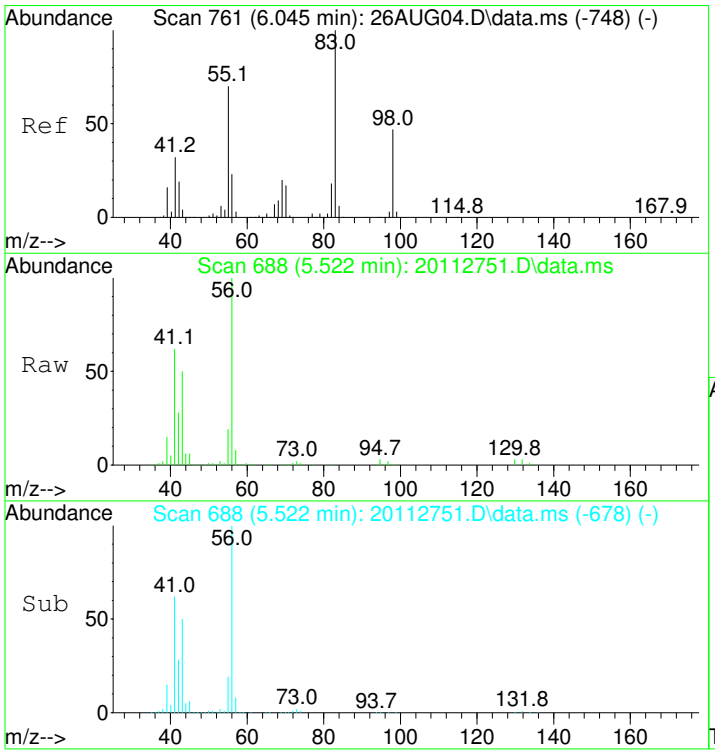


#55
Heptane
Concen: Below Cal
RT: 4.935 min Scan# 606
Delta R.T. 0.036 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 952

Ion	Ratio	Lower	Upper
43	100		
41	193.5	46.8	70.2#
57	0.0	47.5	71.3#
71	21.2	53.8	80.8#

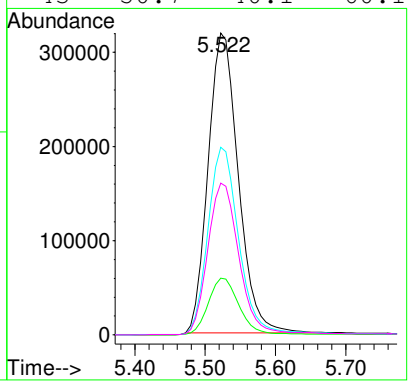


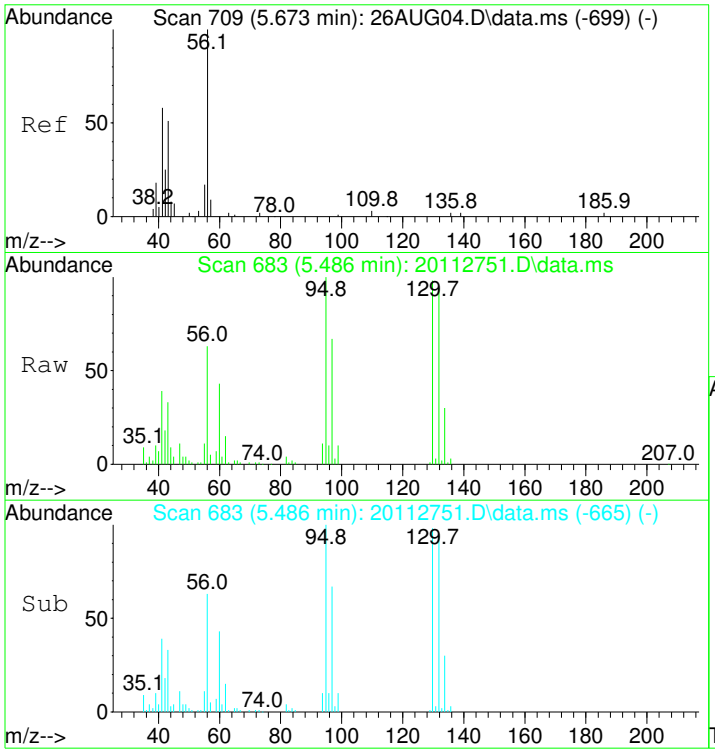


#58
n-Butanol
Concen: 1576.82 ug/L
RT: 5.522 min Scan# 688
Delta R.T. -0.050 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 56 Resp: 950421

Ion	Ratio	Lower	Upper
56	100		
55	18.7	15.4	23.2
41	62.3	50.9	76.3
43	50.7	40.1	60.1

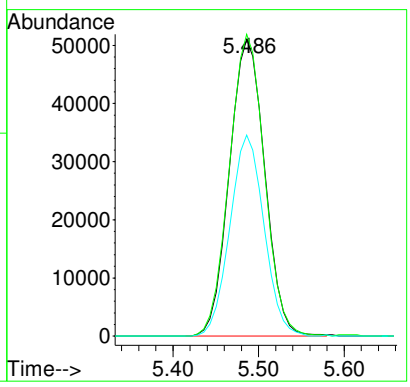


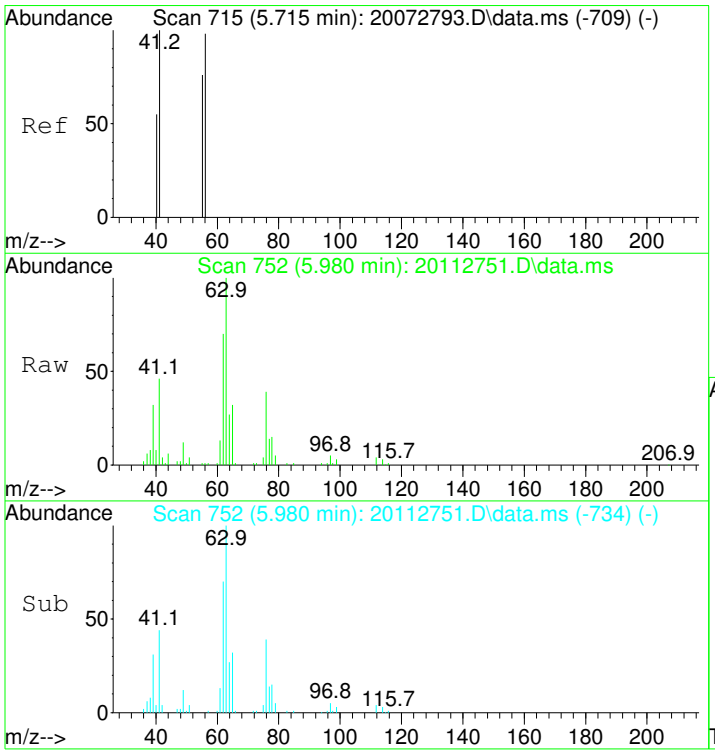


#59
Trichloroethene
Concen: 21.41 ug/L
RT: 5.486 min Scan# 683
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:130 Resp: 146508

Ion	Ratio	Lower	Upper
130	100		
95	101.1	82.7	122.7
97	65.3	47.6	87.6

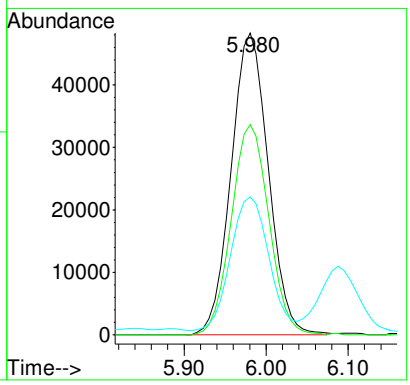


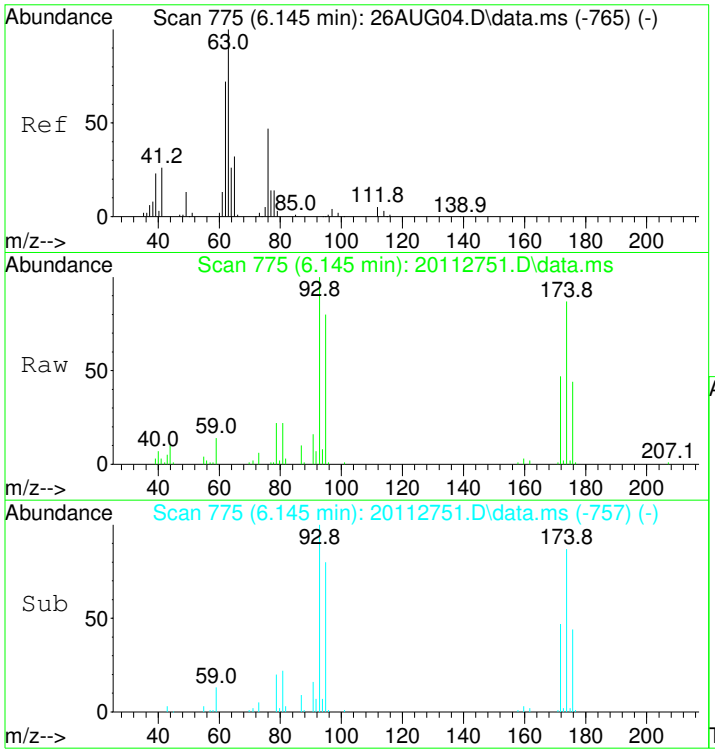


#60
1,2-Dichloropropane
Concen: 22.18 ug/L
RT: 5.980 min Scan# 752
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 63 Resp: 152631

Ion	Ratio	Lower	Upper
63	100		
62	70.1	51.5	91.5
41	45.4	26.1	66.1

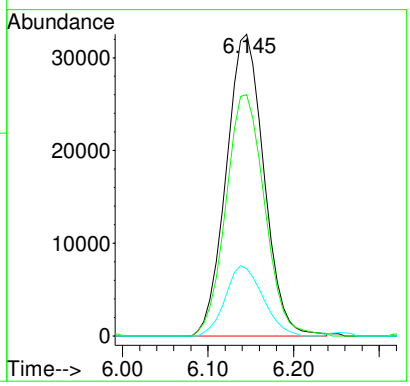


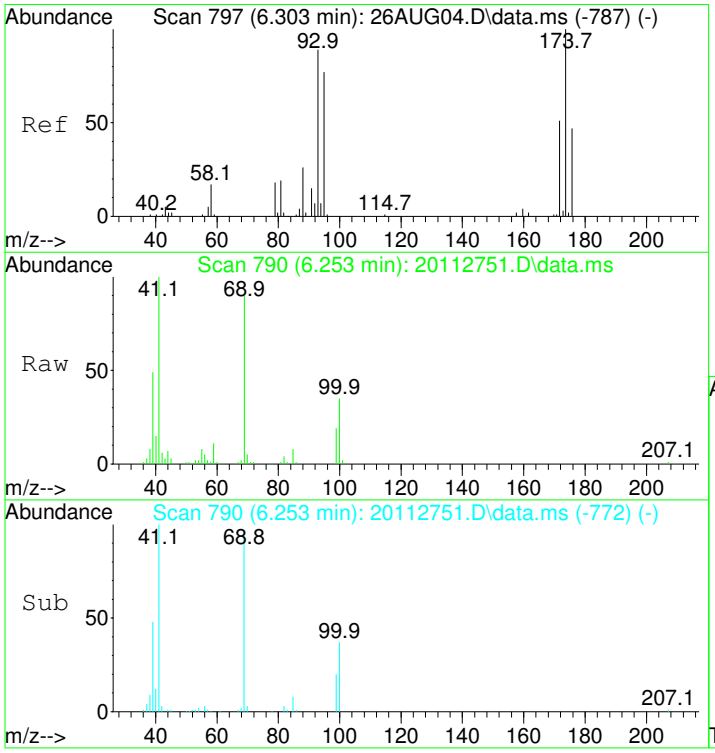


#61
Dibromomethane
Concen: 20.50 ug/L
RT: 6.145 min Scan# 775
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 93 Resp: 99685

Ion	Ratio	Lower	Upper
93	100		
95	82.3	63.0	103.0
81	23.2	3.4	43.4

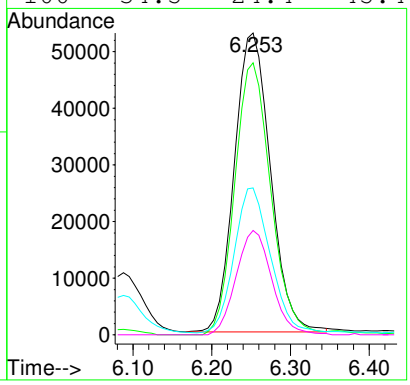


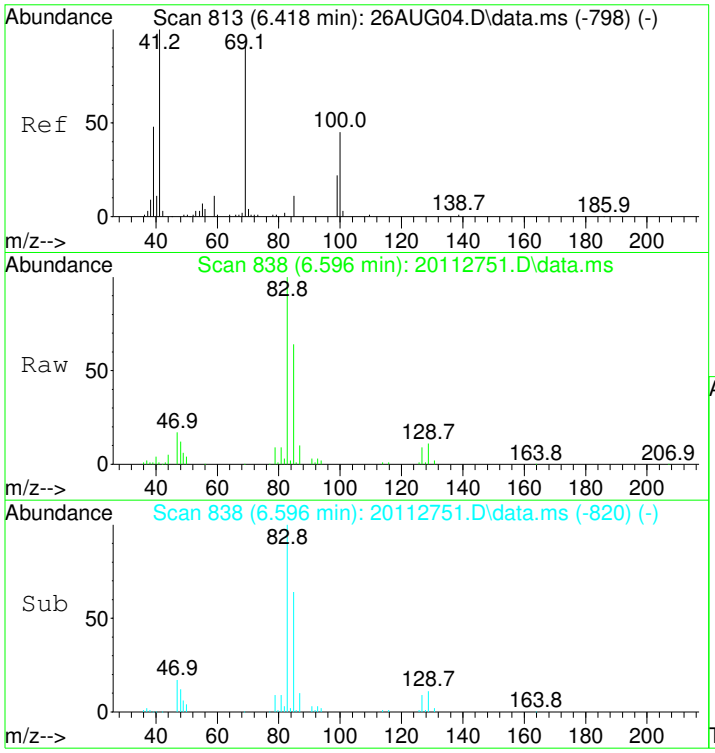


#62
Methyl methacrylate
Concen: 21.21 ug/L
RT: 6.253 min Scan# 790
Delta R.T. 0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 41 Resp: 168025

Ion	Ratio	Lower	Upper
41	100		
69	91.0	72.2	108.4
39	48.5	41.1	61.7
100	34.5	24.4	45.4

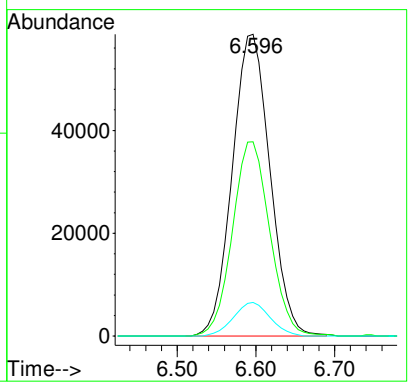


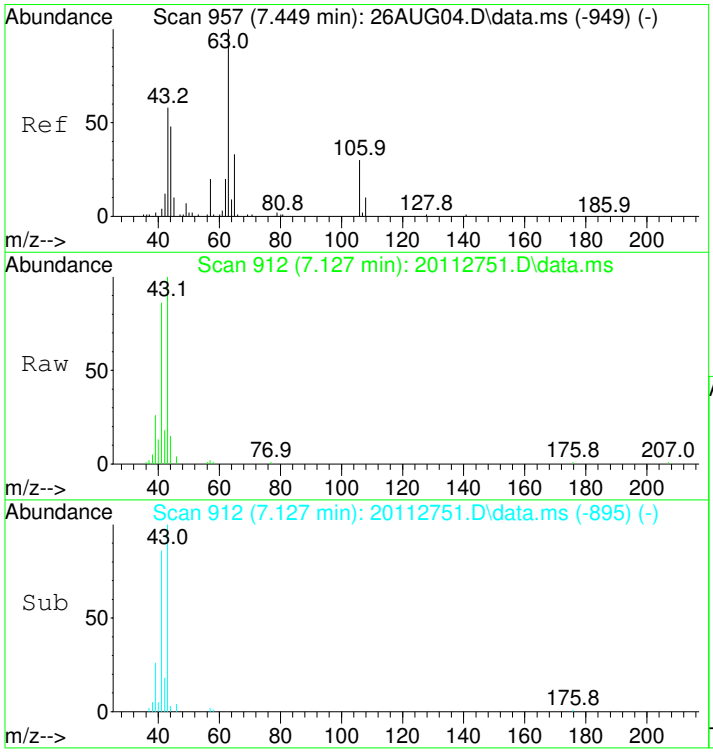


#63
Bromodichloromethane
Concen: 20.96 ug/L
RT: 6.596 min Scan# 838
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 83 Resp: 195577

Ion	Ratio	Lower	Upper
83	100		
85	63.6	44.3	84.3
129	10.9	0.0	31.0

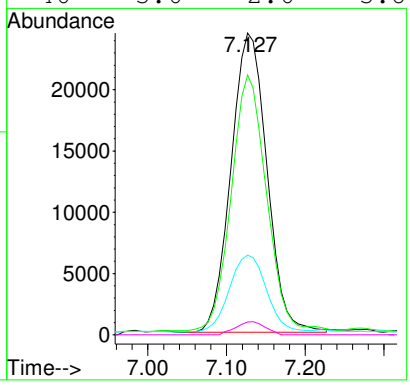


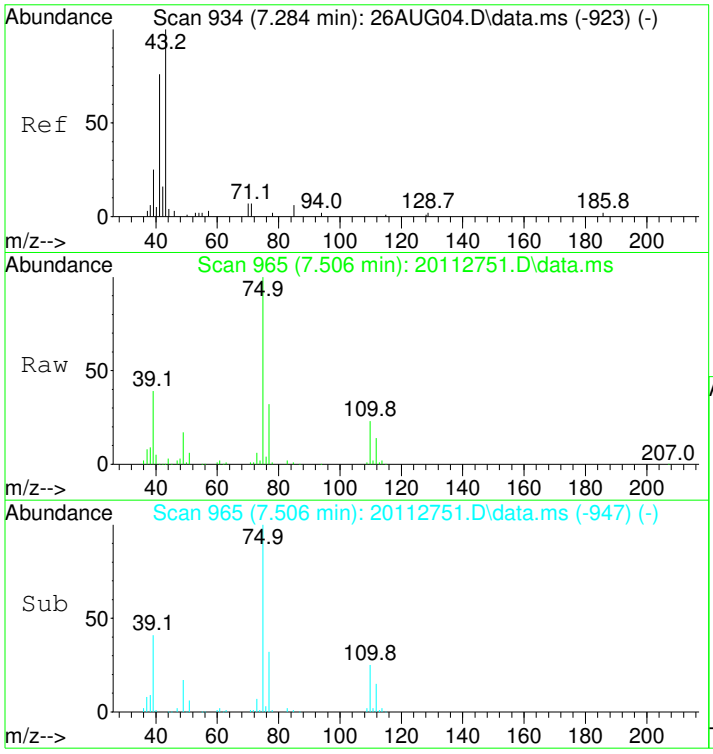


#65
2-Nitropropane
Concen: 21.12 ug/L
RT: 7.127 min Scan# 912
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 77492

Ion	Ratio	Lower	Upper
43	100		
41	83.2	67.9	101.9
39	26.4	21.8	32.8
46	3.6	2.6	3.8

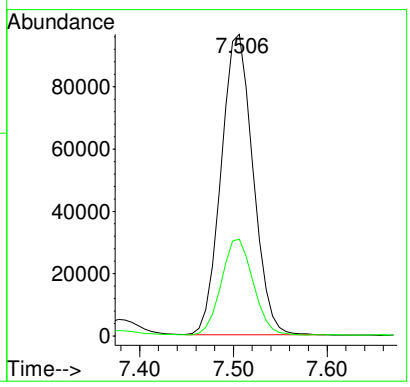


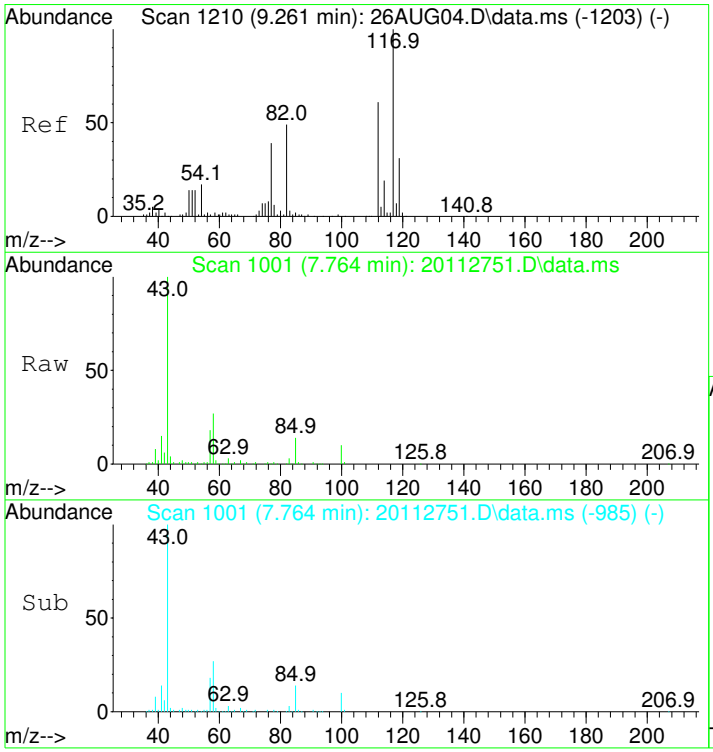


#66
cis-1,3-Dichloropropene
Concen: 19.89 ug/L
RT: 7.506 min Scan# 965
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 75 Resp: 228191

Ion	Ratio	Lower	Upper
75	100		
77	31.7	11.9	51.9

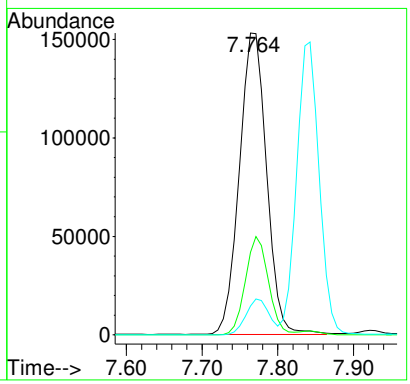


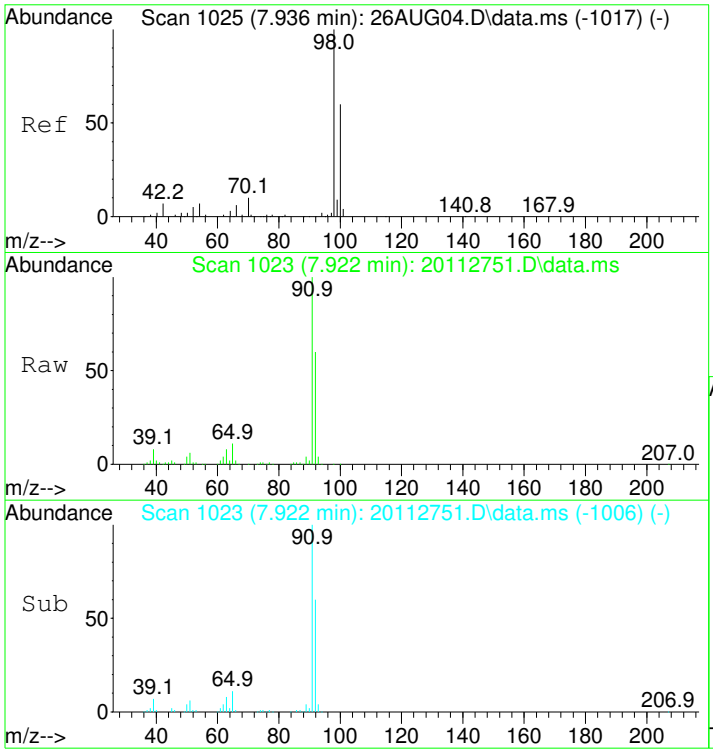


#68
4-Methyl-2-pentanone
Concen: 34.43 ug/L
RT: 7.764 min Scan# 1001
Delta R.T. -0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 381799

Ion	Ratio	Lower	Upper
43	100		
58	27.6	25.4	65.4
100	10.2	0.0	36.2

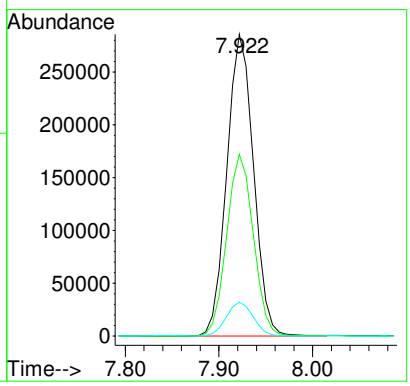


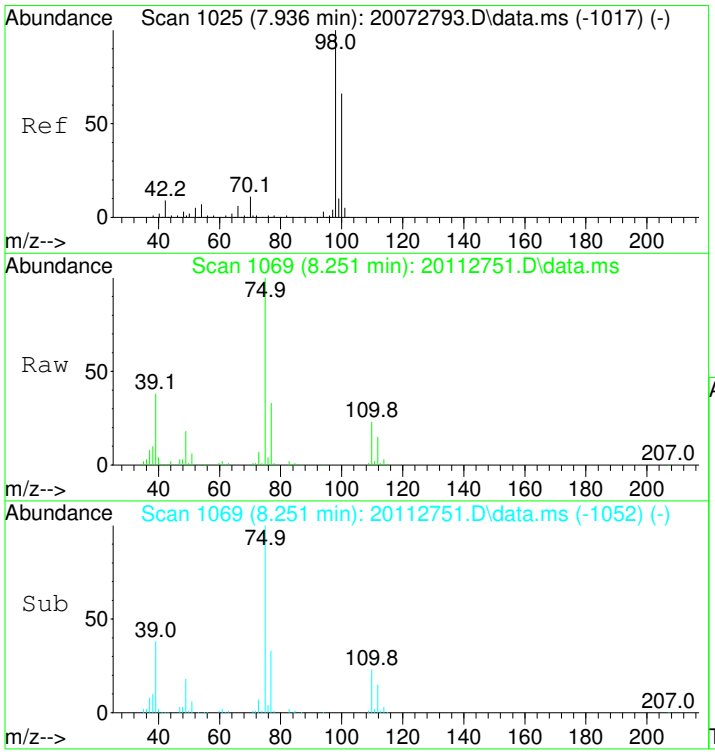


#70
Toluene
Concen: 23.12 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 567733

Ion	Ratio	Lower	Upper
91	100		
92	60.0	40.7	80.7
65	11.4	0.0	31.5

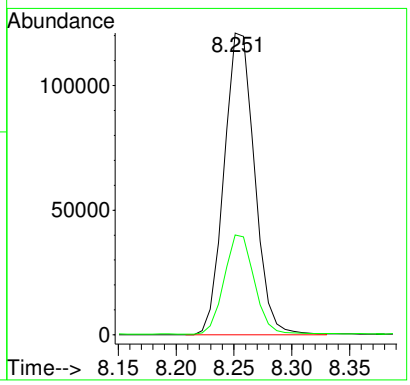


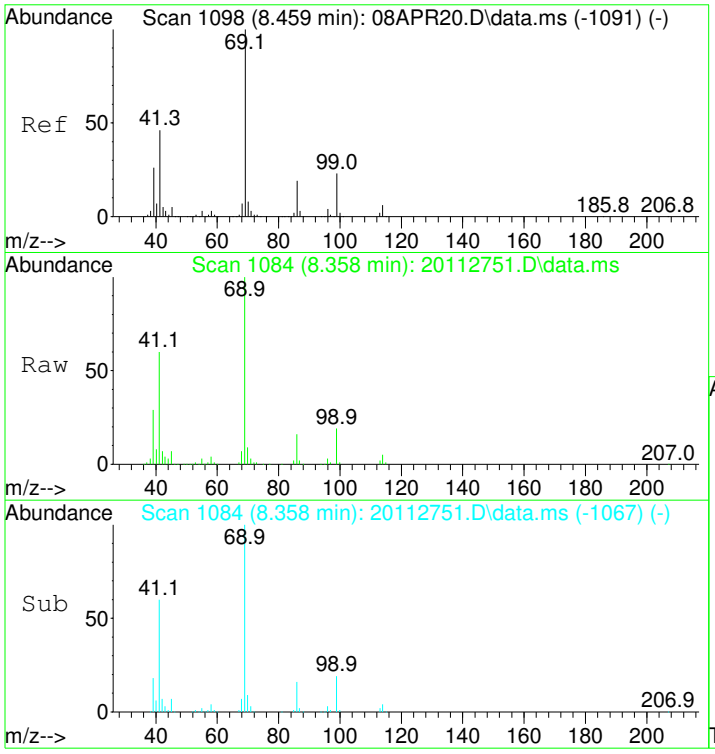


#71
trans-1,3-Dichloropropene
Concen: 20.95 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 75 Resp: 220994

Ion	Ratio	Lower	Upper
75	100		
77	32.7	15.0	55.0

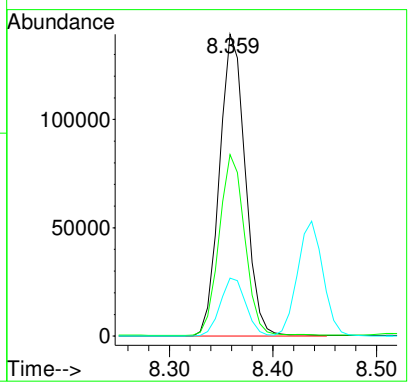


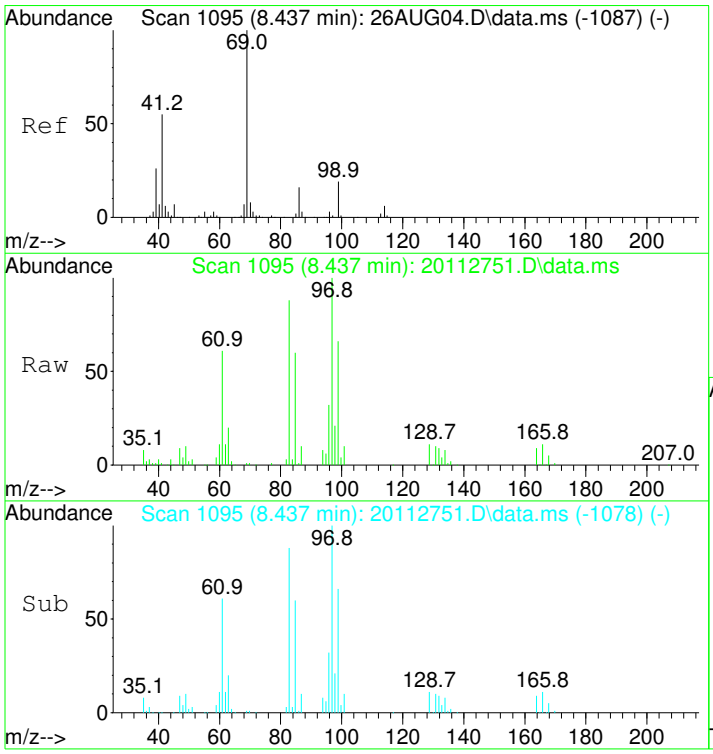


#73
Ethyl methacrylate
Concen: 21.07 ug/L
RT: 8.358 min Scan# 1084
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 69 Resp: 242278

Ion	Ratio	Lower	Upper
69	100		
41	59.5	39.9	79.9
99	19.1	0.0	39.7

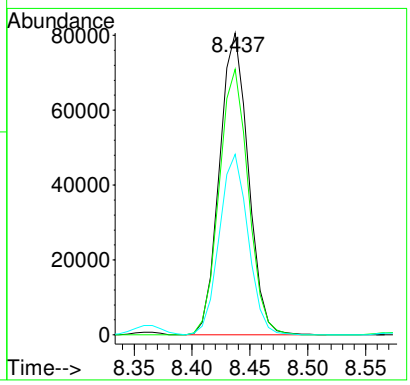


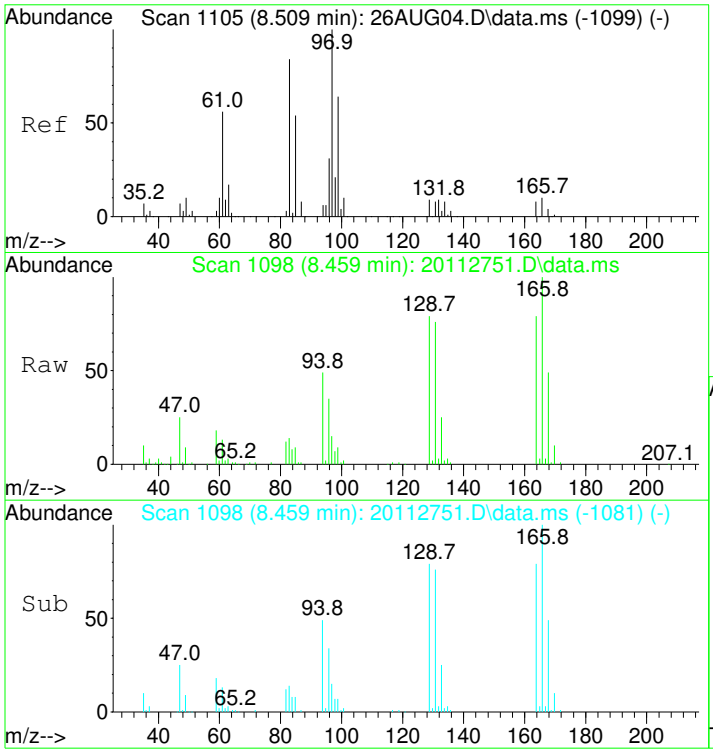


#74
1,1,2-Trichloroethane
Concen: 20.72 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 97 Resp: 139583

Ion	Ratio	Lower	Upper
97	100		
83	89.2	66.1	106.1
85	59.7	36.8	76.8

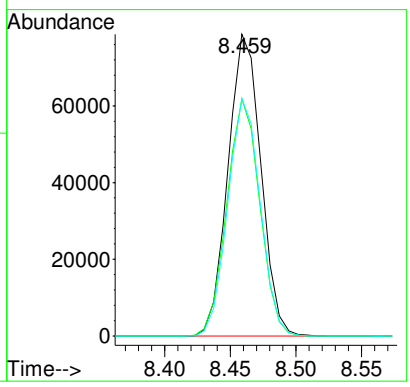


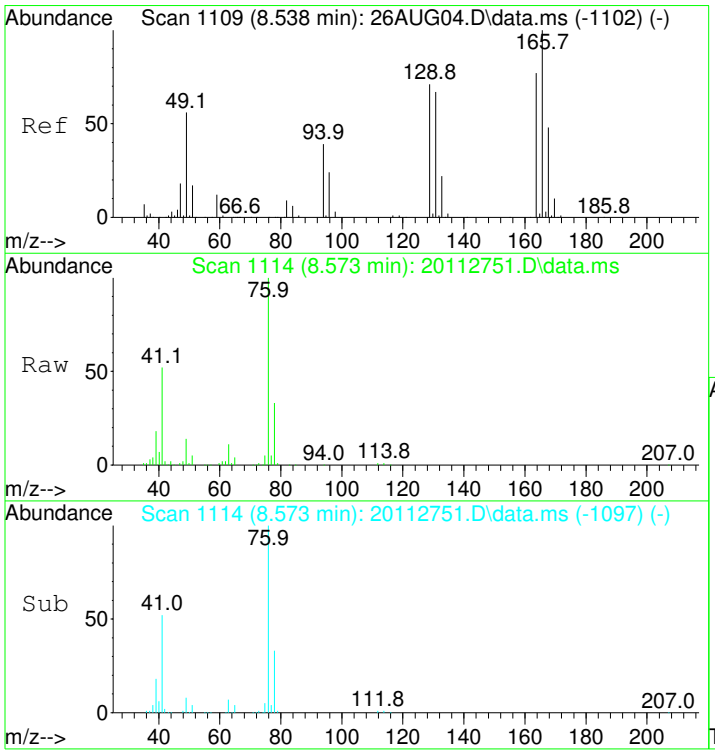


#75
Tetrachloroethene
Concen: 22.21 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:166 Resp: 137294

Ion	Ratio	Lower	Upper
166	100		
129	78.6	59.1	99.1
164	77.6	59.1	99.1

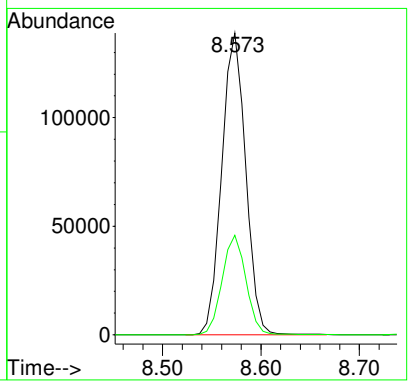


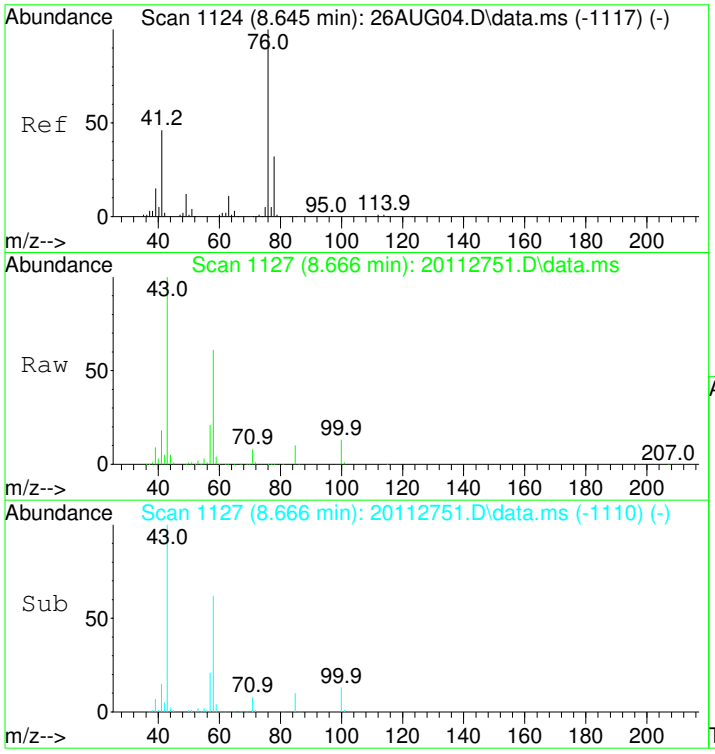


#76
1,3-Dichloropropane
Concen: 21.05 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 76 Resp: 235372

Ion	Ratio	Lower	Upper
76	100		
78	32.9	13.2	53.2

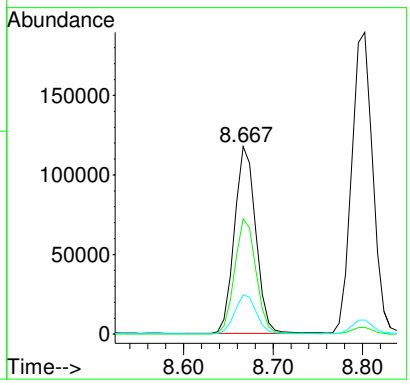


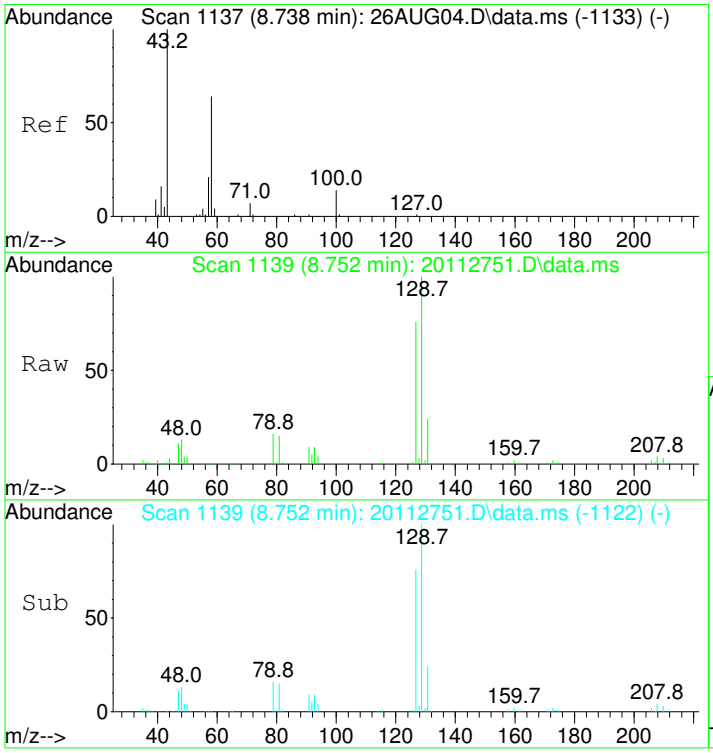


#77
2-Hexanone
Concen: 22.15 ug/L
RT: 8.666 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 195485

Ion	Ratio	Lower	Upper
43	100		
58	61.9	42.3	82.3
57	21.0	1.0	41.0

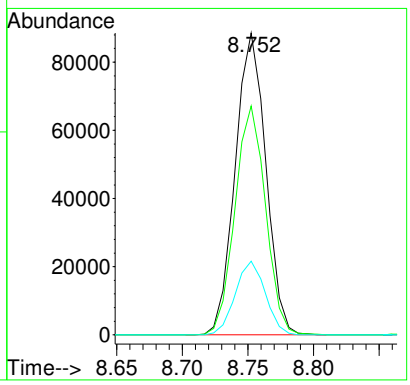


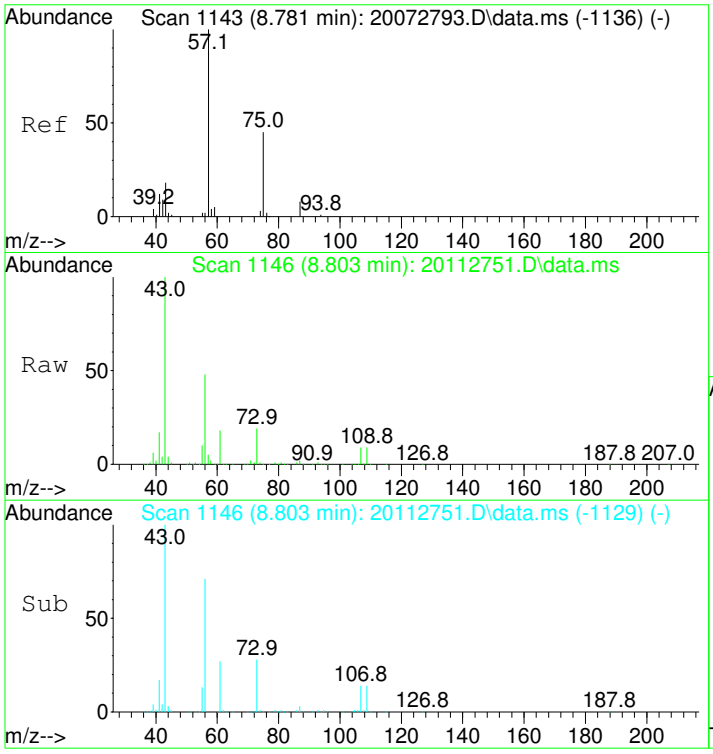


#78
Chlorodibromomethane
Concen: 19.60 ug/L
RT: 8.752 min Scan# 1139
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:129 Resp: 144268

Ion	Ratio	Lower	Upper
129	100		
127	75.6	57.8	97.8
131	23.9	4.2	44.2

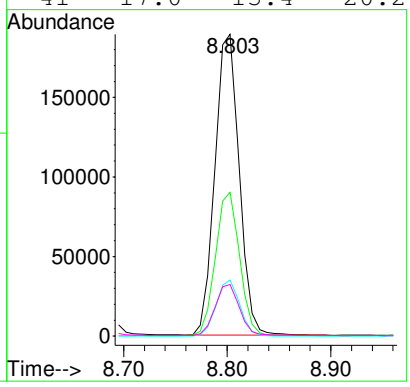


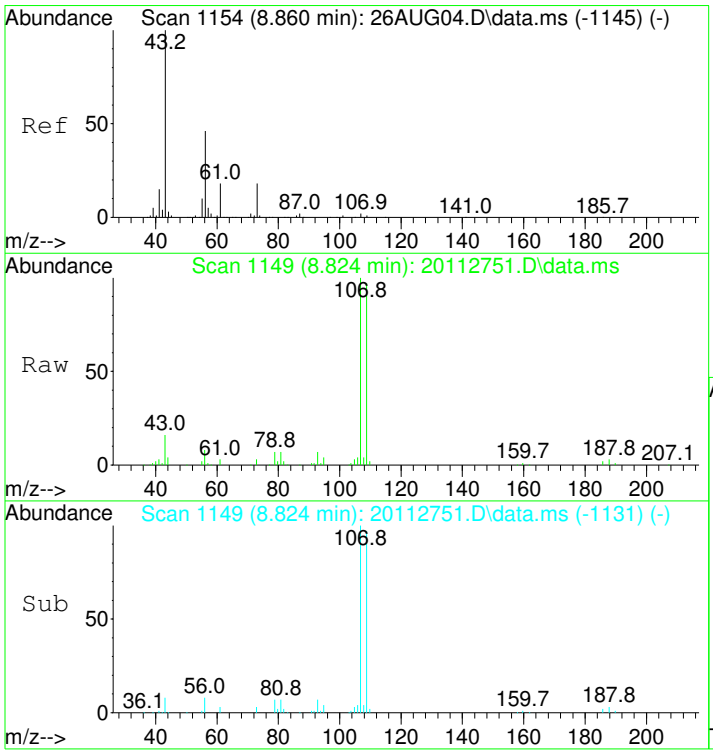


#79
Butyl acetate
Concen: 22.20 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 309361

Ion	Ratio	Lower	Upper
43	100		
56	47.4	38.0	57.0
73	18.1	15.0	22.4
41	17.0	13.4	20.2

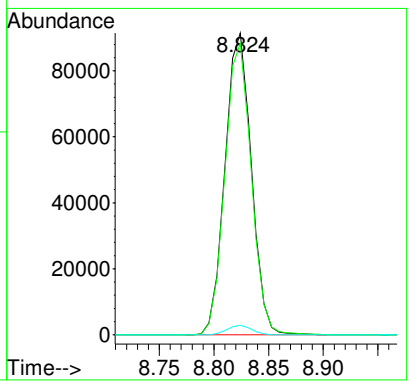


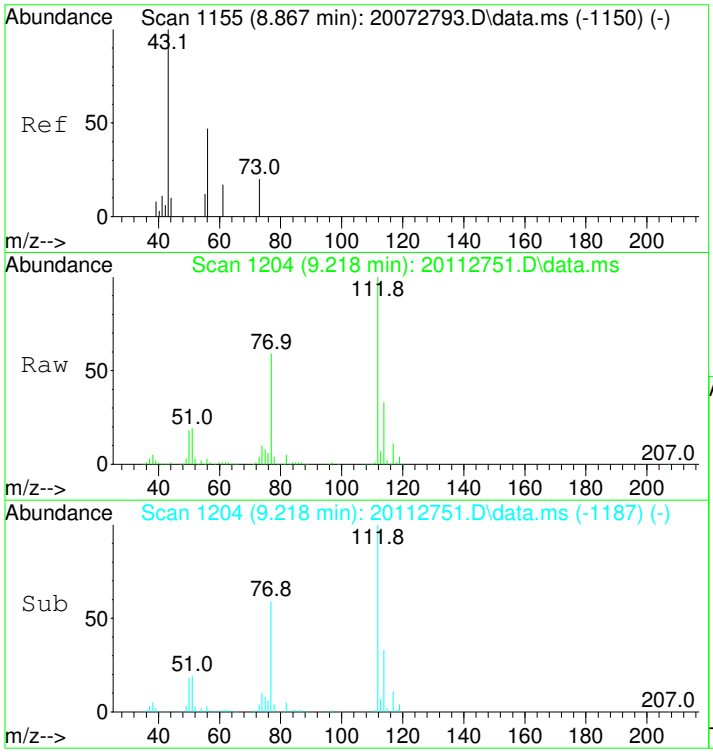


#80
1,2-Dibromoethane
Concen: 21.98 ug/L
RT: 8.824 min Scan# 1149
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:107 Resp: 153276

Ion	Ratio	Lower	Upper
107	100		
109	96.7	76.6	116.6
188	2.9	0.0	22.9

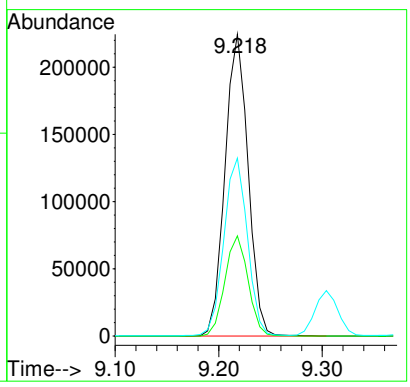


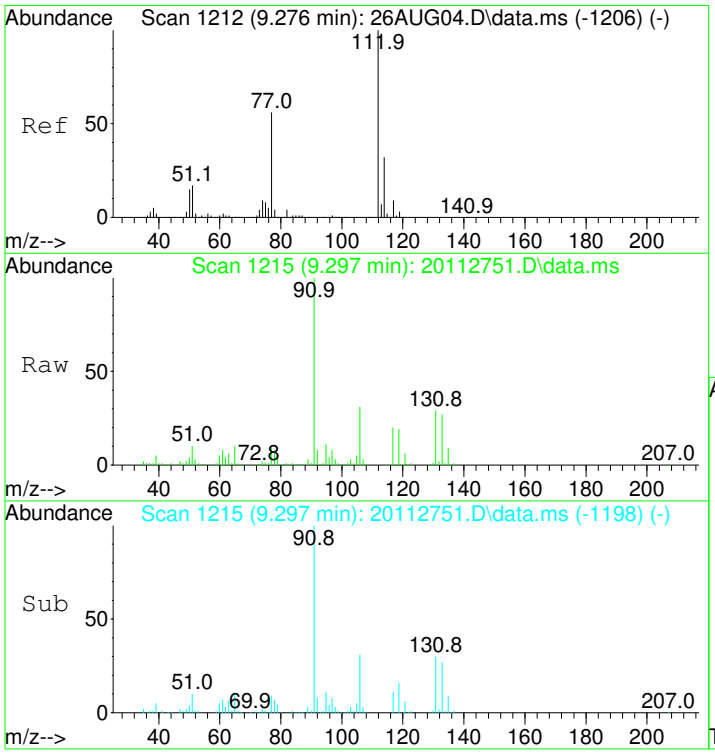


#81
Chlorobenzene
Concen: 22.14 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:112 Resp: 349633

Ion	Ratio	Lower	Upper
112	100		
114	33.3	13.6	53.6
77	60.1	41.7	81.7

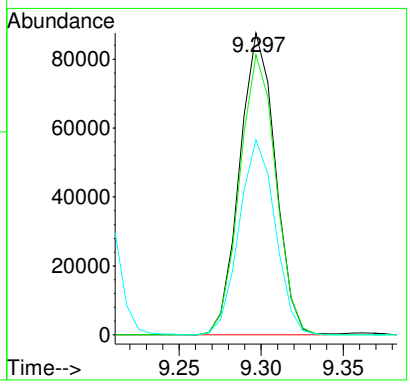


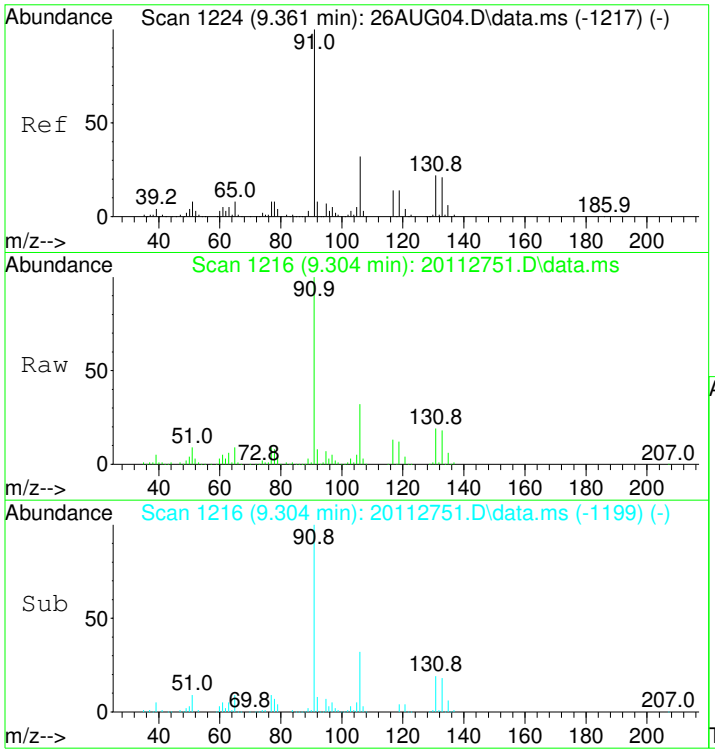


#82
1,1,1,2-Tetrachloroethane
Concen: 21.72 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:131 Resp: 132678

Ion	Ratio	Lower	Upper
131	100		
133	93.9	74.4	114.4
119	65.3	45.7	85.7

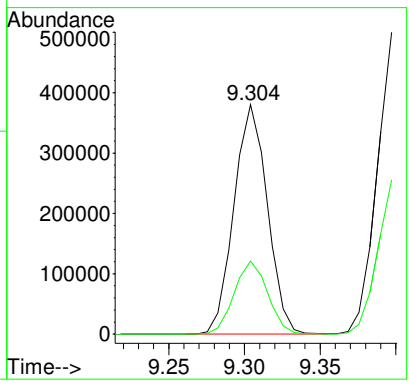


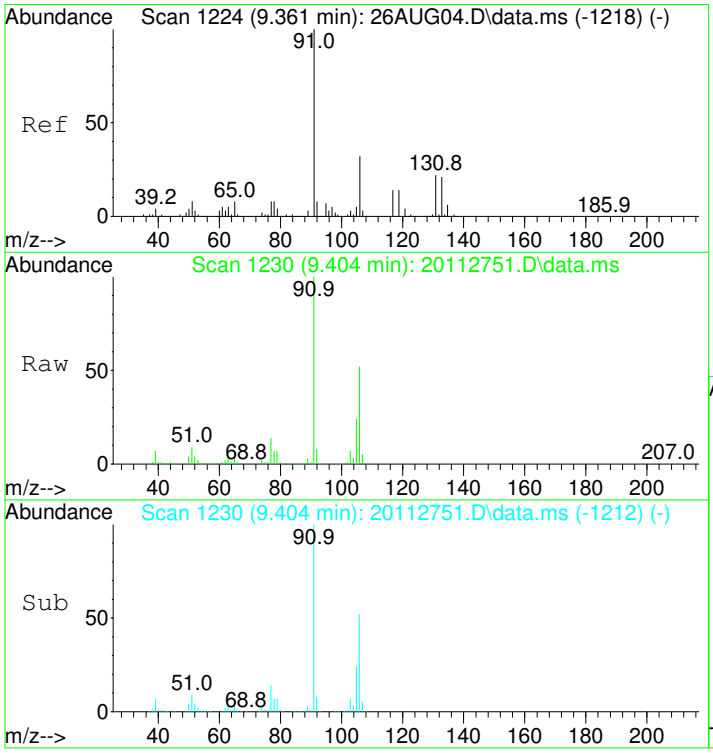


#83
Ethylbenzene
Concen: 20.37 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 582562

Ion	Ratio	Lower	Upper
91	100		
106	31.7	13.6	53.6

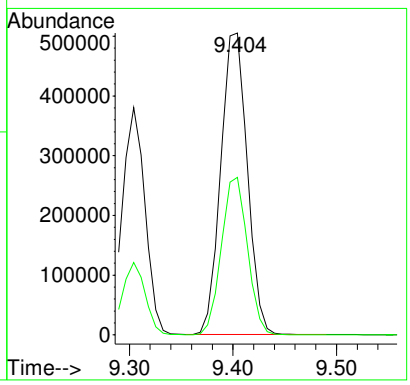


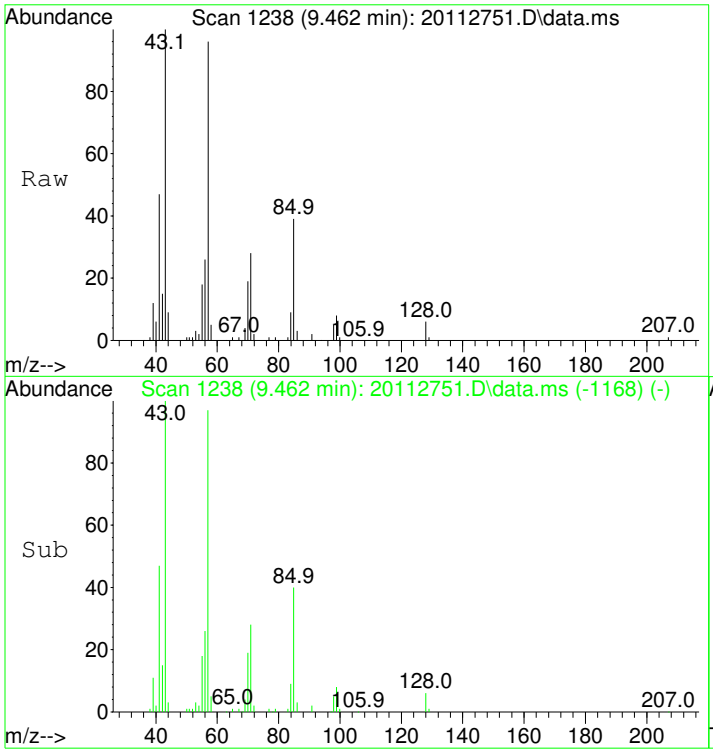


#84
m/p-Xylene
Concen: 39.61 ug/L
RT: 9.404 min Scan# 1230
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 902909

Ion	Ratio	Lower	Upper
91	100		
106	51.4	34.2	74.2

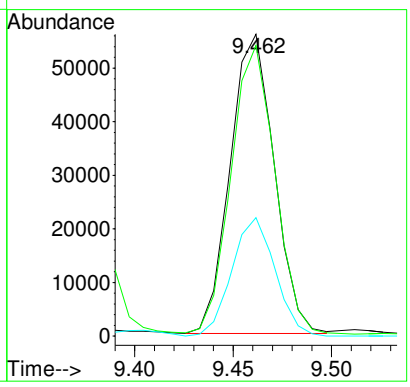


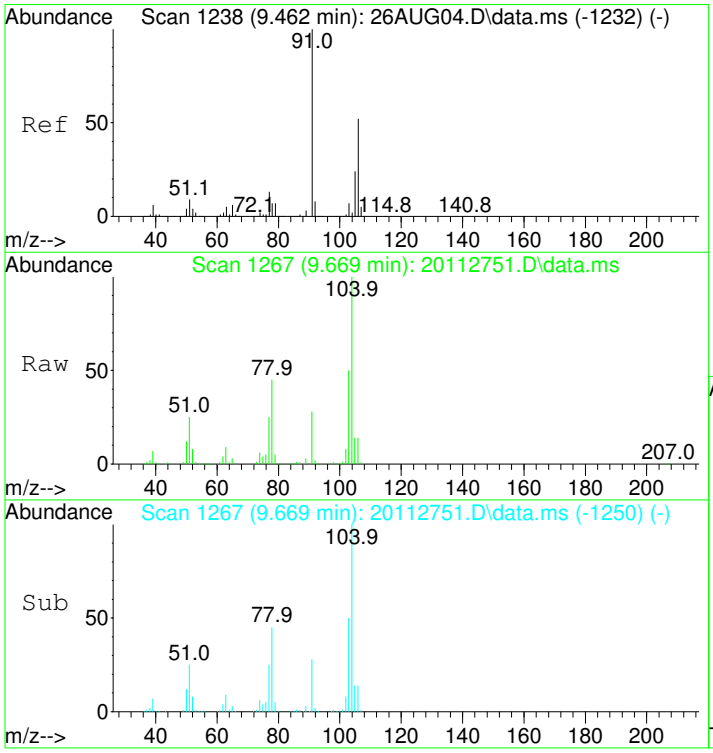


#85
Nonane
Concen: 25.88 ug/L
RT: 9.462 min Scan# 1238
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 87138

Ion	Ratio	Lower	Upper
43	100		
57	96.1	67.9	127.9
85	38.7	10.4	70.4

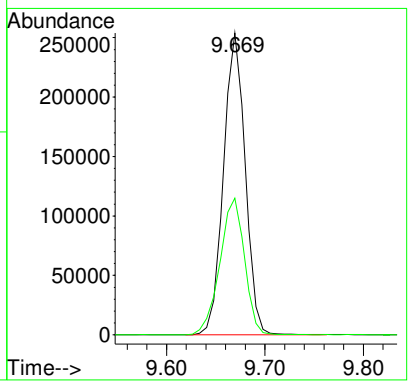


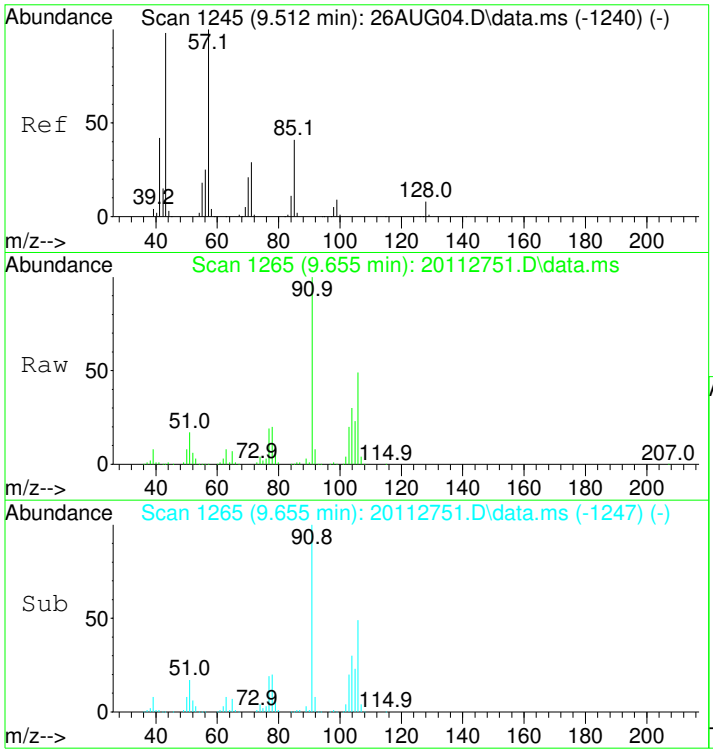


#86
Styrene
Concen: 20.17 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:104 Resp: 389641

Ion	Ratio	Lower	Upper
104	100		
78	51.5	32.3	72.3

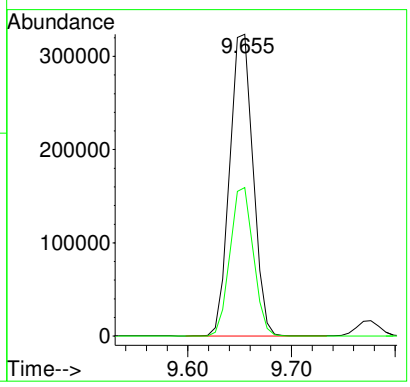


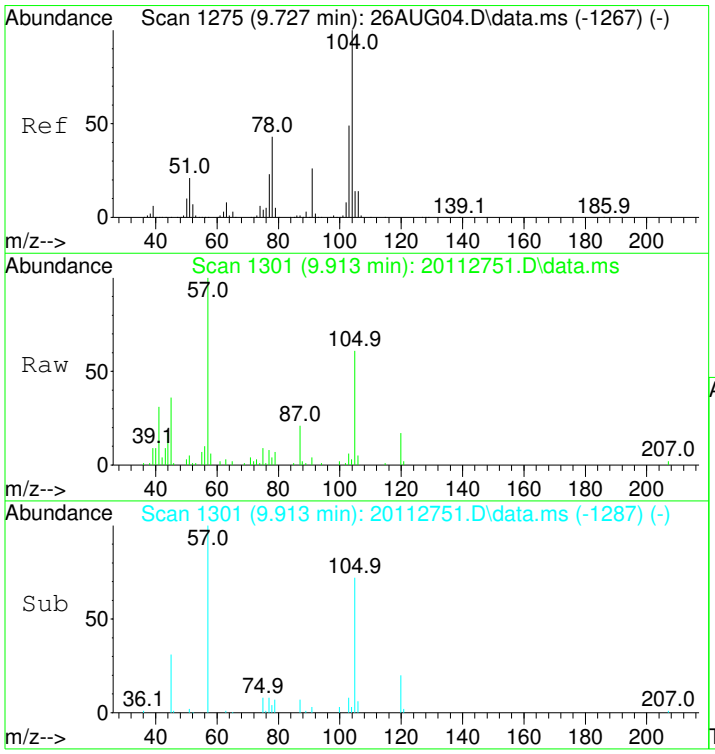


#87
o-Xylene
Concen: 20.29 ug/L
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 510393

Ion	Ratio	Lower	Upper
91	100		
106	49.1	30.3	70.3

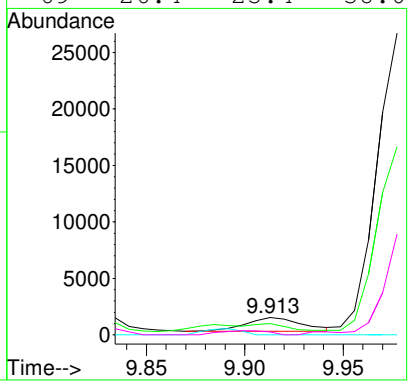


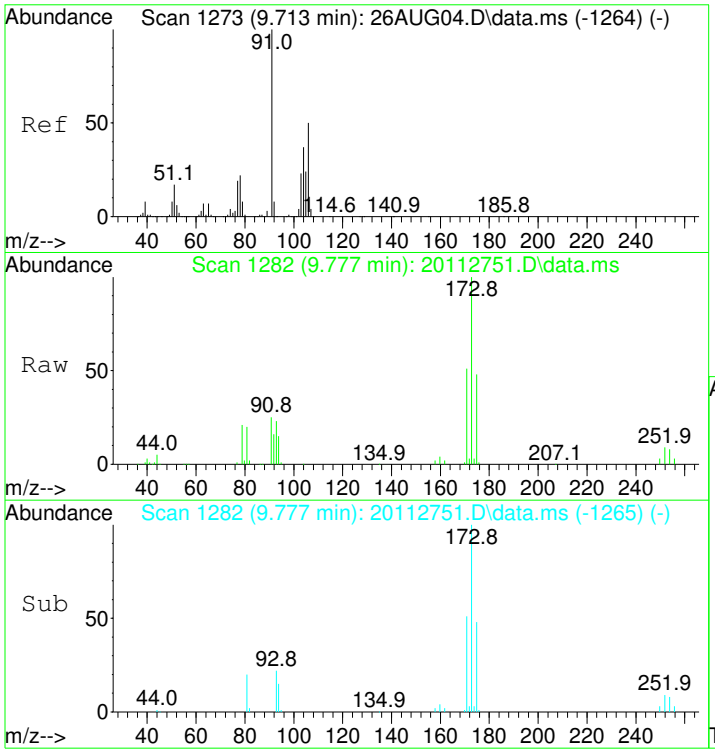


#88
Cyclohexanone
Concen: Below Cal
RT: 9.913 min Scan# 1301
Delta R.T. -0.021 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 55 Resp: 2415

Ion	Ratio	Lower	Upper
55	100		
42	43.1	48.0	72.0#
98	29.2	38.2	57.2#
69	26.4	25.4	38.0

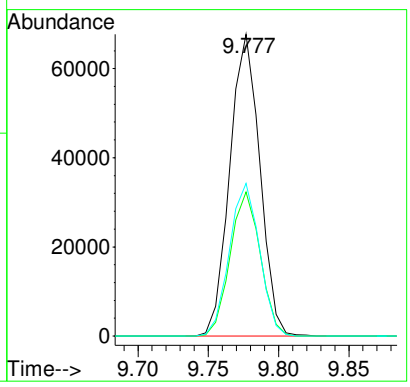


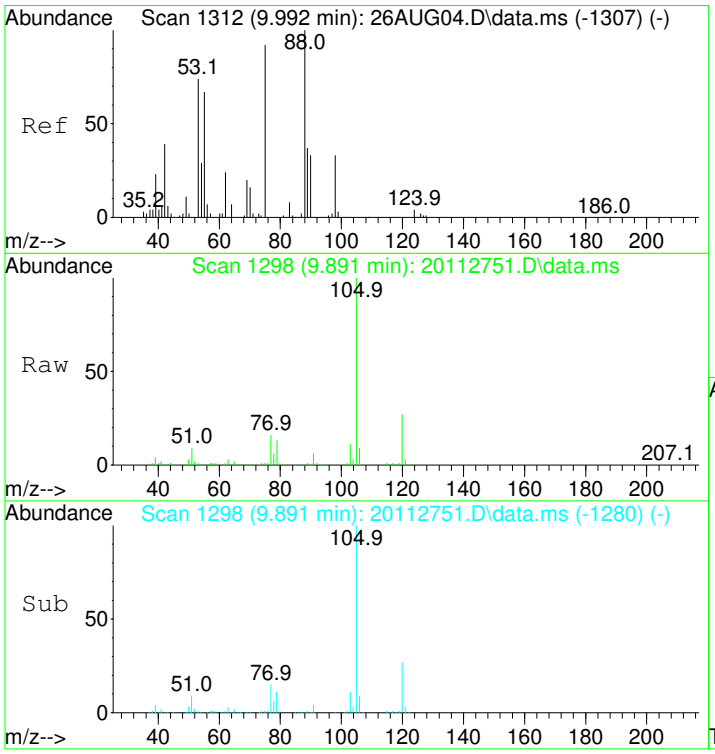


#89
Bromoform
Concen: 17.88 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:173 Resp: 100651

Ion	Ratio	Lower	Upper
173	100		
175	47.8	28.4	68.4
171	50.7	31.7	71.7

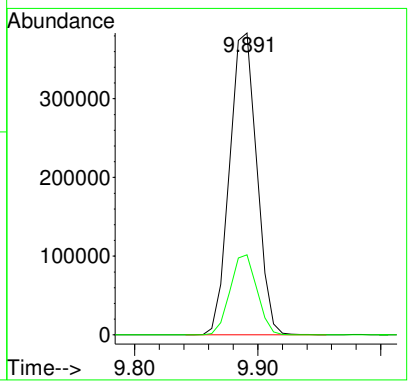


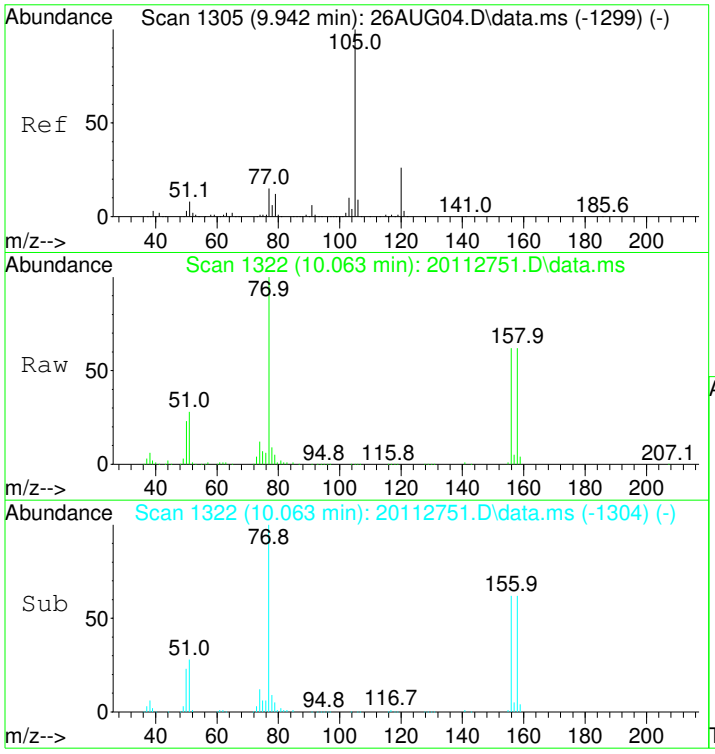


#90
Isopropylbenzene
Concen: 20.42 ug/L
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:105 Resp: 589652

Ion	Ratio	Lower	Upper
105	100		
120	26.2	8.0	48.0

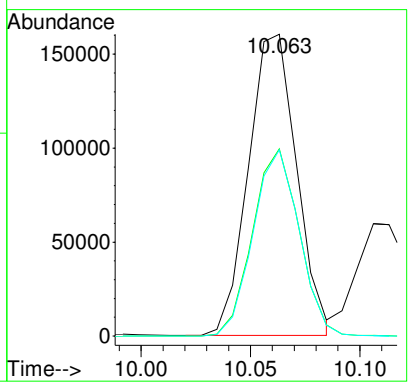


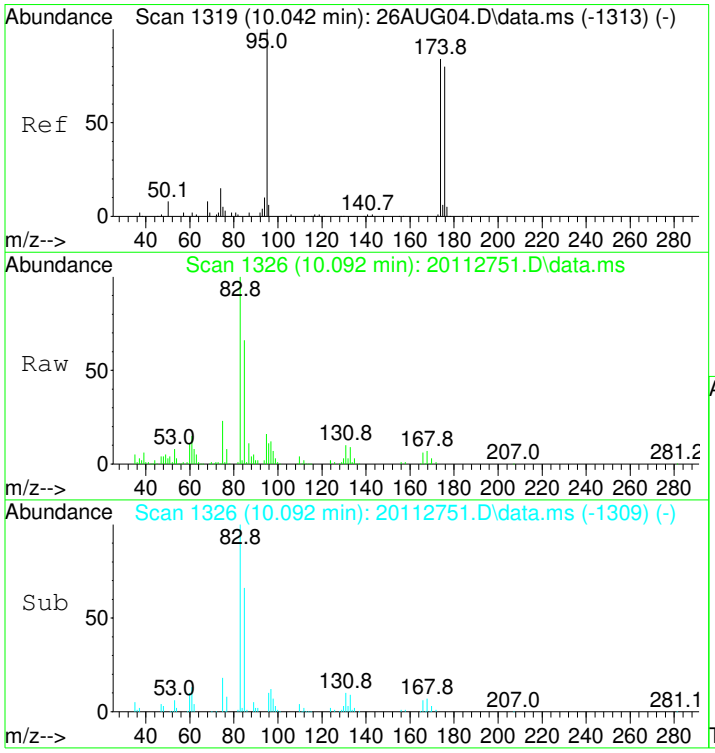


#92
Bromobenzene
Concen: 21.06 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 77 Resp: 246624

Ion	Ratio	Lower	Upper
77	100		
156	60.1	40.2	80.2
158	59.1	38.1	78.1

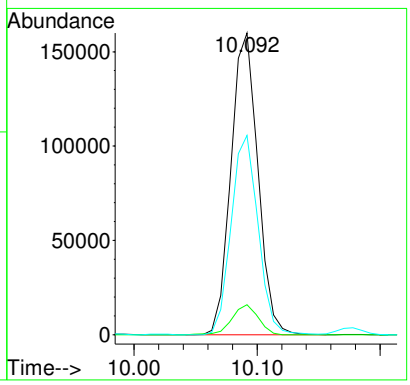


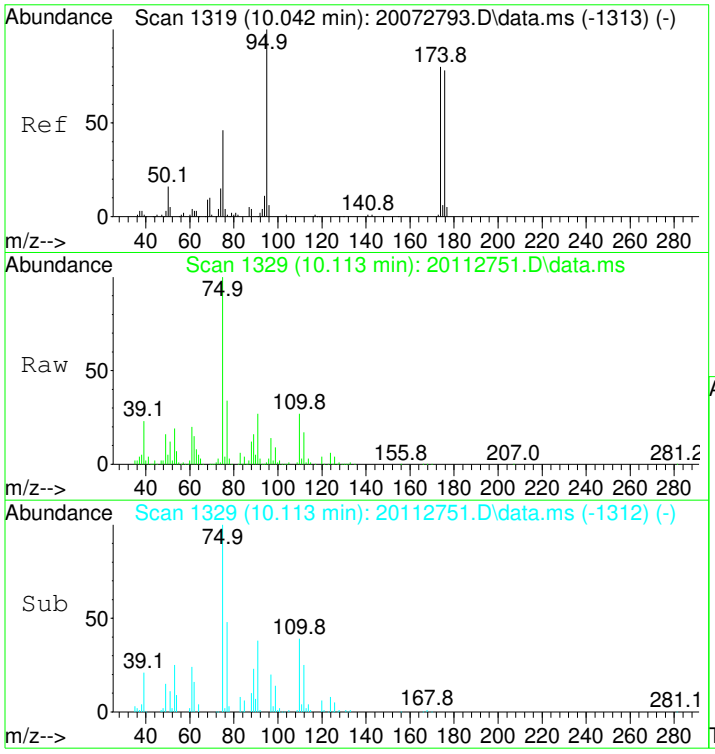


#93
1,1,2,2-Tetrachloroethane
Concen: 21.84 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 83 Resp: 243180

Ion	Ratio	Lower	Upper
83	100		
131	9.8	0.0	35.0
85	66.2	46.4	86.4

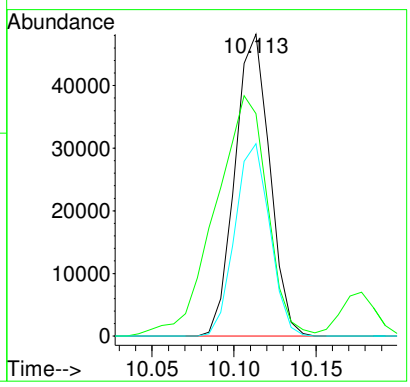


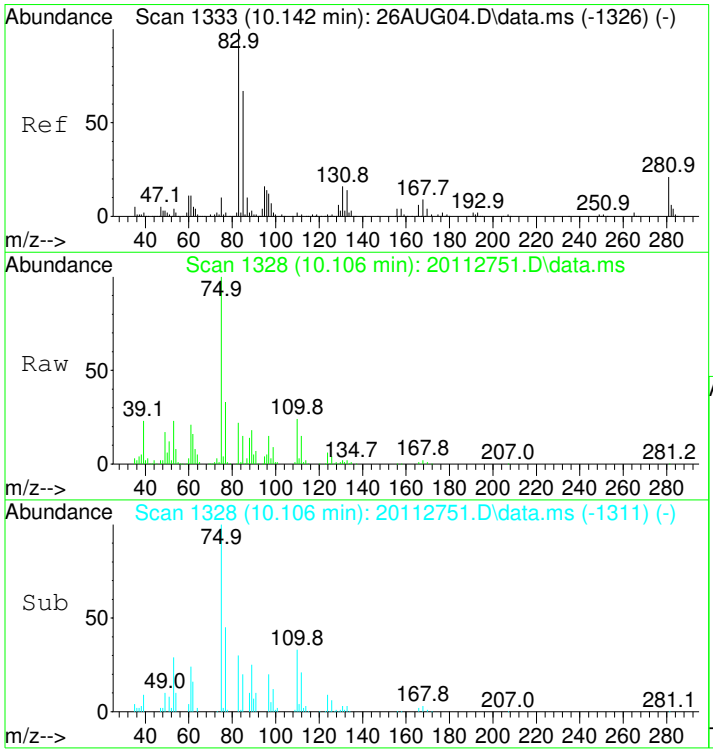


#94
1,2,3-Trichloropropane
Concen: 20.32 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:110 Resp: 71250

Ion	Ratio	Lower	Upper
110	100		
61	118.6	97.0	137.0
112	63.8	44.1	84.1

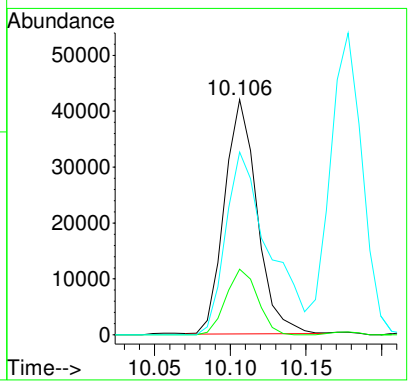


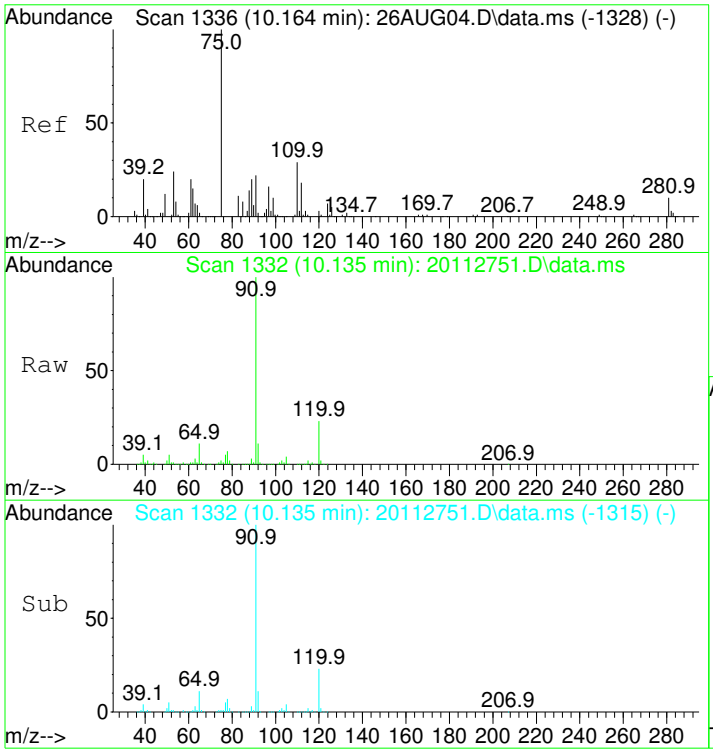


#95
trans-1,4-Dichloro-2-butene
Concen: 17.03 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 53 Resp: 63042

Ion	Ratio	Lower	Upper
53	100		
124	27.0	7.2	47.2
89	102.4	79.3	119.3

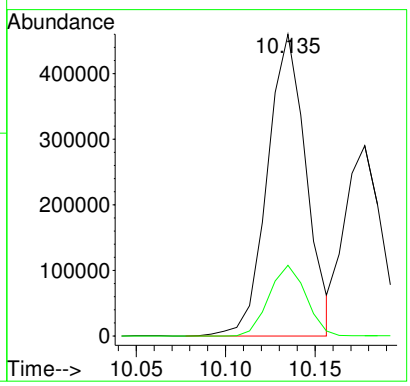


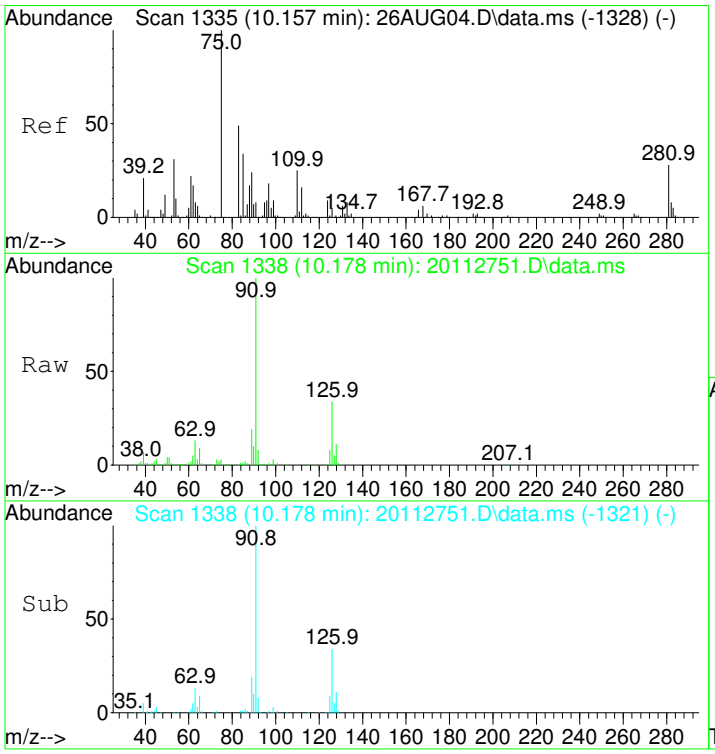


#96
n-Propylbenzene
Concen: 19.80 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 694743

Ion	Ratio	Lower	Upper
91	100		
120	22.5	3.7	43.7

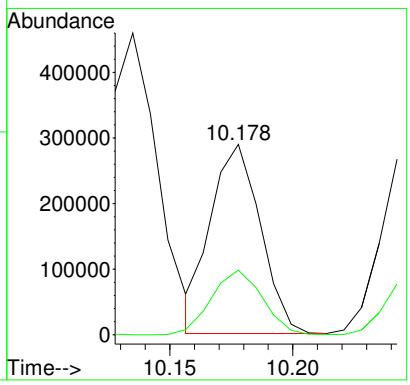


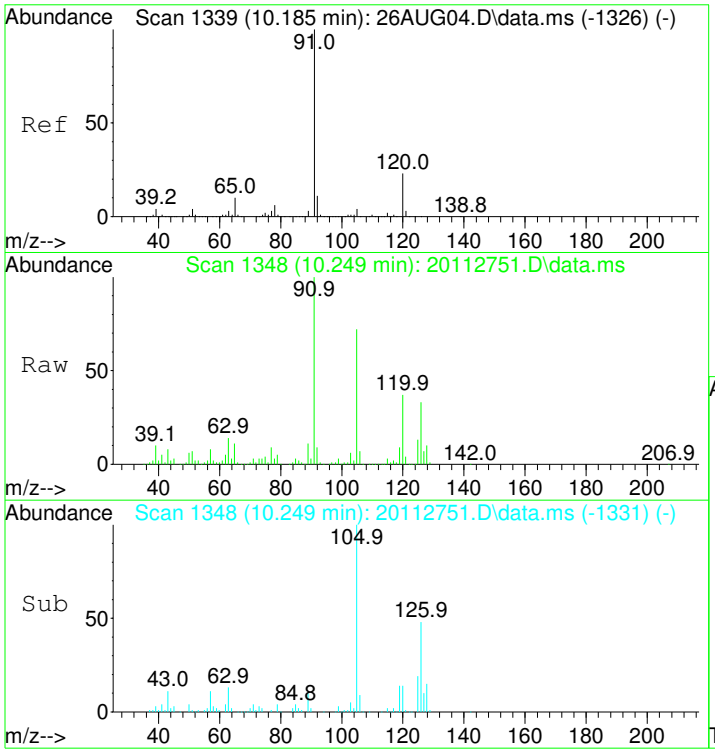


#97
2-Chlorotoluene
Concen: 23.29 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 406761

Ion	Ratio	Lower	Upper
91	100		
126	35.2	17.3	57.3

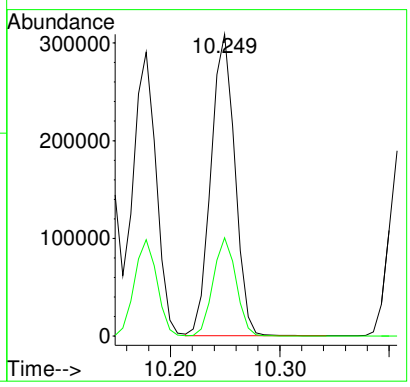


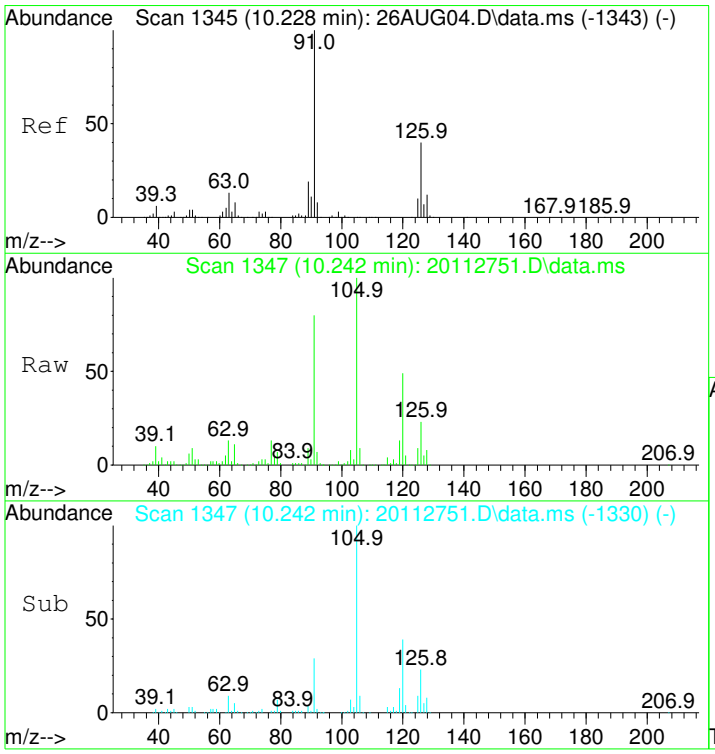


#98
4-Chlorotoluene
Concen: 19.59 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 467858

Ion	Ratio	Lower	Upper
91	100		
126	31.4	12.4	52.4

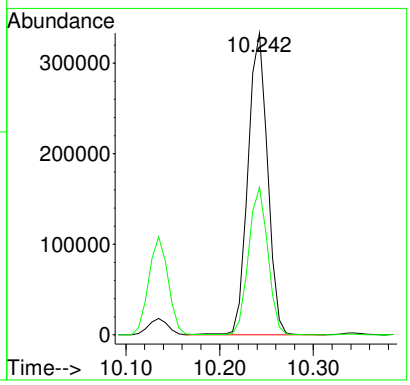


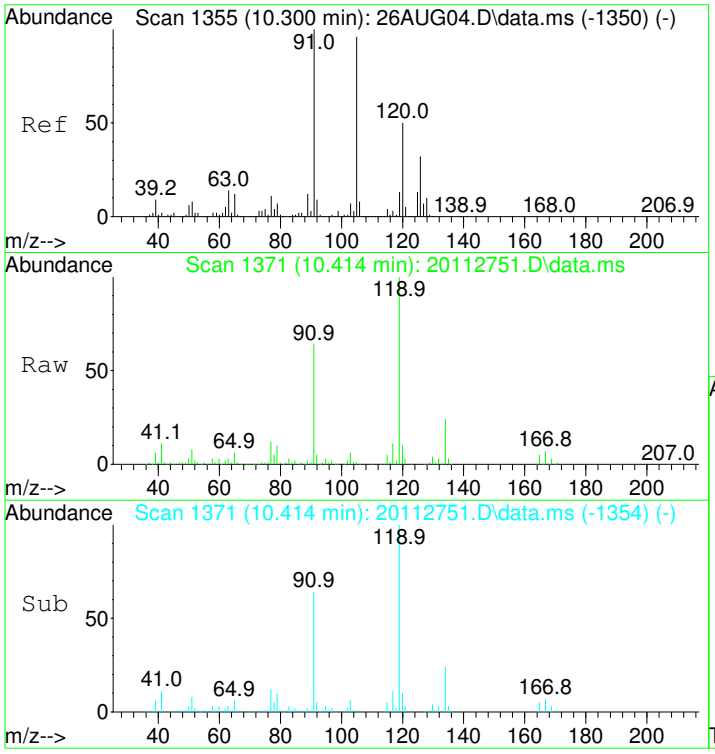


#99
1,3,5-Trimethylbenzene
Concen: 19.96 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:105 Resp: 489435

Ion	Ratio	Lower	Upper
105	100		
120	48.2	31.9	71.9

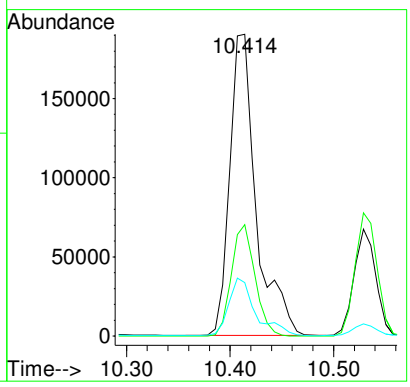


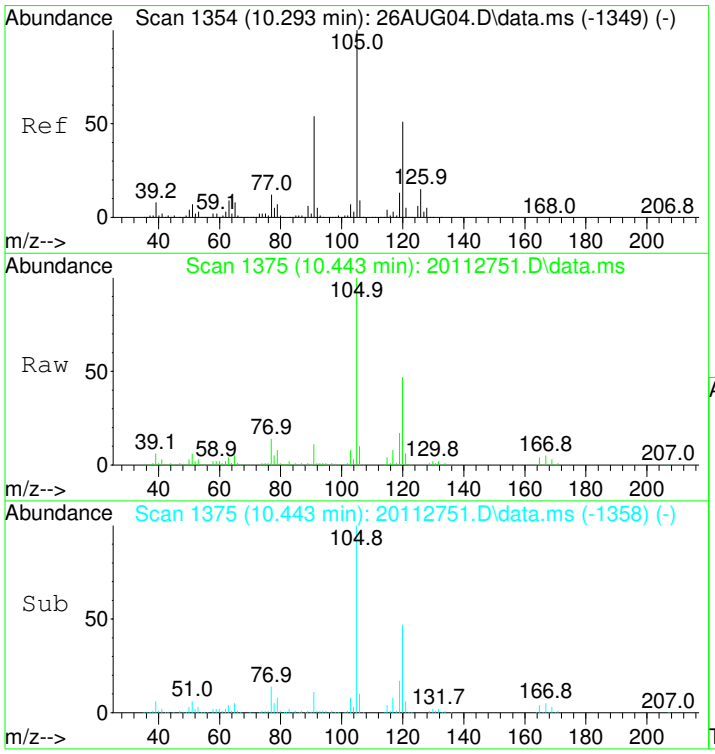


#100
tert-Butylbenzene
Concen: 22.10 ug/L
RT: 10.414 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 338868

Ion	Ratio	Lower	Upper
91	100		
134	32.9	9.7	49.7
41	19.4	0.0	39.3

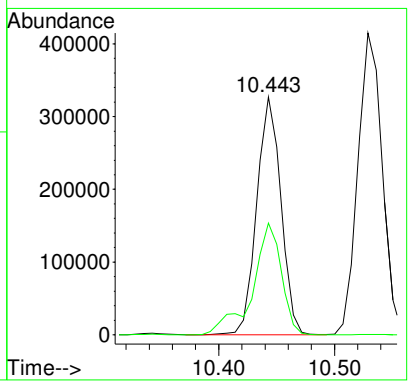


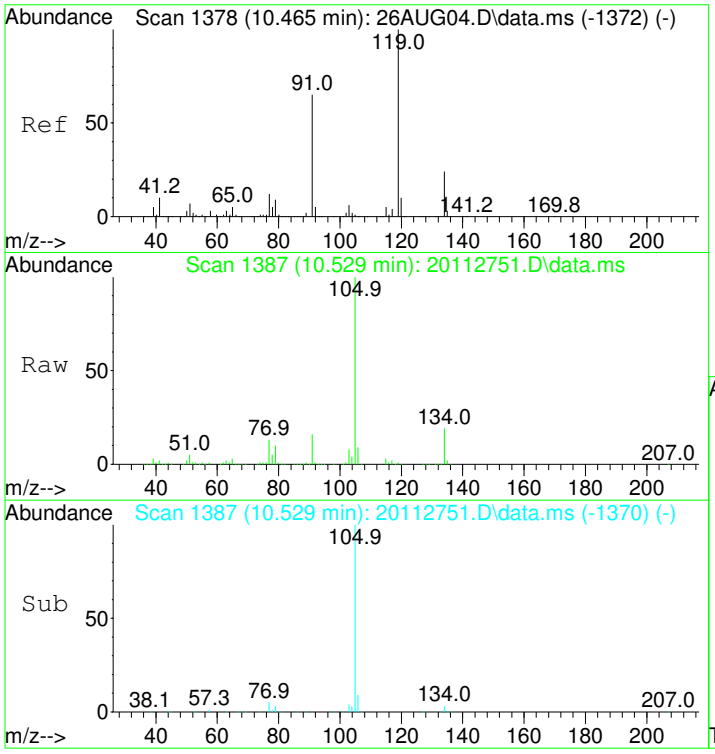


#101
1,2,4-Trimethylbenzene
Concen: 18.51 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:105 Resp: 472038

Ion	Ratio	Lower	Upper
105	100		
120	56.1	37.7	77.7

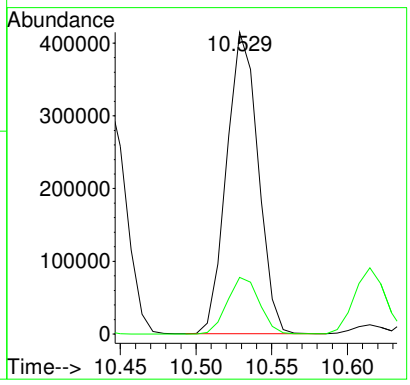


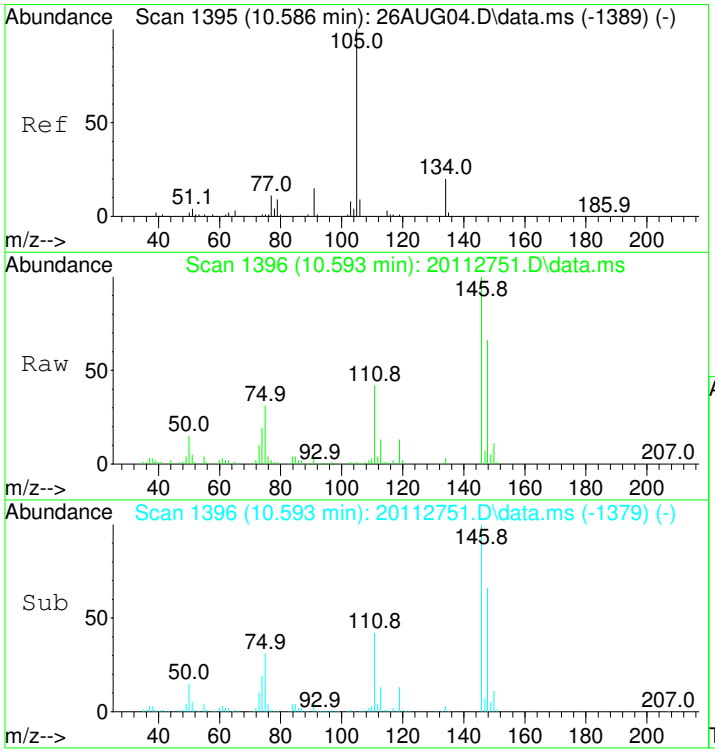


#102
sec-Butylbenzene
Concen: 20.24 ug/L
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:105 Resp: 601035

Ion	Ratio	Lower	Upper
105	100		
134	19.1	1.1	41.1

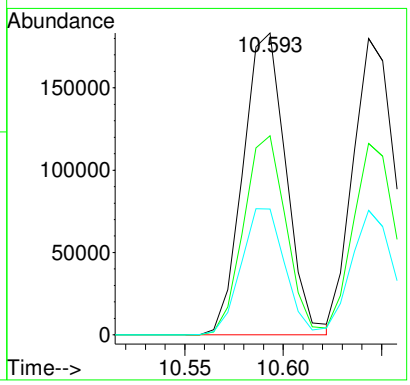


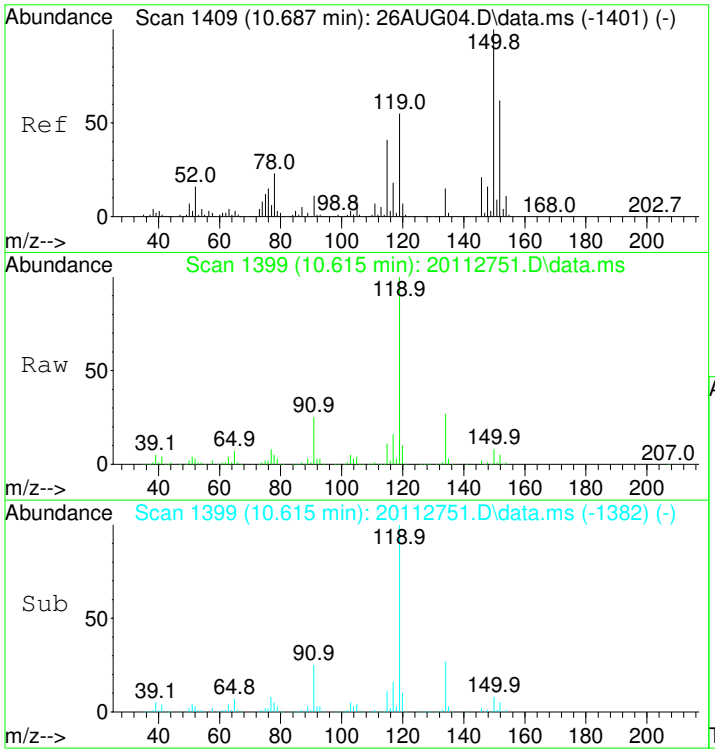


#104
1,3-Dichlorobenzene
Concen: 21.79 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:146 Resp: 278739

Ion	Ratio	Lower	Upper
146	100		
148	65.3	46.5	86.5
111	42.3	22.6	62.6

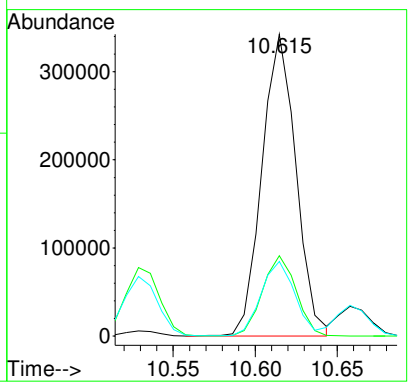


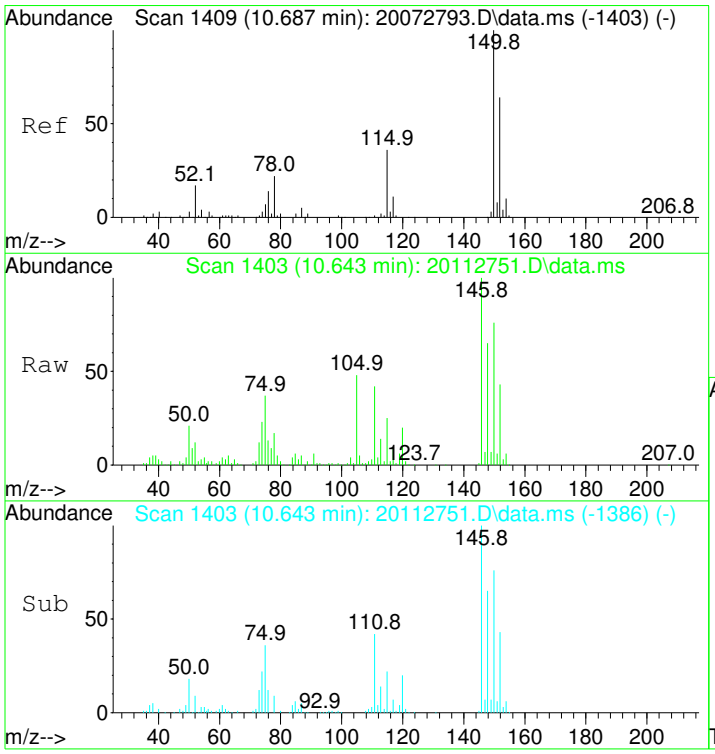


#105
p-Isopropyltoluene
Concen: 23.66 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:119 Resp: 493861

Ion	Ratio	Lower	Upper
119	100		
134	26.4	8.1	48.1
91	24.4	5.2	45.2

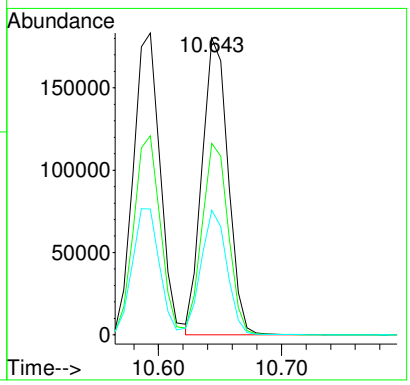


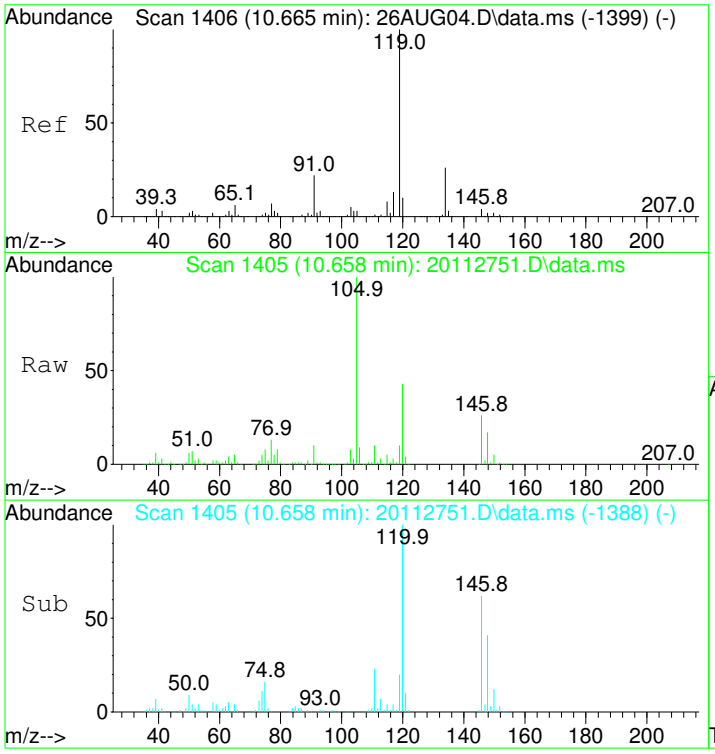


#106
1,4-Dichlorobenzene
Concen: 21.55 ug/L
RT: 10.643 min Scan# 1403
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:146 Resp: 265525

Ion	Ratio	Lower	Upper
146	100		
148	64.7	37.3	97.3
111	41.7	12.5	72.5

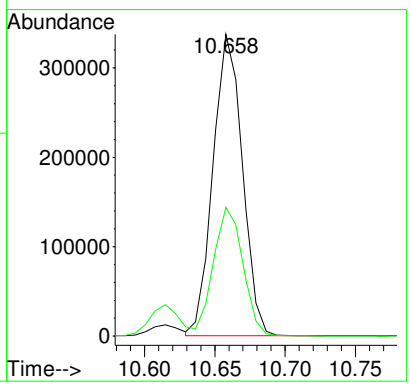


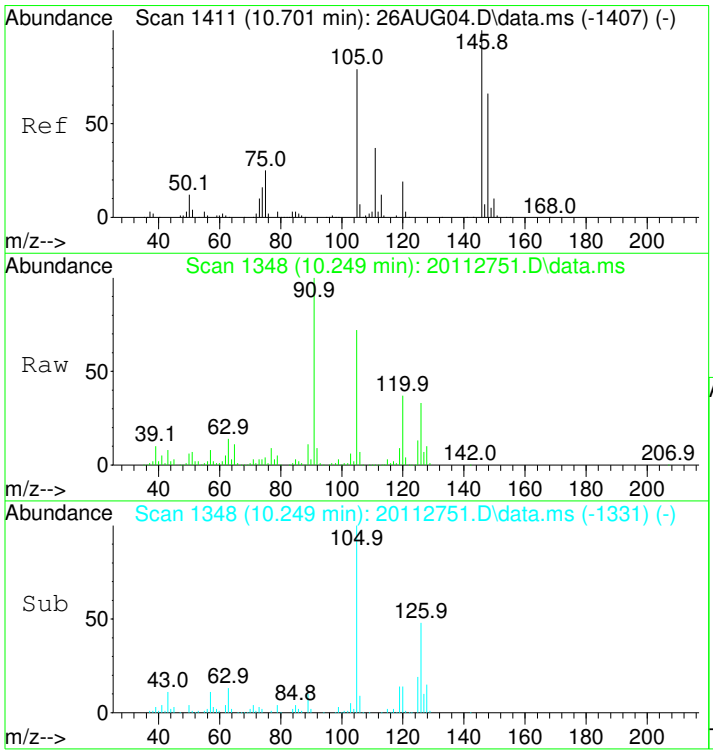


#107
1,2,3-Trimethylbenzene
Concen: 23.45 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:105 Resp: 490101

Ion	Ratio	Lower	Upper
105	100		
120	42.5	35.5	53.3

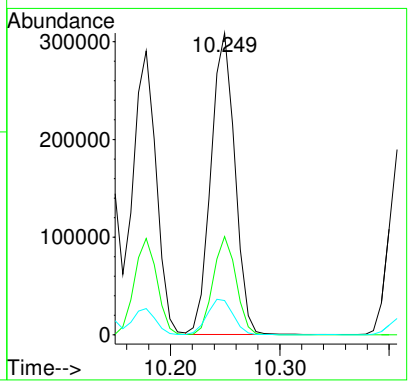


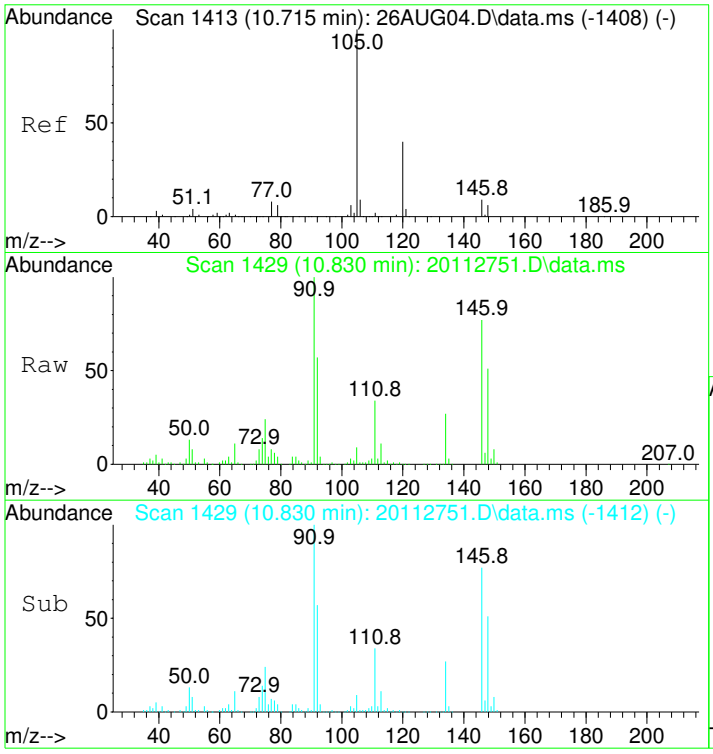


#108
Benzyl chloride
Concen: 20.21 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 467858

Ion	Ratio	Lower	Upper
91	100		
126	31.4	12.4	52.4
65	13.0	0.0	33.3

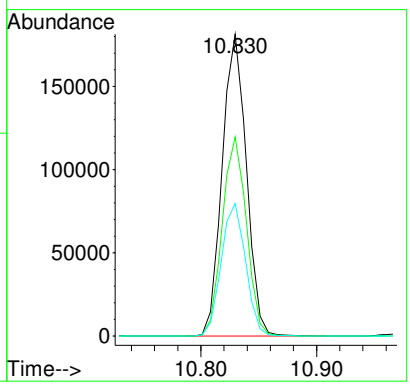


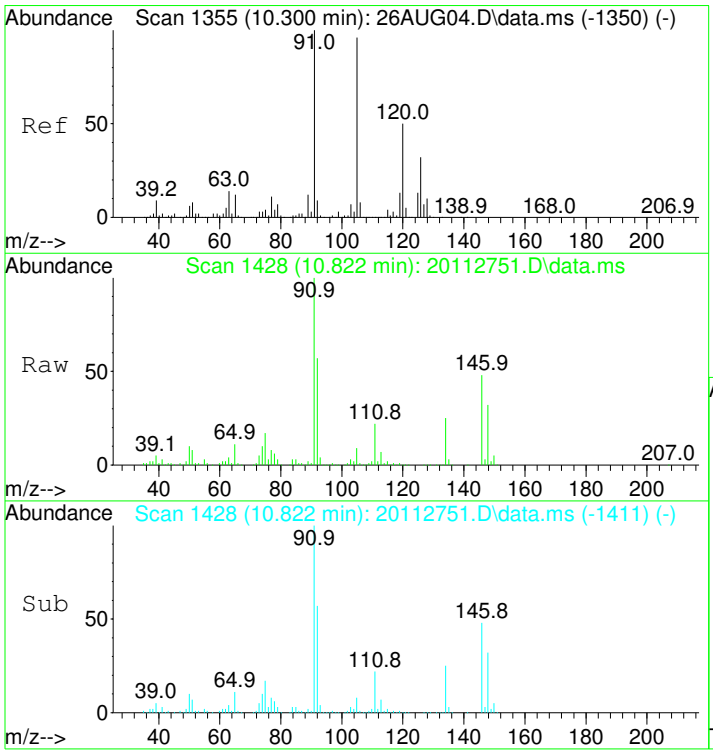


#109
1,2-Dichlorobenzene
Concen: 21.06 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:146 Resp: 263227

Ion	Ratio	Lower	Upper
146	100		
148	65.9	45.6	85.6
111	44.3	24.1	64.1

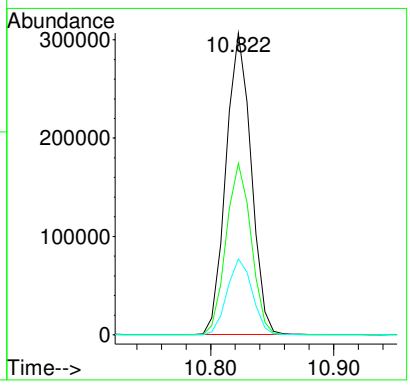


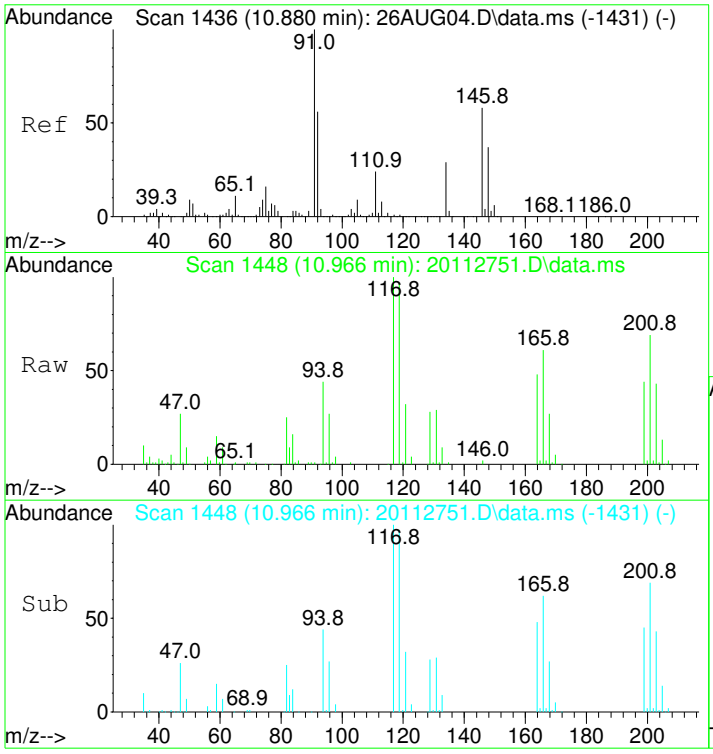


#110
n-Butylbenzene
Concen: 19.30 ug/L
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 91 Resp: 434820

Ion	Ratio	Lower	Upper
91	100		
92	56.7	39.3	79.3
134	25.3	7.5	47.5

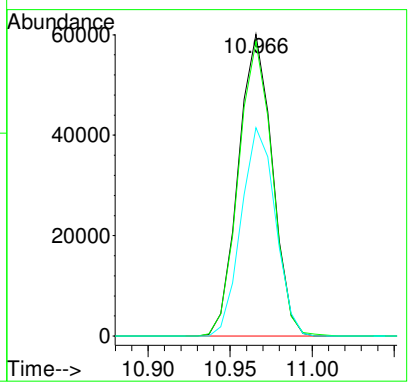


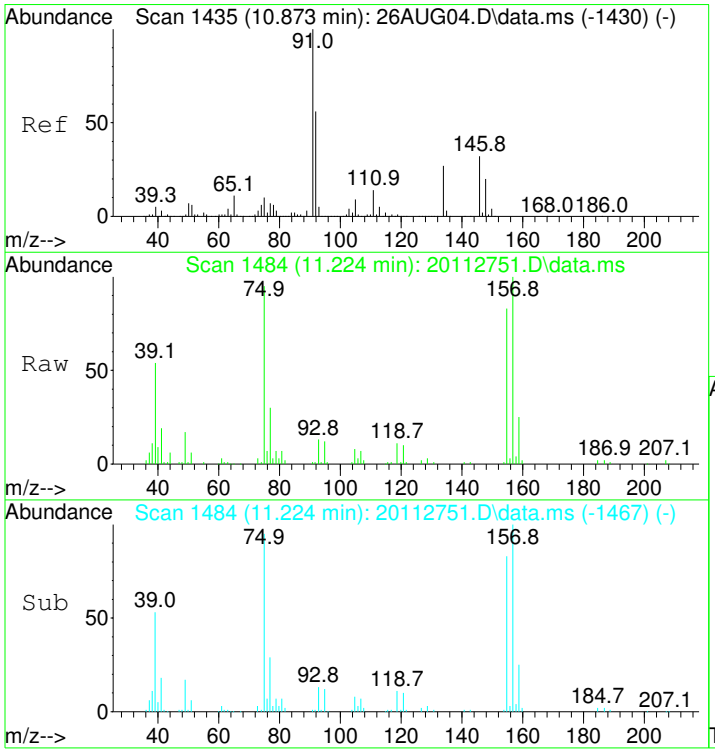


#111
Hexachloroethane
Concen: 18.33 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:117 Resp: 86391

Ion	Ratio	Lower	Upper
117	100		
119	97.8	75.9	115.9
201	69.9	49.2	89.2

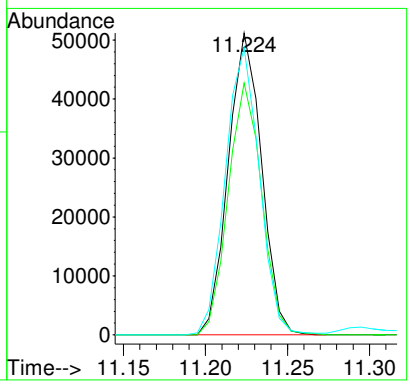


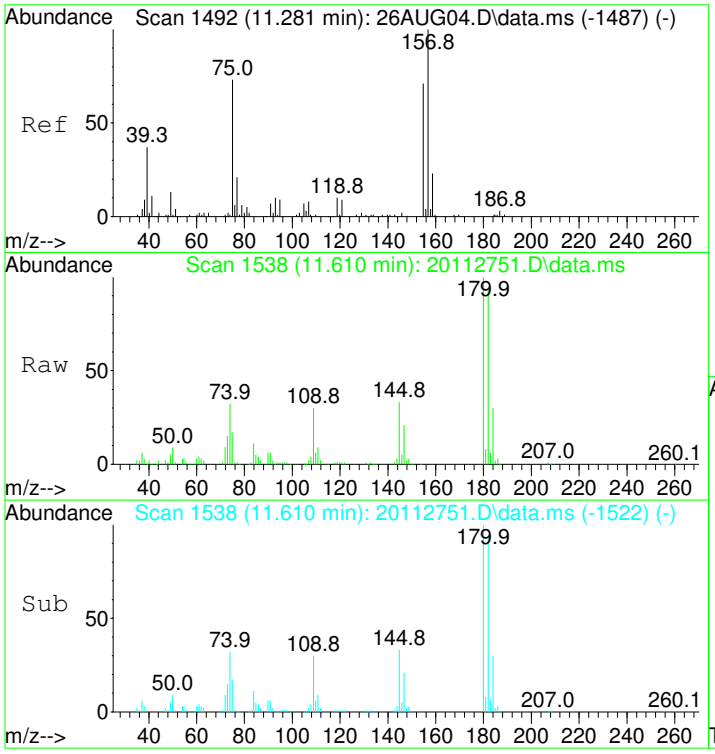


#112
1,2-Dibromo-3-chloropropane
Concen: 20.76 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:157 Resp: 72474

Ion	Ratio	Lower	Upper
157	100		
155	83.7	54.4	94.4
75	97.2	72.1	112.1

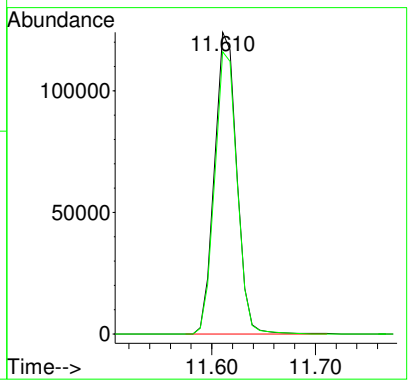


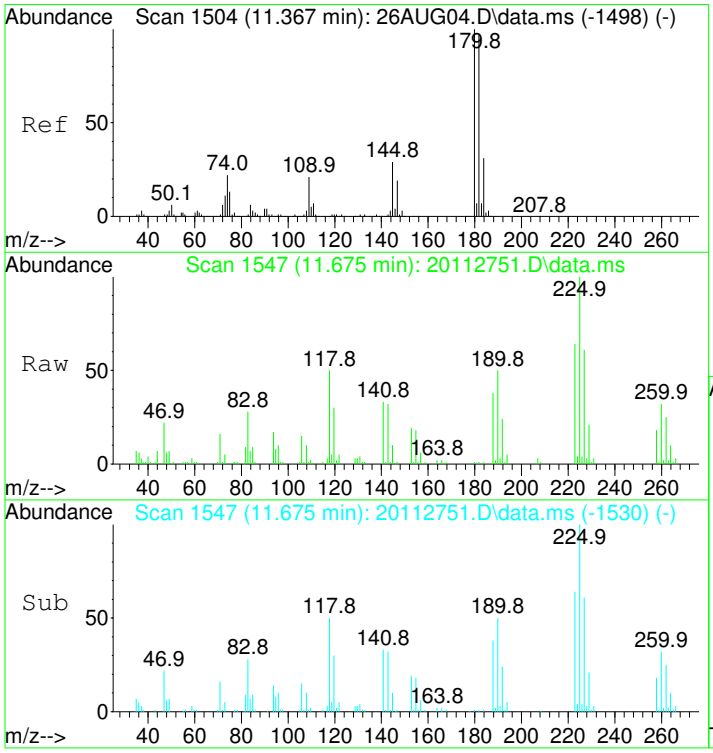


#114
1,2,4-Trichlorobenzene
Concen: 19.62 ug/L
RT: 11.610 min Scan# 1538
Delta R.T. -0.008 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:180 Resp: 185858

Ion	Ratio	Lower	Upper
180	100		
182	94.3	76.7	116.7

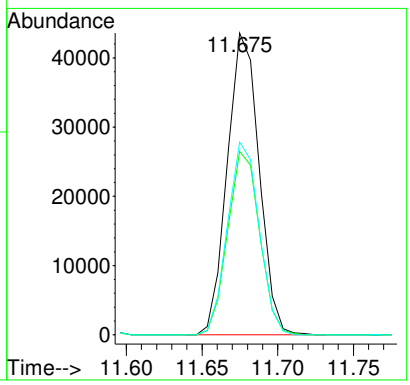


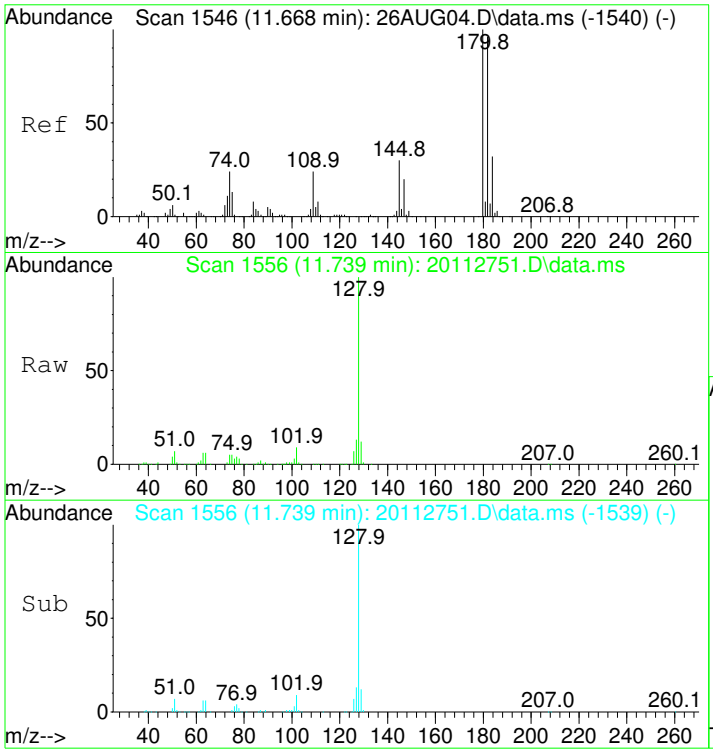


#115
Hexachlorobutadiene
Concen: 19.88 ug/L
RT: 11.675 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:225 Resp: 63698

Ion	Ratio	Lower	Upper
225	100		
227	60.9	50.9	76.3
223	63.3	50.5	75.7

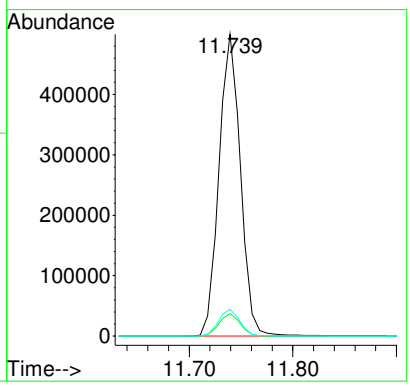


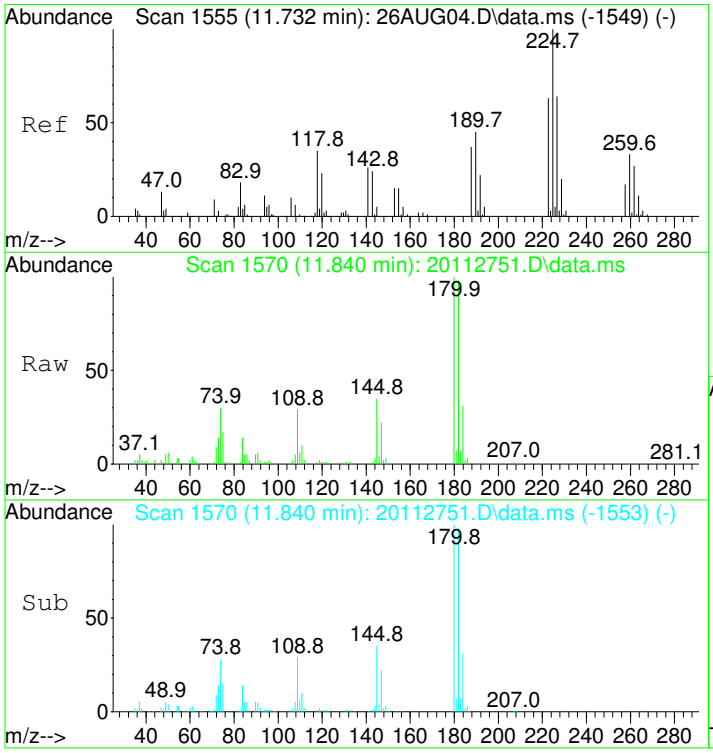


#116
Naphthalene
Concen: 19.82 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:128 Resp: 723202

Ion	Ratio	Lower	Upper
128	100		
126	7.5	0.0	28.2
102	8.9	0.0	30.0

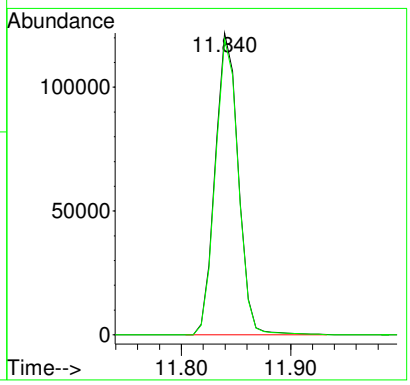


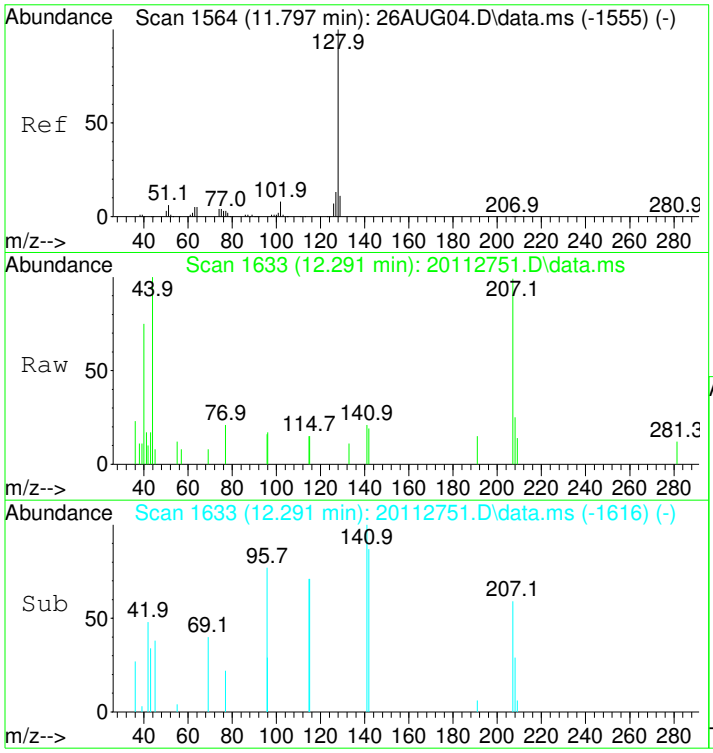


#117
1,2,3-Trichlorobenzene
Concen: 19.80 ug/L
RT: 11.840 min Scan# 1570
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:180 Resp: 179259

Ion	Ratio	Lower	Upper
180	100		
182	97.4	78.4	118.4

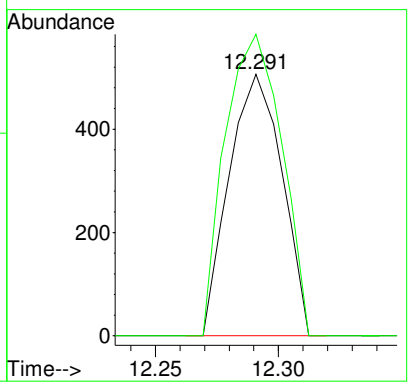


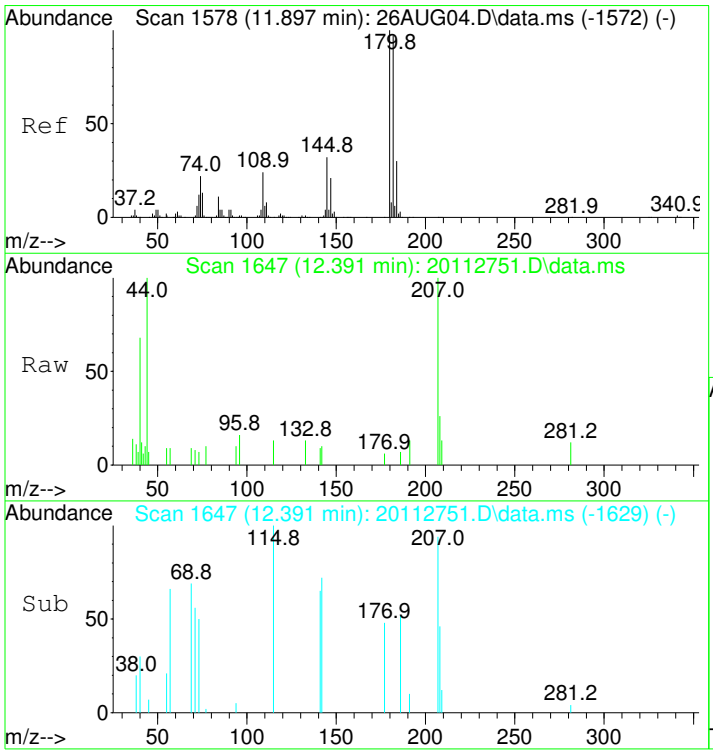


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:142 Resp: 758

Ion	Ratio	Lower	Upper
142	100		
141	123.5	65.0	105.0#

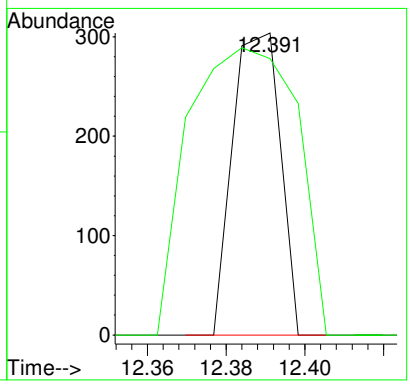


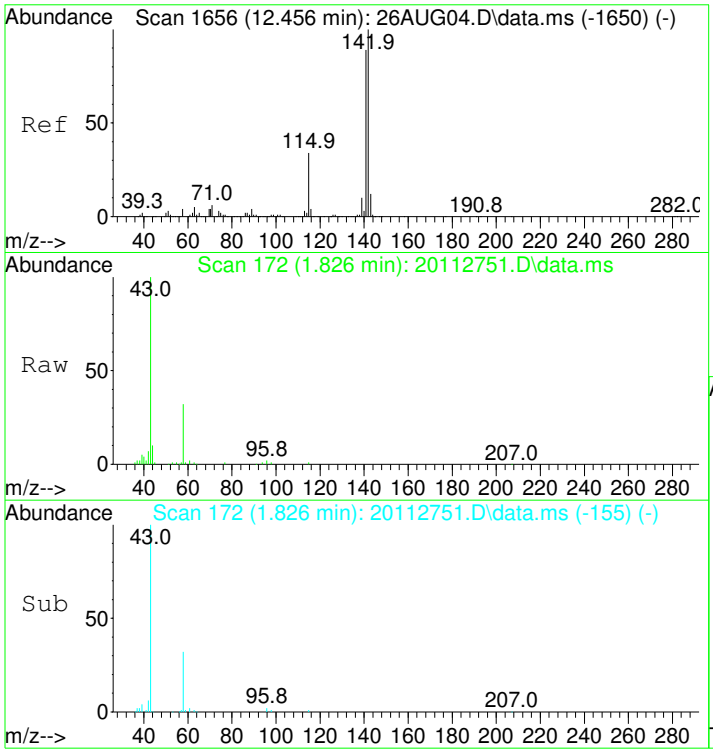


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.391 min Scan# 1647
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion:142 Resp: 256

Ion	Ratio	Lower	Upper
142	100		
141	216.0	69.8	104.8#

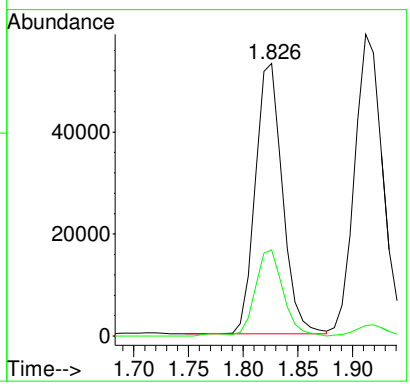


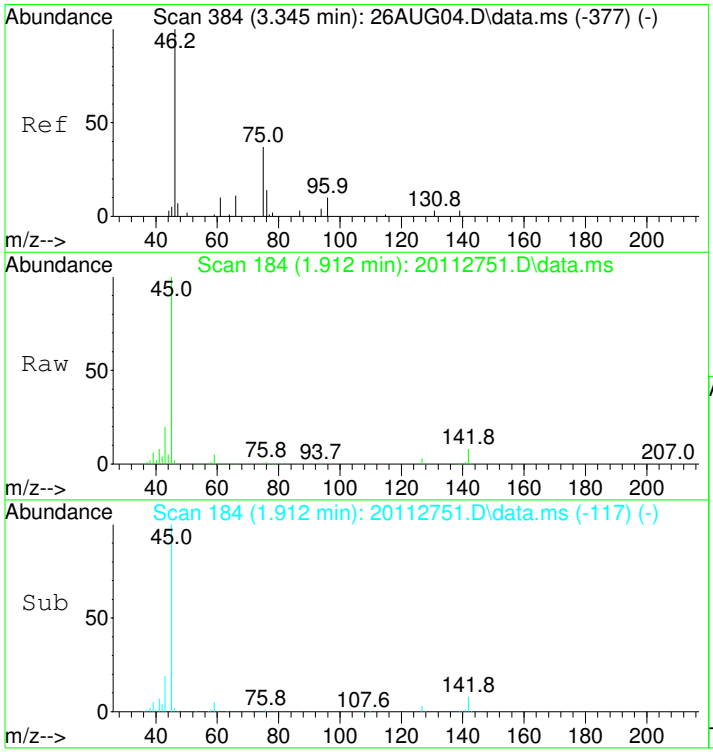


#121
2-Propanone
Concen: 22.76 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 91929

Ion	Ratio	Lower	Upper
43	100		
58	32.3	28.2	42.2

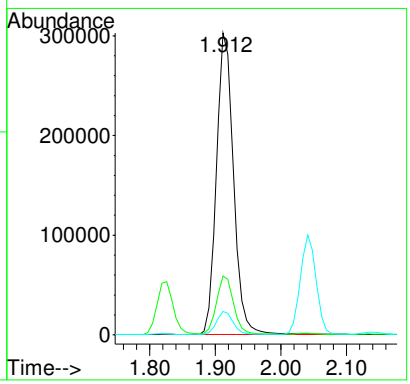


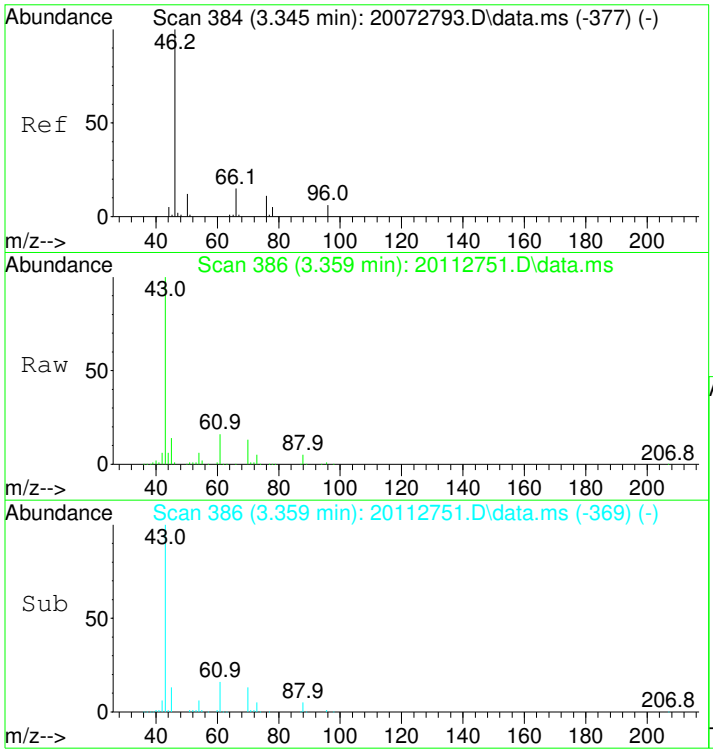


#122
Isopropyl Alcohol
Concen: 400.38 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.021 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 45 Resp: 548302

Ion	Ratio	Lower	Upper
45	100		
43	19.4	14.6	21.8
41	7.5	5.7	8.5

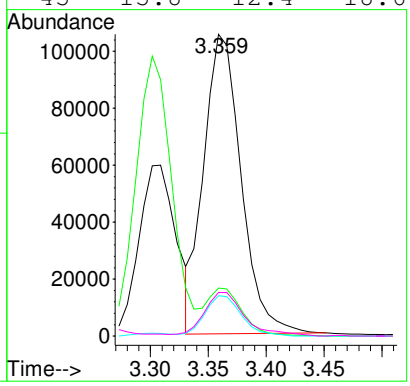


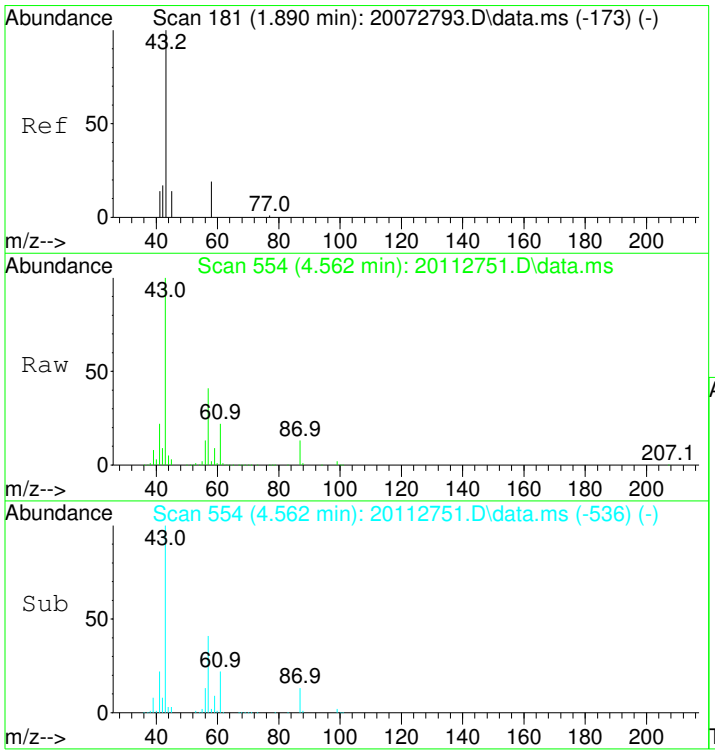


#123
Acetic Ether
Concen: 19.10 ug/L
RT: 3.359 min Scan# 386
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 237164

Ion	Ratio	Lower	Upper
43	100		
61	14.1	11.9	17.9
70	13.3	9.7	14.5
45	15.8	12.4	18.6

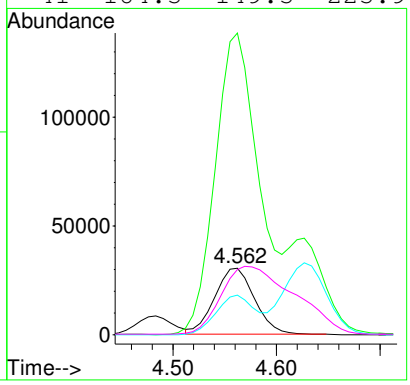


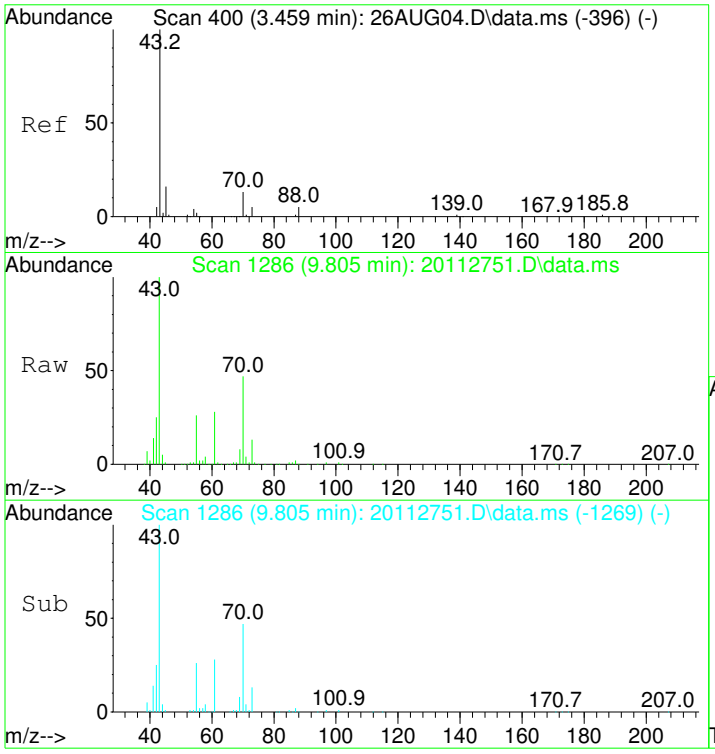


#124
Isopropyl Acetate
Concen: 18.18 ug/L
RT: 4.562 min Scan# 554
Delta R.T. 0.007 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 61 Resp: 81333

Ion	Ratio	Lower	Upper
61	100		
43	504.3	392.6	589.0
87	62.6	46.2	69.2
41	184.3	149.3	223.9

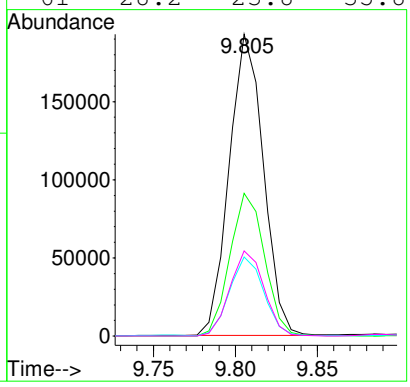




#125
Amyl Acetate
Concen: 16.85 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. 0.000 min
Lab File: 20112751.D
Acq: 28 Nov 2020 1:46 am

Tgt Ion: 43 Resp: 280589

Ion	Ratio	Lower	Upper
43	100		
70	47.9	39.8	59.6
55	26.1	21.8	32.8
61	28.2	23.8	35.8



1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112728.D
Acq On : 27 Nov 2020 7:34 pm
Operator : js
Sample : VBLKW2-201127
Misc : IS 200-21532
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Nov 28 12:56:46 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.989	168	238484	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.121	114	396415	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.196	117	370112	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	193947	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	121585	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	131994	20.84	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 104.20%				
50) 1,2-Dichloroethane-d4	4.362	65	160954	20.96	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 104.80%				
69) Toluene-d8	7.836	98	468272	20.44	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 102.20%				
91) Bromofluorobenzene	9.992	95	191021	20.53	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 102.65%				
Target Compounds							Qvalue
3) Dichlorofluoromethane	1.389	67	306	Below Cal		#	48
6) Vinyl chloride	1.110	62	1287	Below Cal			69
7) Bromomethane	1.282	96	2412	Below Cal			80
10) Ethanol	1.575	45	1977	Below Cal			75
12) Acrolein	1.726	56	367	Below Cal		#	1
13) 1,1-Dichloroethene	1.790	61	210	Below Cal		#	25
16) Acetone	1.826	43	9306	1.80	ug/L		88
17) Chloroprene	2.793	53	306	Below Cal		#	28
18) Carbon disulfide	1.941	76	4648	Below Cal			30
19) 2-Propanol	1.912	45	13230	Below Cal			94
20) Allyl chloride	2.041	41	912	Below Cal		#	71
21) Methyl acetate	2.041	43	636	Below Cal		#	48
22) Acetonitrile	2.041	41	912	Below Cal		#	42
23) Methylene chloride	2.141	49	1493	Below Cal			89
24) trans-1,2-Dichloroethene	2.349	61	567	Below Cal		#	60
25) t-Butanol	2.213	59	3366	Below Cal			78
28) Hexane	2.578	57	851	Below Cal		#	1
32) Methylcyclopentane	3.165	56	1339	Below Cal		#	64
34) 2,2-Dichloropropane	3.244	77	1187	Below Cal			85
36) 2-Butanone	3.309	43	1516	Below Cal		#	43
37) Ethyl Acetate	3.309	43	1516	Below Cal		#	69
38) Methyl acrylate	3.359	55	786	Below Cal		#	64
41) Tetrahydrofuran	3.588	42	2052	Below Cal		#	79
42) Methacrylonitrile	3.595	41	1417	Below Cal		#	55
44) Cyclohexane	3.982	56	5842	Below Cal		#	34
49) 1,1-Dichloropropene	4.111	75	351	Below Cal		#	61
51) 1,2-Dichloroethane	4.498	62	175	Below Cal		#	48
52) Benzene	4.369	78	1121	Below Cal		#	24
54) Isobutyl Alcohol	4.562	43	1420	Below Cal		#	44
55) Heptane	4.913	43	1507	Below Cal		#	67
57) Methylcyclohexane	5.873	83	432	Below Cal		#	1
62) Methyl methacrylate	6.267	41	89	Below Cal		#	1
64) 2-Chloroethyl vinyl ether	7.341	43	775	Below Cal		#	1
65) 2-Nitropropane	7.191	43	358	Below Cal		#	1
68) 4-Methyl-2-pentanone	7.778	43	453	Below Cal		#	39
70) Toluene	7.914	91	1951	Below Cal		#	64
71) trans-1,3-Dichloropropene	8.258	75	199	Below Cal		#	1
73) Ethyl methacrylate	8.366	69	88	Below Cal		#	1
75) Tetrachloroethene	8.459	166	593	Below Cal		#	68
76) 1,3-Dichloropropane	8.580	76	180	Below Cal		#	41

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112728.D
Acq On : 27 Nov 2020 7:34 pm
Operator : js
Sample : VBLKW2-201127
Misc : IS 200-21532
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Nov 28 12:56:46 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

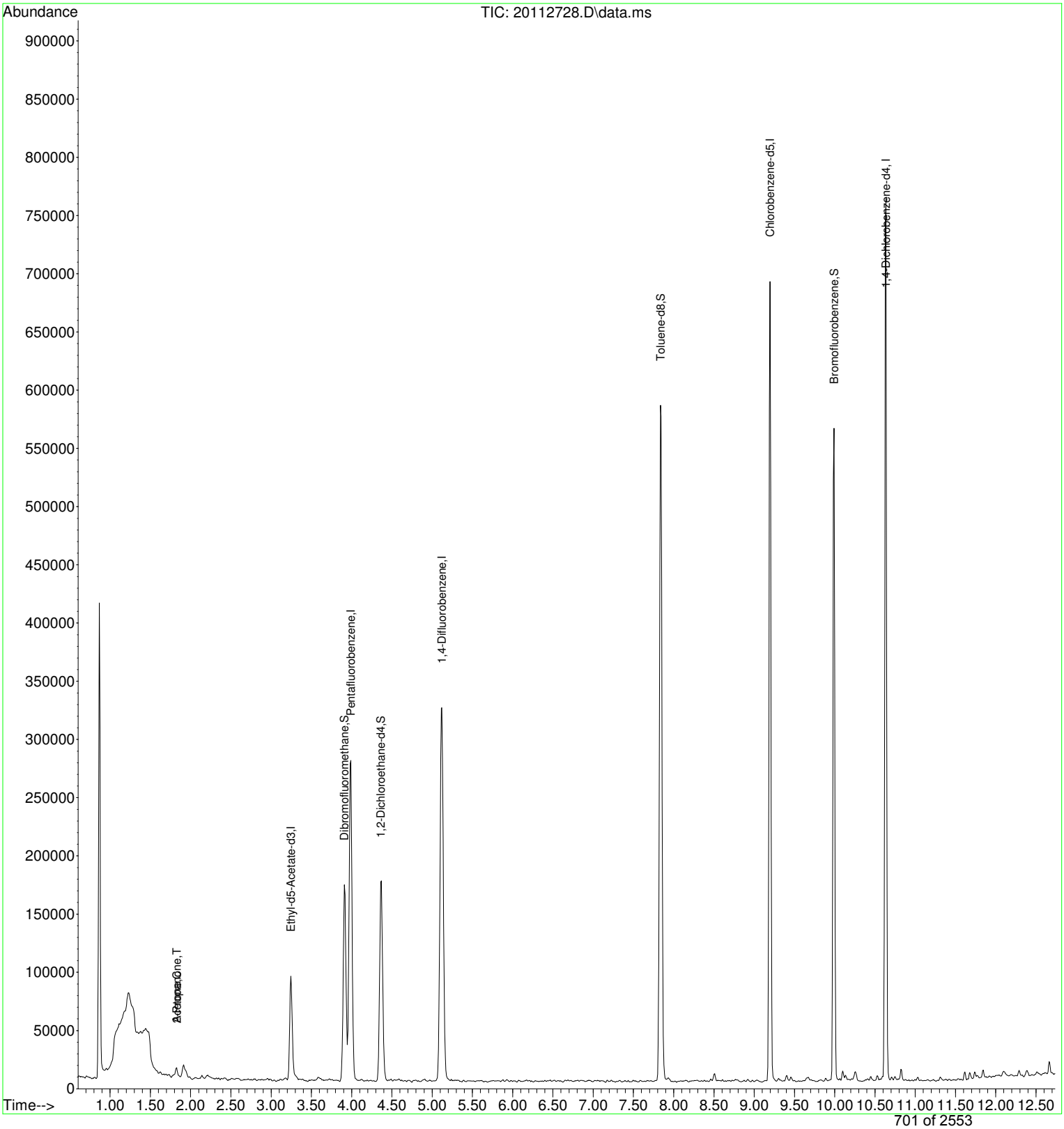
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
77) 2-Hexanone	8.674	43	1241	Below Cal	#	28
79) Butyl acetate	8.803	43	419	Below Cal	#	42
81) Chlorobenzene	9.218	112	720	Below Cal	#	1
83) Ethylbenzene	9.304	91	1854	Below Cal		97
84) m/p-Xylene	9.404	91	3022	Below Cal		79
86) Styrene	9.669	104	1289	Below Cal	#	67
87) o-Xylene	9.648	91	1188	Below Cal	#	50
88) Cyclohexanone	9.898	55	294	Below Cal	#	24
90) Isopropylbenzene	9.891	105	1923	Below Cal		68
92) Bromobenzene	10.063	77	953	Below Cal	#	61
95) trans-1,4-Dichloro-2-b...	10.113	53	320	Below Cal	#	10
96) n-Propylbenzene	10.135	91	3252	Below Cal		98
97) 2-Chlorotoluene	10.249	91	2674	Below Cal		67
98) 4-Chlorotoluene	10.249	91	2868	Below Cal		72
99) 1,3,5-Trimethylbenzene	10.242	105	1430	Below Cal		84
100) tert-Butylbenzene	10.407	91	734	Below Cal	#	28
101) 1,2,4-Trimethylbenzene	10.443	105	1884	Below Cal		74
102) sec-Butylbenzene	10.529	105	3094	Below Cal		89
104) 1,3-Dichlorobenzene	10.593	146	1761	Below Cal		87
105) p-Isopropyltoluene	10.615	119	2885	Below Cal	#	49
106) 1,4-Dichlorobenzene	10.593	146	1761	Below Cal		87
107) 1,2,3-Trimethylbenzene	10.658	105	1376	Below Cal	#	73
108) Benzyl chloride	10.249	91	2868	Below Cal		75
109) 1,2-Dichlorobenzene	10.830	146	1034	Below Cal	#	81
110) n-Butylbenzene	10.822	91	4572	Below Cal		82
113) 1,3,5-Trichlorobenzene	11.309	180	946	Below Cal	#	78
114) 1,2,4-Trichlorobenzene	11.617	180	2255	Below Cal		95
116) Naphthalene	11.739	128	4710	Below Cal		94
117) 1,2,3-Trichlorobenzene	11.847	180	1934	Below Cal		80
118) 2-Methylnaphthalene	12.291	142	2509	Below Cal		84
119) 1-Methylnaphthalene	12.384	142	1534	Below Cal	#	66
121) 2-Propanone	1.826	43	9306	1.86 ug/L	#	88
122) Isopropyl Alcohol	1.912	45	13230	Below Cal	#	94
123) Acetic Ether	3.309	43	1516	Below Cal	#	65
125) Amyl Acetate	9.798	43	736	Below Cal	#	38

(#) = qualifier out of range (m) = manual integration (+) = signals summed

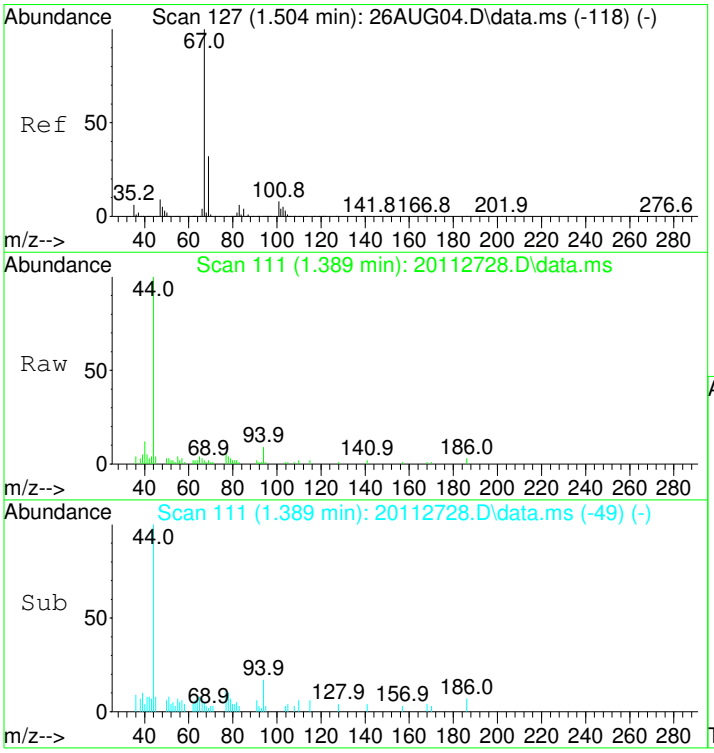
1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112728.D
Acq On : 27 Nov 2020 7:34 pm
Operator : js
Sample : VBLKW2-201127
Misc : IS 200-21532
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Nov 28 12:56:46 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration



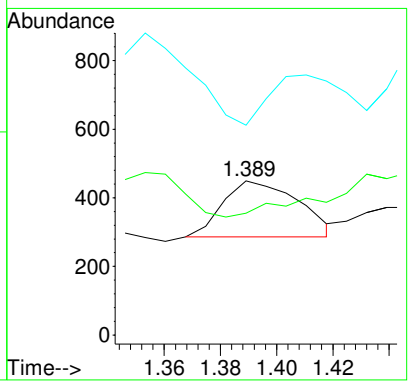
701 of 2553

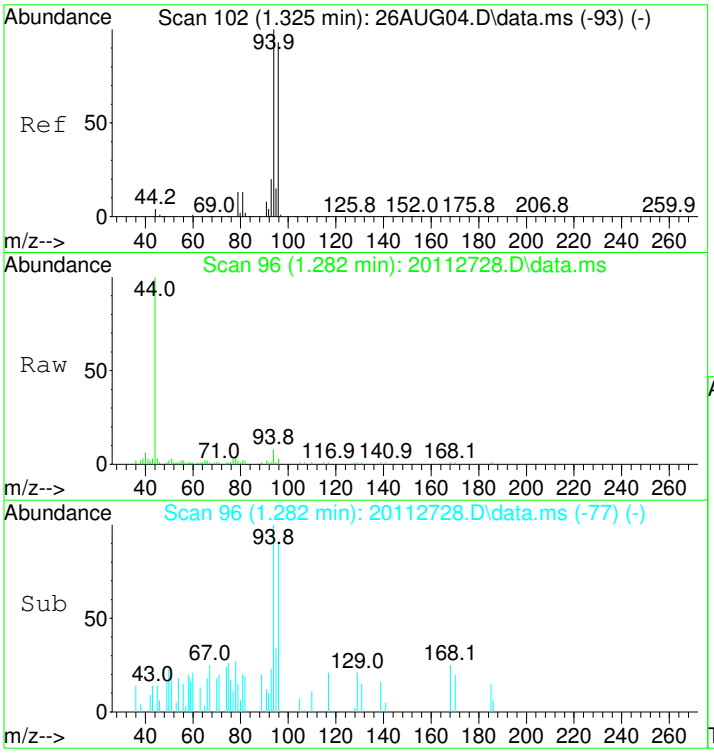


#3
Dichlorofluoromethane
Concen: Below Cal
RT: 1.389 min Scan# 111
Delta R.T. -0.057 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 67 Resp: 306

Ion	Ratio	Lower	Upper
67	100		
69	0.0	23.7	44.1#
66	0.0	8.1	15.0#

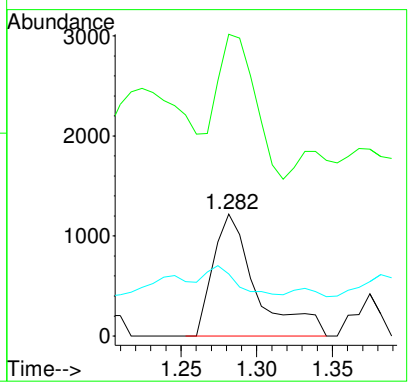


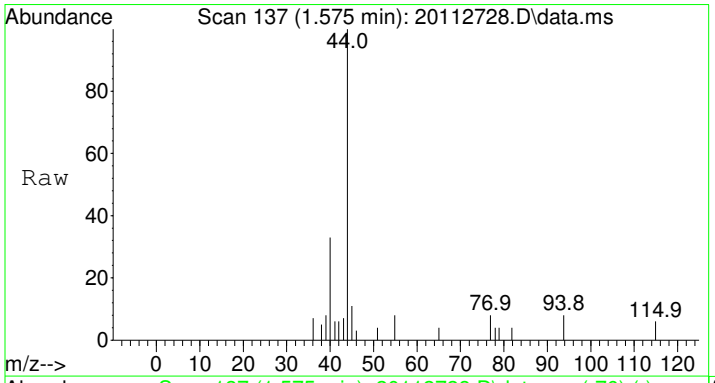


#7
Bromomethane
Concen: Below Cal
RT: 1.282 min Scan# 96
Delta R.T. 0.015 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 96 Resp: 2412

Ion	Ratio	Lower	Upper
96	100		
94	107.8	103.4	163.4
79	23.8	0.0	49.6

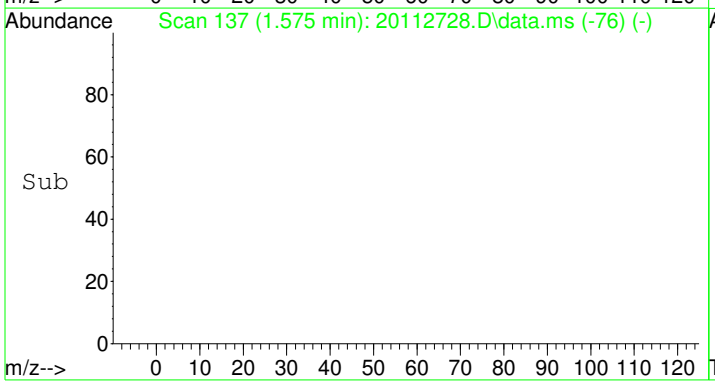


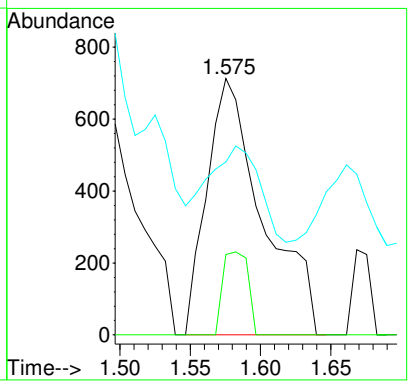


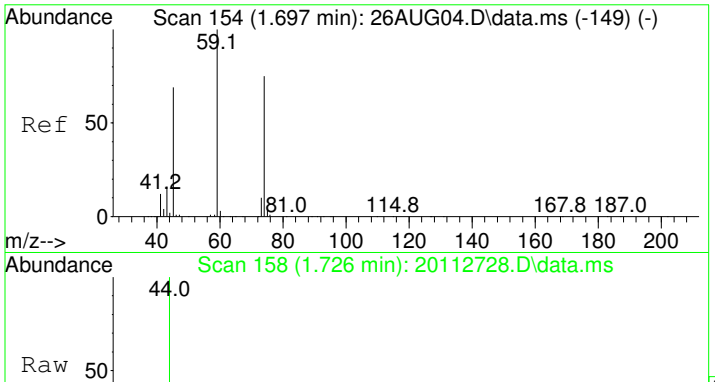
#10
Ethanol
Concen: Below Cal
RT: 1.575 min Scan# 137
Delta R.T. -0.065 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 45 Resp: 1977

Ion	Ratio	Lower	Upper
45	100		
46	14.6	0.0	57.3
43	34.4	0.0	52.4



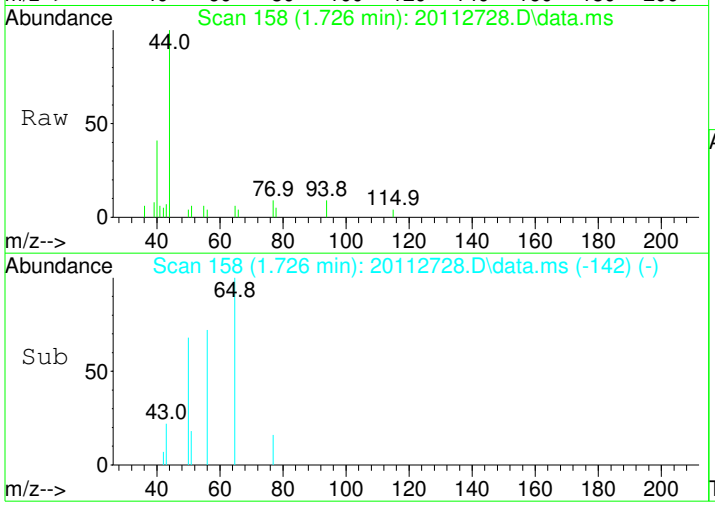


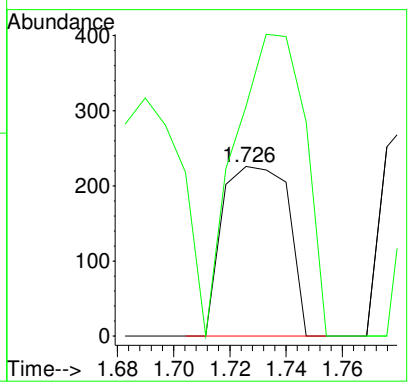


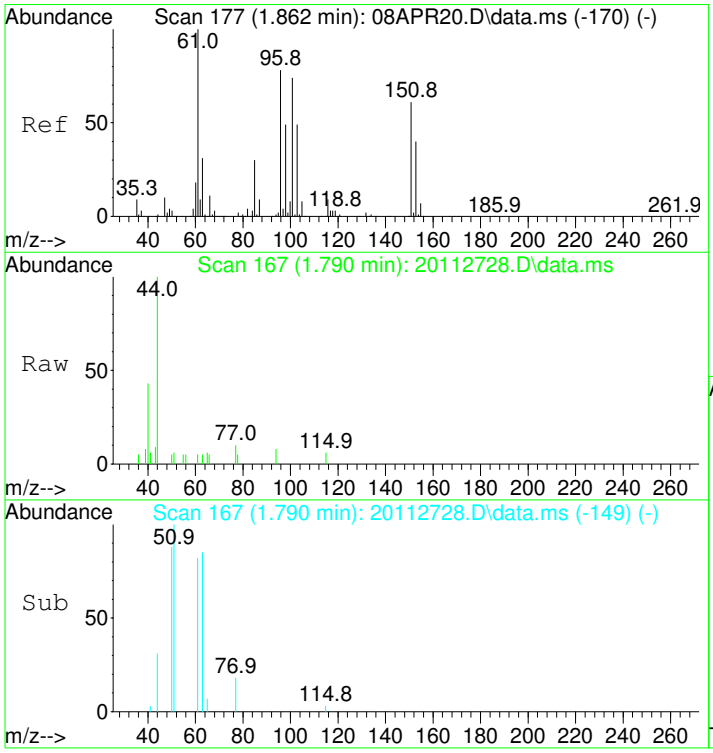
#12
Acrolein
Concen: Below Cal
RT: 1.726 min Scan# 158
Delta R.T. -0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 56 Resp: 367

Ion	Ratio	Lower	Upper
56	100		
55	189.1	17.3	77.3#



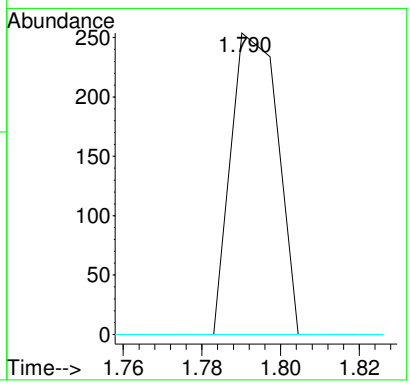


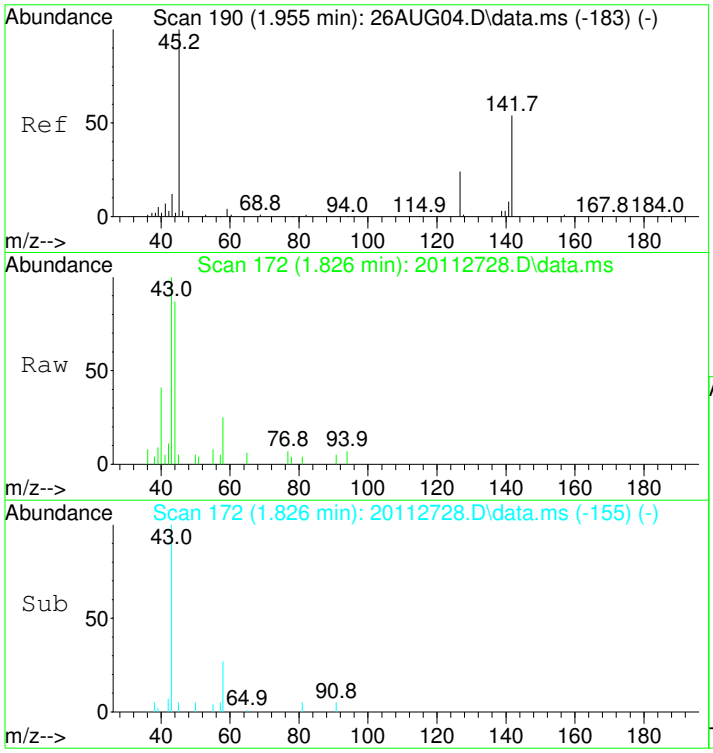


#13
1,1-Dichloroethene
Concen: Below Cal
RT: 1.790 min Scan# 167
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 61 Resp: 210

Ion	Ratio	Lower	Upper
61	100		
96	0.0	32.6	92.6#
98	0.0	10.4	70.4#

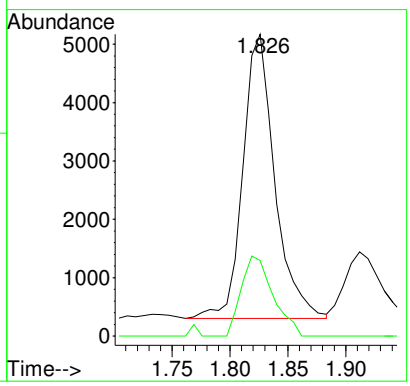


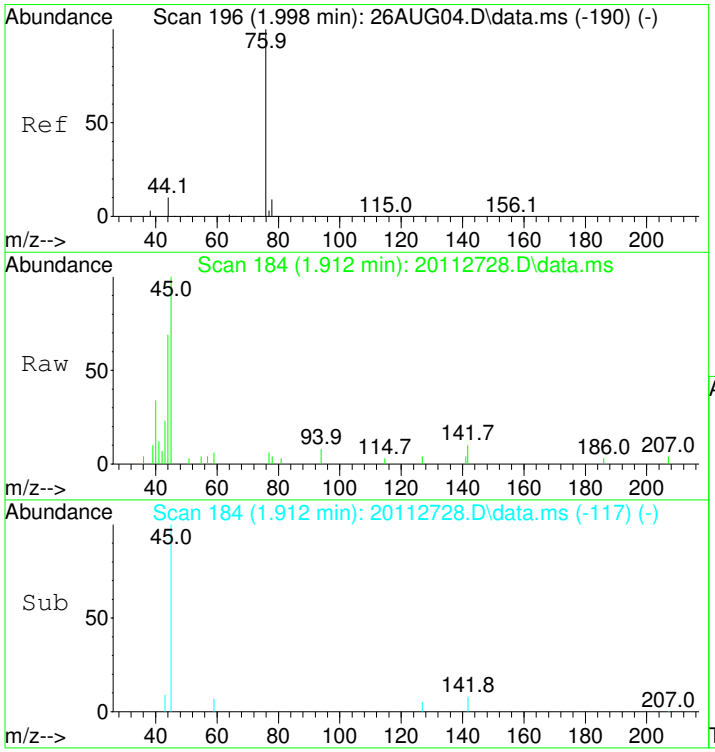


#16
Acetone
Concen: 1.80 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 9306

Ion	Ratio	Lower	Upper
43	100		
58	28.0	5.2	65.2

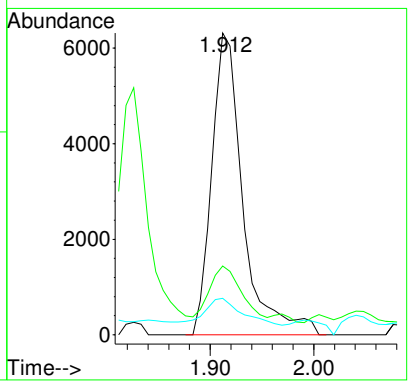


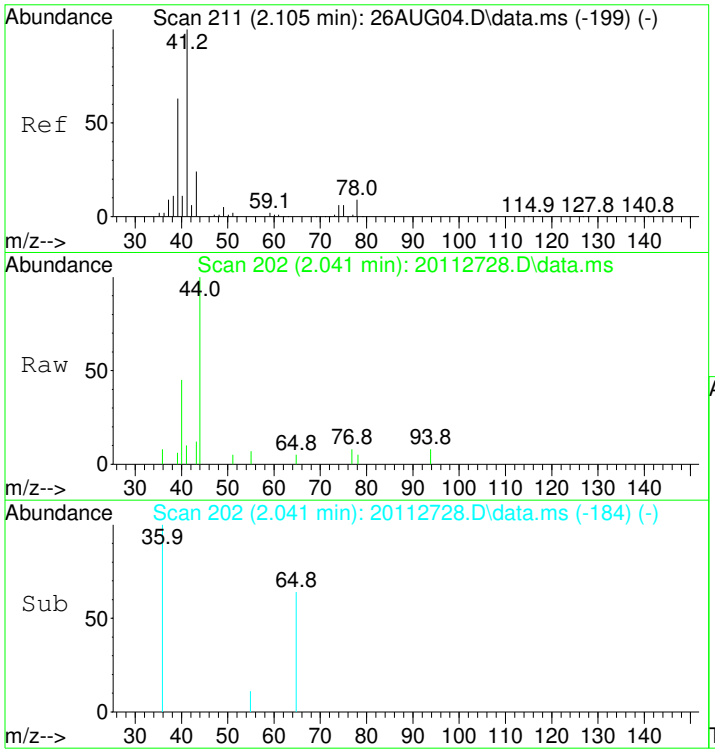


#19
2-Propanol
Concen: Below Cal
RT: 1.912 min Scan# 184
Delta R.T. -0.021 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 45 Resp: 13230

Ion	Ratio	Lower	Upper
45	100		
43	16.5	0.0	48.2
41	10.4	0.0	37.1

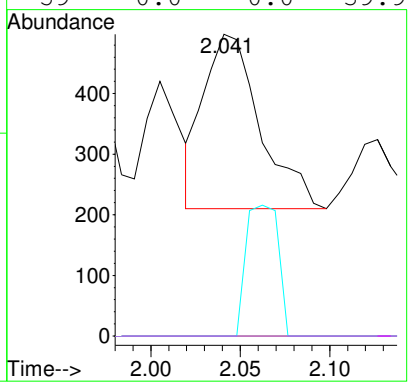


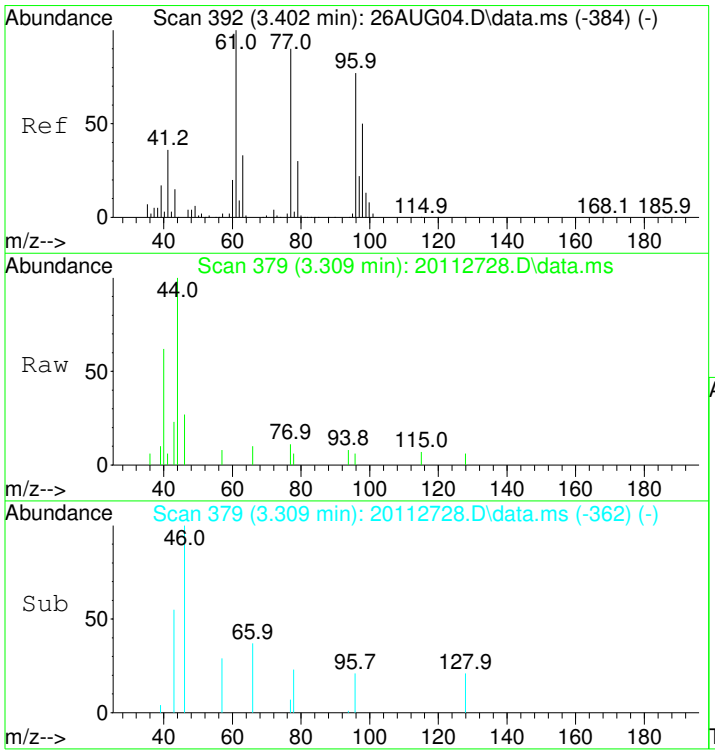


#21
Methyl acetate
Concen: Below Cal
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 636

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.0	56.2
42	42.6	0.0	44.2
59	0.0	0.0	39.9

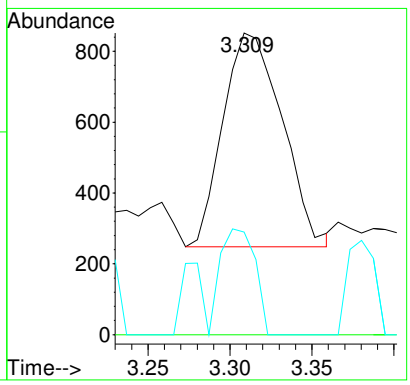


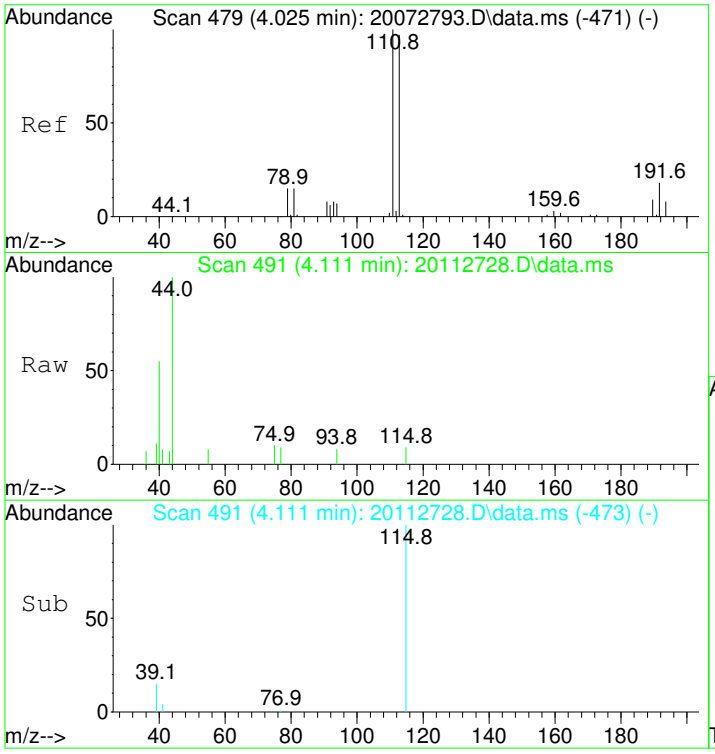


#36
2-Butanone
Concen: Below Cal
RT: 3.309 min Scan# 379
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 1516

Ion	Ratio	Lower	Upper
43	100		
72	0.0	11.0	51.0#
57	29.2	0.0	28.7#

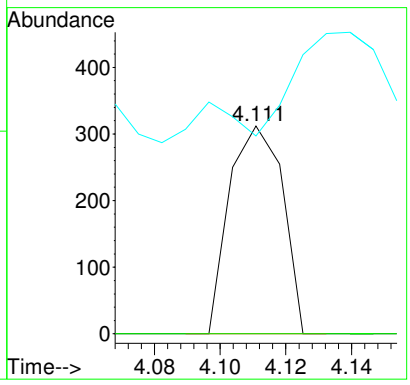


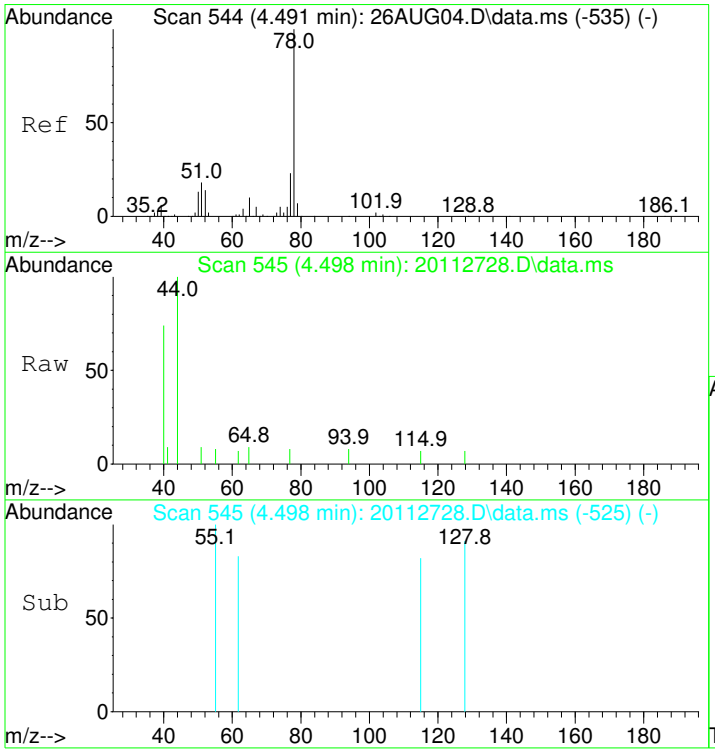


#49
1,1-Dichloropropene
Concen: Below Cal
RT: 4.111 min Scan# 491
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 75 Resp: 351

Ion	Ratio	Lower	Upper
75	100		
110	0.0	16.0	56.0#
77	37.9	11.0	51.0

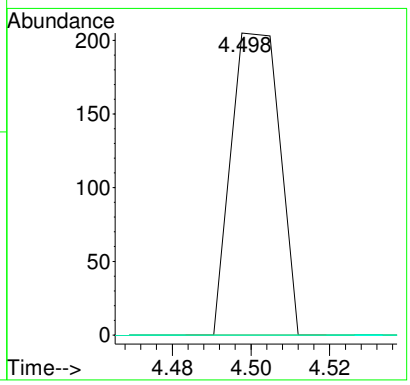


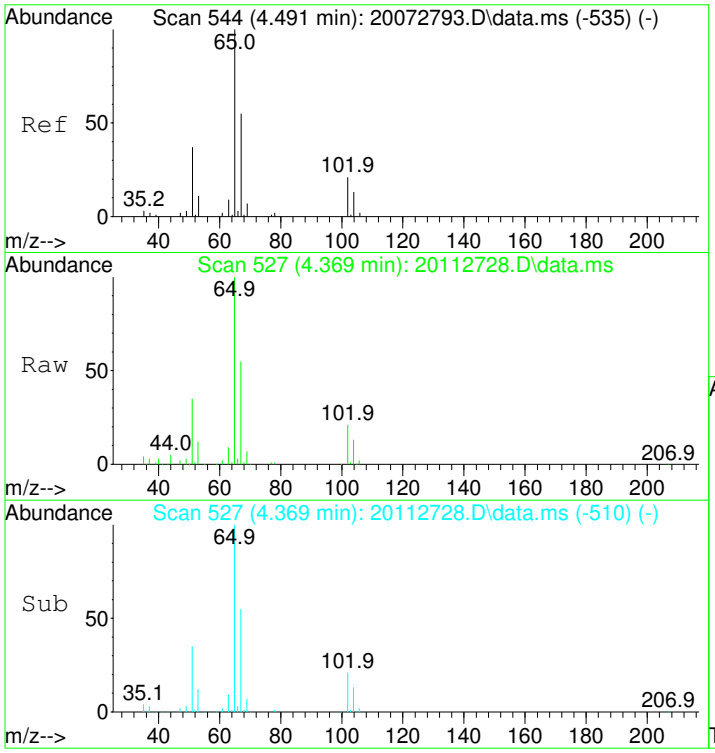


#51
1,2-Dichloroethane
Concen: Below Cal
RT: 4.498 min Scan# 545
Delta R.T. 0.022 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 62 Resp: 175

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.0
64	0.0	13.9	53.9#

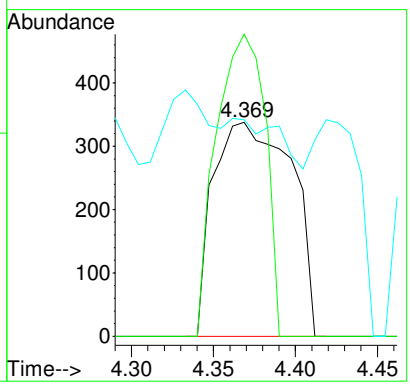


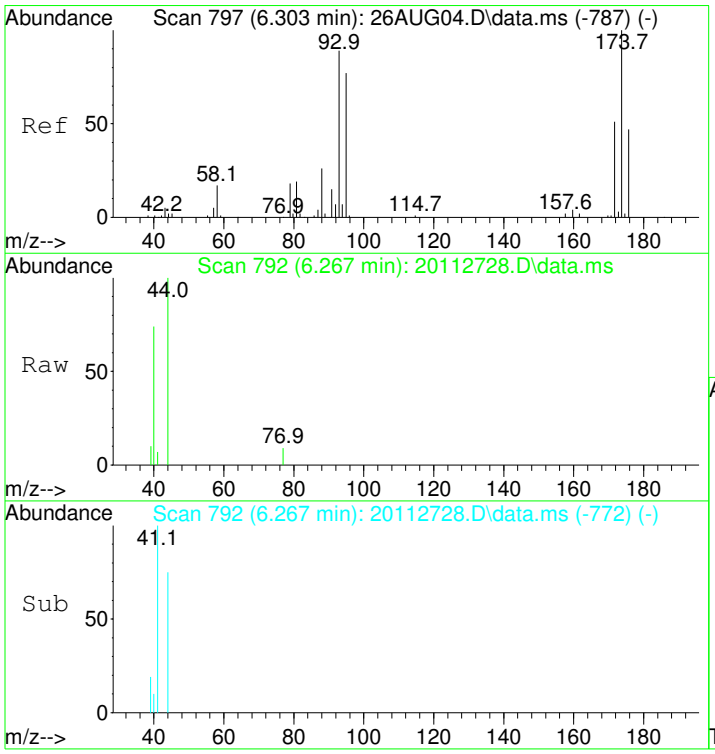


#52
Benzene
Concen: Below Cal
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 78 Resp: 1121

Ion	Ratio	Lower	Upper
78	100		
52	88.2	0.0	35.8#
77	17.8	3.7	43.7

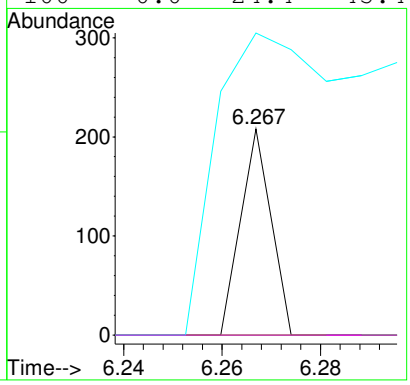


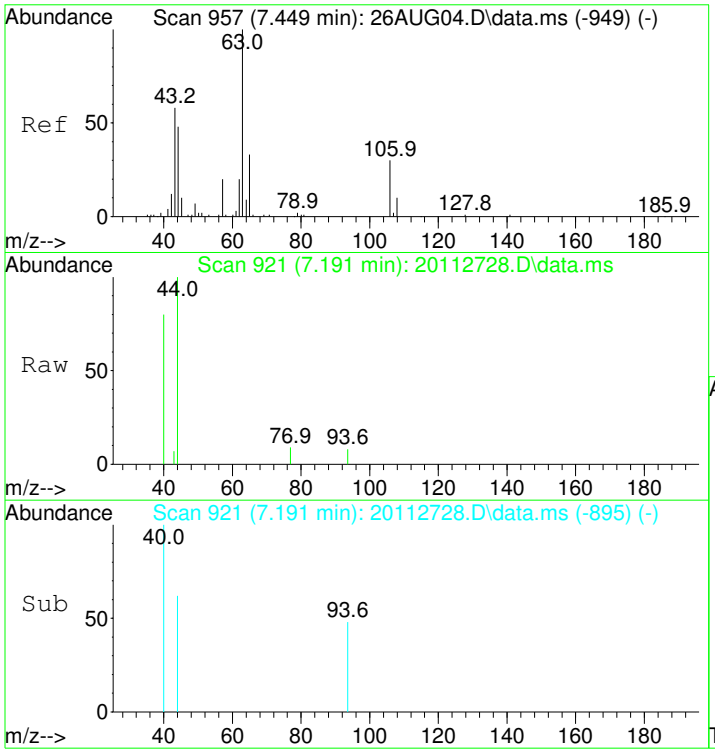


#62
Methyl methacrylate
Concen: Below Cal
RT: 6.267 min Scan# 792
Delta R.T. 0.022 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 41 Resp: 89

Ion	Ratio	Lower	Upper
41	100		
69	0.0	72.2	108.4#
39	1019.1	41.1	61.7#
100	0.0	24.4	45.4#

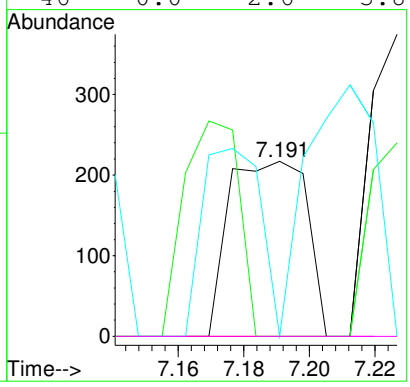


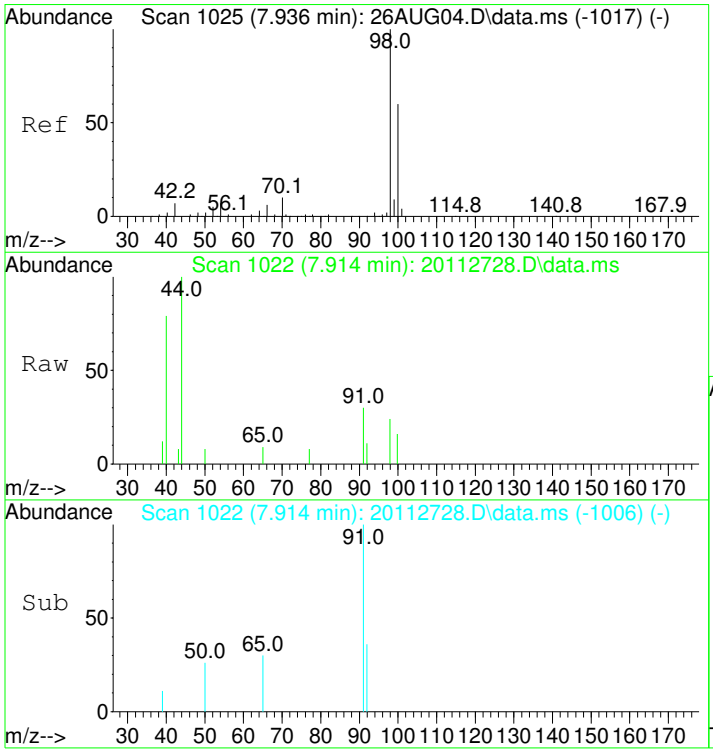


#65
2-Nitropropane
Concen: Below Cal
RT: 7.191 min Scan# 921
Delta R.T. 0.065 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 358

Ion	Ratio	Lower	Upper
43	100		
41	0.0	67.9	101.9#
39	128.2	21.8	32.8#
46	0.0	2.6	3.8#

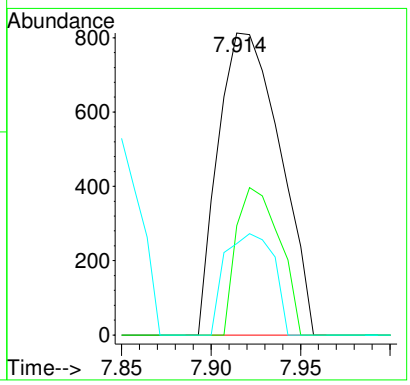


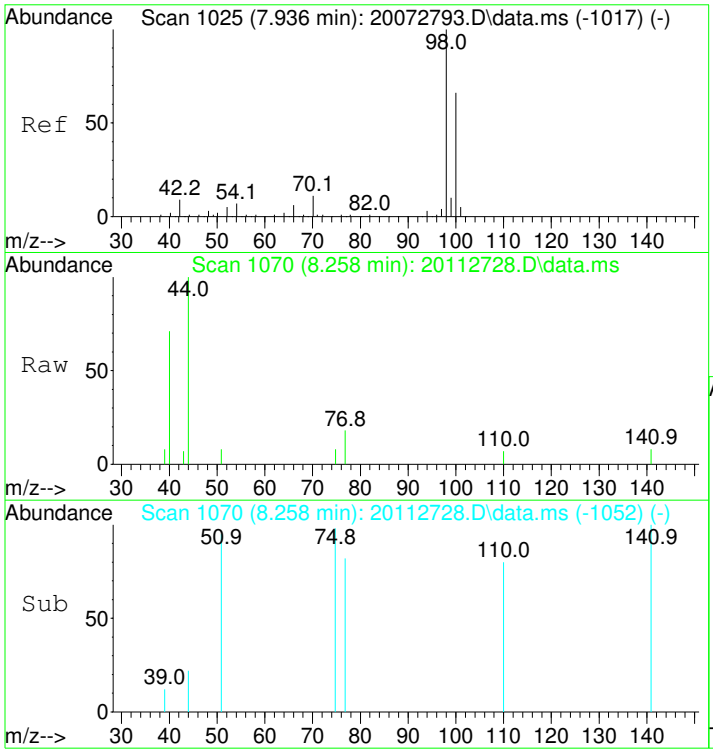


#70
Toluene
Concen: Below Cal
RT: 7.914 min Scan# 1022
Delta R.T. -0.008 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 1951

Ion	Ratio	Lower	Upper
91	100		
92	34.2	40.7	80.7#
65	26.6	0.0	31.5

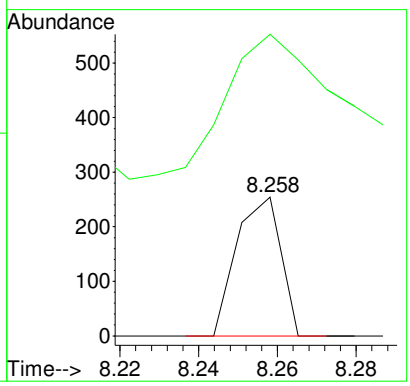


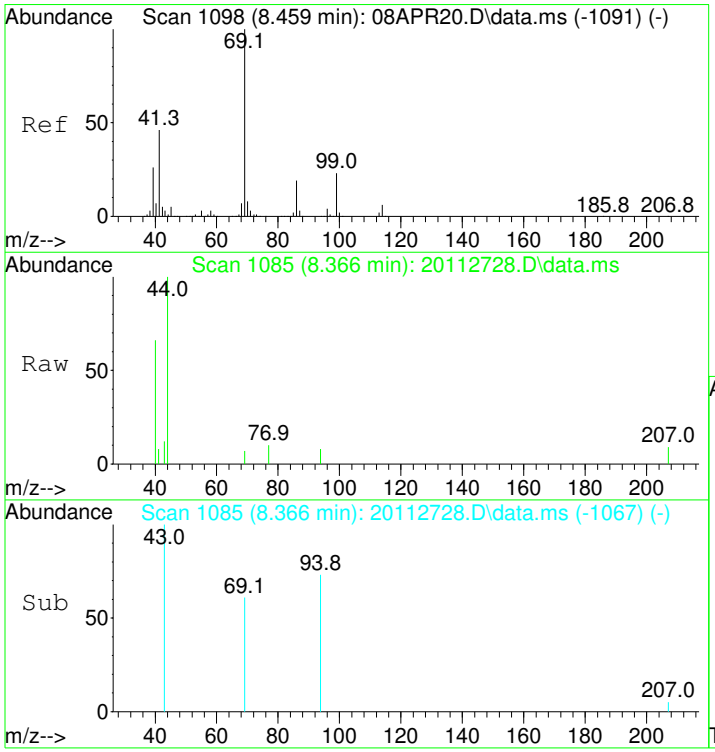


#71
trans-1,3-Dichloropropene
Concen: Below Cal
RT: 8.258 min Scan# 1070
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 75 Resp: 199

Ion	Ratio	Lower	Upper
75	100		
77	459.3	15.0	55.0#

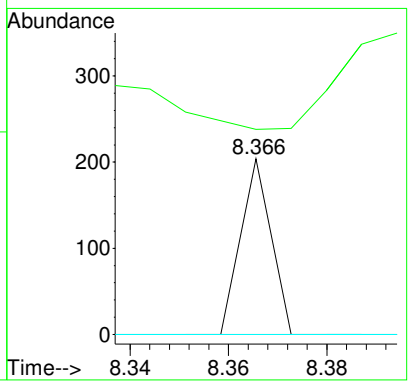


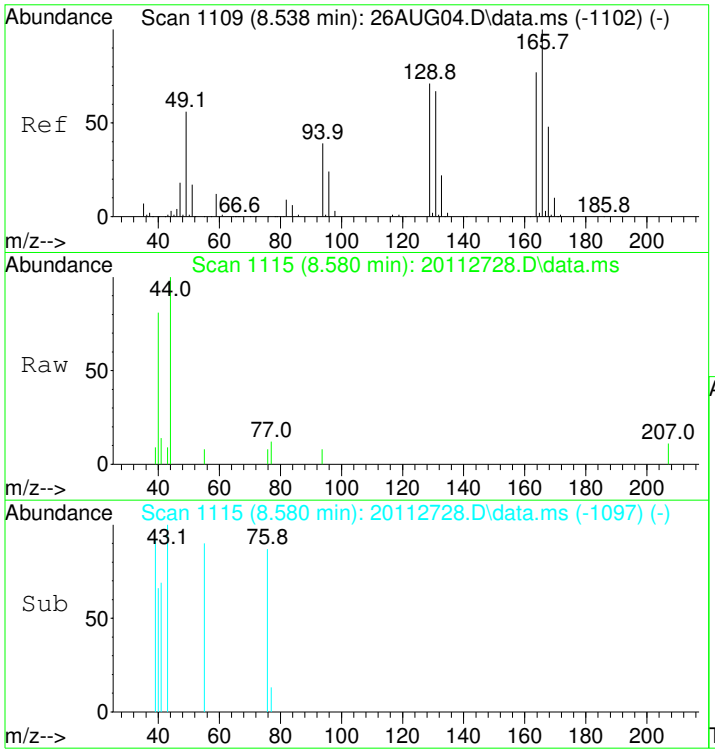


#73
Ethyl methacrylate
Concen: Below Cal
RT: 8.366 min Scan# 1085
Delta R.T. 0.008 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 69 Resp: 88

Ion	Ratio	Lower	Upper
69	100		
41	1628.4	39.9	79.9#
99	0.0	0.0	39.7

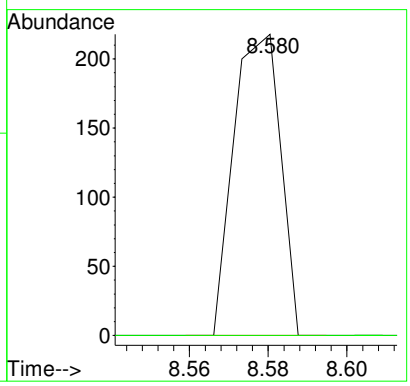


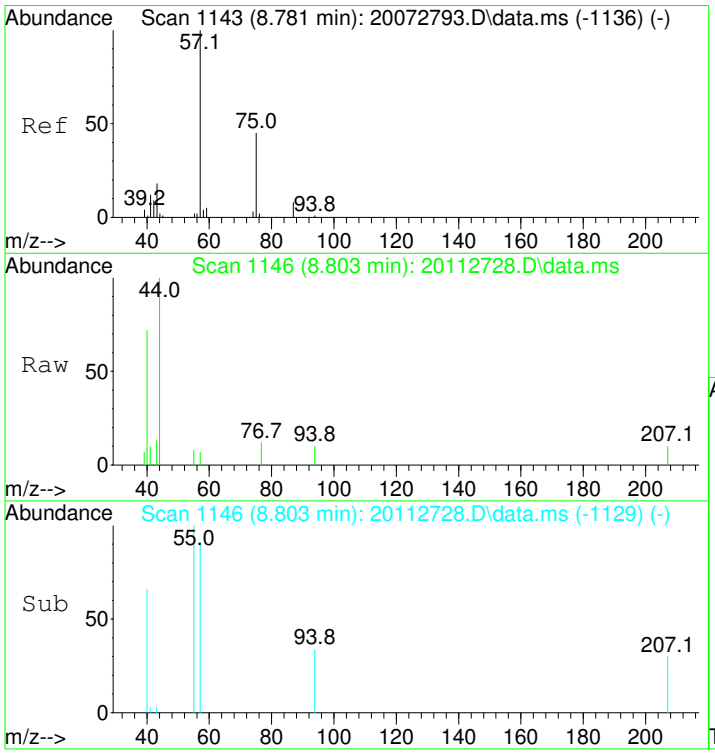


#76
1,3-Dichloropropane
Concen: Below Cal
RT: 8.580 min Scan# 1115
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 76 Resp: 180

Ion	Ratio	Lower	Upper
76	100		
78	0.0	13.2	53.2#

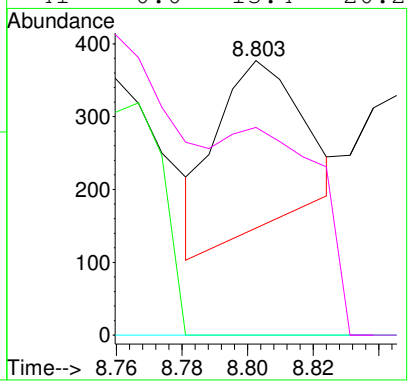


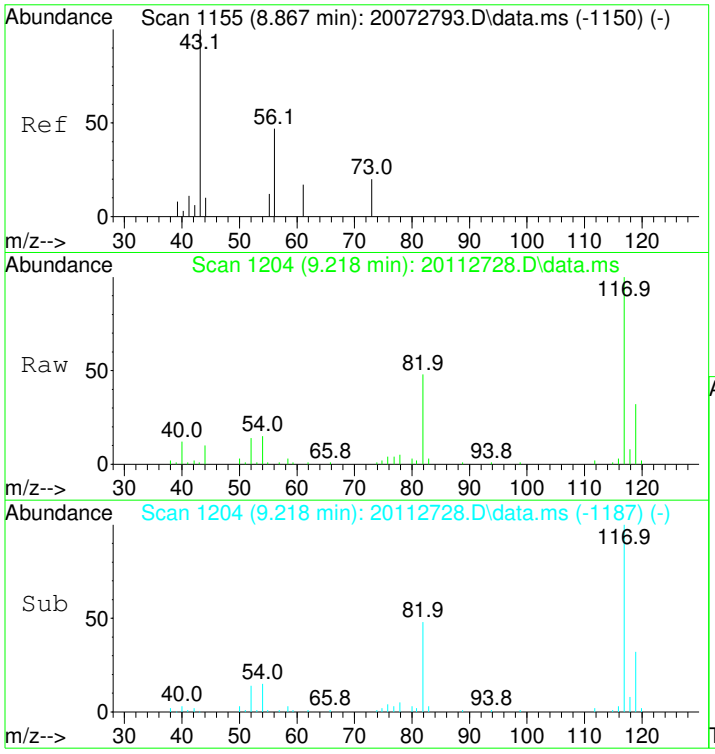


#79
Butyl acetate
Concen: Below Cal
RT: 8.803 min Scan# 1146
Delta R.T. -0.001 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 419

Ion	Ratio	Lower	Upper
43	100		
56	0.0	38.0	57.0#
73	0.0	15.0	22.4#
41	0.0	13.4	20.2#

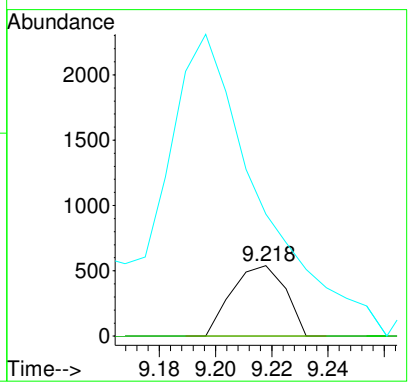


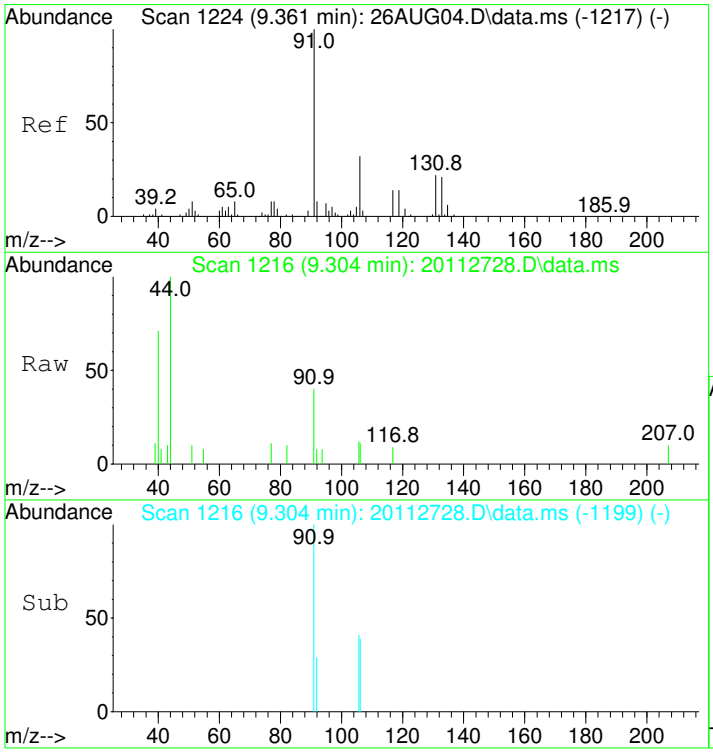


#81
Chlorobenzene
Concen: Below Cal
RT: 9.218 min Scan# 1204
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:112 Resp: 720

Ion	Ratio	Lower	Upper
112	100		
114	0.0	13.6	53.6#
77	955.3	41.7	81.7#

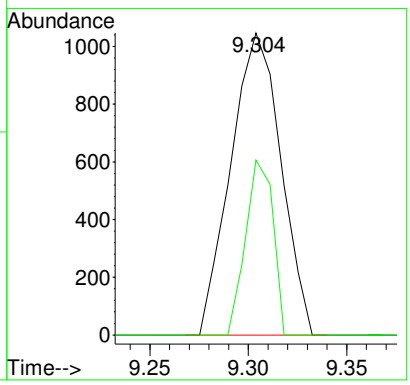


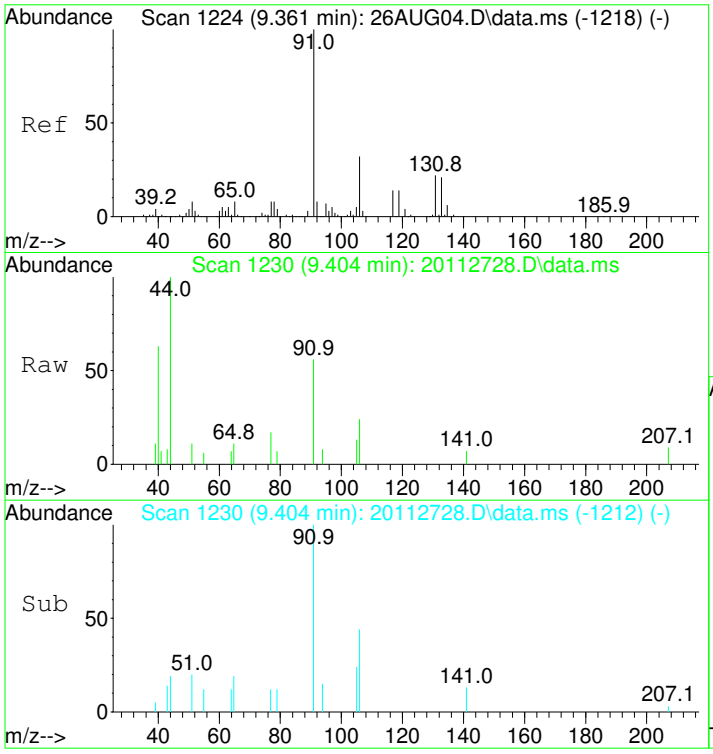


#83
Ethylbenzene
Concen: Below Cal
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 1854

Ion	Ratio	Lower	Upper
91	100		
106	31.8	13.6	53.6

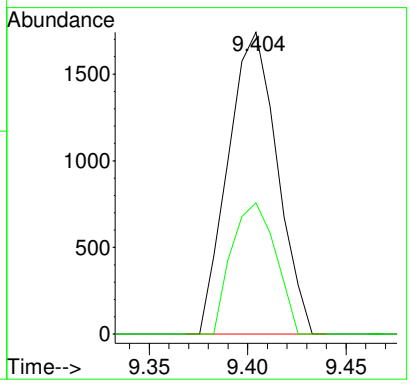


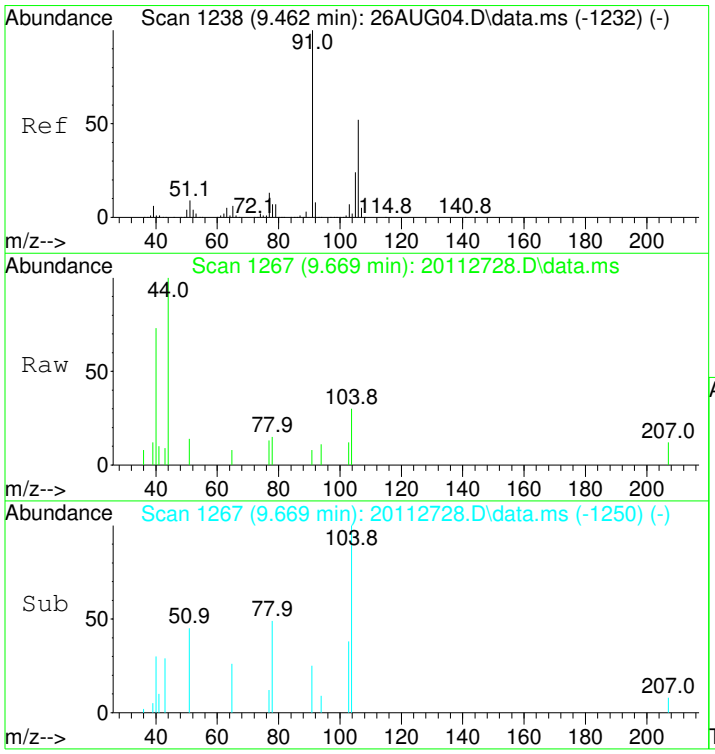


#84
m/p-Xylene
Concen: Below Cal
RT: 9.404 min Scan# 1230
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 3022

Ion	Ratio	Lower	Upper
91	100		
106	39.0	34.2	74.2

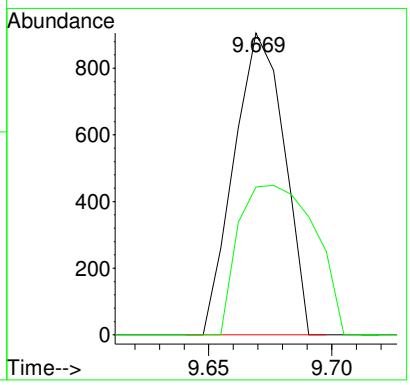


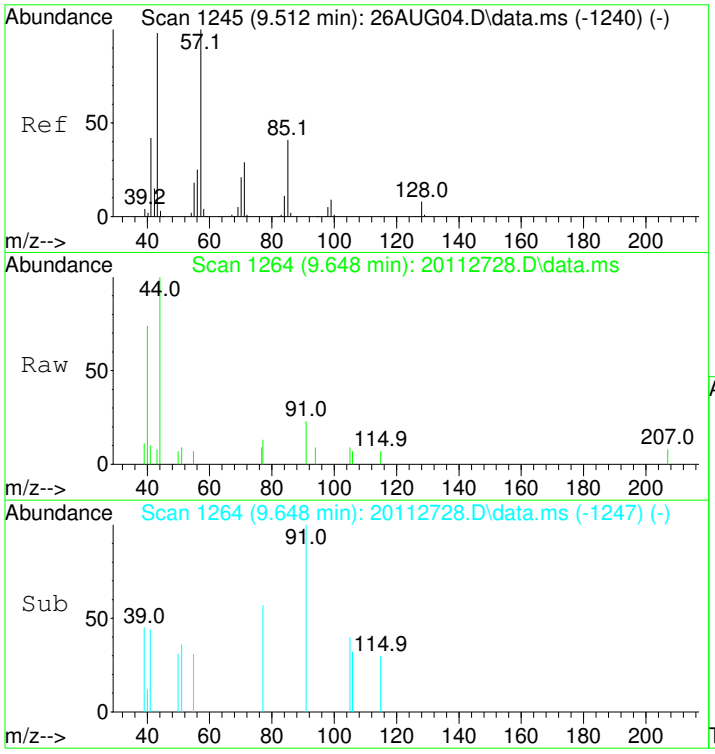


#86
Styrene
Concen: Below Cal
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:104 Resp: 1289

Ion	Ratio	Lower	Upper
104	100		
78	75.3	32.3	72.3#

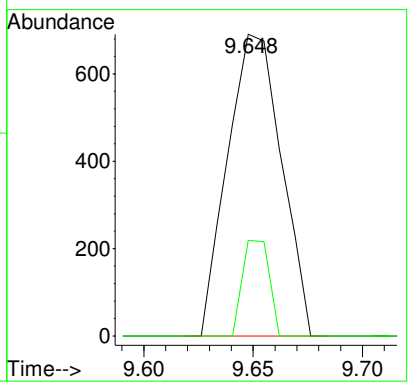


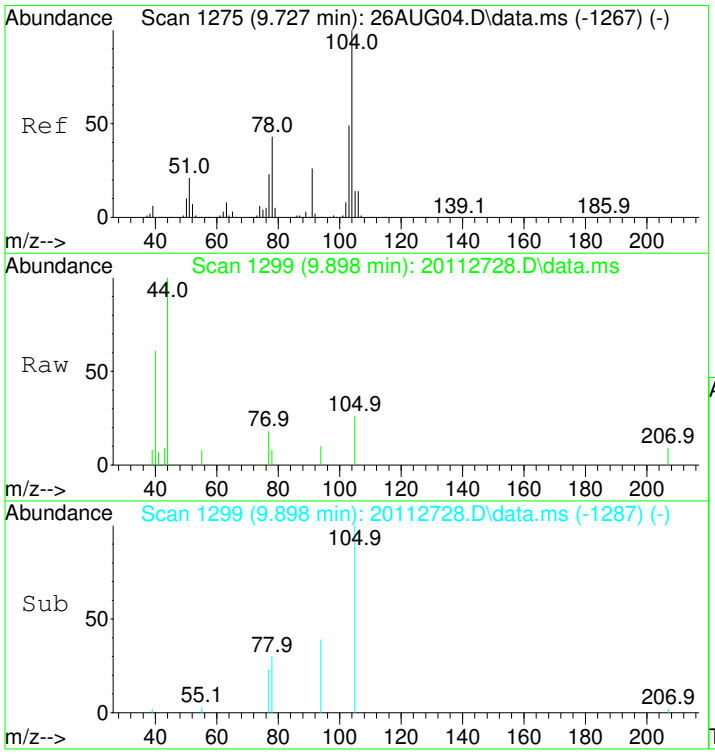


#87
o-Xylene
Concen: Below Cal
RT: 9.648 min Scan# 1264
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 1188

Ion	Ratio	Lower	Upper
91	100		
106	15.7	30.3	70.3#

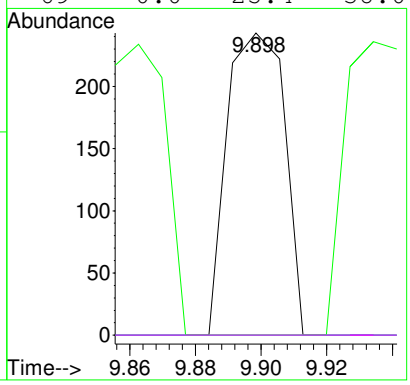


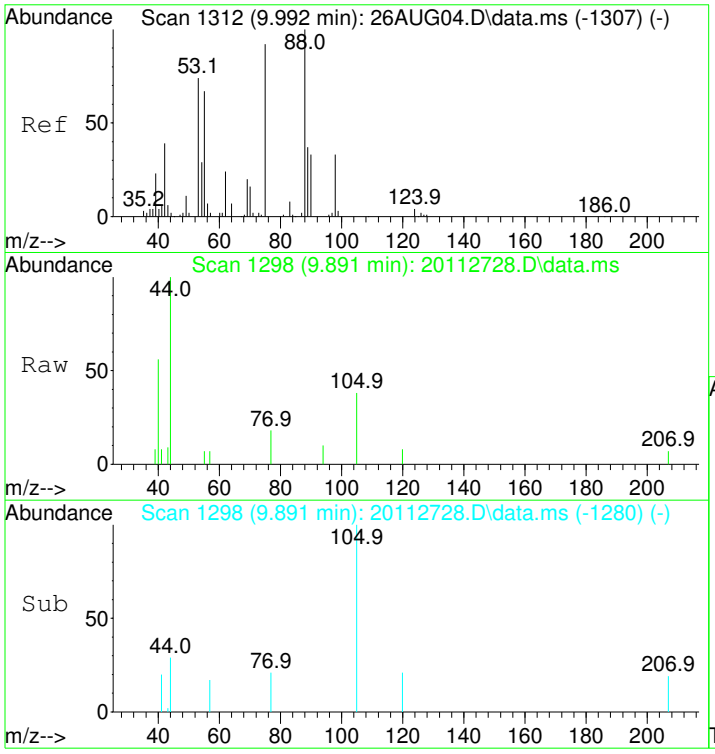


#88
Cyclohexanone
Concen: Below Cal
RT: 9.898 min Scan# 1299
Delta R.T. -0.036 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 55 Resp: 294

Ion	Ratio	Lower	Upper
55	100		
42	128.9	48.0	72.0#
98	0.0	38.2	57.2#
69	0.0	25.4	38.0#

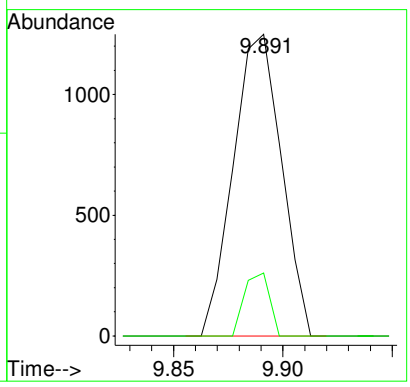


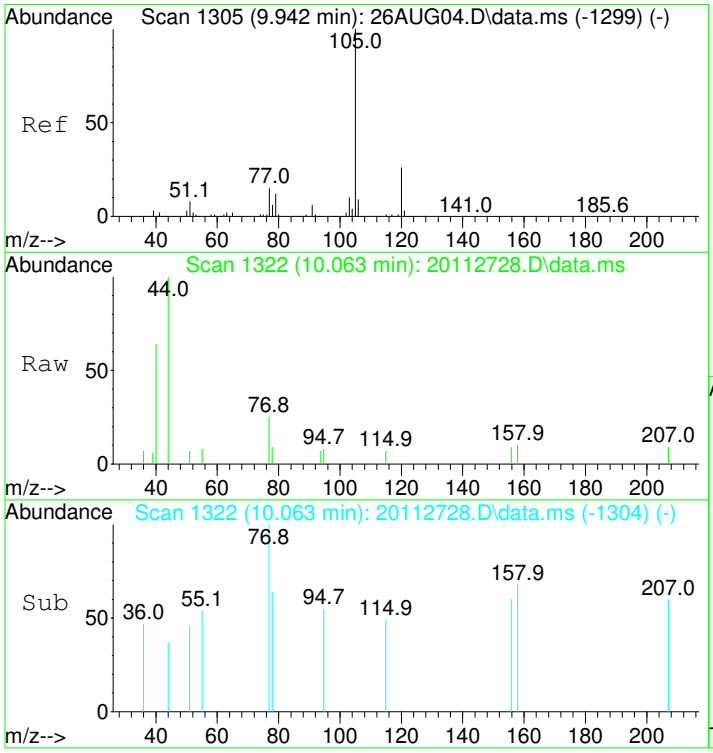


#90
Isopropylbenzene
Concen: Below Cal
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:105 Resp: 1923

Ion	Ratio	Lower	Upper
105	100		
120	11.0	8.0	48.0

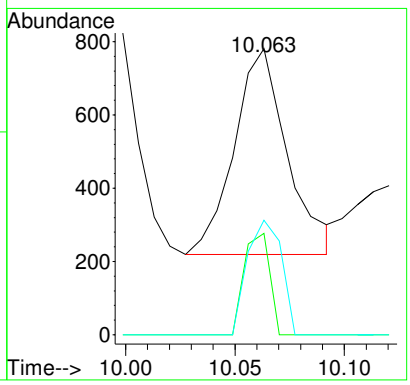


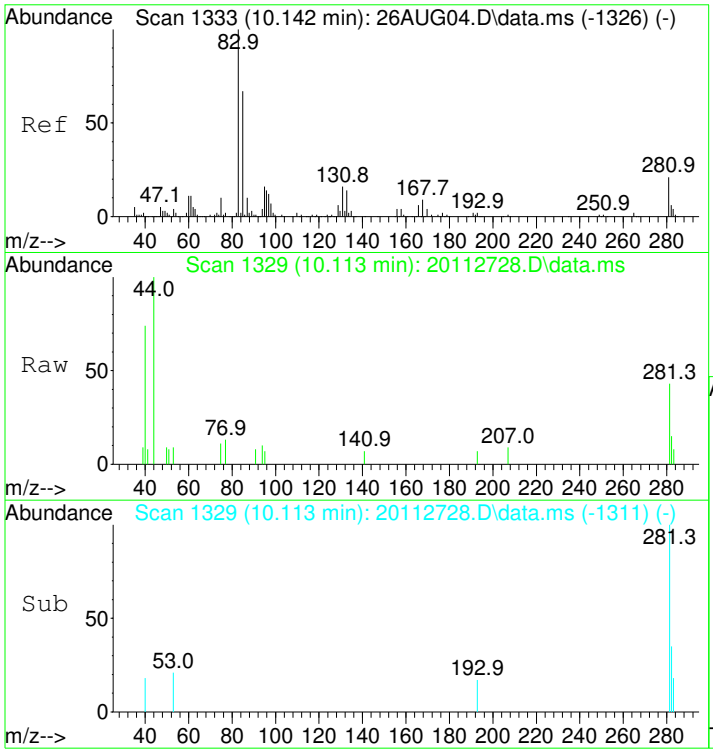


#92
Bromobenzene
Concen: Below Cal
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 77 Resp: 953

Ion	Ratio	Lower	Upper
77	100		
156	23.7	40.2	80.2#
158	35.9	38.1	78.1#

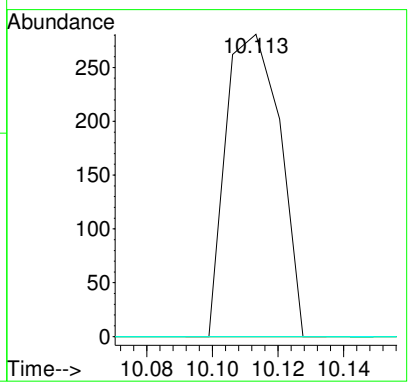


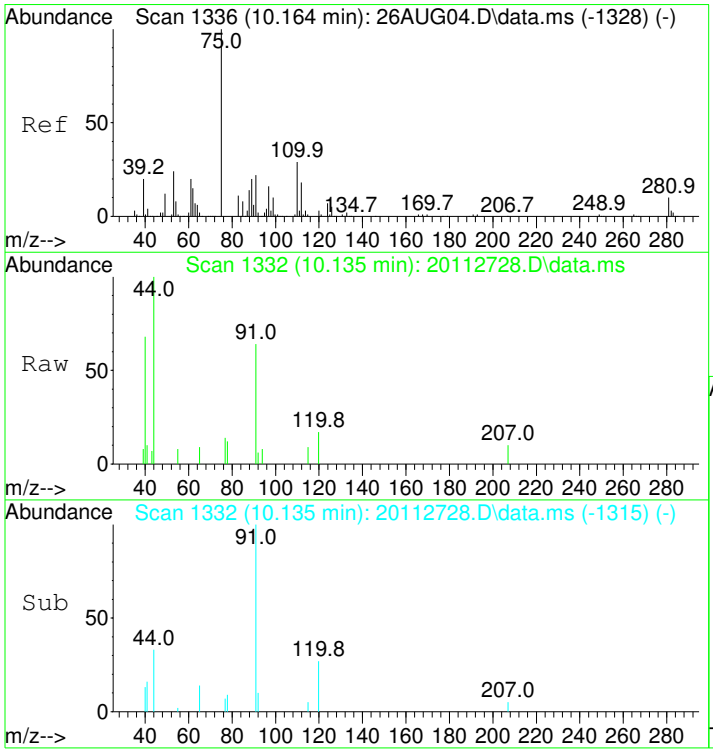


#95
trans-1,4-Dichloro-2-butene
Concen: Below Cal
RT: 10.113 min Scan# 1329
Delta R.T. 0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 53 Resp: 320

Ion	Ratio	Lower	Upper
53	100		
124	0.0	7.2	47.2#
89	0.0	79.3	119.3#

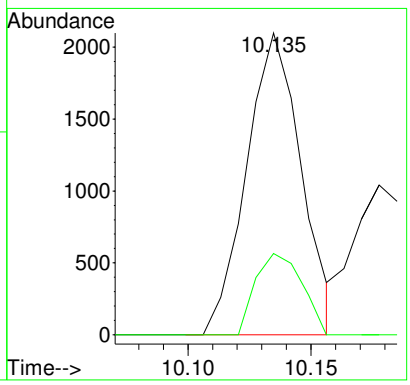


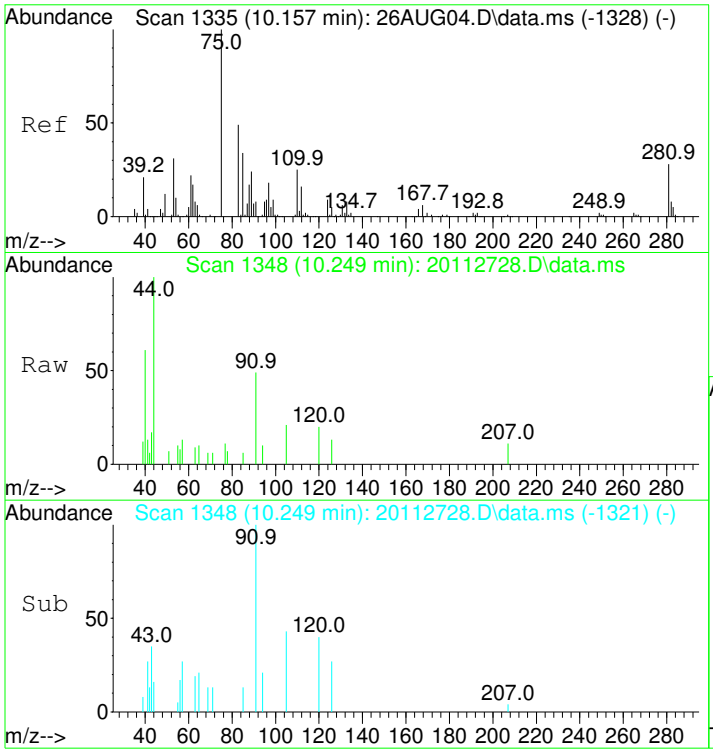


#96
n-Propylbenzene
Concen: Below Cal
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 3252

Ion	Ratio	Lower	Upper
91	100		
120	22.9	3.7	43.7

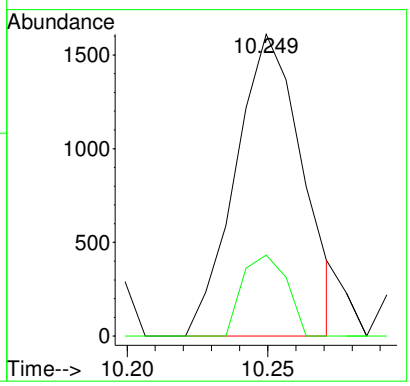


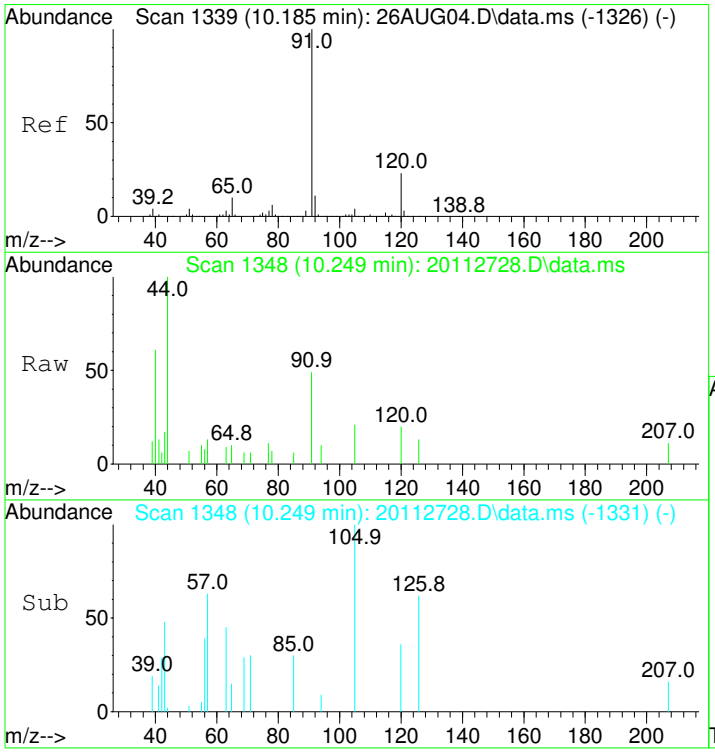


#97
2-Chlorotoluene
Concen: Below Cal
RT: 10.249 min Scan# 1348
Delta R.T. 0.071 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 2674

Ion	Ratio	Lower	Upper
91	100		
126	17.8	17.3	57.3

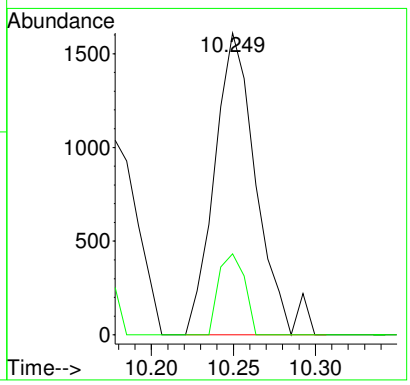


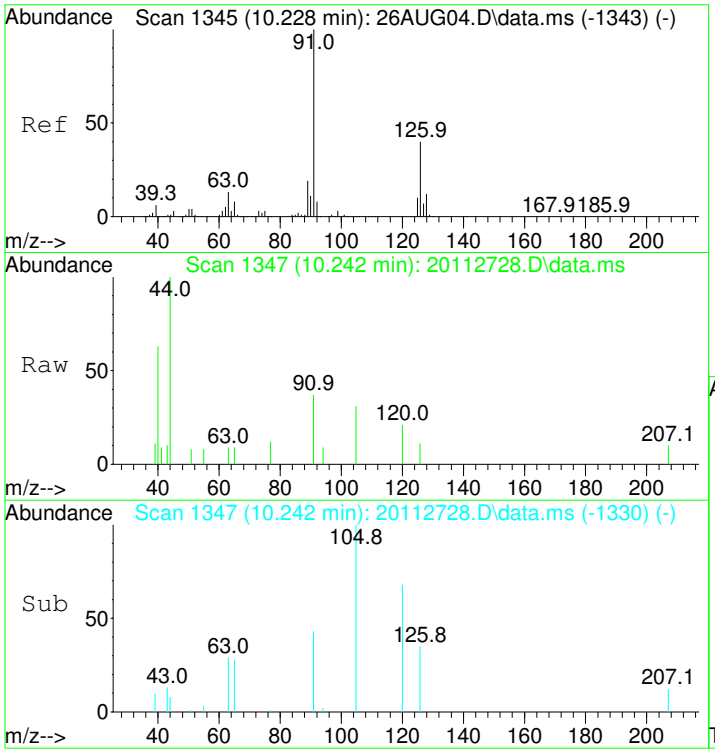


#98
4-Chlorotoluene
Concen: Below Cal
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 2868

Ion	Ratio	Lower	Upper
91	100		
126	16.6	12.4	52.4

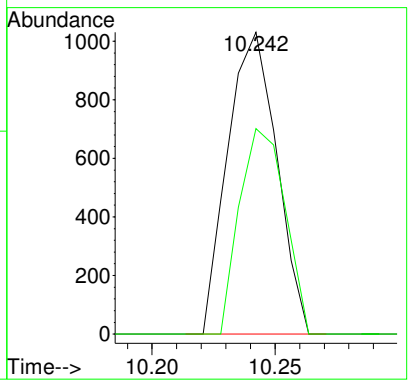


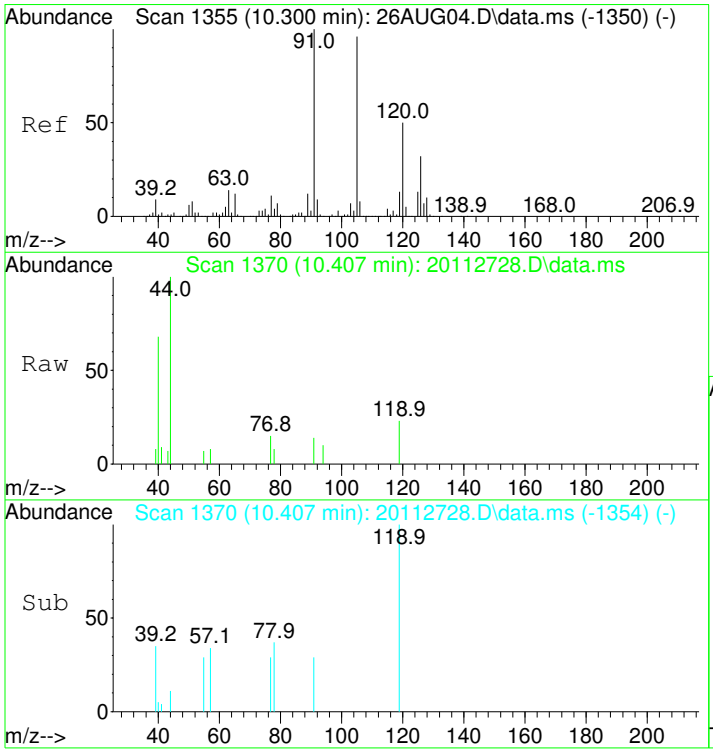


#99
1,3,5-Trimethylbenzene
Concen: Below Cal
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:105 Resp: 1430

Ion	Ratio	Lower	Upper
105	100		
120	63.1	31.9	71.9

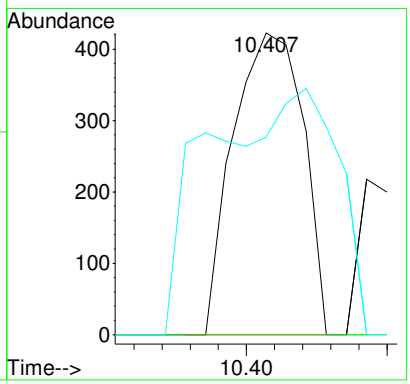


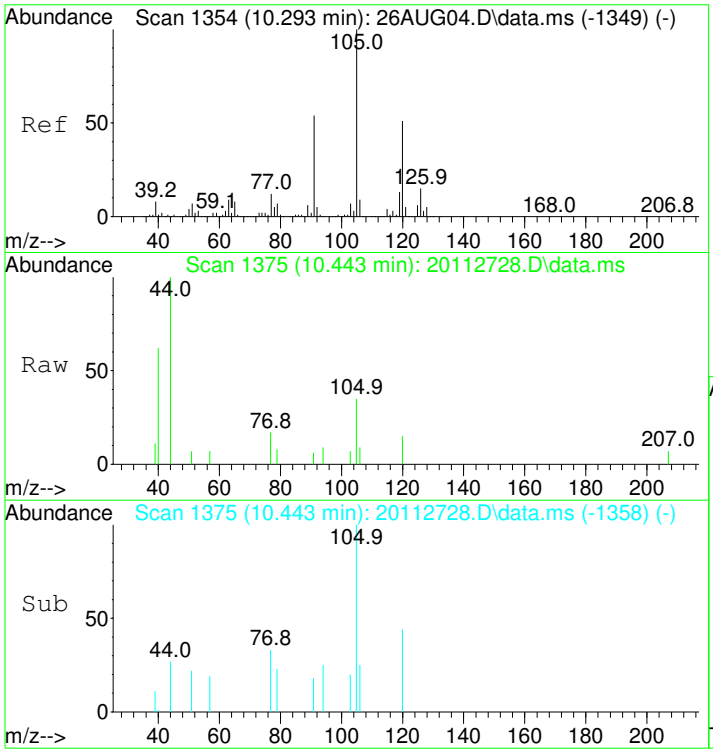


#100
tert-Butylbenzene
Concen: Below Cal
RT: 10.407 min Scan# 1370
Delta R.T. -0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 734

Ion	Ratio	Lower	Upper
91	100		
134	0.0	9.7	49.7#
41	63.6	0.0	39.3#

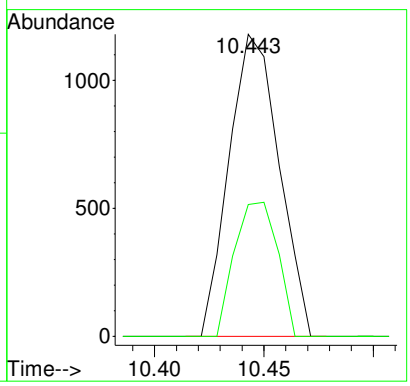


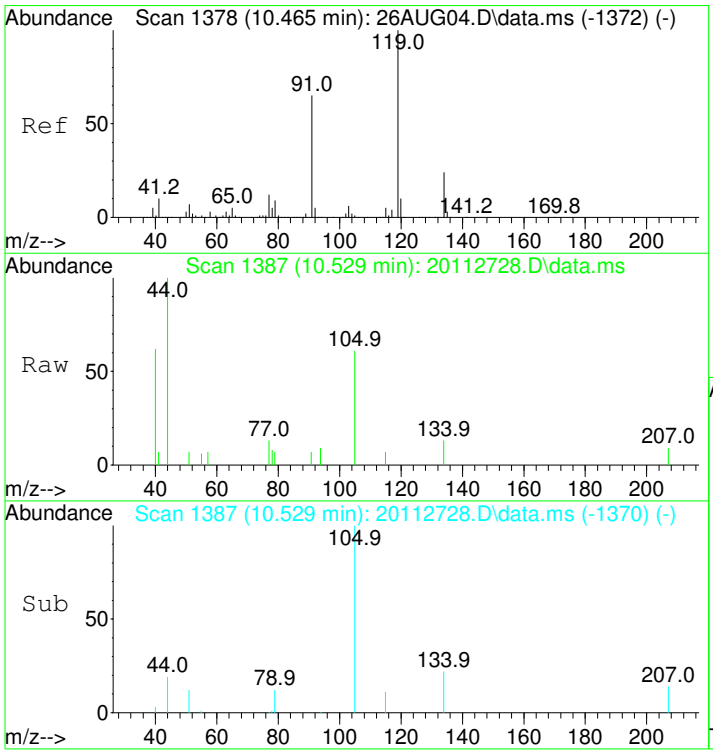


#101
1,2,4-Trimethylbenzene
Concen: Below Cal
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:105 Resp: 1884

Ion	Ratio	Lower	Upper
105	100		
120	38.1	37.7	77.7

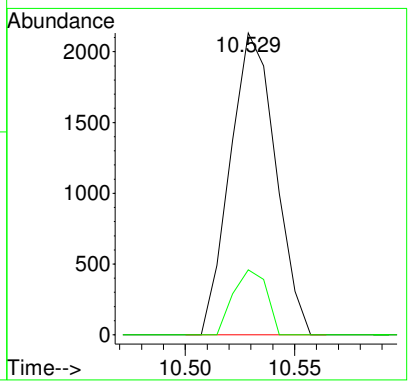


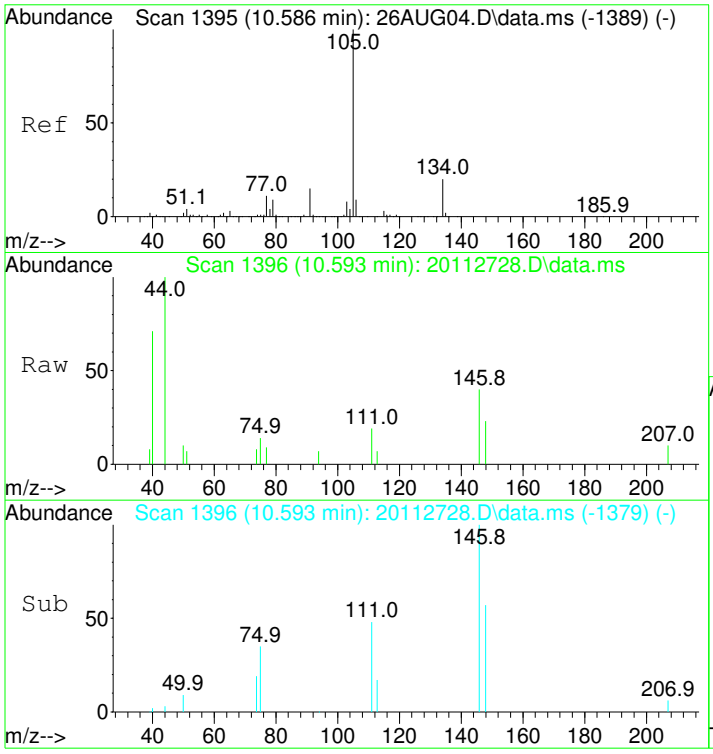


#102
sec-Butylbenzene
Concen: Below Cal
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:105 Resp: 3094

Ion	Ratio	Lower	Upper
105	100		
134	15.8	1.1	41.1

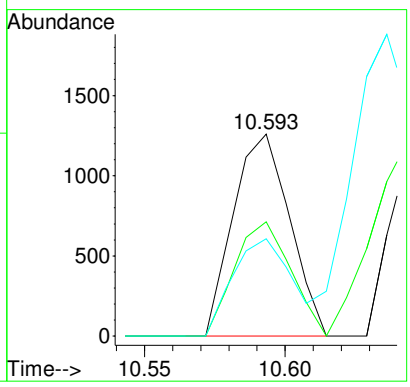


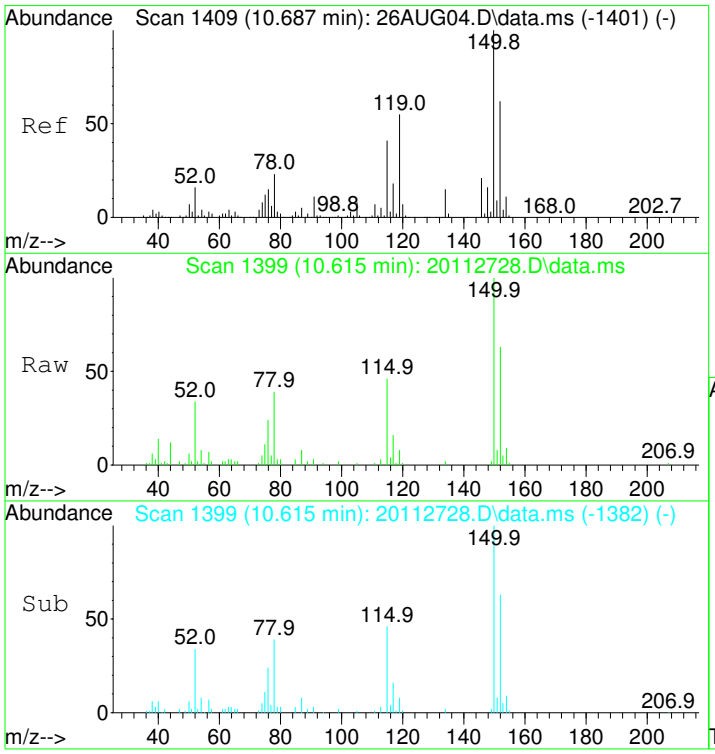


#104
1,3-Dichlorobenzene
Concen: Below Cal
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:146 Resp: 1761

Ion	Ratio	Lower	Upper
146	100		
148	56.3	46.5	86.5
111	50.5	22.6	62.6

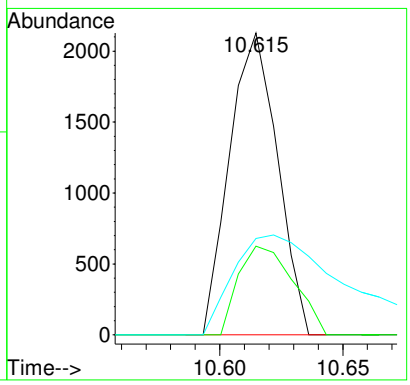


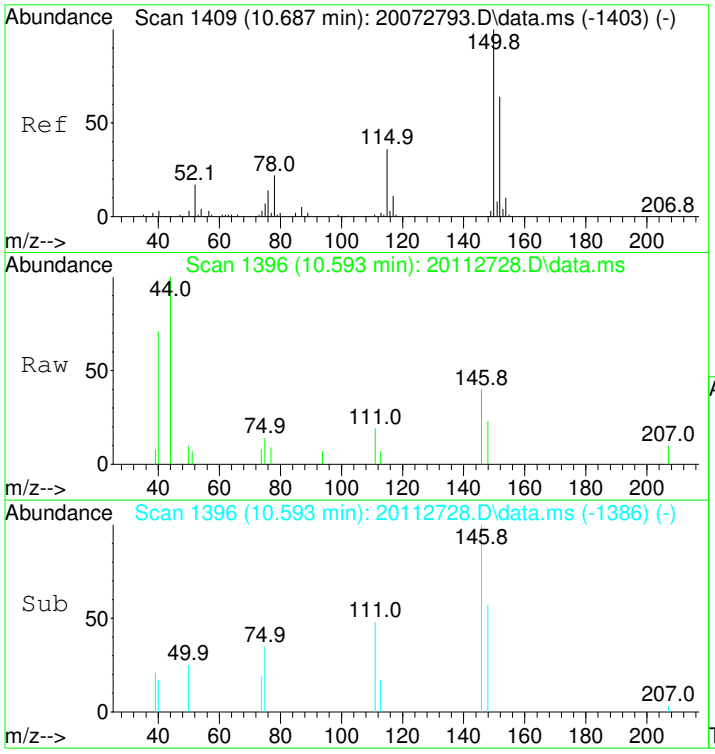


#105
p-Isopropyltoluene
Concen: Below Cal
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:119 Resp: 2885

Ion	Ratio	Lower	Upper
119	100		
134	33.8	8.1	48.1
91	73.5	5.2	45.2#

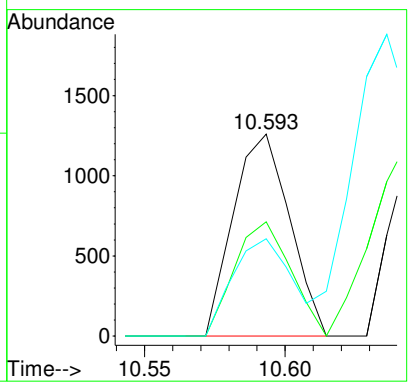


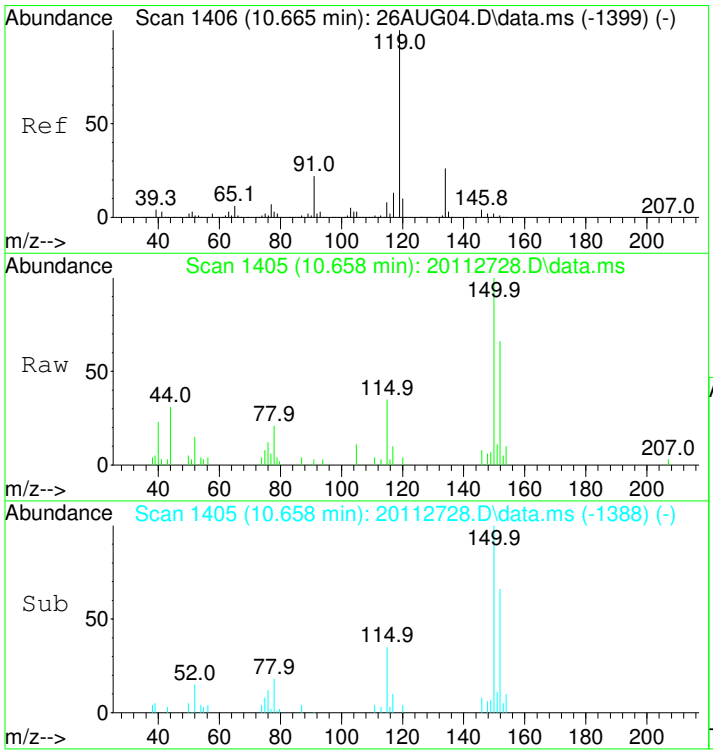


#106
1,4-Dichlorobenzene
Concen: Below Cal
RT: 10.593 min Scan# 1396
Delta R.T. -0.050 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:146 Resp: 1761

Ion	Ratio	Lower	Upper
146	100		
148	56.3	37.3	97.3
111	50.5	12.5	72.5

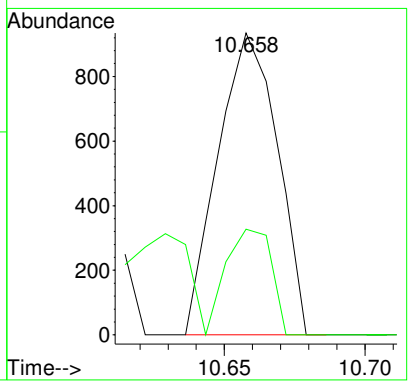


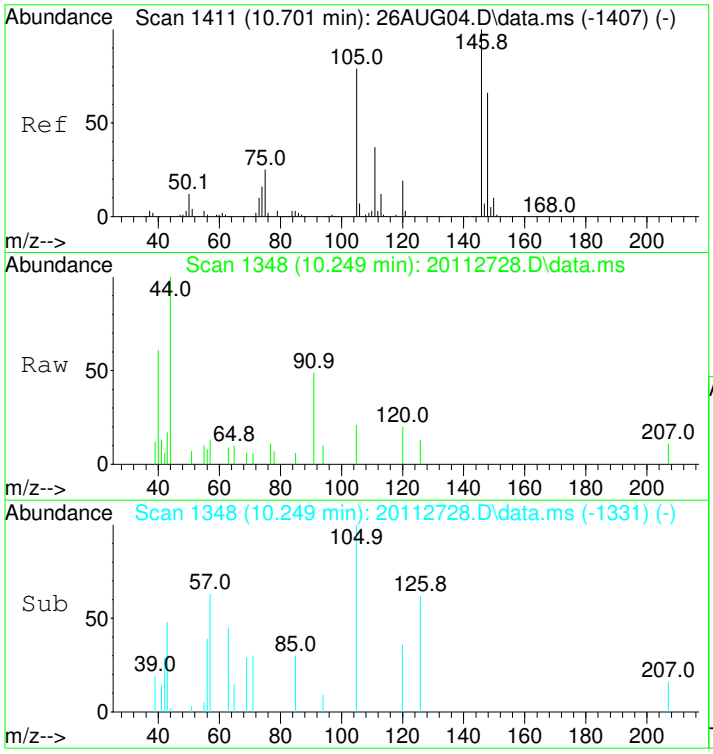


#107
1,2,3-Trimethylbenzene
Concen: Below Cal
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:105 Resp: 1376

Ion	Ratio	Lower	Upper
105	100		
120	26.9	35.5	53.3#

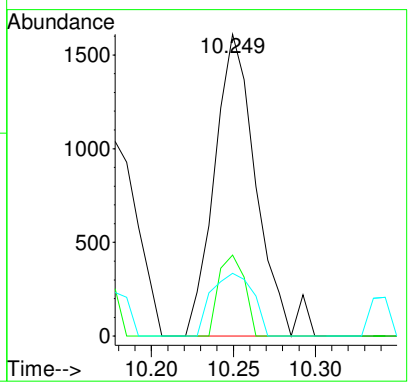


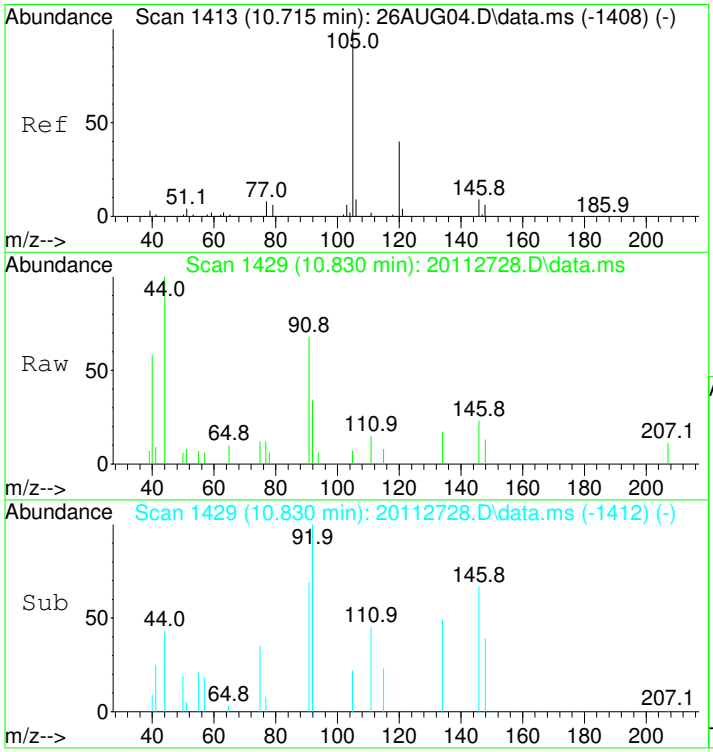


#108
Benzyl chloride
Concen: Below Cal
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 2868

Ion	Ratio	Lower	Upper
91	100		
126	16.6	12.4	52.4
65	20.6	0.0	33.3

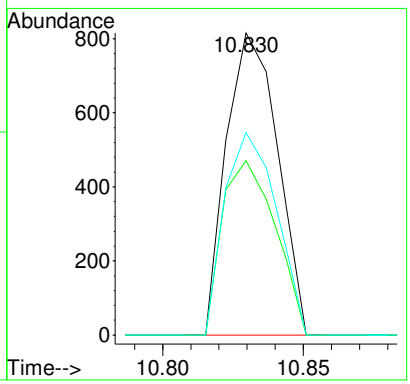


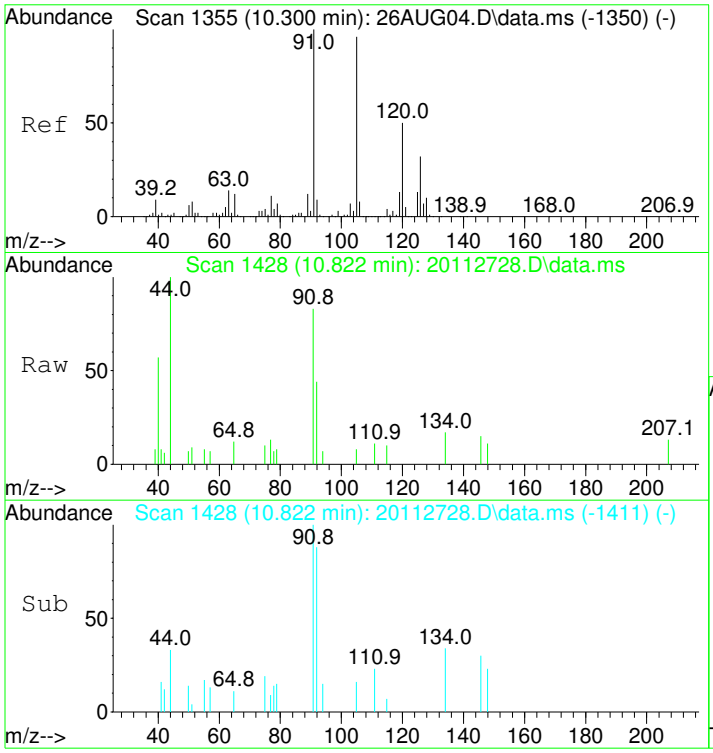


#109
1,2-Dichlorobenzene
Concen: Below Cal
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:146 Resp: 1034

Ion	Ratio	Lower	Upper
146	100		
148	59.8	45.6	85.6
111	67.9	24.1	64.1#

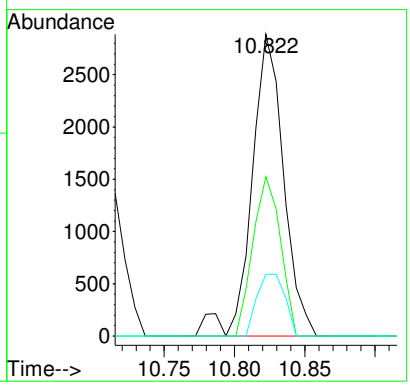


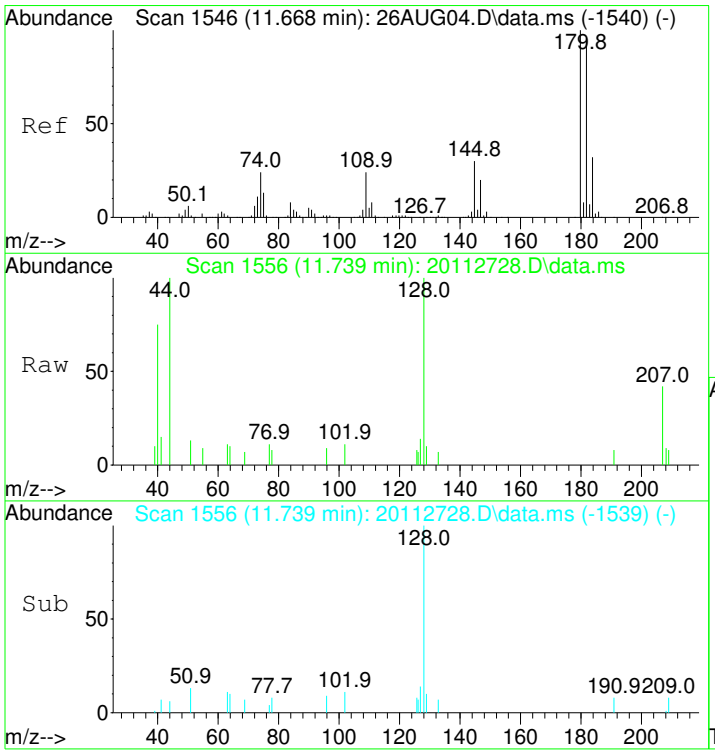


#110
n-Butylbenzene
Concen: Below Cal
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 91 Resp: 4572

Ion	Ratio	Lower	Upper
91	100		
92	45.5	39.3	79.3
134	17.8	7.5	47.5

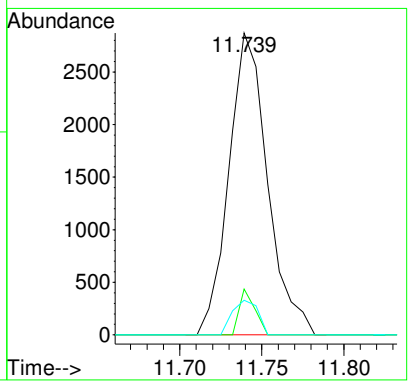


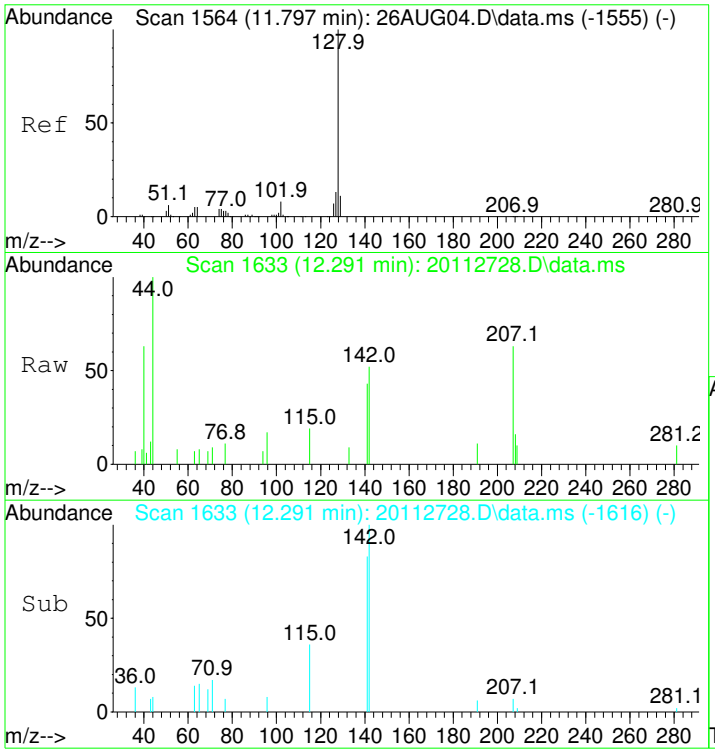


#116
Naphthalene
Concen: Below Cal
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:128 Resp: 4710

Ion	Ratio	Lower	Upper
128	100		
126	6.1	0.0	28.2
102	7.6	0.0	30.0

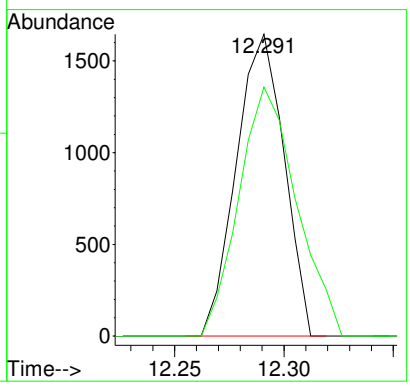


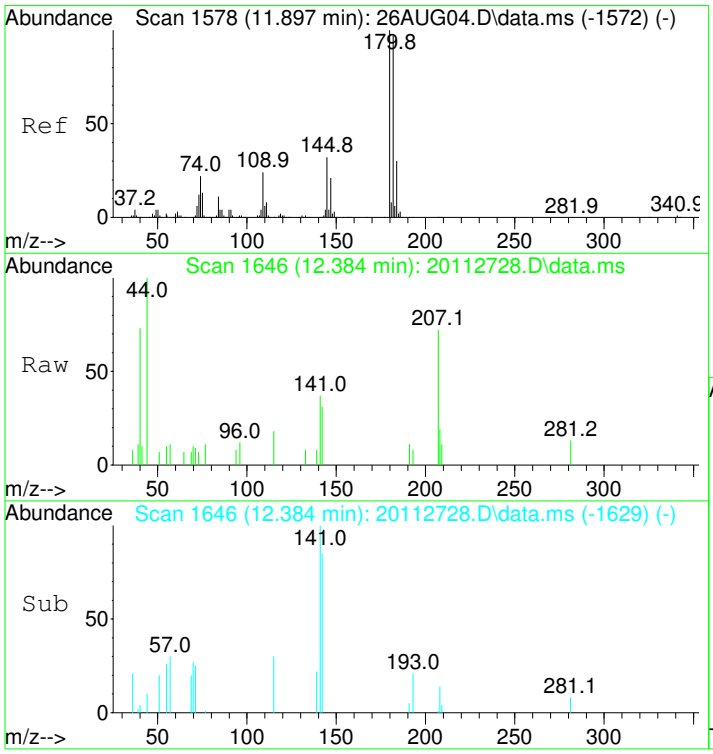


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:142 Resp: 2509

Ion	Ratio	Lower	Upper
142	100		
141	99.6	65.0	105.0

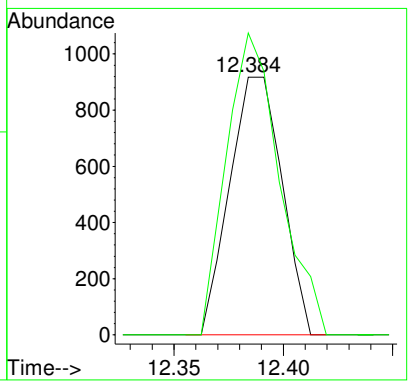


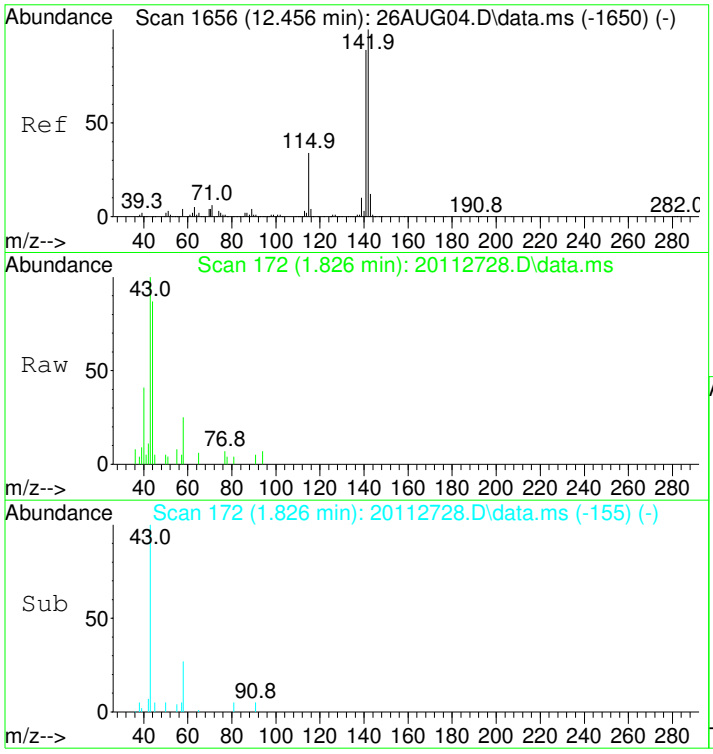


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.384 min Scan# 1646
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion:142 Resp: 1534

Ion	Ratio	Lower	Upper
142	100		
141	119.0	69.8	104.8#

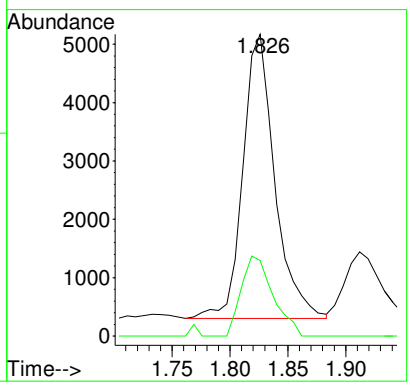


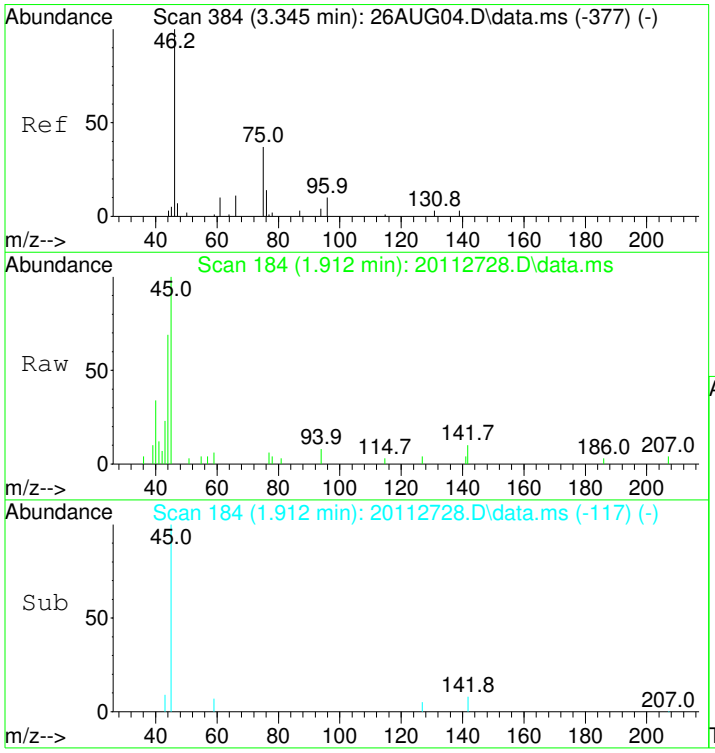


#121
2-Propanone
Concen: 1.86 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 9306

Ion	Ratio	Lower	Upper
43	100		
58	28.0	28.2	42.2#

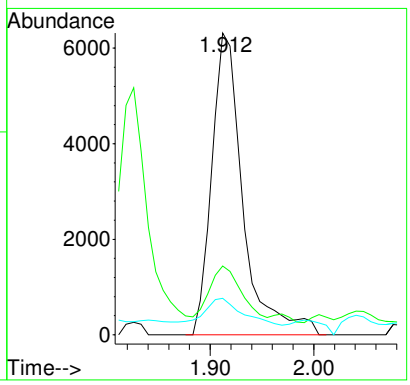


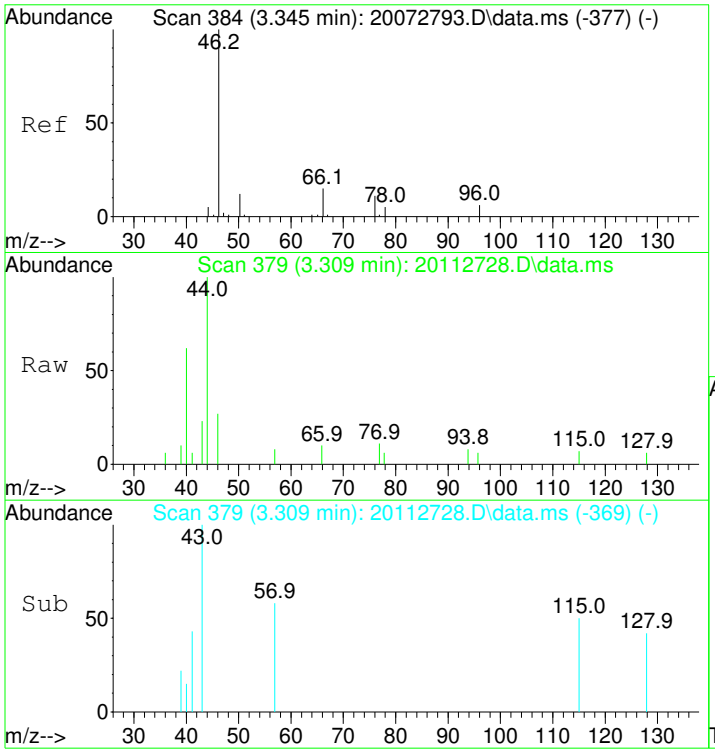


#122
Isopropyl Alcohol
Concen: Below Cal
RT: 1.912 min Scan# 184
Delta R.T. -0.022 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 45 Resp: 13230

Ion	Ratio	Lower	Upper
45	100		
43	16.5	14.6	21.8
41	10.4	5.7	8.5#

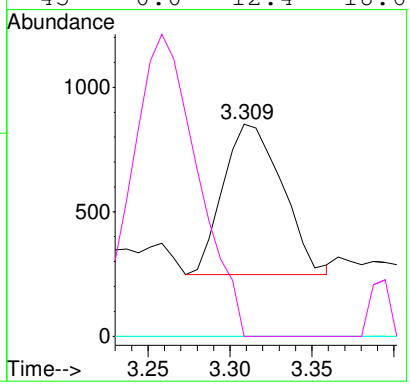


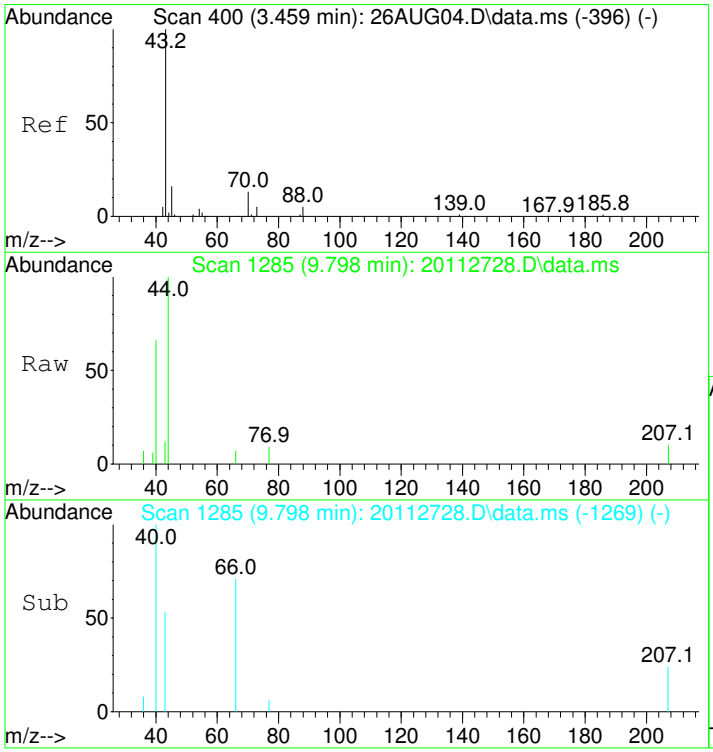


#123
Acetic Ether
Concen: Below Cal
RT: 3.309 min Scan# 379
Delta R.T. -0.050 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 1516

Ion	Ratio	Lower	Upper
43	100		
61	0.0	11.9	17.9#
70	0.0	9.7	14.5#
45	0.0	12.4	18.6#

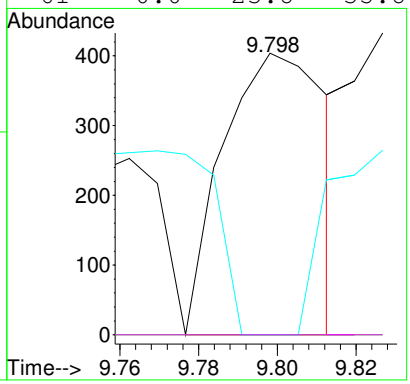




#125
Amyl Acetate
Concen: Below Cal
RT: 9.798 min Scan# 1285
Delta R.T. -0.007 min
Lab File: 20112728.D
Acq: 27 Nov 2020 7:34 pm

Tgt Ion: 43 Resp: 736

Ion	Ratio	Lower	Upper
43	100		
70	0.0	39.8	59.6#
55	0.0	21.8	32.8#
61	0.0	23.8	35.8#



1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112725.D
Acq On : 27 Nov 2020 6:45 pm
Operator : js
Sample : VLCSW1-201127
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 28 12:56:06 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	222246	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	387305	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.196	117	363184	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	183603	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	117499	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	125732	20.31	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 101.55%				
50) 1,2-Dichloroethane-d4	4.362	65	151683	20.21	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 101.05%				
69) Toluene-d8	7.836	98	455664	20.27	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 101.35%				
91) Bromofluorobenzene	9.992	95	181642	19.90	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 99.50%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	128173	22.67	ug/L		99
3) Dichlorofluoromethane	1.454	67	213626	16.80	ug/L		97
4) Chloromethane	1.060	50	189392	15.42	ug/L		99
5) 1,3-Butadiene	1.131	54	724	38.29	ug/L	#	1
6) Vinyl chloride	1.110	62	164023	21.96	ug/L		99
7) Bromomethane	1.267	96	39106	38.34	ug/L		96
8) Chloroethane	1.317	64	71460m	22.83	ug/L		
9) Trichlorofluoromethane	1.468	101	142860	16.23	ug/L		99
10) Ethanol	1.640	45	171472	268.32	ug/L	#	70
11) Ethyl ether	1.640	59	115198	21.66	ug/L		99
12) Acrolein	1.733	56	463	Below Cal		#	34
13) 1,1-Dichloroethene	1.783	61	185163	22.48	ug/L		99
16) Acetone	1.826	43	97190	26.43	ug/L		97
17) Chloroprene	2.793	53	1631	Below Cal		#	1
18) Carbon disulfide	1.933	76	380429	23.14	ug/L		100
19) 2-Propanol	1.941	45	566069	450.66	ug/L		99
20) Allyl chloride	2.034	41	160836	17.03	ug/L		88
22) Acetonitrile	2.034	41	160836	17.02	ug/L		88
23) Methylene chloride	2.134	49	165871	19.19	ug/L		99
24) trans-1,2-Dichloroethene	2.342	61	179052	22.10	ug/L		98
25) t-Butanol	2.241	59	271088	108.64	ug/L		99
26) Acrylonitrile	2.327	53	88869	20.74	ug/L		96
27) Methyl tert-butyl ether	2.342	73	417509	22.65	ug/L		98
29) 1,1-Dichloroethane	2.721	63	244104	20.97	ug/L		99
30) Diisopropyl ether	2.764	45	384762	22.52	ug/L	#	49
31) Vinyl acetate	2.721	86	514	0.27	ug/L	#	1
32) Methylcyclopentane	3.165	56	232585	18.21	ug/L		79
33) Ethyl tert butyl ether	3.122	59	414844	21.30	ug/L		100
34) 2,2-Dichloropropane	3.294	77	188896	19.67	ug/L		99
35) cis-1,2-Dichloroethene	3.302	61	211381	21.54	ug/L		97
36) 2-Butanone	3.309	43	117323	20.71	ug/L		98
37) Ethyl Acetate	3.359	43	212470	19.36	ug/L		98
38) Methyl acrylate	3.402	55	210262	21.49	ug/L		100
40) Bromochloromethane	3.567	49	109890	21.60	ug/L		99
41) Tetrahydrofuran	3.588	42	83153	19.97	ug/L		98
42) Methacrylonitrile	3.545	41	170791	20.76	ug/L		99
43) Chloroform	3.710	83	238510	20.04	ug/L		100
44) Cyclohexane	3.982	56	6212	Below Cal		#	45
46) 1,1,1-Trichloroethane	3.889	97	207185	21.70	ug/L		99
48) Carbon tetrachloride	4.082	117	157175	19.19	ug/L		100

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112725.D
Acq On : 27 Nov 2020 6:45 pm
Operator : js
Sample : VLCSW1-201127
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 28 12:56:06 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
49) 1,1-Dichloropropene	4.104	75	170307	21.10 ug/L		99
51) 1,2-Dichloroethane	4.476	62	193826	21.65 ug/L		98
52) Benzene	4.369	78	522154	22.32 ug/L		99
53) Tertiaryamylmethylether	4.627	73	401387	22.60 ug/L	#	80
54) Isobutyl Alcohol	4.562	43	384111	21.04 ug/L		100
55) Heptane	4.913	43	2402	Below Cal	#	73
56) 1,4-Dioxane	6.188	88	671	Below Cal	#	19
57) Methylcyclohexane	5.866	83	1457	Below Cal	#	32
58) n-Butanol	5.543	56	2601	6.16 ug/L	#	72
59) Trichloroethene	5.479	130	137663	21.04 ug/L		100
60) 1,2-Dichloropropane	5.973	63	141680	21.53 ug/L		99
61) Dibromomethane	6.138	93	96593	20.78 ug/L		99
62) Methyl methacrylate	6.253	41	161311	21.30 ug/L		98
63) Bromodichloromethane	6.589	83	192716	21.62 ug/L		100
64) 2-Chloroethyl vinyl ether	7.306	43	605	Below Cal	#	1
65) 2-Nitropropane	7.126	43	74181	21.15 ug/L		98
66) cis-1,3-Dichloropropene	7.499	75	231231	21.10 ug/L		99
68) 4-Methyl-2-pentanone	7.771	43	365157	34.25 ug/L		79
70) Toluene	7.922	91	538965	22.82 ug/L		97
71) trans-1,3-Dichloropropene	8.251	75	218654	21.57 ug/L		94
73) Ethyl methacrylate	8.358	69	242717	21.97 ug/L		99
74) 1,1,2-Trichloroethane	8.437	97	140371	21.69 ug/L		98
75) Tetrachloroethene	8.459	166	127055	21.38 ug/L		99
76) 1,3-Dichloropropane	8.573	76	230745	21.47 ug/L		100
77) 2-Hexanone	8.674	43	195932	23.11 ug/L		99
78) Chlorodibromomethane	8.752	129	140055	19.79 ug/L		99
79) Butyl acetate	8.803	43	286763	21.39 ug/L		99
80) 1,2-Dibromoethane	8.824	107	153715	23.01 ug/L		97
81) Chlorobenzene	9.218	112	342055	22.54 ug/L		99
82) 1,1,1,2-Tetrachloroethane	9.297	131	126248	21.50 ug/L		99
83) Ethylbenzene	9.304	91	569516	20.75 ug/L		97
84) m/p-Xylene	9.397	91	895205	40.98 ug/L		96
85) Nonane	9.461	43	92257	28.58 ug/L		97
86) Styrene	9.669	104	391882	21.18 ug/L		99
87) o-Xylene	9.655	91	502115	20.80 ug/L		97
88) Cyclohexanone	9.941	55	647	Below Cal	#	36
89) Bromoform	9.777	173	99077	18.31 ug/L		98
90) Isopropylbenzene	9.891	105	566912	20.43 ug/L		97
92) Bromobenzene	10.063	77	255343	22.72 ug/L		98
93) 1,1,2,2-Tetrachloroethane	10.092	83	262006	24.55 ug/L		97
94) 1,2,3-Trichloropropane	10.113	110	72661	21.58 ug/L		98
95) trans-1,4-Dichloro-2-b...	10.106	53	72814	20.57 ug/L		99
96) n-Propylbenzene	10.135	91	694376	20.66 ug/L		97
97) 2-Chlorotoluene	10.178	91	403575	24.06 ug/L		97
98) 4-Chlorotoluene	10.249	91	467373	20.43 ug/L		97
99) 1,3,5-Trimethylbenzene	10.242	105	492694	20.98 ug/L		95
100) tert-Butylbenzene	10.407	91	326755	22.17 ug/L		96
101) 1,2,4-Trimethylbenzene	10.443	105	482274	19.77 ug/L		97
102) sec-Butylbenzene	10.529	105	584411	20.49 ug/L		97
104) 1,3-Dichlorobenzene	10.593	146	288085	22.91 ug/L		98
105) p-Isopropyltoluene	10.615	119	491588	23.94 ug/L		97
106) 1,4-Dichlorobenzene	10.643	146	274703	22.68 ug/L		98
107) 1,2,3-Trimethylbenzene	10.658	105	495443	24.11 ug/L		98
108) Benzyl chloride	10.249	91	467373	20.54 ug/L		98
109) 1,2-Dichlorobenzene	10.830	146	278821	22.70 ug/L		99
110) n-Butylbenzene	10.822	91	445682	20.17 ug/L		97
111) Hexachloroethane	10.966	117	87252	18.81 ug/L		98
112) 1,2-Dibromo-3-chloropr...	11.224	157	77381	22.55 ug/L		96

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112725.D
Acq On : 27 Nov 2020 6:45 pm
Operator : js
Sample : VLCSW1-201127
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 28 12:56:06 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

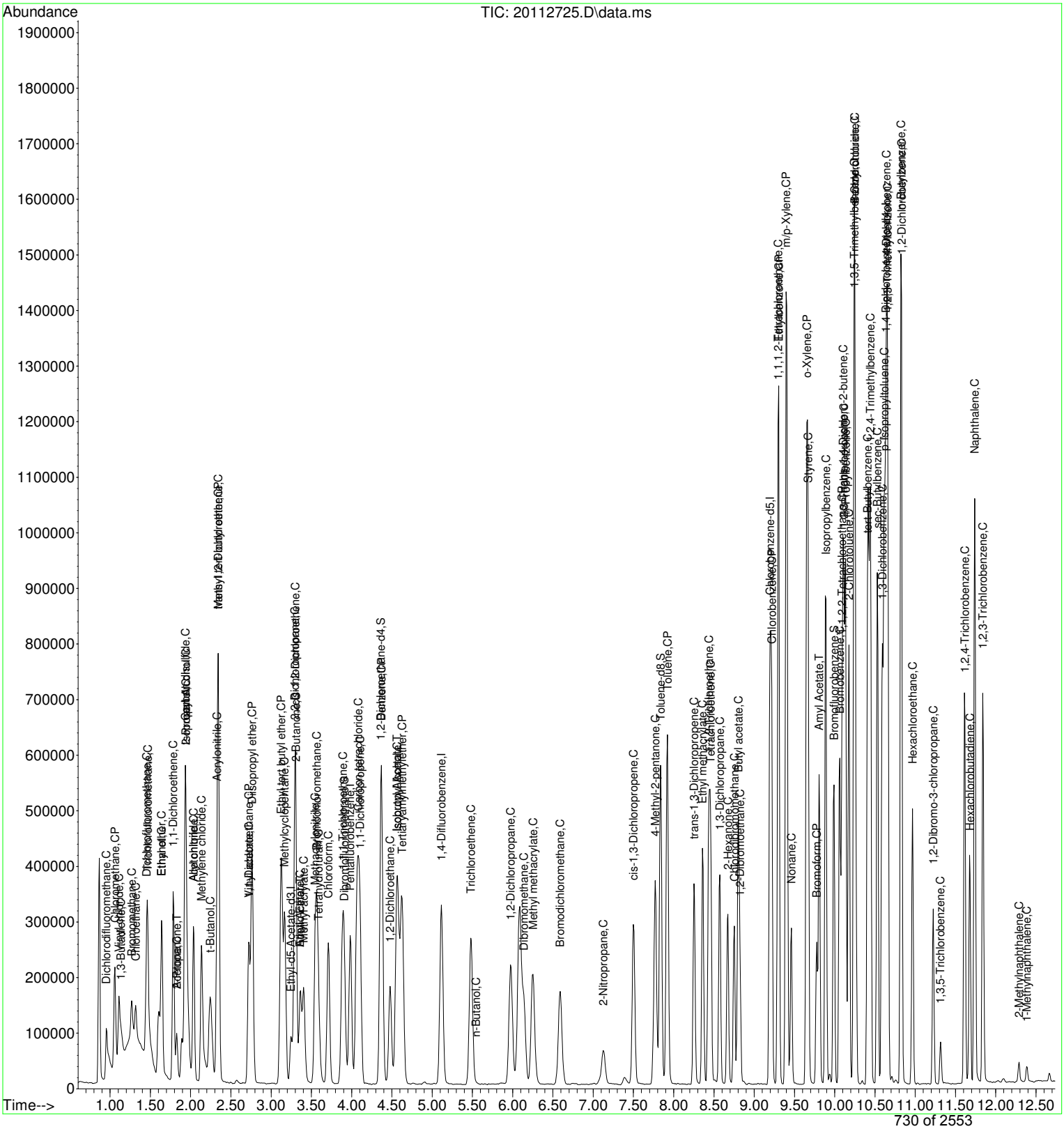
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
113) 1,3,5-Trichlorobenzene	11.309	180	5019	0.27	ug/L	96
114) 1,2,4-Trichlorobenzene	11.617	180	197796	21.25	ug/L	99
115) Hexachlorobutadiene	11.682	225	66624	21.14	ug/L	99
116) Naphthalene	11.739	128	743768	20.80	ug/L	97
117) 1,2,3-Trichlorobenzene	11.840	180	192273	21.61	ug/L	98
118) 2-Methylnaphthalene	12.291	142	16441	0.51	ug/L	96
119) 1-Methylnaphthalene	12.384	142	12176	0.39	ug/L	91
121) 2-Propanone	1.826	43	97190	26.56	ug/L	97
122) Isopropyl Alcohol	1.941	45	566069	456.80	ug/L	99
123) Acetic Ether	3.359	43	212470	18.81	ug/L	99
124) Isopropyl Acetate	4.562	61	77675	19.13	ug/L	99
125) Amyl Acetate	9.805	43	265726	17.60	ug/L	99

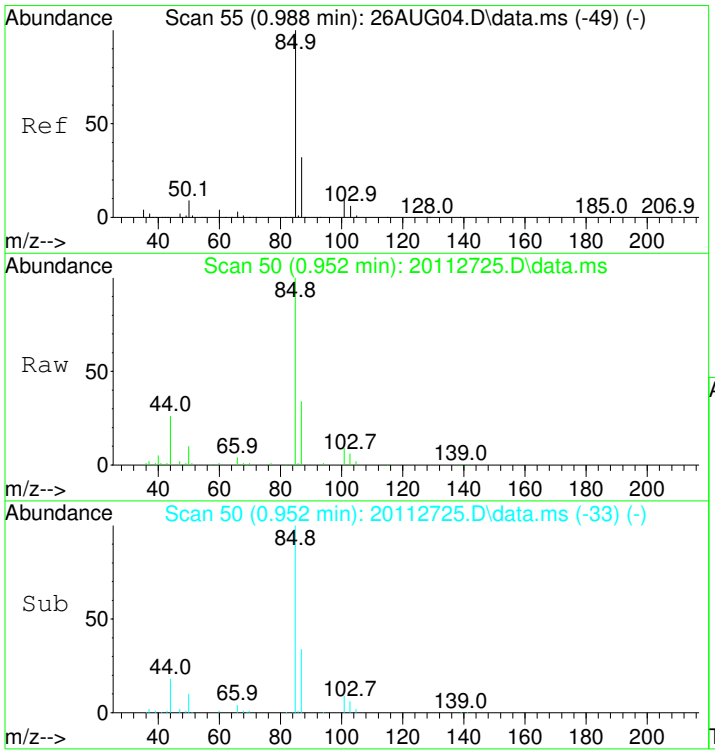
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112725.D
Acq On : 27 Nov 2020 6:45 pm
Operator : js
Sample : VLCSW1-201127
Misc : IS 200-21532; 20PPB 200-21627
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 28 12:56:06 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

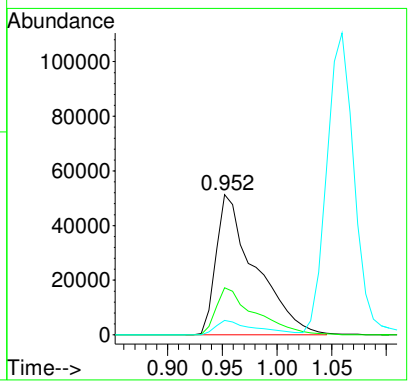


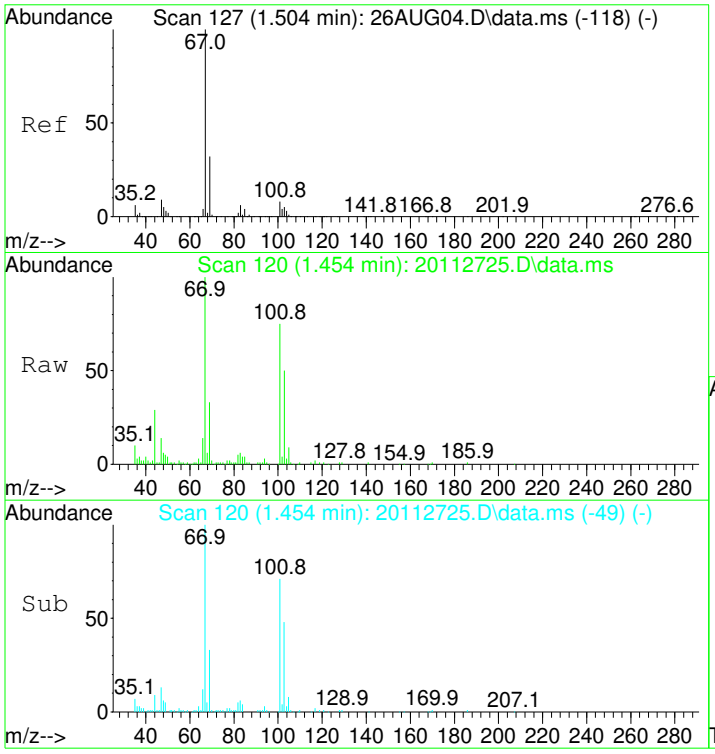


#2
Dichlorodifluoromethane
Concen: 22.67 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 85 Resp: 128173

Ion	Ratio	Lower	Upper
85	100		
87	33.2	3.6	63.6
50	10.4	0.0	40.5

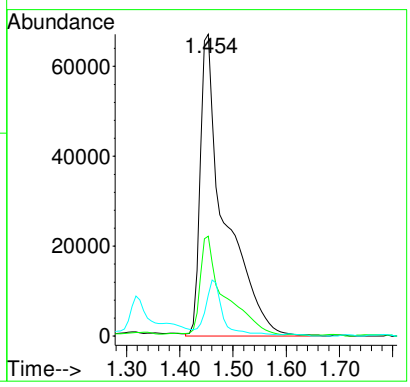


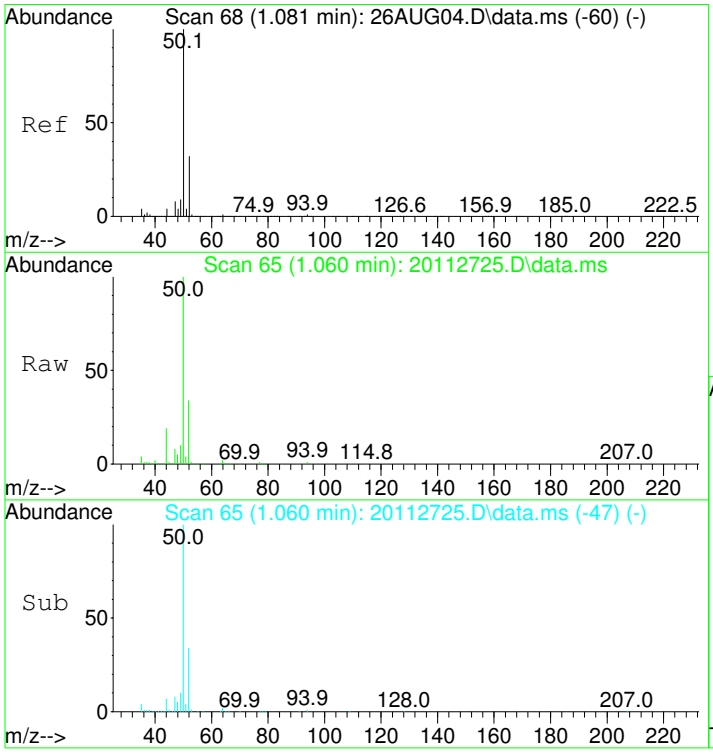


#3
Dichlorofluoromethane
Concen: 16.80 ug/L
RT: 1.454 min Scan# 120
Delta R.T. 0.008 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 67 Resp: 213626

Ion	Ratio	Lower	Upper
67	100		
69	32.2	23.7	44.1
66	13.1	8.1	15.0

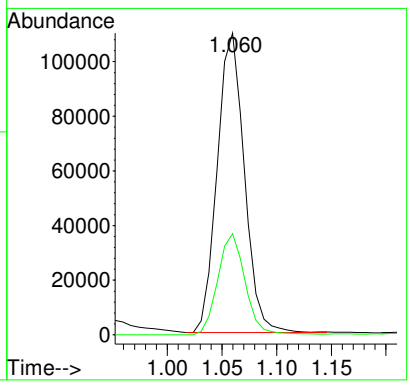


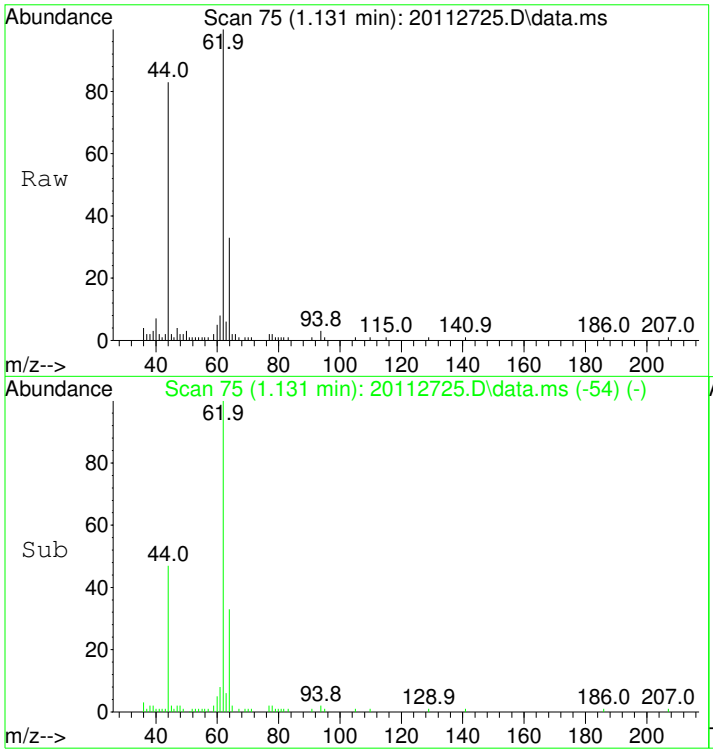


#4
Chloromethane
Concen: 15.42 ug/L
RT: 1.060 min Scan# 65
Delta R.T. 0.008 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 50 Resp: 189392

Ion	Ratio	Lower	Upper
50	100		
52	34.1	4.9	64.9

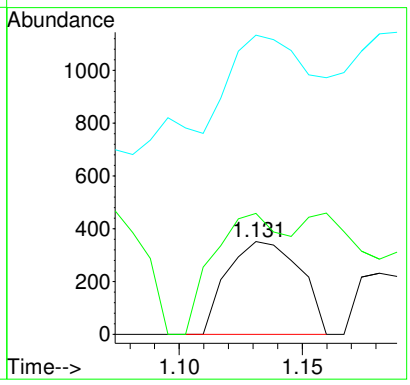


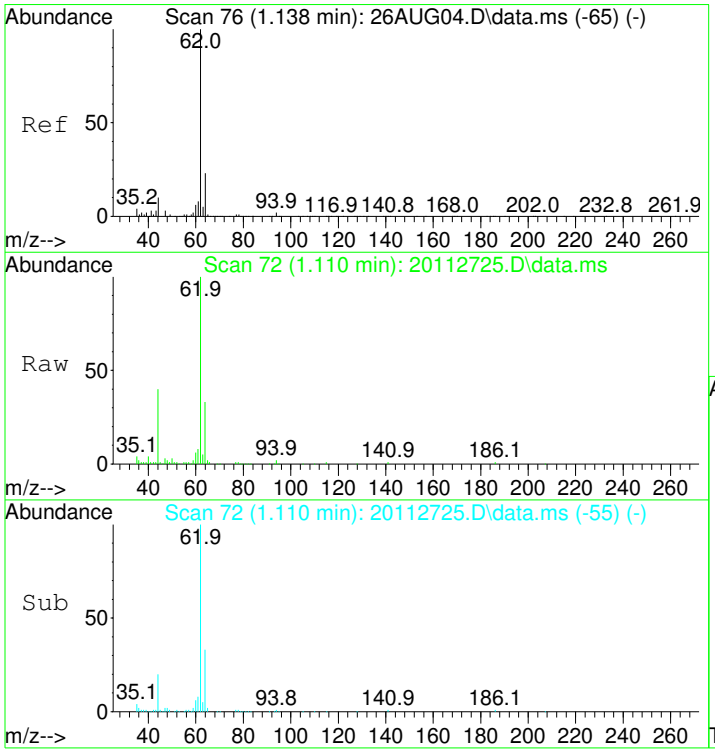


#5
1,3-Butadiene
Concen: 38.29 ug/L
RT: 1.131 min Scan# 75
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 54 Resp: 724

Ion	Ratio	Lower	Upper
54	100		
53	133.0	0.0	30.0#
39	613.7	322.9	382.9#

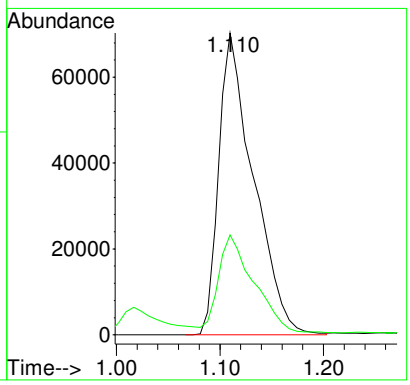


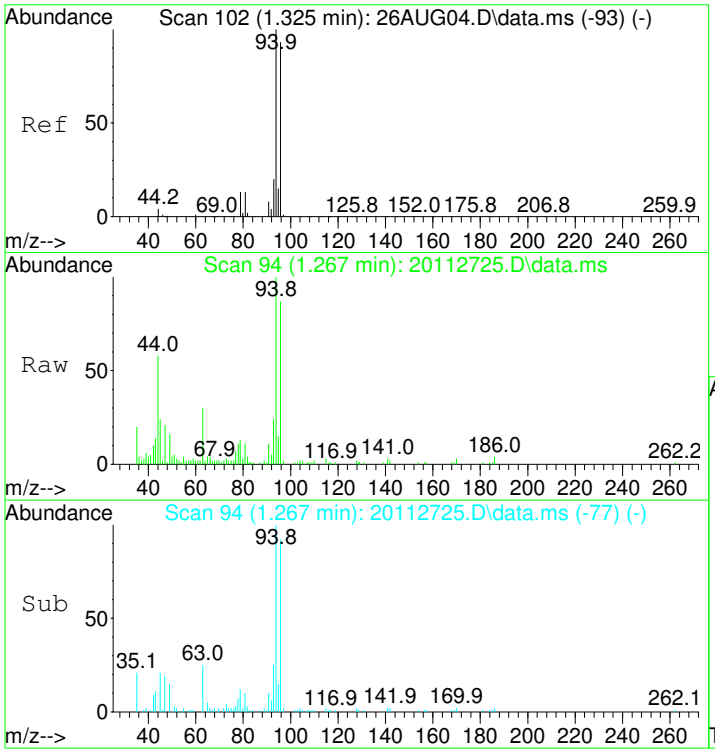


#6
Vinyl chloride
Concen: 21.96 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 62 Resp: 164023

Ion	Ratio	Lower	Upper
62	100		
64	32.5	1.9	61.9

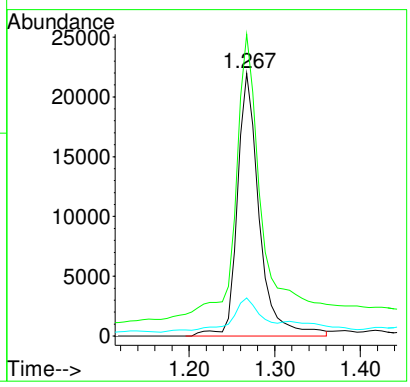


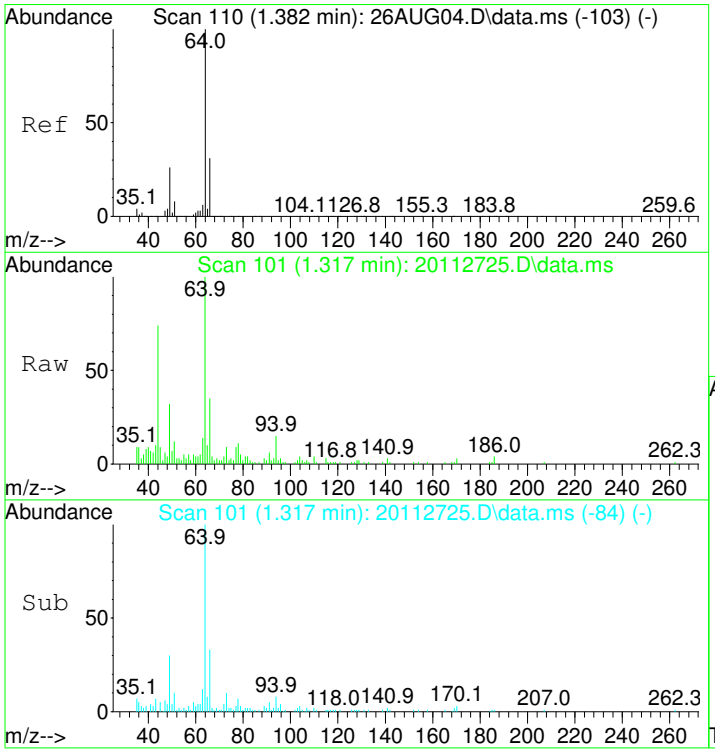


#7
Bromomethane
Concen: 38.34 ug/L
RT: 1.267 min Scan# 94
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 96 Resp: 39106

Ion	Ratio	Lower	Upper
96	100		
94	129.2	103.4	163.4
79	17.9	0.0	49.6

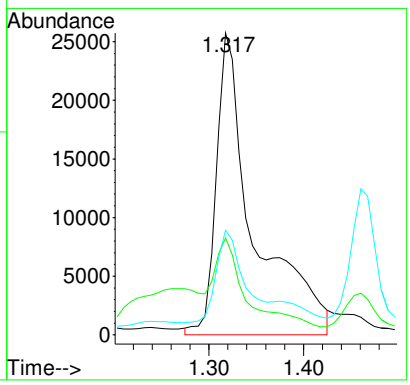


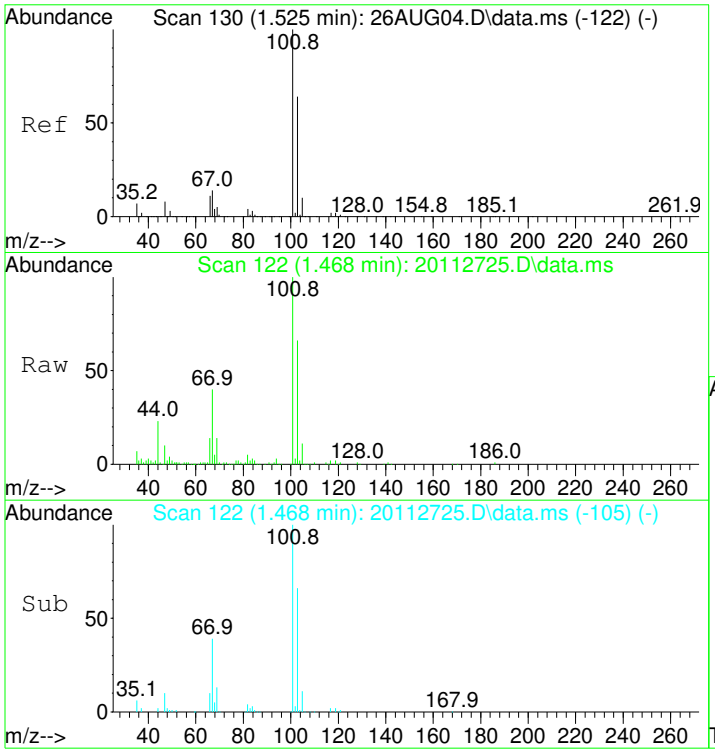


#8
Chloroethane
Concen: 22.83 ug/L m
RT: 1.317 min Scan# 101
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 64 Resp: 71460

Ion	Ratio	Lower	Upper
64	100		
49	22.2	0.0	41.3
66	28.3	0.0	52.2

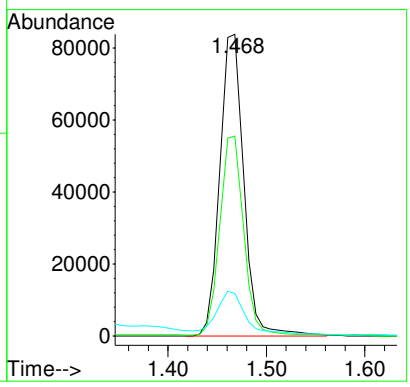


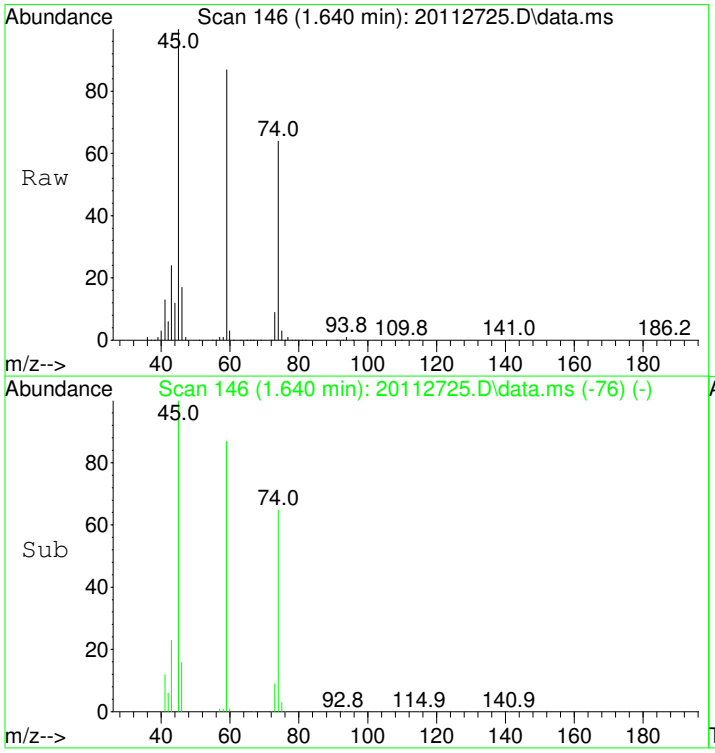


#9
Trichlorofluoromethane
Concen: 16.23 ug/L
RT: 1.468 min Scan# 122
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:101 Resp: 142860

Ion	Ratio	Lower	Upper
101	100		
103	65.1	45.1	85.1
66	16.9	0.0	35.4

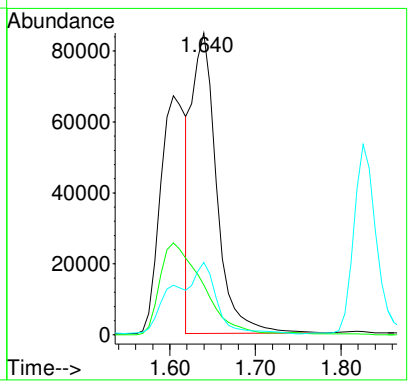


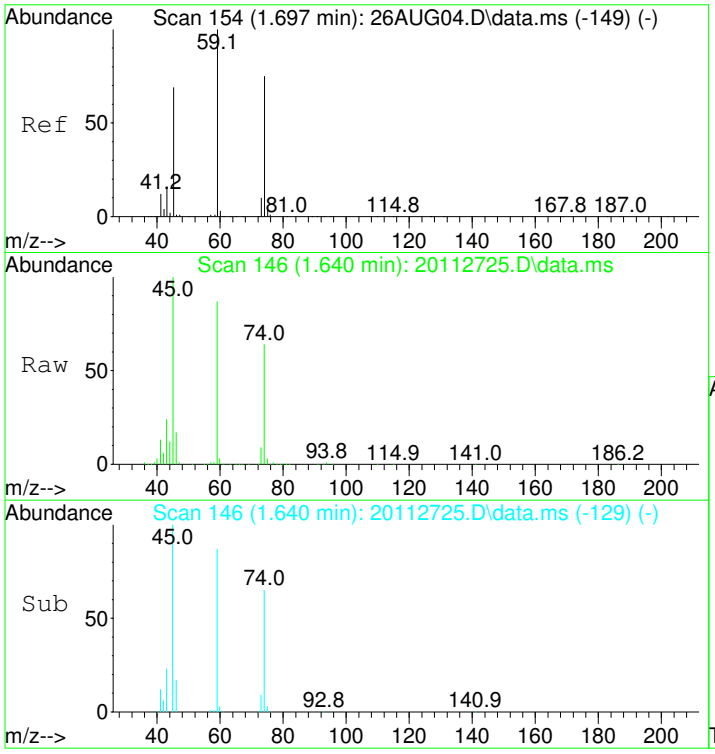


#10
Ethanol
Concen: 268.32 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 45 Resp: 171472

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	57.3
43	23.2	0.0	52.4

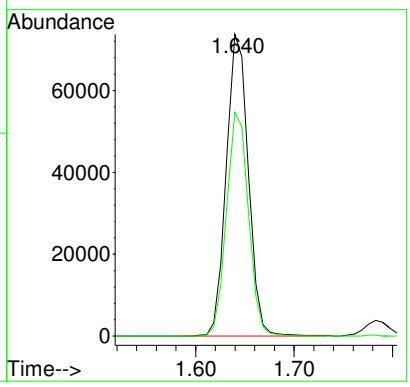


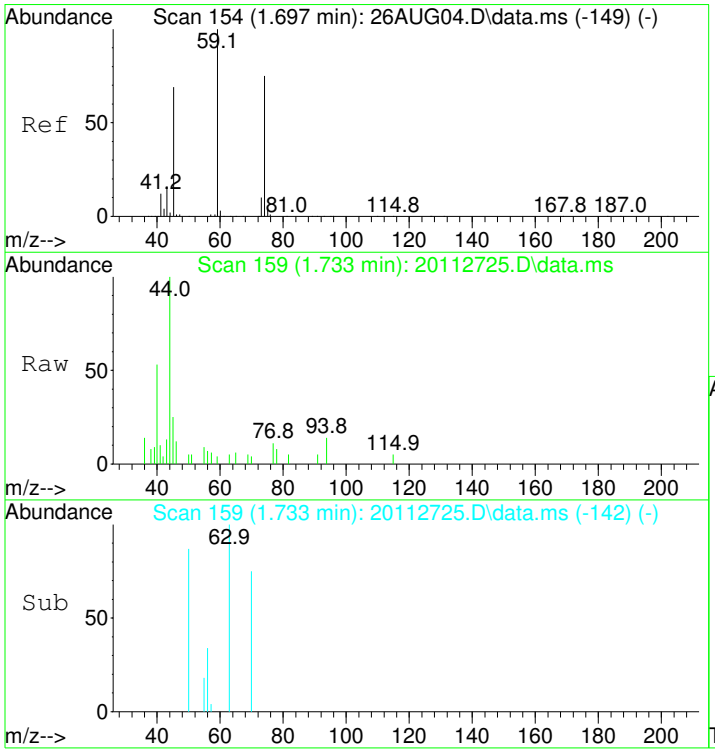


#11
Ethyl ether
Concen: 21.66 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 59 Resp: 115198

Ion	Ratio	Lower	Upper
59	100		
74	73.8	42.6	102.6

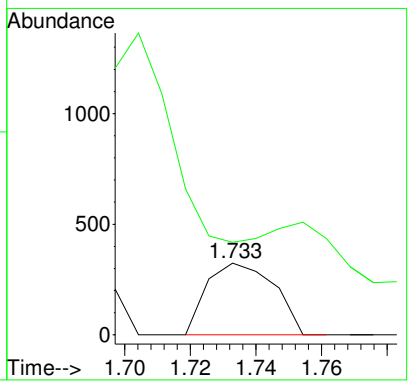


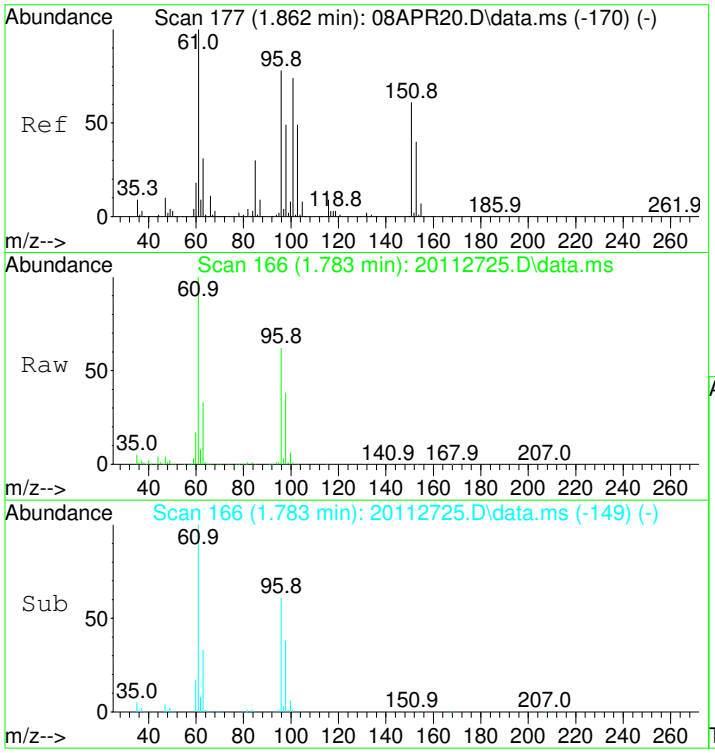


#12
Acrolein
Concen: Below Cal
RT: 1.733 min Scan# 159
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 56 Resp: 463

Ion	Ratio	Lower	Upper
56	100		
55	91.8	17.3	77.3#

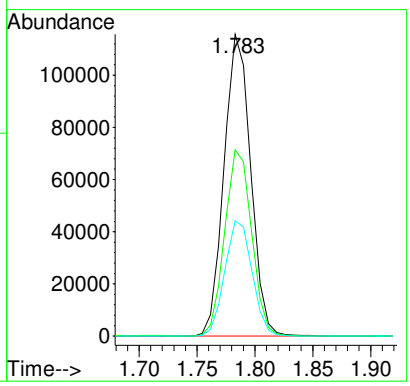


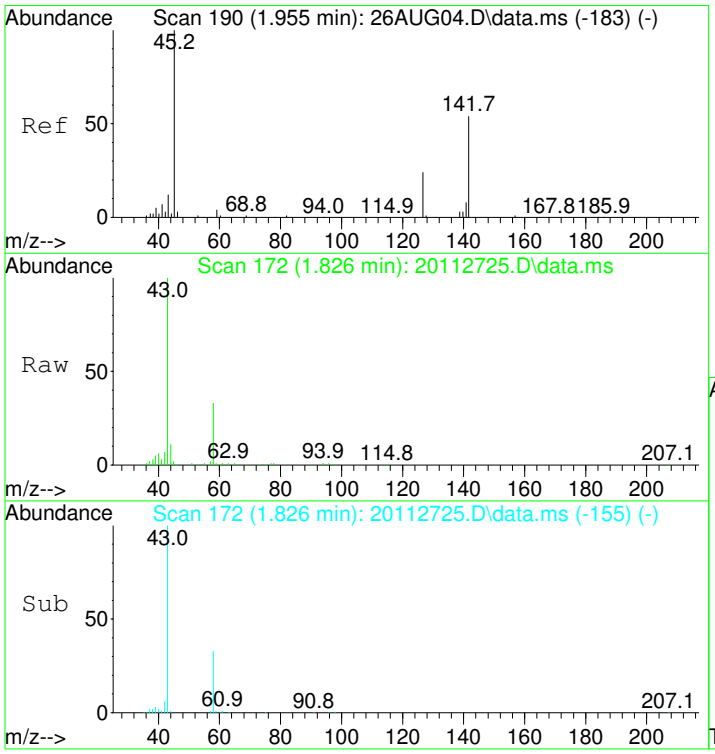


#13
1,1-Dichloroethene
Concen: 22.48 ug/L
RT: 1.783 min Scan# 166
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 61 Resp: 185163

Ion	Ratio	Lower	Upper
61	100		
96	62.2	32.6	92.6
98	39.1	10.4	70.4

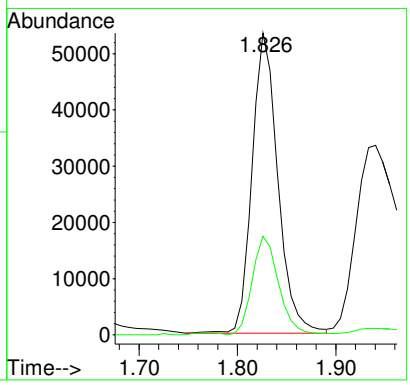


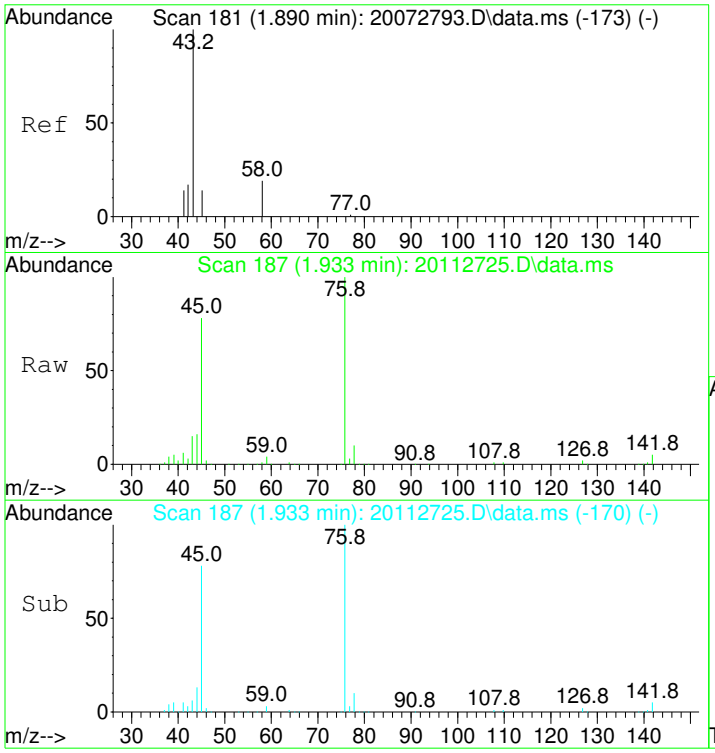


#16
Acetone
Concen: 26.43 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 97190

Ion	Ratio	Lower	Upper
43	100		
58	33.7	5.2	65.2

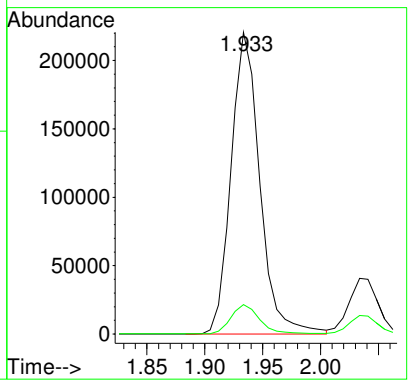


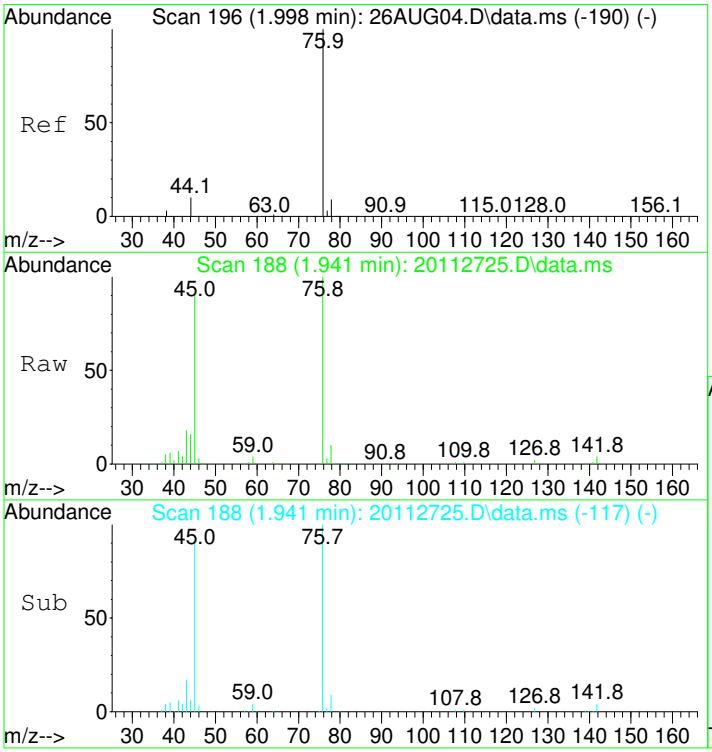


#18
Carbon disulfide
Concen: 23.14 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 76 Resp: 380429

Ion	Ratio	Lower	Upper
76	100		
78	9.6	0.0	39.5

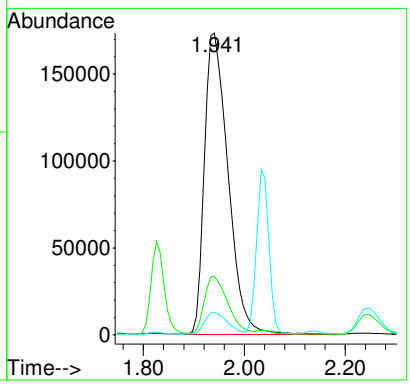


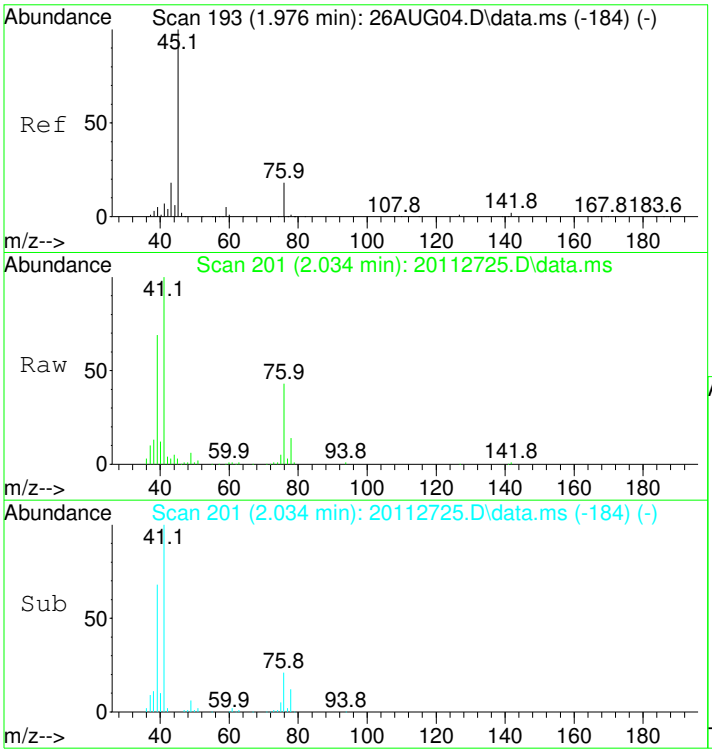


#19
2-Propanol
Concen: 450.66 ug/L
RT: 1.941 min Scan# 188
Delta R.T. 0.008 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 45 Resp: 566069

Ion	Ratio	Lower	Upper
45	100		
43	18.8	0.0	48.2
41	6.9	0.0	37.1

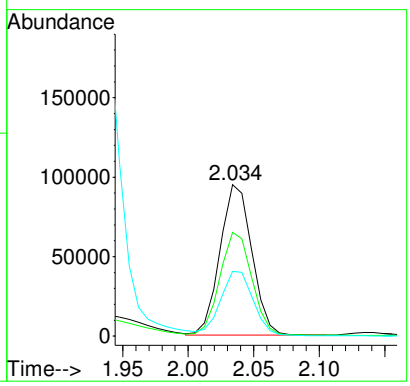


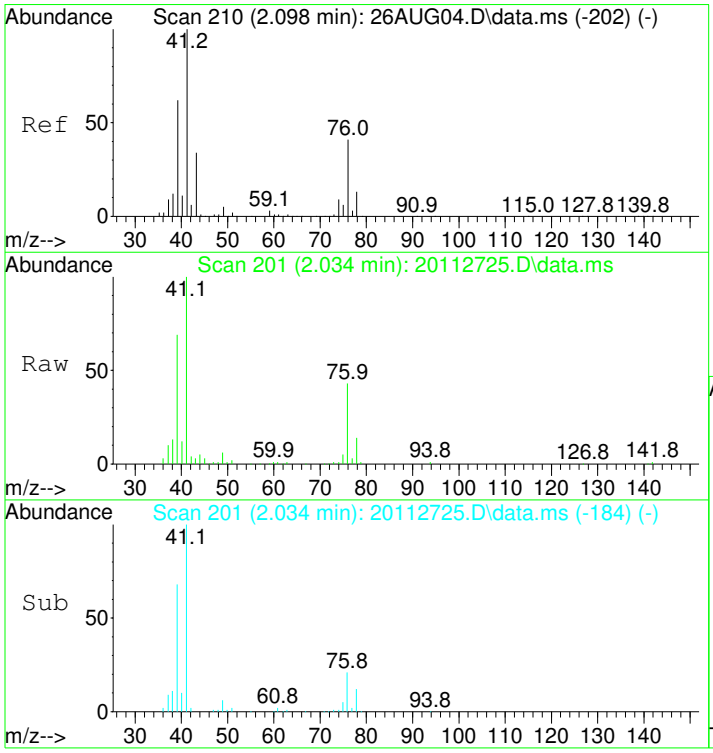


#20
Allyl chloride
Concen: 17.03 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 41 Resp: 160836

Ion	Ratio	Lower	Upper
41	100		
39	68.6	29.0	89.0
76	43.8	7.3	67.3

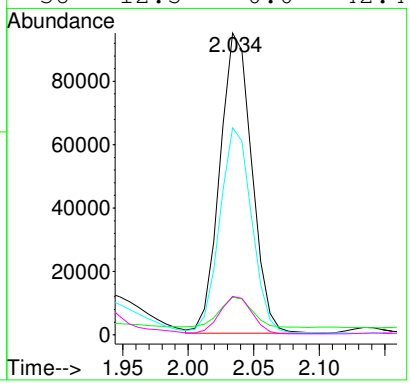


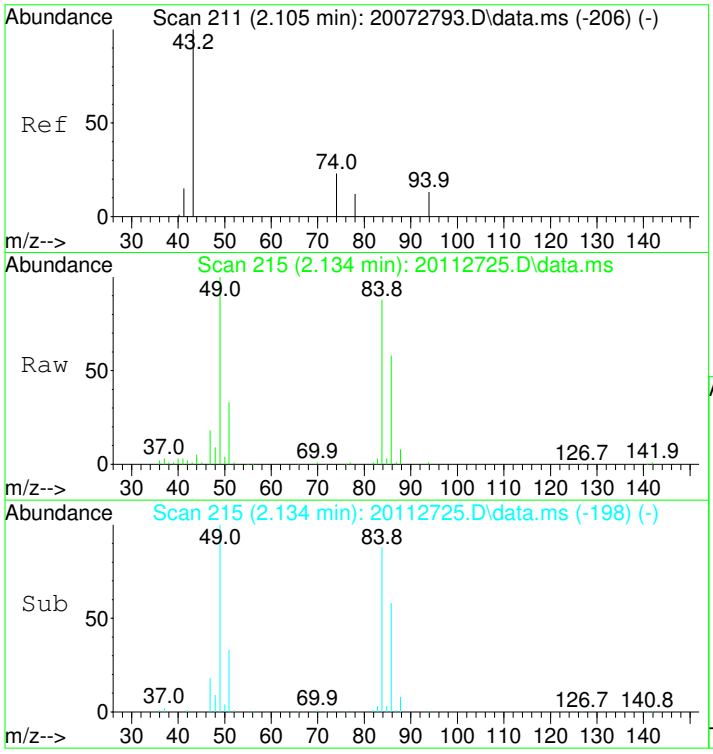


#22
Acetonitrile
Concen: 17.02 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 41 Resp: 160836

Ion	Ratio	Lower	Upper
41	100		
40	10.2	0.0	47.5
39	68.6	29.0	89.0
38	12.5	0.0	42.4

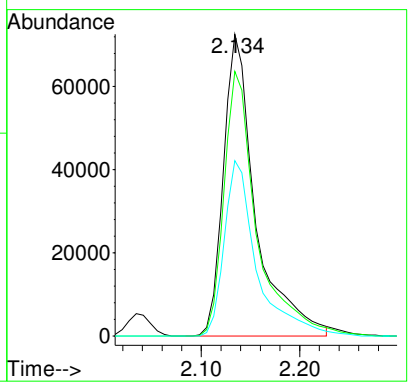


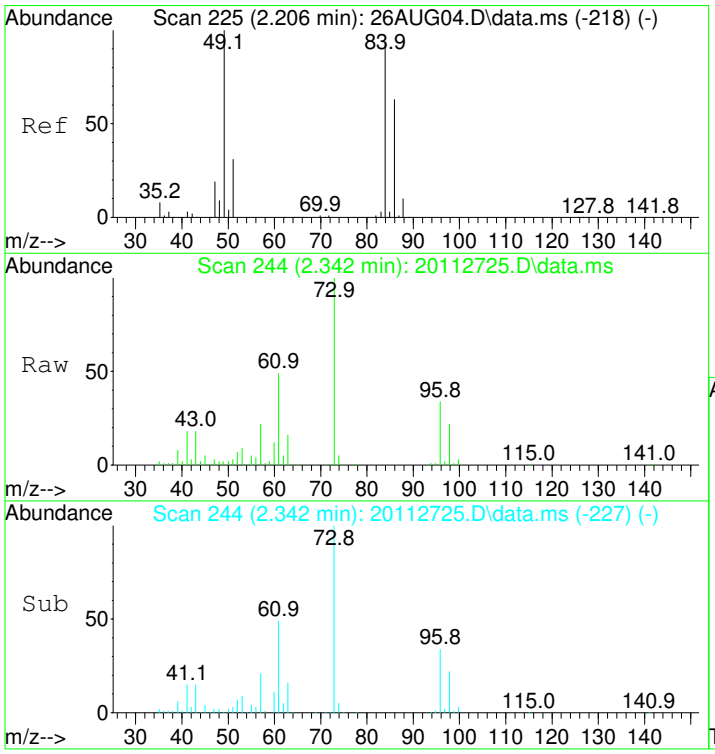


#23
Methylene chloride
Concen: 19.19 ug/L
RT: 2.134 min Scan# 215
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 49 Resp: 165871

Ion	Ratio	Lower	Upper
49	100		
84	88.5	57.4	117.4
86	58.1	27.7	87.7

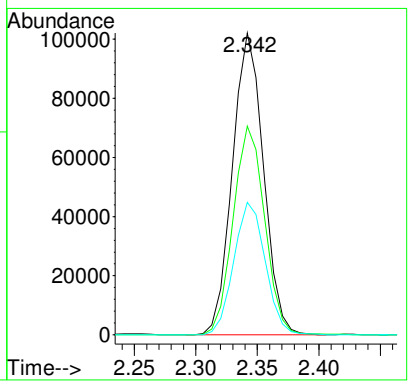


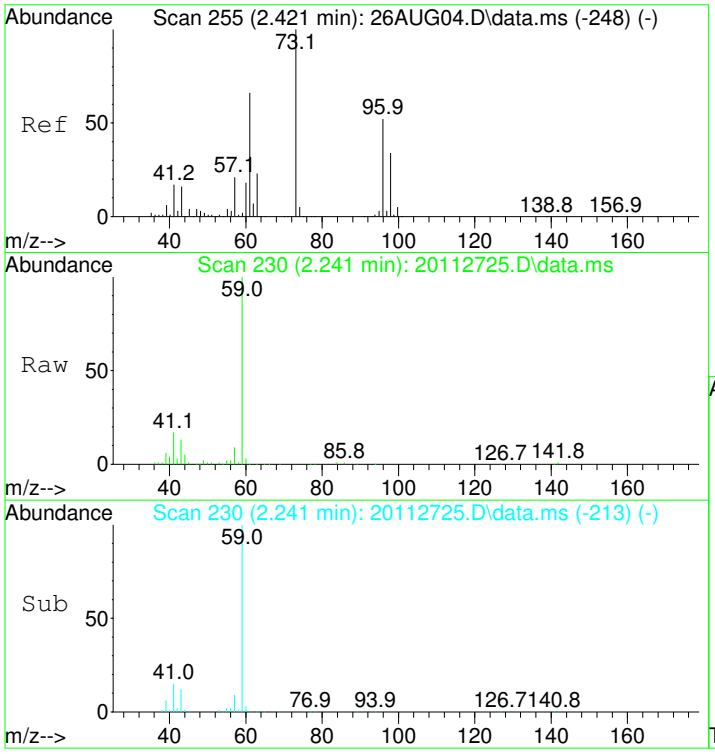


#24
trans-1,2-Dichloroethene
Concen: 22.10 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 61 Resp: 179052

Ion	Ratio	Lower	Upper
61	100		
96	70.3	42.3	102.3
98	44.5	16.1	76.1

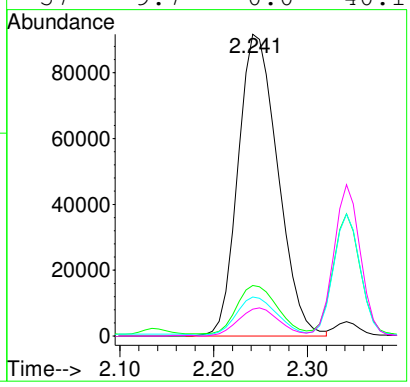


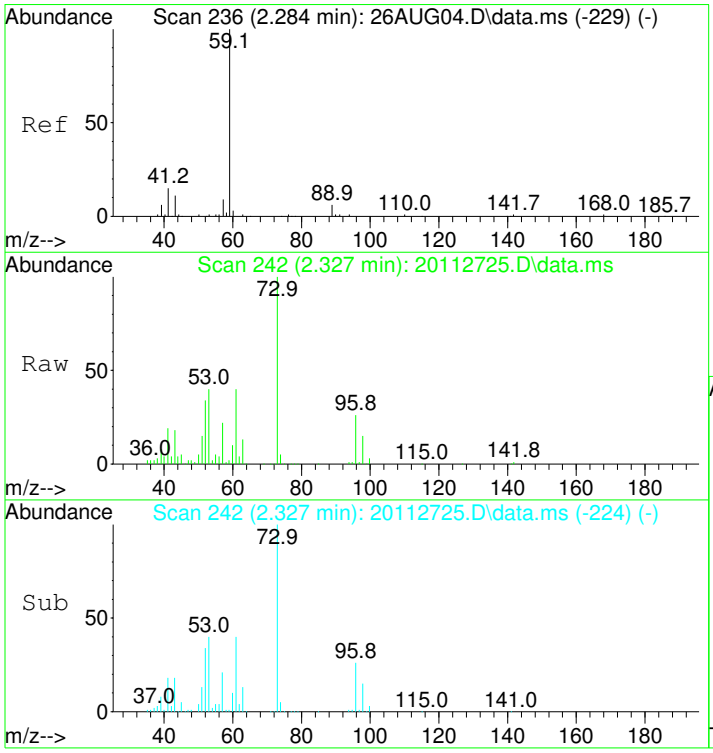


#25
t-Butanol
Concen: 108.64 ug/L
RT: 2.241 min Scan# 230
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 59 Resp: 271088

Ion	Ratio	Lower	Upper
59	100		
41	16.1	0.0	46.1
43	12.7	0.0	41.4
57	9.7	0.0	40.1

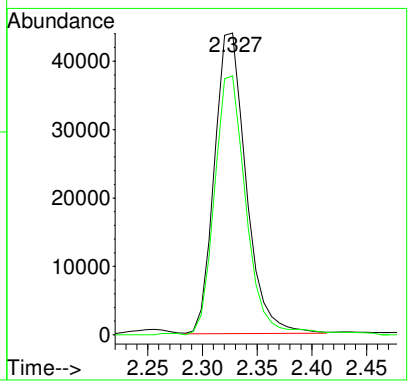


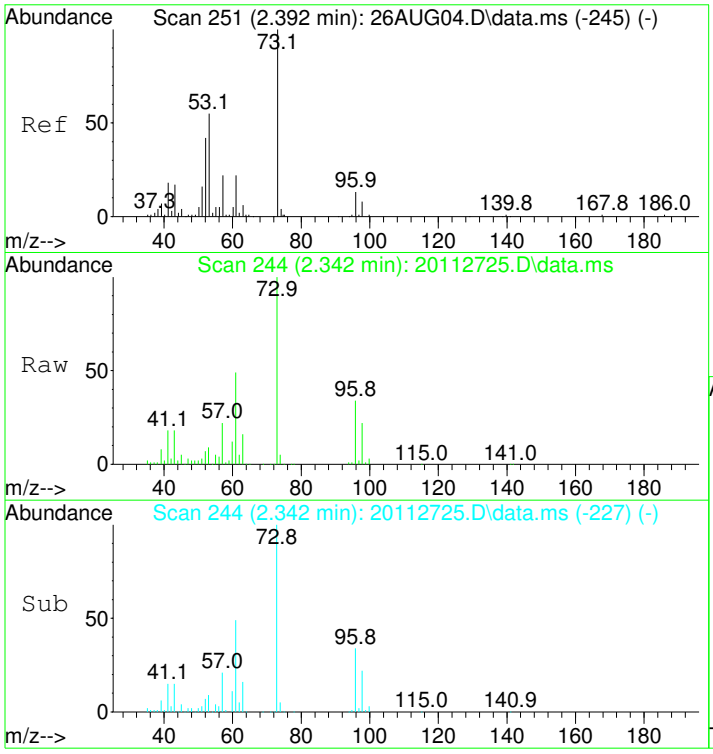


#26
Acrylonitrile
Concen: 20.74 ug/L
RT: 2.327 min Scan# 242
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 53 Resp: 88869

Ion	Ratio	Lower	Upper
53	100		
52	85.2	51.9	111.9

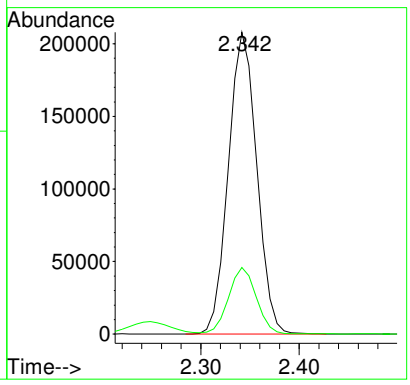


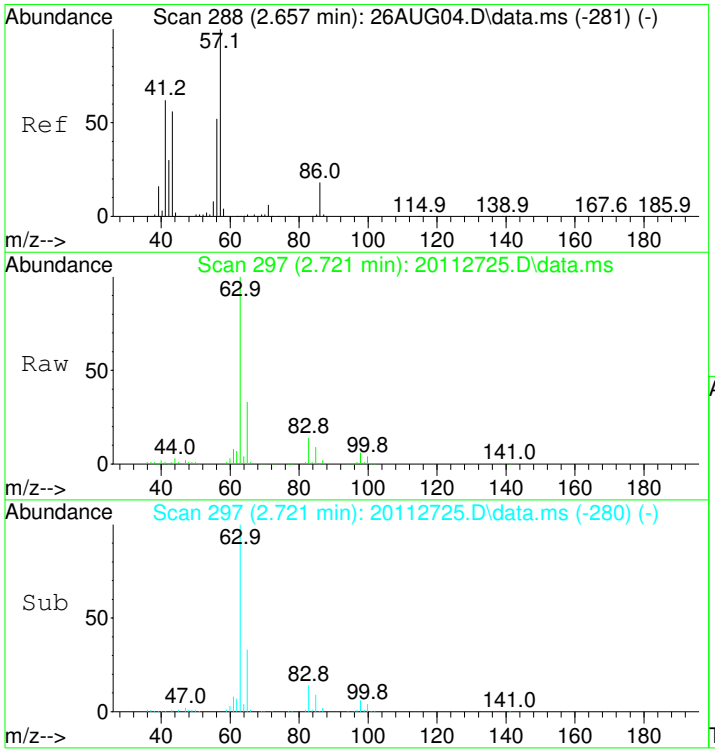


#27
Methyl tert-butyl ether
Concen: 22.65 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 73 Resp: 417509

Ion	Ratio	Lower	Upper
73	100		
57	21.4	0.0	52.4

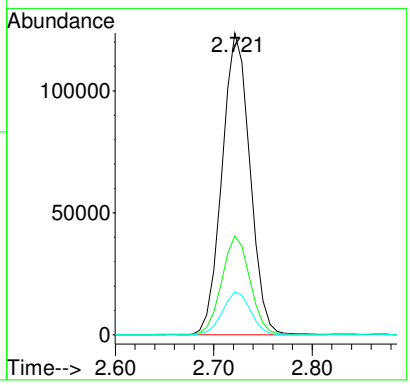


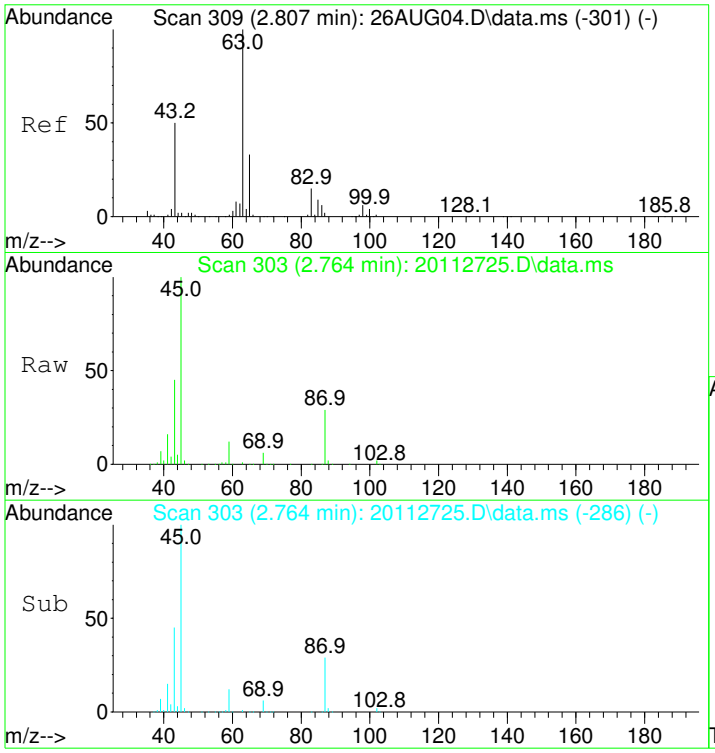


#29
1,1-Dichloroethane
Concen: 20.97 ug/L
RT: 2.721 min Scan# 297
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 63 Resp: 244104

Ion	Ratio	Lower	Upper
63	100		
65	32.9	2.8	62.8
83	14.3	0.0	43.7

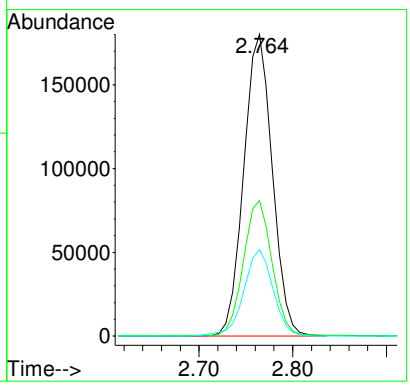


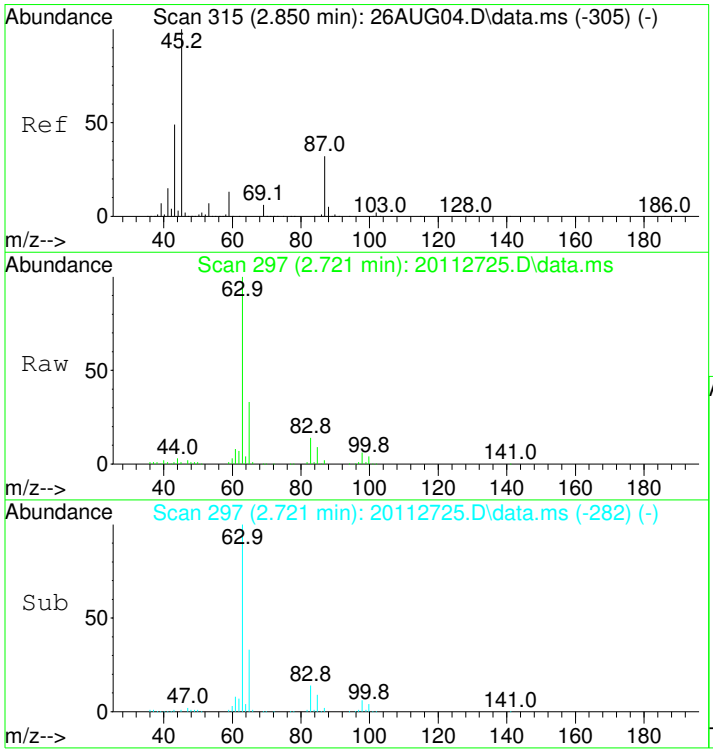


#30
Diisopropyl ether
Concen: 22.52 ug/L
RT: 2.764 min Scan# 303
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 45 Resp: 384762

Ion	Ratio	Lower	Upper
45	100		
43	44.6	79.6	147.8#
87	29.2	22.1	41.1

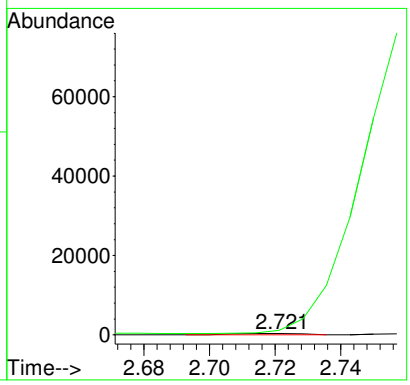


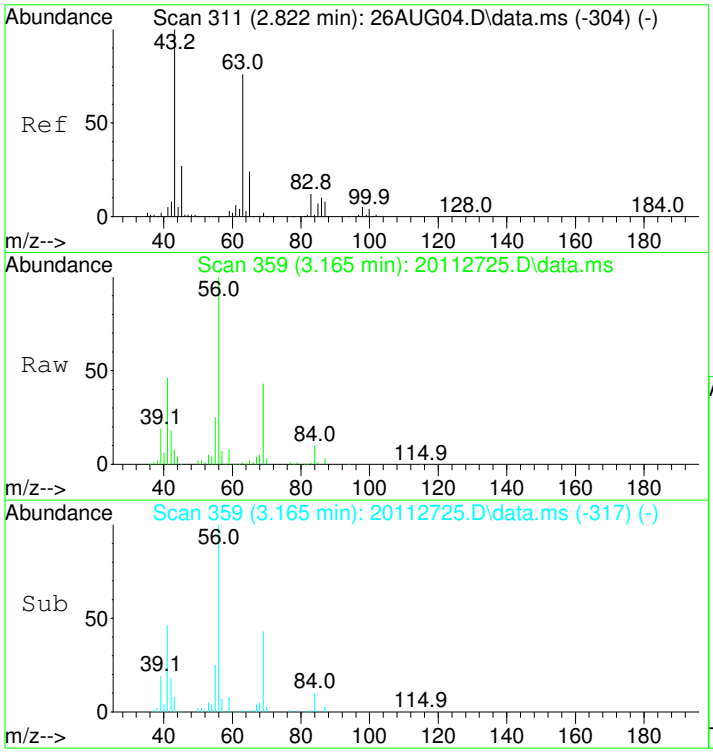


#31
Vinyl acetate
Concen: 0.27 ug/L
RT: 2.721 min Scan# 297
Delta R.T. -0.015 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 86 Resp: 514

Ion	Ratio	Lower	Upper
86	100		
43	0.0	1480.0	1540.0#

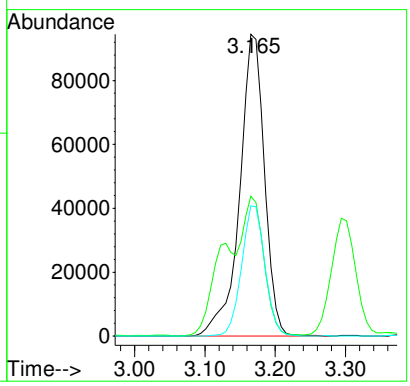


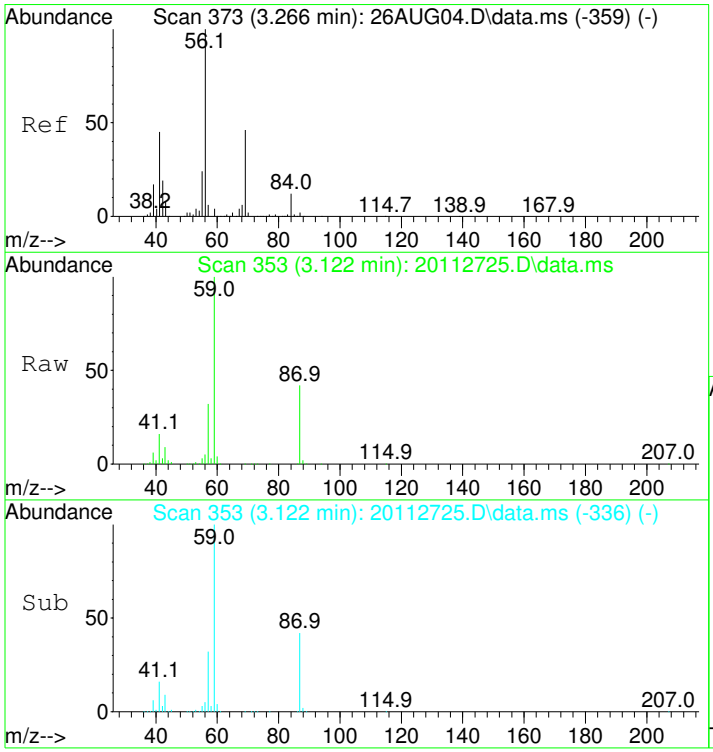


#32
Methylcyclopentane
Concen: 18.21 ug/L
RT: 3.165 min Scan# 359
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 56 Resp: 232585

Ion	Ratio	Lower	Upper
56	100		
41	40.3	36.7	96.7
69	40.7	11.3	71.3

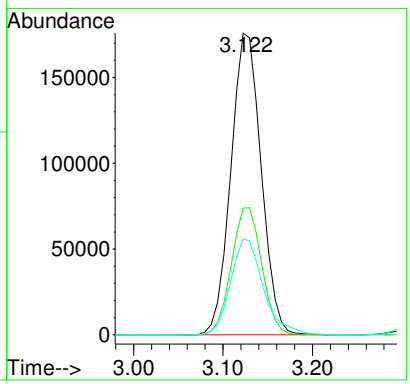


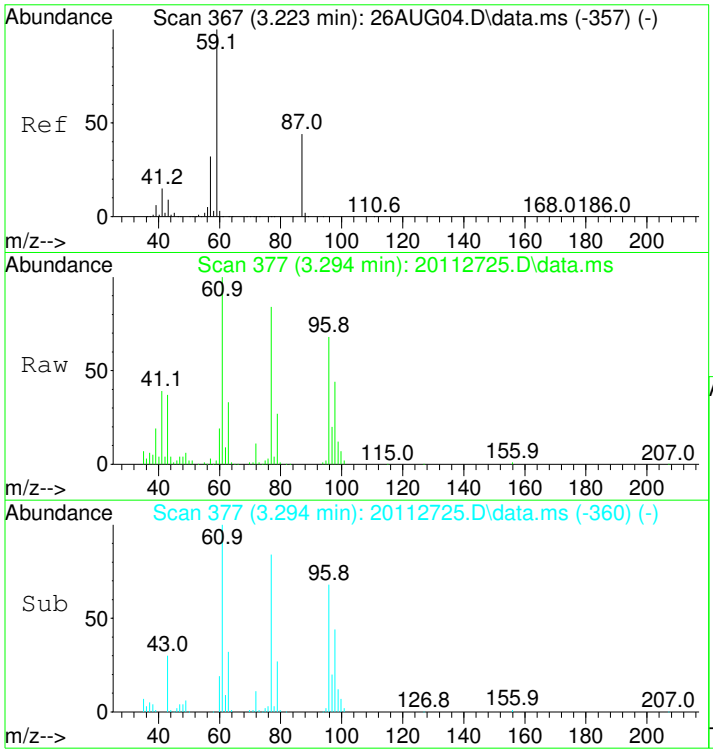


#33
Ethyl tert butyl ether
Concen: 21.30 ug/L
RT: 3.122 min Scan# 353
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 59 Resp: 414844

Ion	Ratio	Lower	Upper
59	100		
87	42.2	12.5	72.5
57	34.4	4.4	64.4

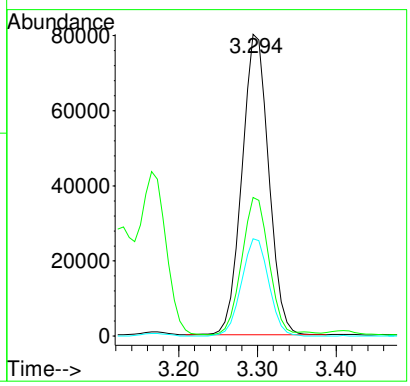


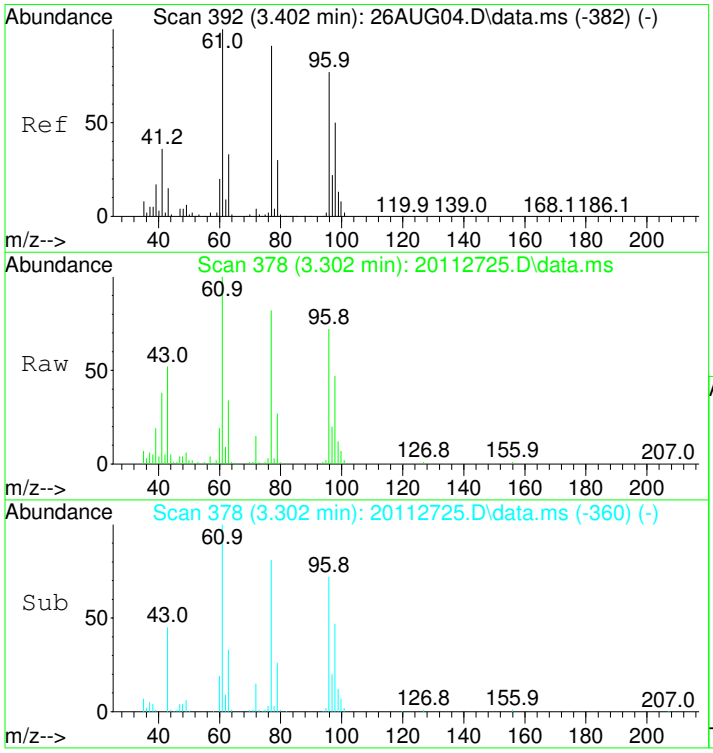


#34
2,2-Dichloropropane
Concen: 19.67 ug/L
RT: 3.294 min Scan# 377
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 77 Resp: 188896

Ion	Ratio	Lower	Upper
77	100		
41	46.4	16.4	76.4
79	33.1	2.4	62.4

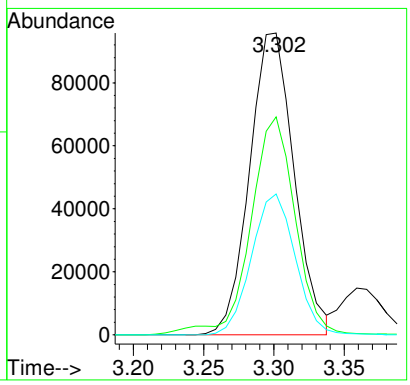


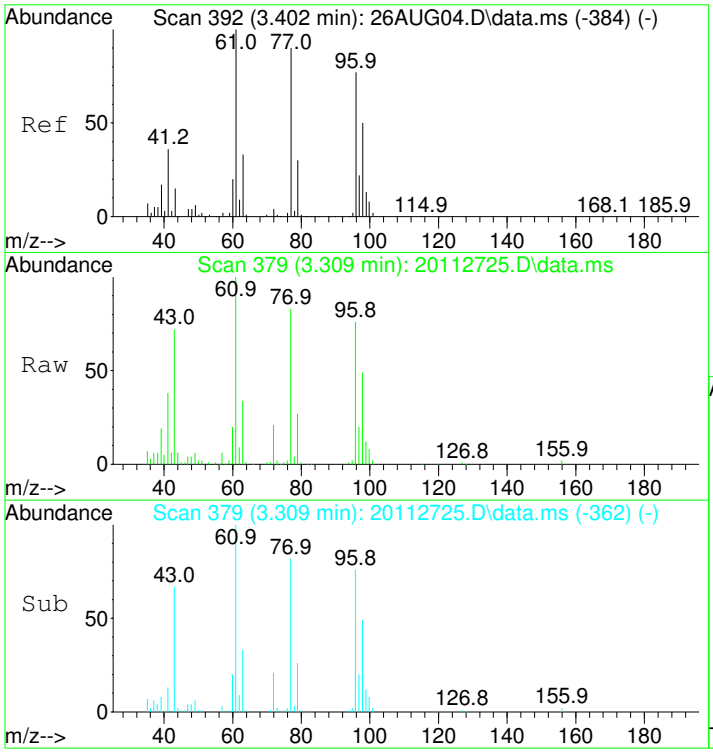


#35
cis-1,2-Dichloroethene
Concen: 21.54 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 61 Resp: 211381

Ion	Ratio	Lower	Upper
61	100		
96	72.4	39.5	99.5
98	45.9	14.9	74.9

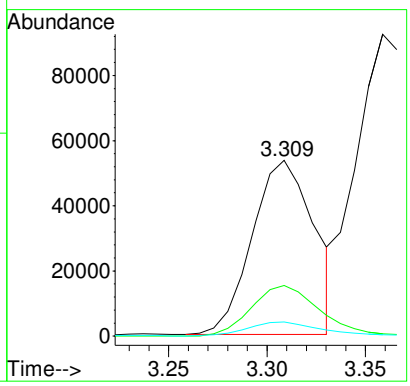


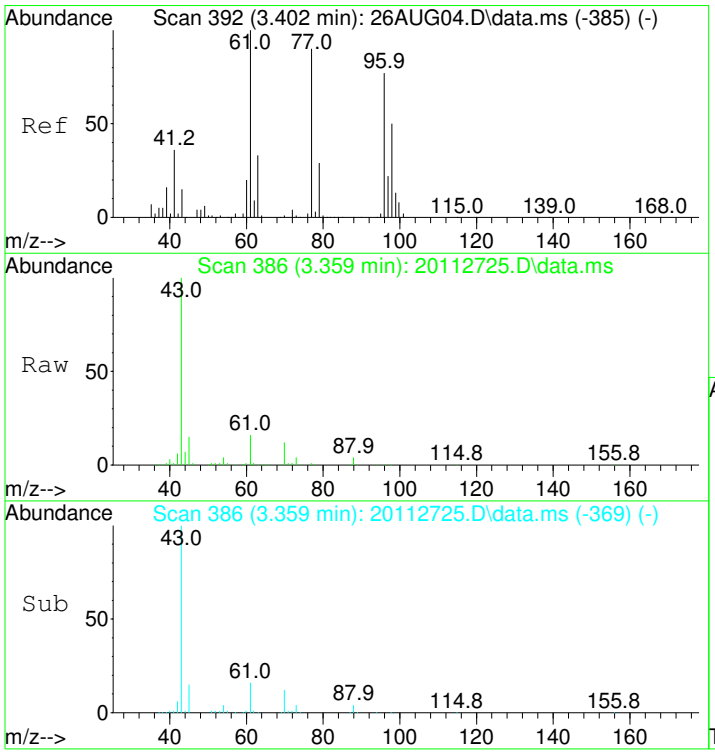


#36
2-Butanone
Concen: 20.71 ug/L
RT: 3.309 min Scan# 379
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 117323

Ion	Ratio	Lower	Upper
43	100		
72	32.2	11.0	51.0
57	9.8	0.0	28.7

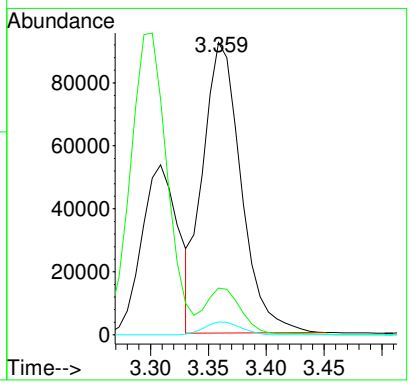


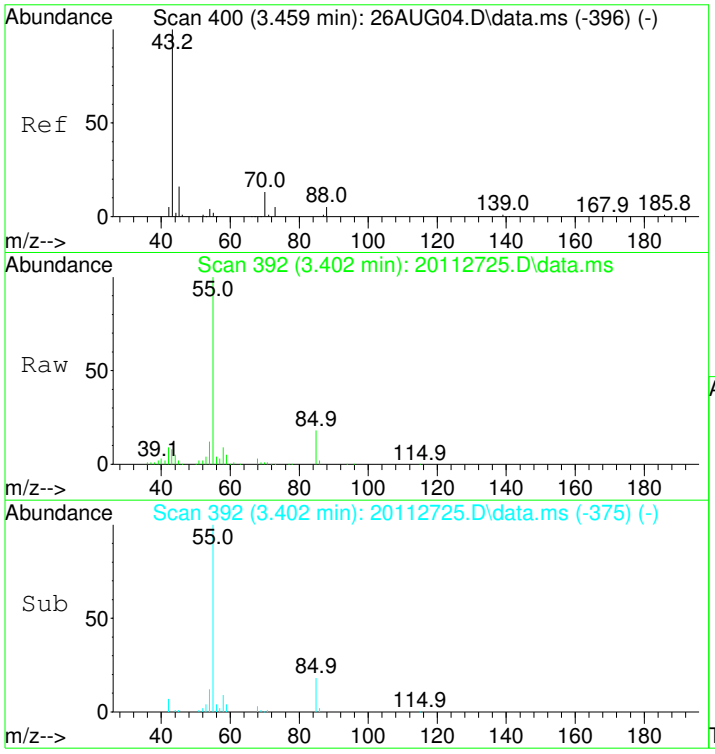


#37
Ethyl Acetate
Concen: 19.36 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 212470

Ion	Ratio	Lower	Upper
43	100		
61	14.0	0.0	34.9
88	4.3	0.0	24.3

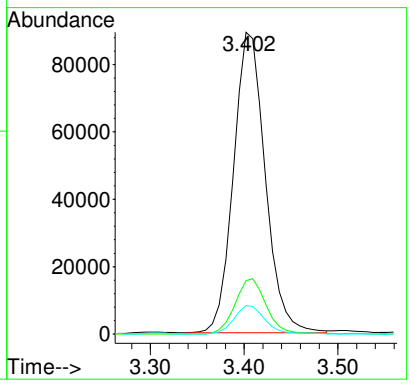


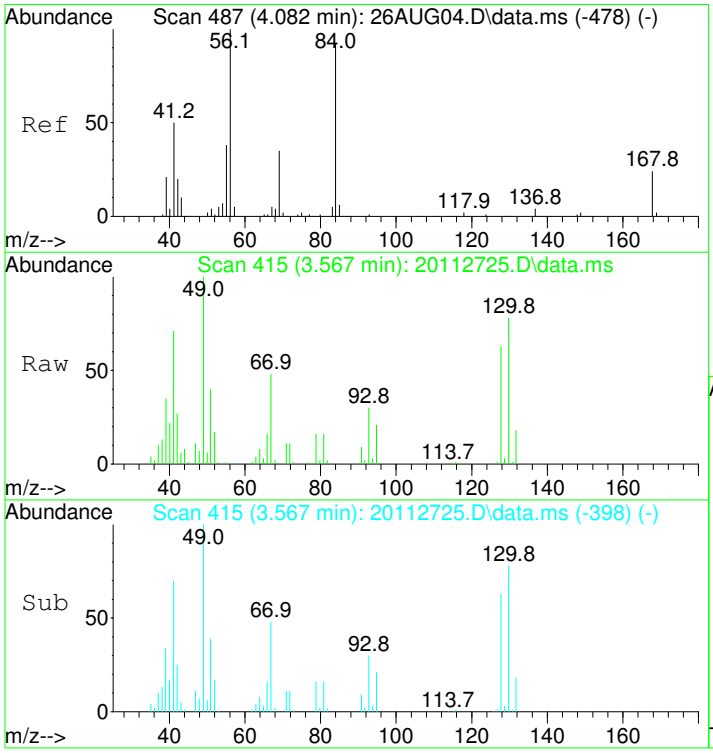


#38
Methyl acrylate
Concen: 21.49 ug/L
RT: 3.402 min Scan# 392
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 55 Resp: 210262

Ion	Ratio	Lower	Upper
55	100		
85	18.2	14.4	21.6
58	9.4	7.4	11.2

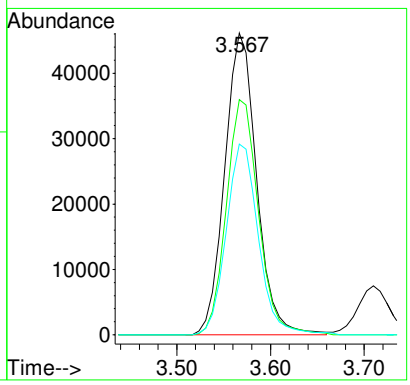


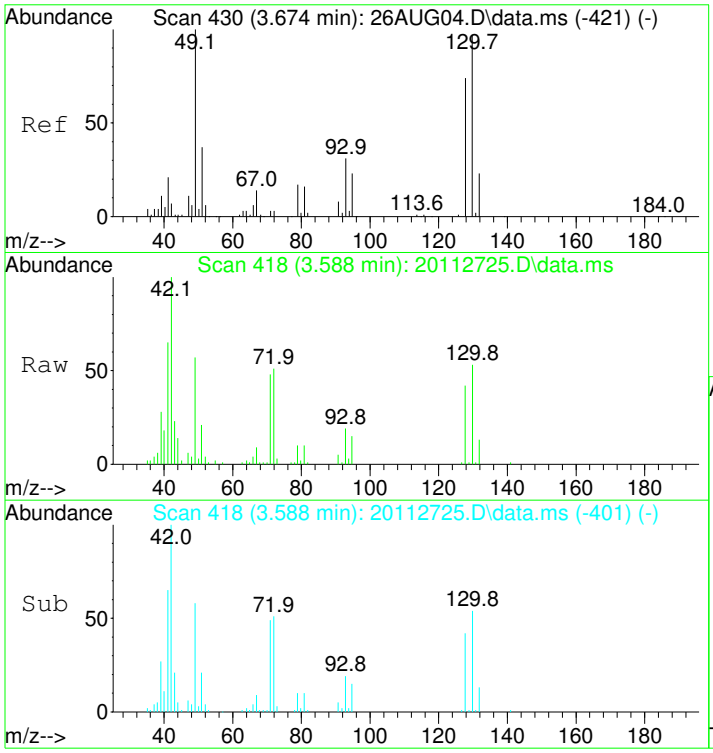


#40
Bromochloromethane
Concen: 21.60 ug/L
RT: 3.567 min Scan# 415
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 49 Resp: 109890

Ion	Ratio	Lower	Upper
49	100		
130	78.6	60.4	100.4
128	63.9	43.3	83.3

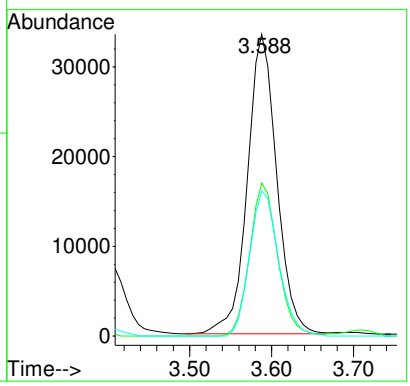


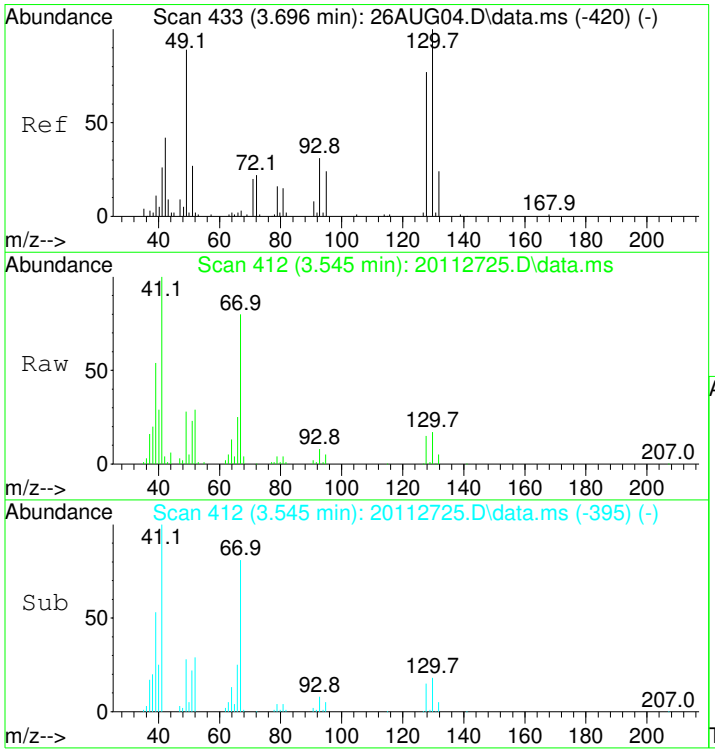


#41
Tetrahydrofuran
Concen: 19.97 ug/L
RT: 3.588 min Scan# 418
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 42 Resp: 83153

Ion	Ratio	Lower	Upper
42	100		
72	48.7	27.6	67.6
71	47.7	26.5	66.5

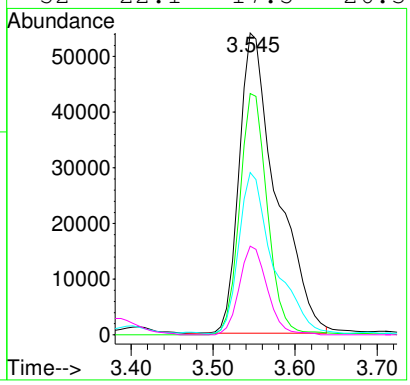


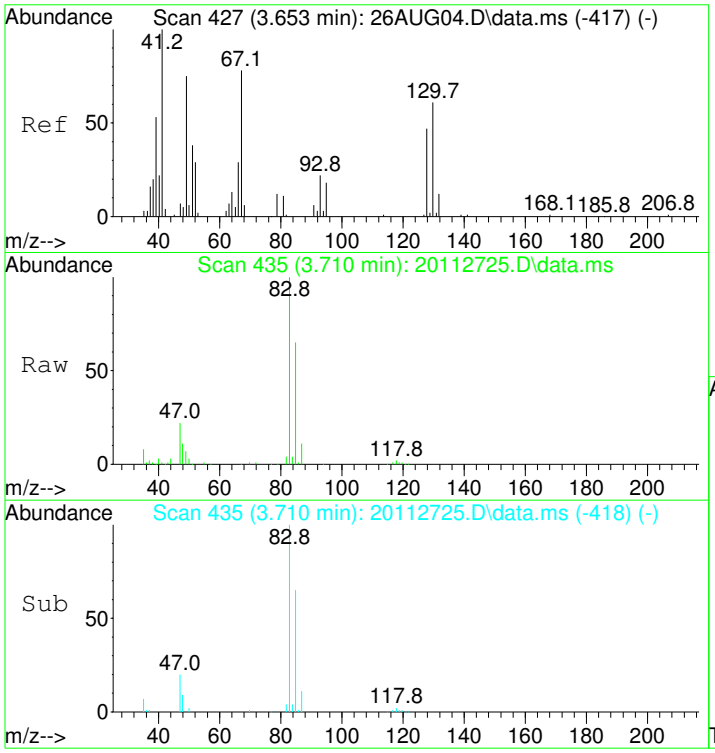


#42
Methacrylonitrile
Concen: 20.76 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 41 Resp: 170791

Ion	Ratio	Lower	Upper
41	100		
67	59.7	47.8	71.6
39	49.3	38.6	57.8
52	22.1	17.5	26.3

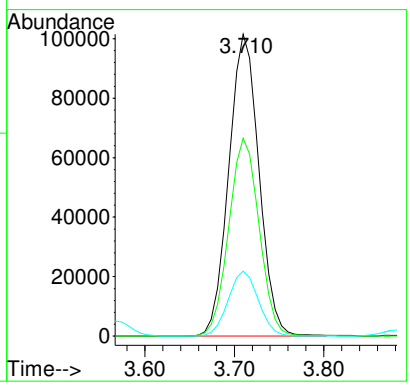


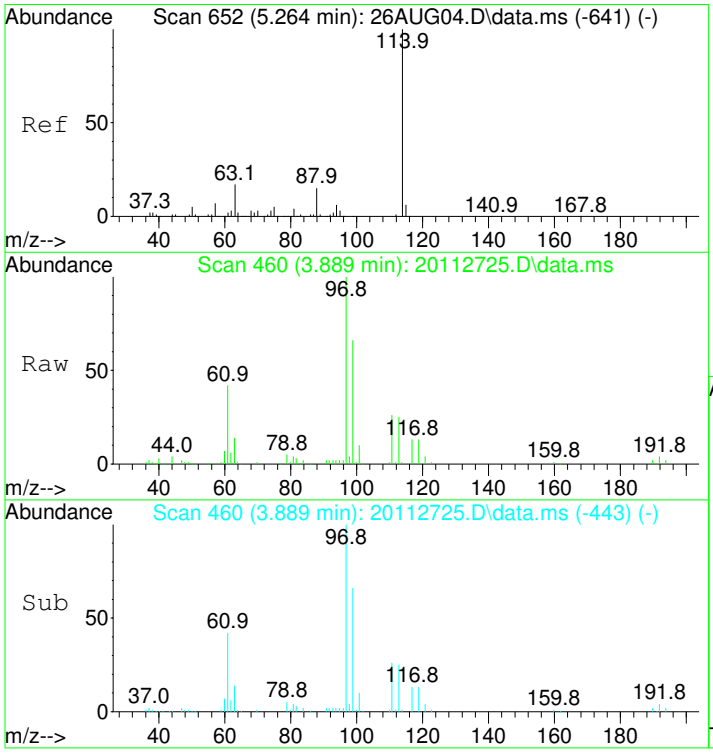


#43
Chloroform
Concen: 20.04 ug/L
RT: 3.710 min Scan# 435
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 83 Resp: 238510

Ion	Ratio	Lower	Upper
83	100		
85	65.8	46.1	86.1
47	21.4	1.2	41.2

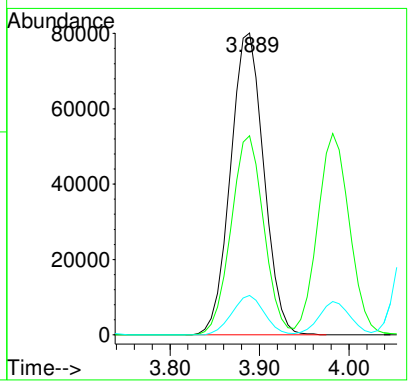


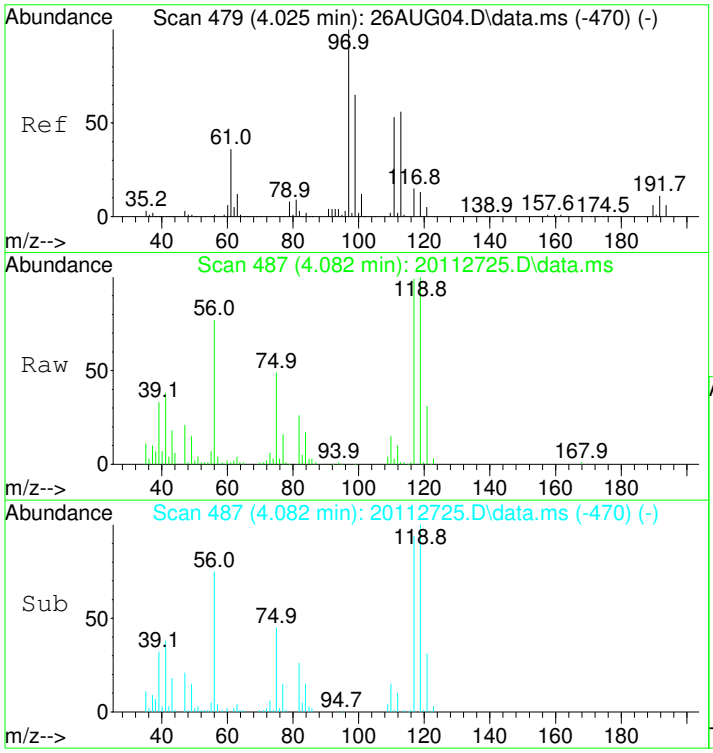


#46
1,1,1-Trichloroethane
Concen: 21.70 ug/L
RT: 3.889 min Scan# 460
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 97 Resp: 207185

Ion	Ratio	Lower	Upper
97	100		
99	65.0	45.8	85.8
117	12.8	0.0	33.4

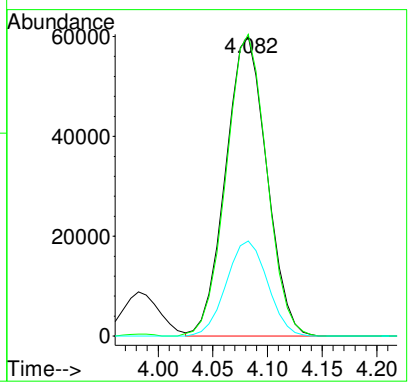


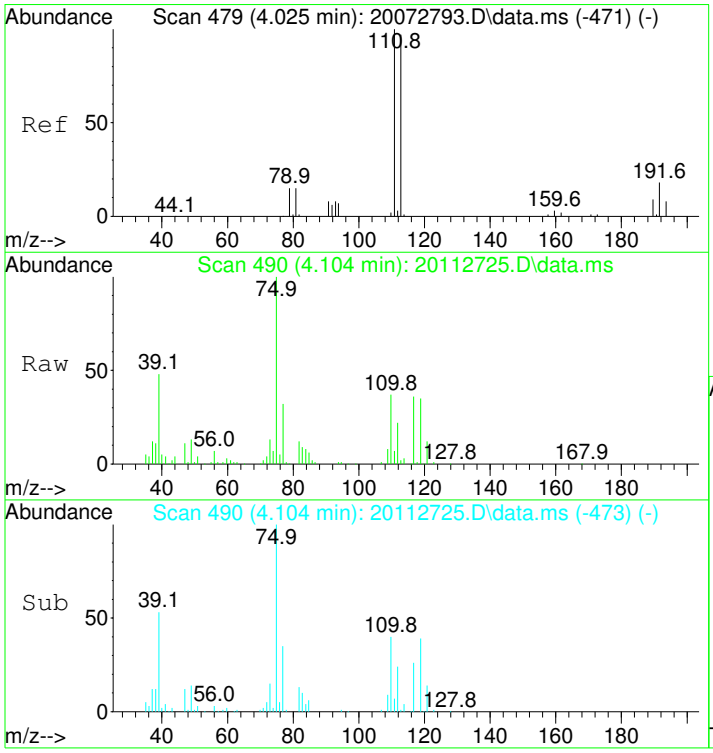


#48
Carbon tetrachloride
Concen: 19.19 ug/L
RT: 4.082 min Scan# 487
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:117 Resp: 157175

Ion	Ratio	Lower	Upper
117	100		
119	98.6	78.7	118.7
121	31.8	11.8	51.8

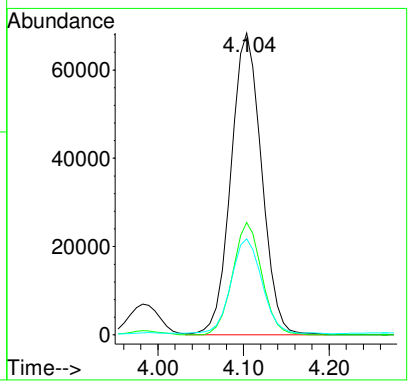


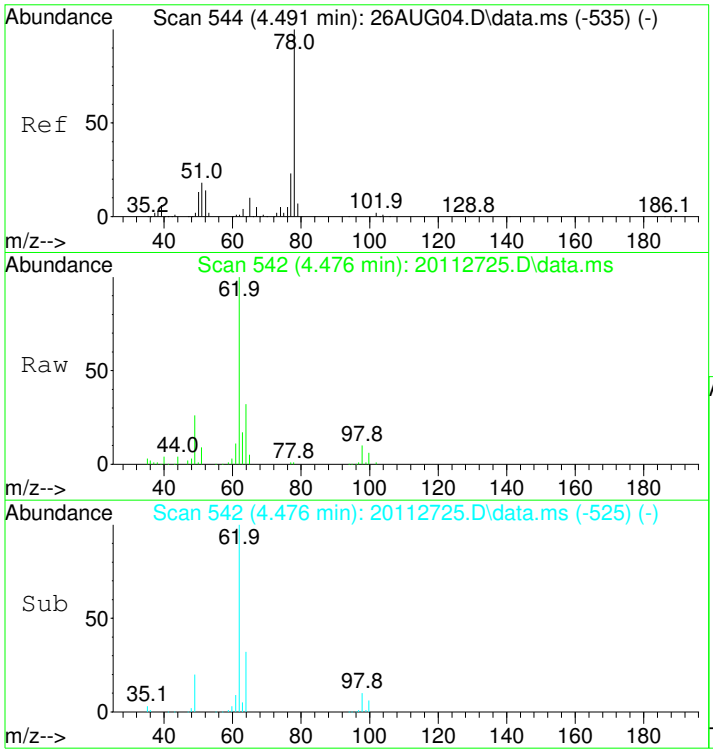


#49
1,1-Dichloropropene
Concen: 21.10 ug/L
RT: 4.104 min Scan# 490
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 75 Resp: 170307

Ion	Ratio	Lower	Upper
75	100		
110	35.2	16.0	56.0
77	31.7	11.0	51.0

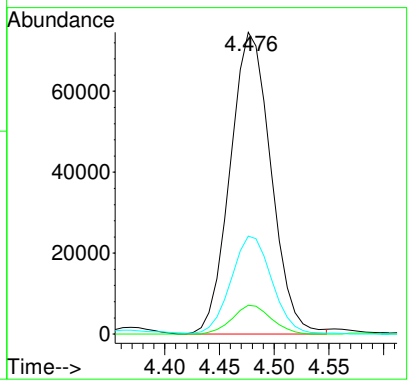


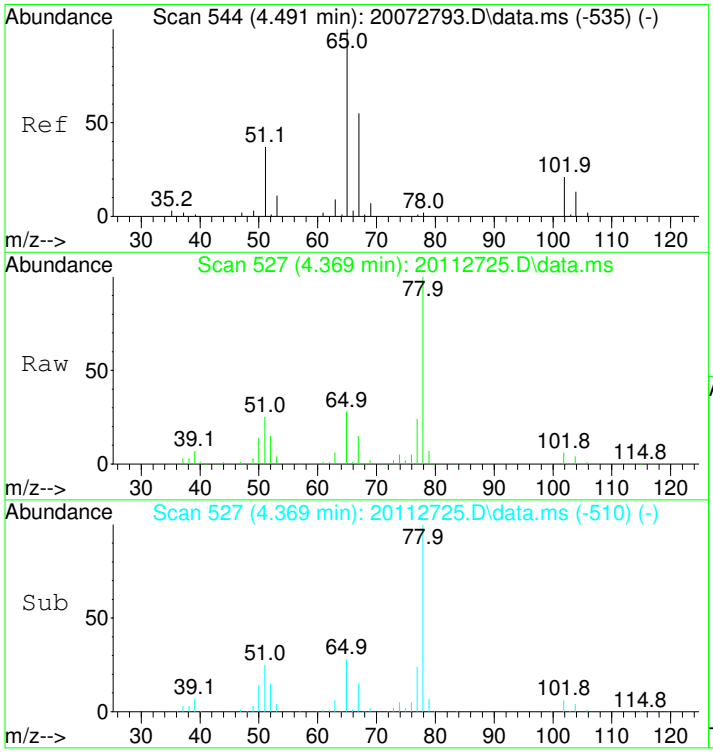


#51
1,2-Dichloroethane
Concen: 21.65 ug/L
RT: 4.476 min Scan# 542
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 62 Resp: 193826

Ion	Ratio	Lower	Upper
62	100		
98	9.1	0.0	29.0
64	32.7	13.9	53.9

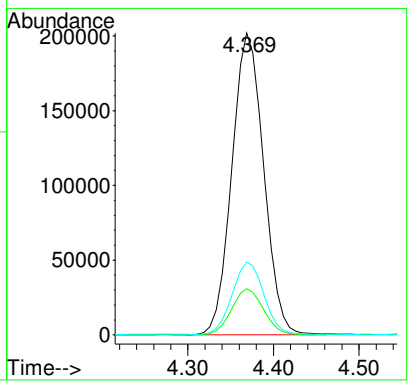


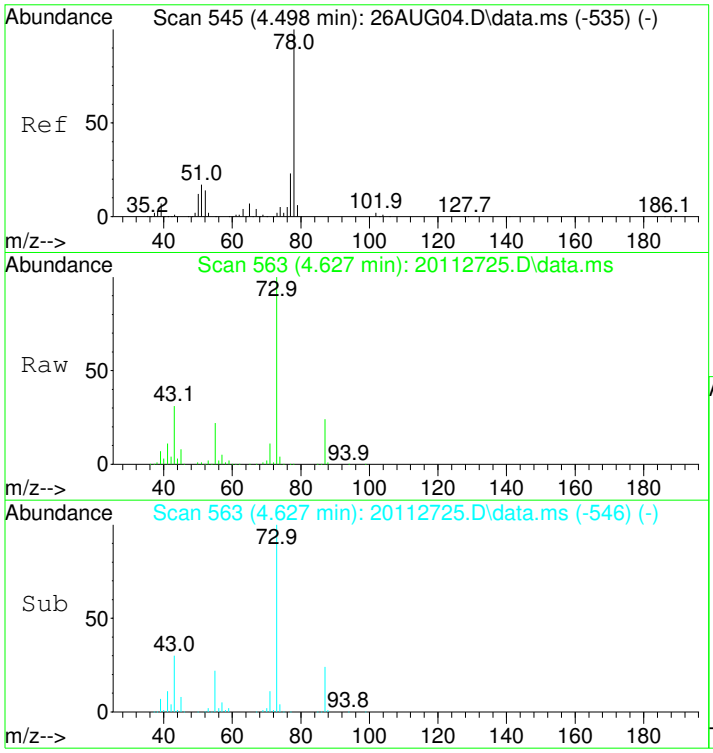


#52
Benzene
Concen: 22.32 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 78 Resp: 522154

Ion	Ratio	Lower	Upper
78	100		
52	15.4	0.0	35.8
77	23.8	3.7	43.7

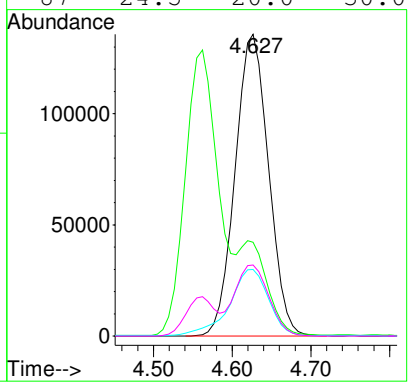


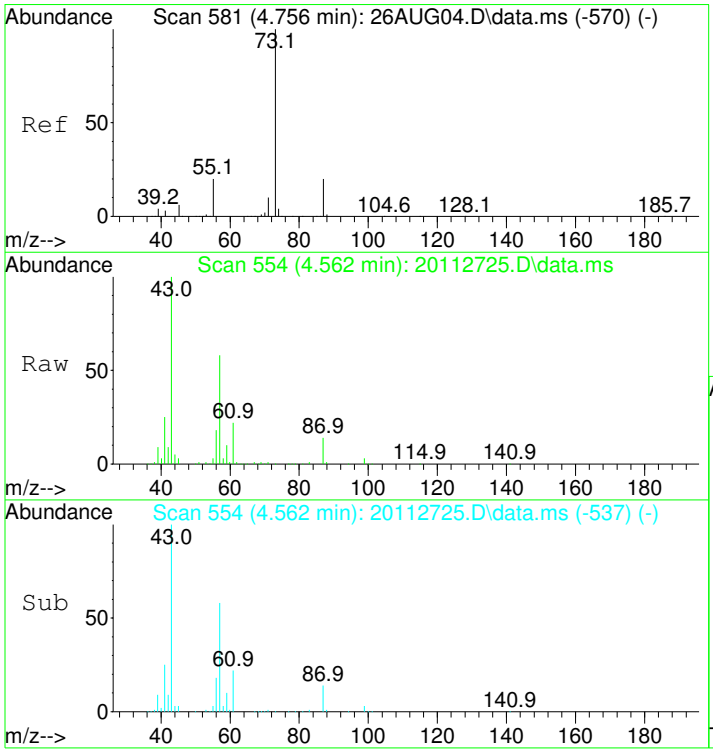


#53
Tertiaryamylmethylether
Concen: 22.60 ug/L
RT: 4.627 min Scan# 563
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 73 Resp: 401387

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	25.5	21.0	31.6
87	24.5	20.0	30.0

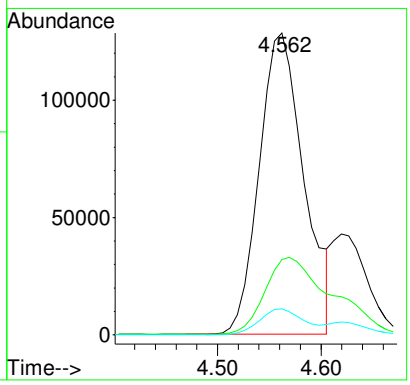


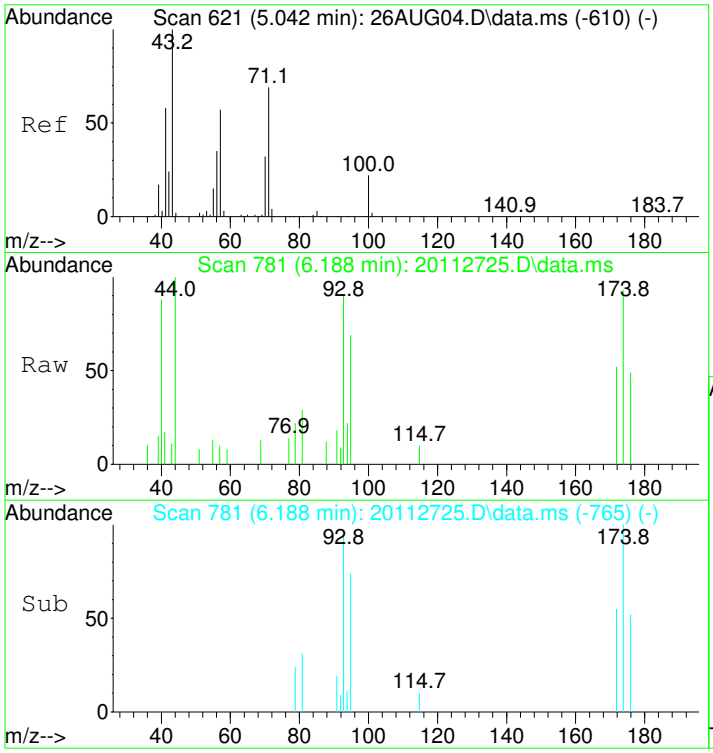


#54
Isobutyl Alcohol
Concen: 21.04 ug/L
RT: 4.562 min Scan# 554
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 384111

Ion	Ratio	Lower	Upper
43	100		
41	38.3	30.7	46.1
42	8.6	6.4	9.6

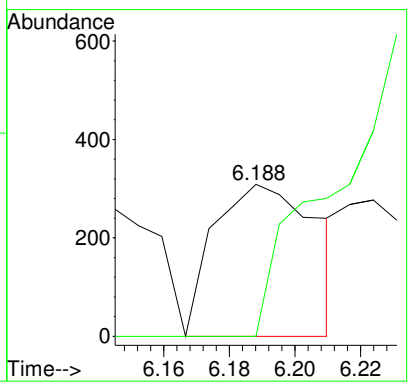


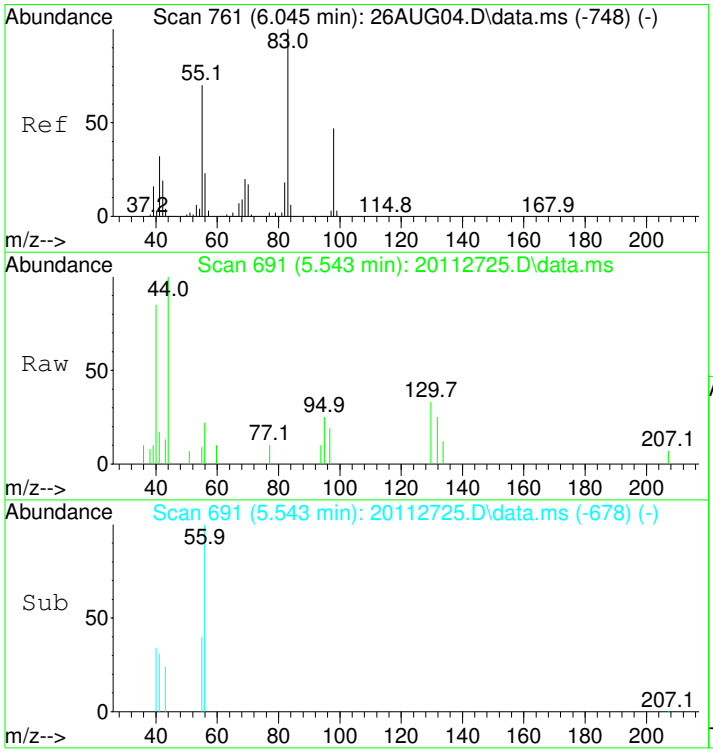


#56
1,4-Dioxane
Concen: Below Cal
RT: 6.188 min Scan# 781
Delta R.T. -0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 88 Resp: 671

Ion	Ratio	Lower	Upper
88	100		
58	0.0	50.7	76.1#

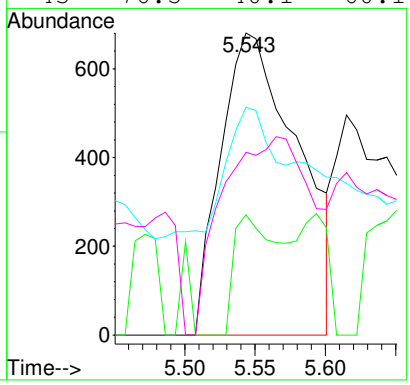


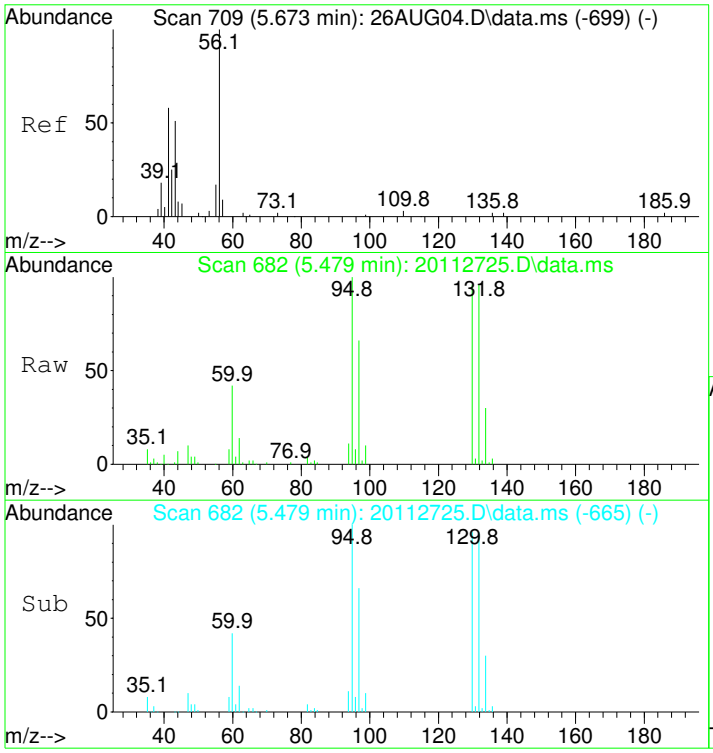


#58
n-Butanol
Concen: 6.16 ug/L
RT: 5.543 min Scan# 691
Delta R.T. -0.029 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 56 Resp: 2601

Ion	Ratio	Lower	Upper
56	100		
55	22.8	15.4	23.2
41	43.8	50.9	76.3#
43	76.5	40.1	60.1#

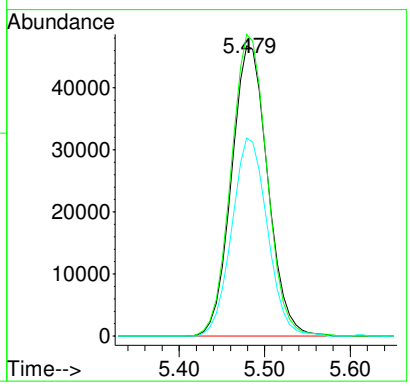


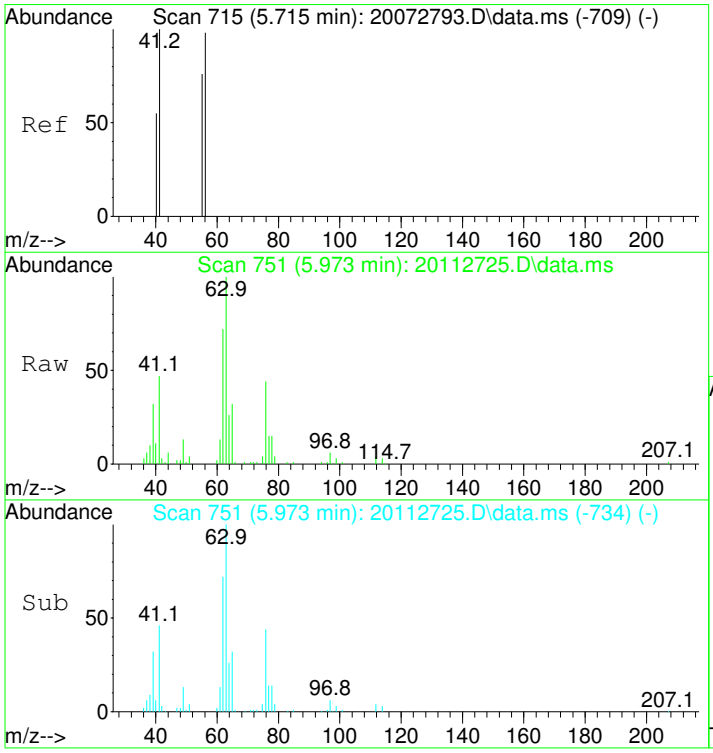


#59
Trichloroethene
Concen: 21.04 ug/L
RT: 5.479 min Scan# 682
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:130 Resp: 137663

Ion	Ratio	Lower	Upper
130	100		
95	102.7	82.7	122.7
97	66.9	47.6	87.6

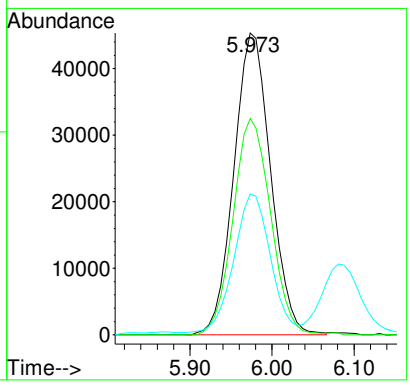


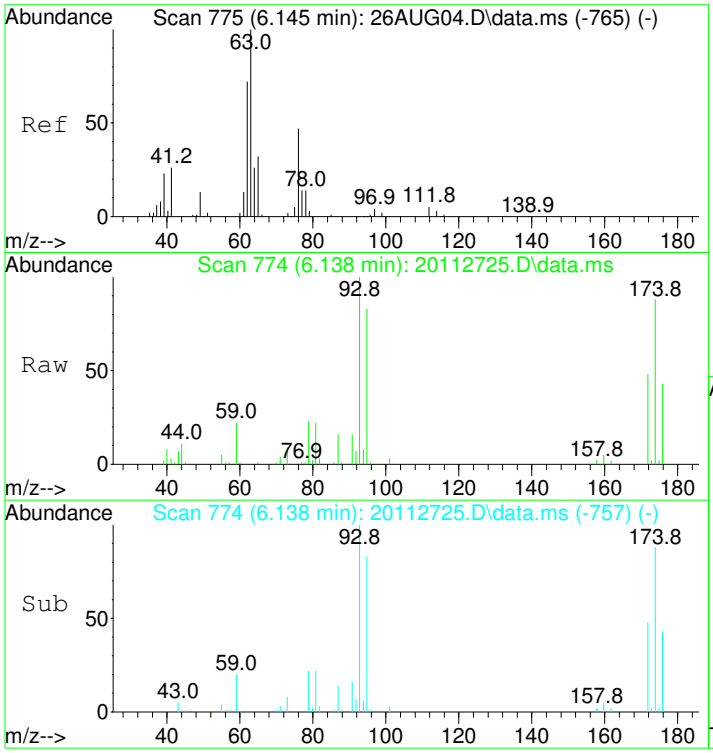


#60
1,2-Dichloropropane
Concen: 21.53 ug/L
RT: 5.973 min Scan# 751
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 63 Resp: 141680

Ion	Ratio	Lower	Upper
63	100		
62	72.9	51.5	91.5
41	45.4	26.1	66.1

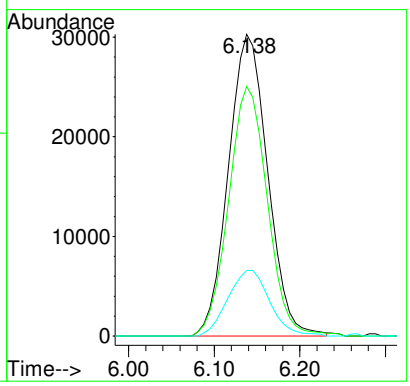


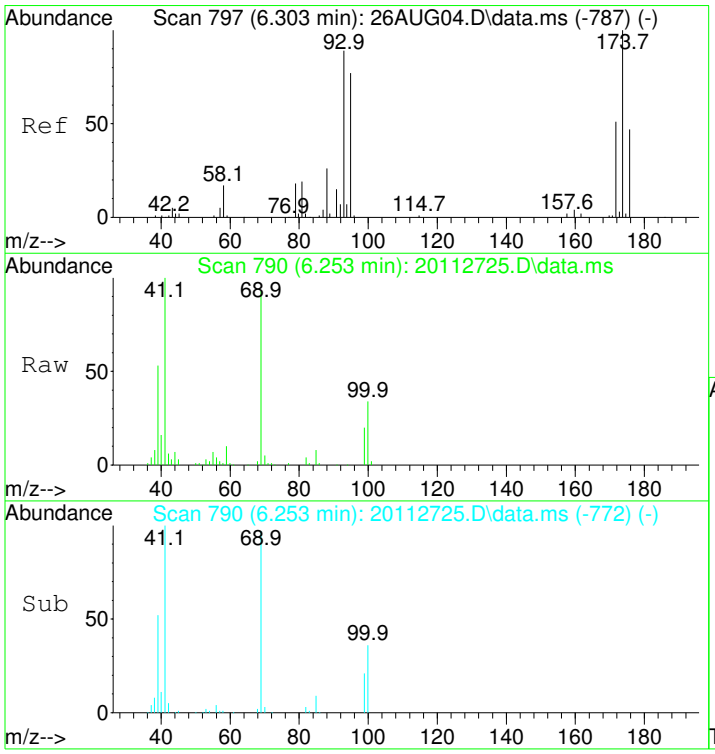


#61
Dibromomethane
Concen: 20.78 ug/L
RT: 6.138 min Scan# 774
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 93 Resp: 96593

Ion	Ratio	Lower	Upper
93	100		
95	81.5	63.0	103.0
81	23.2	3.4	43.4

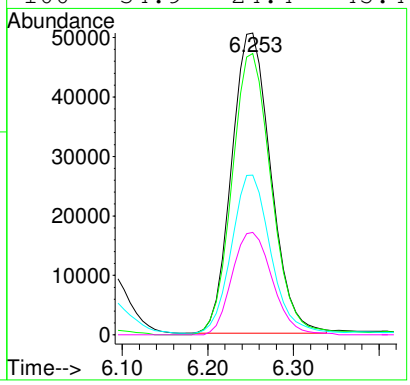


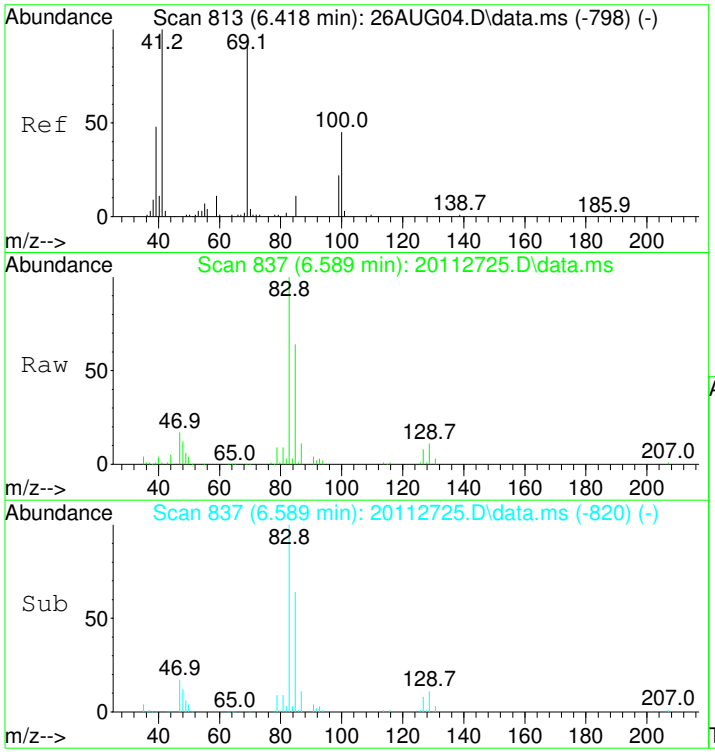


#62
Methyl methacrylate
Concen: 21.30 ug/L
RT: 6.253 min Scan# 790
Delta R.T. 0.008 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 41 Resp: 161311

Ion	Ratio	Lower	Upper
41	100		
69	93.8	72.2	108.4
39	52.1	41.1	61.7
100	34.9	24.4	45.4

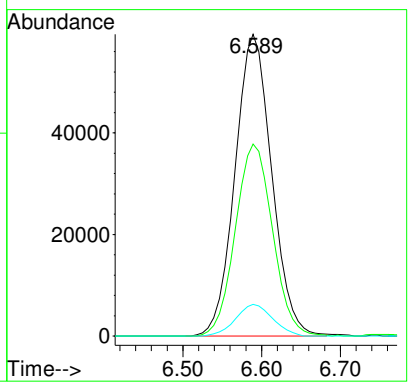


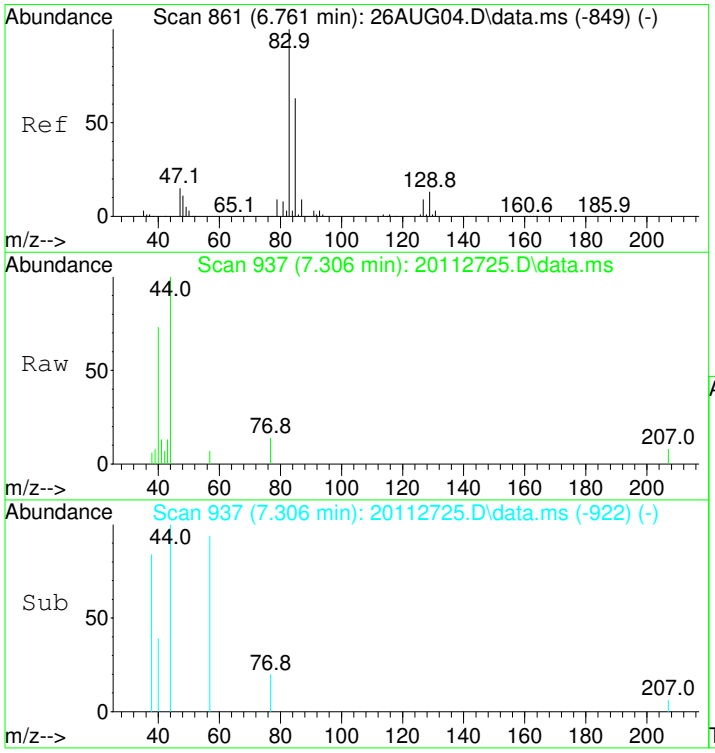


#63
Bromodichloromethane
Concen: 21.62 ug/L
RT: 6.589 min Scan# 837
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 83 Resp: 192716

Ion	Ratio	Lower	Upper
83	100		
85	64.5	44.3	84.3
129	10.6	0.0	31.0

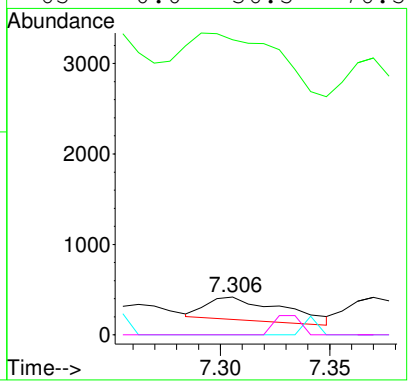


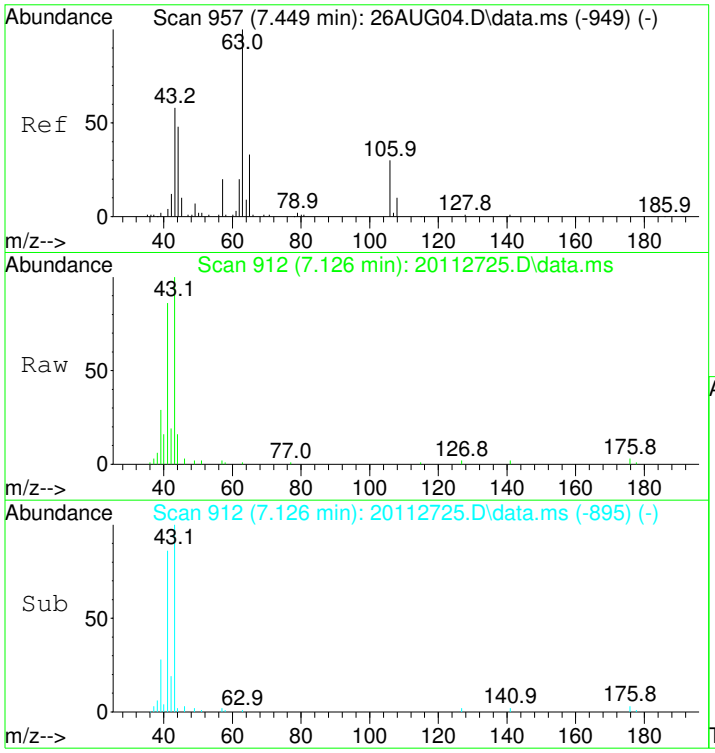


#64
2-Chloroethyl vinyl ether
Concen: Below Cal
RT: 7.306 min Scan# 937
Delta R.T. -0.014 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 605

Ion	Ratio	Lower	Upper
43	100		
44	358.5	51.0	111.0#
63	0.0	141.4	201.4#
65	0.0	36.5	76.5#

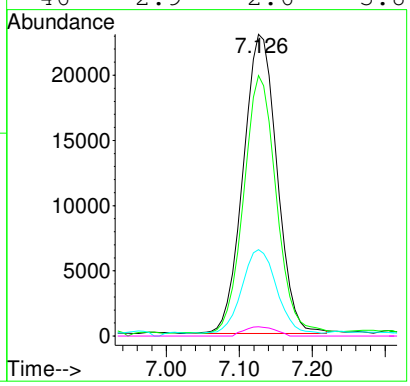


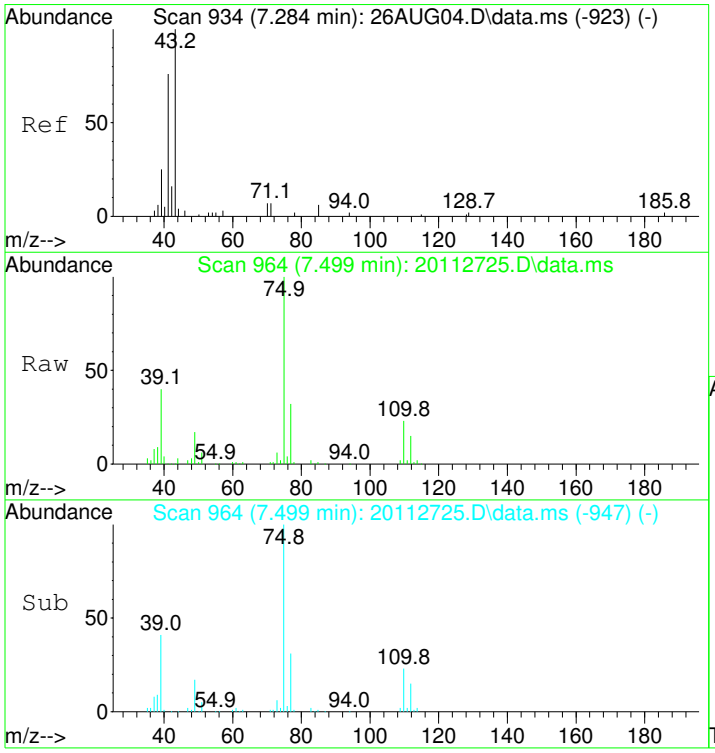


#65
2-Nitropropane
Concen: 21.15 ug/L
RT: 7.126 min Scan# 912
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 74181

Ion	Ratio	Lower	Upper
43	100		
41	82.6	67.9	101.9
39	28.5	21.8	32.8
46	2.9	2.6	3.8

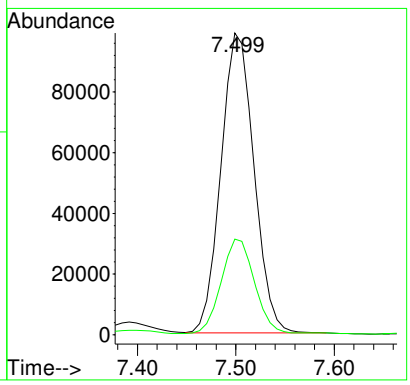


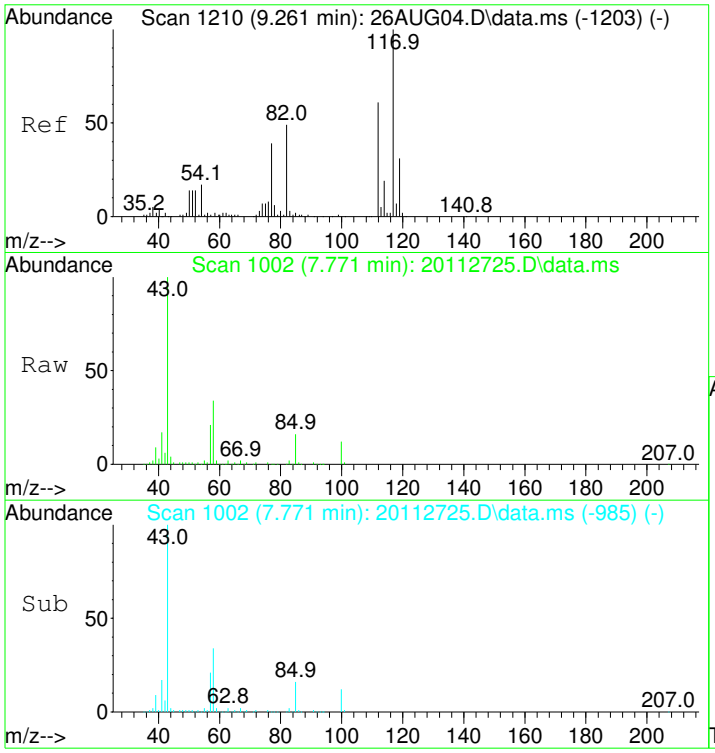


#66
cis-1,3-Dichloropropene
Concen: 21.10 ug/L
RT: 7.499 min Scan# 964
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 75 Resp: 231231

Ion	Ratio	Lower	Upper
75	100		
77	31.5	11.9	51.9

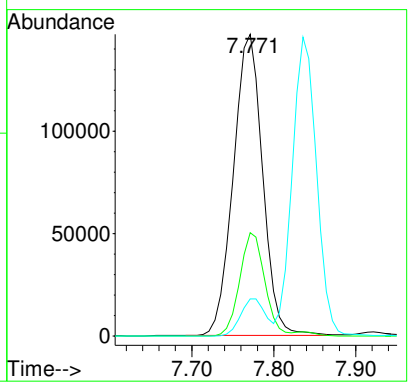


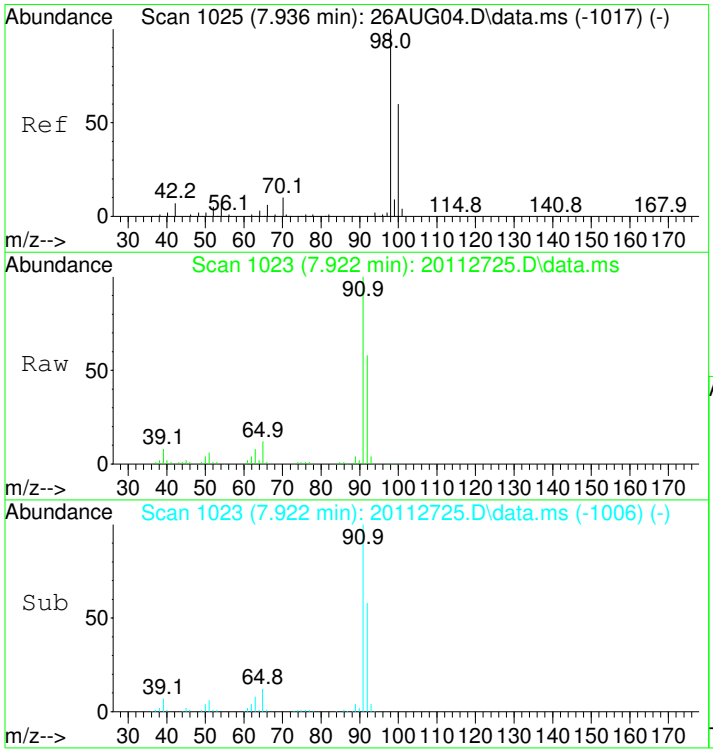


#68
4-Methyl-2-pentanone
Concen: 34.25 ug/L
RT: 7.771 min Scan# 1002
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 365157

Ion	Ratio	Lower	Upper
43	100		
58	29.3	25.4	65.4
100	10.8	0.0	36.2

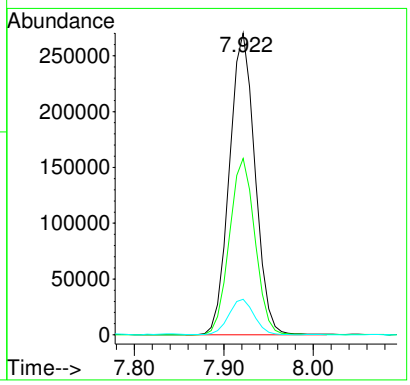


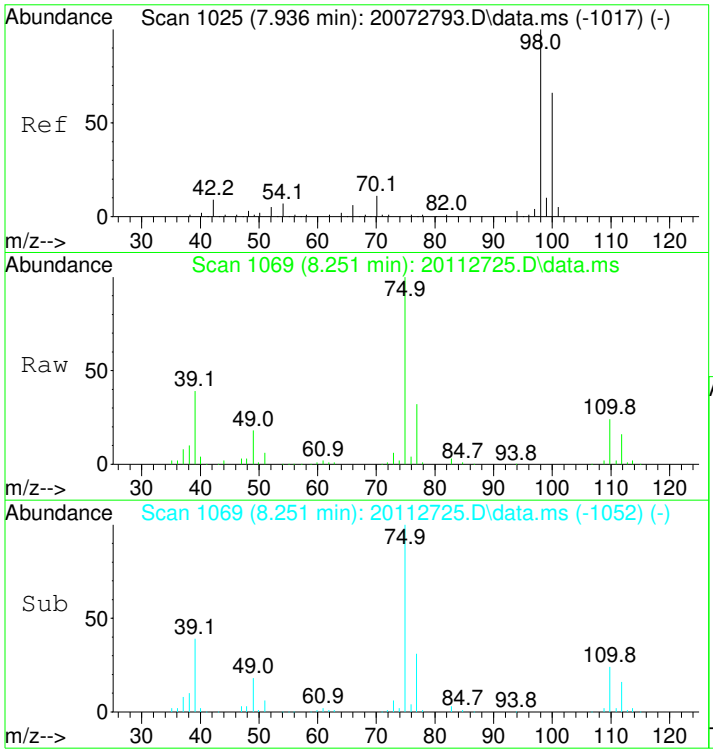


#70
Toluene
Concen: 22.82 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 538965

Ion	Ratio	Lower	Upper
91	100		
92	58.5	40.7	80.7
65	11.8	0.0	31.5

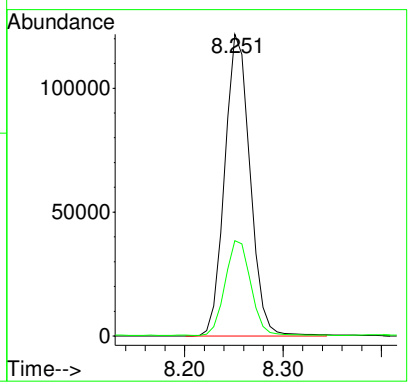


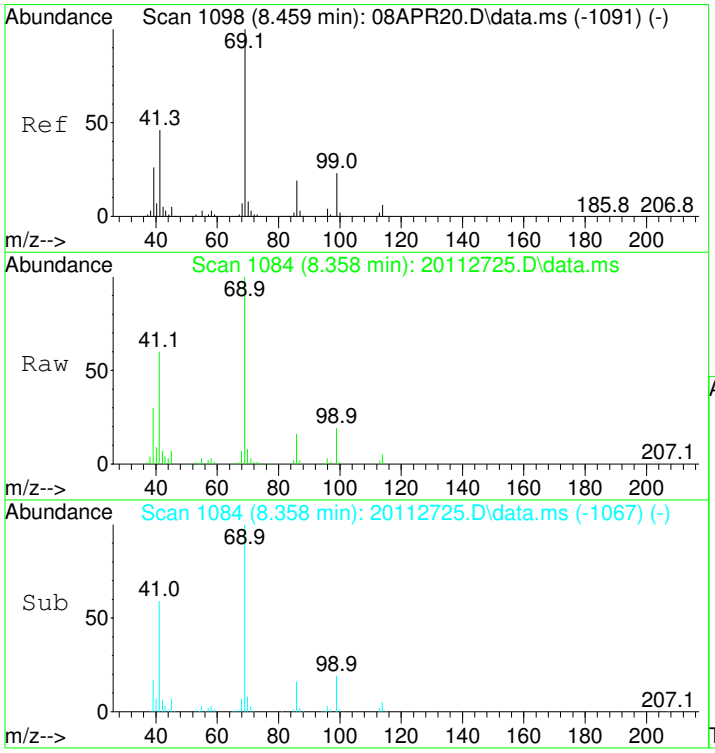


#71
trans-1,3-Dichloropropene
Concen: 21.57 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 75 Resp: 218654

Ion	Ratio	Lower	Upper
75	100		
77	31.5	15.0	55.0

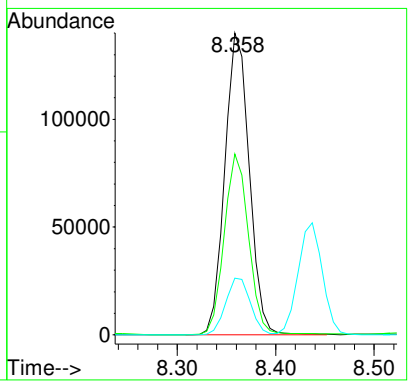


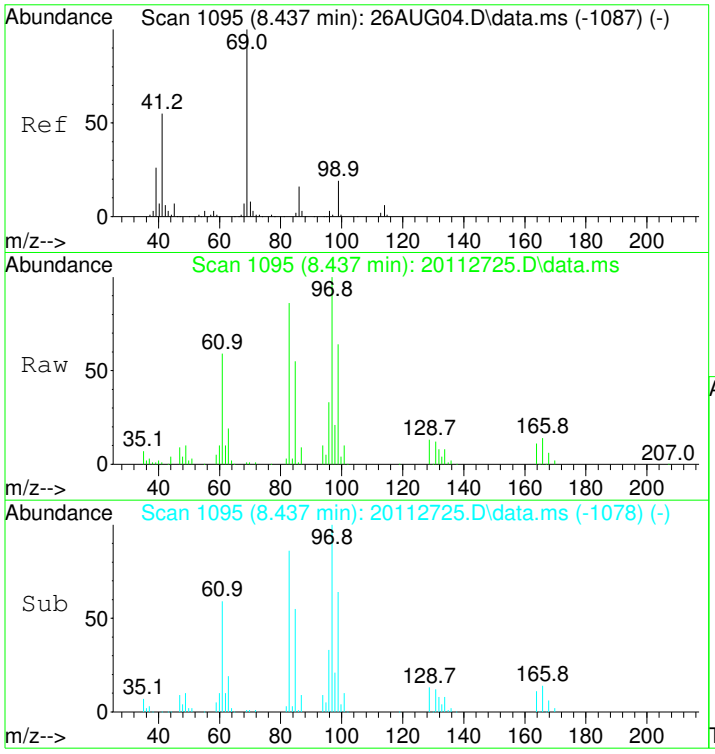


#73
Ethyl methacrylate
Concen: 21.97 ug/L
RT: 8.358 min Scan# 1084
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 69 Resp: 242717

Ion	Ratio	Lower	Upper
69	100		
41	60.1	39.9	79.9
99	19.0	0.0	39.7

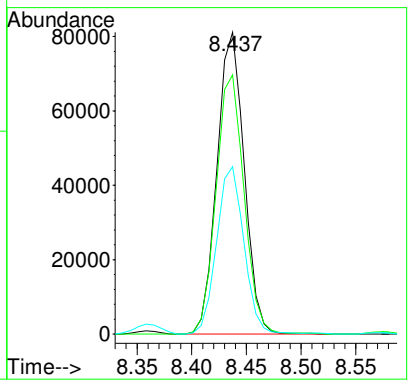


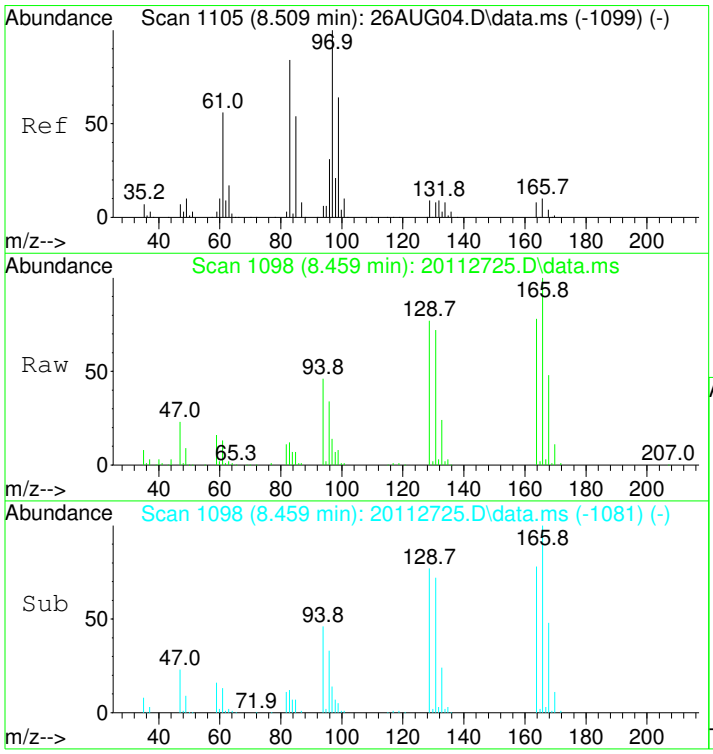


#74
1,1,2-Trichloroethane
Concen: 21.69 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 97 Resp: 140371

Ion	Ratio	Lower	Upper
97	100		
83	88.4	66.1	106.1
85	55.7	36.8	76.8

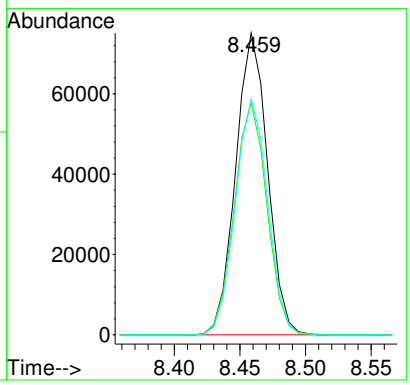


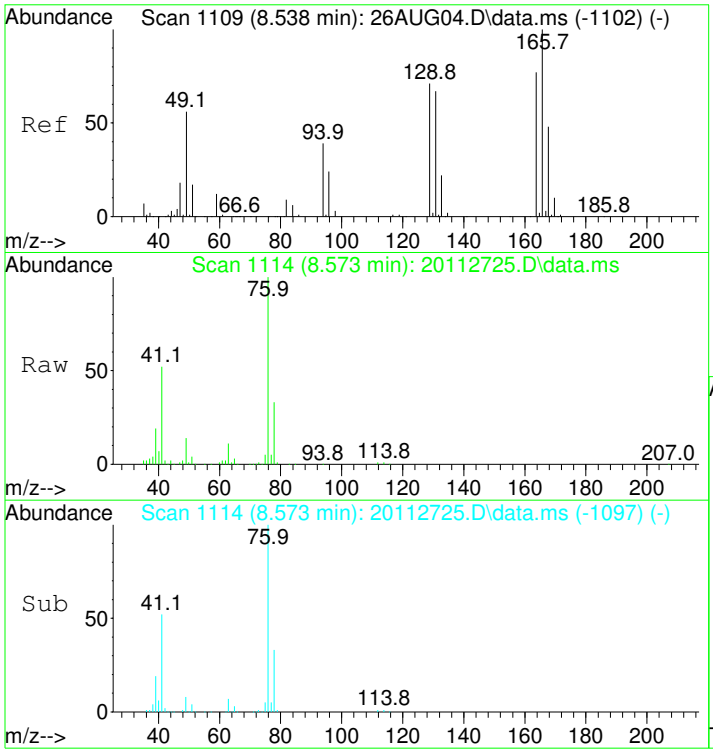


#75
Tetrachloroethene
Concen: 21.38 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:166 Resp: 127055

Ion	Ratio	Lower	Upper
166	100		
129	78.6	59.1	99.1
164	79.5	59.1	99.1

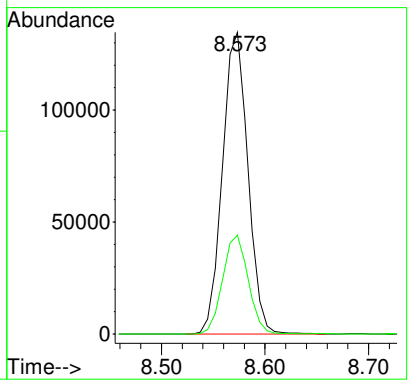


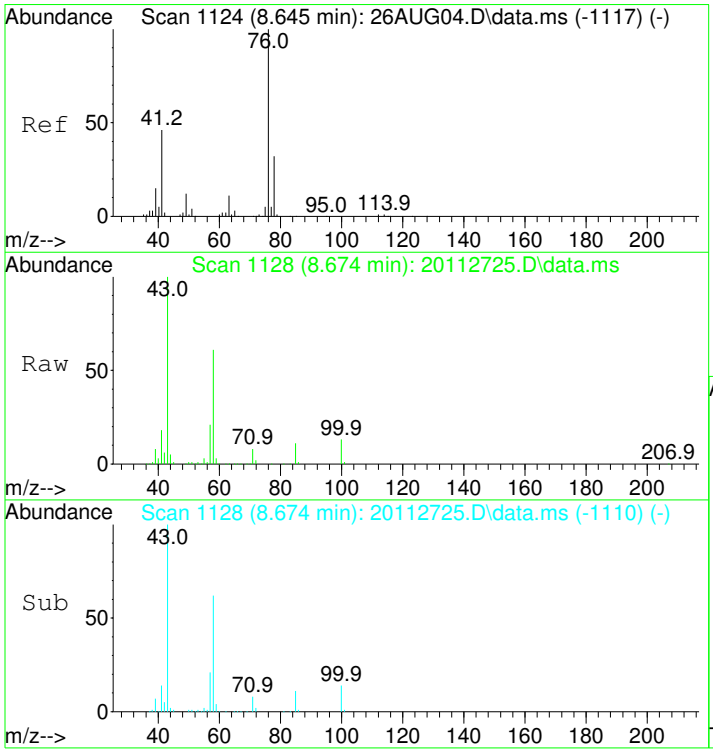


#76
1,3-Dichloropropane
Concen: 21.47 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 76 Resp: 230745

Ion	Ratio	Lower	Upper
76	100		
78	33.0	13.2	53.2

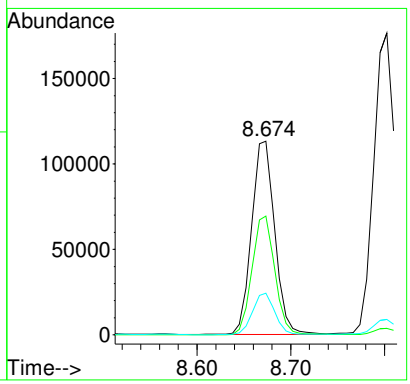


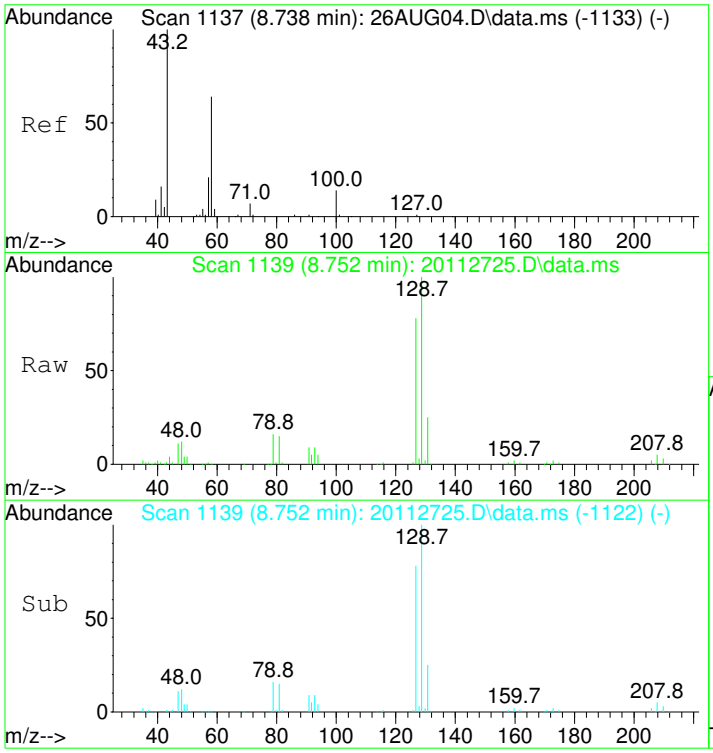


#77
2-Hexanone
Concen: 23.11 ug/L
RT: 8.674 min Scan# 1128
Delta R.T. 0.008 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 195932

Ion	Ratio	Lower	Upper
43	100		
58	61.0	42.3	82.3
57	21.4	1.0	41.0

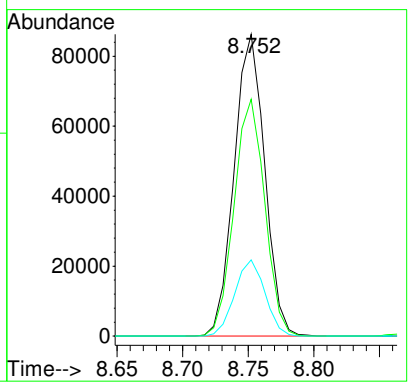


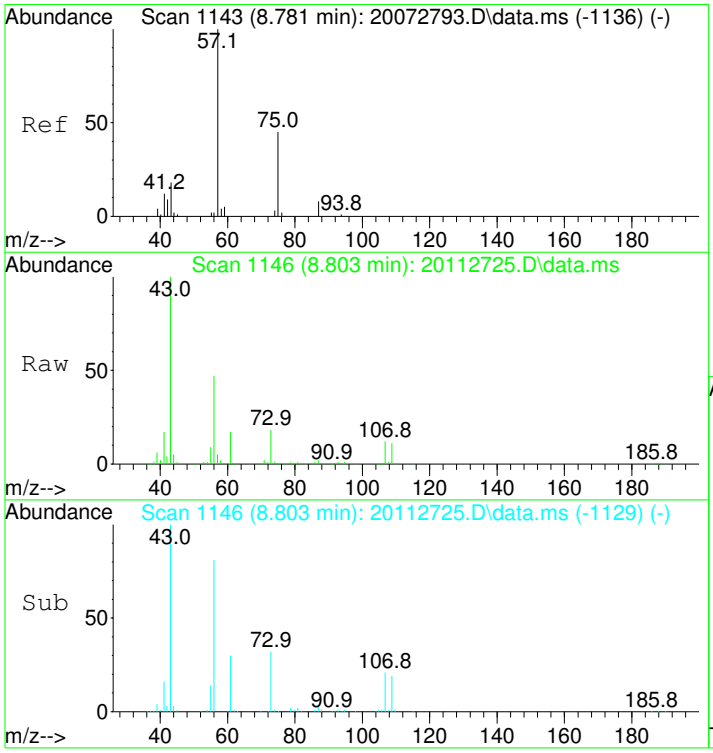


#78
Chlorodibromomethane
Concen: 19.79 ug/L
RT: 8.752 min Scan# 1139
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:129 Resp: 140055

Ion	Ratio	Lower	Upper
129	100		
127	78.7	57.8	97.8
131	25.0	4.2	44.2

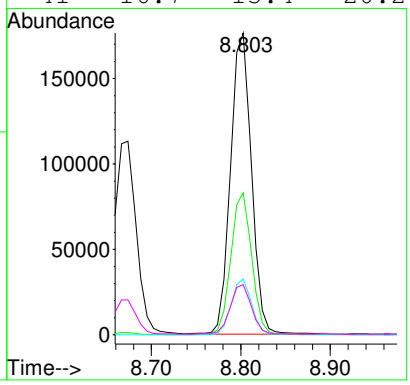


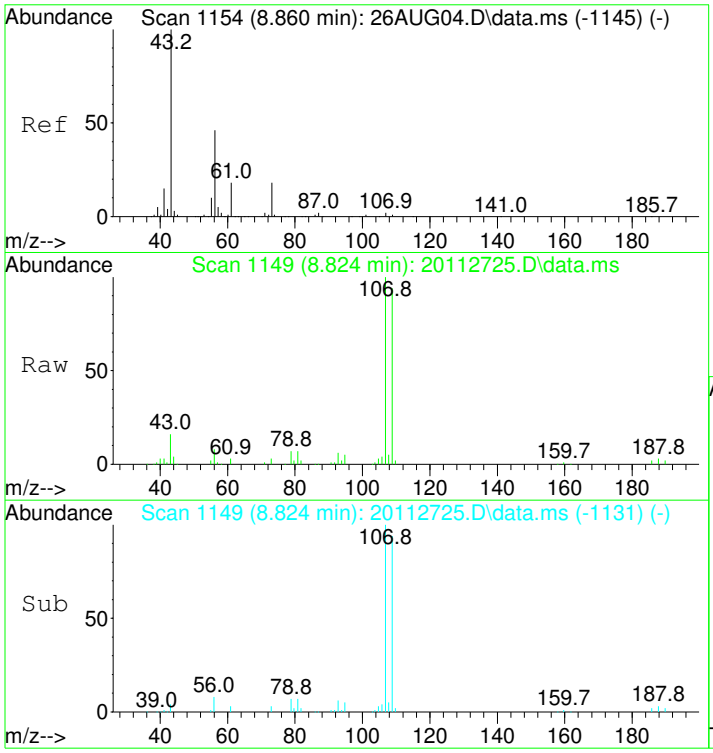


#79
Butyl acetate
Concen: 21.39 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 286763

Ion	Ratio	Lower	Upper
43	100		
56	47.2	38.0	57.0
73	18.1	15.0	22.4
41	16.7	13.4	20.2

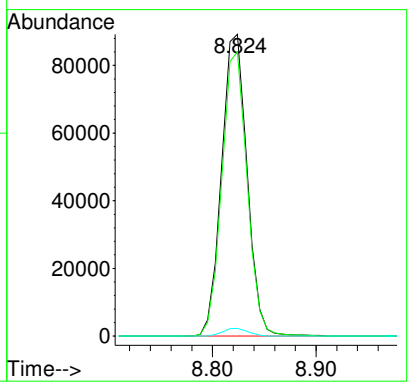


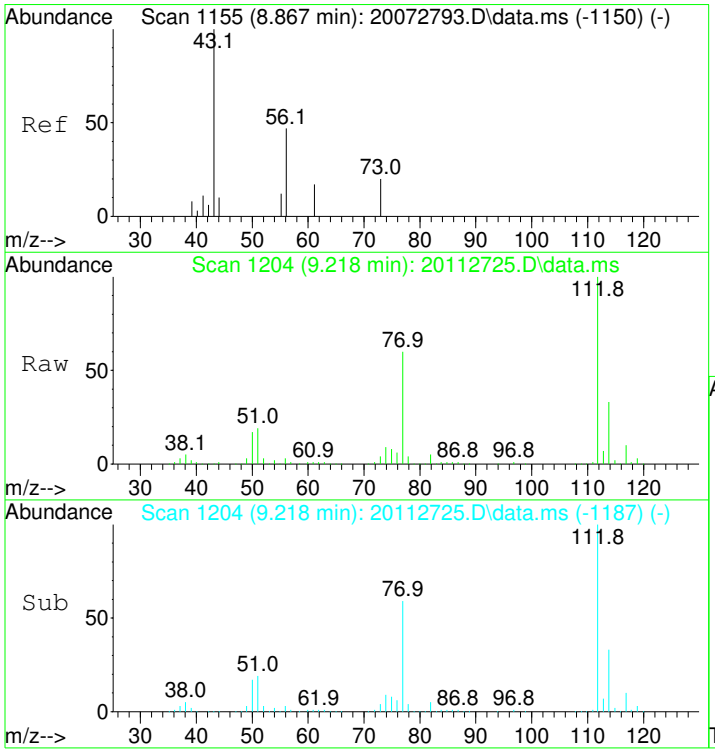


#80
1,2-Dibromoethane
Concen: 23.01 ug/L
RT: 8.824 min Scan# 1149
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:107 Resp: 153715

Ion	Ratio	Lower	Upper
107	100		
109	93.2	76.6	116.6
188	2.5	0.0	22.9

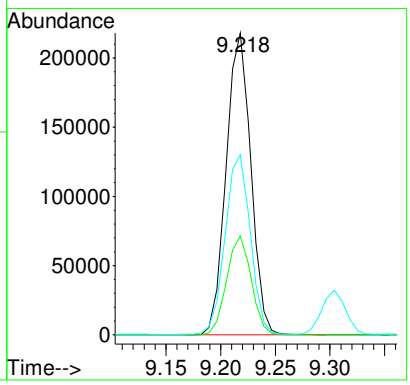


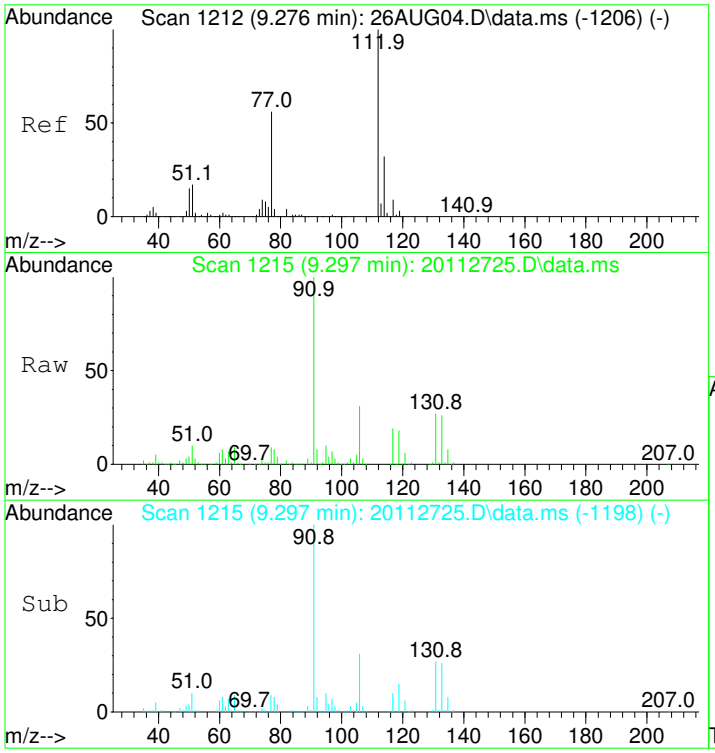


#81
Chlorobenzene
Concen: 22.54 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:112 Resp: 342055

Ion	Ratio	Lower	Upper
112	100		
114	32.5	13.6	53.6
77	60.8	41.7	81.7

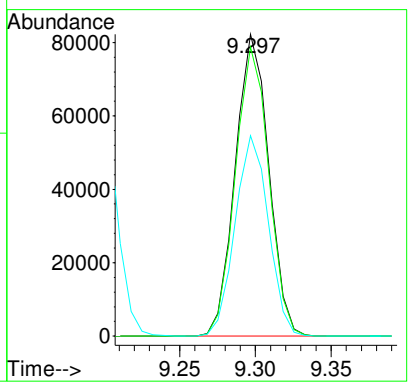


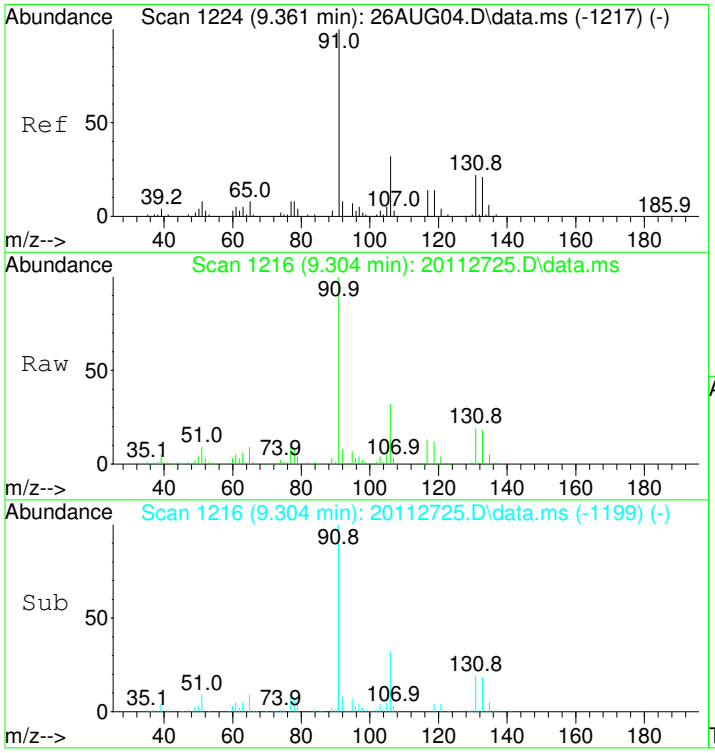


#82
1,1,1,2-Tetrachloroethane
Concen: 21.50 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:131 Resp: 126248

Ion	Ratio	Lower	Upper
131	100		
133	95.5	74.4	114.4
119	66.2	45.7	85.7

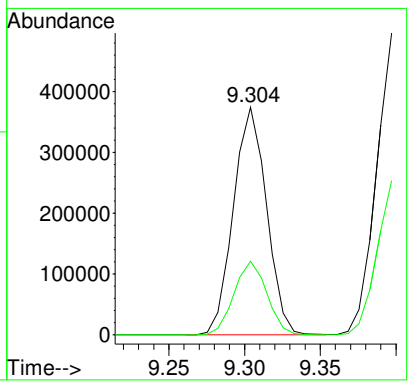


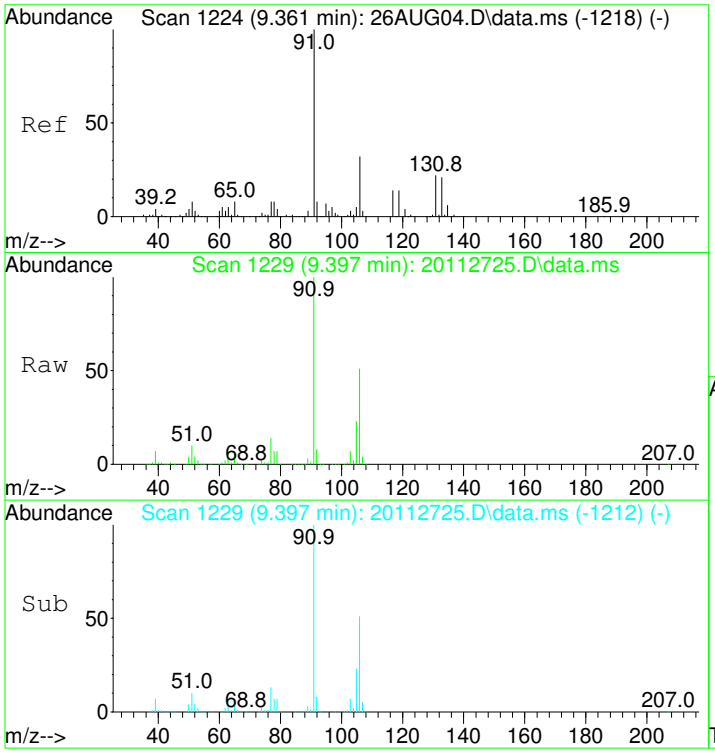


#83
Ethylbenzene
Concen: 20.75 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 569516

Ion	Ratio	Lower	Upper
91	100		
106	32.0	13.6	53.6

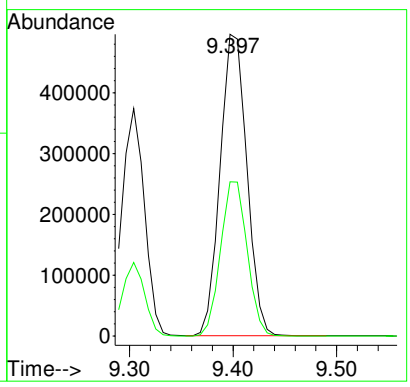


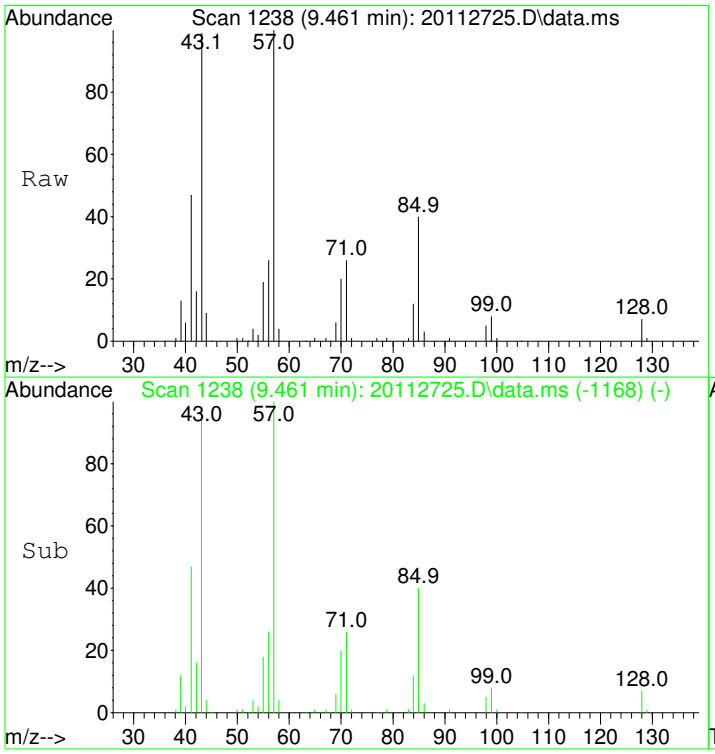


#84
m/p-Xylene
Concen: 40.98 ug/L
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 895205

Ion	Ratio	Lower	Upper
91	100		
106	51.1	34.2	74.2

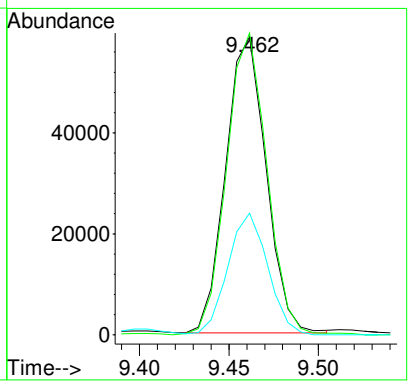


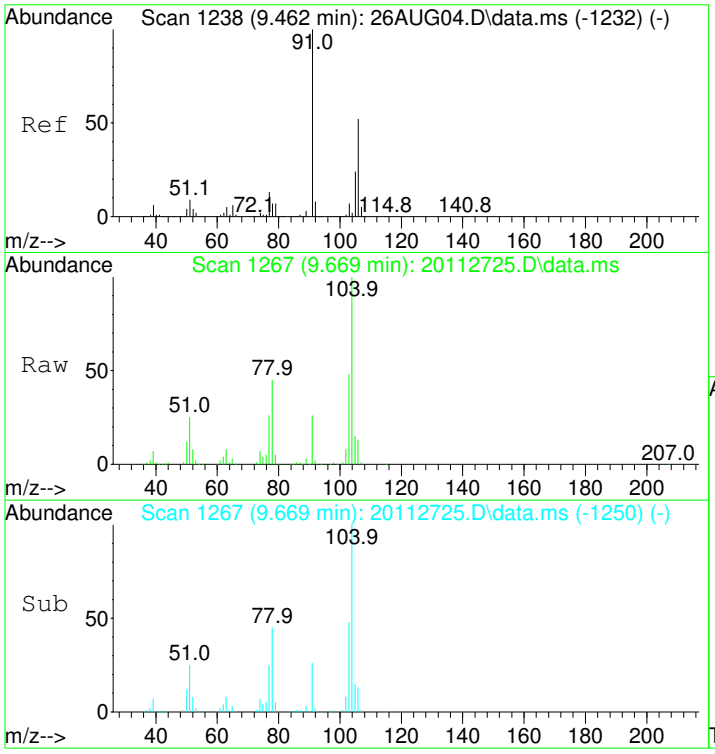


#85
Nonane
Concen: 28.58 ug/L
RT: 9.461 min Scan# 1238
Delta R.T. -0.001 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 92257

Ion	Ratio	Lower	Upper
43	100		
57	101.9	67.9	127.9
85	40.6	10.4	70.4

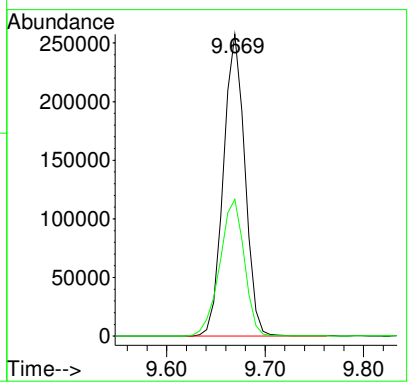


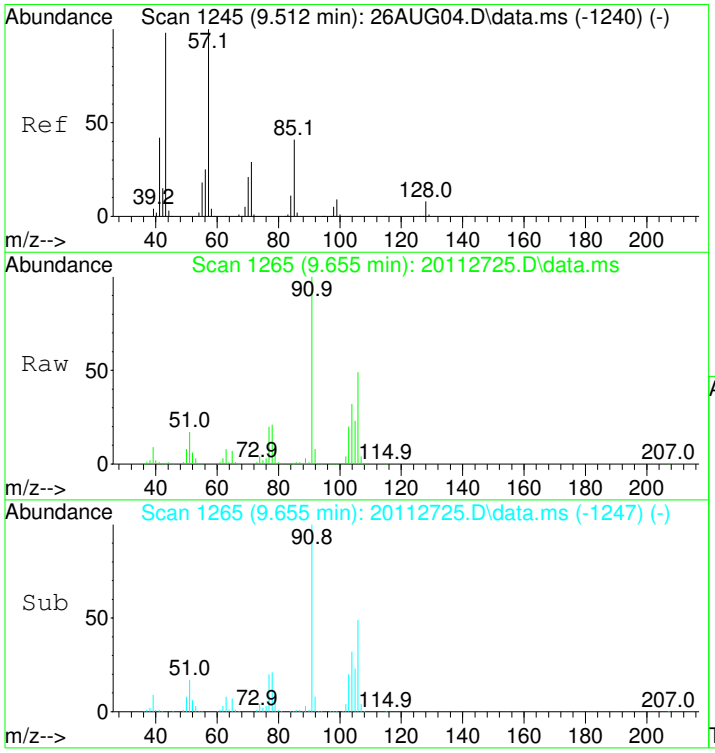


#86
Styrene
Concen: 21.18 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:104 Resp: 391882

Ion	Ratio	Lower	Upper
104	100		
78	51.7	32.3	72.3

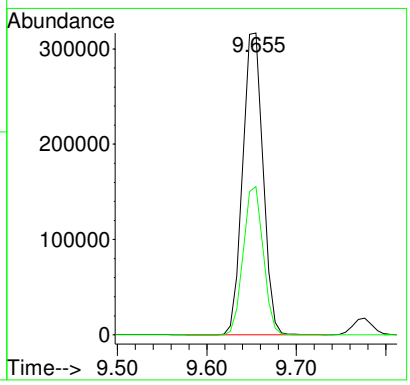


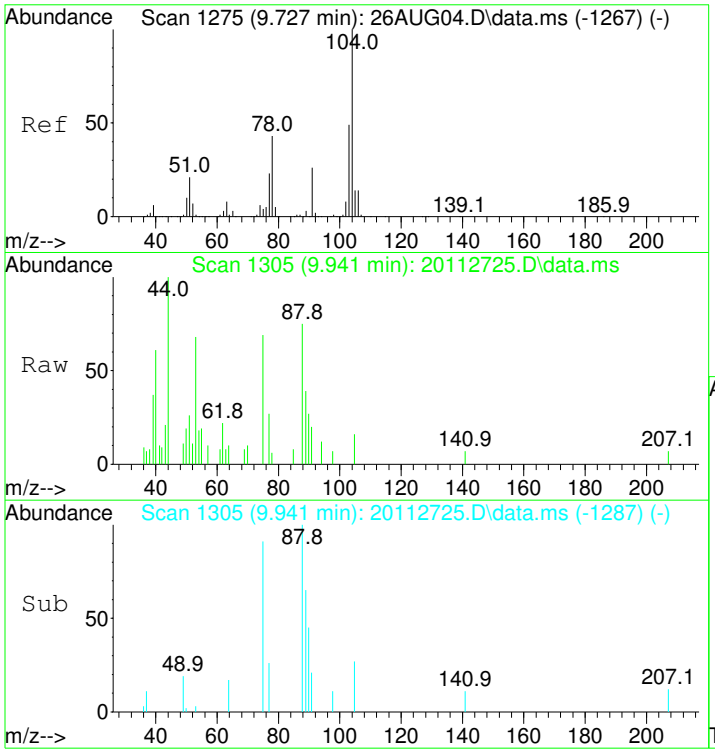


#87
o-Xylene
Concen: 20.80 ug/L
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 502115

Ion	Ratio	Lower	Upper
91	100		
106	48.2	30.3	70.3

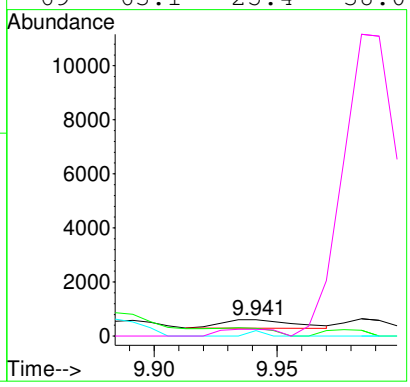


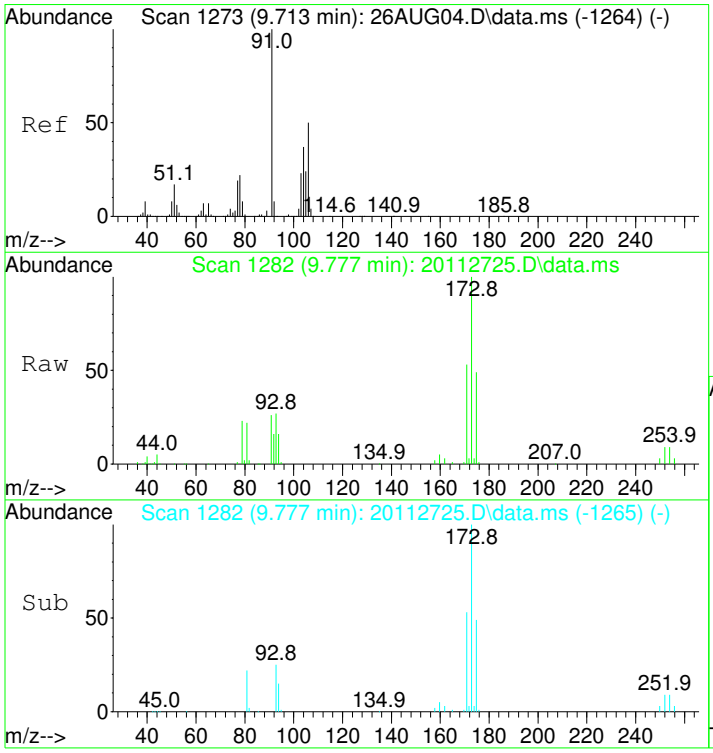


#88
Cyclohexanone
Concen: Below Cal
RT: 9.941 min Scan# 1305
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 55 Resp: 647

Ion	Ratio	Lower	Upper
55	100		
42	0.0	48.0	72.0#
98	13.8	38.2	57.2#
69	63.1	25.4	38.0#

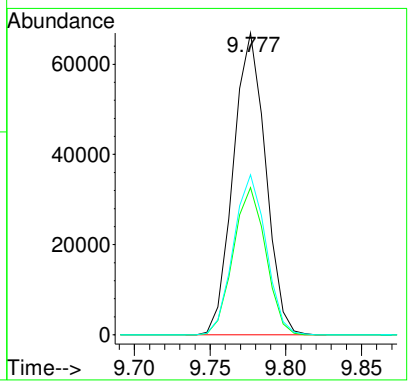


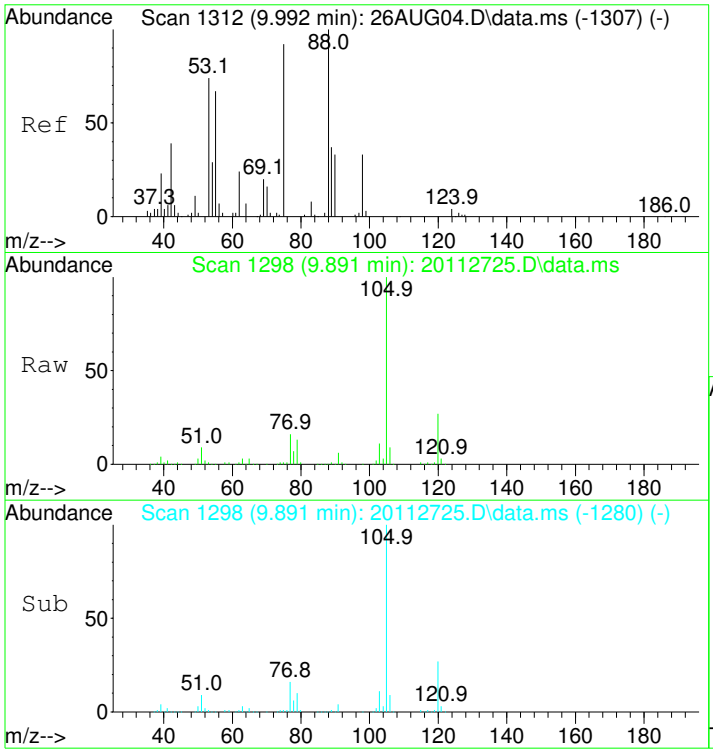


#89
Bromoform
Concen: 18.31 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:173 Resp: 99077

Ion	Ratio	Lower	Upper
173	100		
175	48.9	28.4	68.4
171	53.5	31.7	71.7

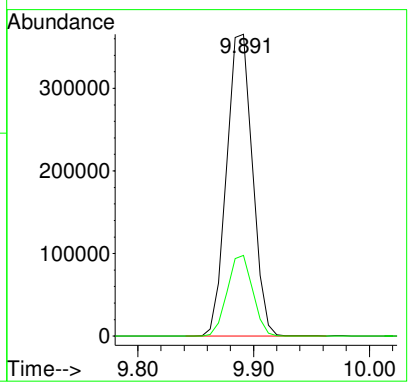


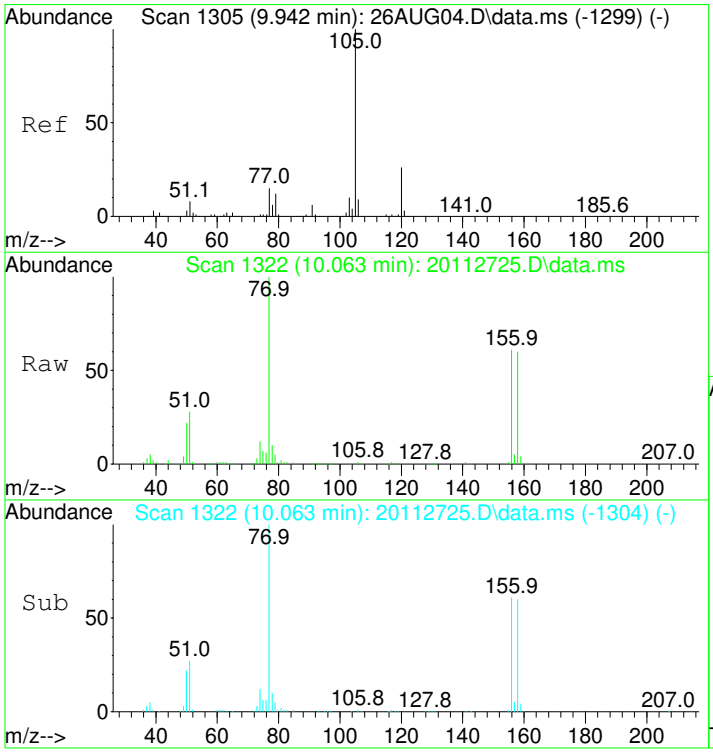


#90
Isopropylbenzene
Concen: 20.43 ug/L
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:105 Resp: 566912

Ion	Ratio	Lower	Upper
105	100		
120	26.3	8.0	48.0

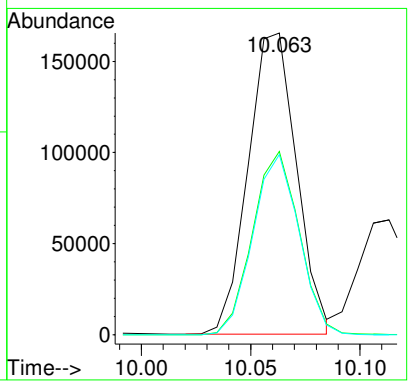


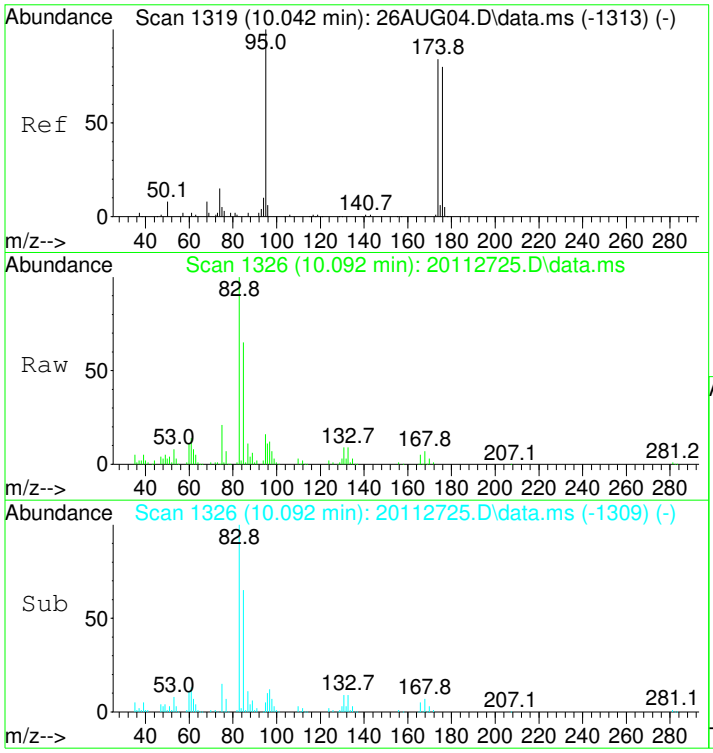


#92
Bromobenzene
Concen: 22.72 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 77 Resp: 255343

Ion	Ratio	Lower	Upper
77	100		
156	58.9	40.2	80.2
158	57.1	38.1	78.1

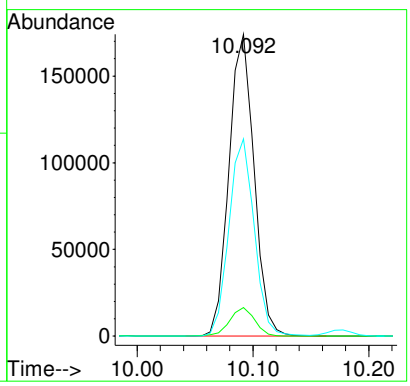


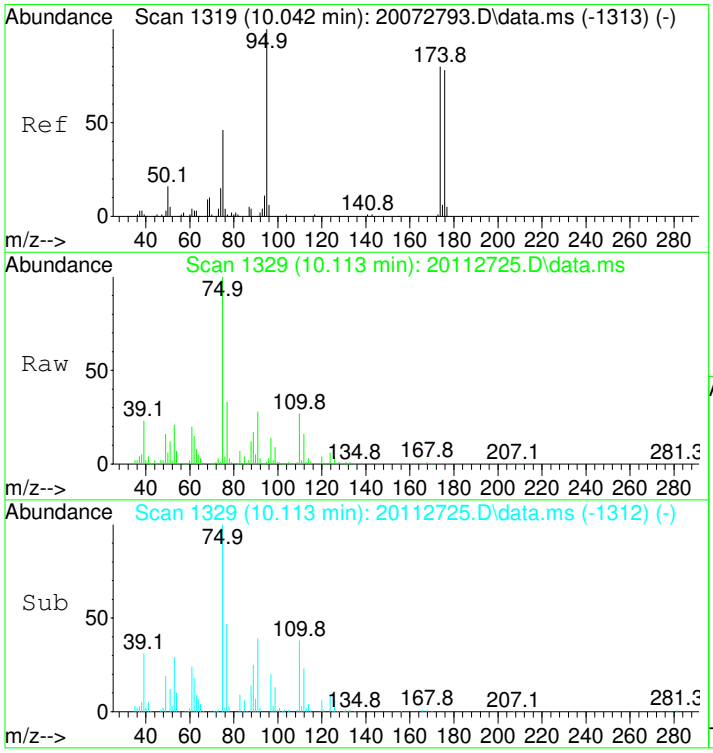


#93
1,1,2,2-Tetrachloroethane
Concen: 24.55 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 83 Resp: 262006

Ion	Ratio	Lower	Upper
83	100		
131	9.6	0.0	35.0
85	65.9	46.4	86.4

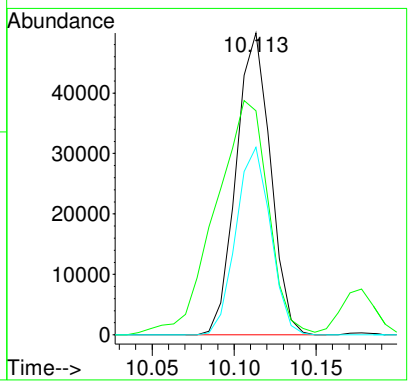


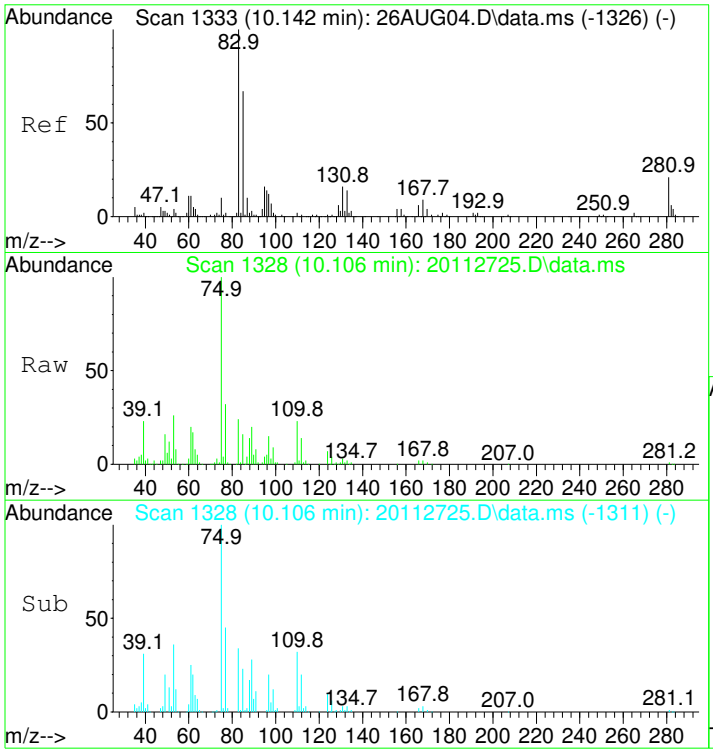


#94
1,2,3-Trichloropropane
Concen: 21.58 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:110 Resp: 72661

Ion	Ratio	Lower	Upper
110	100		
61	119.0	97.0	137.0
112	62.6	44.1	84.1

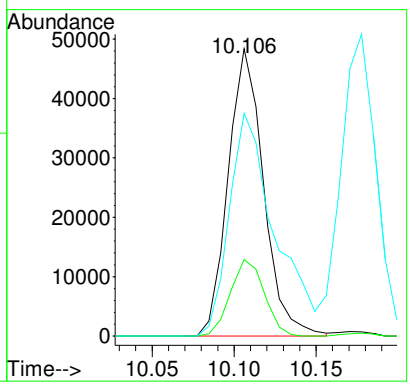


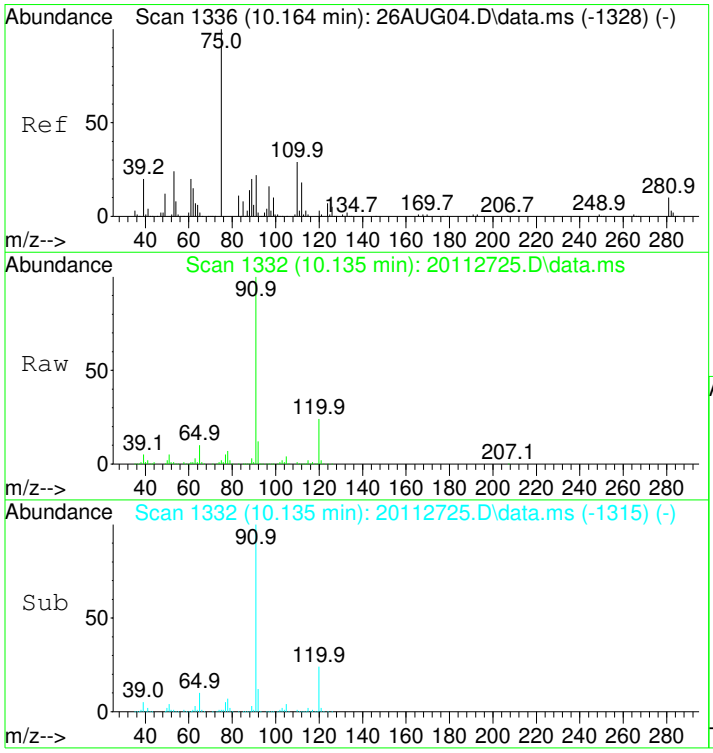


#95
trans-1,4-Dichloro-2-butene
Concen: 20.57 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 53 Resp: 72814

Ion	Ratio	Lower	Upper
53	100		
124	25.5	7.2	47.2
89	98.9	79.3	119.3

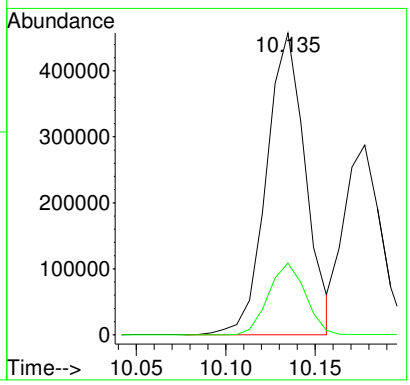


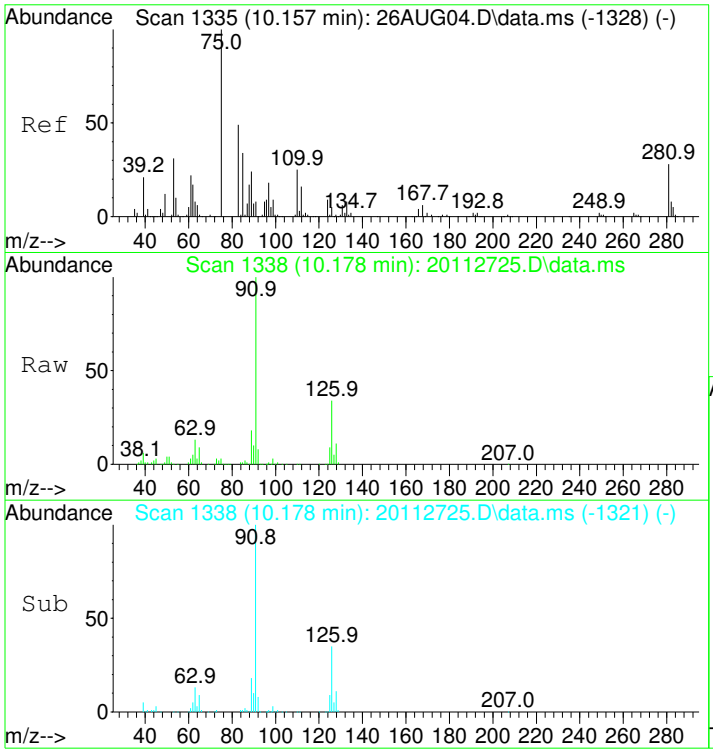


#96
n-Propylbenzene
Concen: 20.66 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 694376

Ion	Ratio	Lower	Upper
91	100		
120	22.4	3.7	43.7

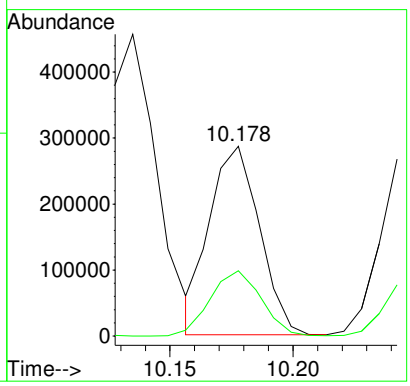


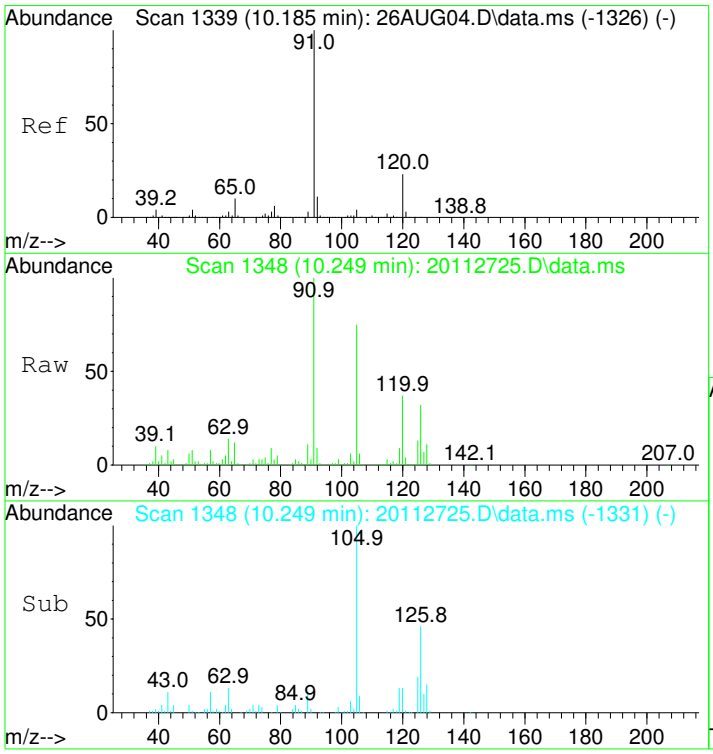


#97
2-Chlorotoluene
Concen: 24.06 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 403575

Ion	Ratio	Lower	Upper
91	100		
126	35.7	17.3	57.3

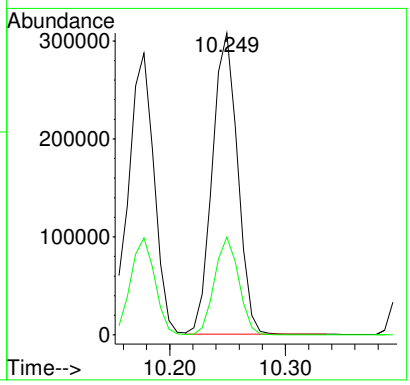


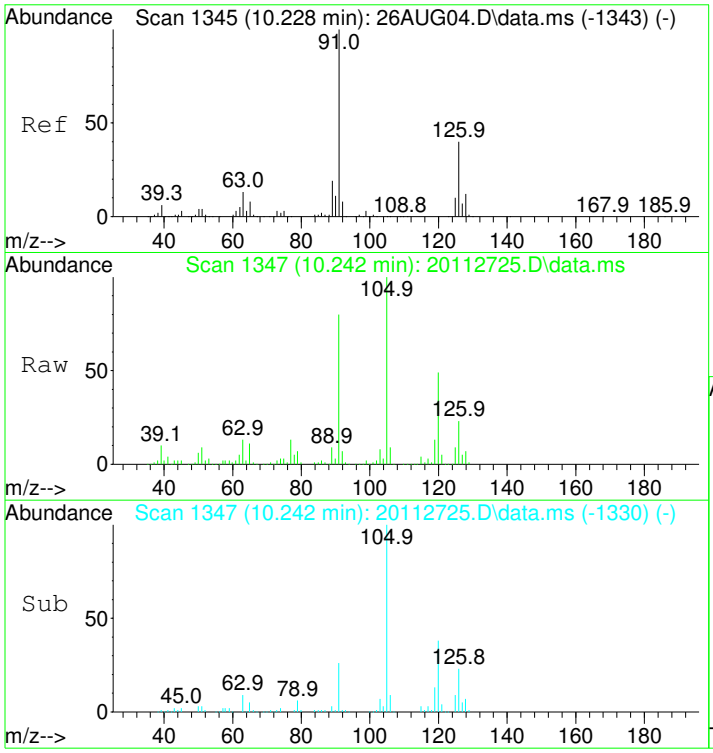


#98
4-Chlorotoluene
Concen: 20.43 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 467373

Ion	Ratio	Lower	Upper
91	100		
126	31.0	12.4	52.4

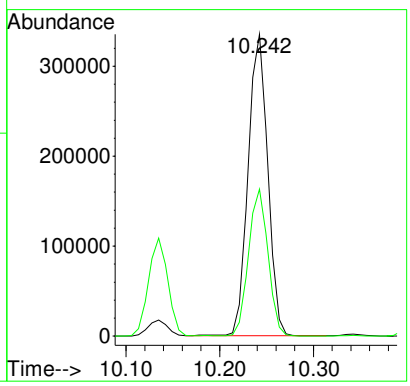


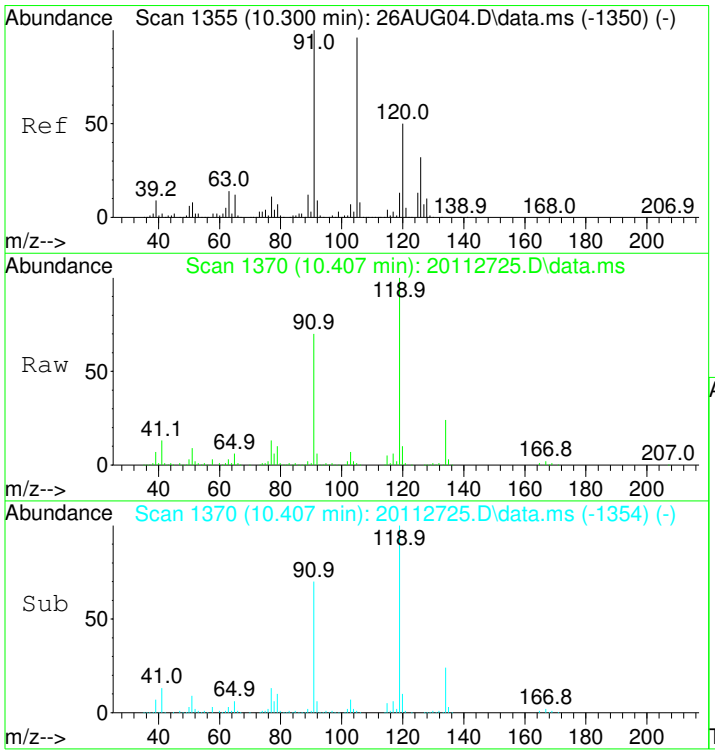


#99
1,3,5-Trimethylbenzene
Concen: 20.98 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:105 Resp: 492694

Ion	Ratio	Lower	Upper
105	100		
120	48.4	31.9	71.9

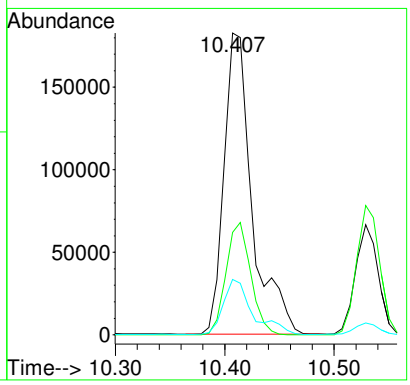


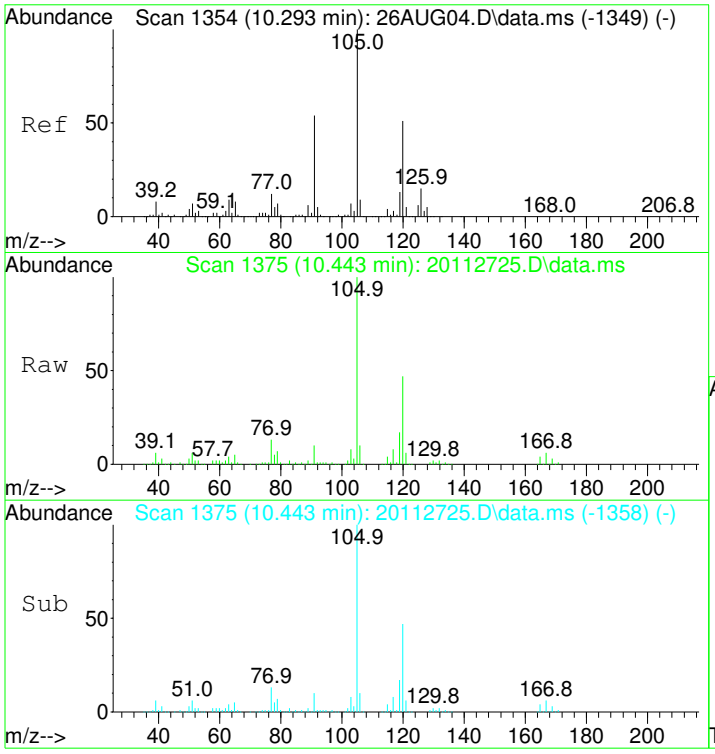


#100
tert-Butylbenzene
Concen: 22.17 ug/L
RT: 10.407 min Scan# 1370
Delta R.T. -0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 326755

Ion	Ratio	Lower	Upper
91	100		
134	32.8	9.7	49.7
41	18.9	0.0	39.3

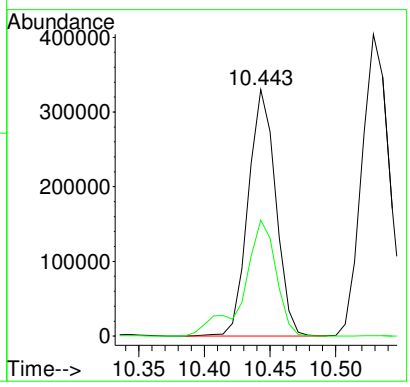


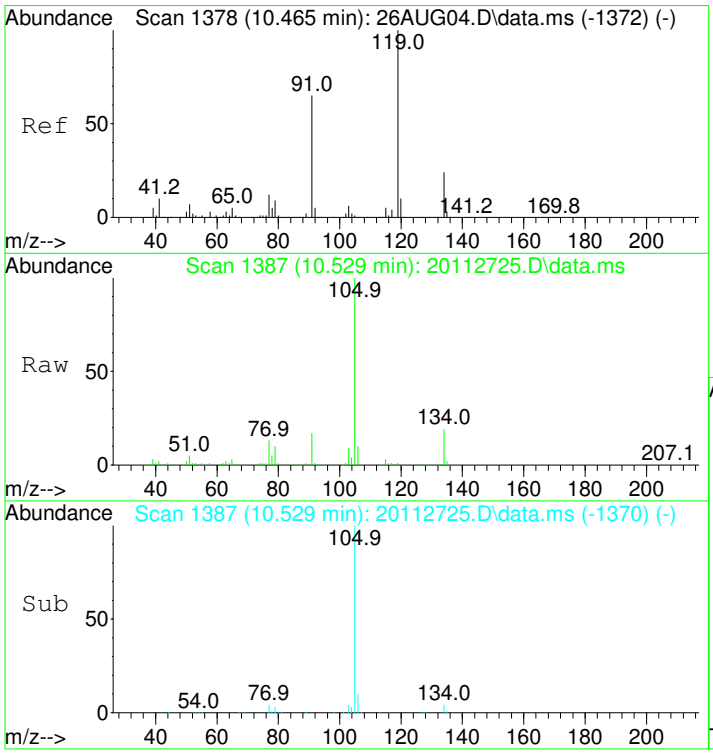


#101
1,2,4-Trimethylbenzene
Concen: 19.77 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:105 Resp: 482274

Ion	Ratio	Lower	Upper
105	100		
120	55.3	37.7	77.7

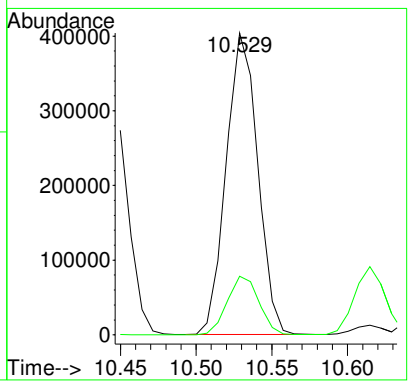


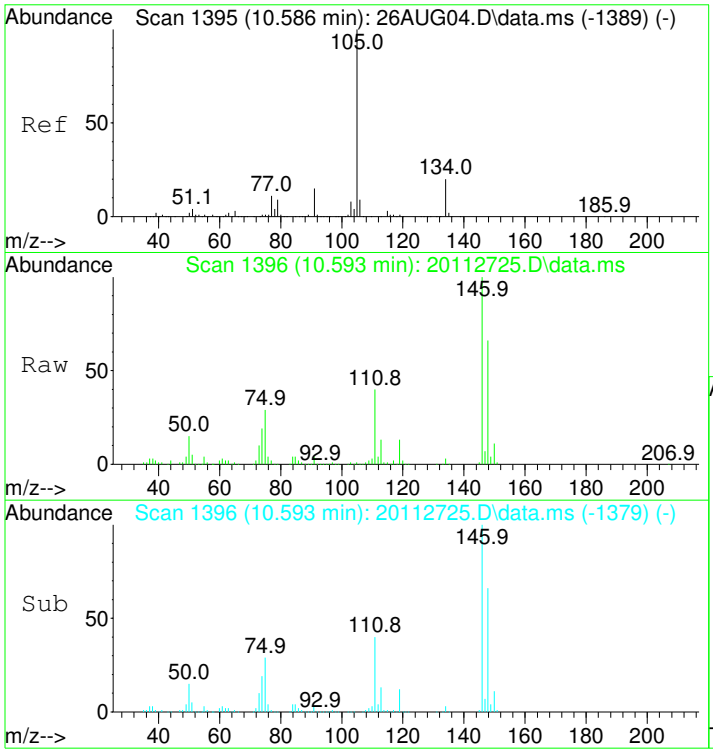


#102
sec-Butylbenzene
Concen: 20.49 ug/L
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:105 Resp: 584411

Ion	Ratio	Lower	Upper
105	100		
134	19.6	1.1	41.1

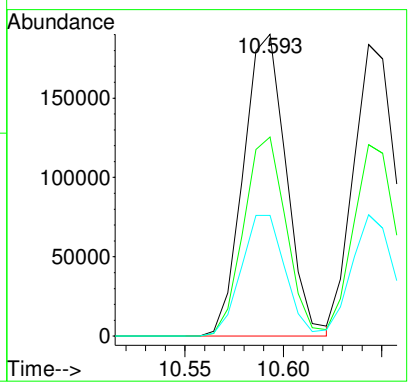


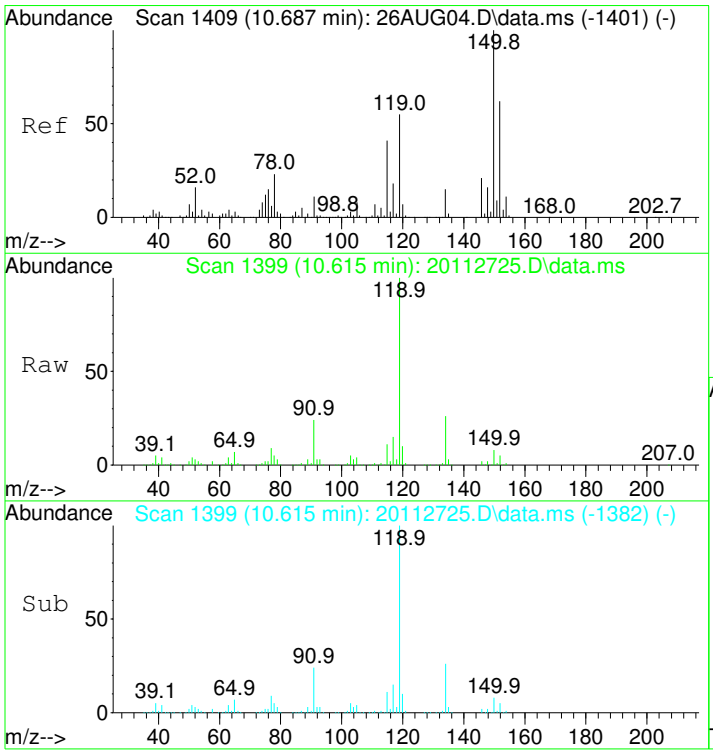


#104
1,3-Dichlorobenzene
Concen: 22.91 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:146 Resp: 288085

Ion	Ratio	Lower	Upper
146	100		
148	65.5	46.5	86.5
111	40.7	22.6	62.6

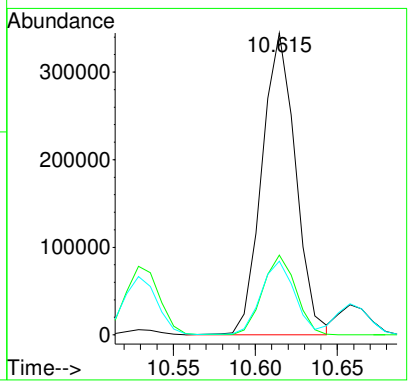


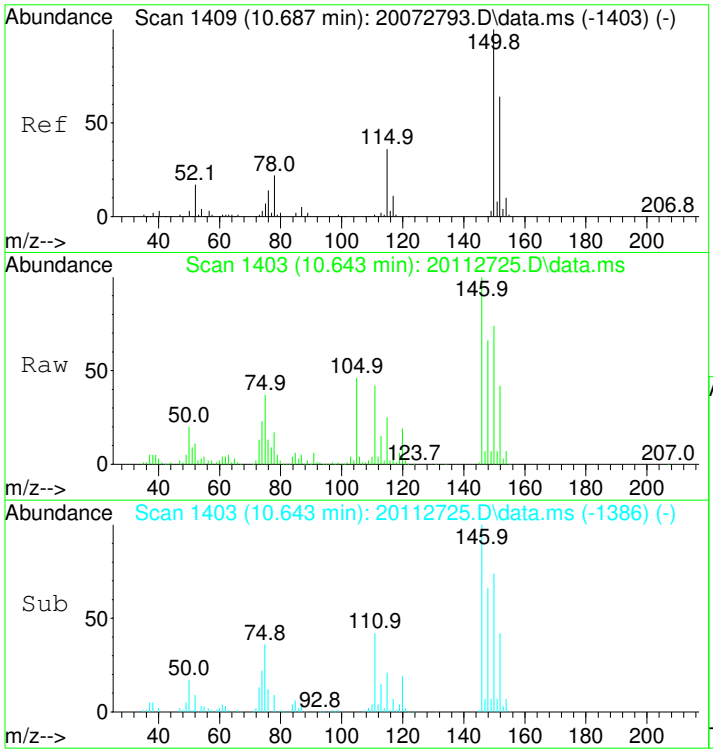


#105
p-Isopropyltoluene
Concen: 23.94 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:119 Resp: 491588

Ion	Ratio	Lower	Upper
119	100		
134	26.2	8.1	48.1
91	24.2	5.2	45.2

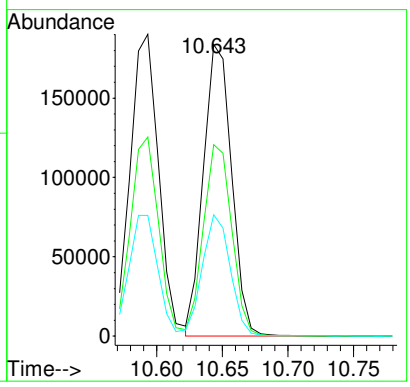


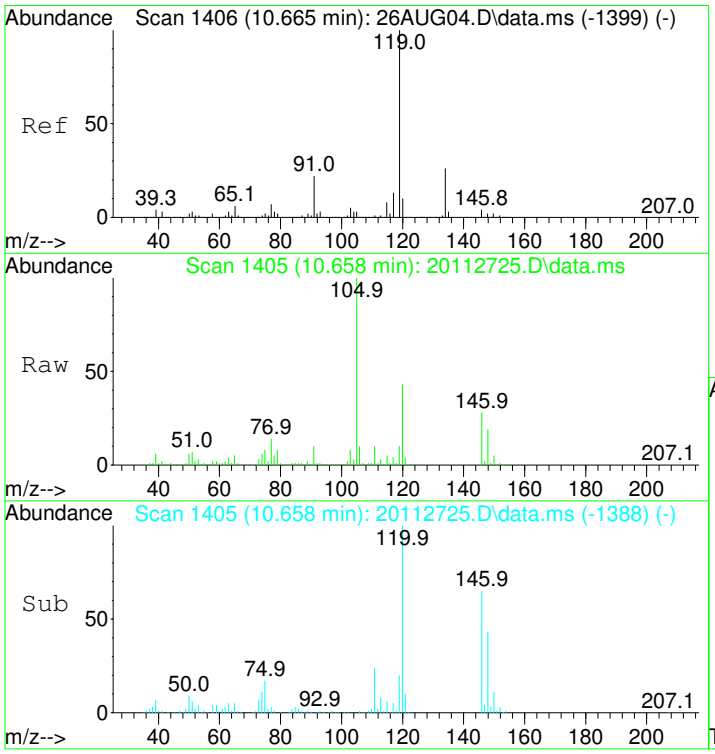


#106
1,4-Dichlorobenzene
Concen: 22.68 ug/L
RT: 10.643 min Scan# 1403
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:146 Resp: 274703

Ion	Ratio	Lower	Upper
146	100		
148	65.9	37.3	97.3
111	41.1	12.5	72.5

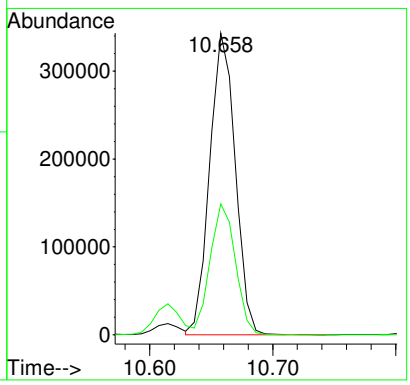


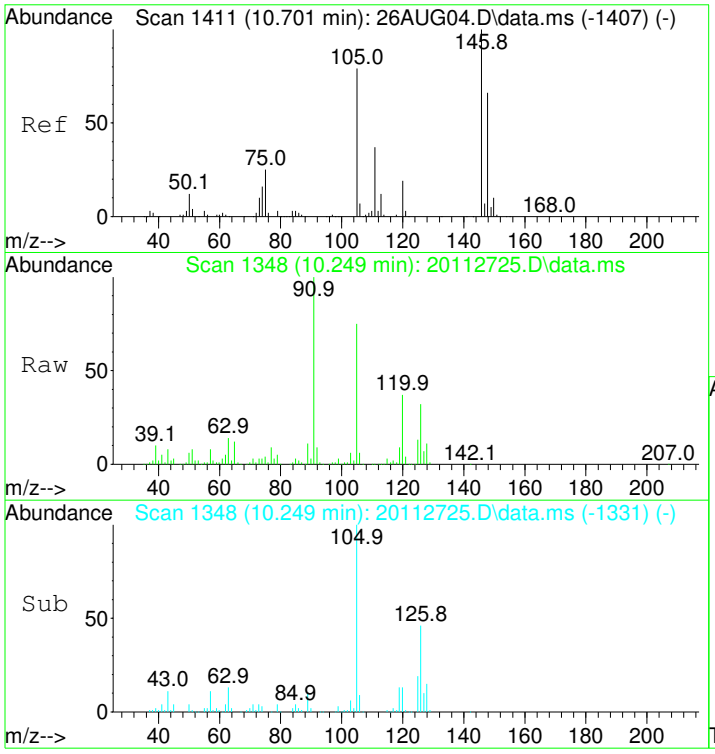


#107
1,2,3-Trimethylbenzene
Concen: 24.11 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:105 Resp: 495443

Ion	Ratio	Lower	Upper
105	100		
120	42.9	35.5	53.3

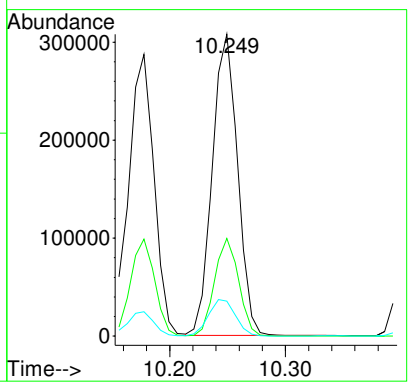


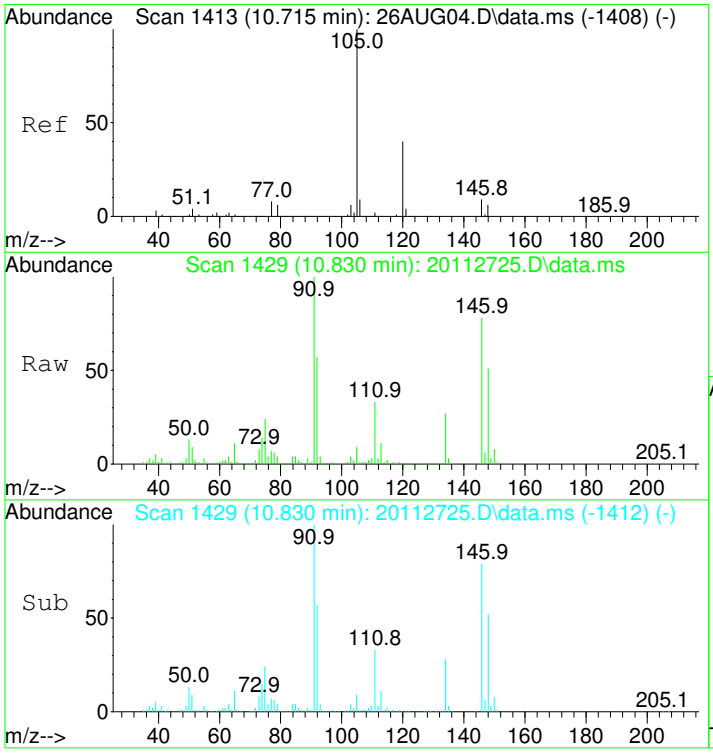


#108
Benzyl chloride
Concen: 20.54 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 467373

Ion	Ratio	Lower	Upper
91	100		
126	31.0	12.4	52.4
65	13.1	0.0	33.3

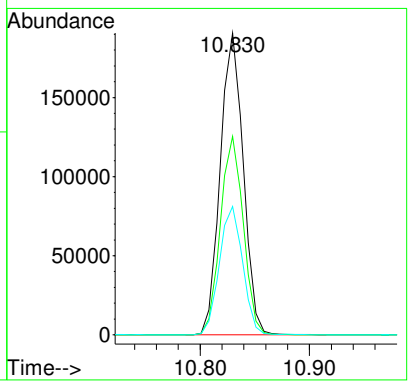


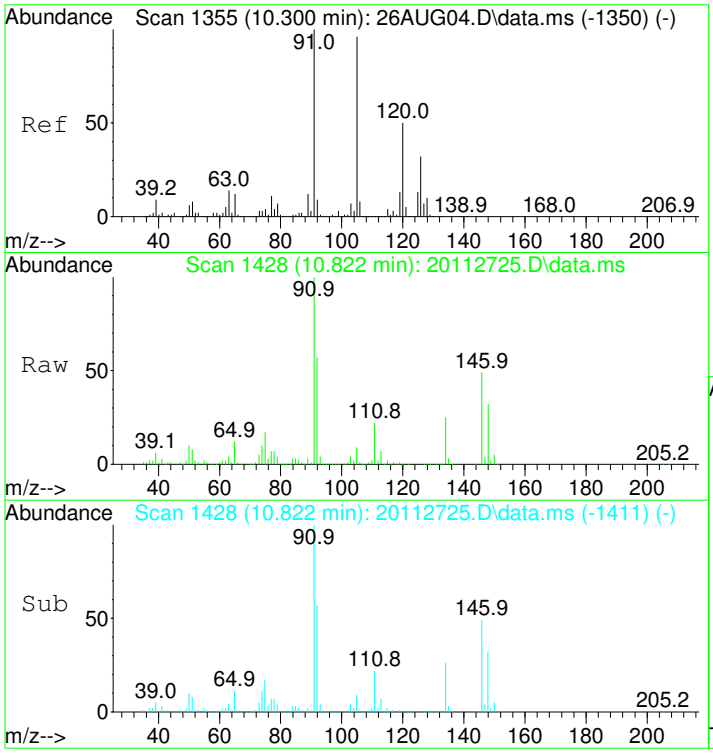


#109
1,2-Dichlorobenzene
Concen: 22.70 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:146 Resp: 278821

Ion	Ratio	Lower	Upper
146	100		
148	65.3	45.6	85.6
111	43.2	24.1	64.1

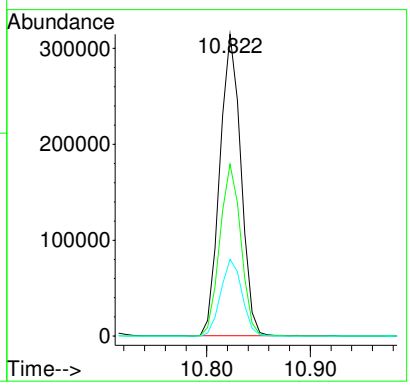


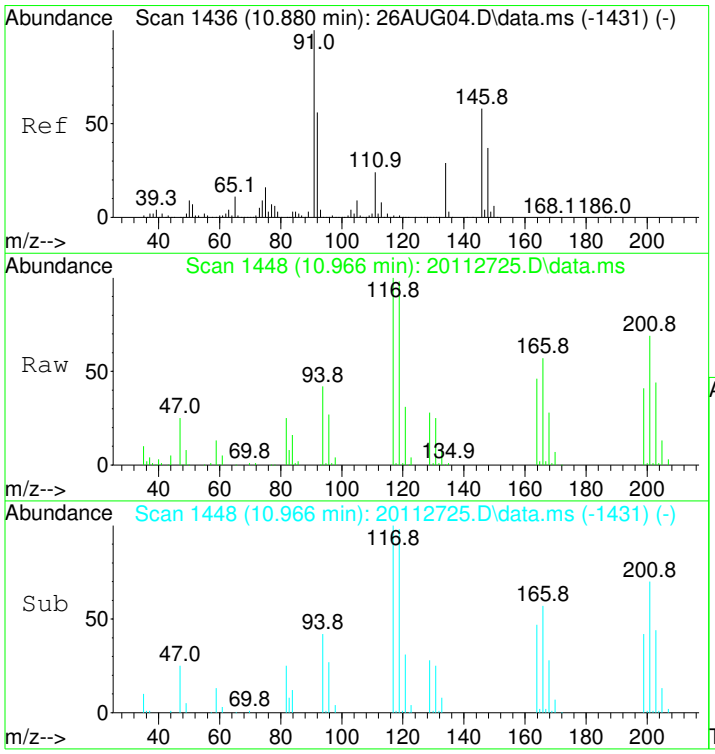


#110
n-Butylbenzene
Concen: 20.17 ug/L
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 91 Resp: 445682

Ion	Ratio	Lower	Upper
91	100		
92	56.7	39.3	79.3
134	25.7	7.5	47.5

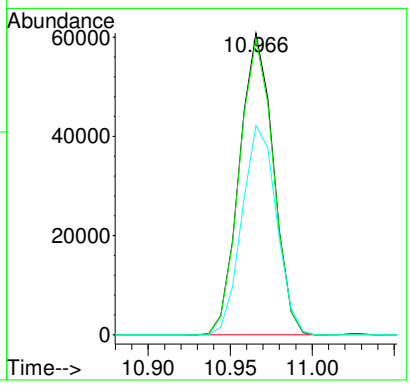


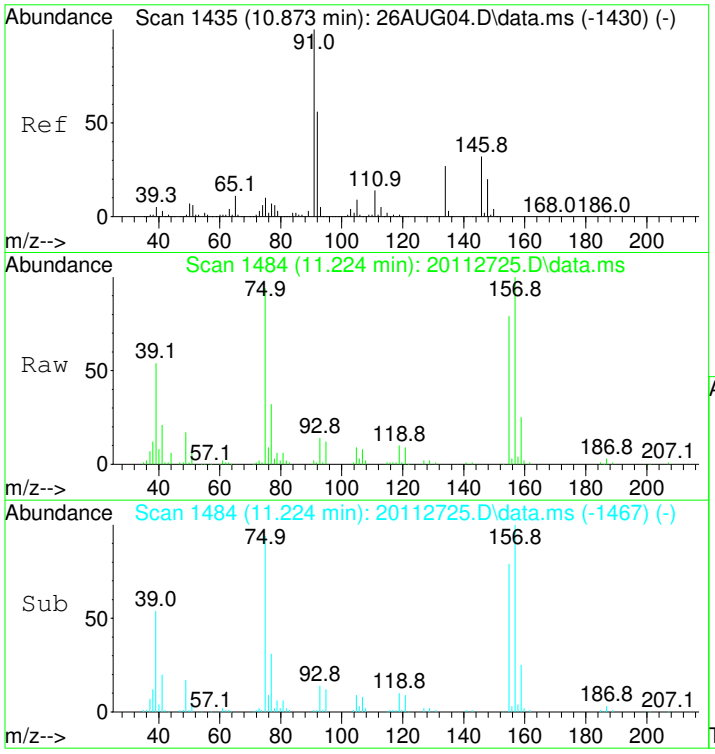


#111
Hexachloroethane
Concen: 18.81 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:117 Resp: 87252

Ion	Ratio	Lower	Upper
117	100		
119	98.1	75.9	115.9
201	70.9	49.2	89.2

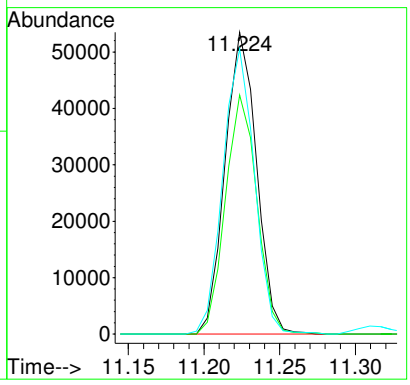


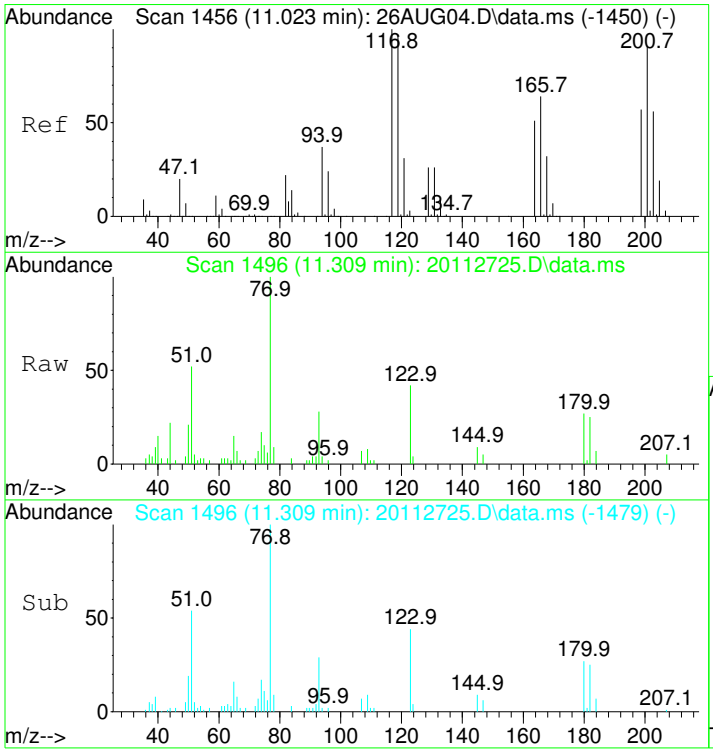


#112
1,2-Dibromo-3-chloropropane
Concen: 22.55 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:157 Resp: 77381

Ion	Ratio	Lower	Upper
157	100		
155	79.1	54.4	94.4
75	94.4	72.1	112.1

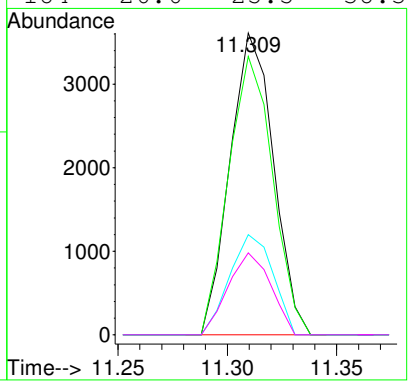


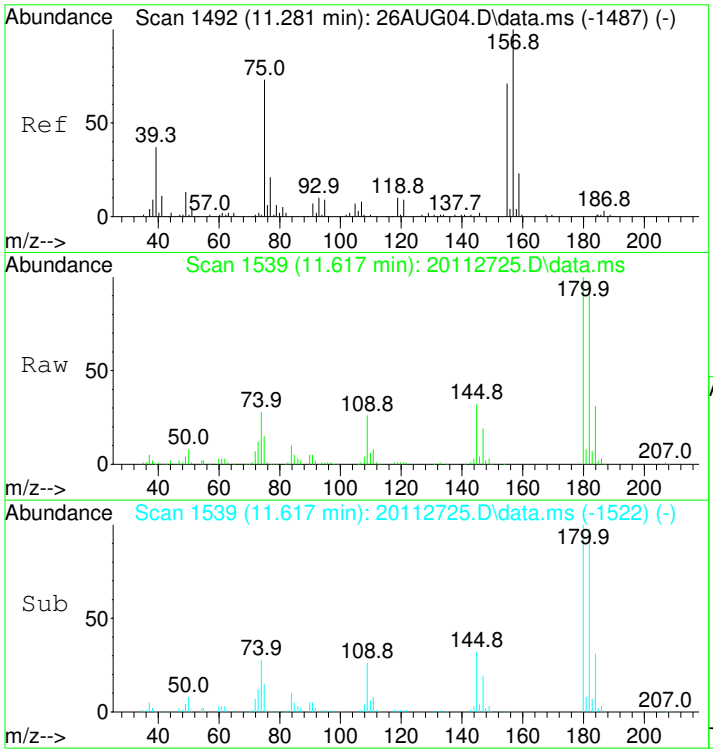


#113
1,3,5-Trichlorobenzene
Concen: 0.27 ug/L
RT: 11.309 min Scan# 1496
Delta R.T. -0.001 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:180 Resp: 5019

Ion	Ratio	Lower	Upper
180	100		
182	93.3	76.9	115.3
145	33.1	24.9	37.3
184	26.6	25.5	38.3

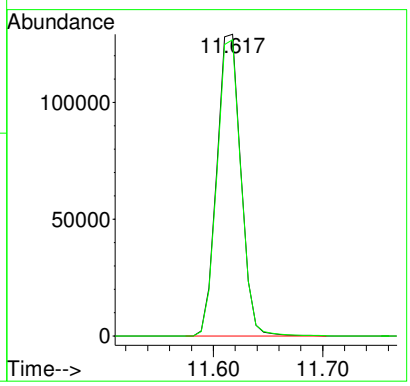


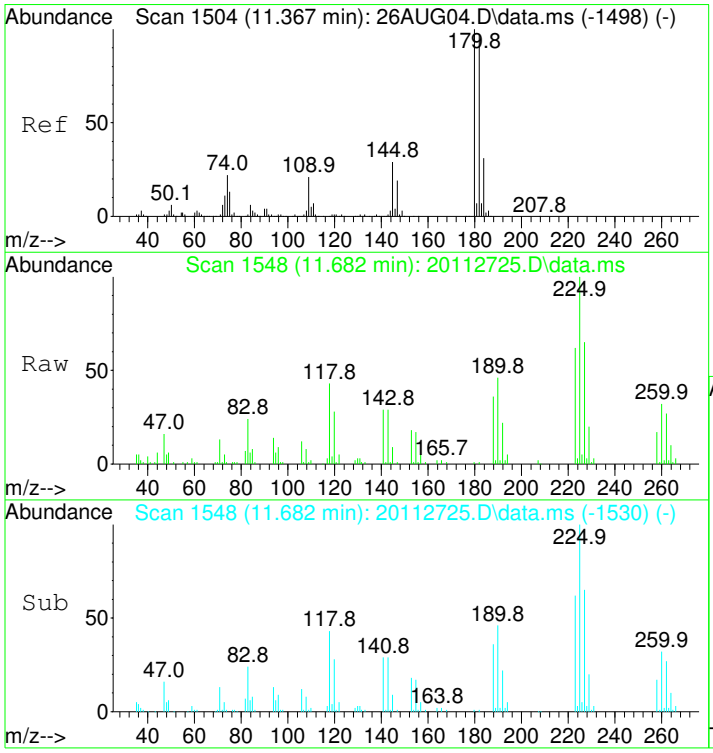


#114
1,2,4-Trichlorobenzene
Concen: 21.25 ug/L
RT: 11.617 min Scan# 1539
Delta R.T. -0.001 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:180 Resp: 197796

Ion	Ratio	Lower	Upper
180	100		
182	97.9	76.7	116.7

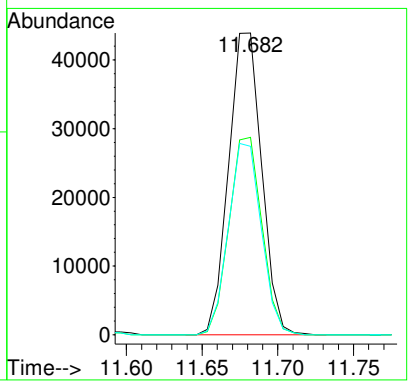


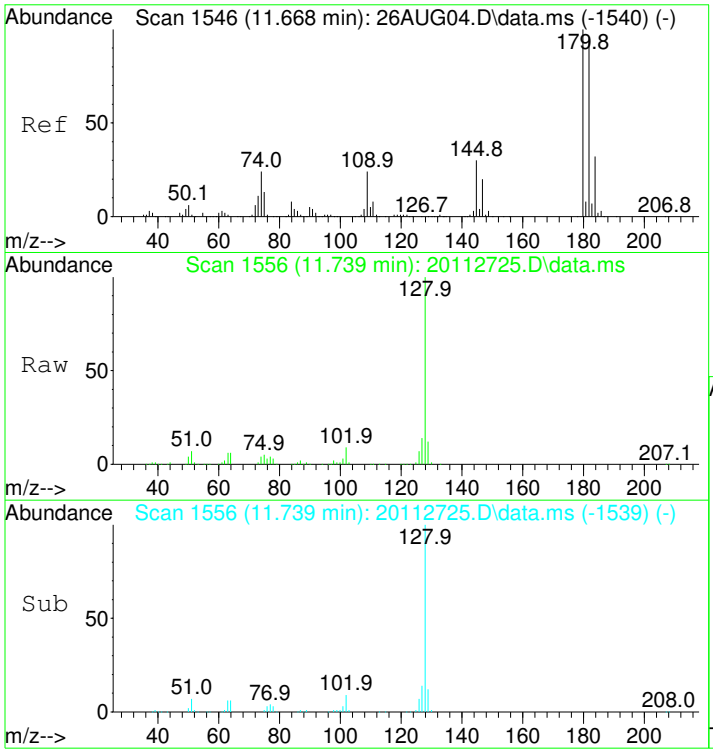


#115
Hexachlorobutadiene
Concen: 21.14 ug/L
RT: 11.682 min Scan# 1548
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:225 Resp: 66624

Ion	Ratio	Lower	Upper
225	100		
227	65.1	50.9	76.3
223	63.2	50.5	75.7

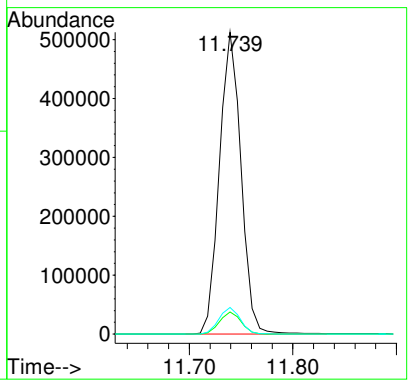


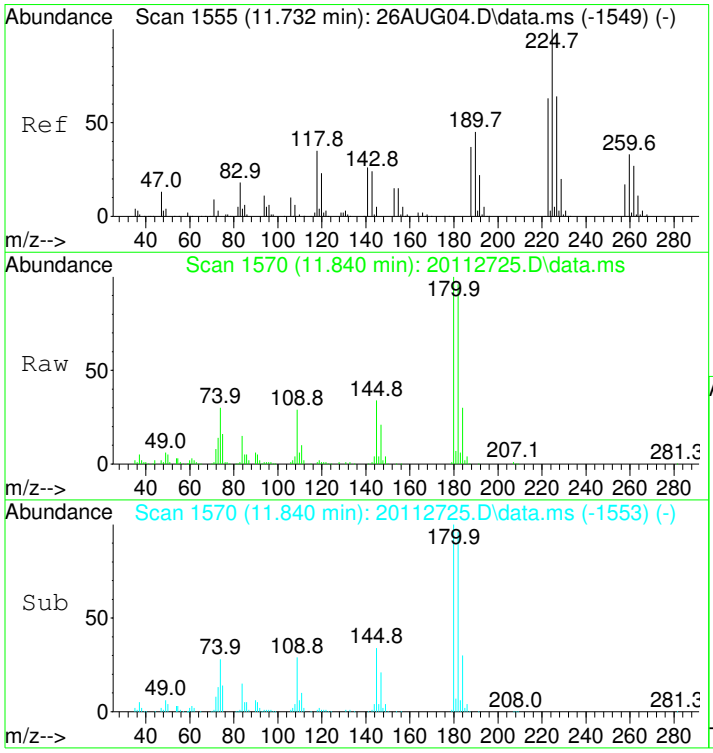


#116
Naphthalene
Concen: 20.80 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:128 Resp: 743768

Ion	Ratio	Lower	Upper
128	100		
126	7.3	0.0	28.2
102	8.7	0.0	30.0

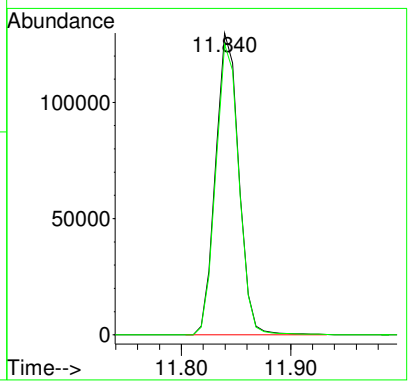


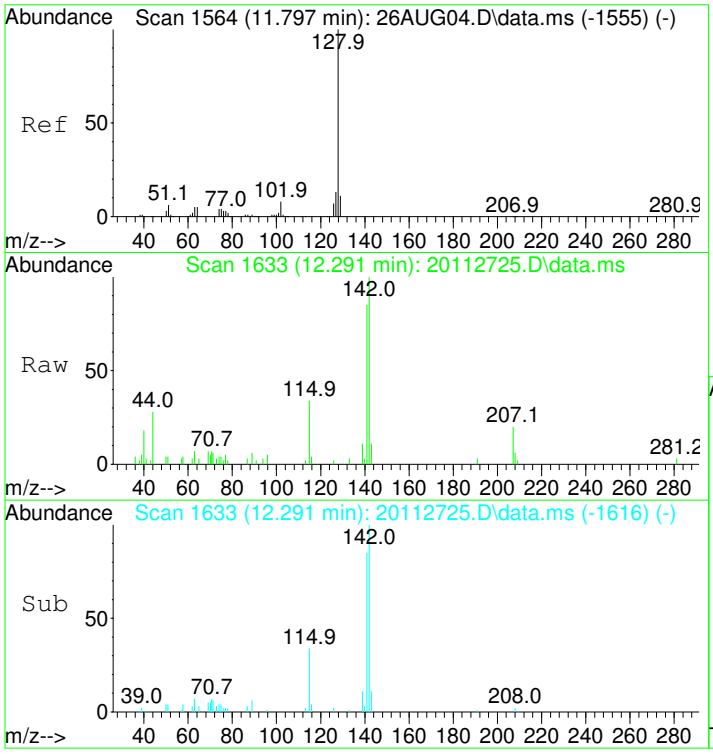


#117
1,2,3-Trichlorobenzene
Concen: 21.61 ug/L
RT: 11.840 min Scan# 1570
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:180 Resp: 192273

Ion	Ratio	Lower	Upper
180	100		
182	96.1	78.4	118.4

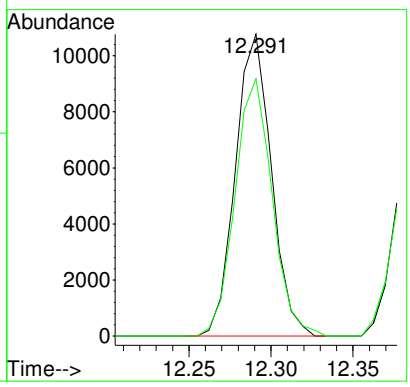


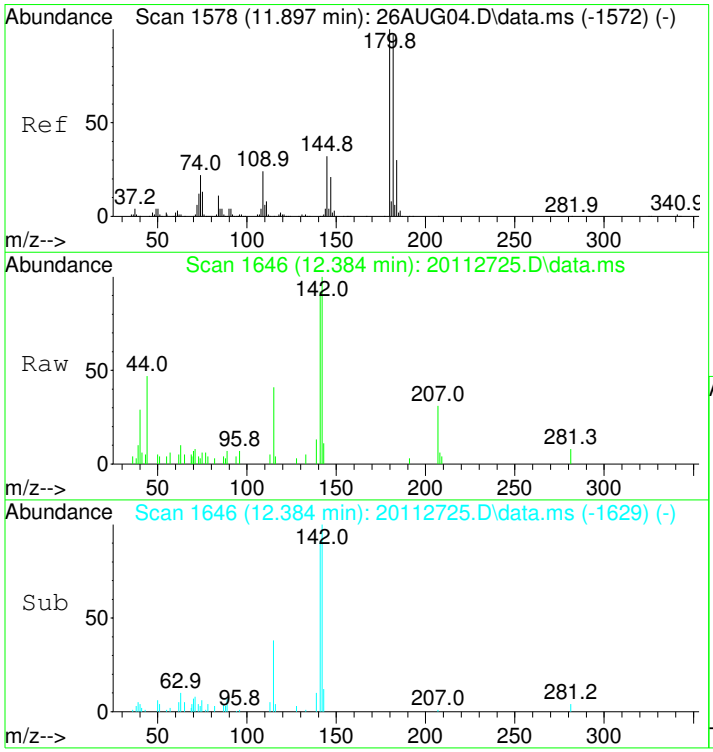


#118
2-Methylnaphthalene
Concen: 0.51 ug/L
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:142 Resp: 16441

Ion	Ratio	Lower	Upper
142	100		
141	88.2	65.0	105.0

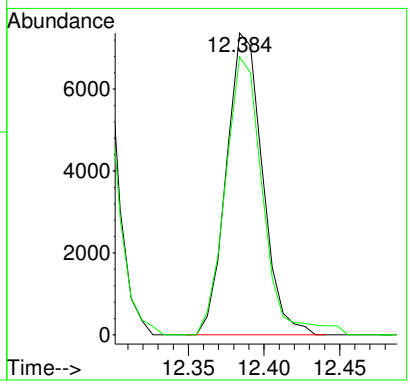


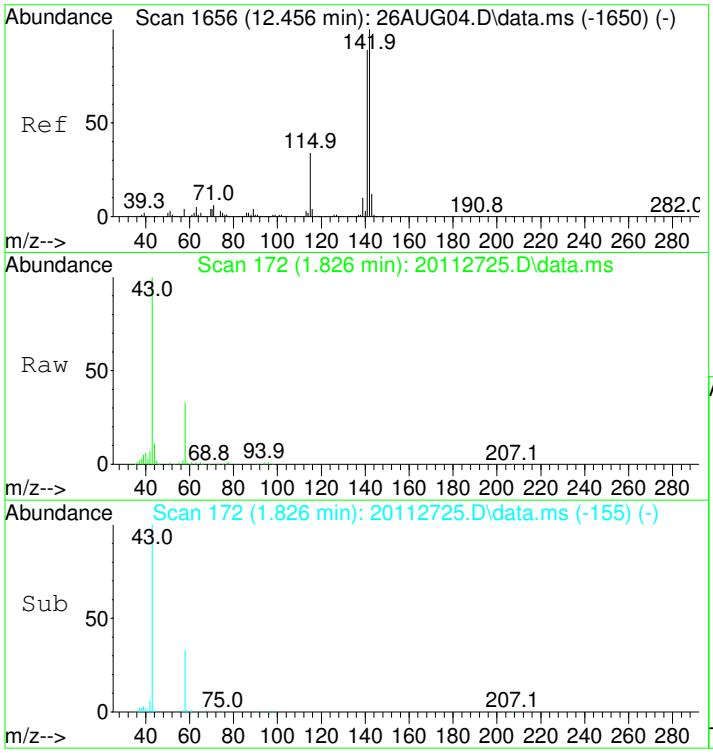


#119
1-Methylnaphthalene
Concen: 0.39 ug/L
RT: 12.384 min Scan# 1646
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion:142 Resp: 12176

Ion	Ratio	Lower	Upper
142	100		
141	95.5	69.8	104.8

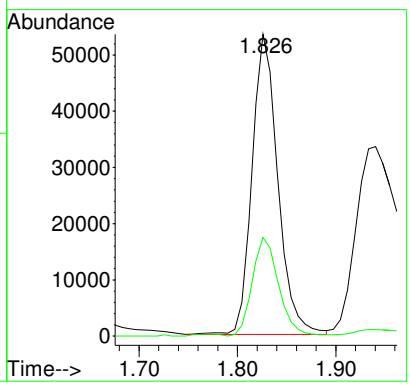


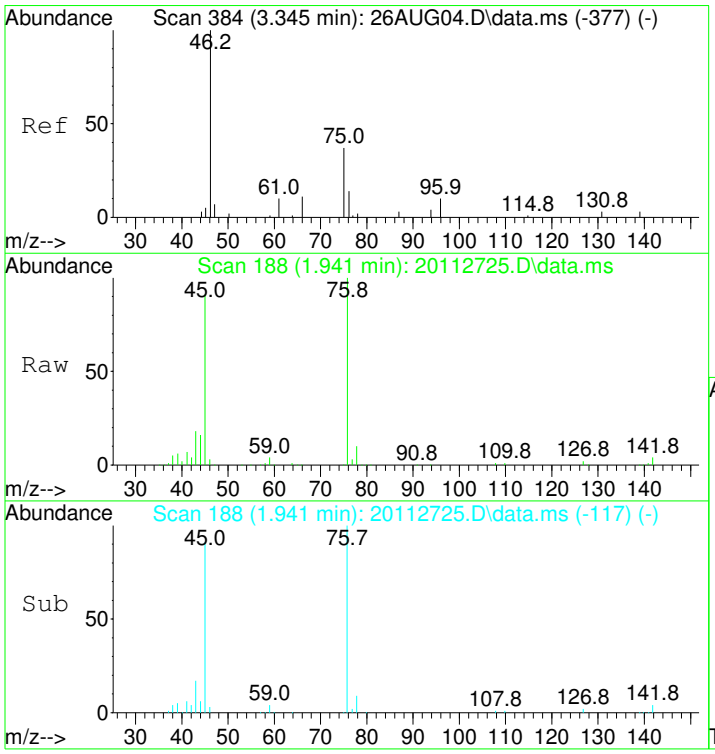


#121
2-Propanone
Concen: 26.56 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 97190

Ion	Ratio	Lower	Upper
43	100		
58	33.7	28.2	42.2

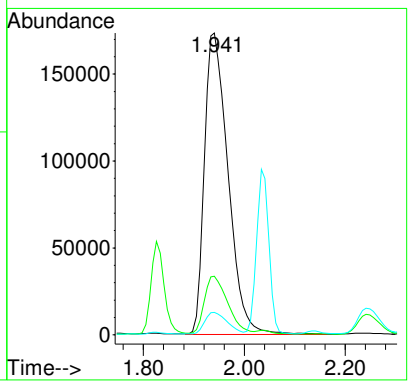


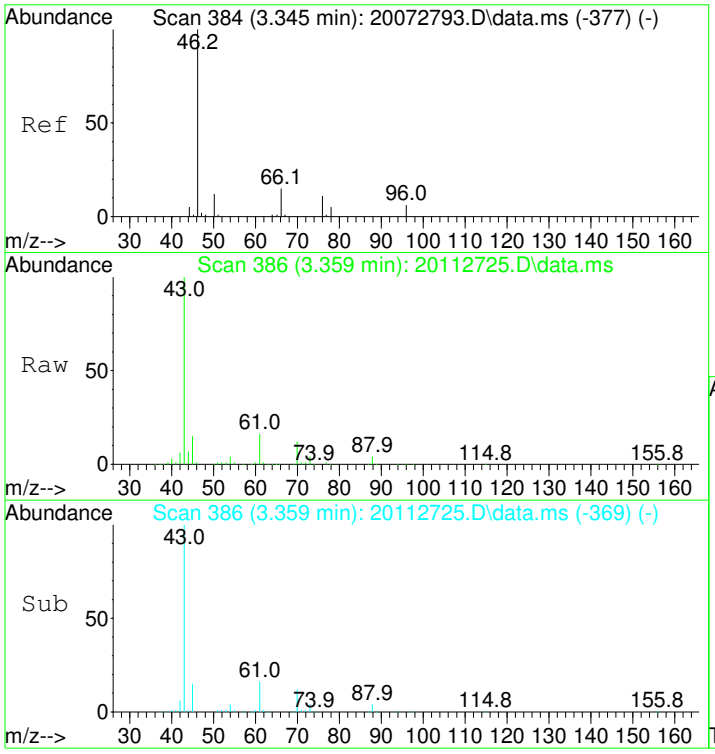


#122
Isopropyl Alcohol
Concen: 456.80 ug/L
RT: 1.941 min Scan# 188
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 45 Resp: 566069

Ion	Ratio	Lower	Upper
45	100		
43	18.8	14.6	21.8
41	6.9	5.7	8.5

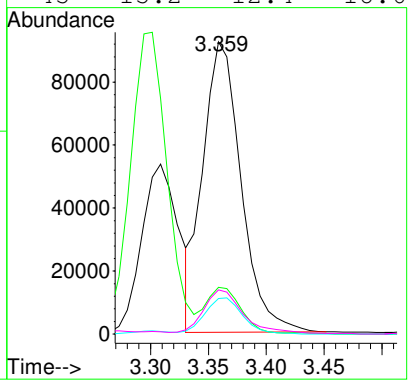


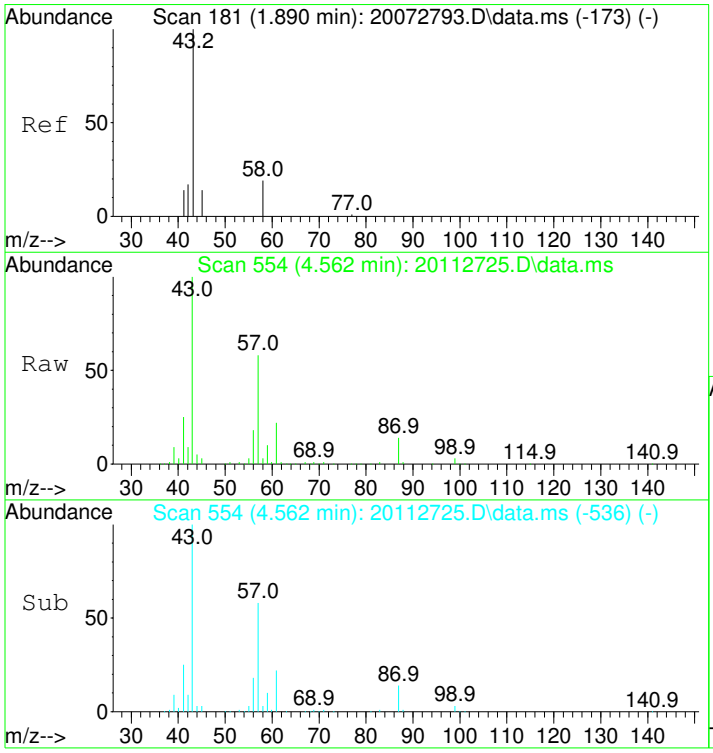


#123
Acetic Ether
Concen: 18.81 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 212470

Ion	Ratio	Lower	Upper
43	100		
61	14.0	11.9	17.9
70	12.4	9.7	14.5
45	15.2	12.4	18.6

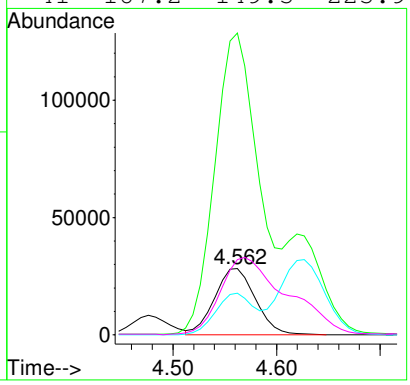


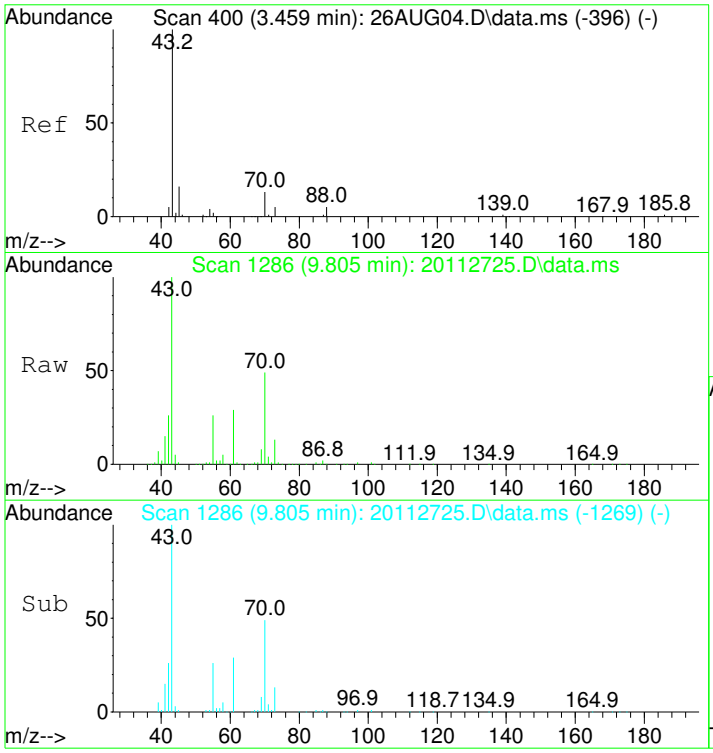


#124
Isopropyl Acetate
Concen: 19.13 ug/L
RT: 4.562 min Scan# 554
Delta R.T. 0.007 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 61 Resp: 77675

Ion	Ratio	Lower	Upper
61	100		
43	494.5	392.6	589.0
87	58.7	46.2	69.2
41	187.2	149.3	223.9

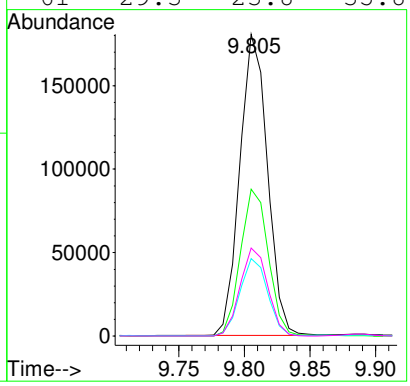




#125
Amyl Acetate
Concen: 17.60 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. -0.000 min
Lab File: 20112725.D
Acq: 27 Nov 2020 6:45 pm

Tgt Ion: 43 Resp: 265726

Ion	Ratio	Lower	Upper
43	100		
70	49.3	39.8	59.6
55	25.6	21.8	32.8
61	29.3	23.8	35.8



Response Factor Report VMS8

Method Path : C:\msdchem\1\methods\
Method File : VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration
Last Update : Sat Nov 28 12:03:56 2020
Response Via : Initial Calibration

Calibration Files
1 =20112711.D 2 =20112712.D 3 =20112713.D 4 =20112714.D 5 =20112715.D 6 =20112716.D 7 =20112717.D
8 =20112718.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------									
2)	C	Dichlorodifluo...	0.576	0.526	0.513	0.494	0.509	0.506	0.519	0.502	0.518	4.87#
3)	C	Dichlorofluoro...	2.016	1.823	1.277	1.223	1.112	1.125	1.150	1.118	1.355	26.29#
4)	CP	Chloromethane	2.099	1.399	1.054	0.944	0.995	1.155	1.156	1.047	1.231	30.64#
5)	C	1,3-Butadiene									0.000	-1.00
6)	C	Vinyl chloride		0.897	0.715	0.700	0.660	0.674	0.679	0.660	0.712	11.78
7)	C	Bromomethane		0.501	0.298	0.205	0.135	0.093	0.101	0.118	0.207	71.54#
8)	C	Chloroethane	0.285	0.293	0.250	0.200	0.256	0.298	0.325	0.324	0.279	15.09#
9)	C	Trichlorofluor...		0.894	0.817	0.764	0.756	0.777	0.782	0.755	0.792	6.26#
10)	C	Ethanol	0.118	0.102	0.065	0.064	0.058	0.056	0.057	0.056	0.072	33.77#
11)	C	Ethyl ether		0.622	0.543	0.537	0.458	0.488	0.484	0.465	0.514	11.25#
12)	C	Acrolein	0.292	0.262	0.128	0.071	0.038	0.016	0.018	0.022	0.106	106.10#
13)	C	1,1-Dichloroet...		1.113	0.849	0.850	0.773	0.763	0.753	0.703	0.829	16.35
14)	C	1,1,2-Trichlor...		0.416	0.345	0.398	0.355	0.352	0.365	0.348	0.369	7.51#
15)	C	Methyl iodide									0.000	-1.00
16)	C	Acetone	0.801	0.719	0.393	0.395	0.326	0.329	0.341	0.339	0.455	41.96#
17)	C	Chloroprene	1.181	1.043	0.880	0.916	0.812	0.786	0.795	0.757	0.896	16.44#
18)	C	Carbon disulfide	2.373	2.186	1.693	1.693	1.526	1.493	1.496	1.430	1.736	20.26#
19)	C	2-Propanol	0.331	0.195	0.136	0.115	0.112	0.112	0.114	0.110	0.153	50.58#
20)	C	Allyl chloride		1.093	0.876	1.003	0.824	0.862	0.864	0.818	0.906	11.35#
21)	C	Methyl acetate	1.457	1.219	0.846	0.779	0.764	0.773	0.782	0.745	0.921	29.00#
22)	C	Acetonitrile	1.379	1.093	0.876	1.003	0.824	0.862	0.864	0.818	0.965	19.94#
23)	C	Methylene chlo...	1.159	1.033	0.817	0.840	0.735	0.778	0.789	0.762	0.864	17.41#
24)	C	trans-1,2-Dich...	1.080	1.140	0.813	0.898	0.750	0.740	0.737	0.700	0.857	19.60#
25)	C	t-Butanol	0.403	0.347	0.238	0.233	0.222	0.222	0.227	0.220	0.264	26.66#
26)	C	Acrylonitrile		0.545	0.431	0.452	0.370	0.377	0.388	0.380	0.420	14.95#
27)	CP	Methyl tert-bu...	2.833	2.292	2.023	1.946	1.801	1.717	1.688	1.563	1.983	20.78#
28)	C	Hexane	1.179	1.124	0.709	0.755	0.652	0.656	0.691	0.656	0.803	27.20#
29)	CP	1,1-Dichloroet...	1.629	1.423	1.129	1.176	1.052	1.058	1.069	1.010	1.193	18.31
30)	CP	Diisopropyl ether	2.375	2.148	1.871	1.761	1.648	1.582	1.565	1.457	1.801	17.58#
31)	C	Vinyl acetate	0.161	0.150	0.112	0.138	0.125	0.119	0.130	0.122	0.132	12.48#
32)	C	Methylcyclopen...	1.807	1.512	1.251	1.361	1.196	1.165	1.168	1.097	1.320	17.96#
33)	CP	Ethyl tert but...	2.557	2.382	1.922	1.919	1.785	1.814	1.785	1.675	1.980	15.95#
34)	C	2,2-Dichloropr...	1.479	1.255	1.007	0.992	0.859	0.873	0.870	0.835	1.021	22.55#
35)	C	cis-1,2-Dichlo...	1.378	1.199	1.030	1.050	0.908	0.895	0.893	0.849	1.025	17.84#
36)	C	2-Butanone	1.212	0.864	0.641	0.591	0.484	0.509	0.514	0.491	0.663	38.42#
37)	C	Ethyl Acetate	1.996	1.334	1.044	1.037	0.988	1.011	0.995	0.952	1.170	30.30#
38)	C	Methyl acrylate	1.779	1.021	0.982	0.955	0.838	0.869	0.887	0.869	1.025	30.37#

1st /S/JS 11/30/20
2nd /S/ BG 12/08/20

Method Path : C:\msdchem\1\methods\
Method File : VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration

39)	C	Propionitrile		0.012	0.081	0.072	0.063	0.057	0.056	0.053	0.056	38.83#
40)	C	Bromochloromet...	0.815	0.657	0.559	0.593	0.483	0.457	0.460	0.440	0.558	23.12#
41)	C	Tetrahydrofuran	0.812	0.612	0.458	0.432	0.385	0.368	0.373	0.364	0.476	33.40#
42)	C	Methacrylonitrile	1.415	1.007	0.767	0.858	0.735	0.741	0.746	0.720	0.874	27.33#
43)	C	Chloroform	1.744	1.383	1.214	1.199	1.064	1.080	1.076	1.044	1.225	19.43
44)	C	Cyclohexane	2.260	1.863	1.117	1.068	0.875	0.848	0.862	0.822	1.214	44.78#
45)	I	1,4-Difluorobenzene	----------ISTD----------									
46)	C	1,1,1-Trichlor...	0.744	0.753	0.549	0.557	0.524	0.500	0.493	0.477	0.575	19.27#
47)	S	Dibromofluorom...	0.330	0.323	0.330	0.323	0.319	0.323	0.305	0.304	0.320	3.12
48)	C	Carbon tetrach...	0.621	0.586	0.439	0.444	0.424	0.436	0.429	0.407	0.473	17.26#
49)	C	1,1-Dichloropr...	0.699	0.649	0.486	0.486	0.444	0.428	0.414	0.401	0.501	22.35#
50)	S	1,2-Dichloroet...	0.408	0.409	0.407	0.390	0.389	0.378	0.367	0.352	0.387	5.35
51)	C	1,2-Dichloroet...	0.707	0.691	0.527	0.526	0.487	0.470	0.461	0.449	0.540	18.99#
52)	CP	Benzene	2.128	1.989	1.452	1.434	1.316	1.255	1.205	1.148	1.491	24.63#
53)	CP	Tertiaryamylme...	1.437	1.421	1.137	1.035	0.995	0.960	0.920	0.870	1.097	20.03#
54)	C	Isobutyl Alcohol		1.236	1.058	1.036	1.031	0.985	0.945	0.898	1.027	10.50#
55)	C	Heptane	0.737	0.616	0.343	0.335	0.312	0.324	0.326	0.311	0.413	40.23#
56)	C	1,4-Dioxane	0.017	0.015	0.012	0.011	0.011	0.011	0.011	0.010	0.012	20.03#
57)	C	Methylcyclohexane	0.762	0.708	0.545	0.540	0.494	0.483	0.492	0.472	0.562	19.71#
58)	C	n-Butanol			0.028	0.023	0.025	0.027	0.028	0.028	0.027	7.88#
59)	C	Trichloroethene	0.511	0.426	0.355	0.376	0.344	0.344	0.337	0.330	0.378	16.39#
60)	C	1,2-Dichloropr...	0.635	0.508	0.391	0.392	0.359	0.344	0.334	0.331	0.412	25.89
61)	C	Dibromomethane	0.325	0.346	0.281	0.271	0.232	0.242	0.241	0.235	0.272	16.01#
62)	C	Methyl methacr...	0.621	0.728	0.450	0.432	0.384	0.400	0.391	0.379	0.473	27.42#
63)	C	Bromodichlorom...	0.723	0.641	0.494	0.476	0.471	0.466	0.458	0.452	0.523	19.43#
64)	C	2-Chloroethyl ...		0.313	0.178	0.188	0.176	0.177	0.171	0.160	0.195	27.14#
65)	C	2-Nitropropane		0.274	0.192	0.183	0.173	0.183	0.193	0.191	0.198	17.07#
66)	C	cis-1,3-Dichlo...	0.875	0.807	0.662	0.652	0.579	0.578	0.567	0.546	0.658	18.39#
67)	I	Chlorobenzene-d5	----------ISTD----------									
68)	C	4-Methyl-2-pen...	0.854	0.774	0.714	0.629	0.659	0.600	0.594	0.565	0.674	14.83#
69)	S	Toluene-d8	1.248	1.282	1.249	1.237	1.267	1.202	1.219	1.199	1.238	2.41
70)	CP	Toluene	2.432	2.045	1.671	1.654	1.480	1.366	1.290	1.222	1.645	25.06
71)	C	trans-1,3-Dich...	0.958	0.800	0.632	0.642	0.616	0.583	0.551	0.535	0.665	21.63#
72)	C	Chloropicrin									0.000	-1.00
73)	C	Ethyl methacry...	1.044	0.979	0.708	0.706	0.659	0.625	0.608	0.582	0.739	23.67#
74)	C	1,1,2-Trichlor...	0.577	0.575	0.415	0.397	0.382	0.364	0.353	0.345	0.426	22.39#
75)	C	Tetrachloroethene	0.479	0.431	0.371	0.365	0.349	0.335	0.329	0.315	0.372	15.01#
76)	C	1,3-Dichloropr...	1.130	0.875	0.721	0.698	0.644	0.605	0.584	0.570	0.728	26.06#
77)	C	2-Hexanone	0.922	0.617	0.531	0.522	0.519	0.479	0.474	0.442	0.563	27.32#
78)	C	Chlorodibromom...	0.587	0.513	0.406	0.387	0.382	0.392	0.392	0.383	0.430	17.81#
79)	C	Butyl acetate	1.548	1.112	0.865	0.861	0.815	0.781	0.737	0.693	0.926	30.32#
80)	C	1,2-Dibromoethane	0.744	0.615	0.448	0.447	0.388	0.347	0.315	0.289	0.449	34.95#
81)	CP	Chlorobenzene	1.504	1.261	1.025	1.024	0.941	0.868	0.836	0.789	1.031	23.43
82)	C	1,1,1,2-Tetrac...	0.559	0.473	0.366	0.364	0.334	0.332	0.323	0.312	0.383	22.75#
83)	CP	Ethylbenzene	2.673	2.312	1.875	1.840	1.630	1.381	1.220	1.094	1.753	30.90#
84)	CP	m/p-Xylene	2.113	1.864	1.482	1.461	1.320	1.077	0.958	0.836	1.389	31.71#

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Method Path : C:\msdchem\1\methods\
Method File : VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration

85)	C	Nonane	0.489	0.387	0.239	0.198	0.184	0.181	0.183	0.168	0.254	46.89#
86)	C	Styrene		1.607	1.201	1.222	1.099	0.945	0.859	0.784	1.102	25.23#
87)	CP	o-Xylene	2.176	2.050	1.579	1.571	1.417	1.231	1.106	1.006	1.517	27.82#
88)	C	Cyclohexanone		0.128	0.066	0.068	0.063	0.055	0.051	0.047	0.068	40.19#
89)	CP	Bromoform		0.371	0.278	0.287	0.273	0.289	0.296	0.291	0.298	11.16
90)	C	Isopropylbenzene	2.666	2.190	1.839	1.818	1.619	1.403	1.275	1.140	1.744	28.91#
91)	S	Bromofluoroben...	0.508	0.510	0.505	0.507	0.519	0.493	0.492	0.487	0.503	2.16
92)	C	Bromobenzene	1.047	0.997	0.805	0.754	0.687	0.654	0.616	0.582	0.768	22.50#
93)	CP	1,1,2,2-Tetrac...	1.278	0.973	0.740	0.766	0.701	0.618	0.584	0.548	0.776	31.25#
94)	C	1,2,3-Trichlor...	0.361	0.243	0.231	0.208	0.205	0.187	0.185	0.179	0.225	26.39#
95)	C	trans-1,4-Dich...		0.323	0.240	0.237	0.217	0.201	0.194	0.184	0.228	20.64#
96)	C	n-Propylbenzene	3.214	2.878	2.275	2.213	2.014	1.683	1.487	1.321	2.136	30.88#
97)	C	2-Chlorotoluene	1.805	1.643	1.295	1.251	1.151	0.983	0.922	0.843	1.237	27.64#
98)	C	4-Chlorotoluene		2.112	1.576	1.550	1.374	1.149	1.038	0.939	1.391	28.86#
99)	C	1,3,5-Trimethy...	2.184	1.971	1.490	1.472	1.417	1.182	1.079	0.957	1.469	28.92#
100)	C	tert-Butylbenzene	1.622	1.314	1.082	1.088	0.958	0.850	0.801	0.757	1.059	27.53#
101)	C	1,2,4-Trimethy...	2.224	2.092	1.638	1.620	1.421	1.229	1.111	1.002	1.542	28.72#
102)	C	sec-Butylbenzene	2.431	2.408	1.908	1.914	1.667	1.438	1.295	1.168	1.778	26.82#
103)	I	1,4-Dichlorobenzen...	----------ISTD----------									
104)	C	1,3-Dichlorobe...	2.458	2.130	1.803	1.688	1.529	1.421	1.353	1.304	1.711	23.73#
105)	C	p-Isopropyltol...	4.135	3.571	3.069	3.028	2.723	2.412	2.221	2.049	2.901	24.28#
106)	C	1,4-Dichlorobe...	2.343	2.148	1.709	1.666	1.514	1.365	1.281	1.266	1.662	24.01#
107)	C	1,2,3-Trimethy...	4.577	3.787	3.053	3.156	2.787	2.443	2.199	2.039	3.005	28.27#
108)	C	Benzyl chloride		3.879	3.050	3.034	2.625	2.310	2.094	1.944	2.705	24.89#
109)	C	1,2-Dichlorobe...	2.491	2.114	1.814	1.716	1.514	1.396	1.309	1.271	1.703	25.06#
110)	C	n-Butylbenzene		3.334	2.845	2.790	2.527	2.252	2.038	1.877	2.523	20.19#
111)	C	Hexachloroethane		0.585	0.486	0.519	0.463	0.491	0.492	0.502	0.505	7.72#
112)	C	1,2-Dibromo-3-...	0.746	0.448	0.441	0.421	0.408	0.411	0.364	0.354	0.449	27.69#
113)	C	1,3,5-Trichlor...	1.703	1.170	1.192	1.202	1.037	1.048	0.989	0.965	1.163	20.36#
114)	C	1,2,4-Trichlor...	1.922	1.501	1.206	1.117	1.080	1.050	1.004	0.975	1.232	26.34#
115)	C	Hexachlorobuta...	0.520	0.458	0.352	0.374	0.330	0.337	0.346	0.341	0.382	18.14#
116)	C	Naphthalene	7.325	5.812	4.675	4.674	4.065	3.616	3.201	2.854	4.528	32.46#
117)	C	1,2,3-Trichlor...	1.705	1.377	1.139	1.131	1.007	0.984	0.966	0.939	1.156	22.81#
118)	C	2-Methylnaphth...	3.774	3.366	2.589	2.577	2.281	2.204	2.081	1.985	2.607	24.57#
119)	C	1-Methylnaphth...	3.589	2.801	2.340	2.227	2.091	2.042	1.929	1.855	2.359	24.49#
120)	I	Ethyl-d5-Acetate-d3	----------ISTD----------									
121)	T	2-Propanone	1.530	1.398	0.754	0.766	0.638	0.618	0.620	0.626	0.869	43.04
122)	C	Isopropyl Alcohol	0.632	0.380	0.260	0.223	0.219	0.210	0.207	0.203	0.292	51.24#
123)	T	Acetic Ether	3.032	2.596	2.001	2.010	1.933	1.898	1.809	1.760	2.130	20.96
124)	T	Isopropyl Acetate	0.963	0.859	0.820	0.711	0.681	0.678	0.660	0.637	0.751	15.46
125)	T	Amyl Acetate	4.337	3.993	2.924	2.804	2.649	2.433	2.223	2.070	2.929	27.95

(#) = Out of Range

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Partial Calibration Report VMS8

Method Path : C:\msdchem\1\methods\
Method File : VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration
Last Update : Sat Nov 28 12:03:56 2020
Response Via : Initial Calibration

Calibration Files
1 =20112711 2 =20112712 3 =20112713 4 =20112714 5 =20112715 6 =20112716
7 =20112717 8 =20112718

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Pentafluorobenzene		----------ISTD----------			
2)	C	Dichlorodifluoro...	Lin	0.0008	0.5081	-----	0.9998
3)	C	Dichlorofluorome...	Lin	0.0184	1.1227	-----	0.9997
4)	CP	Chloromethane	Lin	0.0111	1.0906	-----	0.9959
6)	C	Vinyl chloride	Lin	0.0062	0.6666	-----	0.9998
7)	C	Bromomethane	Quad	0.0250	0.0578	0.0109	0.9988
8)	C	Chloroethane	Quad	-0.0005	0.2676	0.0128	0.9981
10)	C	Ethanol	Lin	0.0255	0.0556	-----	0.9998
11)	C	Ethyl ether	Lin	0.0055	0.4736	-----	0.9993
12)	C	Acrolein	Quad	0.0106	0.0053	0.0029	0.9919
13)	C	1,1-Dichloroethene	Lin	0.0137	0.7289	-----	0.9986
15)	C	Methyl iodide	Quad	-----	-----	-----	0.0000
16)	C	Acetone	Quad	0.0104	0.3173	0.0043	0.9995
17)	C	Chloroprene	Lin	0.0096	0.7749	-----	0.9992
18)	C	Carbon disulfide	Lin	0.0217	1.4609	-----	0.9994
19)	C	2-Propanol	Lin	0.0679	0.1100	-----	0.9988
20)	C	Allyl chloride	Lin	0.0091	0.8391	-----	0.9988
21)	C	Methyl acetate	Lin	0.0129	0.7570	-----	0.9994
22)	C	Acetonitrile	Lin	0.0100	0.8387	-----	0.9988
23)	C	Methylene chloride	Lin	0.0074	0.7700	-----	0.9995
24)	C	trans-1,2-Dichlo...	Lin	0.0109	0.7192	-----	0.9987
25)	C	t-Butanol	Lin	0.0169	0.2214	-----	0.9997
26)	C	Acrylonitrile	Lin	0.0055	0.3803	-----	0.9994
27)	CP	Methyl tert-buty...	Lin	0.0275	1.6348	-----	0.9978
28)	C	Hexane	Lin	0.0110	0.6634	-----	0.9991
29)	CP	1,1-Dichloroethane	Lin	0.0124	1.0359	-----	0.9992
30)	CP	Diisopropyl ether	Lin	0.0224	1.5174	-----	0.9982
31)	C	Vinyl acetate	Quad	0.0006	0.1238	0.0000	0.9985
32)	C	Methylcyclopentane	Lin	0.0147	1.1330	-----	0.9987
33)	CP	Ethyl tert butyl...	Lin	0.0194	1.7346	-----	0.9988
34)	C	2,2-Dichloropropane	Lin	0.0135	0.8506	-----	0.9994
35)	C	cis-1,2-Dichloro...	Lin	0.0121	0.8718	-----	0.9990
36)	C	2-Butanone	Lin	0.0131	0.4970	-----	0.9992
37)	C	Ethyl Acetate	Lin	0.0156	0.9715	-----	0.9991
38)	C	Methyl acrylate	Lin	0.0123	0.8689	-----	0.9992
39)	C	Propionitrile	Lin	0.0001	0.0556	-----	0.9927
40)	C	Bromochloromethane	Lin	0.0085	0.4500	-----	0.9985
41)	C	Tetrahydrofuran	Lin	0.0087	0.3661	-----	0.9998
42)	C	Methacrylonitrile	Lin	0.0114	0.7293	-----	0.9993
43)	C	Chloroform	Lin	0.0132	1.0579	-----	0.9996
44)	C	Cyclohexane	Lin	0.0302	0.8325	-----	0.9994
45)	I	1,4-Difluorobenzene		----------ISTD----------			
46)	C	1,1,1-Trichloroe...	Lin	0.0070	0.4866	-----	0.9994
48)	C	Carbon tetrachlo...	Lin	0.0043	0.4184	-----	0.9992
49)	C	1,1-Dichloropropene	Lin	0.0072	0.4100	-----	0.9991
51)	C	1,2-Dichloroethane	Lin	0.0066	0.4563	-----	0.9995
52)	CP	Benzene	Lin	0.0240	1.1867	-----	0.9984
53)	CP	Tertiaryamylmeth...	Lin	0.0152	0.9038	-----	0.9981
54)	C	Isobutyl Alcohol	Lin	0.0132	0.9304	-----	0.9983
55)	C	Heptane	Lin	0.0078	0.3147	-----	0.9990
56)	C	1,4-Dioxane	Lin	0.0141	0.0106	-----	0.9998
57)	C	Methylcyclohexane	Lin	0.0065	0.4796	-----	0.9996
58)	C	n-Butanol	Quad	-0.0013	0.0262	0.0000	0.9992
59)	C	Trichloroethene	Lin	0.0034	0.3346	-----	0.9997

Partial Calibration Report VMS8

Method Path : C:\msdchem\1\methods\
Method File : VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration

60)	C	1,2-Dichloropropane	Lin	0.0061	0.3341	-----	0.9996
61)	C	Dibromomethane	Lin	0.0027	0.2374	-----	0.9995
62)	C	Methyl methacrylate	Lin	0.0070	0.3846	-----	0.9991
63)	C	Bromodichloromet...	Lin	0.0053	0.4555	-----	0.9999
64)	C	2-Chloroethyl vi...	Lin	0.0040	0.1657	-----	0.9980
65)	C	2-Nitropropane	Quad	0.0024	0.1750	0.0036	0.9995
66)	C	cis-1,3-Dichloro...	Lin	0.0079	0.5584	-----	0.9993
67)	I	Chlorobenzene-d5		----------ISTD----------			
68)	C	4-Methyl-2-penta...	Lin	0.0072	0.5829	-----	0.9986
70)	CP	Toluene	Lin	0.0292	1.2749	-----	0.9968
71)	C	trans-1,3-Dichlo...	Lin	0.0091	0.5498	-----	0.9985
73)	C	Ethyl methacrylate	Lin	0.0111	0.5981	-----	0.9989
74)	C	1,1,2-Trichloroe...	Lin	0.0059	0.3509	-----	0.9994
75)	C	Tetrachloroethene	Lin	0.0038	0.3238	-----	0.9991
76)	C	1,3-Dichloropropane	Lin	0.0116	0.5810	-----	0.9991
77)	C	2-Hexanone	Lin	0.0082	0.4597	-----	0.9981
78)	C	Chlorodibromomet...	Lin	0.0035	0.3862	-----	0.9998
79)	C	Butyl acetate	Lin	0.0161	0.7231	-----	0.9975
80)	C	1,2-Dibromoethane	Quad	0.0073	0.3841	-0.0196	0.9998
81)	CP	Chlorobenzene	Lin	0.0166	0.8210	-----	0.9976
82)	C	1,1,1,2-Tetrachl...	Lin	0.0051	0.3186	-----	0.9994
83)	CP	Ethylbenzene	Quad	0.0240	1.5961	-0.1038	0.9995
84)	CP	m/p-Xylene	Quad	0.0379	1.2771	-0.0453	0.9994
85)	C	Nonane	Lin	0.0063	0.1733	-----	0.9983
86)	C	Styrene	Quad	0.0181	1.0626	-0.0575	0.9996
87)	CP	o-Xylene	Quad	0.0186	1.3945	-0.0801	0.9997
88)	C	Cyclohexanone	Lin	0.0128	0.0494	-----	0.9944
90)	C	Isopropylbenzene	Quad	0.0217	1.6035	-0.0945	0.9997
92)	C	Bromobenzene	Lin	0.0126	0.6078	-----	0.9971
93)	CP	1,1,2,2-Tetrachl...	Lin	0.0159	0.5748	-----	0.9959
94)	C	1,2,3-Trichlorop...	Lin	0.0034	0.1823	-----	0.9989
95)	C	trans-1,4-Dichlo...	Lin	0.0052	0.1899	-----	0.9982
96)	C	n-Propylbenzene	Quad	0.0287	1.9585	-0.1313	0.9995
97)	C	2-Chlorotoluene	Lin	0.0264	0.9018	-----	0.9926
98)	C	4-Chlorotoluene	Quad	0.0279	1.3114	-0.0773	0.9995
99)	C	1,3,5-Trimethylb...	Quad	0.0176	1.3631	-0.0826	0.9997
100)	C	tert-Butylbenzene	Lin	0.0210	0.7925	-----	0.9956
101)	C	1,2,4-Trimethylb...	Quad	0.0201	1.4048	-0.0829	0.9995
102)	C	sec-Butylbenzene	Quad	0.0211	1.6524	-0.0999	0.9994
103)	I	1,4-Dichlorobenz...		----------ISTD----------			
104)	C	1,3-Dichlorobenzene	Lin	0.0289	1.3447	-----	0.9979
105)	C	p-Isopropyltoluene	Lin	0.0561	2.1902	-----	0.9928
106)	C	1,4-Dichlorobenzene	Lin	0.0290	1.2939	-----	0.9977
107)	C	1,2,3-Trimethylb...	Lin	0.0648	2.1848	-----	0.9913
108)	C	Benzyl chloride	Quad	0.0478	2.5646	-0.1295	0.9995
109)	C	1,2-Dichlorobenzene	Lin	0.0310	1.3105	-----	0.9972
110)	C	n-Butylbenzene	Quad	0.0308	2.5080	-0.1300	0.9998
112)	C	1,2-Dibromo-3-ch...	Lin	0.0064	0.3681	-----	0.9963
113)	C	1,3,5-Trichlorob...	Lin	0.0138	0.9882	-----	0.9984
114)	C	1,2,4-Trichlorob...	Lin	0.0186	0.9963	-----	0.9992
115)	C	Hexachlorobutadiene	Lin	0.0033	0.3402	-----	0.9997
116)	C	Naphthalene	Quad	0.0623	4.0995	-0.2543	0.9997
117)	C	1,2,3-Trichlorob...	Lin	0.0159	0.9545	-----	0.9994
118)	C	2-Methylnaphthalene	Quad	0.0308	2.3127	-0.0671	0.9999
119)	C	1-Methylnaphthalene	Quad	0.0256	2.1089	-0.0517	0.9999
120)	I	Ethyl-d5-Acetate-d3		----------ISTD----------			
121)	T	2-Propanone	Quad	0.0206	0.6025	0.0037	0.9996
122)	C	Isopropyl Alcohol	Quad	0.1374	0.2056	-0.0000	0.9992
123)	T	Acetic Ether	Quad	0.0194	1.9353	-0.0358	0.9999
124)	T	Isopropyl Acetate	Quad	0.0056	0.6967	-0.0118	0.9998
125)	T	Amyl Acetate	Quad	0.0365	2.6295	-0.1145	0.9999

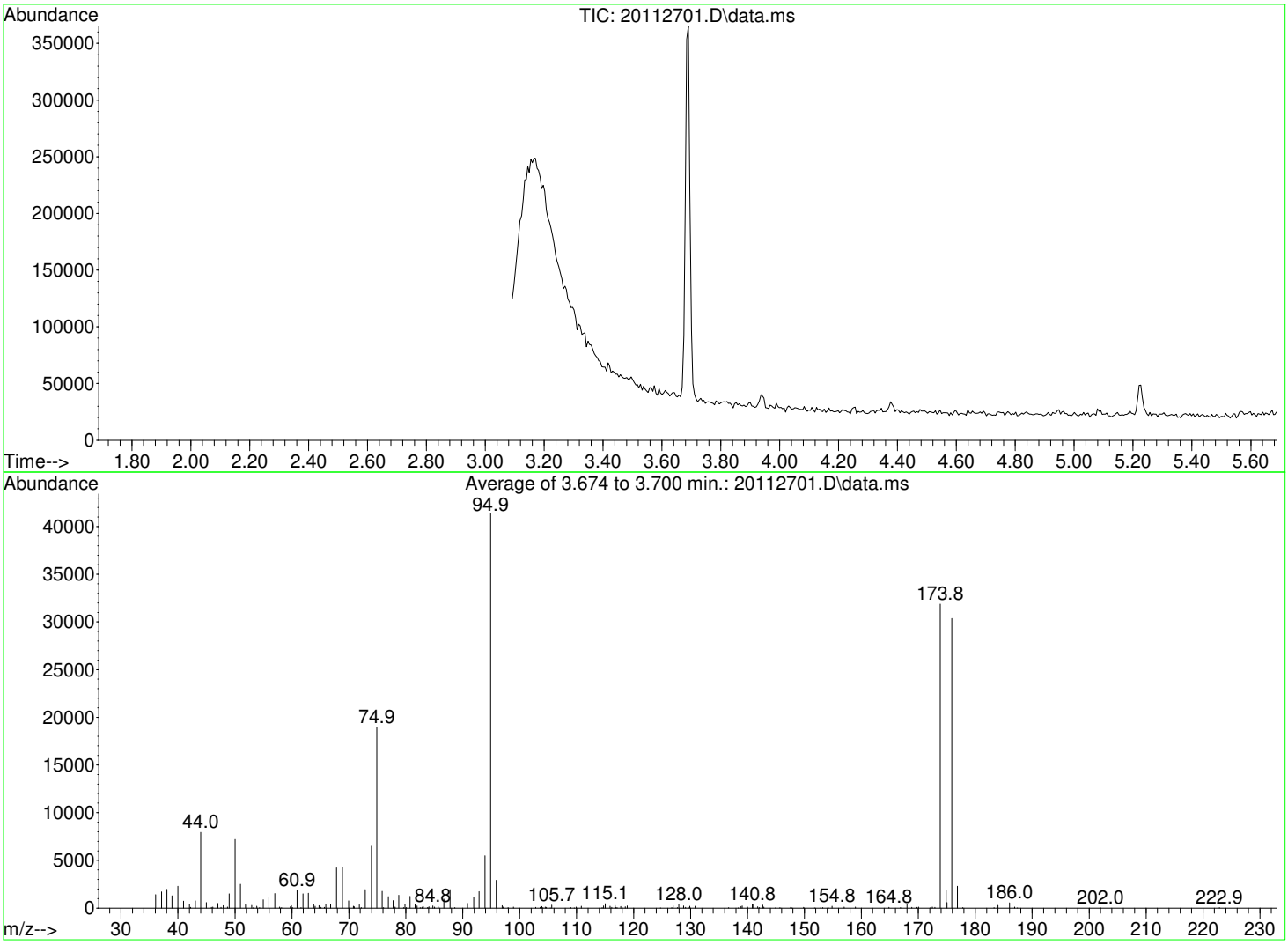
1st /S/ JS 11/30/20

2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112701.D
Acq On : 27 Nov 2020 12:11 pm
Operator : js
Sample : BFB_TUNE1-201127
Misc : BFB 200-21588
ALS Vial : 1 Sample Multiplier: 1

Integration File: 8260.P

Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration
Last Update : Sat Nov 28 12:03:56 2020



Spectrum Information: Average of 3.674 to 3.700 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	7205	PASS
75	95	30	60	45.9	18981	PASS
95	95	100	100	100.0	41376	PASS
96	95	5	9	7.0	2915	PASS
173	174	0.00	2	0.2	71	PASS
174	95	50	120	77.1	31883	PASS
175	174	5	9	5.9	1894	PASS
176	174	95	101	95.2	30360	PASS
177	176	5	9	7.5	2291	PASS

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112710.D
Acq On : 27 Nov 2020 2:44 pm
Operator : js
Sample : VBLKW1-201127
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 27 21:49:09 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.989	168	242211	20.00 ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	421676	20.00 ug/L		0.00
67) Chlorobenzene-d5	9.196	117	385827	20.00 ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	202740	20.00 ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	127551	20.00 ug/L	#	0.00
System Monitoring Compounds						
47) Dibromofluoromethane	3.910	111	140023	19.59 ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 97.95%			
50) 1,2-Dichloroethane-d4	4.369	65	167954	18.70 ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 93.50%			
69) Toluene-d8	7.836	98	491721	20.57 ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 102.85%			
91) Bromofluorobenzene	9.992	95	197545	21.30 ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 106.50%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.038	85	187	Below Cal	#	50
3) Dichlorofluoromethane	1.411	67	316	Below Cal	#	49
4) Chloromethane	1.052	50	3467	Below Cal		75
5) 1,3-Butadiene	1.131	54	1115	No Calib	#	
6) Vinyl chloride	1.103	62	1924	N.D.		
7) Bromomethane	1.282	96	1734	Below Cal	#	86
8) Chloroethane	1.339	64	604	N.D.		
9) Trichlorofluoromethane	0.000		0	N.D.		
10) Ethanol	1.582	45	1805	Below Cal		90
11) Ethyl ether	0.000		0	N.D.		
12) Acrolein	1.726	56	402	Below Cal		85
13) 1,1-Dichloroethene	0.000		0	N.D.		
14) 1,1,2-Trichlorotrifluo...	0.000		0	N.D.		
15) Methyl iodide	1.890	142	4321	Below Cal		88
16) Acetone	1.826	43	2114	Below Cal		74
17) Chloroprene	0.000		0	N.D.		
18) Carbon disulfide	1.941	76	1843	Below Cal	#	1
19) 2-Propanol	1.905	45	296	Below Cal	#	1
20) Allyl chloride	2.041	41	607	0.06 ug/L	#	67
21) Methyl acetate	2.034	43	893	Below Cal	#	25
22) Acetonitrile	2.041	41	607	0.06 ug/L	#	46
23) Methylene chloride	2.134	49	514	Below Cal	#	60
24) trans-1,2-Dichloroethene	2.349	61	98	Below Cal	#	1
25) t-Butanol	2.213	59	1729	Below Cal	#	26
26) Acrylonitrile	0.000		0	N.D.		
27) Methyl tert-butyl ether	0.000		0	N.D.		
28) Hexane	2.578	57	782	Below Cal	#	88
29) 1,1-Dichloroethane	2.800	63	92	Below Cal	#	1
30) Diisopropyl ether	0.000		0	N.D.		
31) Vinyl acetate	0.000		0	N.D.		
32) Methylcyclopentane	3.173	56	356	Below Cal	#	23
33) Ethyl tert butyl ether	0.000		0	N.D.		
34) 2,2-Dichloropropane	3.323	77	361	Below Cal	#	1
35) cis-1,2-Dichloroethene	0.000		0	N.D.		
36) 2-Butanone	3.316	43	1578	Below Cal	#	38
37) Ethyl Acetate	3.316	43	1477	Below Cal	#	71
38) Methyl acrylate	3.387	55	953	Below Cal	#	63
39) Propionitrile	0.000		0	N.D.		
40) Bromochloromethane	0.000		0	N.D.		
41) Tetrahydrofuran	3.567	42	328	Below Cal	#	28

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112710.D
Acq On : 27 Nov 2020 2:44 pm
Operator : js
Sample : VBLKW1-201127
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 27 21:49:09 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) Methacrylonitrile	3.552	41	428	Below Cal	#	53
43) Chloroform	0.000		0	N.D.		
44) Cyclohexane	3.989	56	5176	Below Cal	#	22
46) 1,1,1-Trichloroethane	0.000		0	N.D.		
48) Carbon tetrachloride	0.000		0	N.D. d		
49) 1,1-Dichloropropene	0.000		0	N.D.		
51) 1,2-Dichloroethane	0.000		0	N.D.		
52) Benzene	4.362	78	1563	Below Cal	#	35
53) Tertiaryamylmethylether	0.000		0	N.D.		
54) Isobutyl Alcohol	4.584	43	991	Below Cal	#	62
55) Heptane	4.920	43	1556	Below Cal	#	23
56) 1,4-Dioxane	0.000		0	N.D.		
57) Methylcyclohexane	5.894	83	90	Below Cal	#	1
58) n-Butanol	5.565	56	181	Below Cal	#	1
59) Trichloroethene	0.000		0	N.D.		
60) 1,2-Dichloropropane	0.000		0	N.D.		
61) Dibromomethane	0.000		0	N.D.		
62) Methyl methacrylate	6.274	41	841	Below Cal	#	47
63) Bromodichloromethane	0.000		0	N.D.		
64) 2-Chloroethyl vinyl ether	0.000		0	N.D. d		
65) 2-Nitropropane	7.134	43	1034	0.24 ug/L	#	71
66) cis-1,3-Dichloropropene	0.000		0	N.D.		
68) 4-Methyl-2-pentanone	7.757	43	695	Below Cal	#	42
70) Toluene	7.922	91	845	Below Cal	#	41
71) trans-1,3-Dichloropropene	0.000		0	N.D.		
72) Chloropicrin	0.000		0	N.D.		
73) Ethyl methacrylate	8.394	69	90	Below Cal	#	1
74) 1,1,2-Trichloroethane	0.000		0	N.D.		
75) Tetrachloroethene	0.000		0	N.D.		
76) 1,3-Dichloropropane	0.000		0	N.D.		
77) 2-Hexanone	8.666	43	1096	Below Cal	#	21
78) Chlorodibromomethane	0.000		0	N.D.		
79) Butyl acetate	8.810	43	740	Below Cal	#	33
80) 1,2-Dibromoethane	0.000		0	N.D.		
81) Chlorobenzene	9.218	112	315	Below Cal	#	1
82) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.		
83) Ethylbenzene	9.304	91	899	Below Cal	#	42
84) m/p-Xylene	9.397	91	1533	Below Cal	#	70
85) Nonane	9.461	43	1072	Below Cal	#	78
86) Styrene	9.676	104	376	Below Cal	#	1
87) o-Xylene	9.655	91	566	Below Cal	#	28
88) Cyclohexanone	9.906	55	561	Below Cal	#	63
89) Bromoform	0.000		0	N.D.		
90) Isopropylbenzene	9.891	105	679	Below Cal	#	48
92) Bromobenzene	10.063	77	447	Below Cal	#	19
93) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.		
94) 1,2,3-Trichloropropane	0.000		0	N.D.		
95) trans-1,4-Dichloro-2-b...	0.000		0	N.D.		
96) n-Propylbenzene	10.135	91	1343	Below Cal		87
97) 2-Chlorotoluene	10.249	91	1185	Below Cal		69
98) 4-Chlorotoluene	10.249	91	1186	Below Cal		73
99) 1,3,5-Trimethylbenzene	10.242	105	644	Below Cal	#	48
100) tert-Butylbenzene	10.407	91	744	Below Cal	#	1
101) 1,2,4-Trimethylbenzene	10.443	105	1060	Below Cal	#	51
102) sec-Butylbenzene	10.529	105	840	Below Cal	#	56
104) 1,3-Dichlorobenzene	10.593	146	525	Below Cal	#	74
105) p-Isopropyltoluene	10.615	119	1052	Below Cal	#	7
106) 1,4-Dichlorobenzene	10.650	146	838	Below Cal	#	1

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112710.D
Acq On : 27 Nov 2020 2:44 pm
Operator : js
Sample : VBLKW1-201127
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 27 21:49:09 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

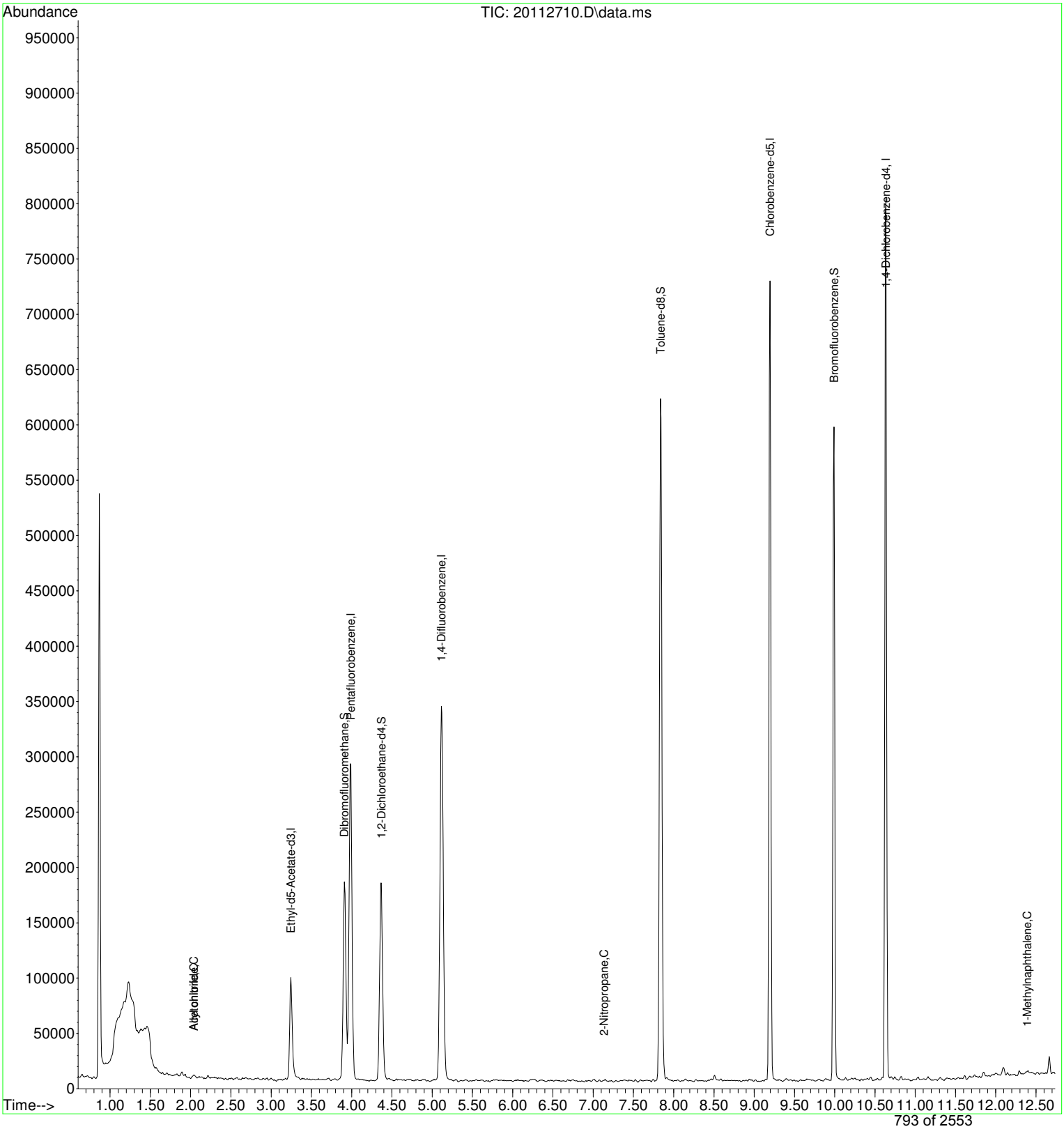
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
107) 1,2,3-Trimethylbenzene	10.665	105	623	Below Cal	#	62
108) Benzyl chloride	10.249	91	1186	Below Cal	#	71
109) 1,2-Dichlorobenzene	10.830	146	196	Below Cal		86
110) n-Butylbenzene	10.822	91	1909	N.D.		
111) Hexachloroethane	0.000		0	N.D.		
112) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
113) 1,3,5-Trichlorobenzene	11.317	180	242	Below Cal	#	14
114) 1,2,4-Trichlorobenzene	11.617	180	708	Below Cal		96
115) Hexachlorobutadiene	11.675	225	219	Below Cal	#	45
116) Naphthalene	11.739	128	1985	N.D.		
117) 1,2,3-Trichlorobenzene	11.840	180	687	N.D.		
118) 2-Methylnaphthalene	12.291	142	1602	N.D.		
119) 1-Methylnaphthalene	12.391	142	1302	0.30 ug/L		95
121) 2-Propanone	1.826	43	2114	Below Cal	#	74
122) Isopropyl Alcohol	1.905	45	296	Below Cal	#	1
123) Acetic Ether	3.316	43	1578	Below Cal	#	66
124) Isopropyl Acetate	0.000		0	N.D.		
125) Amyl Acetate	9.820	43	834	Below Cal	#	70

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112710.D
Acq On : 27 Nov 2020 2:44 pm
Operator : js
Sample : VBLKW1-201127
Misc : IS 200-21532
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 27 21:49:09 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112711.D
Acq On : 27 Nov 2020 3:00 pm
Operator : js
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 27 22:36:32 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene	3.982	168	234952	20.00 ug/L	0.00
45) 1,4-Difluorobenzene	5.114	114	392670	20.00 ug/L	0.00
67) Chlorobenzene-d5	9.196	117	367537	20.00 ug/L	0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	196129	20.00 ug/L	# 0.00
120) Ethyl-d5-Acetate-d3	3.244	46	122974	20.00 ug/L	0.00
System Monitoring Compounds					
47) Dibromofluoromethane	3.910	111	129432	19.44 ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 97.20%		
50) 1,2-Dichloroethane-d4	4.362	65	160023	19.13 ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 95.65%		
69) Toluene-d8	7.836	98	458778	20.14 ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.70%		
91) Bromofluorobenzene	9.992	95	186702	21.13 ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 105.65%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.952	85	2705	N.D.	
3) Dichlorofluoromethane	1.454	67	9471	0.48 ug/L #	85
4) Chloromethane	1.052	50	9863	Below Cal	99
5) 1,3-Butadiene	1.110	54	273	No Calib #	
6) Vinyl chloride	1.110	62	5126	0.68 ug/L	83
7) Bromomethane	1.267	96	4042	Below Cal #	1
8) Chloroethane	1.317	64	1340	N.D.	
9) Trichlorofluoromethane	1.461	101	4776	N.D.	
10) Ethanol	1.640	45	11091m	9.22 ug/L	
11) Ethyl ether	1.640	59	3889	0.70 ug/L	81
12) Acrolein	1.733	56	1372	Below Cal	92
13) 1,1-Dichloroethene	1.790	61	4857	0.52 ug/L	95
14) 1,1,2-Trichlorotrifluo...	1.790	151	2315	0.53 ug/L	92
15) Methyl iodide	1.890	142	16320	2.50 ug/L	96
16) Acetone	1.833	43	3764	N.D.	
17) Chloroprene	2.786	53	5548	0.43 ug/L	97
18) Carbon disulfide	1.933	76	11151	N.D.	
19) 2-Propanol	1.941	45	31089	15.48 ug/L	96
20) Allyl chloride	2.034	41	6480	0.69 ug/L	88
21) Methyl acetate	2.041	43	6847	0.38 ug/L	86
22) Acetonitrile	2.034	41	6480	0.69 ug/L	87
23) Methylene chloride	2.134	49	5447	N.D.	
24) trans-1,2-Dichloroethene	2.342	61	5074	N.D.	
25) t-Butanol	2.249	59	9475	1.89 ug/L	91
26) Acrylonitrile	2.335	53	3356	0.75 ug/L	89
27) Methyl tert-butyl ether	2.342	73	13314	N.D.	
28) Hexane	2.578	57	5538	0.70 ug/L	94
29) 1,1-Dichloroethane	2.721	63	7655	N.D.	
30) Diisopropyl ether	2.764	45	11160	0.39 ug/L	82
31) Vinyl acetate	2.743	86	755	1.37 ug/L #	67
32) Methylcyclopentane	3.165	56	8493	0.49 ug/L	84
33) Ethyl tert butyl ether	3.122	59	12016	0.41 ug/L	89
34) 2,2-Dichloropropane	3.294	77	6950	0.30 ug/L	95
35) cis-1,2-Dichloroethene	3.301	61	6474	N.D.	
36) 2-Butanone	3.316	43	5694	N.D.	
37) Ethyl Acetate	3.366	43	9379m	0.60 ug/L	
38) Methyl acrylate	3.416	55	8361	0.53 ug/L #	88
39) Propionitrile	0.000		0	N.D.	
40) Bromochloromethane	3.574	49	3831	N.D.	
41) Tetrahydrofuran	3.602	42	3816	N.D.	

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112711.D
Acq On : 27 Nov 2020 3:00 pm
Operator : js
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 27 22:36:32 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) Methacrylonitrile	3.559	41	6651m	0.64 ug/L	
43) Chloroform	3.710	83	8194	N.D.	
44) Cyclohexane	3.968	56	10618	0.44 ug/L #	64
46) 1,1,1-Trichloroethane	3.889	97	5842	N.D.	
48) Carbon tetrachloride	4.082	117	4876	N.D.	
49) 1,1-Dichloropropene	4.104	75	5488	N.D.	
51) 1,2-Dichloroethane	4.476	62	5552	N.D.	
52) Benzene	4.376	78	16711	N.D.	
53) Tertiaryamylmethylether	4.627	73	11286	0.34 ug/L #	77
54) Isobutyl Alcohol	4.562	43	18856m	0.67 ug/L	
55) Heptane	4.899	43	5786	0.92 ug/L #	75
56) 1,4-Dioxane	6.202	88	13646m	46.49 ug/L	
57) Methylcyclohexane	5.866	83	5985	0.50 ug/L #	86
58) n-Butanol	0.000		0	N.D. d	
59) Trichloroethene	5.479	130	4014	N.D.	
60) 1,2-Dichloropropane	5.973	63	4987	0.52 ug/L	87
61) Dibromomethane	6.138	93	2552	N.D.	
62) Methyl methacrylate	6.253	41	4877	0.35 ug/L #	85
63) Bromodichloromethane	6.589	83	5680	N.D.	
64) 2-Chloroethyl vinyl ether	7.327	43	1756	0.64 ug/L #	58
65) 2-Nitropropane	7.119	43	3319	0.95 ug/L #	76
66) cis-1,3-Dichloropropene	7.499	75	6868	N.D.	
68) 4-Methyl-2-pentanone	7.778	43	6277	N.D.	
70) Toluene	7.921	91	17875	N.D.	
71) trans-1,3-Dichloropropene	8.258	75	7042	N.D.	
72) Chloropicrin	0.000		0	N.D.	
73) Ethyl methacrylate	8.358	69	7677	N.D.	
74) 1,1,2-Trichloroethane	8.437	97	4243	N.D.	
75) Tetrachloroethene	8.459	166	3518	N.D.	
76) 1,3-Dichloropropane	8.573	76	8307	0.53 ug/L	92
77) 2-Hexanone	8.674	43	6776	N.D.	
78) Chlorodibromomethane	8.752	129	4313	N.D.	
79) Butyl acetate	8.803	43	11377	0.35 ug/L #	93
80) 1,2-Dibromoethane	8.824	107	5470	0.62 ug/L #	91
81) Chlorobenzene	9.218	112	11056	N.D.	
82) 1,1,1,2-Tetrachloroethane	9.297	131	4106	N.D.	
83) Ethylbenzene	9.304	91	19652	N.D.	
84) m/p-Xylene	9.397	91	31066	0.66 ug/L	92
85) Nonane	9.461	43	3597	0.46 ug/L	73
86) Styrene	9.669	104	12536	N.D.	
87) o-Xylene	9.655	91	15993	N.D.	
88) Cyclohexanone	9.941	55	3775	2.48 ug/L	95
89) Bromoform	9.777	173	3383	0.61 ug/L	90
90) Isopropylbenzene	9.891	105	19597	N.D.	
92) Bromobenzene	10.063	77	7696	N.D.	
93) 1,1,2,2-Tetrachloroethane	10.092	83	9393	0.59 ug/L	96
94) 1,2,3-Trichloropropane	10.113	110	2651	0.58 ug/L	96
95) trans-1,4-Dichloro-2-b...	10.106	53	2782	0.69 ug/L	97
96) n-Propylbenzene	10.135	91	23627	0.52 ug/L	96
97) 2-Chlorotoluene	10.178	91	13270	N.D.	
98) 4-Chlorotoluene	10.249	91	16357	N.D.	
99) 1,3,5-Trimethylbenzene	10.242	105	16054	N.D.	
100) tert-Butylbenzene	10.407	91	11920	N.D.	
101) 1,2,4-Trimethylbenzene	10.443	105	16350	N.D.	
102) sec-Butylbenzene	10.529	105	17867	N.D.	
104) 1,3-Dichlorobenzene	10.593	146	9642	N.D.	
105) p-Isopropyltoluene	10.615	119	16219	N.D.	
106) 1,4-Dichlorobenzene	10.643	146	9192	N.D.	

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112711.D
Acq On : 27 Nov 2020 3:00 pm
Operator : js
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 27 22:36:32 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	17955	0.43 ug/L	92
108) Benzyl chloride	10.249	91	16357	N.D.	
109) 1,2-Dichlorobenzene	10.830	146	9772	N.D.	
110) n-Butylbenzene	10.822	91	16203	0.77 ug/L	98
111) Hexachloroethane	10.966	117	2577	0.58 ug/L	95
112) 1,2-Dibromo-3-chloropr...	11.224	157	2926	0.66 ug/L	85
113) 1,3,5-Trichlorobenzene	11.309	180	6679	0.57 ug/L	95
114) 1,2,4-Trichlorobenzene	11.617	180	7540	0.70 ug/L	84
115) Hexachlorobutadiene	11.682	225	2041	0.55 ug/L	94
116) Naphthalene	11.739	128	28732	0.81 ug/L	96
117) 1,2,3-Trichlorobenzene	11.840	180	6689	0.75 ug/L	99
118) 2-Methylnaphthalene	12.291	142	14802	1.38 ug/L	90
119) 1-Methylnaphthalene	12.384	142	14078	1.24 ug/L	94
121) 2-Propanone	1.833	43	3764	Below Cal	94
122) Isopropyl Alcohol	1.941	45	31089	14.81 ug/L	95
123) Acetic Ether	3.366	43	7457	0.39 ug/L #	95
124) Isopropyl Acetate	4.562	61	2368	0.54 ug/L #	58
125) Amyl Acetate	9.805	43	10667	0.34 ug/L	96

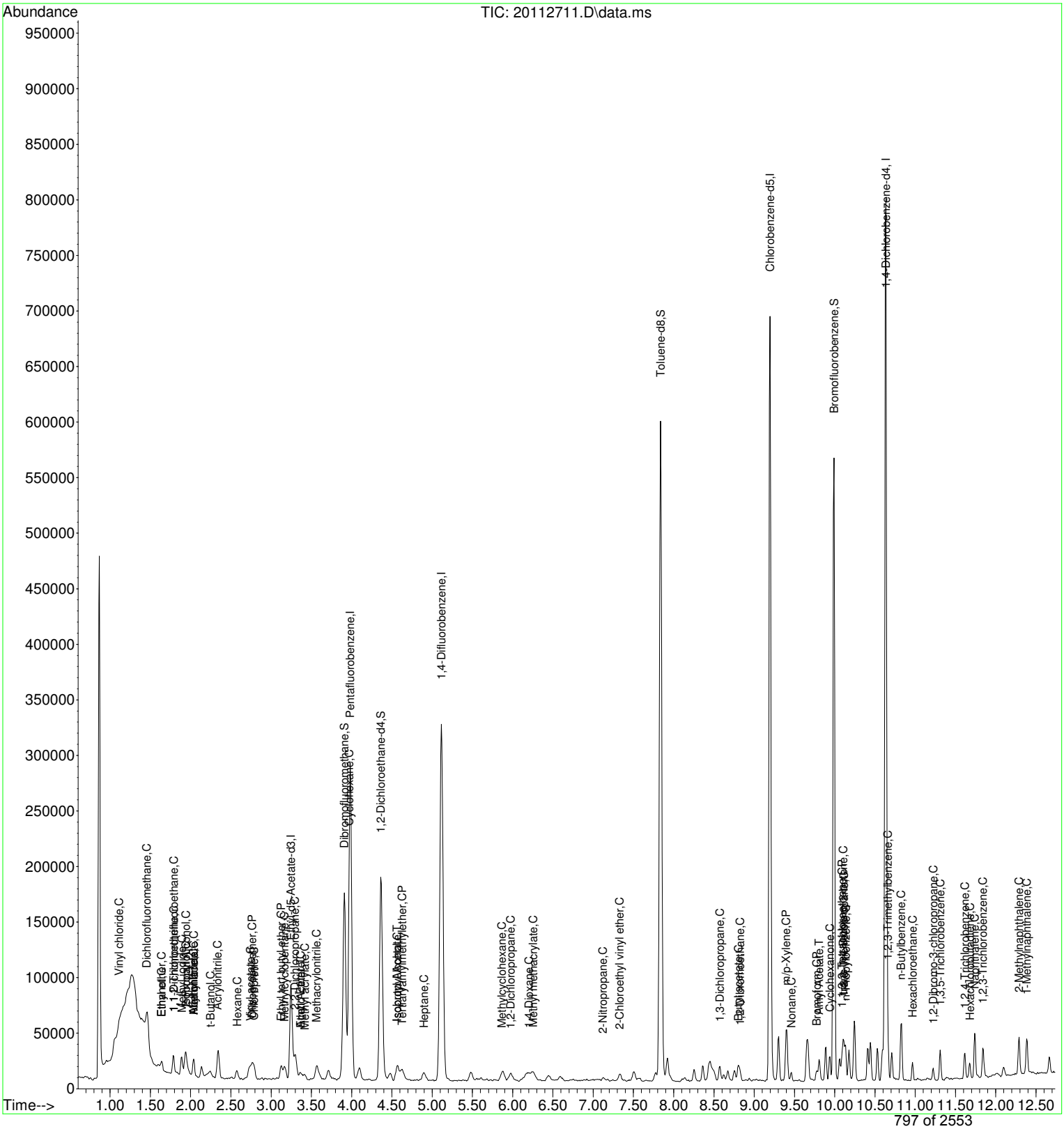
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112711.D
Acq On : 27 Nov 2020 3:00 pm
Operator : js
Sample : 0.4PPB
Misc : IS 200-21532
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 27 22:36:32 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



797 of 2553

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112712.D
Acq On : 27 Nov 2020 3:16 pm
Operator : js
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 27 22:39:26 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene	3.982	168	238774	20.00 ug/L	0.00
45) 1,4-Difluorobenzene	5.114	114	401517	20.00 ug/L	0.00
67) Chlorobenzene-d5	9.196	117	373384	20.00 ug/L	0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	203249	20.00 ug/L	# 0.00
120) Ethyl-d5-Acetate-d3	3.244	46	122723	20.00 ug/L	# 0.00
System Monitoring Compounds					
47) Dibromofluoromethane	3.910	111	129703	19.05 ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 95.25%		
50) 1,2-Dichloroethane-d4	4.362	65	164256	19.21 ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 96.05%		
69) Toluene-d8	7.836	98	478744	20.69 ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 103.45%		
91) Bromofluorobenzene	9.992	95	190594	21.23 ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 106.15%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.952	85	3765	N.D.	
3) Dichlorofluoromethane	1.446	67	13059	0.71 ug/L #	80
4) Chloromethane	1.060	50	10022	Below Cal	94
5) 1,3-Butadiene	1.095	54	191	No Calib #	
6) Vinyl chloride	1.110	62	6424	0.84 ug/L	68
7) Bromomethane	1.267	96	3588	Below Cal #	1
8) Chloroethane	1.317	64	2101	0.73 ug/L #	1
9) Trichlorofluoromethane	1.468	101	6403	0.56 ug/L #	73
10) Ethanol	1.640	45	14602m	14.64 ug/L	
11) Ethyl ether	1.640	59	4453	0.79 ug/L	90
12) Acrolein	1.733	56	1876	N.D.	
13) 1,1-Dichloroethene	1.783	61	7971	0.85 ug/L	93
14) 1,1,2-Trichlorotrifluo...	1.790	151	2983	0.67 ug/L	92
15) Methyl iodide	1.890	142	12780	1.03 ug/L	96
16) Acetone	1.826	43	5147	N.D.	
17) Chloroprene	2.786	53	7468	0.63 ug/L	96
18) Carbon disulfide	1.933	76	15657	0.67 ug/L	81
19) 2-Propanol	1.941	45	27986	12.89 ug/L	94
20) Allyl chloride	2.041	41	7829	0.82 ug/L	95
21) Methyl acetate	2.034	43	8735	0.57 ug/L	90
22) Acetonitrile	2.041	41	7829	0.82 ug/L	90
23) Methylene chloride	2.134	49	7398	0.58 ug/L	92
24) trans-1,2-Dichloroethene	2.342	61	8165	0.73 ug/L	95
25) t-Butanol	2.241	59	12438	2.93 ug/L	87
26) Acrylonitrile	2.335	53	3903	0.86 ug/L	82
27) Methyl tert-butyl ether	2.342	73	16421	0.58 ug/L	88
28) Hexane	2.571	57	8052	1.12 ug/L	88
29) 1,1-Dichloroethane	2.721	63	10190	0.67 ug/L	89
30) Diisopropyl ether	2.764	45	15387	0.64 ug/L	86
31) Vinyl acetate	2.743	86	1074	1.75 ug/L #	47
32) Methylcyclopentane	3.165	56	10829	0.68 ug/L	94
33) Ethyl tert butyl ether	3.122	59	17064	0.66 ug/L	93
34) 2,2-Dichloropropane	3.294	77	8990	0.49 ug/L	92
35) cis-1,2-Dichloroethene	3.302	61	8586	0.61 ug/L	96
36) 2-Butanone	3.316	43	6188	N.D.	
37) Ethyl Acetate	3.366	43	9558	0.60 ug/L #	93
38) Methyl acrylate	3.409	55	7315	0.41 ug/L #	92
39) Propionitrile	3.975	54	87	0.14 ug/L #	1
40) Bromochloromethane	3.567	49	4704	0.64 ug/L	96
41) Tetrahydrofuran	3.595	42	4387	N.D.	

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112712.D
Acq On : 27 Nov 2020 3:16 pm
Operator : js
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 27 22:39:26 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) Methacrylonitrile	3.552	41	7211	0.69 ug/L #	89
43) Chloroform	3.710	83	9906	0.57 ug/L	92
44) Cyclohexane	3.968	56	13342	0.75 ug/L #	77
46) 1,1,1-Trichloroethane	3.889	97	9076	0.67 ug/L	95
48) Carbon tetrachloride	4.082	117	7062	0.68 ug/L	95
49) 1,1-Dichloropropene	4.104	75	7823	0.70 ug/L	85
51) 1,2-Dichloroethane	4.483	62	8325	0.62 ug/L	91
52) Benzene	4.369	78	23963	0.69 ug/L	94
53) Tertiaryamylmethylether	4.627	73	17114	0.65 ug/L #	89
54) Isobutyl Alcohol	4.562	43	14885	0.49 ug/L #	95
55) Heptane	4.899	43	7419	1.28 ug/L #	86
56) 1,4-Dioxane	6.202	88	18086m	65.16 ug/L	
57) Methylcyclohexane	5.873	83	8526	0.79 ug/L #	87
58) n-Butanol	0.000		0	N.D. d	
59) Trichloroethene	5.486	130	5132	0.52 ug/L #	82
60) 1,2-Dichloropropane	5.980	63	6116	0.68 ug/L	90
61) Dibromomethane	6.145	93	4170	0.77 ug/L	90
62) Methyl methacrylate	6.260	41	8764	0.84 ug/L #	92
63) Bromodichloromethane	6.589	83	7723	0.68 ug/L	96
64) 2-Chloroethyl vinyl ether	7.327	43	3769	1.19 ug/L #	78
65) 2-Nitropropane	7.126	43	3295	0.92 ug/L #	67
66) cis-1,3-Dichloropropene	7.506	75	9723	0.73 ug/L	89
68) 4-Methyl-2-pentanone	7.778	43	8672	0.53 ug/L #	77
70) Toluene	7.922	91	22903	0.57 ug/L	97
71) trans-1,3-Dichloropropene	8.258	75	8962	0.62 ug/L	95
72) Chloropicrin	0.000		0	N.D.	
73) Ethyl methacrylate	8.366	69	10964	0.76 ug/L	96
74) 1,1,2-Trichloroethane	8.437	97	6445	0.72 ug/L	94
75) Tetrachloroethene	8.459	166	4824	0.57 ug/L #	80
76) 1,3-Dichloropropane	8.573	76	9805	0.66 ug/L	87
77) 2-Hexanone	8.674	43	6909	N.D.	
78) Chlorodibromomethane	8.752	129	5745	0.64 ug/L	97
79) Butyl acetate	8.803	43	12452	0.42 ug/L #	85
80) 1,2-Dibromoethane	8.824	107	6893	0.81 ug/L #	99
81) Chlorobenzene	9.218	112	14126	0.64 ug/L #	74
82) 1,1,1,2-Tetrachloroethane	9.297	131	5298	0.64 ug/L	96
83) Ethylbenzene	9.304	91	25899	0.57 ug/L	97
84) m/p-Xylene	9.404	91	41759	1.23 ug/L	95
85) Nonane	9.461	43	4336	0.70 ug/L	75
86) Styrene	9.669	104	17998	0.75 ug/L	93
87) o-Xylene	9.655	91	22960	0.68 ug/L	97
88) Cyclohexanone	9.934	55	7152	7.15 ug/L #	81
89) Bromoform	9.777	173	4160	0.73 ug/L	93
90) Isopropylbenzene	9.891	105	24531	0.67 ug/L	97
92) Bromobenzene	10.063	77	11165	0.66 ug/L	90
93) 1,1,2,2-Tetrachloroethane	10.092	83	10897	0.71 ug/L	91
94) 1,2,3-Trichloropropane	10.113	110	2724	0.59 ug/L	95
95) trans-1,4-Dichloro-2-b...	10.106	53	3618	0.88 ug/L	96
96) n-Propylbenzene	10.135	91	32241	0.76 ug/L	97
97) 2-Chlorotoluene	10.178	91	18400	0.62 ug/L	99
98) 4-Chlorotoluene	10.249	91	23655	0.79 ug/L	91
99) 1,3,5-Trimethylbenzene	10.242	105	22075	0.75 ug/L	95
100) tert-Butylbenzene	10.414	91	14723	0.66 ug/L	96
101) 1,2,4-Trimethylbenzene	10.443	105	23431	0.62 ug/L	88
102) sec-Butylbenzene	10.529	105	26977	0.78 ug/L	92
104) 1,3-Dichlorobenzene	10.593	146	12989	0.69 ug/L	99
105) p-Isopropyltoluene	10.615	119	21773	0.67 ug/L	95
106) 1,4-Dichlorobenzene	10.643	146	13096	0.73 ug/L	91

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112712.D
Acq On : 27 Nov 2020 3:16 pm
Operator : js
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 27 22:39:26 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

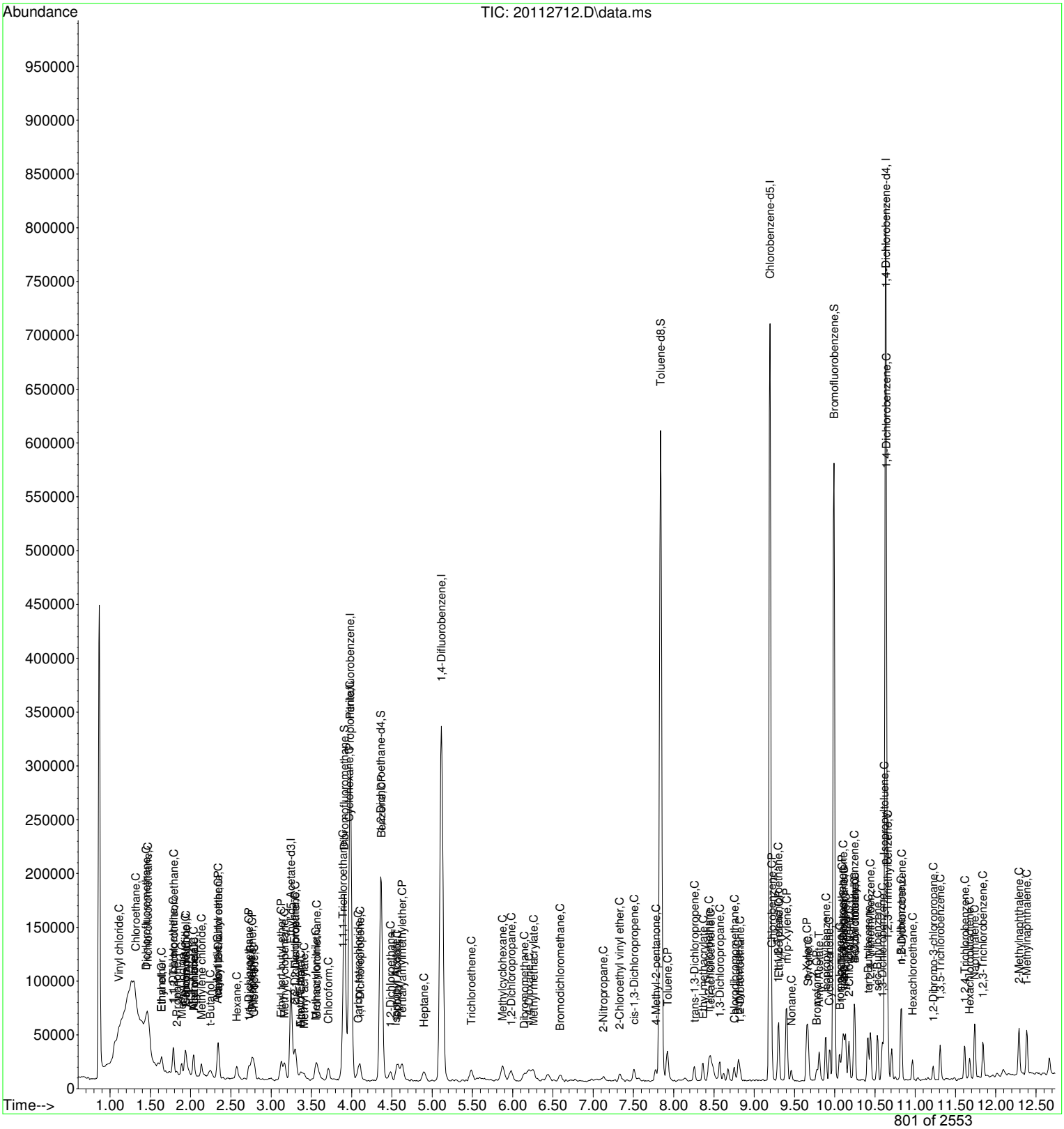
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	23094	0.63	ug/L		93
108) Benzyl chloride	10.249	91	23655	0.71	ug/L		93
109) 1,2-Dichlorobenzene	10.830	146	12893	0.65	ug/L		96
110) n-Butylbenzene	10.822	91	20326	0.94	ug/L		97
111) Hexachloroethane	10.966	117	3567	0.77	ug/L		95
112) 1,2-Dibromo-3-chloropr...	11.224	157	2731	0.59	ug/L	#	74
113) 1,3,5-Trichlorobenzene	11.310	180	7132	0.60	ug/L	#	87
114) 1,2,4-Trichlorobenzene	11.618	180	9153	0.84	ug/L		90
115) Hexachlorobutadiene	11.675	225	2795	0.77	ug/L	#	85
116) Naphthalene	11.739	128	35440	0.96	ug/L		97
117) 1,2,3-Trichlorobenzene	11.840	180	8395	0.91	ug/L		94
118) 2-Methylnaphthalene	12.291	142	20526	1.75	ug/L		99
119) 1-Methylnaphthalene	12.384	142	17079	1.41	ug/L		95
121) 2-Propanone	1.826	43	5147	0.31	ug/L		93
122) Isopropyl Alcohol	1.941	45	27986	12.53	ug/L		94
123) Acetic Ether	3.366	43	9558	0.60	ug/L	#	93
124) Isopropyl Acetate	4.548	61	3163	0.79	ug/L	#	82
125) Amyl Acetate	9.805	43	14701	0.66	ug/L		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112712.D
Acq On : 27 Nov 2020 3:16 pm
Operator : js
Sample : 0.6PPB
Misc : IS 200-21532
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 27 22:39:26 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112713.D
Acq On : 27 Nov 2020 3:33 pm
Operator : js
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 27 22:40:58 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	231497	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	393135	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.196	117	367878	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	190035	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	120792	20.00	ug/L	#	0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	129801	19.47	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 97.35%				
50) 1,2-Dichloroethane-d4	4.362	65	159993	19.11	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 95.55%				
69) Toluene-d8	7.835	98	459660	20.16	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 100.80%				
91) Bromofluorobenzene	9.991	95	185934	21.03	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 105.15%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	11874	2.00	ug/L		99
3) Dichlorofluoromethane	1.453	67	29569	1.90	ug/L	#	84
4) Chloromethane	1.059	50	24411	N.D.			
5) 1,3-Butadiene	1.145	54	91	No Calib		#	
6) Vinyl chloride	1.110	62	16554	2.23	ug/L		97
7) Bromomethane	1.267	96	6908	0.99	ug/L		87
8) Chloroethane	1.317	64	5791	2.22	ug/L	#	73
9) Trichlorofluoromethane	1.468	101	18923	1.71	ug/L		92
10) Ethanol	1.640	45	29998m	41.28	ug/L		
11) Ethyl ether	1.640	59	12574	2.31	ug/L		93
12) Acrolein	1.733	56	2954	3.04	ug/L		94
13) 1,1-Dichloroethene	1.783	61	19646	2.15	ug/L		97
14) 1,1,2-Trichlorotrifluo...	1.790	151	7985	1.85	ug/L		86
15) Methyl iodide	1.890	142	13679	1.54	ug/L		96
16) Acetone	1.826	43	9102	1.44	ug/L		86
17) Chloroprene	2.786	53	20383	2.15	ug/L		97
18) Carbon disulfide	1.933	76	39204	2.20	ug/L		98
19) 2-Propanol	1.940	45	62903	39.36	ug/L		91
20) Allyl chloride	2.034	41	20288	2.20	ug/L		92
21) Methyl acetate	2.034	43	19577	1.82	ug/L		95
22) Acetonitrile	2.034	41	20288	2.20	ug/L		91
23) Methylene chloride	2.134	49	18910	1.98	ug/L		96
24) trans-1,2-Dichloroethene	2.342	61	18814	2.10	ug/L		97
25) t-Butanol	2.241	59	27603	8.88	ug/L		93
26) Acrylonitrile	2.327	53	9967	2.26	ug/L		96
27) Methyl tert-butyl ether	2.342	73	46822	2.28	ug/L		96
28) Hexane	2.571	57	16417	2.64	ug/L		98
29) 1,1-Dichloroethane	2.721	63	26131	2.10	ug/L		94
30) Diisopropyl ether	2.764	45	43315	2.46	ug/L	#	75
31) Vinyl acetate	2.736	86	2598	3.72	ug/L	#	92
32) Methylcyclopentane	3.165	56	28959	2.33	ug/L		95
33) Ethyl tert butyl ether	3.122	59	44484	2.15	ug/L		97
34) 2,2-Dichloropropane	3.294	77	23312	2.03	ug/L		93
35) cis-1,2-Dichloroethene	3.301	61	23850	2.21	ug/L		98
36) 2-Butanone	3.309	43	14845	1.74	ug/L		95
37) Ethyl Acetate	3.366	43	24168	1.97	ug/L		93
38) Methyl acrylate	3.409	55	22742	2.03	ug/L		96
39) Propionitrile	3.960	54	1877	3.17	ug/L	#	60
40) Bromochloromethane	3.566	49	12941	2.21	ug/L		91
41) Tetrahydrofuran	3.595	42	10613	2.08	ug/L		88

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112713.D
Acq On : 27 Nov 2020 3:33 pm
Operator : js
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 27 22:40:58 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) Methacrylonitrile	3.552	41	17759	2.02	ug/L	#	93
43) Chloroform	3.710	83	28113	2.09	ug/L		95
44) Cyclohexane	3.960	56	25869	2.33	ug/L	#	92
46) 1,1,1-Trichloroethane	3.889	97	21587	1.90	ug/L		97
48) Carbon tetrachloride	4.082	117	17264	1.90	ug/L		97
49) 1,1-Dichloropropene	4.104	75	19102	2.12	ug/L		95
51) 1,2-Dichloroethane	4.476	62	20730	1.88	ug/L		96
52) Benzene	4.369	78	57091	2.17	ug/L		97
53) Tertiaryamylmethylether	4.627	73	44709	2.25	ug/L	#	76
54) Isobutyl Alcohol	4.562	43	41595	1.66	ug/L	#	84
55) Heptane	4.899	43	13504	2.83	ug/L	#	91
56) 1,4-Dioxane	6.195	88	48265m	206.12	ug/L		
57) Methylcyclohexane	5.873	83	21440	2.42	ug/L		94
58) n-Butanol	5.579	56	11048	11.72	ug/L	#	84
59) Trichloroethene	5.486	130	13947	1.84	ug/L		96
60) 1,2-Dichloropropane	5.980	63	15358	2.19	ug/L		93
61) Dibromomethane	6.145	93	11047	2.09	ug/L		97
62) Methyl methacrylate	6.252	41	17676	2.03	ug/L		91
63) Bromodichloromethane	6.589	83	19431	1.96	ug/L		94
64) 2-Chloroethyl vinyl ether	7.327	43	6979	2.13	ug/L		87
65) 2-Nitropropane	7.126	43	7555	2.21	ug/L	#	97
66) cis-1,3-Dichloropropene	7.506	75	26010	2.30	ug/L		99
68) 4-Methyl-2-pentanone	7.778	43	26283	2.20	ug/L		97
70) Toluene	7.921	91	61462	2.22	ug/L		97
71) trans-1,3-Dichloropropene	8.258	75	23244	2.06	ug/L		86
72) Chloropicrin	0.000		0	N.D.			
73) Ethyl methacrylate	8.358	69	26042	2.17	ug/L		97
74) 1,1,2-Trichloroethane	8.437	97	15285	2.10	ug/L		98
75) Tetrachloroethene	8.459	166	13644	2.12	ug/L		95
76) 1,3-Dichloropropane	8.573	76	26516	2.25	ug/L		97
77) 2-Hexanone	8.673	43	19550	1.77	ug/L		93
78) Chlorodibromomethane	8.752	129	14920	1.87	ug/L		97
79) Butyl acetate	8.802	43	31838	1.89	ug/L	#	91
80) 1,2-Dibromoethane	8.824	107	16470	2.19	ug/L		94
81) Chlorobenzene	9.218	112	37706	2.17	ug/L		92
82) 1,1,1,2-Tetrachloroethane	9.297	131	13478	1.99	ug/L		95
83) Ethylbenzene	9.304	91	68991	2.46	ug/L		96
84) m/p-Xylene	9.404	91	109017	5.03	ug/L		95
85) Nonane	9.461	43	8794	2.31	ug/L		89
86) Styrene	9.669	104	44192	2.40	ug/L		92
87) o-Xylene	9.655	91	58101	2.41	ug/L		97
88) Cyclohexanone	9.934	55	12204	14.53	ug/L		95
89) Bromoform	9.777	173	10240	1.84	ug/L		92
90) Isopropylbenzene	9.891	105	67641	2.54	ug/L		94
92) Bromobenzene	10.063	77	29614	2.33	ug/L		92
93) 1,1,2,2-Tetrachloroethane	10.092	83	27232	2.22	ug/L		97
94) 1,2,3-Trichloropropane	10.113	110	8491	2.22	ug/L		97
95) trans-1,4-Dichloro-2-b...	10.106	53	8841	2.19	ug/L		98
96) n-Propylbenzene	10.135	91	83691	2.36	ug/L		96
97) 2-Chlorotoluene	10.178	91	47645	2.32	ug/L		98
98) 4-Chlorotoluene	10.249	91	57966	2.61	ug/L		96
99) 1,3,5-Trimethylbenzene	10.242	105	54798	2.49	ug/L		98
100) tert-Butylbenzene	10.414	91	39808	2.42	ug/L		93
101) 1,2,4-Trimethylbenzene	10.443	105	60255	2.49	ug/L		93
102) sec-Butylbenzene	10.529	105	70187	2.72	ug/L		97
104) 1,3-Dichlorobenzene	10.593	146	34265	2.42	ug/L		95
105) p-Isopropyltoluene	10.615	119	58327	2.57	ug/L		98
106) 1,4-Dichlorobenzene	10.643	146	32482	2.33	ug/L		95

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112713.D
Acq On : 27 Nov 2020 3:33 pm
Operator : js
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 27 22:40:58 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

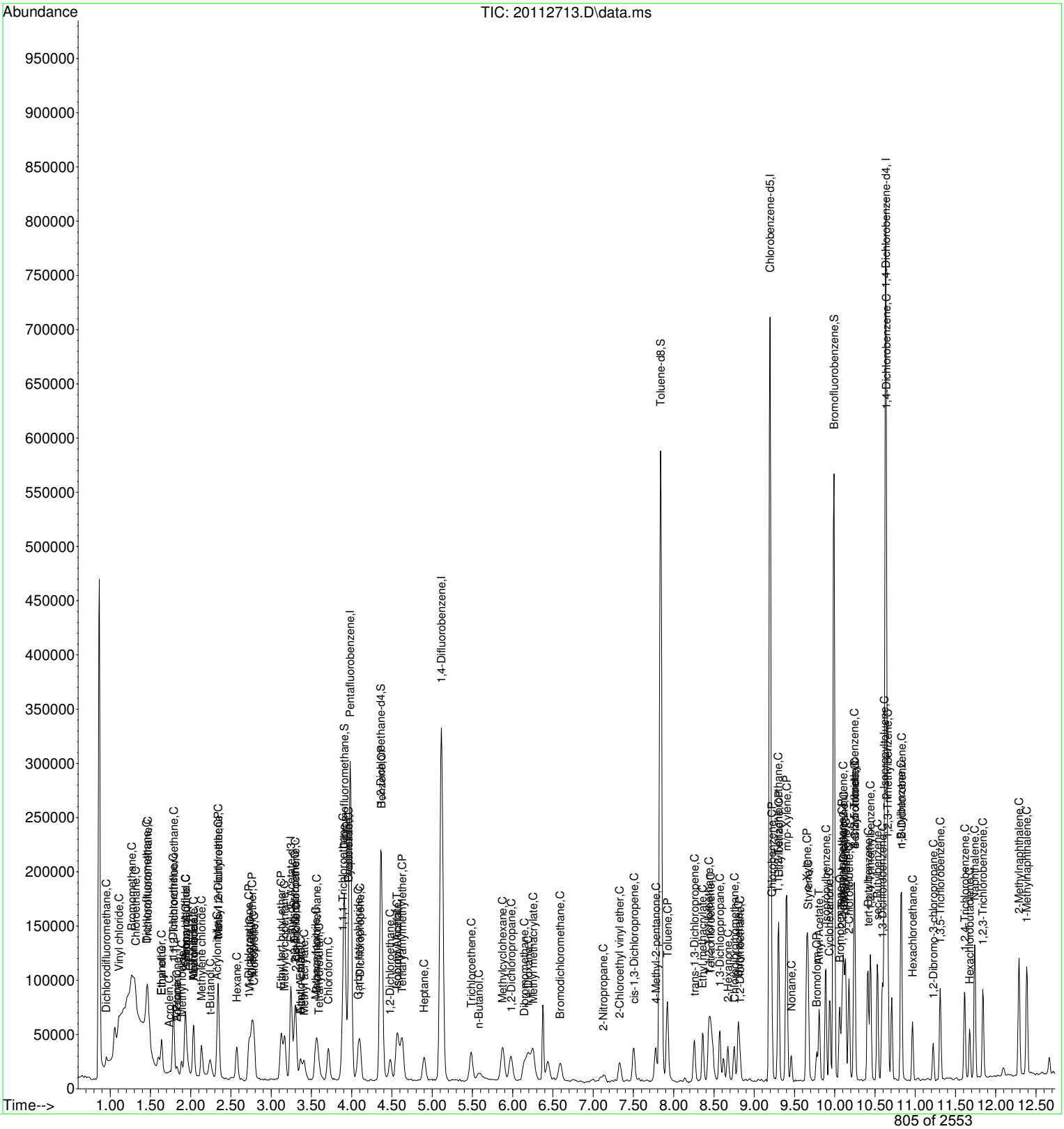
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	58027	2.34	ug/L		96
108) Benzyl chloride	10.249	91	57968	2.49	ug/L		97
109) 1,2-Dichlorobenzene	10.829	146	34473	2.39	ug/L		94
110) n-Butylbenzene	10.822	91	54056	2.66	ug/L		96
111) Hexachloroethane	10.966	117	9229	2.13	ug/L		97
112) 1,2-Dibromo-3-chloropr...	11.223	157	8381	1.94	ug/L		94
113) 1,3,5-Trichlorobenzene	11.309	180	22647	2.44	ug/L		99
114) 1,2,4-Trichlorobenzene	11.617	180	22924	2.45	ug/L		95
115) Hexachlorobutadiene	11.675	225	6696	2.20	ug/L		95
116) Naphthalene	11.739	128	88834	2.57	ug/L		98
117) 1,2,3-Trichlorobenzene	11.839	180	21648	2.50	ug/L		96
118) 2-Methylnaphthalene	12.291	142	49196	4.08	ug/L		99
119) 1-Methylnaphthalene	12.384	142	44464	3.55	ug/L		96
121) 2-Propanone	1.826	43	9102	1.41	ug/L	#	86
122) Isopropyl Alcohol	1.940	45	62903	39.48	ug/L	#	91
123) Acetic Ether	3.366	43	24168	2.09	ug/L	#	92
124) Isopropyl Acetate	4.562	61	9904	2.93	ug/L	#	74
125) Amyl Acetate	9.805	43	35316	2.31	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112713.D
Acq On : 27 Nov 2020 3:33 pm
Operator : js
Sample : 2PPB
Misc : IS 200-21532
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 27 22:40:58 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112714.D
Acq On : 27 Nov 2020 3:49 pm
Operator : js
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 27 22:42:25 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	226422	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	404984	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	375377	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	191837	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	116826	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	130649	19.03	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 95.15%				
50) 1,2-Dichloroethane-d4	4.362	65	157885	18.30	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 91.50%				
69) Toluene-d8	7.836	98	464309	19.96	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 99.80%				
91) Bromofluorobenzene	9.992	95	190131	21.07	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 105.35%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	22357	4.08	ug/L		97
3) Dichlorofluoromethane	1.446	67	55366	3.80	ug/L		95
4) Chloromethane	1.060	50	42741	2.70	ug/L		94
5) 1,3-Butadiene	0.000		0	N.D.	d		
6) Vinyl chloride	1.110	62	31692	4.37	ug/L		99
7) Bromomethane	1.267	96	9278	2.04	ug/L	#	28
8) Chloroethane	1.318	64	9063	3.60	ug/L	#	86
9) Trichlorofluoromethane	1.468	101	34605	3.19	ug/L		94
10) Ethanol	1.640	45	57575m	89.81	ug/L		
11) Ethyl ether	1.640	59	24327	4.57	ug/L		98
12) Acrolein	1.733	56	3221	3.91	ug/L		97
13) 1,1-Dichloroethene	1.783	61	38512	4.32	ug/L		95
14) 1,1,2-Trichlorotrifluo...	1.790	151	18018	4.26	ug/L		98
15) Methyl iodide	1.891	142	14121	1.85	ug/L		92
16) Acetone	1.826	43	17888	3.77	ug/L		99
17) Chloroprene	2.786	53	41473	4.71	ug/L		97
18) Carbon disulfide	1.934	76	76652	4.71	ug/L		99
19) 2-Propanol	1.934	45	104105	71.58	ug/L		94
20) Allyl chloride	2.034	41	45433	5.03	ug/L		90
21) Methyl acetate	2.034	43	35270	3.68	ug/L		98
22) Acetonitrile	2.034	41	45433	5.05	ug/L		90
23) Methylene chloride	2.134	49	38056	4.38	ug/L		98
24) trans-1,2-Dichloroethene	2.342	61	40644	4.97	ug/L		97
25) t-Butanol	2.242	59	52657	18.91	ug/L		98
26) Acrylonitrile	2.328	53	20468	4.74	ug/L		91
27) Methyl tert-butyl ether	2.342	73	88122	4.66	ug/L		99
28) Hexane	2.571	57	34186	5.92	ug/L		99
29) 1,1-Dichloroethane	2.721	63	53251	4.60	ug/L		98
30) Diisopropyl ether	2.764	45	79747	4.90	ug/L	#	74
31) Vinyl acetate	2.736	86	6247	8.51	ug/L	#	48
32) Methylcyclopentane	3.166	56	61618	5.37	ug/L		93
33) Ethyl tert butyl ether	3.123	59	86920	4.52	ug/L		95
34) 2,2-Dichloropropane	3.295	77	44931	4.41	ug/L		93
35) cis-1,2-Dichloroethene	3.302	61	47550	4.75	ug/L		97
36) 2-Butanone	3.309	43	26785	3.91	ug/L		97
37) Ethyl Acetate	3.366	43	46958	4.16	ug/L		97
38) Methyl acrylate	3.409	55	43227	4.25	ug/L		98
39) Propionitrile	3.961	54	3278	5.66	ug/L		74
40) Bromochloromethane	3.567	49	26859	4.93	ug/L		93
41) Tetrahydrofuran	3.595	42	19581	4.41	ug/L		96

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112714.D
Acq On : 27 Nov 2020 3:49 pm
Operator : js
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 27 22:42:25 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) Methacrylonitrile	3.552	41	38858	4.74 ug/L		95
43) Chloroform	3.710	83	54276	4.35 ug/L		98
44) Cyclohexane	3.961	56	48343	5.22 ug/L	#	91
46) 1,1,1-Trichloroethane	3.889	97	45078	4.04 ug/L		99
48) Carbon tetrachloride	4.082	117	35929	3.99 ug/L		97
49) 1,1-Dichloropropene	4.104	75	39395	4.50 ug/L		99
51) 1,2-Dichloroethane	4.476	62	42567	3.94 ug/L		94
52) Benzene	4.369	78	116164	4.61 ug/L		98
53) Tertiaryamylmethylether	4.627	73	83842	4.35 ug/L	#	81
54) Isobutyl Alcohol	4.562	43	83896	3.39 ug/L	#	91
55) Heptane	4.899	43	27127	6.02 ug/L		95
56) 1,4-Dioxane	6.203	88	91572m	393.53 ug/L		
57) Methylcyclohexane	5.873	83	43776	5.03 ug/L		98
58) n-Butanol	5.587	56	18980	24.83 ug/L	#	91
59) Trichloroethene	5.479	130	30454	4.15 ug/L		99
60) 1,2-Dichloropropane	5.981	63	31777	4.69 ug/L		94
61) Dibromomethane	6.145	93	21920	4.02 ug/L		96
62) Methyl methacrylate	6.253	41	35009	4.16 ug/L		92
63) Bromodichloromethane	6.589	83	38553	3.90 ug/L		97
64) 2-Chloroethyl vinyl ether	7.327	43	15217	4.39 ug/L		89
65) 2-Nitropropane	7.127	43	14821	4.24 ug/L	#	82
66) cis-1,3-Dichloropropene	7.506	75	52799	4.69 ug/L		99
68) 4-Methyl-2-pentanone	7.778	43	47215	4.07 ug/L		96
70) Toluene	7.922	91	124182	4.78 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	48194	4.46 ug/L		95
72) Chloropicrin	8.230	117	2688	No Calib	#	
73) Ethyl methacrylate	8.359	69	53025	4.59 ug/L		100
74) 1,1,2-Trichloroethane	8.437	97	29822	4.25 ug/L		92
75) Tetrachloroethene	8.459	166	27421	4.43 ug/L		98
76) 1,3-Dichloropropane	8.573	76	52411	4.61 ug/L		99
77) 2-Hexanone	8.674	43	39160	4.02 ug/L		98
78) Chlorodibromomethane	8.753	129	29091	3.68 ug/L		94
79) Butyl acetate	8.803	43	64617	4.27 ug/L		96
80) 1,2-Dibromoethane	8.824	107	33587	4.59 ug/L		97
81) Chlorobenzene	9.218	112	76871	4.60 ug/L		94
82) 1,1,1,2-Tetrachloroethane	9.297	131	27342	4.17 ug/L		98
83) Ethylbenzene	9.304	91	138116	5.34 ug/L		97
84) m/p-Xylene	9.404	91	219362	10.98 ug/L		95
85) Nonane	9.462	43	14900	4.39 ug/L		96
86) Styrene	9.669	104	91743	5.27 ug/L		99
87) o-Xylene	9.655	91	117977	5.21 ug/L		94
88) Cyclohexanone	9.934	55	25377	32.64 ug/L		93
89) Bromoform	9.777	173	21558	3.79 ug/L		98
90) Isopropylbenzene	9.891	105	136488	5.37 ug/L		97
92) Bromobenzene	10.063	77	56631	4.64 ug/L		97
93) 1,1,2,2-Tetrachloroethane	10.092	83	57536	4.89 ug/L		95
94) 1,2,3-Trichloropropane	10.113	110	15597	4.13 ug/L		96
95) trans-1,4-Dichloro-2-b...	10.106	53	17800	4.33 ug/L		99
96) n-Propylbenzene	10.135	91	166155	4.82 ug/L		100
97) 2-Chlorotoluene	10.178	91	93937	4.87 ug/L		97
98) 4-Chlorotoluene	10.250	91	116389	5.54 ug/L		97
99) 1,3,5-Trimethylbenzene	10.242	105	110504	5.31 ug/L		98
100) tert-Butylbenzene	10.407	91	81684	5.22 ug/L		96
101) 1,2,4-Trimethylbenzene	10.443	105	121647	5.46 ug/L		95
102) sec-Butylbenzene	10.529	105	143663	5.85 ug/L		94
104) 1,3-Dichlorobenzene	10.593	146	64783	4.76 ug/L		98
105) p-Isopropyltoluene	10.615	119	116172	5.40 ug/L		97
106) 1,4-Dichlorobenzene	10.644	146	63918	4.78 ug/L		95

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112714.D
Acq On : 27 Nov 2020 3:49 pm
Operator : js
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 27 22:42:25 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

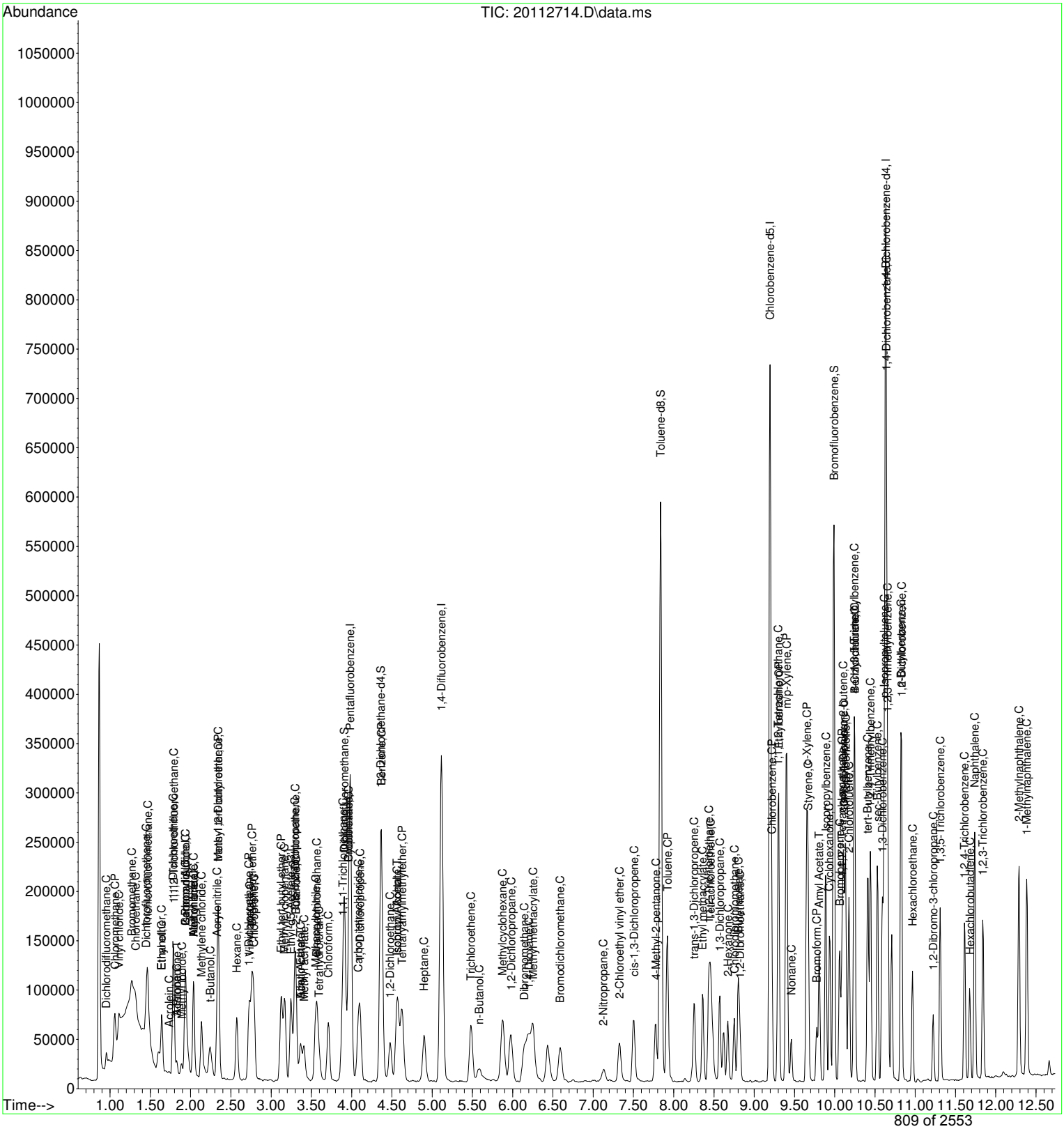
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	121073	5.25	ug/L	95
108) Benzyl chloride	10.250	91	116389	5.33	ug/L	97
109) 1,2-Dichlorobenzene	10.830	146	65841	4.78	ug/L	97
110) n-Butylbenzene	10.823	91	107038	5.22	ug/L	99
111) Hexachloroethane	10.966	117	19898	4.55	ug/L	96
112) 1,2-Dibromo-3-chloropr...	11.224	157	16168	3.71	ug/L	98
113) 1,3,5-Trichlorobenzene	11.310	180	46124	5.09	ug/L	98
114) 1,2,4-Trichlorobenzene	11.610	180	42857	4.65	ug/L	99
115) Hexachlorobutadiene	11.682	225	14342	4.82	ug/L	93
116) Naphthalene	11.739	128	179329	5.14	ug/L	98
117) 1,2,3-Trichlorobenzene	11.840	180	43376	4.96	ug/L	96
118) 2-Methylnaphthalene	12.291	142	98854	7.81	ug/L	99
119) 1-Methylnaphthalene	12.384	142	85435	6.54	ug/L	93
121) 2-Propanone	1.826	43	17888	3.94	ug/L	99
122) Isopropyl Alcohol	1.934	45	104105	73.59	ug/L	94
123) Acetic Ether	3.366	43	46958	4.55	ug/L	97
124) Isopropyl Acetate	4.562	61	16621	5.21	ug/L	98
125) Amyl Acetate	9.805	43	65518	4.88	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112714.D
Acq On : 27 Nov 2020 3:49 pm
Operator : js
Sample : 4PPB
Misc : IS 200-21532
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 27 22:42:25 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112715.D
Acq On : 27 Nov 2020 4:05 pm
Operator : js
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 27 22:43:46 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	228383	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	394759	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	365024	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	191054	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	116695	20.00	ug/L	#	0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	126120	18.84	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 94.20%				
50) 1,2-Dichloroethane-d4	4.362	65	153678	18.28	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 91.40%				
69) Toluene-d8	7.836	98	462499	20.45	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 102.25%				
91) Bromofluorobenzene	9.992	95	189524	21.60	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 108.00%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	58172	10.90	ug/L		95
3) Dichlorofluoromethane	1.454	67	126978	8.87	ug/L		98
4) Chloromethane	1.052	50	113648	12.05	ug/L		98
5) 1,3-Butadiene	1.124	54	208	No Calib		#	
6) Vinyl chloride	1.110	62	75319	10.29	ug/L		94
7) Bromomethane	1.267	96	15385	4.52	ug/L	#	66
8) Chloroethane	1.317	64	29192	11.71	ug/L		83
9) Trichlorofluoromethane	1.468	101	86317	7.90	ug/L		95
10) Ethanol	1.640	45	132042m	215.85	ug/L		
11) Ethyl ether	1.640	59	52327	9.75	ug/L		98
12) Acrolein	1.733	56	4358	6.78	ug/L	#	57
13) 1,1-Dichloroethene	1.783	61	88324	9.81	ug/L		97
14) 1,1,2-Trichlorotrifluo...	1.790	151	40496	9.49	ug/L		99
15) Methyl iodide	1.891	142	16922	2.92	ug/L		93
16) Acetone	1.826	43	37214	8.66	ug/L		97
17) Chloroprene	2.786	53	92694	10.68	ug/L		98
18) Carbon disulfide	1.934	76	174301	11.01	ug/L		98
19) 2-Propanol	1.941	45	255126	184.20	ug/L		95
20) Allyl chloride	2.034	41	94149	10.34	ug/L		90
21) Methyl acetate	2.034	43	87274	9.57	ug/L		98
22) Acetonitrile	2.034	41	94149	10.37	ug/L		92
23) Methylene chloride	2.134	49	83943	9.91	ug/L		99
24) trans-1,2-Dichloroethene	2.342	61	85608	10.67	ug/L		99
25) t-Butanol	2.241	59	127000	47.57	ug/L		97
26) Acrylonitrile	2.327	53	42270	9.70	ug/L		100
27) Methyl tert-butyl ether	2.342	73	205704	11.18	ug/L		99
28) Hexane	2.571	57	74483	13.10	ug/L		96
29) 1,1-Dichloroethane	2.721	63	120166	10.55	ug/L		99
30) Diisopropyl ether	2.764	45	188186	11.89	ug/L	#	76
31) Vinyl acetate	2.736	86	14223	18.55	ug/L	#	55
32) Methylcyclopentane	3.166	56	136586	12.11	ug/L	#	76
33) Ethyl tert butyl ether	3.123	59	203808	10.79	ug/L		99
34) 2,2-Dichloropropane	3.294	77	98073	10.04	ug/L		95
35) cis-1,2-Dichloroethene	3.302	61	103689	10.56	ug/L		95
36) 2-Butanone	3.309	43	55254	8.87	ug/L		97
37) Ethyl Acetate	3.359	43	112771	10.25	ug/L		98
38) Methyl acrylate	3.409	55	95710	9.71	ug/L		98
39) Propionitrile	3.961	54	7142	12.23	ug/L	#	93
40) Bromochloromethane	3.567	49	55208	10.27	ug/L		97
41) Tetrahydrofuran	3.588	42	43927	10.48	ug/L		93

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112715.D
Acq On : 27 Nov 2020 4:05 pm
Operator : js
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 27 22:43:46 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) Methacrylonitrile	3.552	41	83975	10.35 ug/L		95
43) Chloroform	3.710	83	121488	9.93 ug/L		96
44) Cyclohexane	3.961	56	99927	11.58 ug/L		93
46) 1,1,1-Trichloroethane	3.889	97	103432	9.76 ug/L		96
48) Carbon tetrachloride	4.082	117	83774	9.75 ug/L		99
49) 1,1-Dichloropropene	4.104	75	87700	10.59 ug/L		100
51) 1,2-Dichloroethane	4.476	62	96103	9.36 ug/L		98
52) Benzene	4.369	78	259789	11.01 ug/L		98
53) Tertiaryamylmethylether	4.627	73	196306	10.88 ug/L	#	80
54) Isobutyl Alcohol	4.562	43	203471	8.66 ug/L	#	88
55) Heptane	4.899	43	61488	14.68 ug/L		97
56) 1,4-Dioxane	6.195	88	219786m	993.16 ug/L		
57) Methylcyclohexane	5.880	83	97473	11.81 ug/L		96
58) n-Butanol	5.572	56	48640	77.59 ug/L		99
59) Trichloroethene	5.486	130	67814	9.77 ug/L		95
60) 1,2-Dichloropropane	5.980	63	70926	11.12 ug/L		93
61) Dibromomethane	6.138	93	45798	8.62 ug/L		95
62) Methyl methacrylate	6.253	41	75774	9.60 ug/L		90
63) Bromodichloromethane	6.589	83	92937	9.85 ug/L		98
64) 2-Chloroethyl vinyl ether	7.327	43	34748	10.22 ug/L		95
65) 2-Nitropropane	7.127	43	34110	10.02 ug/L	#	90
66) cis-1,3-Dichloropropene	7.499	75	114275	10.61 ug/L		98
68) 4-Methyl-2-pentanone	7.771	43	120283	11.08 ug/L		99
70) Toluene	7.922	91	270151	11.18 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	112515	11.08 ug/L		89
72) Chloropicrin	8.230	117	18048	No Calib		
73) Ethyl methacrylate	8.358	69	120303	11.03 ug/L		99
74) 1,1,2-Trichloroethane	8.437	97	69697	10.58 ug/L		99
75) Tetrachloroethene	8.459	166	63786	10.96 ug/L		99
76) 1,3-Dichloropropane	8.573	76	117478	10.95 ug/L		99
77) 2-Hexanone	8.674	43	94777	10.81 ug/L		98
78) Chlorodibromomethane	8.752	129	69763	9.23 ug/L		98
79) Butyl acetate	8.803	43	148801	10.81 ug/L		95
80) 1,2-Dibromoethane	8.824	107	70737	10.38 ug/L		99
81) Chlorobenzene	9.218	112	171814	10.90 ug/L		97
82) 1,1,1,2-Tetrachloroethane	9.297	131	61032	9.85 ug/L		98
83) Ethylbenzene	9.304	91	297551	12.48 ug/L		97
84) m/p-Xylene	9.397	91	481914	26.16 ug/L		94
85) Nonane	9.462	43	33593	11.27 ug/L		92
86) Styrene	9.669	104	200512	12.29 ug/L		99
87) o-Xylene	9.655	91	258639	12.26 ug/L		97
88) Cyclohexanone	9.934	55	57146	79.43 ug/L		98
89) Bromoform	9.777	173	49863	9.01 ug/L		95
90) Isopropylbenzene	9.891	105	295517	12.40 ug/L		97
92) Bromobenzene	10.063	77	125376	10.96 ug/L		97
93) 1,1,2,2-Tetrachloroethane	10.092	83	127904	11.53 ug/L		98
94) 1,2,3-Trichloropropane	10.113	110	37501	10.45 ug/L		96
95) trans-1,4-Dichloro-2-b...	10.106	53	39542	9.88 ug/L		99
96) n-Propylbenzene	10.135	91	367494	11.39 ug/L		100
97) 2-Chlorotoluene	10.178	91	210128	11.75 ug/L		98
98) 4-Chlorotoluene	10.249	91	250791	12.80 ug/L		97
99) 1,3,5-Trimethylbenzene	10.242	105	258644	13.33 ug/L		97
100) tert-Butylbenzene	10.414	91	174823	11.92 ug/L		99
101) 1,2,4-Trimethylbenzene	10.443	105	259439	12.62 ug/L		99
102) sec-Butylbenzene	10.529	105	304217	13.22 ug/L		97
104) 1,3-Dichlorobenzene	10.593	146	146020	11.12 ug/L		98
105) p-Isopropyltoluene	10.615	119	260159	12.57 ug/L		96
106) 1,4-Dichlorobenzene	10.643	146	144616	11.15 ug/L		97

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112715.D
Acq On : 27 Nov 2020 4:05 pm
Operator : js
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 27 22:43:46 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

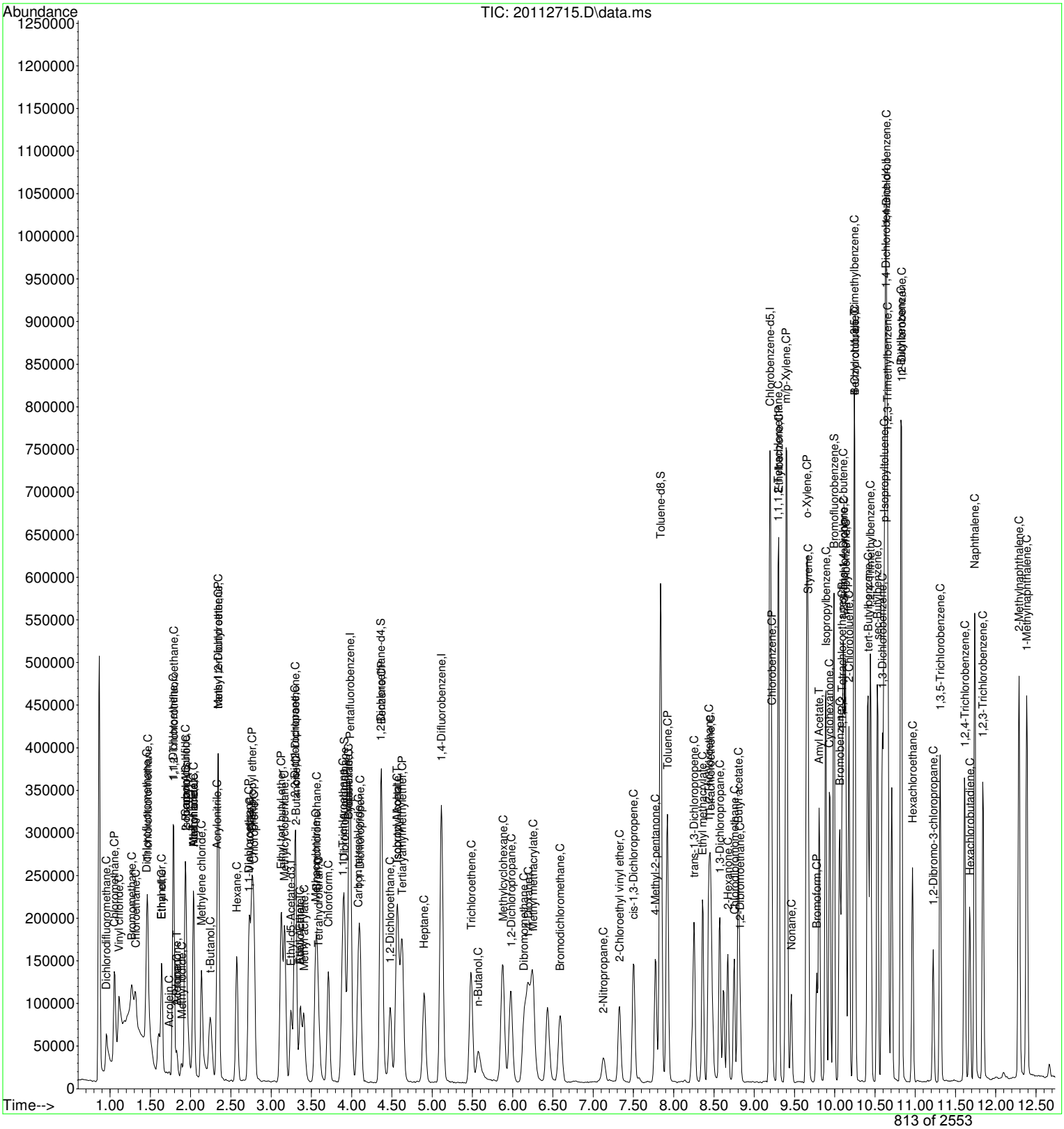
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	266238	12.05	ug/L	97
108) Benzyl chloride	10.249	91	250791	11.98	ug/L	97
109) 1,2-Dichlorobenzene	10.830	146	144610	10.88	ug/L	98
110) n-Butylbenzene	10.823	91	241349	11.82	ug/L	99
111) Hexachloroethane	10.966	117	44197	10.14	ug/L	97
112) 1,2-Dibromo-3-chloropr...	11.224	157	38953	8.98	ug/L	94
113) 1,3,5-Trichlorobenzene	11.310	180	99106	11.19	ug/L	99
114) 1,2,4-Trichlorobenzene	11.618	180	103174	11.40	ug/L	97
115) Hexachlorobutadiene	11.682	225	31529	10.81	ug/L	99
116) Naphthalene	11.739	128	388286	11.18	ug/L	99
117) 1,2,3-Trichlorobenzene	11.840	180	96181	11.04	ug/L	100
118) 2-Methylnaphthalene	12.291	142	217928	16.65	ug/L	100
119) 1-Methylnaphthalene	12.384	142	199701	14.89	ug/L	98
121) 2-Propanone	1.826	43	37214	9.28	ug/L	97
122) Isopropyl Alcohol	1.941	45	255126	192.86	ug/L	95
123) Acetic Ether	3.359	43	112771	11.37	ug/L	98
124) Isopropyl Acetate	4.562	61	39716	12.57	ug/L	96
125) Amyl Acetate	9.805	43	154542	12.16	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112715.D
Acq On : 27 Nov 2020 4:05 pm
Operator : js
Sample : 10PPB
Misc : IS 200-21532
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 27 22:43:46 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112716.D
Acq On : 27 Nov 2020 4:21 pm
Operator : js
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 27 22:48:47 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene	3.982	168	222597	20.00 ug/L	0.00
45) 1,4-Difluorobenzene	5.114	114	400558	20.00 ug/L	0.00
67) Chlorobenzene-d5	9.196	117	379739	20.00 ug/L	0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	188909	20.00 ug/L	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	118627	20.00 ug/L	0.00
System Monitoring Compounds					
47) Dibromofluoromethane	3.910	111	129325	19.04 ug/L	0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 95.20%		
50) 1,2-Dichloroethane-d4	4.362	65	151319	17.74 ug/L	0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 88.70%		
69) Toluene-d8	7.836	98	456307	19.39 ug/L	0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 96.95%		
91) Bromofluorobenzene	9.992	95	187164	20.50 ug/L	0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 102.50%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.952	85	225409	44.09 ug/L	96
3) Dichlorofluoromethane	1.446	67	500990	36.44 ug/L	97
4) Chloromethane	1.052	50	514174	66.89 ug/L	98
5) 1,3-Butadiene	1.131	54	696	No Calib #	
6) Vinyl chloride	1.110	62	300180	42.06 ug/L	96
7) Bromomethane	1.267	96	41524	15.59 ug/L	90
8) Chloroethane	1.317	64	132574m	56.42 ug/L	
9) Trichlorofluoromethane	1.468	101	345931	32.47 ug/L	99
10) Ethanol	1.640	45	494297m	855.05 ug/L	
11) Ethyl ether	1.640	59	217407	41.56 ug/L	97
12) Acrolein	1.733	56	7080	14.06 ug/L	67
13) 1,1-Dichloroethene	1.783	61	339836	38.74 ug/L	97
14) 1,1,2-Trichlorotrifluo...	1.790	151	156685	37.66 ug/L	98
15) Methyl iodide	1.890	142	24683	6.17 ug/L	93
16) Acetone	1.826	43	146606	36.63 ug/L	95
17) Chloroprene	2.786	53	349815	41.96 ug/L	98
18) Carbon disulfide	1.933	76	664607	43.95 ug/L	100
19) 2-Propanol	1.933	45	998562	761.38 ug/L	94
20) Allyl chloride	2.034	41	383762	43.25 ug/L	89
21) Methyl acetate	2.034	43	344242	39.89 ug/L	99
22) Acetonitrile	2.034	41	383762	43.37 ug/L	89
23) Methylene chloride	2.134	49	346380	42.85 ug/L	98
24) trans-1,2-Dichloroethene	2.342	61	329585	42.97 ug/L	99
25) t-Butanol	2.241	59	495054	195.28 ug/L	96
26) Acrylonitrile	2.320	53	167788	39.50 ug/L	98
27) Methyl tert-butyl ether	2.342	73	764326	43.44 ug/L	98
28) Hexane	2.571	57	291916	53.48 ug/L	97
29) 1,1-Dichloroethane	2.721	63	471001	43.04 ug/L	99
30) Diisopropyl ether	2.764	45	704335	46.53 ug/L	80
31) Vinyl acetate	2.736	86	52923	67.54 ug/L #	50
32) Methylcyclopentane	3.165	56	518464	47.93 ug/L	95
33) Ethyl tert butyl ether	3.122	59	807661	44.54 ug/L	99
34) 2,2-Dichloropropane	3.294	77	388701	42.11 ug/L	95
35) cis-1,2-Dichloroethene	3.294	61	398549	42.35 ug/L	99
36) 2-Butanone	3.309	43	226766	40.03 ug/L	99
37) Ethyl Acetate	3.359	43	450209	42.76 ug/L	98
38) Methyl acrylate	3.402	55	386773	41.28 ug/L	98
39) Propionitrile	3.961	54	25279	44.41 ug/L #	88
40) Bromochloromethane	3.567	49	203357	39.39 ug/L	96
41) Tetrahydrofuran	3.588	42	163827	41.68 ug/L	97

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112716.D
Acq On : 27 Nov 2020 4:21 pm
Operator : js
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 27 22:48:47 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) Methacrylonitrile	3.545	41	329988	42.24 ug/L		94
43) Chloroform	3.710	83	480828	41.00 ug/L		98
44) Cyclohexane	3.961	56	377538	47.31 ug/L		95
46) 1,1,1-Trichloroethane	3.889	97	400489	37.77 ug/L		99
48) Carbon tetrachloride	4.082	117	349506	40.53 ug/L		96
49) 1,1-Dichloropropene	4.104	75	342745	41.51 ug/L		99
51) 1,2-Dichloroethane	4.476	62	376158	36.66 ug/L		97
52) Benzene	4.369	78	1005422	42.97 ug/L		99
53) Tertiaryamylmethylether	4.627	73	769288m	42.90 ug/L		
54) Isobutyl Alcohol	4.562	43	789448	33.53 ug/L	#	89
55) Heptane	4.899	43	259603	62.73 ug/L		93
56) 1,4-Dioxane	6.195	88	873269m	3937.14 ug/L		
57) Methylcyclohexane	5.873	83	386558	46.86 ug/L		96
58) n-Butanol	5.572	56	216005	349.53 ug/L		99
59) Trichloroethene	5.479	130	275442	39.75 ug/L		99
60) 1,2-Dichloropropane	5.973	63	275958	43.47 ug/L		93
61) Dibromomethane	6.138	93	194043	36.01 ug/L		97
62) Methyl methacrylate	6.245	41	320476	40.90 ug/L		92
63) Bromodichloromethane	6.589	83	373224	39.41 ug/L		99
64) 2-Chloroethyl vinyl ether	7.320	43	142157	43.78 ug/L		98
65) 2-Nitropropane	7.126	43	146785	41.08 ug/L	#	90
66) cis-1,3-Dichloropropene	7.499	75	462859	42.87 ug/L		98
68) 4-Methyl-2-pentanone	7.771	43	455964	40.73 ug/L		95
70) Toluene	7.922	91	1037530	42.32 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	442582	42.63 ug/L		92
72) Chloropicrin	8.230	117	117243	No Calib		
73) Ethyl methacrylate	8.358	69	474558	42.53 ug/L		98
74) 1,1,2-Trichloroethane	8.437	97	276829	41.13 ug/L		98
75) Tetrachloroethene	8.459	166	254459	42.78 ug/L		99
76) 1,3-Dichloropropane	8.573	76	459157	41.87 ug/L		99
77) 2-Hexanone	8.666	43	363889	40.67 ug/L		96
78) Chlorodibromomethane	8.752	129	297805	38.21 ug/L		99
79) Butyl acetate	8.803	43	592994	42.83 ug/L		97
80) 1,2-Dibromoethane	8.817	107	263570	44.14 ug/L		98
81) Chlorobenzene	9.218	112	658999	40.89 ug/L		98
82) 1,1,1,2-Tetrachloroethane	9.297	131	252324	39.76 ug/L		99
83) Ethylbenzene	9.304	91	1048621	43.57 ug/L		98
84) m/p-Xylene	9.397	91	1635982	87.81 ug/L		97
85) Nonane	9.462	43	137592	46.80 ug/L		97
86) Styrene	9.669	104	717333	43.14 ug/L		99
87) o-Xylene	9.648	91	934895	43.64 ug/L		98
88) Cyclohexanone	9.934	55	208320	285.67 ug/L		96
89) Bromoform	9.777	173	219461	38.12 ug/L		99
90) Isopropylbenzene	9.884	105	1065264	43.84 ug/L		99
92) Bromobenzene	10.056	77	496662	42.63 ug/L		96
93) 1,1,2,2-Tetrachloroethane	10.092	83	469458	41.37 ug/L		98
94) 1,2,3-Trichloropropane	10.113	110	142382	38.56 ug/L		98
95) trans-1,4-Dichloro-2-b...	10.106	53	152417	36.62 ug/L		96
96) n-Propylbenzene	10.135	91	1277890	41.31 ug/L		96
97) 2-Chlorotoluene	10.178	91	746335	41.11 ug/L		96
98) 4-Chlorotoluene	10.249	91	872623	43.80 ug/L		99
99) 1,3,5-Trimethylbenzene	10.242	105	897835	45.43 ug/L		97
100) tert-Butylbenzene	10.414	91	645511	43.20 ug/L		98
101) 1,2,4-Trimethylbenzene	10.443	105	933417	44.97 ug/L		97
102) sec-Butylbenzene	10.529	105	1091818	46.57 ug/L		99
104) 1,3-Dichlorobenzene	10.593	146	536761	42.06 ug/L		98
105) p-Isopropyltoluene	10.615	119	911267	45.42 ug/L		98
106) 1,4-Dichlorobenzene	10.643	146	515768	40.84 ug/L		99

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112716.D
Acq On : 27 Nov 2020 4:21 pm
Operator : js
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 27 22:48:47 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

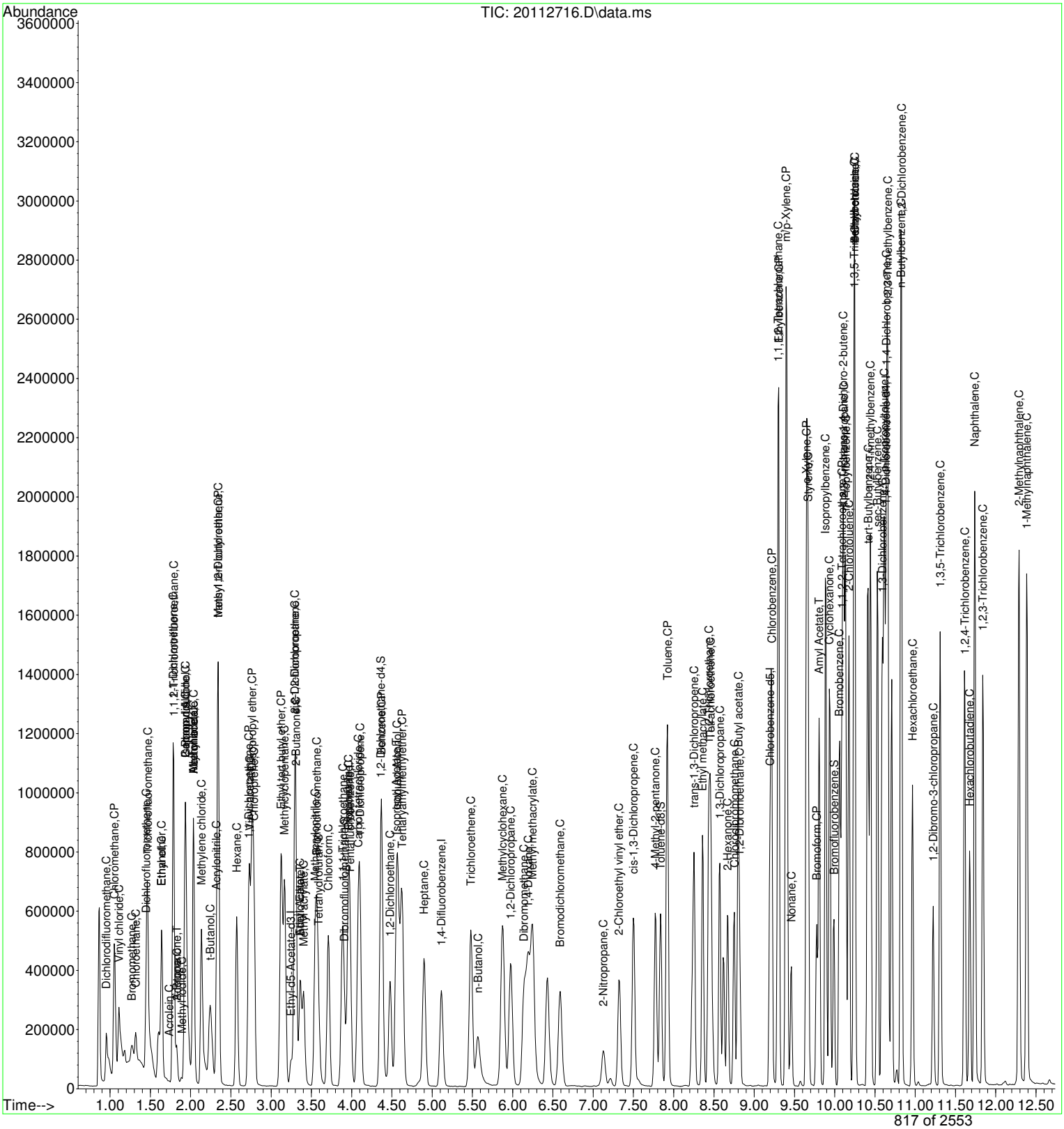
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	923050	43.24	ug/L	100
108) Benzyl chloride	10.249	91	872623	43.12	ug/L	99
109) 1,2-Dichlorobenzene	10.830	146	527523	40.91	ug/L	99
110) n-Butylbenzene	10.822	91	851009	42.16	ug/L	96
111) Hexachloroethane	10.966	117	185484	43.04	ug/L	97
112) 1,2-Dibromo-3-chloropr...	11.224	157	155275	36.18	ug/L	93
113) 1,3,5-Trichlorobenzene	11.310	180	395957	45.74	ug/L	99
114) 1,2,4-Trichlorobenzene	11.618	180	396570	44.66	ug/L	100
115) Hexachlorobutadiene	11.675	225	127188	44.52	ug/L	99
116) Naphthalene	11.739	128	1366128	39.76	ug/L	98
117) 1,2,3-Trichlorobenzene	11.840	180	371953	43.17	ug/L	99
118) 2-Methylnaphthalene	12.291	142	832712	58.23	ug/L	99
119) 1-Methylnaphthalene	12.384	142	771413	54.48	ug/L	100
121) 2-Propanone	1.826	43	146606	37.31	ug/L	95
122) Isopropyl Alcohol	1.933	45	998562	767.04	ug/L	94
123) Acetic Ether	3.359	43	450209	44.31	ug/L	98
124) Isopropyl Acetate	4.555	61	160837	47.66	ug/L	96
125) Amyl Acetate	9.805	43	577171	45.64	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112716.D
Acq On : 27 Nov 2020 4:21 pm
Operator : js
Sample : 40PPB
Misc : IS 200-21532
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 27 22:48:47 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112717.D
Acq On : 27 Nov 2020 4:37 pm
Operator : js
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 27 23:35:24 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	210746	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	393545	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	370682	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	183720	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	115907	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	120121	18.00	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 90.00%				
50) 1,2-Dichloroethane-d4	4.362	65	144559	17.25	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 86.25%				
69) Toluene-d8	7.836	98	452008	19.68	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 98.40%				
91) Bromofluorobenzene	9.992	95	182550	20.49	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 102.45%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	382734	79.26	ug/L		96
3) Dichlorofluoromethane	1.446	67	847956	65.28	ug/L	#	83
4) Chloromethane	1.053	50	852584	119.41	ug/L		98
5) 1,3-Butadiene	1.124	54	1255	No Calib		#	
6) Vinyl chloride	1.110	62	501162	74.17	ug/L		98
7) Bromomethane	1.275	96	74562	30.78	ug/L		98
8) Chloroethane	1.318	64	240052m	111.98	ug/L		
9) Trichlorofluoromethane	1.468	101	576763	57.17	ug/L		98
10) Ethanol	1.640	45	836315m	1535.25	ug/L		
11) Ethyl ether	1.640	59	356982	72.07	ug/L		97
12) Acrolein	1.733	56	13072	30.29	ug/L		72
13) 1,1-Dichloroethene	1.783	61	555555	66.90	ug/L		96
14) 1,1,2-Trichlorotrifluo...	1.790	151	269496	68.42	ug/L		98
15) Methyl iodide	1.883	142	23532m	6.24	ug/L		
16) Acetone	1.826	43	251660	65.32	ug/L		95
17) Chloroprene	2.786	53	586220	74.43	ug/L		96
18) Carbon disulfide	1.934	76	1103244	77.29	ug/L		99
19) 2-Propanol	1.934	45	1678907	1357.70	ug/L		94
20) Allyl chloride	2.034	41	637461	75.88	ug/L		89
21) Methyl acetate	2.034	43	576978	70.91	ug/L		100
22) Acetonitrile	2.034	41	637461	76.09	ug/L		88
23) Methylene chloride	2.134	49	582162	76.28	ug/L		98
24) trans-1,2-Dichloroethene	2.342	61	543278	75.01	ug/L		99
25) t-Butanol	2.242	59	836321	349.78	ug/L		97
26) Acrylonitrile	2.320	53	285948	71.11	ug/L		97
27) Methyl tert-butyl ether	2.342	73	1245006	74.95	ug/L		98
28) Hexane	2.571	57	509955	98.90	ug/L		98
29) 1,1-Dichloroethane	2.721	63	788669	76.28	ug/L		99
30) Diisopropyl ether	2.764	45	1154258	80.77	ug/L		79
31) Vinyl acetate	2.736	86	95759	124.40	ug/L	#	31
32) Methylcyclopentane	3.166	56	861611	84.33	ug/L		95
33) Ethyl tert butyl ether	3.123	59	1316418	76.85	ug/L		99
34) 2,2-Dichloropropane	3.295	77	641469	73.72	ug/L		94
35) cis-1,2-Dichloroethene	3.295	61	658997	74.14	ug/L		99
36) 2-Butanone	3.309	43	378882	71.28	ug/L		99
37) Ethyl Acetate	3.359	43	733984	73.81	ug/L		97
38) Methyl acrylate	3.402	55	654482	74.04	ug/L		99
39) Propionitrile	3.961	54	41524	77.05	ug/L	#	95
40) Bromochloromethane	3.567	49	339161	69.55	ug/L		94
41) Tetrahydrofuran	3.588	42	275446	74.45	ug/L		96

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112717.D
Acq On : 27 Nov 2020 4:37 pm
Operator : js
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 27 23:35:24 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) Methacrylonitrile	3.545	41	550340	74.55 ug/L		95
43) Chloroform	3.710	83	793401	71.62 ug/L		99
44) Cyclohexane	3.961	56	636159	84.85 ug/L		95
46) 1,1,1-Trichloroethane	3.889	97	679354	65.35 ug/L		99
48) Carbon tetrachloride	4.082	117	590221	69.76 ug/L		96
49) 1,1-Dichloropropene	4.104	75	569896	70.42 ug/L		98
51) 1,2-Dichloroethane	4.476	62	634703	63.10 ug/L		98
52) Benzene	4.369	78	1659687	72.42 ug/L		99
53) Tertiaryamylmethylether	4.627	73	1267706	72.16 ug/L	#	80
54) Isobutyl Alcohol	4.555	43	1301891	56.39 ug/L	#	89
55) Heptane	4.899	43	448562	110.72 ug/L		94
56) 1,4-Dioxane	6.195	88	1475140m	6781.08 ug/L		
57) Methylcyclohexane	5.873	83	678121	83.87 ug/L		97
58) n-Butanol	5.565	56	392521	623.99 ug/L		98
59) Trichloroethene	5.479	130	464778	68.43 ug/L		99
60) 1,2-Dichloropropane	5.973	63	460520	74.04 ug/L		92
61) Dibromomethane	6.138	93	331531	62.62 ug/L		97
62) Methyl methacrylate	6.246	41	538408	70.15 ug/L	#	91
63) Bromodichloromethane	6.589	83	631540	67.98 ug/L		99
64) 2-Chloroethyl vinyl ether	7.320	43	235511	80.10 ug/L		98
65) 2-Nitropropane	7.127	43	266371	73.12 ug/L	#	87
66) cis-1,3-Dichloropropene	7.499	75	781661	73.81 ug/L		100
68) 4-Methyl-2-pentanone	7.771	43	771250	70.16 ug/L		94
70) Toluene	7.922	91	1673869	70.20 ug/L		97
71) trans-1,3-Dichloropropene	8.251	75	715407	70.76 ug/L		97
72) Chloropicrin	8.230	117	436977	No Calib		
73) Ethyl methacrylate	8.359	69	789020	72.61 ug/L		99
74) 1,1,2-Trichloroethane	8.437	97	457671	69.83 ug/L		99
75) Tetrachloroethene	8.459	166	426685	73.68 ug/L		98
76) 1,3-Dichloropropane	8.573	76	757867	70.97 ug/L		98
77) 2-Hexanone	8.667	43	614868	69.56 ug/L		95
78) Chlorodibromomethane	8.753	129	509068	67.00 ug/L		100
79) Butyl acetate	8.803	43	956183	71.09 ug/L		95
80) 1,2-Dibromoethane	8.824	107	409138	95.85 ug/L		98
81) Chlorobenzene	9.218	112	1084428	69.11 ug/L		97
82) 1,1,1,2-Tetrachloroethane	9.297	131	419088	67.80 ug/L		99
83) Ethylbenzene	9.304	91	1582417	67.65 ug/L		93
84) m/p-Xylene	9.397	91	2485972	137.29 ug/L		91
85) Nonane	9.462	43	237726	83.46 ug/L		97
86) Styrene	9.669	104	1114126	68.85 ug/L		99
87) o-Xylene	9.648	91	1434912	68.86 ug/L		93
88) Cyclohexanone	9.934	55	333146	469.87 ug/L		96
89) Bromoform	9.777	173	383827	68.31 ug/L		99
90) Isopropylbenzene	9.884	105	1654537	69.97 ug/L		94
92) Bromobenzene	10.056	77	799800	70.53 ug/L		99
93) 1,1,2,2-Tetrachloroethane	10.092	83	757040	68.52 ug/L		96
94) 1,2,3-Trichloropropane	10.113	110	239400	66.54 ug/L		97
95) trans-1,4-Dichloro-2-b...	10.106	53	251148	61.82 ug/L		92
96) n-Propylbenzene	10.135	91	1929293	68.40 ug/L		91
97) 2-Chlorotoluene	10.178	91	1195661	67.74 ug/L		94
98) 4-Chlorotoluene	10.250	91	1346387	69.48 ug/L		95
99) 1,3,5-Trimethylbenzene	10.242	105	1399254	72.76 ug/L		93
100) tert-Butylbenzene	10.407	91	1039159	71.47 ug/L		95
101) 1,2,4-Trimethylbenzene	10.443	105	1440966	71.43 ug/L		92
102) sec-Butylbenzene	10.529	105	1680475	73.66 ug/L		95
104) 1,3-Dichlorobenzene	10.593	146	870118	70.28 ug/L		97
105) p-Isopropyltoluene	10.615	119	1428107	73.40 ug/L		97
106) 1,4-Dichlorobenzene	10.644	146	823608	67.21 ug/L		97

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112717.D
Acq On : 27 Nov 2020 4:37 pm
Operator : js
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 27 23:35:24 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

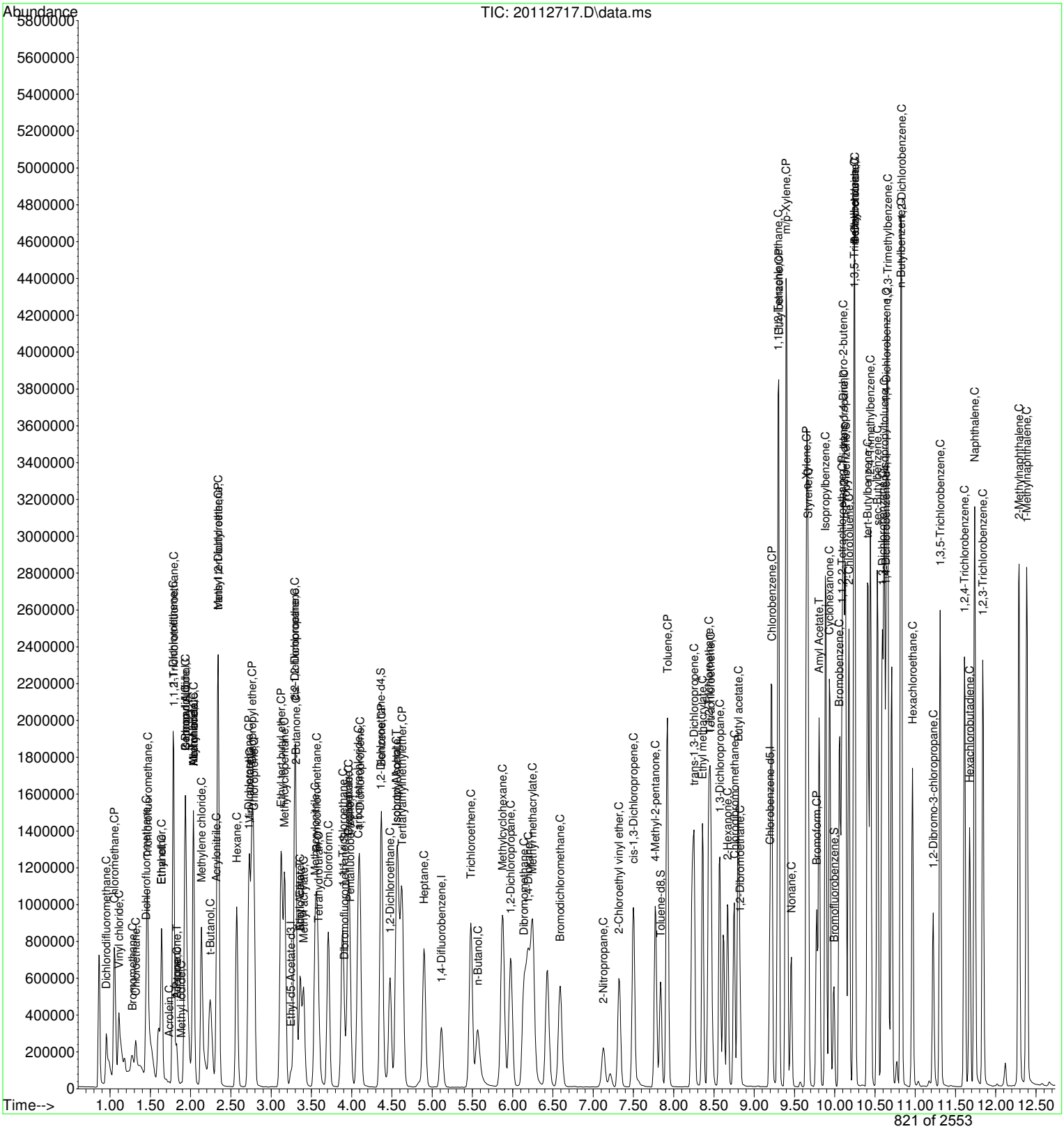
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	1414217	68.34	ug/L	94
108) Benzyl chloride	10.250	91	1346387	68.64	ug/L	96
109) 1,2-Dichlorobenzene	10.830	146	841866	67.32	ug/L	97
110) n-Butylbenzene	10.823	91	1310653	66.77	ug/L	92
111) Hexachloroethane	10.966	117	316207	75.44	ug/L	93
112) 1,2-Dibromo-3-chloropr...	11.224	157	234230	56.12	ug/L	98
113) 1,3,5-Trichlorobenzene	11.310	180	635683	75.63	ug/L	98
114) 1,2,4-Trichlorobenzene	11.610	180	645546	74.84	ug/L	99
115) Hexachlorobutadiene	11.675	225	222342	80.13	ug/L	99
116) Naphthalene	11.739	128	2058232	61.60	ug/L	96
117) 1,2,3-Trichlorobenzene	11.840	180	621139	74.13	ug/L	100
118) 2-Methylnaphthalene	12.291	142	1337870	90.15	ug/L	98
119) 1-Methylnaphthalene	12.384	142	1240583	86.26	ug/L	100
121) 2-Propanone	1.826	43	251660	63.74	ug/L	95
122) Isopropyl Alcohol	1.934	45	1678907	1326.55	ug/L	94
123) Acetic Ether	3.359	43	733984	72.32	ug/L	96
124) Isopropyl Acetate	4.555	61	267927	77.50	ug/L	94
125) Amyl Acetate	9.805	43	901646	72.81	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112717.D
Acq On : 27 Nov 2020 4:37 pm
Operator : js
Sample : 70PPB
Misc : IS 200-21532
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 27 23:35:24 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112718.D
Acq On : 27 Nov 2020 4:54 pm
Operator : js
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 27 22:49:45 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	208691	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	387841	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	363998	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	175788	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	112943	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	117851	17.92	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 89.60%				
50) 1,2-Dichloroethane-d4	4.362	65	136555	16.53	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 82.65%				
69) Toluene-d8	7.836	98	436324	19.34	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 96.70%				
91) Bromofluorobenzene	9.992	95	177342	20.27	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 101.35%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	524252	109.74	ug/L		97
3) Dichlorofluoromethane	1.446	67	1166996	90.79	ug/L		98
4) Chloromethane	1.053	50	1092757	155.43	ug/L		98
5) 1,3-Butadiene	1.124	54	1930	No Calib		#	
6) Vinyl chloride	1.110	62	689006	102.98	ug/L		98
7) Bromomethane	1.267	96	123236	51.65	ug/L		90
8) Chloroethane	1.318	64	338421m	165.35	ug/L		
9) Trichlorofluoromethane	1.468	101	788276	78.91	ug/L		97
10) Ethanol	1.640	45	1161981m	2157.78	ug/L		
11) Ethyl ether	1.640	59	485067	98.90	ug/L		99
12) Acrolein	1.733	56	22767	53.16	ug/L		79
13) 1,1-Dichloroethene	1.783	61	733906	89.25	ug/L		94
14) 1,1,2-Trichlorotrifluo...	1.790	151	363597	93.22	ug/L		98
15) Methyl iodide	1.934	142	60577m	20.13	ug/L		
16) Acetone	1.826	43	353473	90.85	ug/L		94
17) Chloroprene	2.786	53	790236	101.40	ug/L		95
18) Carbon disulfide	1.934	76	1492294	105.69	ug/L		98
19) 2-Propanol	1.934	45	2288880	1871.90	ug/L		95
20) Allyl chloride	2.034	41	853332	102.58	ug/L		90
21) Methyl acetate	2.034	43	777029	96.57	ug/L		99
22) Acetonitrile	2.034	41	853332	102.86	ug/L		89
23) Methylene chloride	2.134	49	794902	105.29	ug/L		97
24) trans-1,2-Dichloroethene	2.342	61	730539	101.96	ug/L		97
25) t-Butanol	2.242	59	1149767	486.26	ug/L		97
26) Acrylonitrile	2.320	53	396790	99.64	ug/L		98
27) Methyl tert-butyl ether	2.342	73	1631051	99.25	ug/L		97
28) Hexane	2.571	57	684800	134.21	ug/L		97
29) 1,1-Dichloroethane	2.721	63	1053663	102.99	ug/L		99
30) Diisopropyl ether	2.764	45	1520243	107.53	ug/L		80
31) Vinyl acetate	2.736	86	127415	163.29	ug/L	#	27
32) Methylcyclopentane	3.166	56	1144340	113.19	ug/L		95
33) Ethyl tert butyl ether	3.123	59	1748146	103.13	ug/L		99
34) 2,2-Dichloropropane	3.294	77	871507	101.30	ug/L		94
35) cis-1,2-Dichloroethene	3.294	61	885665	100.72	ug/L		98
36) 2-Butanone	3.302	43	512334	97.64	ug/L		99
37) Ethyl Acetate	3.359	43	993620	101.00	ug/L		97
38) Methyl acrylate	3.402	55	906447	103.68	ug/L		99
39) Propionitrile	3.961	54	55466	103.93	ug/L	#	93
40) Bromochloromethane	3.567	49	459175	95.17	ug/L		96
41) Tetrahydrofuran	3.588	42	380173	103.98	ug/L		97

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112718.D
Acq On : 27 Nov 2020 4:54 pm
Operator : js
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 27 22:49:45 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) Methacrylonitrile	3.545	41	751336	102.84 ug/L		94
43) Chloroform	3.710	83	1089059	99.36 ug/L		98
44) Cyclohexane	3.961	56	858070	115.88 ug/L		95
46) 1,1,1-Trichloroethane	3.889	97	925679	90.43 ug/L		98
48) Carbon tetrachloride	4.082	117	789747	94.77 ug/L		96
49) 1,1-Dichloropropene	4.104	75	777775	97.61 ug/L		98
51) 1,2-Dichloroethane	4.476	62	870069	87.84 ug/L		98
52) Benzene	4.369	78	2226812	98.72 ug/L		99
53) Tertiaryamylmethylether	4.627	73	1686698	97.52 ug/L	#	80
54) Isobutyl Alcohol	4.555	43	1741045	76.57 ug/L	#	88
55) Heptane	4.899	43	603221	151.27 ug/L		94
56) 1,4-Dioxane	6.195	88	2033490m	9491.84 ug/L		
57) Methylcyclohexane	5.873	83	915994	115.05 ug/L		97
58) n-Butanol	5.565	56	544309	849.96 ug/L		99
59) Trichloroethene	5.479	130	640328	95.76 ug/L		99
60) 1,2-Dichloropropane	5.973	63	642723	104.98 ug/L		93
61) Dibromomethane	6.138	93	455459	87.29 ug/L		97
62) Methyl methacrylate	6.246	41	734869	97.26 ug/L	#	91
63) Bromodichloromethane	6.589	83	877213	95.87 ug/L		99
64) 2-Chloroethyl vinyl ether	7.320	43	309674	117.15 ug/L		99
65) 2-Nitropropane	7.127	43	370783	100.19 ug/L	#	89
66) cis-1,3-Dichloropropene	7.499	75	1059543	101.59 ug/L		100
68) 4-Methyl-2-pentanone	7.771	43	1028246	94.68 ug/L		93
70) Toluene	7.922	91	2223129	95.08 ug/L		94
71) trans-1,3-Dichloropropene	8.251	75	973472	98.15 ug/L		99
72) Chloropicrin	8.230	117	1086496	No Calib		
73) Ethyl methacrylate	8.359	69	1058333	99.27 ug/L		99
74) 1,1,2-Trichloroethane	8.437	97	628285	97.73 ug/L		98
75) Tetrachloroethene	8.459	166	573923	101.03 ug/L		97
76) 1,3-Dichloropropane	8.573	76	1037783	99.07 ug/L		98
77) 2-Hexanone	8.667	43	805205	91.70 ug/L		93
78) Chlorodibromomethane	8.752	129	697762	93.56 ug/L		100
79) Butyl acetate	8.803	43	1260833	95.63 ug/L		93
80) 1,2-Dibromoethane	8.817	107	525295	Below Cal		97
81) Chlorobenzene	9.218	112	1435511	93.26 ug/L		95
82) 1,1,1,2-Tetrachloroethane	9.297	131	567870	93.64 ug/L		98
83) Ethylbenzene	9.304	91	1991637	86.86 ug/L		90
84) m/p-Xylene	9.397	91	3042477	171.37 ug/L		86
85) Nonane	9.462	43	304854	109.25 ug/L		95
86) Styrene	9.669	104	1427506	89.95 ug/L		99
87) o-Xylene	9.648	91	1830776	89.59 ug/L		90
88) Cyclohexanone	9.934	55	424331	610.33 ug/L		95
89) Bromoform	9.777	173	529931	96.04 ug/L		98
90) Isopropylbenzene	9.884	105	2075667	89.50 ug/L		89
92) Bromobenzene	10.056	77	1058569	95.18 ug/L		99
93) 1,1,2,2-Tetrachloroethane	10.092	83	997439	92.03 ug/L		94
94) 1,2,3-Trichloropropane	10.113	110	325077	92.08 ug/L		98
95) trans-1,4-Dichloro-2-b...	10.106	53	334519	83.86 ug/L		89
96) n-Propylbenzene	10.135	91	2404992	92.54 ug/L		86
97) 2-Chlorotoluene	10.178	91	1534368	88.66 ug/L		91
98) 4-Chlorotoluene	10.250	91	1709027	89.94 ug/L		90
99) 1,3,5-Trimethylbenzene	10.242	105	1741546	92.33 ug/L		89
100) tert-Butylbenzene	10.407	91	1377095	96.57 ug/L		95
101) 1,2,4-Trimethylbenzene	10.443	105	1823134	92.19 ug/L		86
102) sec-Butylbenzene	10.529	105	2124872	94.96 ug/L		91
104) 1,3-Dichlorobenzene	10.593	146	1146197	96.86 ug/L		94
105) p-Isopropyltoluene	10.615	119	1801180	96.86 ug/L		93
106) 1,4-Dichlorobenzene	10.643	146	1113171	95.04 ug/L		97

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112718.D
Acq On : 27 Nov 2020 4:54 pm
Operator : js
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 27 22:49:45 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration

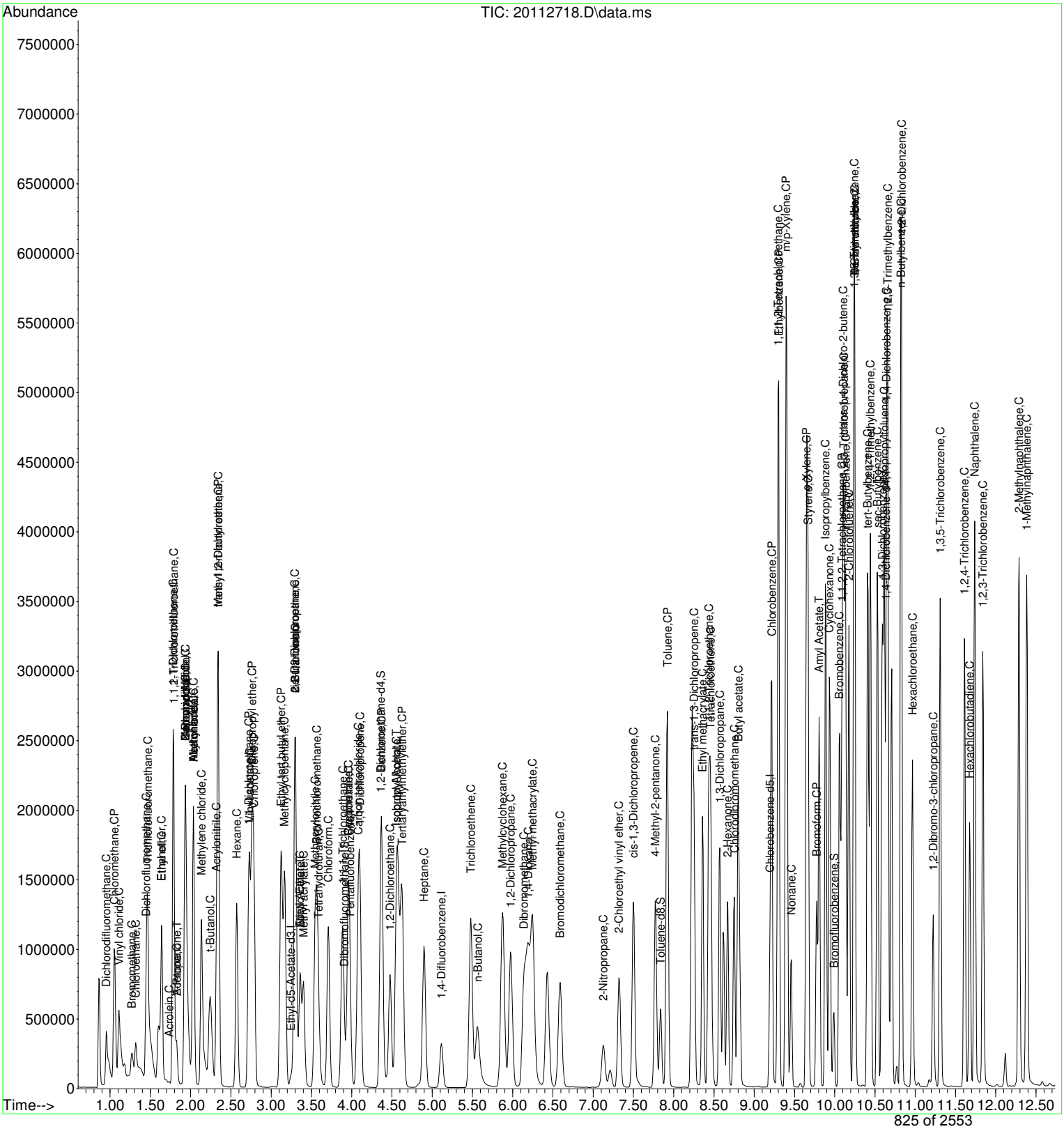
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,3-Trimethylbenzene	10.658	105	1792525	90.66	ug/L	89
108) Benzyl chloride	10.250	91	1709027	91.18	ug/L	92
109) 1,2-Dichlorobenzene	10.830	146	1116797	93.44	ug/L	96
110) n-Butylbenzene	10.823	91	1649549	87.82	ug/L	89
111) Hexachloroethane	10.966	117	441321	110.04	ug/L	94
112) 1,2-Dibromo-3-chloropr...	11.224	157	311411	77.98	ug/L	96
113) 1,3,5-Trichlorobenzene	11.310	180	847809	105.48	ug/L	97
114) 1,2,4-Trichlorobenzene	11.610	180	857113	103.89	ug/L	97
115) Hexachlorobutadiene	11.675	225	299657	112.92	ug/L	100
116) Naphthalene	11.739	128	2508791	78.48	ug/L	93
117) 1,2,3-Trichlorobenzene	11.840	180	824886	102.88	ug/L	98
118) 2-Methylnaphthalene	12.291	142	1744551	116.80	ug/L	98
119) 1-Methylnaphthalene	12.384	142	1630395	114.26	ug/L	100
121) 2-Propanone	1.826	43	353473	89.00	ug/L	94
122) Isopropyl Alcohol	1.934	45	2288880	1860.07	ug/L	95
123) Acetic Ether	3.359	43	993620	98.32	ug/L	96
124) Isopropyl Acetate	4.555	61	359683	102.71	ug/L	94
125) Amyl Acetate	9.805	43	1169215	96.54	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ BG 12/08/20
2nd /S/ JS 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112718.D
Acq On : 27 Nov 2020 4:54 pm
Operator : js
Sample : 100PPB
Misc : IS 200-21532
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 27 22:49:45 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201118-WSA.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Thu Nov 26 12:25:49 2020
Response via : Initial Calibration



1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	212668	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	388126	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	365541	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	178892	20.00	ug/L		0.00
120) Ethyl-d5-Acetate-d3	3.244	46	113712	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	119343	19.24	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 96.20%				
50) 1,2-Dichloroethane-d4	4.362	65	139838	18.60	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 93.00%				
69) Toluene-d8	7.836	98	438069	19.36	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 96.80%				
91) Bromofluorobenzene	9.992	95	181205	19.72	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 98.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	235119	43.49	ug/L		99
3) Dichlorofluoromethane	1.454	67	409369	33.96	ug/L	#	83
4) Chloromethane	1.060	50	353833	30.31	ug/L		98
5) 1,3-Butadiene	1.124	54	1470	81.25	ug/L	#	70
6) Vinyl chloride	1.110	62	302526	42.49	ug/L		100
7) Bromomethane	1.267	96	70132	65.22	ug/L		92
8) Chloroethane	1.317	64	127415	40.84	ug/L		84
9) Trichlorofluoromethane	1.468	101	268407	31.86	ug/L		100
10) Ethanol	1.640	45	304004	504.94	ug/L	#	71
11) Ethyl ether	1.640	59	213428	42.15	ug/L		99
12) Acrolein	1.640	56	346	Below Cal			80
13) 1,1-Dichloroethene	1.783	61	348692	44.61	ug/L		99
16) Acetone	1.826	43	153076	43.42	ug/L		99
17) Chloroprene	2.786	53	6847	0.58	ug/L	#	1
18) Carbon disulfide	1.933	76	705500	45.12	ug/L		100
19) 2-Propanol	1.933	45	1008168	849.40	ug/L		100
20) Allyl chloride	2.034	41	301093	33.53	ug/L		88
21) Methyl acetate	1.933	43	126710	15.40	ug/L	#	59
22) Acetonitrile	2.034	41	301093	33.52	ug/L		89
23) Methylene chloride	2.134	49	311880	37.90	ug/L		99
24) trans-1,2-Dichloroethene	2.342	61	325067	42.20	ug/L		100
25) t-Butanol	2.241	59	500646	211.09	ug/L		99
26) Acrylonitrile	2.320	53	172172	42.29	ug/L		96
27) Methyl tert-butyl ether	2.342	73	752546	42.96	ug/L		99
28) Hexane	2.571	57	4704	0.34	ug/L		94
29) 1,1-Dichloroethane	2.721	63	463183	41.81	ug/L		100
30) Diisopropyl ether	2.764	45	692603	42.63	ug/L	#	50
31) Vinyl acetate	2.729	86	1021	0.67	ug/L	#	1
32) Methylcyclopentane	3.165	56	419341	34.55	ug/L		80
33) Ethyl tert butyl ether	3.123	59	786665	42.43	ug/L		99
34) 2,2-Dichloropropane	3.294	77	362918	39.81	ug/L		100
35) cis-1,2-Dichloroethene	3.302	61	396164	42.46	ug/L		99
36) 2-Butanone	3.309	43	223609	41.78	ug/L		98
37) Ethyl Acetate	3.359	43	411373	39.50	ug/L		99
38) Methyl acrylate	3.402	55	395717	42.54	ug/L		99
40) Bromochloromethane	3.567	49	201216	41.67	ug/L		99
41) Tetrahydrofuran	3.588	42	158345	40.21	ug/L		100
42) Methacrylonitrile	3.545	41	318482	40.76	ug/L		98
43) Chloroform	3.710	83	447363	39.52	ug/L		100
44) Cyclohexane	3.975	56	5287	Below Cal		#	37

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
46) 1,1,1-Trichloroethane	3.889	97	388795	40.89 ug/L		98
48) Carbon tetrachloride	4.082	117	301954	36.98 ug/L		98
49) 1,1-Dichloropropene	4.104	75	316135	39.38 ug/L		98
51) 1,2-Dichloroethane	4.476	62	359334	40.29 ug/L		98
52) Benzene	4.369	78	960629	41.31 ug/L		99
53) Tertiaryamylmethylether	4.627	73	740743	41.90 ug/L	#	81
54) Isobutyl Alcohol	4.562	43	720072	39.61 ug/L		98
55) Heptane	4.899	43	2345	Below Cal	#	52
56) 1,4-Dioxane	6.202	88	661	Below Cal	#	1
57) Methylcyclohexane	5.880	83	2089	Below Cal	#	52
58) n-Butanol	5.558	56	2746	6.44 ug/L	#	76
59) Trichloroethene	5.479	130	258212	39.56 ug/L		99
60) 1,2-Dichloropropane	5.973	63	272779	41.70 ug/L		99
61) Dibromomethane	6.138	93	180615	38.97 ug/L		100
62) Methyl methacrylate	6.245	41	304965	40.50 ug/L		99
63) Bromodichloromethane	6.589	83	356930	40.15 ug/L		98
64) 2-Chloroethyl vinyl ether	7.349	43	735	Below Cal	#	10
65) 2-Nitropropane	7.127	43	141891	39.86 ug/L		98
66) cis-1,3-Dichloropropene	7.499	75	432233	39.60 ug/L		99
68) 4-Methyl-2-pentanone	7.771	43	682052	63.77 ug/L		79
70) Toluene	7.922	91	997915	42.37 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	418587	41.33 ug/L		94
73) Ethyl methacrylate	8.358	69	453952	41.15 ug/L		100
74) 1,1,2-Trichloroethane	8.437	97	259780	40.16 ug/L		98
75) Tetrachloroethene	8.459	166	238183	40.01 ug/L		100
76) 1,3-Dichloropropane	8.573	76	425212	39.64 ug/L		99
77) 2-Hexanone	8.666	43	365311	43.12 ug/L		100
78) Chlorodibromomethane	8.752	129	268919	37.92 ug/L		99
79) Butyl acetate	8.803	43	538288	40.29 ug/L		99
80) 1,2-Dibromoethane	8.817	107	281584	44.88 ug/L		99
81) Chlorobenzene	9.218	112	629744	41.57 ug/L		99
82) 1,1,1,2-Tetrachloroethane	9.297	131	239353	40.78 ug/L		99
83) Ethylbenzene	9.304	91	1012601	39.48 ug/L		99
84) m/p-Xylene	9.397	91	1571355	77.32 ug/L		99
85) Nonane	9.462	43	170623	53.12 ug/L		97
86) Styrene	9.669	104	706298	45.06 ug/L		100
87) o-Xylene	9.648	91	887706	37.93 ug/L		100
88) Cyclohexanone	9.934	55	406	Below Cal	#	1
89) Bromoform	9.777	173	197456	36.25 ug/L		99
90) Isopropylbenzene	9.884	105	1020180	39.03 ug/L		99
92) Bromobenzene	10.063	77	466088	41.54 ug/L		99
93) 1,1,2,2-Tetrachloroethane	10.092	83	480377	45.17 ug/L		97
94) 1,2,3-Trichloropropane	10.113	110	134816	40.10 ug/L		100
95) trans-1,4-Dichloro-2-b...	10.106	53	135808	38.59 ug/L		100
96) n-Propylbenzene	10.135	91	1225366	39.05 ug/L		100
97) 2-Chlorotoluene	10.178	91	717839	42.97 ug/L		100
98) 4-Chlorotoluene	10.249	91	825032	43.48 ug/L		100
99) 1,3,5-Trimethylbenzene	10.242	105	861850	38.93 ug/L		99
100) tert-Butylbenzene	10.407	91	597217	40.70 ug/L		95
101) 1,2,4-Trimethylbenzene	10.443	105	856125	37.13 ug/L		99
102) sec-Butylbenzene	10.529	105	1028926	38.23 ug/L		99
104) 1,3-Dichlorobenzene	10.593	146	523773	43.12 ug/L		99
105) p-Isopropyltoluene	10.615	119	877184	44.26 ug/L		99
106) 1,4-Dichlorobenzene	10.643	146	490987	41.97 ug/L		100
107) 1,2,3-Trimethylbenzene	10.658	105	874932	44.18 ug/L		99
108) Benzyl chloride	10.249	91	825032	43.78 ug/L		100
109) 1,2-Dichlorobenzene	10.830	146	499528	42.14 ug/L		99
110) n-Butylbenzene	10.822	91	789414	43.28 ug/L		99

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

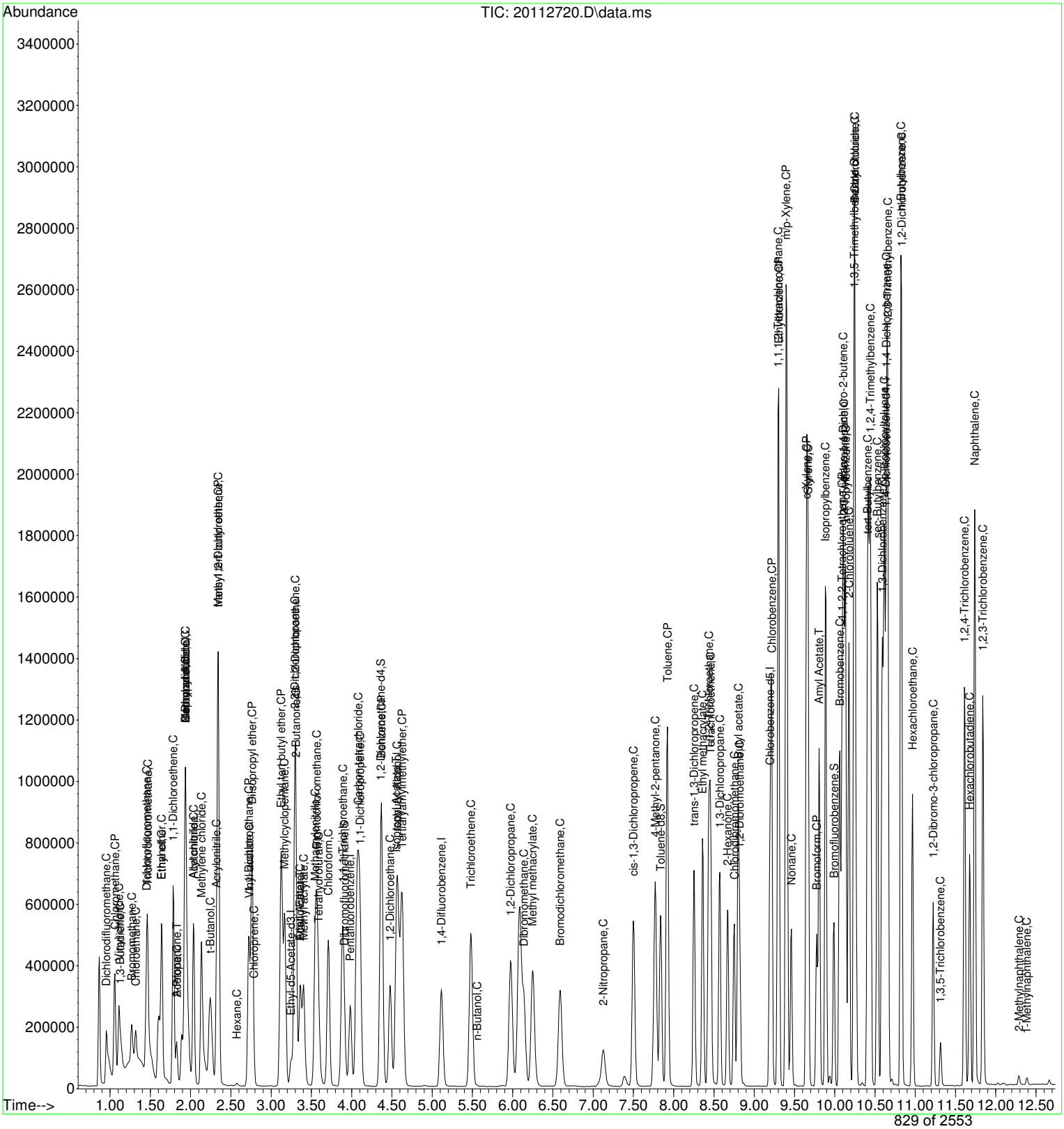
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) Hexachloroethane	10.966	117	169862	37.59	ug/L	99
112) 1,2-Dibromo-3-chloropr...	11.224	157	148025	44.61	ug/L	95
113) 1,3,5-Trichlorobenzene	11.310	180	9330	0.78	ug/L	93
114) 1,2,4-Trichlorobenzene	11.610	180	366263	40.73	ug/L	99
115) Hexachlorobutadiene	11.675	225	120058	39.26	ug/L	99
116) Naphthalene	11.739	128	1283132	39.54	ug/L	99
117) 1,2,3-Trichlorobenzene	11.840	180	337985	39.25	ug/L	98
118) 2-Methylnaphthalene	12.291	142	14218	0.42	ug/L	93
119) 1-Methylnaphthalene	12.384	142	10429	0.31	ug/L	86
121) 2-Propanone	1.826	43	153076	43.43	ug/L	99
122) Isopropyl Alcohol	1.933	45	1008168	854.59	ug/L	100
123) Acetic Ether	3.359	43	411373	38.56	ug/L	99
124) Isopropyl Acetate	4.555	61	144297	37.46	ug/L	97
125) Amyl Acetate	9.805	43	515414	37.21	ug/L	99

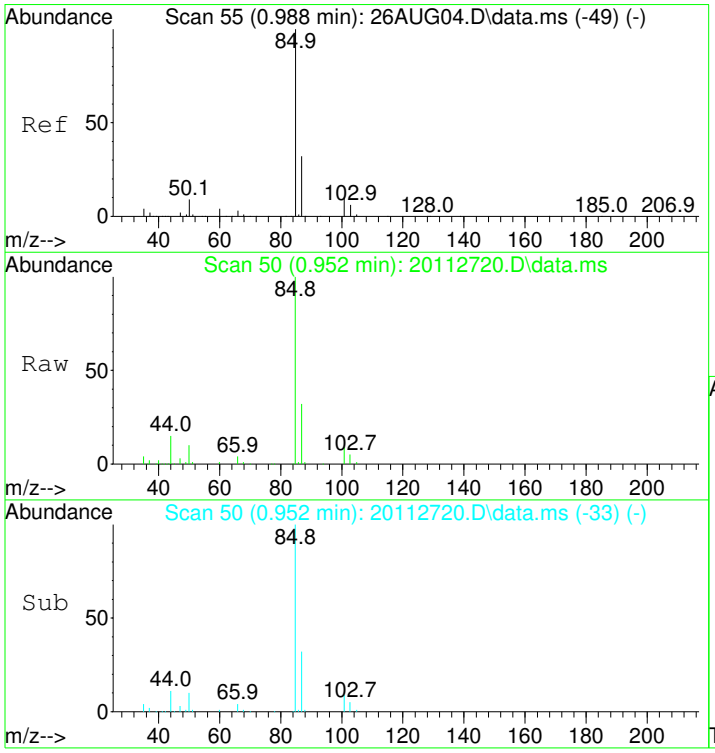
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

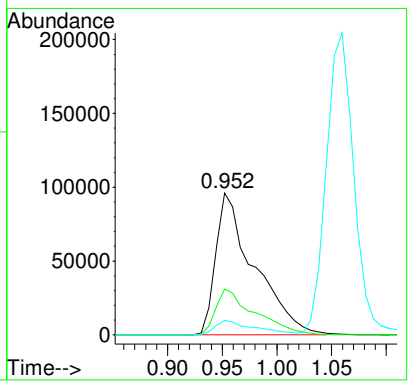


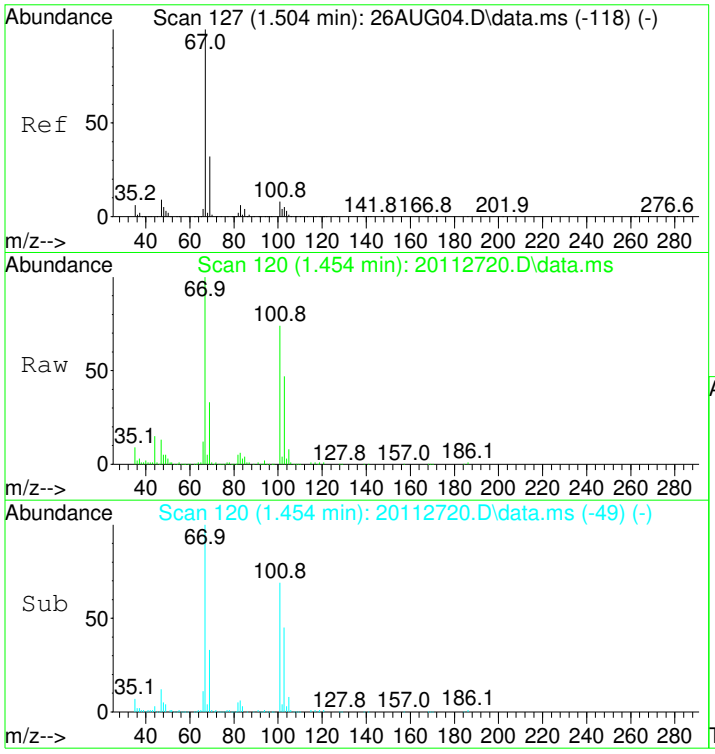


#2
Dichlorodifluoromethane
Concen: 43.49 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 85 Resp: 235119

Ion	Ratio	Lower	Upper
85	100		
87	32.7	3.6	63.6
50	10.4	0.0	40.5

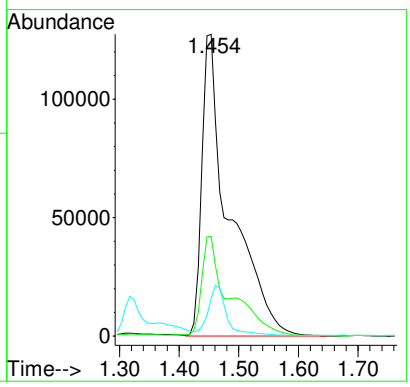


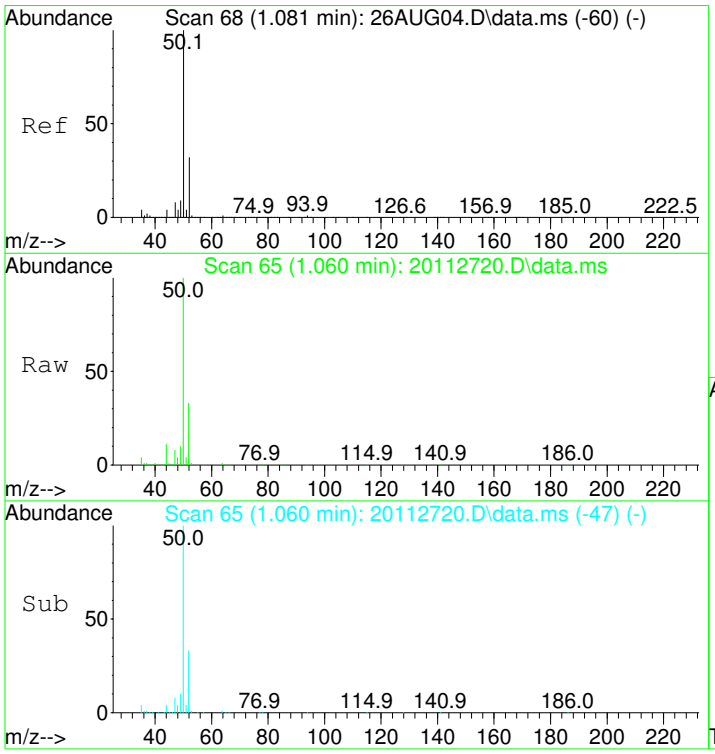


#3
Dichlorofluoromethane
Concen: 33.96 ug/L
RT: 1.454 min Scan# 120
Delta R.T. 0.008 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 67 Resp: 409369

Ion	Ratio	Lower	Upper
67	100		
69	21.1	23.7	44.1#
66	11.1	8.1	15.0

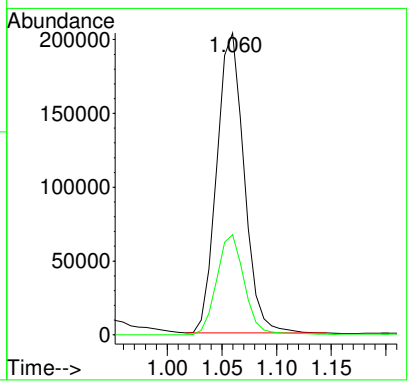


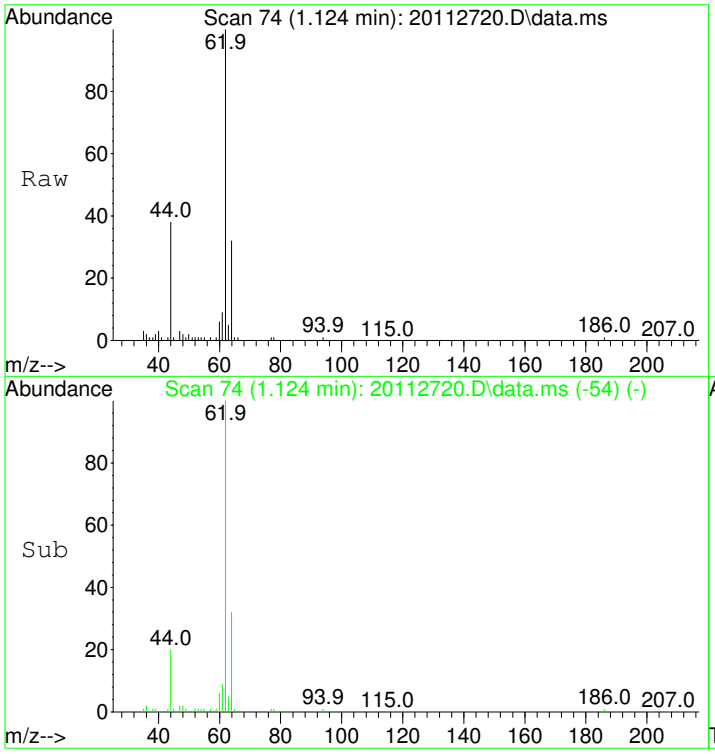


#4
Chloromethane
Concen: 30.31 ug/L
RT: 1.060 min Scan# 65
Delta R.T. 0.008 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 50 Resp: 353833

Ion	Ratio	Lower	Upper
50	100		
52	33.9	4.9	64.9

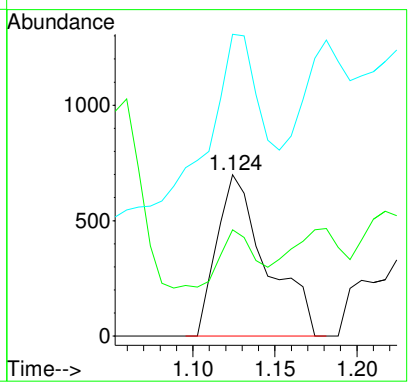


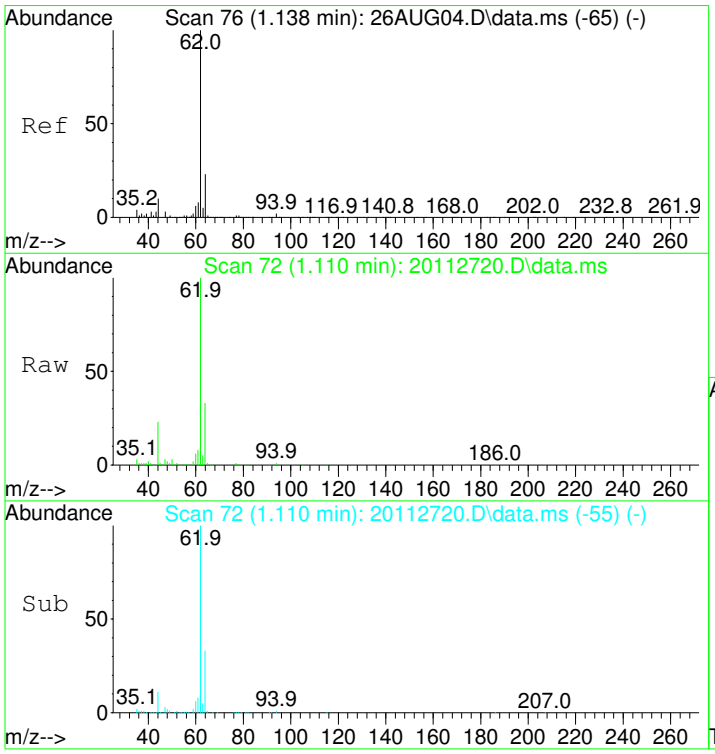


#5
1,3-Butadiene
Concen: 81.25 ug/L
RT: 1.124 min Scan# 74
Delta R.T. -0.007 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 54 Resp: 1470

Ion	Ratio	Lower	Upper
54	100		
53	27.7	0.0	30.0
39	418.4	322.9	382.9#

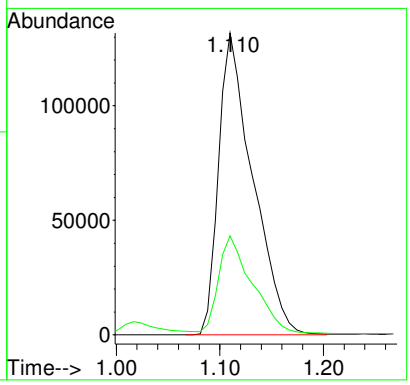


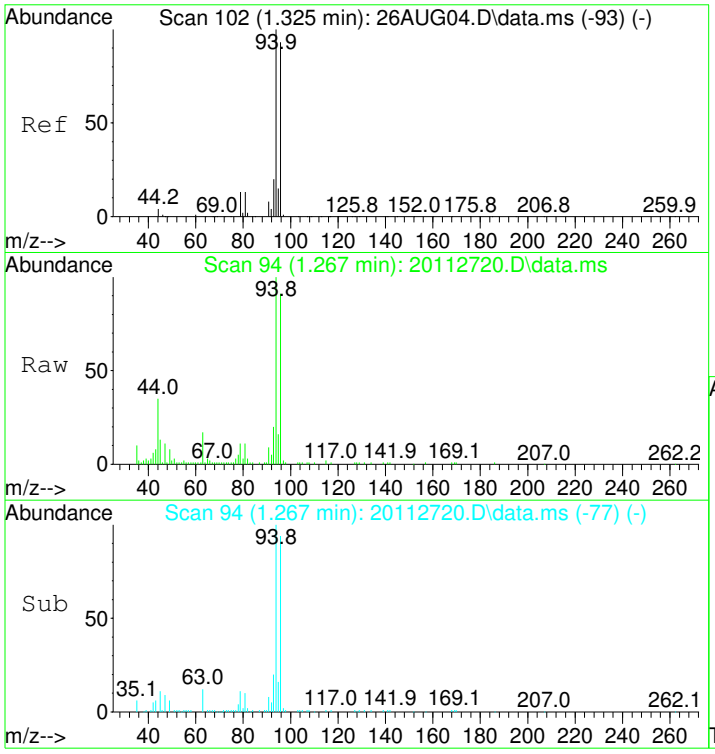


#6
Vinyl chloride
Concen: 42.49 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 62 Resp: 302526

Ion	Ratio	Lower	Upper
62	100		
64	31.8	1.9	61.9

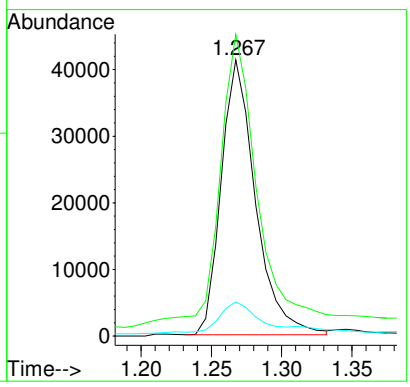


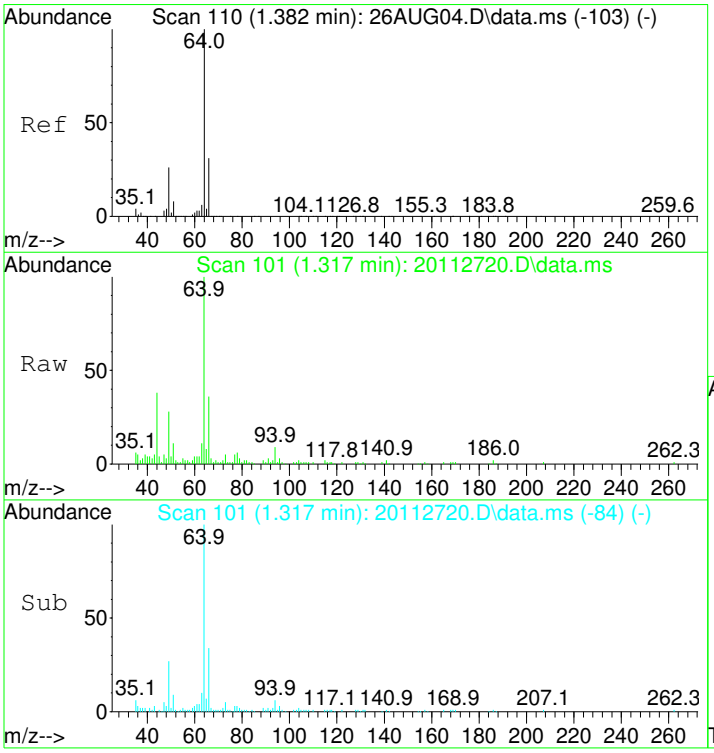


#7
Bromomethane
Concen: 65.22 ug/L
RT: 1.267 min Scan# 94
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 96 Resp: 70132

Ion	Ratio	Lower	Upper
96	100		
94	123.3	103.4	163.4
79	17.4	0.0	49.6

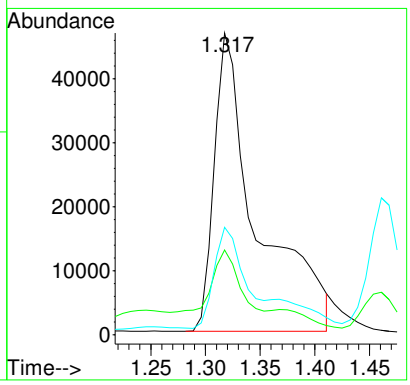


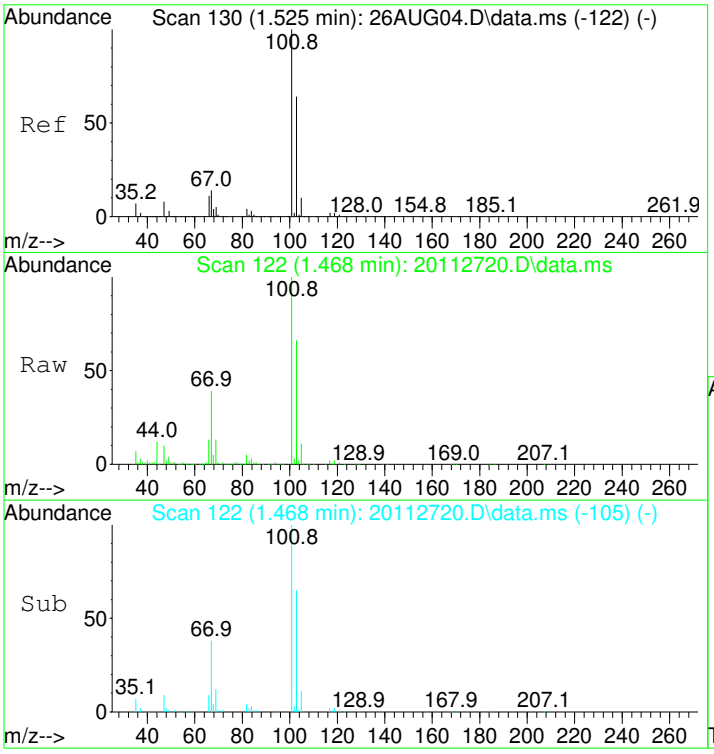


#8
Chloroethane
Concen: 40.84 ug/L
RT: 1.317 min Scan# 101
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 64 Resp: 127415

Ion	Ratio	Lower	Upper
64	100		
49	12.5	0.0	41.3
66	33.1	0.0	52.2

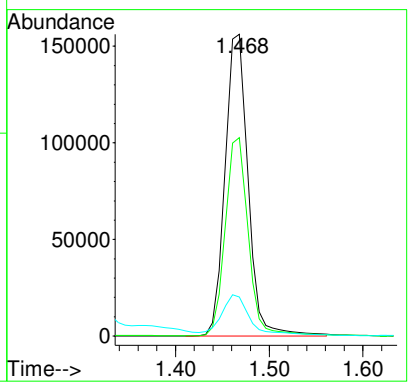


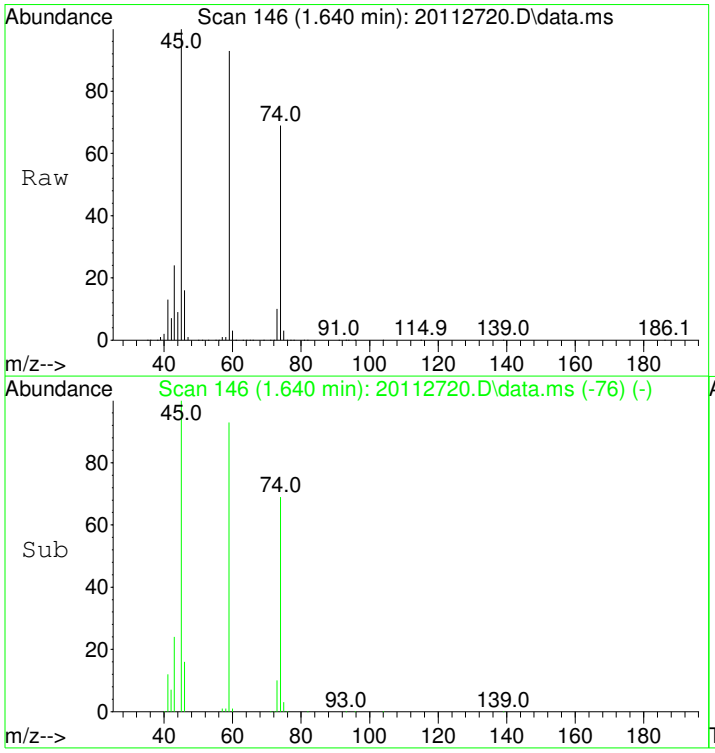


#9
Trichlorofluoromethane
Concen: 31.86 ug/L
RT: 1.468 min Scan# 122
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:101 Resp: 268407

Ion	Ratio	Lower	Upper
101	100		
103	65.1	45.1	85.1
66	15.7	0.0	35.4

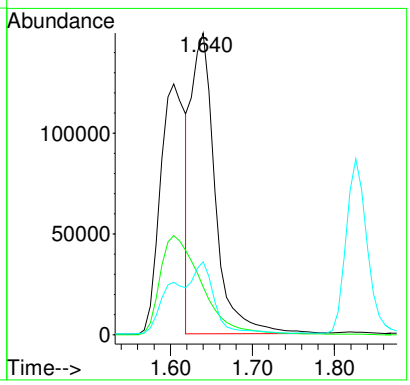


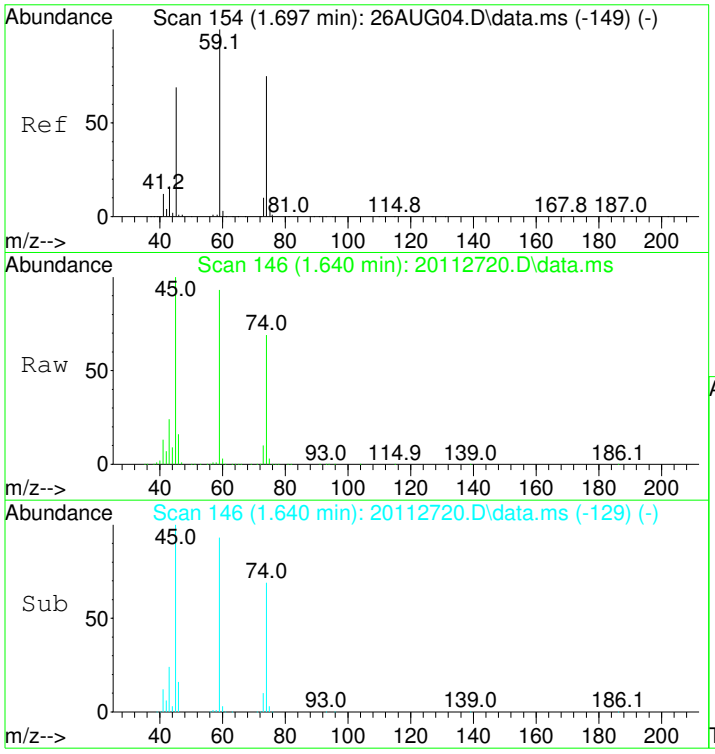


#10
Ethanol
Concen: 504.94 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 45 Resp: 304004

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	57.3
43	22.2	0.0	52.4

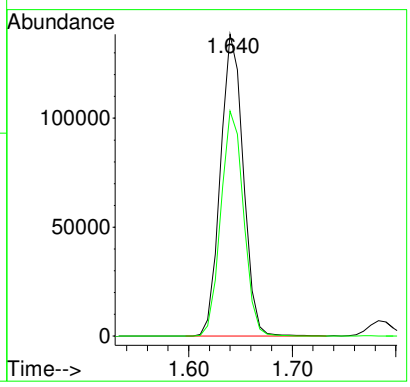


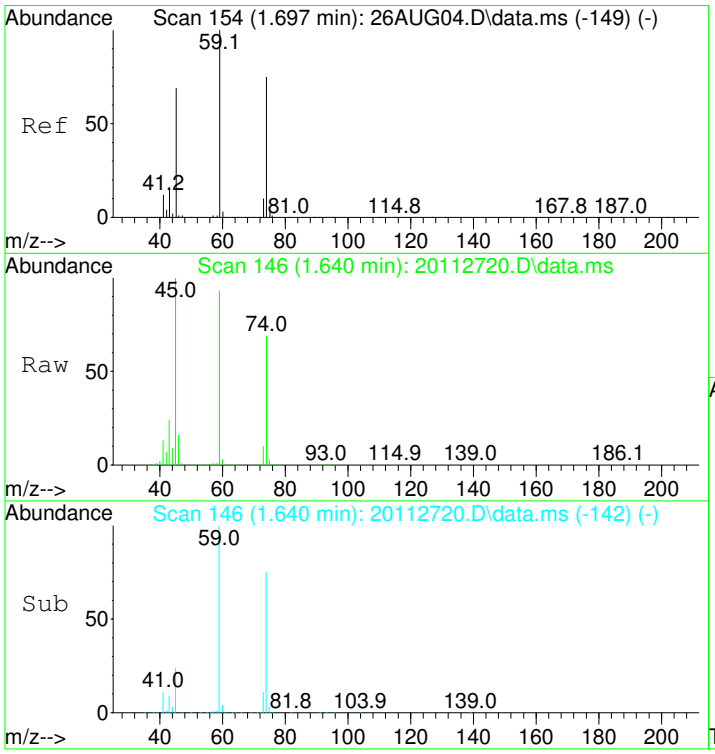


#11
Ethyl ether
Concen: 42.15 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 59 Resp: 213428

Ion	Ratio	Lower	Upper
59	100		
74	73.8	42.6	102.6

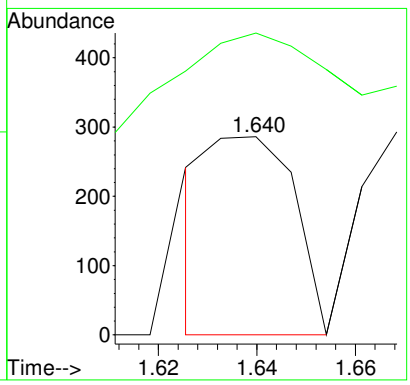


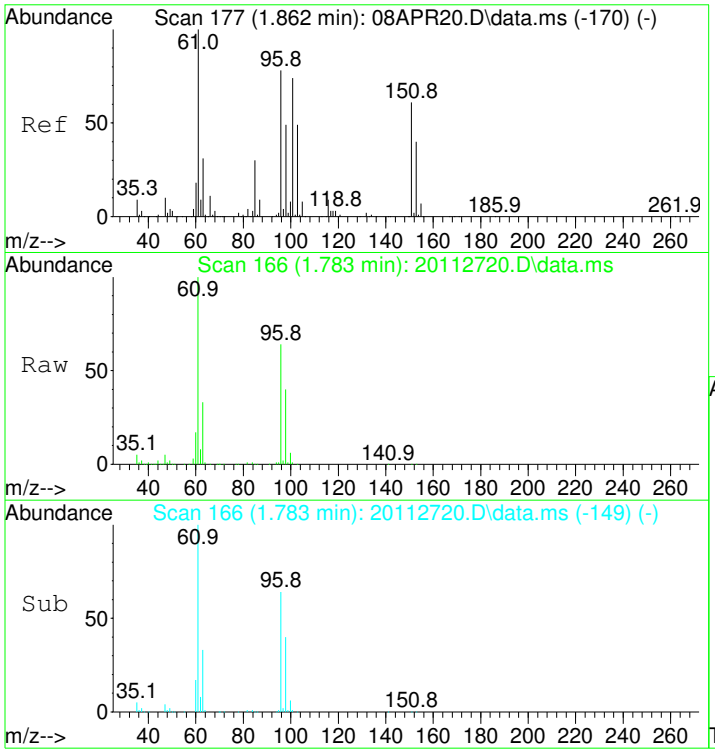


#12
Acrolein
Concen: Below Cal
RT: 1.640 min Scan# 146
Delta R.T. -0.093 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 56 Resp: 346

Ion	Ratio	Lower	Upper
56	100		
55	33.8	17.3	77.3

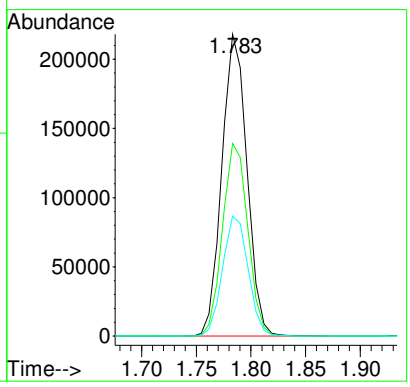


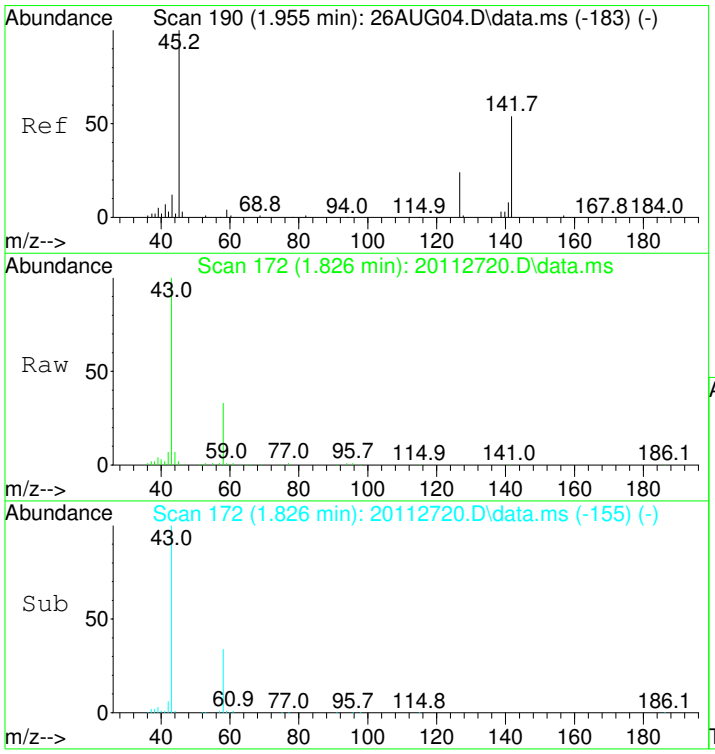


#13
1,1-Dichloroethene
Concen: 44.61 ug/L
RT: 1.783 min Scan# 166
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 61 Resp: 348692

Ion	Ratio	Lower	Upper
61	100		
96	64.1	32.6	92.6
98	40.4	10.4	70.4

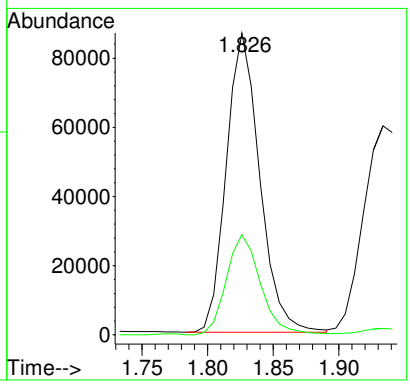


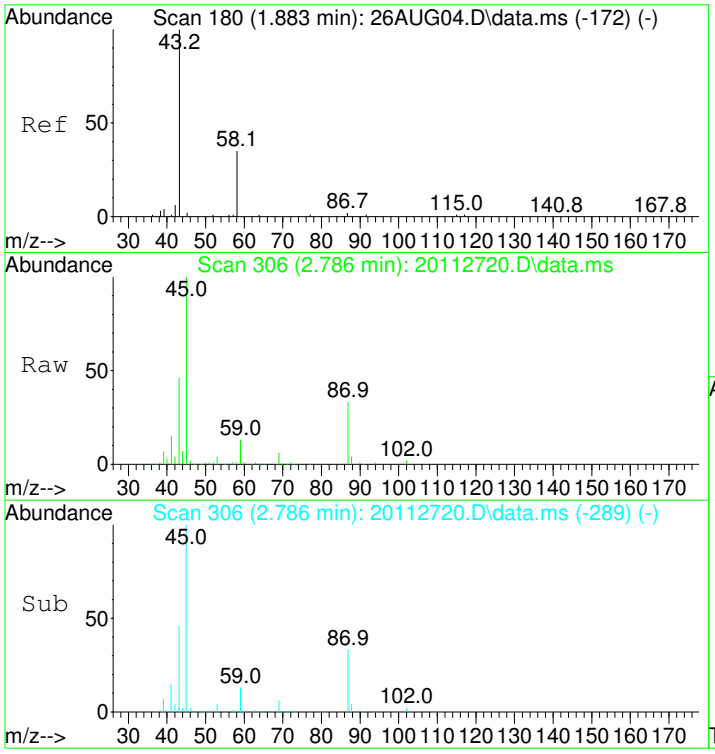


#16
Acetone
Concen: 43.42 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 153076

Ion	Ratio	Lower	Upper
43	100		
58	34.5	5.2	65.2

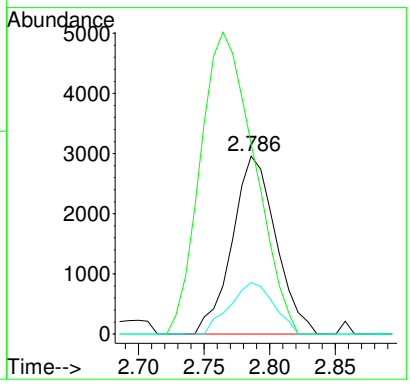


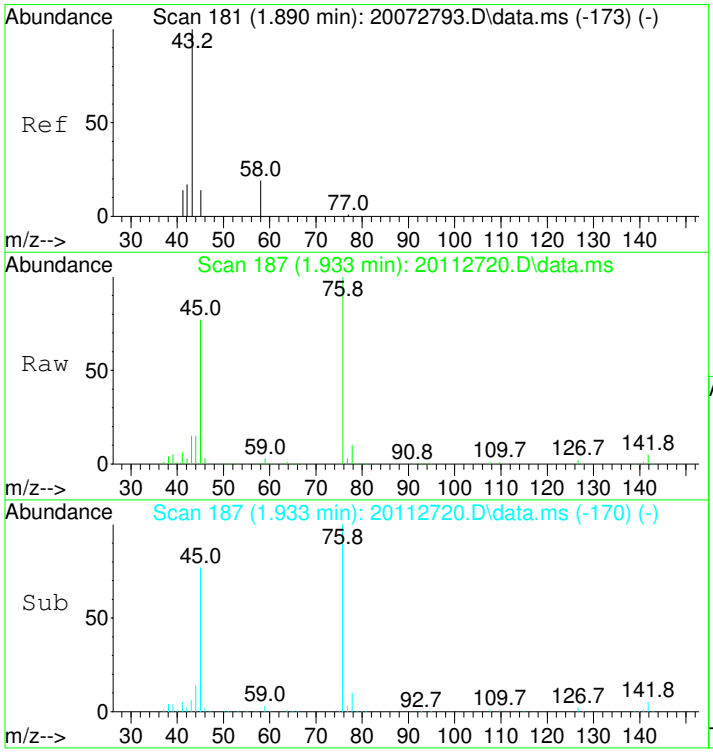


#17
Chloroprene
Concen: 0.58 ug/L
RT: 2.786 min Scan# 306
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 53 Resp: 6847

Ion	Ratio	Lower	Upper
53	100		
88	209.3	43.7	81.1#
52	29.1	17.3	32.1

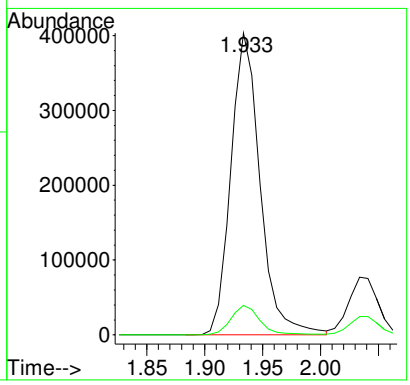


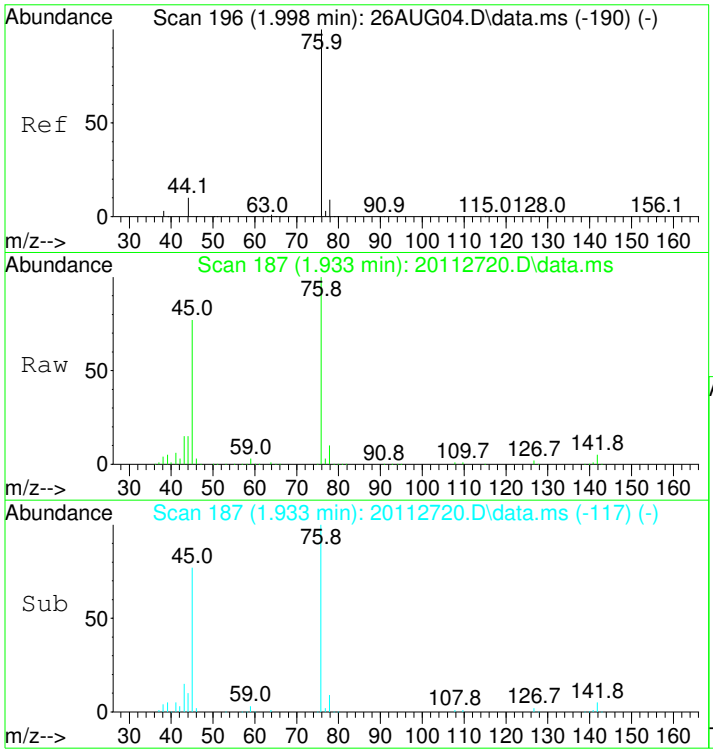


#18
Carbon disulfide
Concen: 45.12 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 76 Resp: 705500

Ion	Ratio	Lower	Upper
76	100		
78	9.5	0.0	39.5

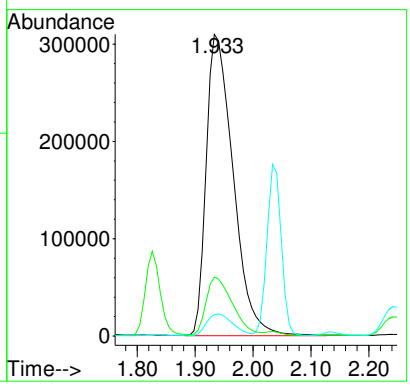


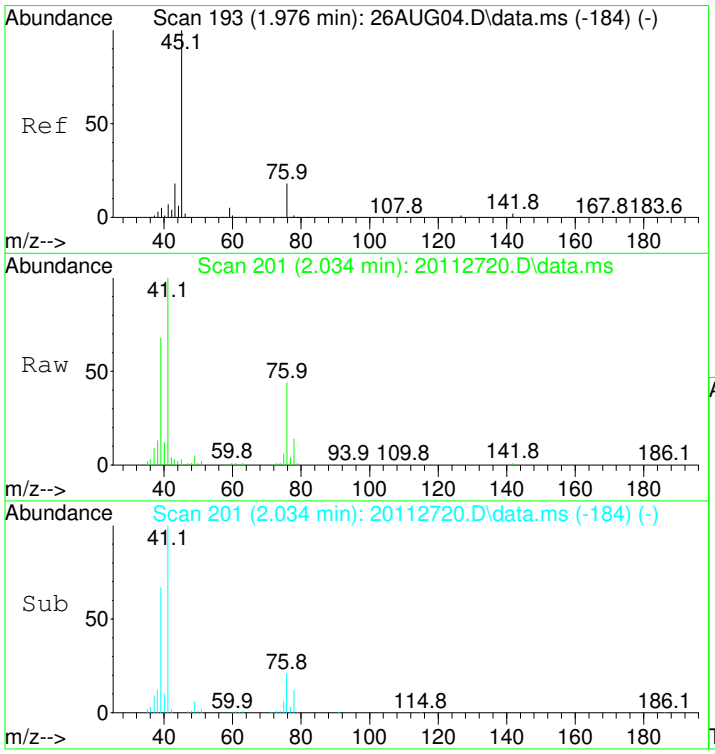


#19
2-Propanol
Concen: 849.40 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 45 Resp: 1008168

Ion	Ratio	Lower	Upper
45	100		
43	18.3	0.0	48.2
41	7.0	0.0	37.1

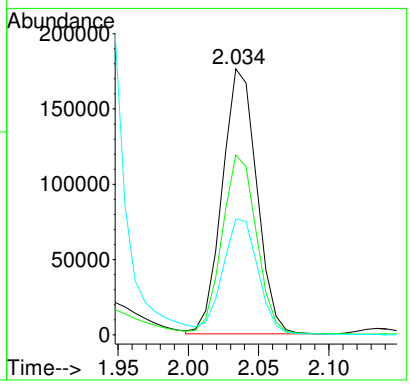


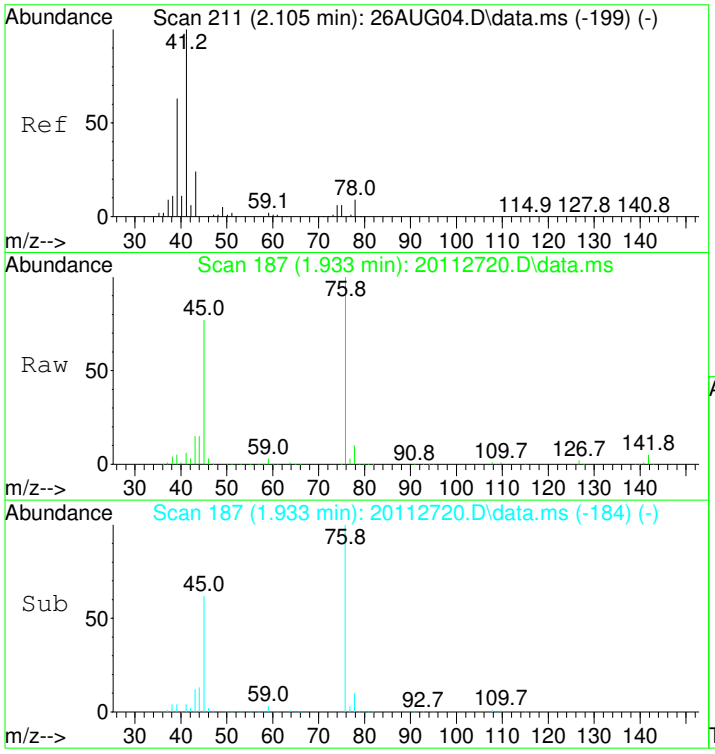


#20
Allyl chloride
Concen: 33.53 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 41 Resp: 301093

Ion	Ratio	Lower	Upper
41	100		
39	67.5	29.0	89.0
76	44.7	7.3	67.3

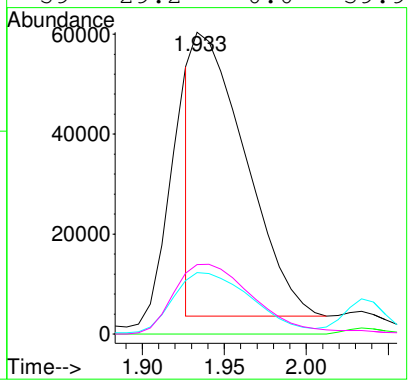


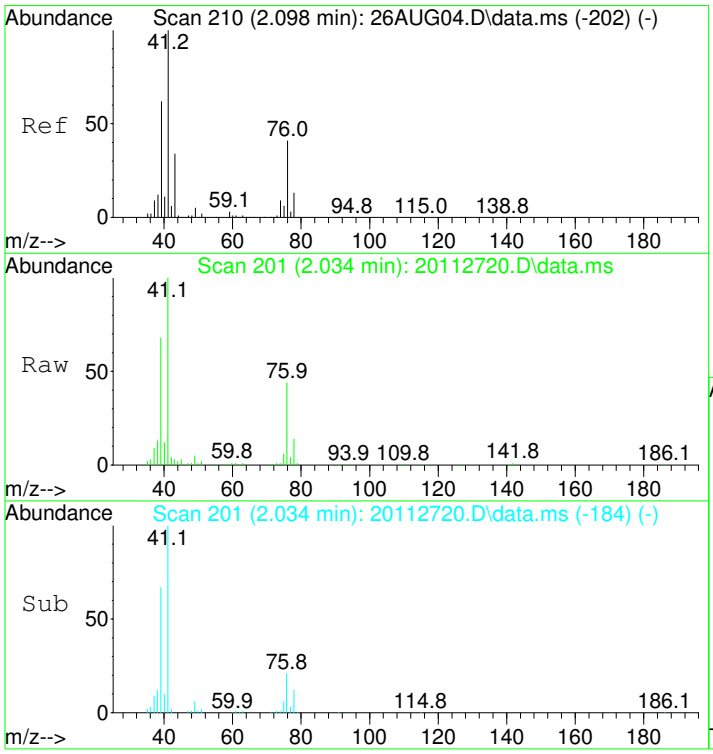


#21
Methyl acetate
Concen: 15.40 ug/L
RT: 1.933 min Scan# 187
Delta R.T. -0.101 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 126710

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.0	56.2
42	20.5	0.0	44.2
59	29.2	0.0	39.9

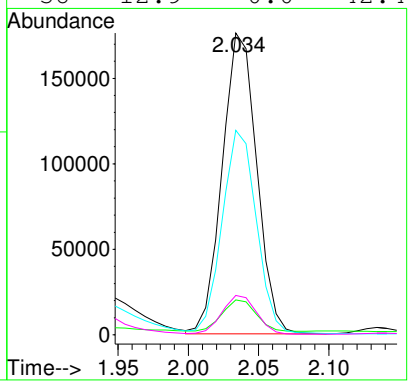


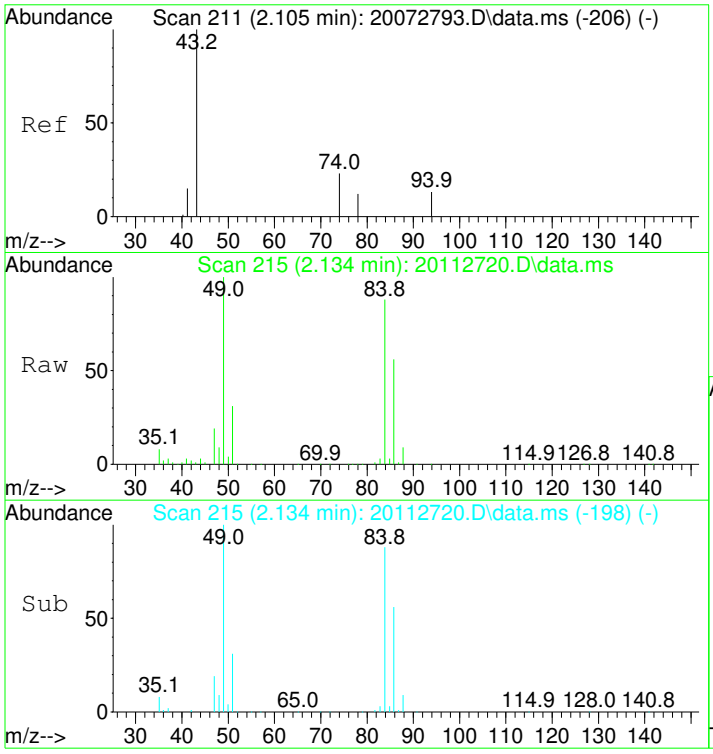


#22
Acetonitrile
Concen: 33.52 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 41 Resp: 301093

Ion	Ratio	Lower	Upper
41	100		
40	10.3	0.0	47.5
39	67.5	29.0	89.0
38	12.9	0.0	42.4

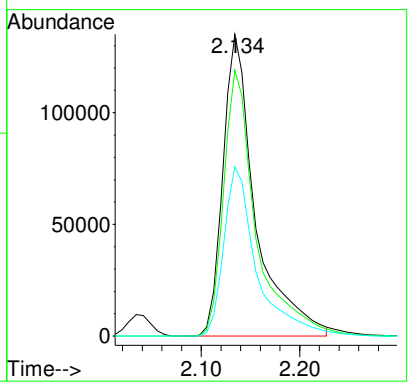


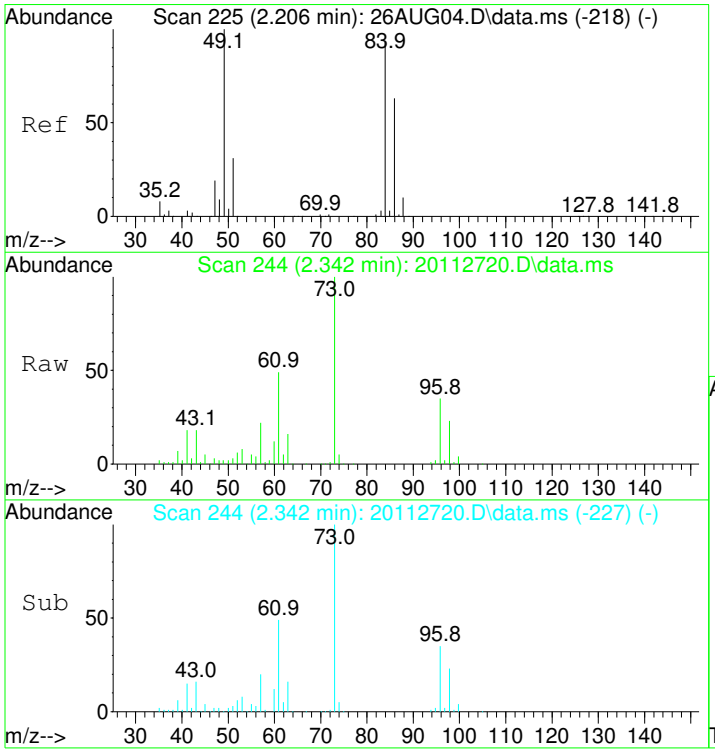


#23
Methylene chloride
Concen: 37.90 ug/L
RT: 2.134 min Scan# 215
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 49 Resp: 311880

Ion	Ratio	Lower	Upper
49	100		
84	87.1	57.4	117.4
86	56.0	27.7	87.7

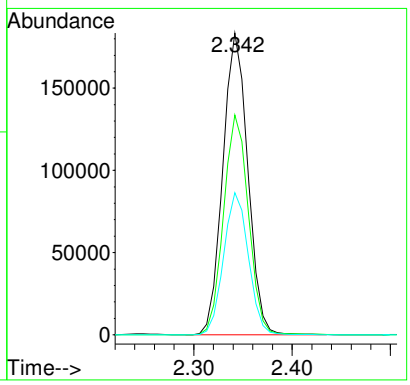


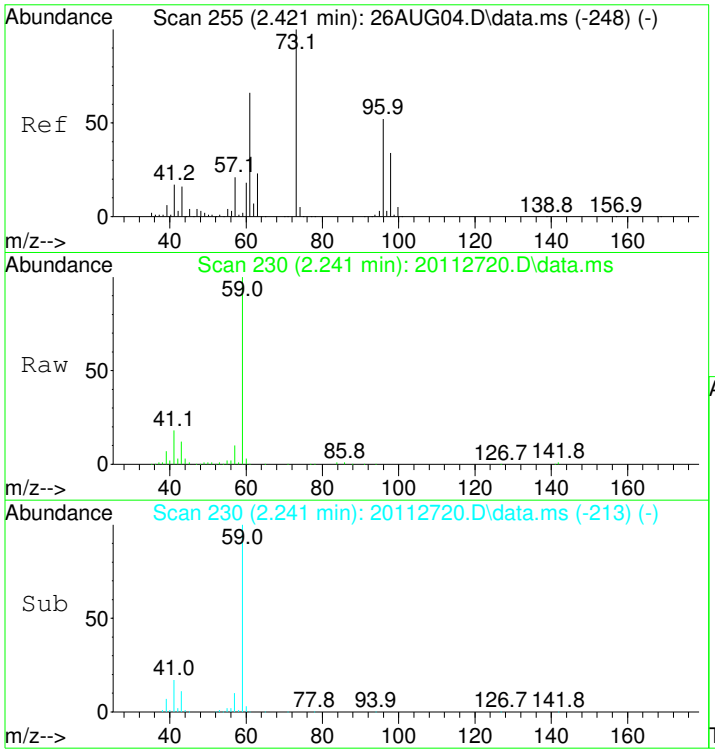


#24
trans-1,2-Dichloroethene
Concen: 42.20 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 61 Resp: 325067

Ion	Ratio	Lower	Upper
61	100		
96	72.5	42.3	102.3
98	46.7	16.1	76.1

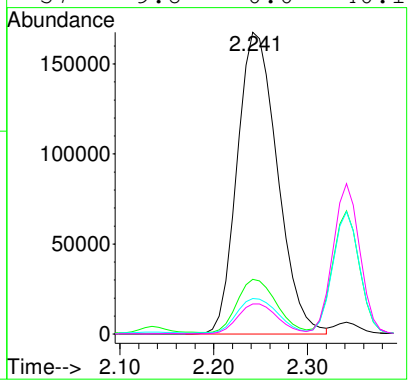


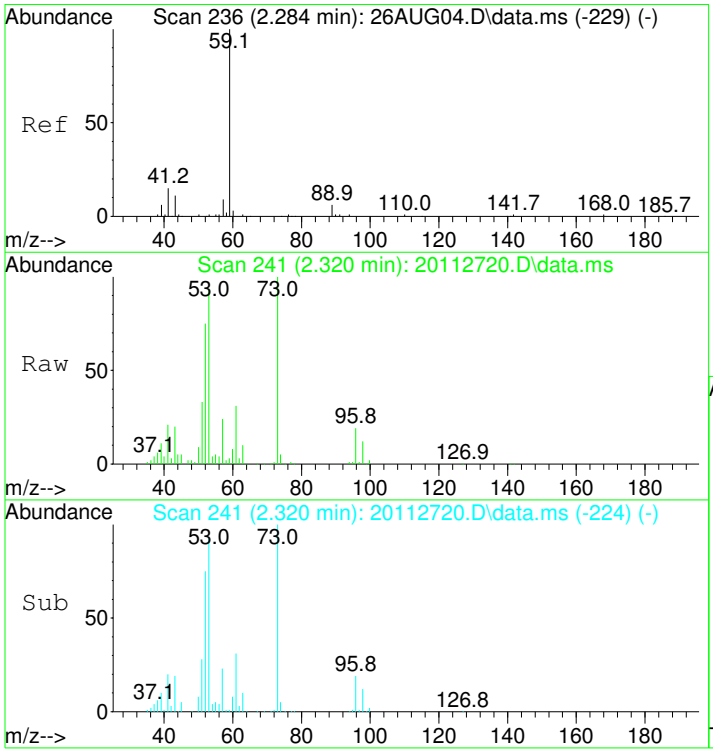


#25
t-Butanol
Concen: 211.09 ug/L
RT: 2.241 min Scan# 230
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 59 Resp: 500646

Ion	Ratio	Lower	Upper
59	100		
41	16.9	0.0	46.1
43	11.5	0.0	41.4
57	9.8	0.0	40.1

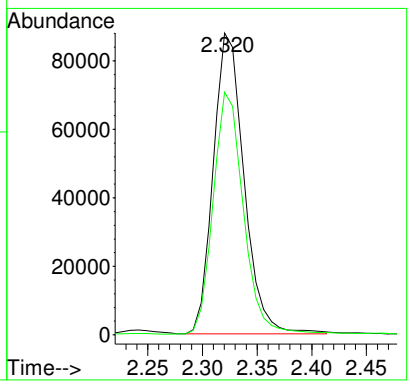


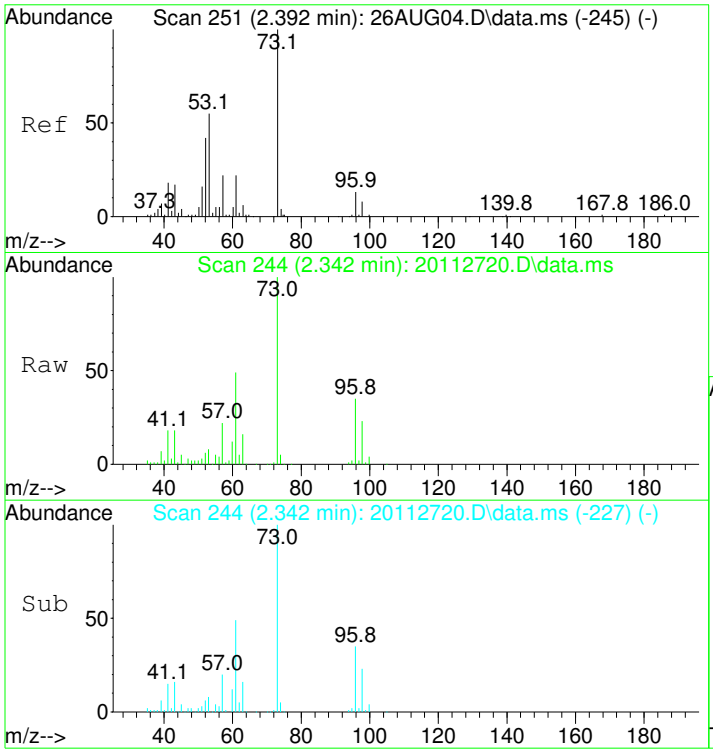


#26
Acrylonitrile
Concen: 42.29 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 53 Resp: 172172

Ion	Ratio	Lower	Upper
53	100		
52	78.5	51.9	111.9

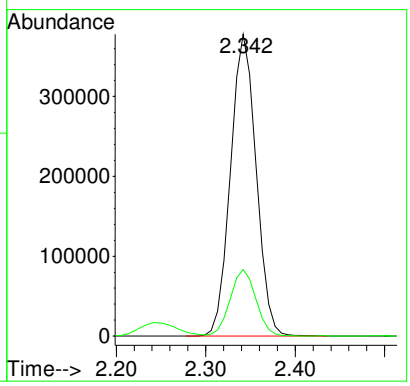


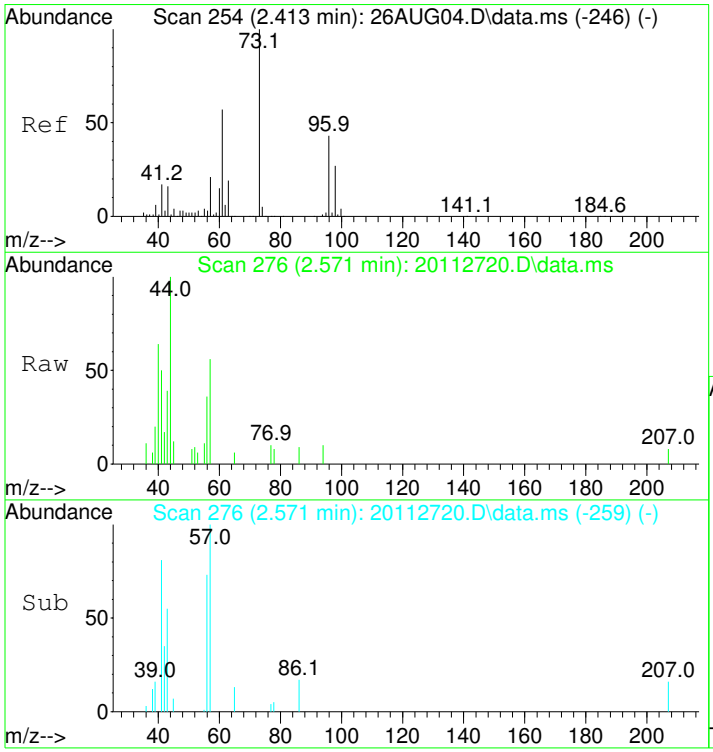


#27
Methyl tert-butyl ether
Concen: 42.96 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 73 Resp: 752546

Ion	Ratio	Lower	Upper
73	100		
57	22.0	0.0	52.4

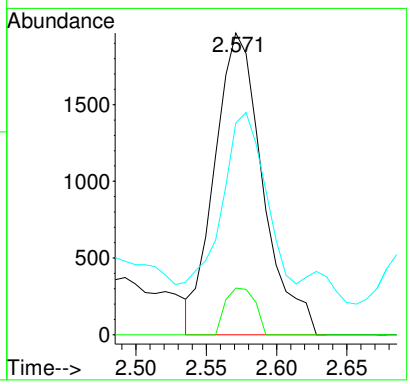


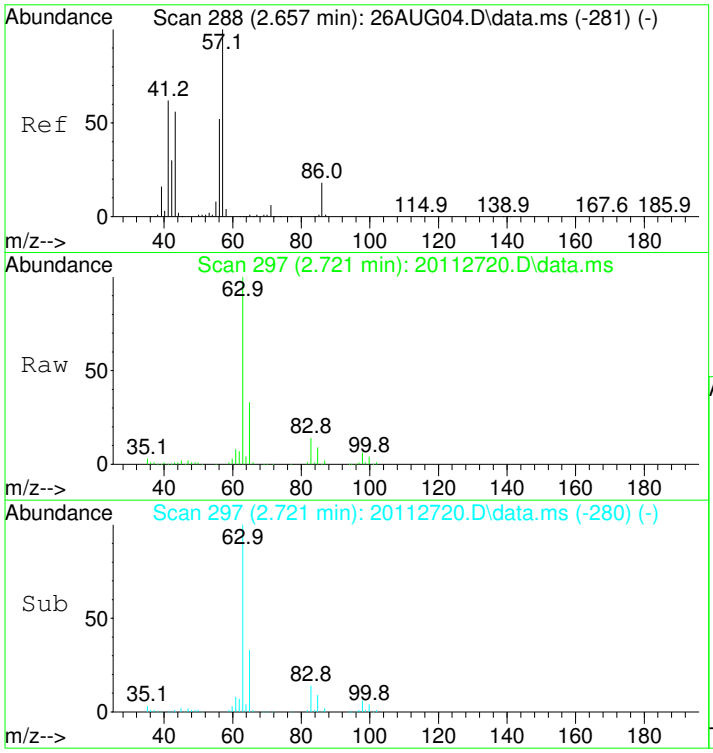


#28
Hexane
Concen: 0.34 ug/L
RT: 2.571 min Scan# 276
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 57 Resp: 4704

Ion	Ratio	Lower	Upper
57	100		
86	9.5	0.0	46.9
43	55.7	27.9	87.9

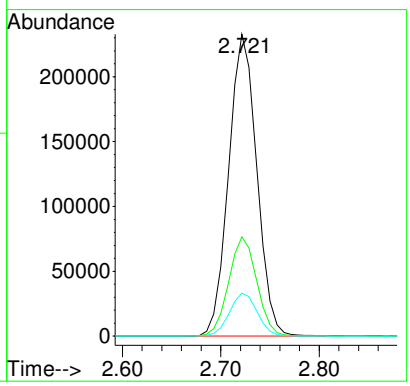


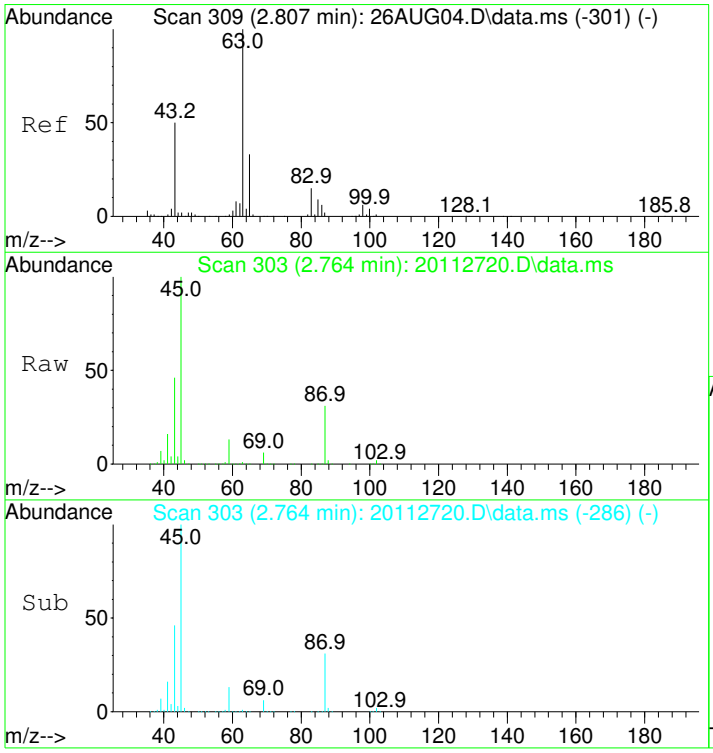


#29
1,1-Dichloroethane
Concen: 41.81 ug/L
RT: 2.721 min Scan# 297
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 63 Resp: 463183

Ion	Ratio	Lower	Upper
63	100		
65	32.9	2.8	62.8
83	14.1	0.0	43.7

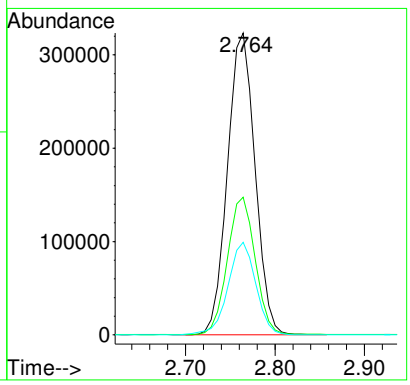


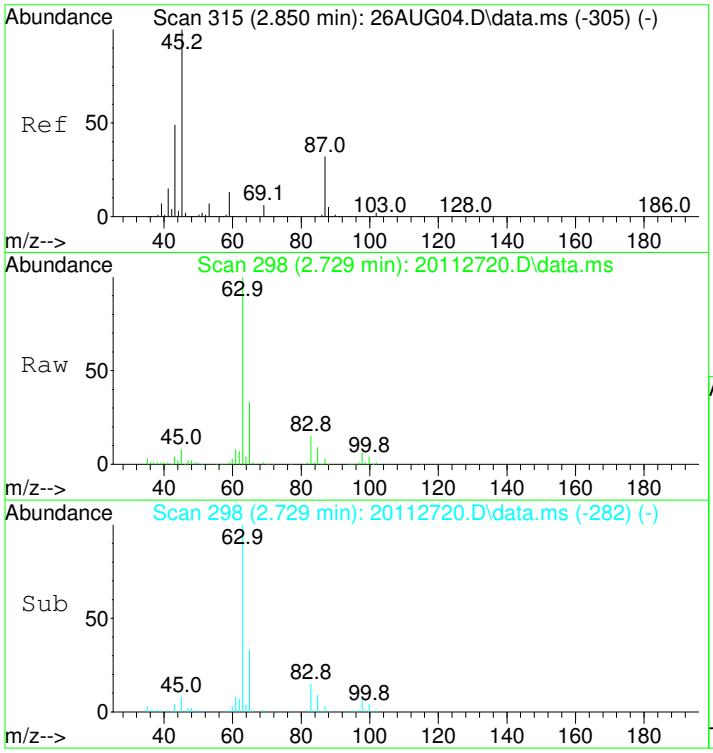


#30
Diisopropyl ether
Concen: 42.63 ug/L
RT: 2.764 min Scan# 303
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 45 Resp: 692603

Ion	Ratio	Lower	Upper
45	100		
43	45.8	79.6	147.8#
87	31.0	22.1	41.1

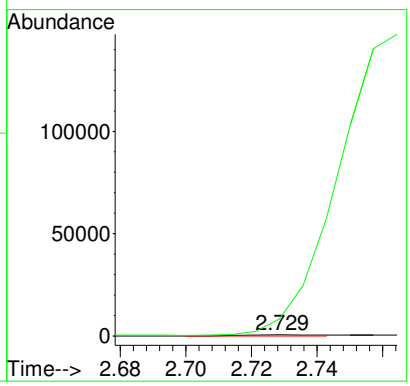


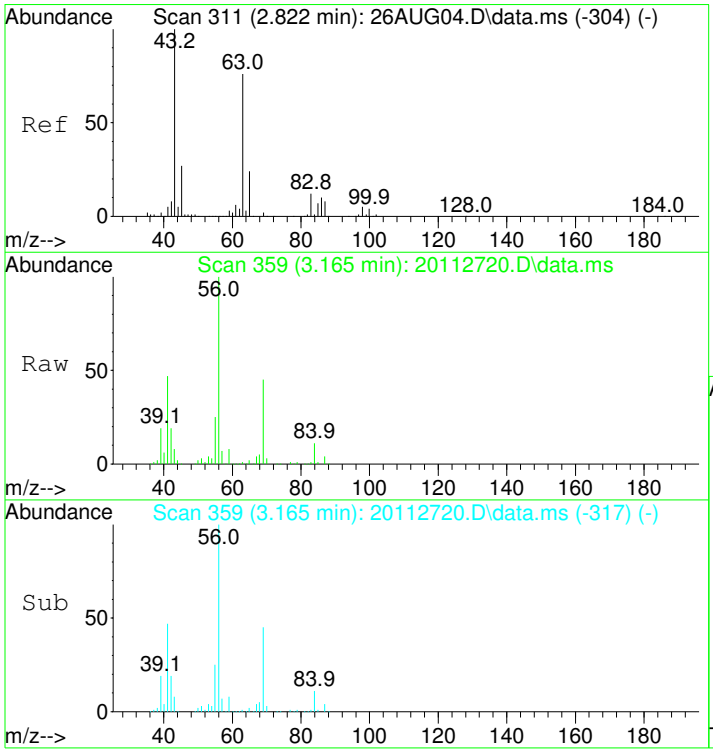


#31
Vinyl acetate
Concen: 0.67 ug/L
RT: 2.729 min Scan# 298
Delta R.T. -0.007 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 86 Resp: 1021

Ion	Ratio	Lower	Upper
86	100		
43	31014.5	1480.0	1540.0#

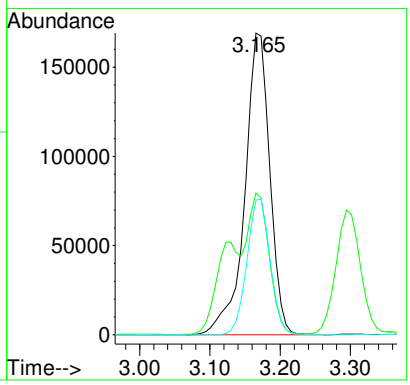


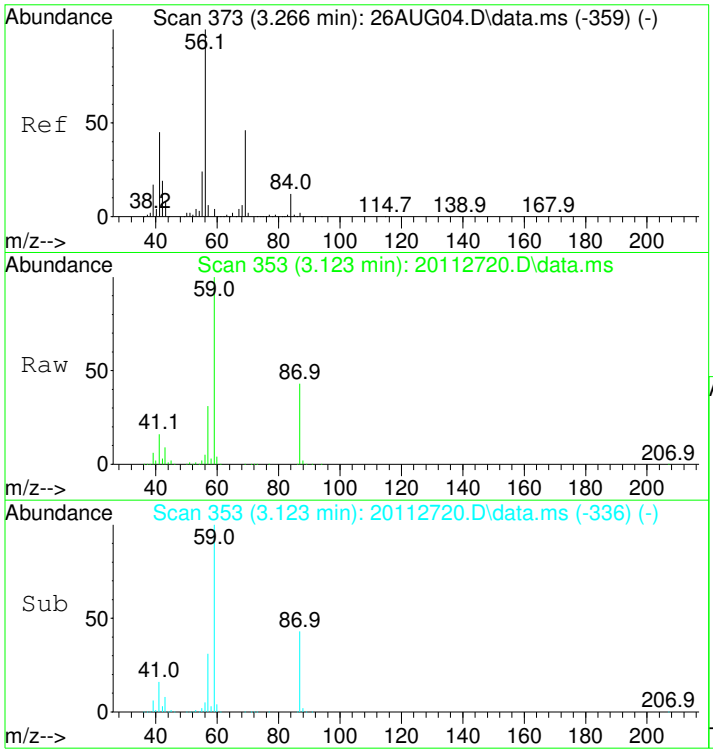


#32
Methylcyclopentane
Concen: 34.55 ug/L
RT: 3.165 min Scan# 359
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 56 Resp: 419341

Ion	Ratio	Lower	Upper
56	100		
41	40.7	36.7	96.7
69	41.8	11.3	71.3

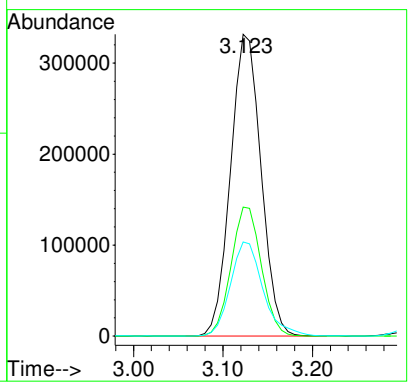


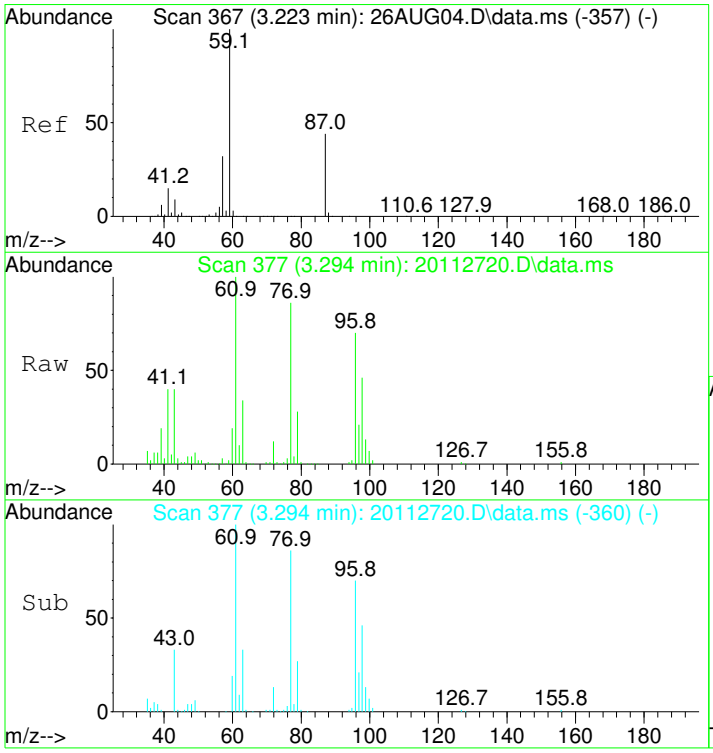


#33
Ethyl tert butyl ether
Concen: 42.43 ug/L
RT: 3.123 min Scan# 353
Delta R.T. 0.001 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 59 Resp: 786665

Ion	Ratio	Lower	Upper
59	100		
87	42.3	12.5	72.5
57	33.4	4.4	64.4

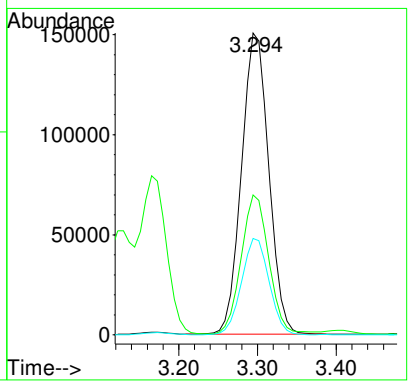


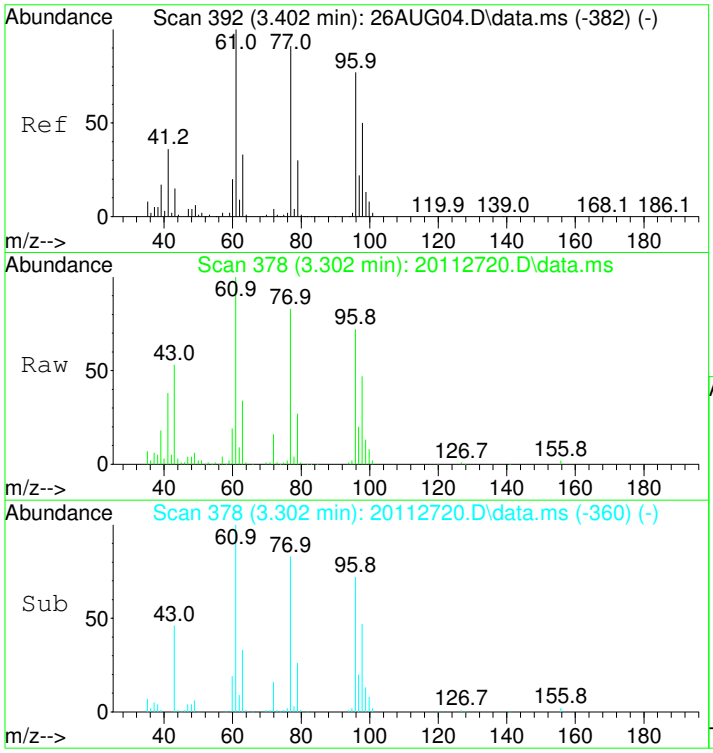


#34
2,2-Dichloropropane
Concen: 39.81 ug/L
RT: 3.294 min Scan# 377
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 77 Resp: 362918

Ion	Ratio	Lower	Upper
77	100		
41	46.7	16.4	76.4
79	32.4	2.4	62.4

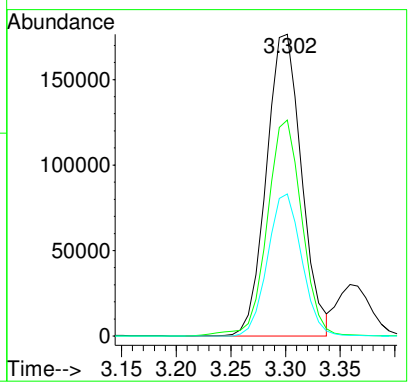


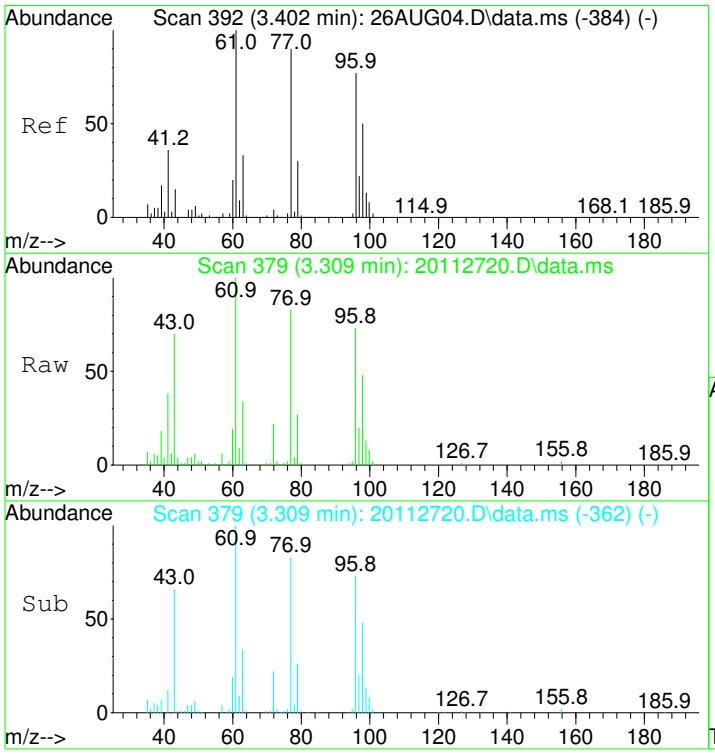


#35
cis-1,2-Dichloroethene
Concen: 42.46 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 61 Resp: 396164

Ion	Ratio	Lower	Upper
61	100		
96	70.5	39.5	99.5
98	45.7	14.9	74.9

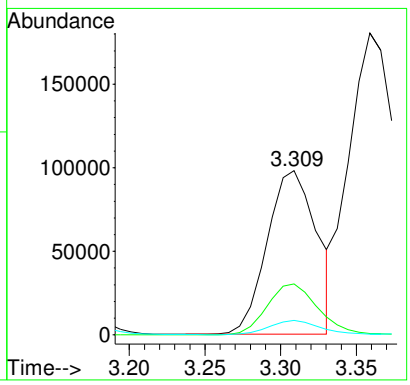


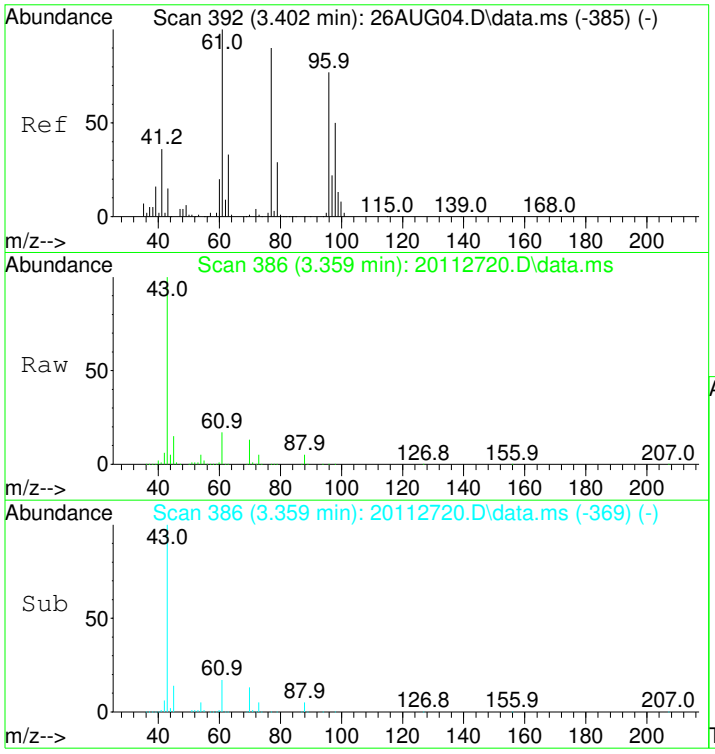


#36
2-Butanone
Concen: 41.78 ug/L
RT: 3.309 min Scan# 379
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 223609

Ion	Ratio	Lower	Upper
43	100		
72	32.1	11.0	51.0
57	9.3	0.0	28.7

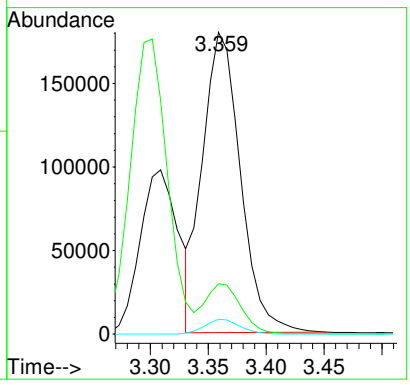


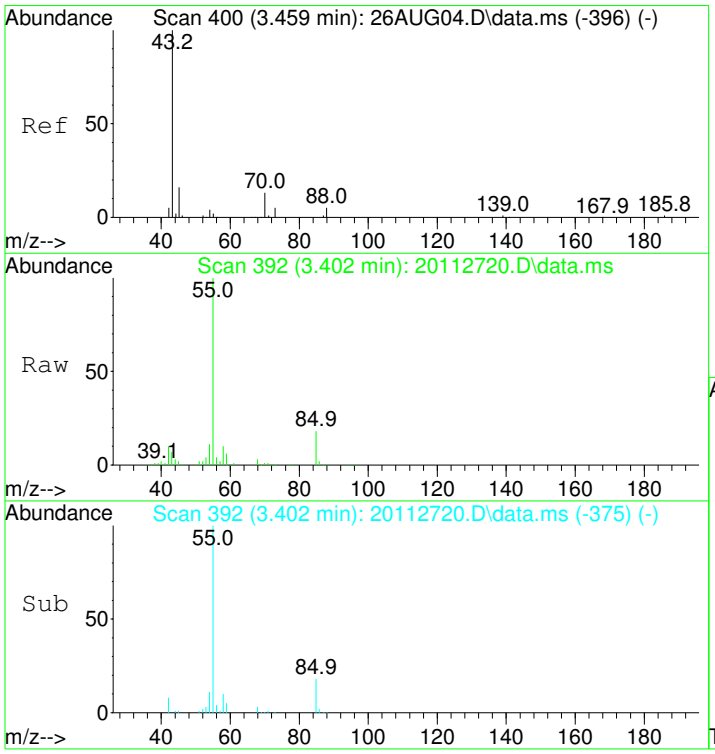


#37
Ethyl Acetate
Concen: 39.50 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 411373

Ion	Ratio	Lower	Upper
43	100		
61	15.5	0.0	34.9
88	4.5	0.0	24.3

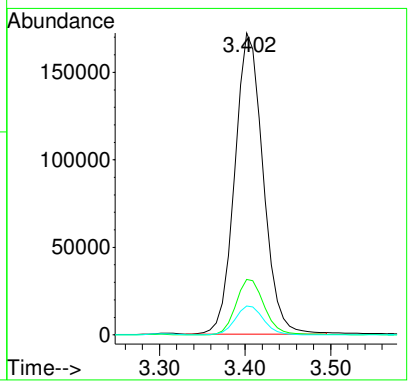


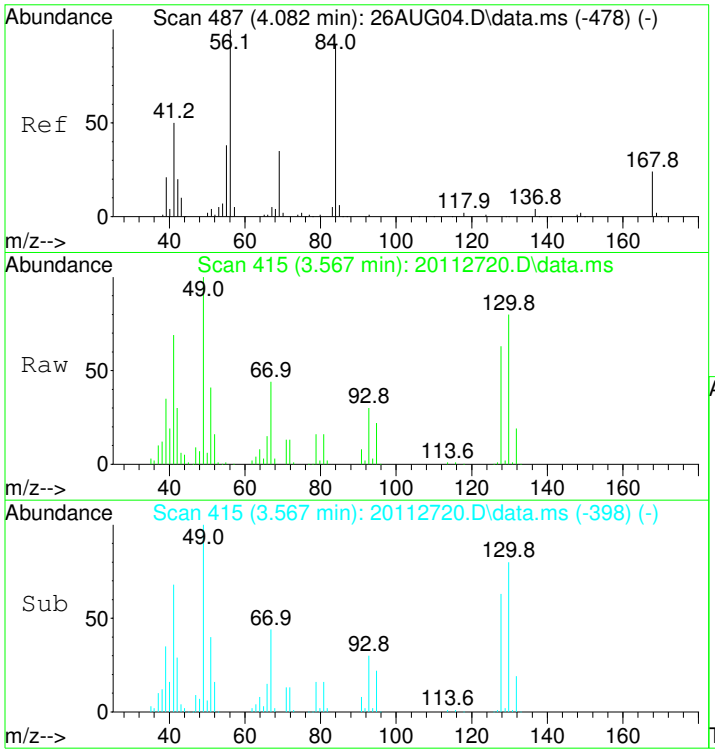


#38
Methyl acrylate
Concen: 42.54 ug/L
RT: 3.402 min Scan# 392
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 55 Resp: 395717

Ion	Ratio	Lower	Upper
55	100		
85	18.5	14.4	21.6
58	9.6	7.4	11.2

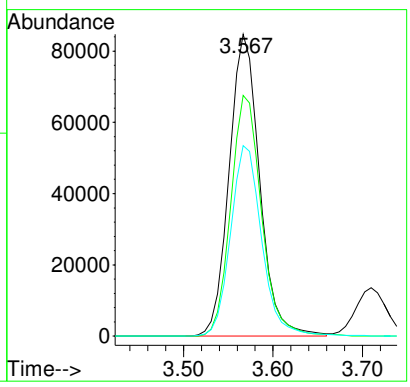


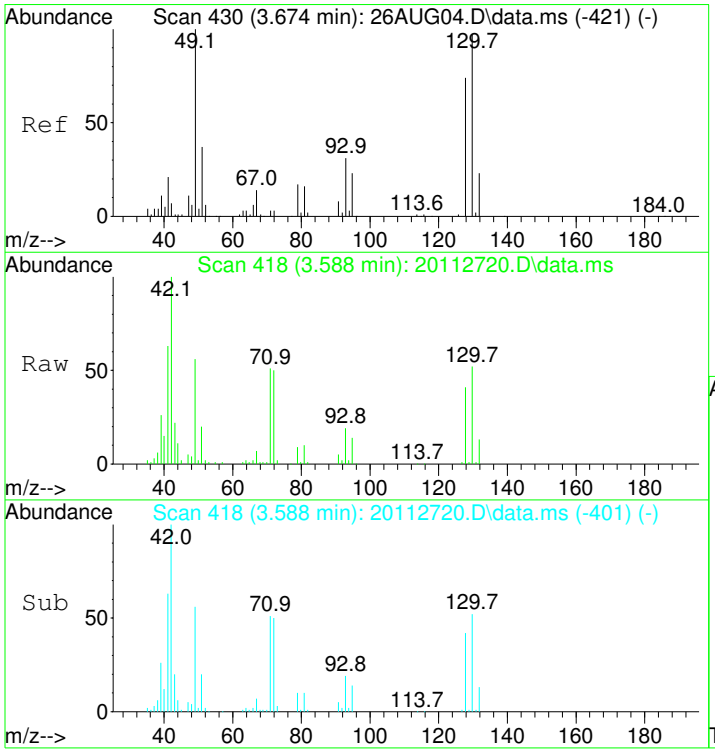


#40
Bromochloromethane
Concen: 41.67 ug/L
RT: 3.567 min Scan# 415
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 49 Resp: 201216

Ion	Ratio	Lower	Upper
49	100		
130	80.1	60.4	100.4
128	64.1	43.3	83.3

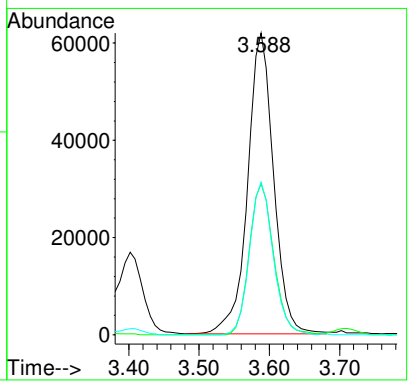


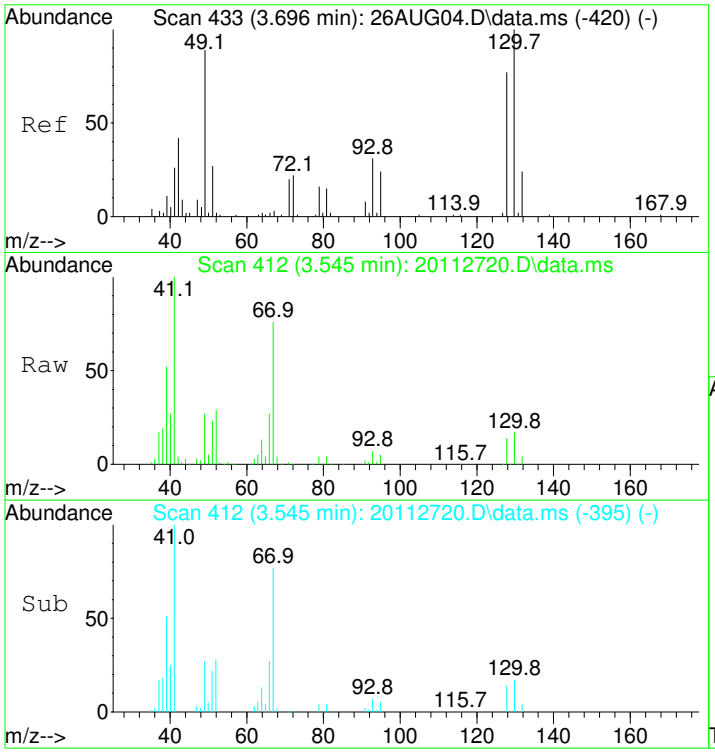


#41
Tetrahydrofuran
Concen: 40.21 ug/L
RT: 3.588 min Scan# 418
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 42 Resp: 158345

Ion	Ratio	Lower	Upper
42	100		
72	47.3	27.6	67.6
71	46.6	26.5	66.5

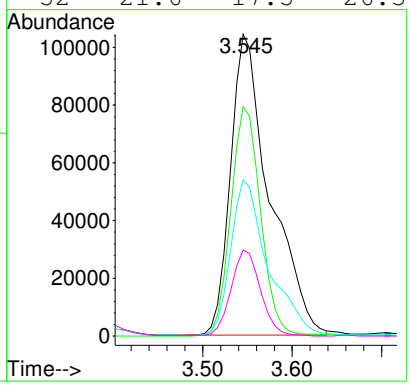


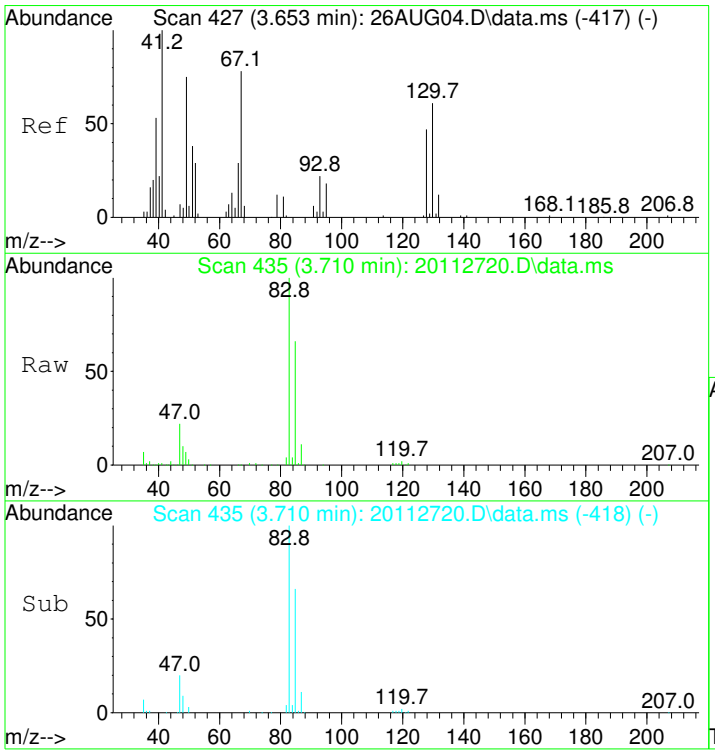


#42
Methacrylonitrile
Concen: 40.76 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 41 Resp: 318482

Ion	Ratio	Lower	Upper
41	100		
67	58.0	47.8	71.6
39	49.0	38.6	57.8
52	21.6	17.5	26.3

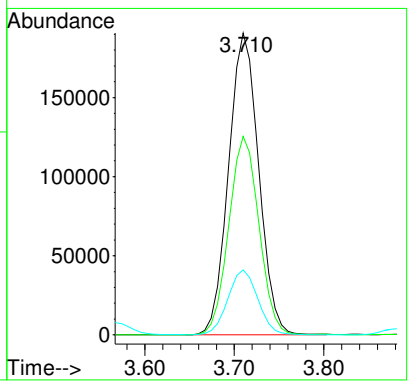


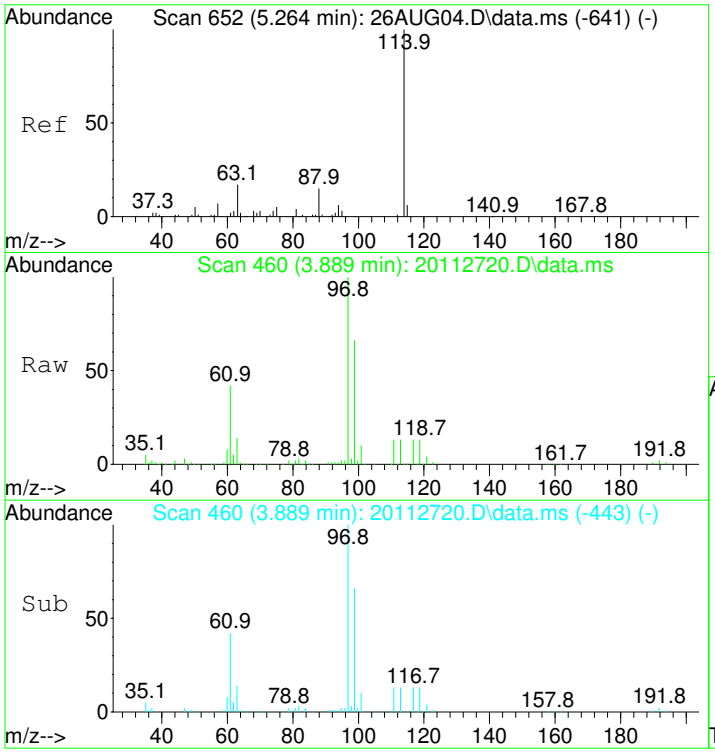


#43
Chloroform
Concen: 39.52 ug/L
RT: 3.710 min Scan# 435
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 83 Resp: 447363

Ion	Ratio	Lower	Upper
83	100		
85	65.7	46.1	86.1
47	21.4	1.2	41.2

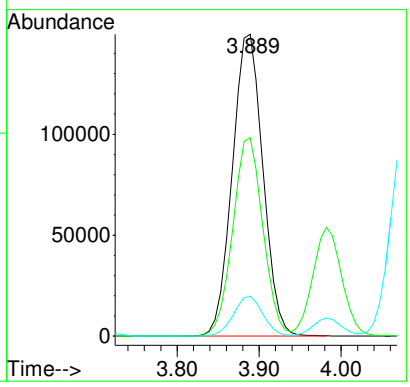


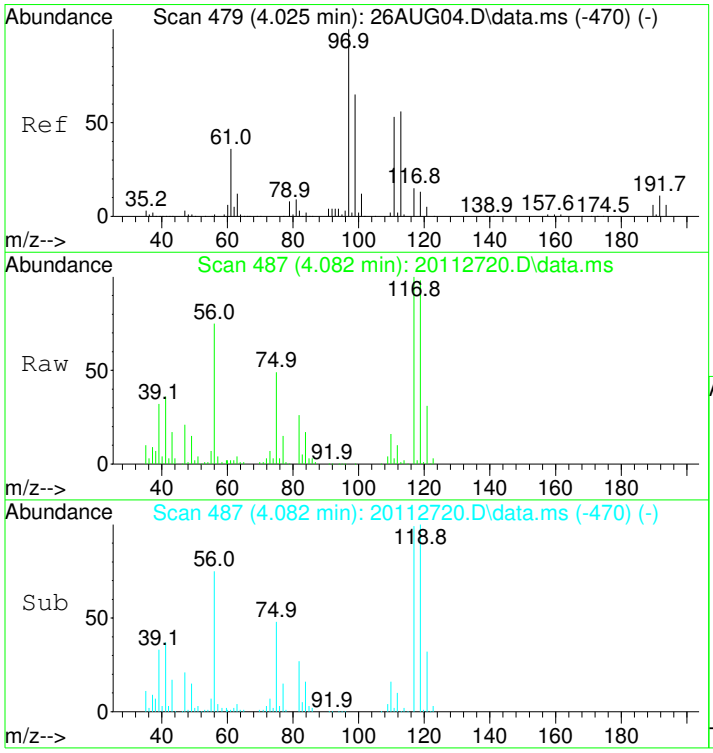


#46
1,1,1-Trichloroethane
Concen: 40.89 ug/L
RT: 3.889 min Scan# 460
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 97 Resp: 388795

Ion	Ratio	Lower	Upper
97	100		
99	64.6	45.8	85.8
117	12.7	0.0	33.4

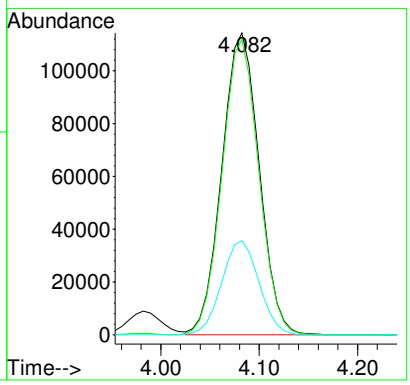


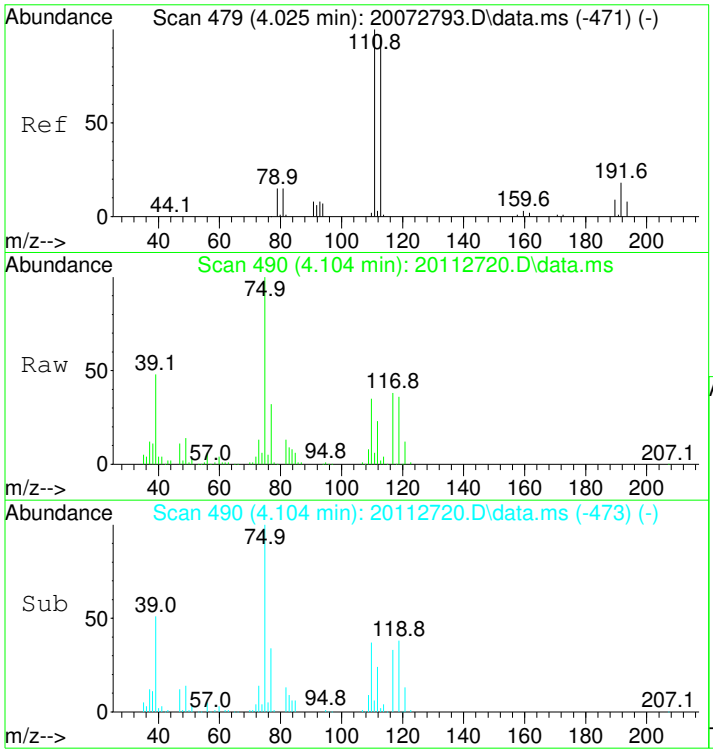


#48
Carbon tetrachloride
Concen: 36.98 ug/L
RT: 4.082 min Scan# 487
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:117 Resp: 301954

Ion	Ratio	Lower	Upper
117	100		
119	96.3	78.7	118.7
121	31.1	11.8	51.8

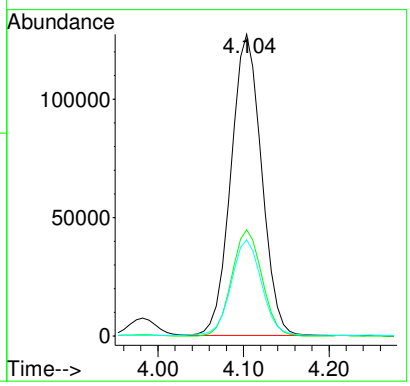


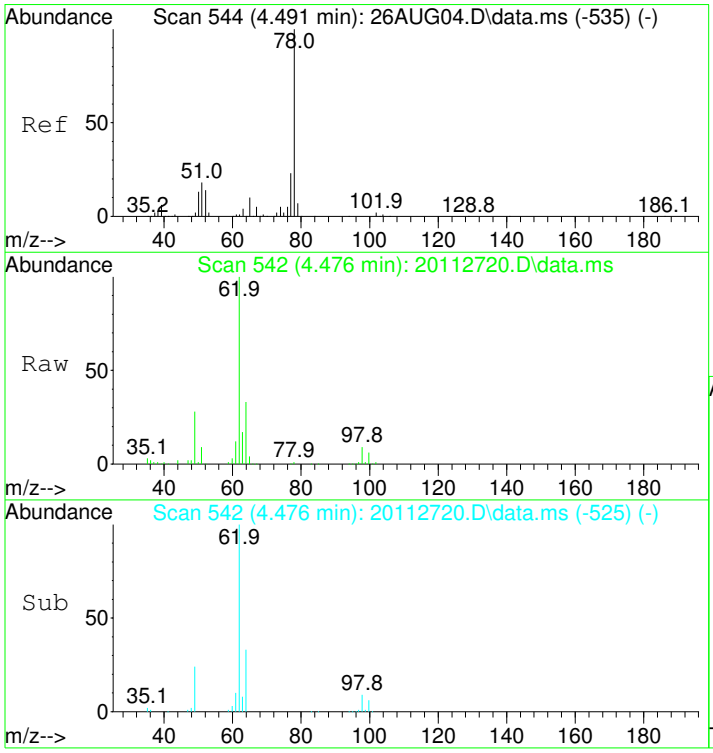


#49
1,1-Dichloropropene
Concen: 39.38 ug/L
RT: 4.104 min Scan# 490
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 75 Resp: 316135

Ion	Ratio	Lower	Upper
75	100		
110	34.9	16.0	56.0
77	31.7	11.0	51.0

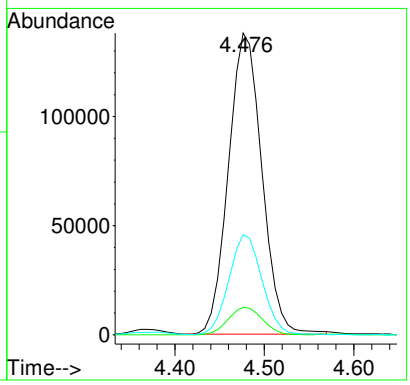


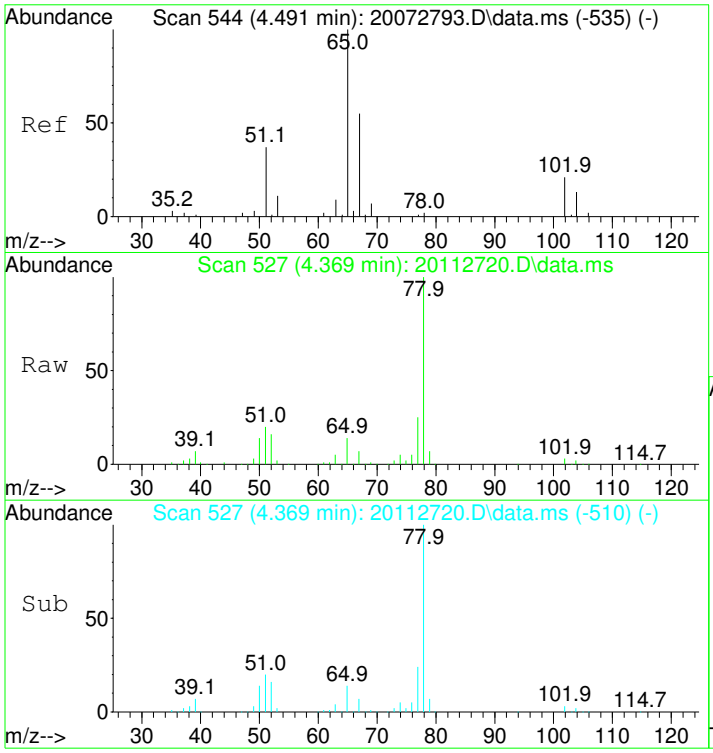


#51
1,2-Dichloroethane
Concen: 40.29 ug/L
RT: 4.476 min Scan# 542
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 62 Resp: 359334

Ion	Ratio	Lower	Upper
62	100		
98	9.4	0.0	29.0
64	32.5	13.9	53.9

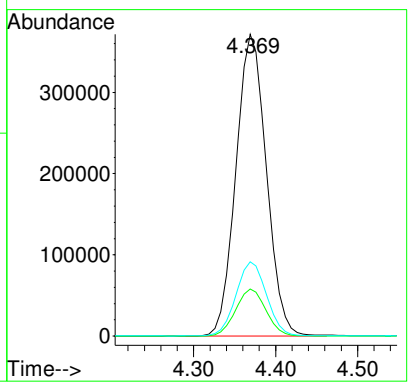


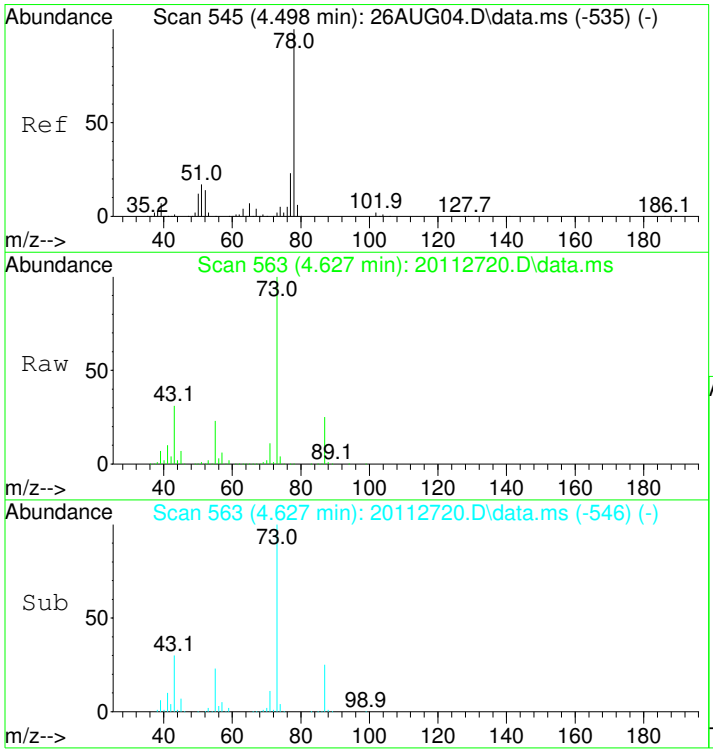


#52
Benzene
Concen: 41.31 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 78 Resp: 960629

Ion	Ratio	Lower	Upper
78	100		
52	15.5	0.0	35.8
77	24.6	3.7	43.7

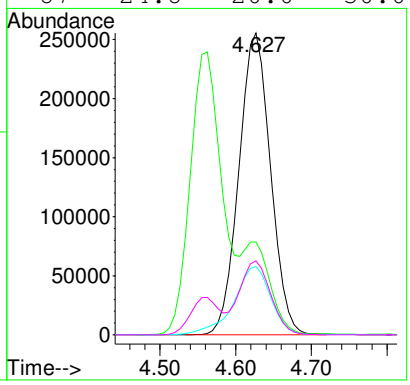


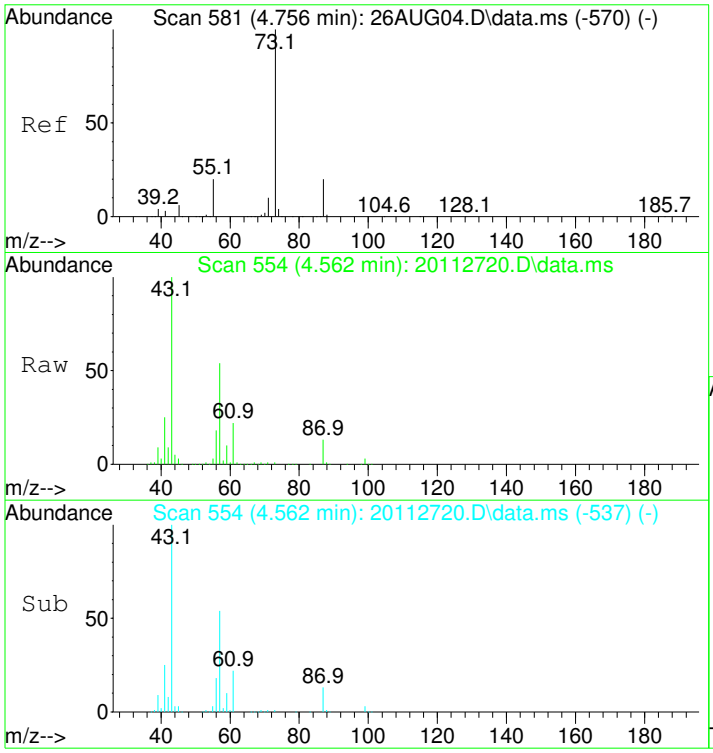


#53
Tertiaryamylmethylether
Concen: 41.90 ug/L
RT: 4.627 min Scan# 563
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 73 Resp: 740743

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	26.2	21.0	31.6
87	24.8	20.0	30.0

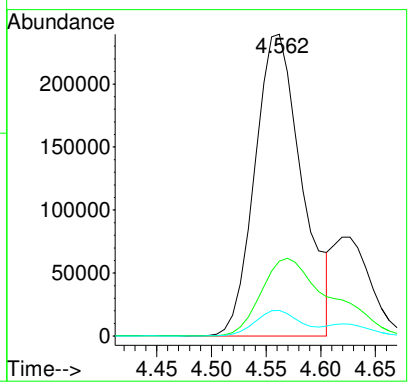


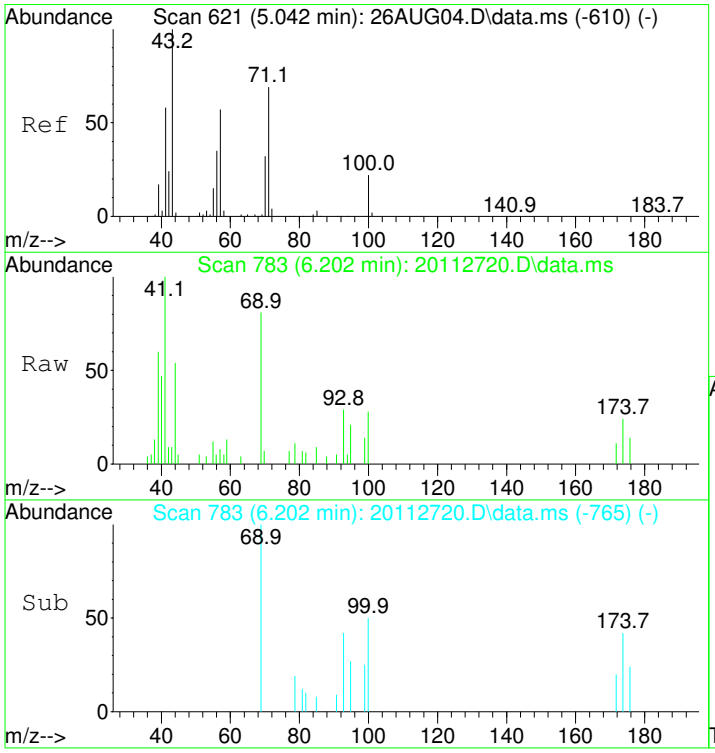


#54
Isobutyl Alcohol
Concen: 39.61 ug/L
RT: 4.562 min Scan# 554
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 720072

Ion	Ratio	Lower	Upper
43	100		
41	37.2	30.7	46.1
42	8.3	6.4	9.6

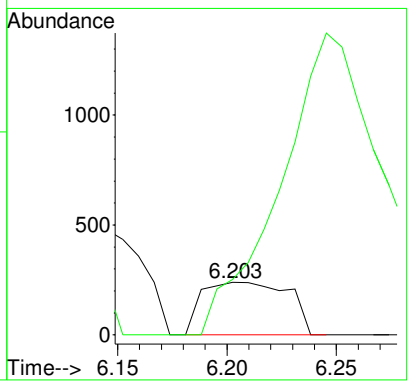


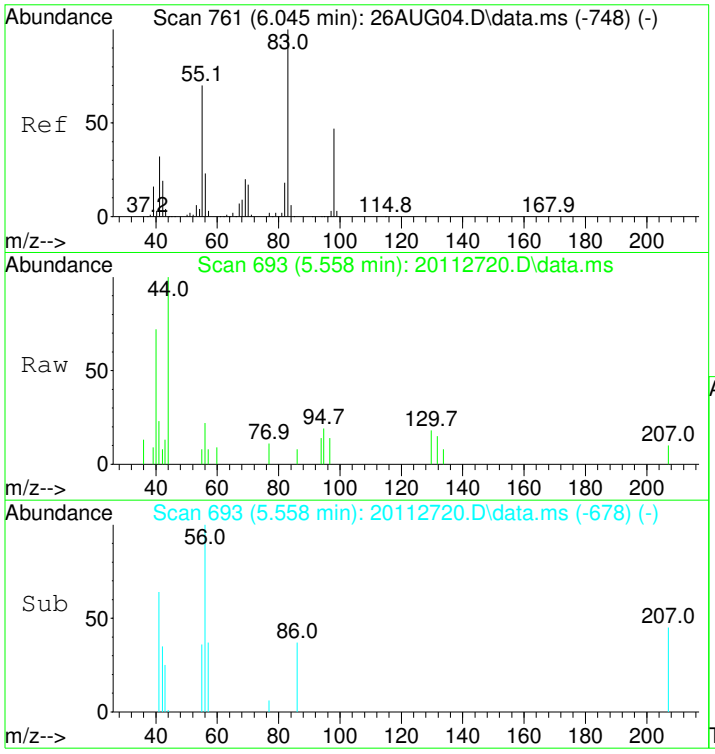


#56
1,4-Dioxane
Concen: Below Cal
RT: 6.202 min Scan# 783
Delta R.T. 0.007 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 88 Resp: 661

Ion	Ratio	Lower	Upper
88	100		
58	655.1	50.7	76.1#

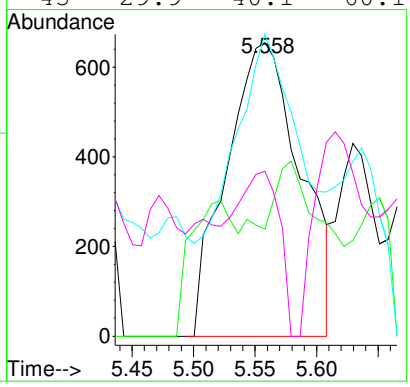


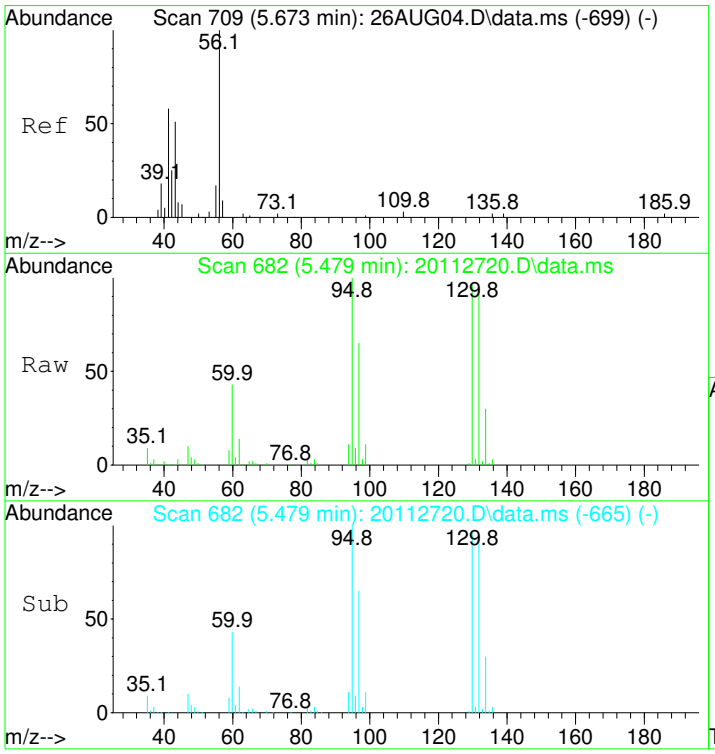


#58
n-Butanol
Concen: 6.44 ug/L
RT: 5.558 min Scan# 693
Delta R.T. -0.014 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 56 Resp: 2746

Ion	Ratio	Lower	Upper
56	100		
55	41.0	15.4	23.2#
41	53.8	50.9	76.3
43	29.9	40.1	60.1#

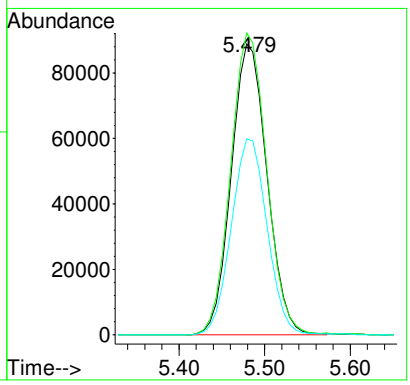


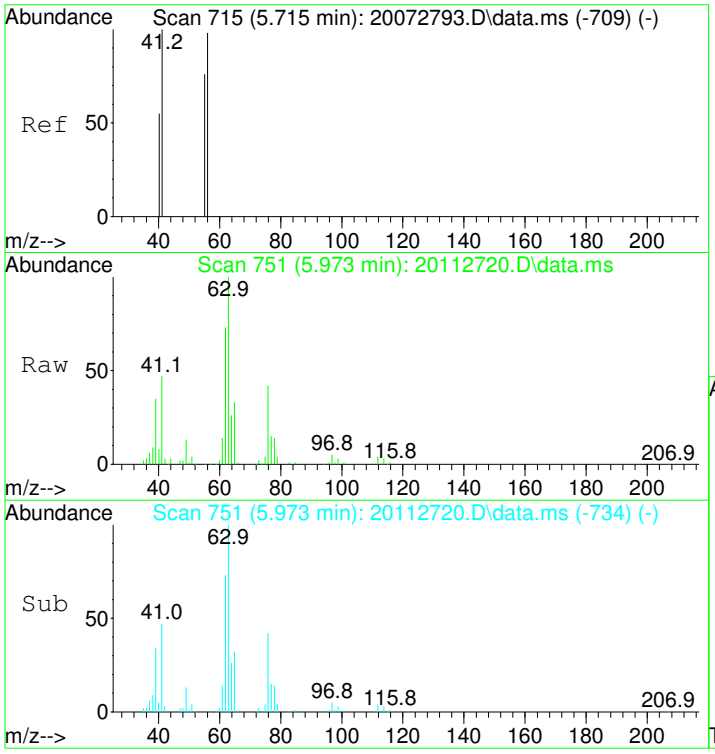


#59
Trichloroethene
Concen: 39.56 ug/L
RT: 5.479 min Scan# 682
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:130 Resp: 258212

Ion	Ratio	Lower	Upper
130	100		
95	104.3	82.7	122.7
97	67.4	47.6	87.6

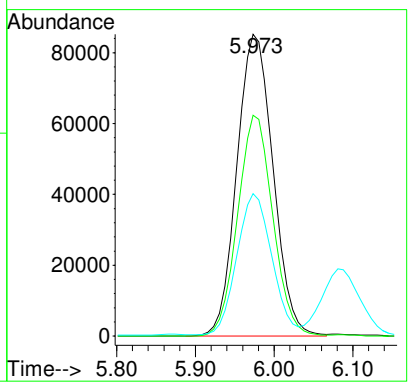


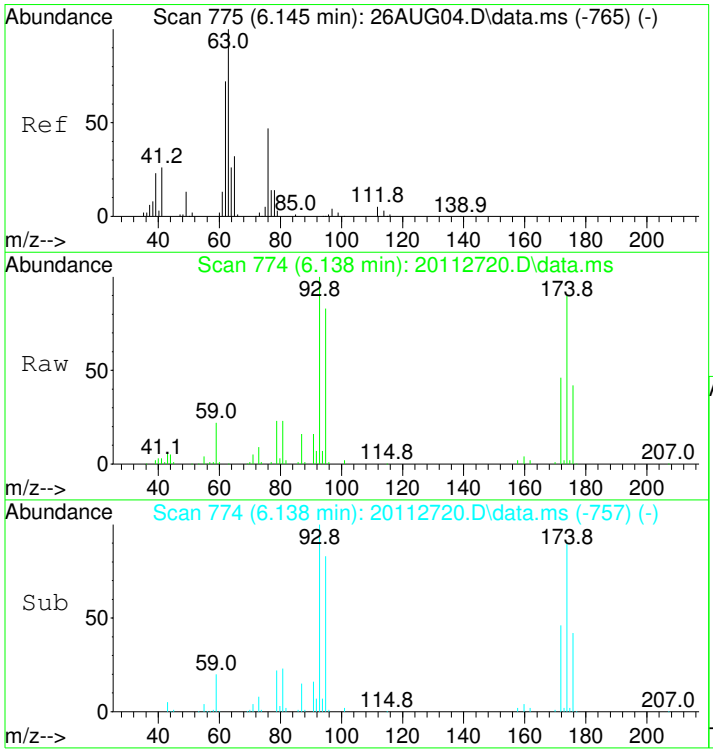


#60
1,2-Dichloropropane
Concen: 41.70 ug/L
RT: 5.973 min Scan# 751
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 63 Resp: 272779

Ion	Ratio	Lower	Upper
63	100		
62	71.0	51.5	91.5
41	45.0	26.1	66.1

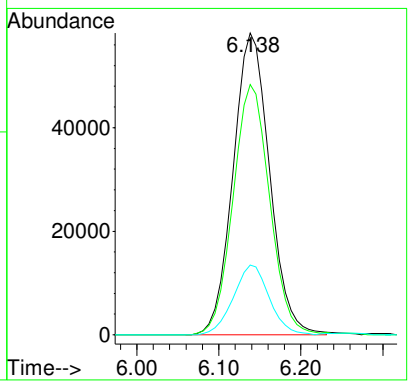


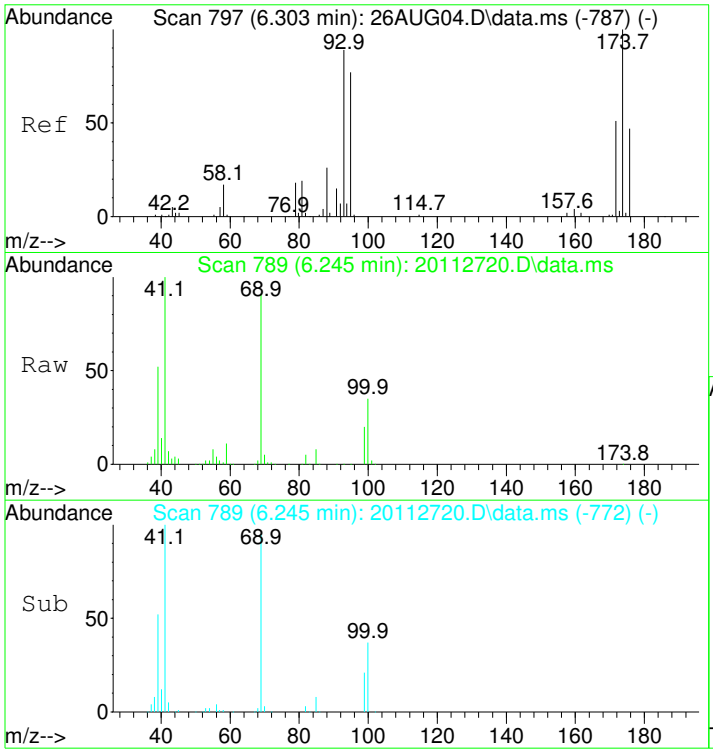


#61
Dibromomethane
Concen: 38.97 ug/L
RT: 6.138 min Scan# 774
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 93 Resp: 180615

Ion	Ratio	Lower	Upper
93	100		
95	83.0	63.0	103.0
81	22.7	3.4	43.4

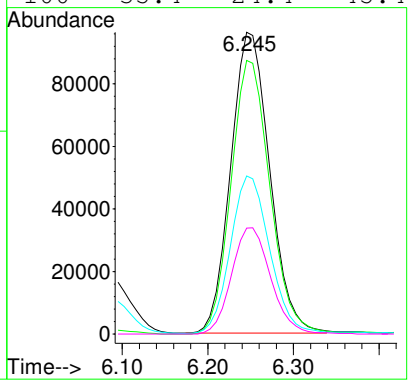


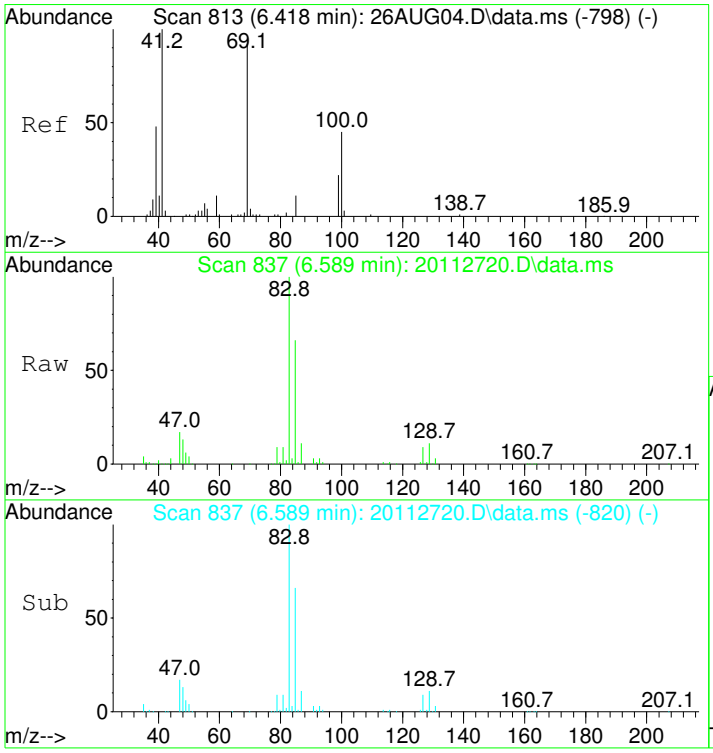


#62
Methyl methacrylate
Concen: 40.50 ug/L
RT: 6.245 min Scan# 789
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 41 Resp: 304965

Ion	Ratio	Lower	Upper
41	100		
69	90.8	72.2	108.4
39	52.5	41.1	61.7
100	35.4	24.4	45.4

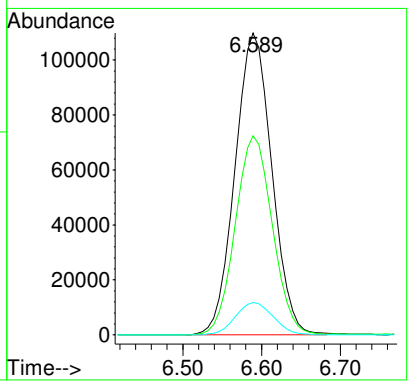


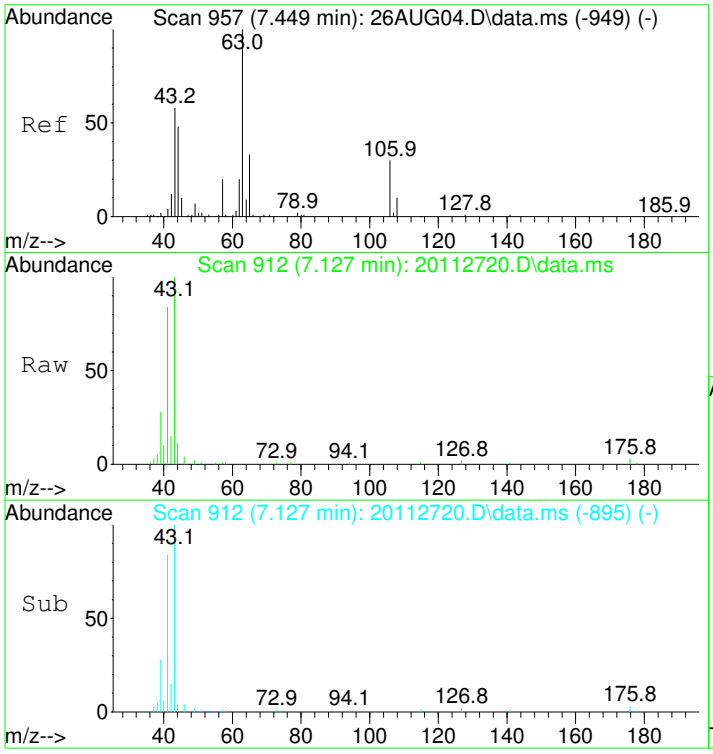


#63
Bromodichloromethane
Concen: 40.15 ug/L
RT: 6.589 min Scan# 837
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 83 Resp: 356930

Ion	Ratio	Lower	Upper
83	100		
85	66.3	44.3	84.3
129	11.0	0.0	31.0

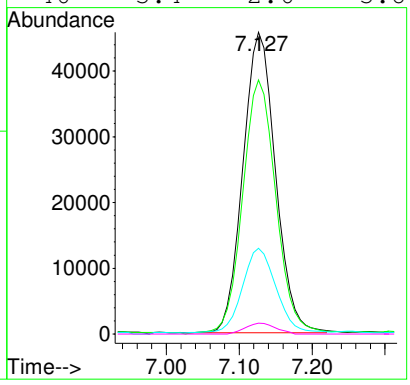


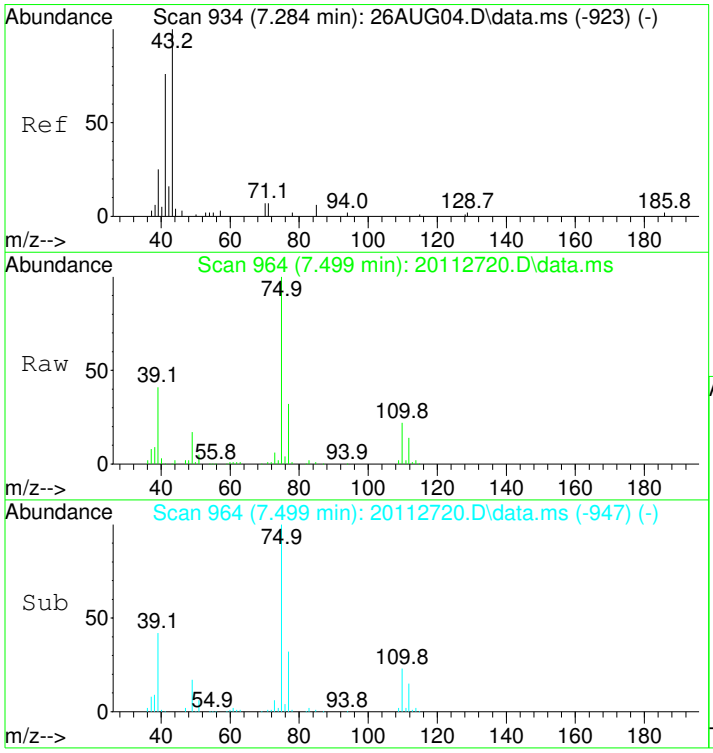


#65
2-Nitropropane
Concen: 39.86 ug/L
RT: 7.127 min Scan# 912
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 141891

Ion	Ratio	Lower	Upper
43	100		
41	86.9	67.9	101.9
39	28.9	21.8	32.8
46	3.4	2.6	3.8

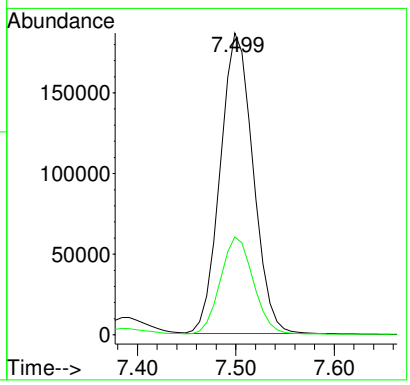


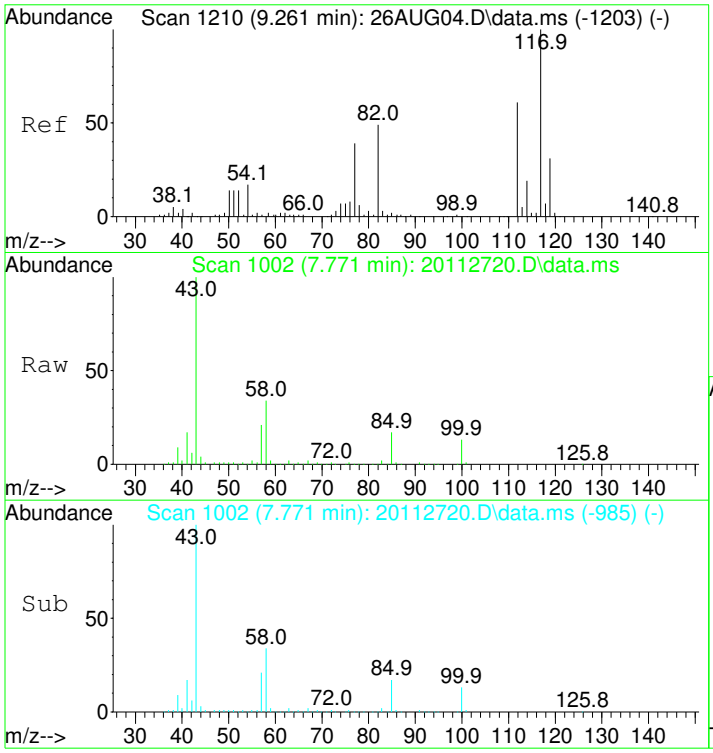


#66
cis-1,3-Dichloropropene
Concen: 39.60 ug/L
RT: 7.499 min Scan# 964
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 75 Resp: 432233

Ion	Ratio	Lower	Upper
75	100		
77	32.3	11.9	51.9

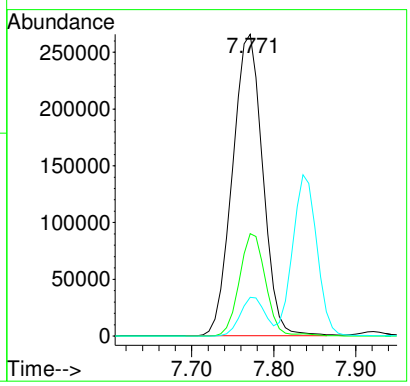


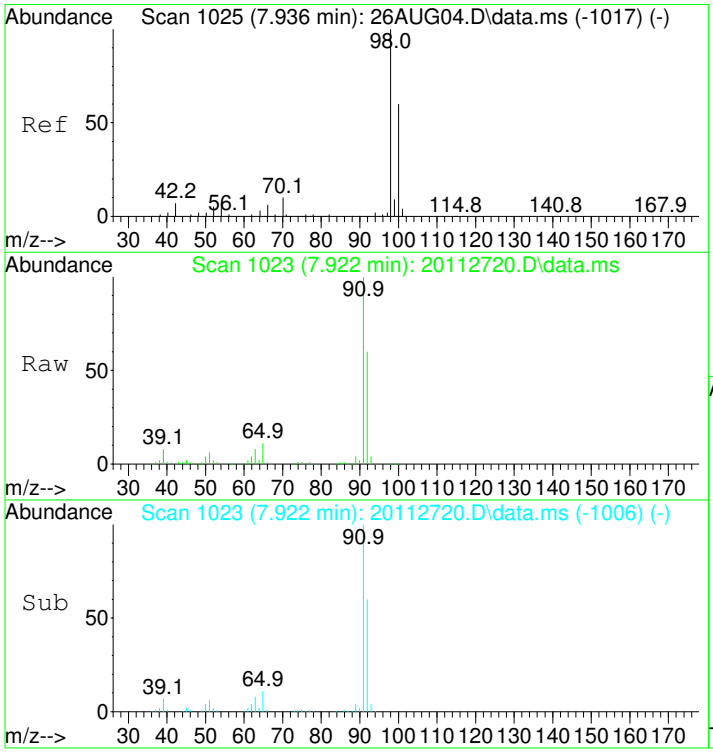


#68
4-Methyl-2-pentanone
Concen: 63.77 ug/L
RT: 7.771 min Scan# 1002
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 682052

Ion	Ratio	Lower	Upper
43	100		
58	29.5	25.4	65.4
100	10.7	0.0	36.2

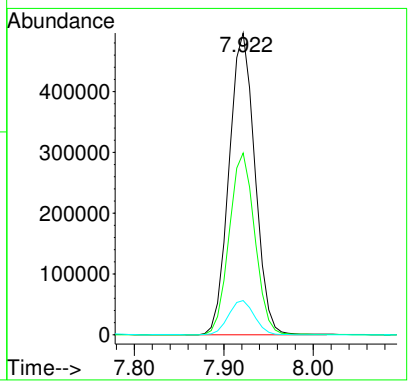


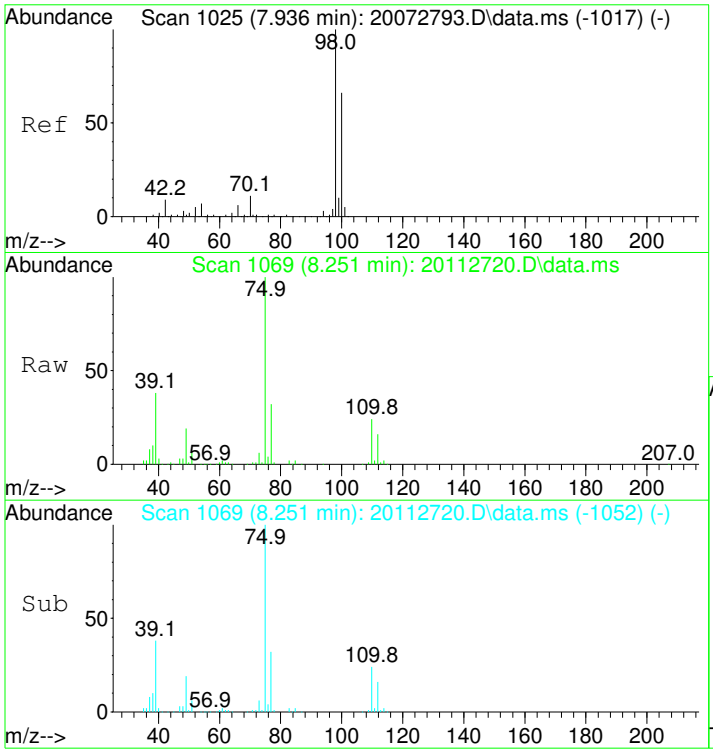


#70
Toluene
Concen: 42.37 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 997915

Ion	Ratio	Lower	Upper
91	100		
92	59.8	40.7	80.7
65	11.5	0.0	31.5

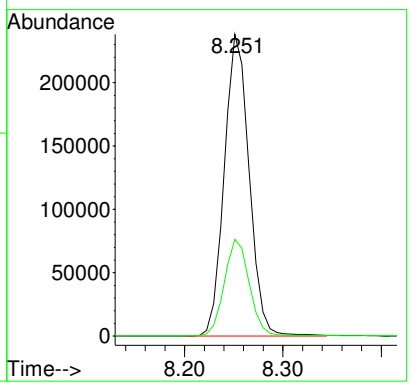


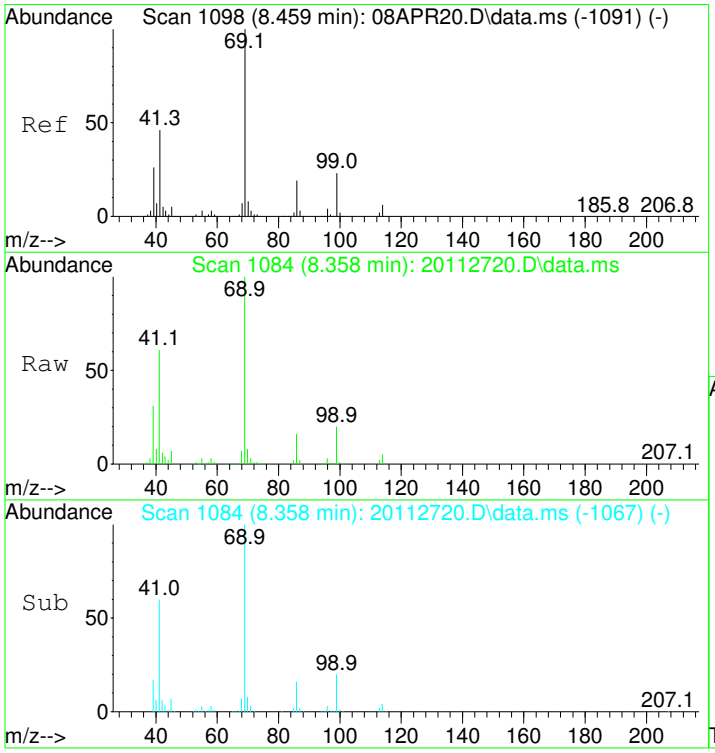


#71
trans-1,3-Dichloropropene
Concen: 41.33 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 75 Resp: 418587

Ion	Ratio	Lower	Upper
75	100		
77	31.8	15.0	55.0

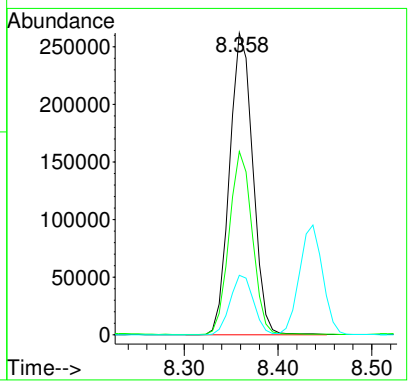


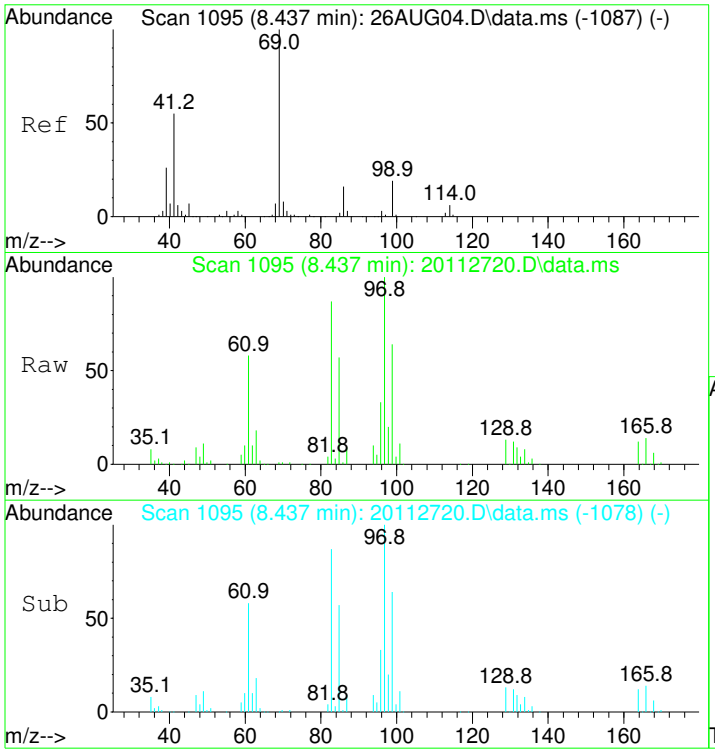


#73
Ethyl methacrylate
Concen: 41.15 ug/L
RT: 8.358 min Scan# 1084
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 69 Resp: 453952

Ion	Ratio	Lower	Upper
69	100		
41	60.0	39.9	79.9
99	19.8	0.0	39.7

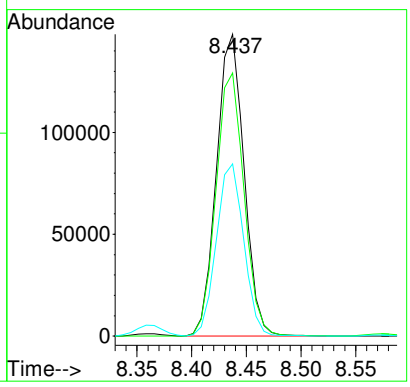


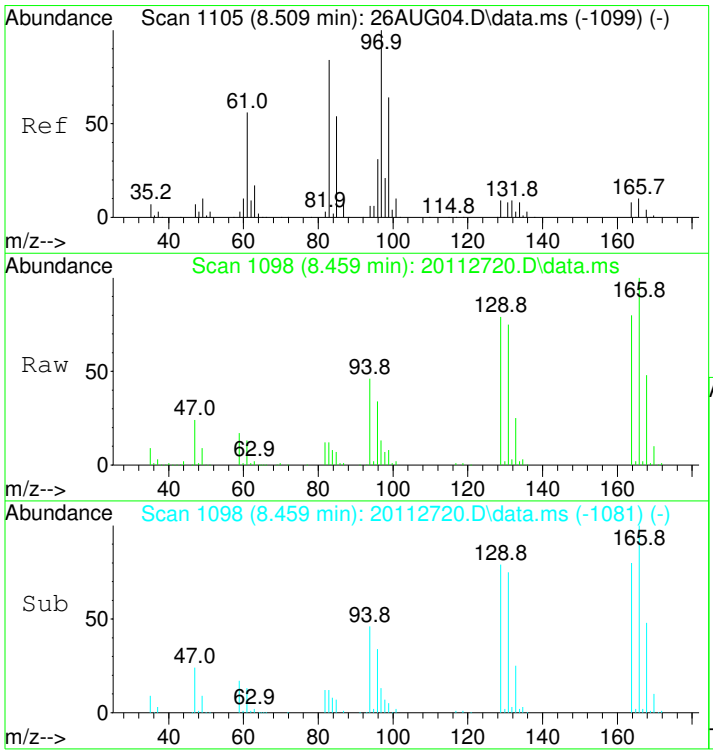


#74
1,1,2-Trichloroethane
Concen: 40.16 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 97 Resp: 259780

Ion	Ratio	Lower	Upper
97	100		
83	88.7	66.1	106.1
85	56.7	36.8	76.8

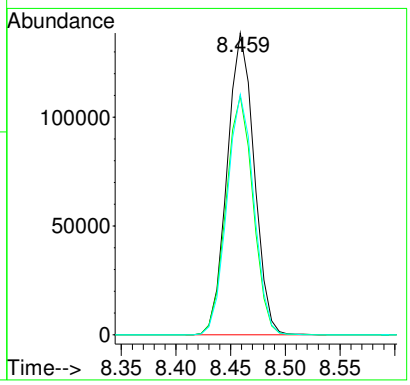


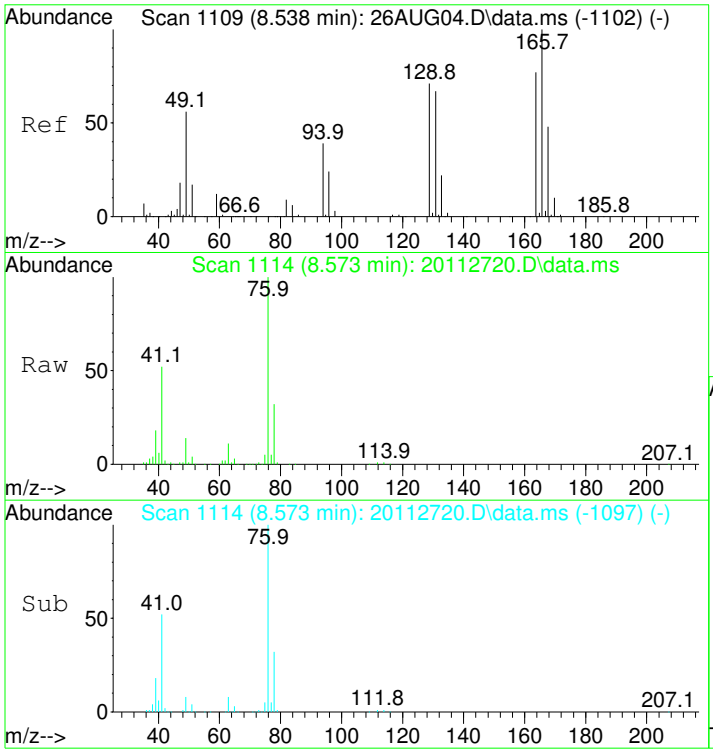


#75
Tetrachloroethene
Concen: 40.01 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:166 Resp: 238183

Ion	Ratio	Lower	Upper
166	100		
129	79.1	59.1	99.1
164	79.1	59.1	99.1

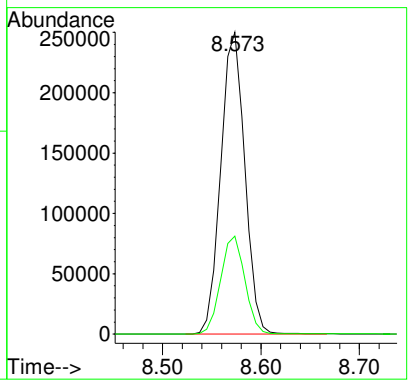


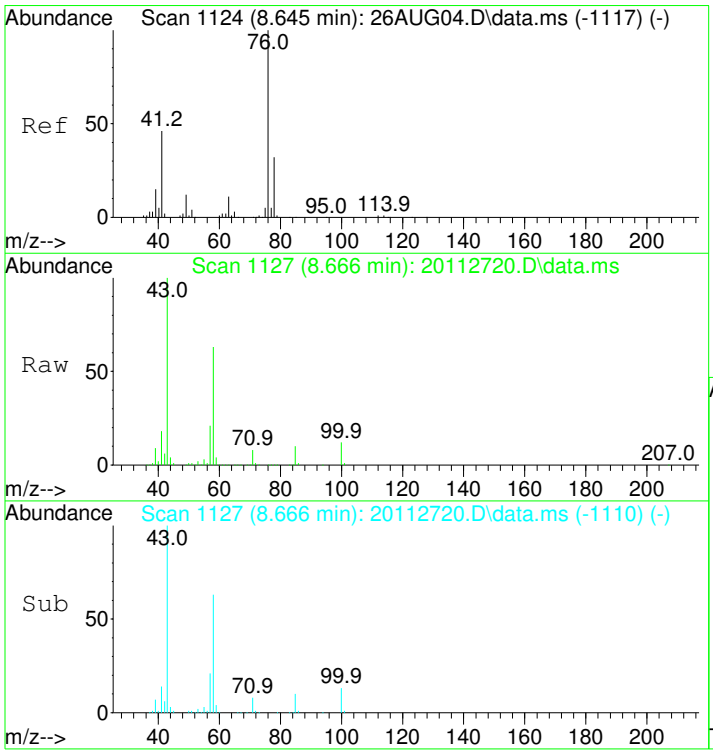


#76
1,3-Dichloropropane
Concen: 39.64 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 76 Resp: 425212

Ion	Ratio	Lower	Upper
76	100		
78	32.7	13.2	53.2

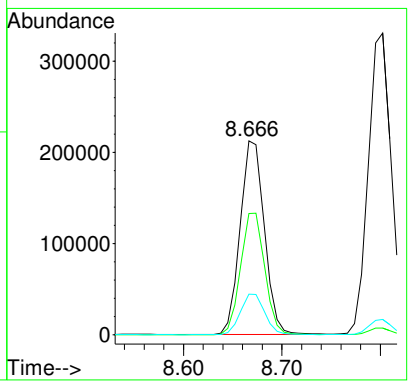


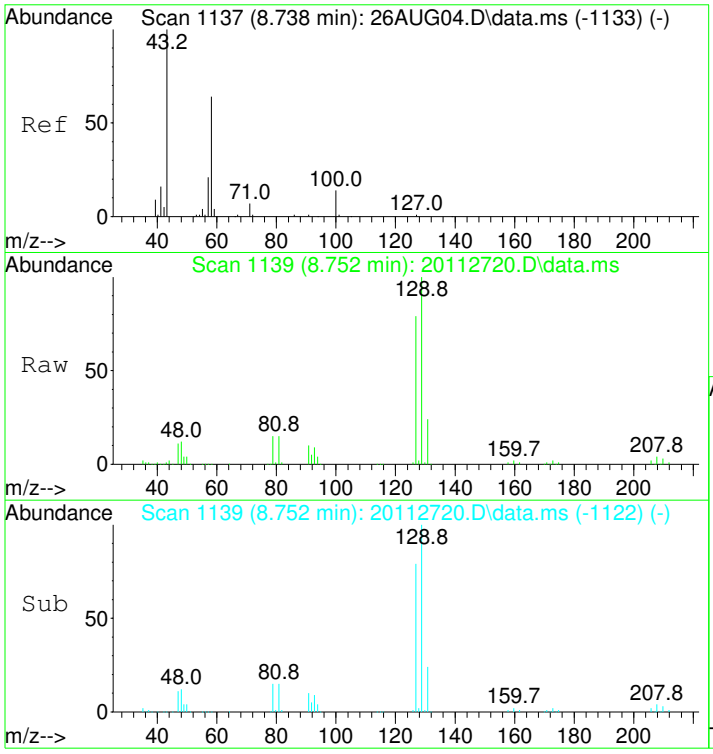


#77
2-Hexanone
Concen: 43.12 ug/L
RT: 8.666 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 365311

Ion	Ratio	Lower	Upper
43	100		
58	62.8	42.3	82.3
57	21.0	1.0	41.0

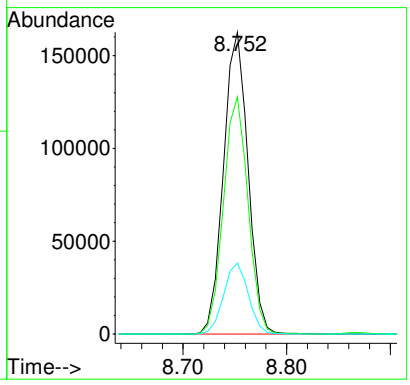


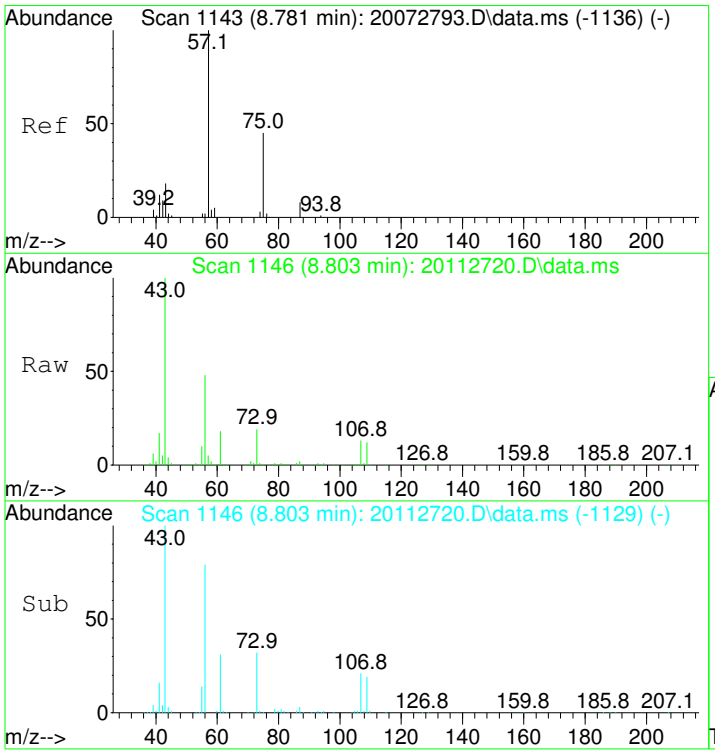


#78
Chlorodibromomethane
Concen: 37.92 ug/L
RT: 8.752 min Scan# 1139
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:129 Resp: 268919

Ion	Ratio	Lower	Upper
129	100		
127	78.6	57.8	97.8
131	23.7	4.2	44.2

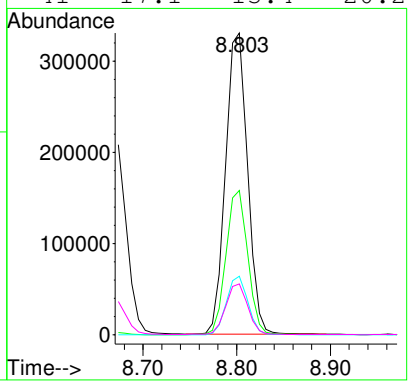


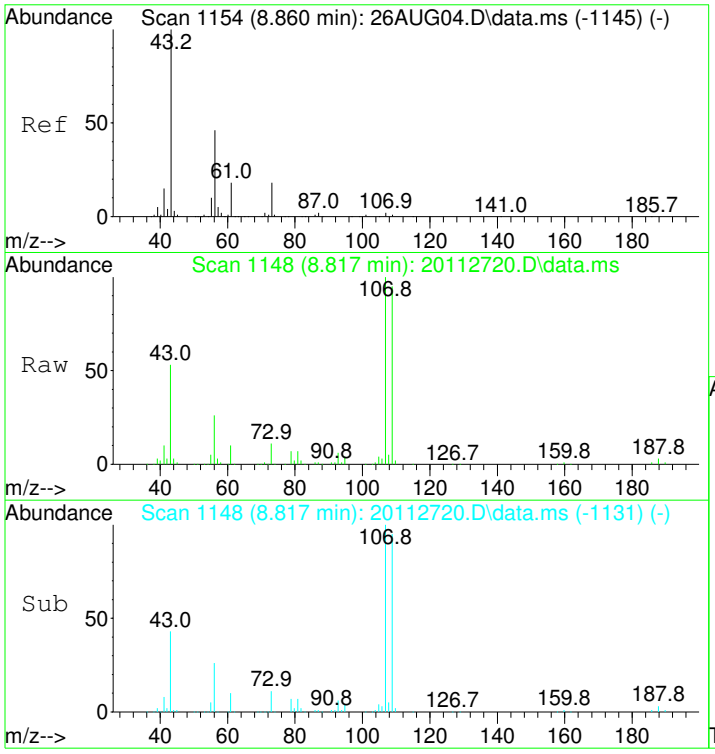


#79
Butyl acetate
Concen: 40.29 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 538288

Ion	Ratio	Lower	Upper
43	100		
56	47.9	38.0	57.0
73	19.1	15.0	22.4
41	17.1	13.4	20.2

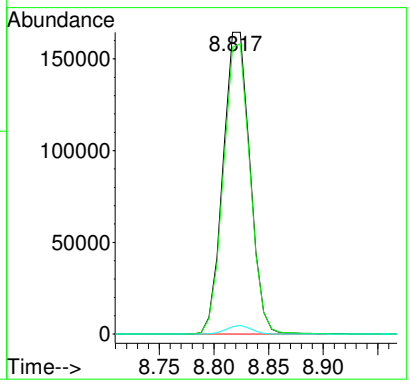


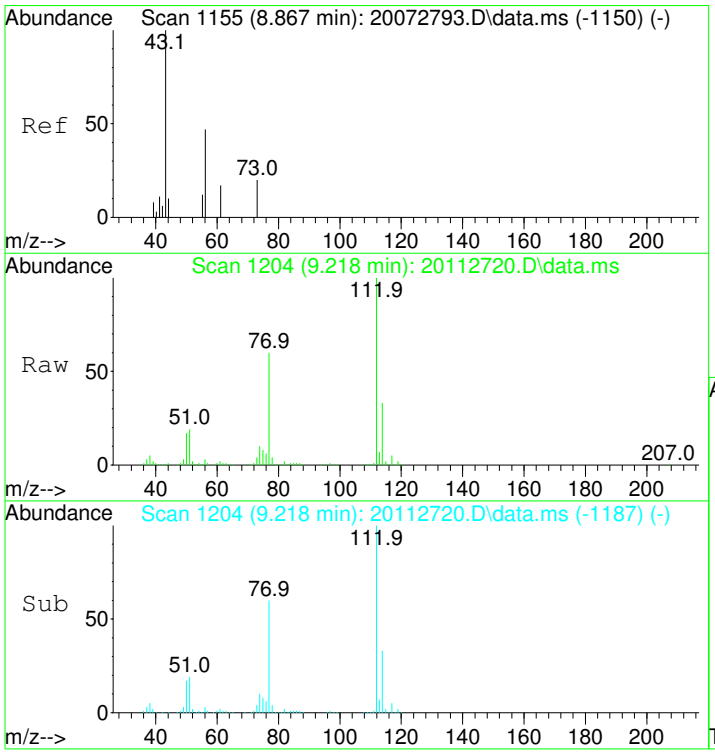


#80
1,2-Dibromoethane
Concen: 44.88 ug/L
RT: 8.817 min Scan# 1148
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:107 Resp: 281584

Ion	Ratio	Lower	Upper
107	100		
109	95.4	76.6	116.6
188	2.7	0.0	22.9

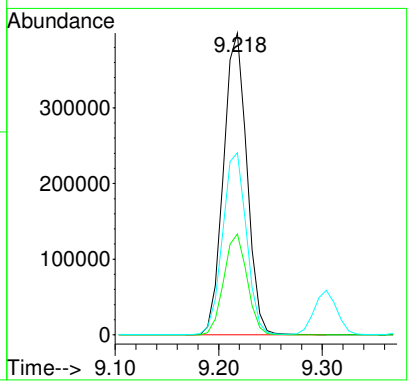


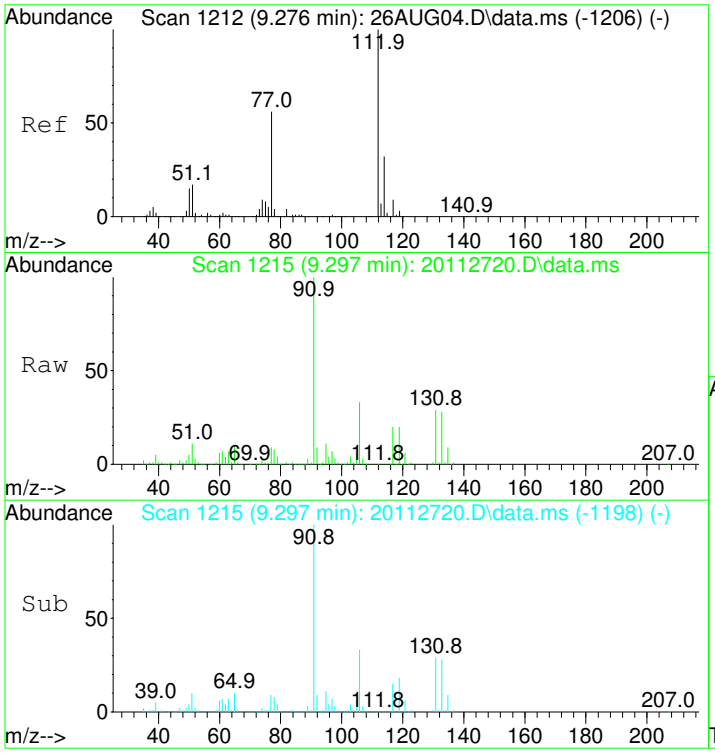


#81
Chlorobenzene
Concen: 41.57 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:112 Resp: 629744

Ion	Ratio	Lower	Upper
112	100		
114	33.2	13.6	53.6
77	61.4	41.7	81.7

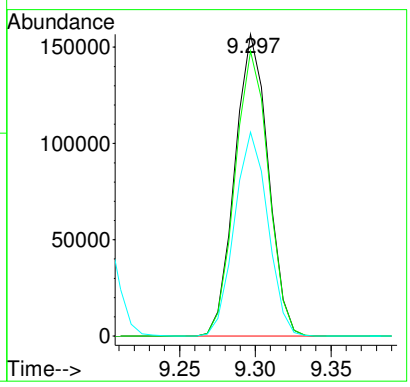


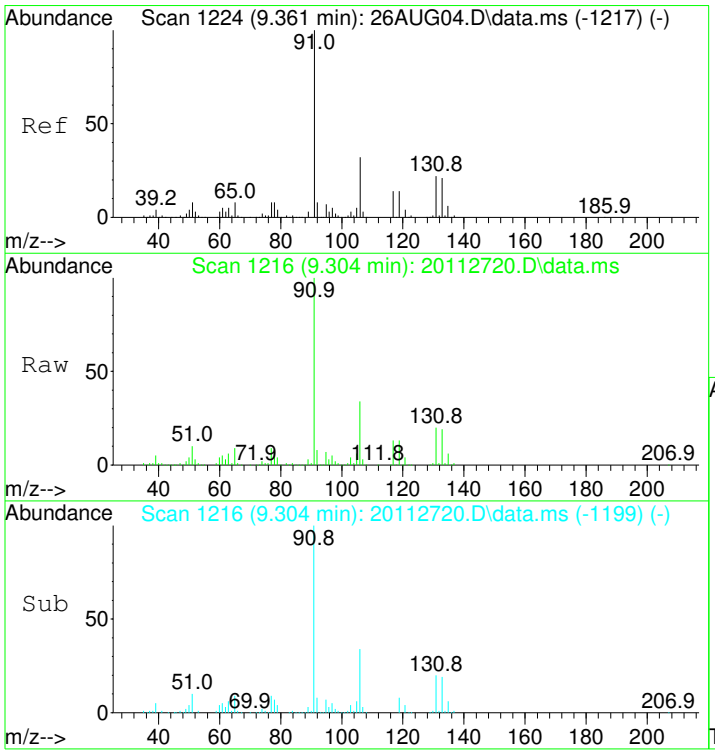


#82
1,1,1,2-Tetrachloroethane
Concen: 40.78 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:131 Resp: 239353

Ion	Ratio	Lower	Upper
131	100		
133	94.7	74.4	114.4
119	67.6	45.7	85.7

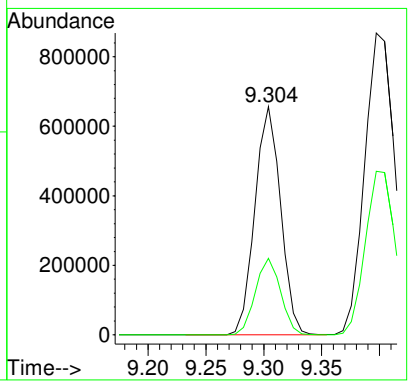


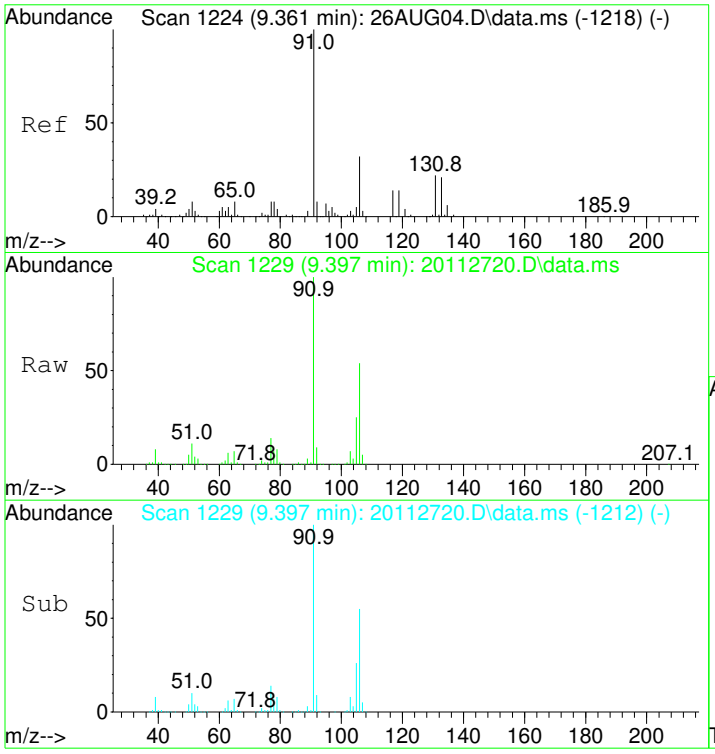


#83
Ethylbenzene
Concen: 39.48 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 1012601

Ion	Ratio	Lower	Upper
91	100		
106	32.9	13.6	53.6

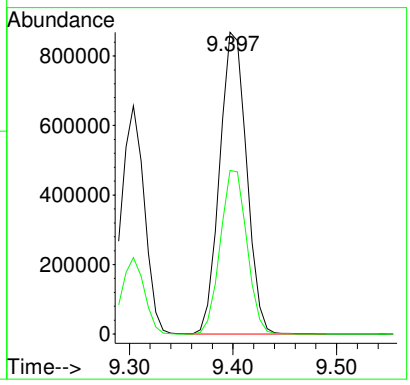


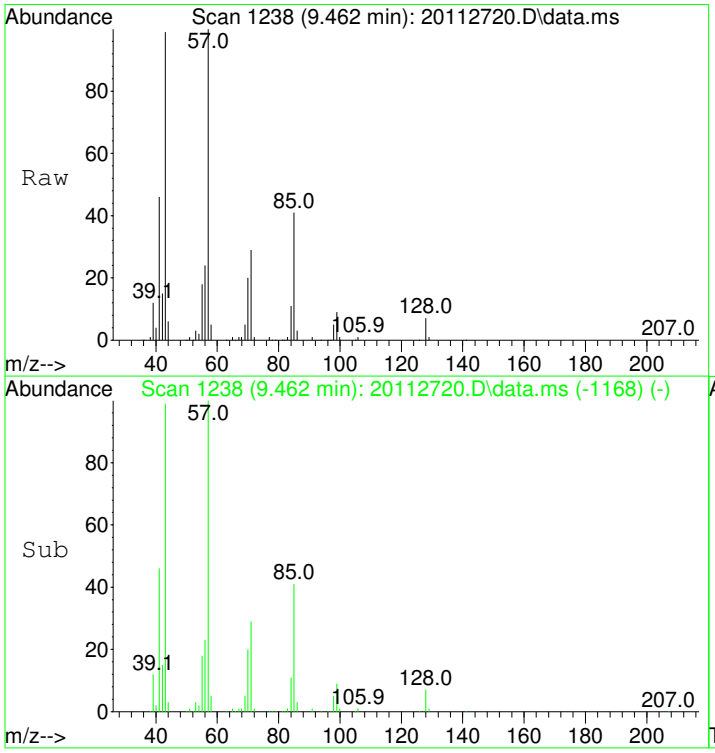


#84
m/p-Xylene
Concen: 77.32 ug/L
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 1571355

Ion	Ratio	Lower	Upper
91	100		
106	53.7	34.2	74.2

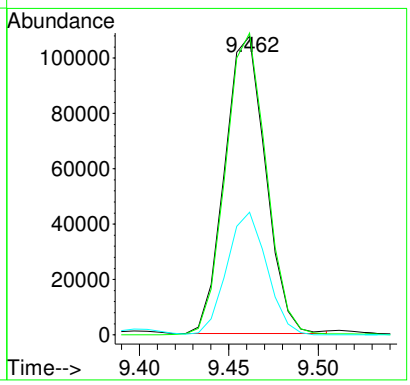


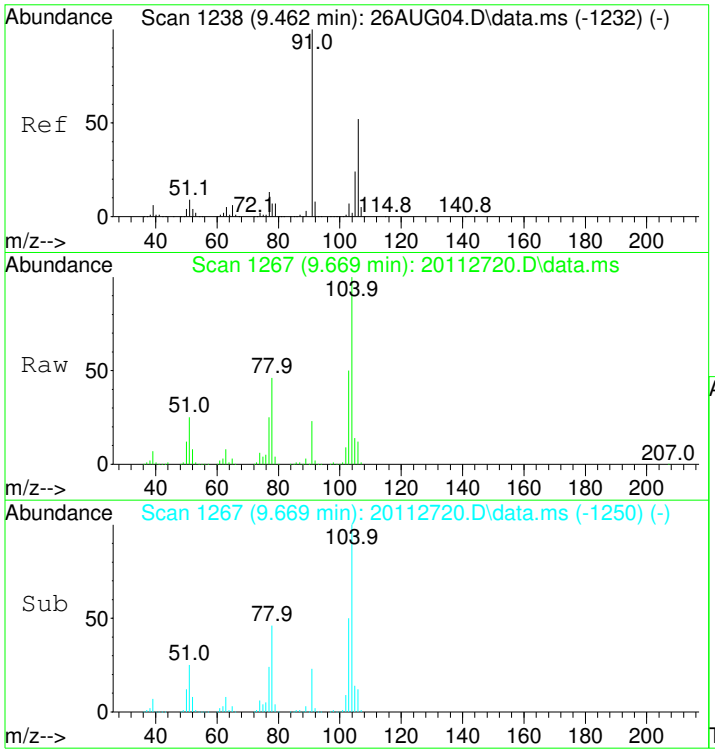


#85
Nonane
Concen: 53.12 ug/L
RT: 9.462 min Scan# 1238
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 170623

Ion	Ratio	Lower	Upper
43	100		
57	101.4	67.9	127.9
85	40.3	10.4	70.4

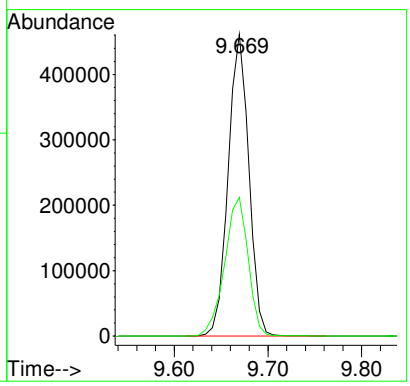


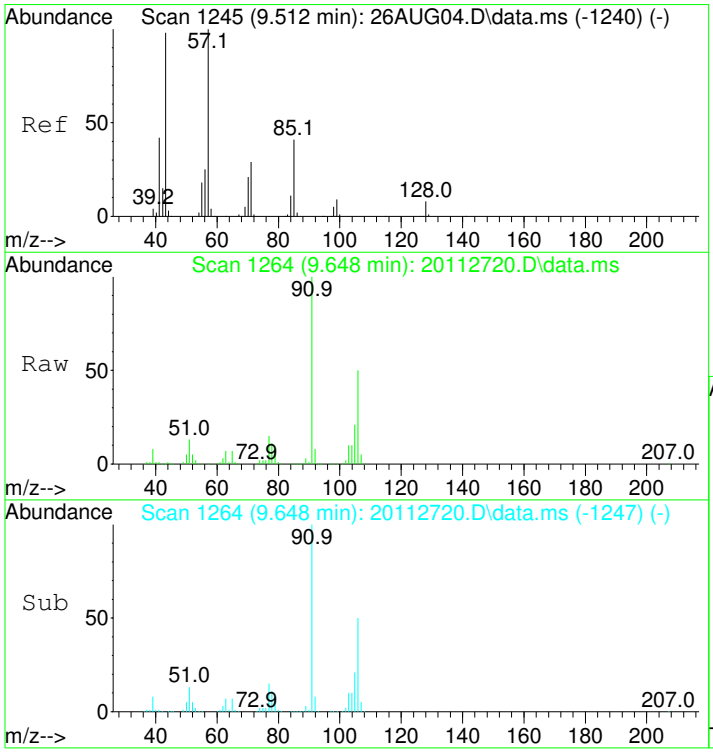


#86
Styrene
Concen: 45.06 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:104 Resp: 706298

Ion	Ratio	Lower	Upper
104	100		
78	52.4	32.3	72.3

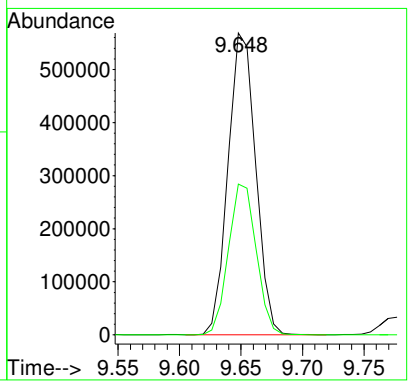


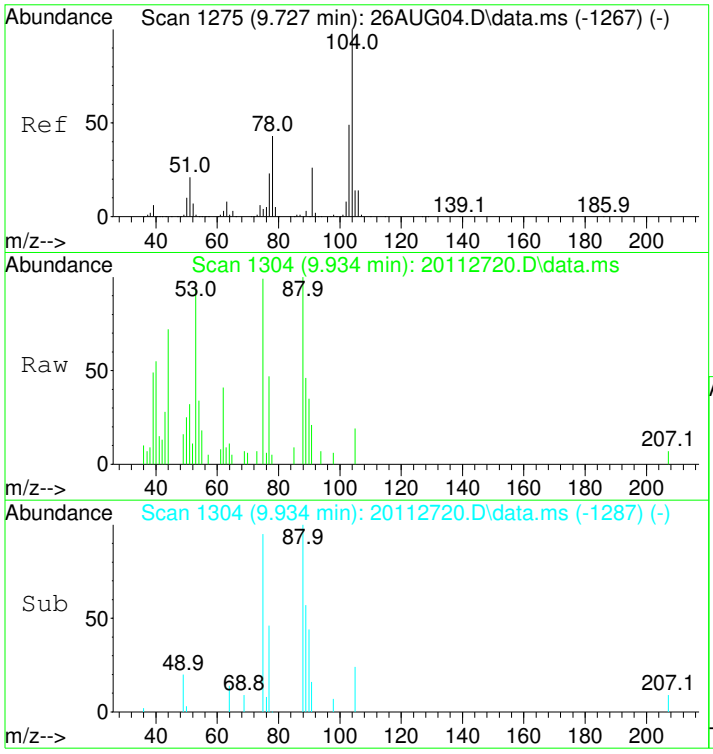


#87
o-Xylene
Concen: 37.93 ug/L
RT: 9.648 min Scan# 1264
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 887706

Ion	Ratio	Lower	Upper
91	100		
106	50.3	30.3	70.3

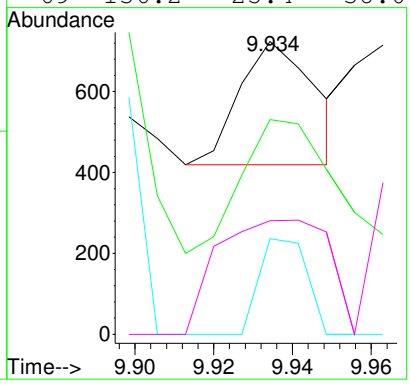


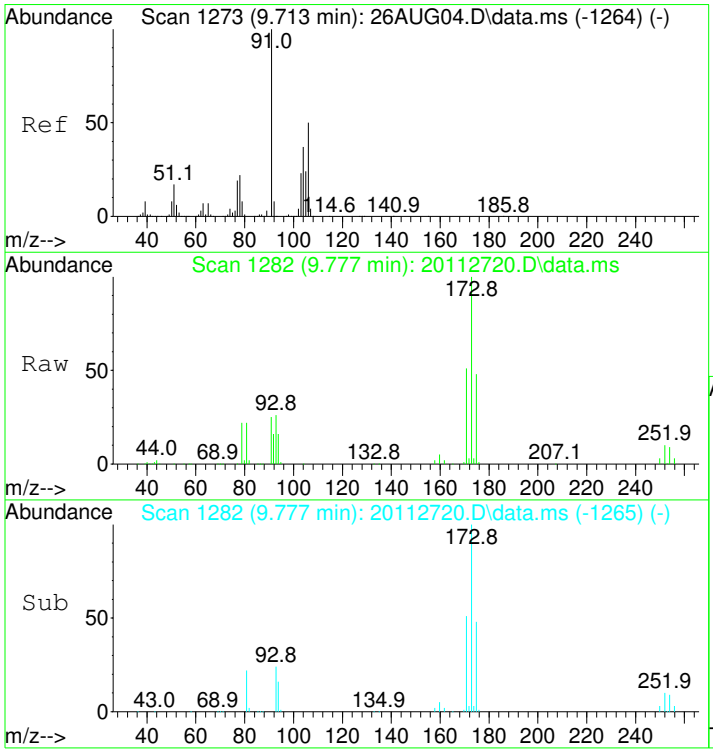


#88
Cyclohexanone
Concen: Below Cal
RT: 9.934 min Scan# 1304
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 55 Resp: 406

Ion	Ratio	Lower	Upper
55	100		
42	327.1	48.0	72.0#
98	48.8	38.2	57.2
69	136.2	25.4	38.0#

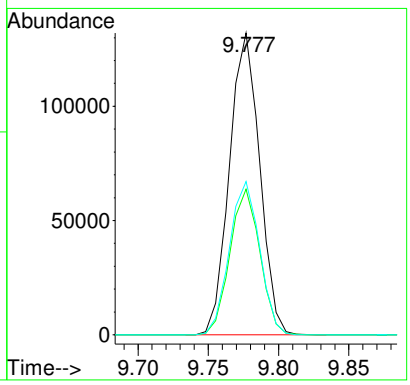


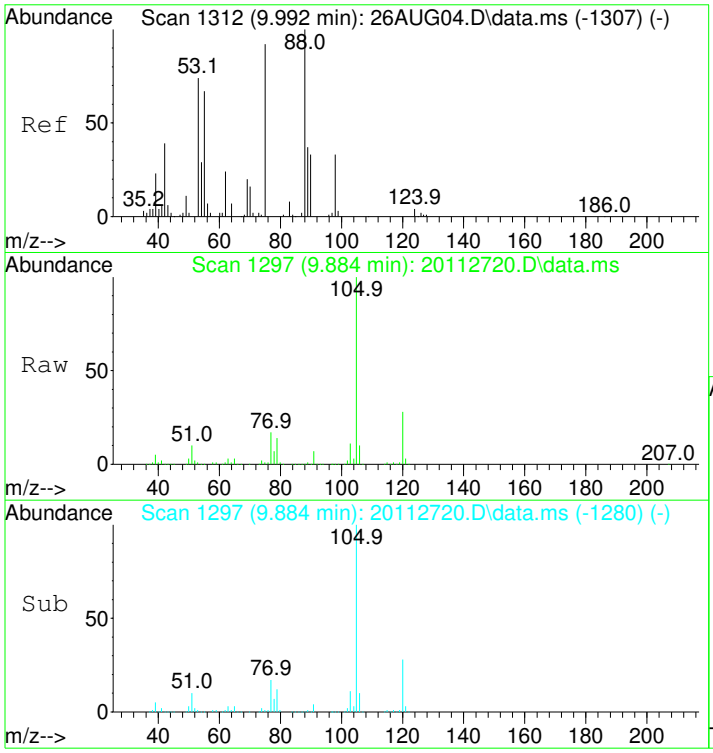


#89
Bromoform
Concen: 36.25 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:173 Resp: 197456

Ion	Ratio	Lower	Upper
173	100		
175	47.9	28.4	68.4
171	50.9	31.7	71.7

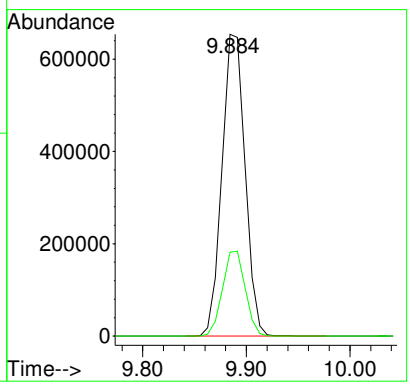


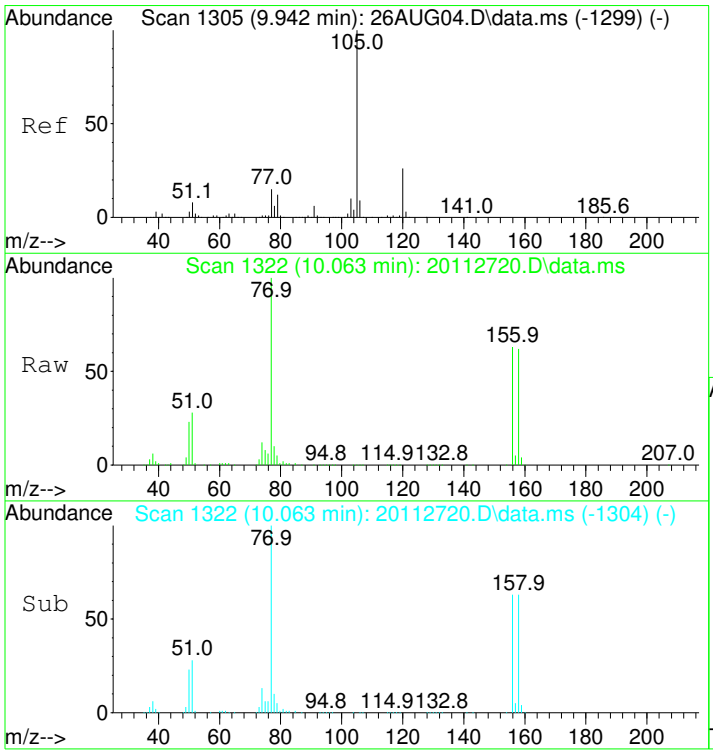


#90
Isopropylbenzene
Concen: 39.03 ug/L
RT: 9.884 min Scan# 1297
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:105 Resp: 1020180

Ion	Ratio	Lower	Upper
105	100		
120	27.7	8.0	48.0

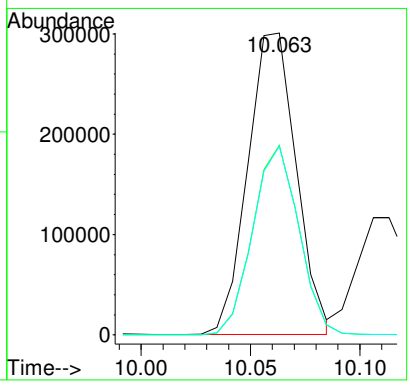


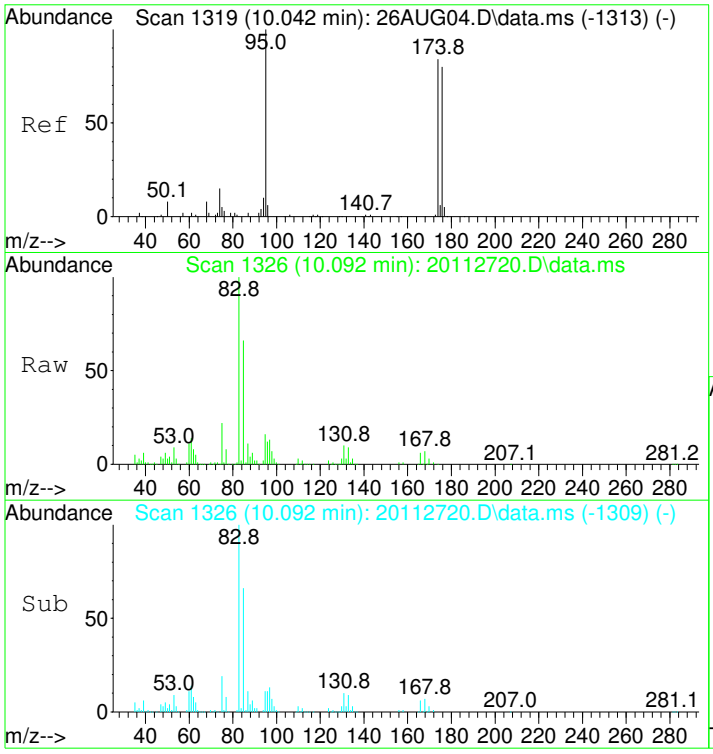


#92
Bromobenzene
Concen: 41.54 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 77 Resp: 466088

Ion	Ratio	Lower	Upper
77	100		
156	59.8	40.2	80.2
158	59.4	38.1	78.1

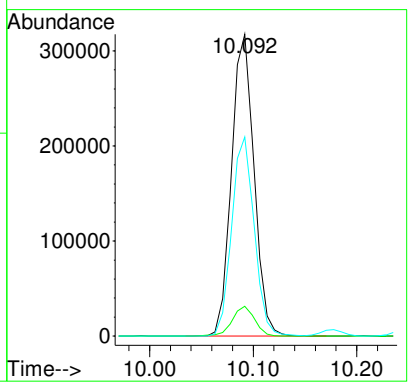


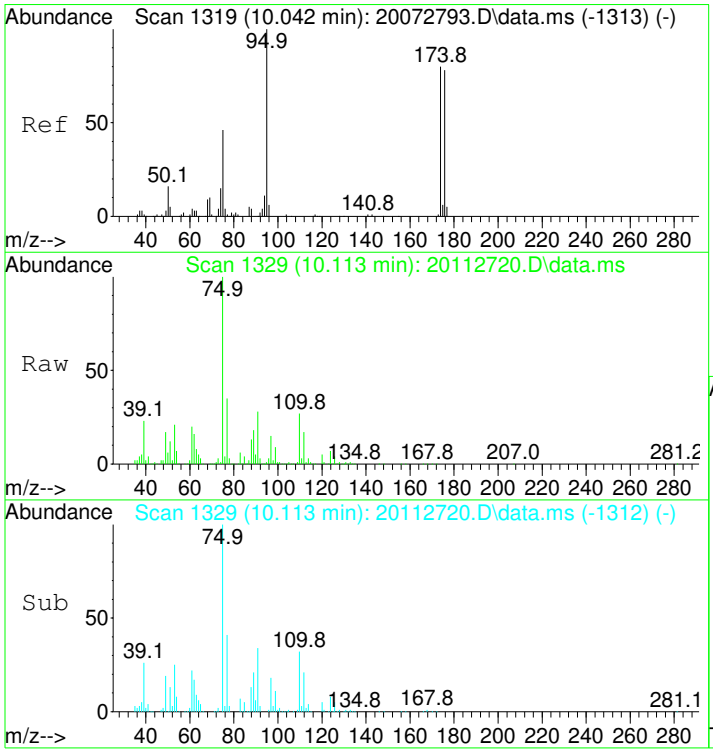


#93
1,1,2,2-Tetrachloroethane
Concen: 45.17 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 83 Resp: 480377

Ion	Ratio	Lower	Upper
83	100		
131	9.9	0.0	35.0
85	65.9	46.4	86.4

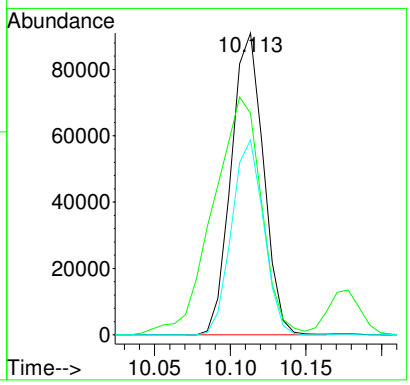


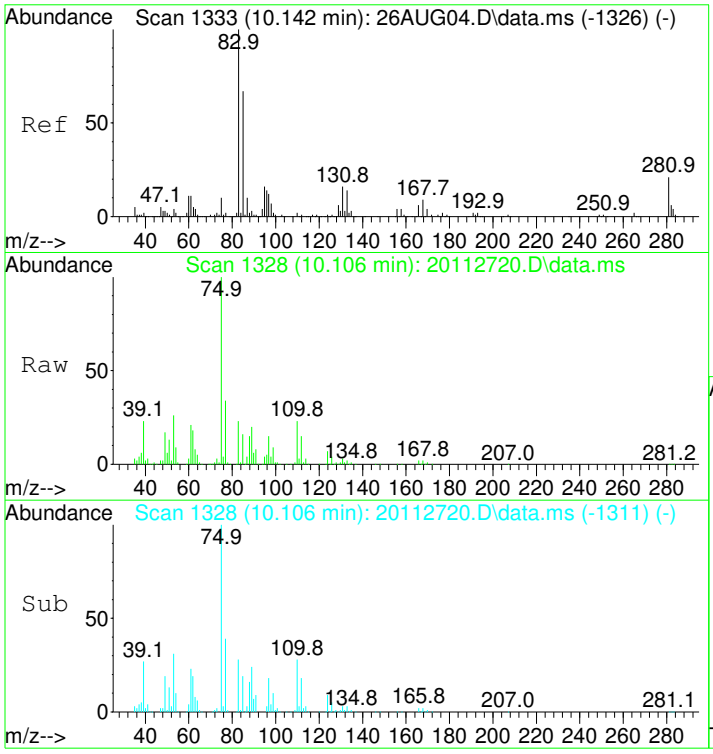


#94
1,2,3-Trichloropropane
Concen: 40.10 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:110 Resp: 134816

Ion	Ratio	Lower	Upper
110	100		
61	117.7	97.0	137.0
112	64.0	44.1	84.1

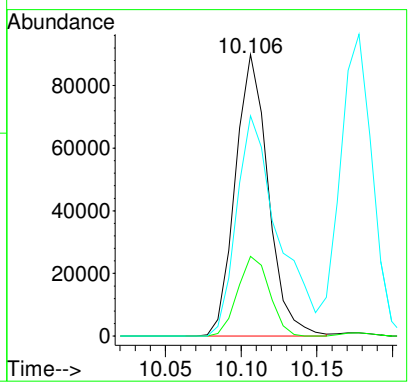


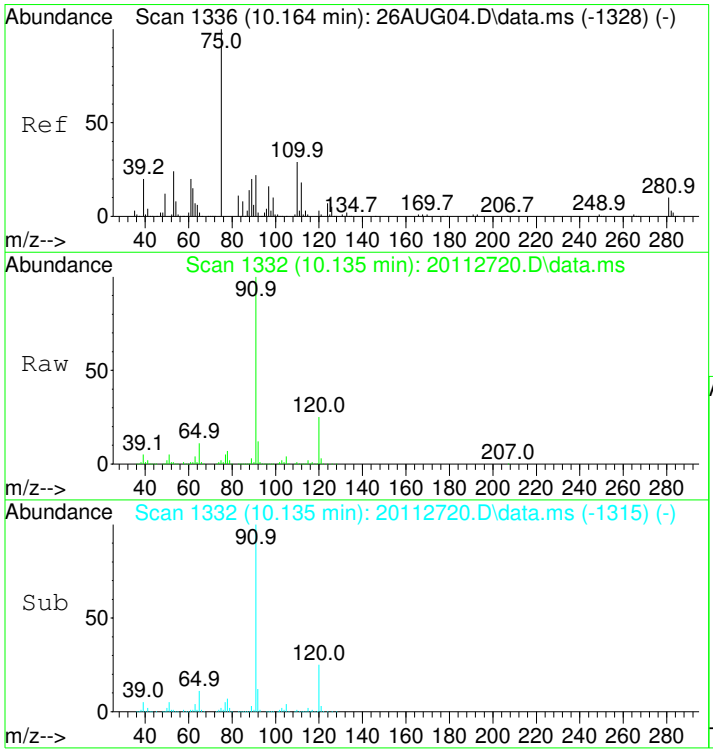


#95
trans-1,4-Dichloro-2-butene
Concen: 38.59 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 53 Resp: 135808

Ion	Ratio	Lower	Upper
53	100		
124	27.3	7.2	47.2
89	98.9	79.3	119.3

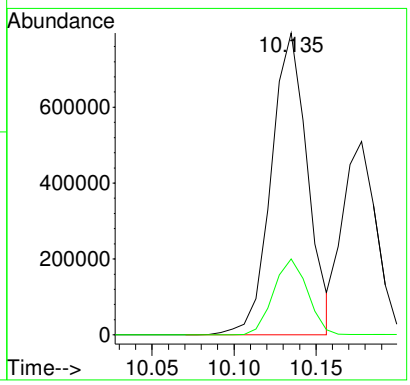


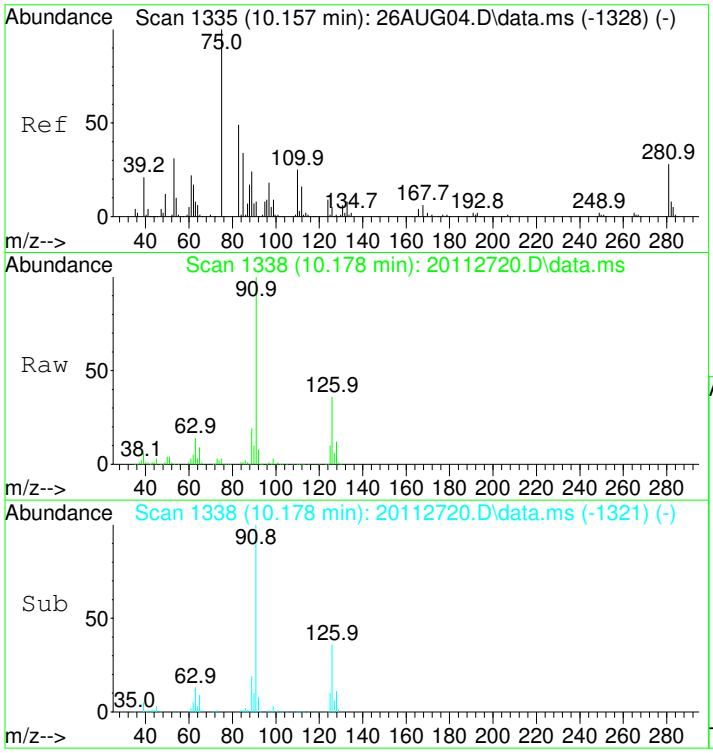


#96
n-Propylbenzene
Concen: 39.05 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 1225366

Ion	Ratio	Lower	Upper
91	100		
120	23.6	3.7	43.7

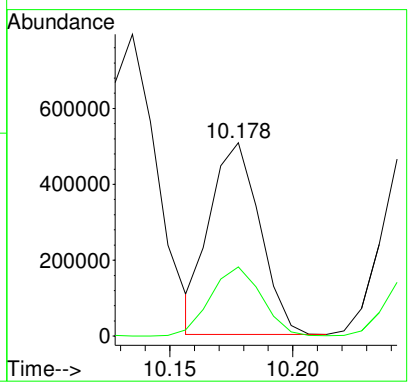


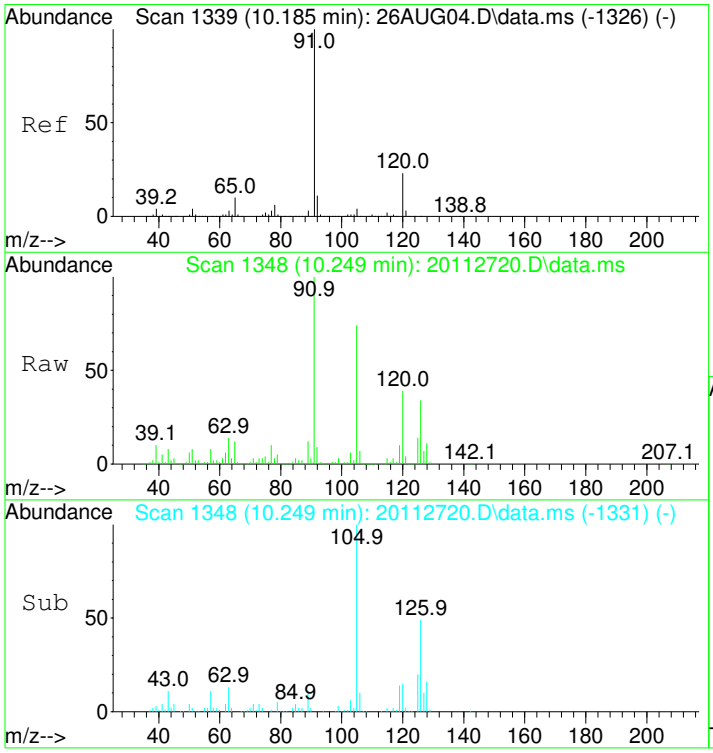


#97
2-Chlorotoluene
Concen: 42.97 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 717839

Ion	Ratio	Lower	Upper
91	100		
126	37.0	17.3	57.3

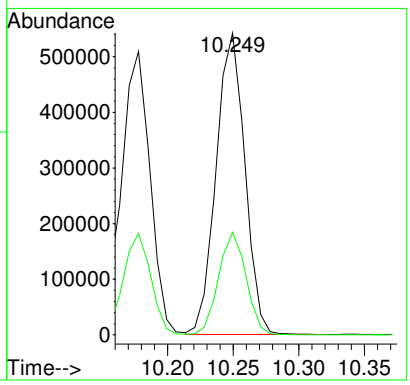


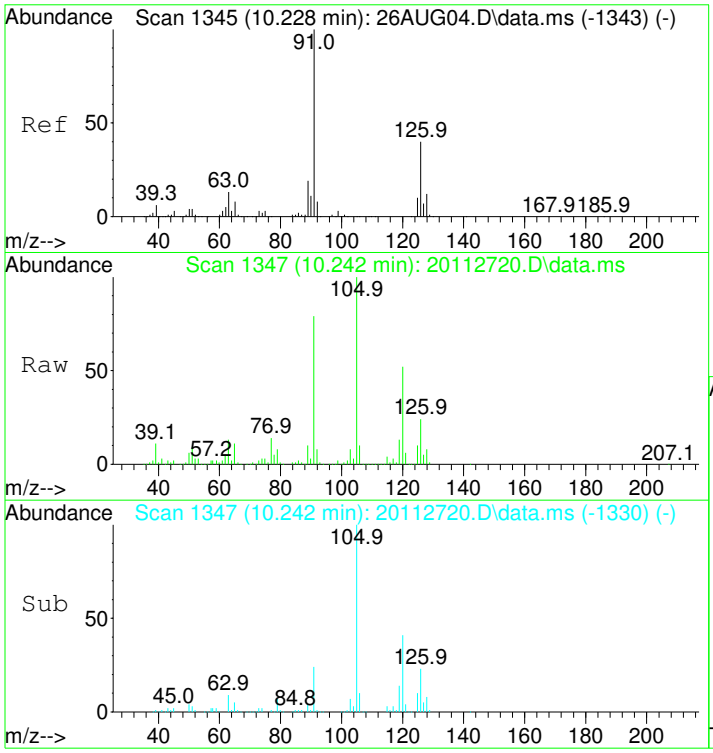


#98
4-Chlorotoluene
Concen: 43.48 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 825032

Ion	Ratio	Lower	Upper
91	100		
126	32.6	12.4	52.4

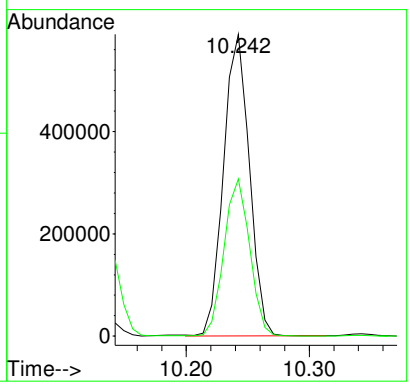


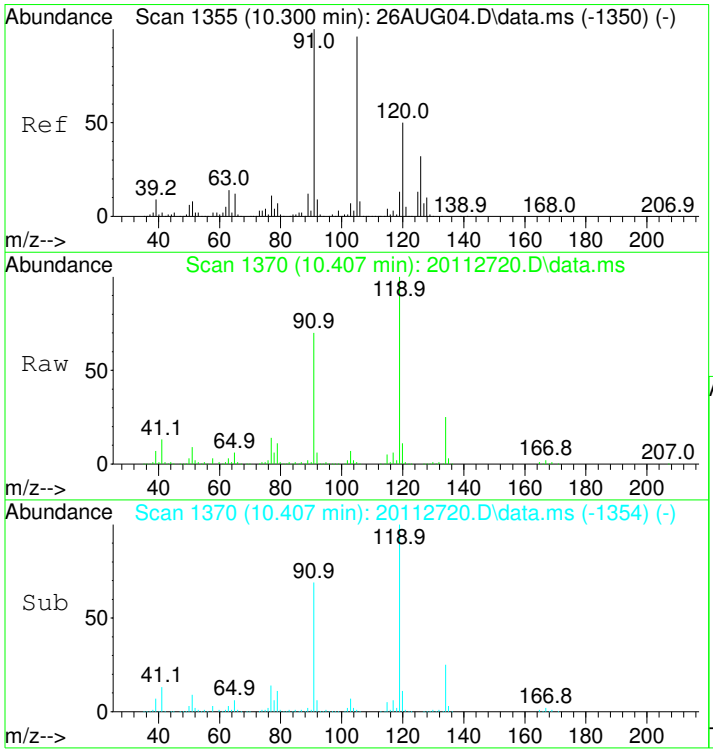


#99
1,3,5-Trimethylbenzene
Concen: 38.93 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:105 Resp: 861850

Ion	Ratio	Lower	Upper
105	100		
120	51.5	31.9	71.9

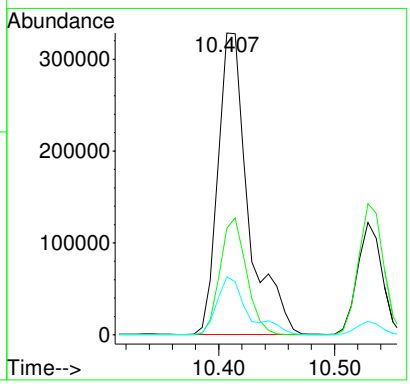


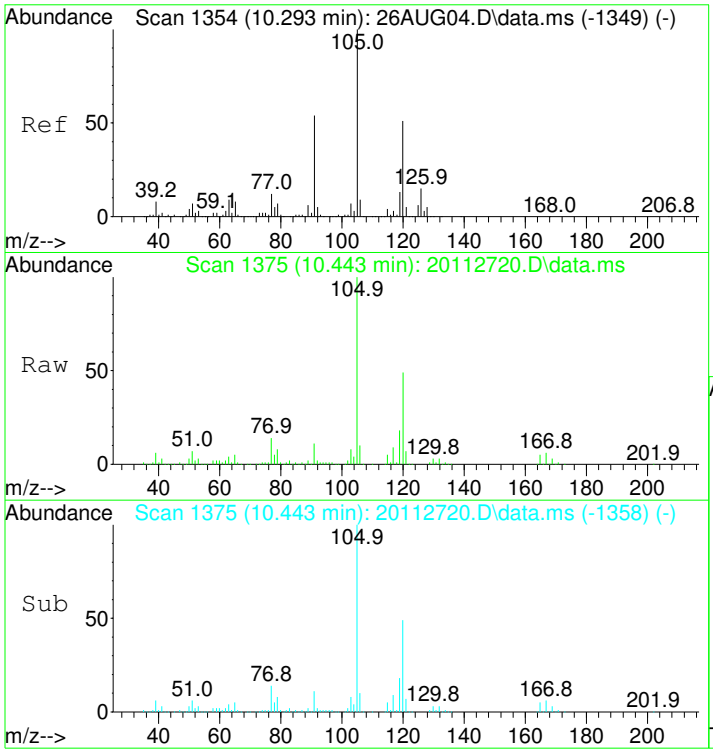


#100
tert-Butylbenzene
Concen: 40.70 ug/L
RT: 10.407 min Scan# 1370
Delta R.T. -0.007 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 597217

Ion	Ratio	Lower	Upper
91	100		
134	33.8	9.7	49.7
41	19.6	0.0	39.3

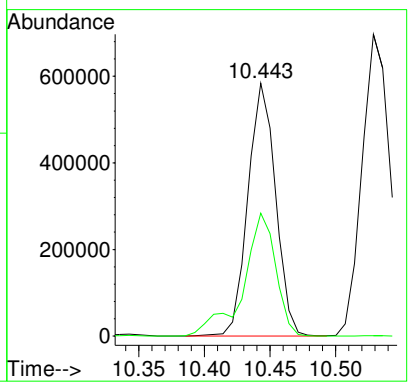


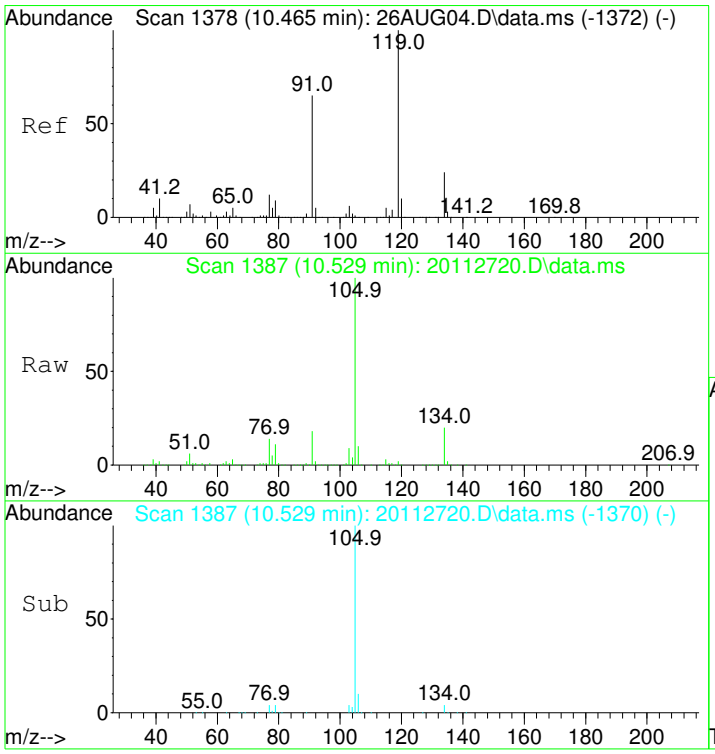


#101
1,2,4-Trimethylbenzene
Concen: 37.13 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:105 Resp: 856125

Ion	Ratio	Lower	Upper
105	100		
120	57.1	37.7	77.7

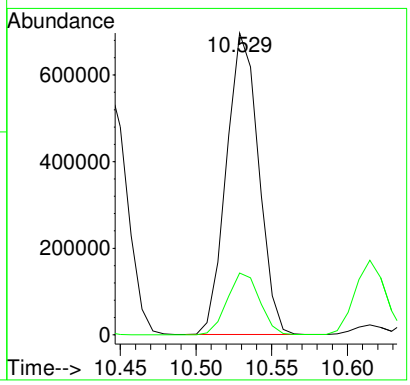


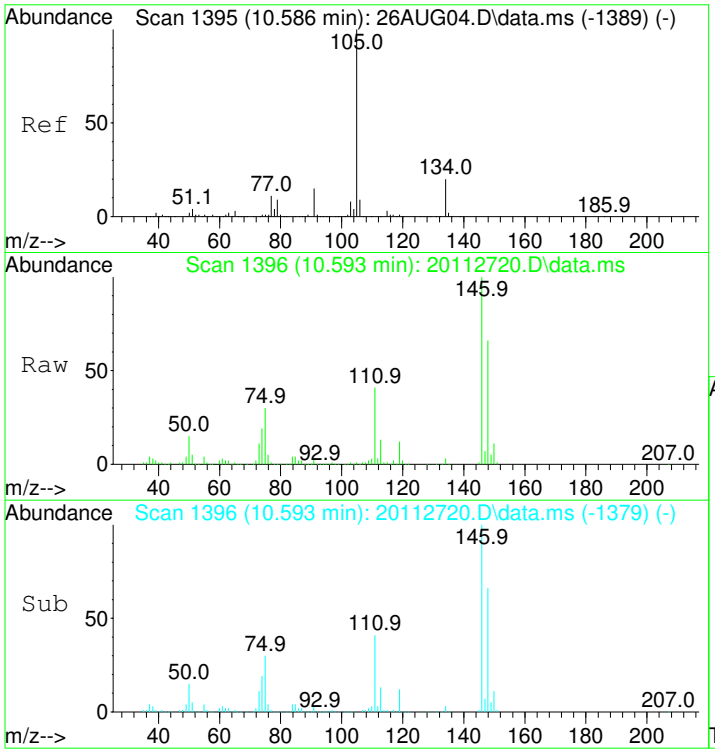


#102
sec-Butylbenzene
Concen: 38.23 ug/L
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:105 Resp: 1028926

Ion	Ratio	Lower	Upper
105	100		
134	20.7	1.1	41.1

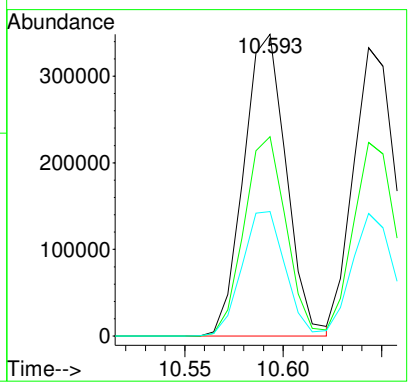


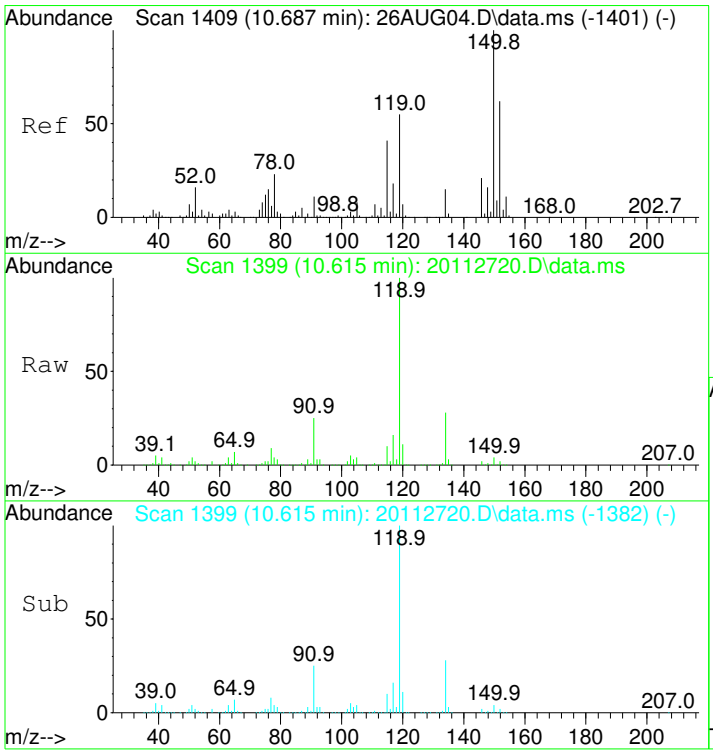


#104
1,3-Dichlorobenzene
Concen: 43.12 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:146 Resp: 523773

Ion	Ratio	Lower	Upper
146	100		
148	65.5	46.5	86.5
111	41.7	22.6	62.6

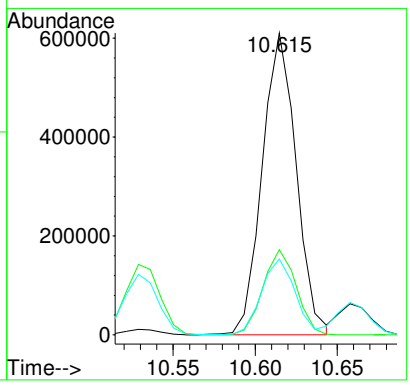


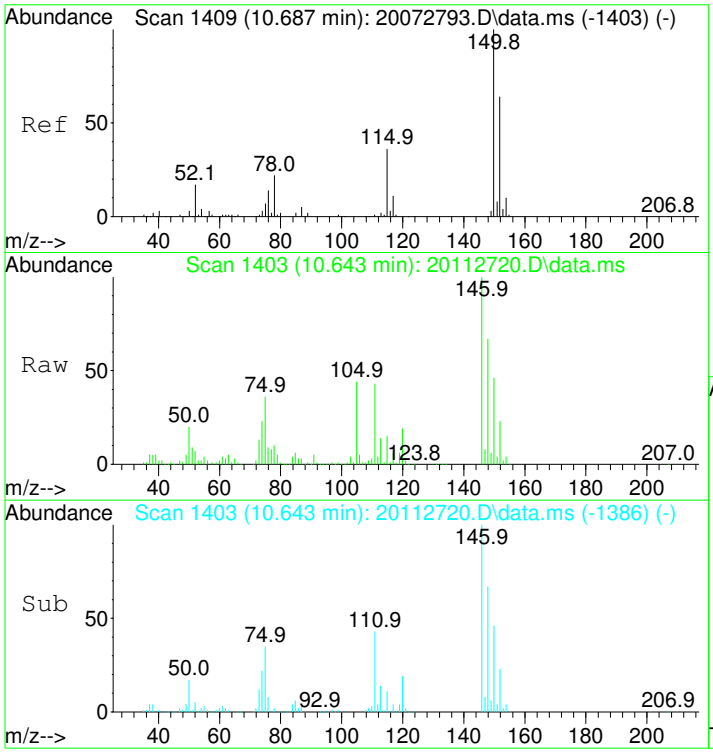


#105
p-Isopropyltoluene
Concen: 44.26 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:119 Resp: 877184

Ion	Ratio	Lower	Upper
119	100		
134	27.7	8.1	48.1
91	24.7	5.2	45.2

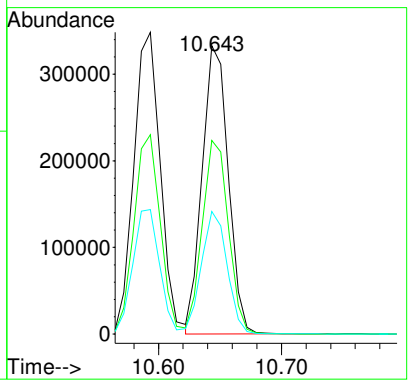


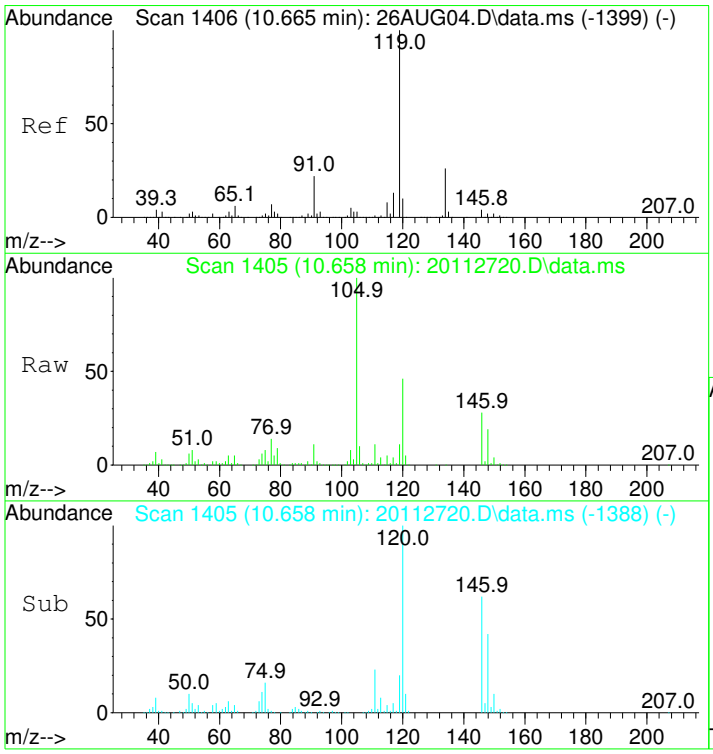


#106
1,4-Dichlorobenzene
Concen: 41.97 ug/L
RT: 10.643 min Scan# 1403
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:146 Resp: 490987

Ion	Ratio	Lower	Upper
146	100		
148	67.3	37.3	97.3
111	42.0	12.5	72.5

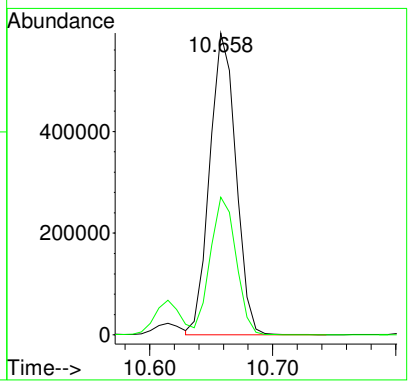


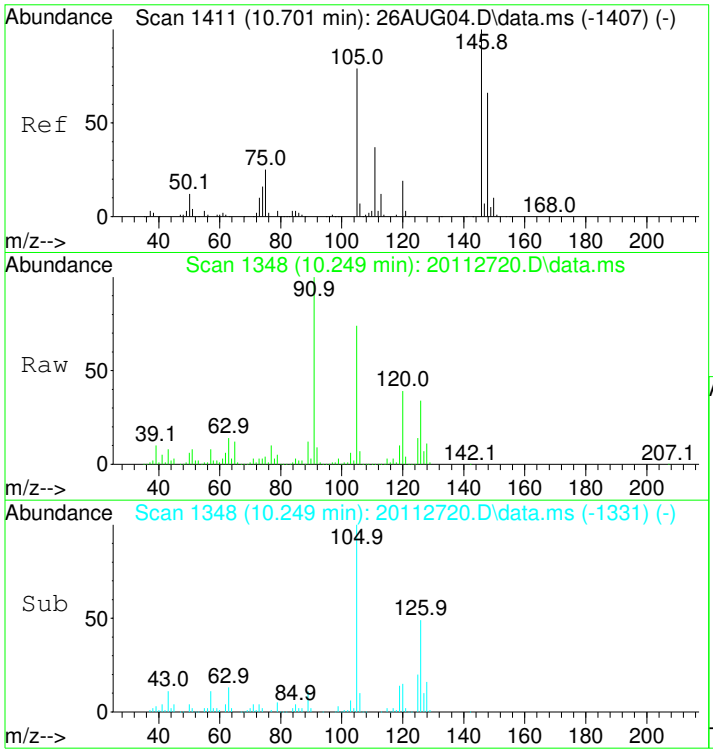


#107
1,2,3-Trimethylbenzene
Concen: 44.18 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:105 Resp: 874932

Ion	Ratio	Lower	Upper
105	100		
120	45.1	35.5	53.3

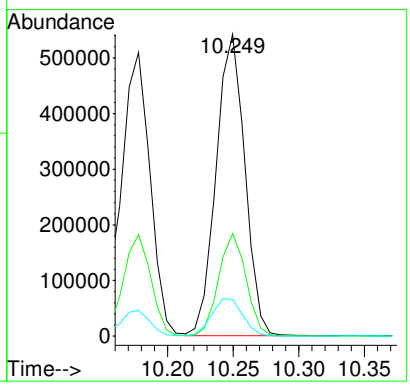


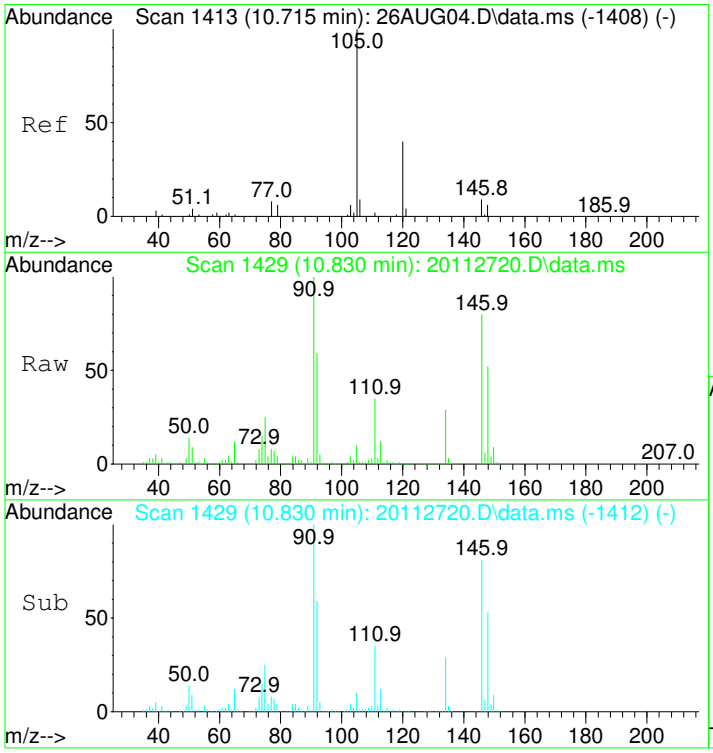


#108
Benzyl chloride
Concen: 43.78 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 825032

Ion	Ratio	Lower	Upper
91	100		
126	32.6	12.4	52.4
65	13.3	0.0	33.3

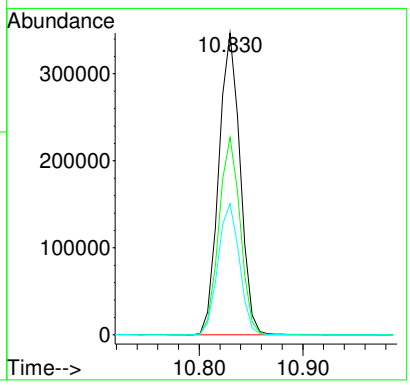


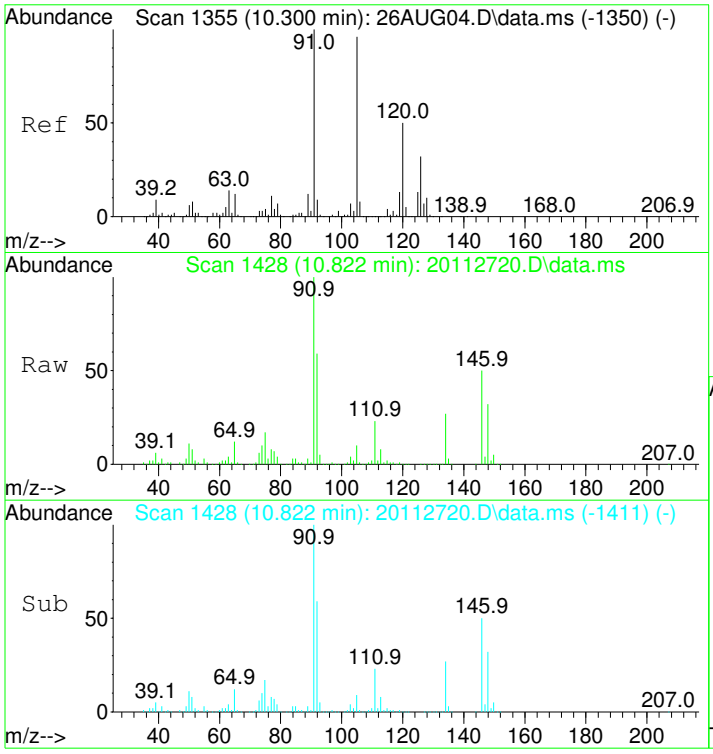


#109
1,2-Dichlorobenzene
Concen: 42.14 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:146 Resp: 499528

Ion	Ratio	Lower	Upper
146	100		
148	65.2	45.6	85.6
111	43.7	24.1	64.1

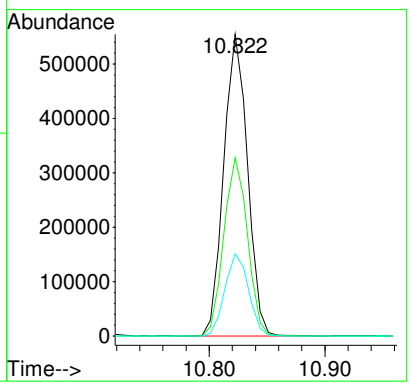


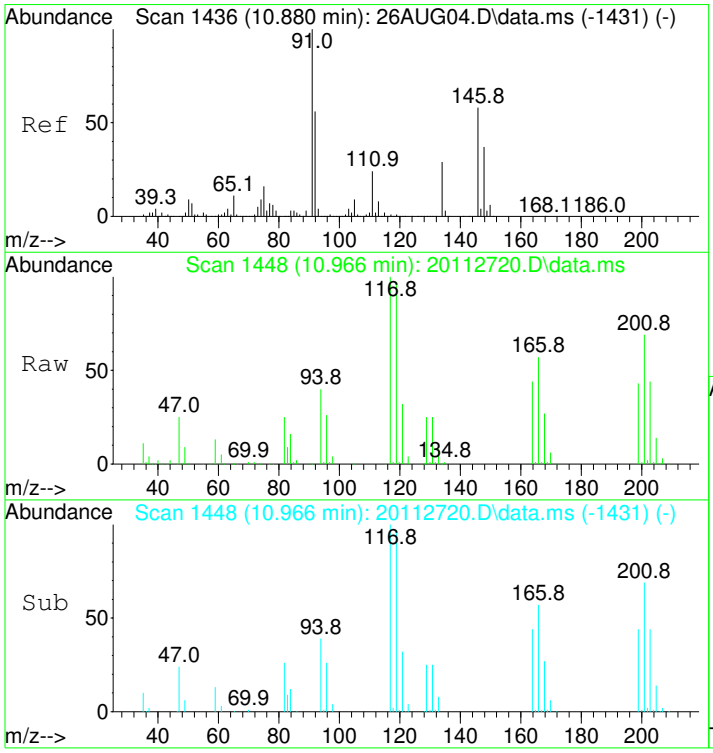


#110
n-Butylbenzene
Concen: 43.28 ug/L
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 91 Resp: 789414

Ion	Ratio	Lower	Upper
91	100		
92	58.8	39.3	79.3
134	27.3	7.5	47.5

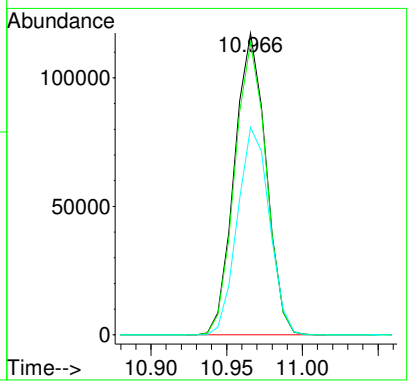


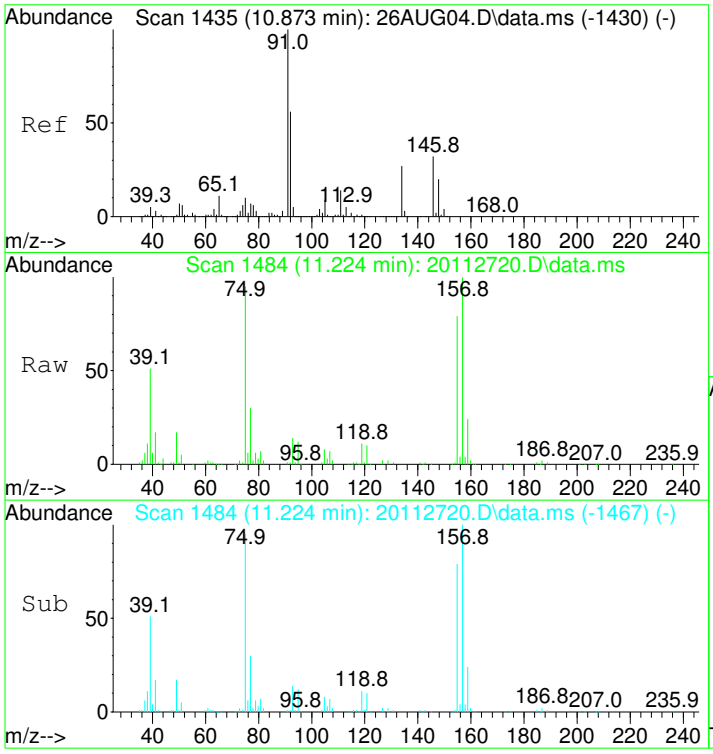


#111
Hexachloroethane
Concen: 37.59 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:117 Resp: 169862

Ion	Ratio	Lower	Upper
117	100		
119	96.6	75.9	115.9
201	69.5	49.2	89.2

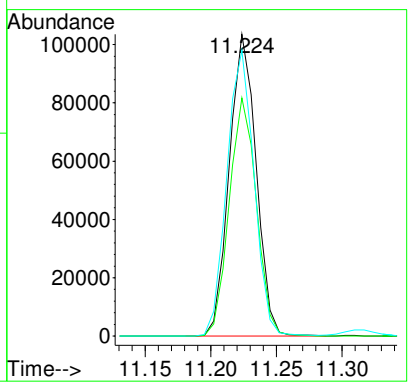


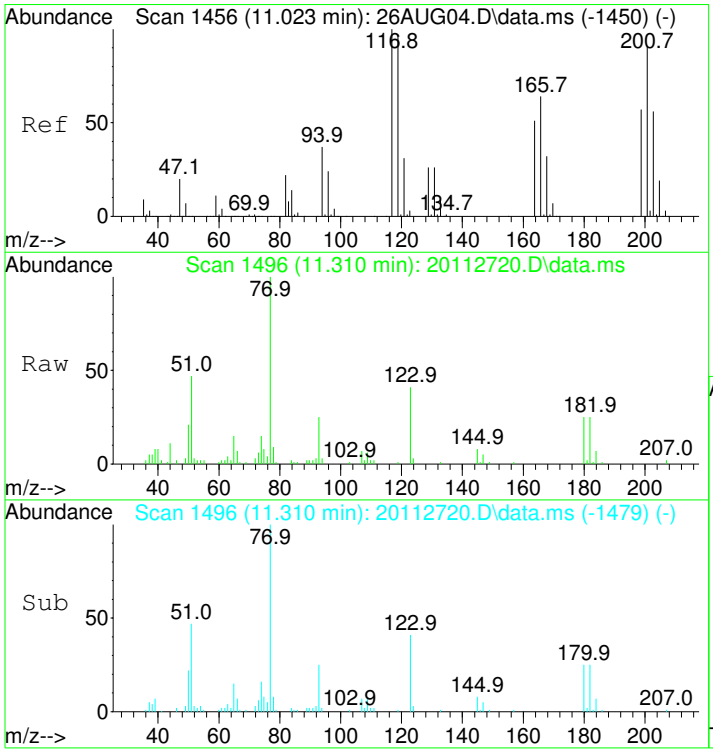


#112
1,2-Dibromo-3-chloropropane
Concen: 44.61 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:157 Resp: 148025

Ion	Ratio	Lower	Upper
157	100		
155	79.4	54.4	94.4
75	95.6	72.1	112.1

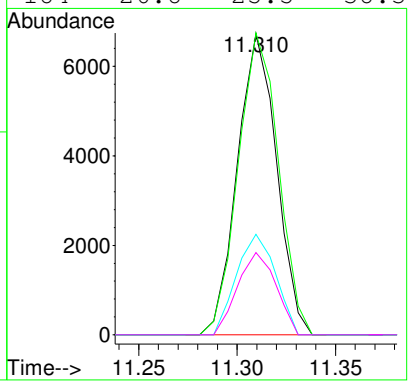


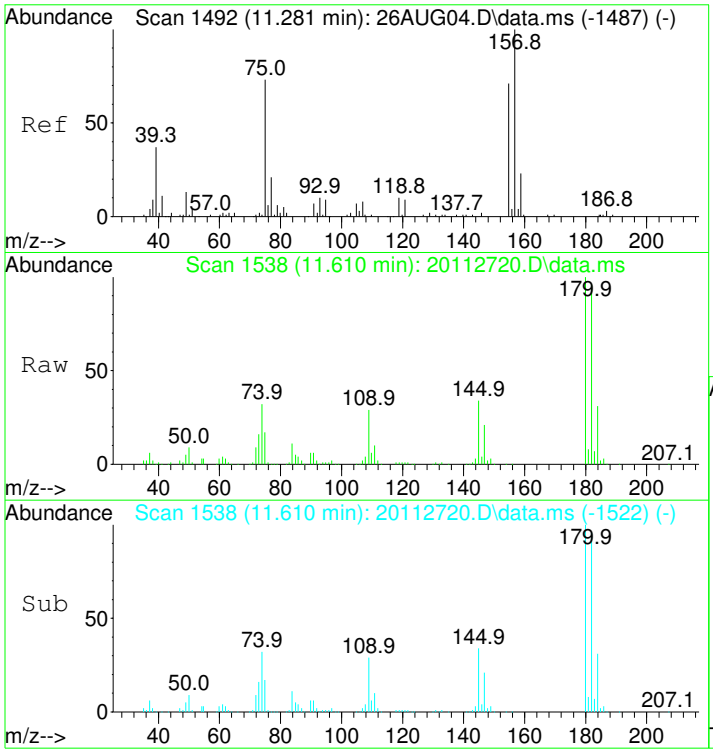


#113
1,3,5-Trichlorobenzene
Concen: 0.78 ug/L
RT: 11.310 min Scan# 1496
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:180 Resp: 9330

Ion	Ratio	Lower	Upper
180	100		
182	102.8	76.9	115.3
145	33.4	24.9	37.3
184	26.8	25.5	38.3

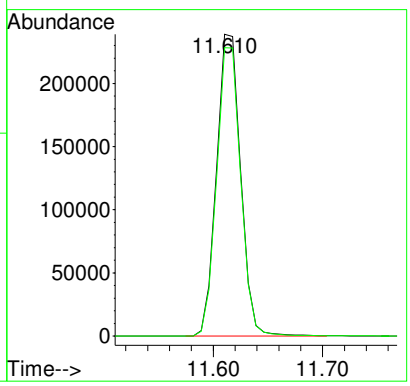


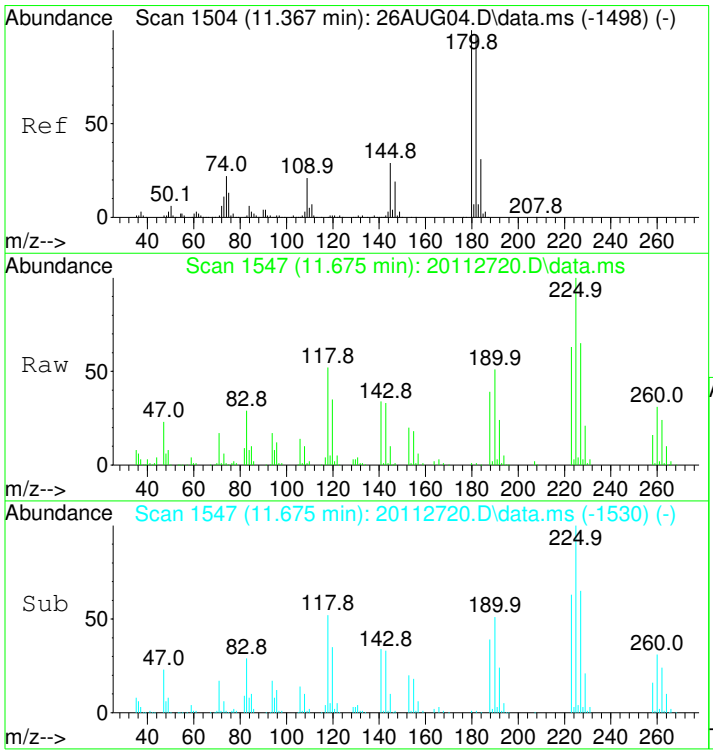


#114
1,2,4-Trichlorobenzene
Concen: 40.73 ug/L
RT: 11.610 min Scan# 1538
Delta R.T. -0.008 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:180 Resp: 366263

Ion	Ratio	Lower	Upper
180	100		
182	95.6	76.7	116.7

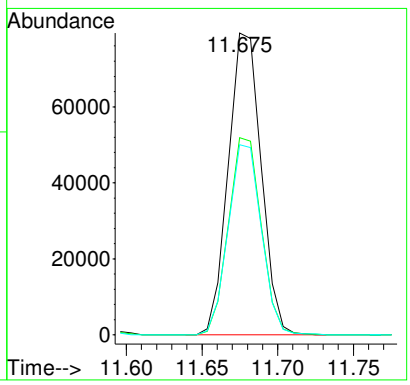


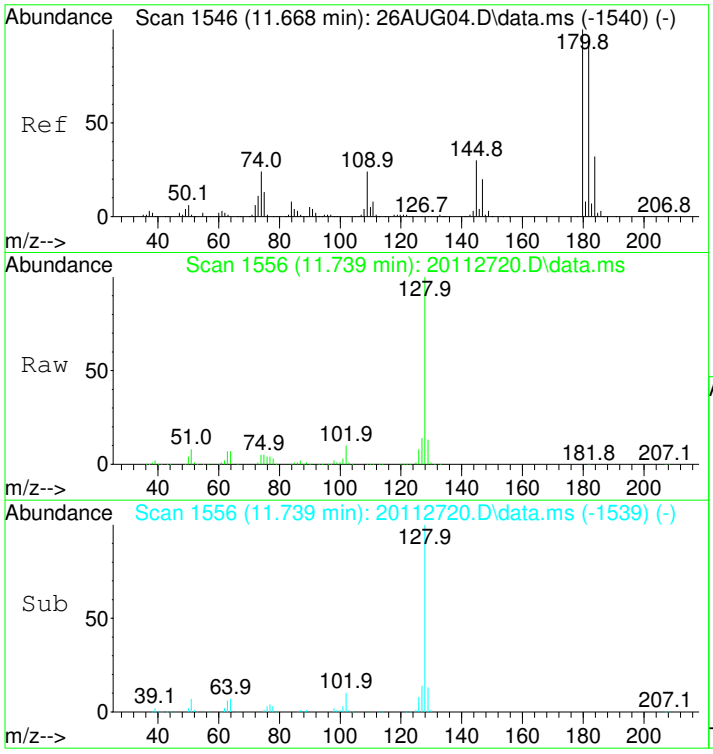


#115
Hexachlorobutadiene
Concen: 39.26 ug/L
RT: 11.675 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:225 Resp: 120058

Ion	Ratio	Lower	Upper
225	100		
227	65.2	50.9	76.3
223	63.4	50.5	75.7

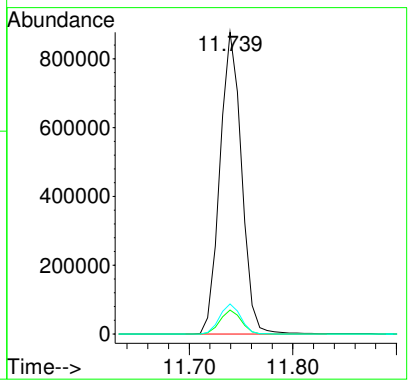


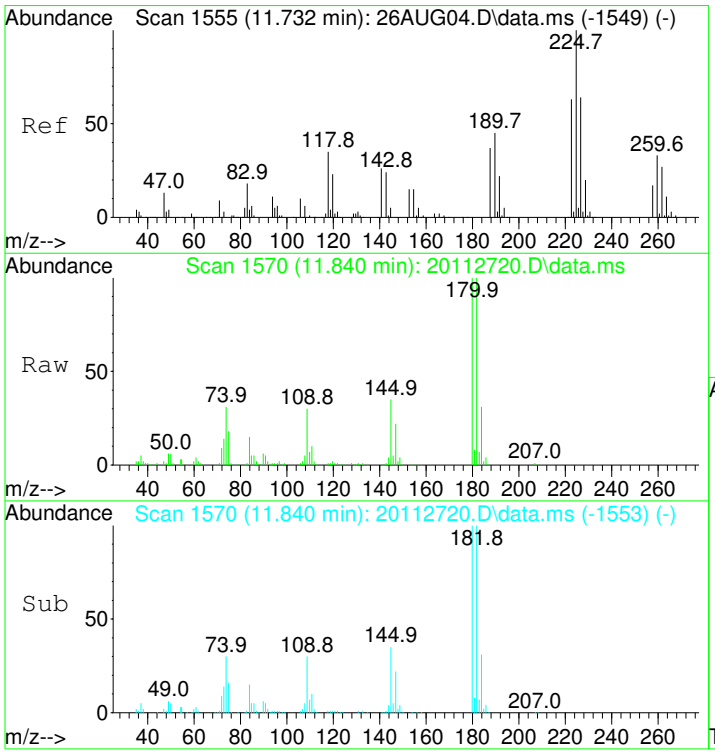


#116
Naphthalene
Concen: 39.54 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:128 Resp: 1283132

Ion	Ratio	Lower	Upper
128	100		
126	7.8	0.0	28.2
102	9.8	0.0	30.0

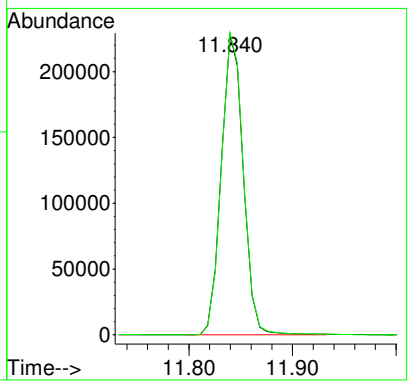


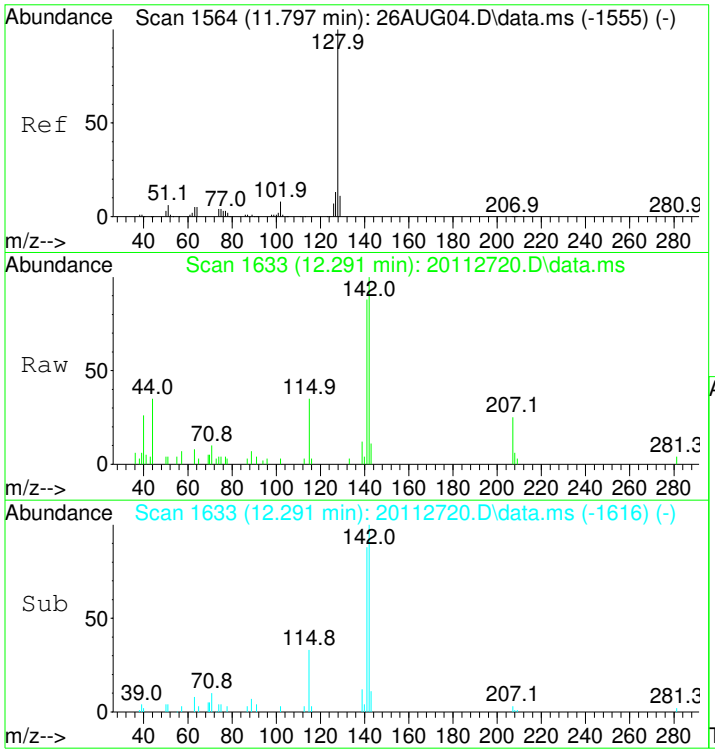


#117
1,2,3-Trichlorobenzene
Concen: 39.25 ug/L
RT: 11.840 min Scan# 1570
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:180 Resp: 337985

Ion	Ratio	Lower	Upper
180	100		
182	100.5	78.4	118.4

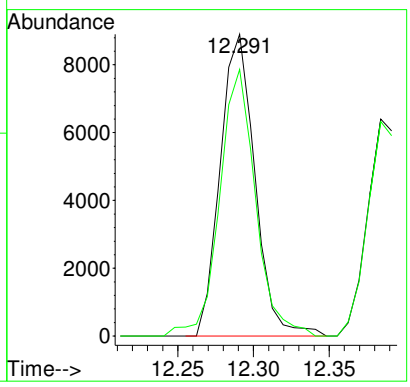


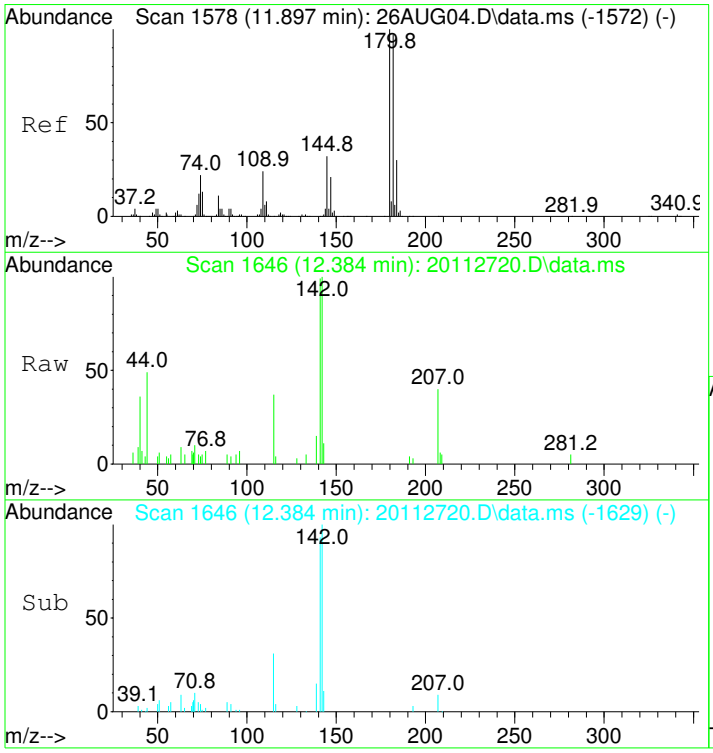


#118
2-Methylnaphthalene
Concen: 0.42 ug/L
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:142 Resp: 14218

Ion	Ratio	Lower	Upper
142	100		
141	91.2	65.0	105.0

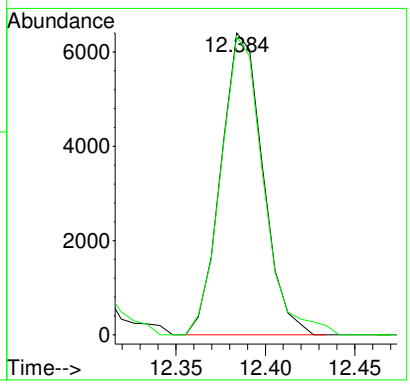


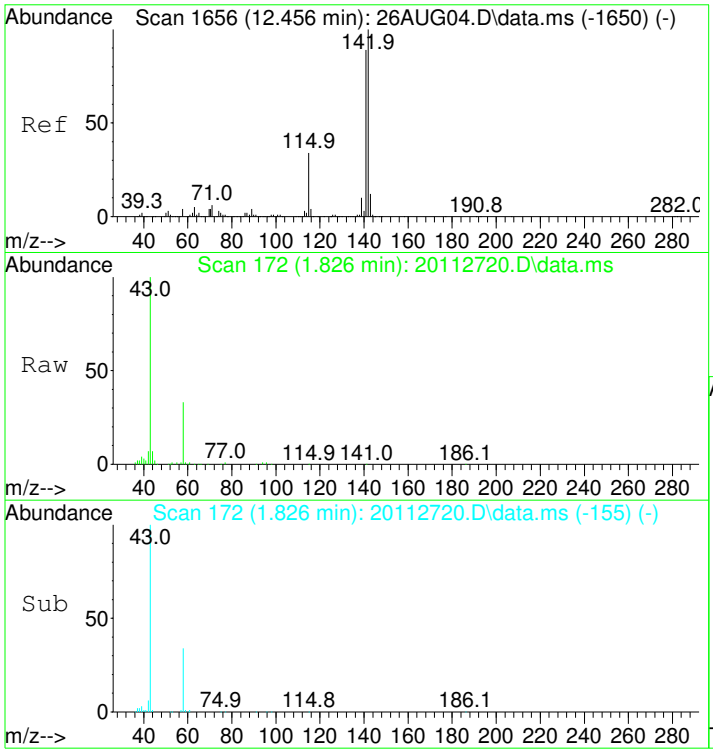


#119
1-Methylnaphthalene
Concen: 0.31 ug/L
RT: 12.384 min Scan# 1646
Delta R.T. -0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion:142 Resp: 10429

Ion	Ratio	Lower	Upper
142	100		
141	100.7	69.8	104.8

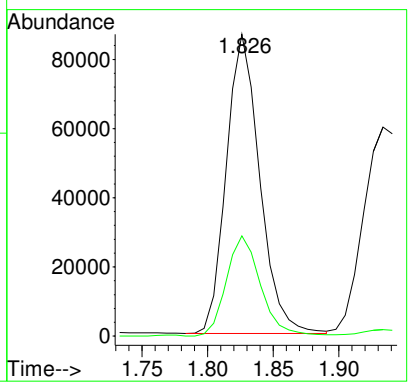


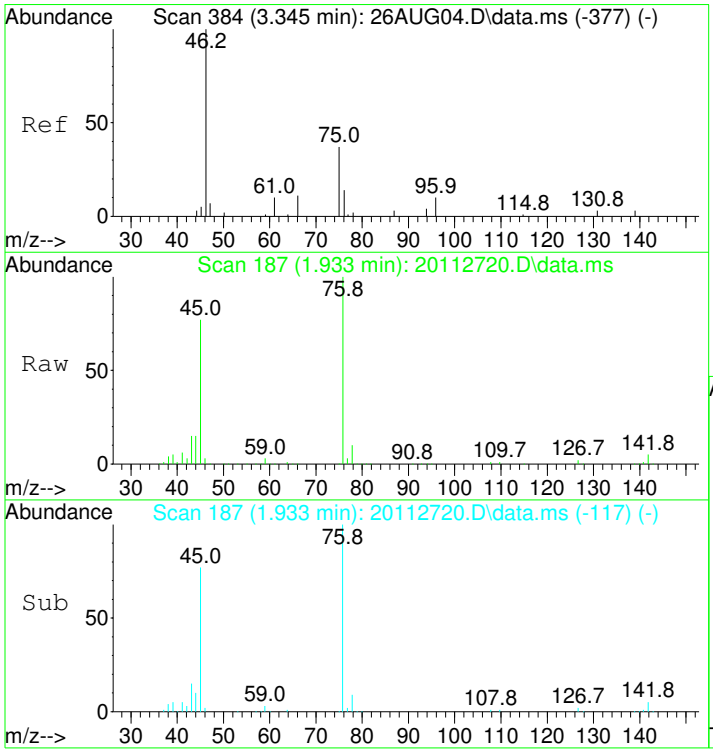


#121
2-Propanone
Concen: 43.43 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 153076

Ion	Ratio	Lower	Upper
43	100		
58	34.5	28.2	42.2

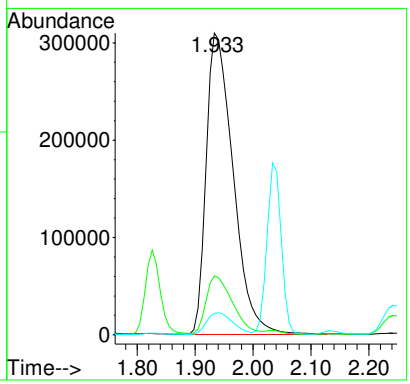


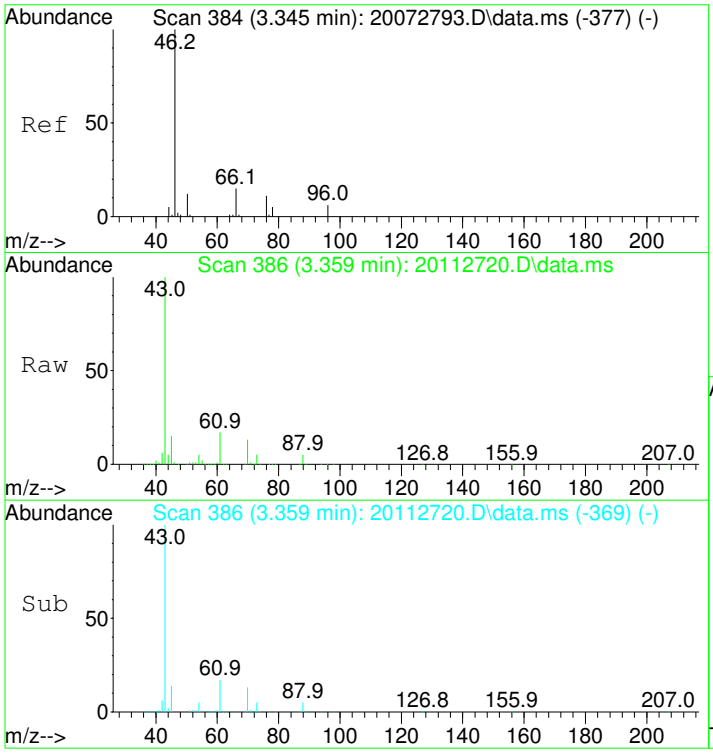


#122
Isopropyl Alcohol
Concen: 854.59 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 45 Resp: 1008168

Ion	Ratio	Lower	Upper
45	100		
43	18.3	14.6	21.8
41	7.0	5.7	8.5

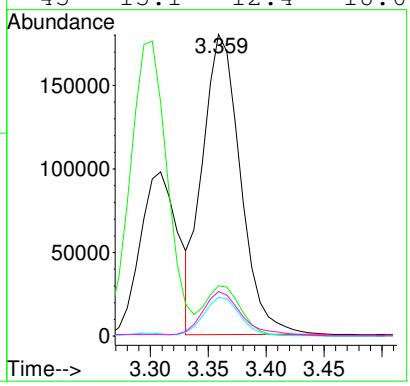


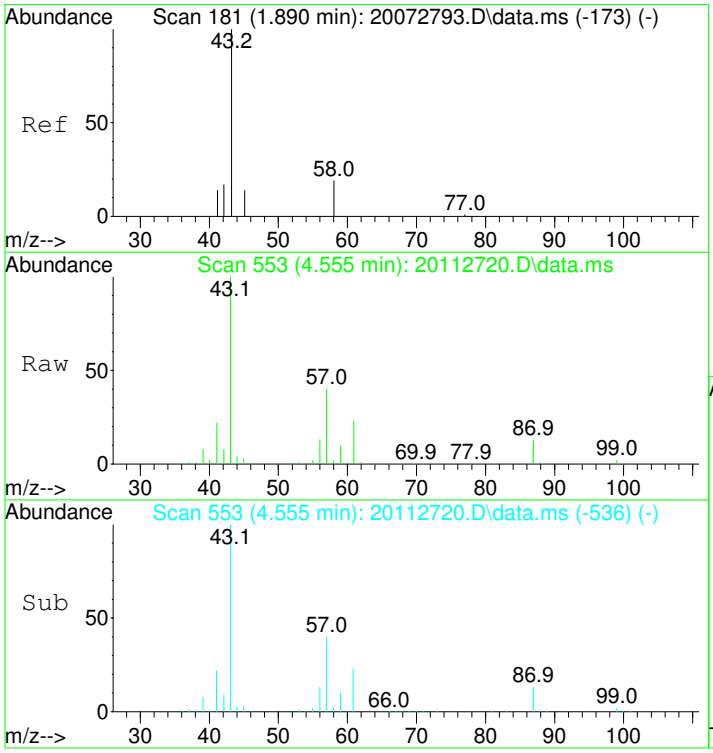


#123
Acetic Ether
Concen: 38.56 ug/L
RT: 3.359 min Scan# 386
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 411373

Ion	Ratio	Lower	Upper
43	100		
61	15.5	11.9	17.9
70	12.6	9.7	14.5
45	15.1	12.4	18.6

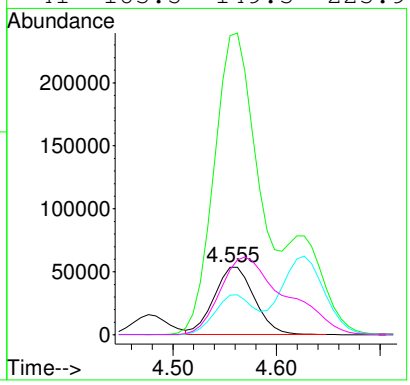


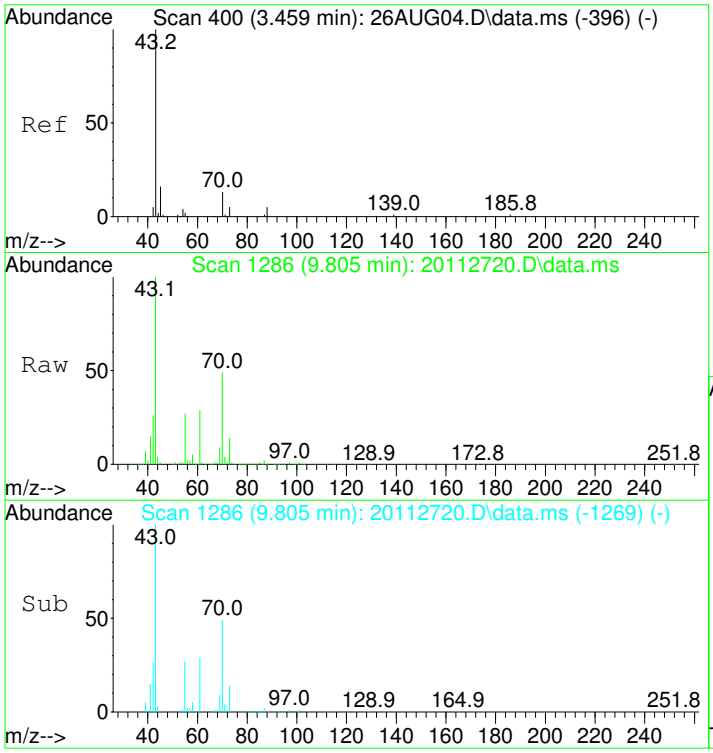


#124
Isopropyl Acetate
Concen: 37.46 ug/L
RT: 4.555 min Scan# 553
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 61 Resp: 144297

Ion	Ratio	Lower	Upper
61	100		
43	499.0	392.6	589.0
87	58.1	46.2	69.2
41	183.5	149.3	223.9

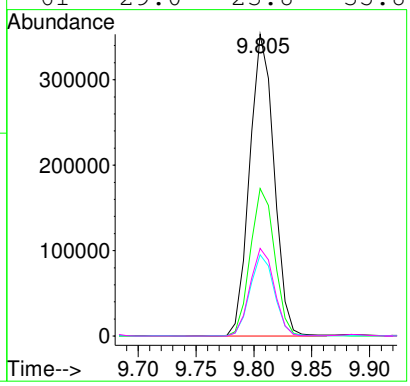




#125
Amyl Acetate
Concen: 37.21 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. 0.000 min
Lab File: 20112720.D
Acq: 27 Nov 2020 5:26 pm

Tgt Ion: 43 Resp: 515414

Ion	Ratio	Lower	Upper
43	100		
70	48.8	39.8	59.6
55	27.2	21.8	32.8
61	29.0	23.8	35.8



1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	20.000	20.000	0.0	96	0.00
2	C	Dichlorodifluoromethane	40.000	43.490	-8.7	104	0.00
3	C	Dichlorofluoromethane	40.000	33.964	15.1	82	0.00
4	CP	Chloromethane	40.000	30.307	24.2#	69	0.00
5	C	1,3-Butadiene	40.000	81.251	-103.1#	0	0.00
6	C	Vinyl chloride	40.000	42.492	-6.2	101	0.00
7	C	Bromomethane	40.000	65.222	-63.1#	169	0.00
8	C	Chloroethane	40.000	40.838	-2.1	96	0.00
9	C	Trichlorofluoromethane	40.000	31.861	20.3#	78	0.00
10	C	Ethanol	800.000	504.945	36.9#	62	0.00
11	C	Ethyl ether	40.000	42.148	-5.4	98	0.00
12	C	Acrolein	40.000	-1.000	102.5#	5	-0.09
13	C	1,1-Dichloroethene	40.000	44.611	-11.5	103	0.00
14	C	1,1,2-Trichlorotrifluoroeth	40.000	0.213	99.5#	1	0.00
15	C	Methyl iodide	40.000	0.000	100.0#	0	0.00
16	C	Acetone	40.000	43.420	-8.6	104	0.00
17	C	Chloroprene	40.000	0.584	98.5#	2	0.00
18	C	Carbon disulfide	40.000	45.117	-12.8	106	0.00
19	C	2-Propanol	800.000	849.403	-6.2	101	0.00
20	C	Allyl chloride	40.000	33.527	16.2	78	0.00
21	C	Methyl acetate	40.000	15.399	61.5#	37	-0.10
22	C	Acetonitrile	40.000	33.525	16.2	78	0.00
23	C	Methylene chloride	40.000	37.898	5.3	90	0.00
24	C	trans-1,2-Dichloroethene	40.000	42.201	-5.5	99	0.00
25	C	t-Butanol	200.000	211.089	-5.5	101	0.00
26	C	Acrylonitrile	40.000	42.291	-5.7	103	0.00
27	CP	Methyl tert-butyl ether	40.000	42.955	-7.4	98	0.00
28	C	Hexane	40.000	0.335	99.2#	2	0.00
29	CP	1,1-Dichloroethane	40.000	41.811	-4.5	98	0.00
30	CP	Diisopropyl ether	40.000	42.631	-6.6	98	0.00
31	C	Vinyl acetate	40.000	0.671	98.3#	2	0.00
32	C	Methylcyclopentane	40.000	34.546	13.6	81	0.00
33	CP	Ethyl tert butyl ether	40.000	42.427	-6.1	97	0.00
34	C	2,2-Dichloropropane	40.000	39.809	0.5	93	0.00
35	C	cis-1,2-Dichloroethene	40.000	42.457	-6.1	99	0.00
36	C	2-Butanone	40.000	41.783	-4.5	99	0.00
37	C	Ethyl Acetate	40.000	39.498	1.3	91	0.00
38	C	Methyl acrylate	40.000	42.544	-6.4	102	0.00
39	C	Propionitrile	40.000	0.000	100.0#	0	-3.96#
40	C	Bromochloromethane	40.000	41.675	-4.2	99	0.00
41	C	Tetrahydrofuran	40.000	40.208	-0.5	97	0.00
42	C	Methacrylonitrile	40.000	40.757	-1.9	97	0.00
43	C	Chloroform	40.000	39.519	1.2	93	0.00
44	C	Cyclohexane	40.000	-0.127	100.3#	1	0.01
45	I	1,4-Difluorobenzene	20.000	20.000	0.0	97	0.00
46	C	1,1,1-Trichloroethane	40.000	40.887	-2.2	97	0.00
47	S	Dibromofluoromethane	20.000	19.241	3.8	92	0.00
48	C	Carbon tetrachloride	40.000	36.982	7.5	86	0.00
49	C	1,1-Dichloropropene	40.000	39.385	1.5	92	0.00
50	S	1,2-Dichloroethane-d4	20.000	18.596	7.0	92	0.00
51	C	1,2-Dichloroethane	40.000	40.293	-0.7	96	0.00
52	CP	Benzene	40.000	41.308	-3.3	96	0.00
53	CP	Tertiaryamylmethylether	40.000	41.896	-4.7	96	0.00

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
54	C	Isobutyl Alcohol	40.000	39.608	1.0	91	0.00
55	C	Heptane	40.000	-0.109	100.3#	1	0.00
56	C	1,4-Dioxane	4000.000	-23.416	100.6#	0	0.00
57	C	Methylcyclohexane	40.000	-0.047	100.1#	1	0.00
58	C	n-Butanol	400.000	6.436	98.4#	1	-0.01
59	C	Trichloroethene	40.000	39.561	1.1	94	0.00
60	C	1,2-Dichloropropane	40.000	41.701	-4.3	99	0.00
61	C	Dibromomethane	40.000	38.973	2.6	93	0.00
62	C	Methyl methacrylate	40.000	40.502	-1.3	95	0.00
63	C	Bromodichloromethane	40.000	40.148	-0.4	96	0.00
64	C	2-Chloroethyl vinyl ether	40.000	-0.075	100.2#	1	0.03
65	C	2-Nitropropane	40.000	39.863	0.3	97	0.00
66	C	cis-1,3-Dichloropropene	40.000	39.602	1.0	93	0.00
67	I	Chlorobenzene-d5	20.000	20.000	0.0	96	0.00
68	C	4-Methyl-2-pentanone	40.000	63.775	-59.4#	150	0.00
69	S	Toluene-d8	20.000	19.361	3.2	96	0.00
70	CP	Toluene	40.000	42.370	-5.9	96	0.00
71	C	trans-1,3-Dichloropropene	40.000	41.326	-3.3	95	0.00
72	C	Chloropicrin	400.000	0.000	100.0#	0	-8.23#
73	C	Ethyl methacrylate	40.000	41.153	-2.9	96	0.00
74	C	1,1,2-Trichloroethane	40.000	40.165	-0.4	94	0.00
75	C	Tetrachloroethene	40.000	40.014	-0.0	94	0.00
76	C	1,3-Dichloropropane	40.000	39.644	0.9	93	0.00
77	C	2-Hexanone	40.000	43.122	-7.8	100	0.00
78	C	Chlorodibromomethane	40.000	37.922	5.2	90	0.00
79	C	Butyl acetate	40.000	40.286	-0.7	91	0.00
80	C	1,2-Dibromoethane	40.000	44.876	-12.2	107	0.00
81	CP	Chlorobenzene	40.000	41.566	-3.9	96	0.00
82	C	1,1,1,2-Tetrachloroethane	40.000	40.781	-2.0	95	0.00
83	CP	Ethylbenzene	40.000	39.478	1.3	97	0.00
84	CP	m/p-Xylene	80.000	77.321	3.3	96	0.00
85	C	Nonane	40.000	53.123	-32.8#	124	0.00
86	C	Styrene	40.000	45.055	-12.6	98	0.00
87	CP	o-Xylene	40.000	37.933	5.2	95	0.00
88	C	Cyclohexanone	200.000	-3.141	101.6#	0	0.00
89	CP	Bromoform	40.000	36.252	9.4	90	0.00
90	C	Isopropylbenzene	40.000	39.026	2.4	96	0.00
91	S	Bromofluorobenzene	20.000	19.720	1.4	97	0.00
92	C	Bromobenzene	40.000	41.542	-3.9	94	0.00
93	CP	1,1,2,2-Tetrachloroethane	40.000	45.172	-12.9	102	0.00
94	C	1,2,3-Trichloropropane	40.000	40.098	-0.2	95	0.00
95	C	trans-1,4-Dichloro-2-butene	40.000	38.591	3.5	89	0.00
96	C	n-Propylbenzene	40.000	39.049	2.4	96	0.00
97	C	2-Chlorotoluene	40.000	42.965	-7.4	96	0.00
98	C	4-Chlorotoluene	40.000	43.479	-8.7	95	0.00
99	C	1,3,5-Trimethylbenzene	40.000	38.930	2.7	96	0.00
100	C	tert-Butylbenzene	40.000	40.701	-1.8	93	0.00
101	C	1,2,4-Trimethylbenzene	40.000	37.126	7.2	92	0.00
102	C	sec-Butylbenzene	40.000	38.231	4.4	94	0.00
103	I	1,4-Dichlorobenzene-d4	20.000	20.000	0.0	95	0.00
104	C	1,3-Dichlorobenzene	40.000	43.118	-7.8	98	0.00
105	C	p-Isopropyltoluene	40.000	44.264	-10.7	96	0.00

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
106	C	1,4-Dichlorobenzene	40.000	41.975	-4.9	95	0.00
107	C	1,2,3-Trimethylbenzene	40.000	44.178	-10.4	95	0.00
108	C	Benzyl chloride	40.000	43.778	-9.4	95	0.00
109	C	1,2-Dichlorobenzene	40.000	42.140	-5.4	95	0.00
110	C	n-Butylbenzene	40.000	43.280	-8.2	93	0.00
111	C	Hexachloroethane	40.000	37.587	6.0	92	0.00
112	C	1,2-Dibromo-3-chloropropane	40.000	44.612	-11.5	95	0.00
113	C	1,3,5-Trichlorobenzene	40.000	0.776	98.1#	2	0.00
114	C	1,2,4-Trichlorobenzene	40.000	40.728	-1.8	92	0.00
115	C	Hexachlorobutadiene	40.000	39.264	1.8	94	0.00
116	C	Naphthalene	40.000	39.537	1.2	94	0.00
117	C	1,2,3-Trichlorobenzene	40.000	39.253	1.9	91	0.00
118	C	2-Methylnaphthalene	40.000	0.422	98.9#	2	0.00
119	C	1-Methylnaphthalene	40.000	0.311	99.2#	1	0.00
120	I	Ethyl-d5-Acetate-d3	20.000	20.000	0.0	96	0.00
121	T	2-Propanone	40.000	43.426	-8.6	104	0.00
122	C	Isopropyl Alcohol	800.000	854.589	-6.8	101	0.00
123	T	Acetic Ether	40.000	38.562	3.6	91	0.00
124	T	Isopropyl Acetate	40.000	37.456	6.4	90	0.00
125	T	Amyl Acetate	40.000	37.211	7.0	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 26

1st /S/ JS 11/30/20

2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	96	0.00
2	C	Dichlorodifluoromethane	0.518	0.553	-6.8	104	0.00
3	C	Dichlorofluoromethane	1.355	0.962	29.0#	82	0.00
4	CP	Chloromethane	1.231	0.832	32.4#	69	0.00
5	C	1,3-Butadiene	0.000	0.003	0.0	0#	0.00
6	C	Vinyl chloride	0.712	0.711	0.1	101	0.00
7	C	Bromomethane	0.207	0.165	20.3#	169#	0.00
8	C	Chloroethane	0.279	0.300	-7.5	96	0.00
9	C	Trichlorofluoromethane	0.792	0.631	20.3#	78	0.00
10	C	Ethanol	0.072	0.036	50.0#	62	0.00
11	C	Ethyl ether	0.514	0.502	2.3	98	0.00
12	C	Acrolein	0.106	0.001	99.1#	5#	-0.09
13	C	1,1-Dichloroethene	0.829	0.820	1.1	103	0.00
14	C	1,1,2-Trichlorotrifluoroeth	0.369	0.002	99.5#	1#	0.00
15	C	Methyl iodide	0.000	0.557	0.0	0#	0.00
16	C	Acetone	0.455	0.360	20.9#	104	0.00
17	C	Chloroprene	0.896	0.016	98.2#	2#	0.00
18	C	Carbon disulfide	1.736	1.659	4.4	106	0.00
19	C	2-Propanol	0.153	0.119	22.2#	101	0.00
20	C	Allyl chloride	0.906	0.708	21.9#	78	0.00
21	C	Methyl acetate	0.921	0.298	67.6#	37#	-0.10
22	C	Acetonitrile	0.965	0.708	26.6#	78	0.00
23	C	Methylene chloride	0.864	0.733	15.2	90	0.00
24	C	trans-1,2-Dichloroethene	0.857	0.764	10.9	99	0.00
25	C	t-Butanol	0.264	0.235	11.0	101	0.00
26	C	Acrylonitrile	0.420	0.405	3.6	103	0.00
27	CP	Methyl tert-butyl ether	1.983	1.769	10.8	98	0.00
28	C	Hexane	0.803	0.011	98.6#	2#	0.00
29	CP	1,1-Dichloroethane	1.193	1.089	8.7	98	0.00
30	CP	Diisopropyl ether	1.801	1.628	9.6	98	0.00
31	C	Vinyl acetate	0.132	0.002	98.5#	2#	0.00
32	C	Methylcyclopentane	1.320	0.986	25.3#	81	0.00
33	CP	Ethyl tert butyl ether	1.980	1.850	6.6	97	0.00
34	C	2,2-Dichloropropane	1.021	0.853	16.5	93	0.00
35	C	cis-1,2-Dichloroethene	1.025	0.931	9.2	99	0.00
36	C	2-Butanone	0.663	0.526	20.7#	99	0.00
37	C	Ethyl Acetate	1.170	0.967	17.4	91	0.00
38	C	Methyl acrylate	1.025	0.930	9.3	102	0.00
39	C	Propionitrile	0.056	0.000	100.0#	0#	-3.96#
40	C	Bromochloromethane	0.558	0.473	15.2	99	0.00
41	C	Tetrahydrofuran	0.476	0.372	21.8#	97	0.00
42	C	Methacrylonitrile	0.874	0.749	14.3	97	0.00
43	C	Chloroform	1.225	1.052	14.1	93	0.00
44	C	Cyclohexane	1.214	0.012	99.0#	1#	0.01
45	I	1,4-Difluorobenzene	1.000	1.000	0.0	97	0.00
46	C	1,1,1-Trichloroethane	0.575	0.501	12.9	97	0.00
47	S	Dibromofluoromethane	0.320	0.307	4.1	92	0.00
48	C	Carbon tetrachloride	0.473	0.389	17.8	86	0.00
49	C	1,1-Dichloropropene	0.501	0.407	18.8	92	0.00
50	S	1,2-Dichloroethane-d4	0.387	0.360	7.0	92	0.00
51	C	1,2-Dichloroethane	0.540	0.463	14.3	96	0.00
52	CP	Benzene	1.491	1.238	17.0	96	0.00
53	CP	Tertiaryamylmethylether	1.097	0.954	13.0	96	0.00

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	C	Isobutyl Alcohol	1.027	0.928	9.6	91	0.00
55	C	Heptane	0.413	0.003	99.3#	1#	0.00
56	C	1,4-Dioxane	0.012	0.000	100.0#	0#	0.00
57	C	Methylcyclohexane	0.562	0.003	99.5#	1#	0.00
58	C	n-Butanol	0.027	0.000	100.0#	1#	-0.01
59	C	Trichloroethene	0.378	0.333	11.9	94	0.00
60	C	1,2-Dichloropropane	0.412	0.351	14.8	99	0.00
61	C	Dibromomethane	0.272	0.233	14.3	93	0.00
62	C	Methyl methacrylate	0.473	0.393	16.9	95	0.00
63	C	Bromodichloromethane	0.523	0.460	12.0	96	0.00
64	C	2-Chloroethyl vinyl ether	0.195	0.001	99.5#	1#	0.03
65	C	2-Nitropropane	0.198	0.183	7.6	97	0.00
66	C	cis-1,3-Dichloropropene	0.658	0.557	15.3	93	0.00
67	I	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00
68	C	4-Methyl-2-pentanone	0.674	0.933	-38.4#	150	0.00
69	S	Toluene-d8	1.238	1.198	3.2	96	0.00
70	CP	Toluene	1.645	1.365	17.0	96	0.00
71	C	trans-1,3-Dichloropropene	0.665	0.573	13.8	95	0.00
72	C	Chloropicrin	0.000	0.000	0.0	0#	-8.23#
73	C	Ethyl methacrylate	0.739	0.621	16.0	96	0.00
74	C	1,1,2-Trichloroethane	0.426	0.355	16.7	94	0.00
75	C	Tetrachloroethene	0.372	0.326	12.4	94	0.00
76	C	1,3-Dichloropropane	0.728	0.582	20.1#	93	0.00
77	C	2-Hexanone	0.563	0.500	11.2	100	0.00
78	C	Chlorodibromomethane	0.430	0.368	14.4	90	0.00
79	C	Butyl acetate	0.926	0.736	20.5#	91	0.00
80	C	1,2-Dibromoethane	0.449	0.385	14.3	107	0.00
81	CP	Chlorobenzene	1.031	0.861	16.5	96	0.00
82	C	1,1,1,2-Tetrachloroethane	0.383	0.327	14.6	95	0.00
83	CP	Ethylbenzene	1.753	1.385	21.0#	97	0.00
84	CP	m/p-Xylene	1.389	1.075	22.6#	96	0.00
85	C	Nonane	0.254	0.233	8.3	124	0.00
86	C	Styrene	1.102	0.966	12.3	98	0.00
87	CP	o-Xylene	1.517	1.214	20.0	95	0.00
88	C	Cyclohexanone	0.068	0.000	100.0#	0#	0.00
89	CP	Bromoform	0.298	0.270	9.4	90	0.00
90	C	Isopropylbenzene	1.744	1.395	20.0#	96	0.00
91	S	Bromofluorobenzene	0.503	0.496	1.4	97	0.00
92	C	Bromobenzene	0.768	0.638	16.9	94	0.00
93	CP	1,1,2,2-Tetrachloroethane	0.776	0.657	15.3	102	0.00
94	C	1,2,3-Trichloropropane	0.225	0.184	18.2	95	0.00
95	C	trans-1,4-Dichloro-2-butene	0.228	0.186	18.4	89	0.00
96	C	n-Propylbenzene	2.136	1.676	21.5#	96	0.00
97	C	2-Chlorotoluene	1.237	0.982	20.6#	96	0.00
98	C	4-Chlorotoluene	1.391	1.129	18.8	95	0.00
99	C	1,3,5-Trimethylbenzene	1.469	1.179	19.7	96	0.00
100	C	tert-Butylbenzene	1.059	0.817	22.9#	93	0.00
101	C	1,2,4-Trimethylbenzene	1.542	1.171	24.1#	92	0.00
102	C	sec-Butylbenzene	1.778	1.407	20.9#	94	0.00
103	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
104	C	1,3-Dichlorobenzene	1.711	1.464	14.4	98	0.00
105	C	p-Isopropyltoluene	2.901	2.452	15.5	96	0.00

1st /S/ JS 11/30/20
2nd /S/ BG 12/08/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112720.D
Acq On : 27 Nov 2020 5:26 pm
Operator : js
Sample : ICV
Misc : IS 200-21532
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 27 23:44:00 2020
Quant Method : \\NAHLLW7016\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Fri Nov 27 23:43:37 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
106	C	1,4-Dichlorobenzene	1.662	1.372	17.4	95	0.00
107	C	1,2,3-Trimethylbenzene	3.005	2.445	18.6	95	0.00
108	C	Benzyl chloride	2.705	2.306	14.8	95	0.00
109	C	1,2-Dichlorobenzene	1.703	1.396	18.0	95	0.00
110	C	n-Butylbenzene	2.523	2.206	12.6	93	0.00
111	C	Hexachloroethane	0.505	0.475	5.9	92	0.00
112	C	1,2-Dibromo-3-chloropropane	0.449	0.414	7.8	95	0.00
113	C	1,3,5-Trichlorobenzene	1.163	0.026	97.8#	2#	0.00
114	C	1,2,4-Trichlorobenzene	1.232	1.024	16.9	92	0.00
115	C	Hexachlorobutadiene	0.382	0.336	12.0	94	0.00
116	C	Naphthalene	4.528	3.586	20.8#	94	0.00
117	C	1,2,3-Trichlorobenzene	1.156	0.945	18.3	91	0.00
118	C	2-Methylnaphthalene	2.607	0.040	98.5#	2#	0.00
119	C	1-Methylnaphthalene	2.359	0.029	98.8#	1#	0.00
120	I	Ethyl-d5-Acetate-d3	1.000	1.000	0.0	96	0.00
121	T	2-Propanone	0.869	0.673	22.6	104	0.00
122	C	Isopropyl Alcohol	0.292	0.222	24.0#	101	0.00
123	T	Acetic Ether	2.130	1.809	15.1	91	0.00
124	T	Isopropyl Acetate	0.751	0.634	15.6	90	0.00
125	T	Amyl Acetate	2.929	2.266	22.6	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 42

Starting sequence Fri Nov 27 12:10:29 2020

Instrument Name: VMS8
Sequence File: C:\msdchem\1\sequence\VMS8-201127.s
Comment:
Operator: js
Data Path: C:\MSDCHEM\1\DATA\VMS8-201127\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
1)	Sample	1	20112701	BFB	BFB_TUNE1-201127
	Sequence Table edit performed Fri Nov 27 12:23:22 2020				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
2)	Sample	1	20112702	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
3)	Sample	2	20112703	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
4)	Sample	3	20112704	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
5)	Sample	4	20112705	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
6)	Sample	5	20112706	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
7)	Sample	6	20112707	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
8)	Sample	7	20112708	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
9)	Sample	8	20112709	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
10)	Sample	9	20112710	8GO8260B	VBLKW1-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
11)	Sample	10	20112711	8GO8260B	0.4PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
12)	Sample	11	20112712	8GO8260B	0.6PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
13)	Sample	12	20112713	8GO8260B	2PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
14)	Sample	13	20112714	8GO8260B	4PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
15)	Sample	14	20112715	8GO8260B	10PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
16)	Sample	15	20112716	8GO8260B	40PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
17)	Sample	16	20112717	8GO8260B	70PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
18)	Sample	17	20112718	8GO8260B	100PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
19)	Sample	18	20112719	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
20)	Sample	19	20112720	8GO8260B	ICV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
21)	Sample	20	20112721	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
22)	Sample	21	20112722	BFB	BFB_TUNE2-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
23)	Sample	22	20112723	8GO8260B	VCCV1-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
24)	Sample	23	20112724	8GO8260B	VCCV2-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
25)	Sample	24	20112725	8GO8260B	VLCSW1-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
26)	Sample	25	20112726	8GO8260B	LCS-
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
27)	Sample	26	20112727	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
28)	Sample	27	20112728	8GO8260B	VBLKW2-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
29)	Sample	28	20112729	8GO8260B	MBLK-
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
30)	Sample	29	20112730	8GO8260B	20111800-05A
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
31)	Sample	30	20112731	8GO8260B	20111585-11A
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
32)	Sample	31	20112732	8GO8260B	20111800-01F

Limits fail: Pump Oil (Days), Tune Time (Hours)
33) Sample 32 20112733 8GO8260B 20111800-02F DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
34) Sample 33 20112734 8GO8260B 20111800-03F
Limits fail: Pump Oil (Days), Tune Time (Hours)
35) Sample 34 20112735 8GO8260B 20111800-04F DF500
Limits fail: Pump Oil (Days), Tune Time (Hours)
36) Sample 35 20112736 8GO8260B 20111585-01A DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
37) Sample 36 20112737 8GO8260B 20111585-02A
Limits fail: Pump Oil (Days), Tune Time (Hours)
38) Sample 37 20112738 8GO8260B 20111585-03A
Limits fail: Pump Oil (Days), Tune Time (Hours)
39) Sample 38 20112739 8GO8260B 20111585-04A
Limits fail: Pump Oil (Days), Tune Time (Hours)
40) Sample 39 20112740 8GO8260B 20111585-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
41) Sample 40 20112741 8GO8260B 20111585-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
42) Sample 41 20112742 8GO8260B 20111585-07A
Limits fail: Pump Oil (Days), Tune Time (Hours)
43) Sample 42 20112743 8GO8260B 20111585-08A
Limits fail: Pump Oil (Days), Tune Time (Hours)
44) Sample 43 20112744 8GO8260B 20111585-09A
Limits fail: Pump Oil (Days), Tune Time (Hours)
45) Sample 44 20112745 8GO8260B 20111585-10A
Limits fail: Pump Oil (Days), Tune Time (Hours)
46) Sample 45 20112746 8GO8260B 20111720-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
47) Sample 46 20112747 8GO8260B 20111720-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
48) Sample 47 20112748 8GO8260B 20111720-01A
Limits fail: Pump Oil (Days), Tune Time (Hours)
49) Sample 48 20112749 8GO8260B 20111764-04A DF20
Limits fail: Pump Oil (Days), Tune Time (Hours)
50) Sample 49 20112750 8GO8260B 20111800-04F MS DF500
Limits fail: Pump Oil (Days), Tune Time (Hours)
51) Sample 50 20112751 8GO8260B 20111800-04F MSD DF500
Limits fail: Pump Oil (Days), Tune Time (Hours)
52) Sample 51 20112752 8GO8260B 20111720-06A MS
Limits fail: Pump Oil (Days), Tune Time (Hours)
53) Sample 52 20112753 8GO8260B 20111720-06A MSD
Limits fail: Pump Oil (Days), Tune Time (Hours)
54) Sample 53 20112754 8GO8260B BLK
Limits fail: Pump Oil (Days), Tune Time (Hours)
55) Sample 54 20112755 BFB BFB_TUNE3-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
56) Sample 55 20112756 8GO8260B VCCV3-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
57) Sample 56 20112757 8GO8260B VCCV4-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
58) Sample 57 20112758 8GO8260B VLCSW2-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
59) Sample 58 20112759 8GO8260B LCS-
Limits fail: Pump Oil (Days), Tune Time (Hours)
60) Sample 59 20112760 8GO8260B BLK
Limits fail: Pump Oil (Days), Tune Time (Hours)
61) Sample 60 20112761 8GO8260B VBLKW3-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
62) Sample 61 20112762 8GO8260B MBLK-
Limits fail: Pump Oil (Days), Tune Time (Hours)
63) Sample 62 20112763 8GO8260B 20111623-07A DF2000
Limits fail: Pump Oil (Days), Tune Time (Hours)
64) Sample 63 20112764 8GO8260B 20111724-11A
Limits fail: Pump Oil (Days), Tune Time (Hours)
65) Sample 64 20112765 8GO8260B 20111700-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
66) Sample 65 20112766 8GO8260B 20111700-01A DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
67) Sample 66 20112767 8GO8260B 20111700-02A DF100
Limits fail: Pump Oil (Days), Tune Time (Hours)
68) Sample 67 20112768 8GO8260B 20111700-03A
Limits fail: Pump Oil (Days), Tune Time (Hours)
69) Sample 68 20112769 8GO8260B 20111700-04A
Limits fail: Pump Oil (Days), Tune Time (Hours)
70) Sample 69 20112770 8GO8260B 20111700-05A

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Limits fail: Pump Oil (Days), Tune Time (Hours)
 71) Sample         70  20112771  8GO8260B  20111724-01A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 72) Sample         71  20112772  8GO8260B  20111724-02A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 73) Sample         72  20112773  8GO8260B  20111724-03A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 74) Sample         73  20112774  8GO8260B  20111724-04A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 75) Sample         74  20112775  8GO8260B  20111724-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 76) Sample         75  20112776  8GO8260B  20111724-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 77) Sample         76  20112777  8GO8260B  20111724-07A DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 78) Sample         77  20112778  8GO8260B  20111724-08A DF20
Limits fail: Pump Oil (Days), Tune Time (Hours)
 79) Sample         78  20112779  8GO8260B  20111724-09A DF20
Limits fail: Pump Oil (Days), Tune Time (Hours)
 80) Sample         79  20112780  8GO8260B  20111724-10A DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 81) Sample         80  20112781  8GO8260B  20111825-21A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 82) Sample          1  20112782  8GO8260B  20111825-22A DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
 83) Sample          2  20112783  8GO8260B  20111825-22A MS DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
 84) Sample          3  20112784  8GO8260B  20111825-22A MSD DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
 85) Sample          4  20112785  8GO8260B  BLK

Sequence completed Sat Nov 28 11:07:04 2020

  C:\MSDCHEM\1\DATA\VMS8-201127\2020 Nov 27 1210 Quality Log.LOG
  C:\MSDCHEM\1\DATA\VMS8-201127\2020 Nov 27 1210 Sequence Log .LOG
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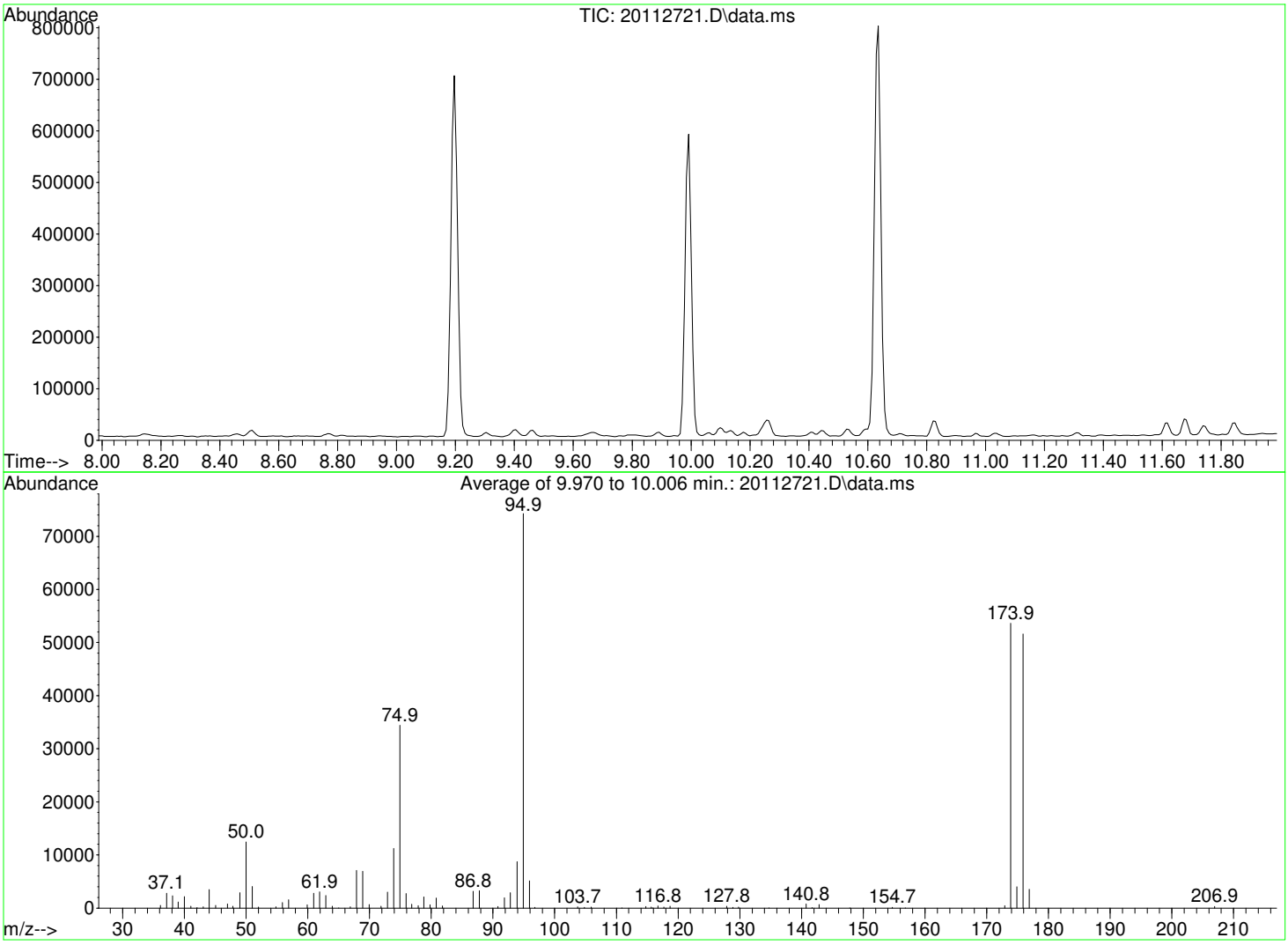
1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112721.D
Acq On : 27 Nov 2020 5:42 pm
Operator : js
Sample : BFB_TUNE2-201127
Misc : IS 200-21532
ALS Vial : 20 Sample Multiplier: 1

Integration File: 8260.P

Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration
Last Update : Sat Nov 28 12:03:56 2020



Spectrum Information: Average of 9.970 to 10.006 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.7	12443	PASS
75	95	30	60	46.3	34410	PASS
95	95	100	100	100.0	74305	PASS
96	95	5	9	6.9	5117	PASS
173	174	0.00	2	0.8	445	PASS
174	95	50	120	72.2	53630	PASS
175	174	5	9	7.5	4030	PASS
176	174	95	101	96.3	51627	PASS
177	176	5	9	6.8	3536	PASS

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	20.000	20.000	0.0	96	0.00
2	C	Dichlorodifluoromethane	40.000	36.792	8.0	89	0.00
3	C	Dichlorofluoromethane	40.000	39.426	1.4	95	0.00
4	CP	Chloromethane	40.000	42.657	-6.6	97	0.00
5	C	1,3-Butadiene	40.000	68.928	-72.3#	0	0.00
6	C	Vinyl chloride	40.000	38.848	2.9	93	0.00
7	C	Bromomethane	40.000	41.635	-4.1	99	0.00
8	C	Chloroethane	40.000	42.288	-5.7	100	0.00
9	C	Trichlorofluoromethane	40.000	37.822	5.4	93	0.00
10	C	Ethanol	800.000	437.254	45.3#	54	0.00
11	C	Ethyl ether	40.000	38.540	3.7	90	0.00
12	C	Acrolein	40.000	36.564	8.6	90	0.00
13	C	1,1-Dichloroethene	40.000	40.404	-1.0	93	0.00
14	C	1,1,2-Trichlorotrifluoroeth	40.000	36.284	9.3	91	0.00
15	C	Methyl iodide	40.000	0.000	100.0#	0	0.00
16	C	Acetone	40.000	42.247	-5.6	102	0.00
17	C	Chloroprene	40.000	38.887	2.8	93	0.00
18	C	Carbon disulfide	40.000	38.811	3.0	92	0.00
19	C	2-Propanol	800.000	848.376	-6.0	101	0.00
20	C	Allyl chloride	40.000	39.241	1.9	92	0.00
21	C	Methyl acetate	40.000	42.275	-5.7	100	0.00
22	C	Acetonitrile	40.000	39.242	1.9	92	0.00
23	C	Methylene chloride	40.000	39.160	2.1	93	0.00
24	C	trans-1,2-Dichloroethene	40.000	40.137	-0.3	94	0.00
25	C	t-Butanol	200.000	207.655	-3.8	100	0.00
26	C	Acrylonitrile	40.000	38.360	4.1	94	0.00
27	CP	Methyl tert-butyl ether	40.000	42.090	-5.2	97	0.00
28	C	Hexane	40.000	37.256	6.9	91	0.00
29	CP	1,1-Dichloroethane	40.000	38.908	2.7	92	0.00
30	CP	Diisopropyl ether	40.000	41.751	-4.4	97	0.00
31	C	Vinyl acetate	40.000	34.552	13.6	87	0.00
32	C	Methylcyclopentane	40.000	38.819	3.0	91	0.00
33	CP	Ethyl tert butyl ether	40.000	40.916	-2.3	94	0.00
34	C	2,2-Dichloropropane	40.000	38.379	4.1	90	0.00
35	C	cis-1,2-Dichloroethene	40.000	40.163	-0.4	95	0.00
36	C	2-Butanone	40.000	41.208	-3.0	98	0.00
37	C	Ethyl Acetate	40.000	40.523	-1.3	94	0.00
38	C	Methyl acrylate	40.000	38.484	3.8	93	0.00
39	C	Propionitrile	40.000	38.029	4.9	89	0.00
40	C	Bromochloromethane	40.000	38.374	4.1	92	0.00
41	C	Tetrahydrofuran	40.000	39.473	1.3	95	0.00
42	C	Methacrylonitrile	40.000	38.718	3.2	92	0.00
43	C	Chloroform	40.000	39.425	1.4	93	0.00
44	C	Cyclohexane	40.000	38.678	3.3	93	0.00
45	I	1,4-Difluorobenzene	20.000	20.000	0.0	98	0.00
46	C	1,1,1-Trichloroethane	40.000	39.327	1.7	94	0.00
47	S	Dibromofluoromethane	20.000	19.506	2.5	94	0.00
48	C	Carbon tetrachloride	40.000	40.546	-1.4	96	0.00
49	C	1,1-Dichloropropene	40.000	39.599	1.0	94	0.00
50	S	1,2-Dichloroethane-d4	20.000	19.873	0.6	100	0.00
51	C	1,2-Dichloroethane	40.000	38.432	3.9	92	0.00
52	CP	Benzene	40.000	40.407	-1.0	94	0.00
53	CP	Tertiaryamylmethylether	40.000	40.840	-2.1	95	0.00

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
54	C	Isobutyl Alcohol	40.000	41.543	-3.9	97	0.00
55	C	Heptane	40.000	37.022	7.4	89	0.00
56	C	1,4-Dioxane	4000.000	3886.194	2.8	93	0.00
57	C	Methylcyclohexane	40.000	38.039	4.9	93	0.00
58	C	n-Butanol	400.000	407.728	-1.9	100	0.00
59	C	Trichloroethene	40.000	39.783	0.5	95	0.00
60	C	1,2-Dichloropropane	40.000	38.982	2.5	93	0.00
61	C	Dibromomethane	40.000	38.118	4.7	92	0.00
62	C	Methyl methacrylate	40.000	39.353	1.6	93	0.00
63	C	Bromodichloromethane	40.000	38.535	3.7	93	0.00
64	C	2-Chloroethyl vinyl ether	40.000	40.519	-1.3	94	0.00
65	C	2-Nitropropane	40.000	39.776	0.6	97	0.00
66	C	cis-1,3-Dichloropropene	40.000	39.585	1.0	94	0.00
67	I	Chlorobenzene-d5	20.000	20.000	0.0	97	0.00
68	C	4-Methyl-2-pentanone	40.000	40.466	-1.2	96	0.00
69	S	Toluene-d8	20.000	19.497	2.5	97	0.00
70	CP	Toluene	40.000	41.407	-3.5	94	0.00
71	C	trans-1,3-Dichloropropene	40.000	40.609	-1.5	93	0.00
72	C	Chloropicrin	400.000	0.000	100.0#	0	0.00
73	C	Ethyl methacrylate	40.000	39.988	0.0	93	0.00
74	C	1,1,2-Trichloroethane	40.000	38.933	2.7	91	0.00
75	C	Tetrachloroethene	40.000	40.526	-1.3	95	0.00
76	C	1,3-Dichloropropane	40.000	39.367	1.6	92	0.00
77	C	2-Hexanone	40.000	41.989	-5.0	98	0.00
78	C	Chlorodibromomethane	40.000	39.279	1.8	94	0.00
79	C	Butyl acetate	40.000	42.579	-6.4	96	0.00
80	C	1,2-Dibromoethane	40.000	38.086	4.8	93	0.00
81	CP	Chlorobenzene	40.000	40.850	-2.1	94	0.00
82	C	1,1,1,2-Tetrachloroethane	40.000	39.746	0.6	93	0.00
83	CP	Ethylbenzene	40.000	37.782	5.5	93	0.00
84	CP	m/p-Xylene	80.000	75.615	5.5	95	0.00
85	C	Nonane	40.000	38.519	3.7	91	0.00
86	C	Styrene	40.000	38.331	4.2	94	0.00
87	CP	o-Xylene	40.000	38.327	4.2	94	0.00
88	C	Cyclohexanone	200.000	224.144	-12.1	100	0.00
89	CP	Bromoform	40.000	37.278	6.8	93	0.00
90	C	Isopropylbenzene	40.000	37.767	5.6	93	0.00
91	S	Bromofluorobenzene	20.000	19.453	2.7	96	0.00
92	C	Bromobenzene	40.000	40.927	-2.3	93	0.00
93	CP	1,1,2,2-Tetrachloroethane	40.000	40.427	-1.1	92	0.00
94	C	1,2,3-Trichloropropane	40.000	39.990	0.0	95	0.00
95	C	trans-1,4-Dichloro-2-butene	40.000	39.539	1.2	92	0.00
96	C	n-Propylbenzene	40.000	37.469	6.3	93	0.00
97	C	2-Chlorotoluene	40.000	42.103	-5.3	95	0.00
98	C	4-Chlorotoluene	40.000	37.658	5.9	94	0.00
99	C	1,3,5-Trimethylbenzene	40.000	37.595	6.0	94	0.00
100	C	tert-Butylbenzene	40.000	40.877	-2.2	93	0.00
101	C	1,2,4-Trimethylbenzene	40.000	37.749	5.6	93	0.00
102	C	sec-Butylbenzene	40.000	37.423	6.4	93	0.00
103	I	1,4-Dichlorobenzene-d4	20.000	20.000	0.0	91	0.00
104	C	1,3-Dichlorobenzene	40.000	42.710	-6.8	93	0.00
105	C	p-Isopropyltoluene	40.000	44.049	-10.1	93	0.00

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
106	C	1,4-Dichlorobenzene	40.000	43.306	-8.3	95	0.00
107	C	1,2,3-Trimethylbenzene	40.000	44.491	-11.2	92	0.00
108	C	Benzyl chloride	40.000	40.629	-1.6	94	0.00
109	C	1,2-Dichlorobenzene	40.000	42.971	-7.4	93	0.00
110	C	n-Butylbenzene	40.000	40.106	-0.3	92	0.00
111	C	Hexachloroethane	40.000	39.595	1.0	93	0.00
112	C	1,2-Dibromo-3-chloropropane	40.000	42.966	-7.4	89	0.00
113	C	1,3,5-Trichlorobenzene	40.000	40.469	-1.2	88	0.00
114	C	1,2,4-Trichlorobenzene	40.000	40.965	-2.4	90	0.00
115	C	Hexachlorobutadiene	40.000	40.393	-1.0	94	0.00
116	C	Naphthalene	40.000	40.681	-1.7	93	0.00
117	C	1,2,3-Trichlorobenzene	40.000	41.555	-3.9	93	0.00
118	C	2-Methylnaphthalene	40.000	40.745	-1.9	93	0.00
119	C	1-Methylnaphthalene	40.000	41.114	-2.8	93	0.00
120	I	Ethyl-d5-Acetate-d3	20.000	20.000	0.0	99	0.00
121	T	2-Propanone	40.000	41.155	-2.9	102	0.00
122	C	Isopropyl Alcohol	800.000	831.327	-3.9	101	0.00
123	T	Acetic Ether	40.000	38.546	3.6	94	0.00
124	T	Isopropyl Acetate	40.000	38.206	4.5	94	0.00
125	T	Amyl Acetate	40.000	38.694	3.3	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 4

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	96	0.00
2	C	Dichlorodifluoromethane	0.518	0.468	9.7	89	0.00
3	C	Dichlorofluoromethane	1.355	1.116	17.6	95	0.00
4	CP	Chloromethane	1.231	1.169	5.0	97	0.00
5	C	1,3-Butadiene	0.000	0.003	0.0	0#	0.00
6	C	Vinyl chloride	0.712	0.651	8.6	93	0.00
7	C	Bromomethane	0.207	0.096	53.6#	99	0.00
8	C	Chloroethane	0.279	0.311	-11.5	100	0.00
9	C	Trichlorofluoromethane	0.792	0.749	5.4	93	0.00
10	C	Ethanol	0.072	0.031	56.9#	54	0.00
11	C	Ethyl ether	0.514	0.459	10.7	90	0.00
12	C	Acrolein	0.106	0.015	85.8#	90	0.00
13	C	1,1-Dichloroethene	0.829	0.743	10.4	93	0.00
14	C	1,1,2-Trichlorotrifluoroeth	0.369	0.334	9.5	91	0.00
15	C	Methyl iodide	0.000	0.037	0.0	0#	0.00
16	C	Acetone	0.455	0.350	23.1#	102	0.00
17	C	Chloroprene	0.896	0.758	15.4	93	0.00
18	C	Carbon disulfide	1.736	1.428	17.7	92	0.00
19	C	2-Propanol	0.153	0.118	22.9#	101	0.00
20	C	Allyl chloride	0.906	0.828	8.6	92	0.00
21	C	Methyl acetate	0.921	0.807	12.4	100	0.00
22	C	Acetonitrile	0.965	0.828	14.2	92	0.00
23	C	Methylene chloride	0.864	0.758	12.3	93	0.00
24	C	trans-1,2-Dichloroethene	0.857	0.727	15.2	94	0.00
25	C	t-Butanol	0.264	0.232	12.1	100	0.00
26	C	Acrylonitrile	0.420	0.367	12.6	94	0.00
27	CP	Methyl tert-butyl ether	1.983	1.734	12.6	97	0.00
28	C	Hexane	0.803	0.623	22.4#	91	0.00
29	CP	1,1-Dichloroethane	1.193	1.014	15.0	92	0.00
30	CP	Diisopropyl ether	1.801	1.595	11.4	97	0.00
31	C	Vinyl acetate	0.132	0.107	18.9	87	0.00
32	C	Methylcyclopentane	1.320	1.107	16.1	91	0.00
33	CP	Ethyl tert butyl ether	1.980	1.784	9.9	94	0.00
34	C	2,2-Dichloropropane	1.021	0.823	19.4	90	0.00
35	C	cis-1,2-Dichloroethene	1.025	0.881	14.0	95	0.00
36	C	2-Butanone	0.663	0.519	21.7#	98	0.00
37	C	Ethyl Acetate	1.170	0.992	15.2	94	0.00
38	C	Methyl acrylate	1.025	0.842	17.9	93	0.00
39	C	Propionitrile	0.056	0.053	5.4	89	0.00
40	C	Bromochloromethane	0.558	0.436	21.9#	92	0.00
41	C	Tetrahydrofuran	0.476	0.366	23.1#	95	0.00
42	C	Methacrylonitrile	0.874	0.712	18.5	92	0.00
43	C	Chloroform	1.225	1.049	14.4	93	0.00
44	C	Cyclohexane	1.214	0.820	32.5#	93	0.00
45	I	1,4-Difluorobenzene	1.000	1.000	0.0	98	0.00
46	C	1,1,1-Trichloroethane	0.575	0.482	16.2	94	0.00
47	S	Dibromofluoromethane	0.320	0.312	2.5	94	0.00
48	C	Carbon tetrachloride	0.473	0.426	9.9	96	0.00
49	C	1,1-Dichloropropene	0.501	0.409	18.4	94	0.00
50	S	1,2-Dichloroethane-d4	0.387	0.385	0.5	100	0.00
51	C	1,2-Dichloroethane	0.540	0.442	18.1	92	0.00
52	CP	Benzene	1.491	1.211	18.8	94	0.00
53	CP	Tertiaryamylmethylether	1.097	0.930	15.2	95	0.00

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	C	Isobutyl Alcohol	1.027	0.973	5.3	97	0.00
55	C	Heptane	0.413	0.295	28.6#	89	0.00
56	C	1,4-Dioxane	0.012	0.010	16.7	93	0.00
57	C	Methylcyclohexane	0.562	0.459	18.3	93	0.00
58	C	n-Butanol	0.027	0.028	-3.7	100	0.00
59	C	Trichloroethene	0.378	0.334	11.6	95	0.00
60	C	1,2-Dichloropropane	0.412	0.329	20.1#	93	0.00
61	C	Dibromomethane	0.272	0.228	16.2	92	0.00
62	C	Methyl methacrylate	0.473	0.382	19.2	93	0.00
63	C	Bromodichloromethane	0.523	0.441	15.7	93	0.00
64	C	2-Chloroethyl vinyl ether	0.195	0.170	12.8	94	0.00
65	C	2-Nitropropane	0.198	0.182	8.1	97	0.00
66	C	cis-1,3-Dichloropropene	0.658	0.557	15.3	94	0.00
67	I	Chlorobenzene-d5	1.000	1.000	0.0	97	0.00
68	C	4-Methyl-2-pentanone	0.674	0.593	12.0	96	0.00
69	S	Toluene-d8	1.238	1.207	2.5	97	0.00
70	CP	Toluene	1.645	1.334	18.9	94	0.00
71	C	trans-1,3-Dichloropropene	0.665	0.563	15.3	93	0.00
72	C	Chloropicrin	0.000	0.016	0.0	0#	0.00
73	C	Ethyl methacrylate	0.739	0.604	18.3	93	0.00
74	C	1,1,2-Trichloroethane	0.426	0.345	19.0	91	0.00
75	C	Tetrachloroethene	0.372	0.330	11.3	95	0.00
76	C	1,3-Dichloropropane	0.728	0.578	20.6#	92	0.00
77	C	2-Hexanone	0.563	0.487	13.5	98	0.00
78	C	Chlorodibromomethane	0.430	0.381	11.4	94	0.00
79	C	Butyl acetate	0.926	0.778	16.0	96	0.00
80	C	1,2-Dibromoethane	0.449	0.334	25.6#	93	0.00
81	CP	Chlorobenzene	1.031	0.847	17.8	94	0.00
82	C	1,1,1,2-Tetrachloroethane	0.383	0.319	16.7	93	0.00
83	CP	Ethylbenzene	1.753	1.334	23.9#	93	0.00
84	CP	m/p-Xylene	1.389	1.055	24.0#	95	0.00
85	C	Nonane	0.254	0.170	33.1#	91	0.00
86	C	Styrene	1.102	0.922	16.3	94	0.00
87	CP	o-Xylene	1.517	1.198	21.0#	94	0.00
88	C	Cyclohexanone	0.068	0.057	16.2	100	0.00
89	CP	Bromoform	0.298	0.278	6.7	93	0.00
90	C	Isopropylbenzene	1.744	1.356	22.2#	93	0.00
91	S	Bromofluorobenzene	0.503	0.489	2.8	96	0.00
92	C	Bromobenzene	0.768	0.628	18.2	93	0.00
93	CP	1,1,2,2-Tetrachloroethane	0.776	0.589	24.1#	92	0.00
94	C	1,2,3-Trichloropropane	0.225	0.184	18.2	95	0.00
95	C	trans-1,4-Dichloro-2-butene	0.228	0.190	16.7	92	0.00
96	C	n-Propylbenzene	2.136	1.619	24.2#	93	0.00
97	C	2-Chlorotoluene	1.237	0.962	22.2#	95	0.00
98	C	4-Chlorotoluene	1.391	1.112	20.1#	94	0.00
99	C	1,3,5-Trimethylbenzene	1.469	1.144	22.1#	94	0.00
100	C	tert-Butylbenzene	1.059	0.820	22.6#	93	0.00
101	C	1,2,4-Trimethylbenzene	1.542	1.188	23.0#	93	0.00
102	C	sec-Butylbenzene	1.778	1.382	22.3#	93	0.00
103	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	91	0.00
104	C	1,3-Dichlorobenzene	1.711	1.450	15.3	93	0.00
105	C	p-Isopropyltoluene	2.901	2.440	15.9	93	0.00

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
106	C	1,4-Dichlorobenzene	1.662	1.415	14.9	95	0.00
107	C	1,2,3-Trimethylbenzene	3.005	2.463	18.0	92	0.00
108	C	Benzyl chloride	2.705	2.362	12.7	94	0.00
109	C	1,2-Dichlorobenzene	1.703	1.423	16.4	93	0.00
110	C	n-Butylbenzene	2.523	2.269	10.1	92	0.00
111	C	Hexachloroethane	0.505	0.500	1.0	93	0.00
112	C	1,2-Dibromo-3-chloropropane	0.449	0.399	11.1	89	0.00
113	C	1,3,5-Trichlorobenzene	1.163	1.007	13.4	88	0.00
114	C	1,2,4-Trichlorobenzene	1.232	1.030	16.4	90	0.00
115	C	Hexachlorobutadiene	0.382	0.345	9.7	94	0.00
116	C	Naphthalene	4.528	3.674	18.9	93	0.00
117	C	1,2,3-Trichlorobenzene	1.156	1.000	13.5	93	0.00
118	C	2-Methylnaphthalene	2.607	2.232	14.4	93	0.00
119	C	1-Methylnaphthalene	2.359	2.071	12.2	93	0.00
120	I	Ethyl-d5-Acetate-d3	1.000	1.000	0.0	99	0.00
121	T	2-Propanone	0.869	0.638	26.6#	102	0.00
122	C	Isopropyl Alcohol	0.292	0.216	26.0#	101	0.00
123	T	Acetic Ether	2.130	1.808	15.1	94	0.00
124	T	Isopropyl Acetate	0.751	0.647	13.8	94	0.00
125	T	Amyl Acetate	2.929	2.348	19.8	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 28

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	213683	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	391573	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	367126	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	172806	20.00	ug/L		0.00
120) Ethyl-d5-Acetate-d3	3.244	46	117240	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	122057	19.51	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 97.55%				
50) 1,2-Dichloroethane-d4	4.362	65	150768	19.87	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 99.35%				
69) Toluene-d8	7.836	98	443043	19.50	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 97.50%				
91) Bromofluorobenzene	9.992	95	179530	19.45	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 97.25%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	199883	36.79	ug/L		99
3) Dichlorofluoromethane	1.446	67	476838	39.43	ug/L		99
4) Chloromethane	1.052	50	499437	42.66	ug/L		99
5) 1,3-Butadiene	1.124	54	1253	68.93	ug/L	#	83
6) Vinyl chloride	1.110	62	278017	38.85	ug/L		100
7) Bromomethane	1.267	96	41178	41.63	ug/L		78
8) Chloroethane	1.317	64	132991m	42.29	ug/L		
9) Trichlorofluoromethane	1.468	101	320144	37.82	ug/L		99
10) Ethanol	1.640	45	265237	437.25	ug/L	#	68
11) Ethyl ether	1.640	59	196189	38.54	ug/L		99
12) Acrolein	1.733	56	6349	36.56	ug/L		92
13) 1,1-Dichloroethene	1.783	61	317592	40.40	ug/L		100
14) 1,1,2-Trichlorotrifluo...	1.790	151	142861	36.28	ug/L		99
16) Acetone	1.826	43	149598	42.25	ug/L		98
17) Chloroprene	2.786	53	323999	38.89	ug/L		98
18) Carbon disulfide	1.933	76	610432	38.81	ug/L		100
19) 2-Propanol	1.933	45	1011773	848.38	ug/L		99
20) Allyl chloride	2.034	41	353761	39.24	ug/L		99
21) Methyl acetate	2.034	43	344695	42.27	ug/L		99
22) Acetonitrile	2.034	41	353761	39.24	ug/L		100
23) Methylene chloride	2.134	49	323750	39.16	ug/L		99
24) trans-1,2-Dichloroethene	2.342	61	310759	40.14	ug/L		99
25) t-Butanol	2.241	59	494912	207.66	ug/L		99
26) Acrylonitrile	2.320	53	157022	38.36	ug/L		99
27) Methyl tert-butyl ether	2.342	73	741028	42.09	ug/L		100
28) Hexane	2.571	57	266427	37.26	ug/L		100
29) 1,1-Dichloroethane	2.721	63	433271	38.91	ug/L		98
30) Diisopropyl ether	2.764	45	681643	41.75	ug/L		93
31) Vinyl acetate	2.736	86	45853	34.55	ug/L	#	93
32) Methylcyclopentane	3.165	56	473075	38.82	ug/L		99
33) Ethyl tert butyl ether	3.122	59	762414	40.92	ug/L		99
34) 2,2-Dichloropropane	3.294	77	351659	38.38	ug/L		99
35) cis-1,2-Dichloroethene	3.294	61	376688	40.16	ug/L		98
36) 2-Butanone	3.309	43	221622	41.21	ug/L		99
37) Ethyl Acetate	3.359	43	423967	40.52	ug/L		100
38) Methyl acrylate	3.402	55	359913	38.48	ug/L		99
39) Propionitrile	3.961	54	22610	38.03	ug/L		96
40) Bromochloromethane	3.567	49	186308	38.37	ug/L		99
41) Tetrahydrofuran	3.588	42	156227	39.47	ug/L		99
42) Methacrylonitrile	3.545	41	304115	38.72	ug/L		100

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) Chloroform	3.710	83	448436	39.43	ug/L		99
44) Cyclohexane	3.961	56	350469	38.68	ug/L		98
46) 1,1,1-Trichloroethane	3.889	97	377390	39.33	ug/L		99
48) Carbon tetrachloride	4.082	117	333834	40.55	ug/L		99
49) 1,1-Dichloropropene	4.104	75	320659	39.60	ug/L		99
51) 1,2-Dichloroethane	4.476	62	345899	38.43	ug/L		98
52) Benzene	4.369	78	948236	40.41	ug/L		99
53) Tertiaryamylmethylether	4.627	73	728643	40.84	ug/L	#	80
54) Isobutyl Alcohol	4.555	43	761892	41.54	ug/L		97
55) Heptane	4.899	43	231124	37.02	ug/L		99
56) 1,4-Dioxane	6.195	88	812919	3886.19	ug/L		99
57) Methylcyclohexane	5.873	83	359759	38.04	ug/L		100
58) n-Butanol	5.565	56	215750	407.73	ug/L		99
59) Trichloroethene	5.479	130	261961	39.78	ug/L		99
60) 1,2-Dichloropropane	5.973	63	257414	38.98	ug/L		99
61) Dibromomethane	6.138	93	178244	38.12	ug/L		98
62) Methyl methacrylate	6.245	41	299021	39.35	ug/L		99
63) Bromodichloromethane	6.589	83	345711	38.53	ug/L		99
64) 2-Chloroethyl vinyl ether	7.320	43	132963	40.52	ug/L		99
65) 2-Nitropropane	7.126	43	142829	39.78	ug/L		97
66) cis-1,3-Dichloropropene	7.499	75	435891	39.59	ug/L		100
68) 4-Methyl-2-pentanone	7.771	43	435609	40.47	ug/L		99
70) Toluene	7.922	91	979723	41.41	ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	413174	40.61	ug/L		100
73) Ethyl methacrylate	8.358	69	443123	39.99	ug/L		100
74) 1,1,2-Trichloroethane	8.437	97	252969	38.93	ug/L		98
75) Tetrachloroethene	8.459	166	242254	40.53	ug/L		98
76) 1,3-Dichloropropane	8.573	76	424103	39.37	ug/L		98
77) 2-Hexanone	8.666	43	357332	41.99	ug/L		99
78) Chlorodibromomethane	8.752	129	279710	39.28	ug/L		98
79) Butyl acetate	8.803	43	571057	42.58	ug/L		99
80) 1,2-Dibromoethane	8.817	107	245083	38.09	ug/L		100
81) Chlorobenzene	9.218	112	621692	40.85	ug/L		99
82) 1,1,1,2-Tetrachloroethane	9.297	131	234341	39.75	ug/L		100
83) Ethylbenzene	9.304	91	979780	37.78	ug/L		100
84) m/p-Xylene	9.397	91	1549010	75.61	ug/L		99
85) Nonane	9.462	43	124893	38.52	ug/L		97
86) Styrene	9.669	104	676828	38.33	ug/L		98
87) o-Xylene	9.648	91	879932	38.33	ug/L		100
88) Cyclohexanone	9.934	55	208062	224.14	ug/L		99
89) Bromoform	9.777	173	203925	37.28	ug/L		99
90) Isopropylbenzene	9.884	105	995917	37.77	ug/L		100
92) Bromobenzene	10.056	77	461241	40.93	ug/L		99
93) 1,1,2,2-Tetrachloroethane	10.092	83	432395	40.43	ug/L		100
94) 1,2,3-Trichloropropane	10.113	110	135039	39.99	ug/L		97
95) trans-1,4-Dichloro-2-b...	10.106	53	139701	39.54	ug/L		99
96) n-Propylbenzene	10.135	91	1188453	37.47	ug/L		100
97) 2-Chlorotoluene	10.178	91	706682	42.10	ug/L		99
98) 4-Chlorotoluene	10.249	91	816204	37.66	ug/L		100
99) 1,3,5-Trimethylbenzene	10.242	105	839941	37.60	ug/L		99
100) tert-Butylbenzene	10.407	91	602366	40.88	ug/L		99
101) 1,2,4-Trimethylbenzene	10.443	105	872351	37.75	ug/L		99
102) sec-Butylbenzene	10.529	105	1014494	37.42	ug/L		99
104) 1,3-Dichlorobenzene	10.593	146	501207	42.71	ug/L		100
105) p-Isopropyltoluene	10.615	119	843269	44.05	ug/L		100
106) 1,4-Dichlorobenzene	10.643	146	489165	43.31	ug/L		98
107) 1,2,3-Trimethylbenzene	10.658	105	851088	44.49	ug/L		99
108) Benzyl chloride	10.249	91	816204	40.63	ug/L		100

1st /S/ JS 11/28/20
2nd /S/ BG 11/29/20

Data Path : C:\msdchem\1\data\VMS8-201127\
Data File : 20112724.D
Acq On : 27 Nov 2020 6:29 pm
Operator : js
Sample : VCCV2-201127
Misc : IS 200-21532; 40PPB 200-21629, 21625, 21630
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 28 12:55:41 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:01:34 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dichlorobenzene	10.830	146	491936	42.97	ug/L	99
110) n-Butylbenzene	10.822	91	784051	40.11	ug/L	99
111) Hexachloroethane	10.966	117	172851	39.60	ug/L	98
112) 1,2-Dibromo-3-chloropr...	11.224	157	137756	42.97	ug/L	93
113) 1,3,5-Trichlorobenzene	11.310	180	347920	40.47	ug/L	98
114) 1,2,4-Trichlorobenzene	11.610	180	355842	40.97	ug/L	99
115) Hexachlorobutadiene	11.675	225	119291	40.39	ug/L	98
116) Naphthalene	11.739	128	1269911	40.68	ug/L	99
117) 1,2,3-Trichlorobenzene	11.840	180	345476	41.56	ug/L	97
118) 2-Methylnaphthalene	12.291	142	771357	40.75	ug/L	99
119) 1-Methylnaphthalene	12.384	142	715807	41.11	ug/L	98
121) 2-Propanone	1.826	43	149598	41.16	ug/L	98
122) Isopropyl Alcohol	1.933	45	1011773	831.33	ug/L	99
123) Acetic Ether	3.359	43	423967	38.55	ug/L	99
124) Isopropyl Acetate	4.555	61	151642	38.21	ug/L	96
125) Amyl Acetate	9.805	43	550476	38.69	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ JS 11/28/20
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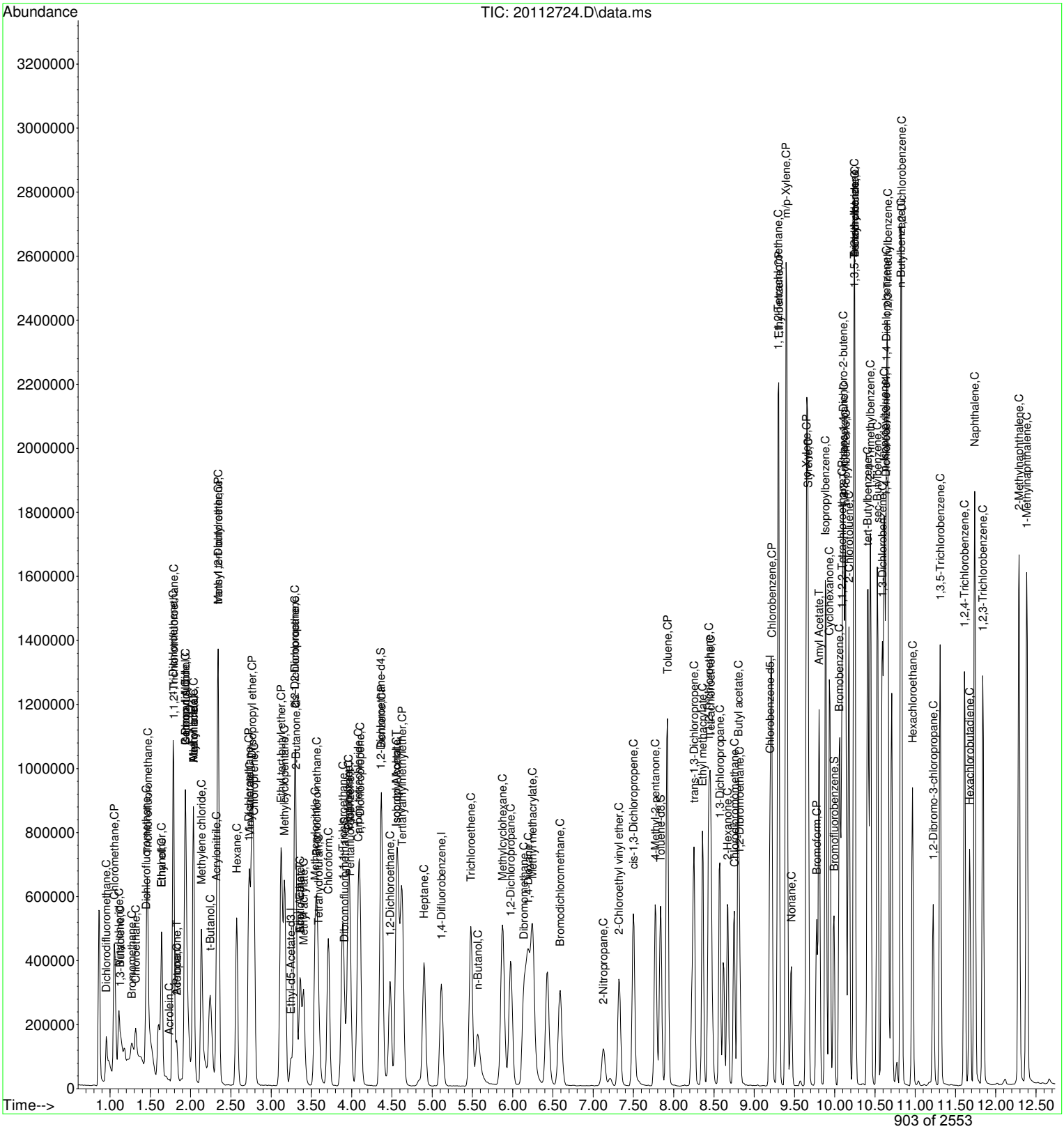
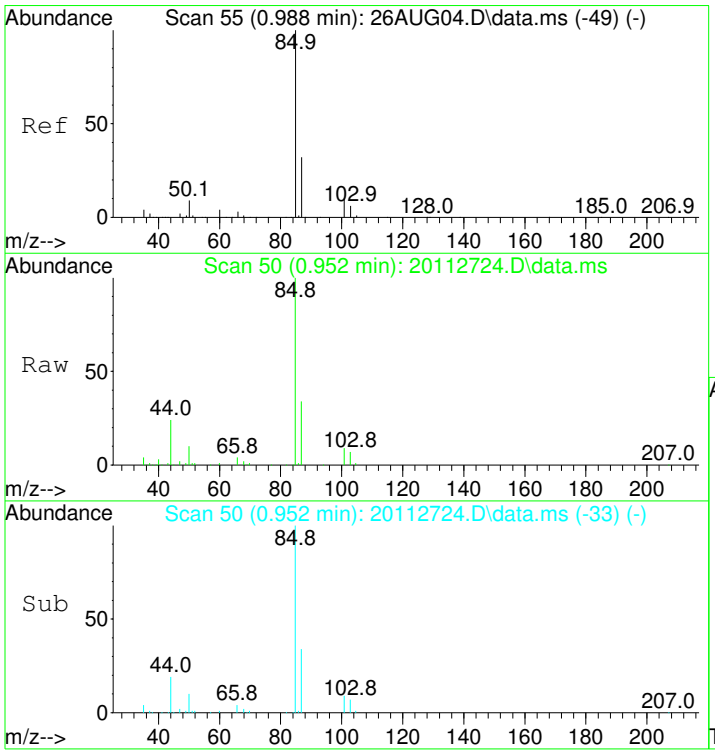
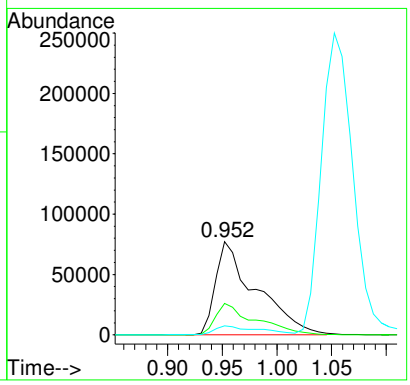


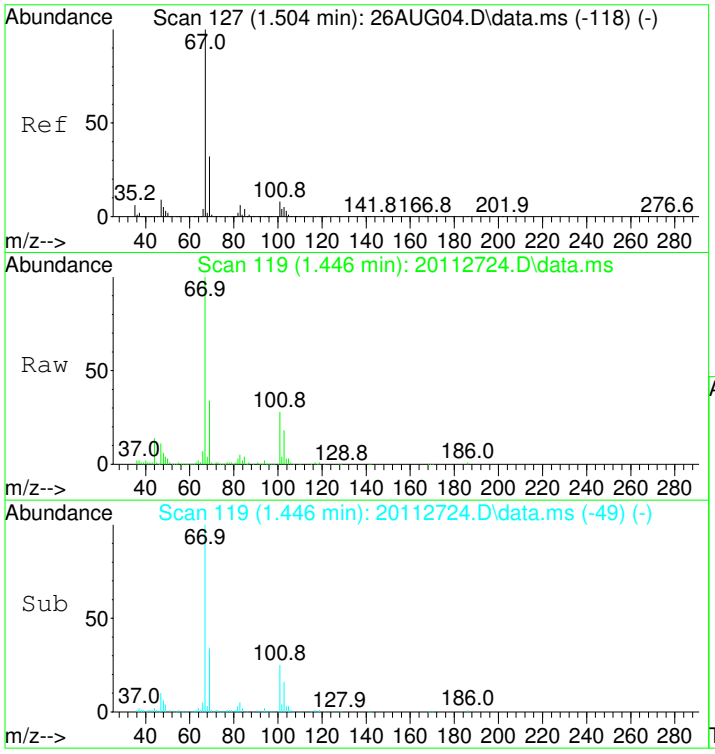


#2
Dichlorodifluoromethane
Concen: 36.79 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 85 Resp: 199883

Ion	Ratio	Lower	Upper
85	100		
87	32.9	3.6	63.6
50	10.9	0.0	40.5

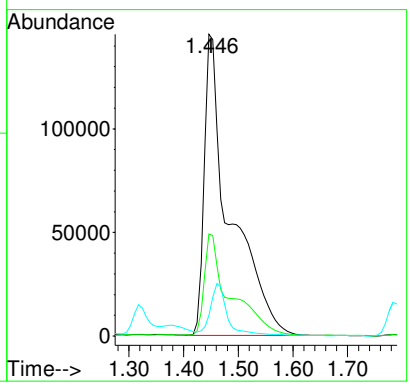


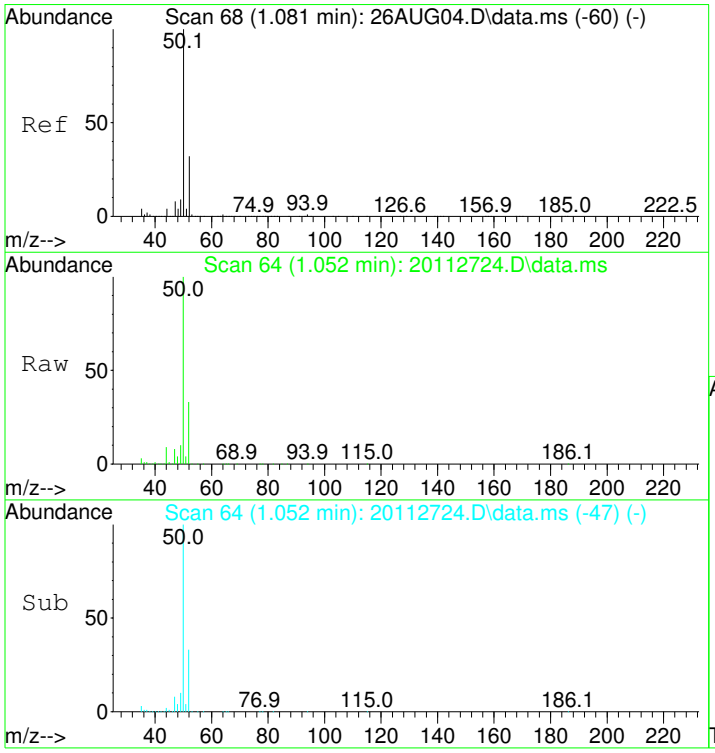


#3
Dichlorofluoromethane
Concen: 39.43 ug/L
RT: 1.446 min Scan# 119
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 67 Resp: 476838

Ion	Ratio	Lower	Upper
67	100		
69	33.5	23.7	44.1
66	11.1	8.1	15.0

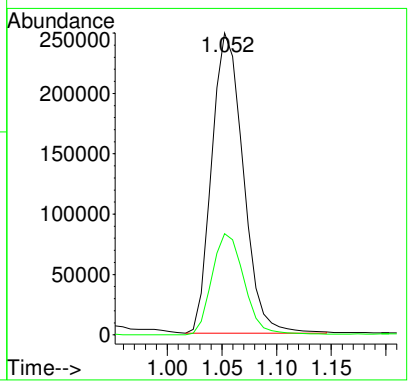


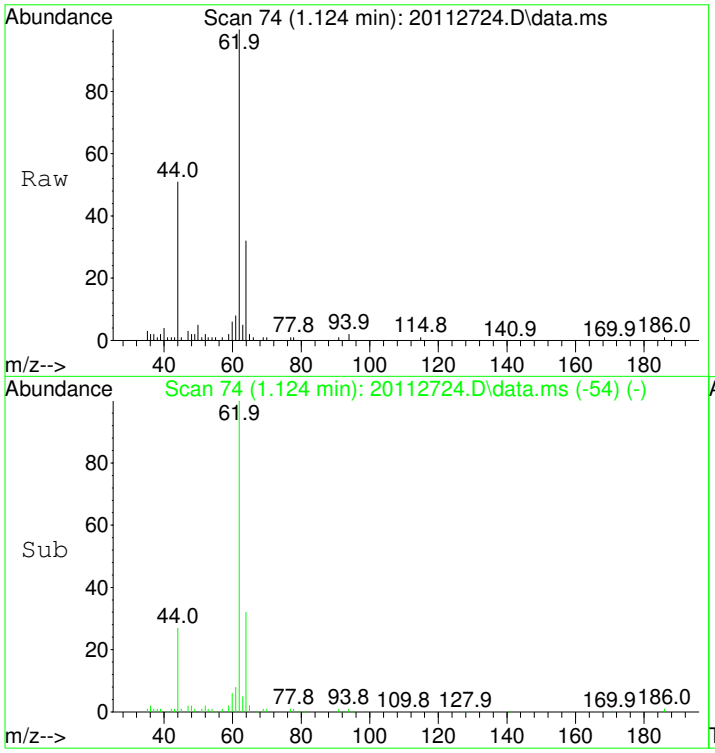


#4
Chloromethane
Concen: 42.66 ug/L
RT: 1.052 min Scan# 64
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 50 Resp: 499437

Ion	Ratio	Lower	Upper
50	100		
52	34.6	4.9	64.9

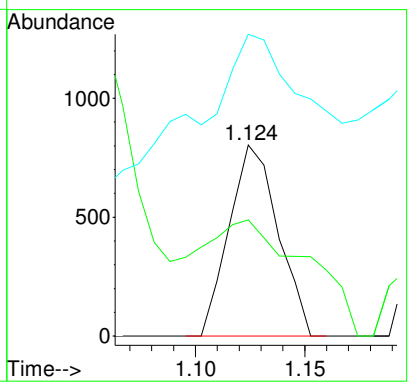


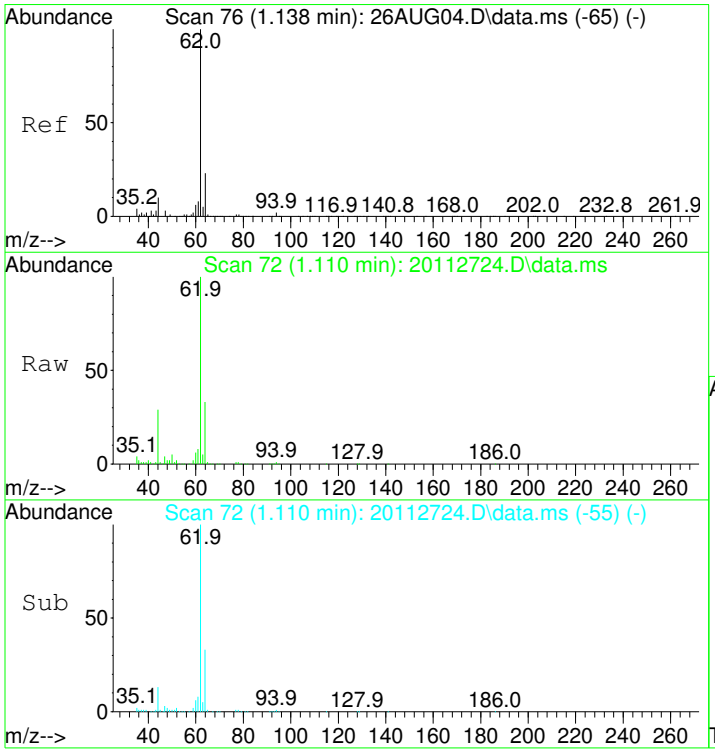


#5
1,3-Butadiene
Concen: 68.93 ug/L
RT: 1.124 min Scan# 74
Delta R.T. -0.007 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 54 Resp: 1253

Ion	Ratio	Lower	Upper
54	100		
53	125.1	0.0	30.0#
39	390.3	322.9	382.9#

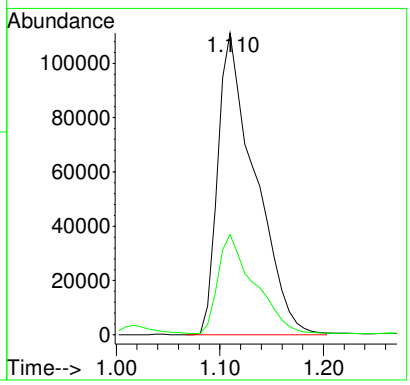


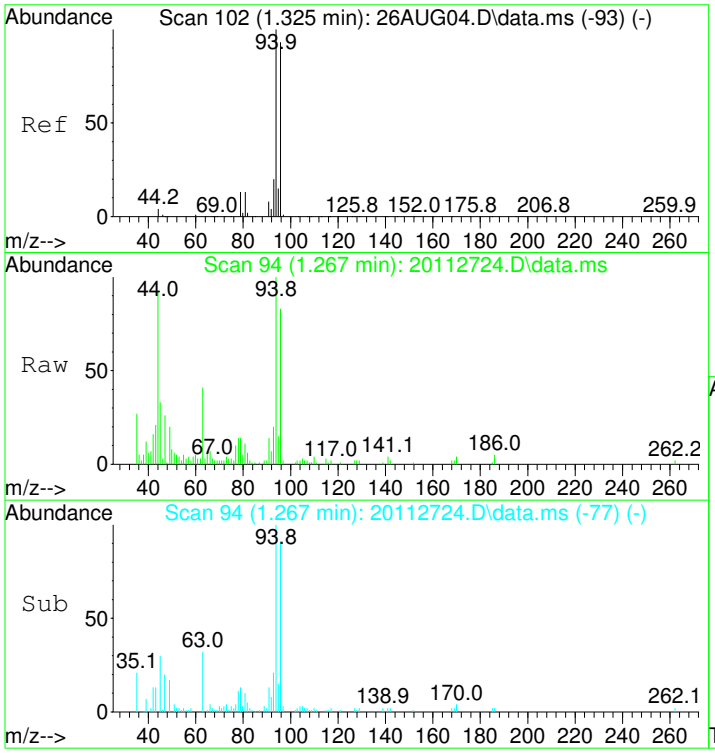


#6
Vinyl chloride
Concen: 38.85 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 62 Resp: 278017

Ion	Ratio	Lower	Upper
62	100		
64	31.8	1.9	61.9

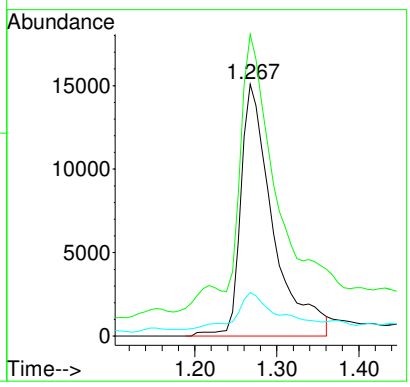


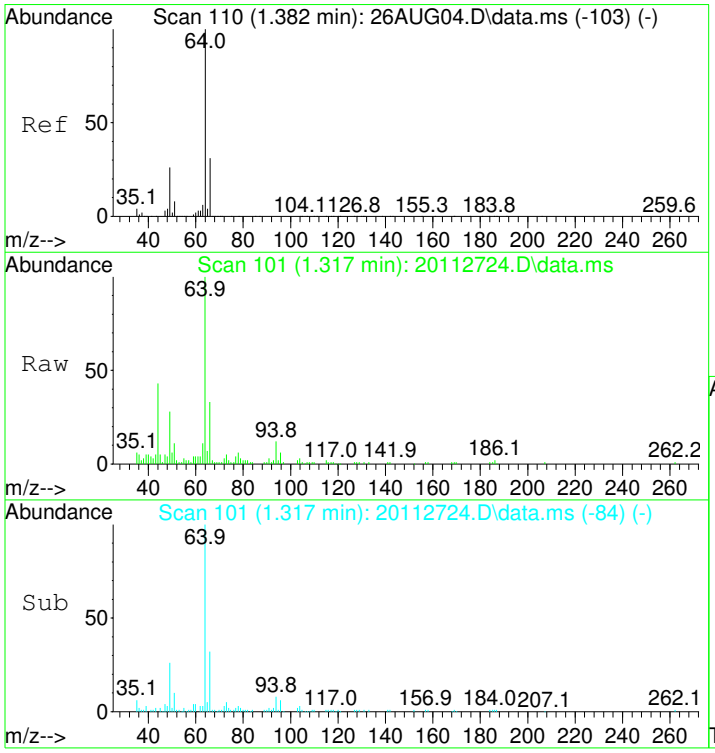


#7
Bromomethane
Concen: 41.63 ug/L
RT: 1.267 min Scan# 94
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 96 Resp: 41178

Ion	Ratio	Lower	Upper
96	100		
94	104.4	103.4	163.4
79	19.0	0.0	49.6

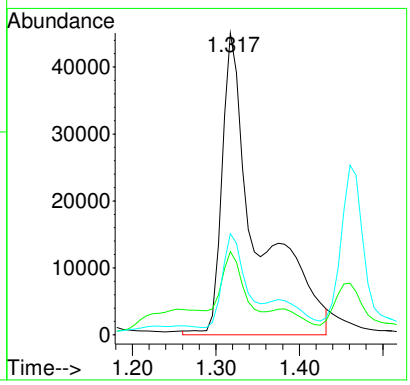


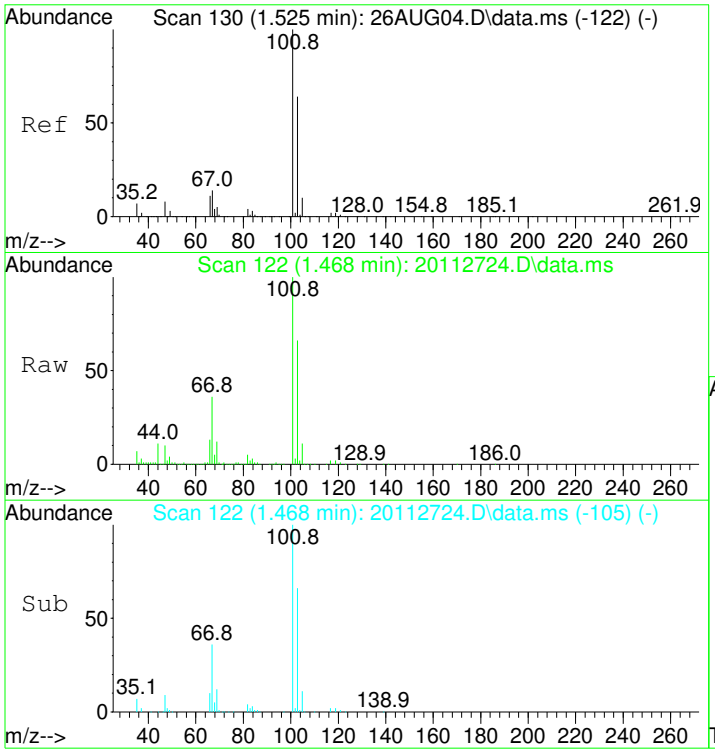


#8
Chloroethane
Concen: 42.29 ug/L m
RT: 1.317 min Scan# 101
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 64 Resp: 132991

Ion	Ratio	Lower	Upper
64	100		
49	11.1	0.0	41.3
66	20.0	0.0	52.2

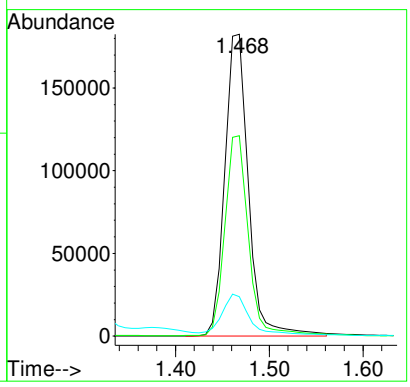


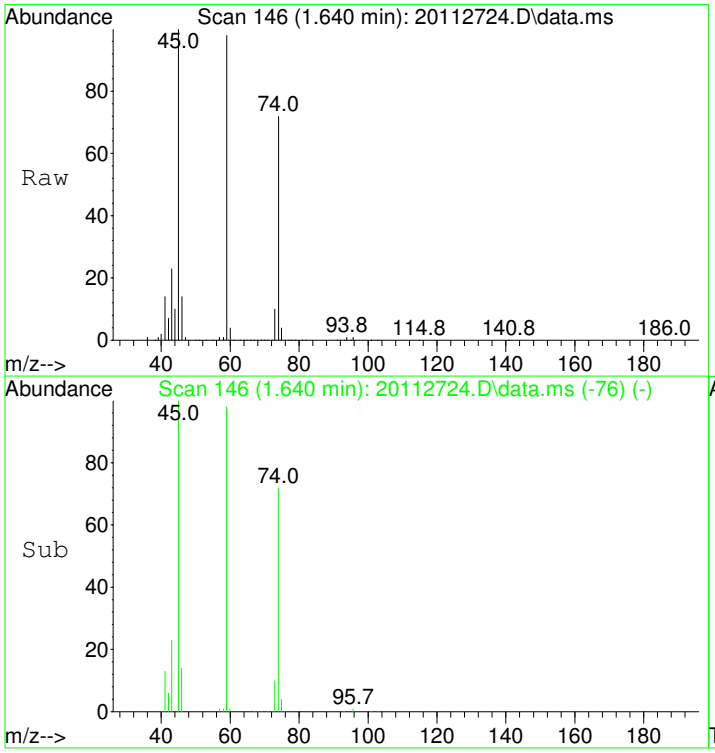


#9
Trichlorofluoromethane
Concen: 37.82 ug/L
RT: 1.468 min Scan# 122
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:101 Resp: 320144

Ion	Ratio	Lower	Upper
101	100		
103	65.8	45.1	85.1
66	15.3	0.0	35.4

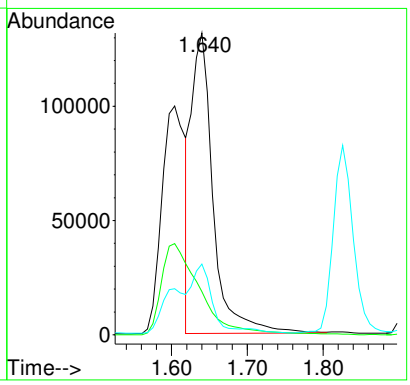


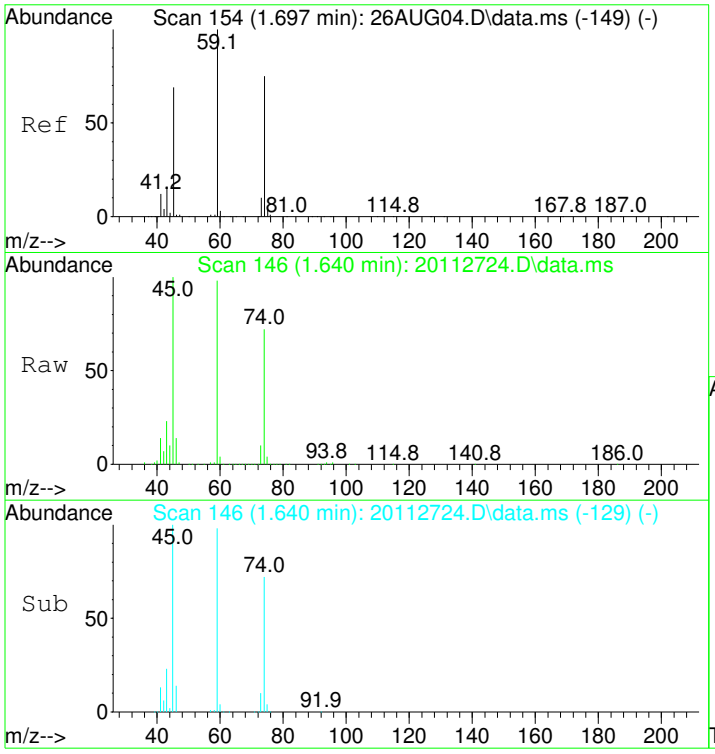


#10
Ethanol
Concen: 437.25 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 45 Resp: 265237

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	57.3
43	18.9	0.0	52.4

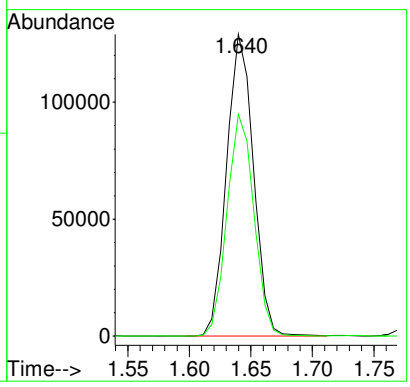


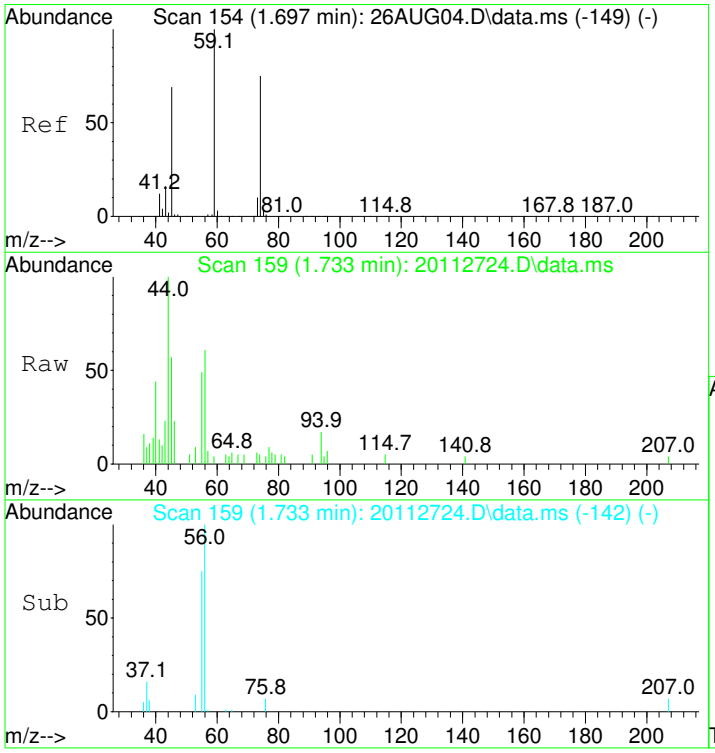


#11
Ethyl ether
Concen: 38.54 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 59 Resp: 196189

Ion	Ratio	Lower	Upper
59	100		
74	73.3	42.6	102.6

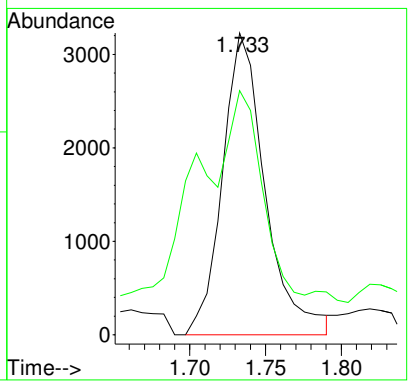


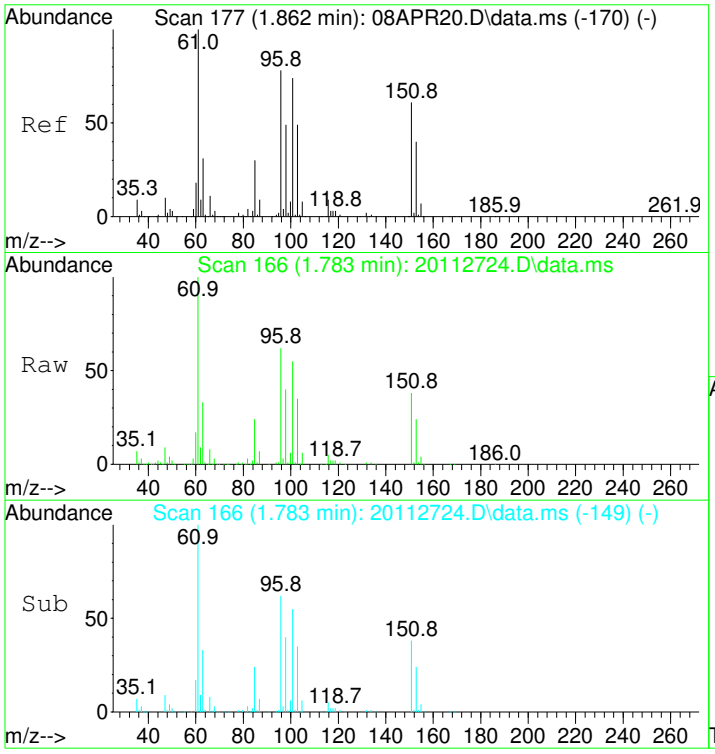


#12
Acrolein
Concen: 36.56 ug/L
RT: 1.733 min Scan# 159
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 56 Resp: 6349

Ion	Ratio	Lower	Upper
56	100		
55	52.7	17.3	77.3

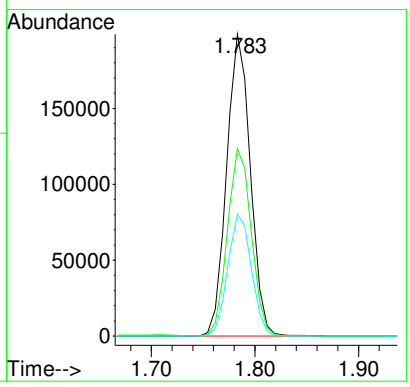


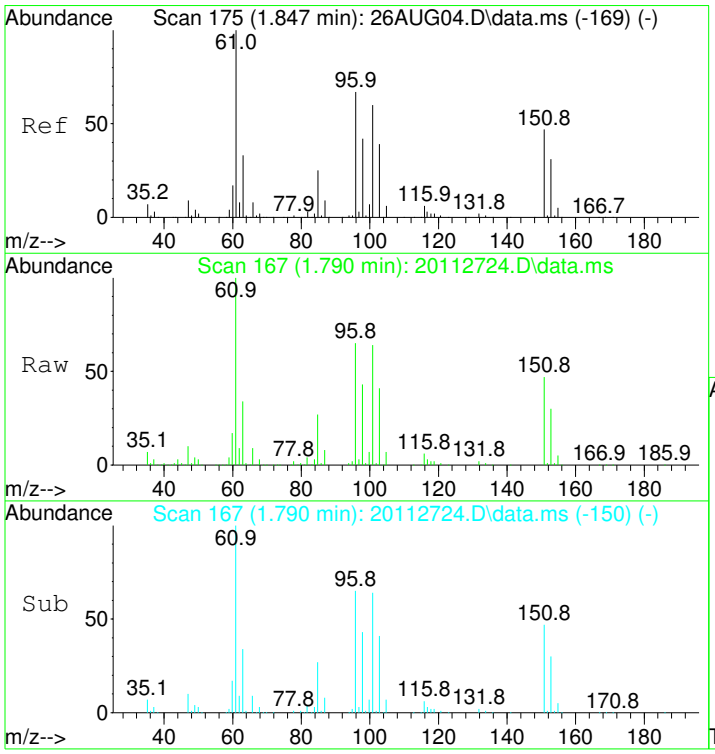


#13
1,1-Dichloroethene
Concen: 40.40 ug/L
RT: 1.783 min Scan# 166
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 61 Resp: 317592

Ion	Ratio	Lower	Upper
61	100		
96	62.8	32.6	92.6
98	40.3	10.4	70.4

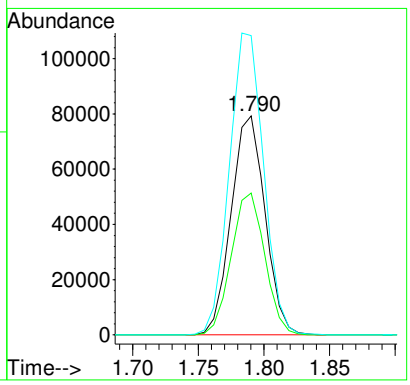


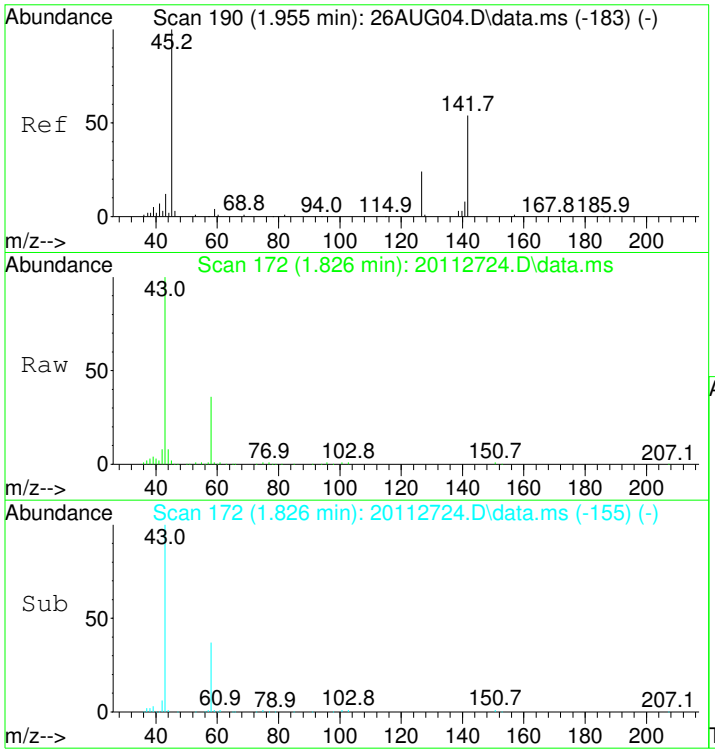


#14
1,1,2-Trichlorotrifluoroethane
Concen: 36.28 ug/L
RT: 1.790 min Scan# 167
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:151 Resp: 142861

Ion	Ratio	Lower	Upper
151	100		
153	63.9	33.0	93.0
101	139.2	110.1	170.1

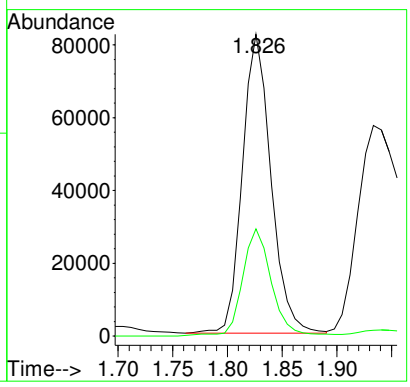


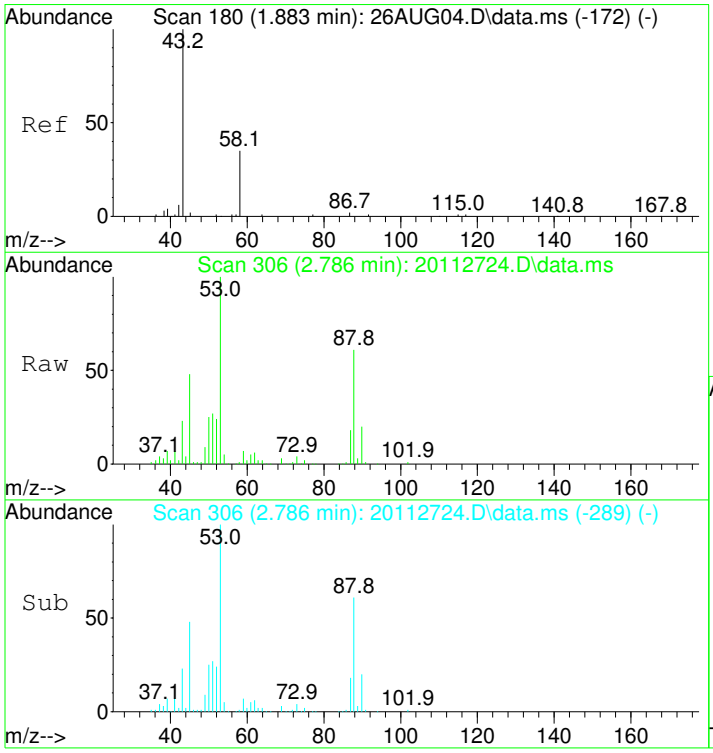


#16
Acetone
Concen: 42.25 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 149598

Ion	Ratio	Lower	Upper
43	100		
58	36.4	5.2	65.2

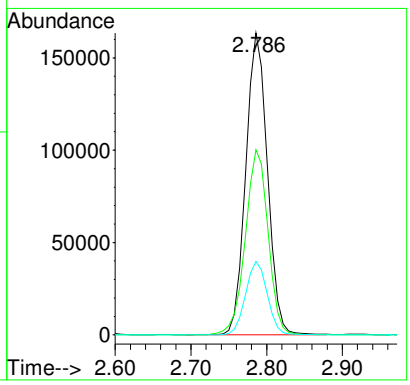


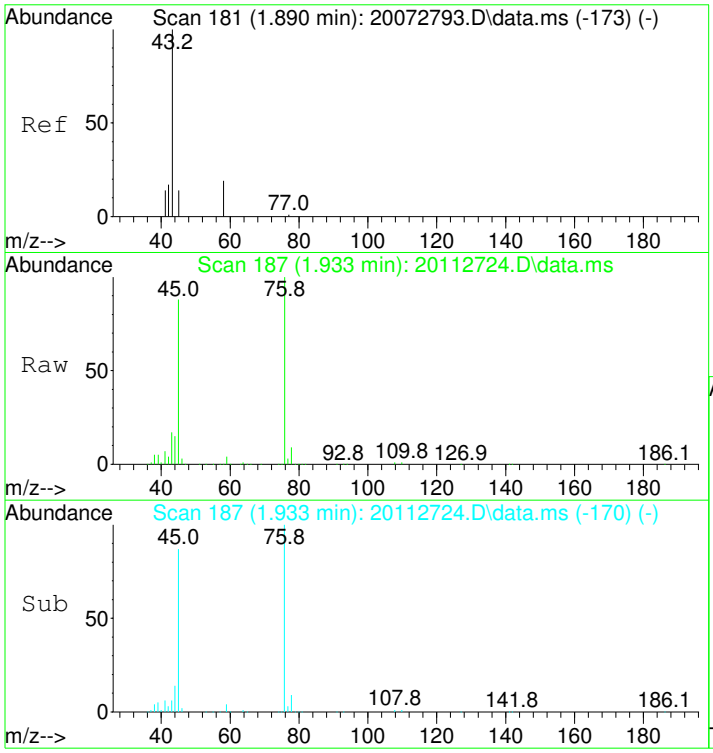


#17
Chloroprene
Concen: 38.89 ug/L
RT: 2.786 min Scan# 306
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 53 Resp: 323999

Ion	Ratio	Lower	Upper
53	100		
88	64.5	43.7	81.1
52	24.4	17.3	32.1

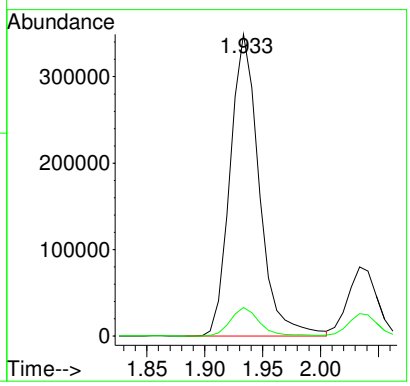


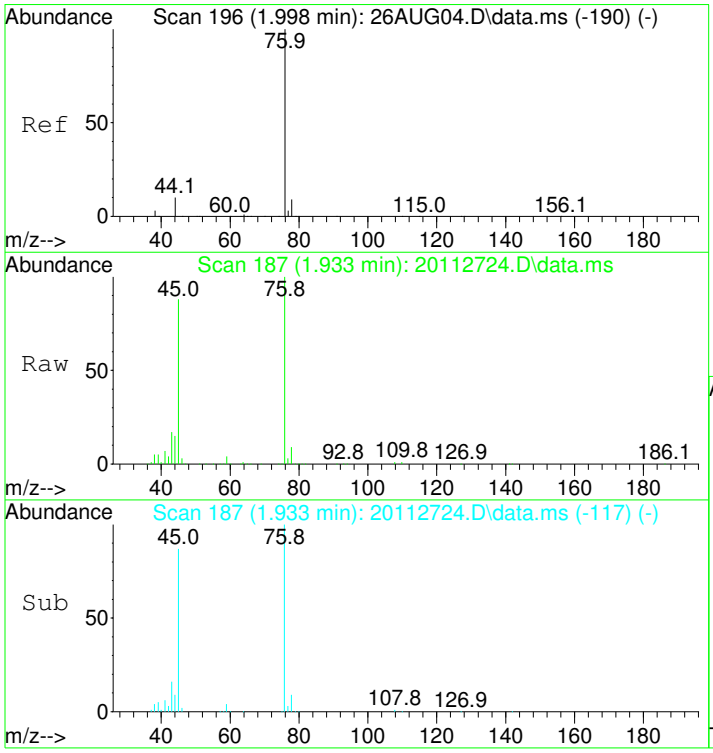


#18
Carbon disulfide
Concen: 38.81 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 76 Resp: 610432

Ion	Ratio	Lower	Upper
76	100		
78	9.6	0.0	39.5

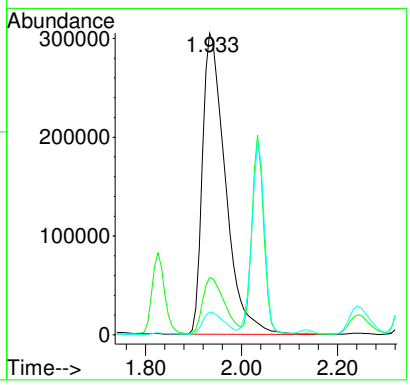


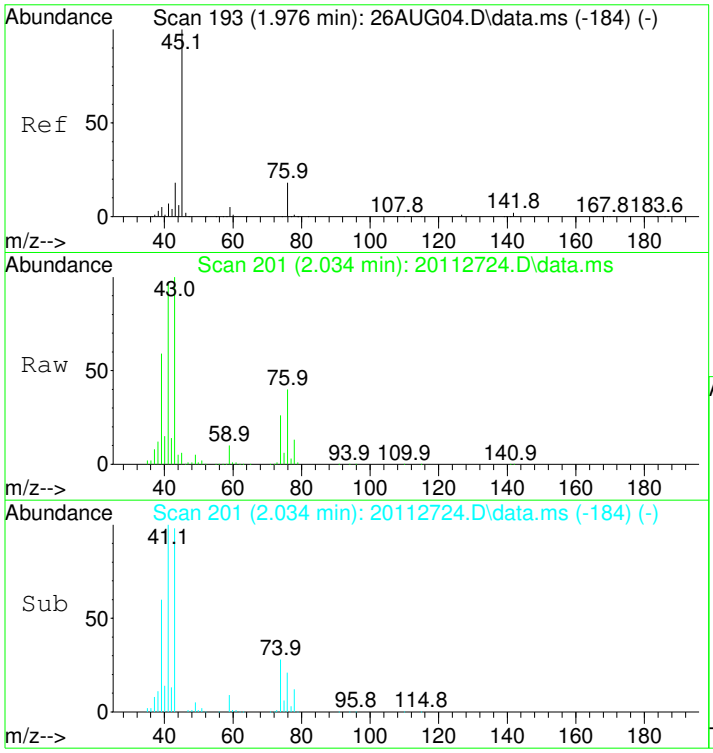


#19
2-Propanol
Concen: 848.38 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 45 Resp: 1011773

Ion	Ratio	Lower	Upper
45	100		
43	17.9	0.0	48.2
41	7.0	0.0	37.1

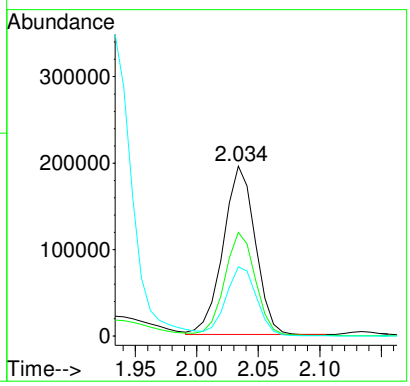


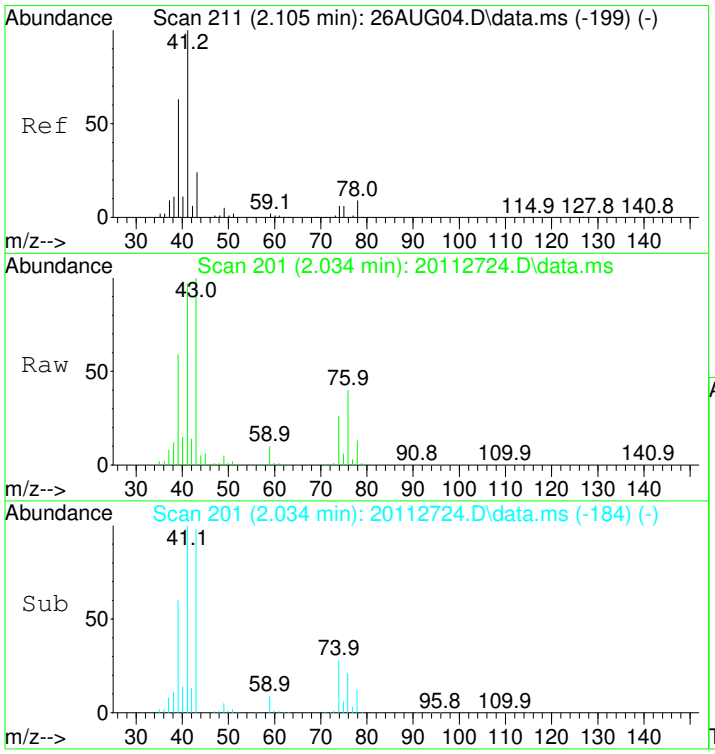


#20
Allyl chloride
Concen: 39.24 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 41 Resp: 353761

Ion	Ratio	Lower	Upper
41	100		
39	59.0	29.0	89.0
76	39.5	7.3	67.3

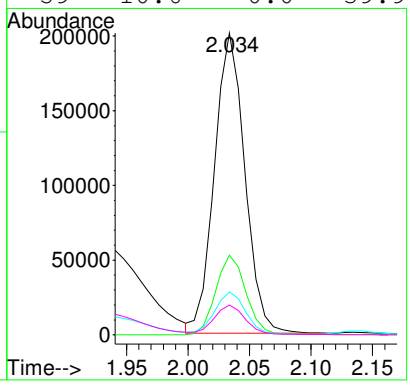


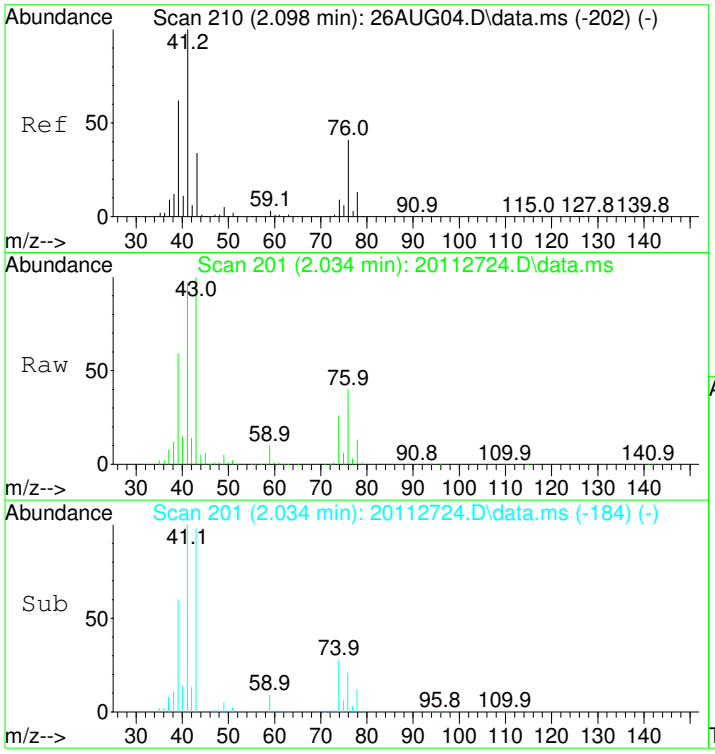


#21
Methyl acetate
Concen: 42.27 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 344695

Ion	Ratio	Lower	Upper
43	100		
74	26.5	0.0	56.2
42	14.3	0.0	44.2
59	10.6	0.0	39.9

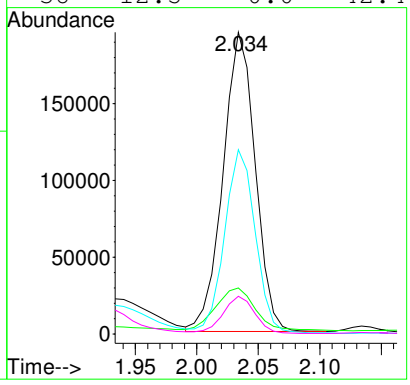


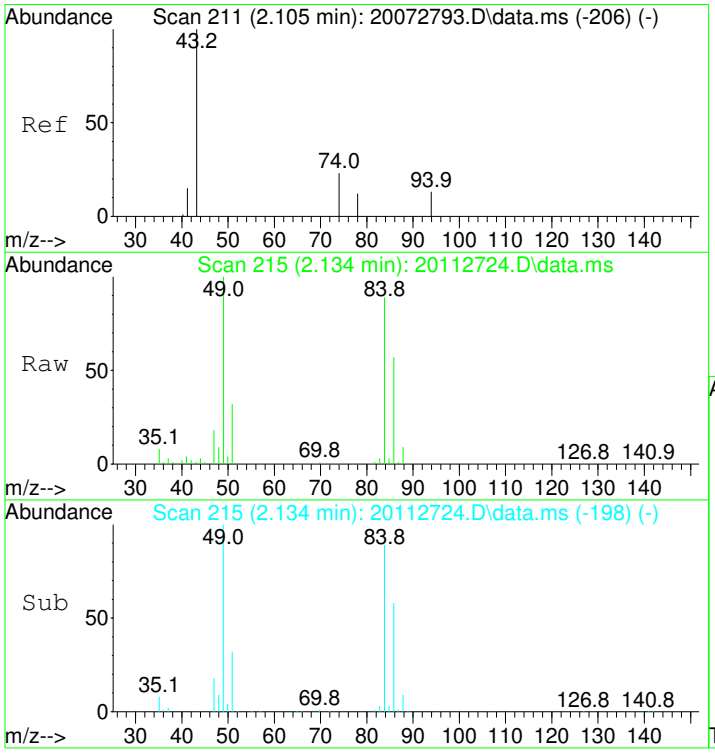


#22
Acetonitrile
Concen: 39.24 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 41 Resp: 353761

Ion	Ratio	Lower	Upper
41	100		
40	17.6	0.0	47.5
39	59.0	29.0	89.0
38	12.5	0.0	42.4

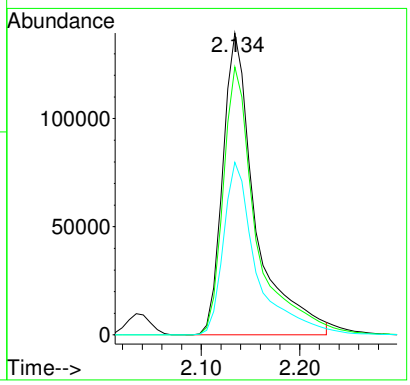


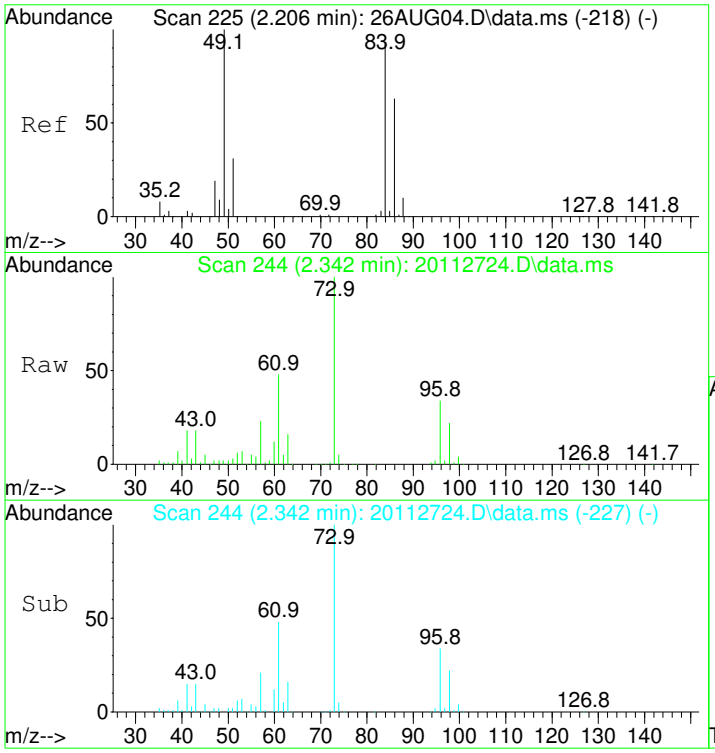


#23
Methylene chloride
Concen: 39.16 ug/L
RT: 2.134 min Scan# 215
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 49 Resp: 323750

Ion	Ratio	Lower	Upper
49	100		
84	88.2	57.4	117.4
86	57.2	27.7	87.7

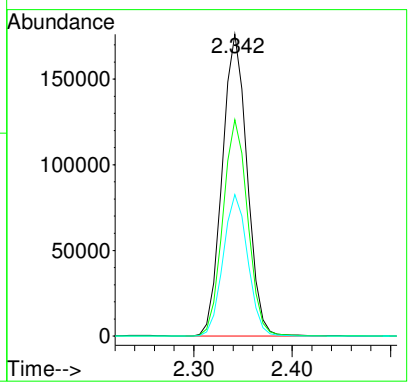


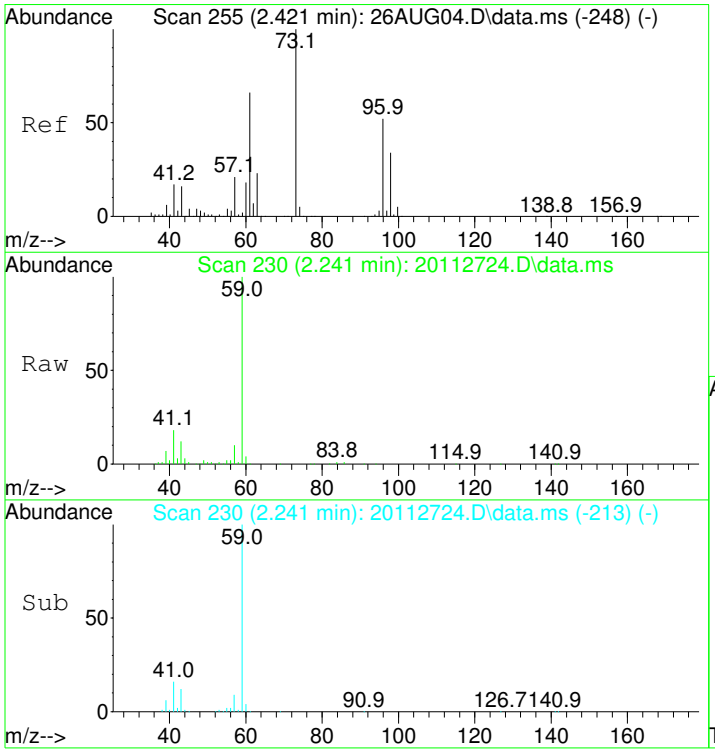


#24
trans-1,2-Dichloroethene
Concen: 40.14 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 61 Resp: 310759

Ion	Ratio	Lower	Upper
61	100		
96	71.5	42.3	102.3
98	46.4	16.1	76.1

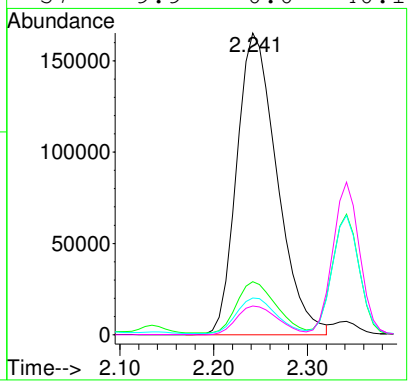


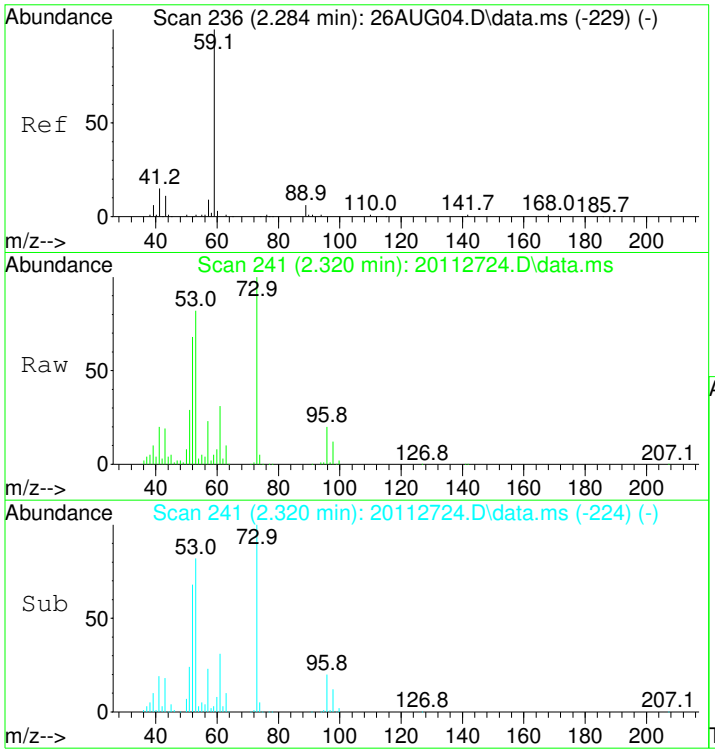


#25
t-Butanol
Concen: 207.66 ug/L
RT: 2.241 min Scan# 230
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 59 Resp: 494912

Ion	Ratio	Lower	Upper
59	100		
41	16.4	0.0	46.1
43	11.6	0.0	41.4
57	9.9	0.0	40.1

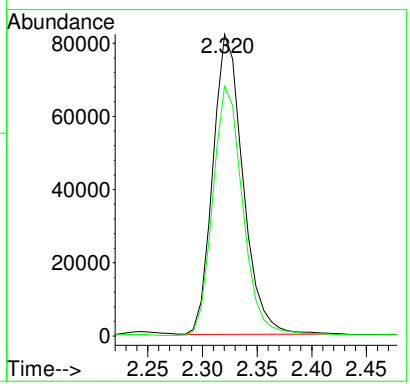


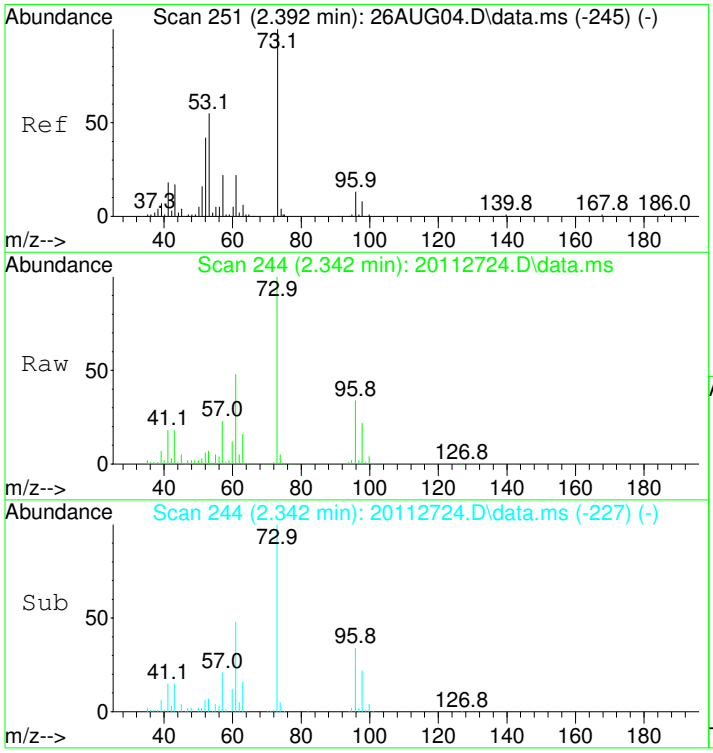


#26
Acrylonitrile
Concen: 38.36 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 53 Resp: 157022

Ion	Ratio	Lower	Upper
53	100		
52	82.4	51.9	111.9

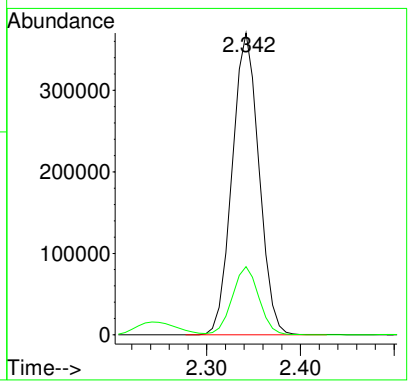


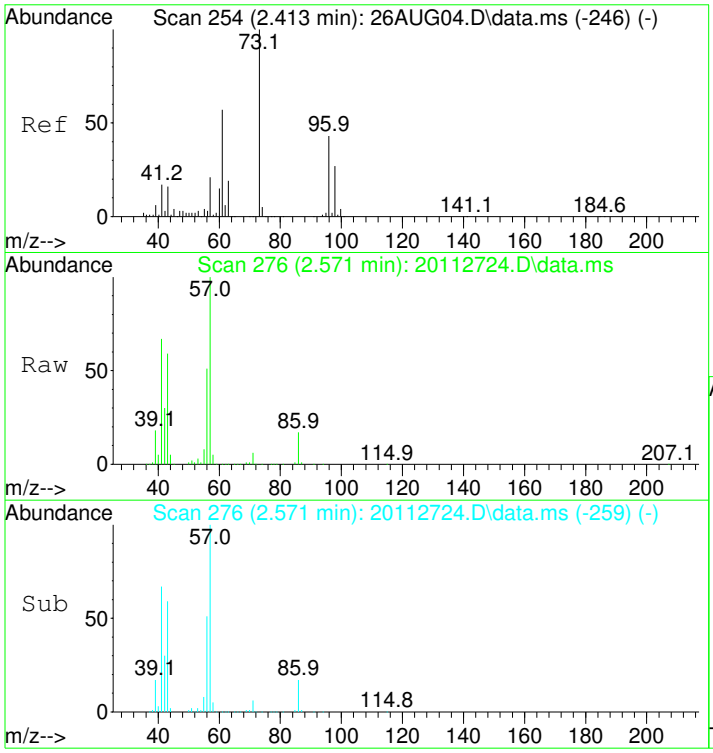


#27
Methyl tert-butyl ether
Concen: 42.09 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 73 Resp: 741028

Ion	Ratio	Lower	Upper
73	100		
57	22.5	0.0	52.4

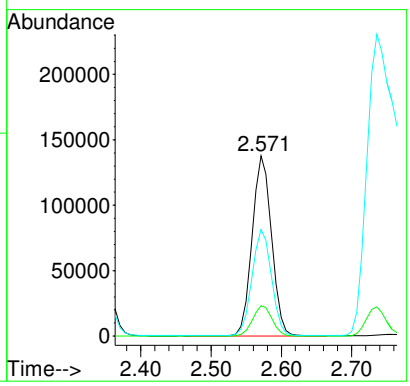


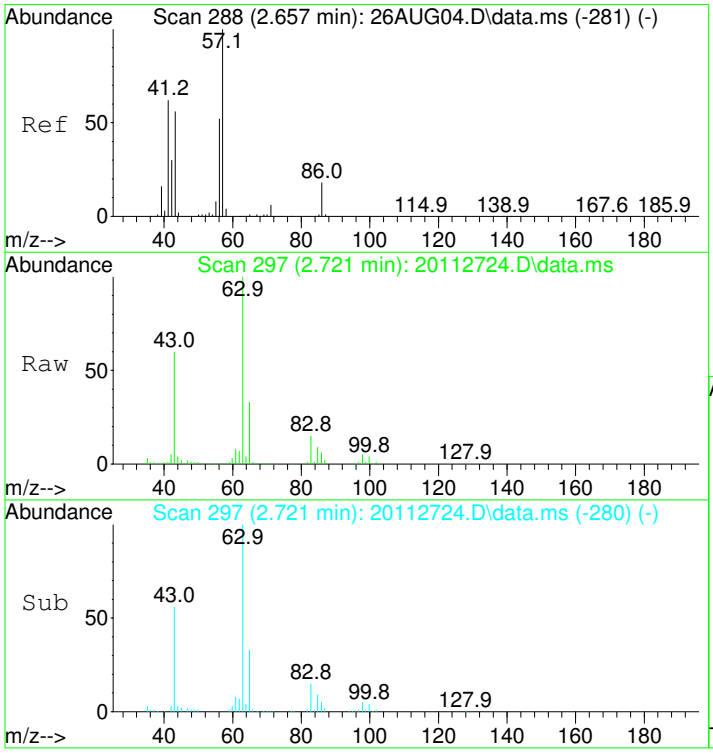


#28
Hexane
Concen: 37.26 ug/L
RT: 2.571 min Scan# 276
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 57 Resp: 266427

Ion	Ratio	Lower	Upper
57	100		
86	16.9	0.0	46.9
43	58.2	27.9	87.9

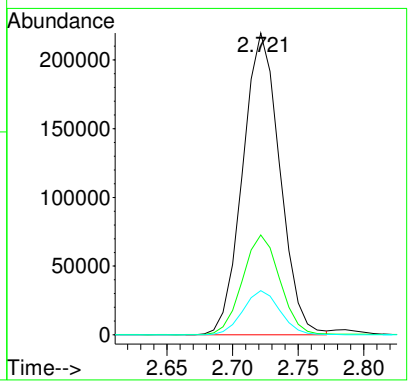


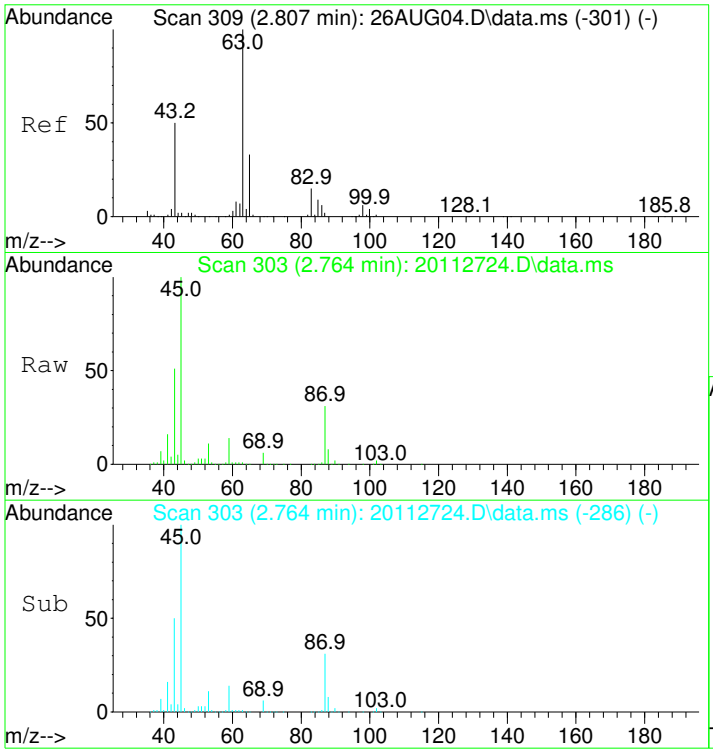


#29
1,1-Dichloroethane
Concen: 38.91 ug/L
RT: 2.721 min Scan# 297
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 63 Resp: 433271

Ion	Ratio	Lower	Upper
63	100		
65	33.6	2.8	62.8
83	14.6	0.0	43.7

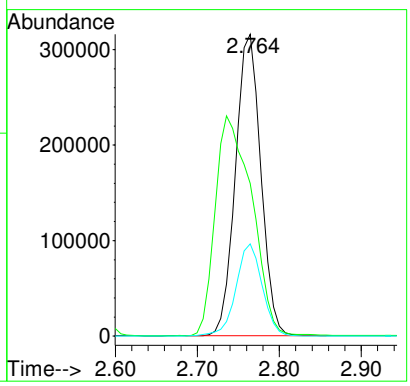


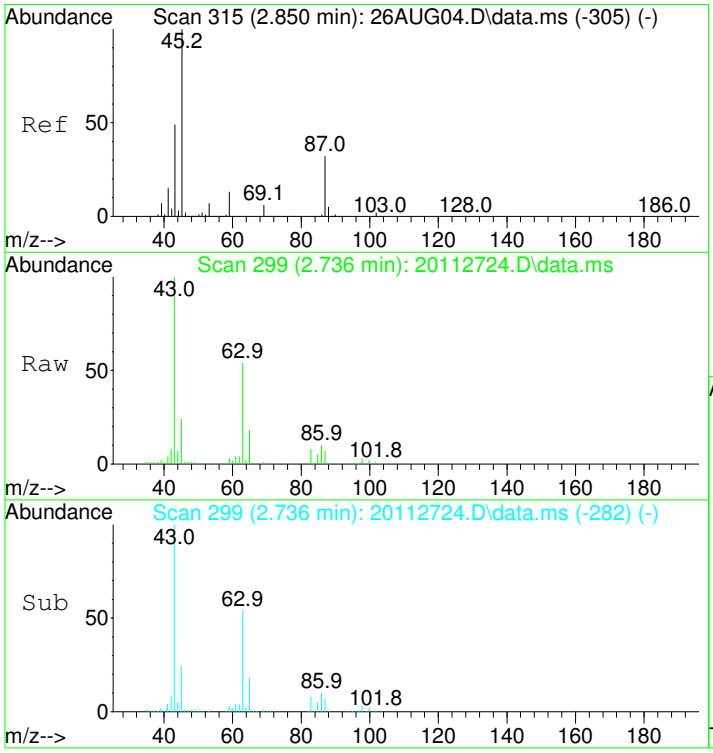


#30
Diisopropyl ether
Concen: 41.75 ug/L
RT: 2.764 min Scan# 303
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 45 Resp: 681643

Ion	Ratio	Lower	Upper
45	100		
43	104.4	79.6	147.8
87	31.7	22.1	41.1

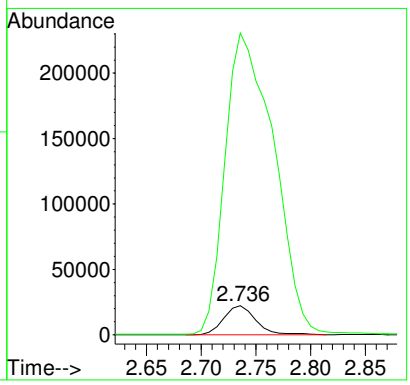


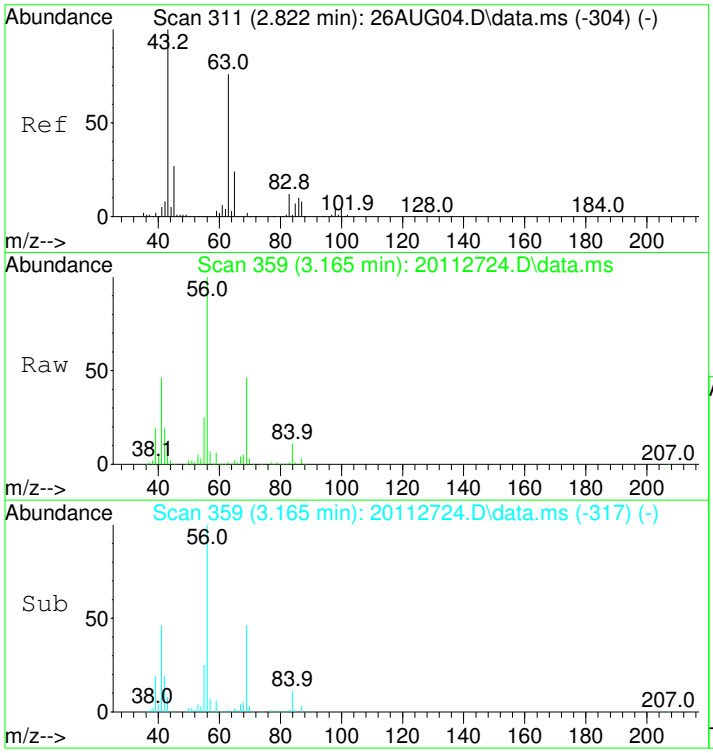


#31
Vinyl acetate
Concen: 34.55 ug/L
RT: 2.736 min Scan# 299
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 86 Resp: 45853

Ion	Ratio	Lower	Upper
86	100		
43	1551.4	1480.0	1540.0#

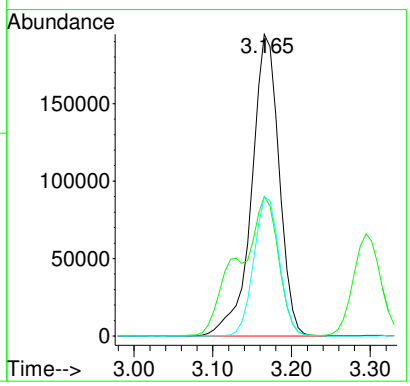


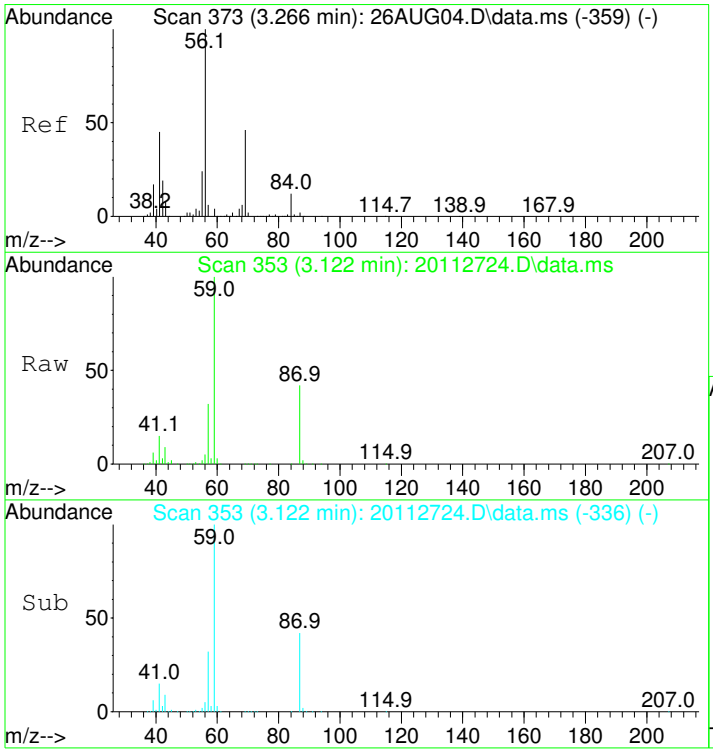


#32
Methylcyclopentane
Concen: 38.82 ug/L
RT: 3.165 min Scan# 359
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 56 Resp: 473075

Ion	Ratio	Lower	Upper
56	100		
41	66.9	36.7	96.7
69	43.1	11.3	71.3

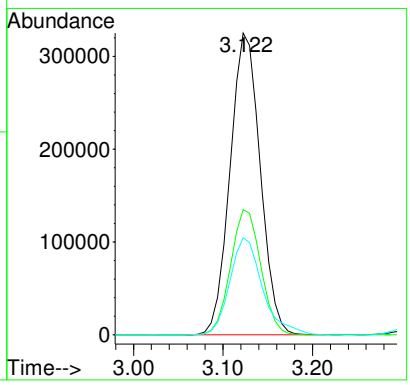


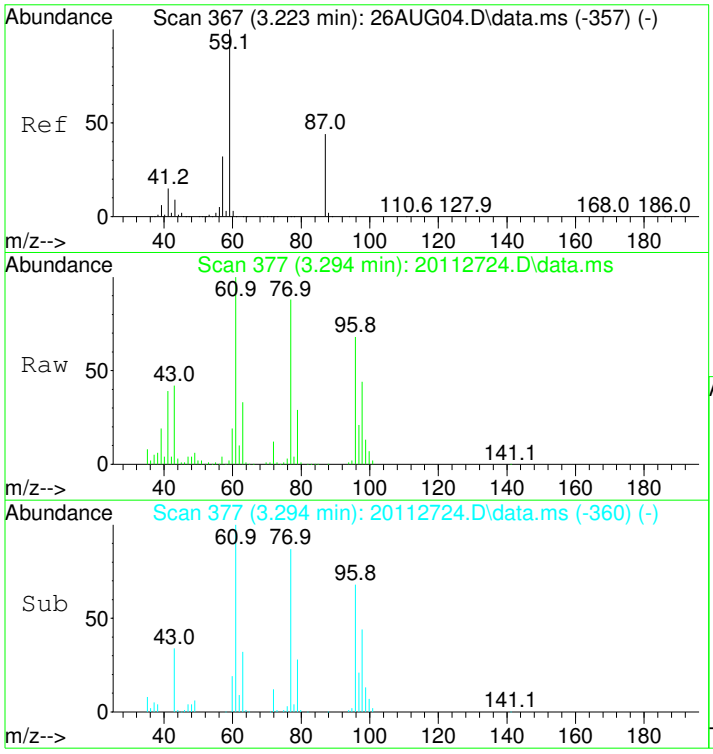


#33
Ethyl tert butyl ether
Concen: 40.92 ug/L
RT: 3.122 min Scan# 353
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 59 Resp: 762414

Ion	Ratio	Lower	Upper
59	100		
87	41.6	12.5	72.5
57	34.9	4.4	64.4

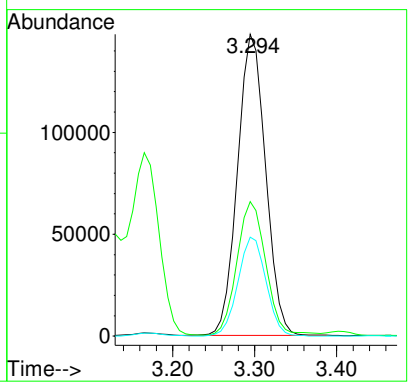


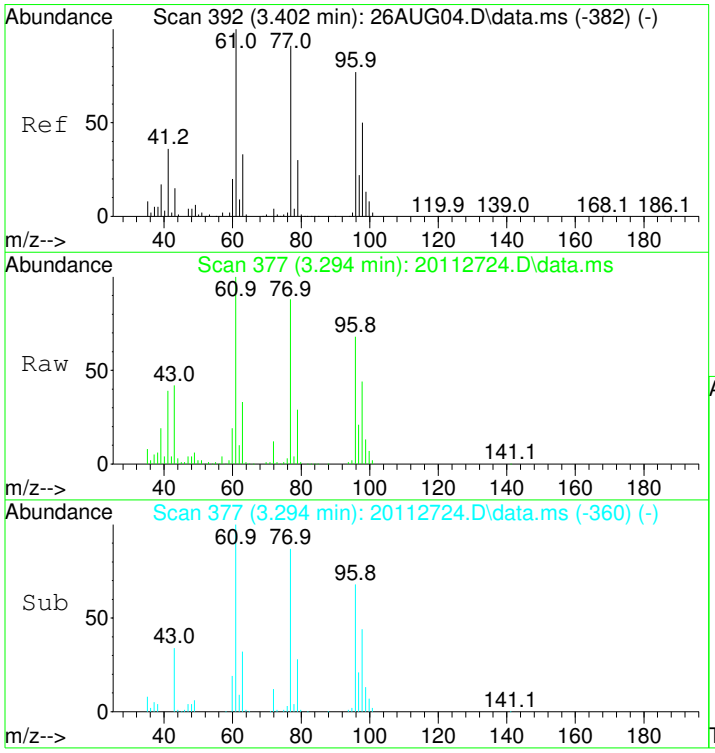


#34
2,2-Dichloropropane
Concen: 38.38 ug/L
RT: 3.294 min Scan# 377
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 77 Resp: 351659

Ion	Ratio	Lower	Upper
77	100		
41	45.7	16.4	76.4
79	32.9	2.4	62.4

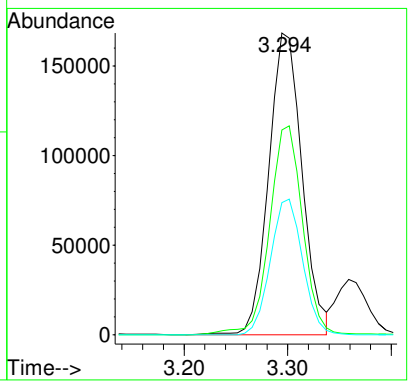


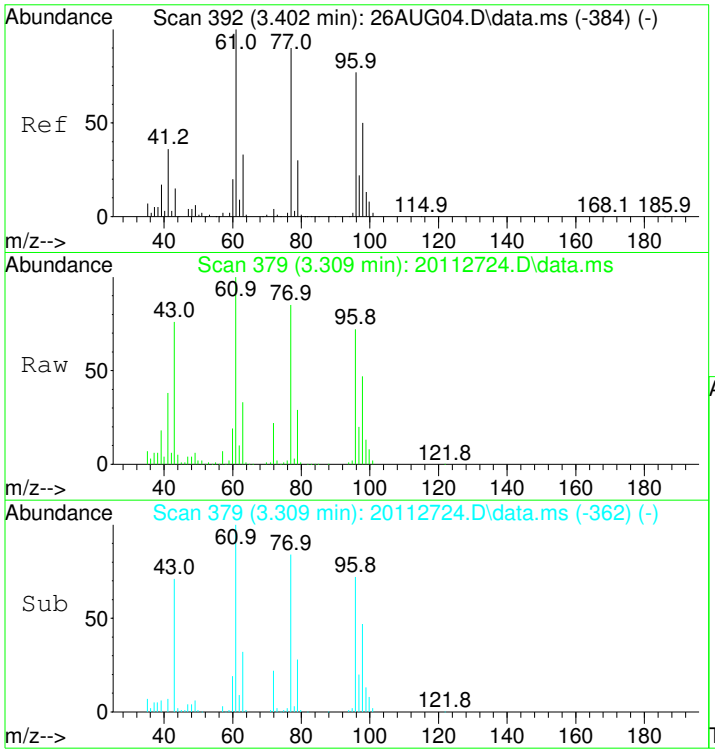


#35
cis-1,2-Dichloroethene
Concen: 40.16 ug/L
RT: 3.294 min Scan# 377
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 61 Resp: 376688

Ion	Ratio	Lower	Upper
61	100		
96	68.7	39.5	99.5
98	43.3	14.9	74.9

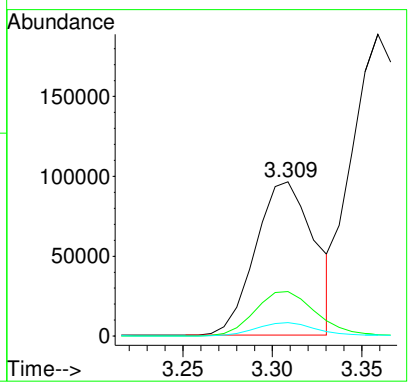


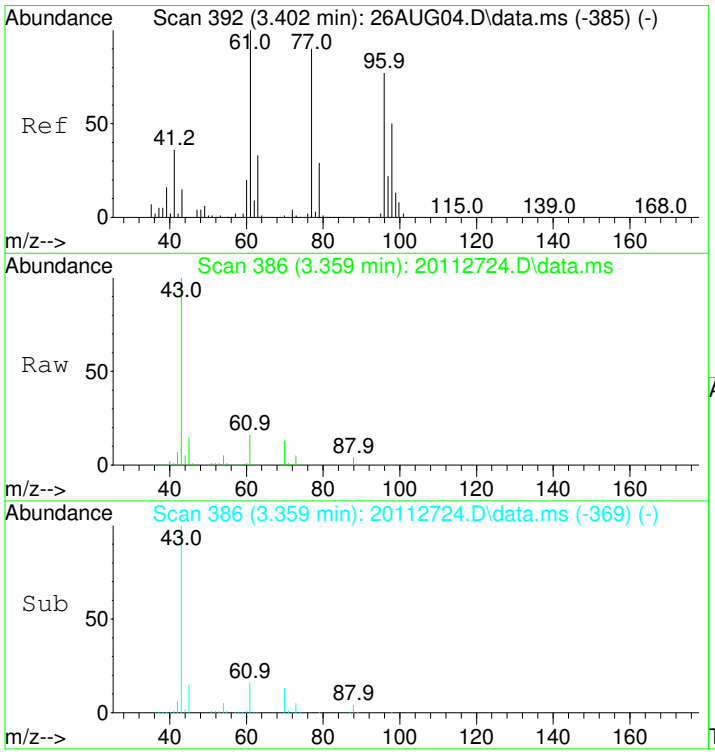


#36
2-Butanone
Concen: 41.21 ug/L
RT: 3.309 min Scan# 379
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 221622

Ion	Ratio	Lower	Upper
43	100		
72	30.5	11.0	51.0
57	9.3	0.0	28.7

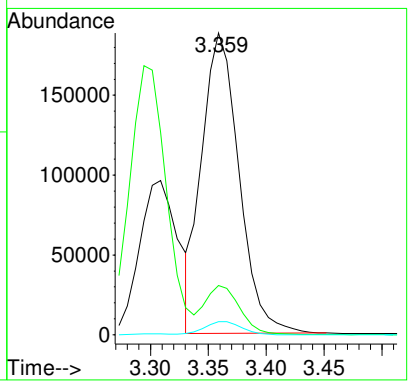


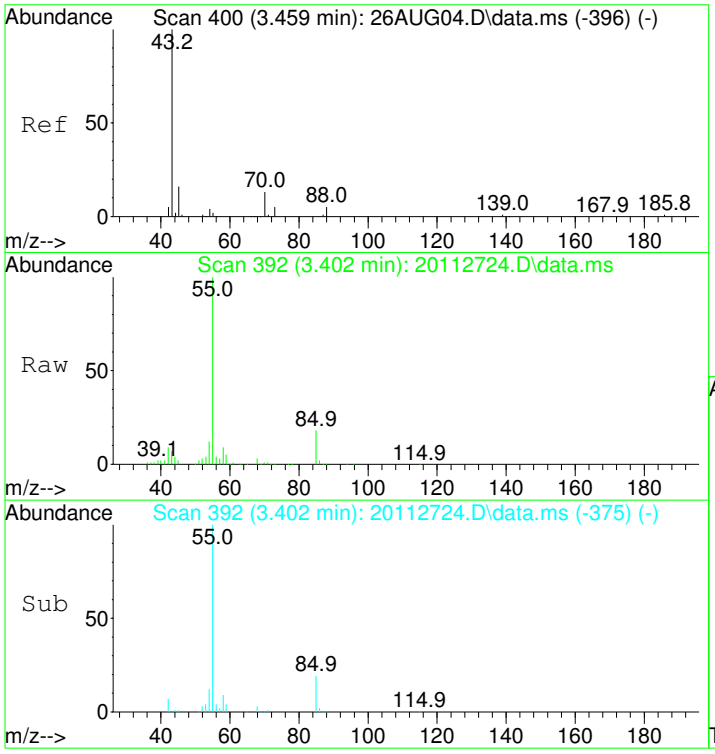


#37
Ethyl Acetate
Concen: 40.52 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 423967

Ion	Ratio	Lower	Upper
43	100		
61	15.1	0.0	34.9
88	4.4	0.0	24.3

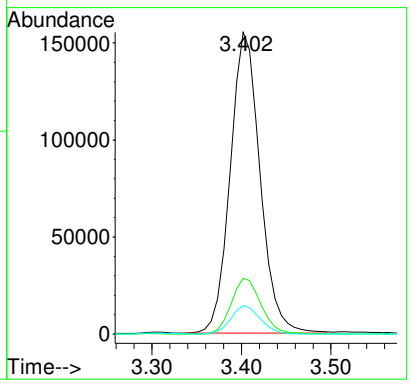


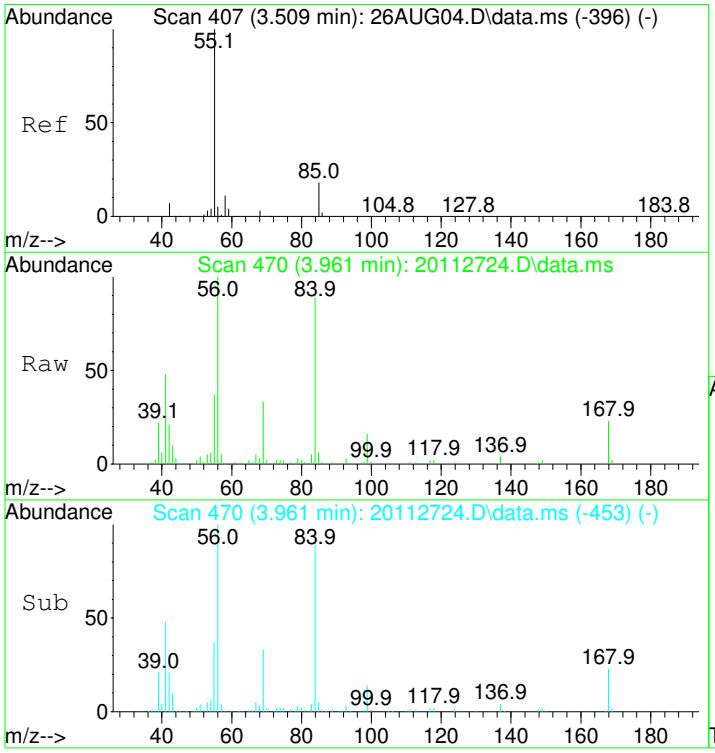


#38
Methyl acrylate
Concen: 38.48 ug/L
RT: 3.402 min Scan# 392
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 55 Resp: 359913

Ion	Ratio	Lower	Upper
55	100		
85	18.6	14.4	21.6
58	9.4	7.4	11.2

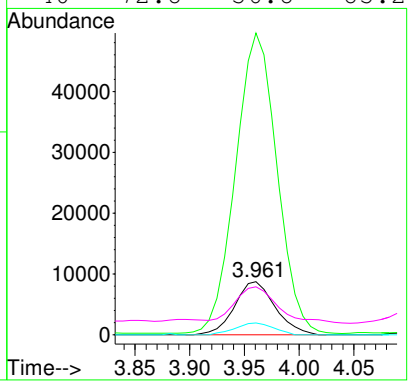


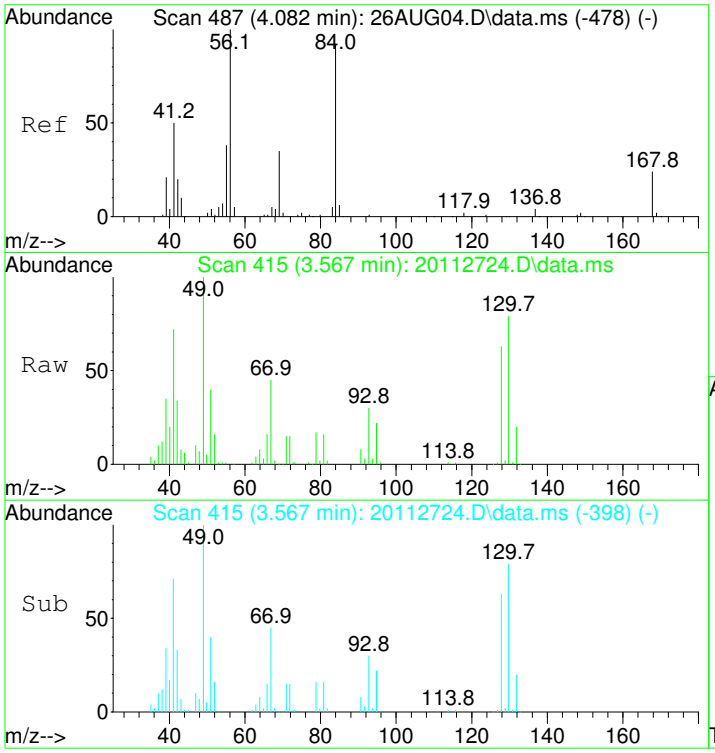


#39
Propionitrile
Concen: 38.03 ug/L
RT: 3.961 min Scan# 470
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 54 Resp: 22610

Ion	Ratio	Lower	Upper
54	100		
55	574.9	470.1	705.1
52	21.2	17.5	26.3
40	72.8	56.8	85.2

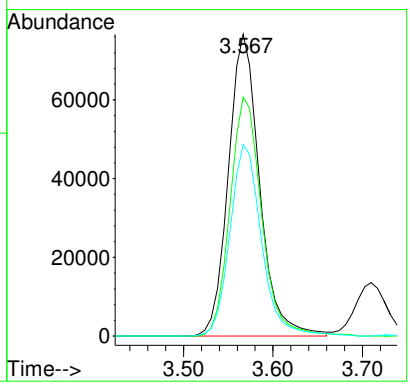


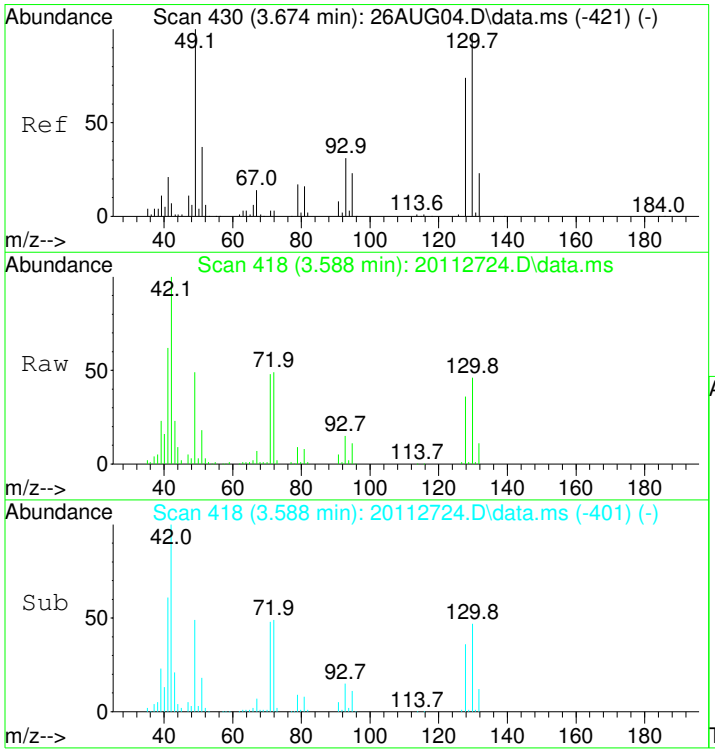


#40
Bromochloromethane
Concen: 38.37 ug/L
RT: 3.567 min Scan# 415
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 49 Resp: 186308

Ion	Ratio	Lower	Upper
49	100		
130	79.7	60.4	100.4
128	63.8	43.3	83.3

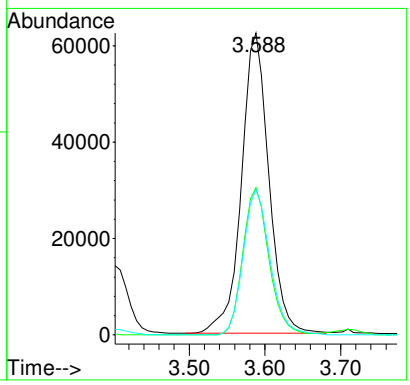


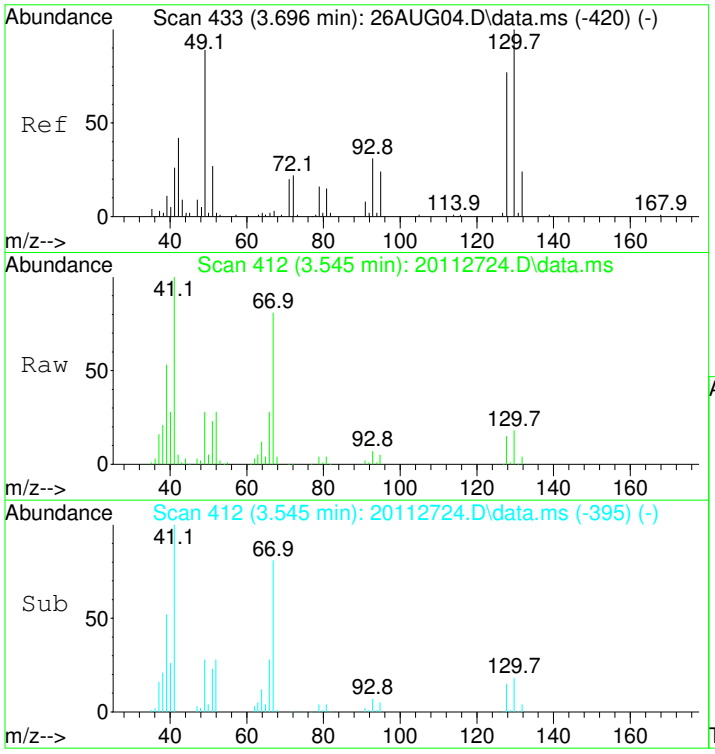


#41
Tetrahydrofuran
Concen: 39.47 ug/L
RT: 3.588 min Scan# 418
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 42 Resp: 156227

Ion	Ratio	Lower	Upper
42	100		
72	46.6	27.6	67.6
71	47.3	26.5	66.5

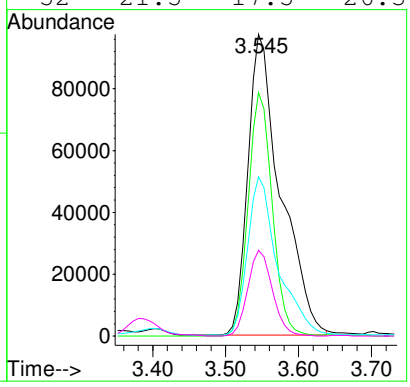


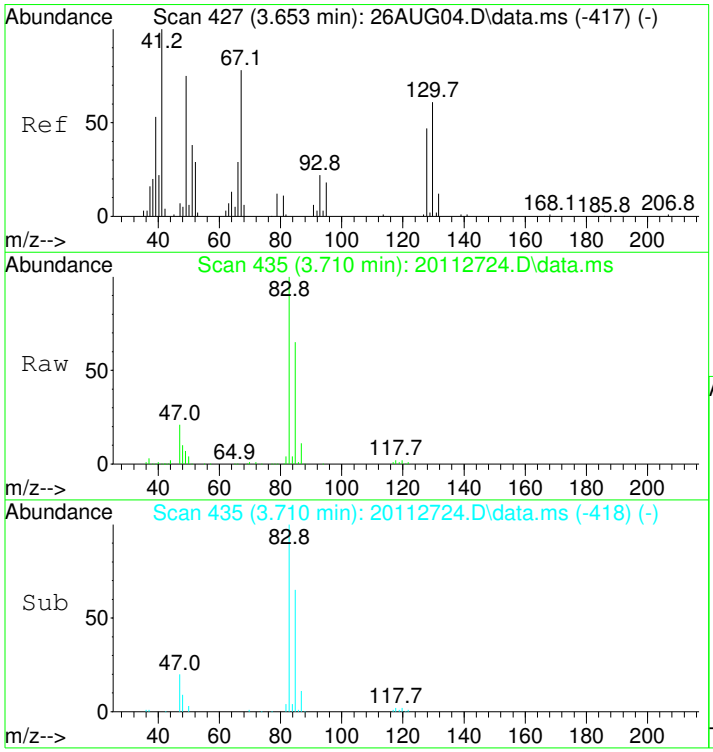


#42
Methacrylonitrile
Concen: 38.72 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 41 Resp: 304115

Ion	Ratio	Lower	Upper
41	100		
67	59.5	47.8	71.6
39	48.3	38.6	57.8
52	21.5	17.5	26.3

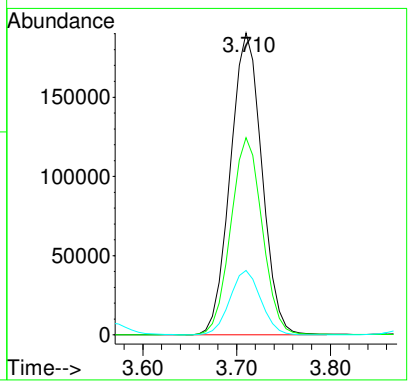


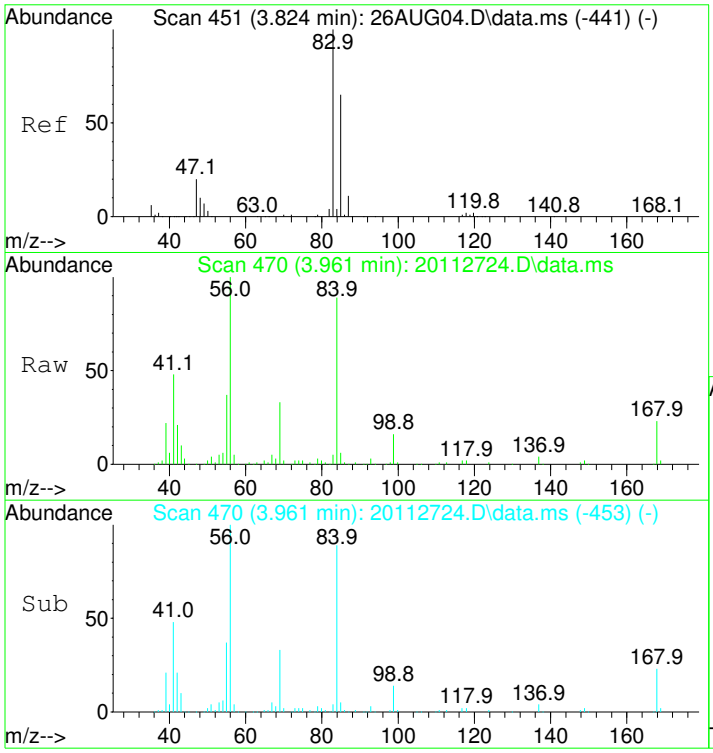


#43
Chloroform
Concen: 39.43 ug/L
RT: 3.710 min Scan# 435
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 83 Resp: 448436

Ion	Ratio	Lower	Upper
83	100		
85	65.1	46.1	86.1
47	20.9	1.2	41.2

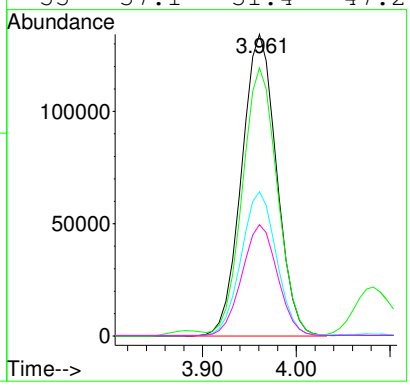


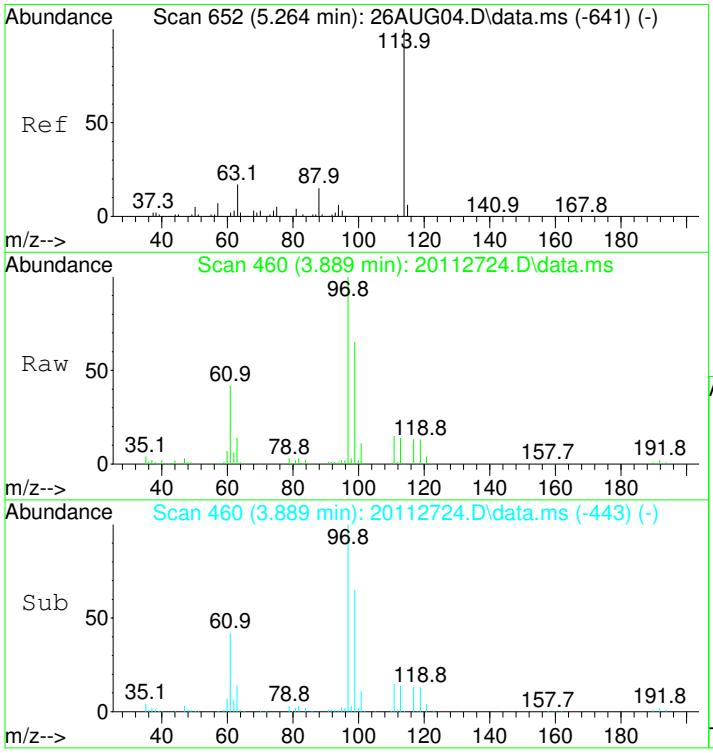


#44
Cyclohexane
Concen: 38.68 ug/L
RT: 3.961 min Scan# 470
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 56 Resp: 350469

Ion	Ratio	Lower	Upper
56	100		
84	87.9	69.5	104.3
41	47.7	39.4	59.0
55	37.1	31.4	47.2

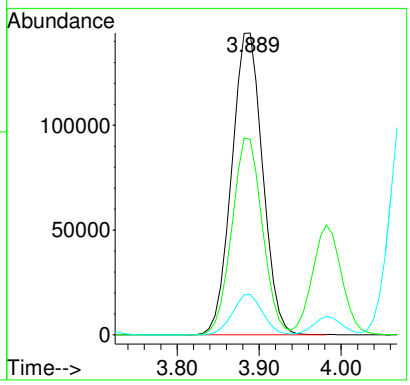


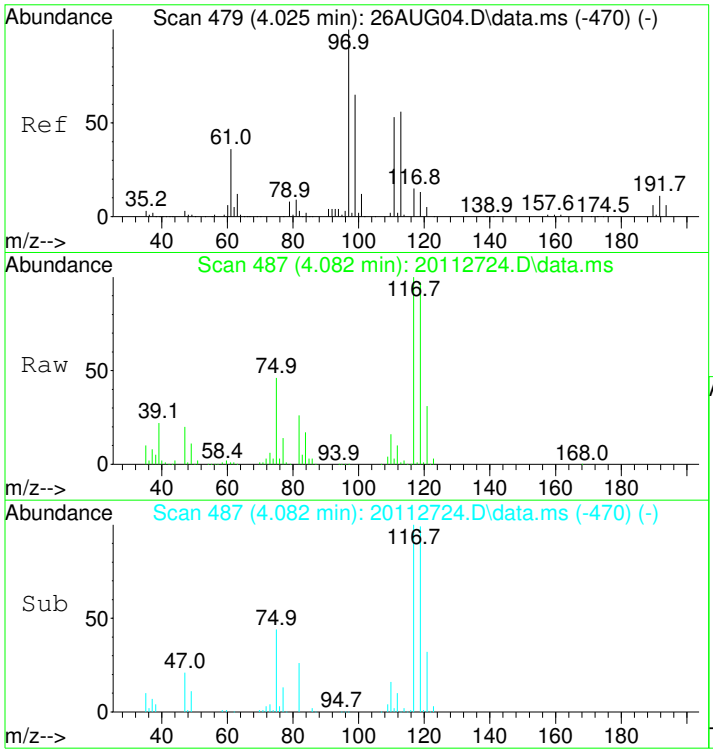


#46
1,1,1-Trichloroethane
Concen: 39.33 ug/L
RT: 3.889 min Scan# 460
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 97 Resp: 377390

Ion	Ratio	Lower	Upper
97	100		
99	64.5	45.8	85.8
117	13.1	0.0	33.4

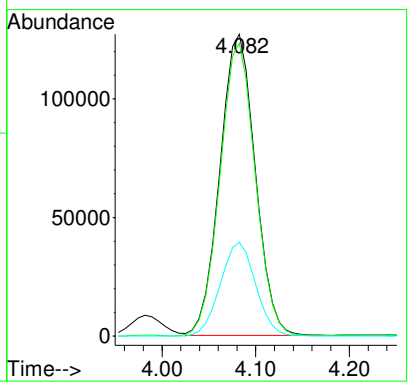


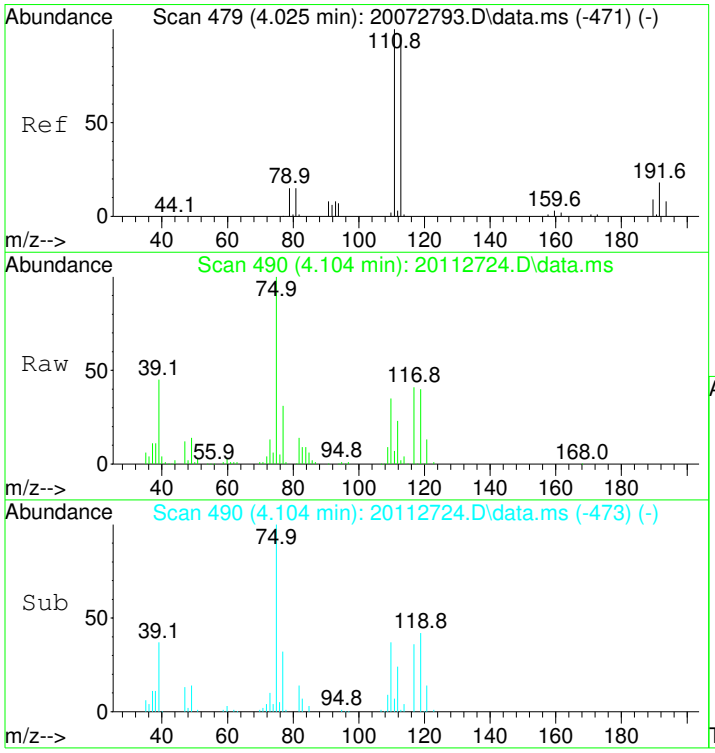


#48
Carbon tetrachloride
Concen: 40.55 ug/L
RT: 4.082 min Scan# 487
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:117 Resp: 333834

Ion	Ratio	Lower	Upper
117	100		
119	97.4	78.7	118.7
121	31.2	11.8	51.8

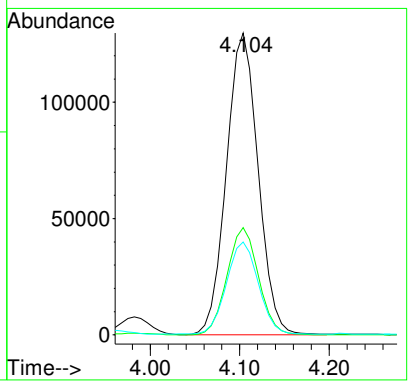


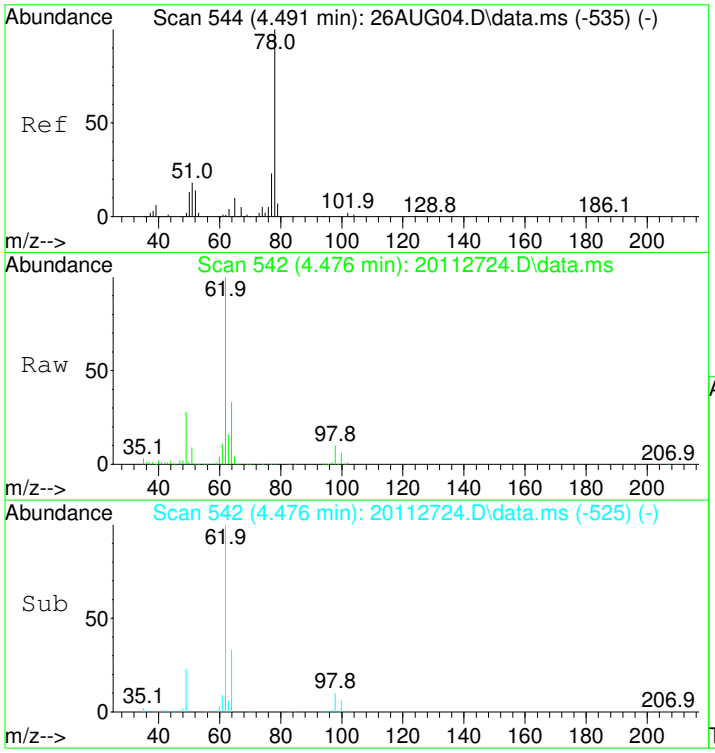


#49
1,1-Dichloropropene
Concen: 39.60 ug/L
RT: 4.104 min Scan# 490
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 75 Resp: 320659

Ion	Ratio	Lower	Upper
75	100		
110	35.1	16.0	56.0
77	30.6	11.0	51.0

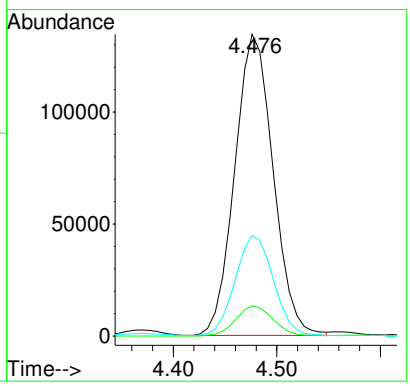


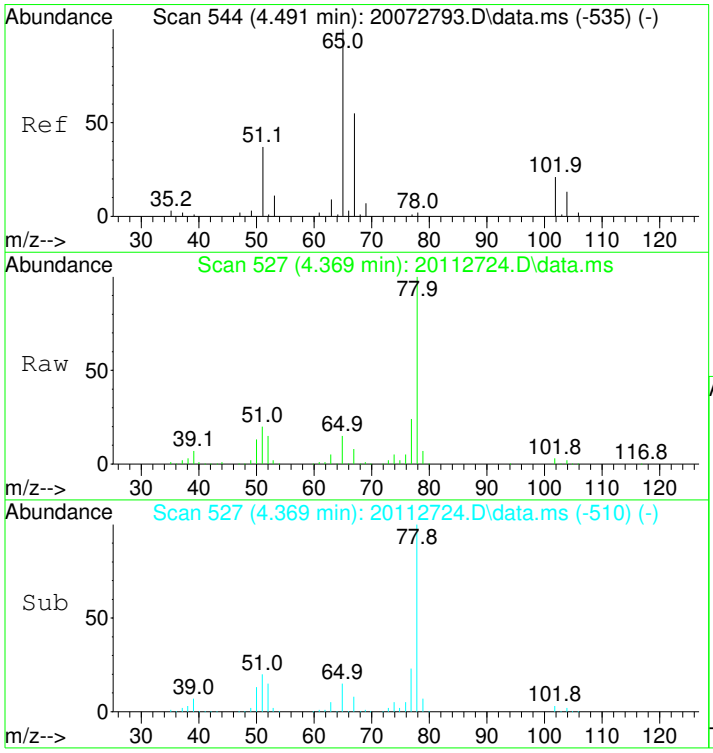


#51
1,2-Dichloroethane
Concen: 38.43 ug/L
RT: 4.476 min Scan# 542
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 62 Resp: 345899

Ion	Ratio	Lower	Upper
62	100		
98	9.9	0.0	29.0
64	33.0	13.9	53.9

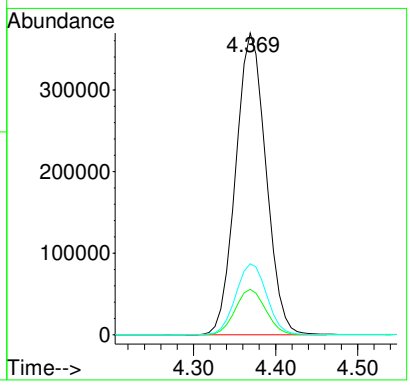


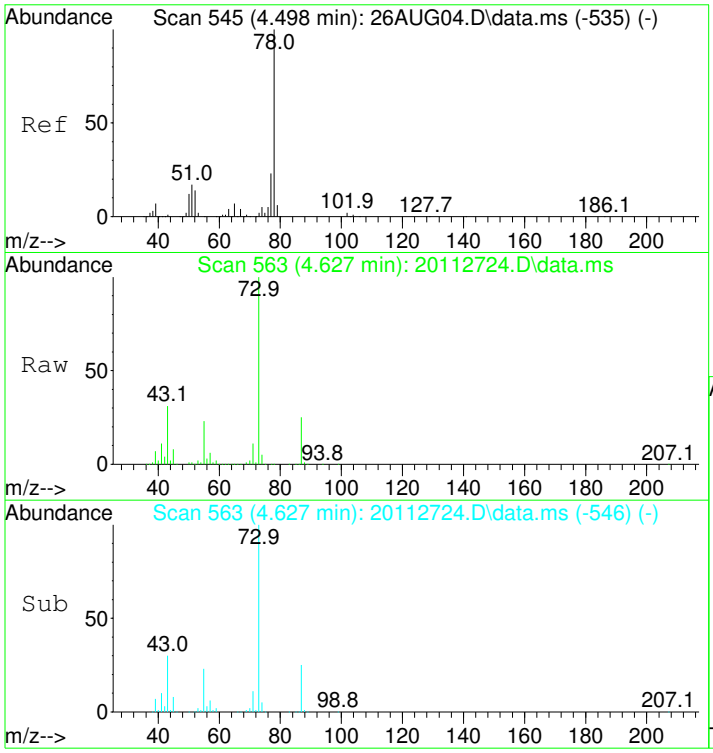


#52
Benzene
Concen: 40.41 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 78 Resp: 948236

Ion	Ratio	Lower	Upper
78	100		
52	15.2	0.0	35.8
77	24.0	3.7	43.7

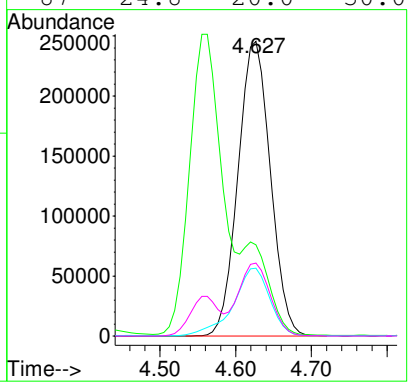


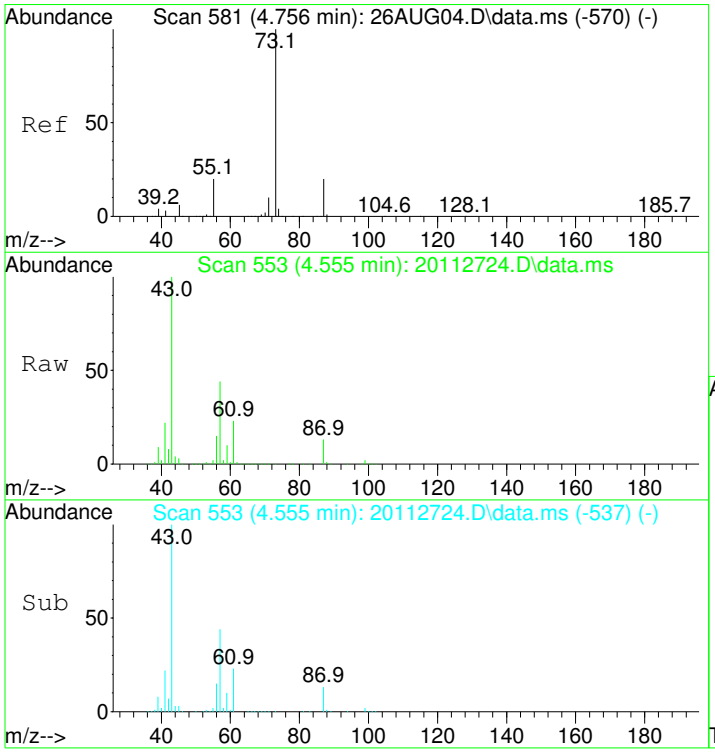


#53
Tertiaryamylmethylether
Concen: 40.84 ug/L
RT: 4.627 min Scan# 563
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 73 Resp: 728643

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	25.8	21.0	31.6
87	24.8	20.0	30.0

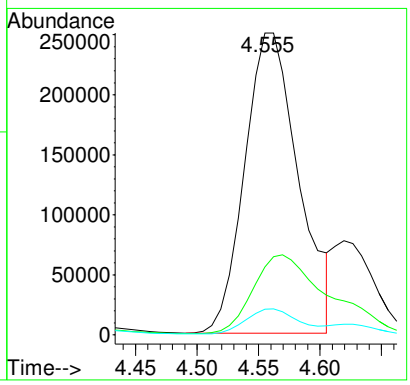


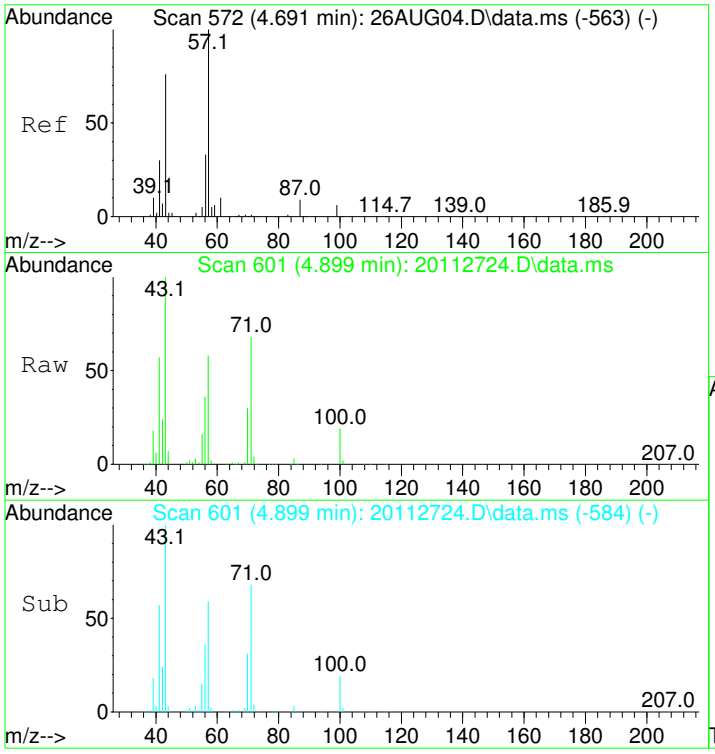


#54
Isobutyl Alcohol
Concen: 41.54 ug/L
RT: 4.555 min Scan# 553
Delta R.T. -0.007 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 761892

Ion	Ratio	Lower	Upper
43	100		
41	36.1	30.7	46.1
42	7.9	6.4	9.6

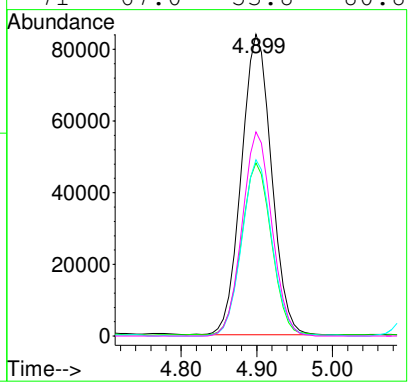


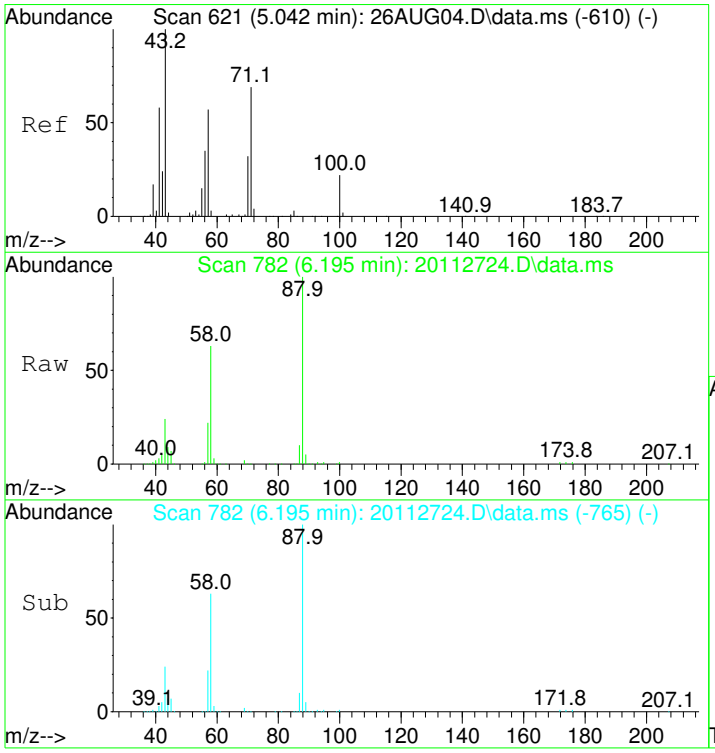


#55
Heptane
Concen: 37.02 ug/L
RT: 4.899 min Scan# 601
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 231124

Ion	Ratio	Lower	Upper
43	100		
41	57.0	46.8	70.2
57	58.8	47.5	71.3
71	67.0	53.8	80.8

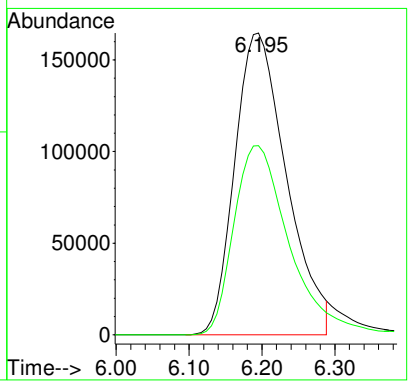


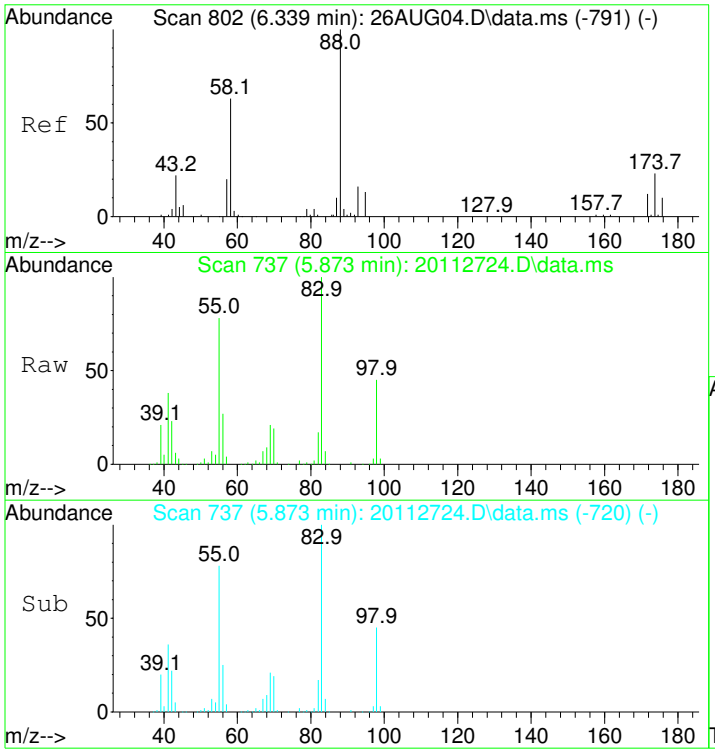


#56
1,4-Dioxane
Concen: 3886.19 ug/L
RT: 6.195 min Scan# 782
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 88 Resp: 812919

Ion	Ratio	Lower	Upper
88	100		
58	64.2	50.7	76.1

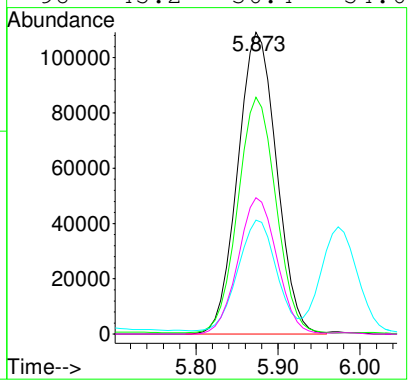


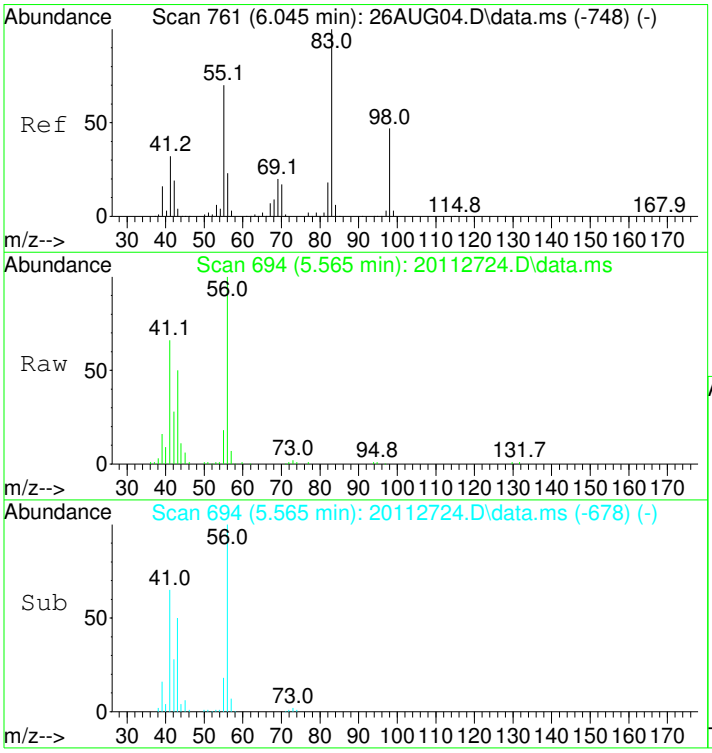


#57
Methylcyclohexane
Concen: 38.04 ug/L
RT: 5.873 min Scan# 737
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 83 Resp: 359759

Ion	Ratio	Lower	Upper
83	100		
55	76.7	61.7	92.5
41	36.0	28.5	42.7
98	45.2	36.4	54.6

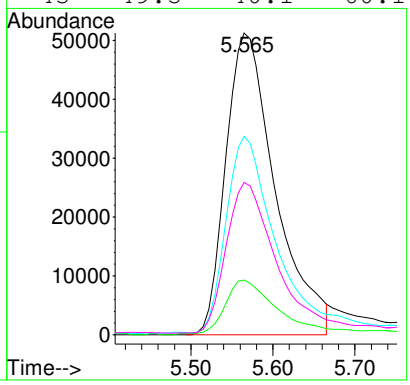


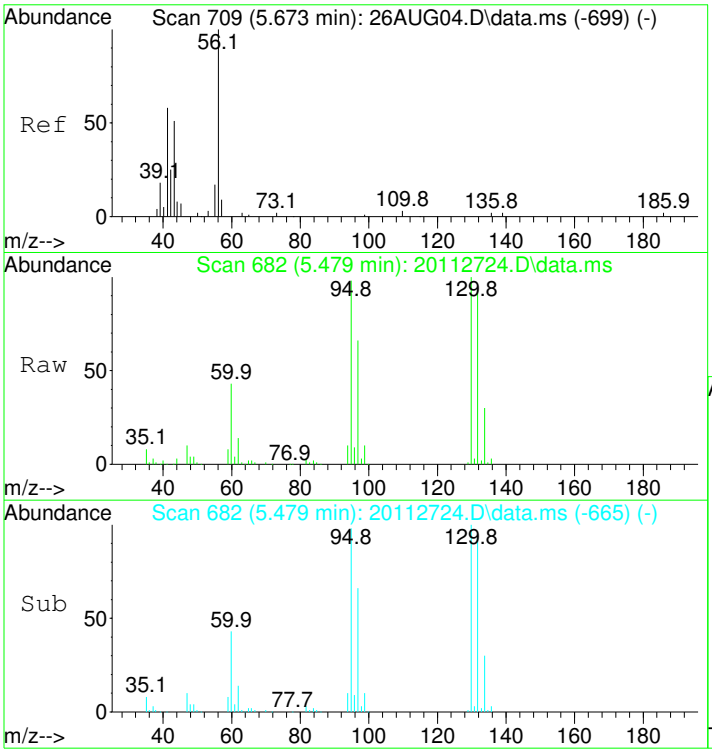


#58
n-Butanol
Concen: 407.73 ug/L
RT: 5.565 min Scan# 694
Delta R.T. -0.007 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 56 Resp: 215750

Ion	Ratio	Lower	Upper
56	100		
55	18.8	15.4	23.2
41	63.1	50.9	76.3
43	49.5	40.1	60.1

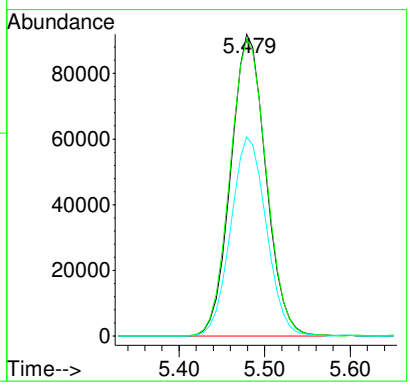


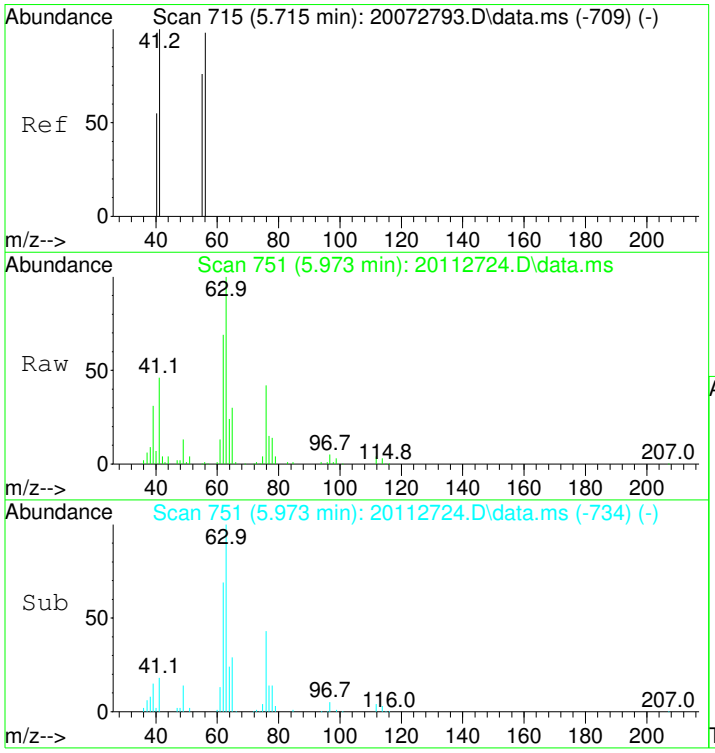


#59
Trichloroethene
Concen: 39.78 ug/L
RT: 5.479 min Scan# 682
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:130 Resp: 261961

Ion	Ratio	Lower	Upper
130	100		
95	101.4	82.7	122.7
97	66.6	47.6	87.6

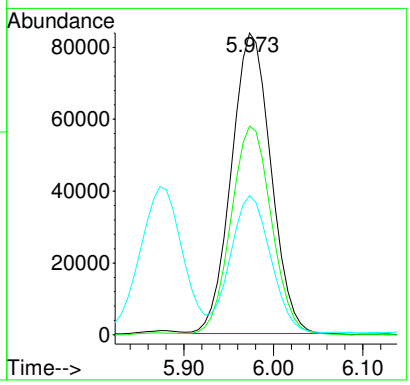


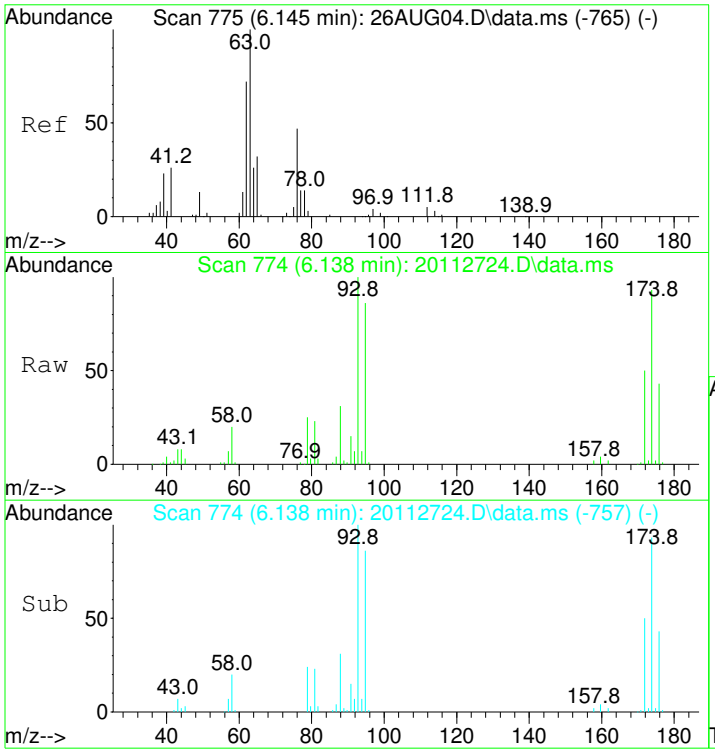


#60
1,2-Dichloropropane
Concen: 38.98 ug/L
RT: 5.973 min Scan# 751
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 63 Resp: 257414

Ion	Ratio	Lower	Upper
63	100		
62	70.3	51.5	91.5
41	46.2	26.1	66.1

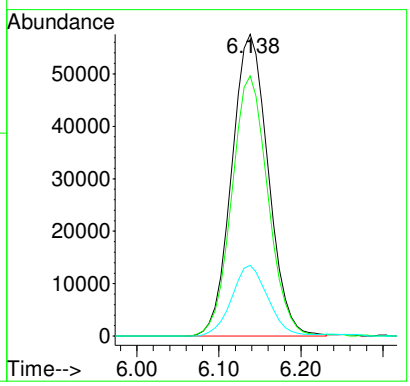


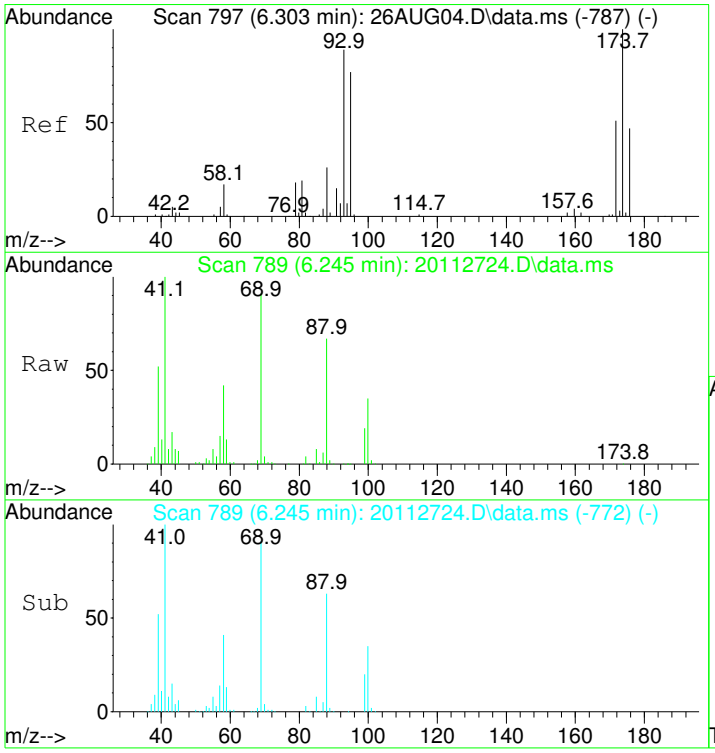


#61
Dibromomethane
Concen: 38.12 ug/L
RT: 6.138 min Scan# 774
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 93 Resp: 178244

Ion	Ratio	Lower	Upper
93	100		
95	85.2	63.0	103.0
81	23.3	3.4	43.4

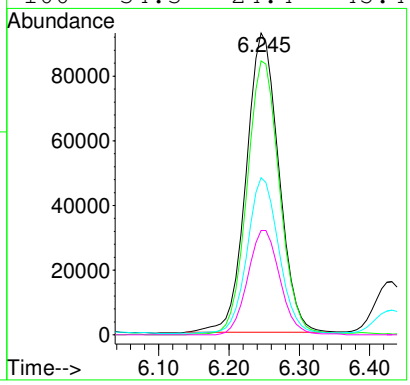


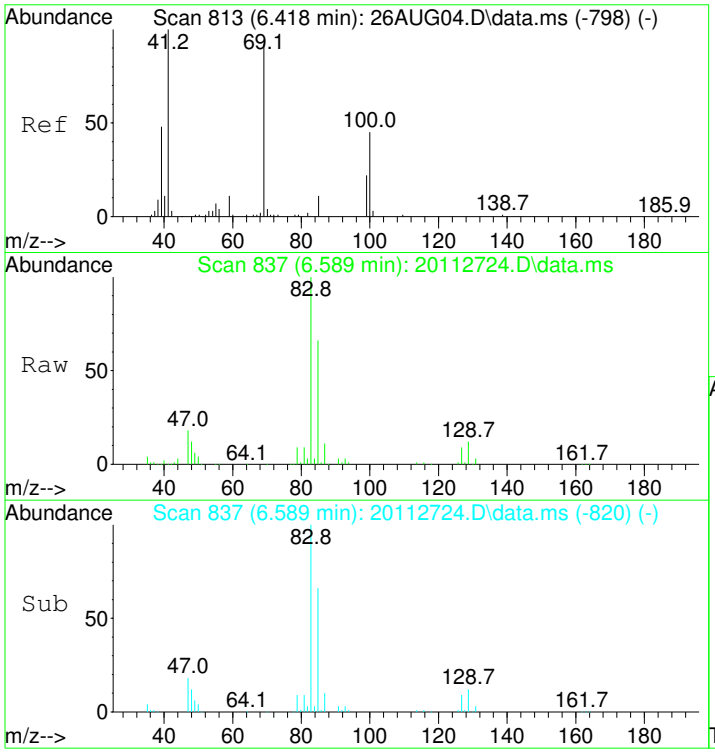


#62
Methyl methacrylate
Concen: 39.35 ug/L
RT: 6.245 min Scan# 789
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 41 Resp: 299021

Ion	Ratio	Lower	Upper
41	100		
69	91.2	72.2	108.4
39	50.3	41.1	61.7
100	34.3	24.4	45.4

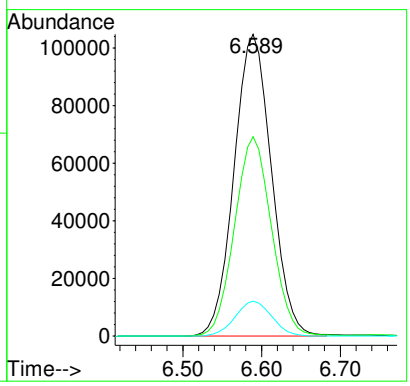


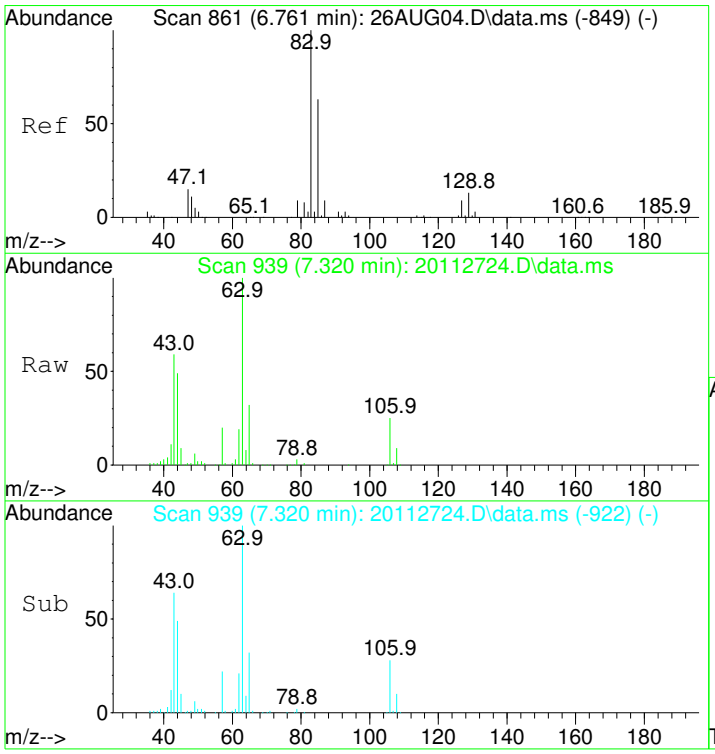


#63
Bromodichloromethane
Concen: 38.53 ug/L
RT: 6.589 min Scan# 837
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 83 Resp: 345711

Ion	Ratio	Lower	Upper
83	100		
85	65.2	44.3	84.3
129	11.3	0.0	31.0

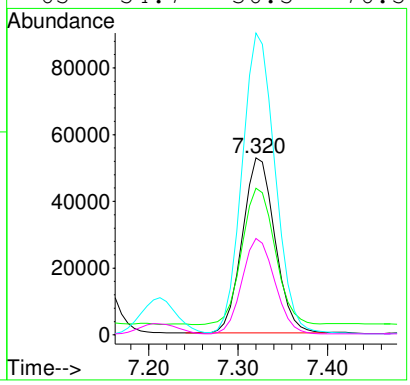


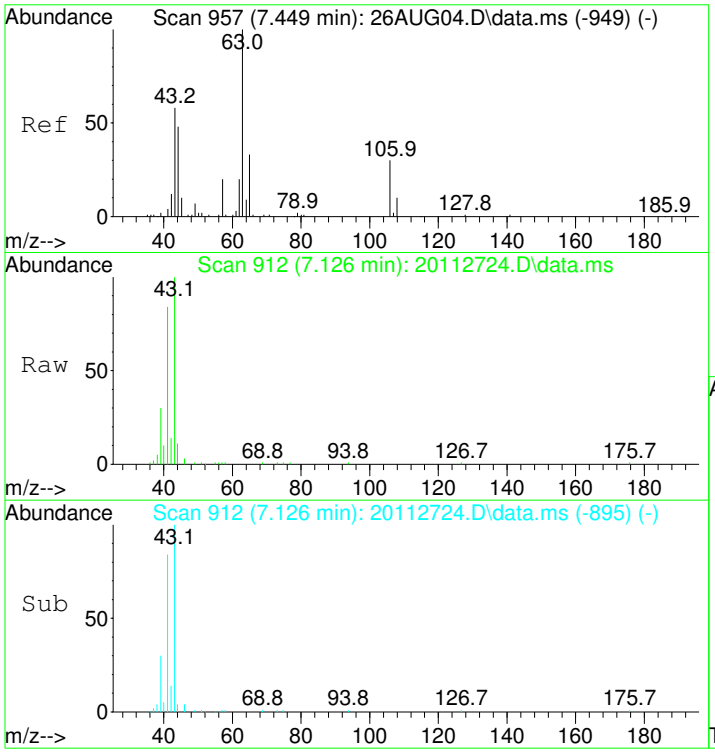


#64
2-Chloroethyl vinyl ether
Concen: 40.52 ug/L
RT: 7.320 min Scan# 939
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 132963

Ion	Ratio	Lower	Upper
43	100		
44	79.8	51.0	111.0
63	171.9	141.4	201.4
65	54.7	36.5	76.5

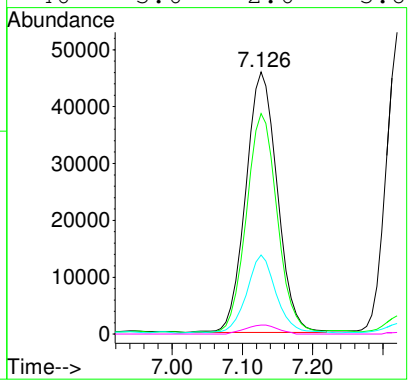


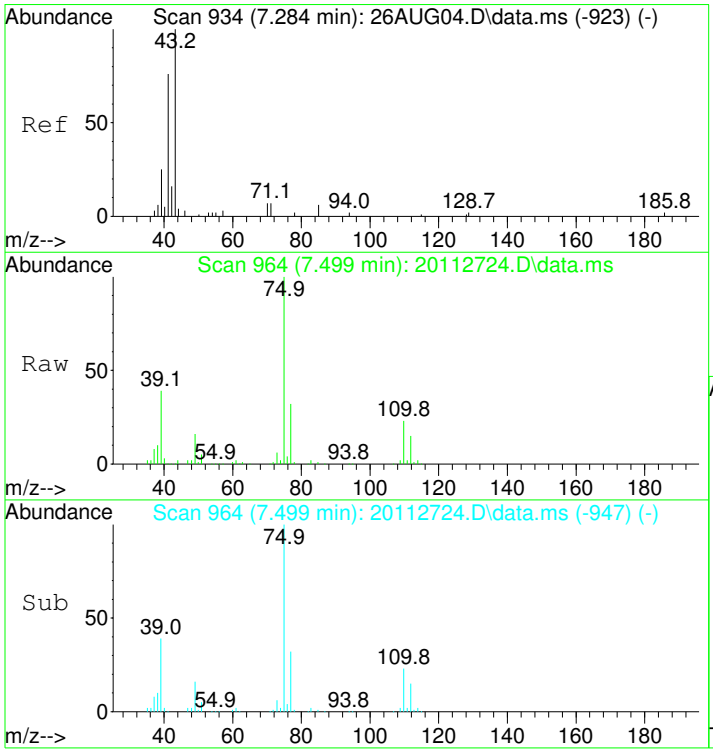


#65
2-Nitropropane
Concen: 39.78 ug/L
RT: 7.126 min Scan# 912
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 142829

Ion	Ratio	Lower	Upper
43	100		
41	81.6	67.9	101.9
39	27.3	21.8	32.8
46	3.6	2.6	3.8

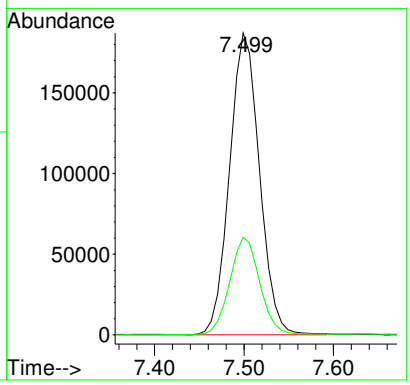


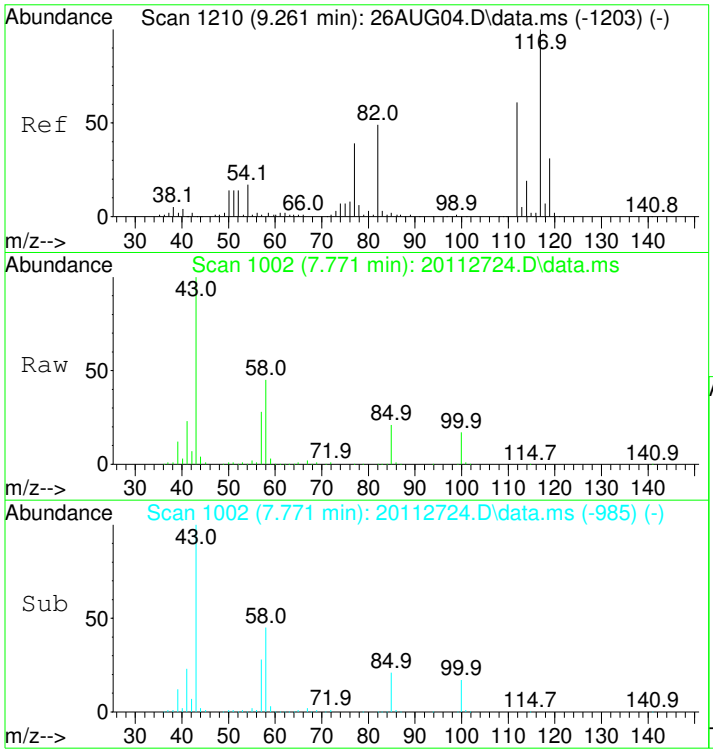


#66
cis-1,3-Dichloropropene
Concen: 39.59 ug/L
RT: 7.499 min Scan# 964
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 75 Resp: 435891

Ion	Ratio	Lower	Upper
75	100		
77	32.0	11.9	51.9

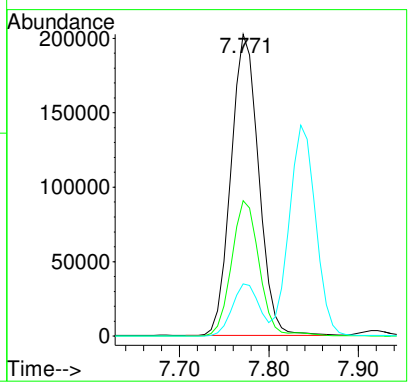


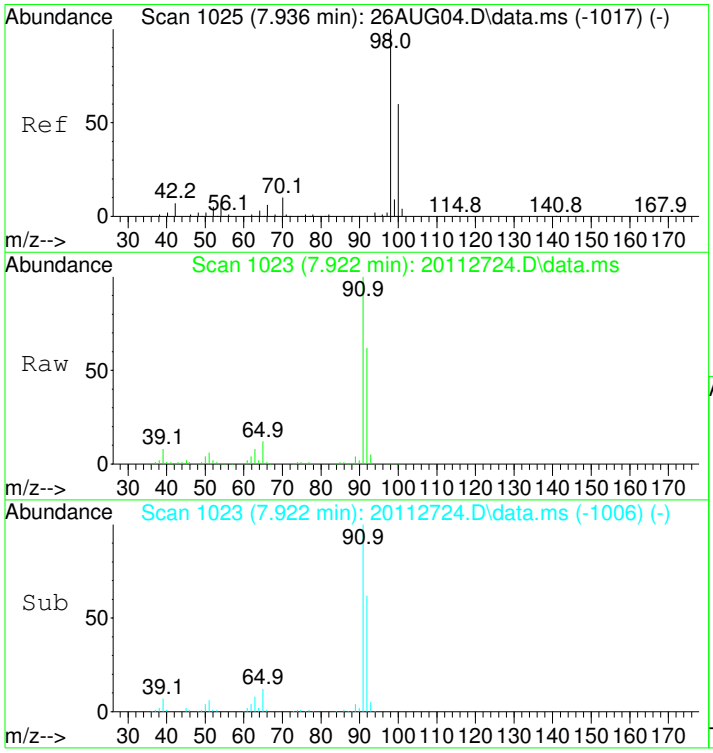


#68
4-Methyl-2-pentanone
Concen: 40.47 ug/L
RT: 7.771 min Scan# 1002
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 435609

Ion	Ratio	Lower	Upper
43	100		
58	45.1	25.4	65.4
100	17.0	0.0	36.2

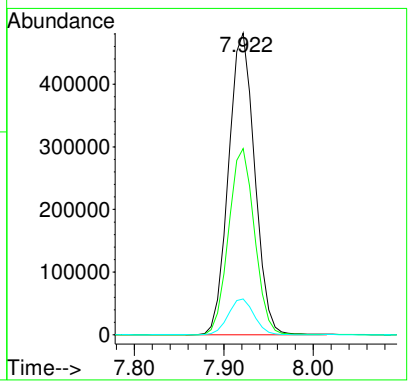


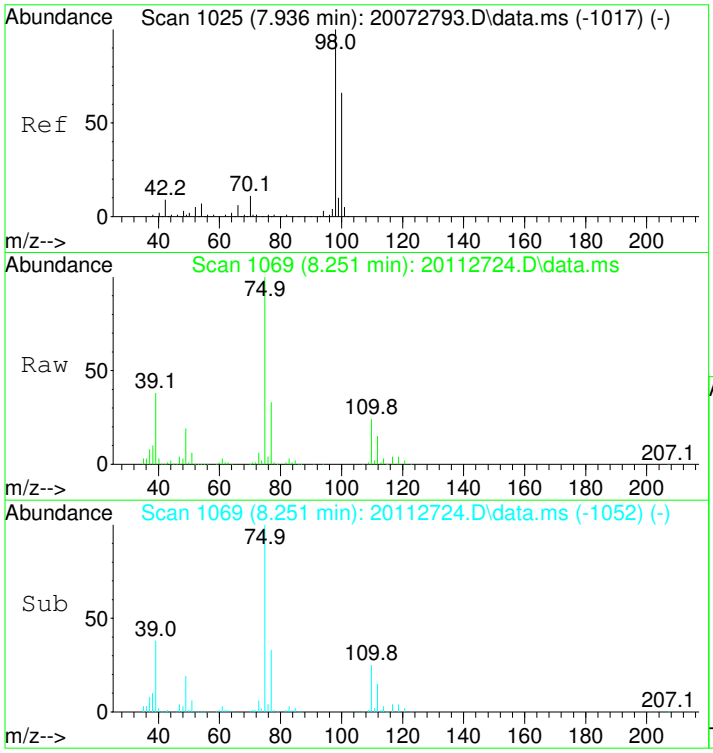


#70
Toluene
Concen: 41.41 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 979723

Ion	Ratio	Lower	Upper
91	100		
92	61.3	40.7	80.7
65	11.7	0.0	31.5

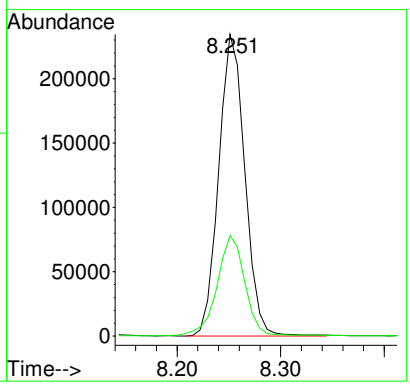


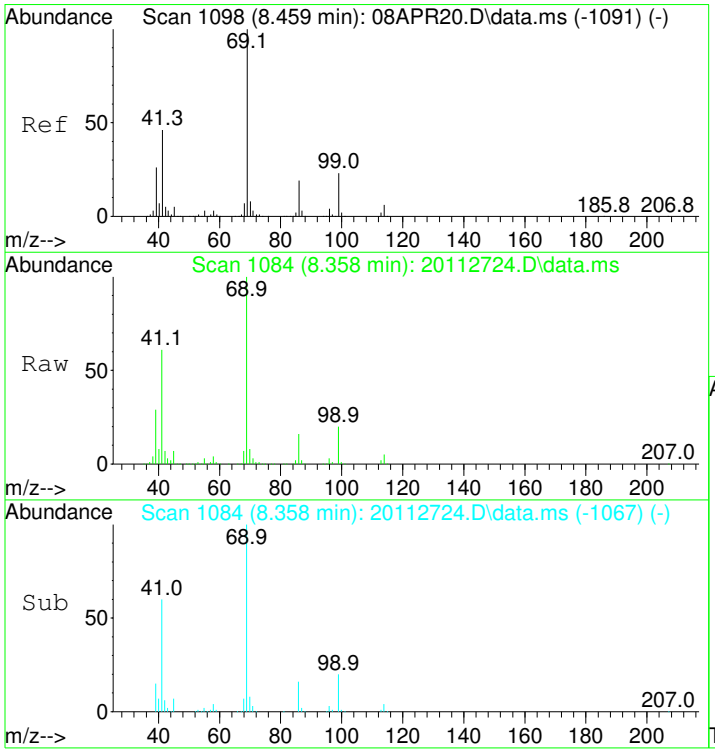


#71
trans-1,3-Dichloropropene
Concen: 40.61 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 75 Resp: 413174

Ion	Ratio	Lower	Upper
75	100		
77	35.2	15.0	55.0

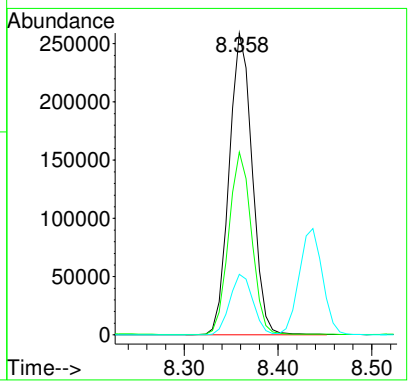


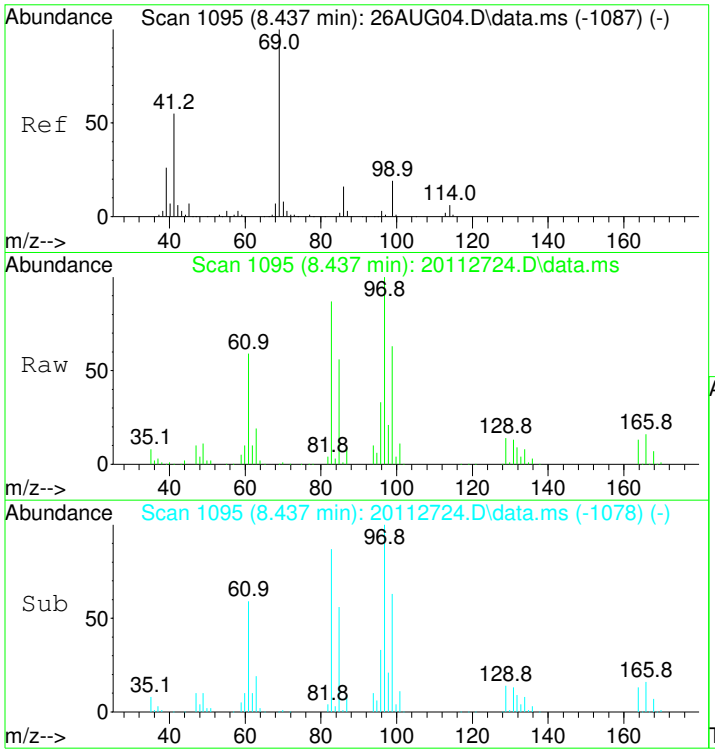


#73
Ethyl methacrylate
Concen: 39.99 ug/L
RT: 8.358 min Scan# 1084
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 69 Resp: 443123

Ion	Ratio	Lower	Upper
69	100		
41	59.7	39.9	79.9
99	20.2	0.0	39.7

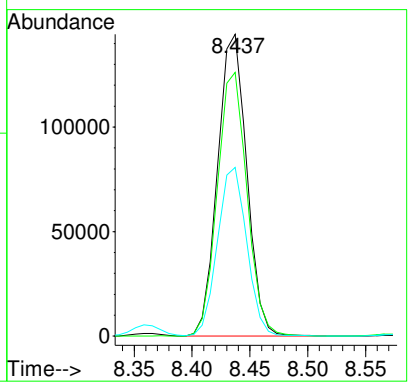


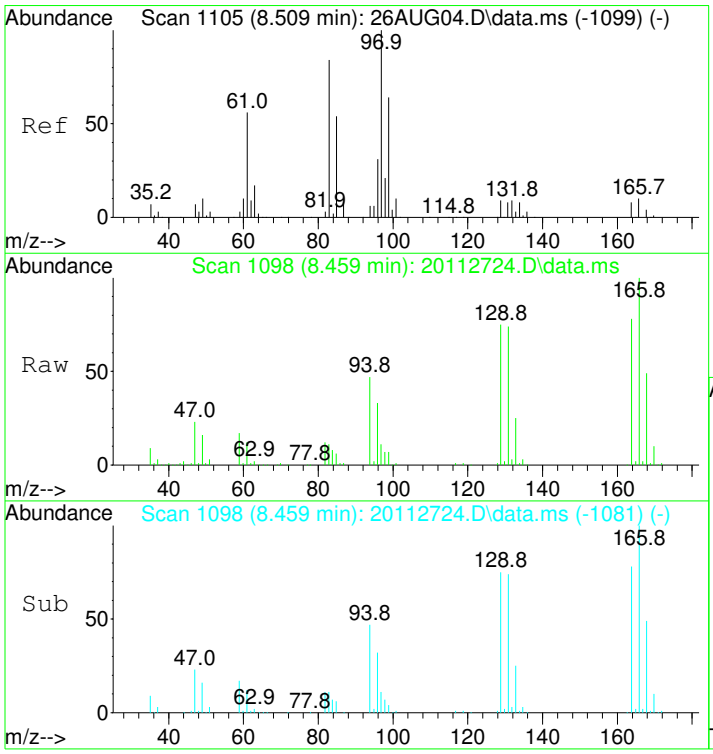


#74
1,1,2-Trichloroethane
Concen: 38.93 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 97 Resp: 252969

Ion	Ratio	Lower	Upper
97	100		
83	88.9	66.1	106.1
85	56.3	36.8	76.8

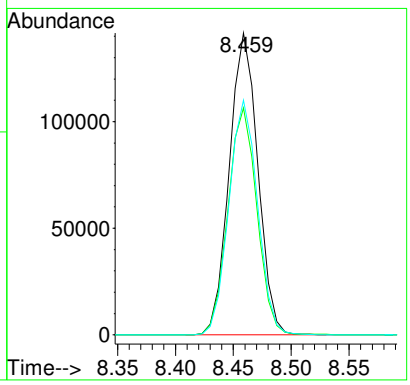


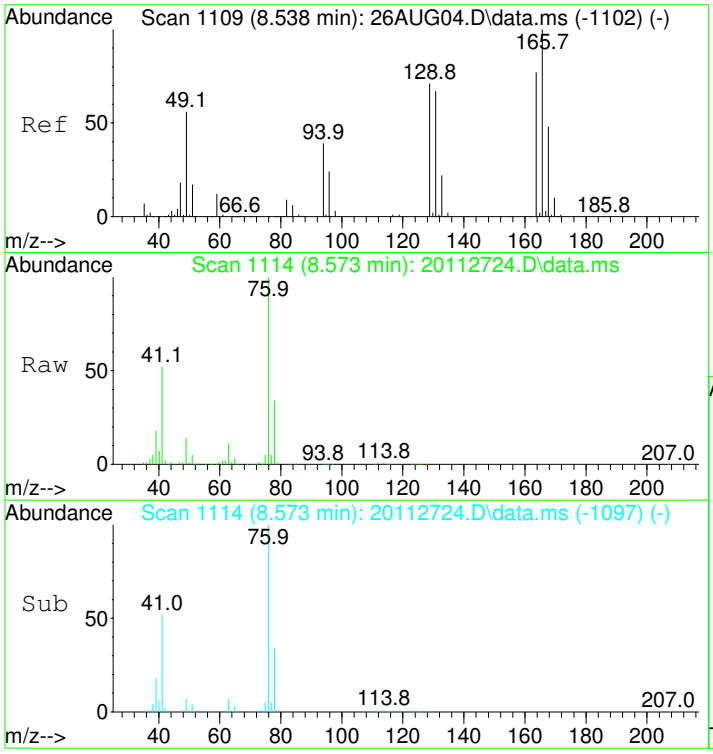


#75
Tetrachloroethene
Concen: 40.53 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:166 Resp: 242254

Ion	Ratio	Lower	Upper
166	100		
129	76.2	59.1	99.1
164	78.2	59.1	99.1

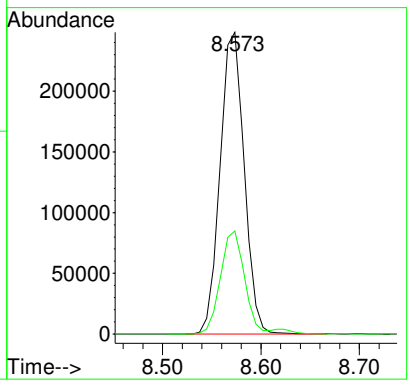


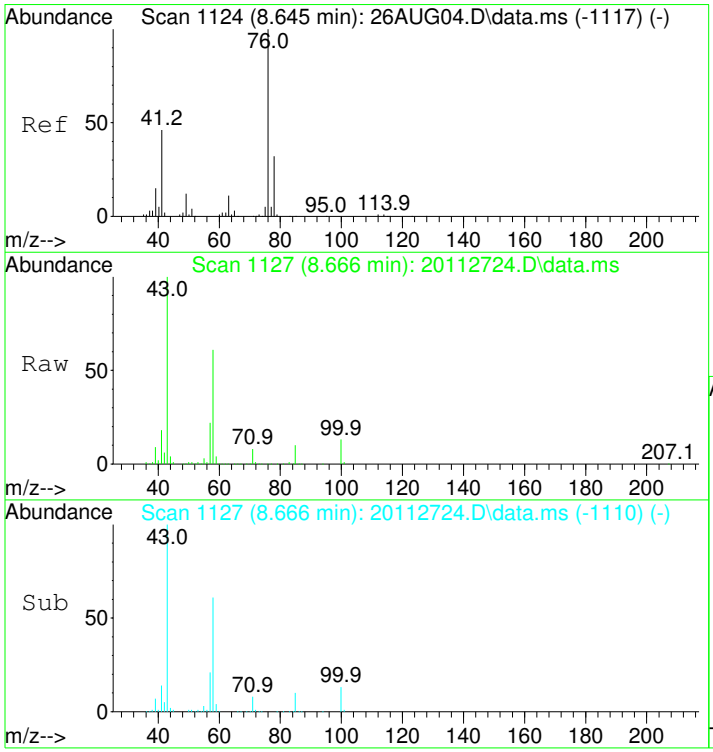


#76
1,3-Dichloropropane
Concen: 39.37 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 76 Resp: 424103

Ion	Ratio	Lower	Upper
76	100		
78	34.1	13.2	53.2

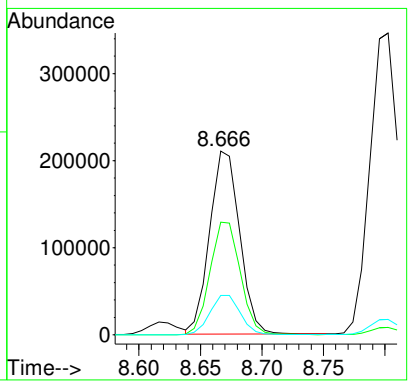


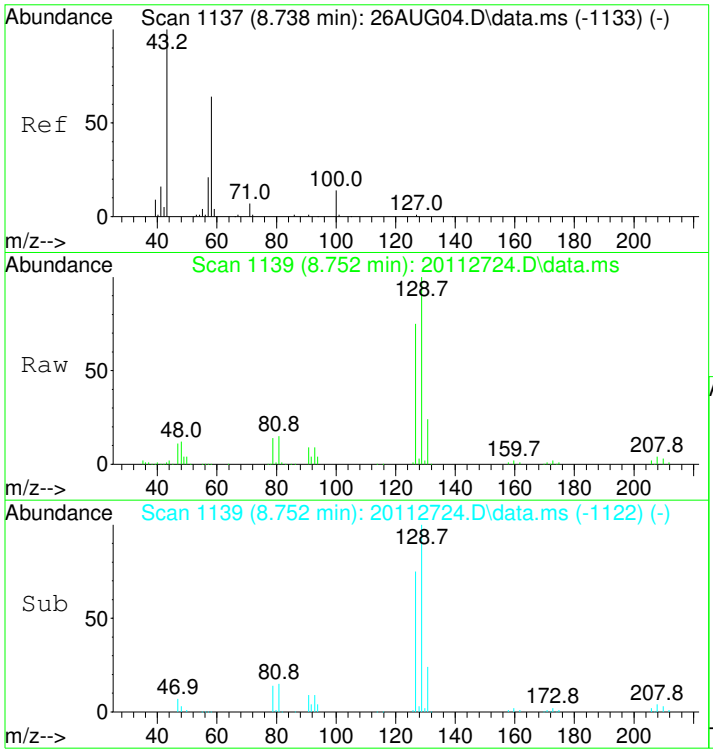


#77
2-Hexanone
Concen: 41.99 ug/L
RT: 8.666 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 357332

Ion	Ratio	Lower	Upper
43	100		
58	62.3	42.3	82.3
57	22.1	1.0	41.0

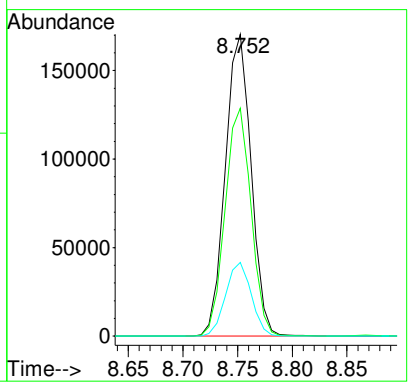


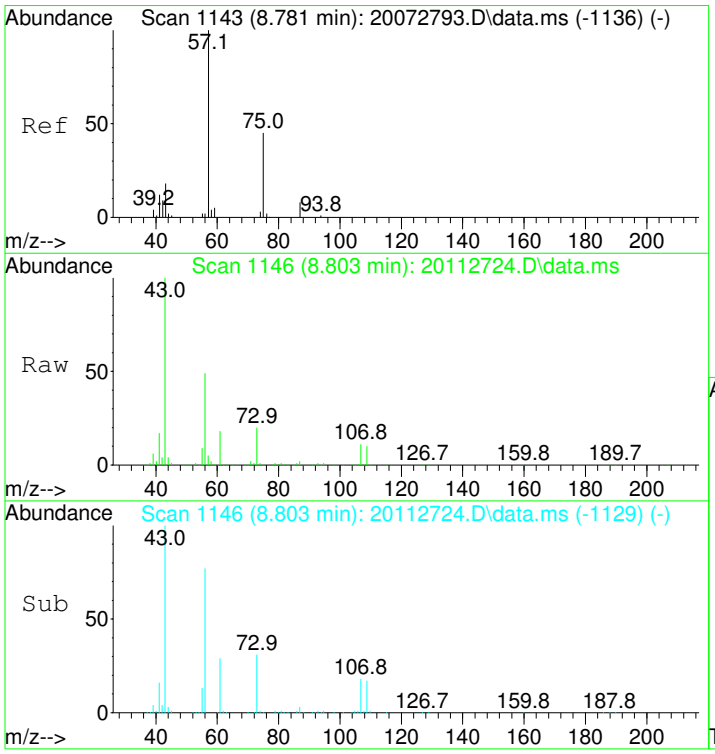


#78
Chlorodibromomethane
Concen: 39.28 ug/L
RT: 8.752 min Scan# 1139
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:129 Resp: 279710

Ion	Ratio	Lower	Upper
129	100		
127	76.0	57.8	97.8
131	24.2	4.2	44.2

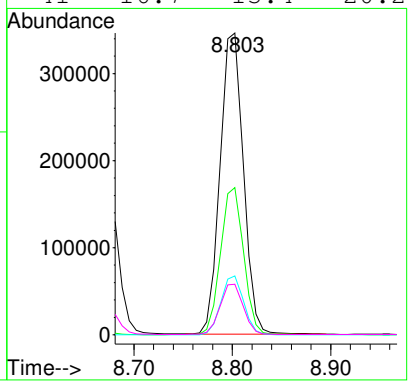


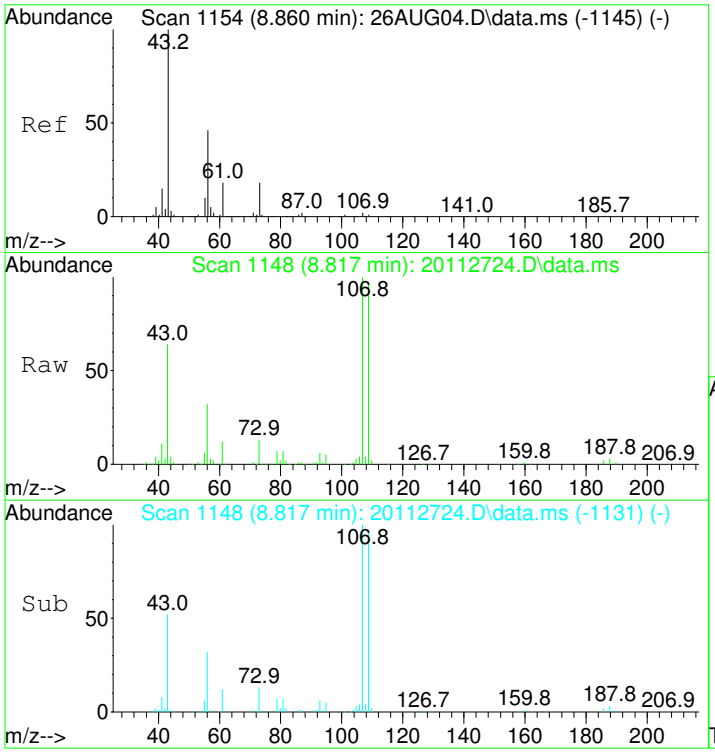


#79
Butyl acetate
Concen: 42.58 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 571057

Ion	Ratio	Lower	Upper
43	100		
56	48.3	38.0	57.0
73	19.1	15.0	22.4
41	16.7	13.4	20.2

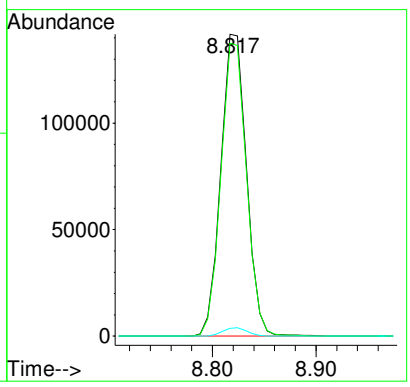


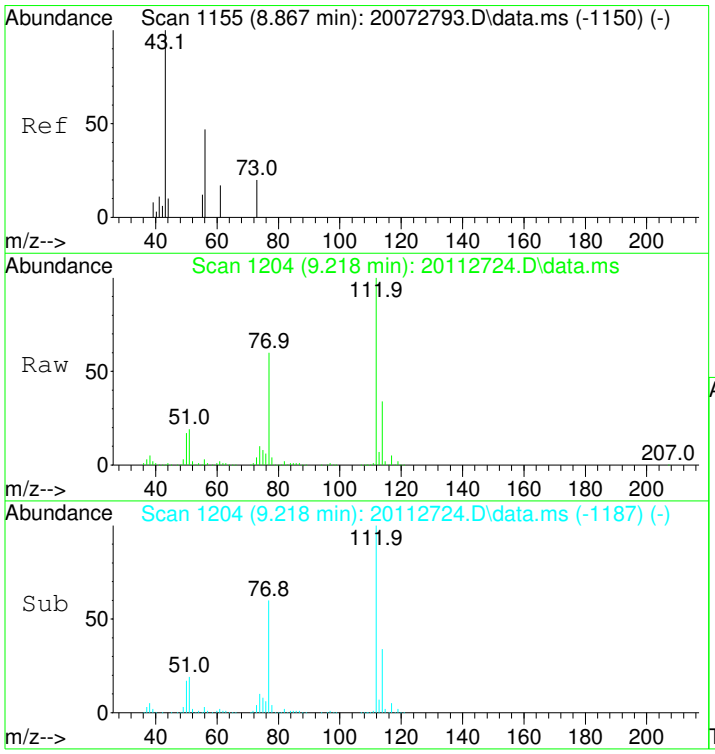


#80
1,2-Dibromoethane
Concen: 38.09 ug/L
RT: 8.817 min Scan# 1148
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:107 Resp: 245083

Ion	Ratio	Lower	Upper
107	100		
109	96.5	76.6	116.6
188	2.7	0.0	22.9

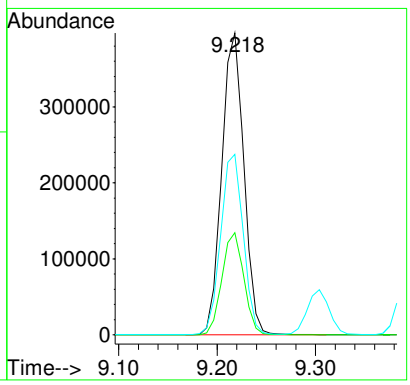


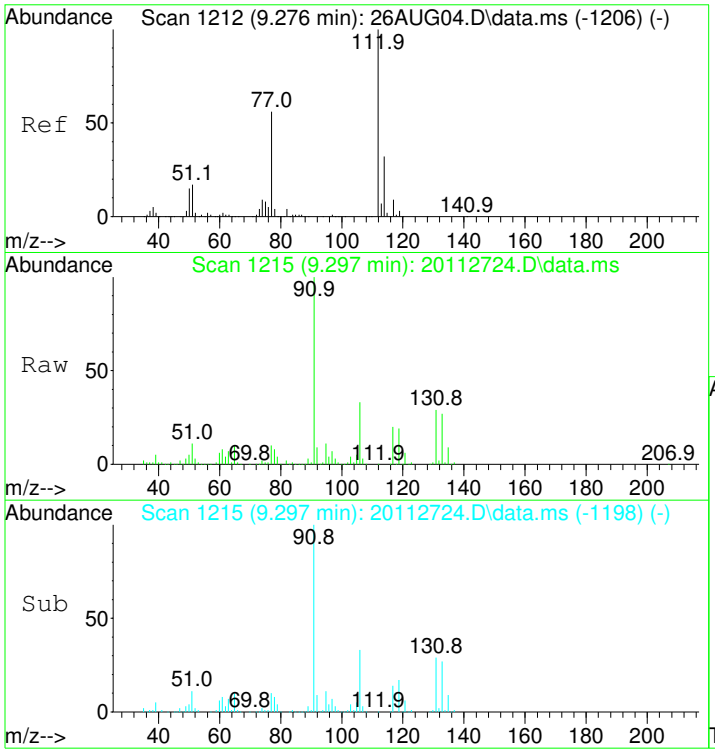


#81
Chlorobenzene
Concen: 40.85 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:112 Resp: 621692

Ion	Ratio	Lower	Upper
112	100		
114	33.5	13.6	53.6
77	61.0	41.7	81.7

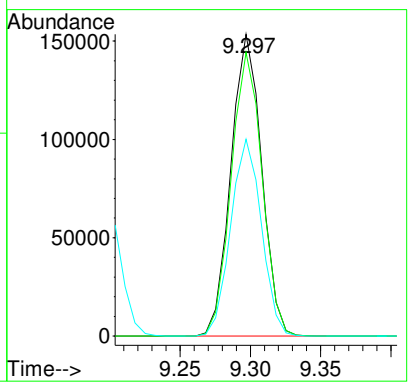


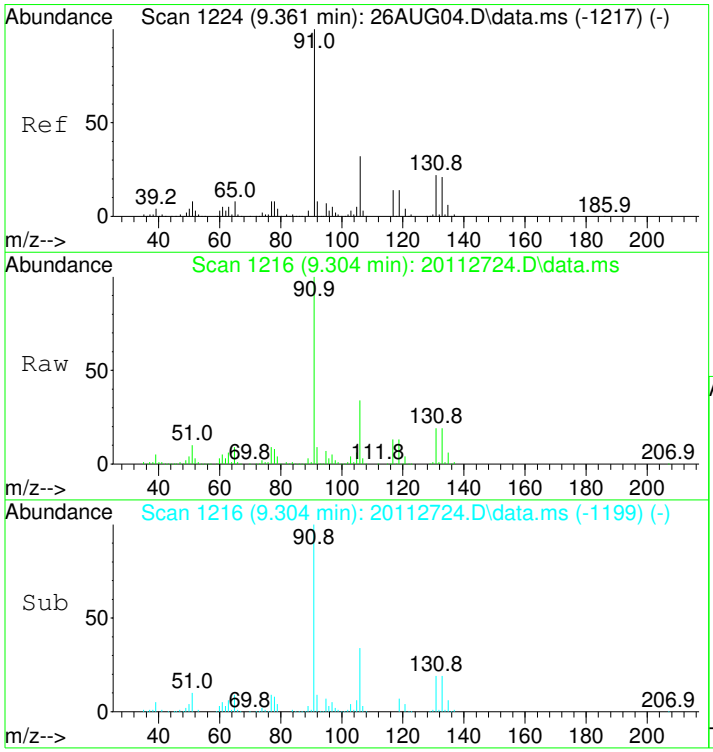


#82
1,1,1,2-Tetrachloroethane
Concen: 39.75 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:131 Resp: 234341

Ion	Ratio	Lower	Upper
131	100		
133	94.4	74.4	114.4
119	65.1	45.7	85.7

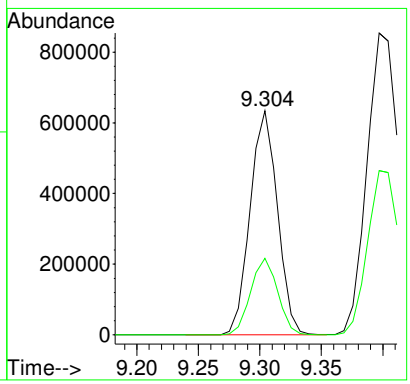


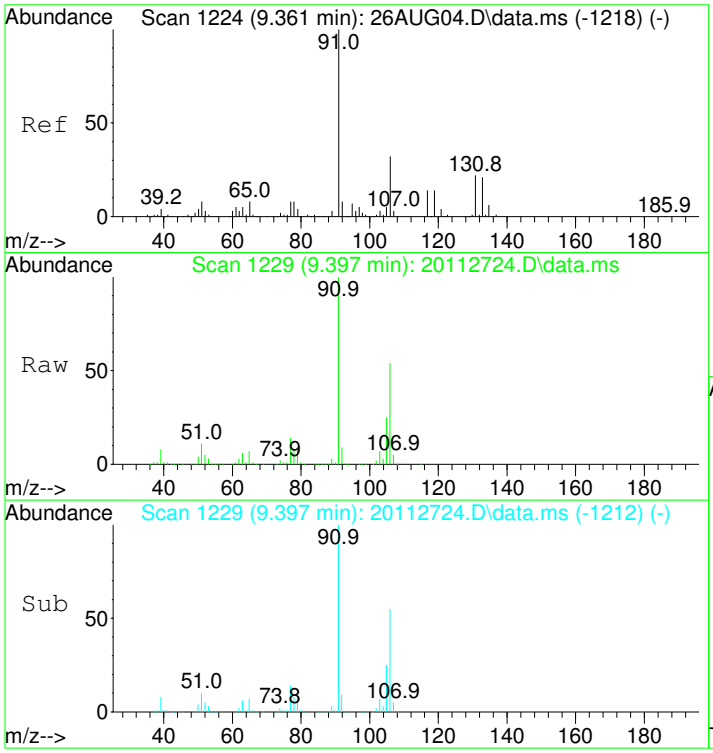


#83
Ethylbenzene
Concen: 37.78 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 979780

Ion	Ratio	Lower	Upper
91	100		
106	33.7	13.6	53.6

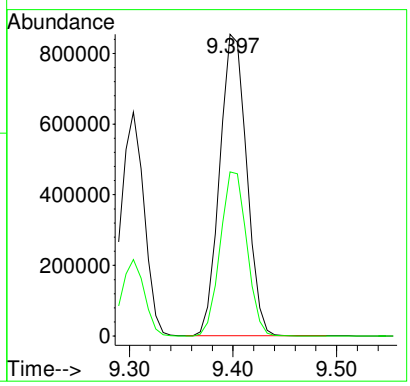


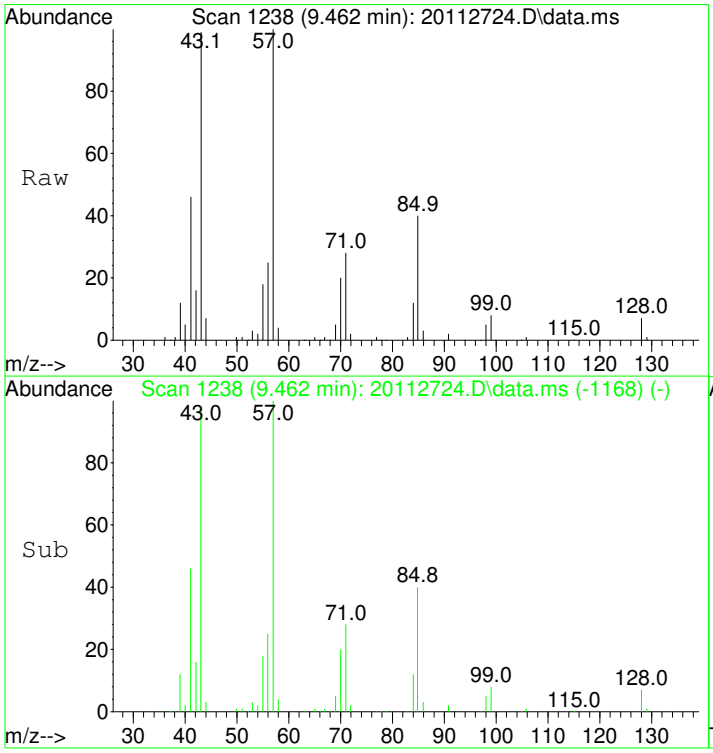


#84
m/p-Xylene
Concen: 75.61 ug/L
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 1549010

Ion	Ratio	Lower	Upper
91	100		
106	53.6	34.2	74.2

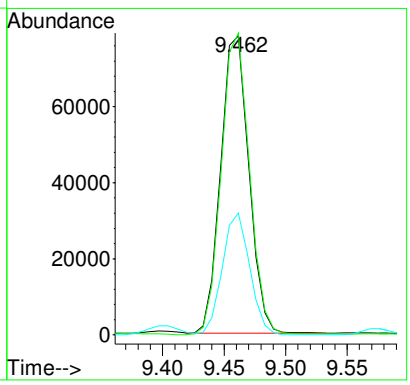


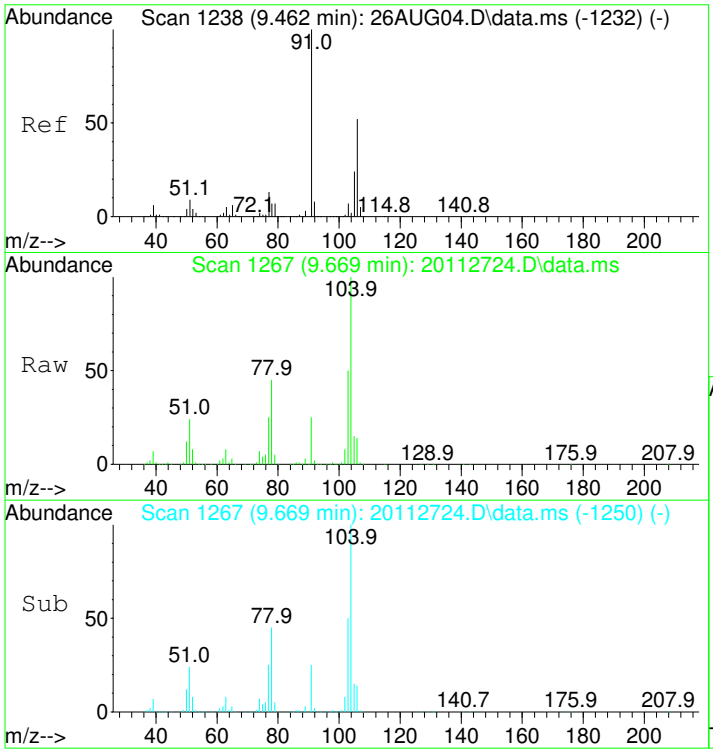


#85
Nonane
Concen: 38.52 ug/L
RT: 9.462 min Scan# 1238
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 124893

Ion	Ratio	Lower	Upper
43	100		
57	101.8	67.9	127.9
85	39.7	10.4	70.4

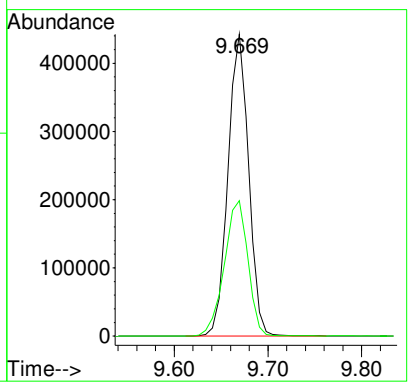


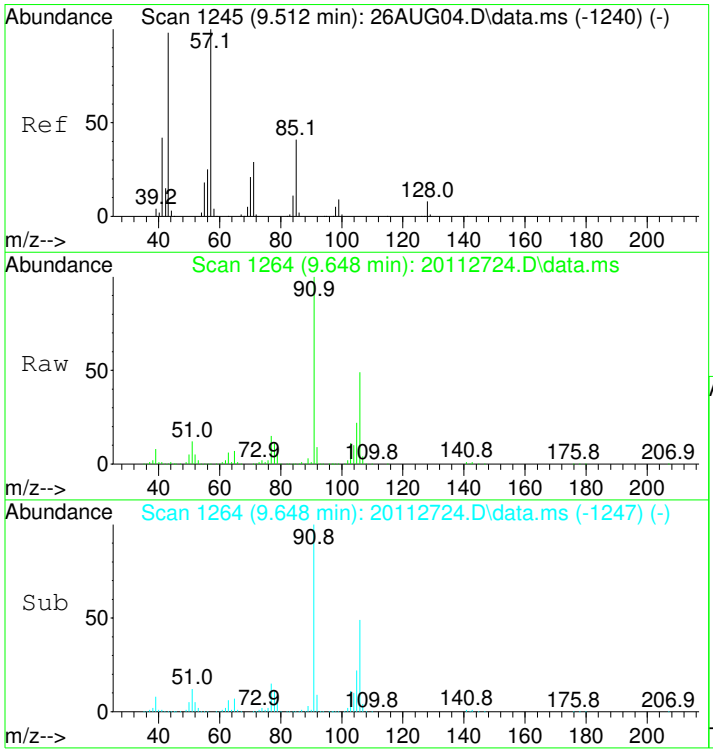


#86
Styrene
Concen: 38.33 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:104 Resp: 676828

Ion	Ratio	Lower	Upper
104	100		
78	51.2	32.3	72.3

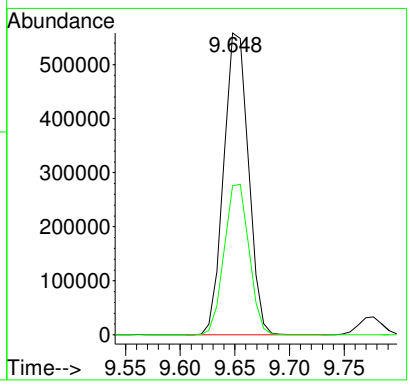


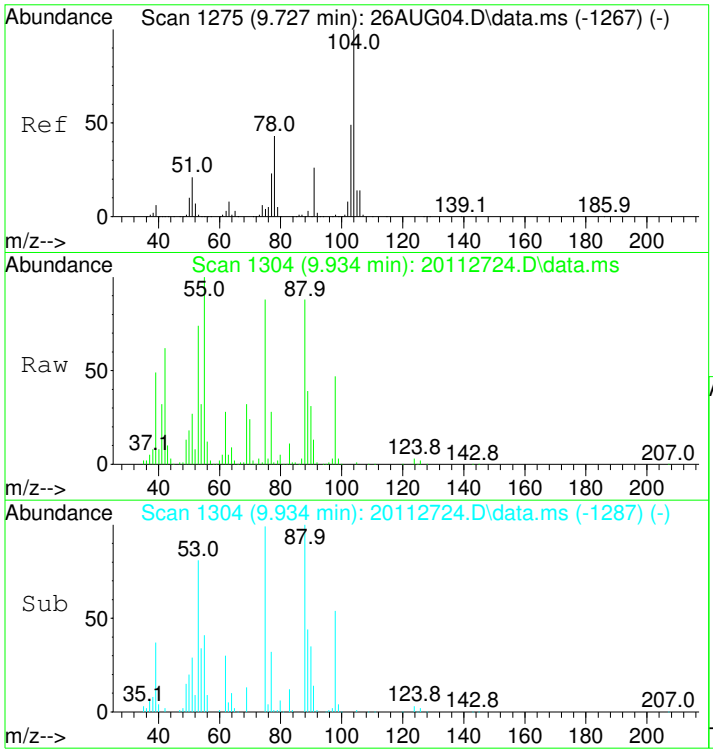


#87
o-Xylene
Concen: 38.33 ug/L
RT: 9.648 min Scan# 1264
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 879932

Ion	Ratio	Lower	Upper
91	100		
106	50.0	30.3	70.3

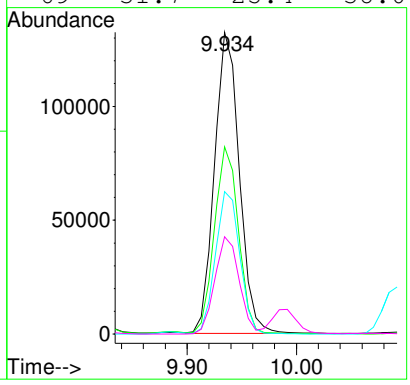


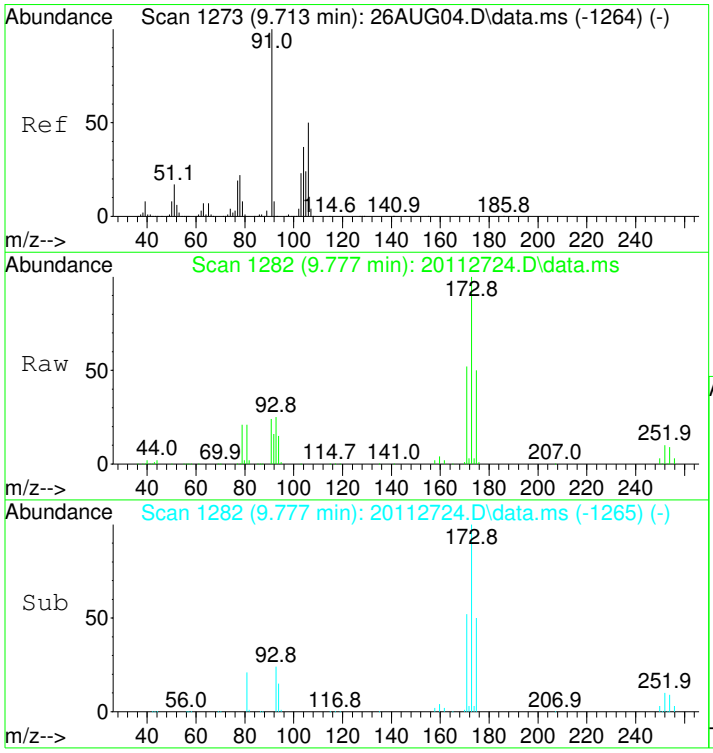


#88
Cyclohexanone
Concen: 224.14 ug/L
RT: 9.934 min Scan# 1304
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 55 Resp: 208062

Ion	Ratio	Lower	Upper
55	100		
42	60.0	48.0	72.0
98	46.5	38.2	57.2
69	31.7	25.4	38.0

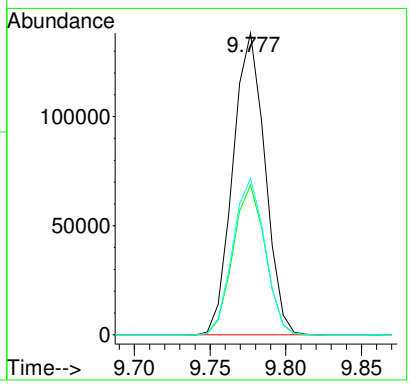


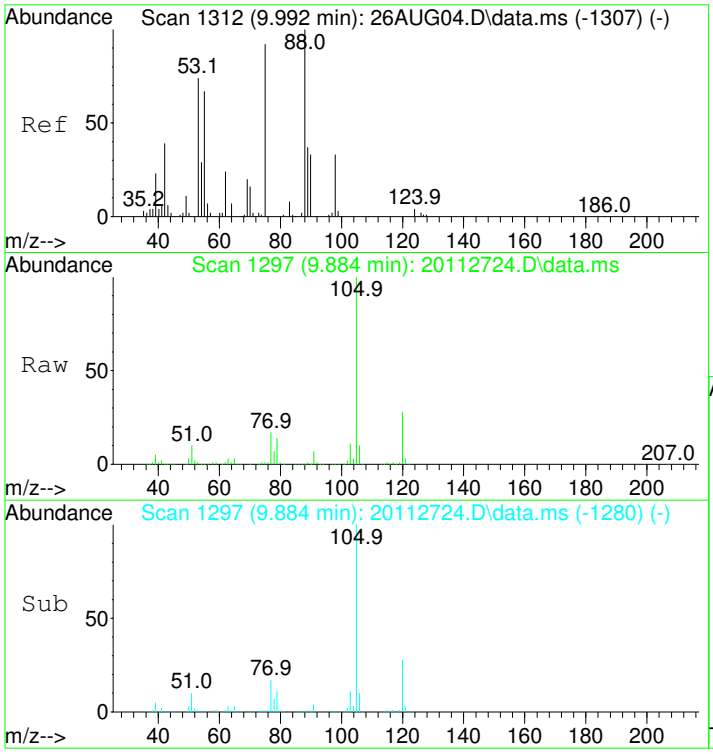


#89
Bromoform
Concen: 37.28 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:173 Resp: 203925

Ion	Ratio	Lower	Upper
173	100		
175	49.6	28.4	68.4
171	52.1	31.7	71.7

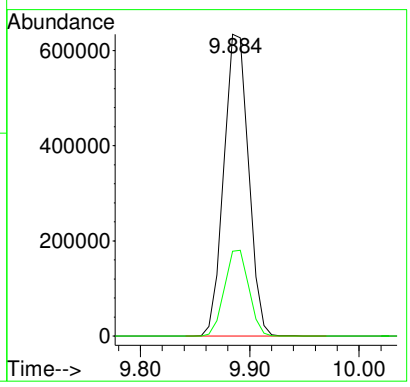


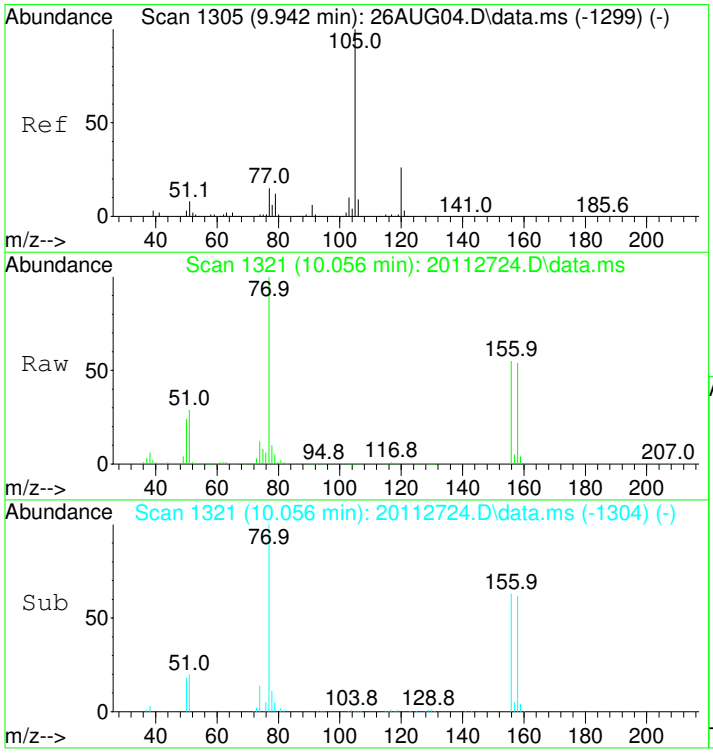


#90
Isopropylbenzene
Concen: 37.77 ug/L
RT: 9.884 min Scan# 1297
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:105 Resp: 995917

Ion	Ratio	Lower	Upper
105	100		
120	28.0	8.0	48.0

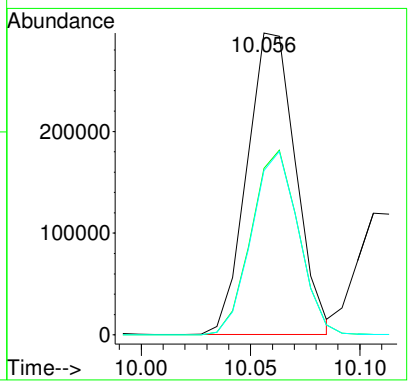


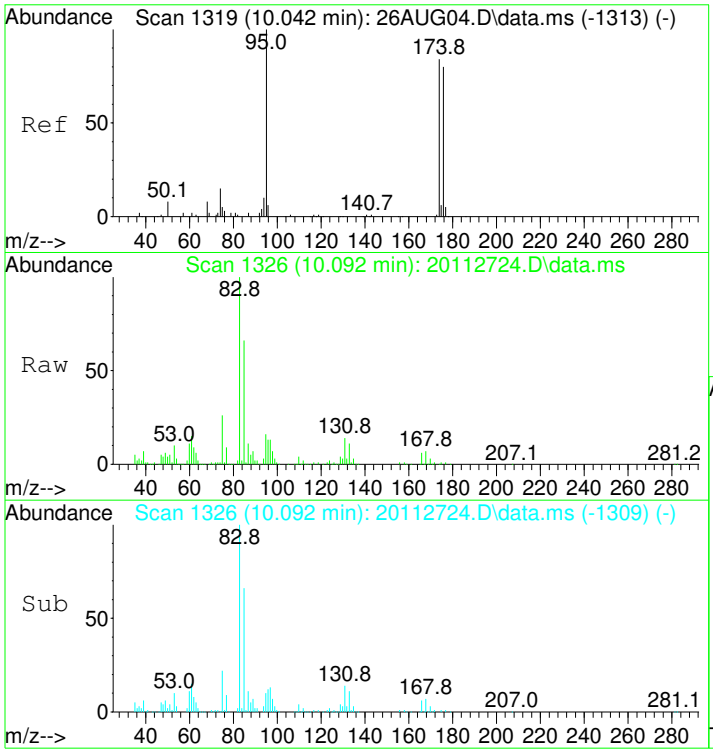


#92
Bromobenzene
Concen: 40.93 ug/L
RT: 10.056 min Scan# 1321
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 77 Resp: 461241

Ion	Ratio	Lower	Upper
77	100		
156	59.3	40.2	80.2
158	58.6	38.1	78.1

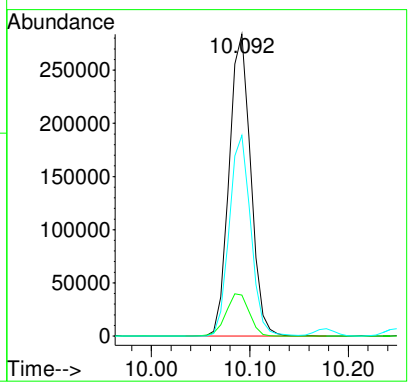


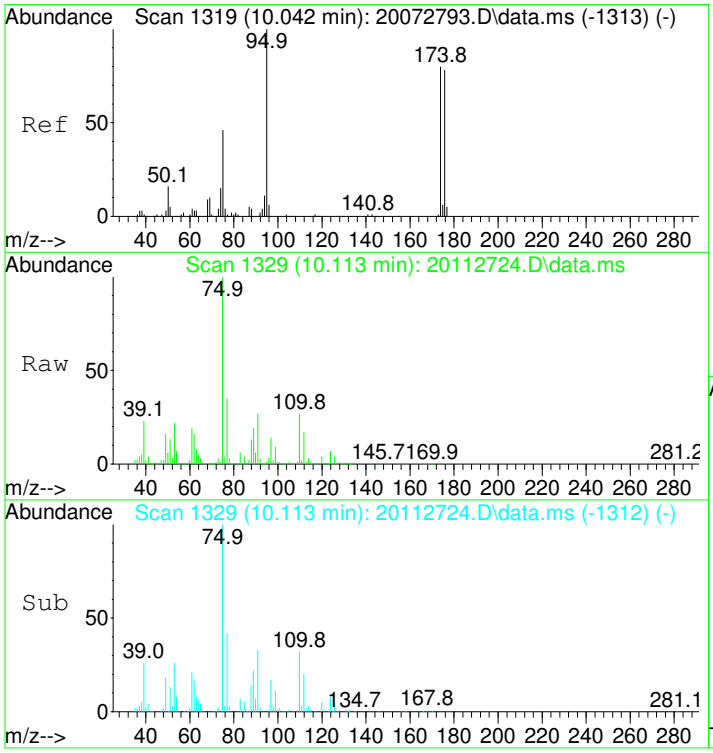


#93
1,1,2,2-Tetrachloroethane
Concen: 40.43 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 83 Resp: 432395

Ion	Ratio	Lower	Upper
83	100		
131	15.2	0.0	35.0
85	66.3	46.4	86.4

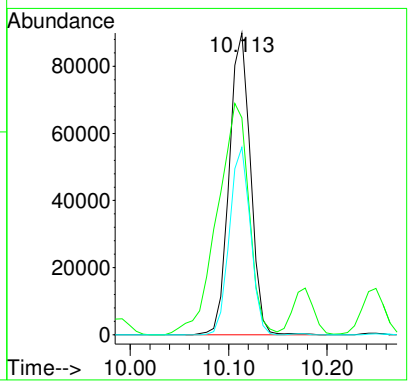


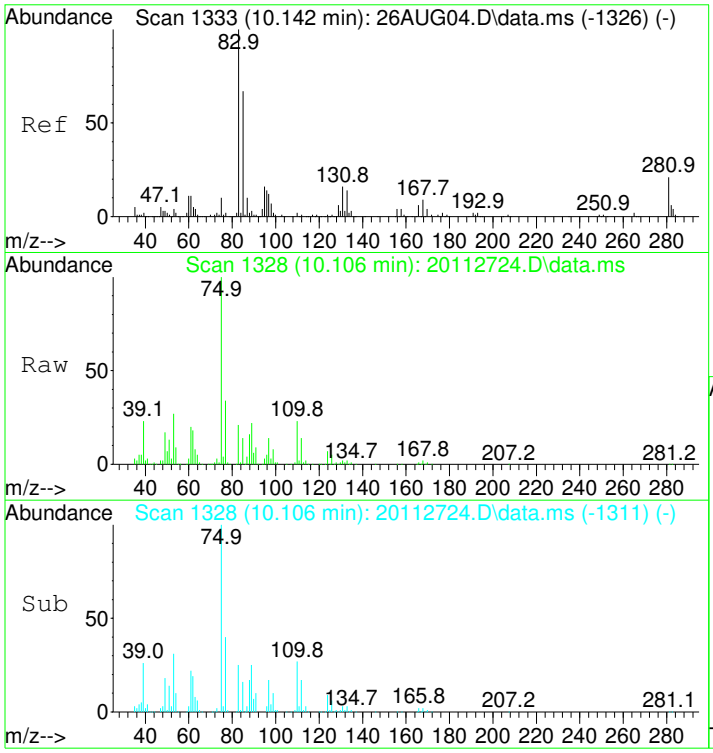


#94
1,2,3-Trichloropropane
Concen: 39.99 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:110 Resp: 135039

Ion	Ratio	Lower	Upper
110	100		
61	113.7	97.0	137.0
112	61.2	44.1	84.1

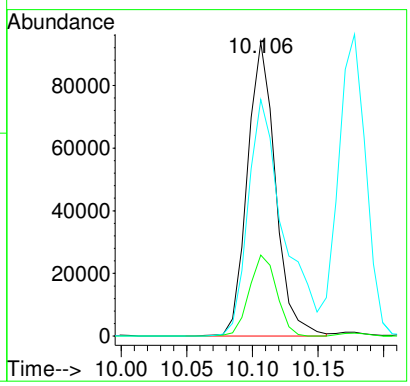


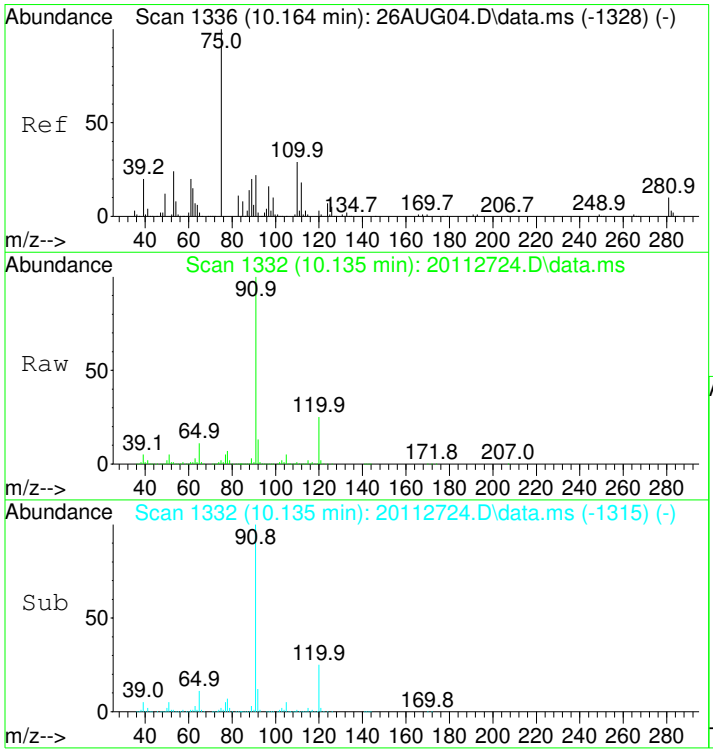


#95
trans-1,4-Dichloro-2-butene
Concen: 39.54 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 53 Resp: 139701

Ion	Ratio	Lower	Upper
53	100		
124	26.9	7.2	47.2
89	101.1	79.3	119.3

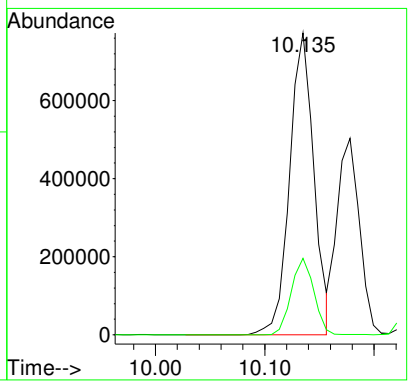


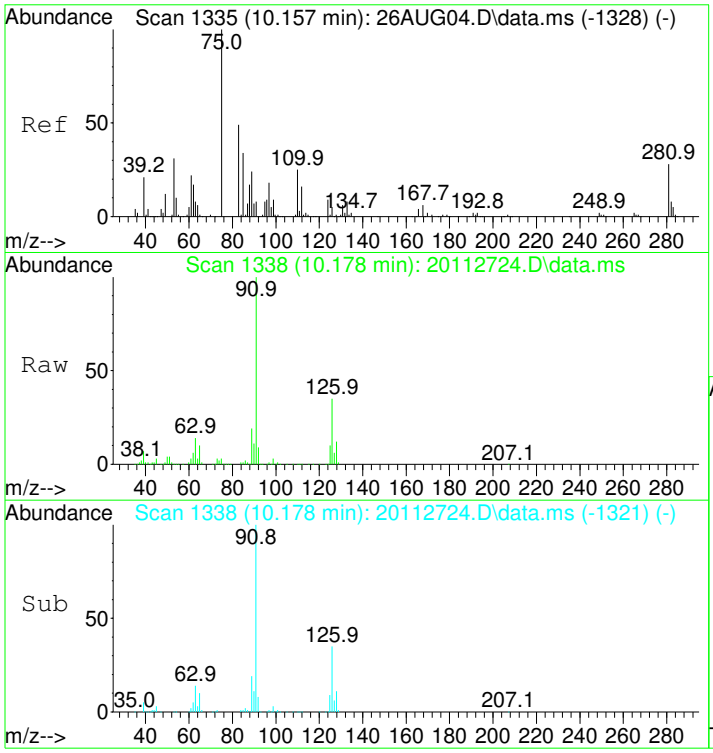


#96
n-Propylbenzene
Concen: 37.47 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 1188453

Ion	Ratio	Lower	Upper
91	100		
120	23.7	3.7	43.7

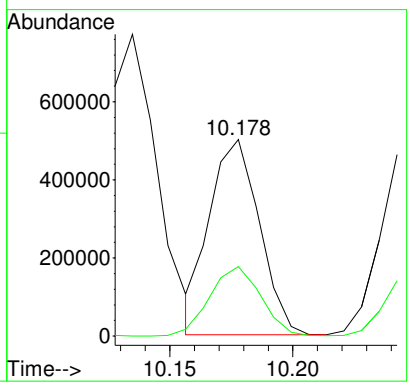


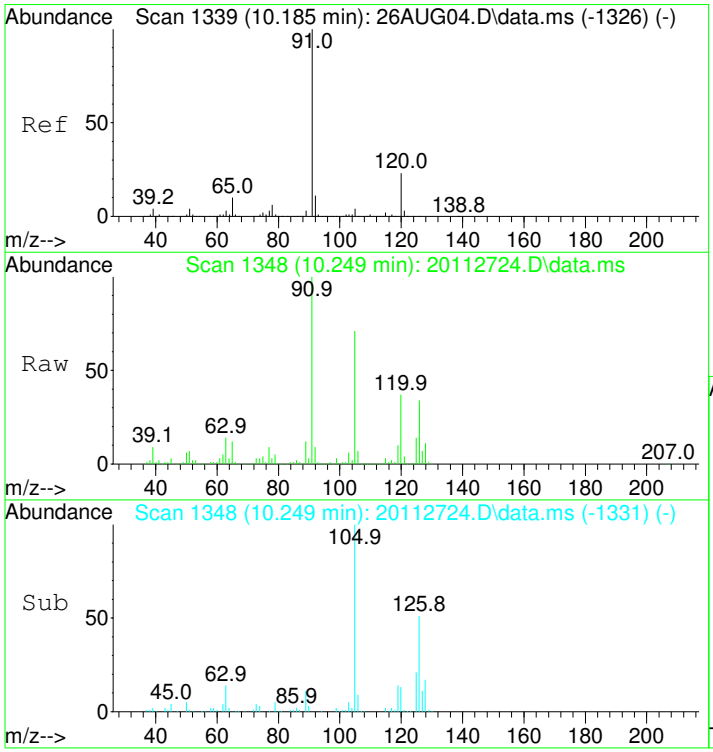


#97
2-Chlorotoluene
Concen: 42.10 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 706682

Ion	Ratio	Lower	Upper
91	100		
126	36.6	17.3	57.3

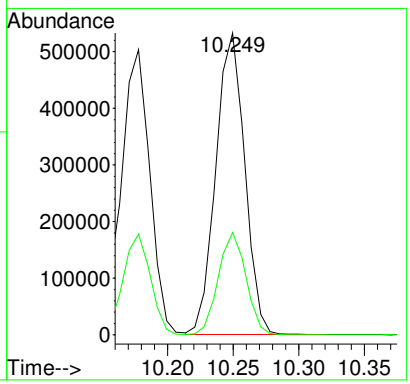


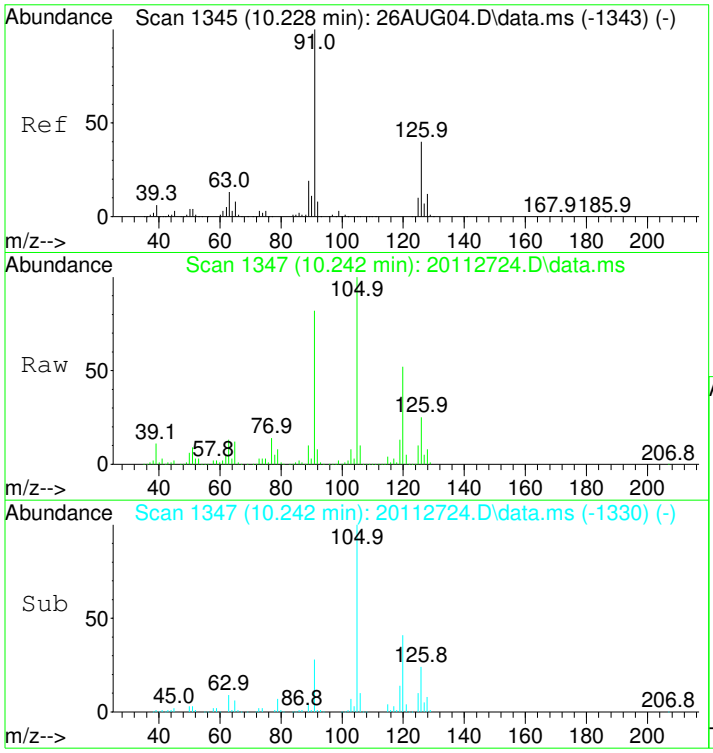


#98
4-Chlorotoluene
Concen: 37.66 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 816204

Ion	Ratio	Lower	Upper
91	100		
126	32.5	12.4	52.4

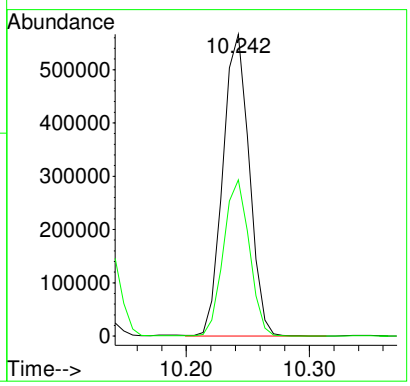


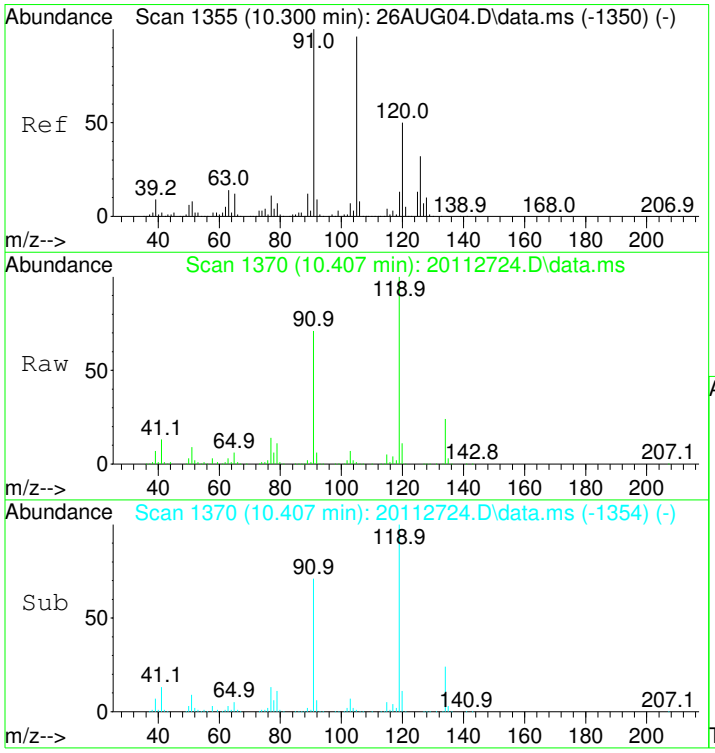


#99
1,3,5-Trimethylbenzene
Concen: 37.60 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:105 Resp: 839941

Ion	Ratio	Lower	Upper
105	100		
120	51.1	31.9	71.9

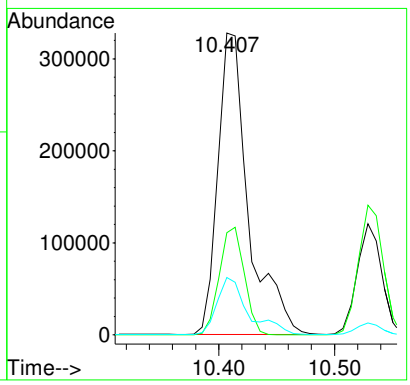


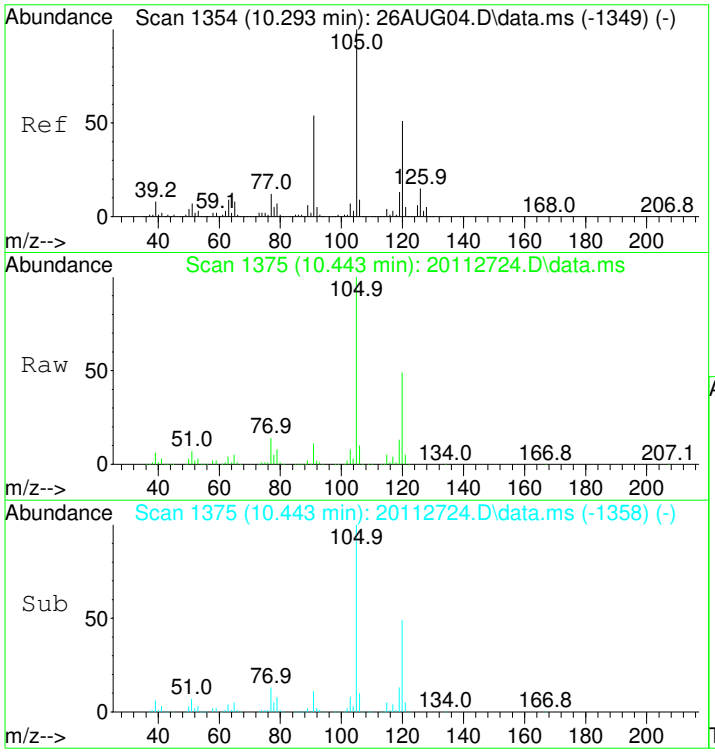


#100
tert-Butylbenzene
Concen: 40.88 ug/L
RT: 10.407 min Scan# 1370
Delta R.T. -0.007 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 602366

Ion	Ratio	Lower	Upper
91	100		
134	29.1	9.7	49.7
41	19.1	0.0	39.3

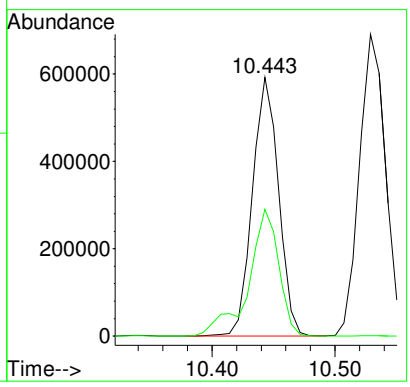


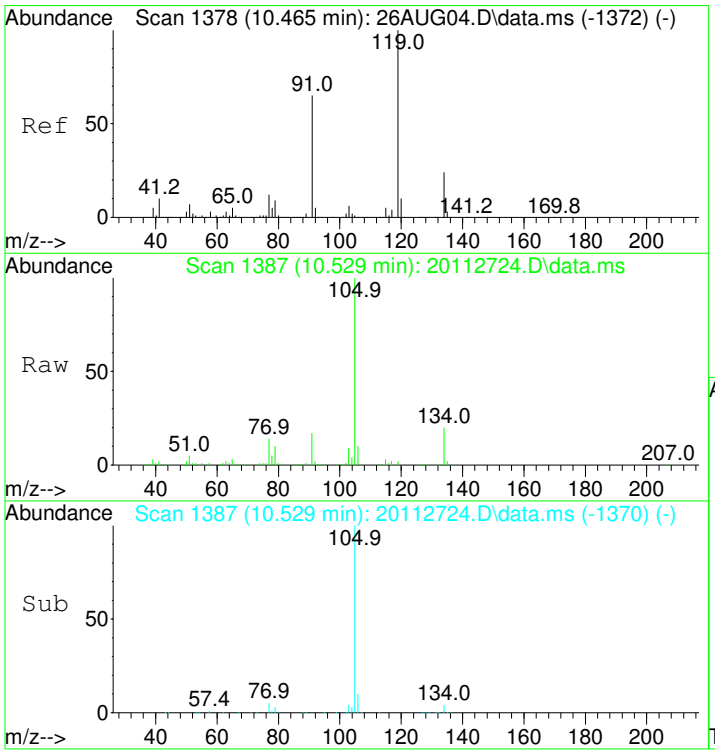


#101
1,2,4-Trimethylbenzene
Concen: 37.75 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:105 Resp: 872351

Ion	Ratio	Lower	Upper
105	100		
120	56.9	37.7	77.7

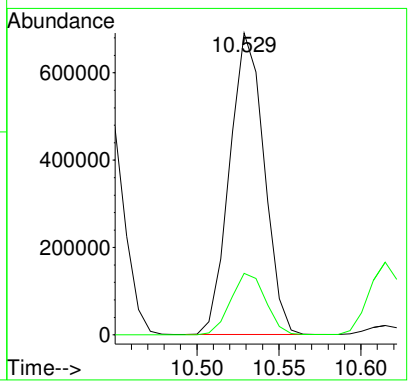


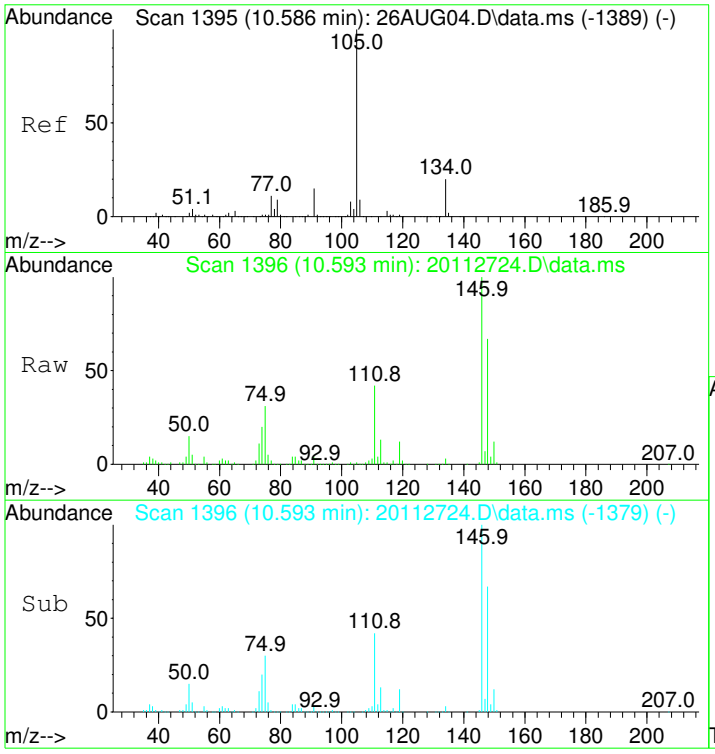


#102
sec-Butylbenzene
Concen: 37.42 ug/L
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:105 Resp: 1014494

Ion	Ratio	Lower	Upper
105	100		
134	20.6	1.1	41.1

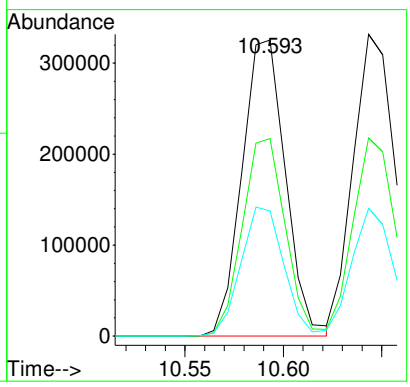


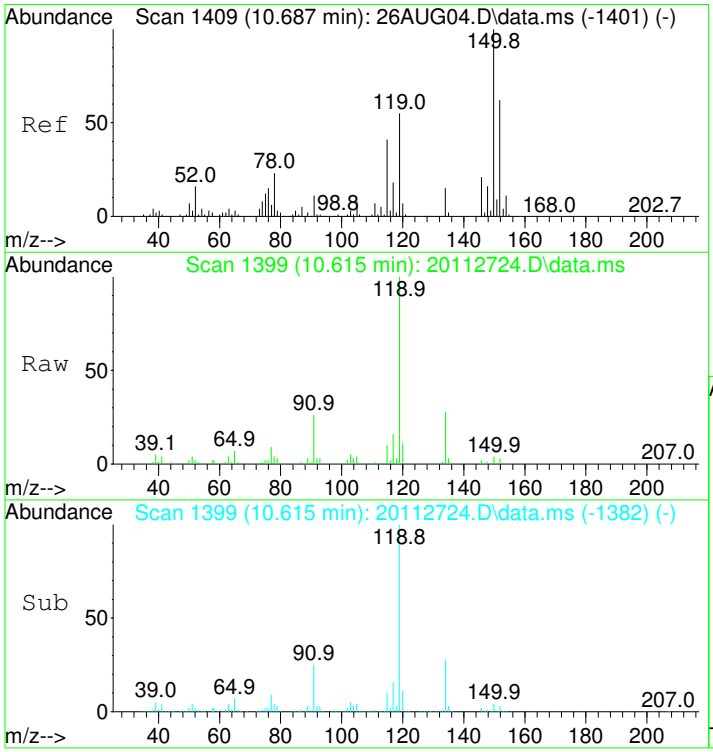


#104
1,3-Dichlorobenzene
Concen: 42.71 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:146 Resp: 501207

Ion	Ratio	Lower	Upper
146	100		
148	66.1	46.5	86.5
111	42.9	22.6	62.6

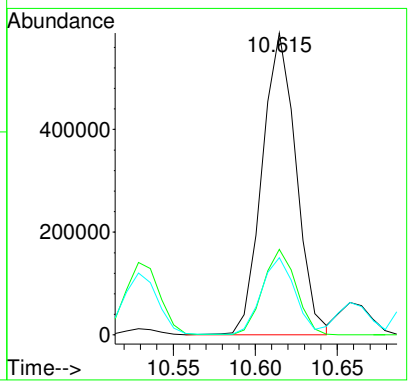


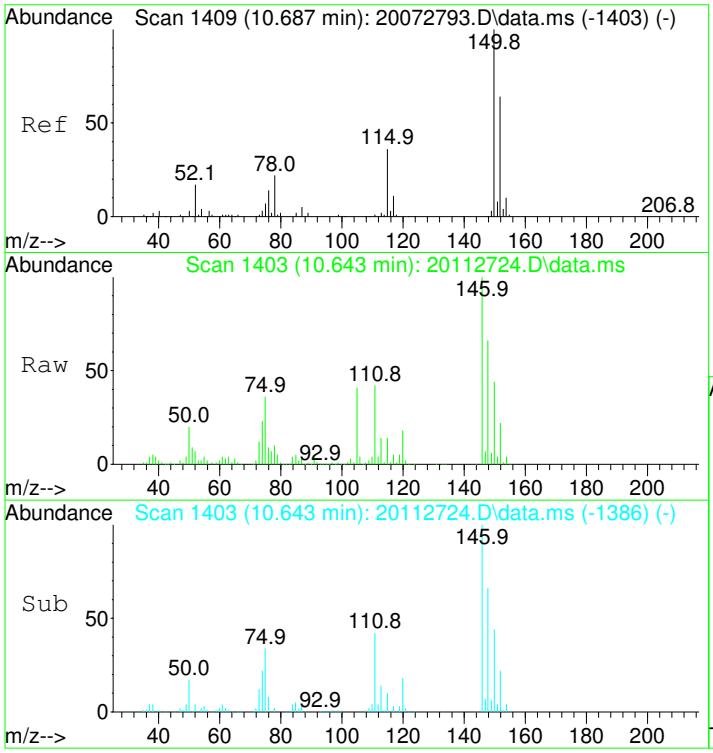


#105
p-Isopropyltoluene
Concen: 44.05 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:119 Resp: 843269

Ion	Ratio	Lower	Upper
119	100		
134	27.9	8.1	48.1
91	25.0	5.2	45.2

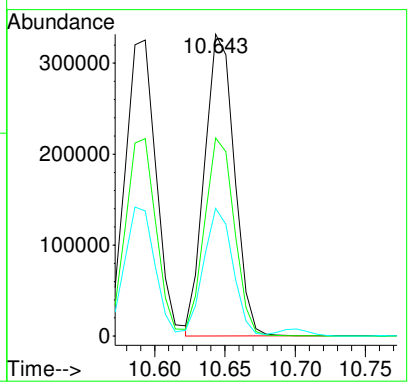


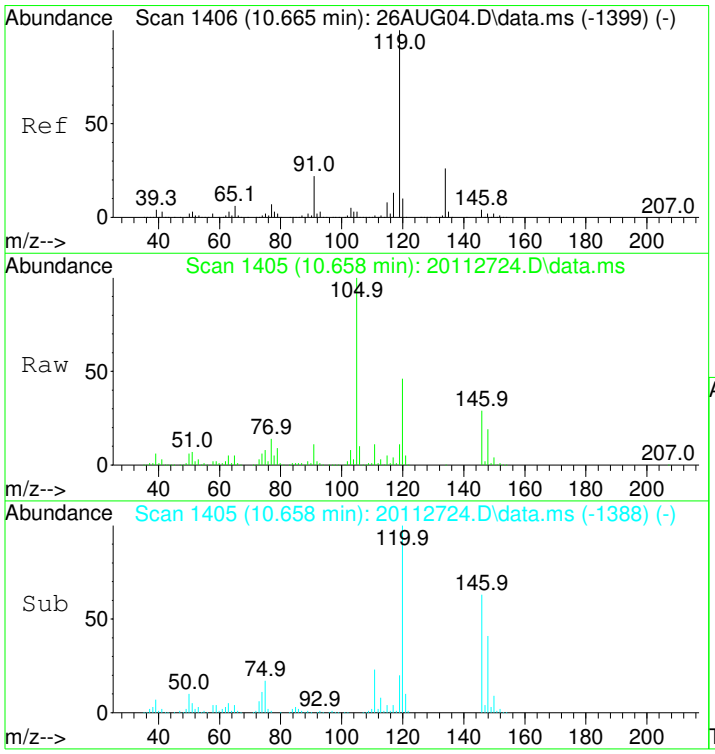


#106
1,4-Dichlorobenzene
Concen: 43.31 ug/L
RT: 10.643 min Scan# 1403
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:146 Resp: 489165

Ion	Ratio	Lower	Upper
146	100		
148	65.5	37.3	97.3
111	42.0	12.5	72.5

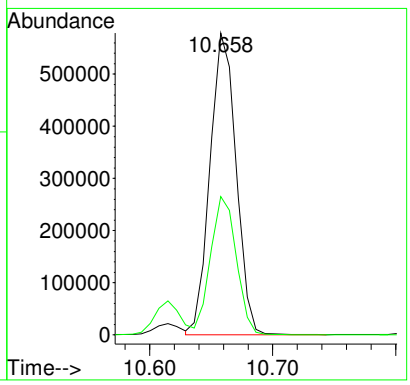


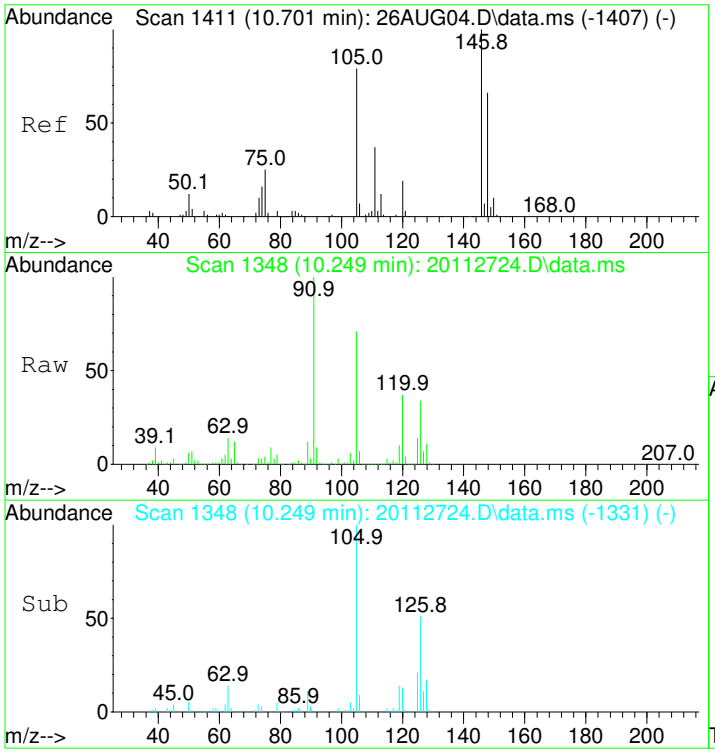


#107
1,2,3-Trimethylbenzene
Concen: 44.49 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:105 Resp: 851088

Ion	Ratio	Lower	Upper
105	100		
120	45.3	35.5	53.3

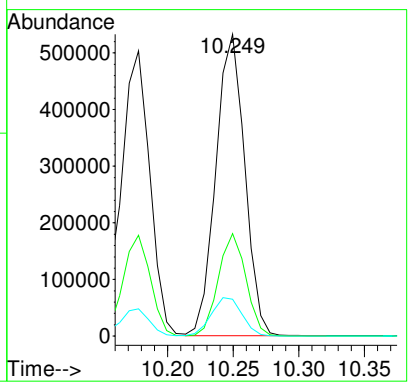


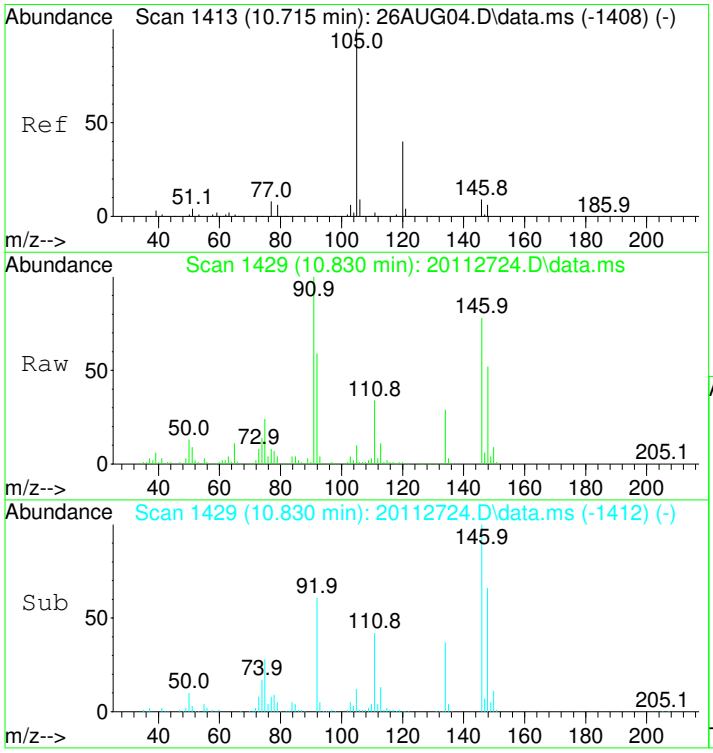


#108
Benzyl chloride
Concen: 40.63 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 816204

Ion	Ratio	Lower	Upper
91	100		
126	32.5	12.4	52.4
65	13.6	0.0	33.3

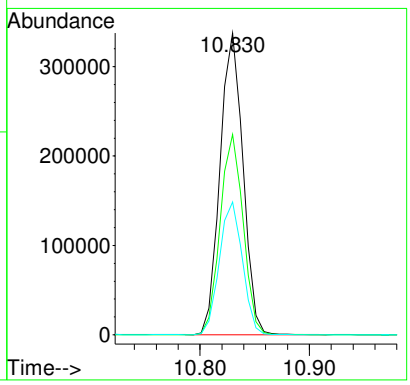


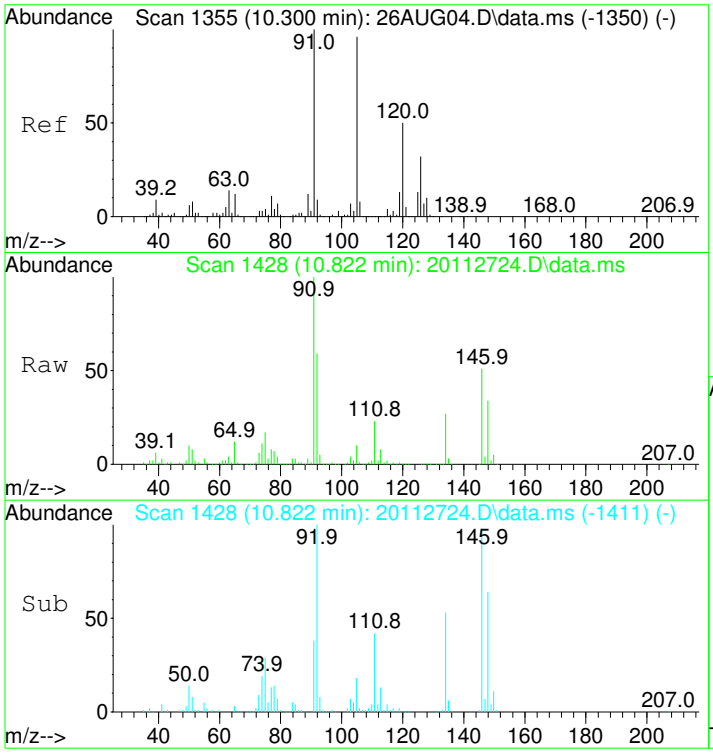


#109
1,2-Dichlorobenzene
Concen: 42.97 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:146 Resp: 491936

Ion	Ratio	Lower	Upper
146	100		
148	66.5	45.6	85.6
111	44.3	24.1	64.1

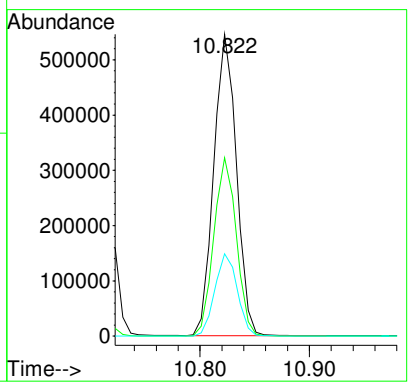


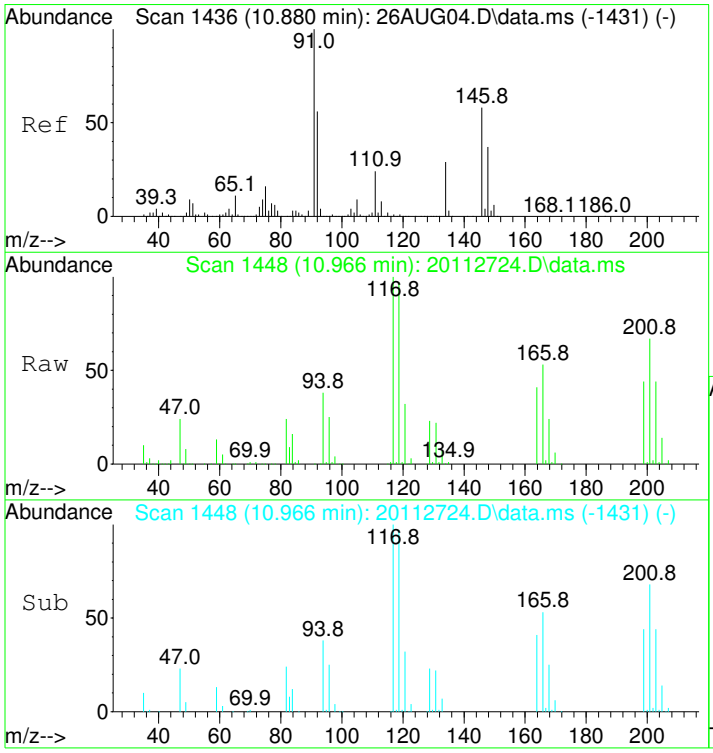


#110
n-Butylbenzene
Concen: 40.11 ug/L
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 91 Resp: 784051

Ion	Ratio	Lower	Upper
91	100		
92	58.8	39.3	79.3
134	27.1	7.5	47.5

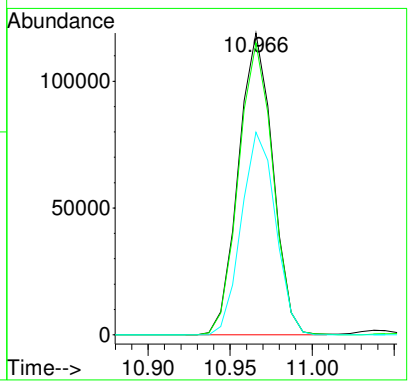


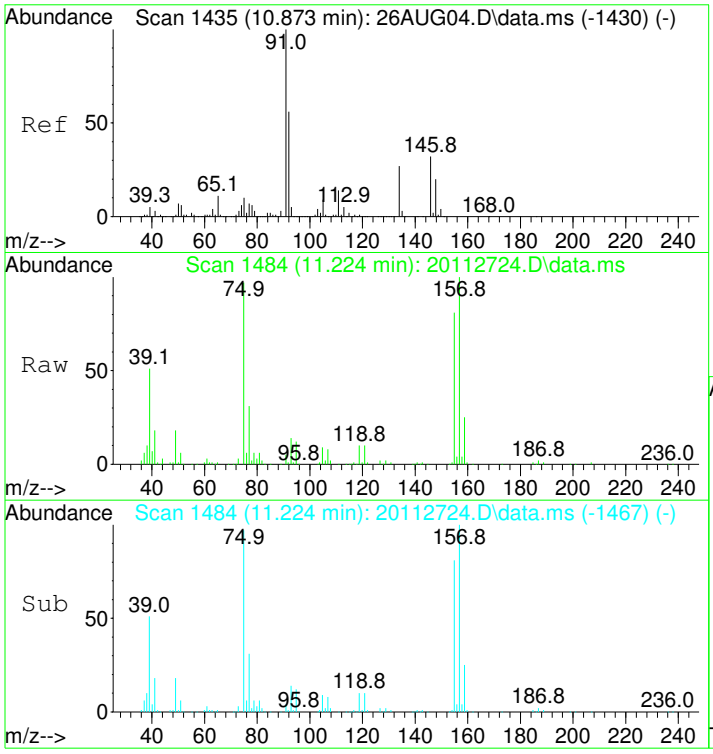


#111
Hexachloroethane
Concen: 39.60 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:117 Resp: 172851

Ion	Ratio	Lower	Upper
117	100		
119	96.6	75.9	115.9
201	67.0	49.2	89.2

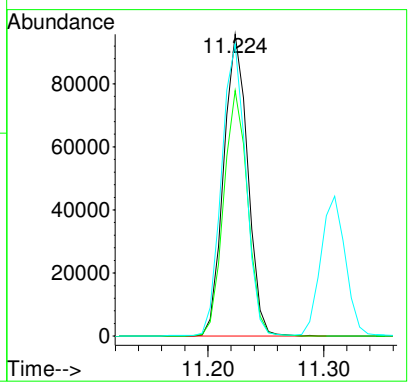


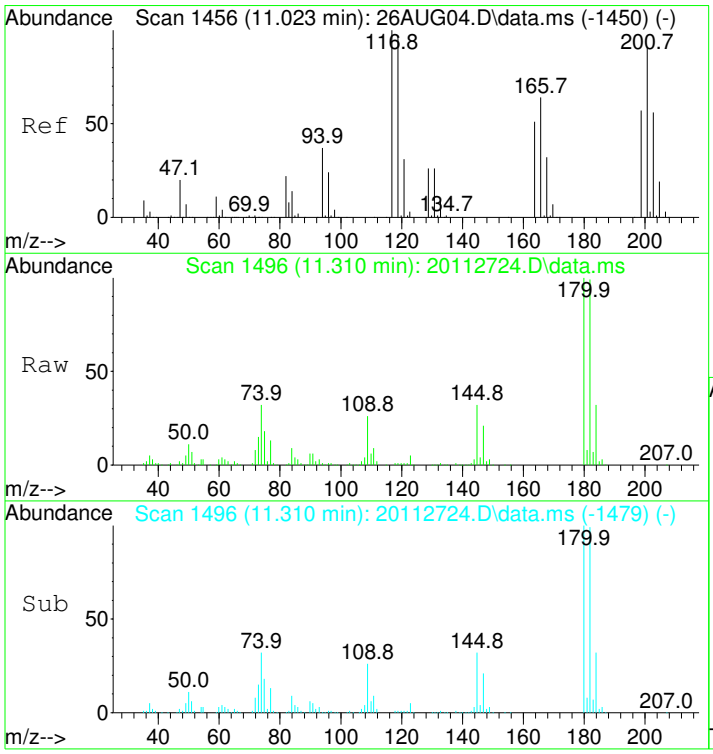


#112
1,2-Dibromo-3-chloropropane
Concen: 42.97 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:157 Resp: 137756

Ion	Ratio	Lower	Upper
157	100		
155	80.9	54.4	94.4
75	98.3	72.1	112.1

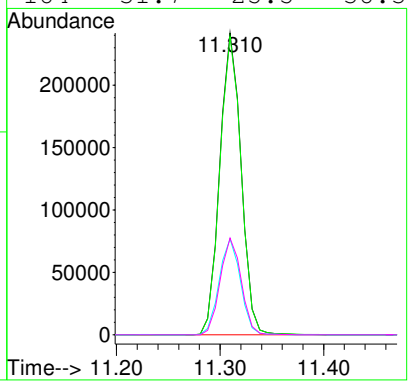


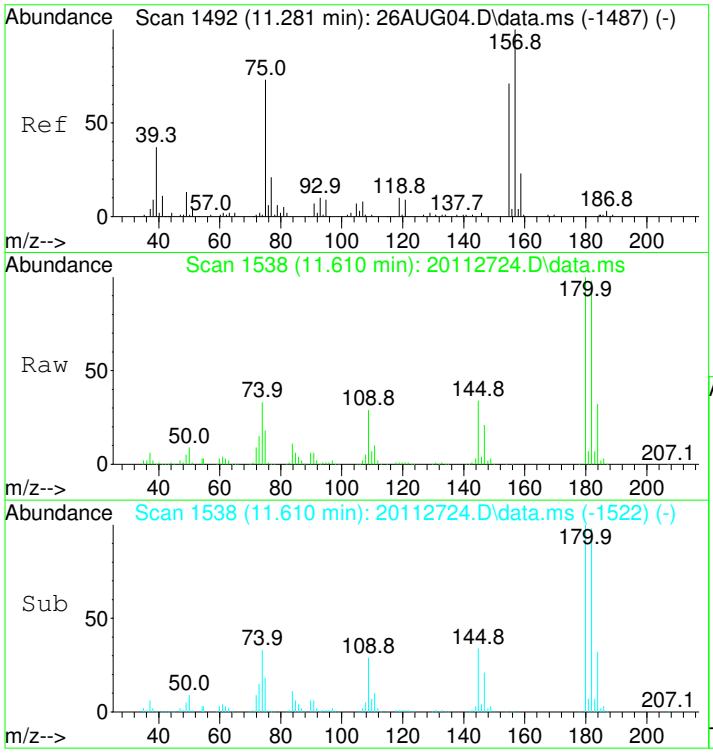


#113
1,3,5-Trichlorobenzene
Concen: 40.47 ug/L
RT: 11.310 min Scan# 1496
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:180 Resp: 347920

Ion	Ratio	Lower	Upper
180	100		
182	98.8	76.9	115.3
145	31.7	24.9	37.3
184	31.7	25.5	38.3

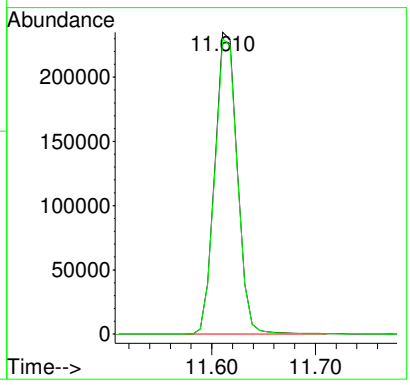


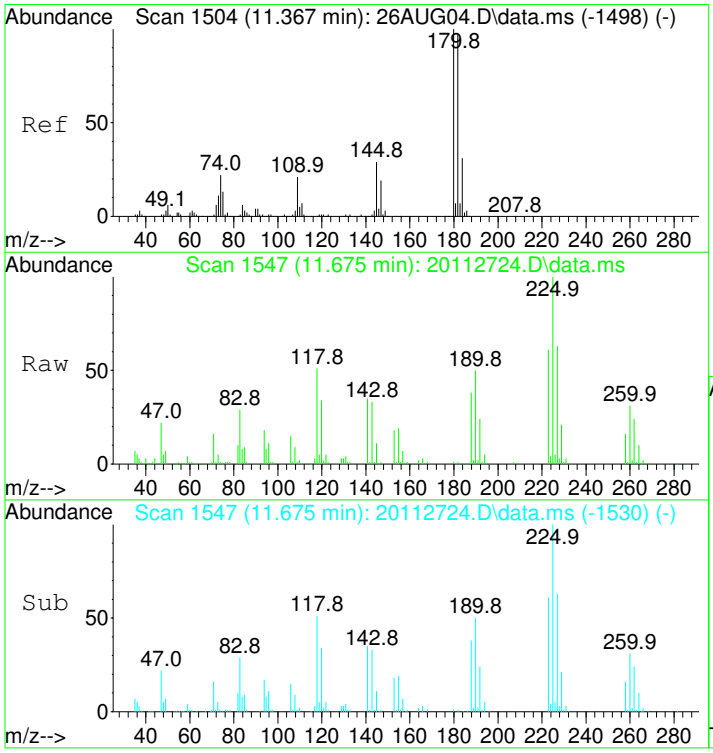


#114
1,2,4-Trichlorobenzene
Concen: 40.97 ug/L
RT: 11.610 min Scan# 1538
Delta R.T. -0.008 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:180 Resp: 355842

Ion	Ratio	Lower	Upper
180	100		
182	98.0	76.7	116.7

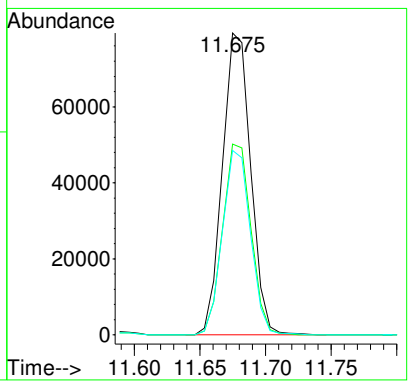


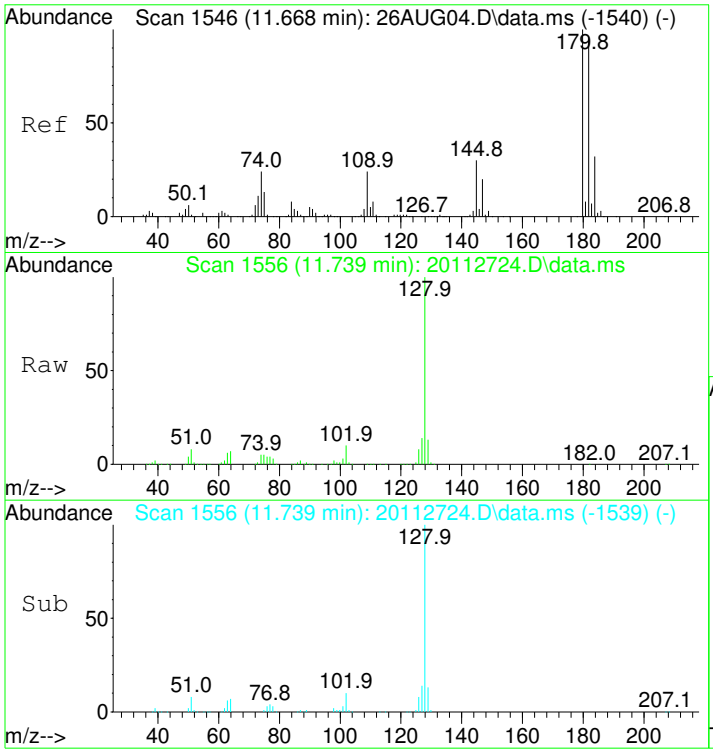


#115
Hexachlorobutadiene
Concen: 40.39 ug/L
RT: 11.675 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:225 Resp: 119291

Ion	Ratio	Lower	Upper
225	100		
227	63.4	50.9	76.3
223	60.5	50.5	75.7

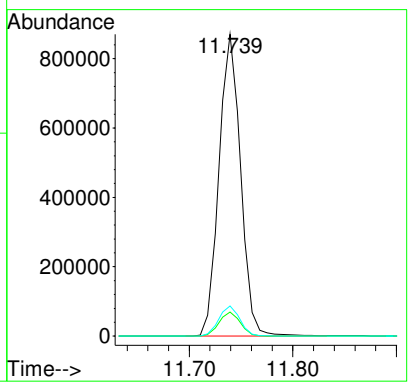


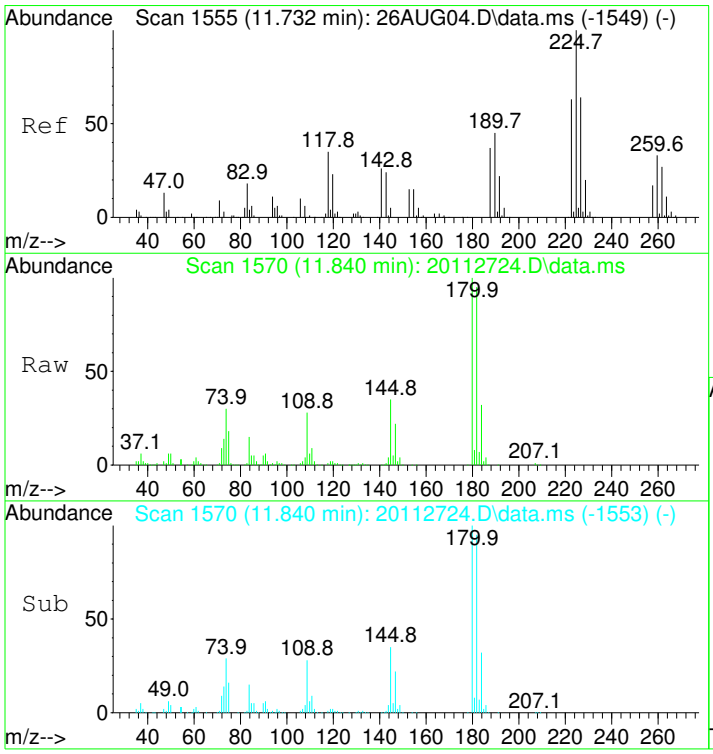


#116
Naphthalene
Concen: 40.68 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:128 Resp: 1269911

Ion	Ratio	Lower	Upper
128	100		
126	7.8	0.0	28.2
102	9.8	0.0	30.0

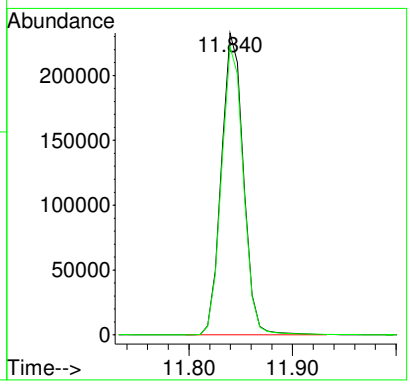


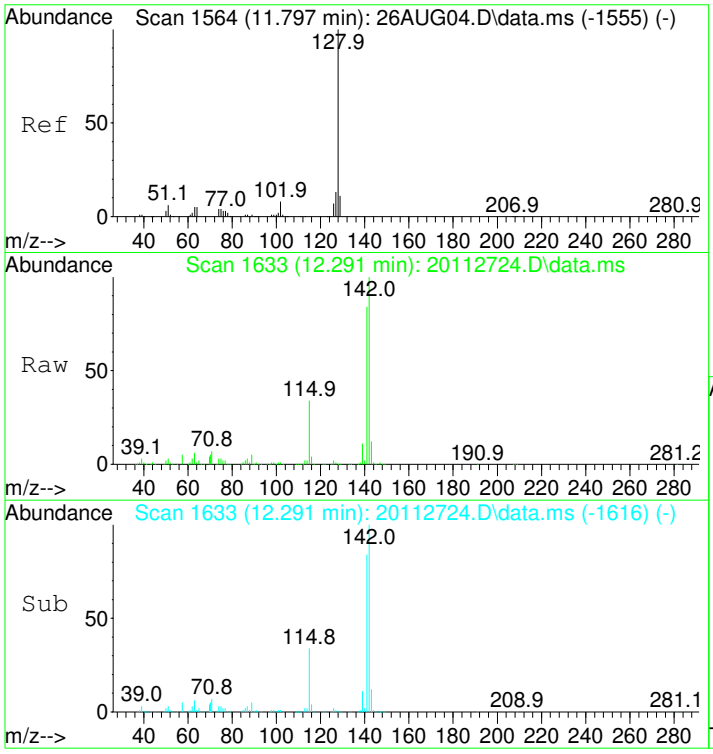


#117
1,2,3-Trichlorobenzene
Concen: 41.56 ug/L
RT: 11.840 min Scan# 1570
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:180 Resp: 345476

Ion	Ratio	Lower	Upper
180	100		
182	95.3	78.4	118.4

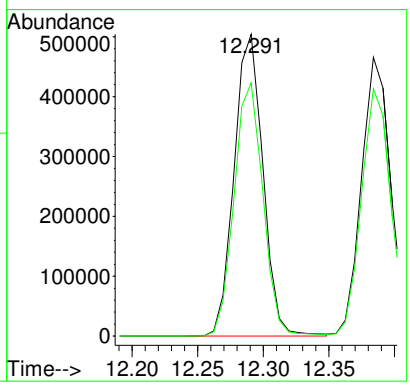


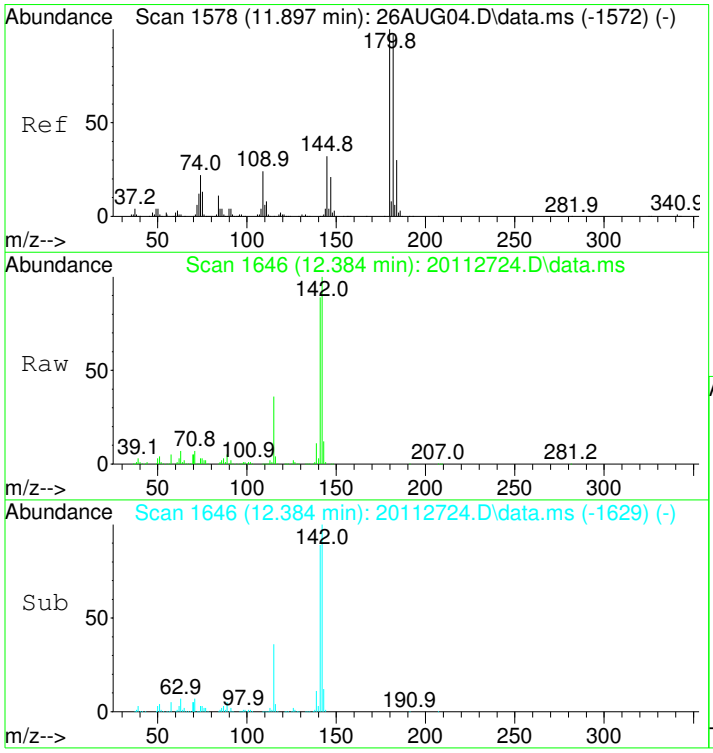


#118
2-Methylnaphthalene
Concen: 40.75 ug/L
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:142 Resp: 771357

Ion	Ratio	Lower	Upper
142	100		
141	84.4	65.0	105.0

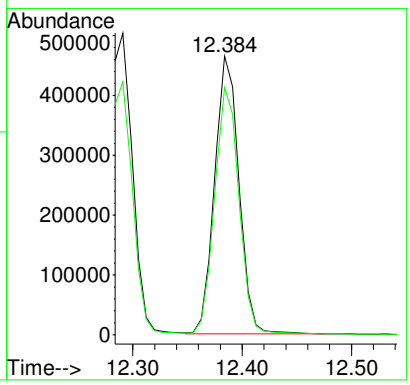


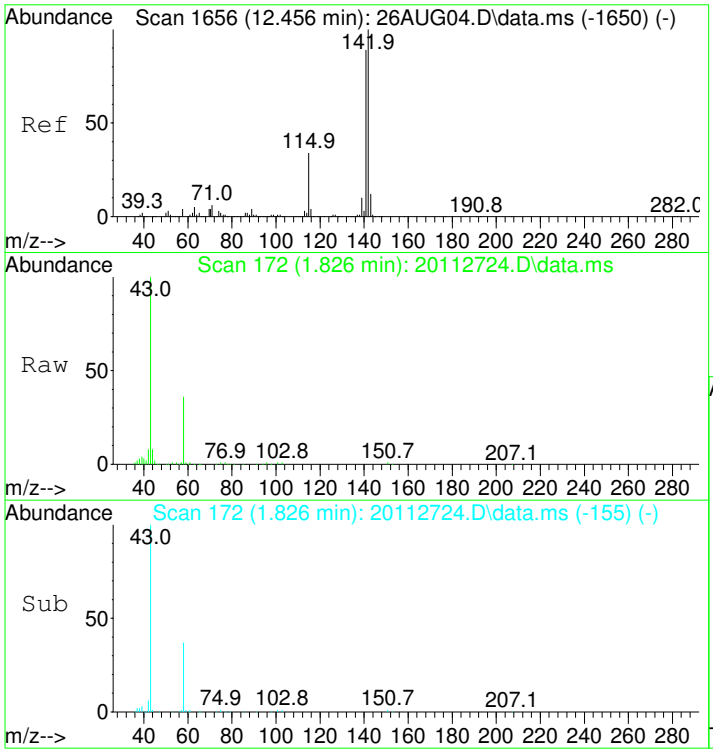


#119
1-Methylnaphthalene
Concen: 41.11 ug/L
RT: 12.384 min Scan# 1646
Delta R.T. -0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion:142 Resp: 715807

Ion	Ratio	Lower	Upper
142	100		
141	89.0	69.8	104.8

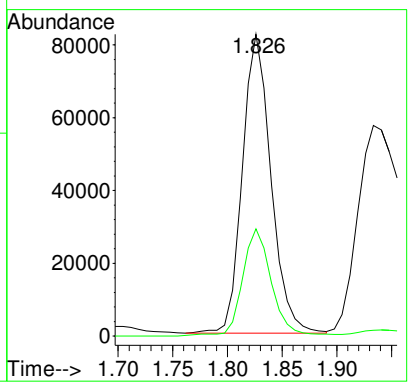


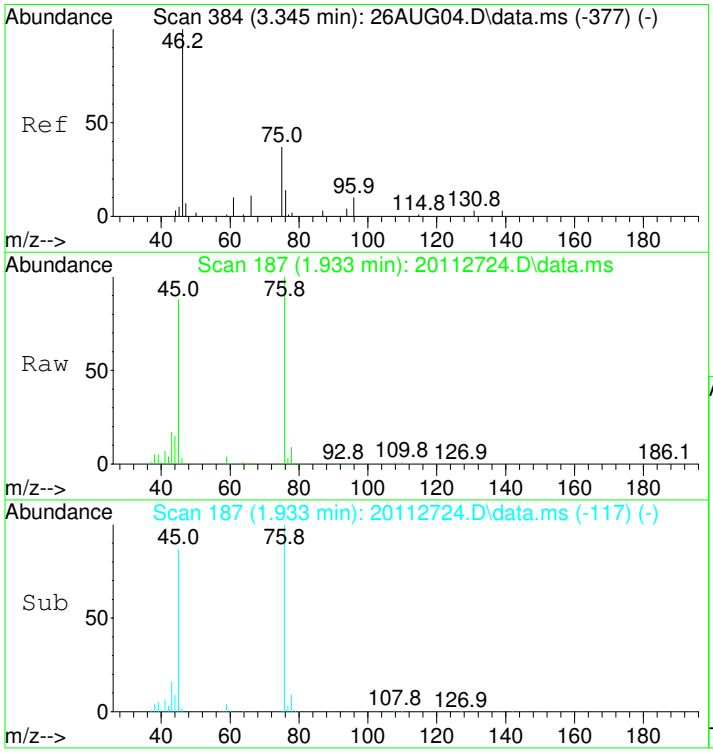


#121
2-Propanone
Concen: 41.16 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 149598

Ion	Ratio	Lower	Upper
43	100		
58	36.4	28.2	42.2

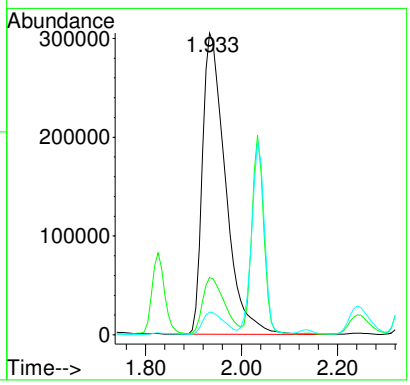


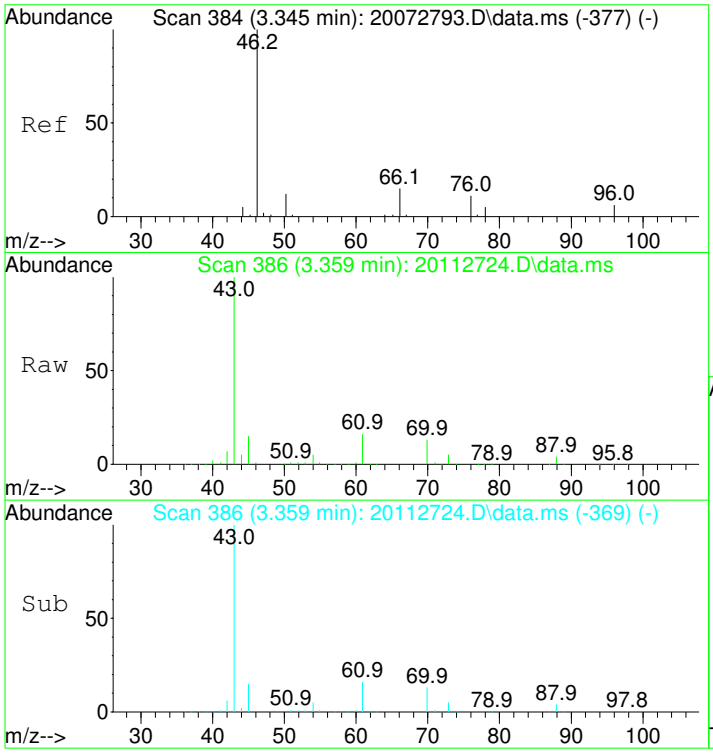


#122
Isopropyl Alcohol
Concen: 831.33 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 45 Resp: 1011773

Ion	Ratio	Lower	Upper
45	100		
43	17.9	14.6	21.8
41	7.0	5.7	8.5

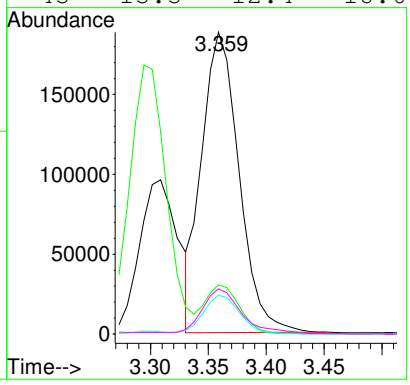


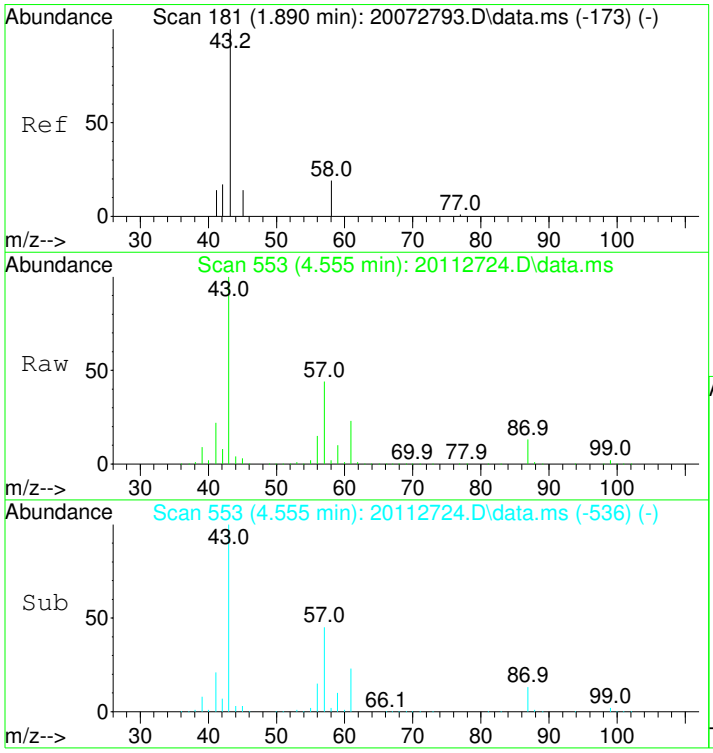


#123
Acetic Ether
Concen: 38.55 ug/L
RT: 3.359 min Scan# 386
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 423967

Ion	Ratio	Lower	Upper
43	100		
61	15.1	11.9	17.9
70	12.7	9.7	14.5
45	15.5	12.4	18.6

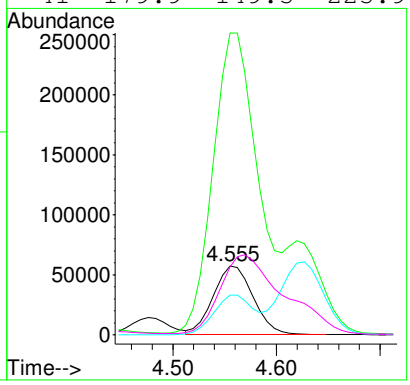


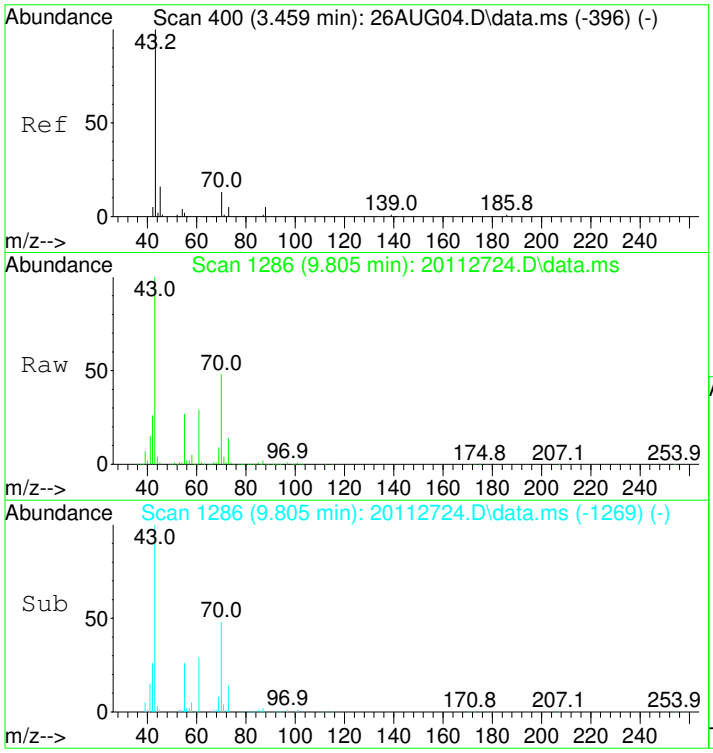


#124
Isopropyl Acetate
Concen: 38.21 ug/L
RT: 4.555 min Scan# 553
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 61 Resp: 151642

Ion	Ratio	Lower	Upper
61	100		
43	502.4	392.6	589.0
87	57.8	46.2	69.2
41	179.9	149.3	223.9

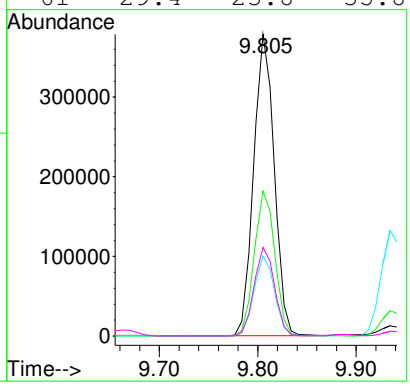




#125
Amyl Acetate
Concen: 38.69 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. 0.000 min
Lab File: 20112724.D
Acq: 27 Nov 2020 6:29 pm

Tgt Ion: 43 Resp: 550476

Ion	Ratio	Lower	Upper
43	100		
70	48.4	39.8	59.6
55	26.4	21.8	32.8
61	29.4	23.8	35.8



1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120114.D
Acq On : 1 Dec 2020 1:46 pm
Operator : MF
Sample : 20111764-06A DF20
Misc : IS 200-21725
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 02 09:41:56 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	198319	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	340764	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	315190	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	161449	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	97673	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	109718	20.15	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 100.75%				
50) 1,2-Dichloroethane-d4	4.362	65	127656	19.34	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 96.70%				
69) Toluene-d8	7.836	98	394007	20.20	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 101.00%				
91) Bromofluorobenzene	9.992	95	163006	20.57	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 102.85%				
Target Compounds							Qvalue
3) Dichlorofluoromethane	1.411	67	110	Below Cal		#	1
4) Chloromethane	1.053	50	1221	Below Cal			81
6) Vinyl chloride	1.110	62	319	Below Cal		#	43
7) Bromomethane	1.275	96	525	Below Cal		#	1
10) Ethanol	1.583	45	1195	Below Cal		#	50
16) Acetone	1.826	43	9299	2.30	ug/L		89
18) Carbon disulfide	1.941	76	699	Below Cal			56
19) 2-Propanol	1.919	45	2176	Below Cal		#	67
20) Allyl chloride	2.027	41	1298	Below Cal		#	64
21) Methyl acetate	2.034	43	8314	0.77	ug/L		95
22) Acetonitrile	2.027	41	1298	Below Cal		#	74
25) t-Butanol	2.213	59	2275	Below Cal			66
28) Hexane	2.557	57	205	Below Cal		#	1
34) 2,2-Dichloropropane	3.330	77	297	Below Cal		#	35
35) cis-1,2-Dichloroethene	3.302	61	304	Below Cal		#	21
37) Ethyl Acetate	3.309	43	4582	0.15	ug/L	#	82
38) Methyl acrylate	3.409	55	507	Below Cal		#	64
41) Tetrahydrofuran	3.588	42	89	Below Cal		#	30
42) Methacrylonitrile	3.567	41	91	Below Cal		#	29
43) Chloroform	3.717	83	341	Below Cal		#	53
44) Cyclohexane	3.982	56	4528	Below Cal		#	38
52) Benzene	4.369	78	85689	3.83	ug/L		99
54) Isobutyl Alcohol	4.577	43	1053	Below Cal		#	93
55) Heptane	4.913	43	754	Below Cal		#	29
58) n-Butanol	5.558	56	298	1.70	ug/L	#	1
62) Methyl methacrylate	6.253	41	13820	1.75	ug/L		91
64) 2-Chloroethyl vinyl ether	7.320	43	88	Below Cal		#	1
65) 2-Nitropropane	7.134	43	823	0.00	ug/L	#	12
70) Toluene	7.922	91	32532	1.16	ug/L		100
71) trans-1,3-Dichloropropene	8.258	75	487	Below Cal		#	1
73) Ethyl methacrylate	8.402	69	189	Below Cal		#	76
77) 2-Hexanone	8.674	43	762	Below Cal		#	28
79) Butyl acetate	8.788	43	872	Below Cal		#	42
83) Ethylbenzene	9.304	91	3432	Below Cal			91
84) m/p-Xylene	9.397	91	7575	Below Cal			89
85) Nonane	9.454	43	1432	Below Cal		#	20
86) Styrene	9.677	104	654	Below Cal		#	40
87) o-Xylene	9.655	91	3291	Below Cal			89
88) Cyclohexanone	9.942	55	90	Below Cal		#	29
90) Isopropylbenzene	9.891	105	688	Below Cal		#	47

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120114.D
Acq On : 1 Dec 2020 1:46 pm
Operator : MF
Sample : 20111764-06A DF20
Misc : IS 200-21725
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 02 09:41:56 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

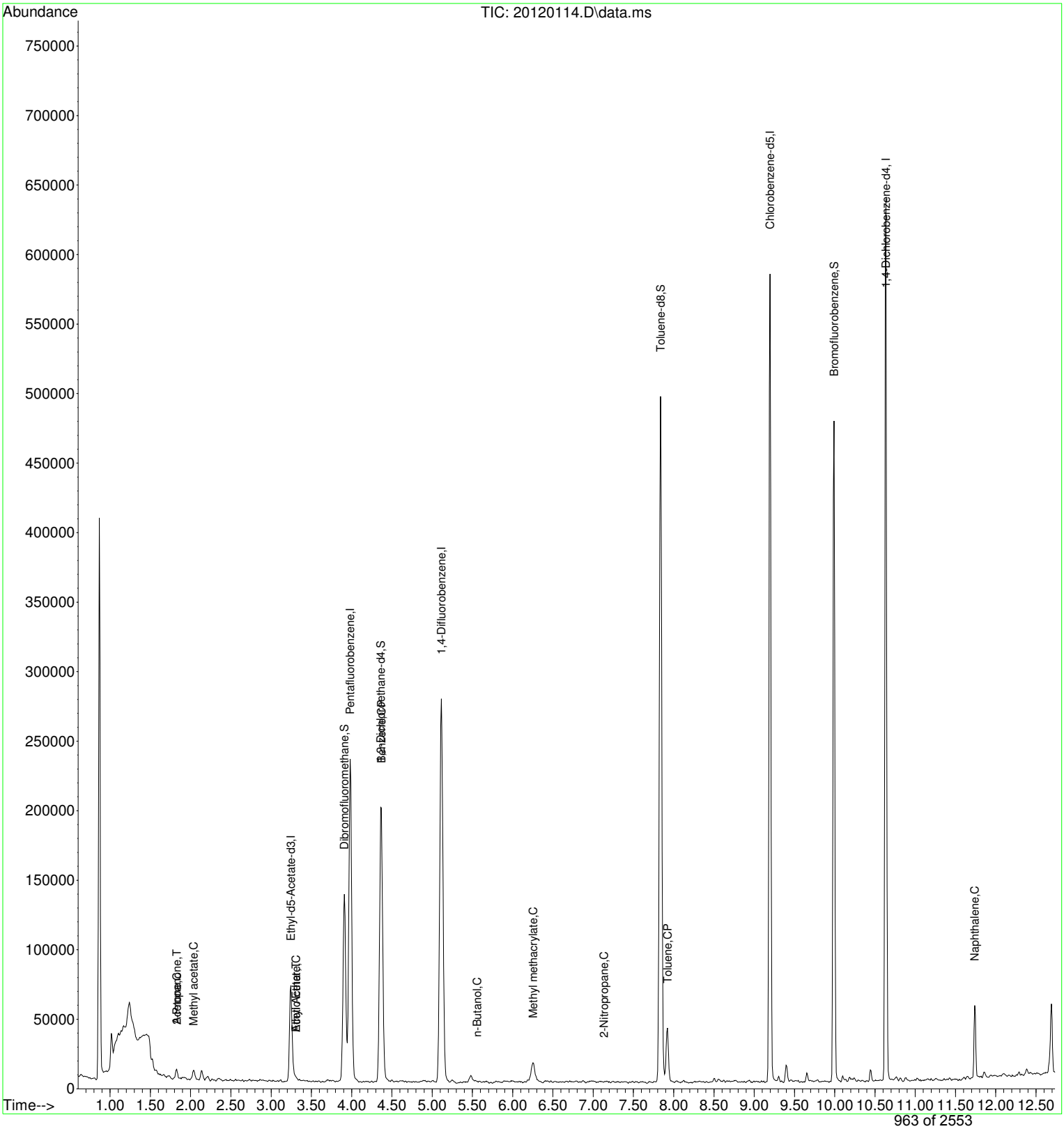
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	Bromobenzene	10.056	77	230	Below Cal		#	21
96)	n-Propylbenzene	10.135	91	1519	Below Cal		#	52
97)	2-Chlorotoluene	10.185	91	746	Below Cal		#	38
98)	4-Chlorotoluene	10.242	91	493	Below Cal		#	42
99)	1,3,5-Trimethylbenzene	10.242	105	1713	Below Cal		#	65
100)	tert-Butylbenzene	10.450	91	774	Below Cal		#	41
101)	1,2,4-Trimethylbenzene	10.443	105	4300	Below Cal		#	70
102)	sec-Butylbenzene	10.529	105	391	Below Cal		#	55
105)	p-Isopropyltoluene	10.615	119	90	Below Cal		#	1
107)	1,2,3-Trimethylbenzene	10.658	105	1002	Below Cal		#	84
108)	Benzyl chloride	10.242	91	493	Below Cal		#	49
110)	n-Butylbenzene	10.830	91	935	Below Cal		#	26
116)	Naphthalene	11.739	128	38564	0.86	ug/L		98
118)	2-Methylnaphthalene	12.291	142	1126	Below Cal		#	61
119)	1-Methylnaphthalene	12.384	142	578	Below Cal		#	1
121)	2-Propanone	1.826	43	9299	2.47	ug/L		89
122)	Isopropyl Alcohol	1.919	45	2176	Below Cal		#	67
123)	Acetic Ether	3.309	43	4582	0.28	ug/L	#	71
125)	Amyl Acetate	9.856	43	176	Below Cal		#	40

(#) = qualifier out of range (m) = manual integration (+) = signals summed

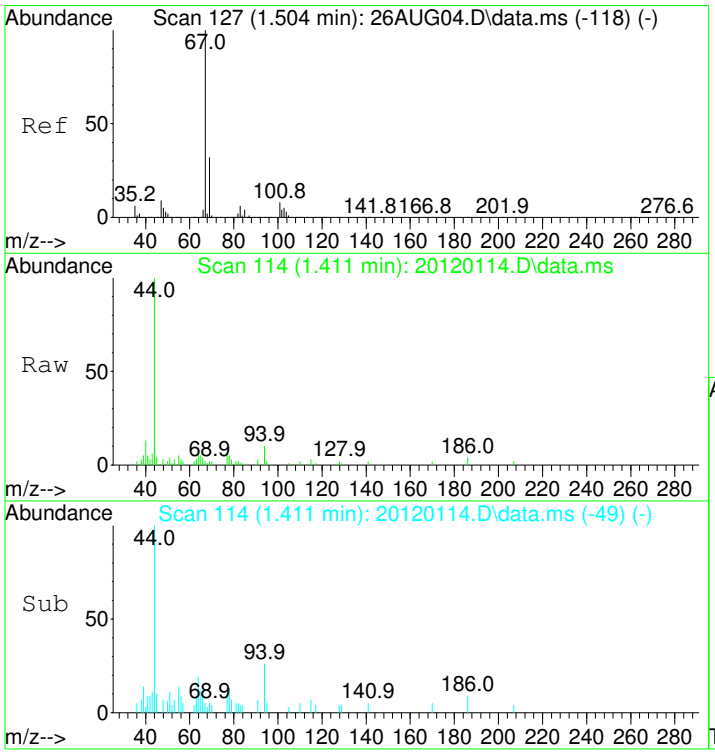
1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120114.D
Acq On : 1 Dec 2020 1:46 pm
Operator : MF
Sample : 20111764-06A DF20
Misc : IS 200-21725
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 02 09:41:56 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration



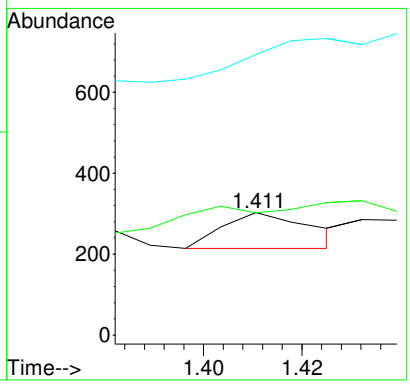
963 of 2553

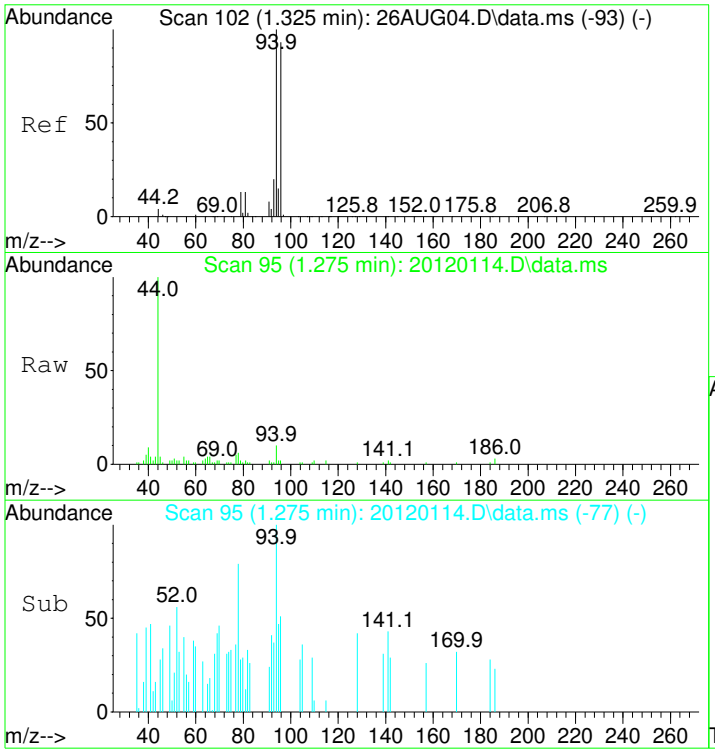


#3
Dichlorofluoromethane
Concen: Below Cal
RT: 1.411 min Scan# 114
Delta R.T. -0.035 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 67 Resp: 110

Ion	Ratio	Lower	Upper
67	100		
69	182.7	23.7	44.1#
66	0.0	8.1	15.0#

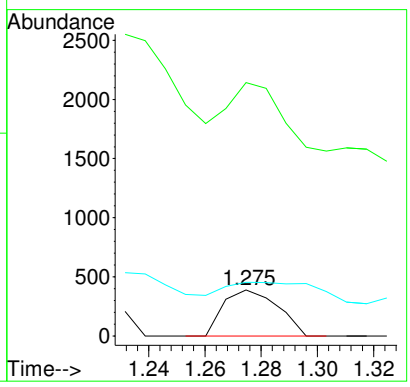


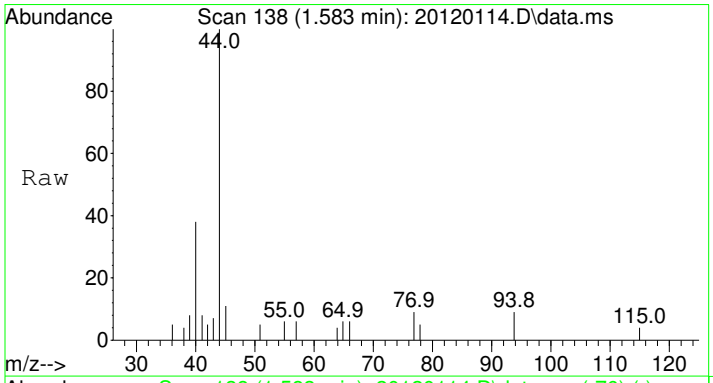


#7
Bromomethane
Concen: Below Cal
RT: 1.275 min Scan# 95
Delta R.T. 0.008 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 96 Resp: 525

Ion	Ratio	Lower	Upper
96	100		
94	309.7	103.4	163.4#
79	81.0	0.0	49.6#

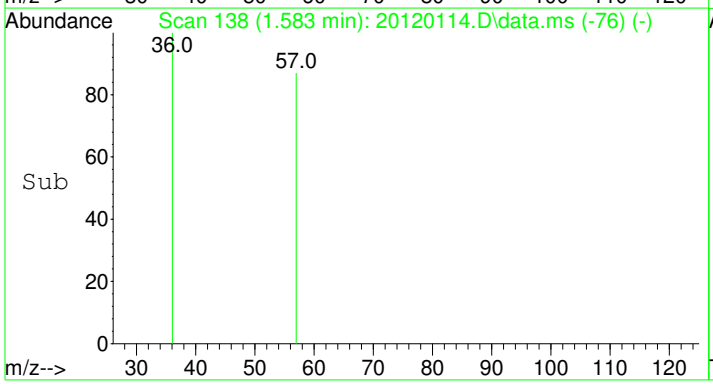


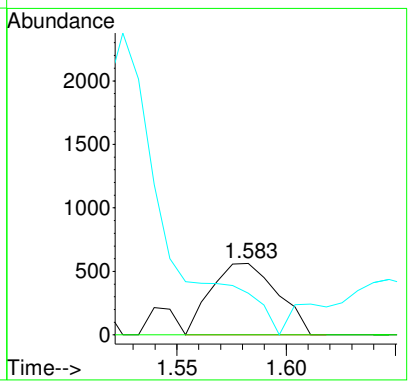


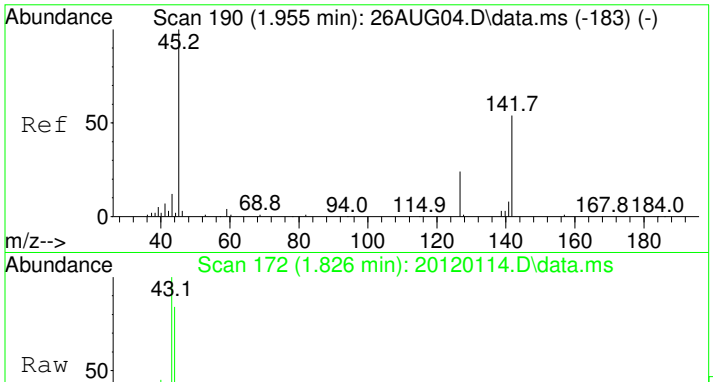
#10
Ethanol
Concen: Below Cal
RT: 1.583 min Scan# 138
Delta R.T. -0.057 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 45 Resp: 1195

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	57.3
43	0.0	0.0	52.4



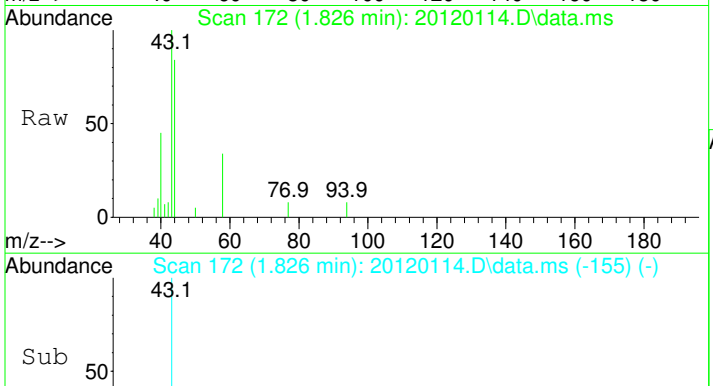


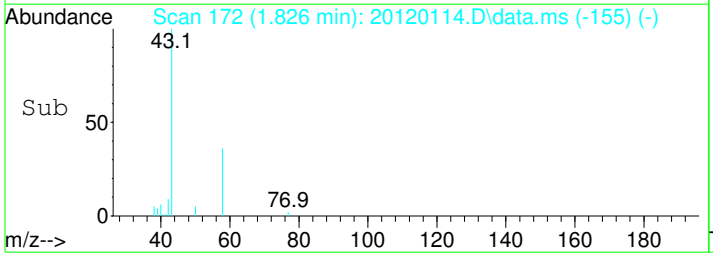


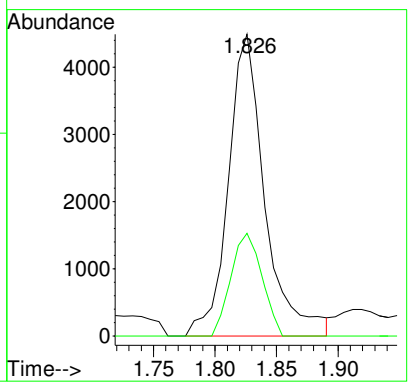
#16
Acetone
Concen: 2.30 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

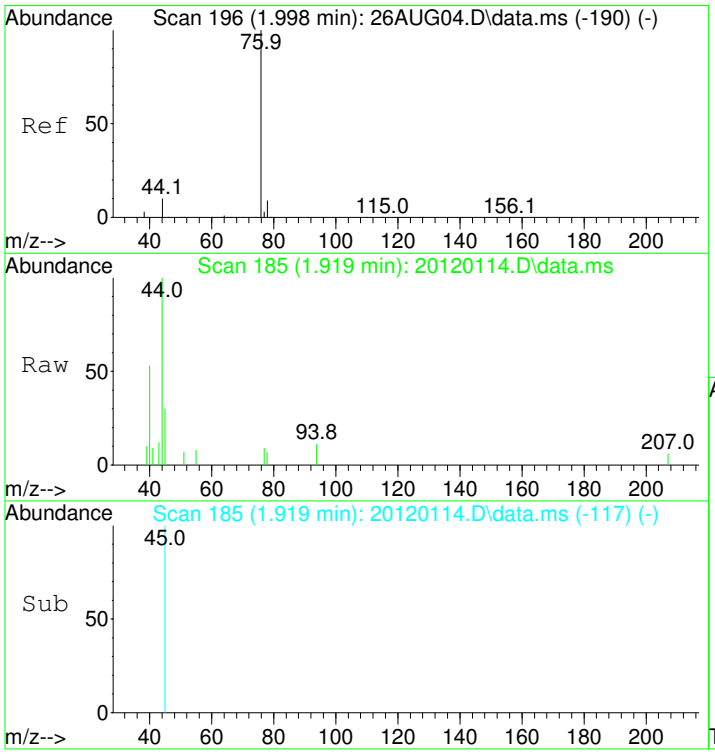
Tgt Ion: 43 Resp: 9299

Ion	Ratio	Lower	Upper
43	100		
58	28.8	5.2	65.2





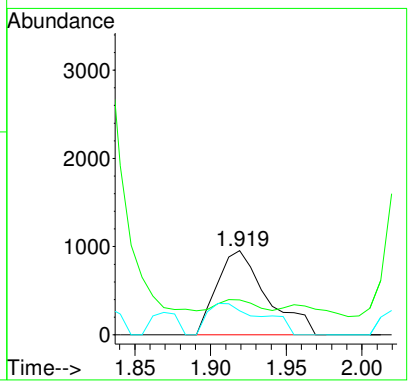


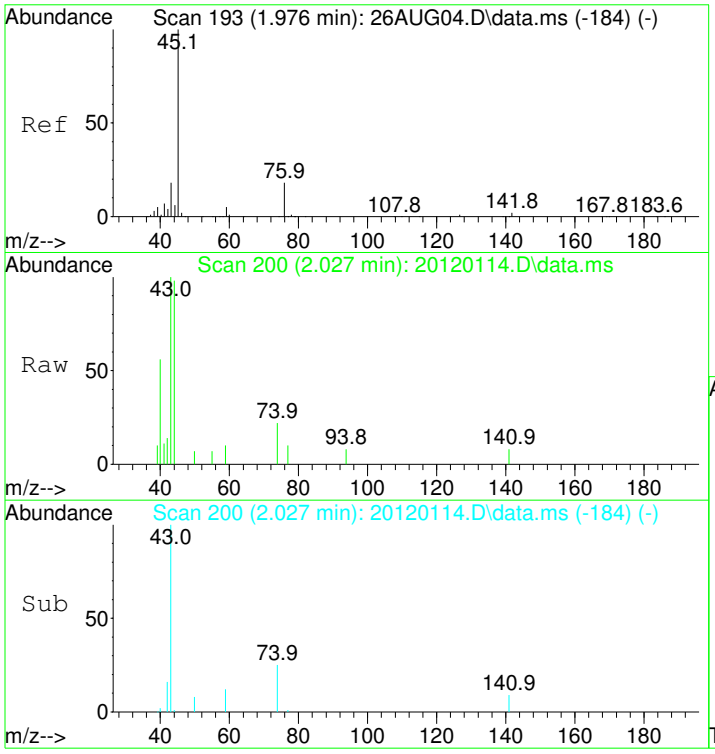


#19
2-Propanol
Concen: Below Cal
RT: 1.919 min Scan# 185
Delta R.T. -0.014 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 45 Resp: 2176

Ion	Ratio	Lower	Upper
45	100		
43	14.7	0.0	48.2
41	41.2	0.0	37.1#

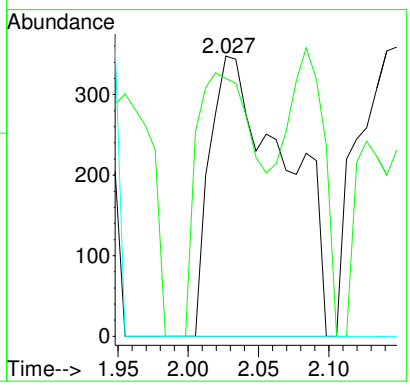


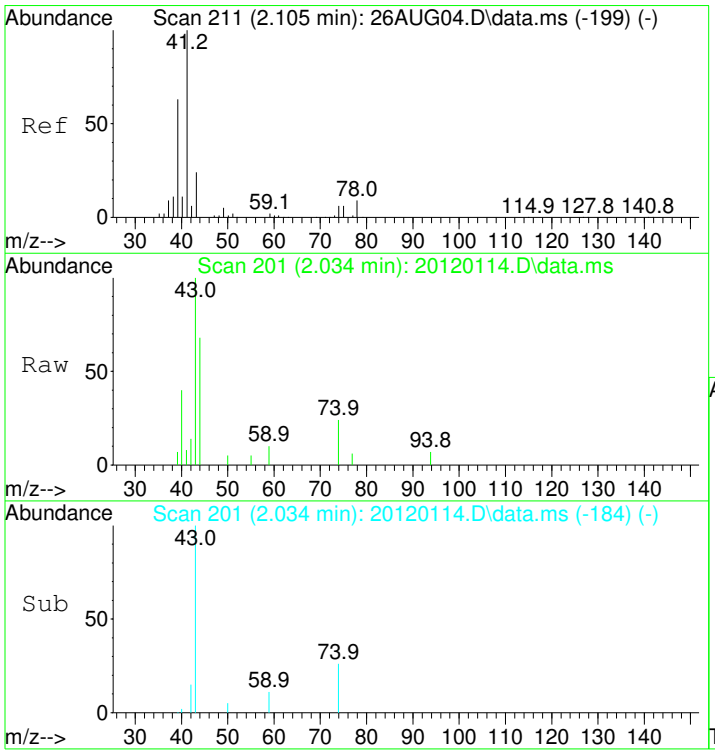


#20
Allyl chloride
Concen: Below Cal
RT: 2.027 min Scan# 200
Delta R.T. -0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 41 Resp: 1298

Ion	Ratio	Lower	Upper
41	100		
39	73.6	29.0	89.0
76	0.0	7.3	67.3#

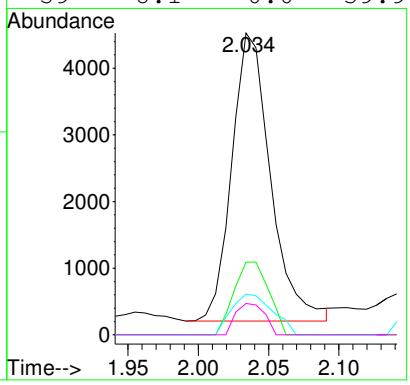


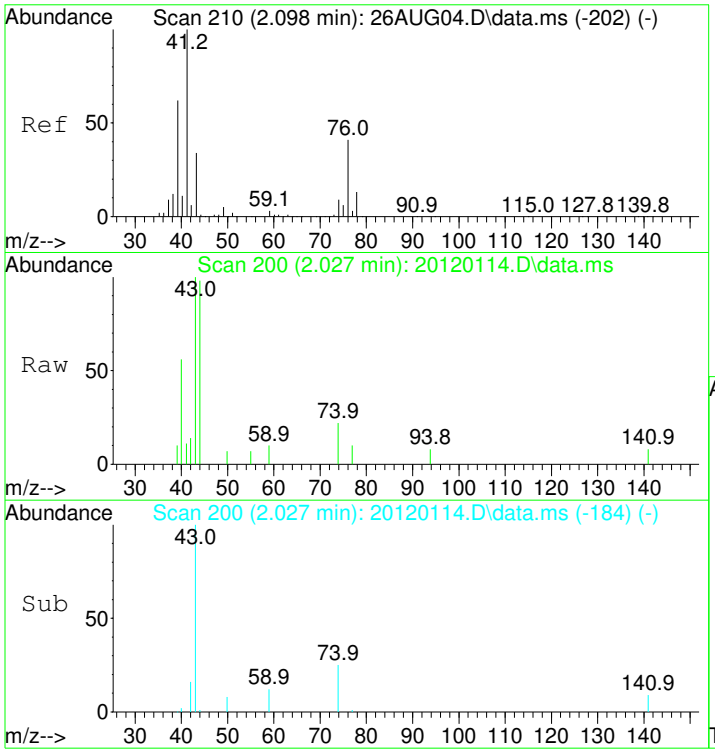


#21
Methyl acetate
Concen: 0.77 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 8314

Ion	Ratio	Lower	Upper
43	100		
74	22.7	0.0	56.2
42	15.1	0.0	44.2
59	8.1	0.0	39.9

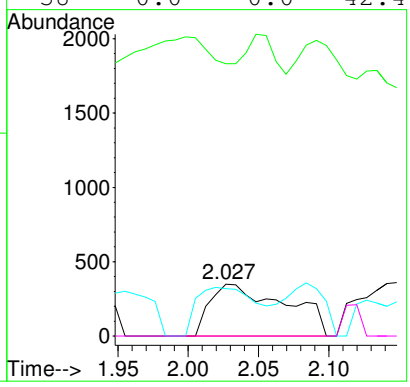


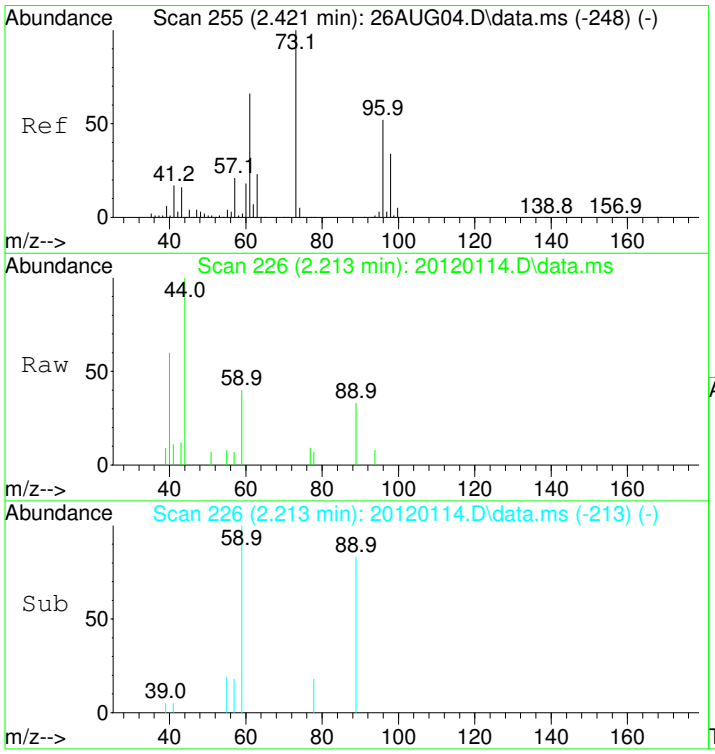


#22
Acetonitrile
Concen: Below Cal
RT: 2.027 min Scan# 200
Delta R.T. -0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 41 Resp: 1298

Ion	Ratio	Lower	Upper
41	100		
40	35.8	0.0	47.5
39	73.6	29.0	89.0
38	0.0	0.0	42.4

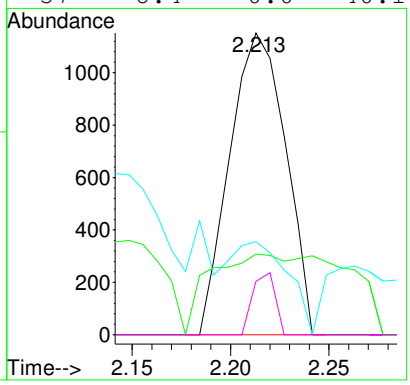


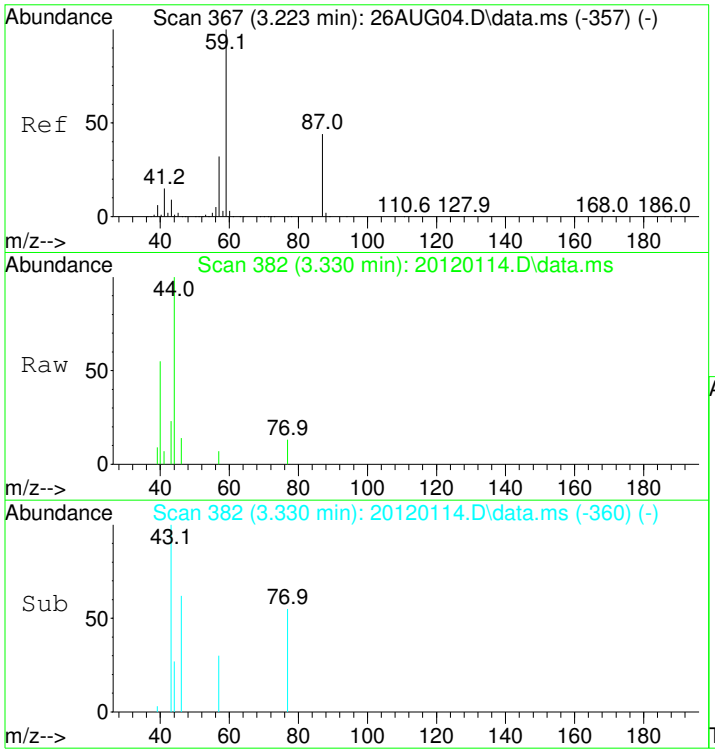


#25
t-Butanol
Concen: Below Cal
RT: 2.213 min Scan# 226
Delta R.T. -0.028 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 59 Resp: 2275

Ion	Ratio	Lower	Upper
59	100		
41	36.0	0.0	46.1
43	27.5	0.0	41.4
57	8.4	0.0	40.1

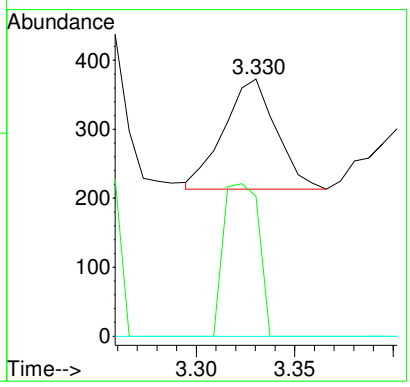


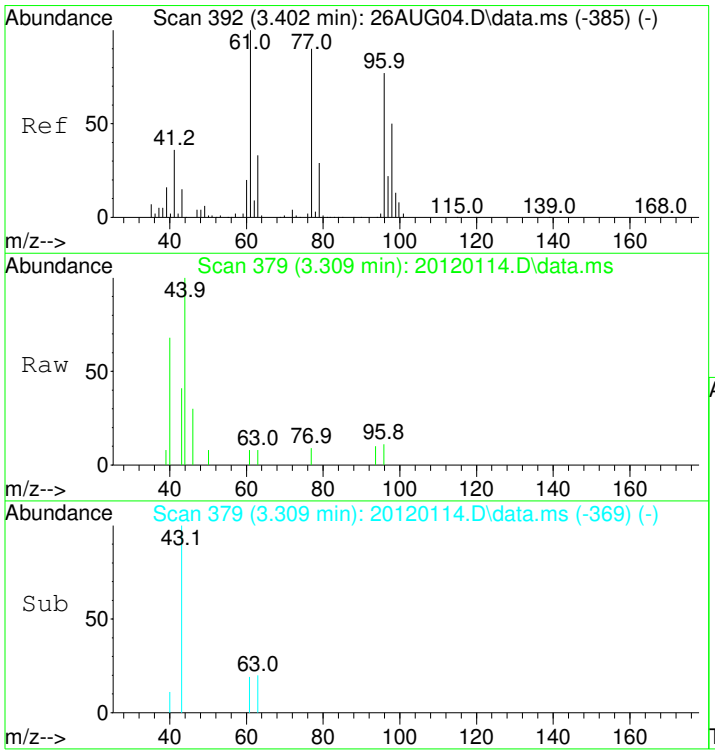


#34
2,2-Dichloropropane
Concen: Below Cal
RT: 3.330 min Scan# 382
Delta R.T. 0.036 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 77 Resp: 297

Ion	Ratio	Lower	Upper
77	100		
41	92.9	16.4	76.4#
79	0.0	2.4	62.4#

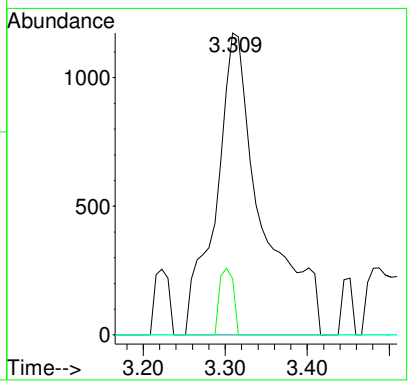


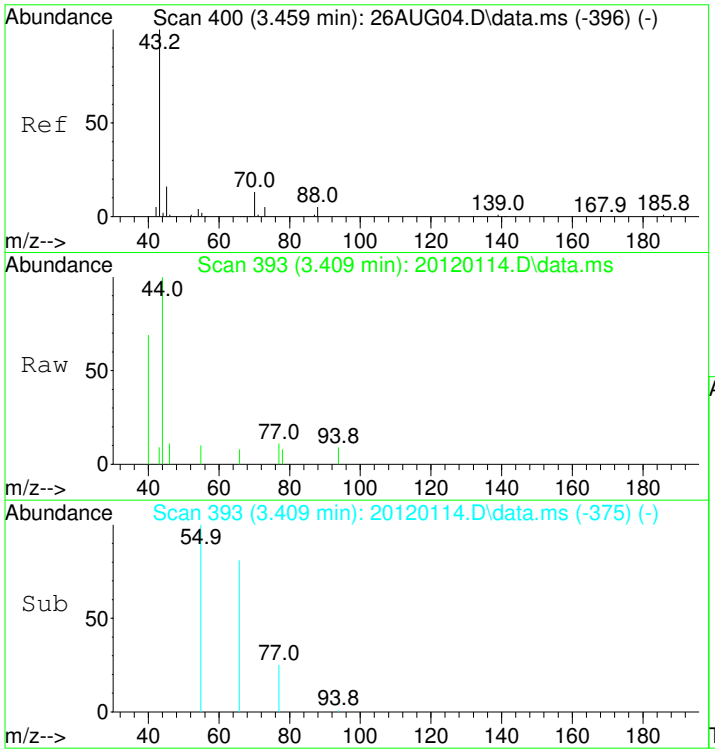


#37
Ethyl Acetate
Concen: 0.15 ug/L
RT: 3.309 min Scan# 379
Delta R.T. -0.050 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 4582

Ion	Ratio	Lower	Upper
43	100		
61	6.6	0.0	34.9
88	0.0	0.0	24.3

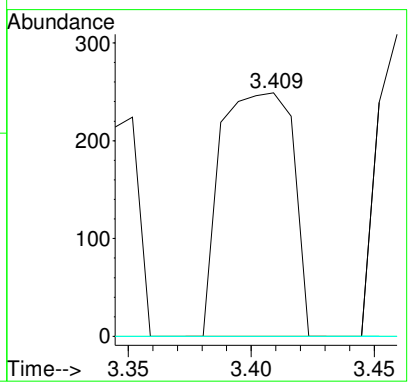


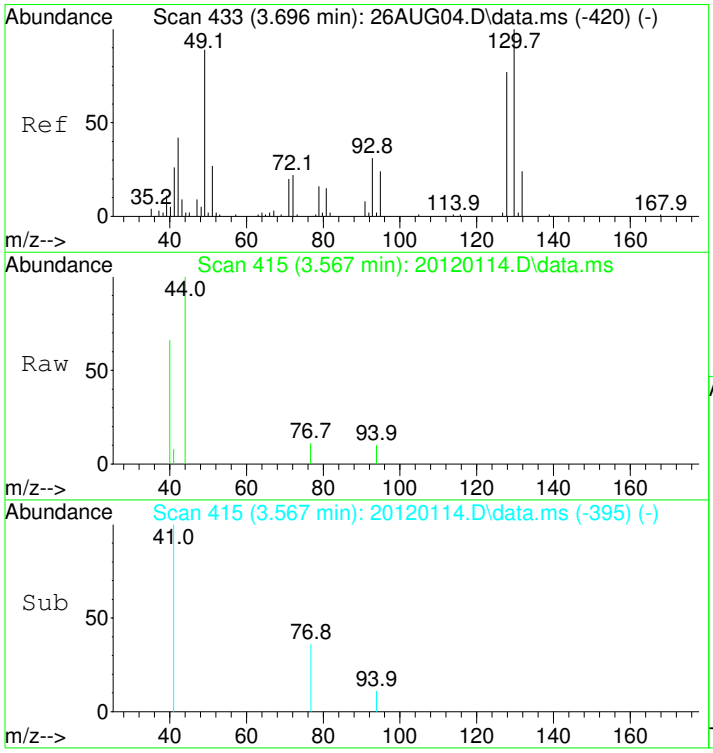


#38
Methyl acrylate
Concen: Below Cal
RT: 3.409 min Scan# 393
Delta R.T. 0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 55 Resp: 507

Ion	Ratio	Lower	Upper
55	100		
85	0.0	14.4	21.6#
58	0.0	7.4	11.2#

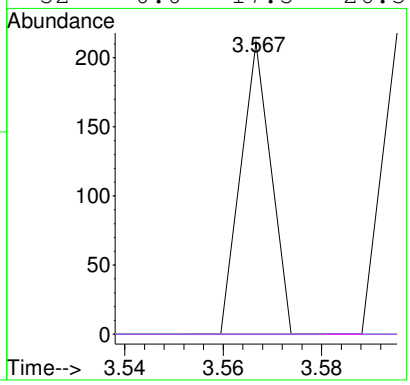


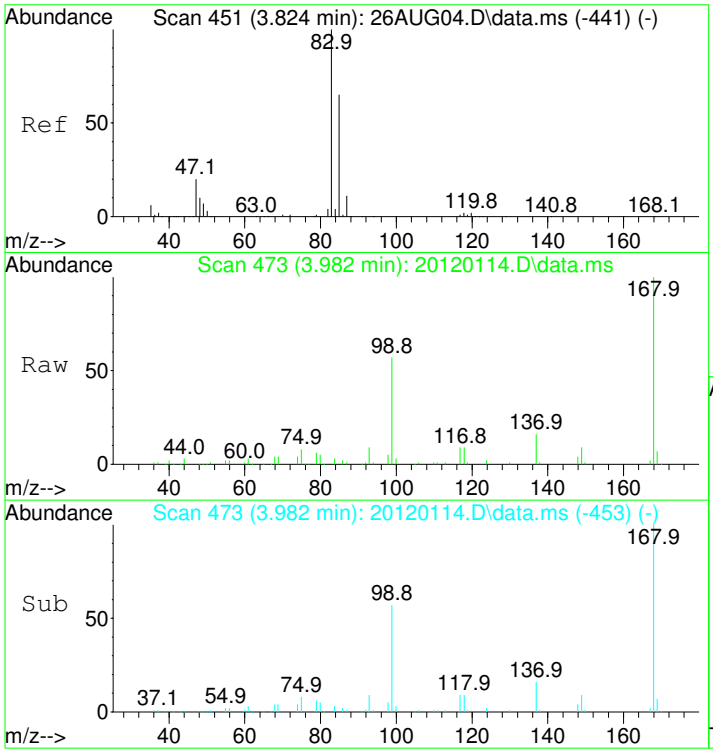


#42
Methacrylonitrile
Concen: Below Cal
RT: 3.567 min Scan# 415
Delta R.T. 0.022 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 41 Resp: 91

Ion	Ratio	Lower	Upper
41	100		
67	0.0	47.8	71.6#
39	0.0	38.6	57.8#
52	0.0	17.5	26.3#

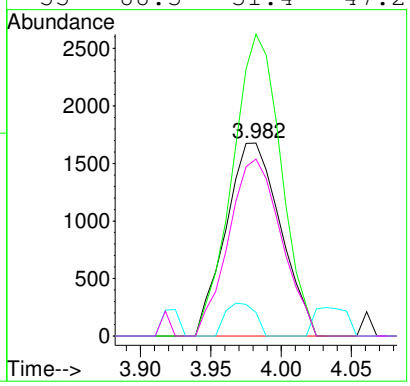


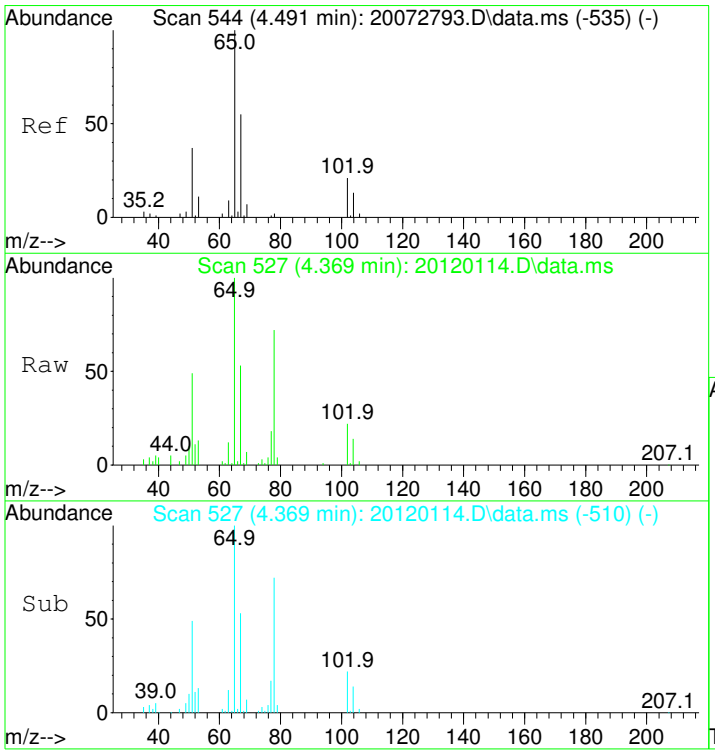


#44
Cyclohexane
Concen: Below Cal
RT: 3.982 min Scan# 473
Delta R.T. 0.021 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 56 Resp: 4528

Ion	Ratio	Lower	Upper
56	100		
84	139.4	69.5	104.3#
41	9.4	39.4	59.0#
55	88.3	31.4	47.2#

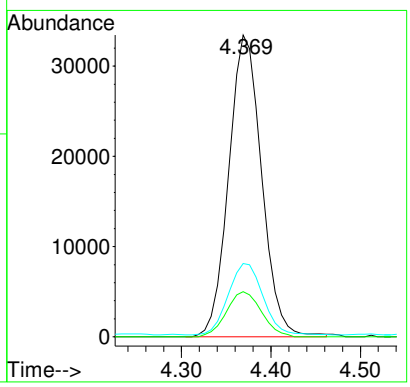


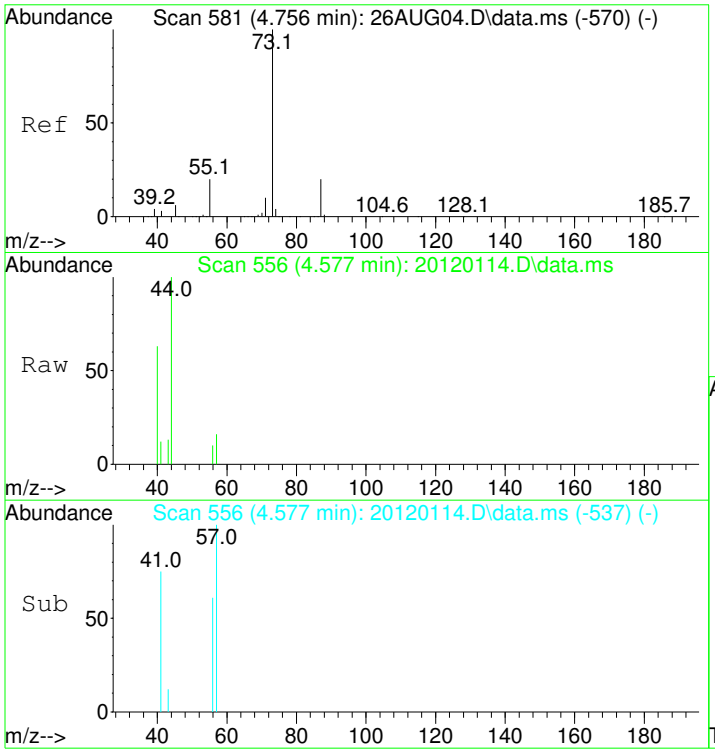


#52
Benzene
Concen: 3.83 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 78 Resp: 85689

Ion	Ratio	Lower	Upper
78	100		
52	15.9	0.0	35.8
77	24.8	3.7	43.7

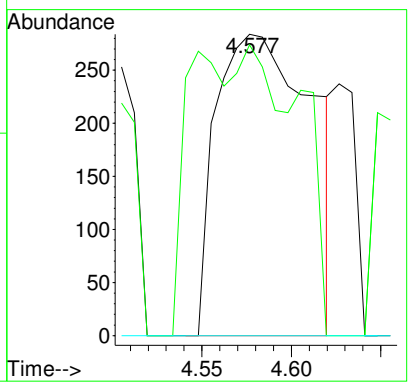


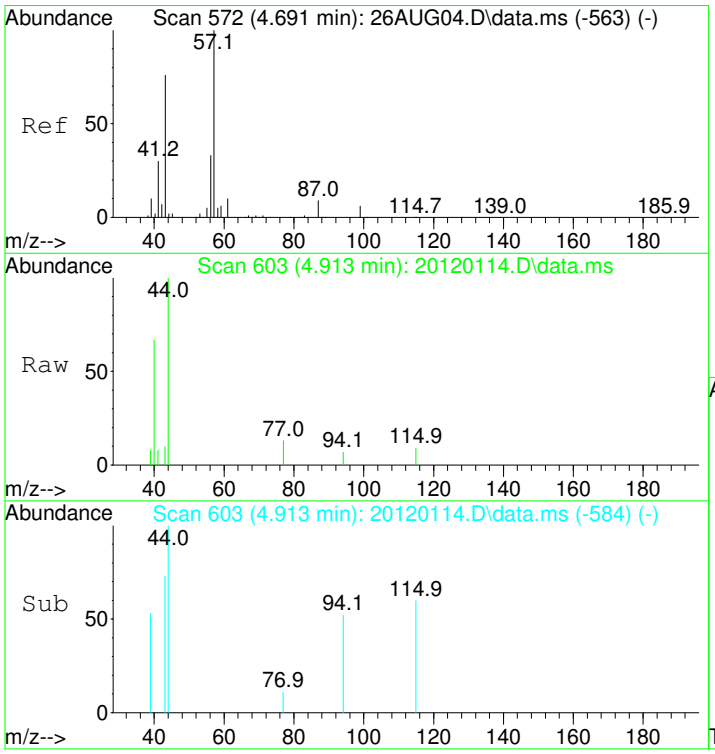


#54
Isobutyl Alcohol
Concen: Below Cal
RT: 4.577 min Scan# 556
Delta R.T. 0.015 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 1053

Ion	Ratio	Lower	Upper
43	100		
41	40.9	30.7	46.1
42	0.0	6.4	9.6#

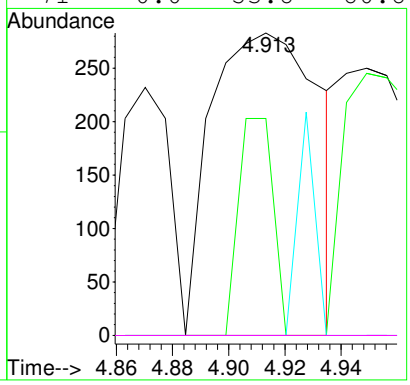


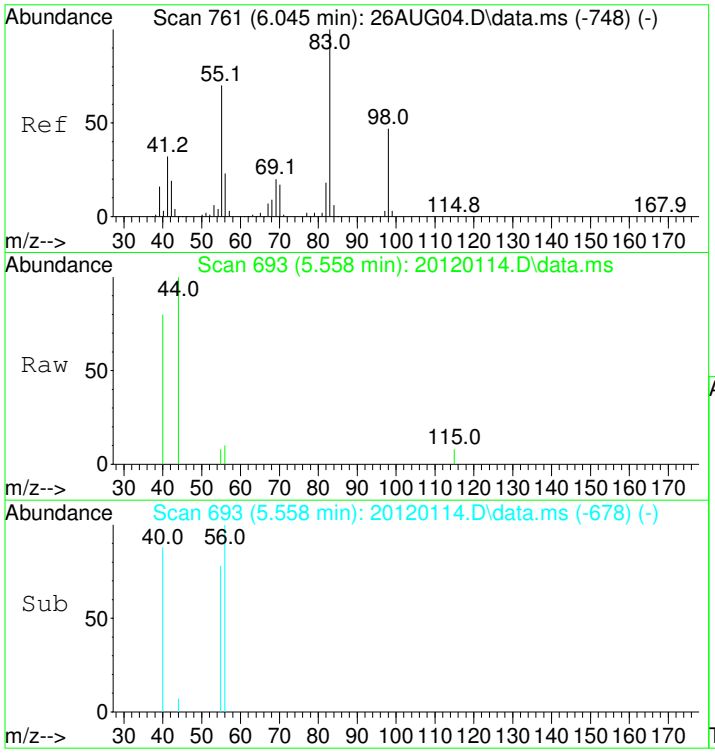


#55
Heptane
Concen: Below Cal
RT: 4.913 min Scan# 603
Delta R.T. 0.014 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 754

Ion	Ratio	Lower	Upper
43	100		
41	23.1	46.8	70.2#
57	0.0	47.5	71.3#
71	0.0	53.8	80.8#

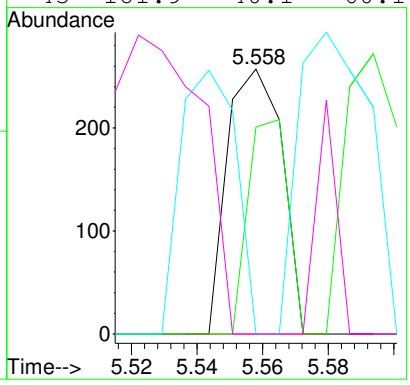


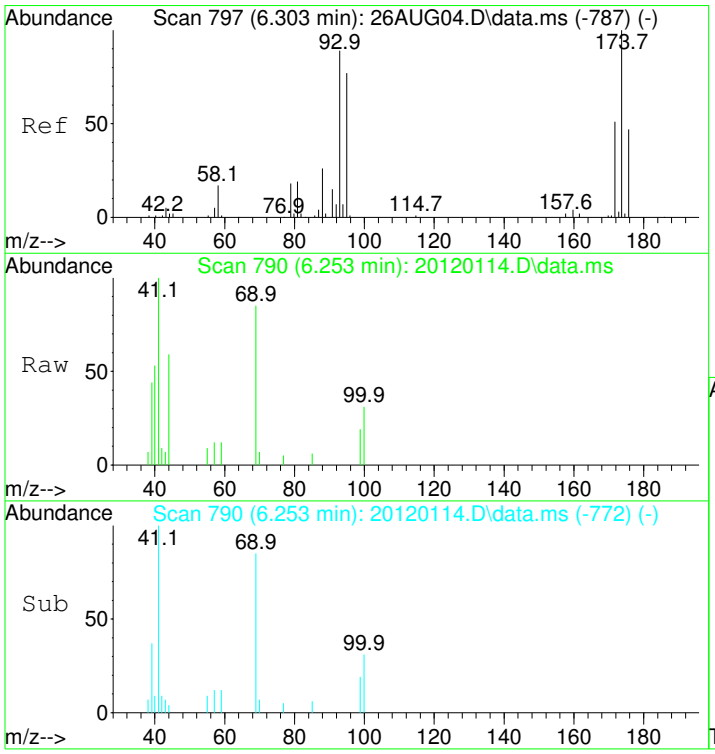


#58
n-Butanol
Concen: 1.70 ug/L
RT: 5.558 min Scan# 693
Delta R.T. -0.014 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 56 Resp: 298

Ion	Ratio	Lower	Upper
56	100		
55	59.1	15.4	23.2#
41	101.0	50.9	76.3#
43	181.9	40.1	60.1#

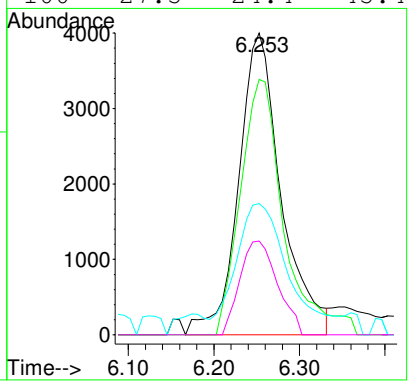


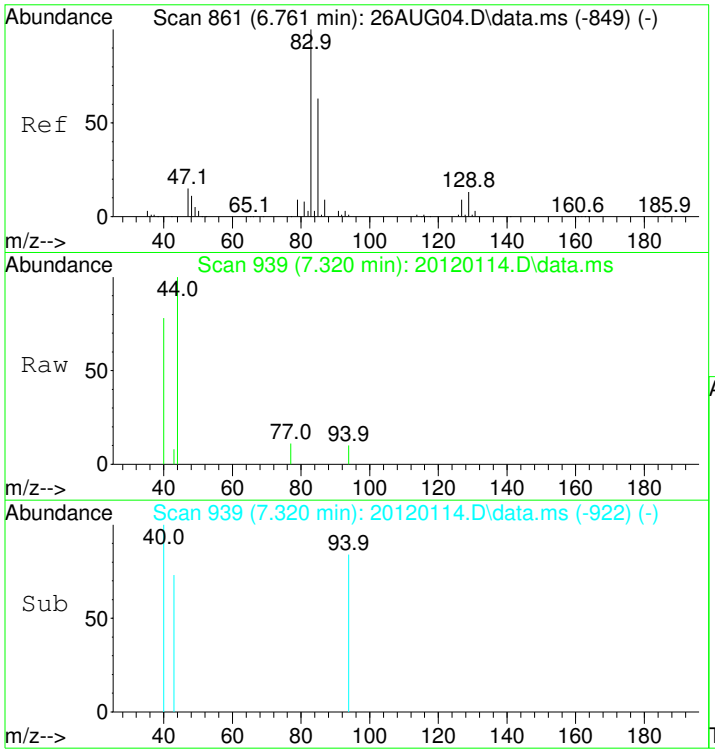


#62
Methyl methacrylate
Concen: 1.75 ug/L
RT: 6.253 min Scan# 790
Delta R.T. 0.008 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 41 Resp: 13820

Ion	Ratio	Lower	Upper
41	100		
69	83.9	72.2	108.4
39	45.0	41.1	61.7
100	27.5	24.4	45.4

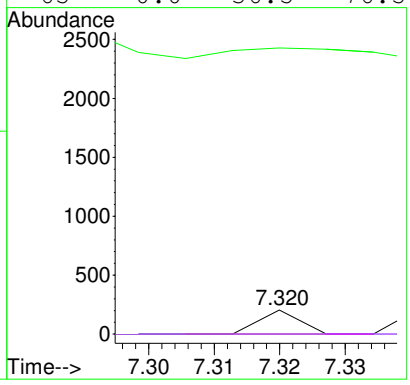


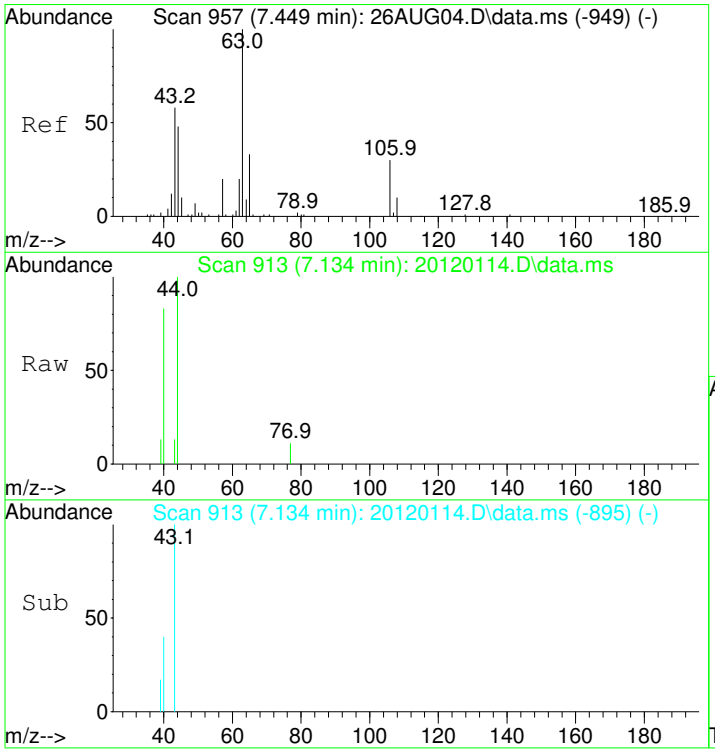


#64
2-Chloroethyl vinyl ether
Concen: Below Cal
RT: 7.320 min Scan# 939
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 88

Ion	Ratio	Lower	Upper
43	100		
44	637.5	51.0	111.0#
63	0.0	141.4	201.4#
65	0.0	36.5	76.5#

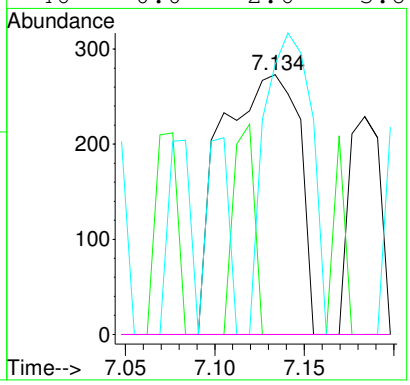


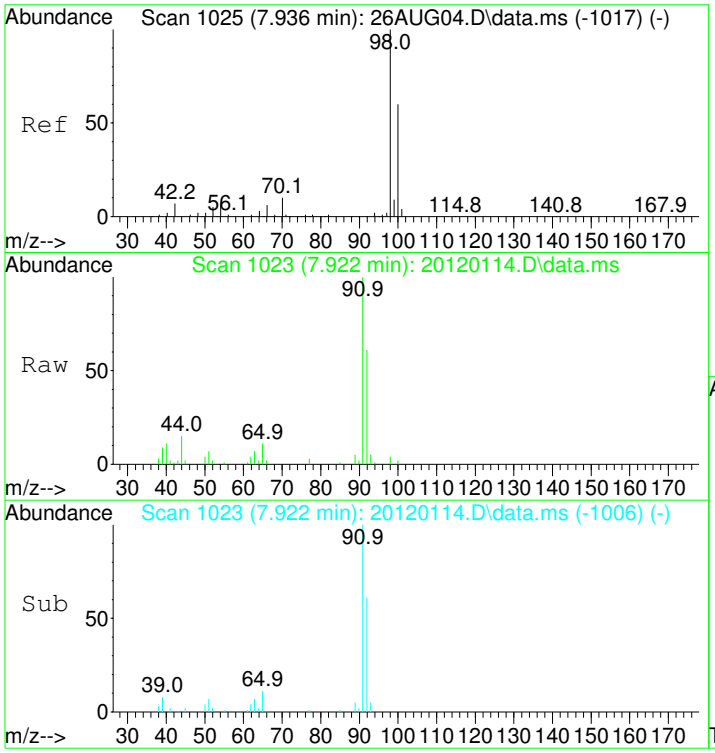


#65
2-Nitropropane
Concen: 0.00 ug/L
RT: 7.134 min Scan# 913
Delta R.T. 0.008 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 823

Ion	Ratio	Lower	Upper
43	100		
41	0.0	67.9	101.9#
39	70.5	21.8	32.8#
46	0.0	2.6	3.8#

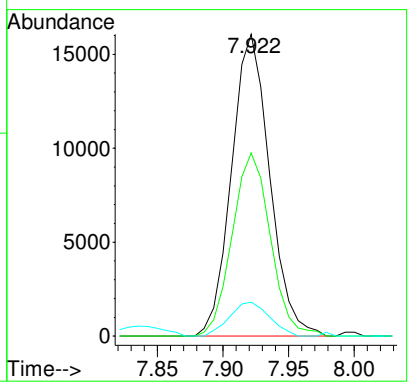


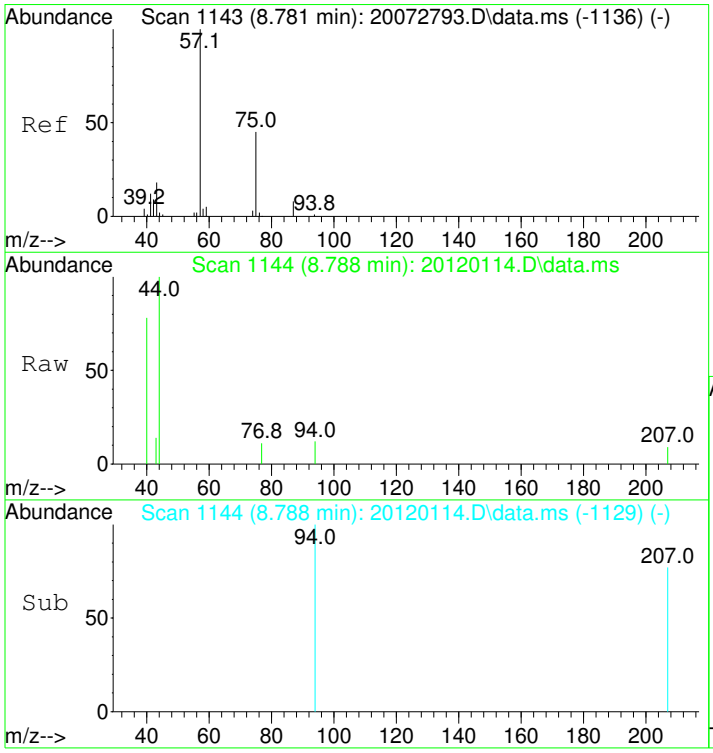


#70
Toluene
Concen: 1.16 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 32532

Ion	Ratio	Lower	Upper
91	100		
92	60.6	40.7	80.7
65	11.8	0.0	31.5

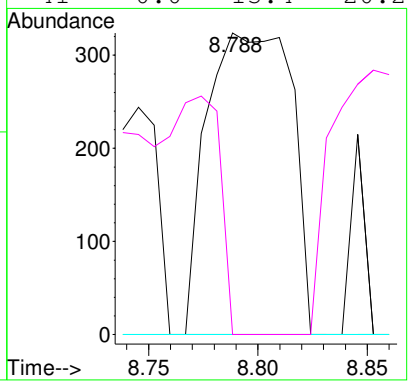


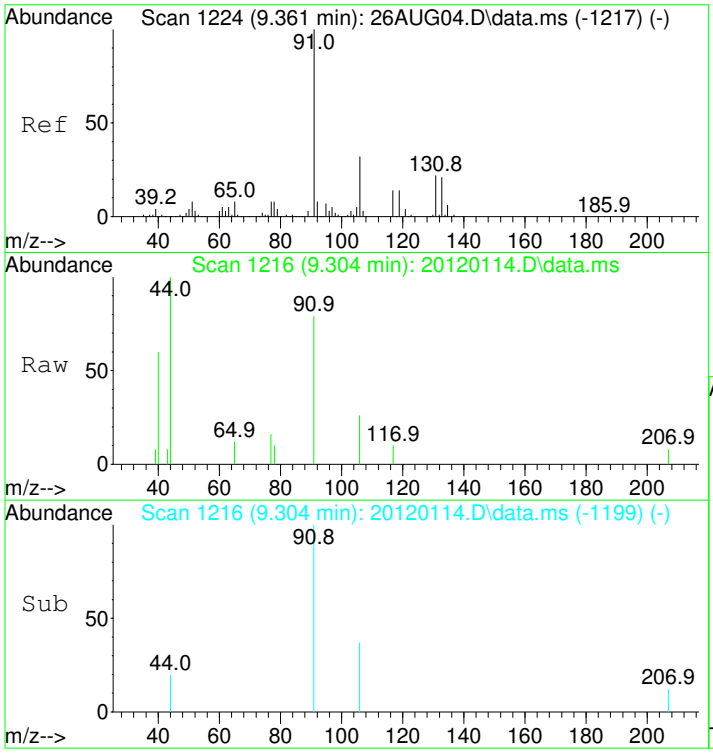


#79
Butyl acetate
Concen: Below Cal
RT: 8.788 min Scan# 1144
Delta R.T. -0.015 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 872

Ion	Ratio	Lower	Upper
43	100		
56	0.0	38.0	57.0#
73	0.0	15.0	22.4#
41	0.0	13.4	20.2#

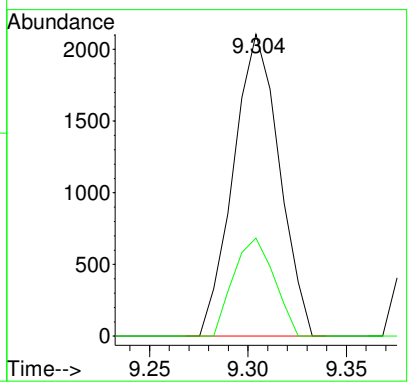


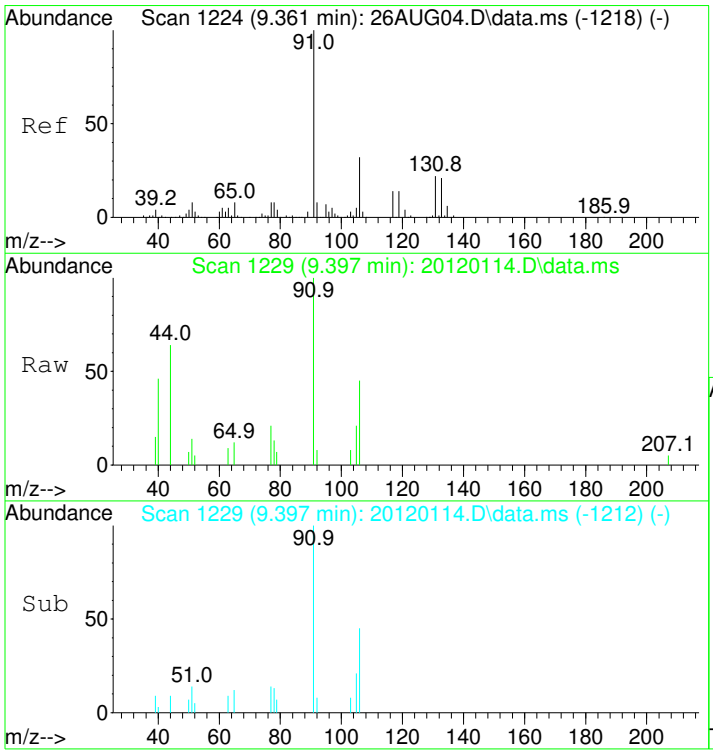


#83
Ethylbenzene
Concen: Below Cal
RT: 9.304 min Scan# 1216
Delta R.T. 0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 3432

Ion	Ratio	Lower	Upper
91	100		
106	28.6	13.6	53.6

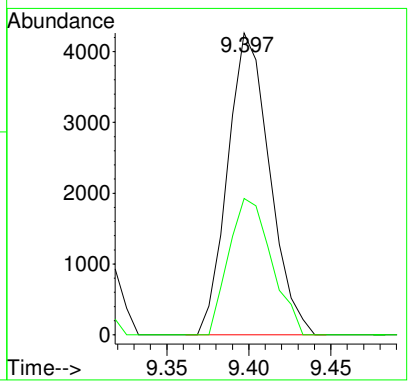


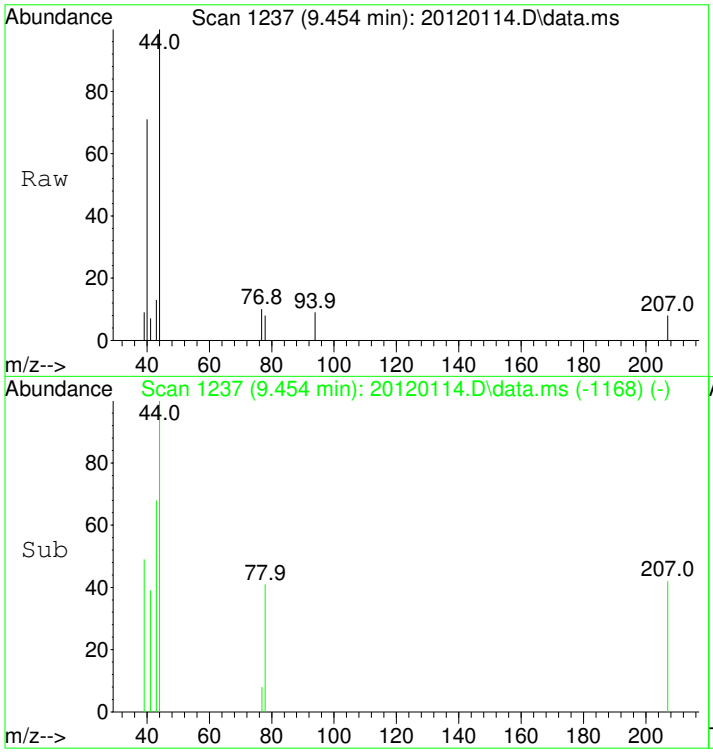


#84
m/p-Xylene
Concen: Below Cal
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 7575

Ion	Ratio	Lower	Upper
91	100		
106	46.1	34.2	74.2

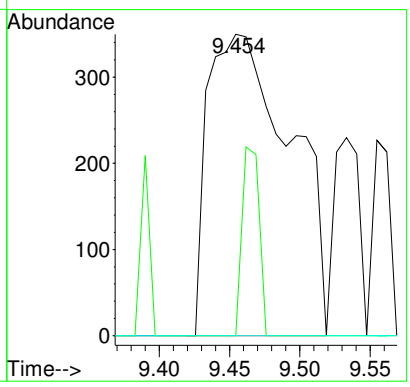


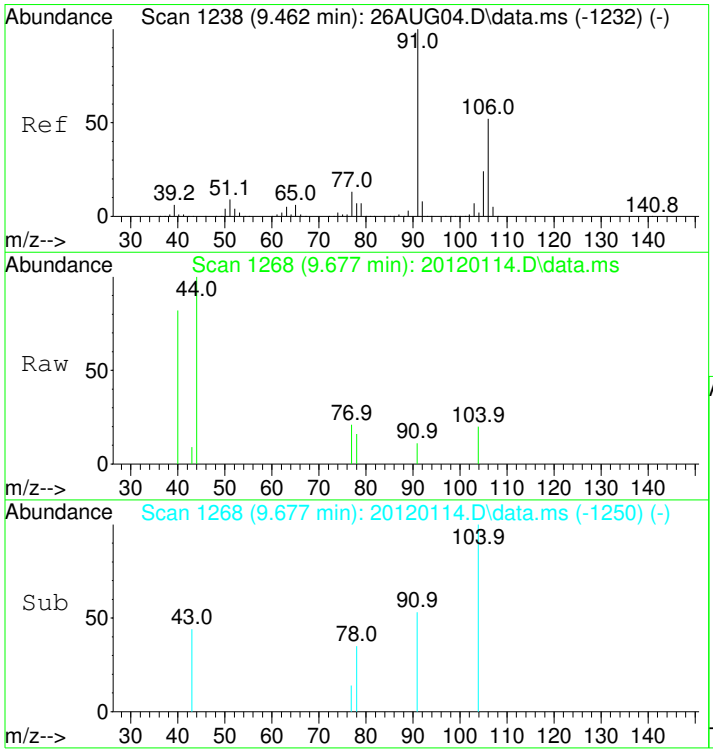


#85
Nonane
Concen: Below Cal
RT: 9.454 min Scan# 1237
Delta R.T. -0.008 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 1432

Ion	Ratio	Lower	Upper
43	100		
57	12.8	67.9	127.9#
85	0.0	10.4	70.4#

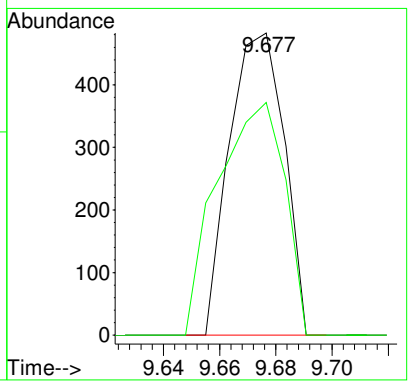


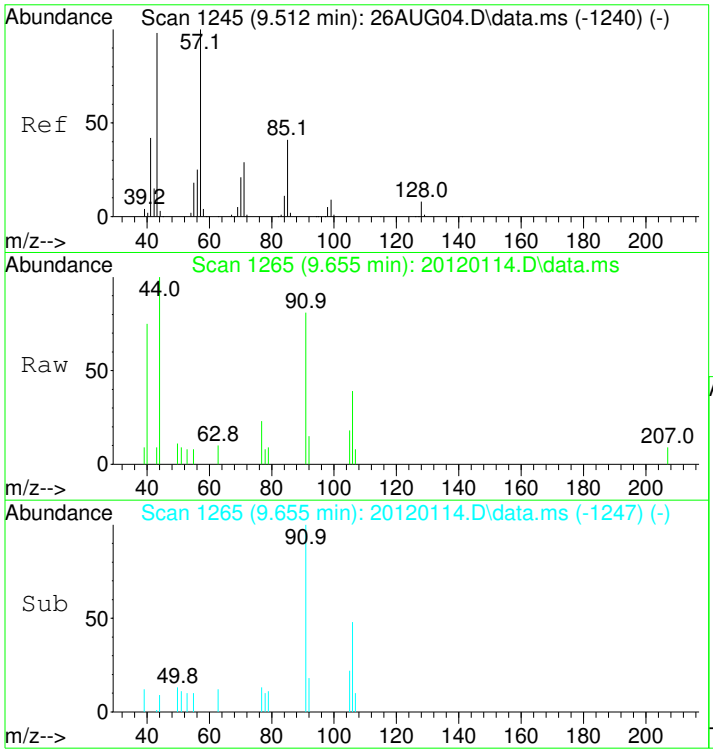


#86
Styrene
Concen: Below Cal
RT: 9.677 min Scan# 1268
Delta R.T. 0.008 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:104 Resp: 654

Ion	Ratio	Lower	Upper
104	100		
78	94.6	32.3	72.3#

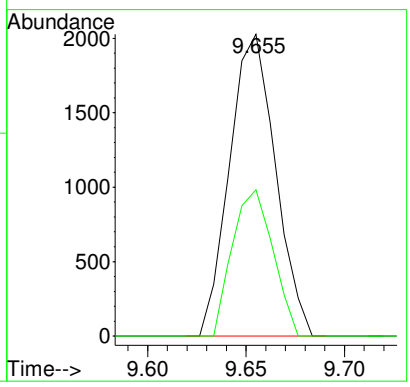


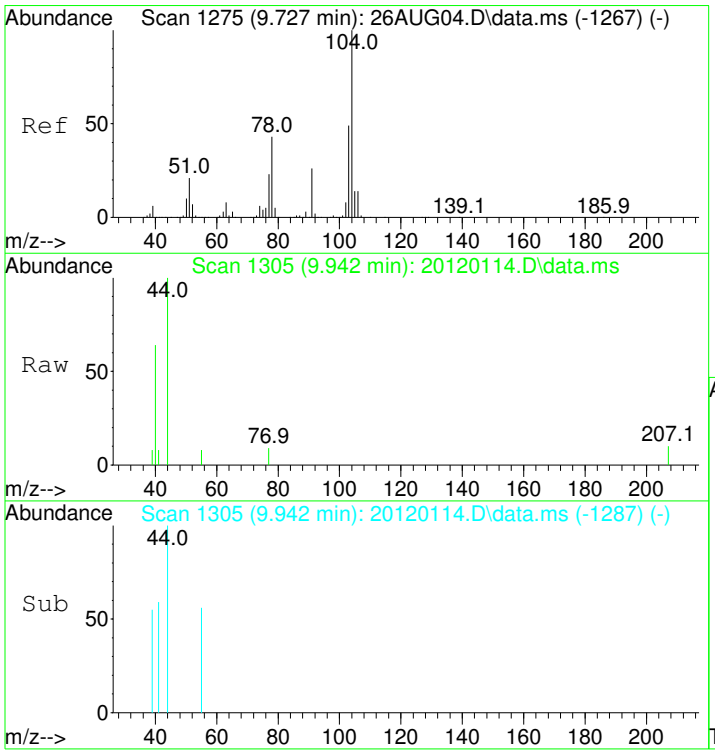


#87
o-Xylene
Concen: Below Cal
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 3291

Ion	Ratio	Lower	Upper
91	100		
106	42.8	30.3	70.3

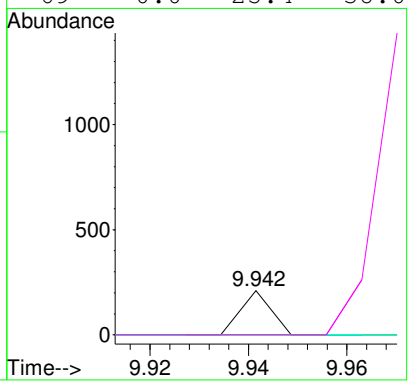


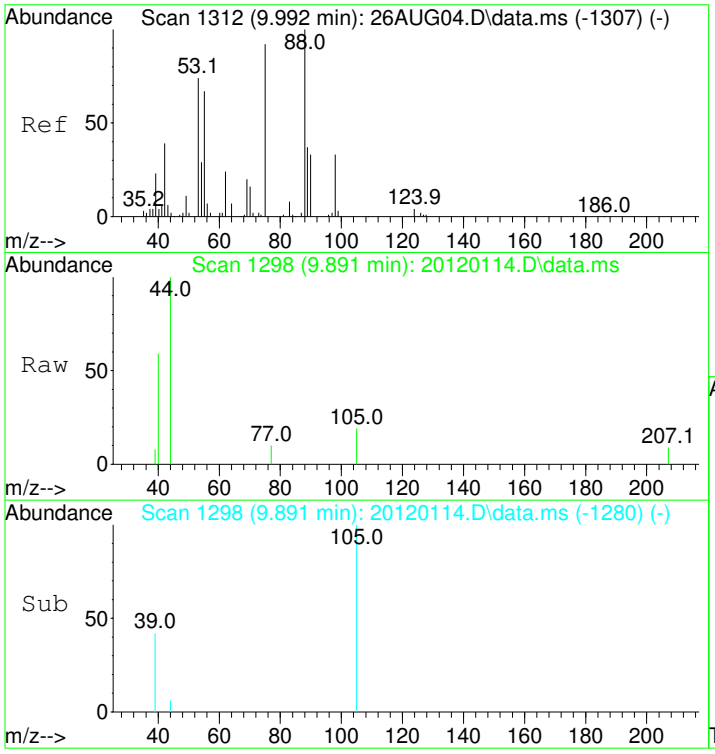


#88
Cyclohexanone
Concen: Below Cal
RT: 9.942 min Scan# 1305
Delta R.T. 0.008 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 55 Resp: 90

Ion	Ratio	Lower	Upper
55	100		
42	0.0	48.0	72.0#
98	0.0	38.2	57.2#
69	0.0	25.4	38.0#

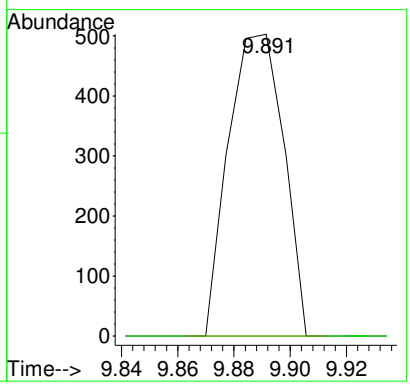


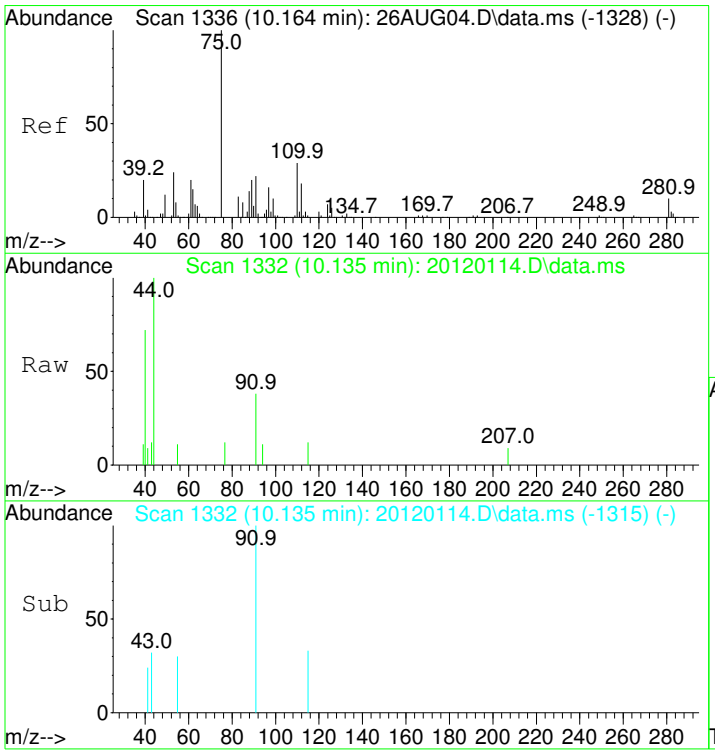


#90
Isopropylbenzene
Concen: Below Cal
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:105 Resp: 688

Ion	Ratio	Lower	Upper
105	100		
120	0.0	8.0	48.0#

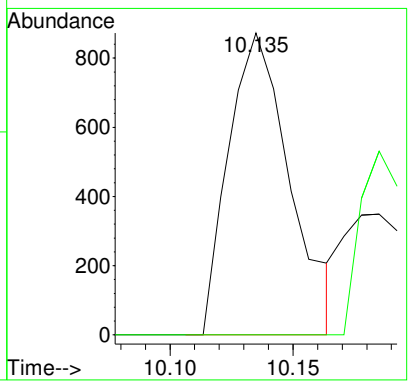


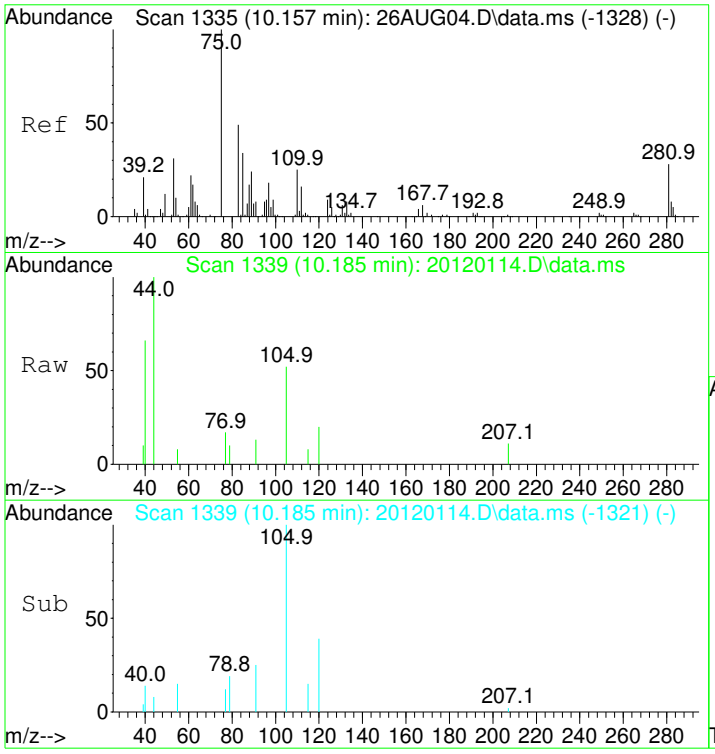


#96
n-Propylbenzene
Concen: Below Cal
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 1519

Ion	Ratio	Lower	Upper
91	100		
120	0.0	3.7	43.7#

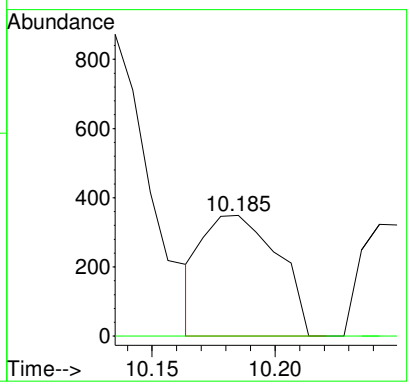


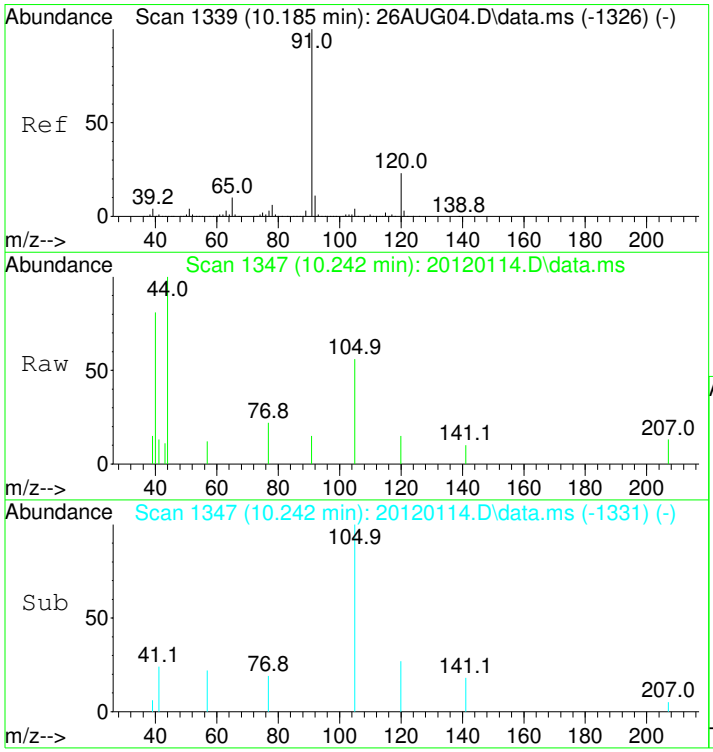


#97
2-Chlorotoluene
Concen: Below Cal
RT: 10.185 min Scan# 1339
Delta R.T. 0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 746

Ion	Ratio	Lower	Upper
91	100		
126	0.0	17.3	57.3#

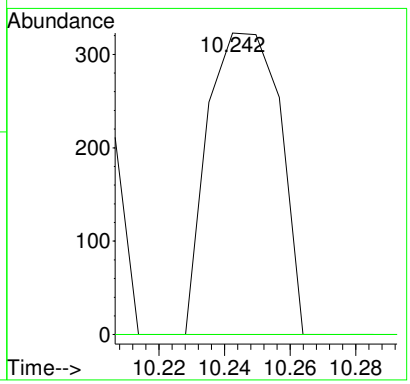


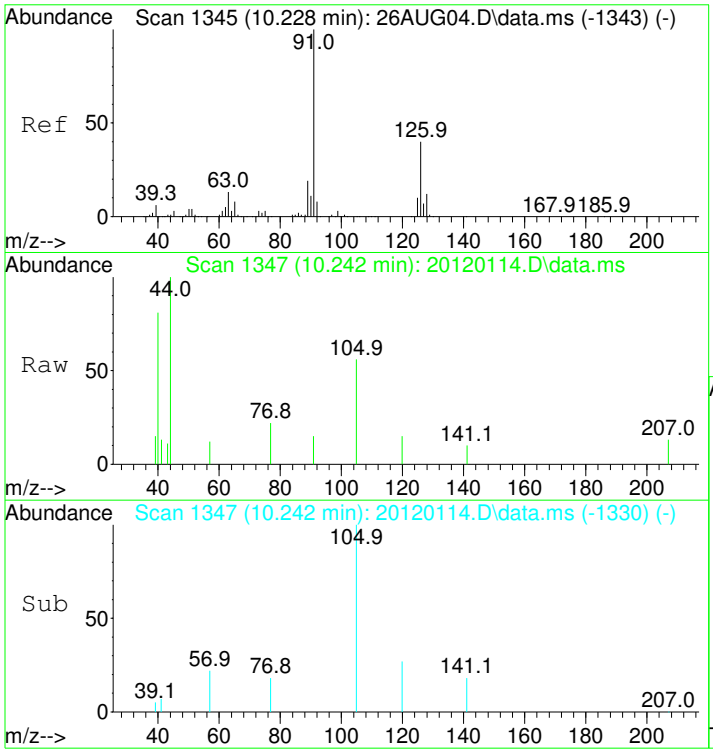


#98
4-Chlorotoluene
Concen: Below Cal
RT: 10.242 min Scan# 1347
Delta R.T. -0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 493

Ion	Ratio	Lower	Upper
91	100		
126	0.0	12.4	52.4#

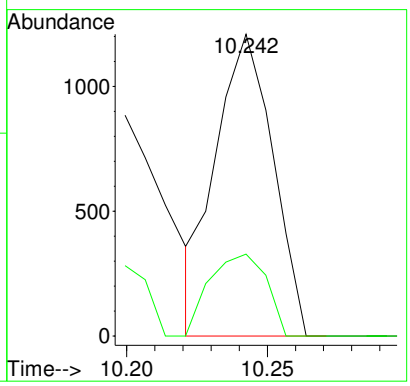


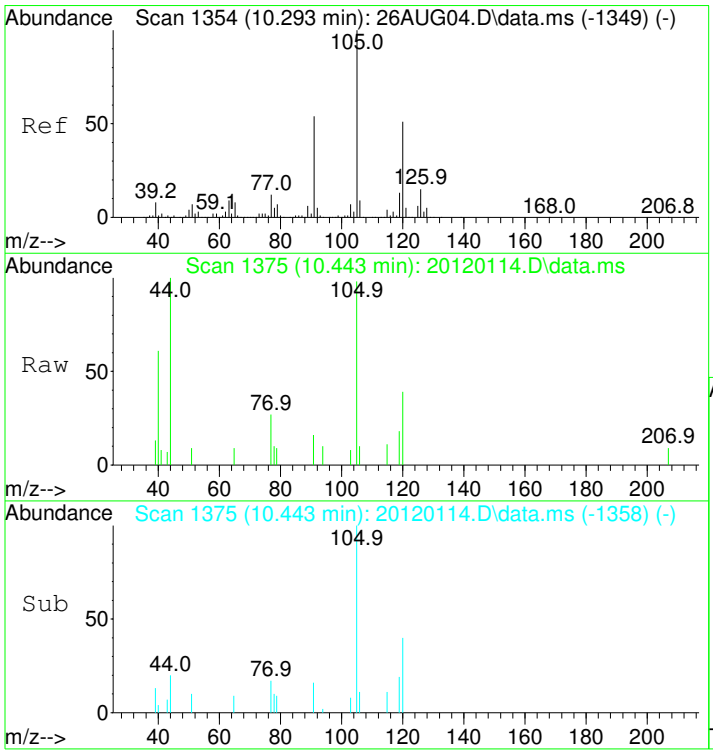


#99
1,3,5-Trimethylbenzene
Concen: Below Cal
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:105 Resp: 1713

Ion	Ratio	Lower	Upper
105	100		
120	27.1	31.9	71.9#

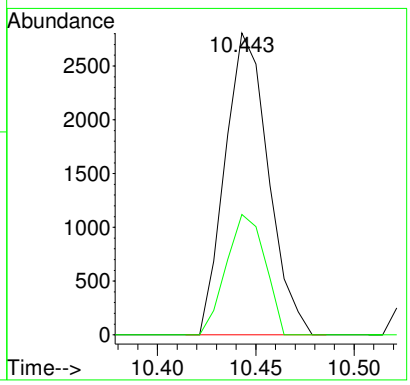


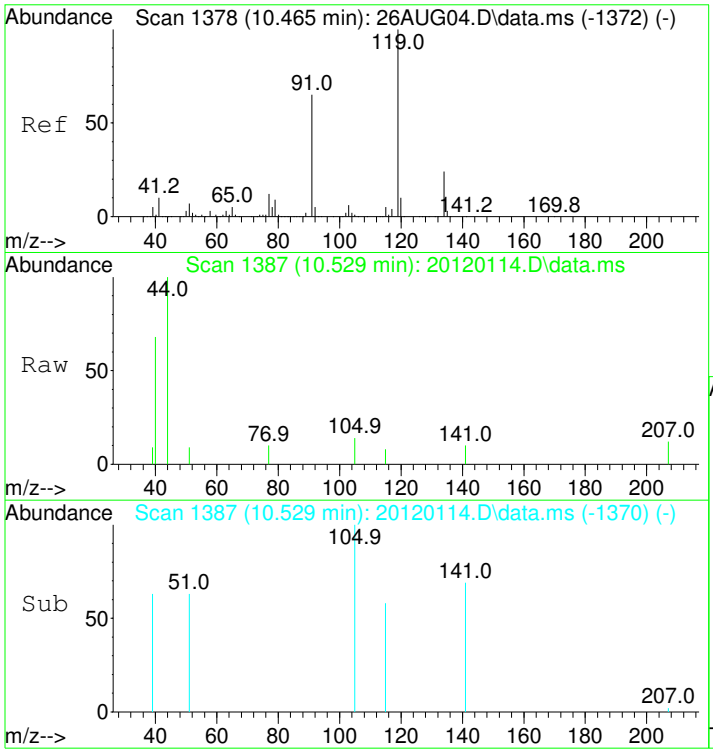


#101
1,2,4-Trimethylbenzene
Concen: Below Cal
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:105 Resp: 4300

Ion	Ratio	Lower	Upper
105	100		
120	35.8	37.7	77.7#

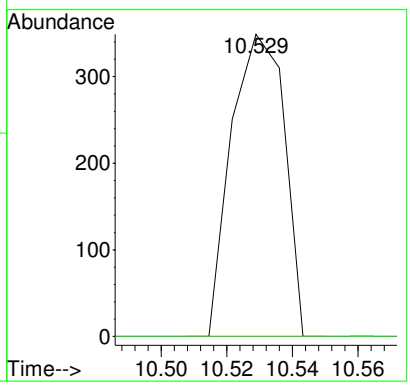


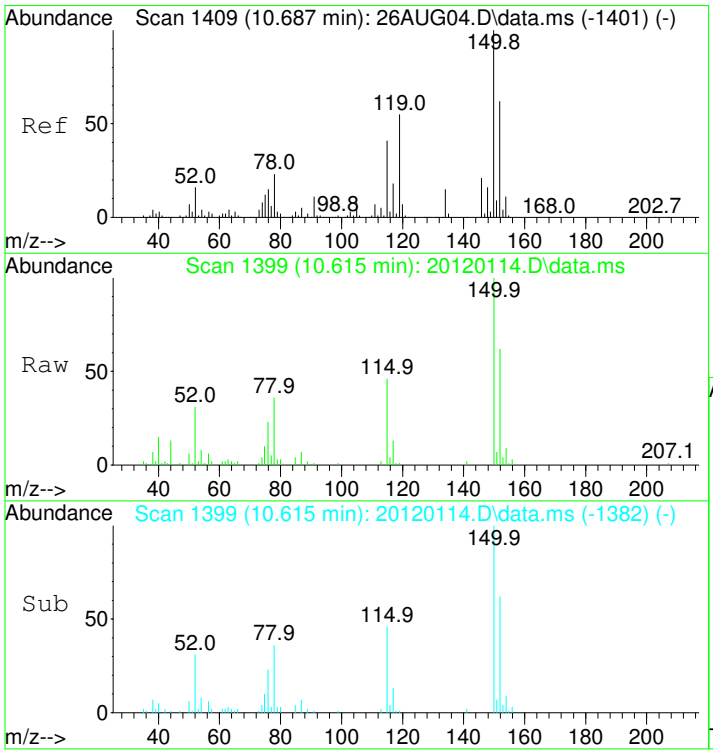


#102
sec-Butylbenzene
Concen: Below Cal
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:105 Resp: 391

Ion	Ratio	Lower	Upper
105	100		
134	0.0	1.1	41.1#

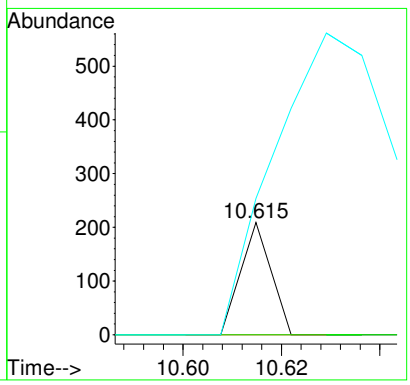


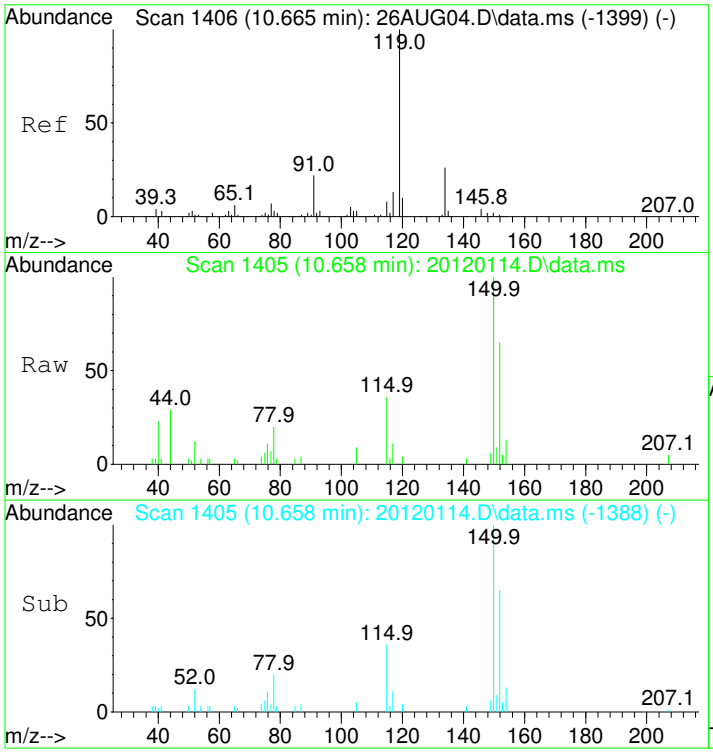


#105
p-Isopropyltoluene
Concen: Below Cal
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:119 Resp: 90

Ion	Ratio	Lower	Upper
119	100		
134	0.0	8.1	48.1#
91	995.6	5.2	45.2#

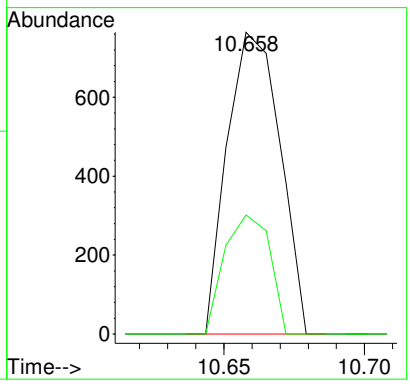


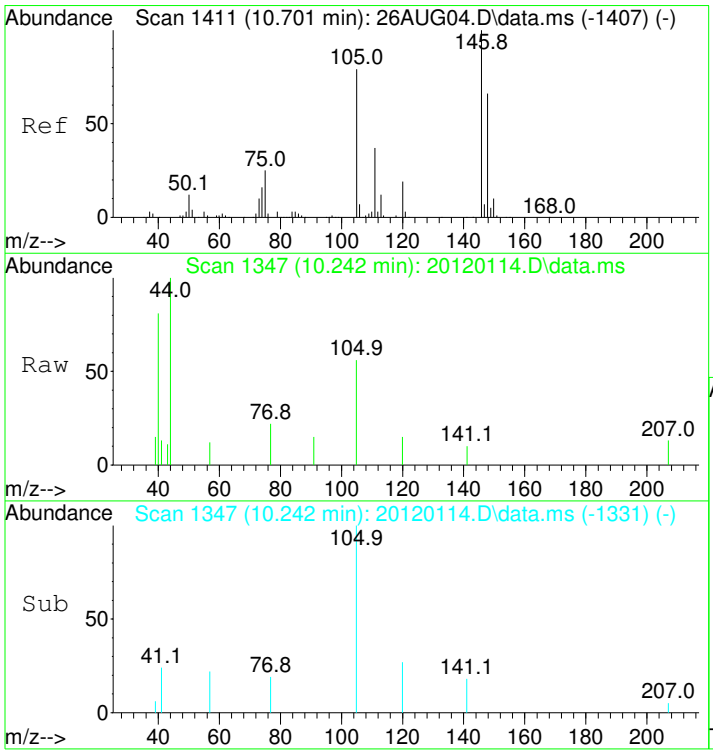


#107
1,2,3-Trimethylbenzene
Concen: Below Cal
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:105 Resp: 1002

Ion	Ratio	Lower	Upper
105	100		
120	33.8	35.5	53.3#

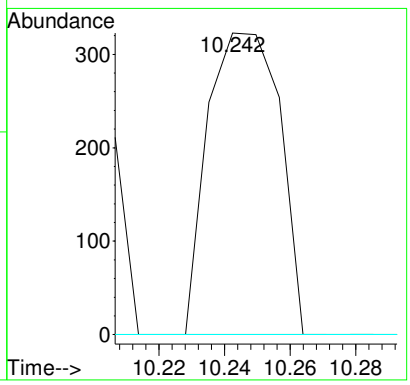


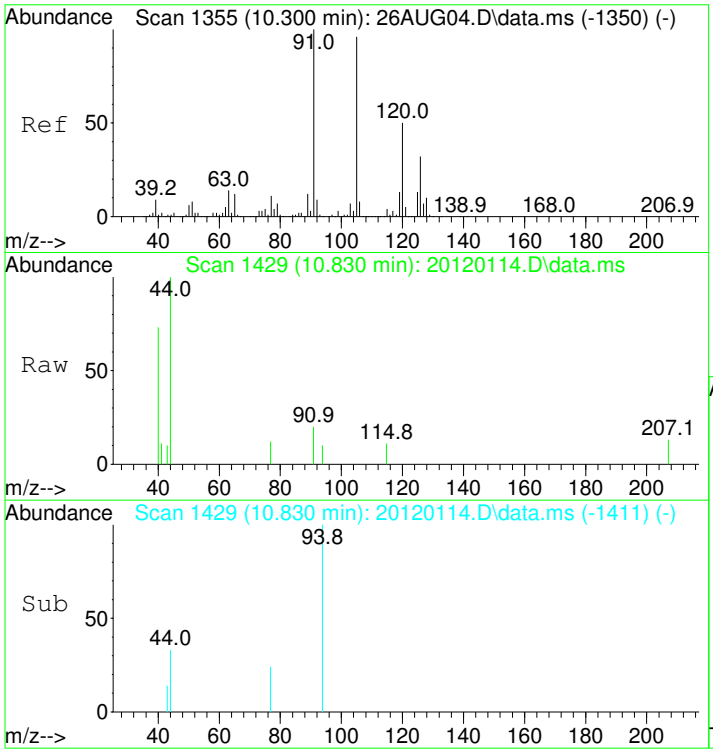


#108
Benzyl chloride
Concen: Below Cal
RT: 10.242 min Scan# 1347
Delta R.T. -0.007 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 493

Ion	Ratio	Lower	Upper
91	100		
126	0.0	12.4	52.4#
65	0.0	0.0	33.3

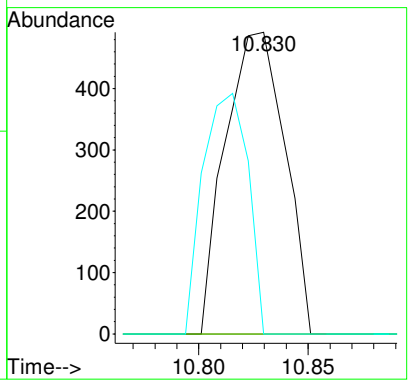


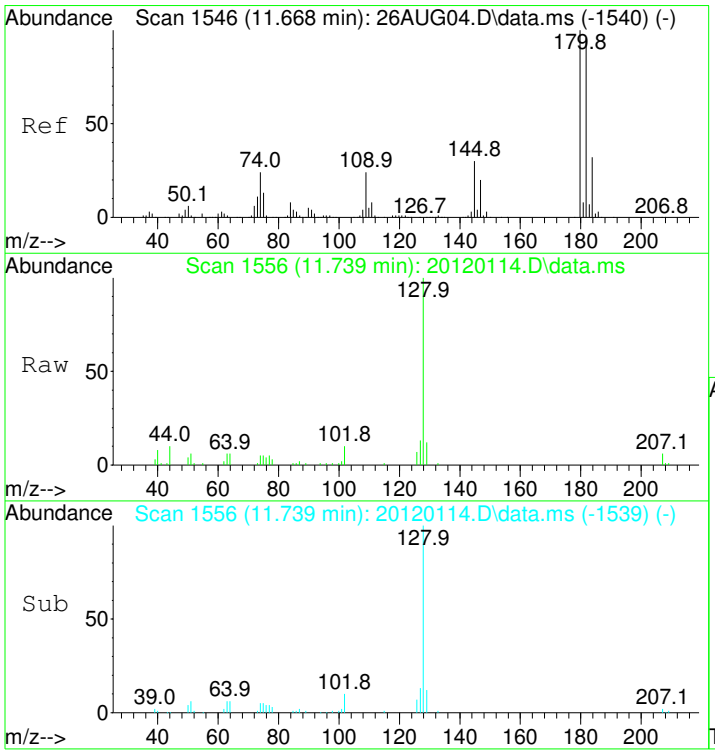


#110
n-Butylbenzene
Concen: Below Cal
RT: 10.830 min Scan# 1429
Delta R.T. 0.008 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 91 Resp: 935

Ion	Ratio	Lower	Upper
91	100		
92	0.0	39.3	79.3#
134	60.1	7.5	47.5#

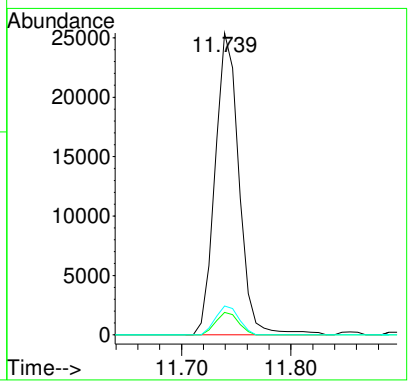


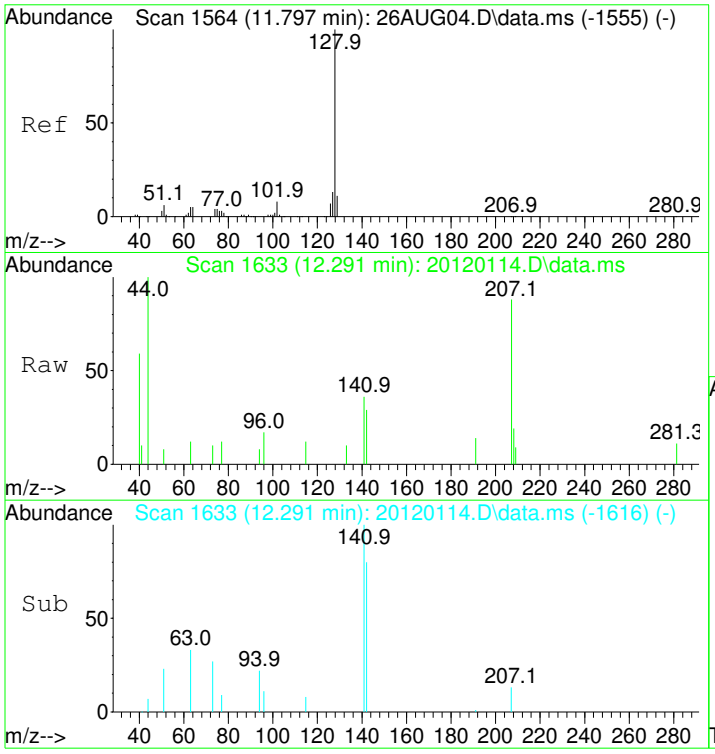


#116
Naphthalene
Concen: 0.86 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:128 Resp: 38564

Ion	Ratio	Lower	Upper
128	100		
126	7.1	0.0	28.2
102	9.4	0.0	30.0

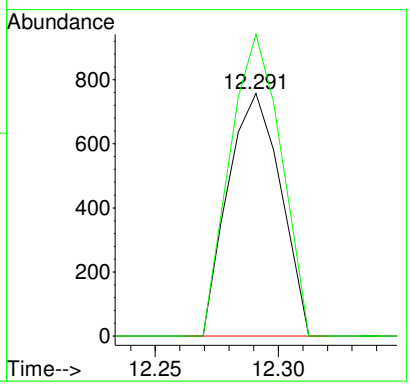


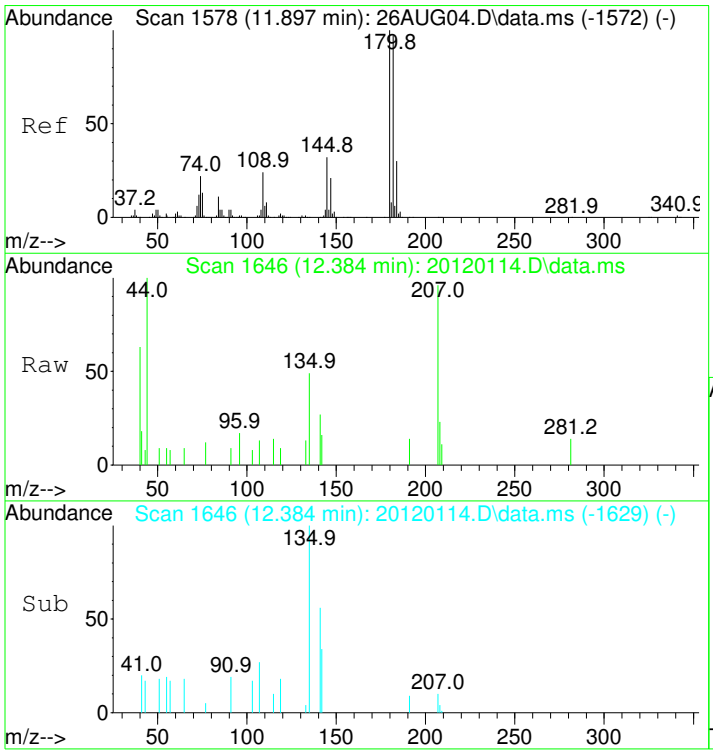


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:142 Resp: 1126

Ion	Ratio	Lower	Upper
142	100		
141	120.7	65.0	105.0#

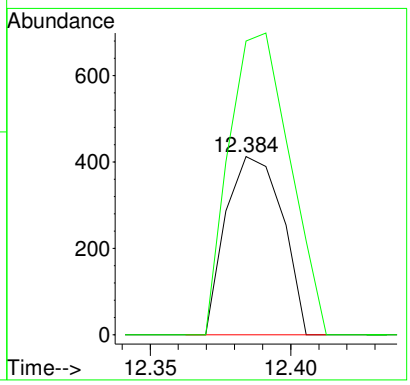


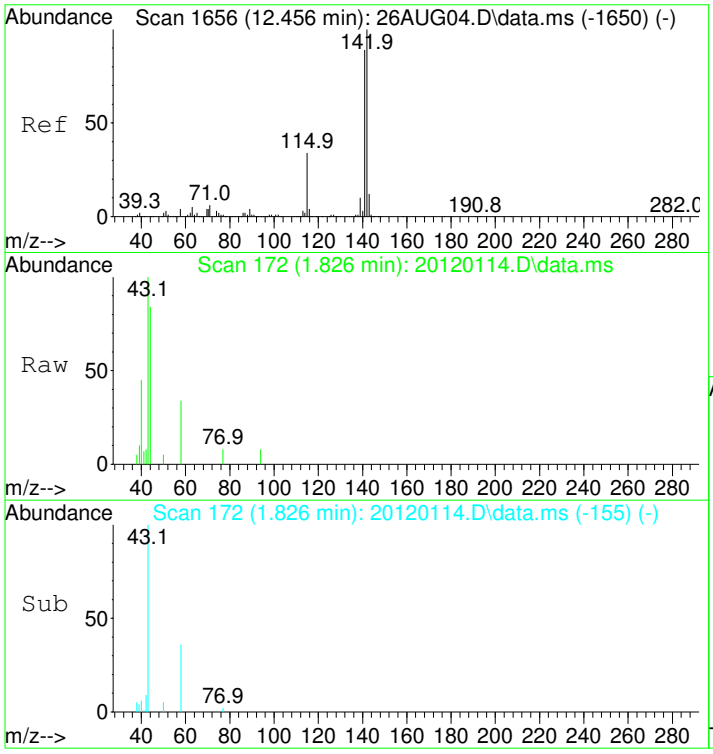


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.384 min Scan# 1646
Delta R.T. 0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion:142 Resp: 578

Ion	Ratio	Lower	Upper
142	100		
141	182.2	69.8	104.8#

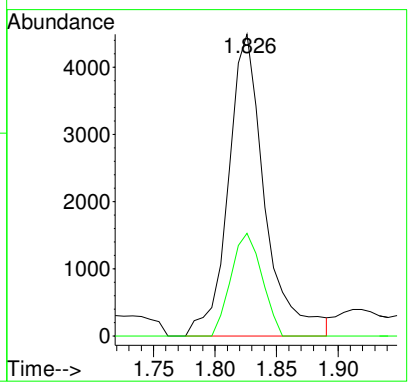


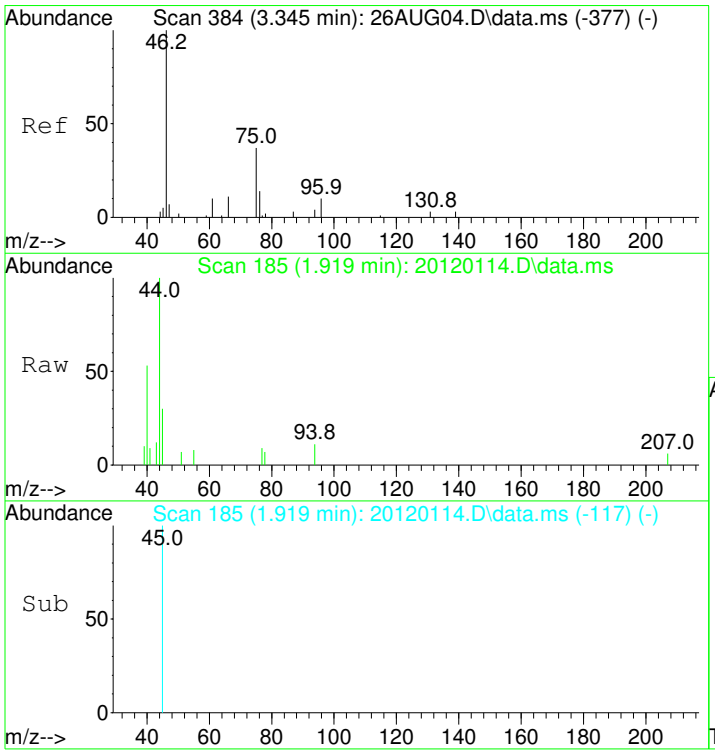


#121
2-Propanone
Concen: 2.47 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 9299

Ion	Ratio	Lower	Upper
43	100		
58	28.8	28.2	42.2

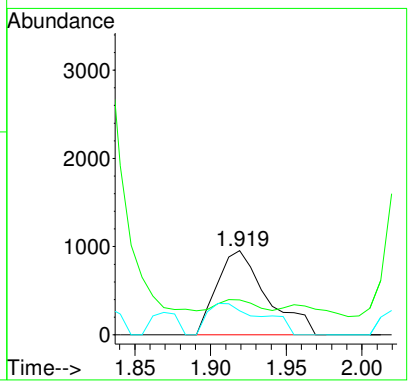


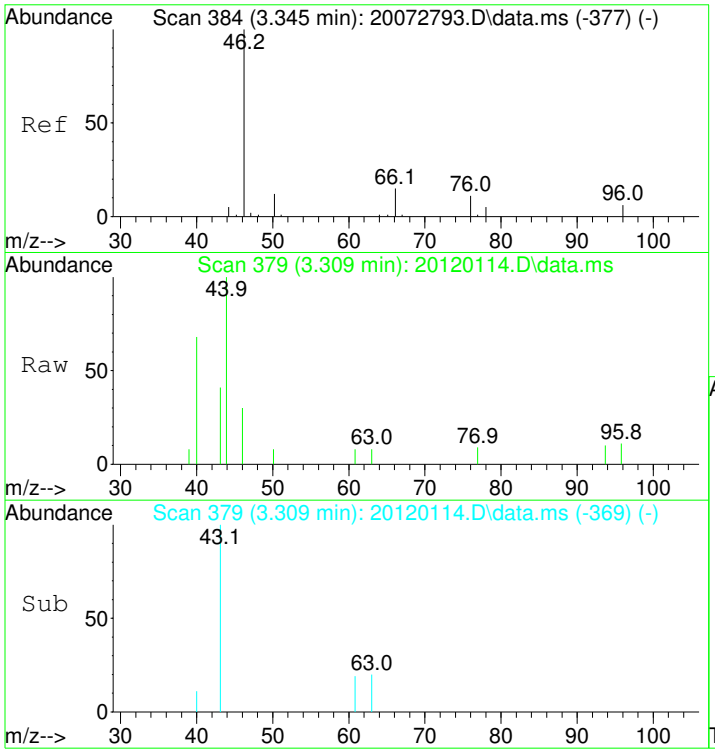


#122
Isopropyl Alcohol
Concen: Below Cal
RT: 1.919 min Scan# 185
Delta R.T. -0.014 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 45 Resp: 2176

Ion	Ratio	Lower	Upper
45	100		
43	14.7	14.6	21.8
41	41.2	5.7	8.5#

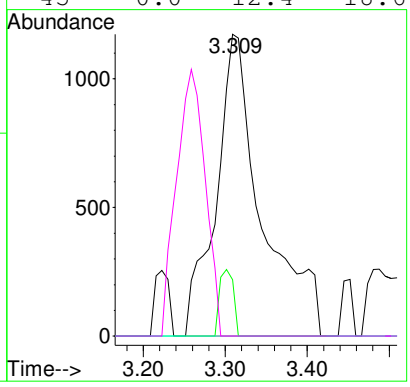


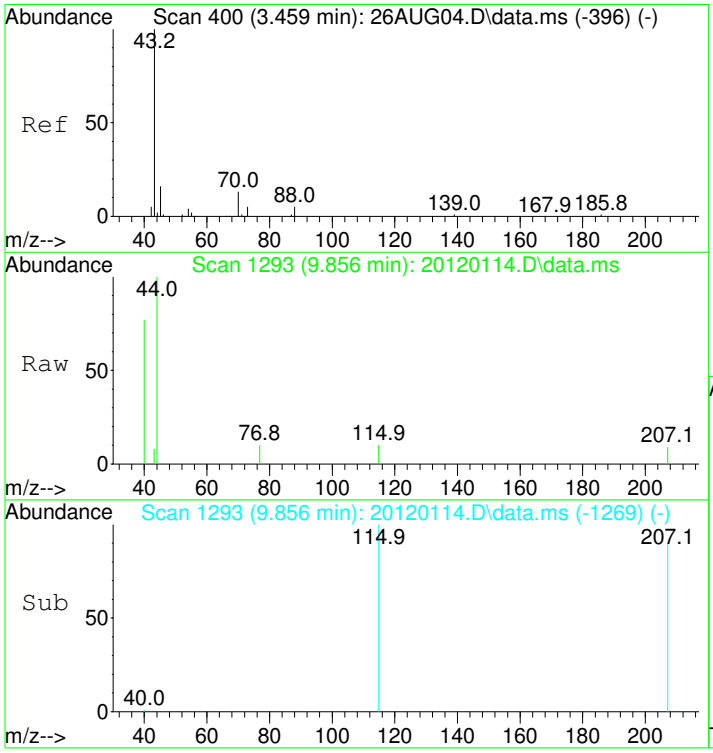


#123
Acetic Ether
Concen: 0.28 ug/L
RT: 3.309 min Scan# 379
Delta R.T. -0.050 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 4582

Ion	Ratio	Lower	Upper
43	100		
61	6.6	11.9	17.9#
70	0.0	9.7	14.5#
45	0.0	12.4	18.6#

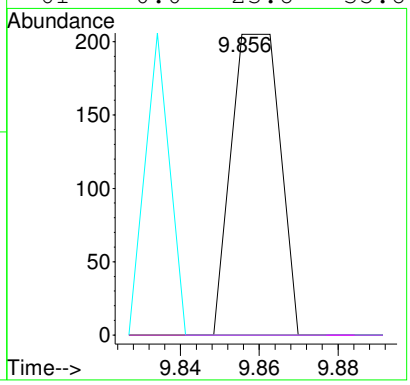




#125
Amyl Acetate
Concen: Below Cal
RT: 9.856 min Scan# 1293
Delta R.T. 0.050 min
Lab File: 20120114.D
Acq: 1 Dec 2020 1:46 pm

Tgt Ion: 43 Resp: 176

Ion	Ratio	Lower	Upper
43	100		
70	0.0	39.8	59.6#
55	50.6	21.8	32.8#
61	0.0	23.8	35.8#



Quantitation Report (QT Reviewed)

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120129.D
Acq On : 1 Dec 2020 5:58 pm
Operator : MF
Sample : 20111803-03A MS DF50
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 08:48:02 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.989	168	189311	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	332075	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	305737	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	150852	20.00	ug/L		0.00
120) Ethyl-d5-Acetate-d3	3.244	46	98145	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.911	111	105544	19.89	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 99.45%				
50) 1,2-Dichloroethane-d4	4.362	65	124473	19.35	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 96.75%				
69) Toluene-d8	7.836	98	385665	20.38	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 101.90%				
91) Bromofluorobenzene	9.992	95	155307	20.21	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 101.05%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	102490	21.28	ug/L		100
3) Dichlorofluoromethane	1.454	67	168584	15.54	ug/L		100
4) Chloromethane	1.060	50	136090	12.98	ug/L		98
6) Vinyl chloride	1.110	62	133482	20.97	ug/L		98
7) Bromomethane	1.275	96	82428	80.59	ug/L		83
8) Chloroethane	1.339	64	69713	25.95	ug/L		75
9) Trichlorofluoromethane	1.475	101	125837	16.78	ug/L		99
10) Ethanol	1.575	45	164978	304.26	ug/L		80
11) Ethyl ether	1.640	59	92855	20.48	ug/L		98
12) Acrolein	1.740	56	348	Below Cal		#	1
13) 1,1-Dichloroethene	1.790	61	156454	22.30	ug/L		97
16) Acetone	1.819	43	67818	21.60	ug/L		95
18) Carbon disulfide	1.941	76	317723	22.68	ug/L		100
19) 2-Propanol	1.912	45	414134	385.32	ug/L		99
20) Allyl chloride	2.041	41	136294	16.94	ug/L		92
21) Methyl acetate	2.034	43	2461	0.00	ug/L	#	1
22) Acetonitrile	2.041	41	136294	16.93	ug/L		93
23) Methylene chloride	2.134	49	131437	17.84	ug/L		98
24) trans-1,2-Dichloroethene	2.349	61	148684	21.54	ug/L		99
25) t-Butanol	2.220	59	205661	96.59	ug/L		99
26) Acrylonitrile	2.320	53	76231	20.89	ug/L		100
27) Methyl tert-butyl ether	2.342	73	342143	21.77	ug/L		100
28) Hexane	2.571	57	1667	Below Cal		#	1
29) 1,1-Dichloroethane	2.721	63	205025	20.67	ug/L		99
30) Diisopropyl ether	2.764	45	309255	21.24	ug/L	#	50
32) Methylcyclopentane	3.173	56	197717	18.18	ug/L		81
33) Ethyl tert butyl ether	3.123	59	333524	20.09	ug/L		99
34) 2,2-Dichloropropane	3.302	77	162581	19.88	ug/L		99
35) cis-1,2-Dichloroethene	3.302	61	178452	21.35	ug/L		99
36) 2-Butanone	3.302	43	101250	20.99	ug/L		99
37) Ethyl Acetate	3.359	43	186654	19.98	ug/L		98
38) Methyl acrylate	3.402	55	173092	20.76	ug/L		100
40) Bromochloromethane	3.567	49	88503	20.40	ug/L		97
41) Tetrahydrofuran	3.588	42	72206	20.37	ug/L		98
42) Methacrylonitrile	3.545	41	137626	19.62	ug/L		98
43) Chloroform	3.710	83	197255	19.45	ug/L		98
44) Cyclohexane	3.982	56	4434	Below Cal		#	29
46) 1,1,1-Trichloroethane	3.889	97	174698	21.34	ug/L		100
48) Carbon tetrachloride	4.082	117	133425	19.00	ug/L		99
49) 1,1-Dichloropropene	4.104	75	148996	21.54	ug/L		98

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120129.D
Acq On : 1 Dec 2020 5:58 pm
Operator : MF
Sample : 20111803-03A MS DF50
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 08:48:02 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
51) 1,2-Dichloroethane	4.476	62	153495	19.97 ug/L		99
52) Benzene	4.369	78	438886	21.87 ug/L		99
53) Tertiaryamylmethylether	4.627	73	323369	21.21 ug/L	#	80
54) Isobutyl Alcohol	4.555	43	327214	20.90 ug/L		99
55) Heptane	4.913	43	1109	Below Cal	#	38
58) n-Butanol	5.551	56	281	1.68 ug/L	#	1
59) Trichloroethene	5.486	130	118621	21.15 ug/L		98
60) 1,2-Dichloropropane	5.981	63	116088	20.56 ug/L		99
61) Dibromomethane	6.138	93	78534	19.69 ug/L		99
62) Methyl methacrylate	6.246	41	131844	20.29 ug/L		99
63) Bromodichloromethane	6.589	83	154149	20.15 ug/L		99
64) 2-Chloroethyl vinyl ether	7.320	43	696	Below Cal	#	1
65) 2-Nitropropane	7.127	43	59125	19.67 ug/L	#	96
66) cis-1,3-Dichloropropene	7.499	75	187102	19.90 ug/L		99
68) 4-Methyl-2-pentanone	7.764	43	302373	33.69 ug/L		78
70) Toluene	7.922	91	447745	22.52 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	175092	20.50 ug/L		95
73) Ethyl methacrylate	8.359	69	192923	20.73 ug/L		99
74) 1,1,2-Trichloroethane	8.437	97	115919	21.27 ug/L		98
75) Tetrachloroethene	8.459	166	111233	22.24 ug/L		99
76) 1,3-Dichloropropane	8.573	76	184213	20.34 ug/L		100
77) 2-Hexanone	8.667	43	151954	21.27 ug/L		99
78) Chlorodibromomethane	8.753	129	114398	19.20 ug/L		99
79) Butyl acetate	8.803	43	242514	21.50 ug/L		99
80) 1,2-Dibromoethane	8.824	107	126414	22.43 ug/L		96
81) Chlorobenzene	9.218	112	281289	22.01 ug/L		99
82) 1,1,1,2-Tetrachloroethane	9.297	131	102307	20.68 ug/L		99
83) Ethylbenzene	9.304	91	618251	27.50 ug/L		98
84) m/p-Xylene	9.397	91	846522	46.62 ug/L		95
85) Nonane	9.462	43	82300	30.33 ug/L		100
86) Styrene	9.669	104	316779	20.27 ug/L		98
87) o-Xylene	9.648	91	418672	20.59 ug/L		96
88) Cyclohexanone	9.956	55	587	Below Cal	#	40
89) Bromoform	9.777	173	79665	17.49 ug/L		99
90) Isopropylbenzene	9.891	105	515067	22.19 ug/L		97
92) Bromobenzene	10.063	77	196203	20.70 ug/L		97
93) 1,1,2,2-Tetrachloroethane	10.092	83	201976	22.43 ug/L		97
94) 1,2,3-Trichloropropane	10.113	110	56386	19.87 ug/L		99
95) trans-1,4-Dichloro-2-b...	10.106	53	50975	17.02 ug/L		91
96) n-Propylbenzene	10.135	91	638479	22.77 ug/L		97
97) 2-Chlorotoluene	10.178	91	332458	23.53 ug/L		95
98) 4-Chlorotoluene	10.250	91	389557	20.21 ug/L		97
99) 1,3,5-Trimethylbenzene	10.242	105	463769	23.70 ug/L		96
100) tert-Butylbenzene	10.414	91	303501	24.52 ug/L		99
101) 1,2,4-Trimethylbenzene	10.443	105	700684	36.21 ug/L		93
102) sec-Butylbenzene	10.529	105	513019	21.44 ug/L		98
104) 1,3-Dichlorobenzene	10.593	146	224779	21.73 ug/L		97
105) p-Isopropyltoluene	10.615	119	454584	27.01 ug/L		97
106) 1,4-Dichlorobenzene	10.644	146	214485	21.53 ug/L		97
107) 1,2,3-Trimethylbenzene	10.658	105	651385	38.93 ug/L		98
108) Benzyl chloride	10.250	91	389557	20.87 ug/L		98
109) 1,2-Dichlorobenzene	10.830	146	213429	21.12 ug/L		99
110) n-Butylbenzene	10.823	91	397464	22.02 ug/L		95
111) Hexachloroethane	10.966	117	75464	19.80 ug/L	#	17
112) 1,2-Dibromo-3-chloropr...	11.224	157	58956	20.89 ug/L		98
114) 1,2,4-Trichlorobenzene	11.618	180	150011	19.59 ug/L		100
115) Hexachlorobutadiene	11.682	225	51171	19.75 ug/L		97
116) Naphthalene	11.739	128	636381	21.74 ug/L		97

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120129.D
Acq On : 1 Dec 2020 5:58 pm
Operator : MF
Sample : 20111803-03A MS DF50
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 08:48:02 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

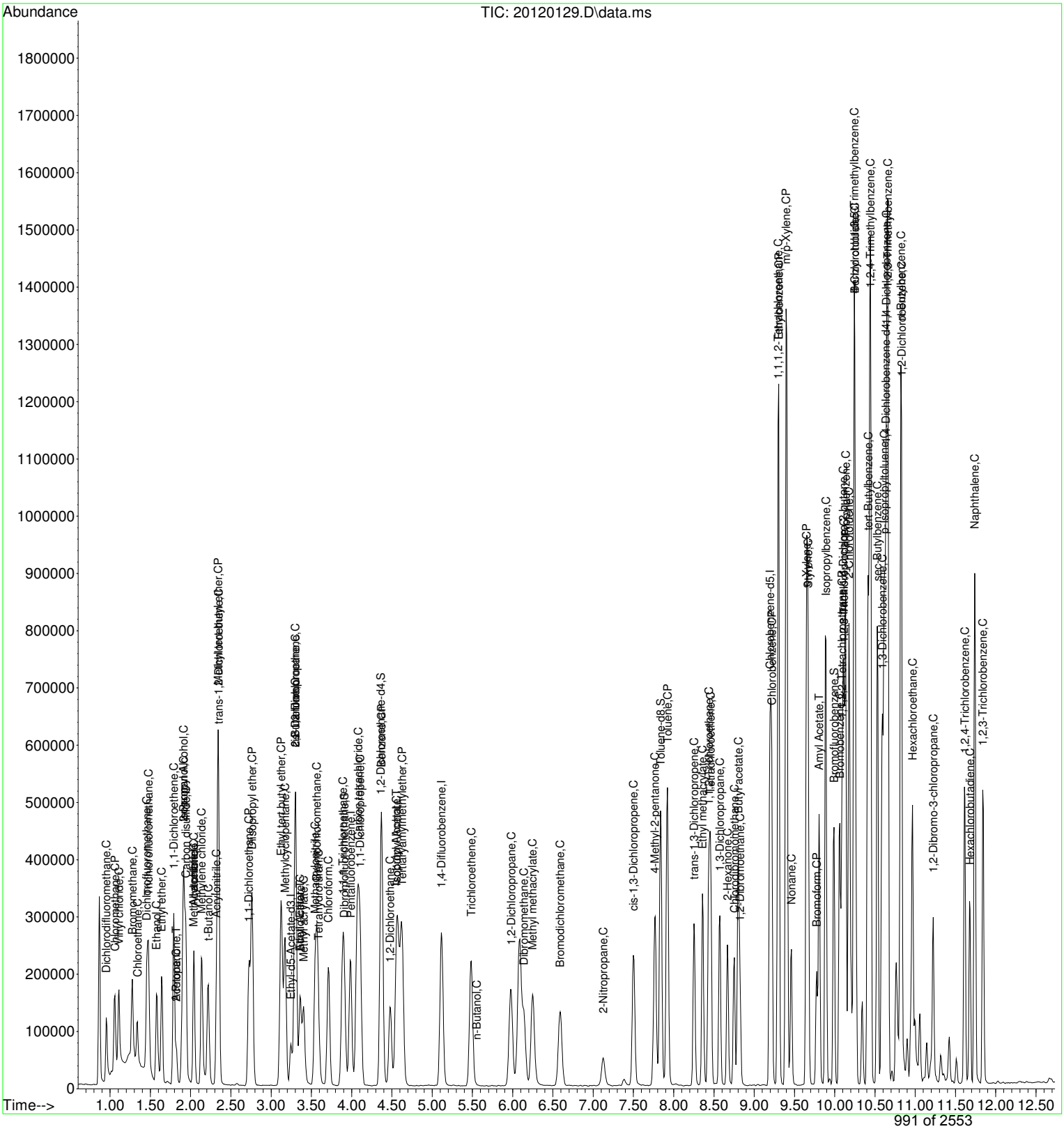
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) 1,2,3-Trichlorobenzene	11.840	180	148359	20.27	ug/L	95
118) 2-Methylnaphthalene	12.291	142	1402	Below Cal		80
119) 1-Methylnaphthalene	12.291	142	1279	Below Cal		83
121) 2-Propanone	1.819	43	67818	22.11	ug/L	95
122) Isopropyl Alcohol	1.912	45	414134	398.25	ug/L	99
123) Acetic Ether	3.359	43	186230	19.77	ug/L	98
124) Isopropyl Acetate	4.555	61	65854	19.42	ug/L	98
125) Amyl Acetate	9.805	43	224201	17.79	ug/L	98

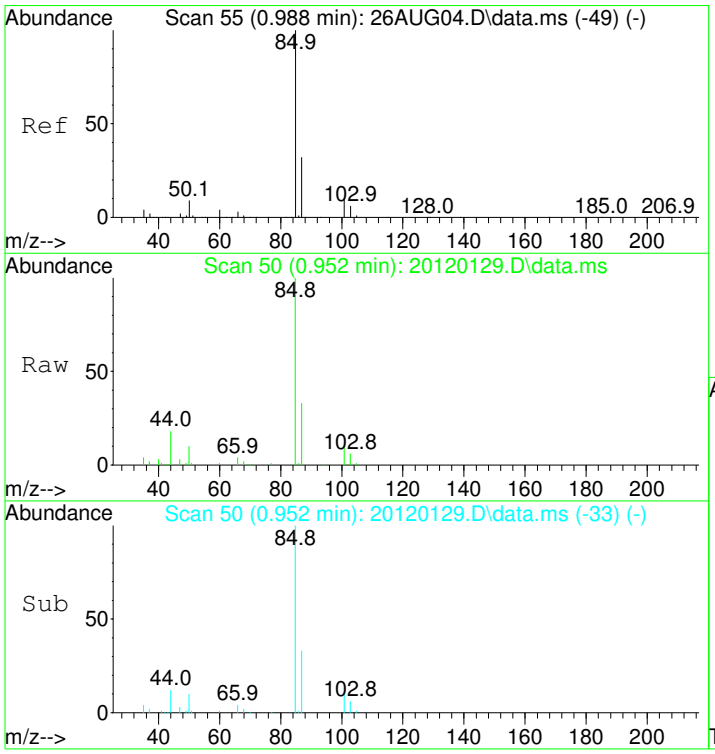
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120129.D
Acq On : 1 Dec 2020 5:58 pm
Operator : MF
Sample : 20111803-03A MS DF50
Misc : IS 200-21725
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 02 08:48:02 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

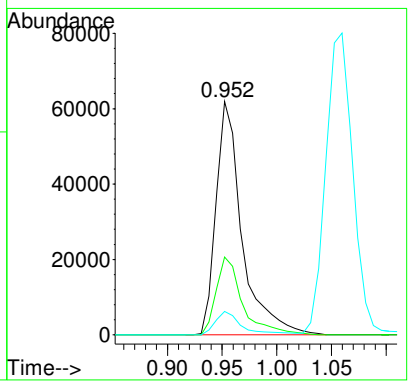


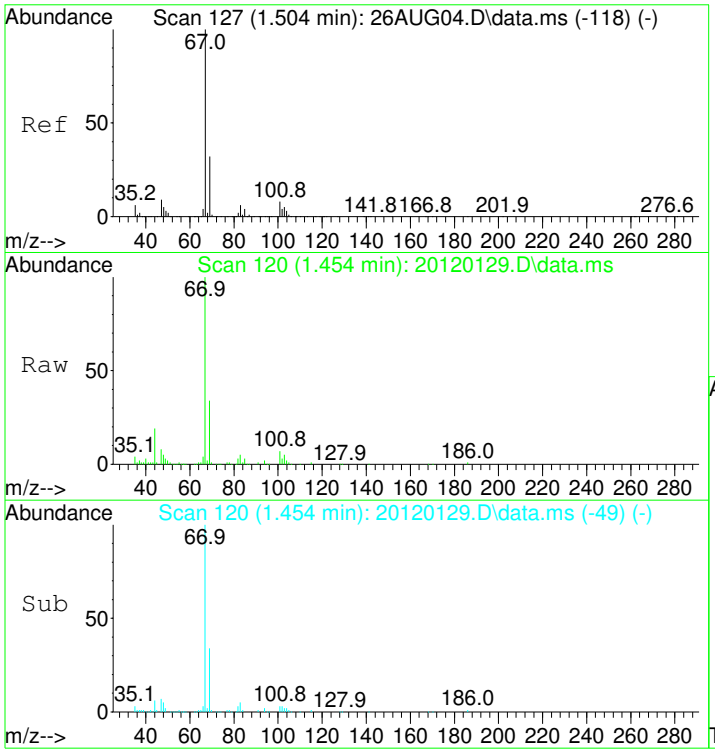


#2
Dichlorodifluoromethane
Concen: 21.28 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 85 Resp: 102490

Ion	Ratio	Lower	Upper
85	100		
87	33.9	3.6	63.6
50	10.3	0.0	40.5

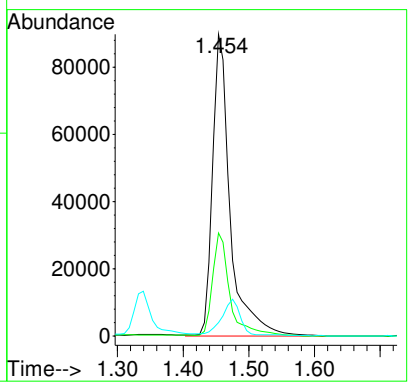


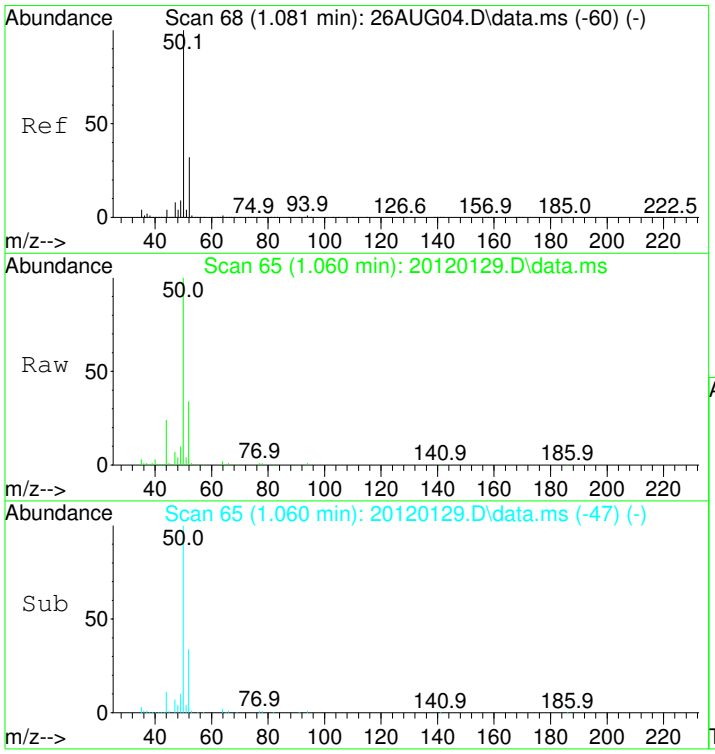


#3
Dichlorofluoromethane
Concen: 15.54 ug/L
RT: 1.454 min Scan# 120
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 67 Resp: 168584

Ion	Ratio	Lower	Upper
67	100		
69	33.9	23.7	44.1
66	11.8	8.1	15.0

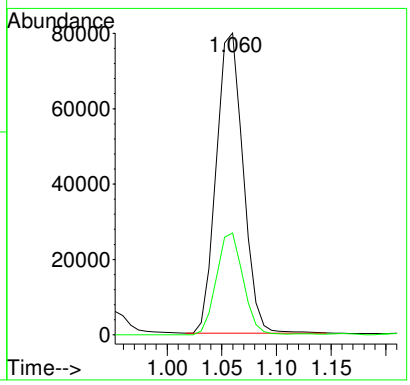


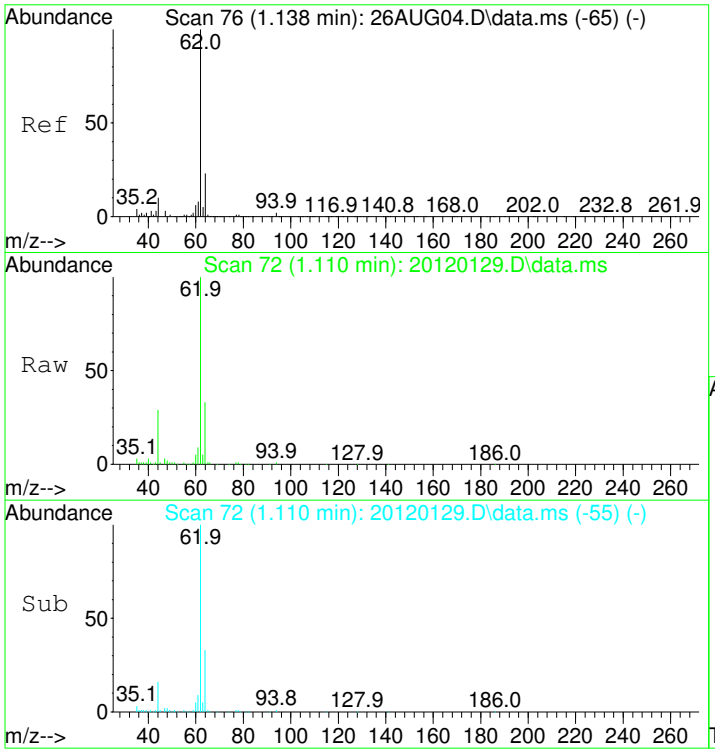


#4
Chloromethane
Concen: 12.98 ug/L
RT: 1.060 min Scan# 65
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 50 Resp: 136090

Ion	Ratio	Lower	Upper
50	100		
52	33.7	4.9	64.9

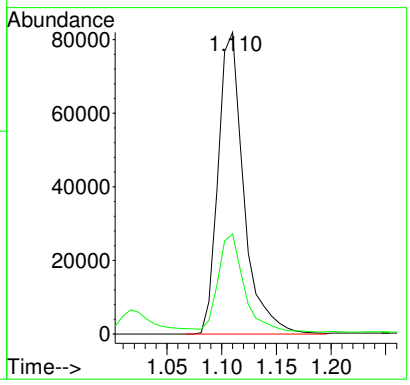


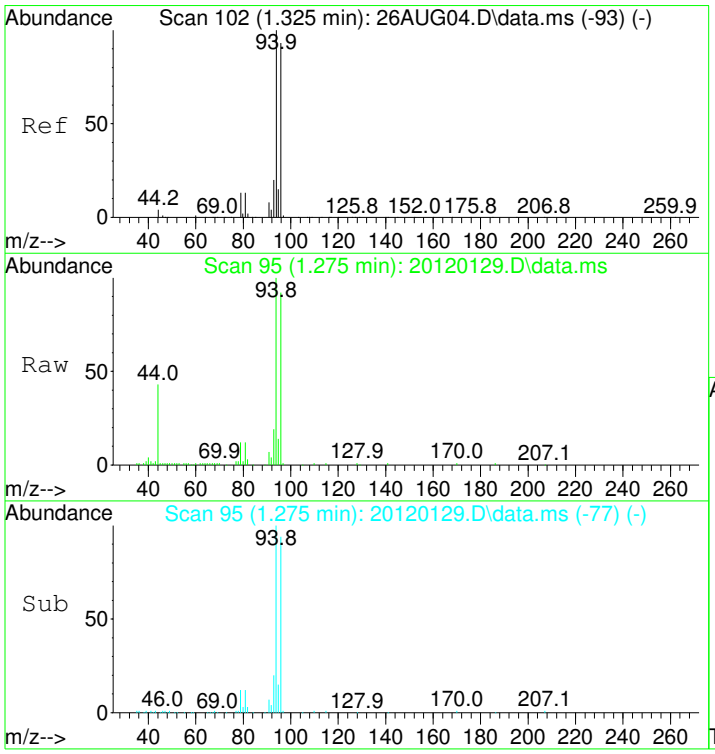


#6
Vinyl chloride
Concen: 20.97 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 62 Resp: 133482

Ion	Ratio	Lower	Upper
62	100		
64	33.0	1.9	61.9

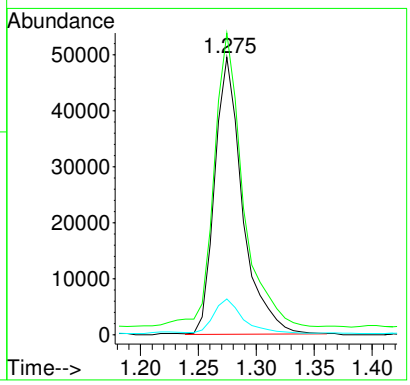


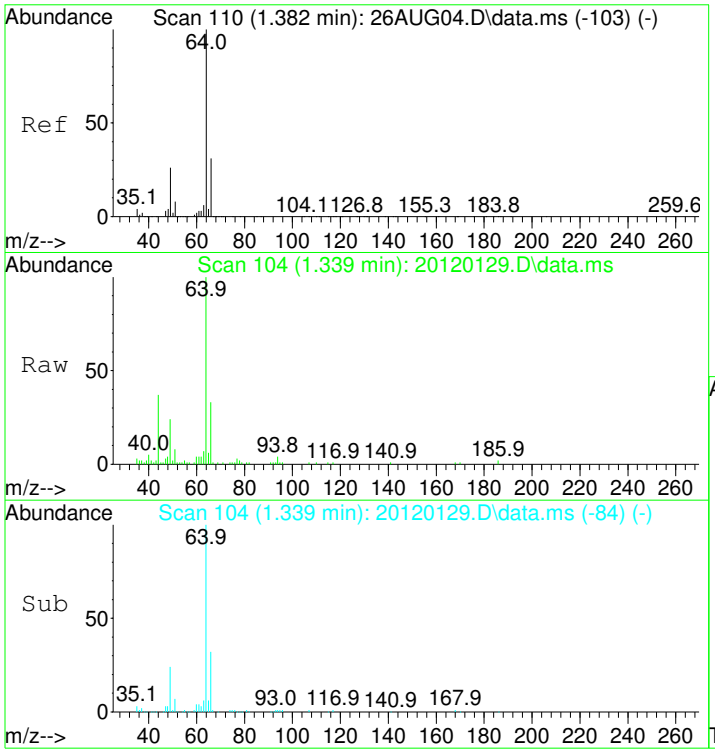


#7
Bromomethane
Concen: 80.59 ug/L
RT: 1.275 min Scan# 95
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 96 Resp: 82428

Ion	Ratio	Lower	Upper
96	100		
94	112.4	103.4	163.4
79	13.1	0.0	49.6

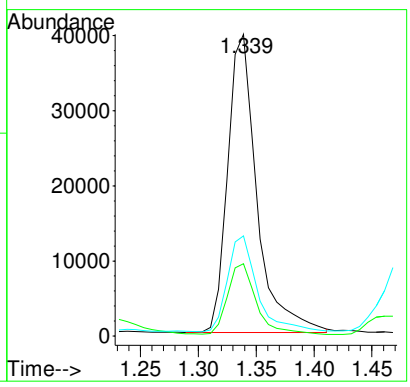


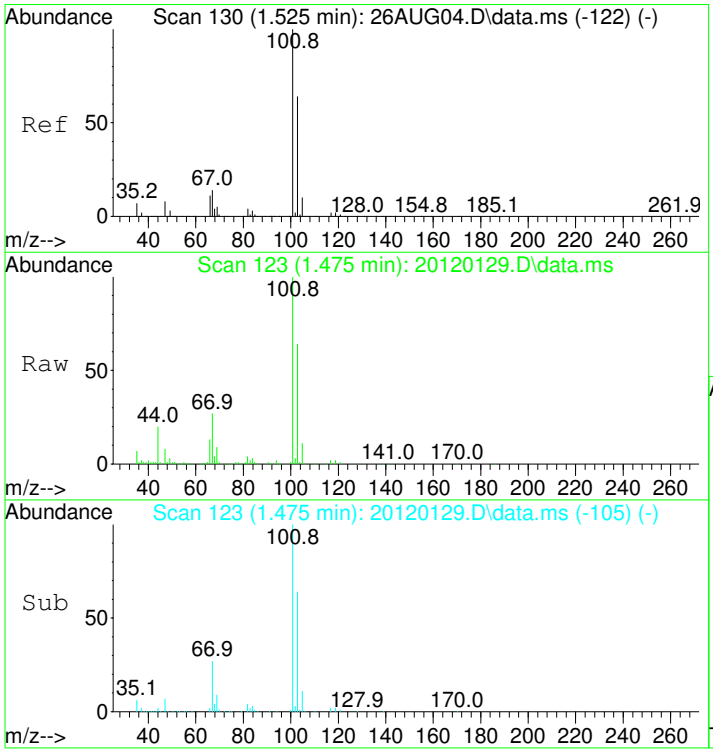


#8
Chloroethane
Concen: 25.95 ug/L
RT: 1.339 min Scan# 104
Delta R.T. 0.022 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 64 Resp: 69713

Ion	Ratio	Lower	Upper
64	100		
49	23.1	0.0	41.3
66	32.8	0.0	52.2

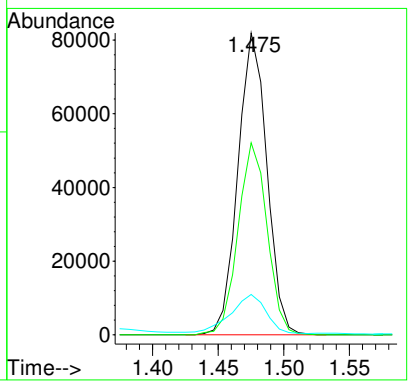


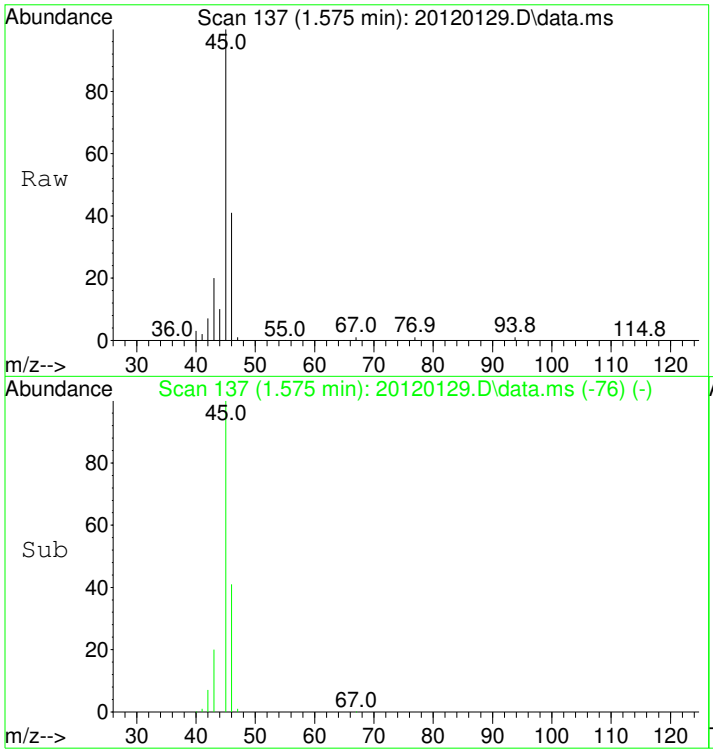


#9
Trichlorofluoromethane
Concen: 16.78 ug/L
RT: 1.475 min Scan# 123
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:101 Resp: 125837

Ion	Ratio	Lower	Upper
101	100		
103	64.0	45.1	85.1
66	15.8	0.0	35.4

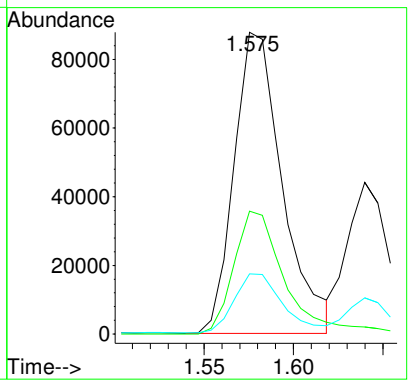


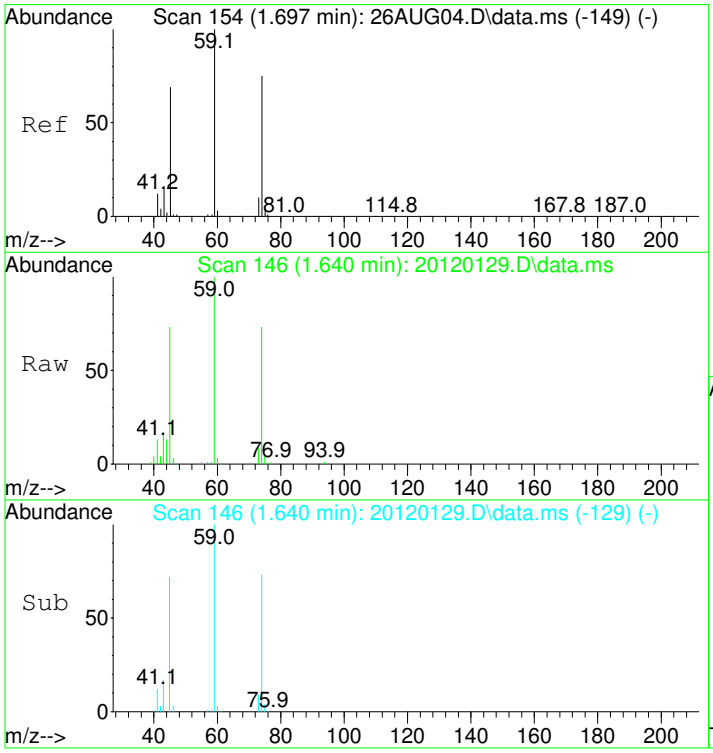


#10
Ethanol
Concen: 304.26 ug/L
RT: 1.575 min Scan# 137
Delta R.T. -0.065 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 45 Resp: 164978

Ion	Ratio	Lower	Upper
45	100		
46	43.7	0.0	57.3
43	19.8	0.0	52.4

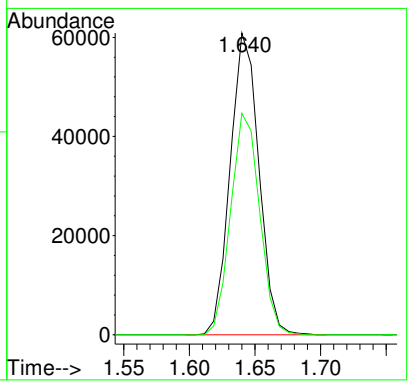


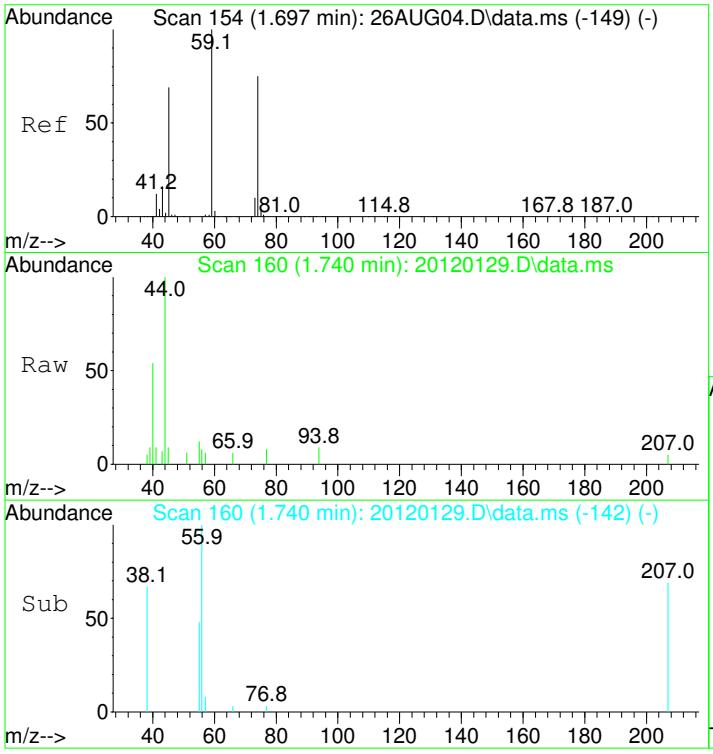


#11
Ethyl ether
Concen: 20.48 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 59 Resp: 92855

Ion	Ratio	Lower	Upper
59	100		
74	74.0	42.6	102.6

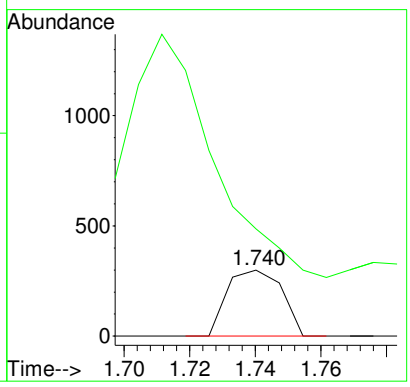


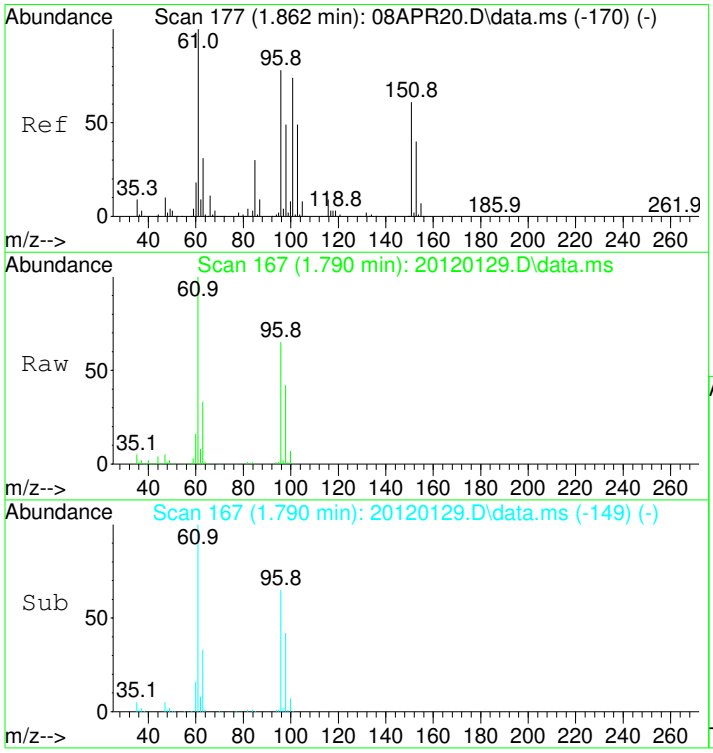


#12
Acrolein
Concen: Below Cal
RT: 1.740 min Scan# 160
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 56 Resp: 348

Ion	Ratio	Lower	Upper
56	100		
55	660.6	17.3	77.3#

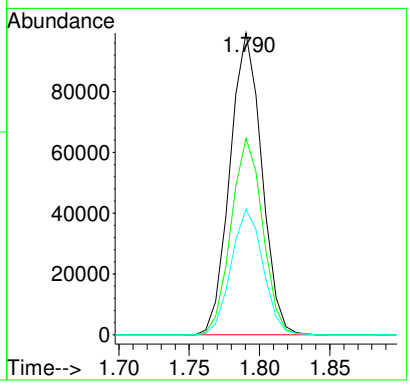


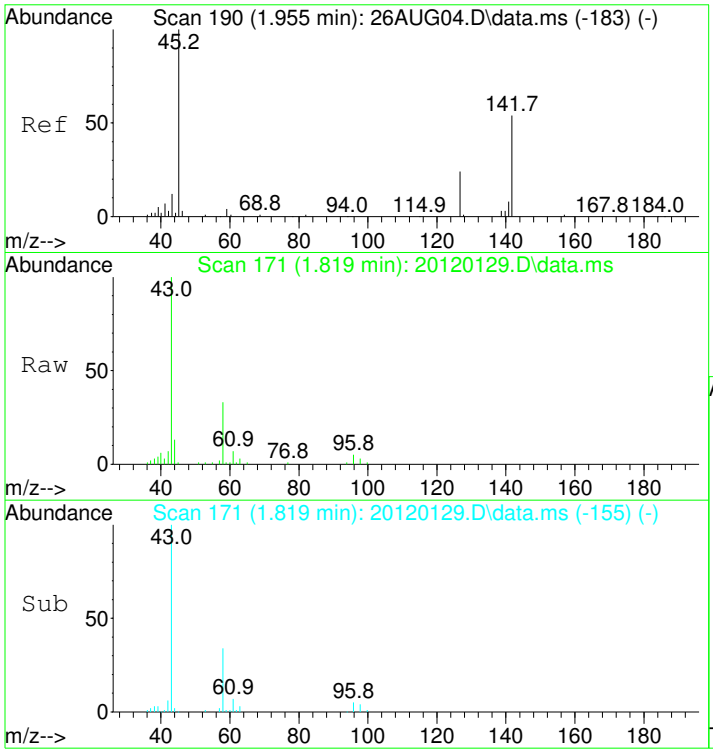


#13
1,1-Dichloroethene
Concen: 22.30 ug/L
RT: 1.790 min Scan# 167
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 61 Resp: 156454

Ion	Ratio	Lower	Upper
61	100		
96	64.7	32.6	92.6
98	41.8	10.4	70.4

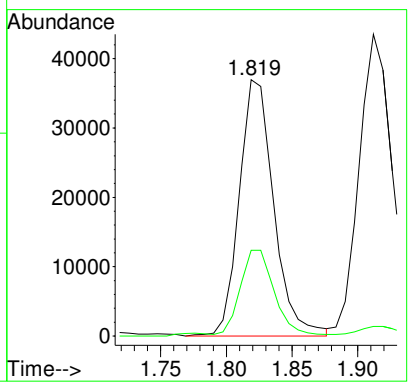


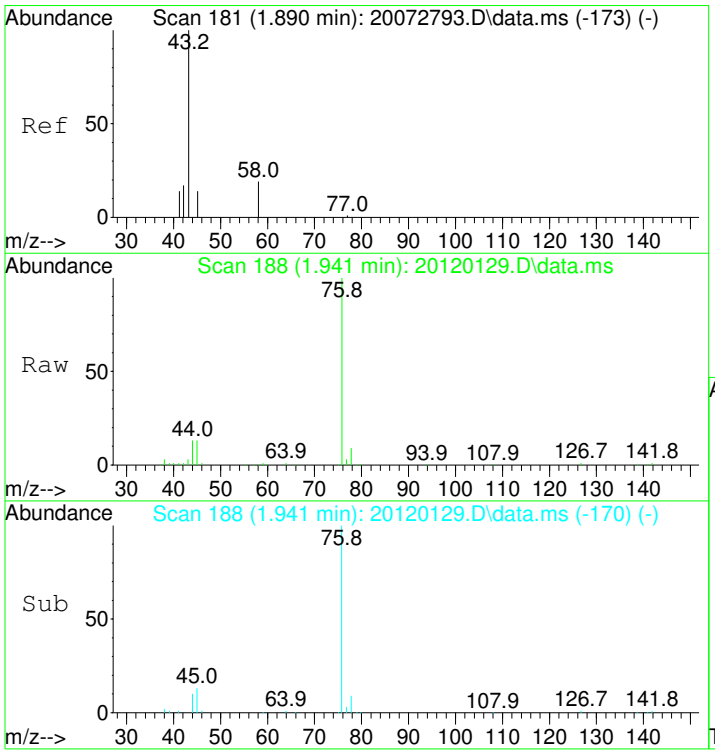


#16
Acetone
Concen: 21.60 ug/L
RT: 1.819 min Scan# 171
Delta R.T. -0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 67818

Ion	Ratio	Lower	Upper
43	100		
58	32.0	5.2	65.2

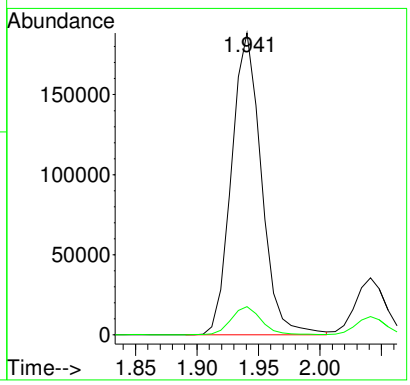


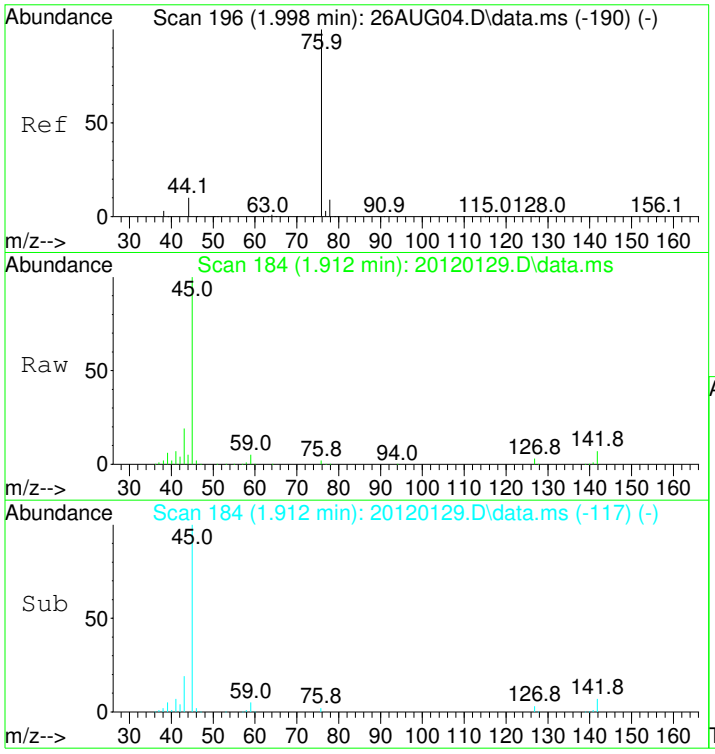


#18
Carbon disulfide
Concen: 22.68 ug/L
RT: 1.941 min Scan# 188
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 76 Resp: 317723

Ion	Ratio	Lower	Upper
76	100		
78	9.7	0.0	39.5

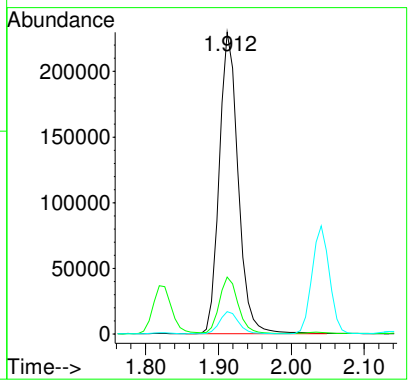


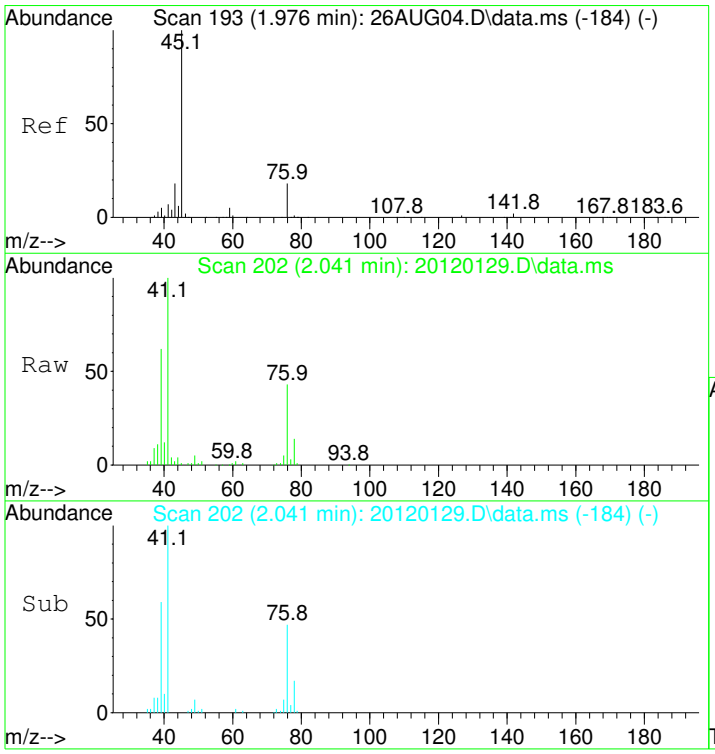


#19
2-Propanol
Concen: 385.32 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.021 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 45 Resp: 414134

Ion	Ratio	Lower	Upper
45	100		
43	18.8	0.0	48.2
41	7.4	0.0	37.1

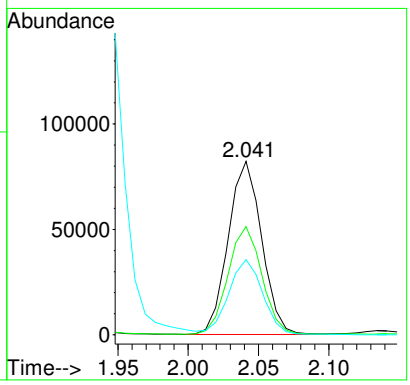


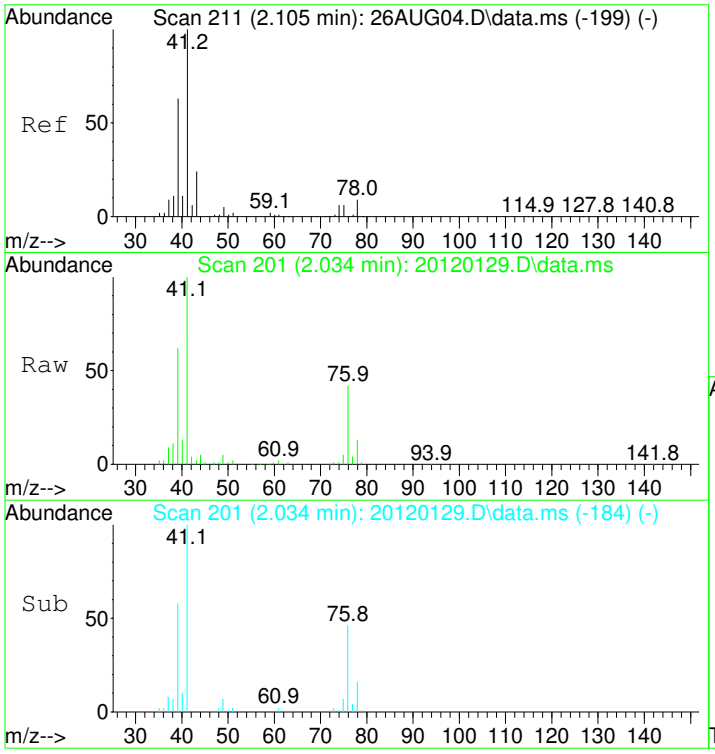


#20
Allyl chloride
Concen: 16.94 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 41 Resp: 136294

Ion	Ratio	Lower	Upper
41	100		
39	62.4	29.0	89.0
76	44.9	7.3	67.3

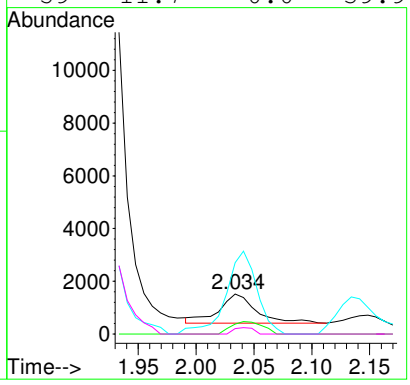


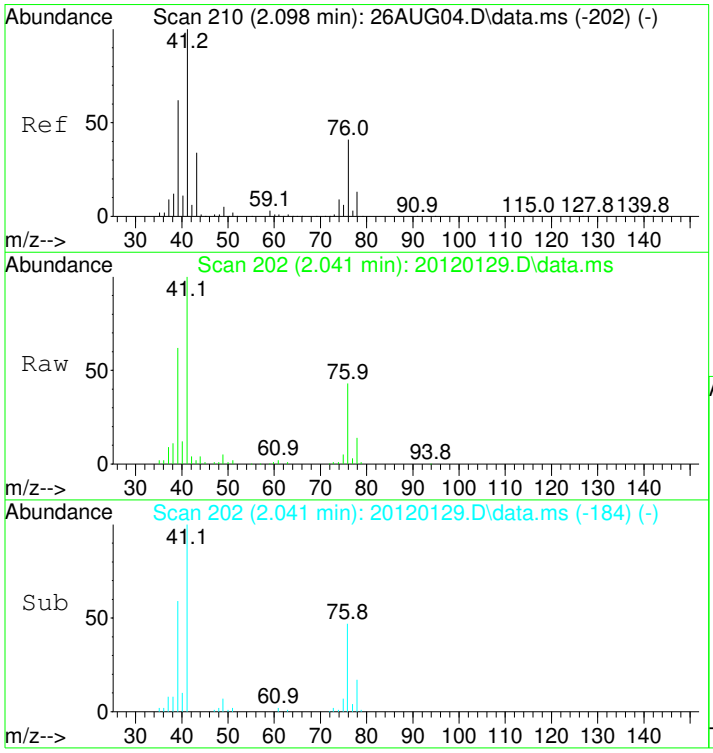


#21
Methyl acetate
Concen: 0.00 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 2461

Ion	Ratio	Lower	Upper
43	100		
74	36.2	0.0	56.2
42	238.2	0.0	44.2#
59	11.7	0.0	39.9

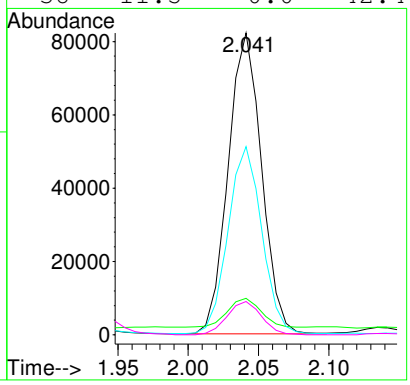


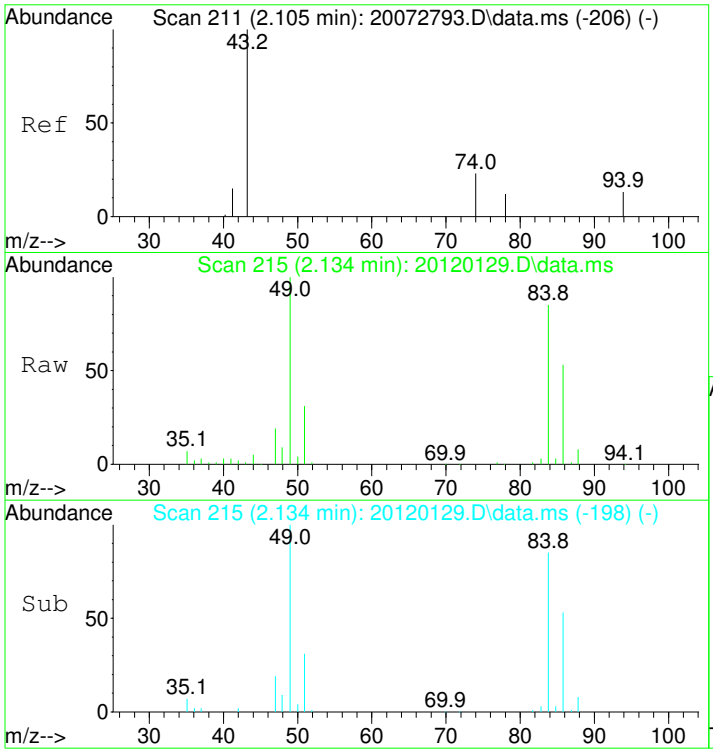


#22
Acetonitrile
Concen: 16.93 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 41 Resp: 136294

Ion	Ratio	Lower	Upper
41	100		
40	10.1	0.0	47.5
39	62.4	29.0	89.0
38	11.5	0.0	42.4

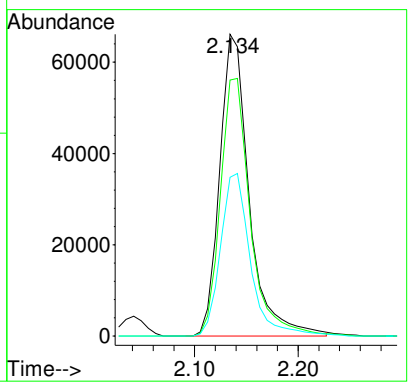


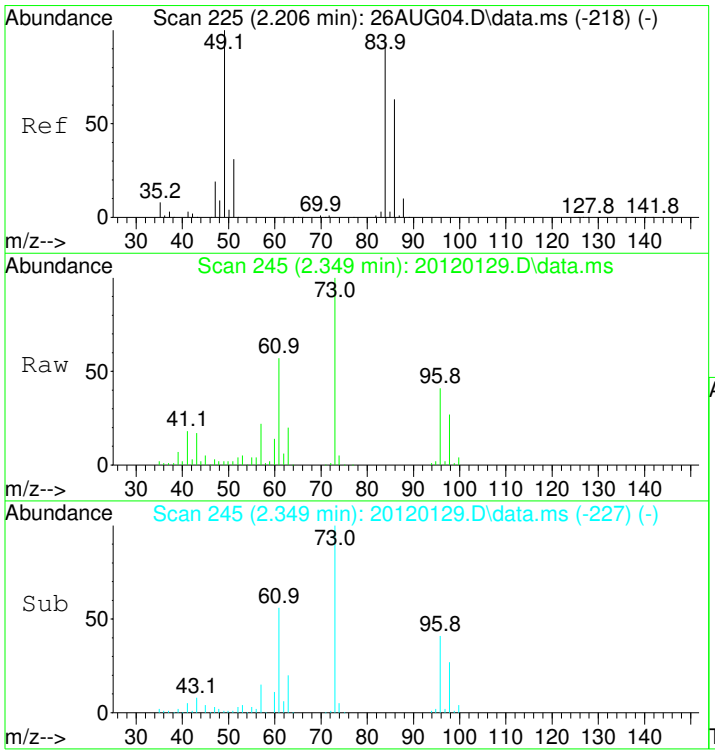


#23
Methylene chloride
Concen: 17.84 ug/L
RT: 2.134 min Scan# 215
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 49 Resp: 131437

Ion	Ratio	Lower	Upper
49	100		
84	86.3	57.4	117.4
86	54.6	27.7	87.7

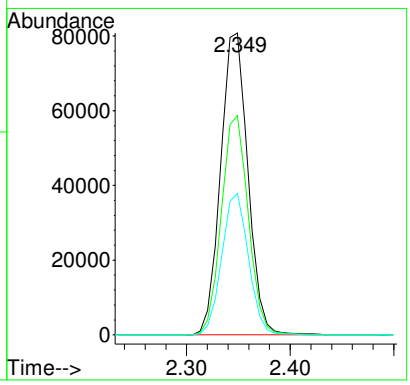


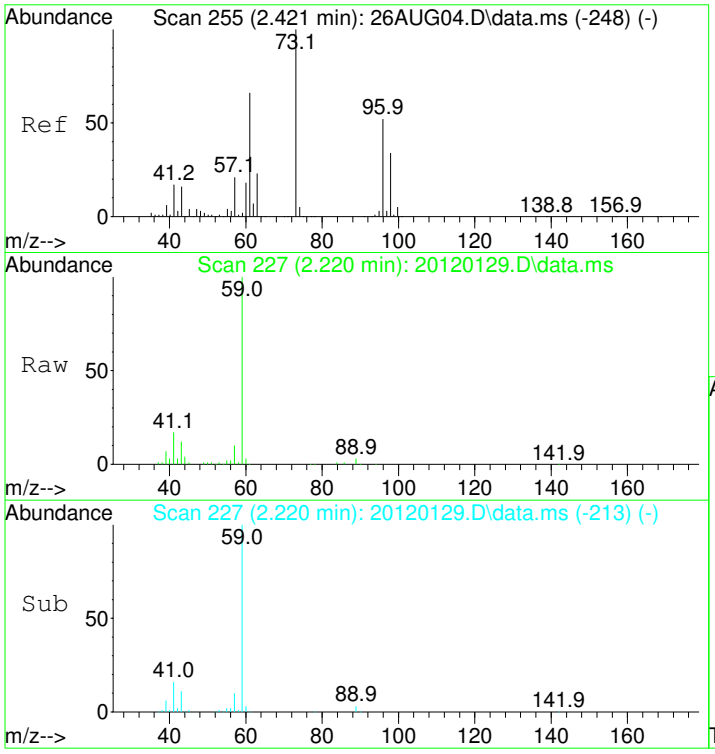


#24
trans-1,2-Dichloroethene
Concen: 21.54 ug/L
RT: 2.349 min Scan# 245
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 61 Resp: 148684

Ion	Ratio	Lower	Upper
61	100		
96	71.6	42.3	102.3
98	45.8	16.1	76.1

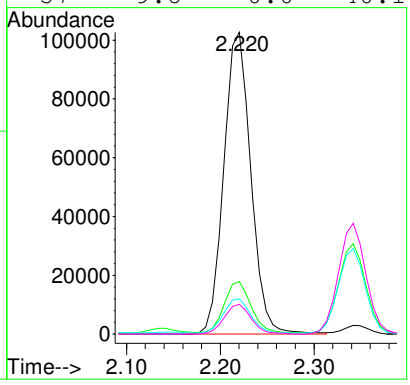


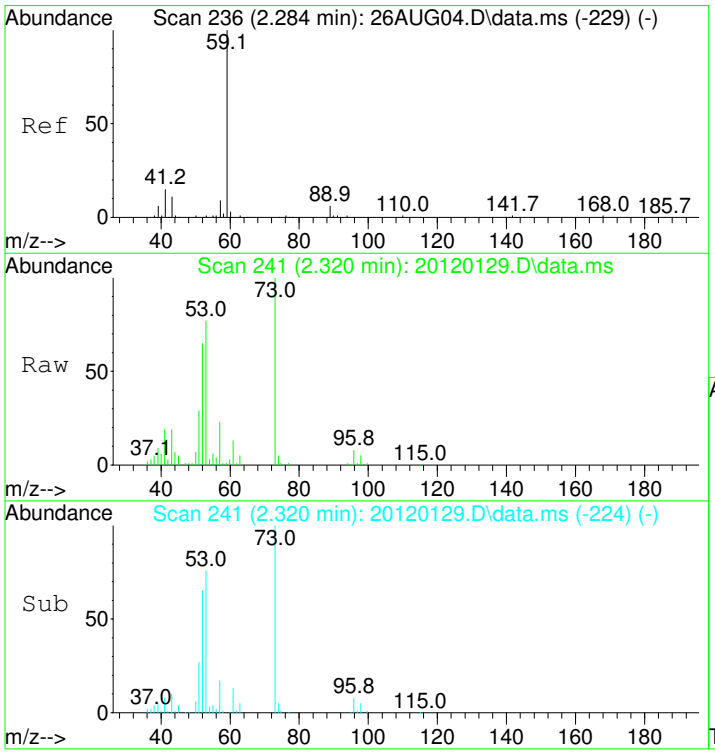


#25
t-Butanol
Concen: 96.59 ug/L
RT: 2.220 min Scan# 227
Delta R.T. -0.021 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 59 Resp: 205661

Ion	Ratio	Lower	Upper
59	100		
41	16.8	0.0	46.1
43	11.5	0.0	41.4
57	9.8	0.0	40.1

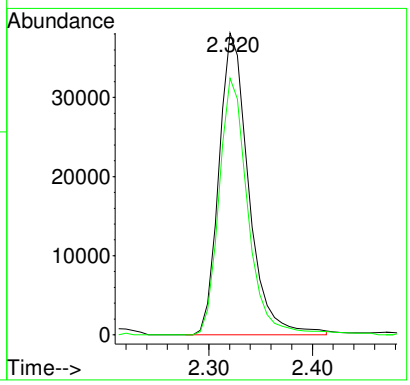


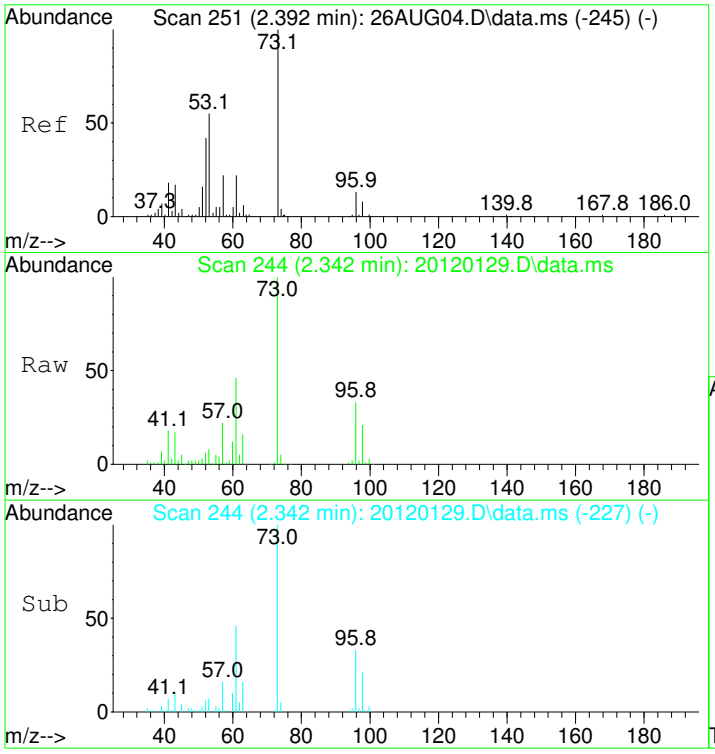


#26
Acrylonitrile
Concen: 20.89 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 53 Resp: 76231

Ion	Ratio	Lower	Upper
53	100		
52	81.9	51.9	111.9

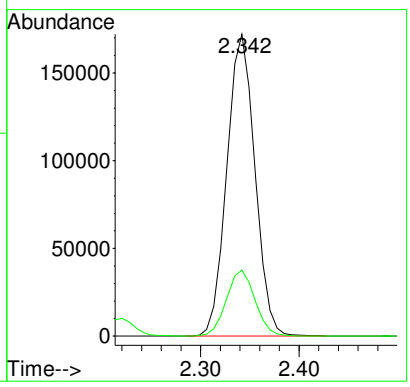


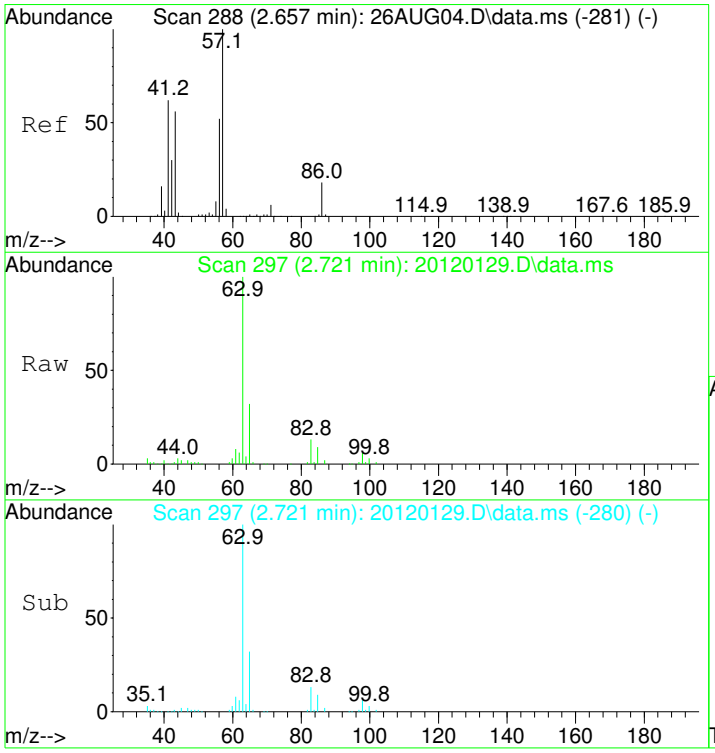


#27
Methyl tert-butyl ether
Concen: 21.77 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 73 Resp: 342143

Ion	Ratio	Lower	Upper
73	100		
57	22.3	0.0	52.4

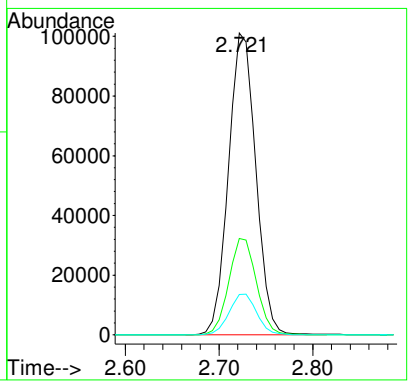


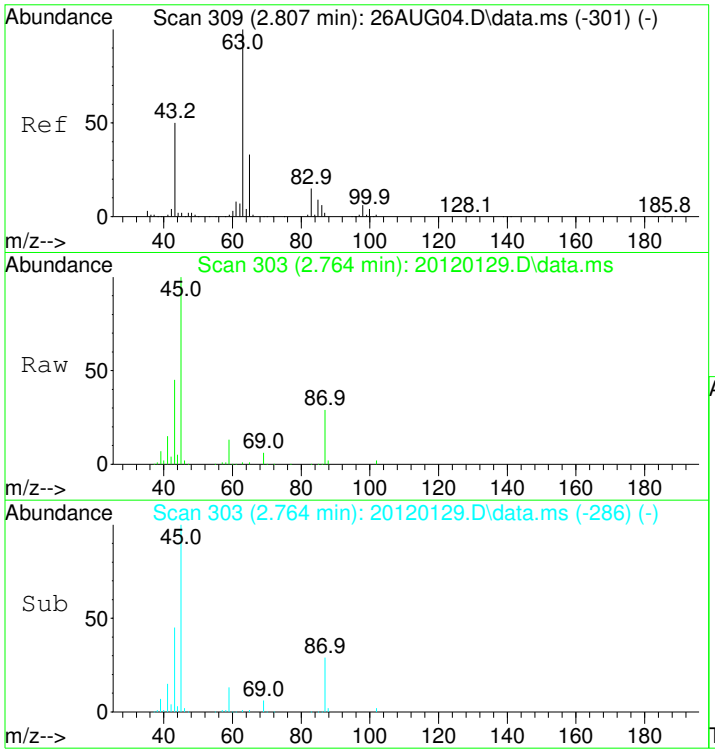


#29
1,1-Dichloroethane
Concen: 20.67 ug/L
RT: 2.721 min Scan# 297
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 63 Resp: 205025

Ion	Ratio	Lower	Upper
63	100		
65	32.2	2.8	62.8
83	13.7	0.0	43.7

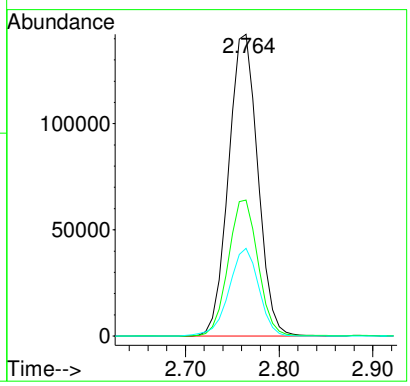


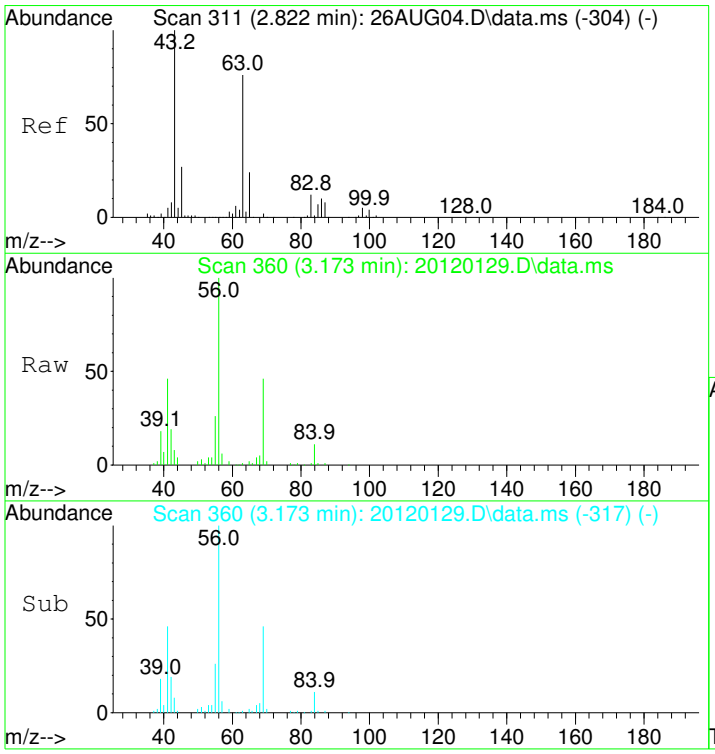


#30
Diisopropyl ether
Concen: 21.24 ug/L
RT: 2.764 min Scan# 303
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 45 Resp: 309255

Ion	Ratio	Lower	Upper
45	100		
43	46.1	79.6	147.8#
87	29.6	22.1	41.1

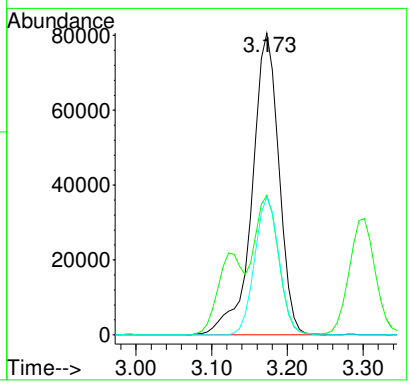


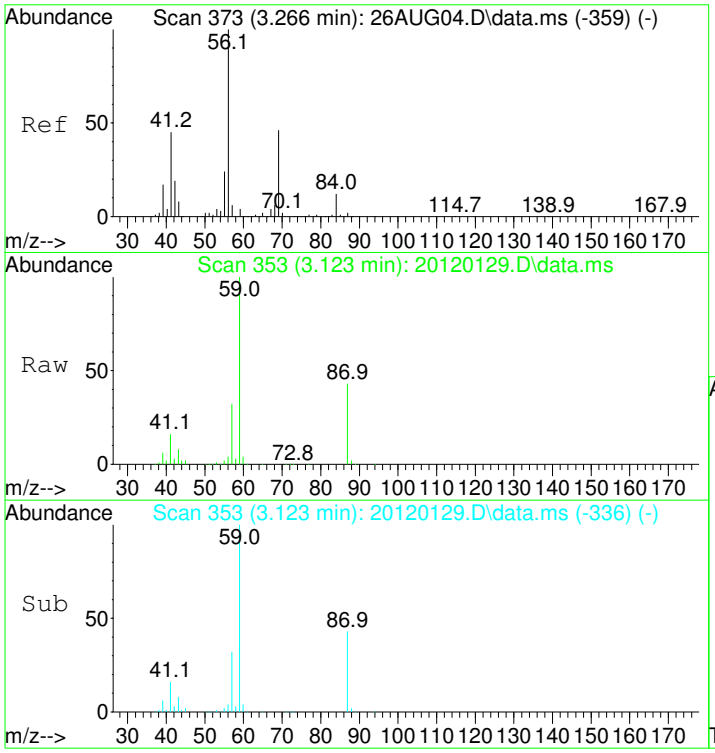


#32
Methylcyclopentane
Concen: 18.18 ug/L
RT: 3.173 min Scan# 360
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 56 Resp: 197717

Ion	Ratio	Lower	Upper
56	100		
41	42.4	36.7	96.7
69	41.6	11.3	71.3

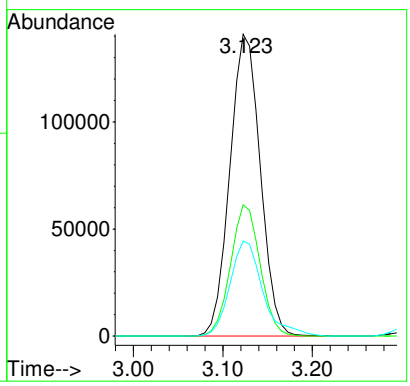


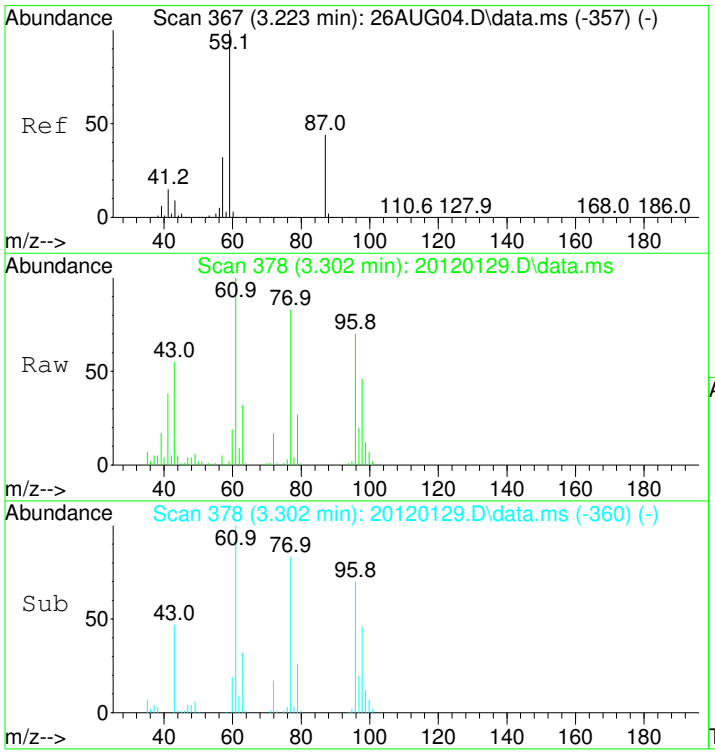


#33
Ethyl tert butyl ether
Concen: 20.09 ug/L
RT: 3.123 min Scan# 353
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 59 Resp: 333524

Ion	Ratio	Lower	Upper
59	100		
87	42.2	12.5	72.5
57	34.0	4.4	64.4

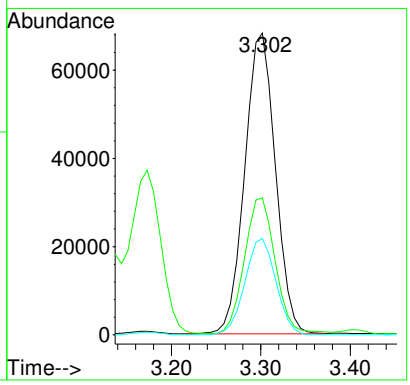


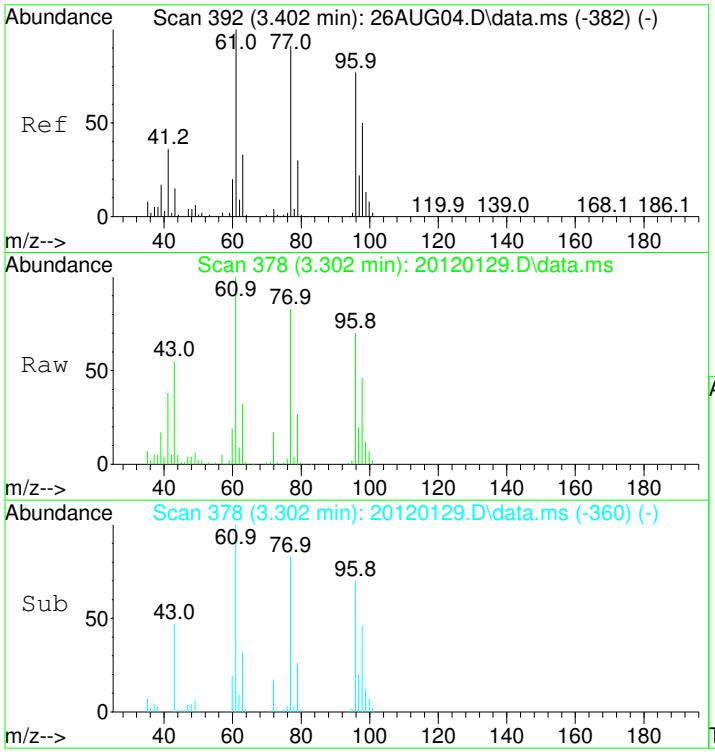


#34
2,2-Dichloropropane
Concen: 19.88 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 77 Resp: 162581

Ion	Ratio	Lower	Upper
77	100		
41	45.1	16.4	76.4
79	32.3	2.4	62.4

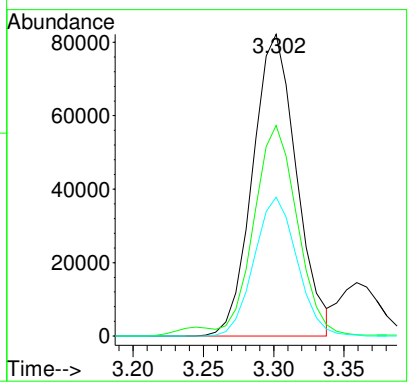


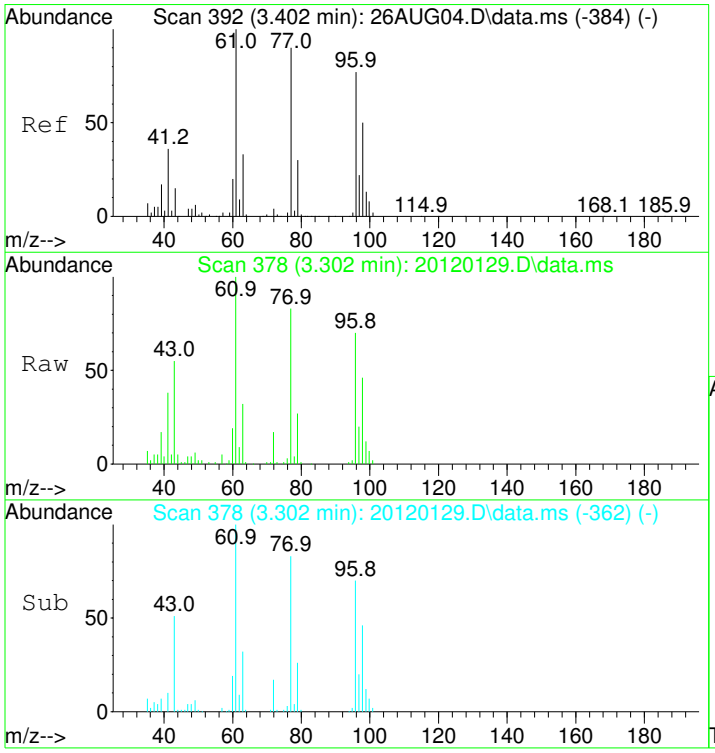


#35
cis-1,2-Dichloroethene
Concen: 21.35 ug/L
RT: 3.302 min Scan# 378
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 61 Resp: 178452

Ion	Ratio	Lower	Upper
61	100		
96	68.3	39.5	99.5
98	45.0	14.9	74.9

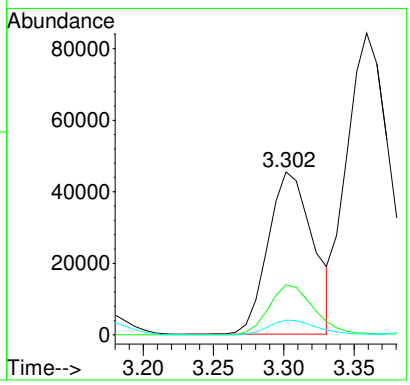


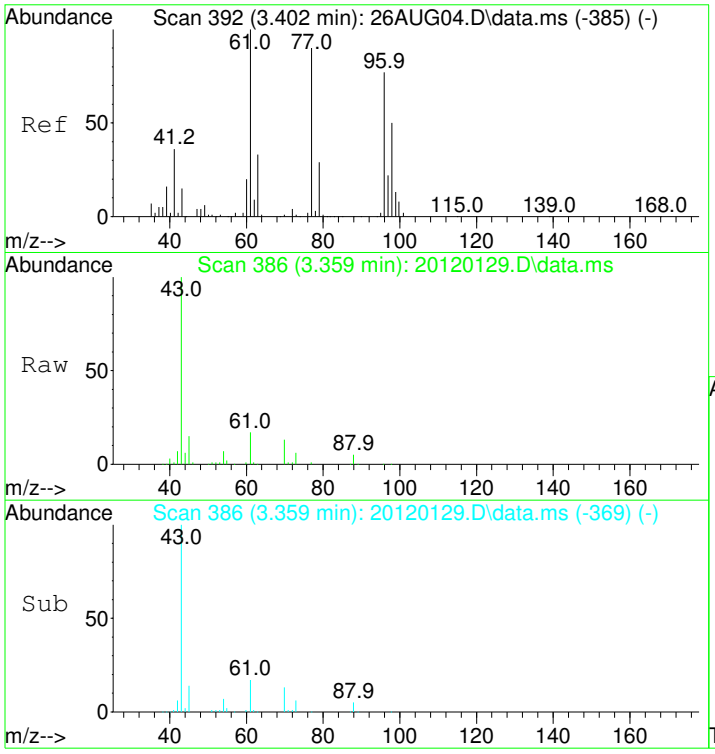


#36
2-Butanone
Concen: 20.99 ug/L
RT: 3.302 min Scan# 378
Delta R.T. -0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 101250

Ion	Ratio	Lower	Upper
43	100		
72	31.3	11.0	51.0
57	9.9	0.0	28.7

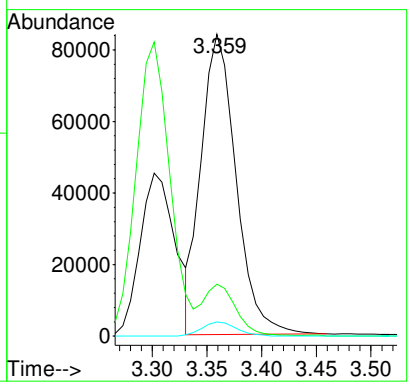


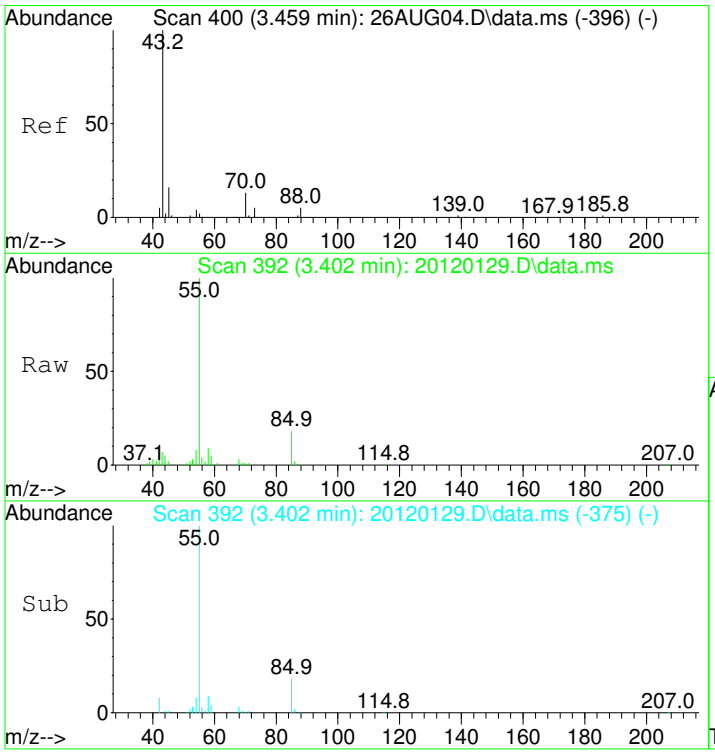


#37
Ethyl Acetate
Concen: 19.98 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 186654

Ion	Ratio	Lower	Upper
43	100		
61	15.6	0.0	34.9
88	4.7	0.0	24.3

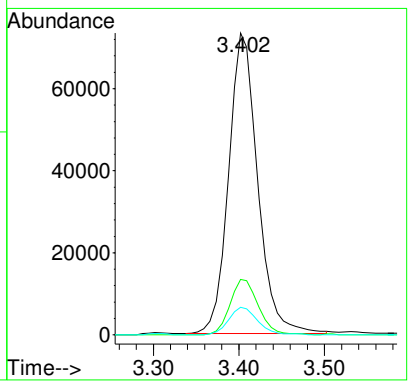


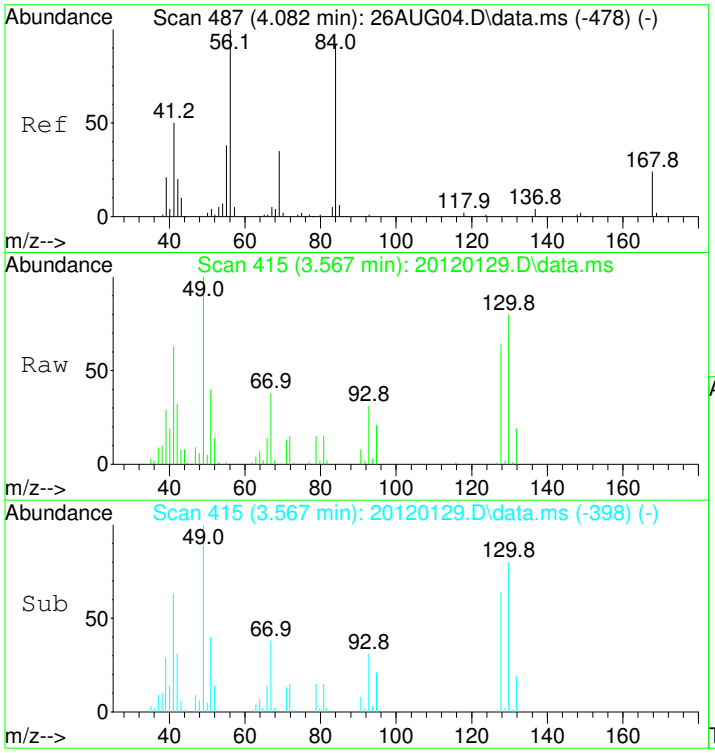


#38
Methyl acrylate
Concen: 20.76 ug/L
RT: 3.402 min Scan# 392
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 55 Resp: 173092

Ion	Ratio	Lower	Upper
55	100		
85	18.1	14.4	21.6
58	9.2	7.4	11.2

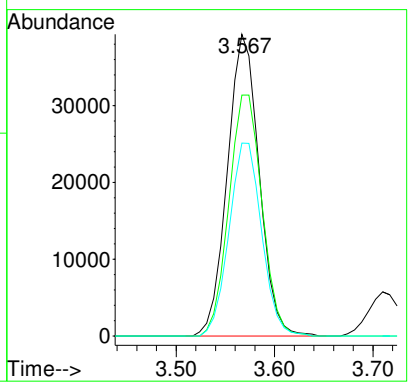


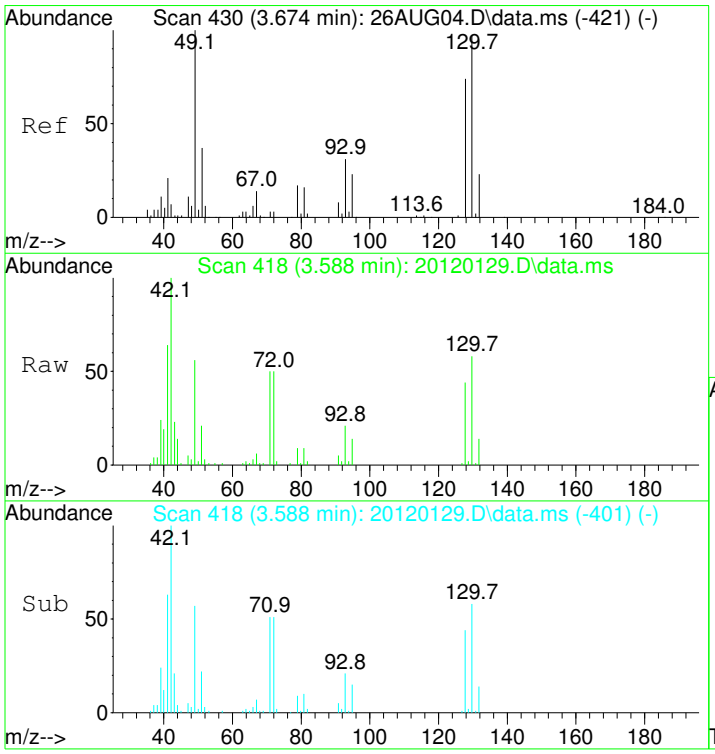


#40
Bromochloromethane
Concen: 20.40 ug/L
RT: 3.567 min Scan# 415
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 49 Resp: 88503

Ion	Ratio	Lower	Upper
49	100		
130	82.8	60.4	100.4
128	65.4	43.3	83.3

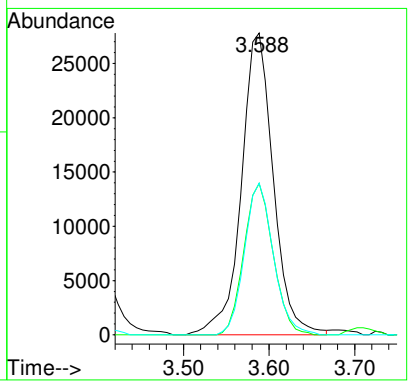


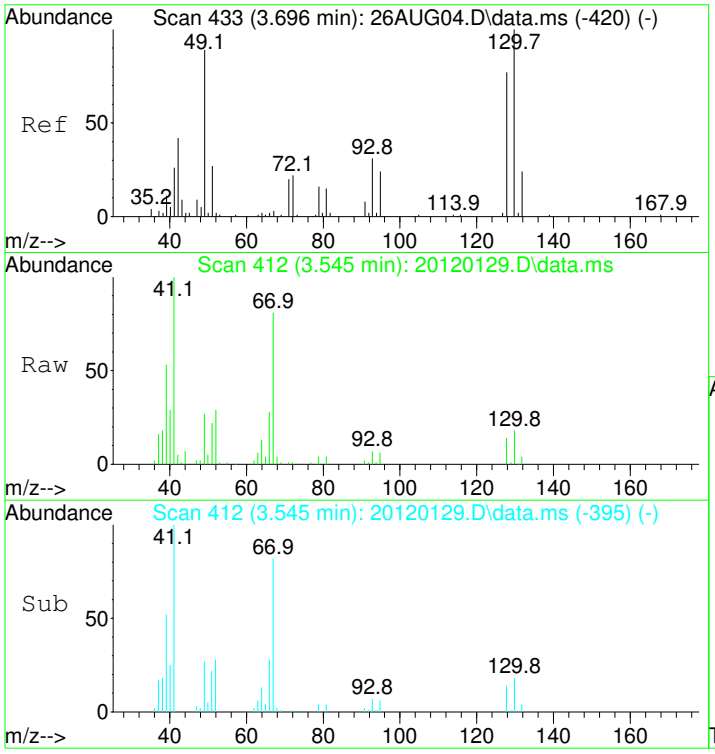


#41
Tetrahydrofuran
Concen: 20.37 ug/L
RT: 3.588 min Scan# 418
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 42 Resp: 72206

Ion	Ratio	Lower	Upper
42	100		
72	45.7	27.6	67.6
71	45.6	26.5	66.5

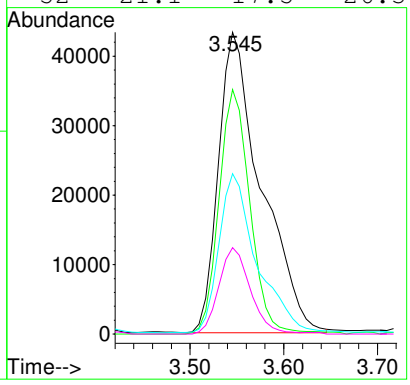


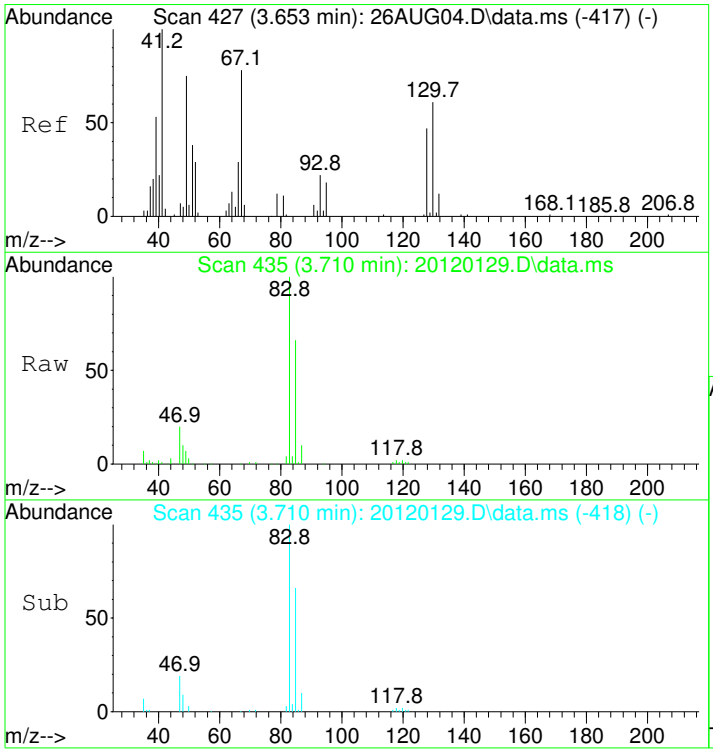


#42
Methacrylonitrile
Concen: 19.62 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 41 Resp: 137626

Ion	Ratio	Lower	Upper
41	100		
67	58.9	47.8	71.6
39	46.6	38.6	57.8
52	21.1	17.5	26.3

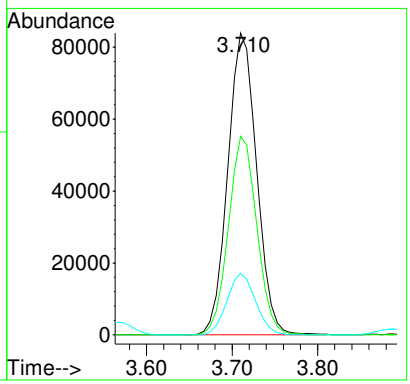


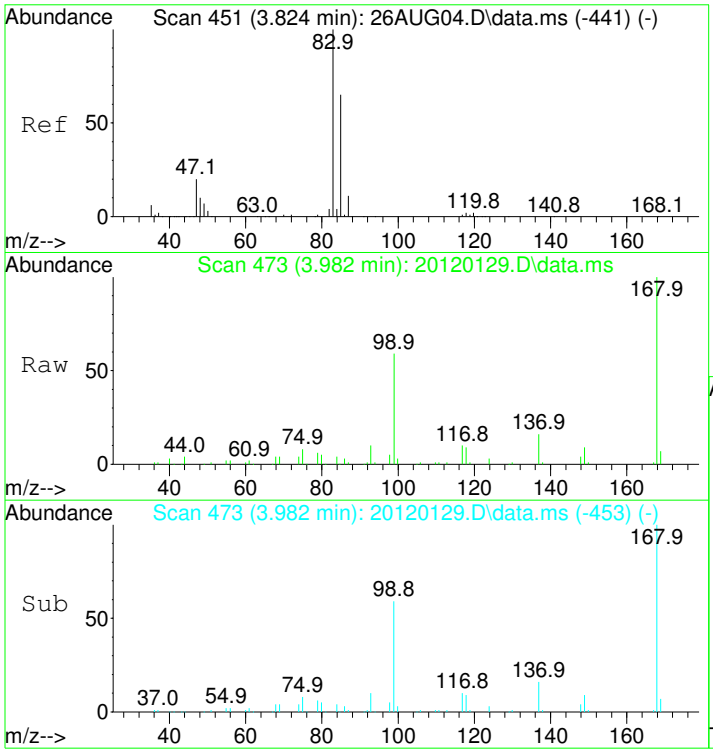


#43
Chloroform
Concen: 19.45 ug/L
RT: 3.710 min Scan# 435
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 83 Resp: 197255

Ion	Ratio	Lower	Upper
83	100		
85	64.7	46.1	86.1
47	20.1	1.2	41.2

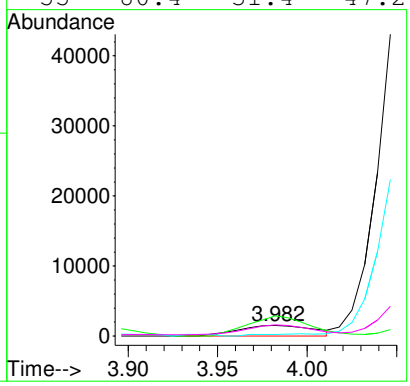


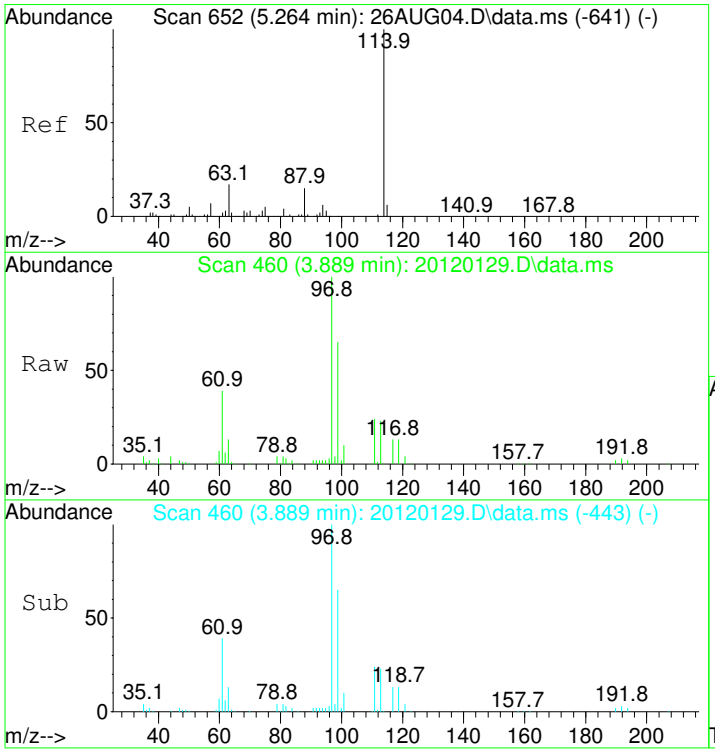


#44
Cyclohexane
Concen: Below Cal
RT: 3.982 min Scan# 473
Delta R.T. 0.021 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 56 Resp: 4434

Ion	Ratio	Lower	Upper
56	100		
84	158.4	69.5	104.3#
41	6.6	39.4	59.0#
55	80.4	31.4	47.2#

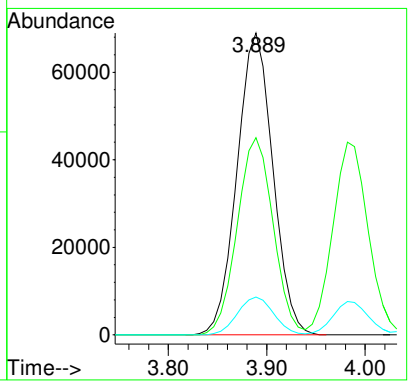


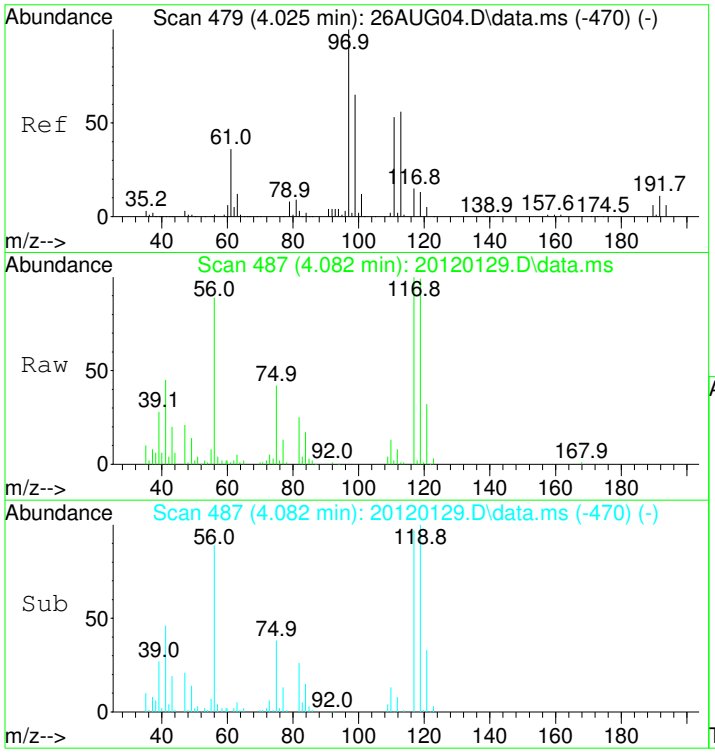


#46
1,1,1-Trichloroethane
Concen: 21.34 ug/L
RT: 3.889 min Scan# 460
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 97 Resp: 174698

Ion	Ratio	Lower	Upper
97	100		
99	65.6	45.8	85.8
117	12.7	0.0	33.4

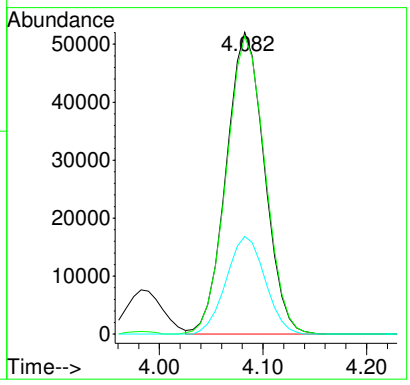


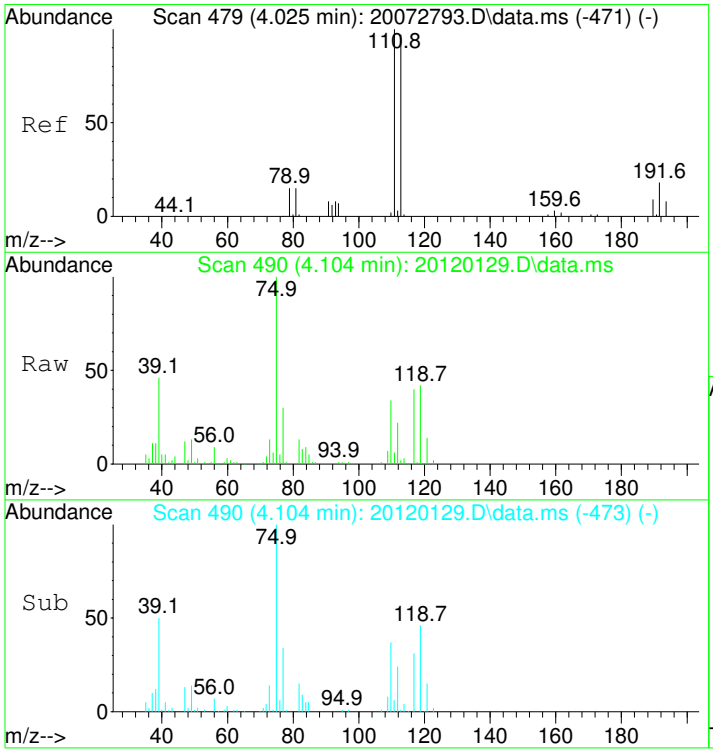


#48
Carbon tetrachloride
Concen: 19.00 ug/L
RT: 4.082 min Scan# 487
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:117 Resp: 133425

Ion	Ratio	Lower	Upper
117	100		
119	99.7	78.7	118.7
121	32.8	11.8	51.8

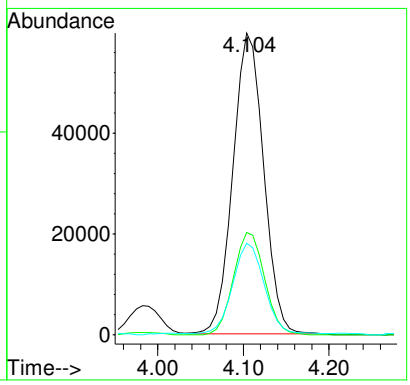


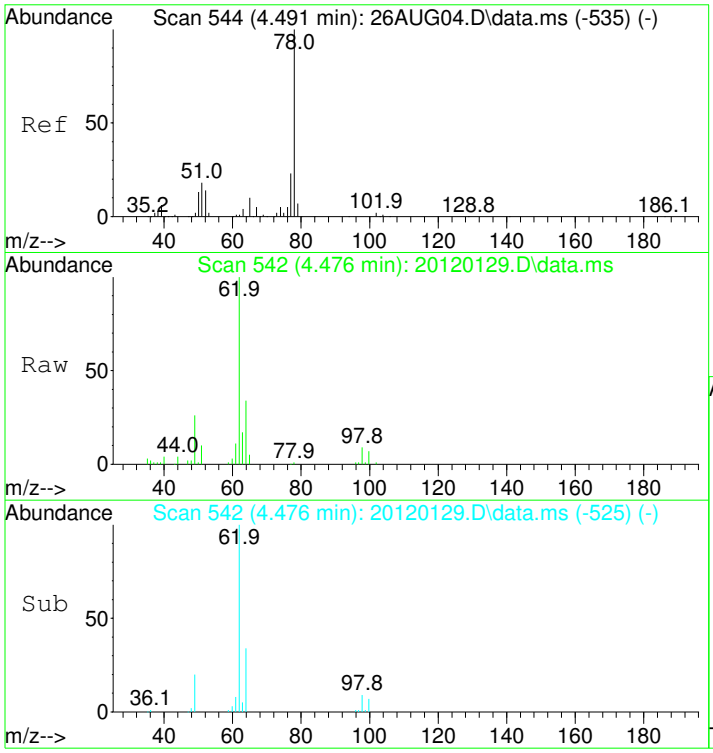


#49
1,1-Dichloropropene
Concen: 21.54 ug/L
RT: 4.104 min Scan# 490
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 75 Resp: 148996

Ion	Ratio	Lower	Upper
75	100		
110	34.5	16.0	56.0
77	30.5	11.0	51.0

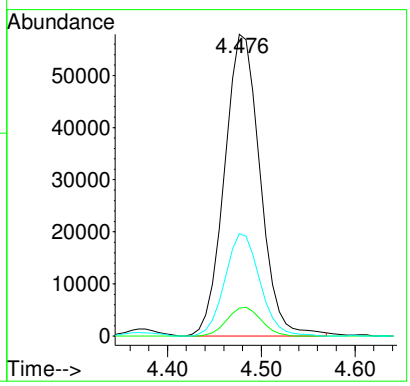


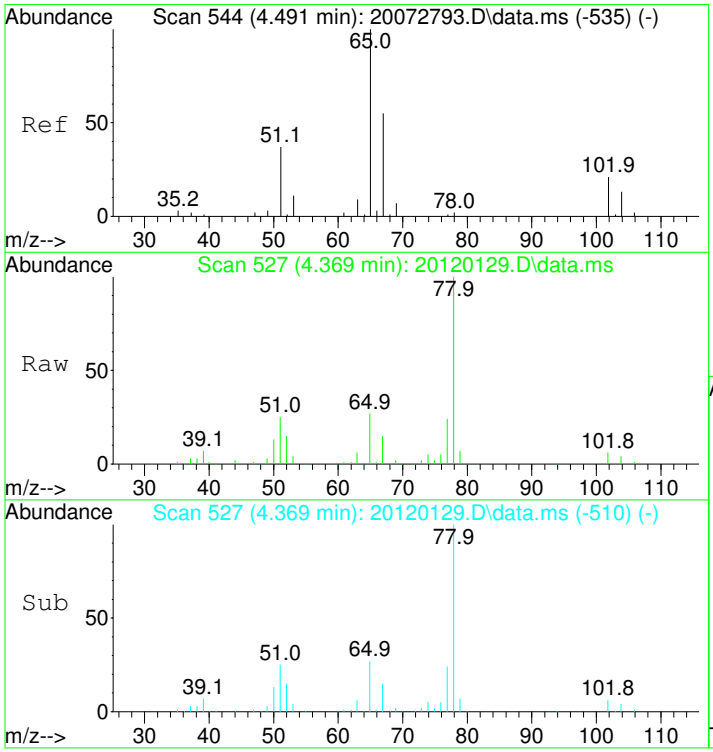


#51
1,2-Dichloroethane
Concen: 19.97 ug/L
RT: 4.476 min Scan# 542
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 62 Resp: 153495

Ion	Ratio	Lower	Upper
62	100		
98	9.1	0.0	29.0
64	33.4	13.9	53.9

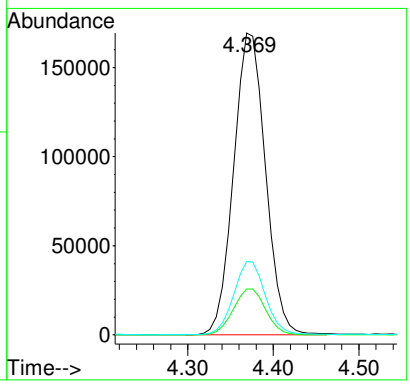


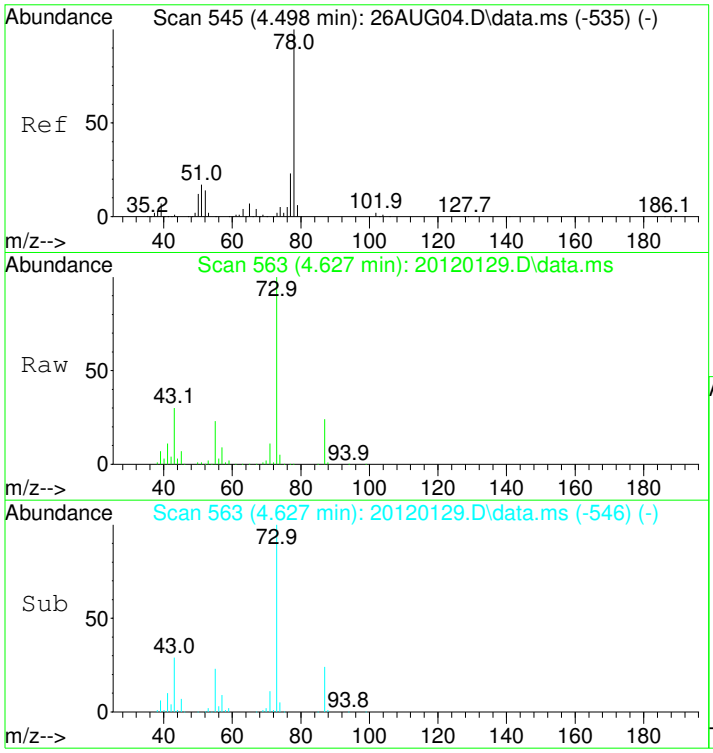


#52
Benzene
Concen: 21.87 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 78 Resp: 438886

Ion	Ratio	Lower	Upper
78	100		
52	15.4	0.0	35.8
77	24.5	3.7	43.7

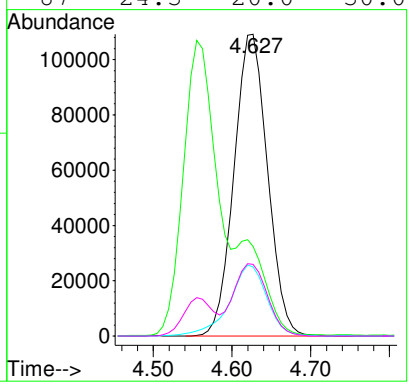


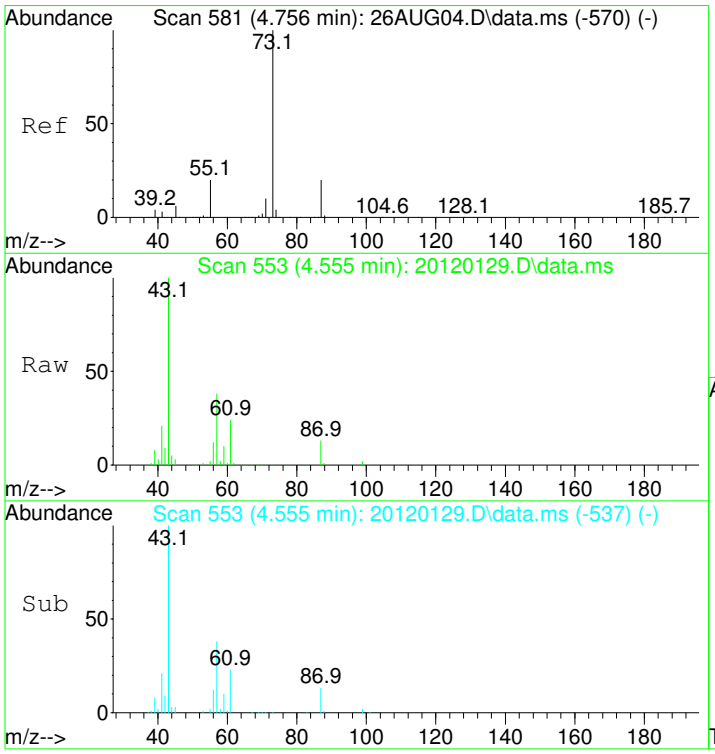


#53
Tertiaryamylmethylether
Concen: 21.21 ug/L
RT: 4.627 min Scan# 563
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 73 Resp: 323369

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	26.5	21.0	31.6
87	24.3	20.0	30.0

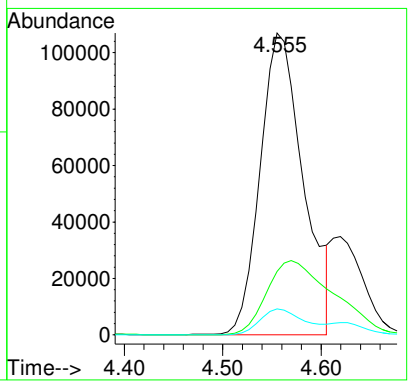


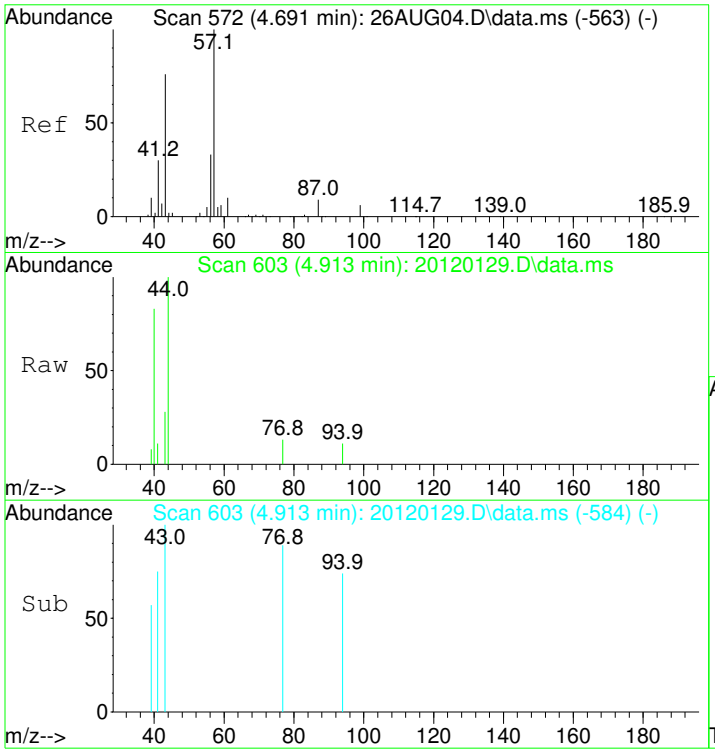


#54
Isobutyl Alcohol
Concen: 20.90 ug/L
RT: 4.555 min Scan# 553
Delta R.T. -0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 327214

Ion	Ratio	Lower	Upper
43	100		
41	37.5	30.7	46.1
42	8.6	6.4	9.6

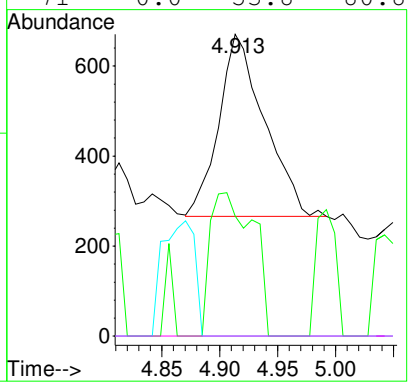


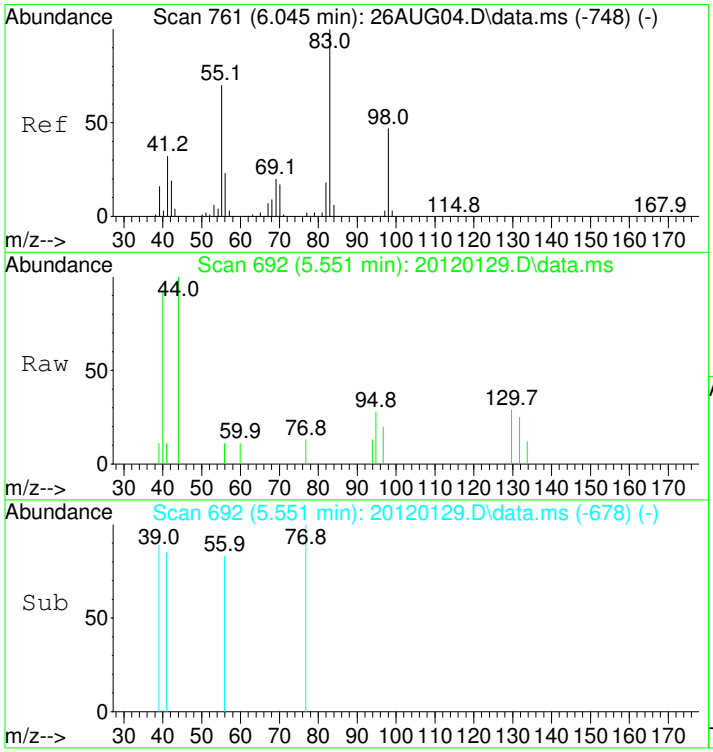


#55
Heptane
Concen: Below Cal
RT: 4.913 min Scan# 603
Delta R.T. 0.014 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 1109

Ion	Ratio	Lower	Upper
43	100		
41	73.9	46.8	70.2#
57	0.0	47.5	71.3#
71	0.0	53.8	80.8#

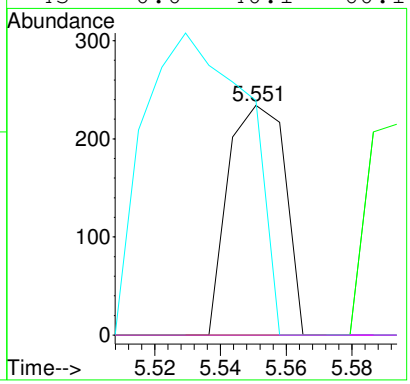


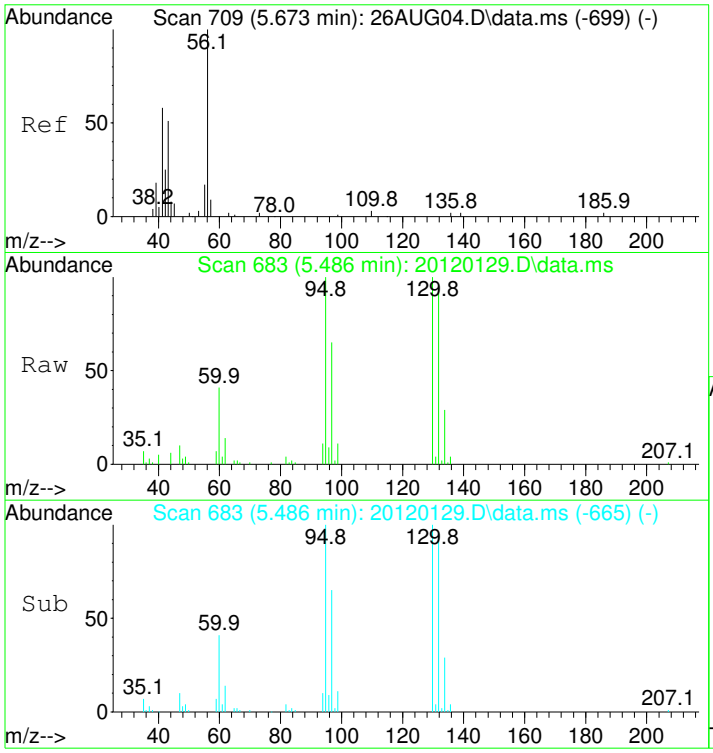


#58
n-Butanol
Concen: 1.68 ug/L
RT: 5.551 min Scan# 692
Delta R.T. -0.021 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 56 Resp: 281

Ion	Ratio	Lower	Upper
56	100		
55	0.0	15.4	23.2#
41	238.8	50.9	76.3#
43	0.0	40.1	60.1#

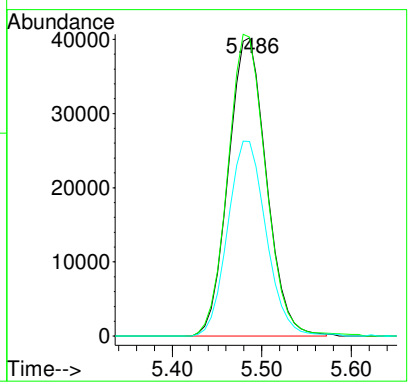


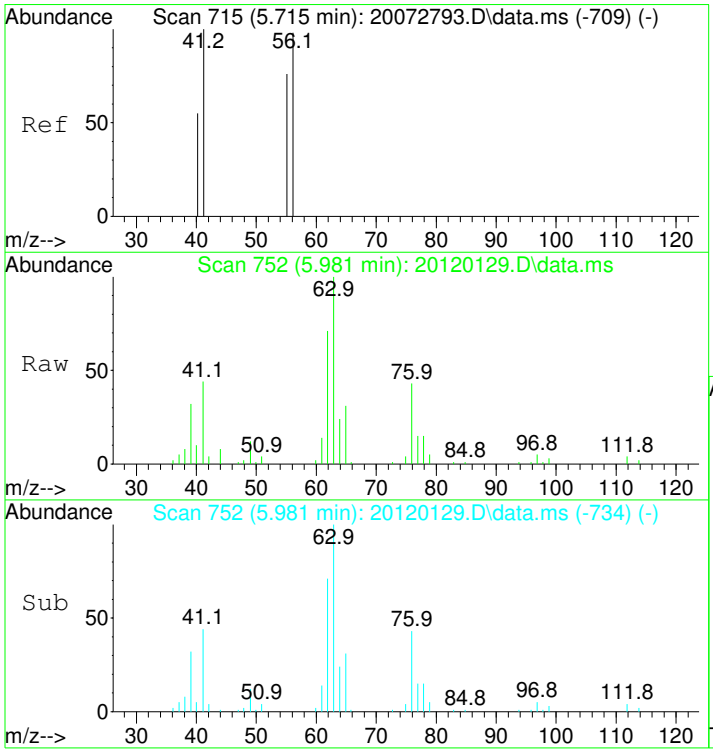


#59
Trichloroethene
Concen: 21.15 ug/L
RT: 5.486 min Scan# 683
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:130 Resp: 118621

Ion	Ratio	Lower	Upper
130	100		
95	100.9	82.7	122.7
97	65.9	47.6	87.6

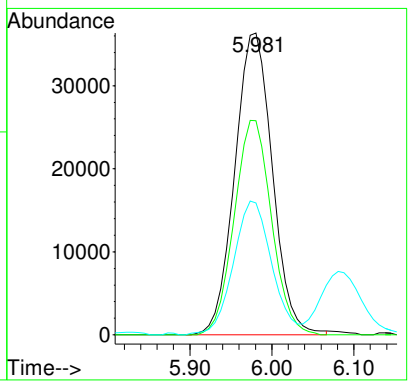


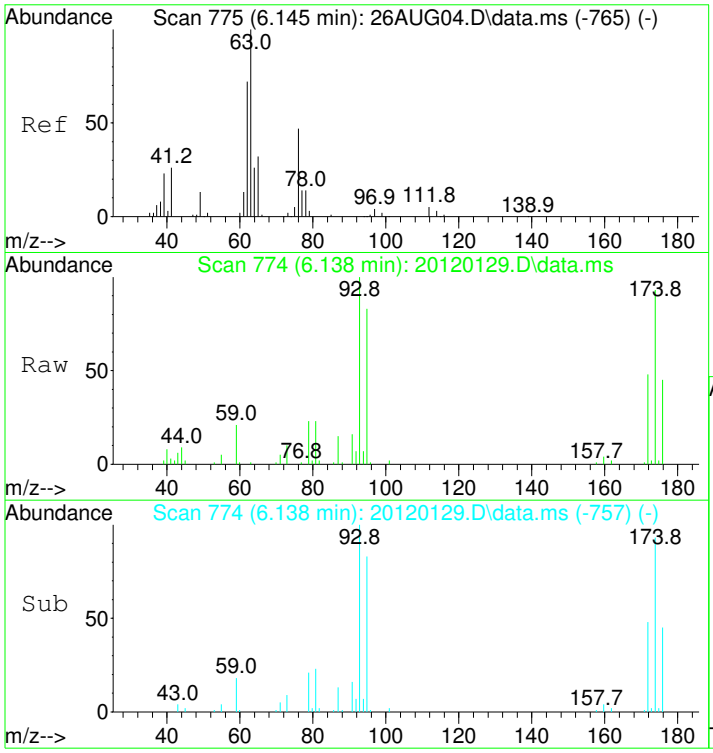


#60
1,2-Dichloropropane
Concen: 20.56 ug/L
RT: 5.981 min Scan# 752
Delta R.T. 0.008 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 63 Resp: 116088

Ion	Ratio	Lower	Upper
63	100		
62	70.3	51.5	91.5
41	45.3	26.1	66.1

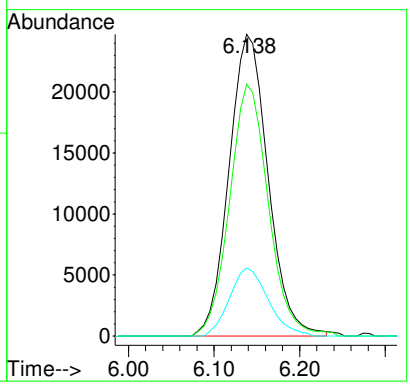


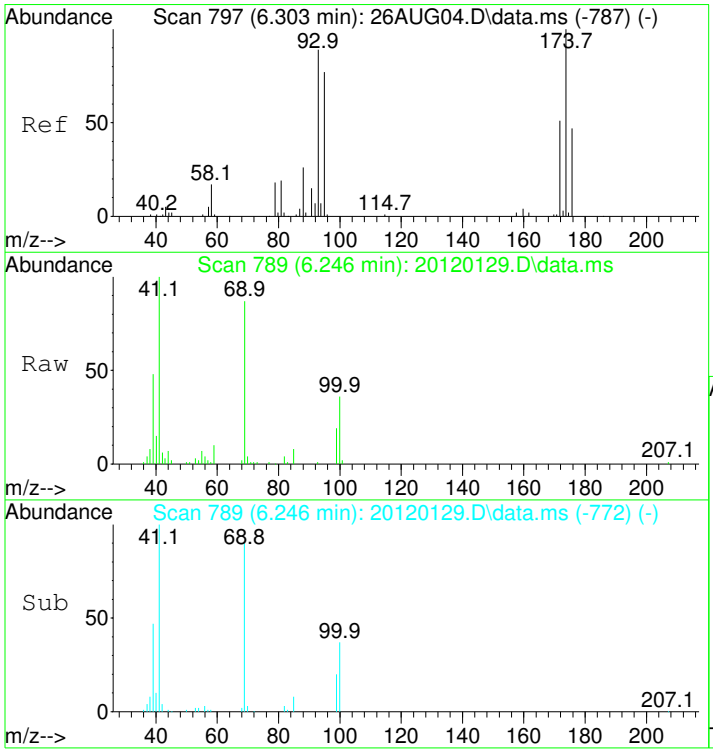


#61
Dibromomethane
Concen: 19.69 ug/L
RT: 6.138 min Scan# 774
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 93 Resp: 78534

Ion	Ratio	Lower	Upper
93	100		
95	82.5	63.0	103.0
81	22.4	3.4	43.4

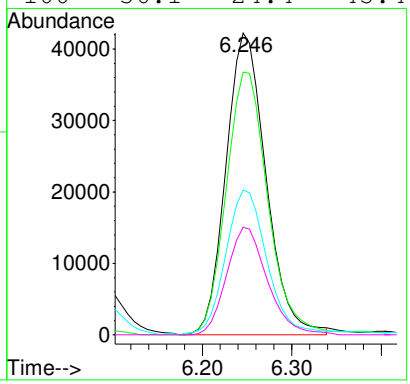


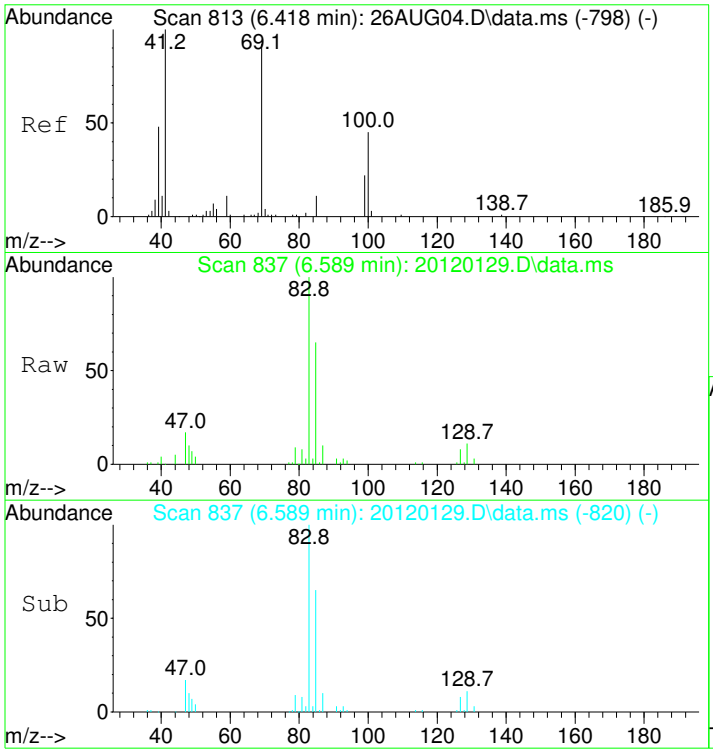


#62
Methyl methacrylate
Concen: 20.29 ug/L
RT: 6.246 min Scan# 789
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 41 Resp: 131844

Ion	Ratio	Lower	Upper
41	100		
69	90.0	72.2	108.4
39	49.4	41.1	61.7
100	36.1	24.4	45.4

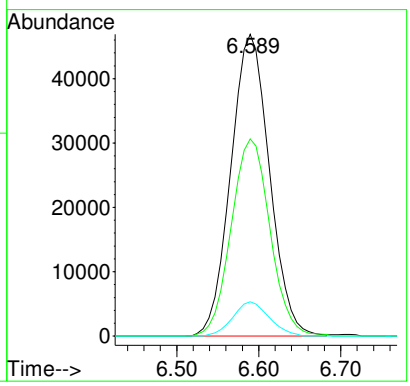


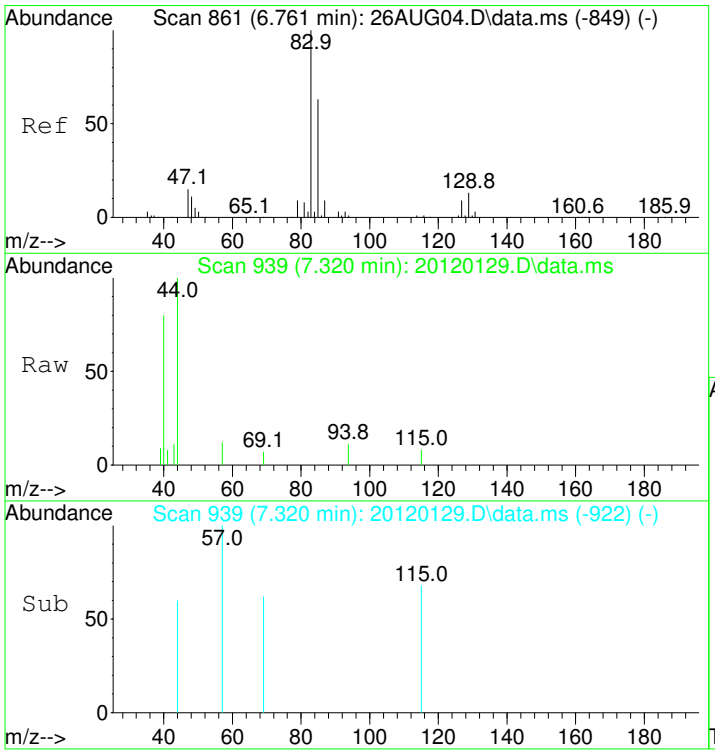


#63
Bromodichloromethane
Concen: 20.15 ug/L
RT: 6.589 min Scan# 837
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 83 Resp: 154149

Ion	Ratio	Lower	Upper
83	100		
85	65.3	44.3	84.3
129	10.7	0.0	31.0

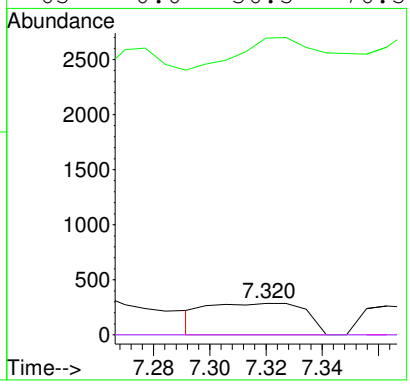


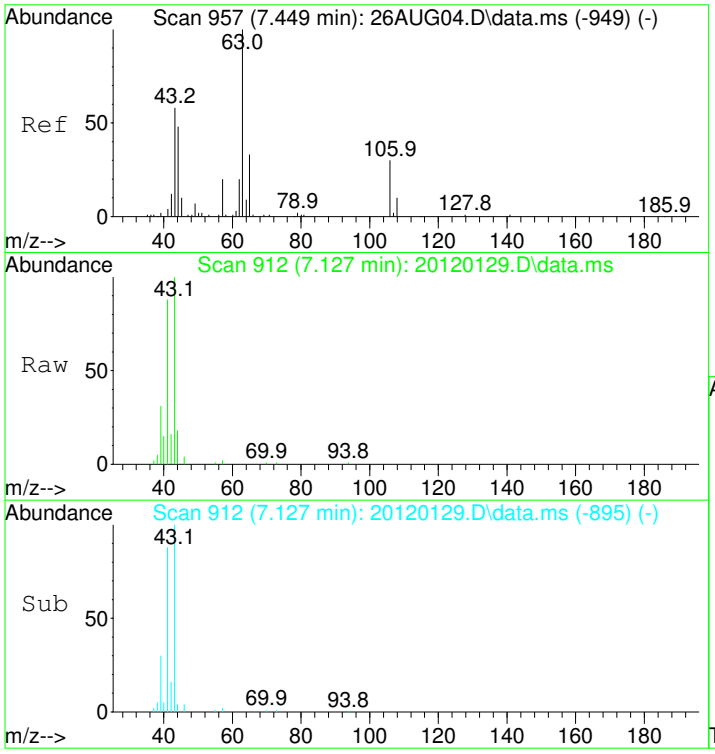


#64
2-Chloroethyl vinyl ether
Concen: Below Cal
RT: 7.320 min Scan# 939
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 696

Ion	Ratio	Lower	Upper
43	100		
44	160.6	51.0	111.0#
63	0.0	141.4	201.4#
65	0.0	36.5	76.5#

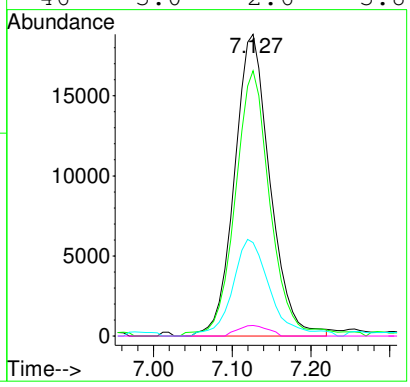


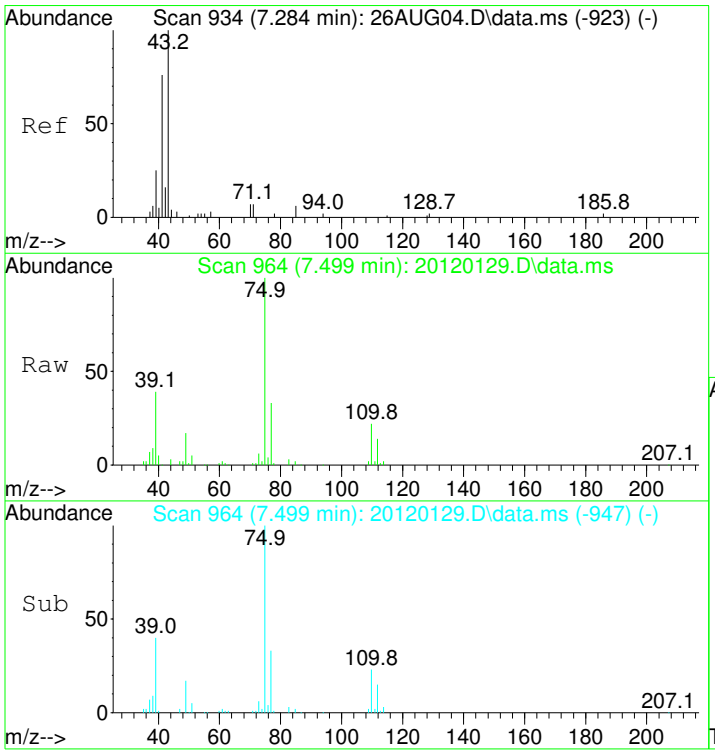


#65
2-Nitropropane
Concen: 19.67 ug/L
RT: 7.127 min Scan# 912
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 59125

Ion	Ratio	Lower	Upper
43	100		
41	85.8	67.9	101.9
39	33.6	21.8	32.8#
46	3.0	2.6	3.8

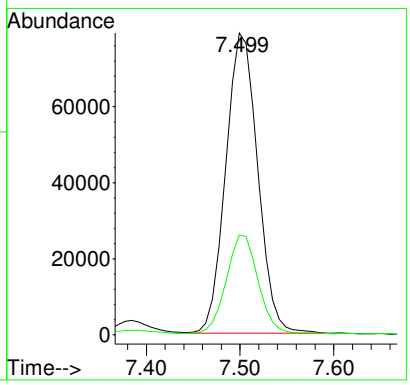


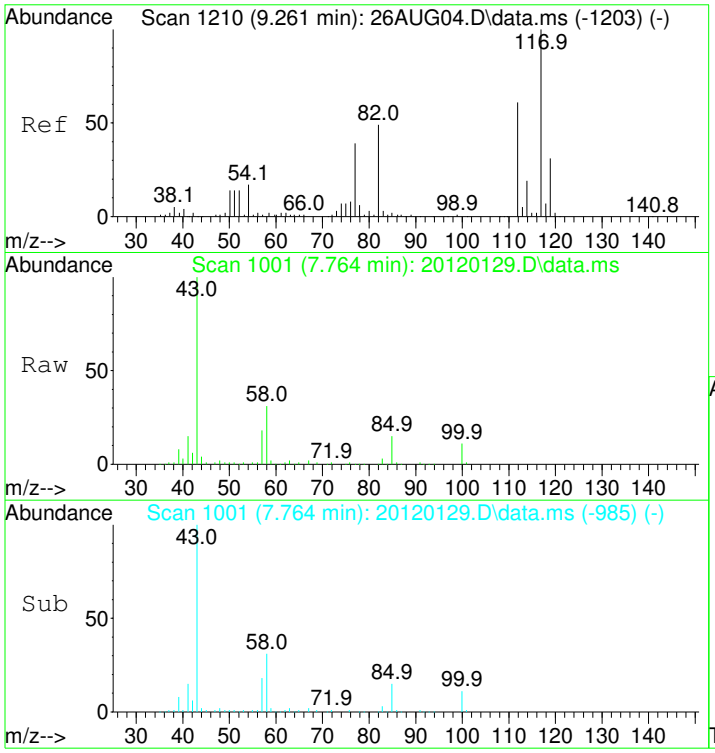


#66
cis-1,3-Dichloropropene
Concen: 19.90 ug/L
RT: 7.499 min Scan# 964
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 75 Resp: 187102

Ion	Ratio	Lower	Upper
75	100		
77	32.6	11.9	51.9

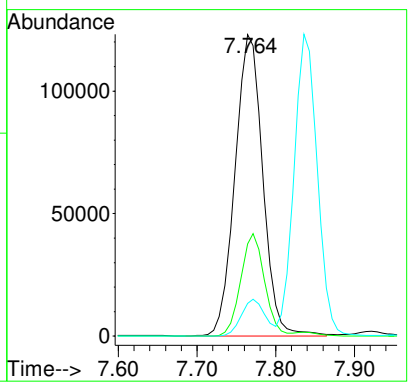


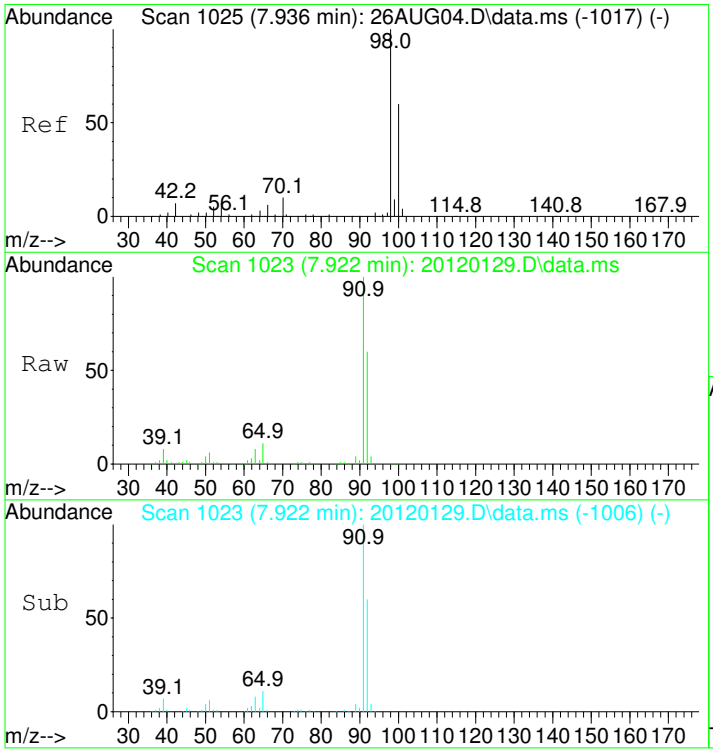


#68
4-Methyl-2-pentanone
Concen: 33.69 ug/L
RT: 7.764 min Scan# 1001
Delta R.T. -0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 302373

Ion	Ratio	Lower	Upper
43	100		
58	29.2	25.4	65.4
100	10.7	0.0	36.2

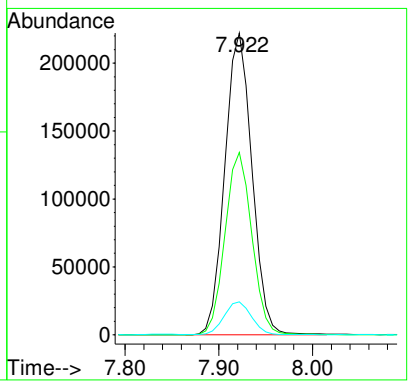


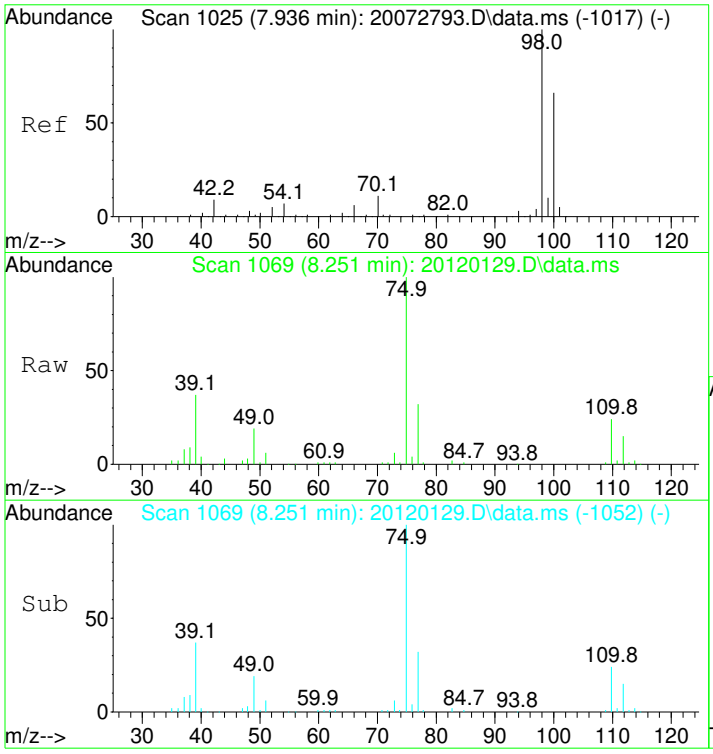


#70
Toluene
Concen: 22.52 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 447745

Ion	Ratio	Lower	Upper
91	100		
92	59.9	40.7	80.7
65	11.3	0.0	31.5

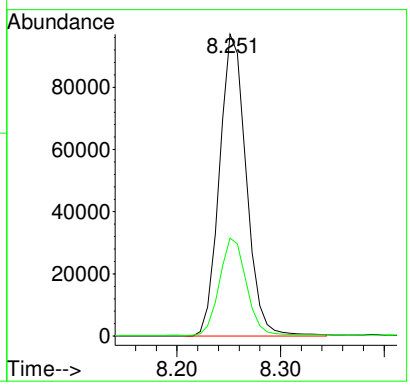


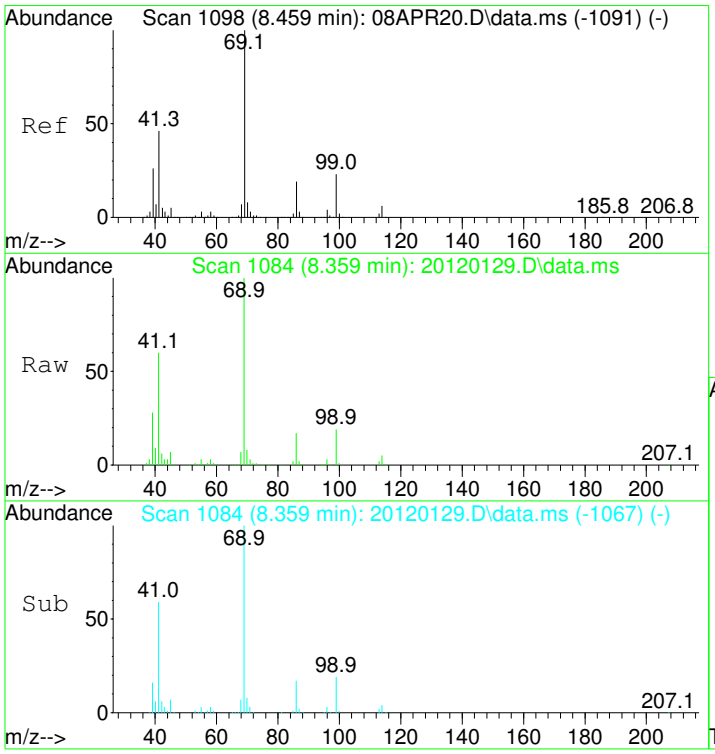


#71
trans-1,3-Dichloropropene
Concen: 20.50 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 75 Resp: 175092

Ion	Ratio	Lower	Upper
75	100		
77	32.3	15.0	55.0

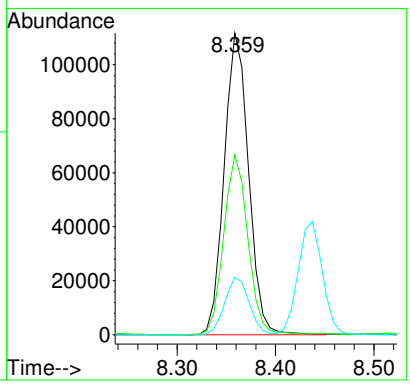


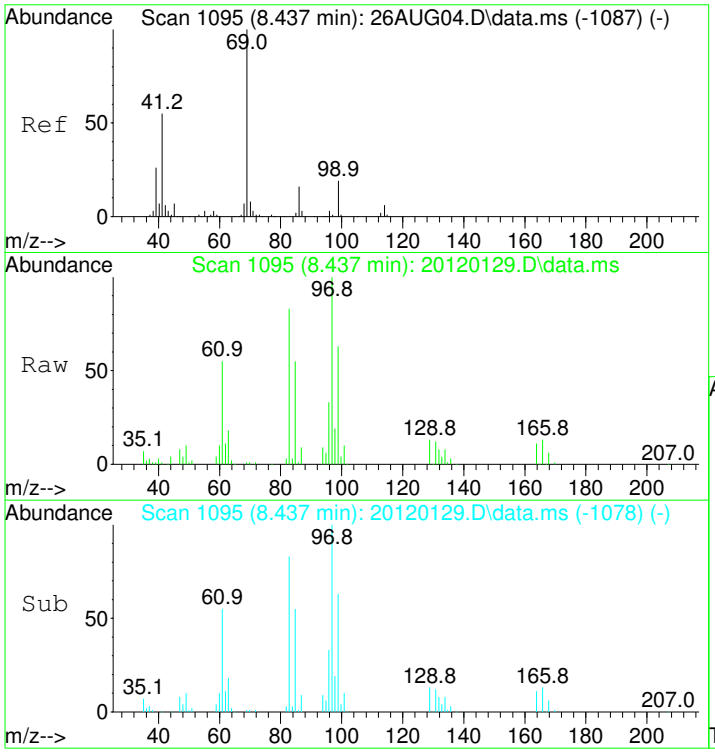


#73
Ethyl methacrylate
Concen: 20.73 ug/L
RT: 8.359 min Scan# 1084
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 69 Resp: 192923

Ion	Ratio	Lower	Upper
69	100		
41	59.2	39.9	79.9
99	19.0	0.0	39.7

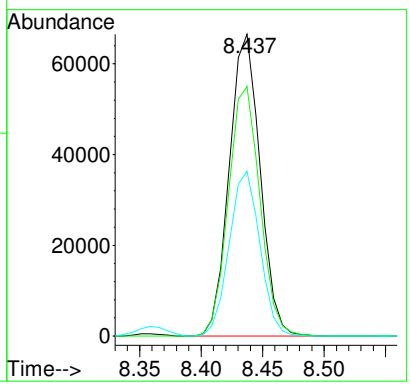


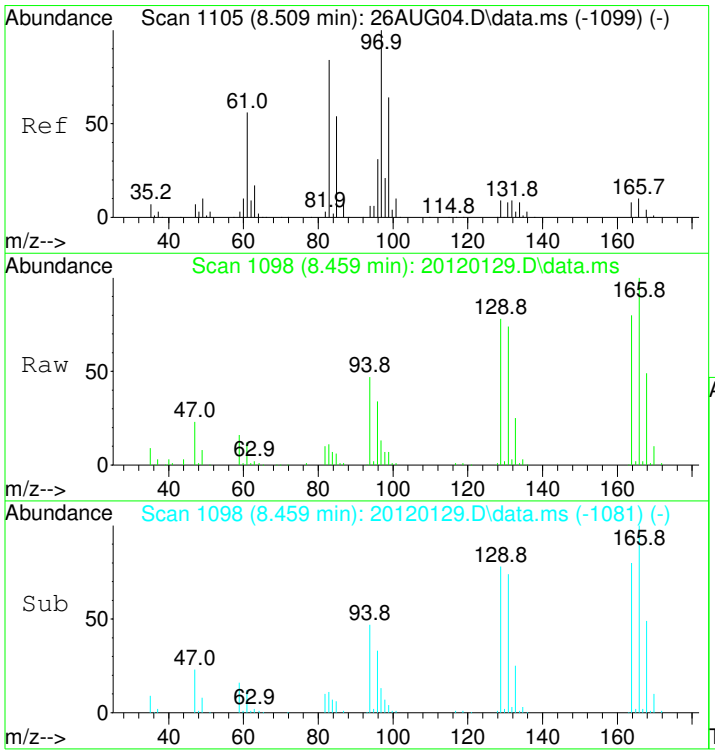


#74
1,1,2-Trichloroethane
Concen: 21.27 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 97 Resp: 115919

Ion	Ratio	Lower	Upper
97	100		
83	84.6	66.1	106.1
85	54.4	36.8	76.8

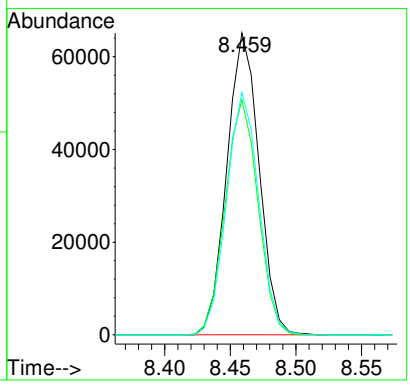


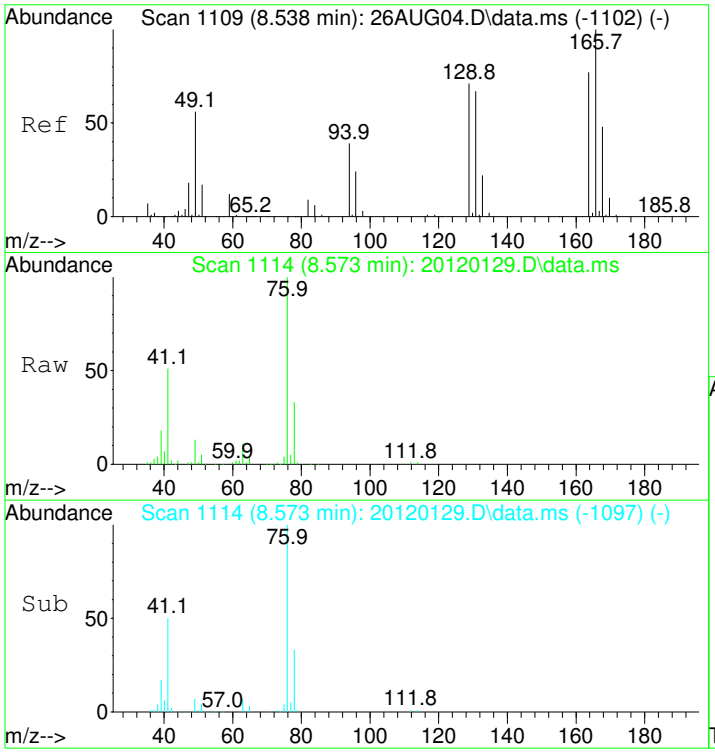


#75
Tetrachloroethene
Concen: 22.24 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:166 Resp: 111233

Ion	Ratio	Lower	Upper
166	100		
129	79.2	59.1	99.1
164	80.4	59.1	99.1

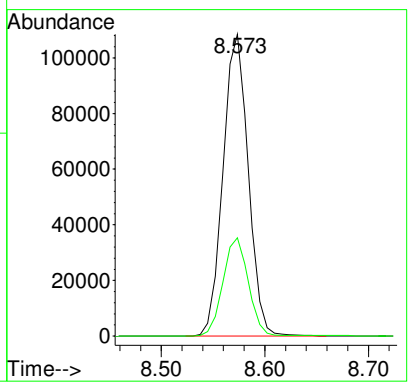


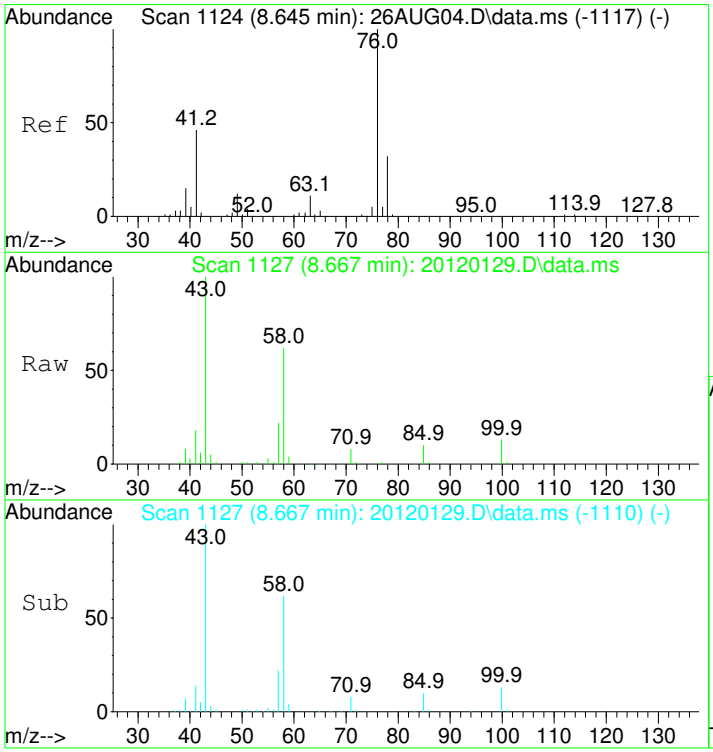


#76
1,3-Dichloropropane
Concen: 20.34 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 76 Resp: 184213

Ion	Ratio	Lower	Upper
76	100		
78	33.0	13.2	53.2

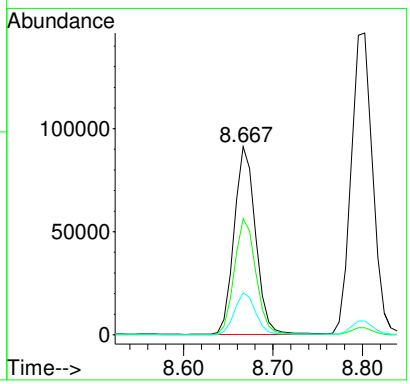


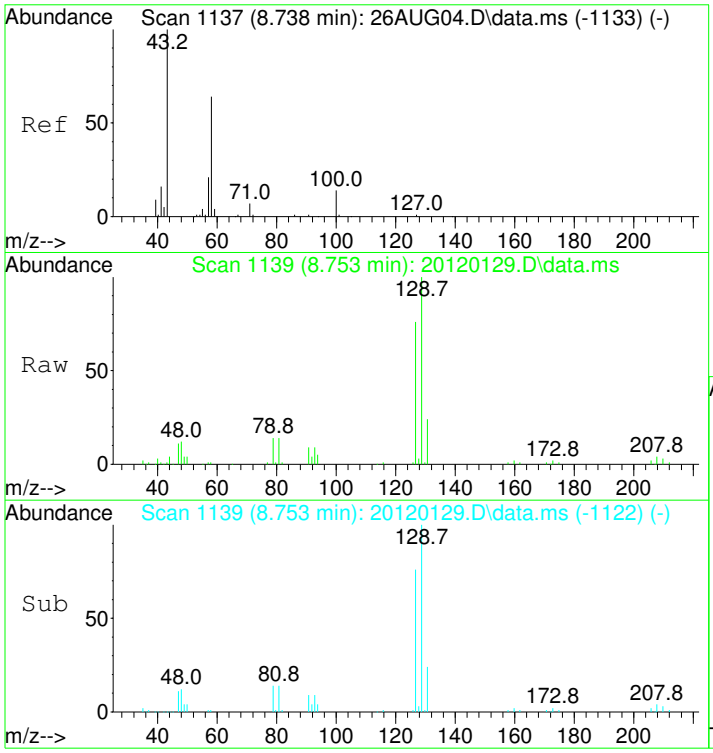


#77
2-Hexanone
Concen: 21.27 ug/L
RT: 8.667 min Scan# 1127
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 151954

Ion	Ratio	Lower	Upper
43	100		
58	62.5	42.3	82.3
57	23.0	1.0	41.0

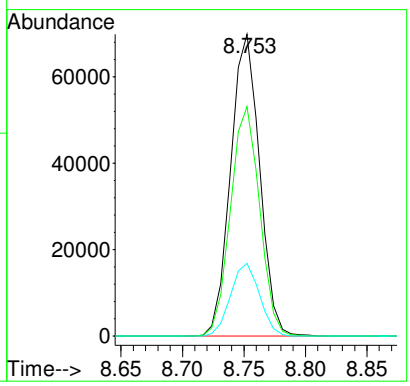


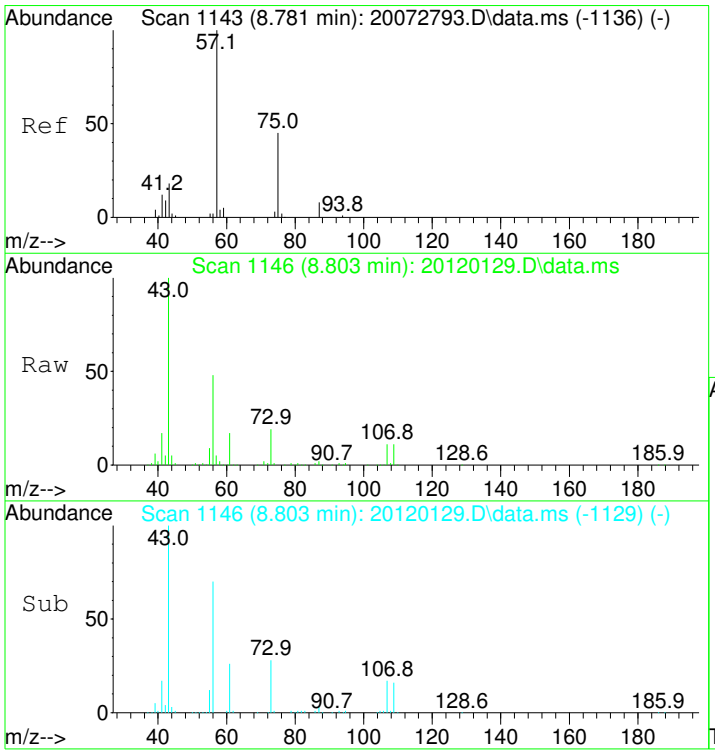


#78
Chlorodibromomethane
Concen: 19.20 ug/L
RT: 8.753 min Scan# 1139
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:129 Resp: 114398

Ion	Ratio	Lower	Upper
129	100		
127	76.3	57.8	97.8
131	24.1	4.2	44.2

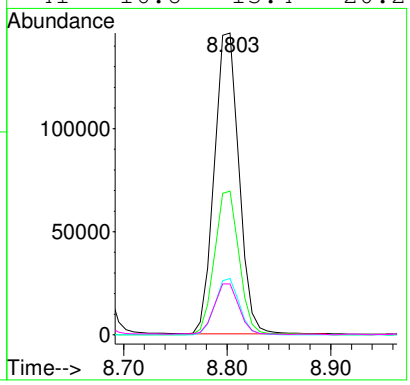


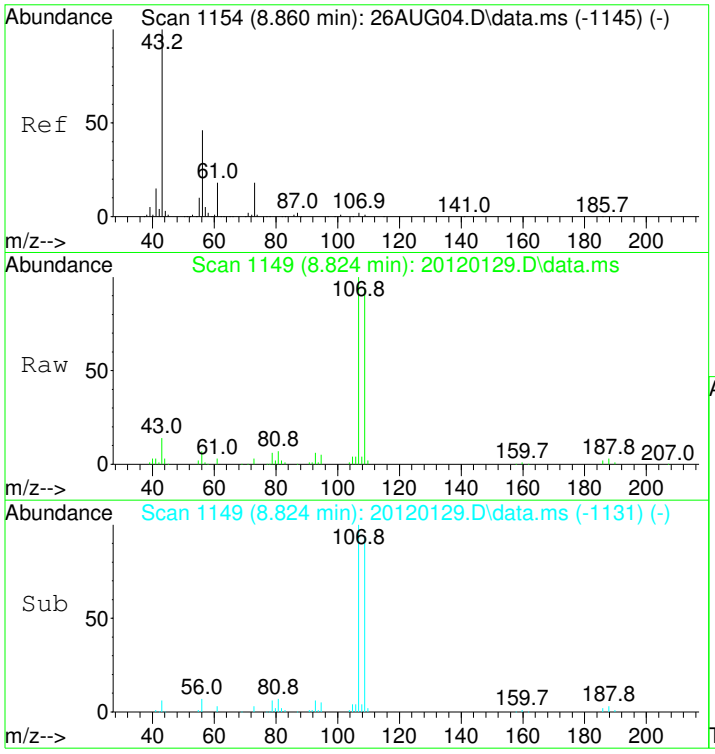


#79
Butyl acetate
Concen: 21.50 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 242514

Ion	Ratio	Lower	Upper
43	100		
56	48.1	38.0	57.0
73	18.4	15.0	22.4
41	16.8	13.4	20.2

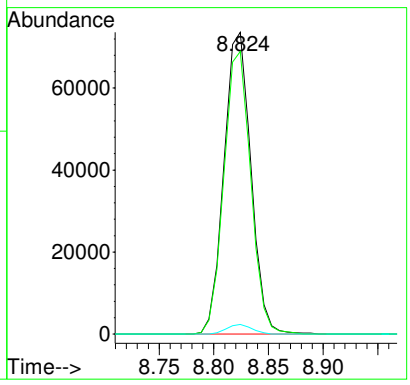


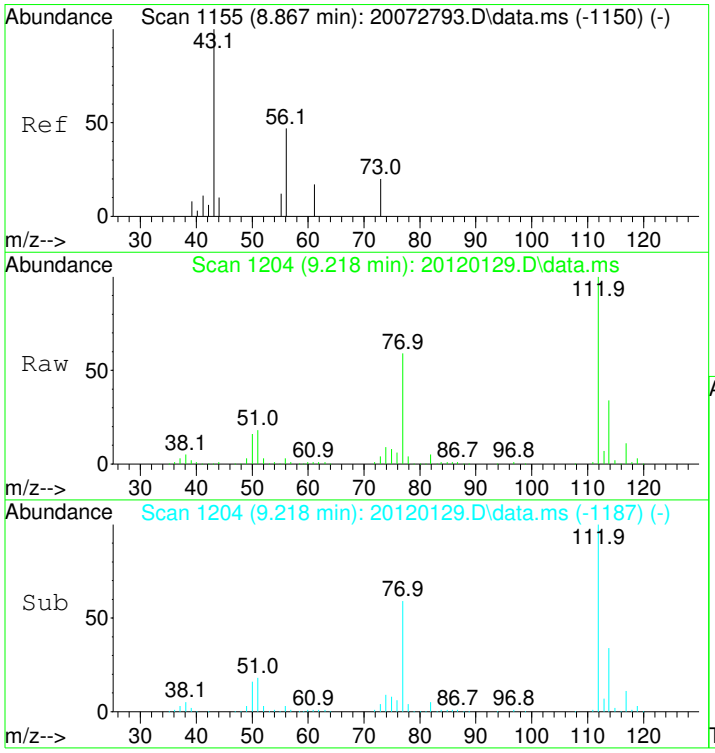


#80
1,2-Dibromoethane
Concen: 22.43 ug/L
RT: 8.824 min Scan# 1149
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:107 Resp: 126414

Ion	Ratio	Lower	Upper
107	100		
109	93.1	76.6	116.6
188	3.0	0.0	22.9

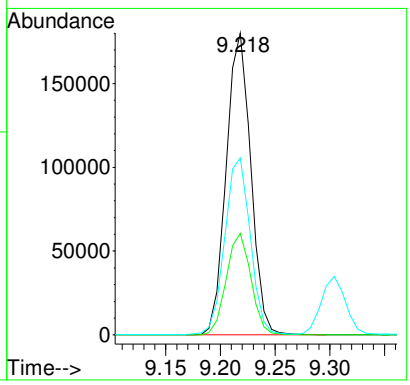


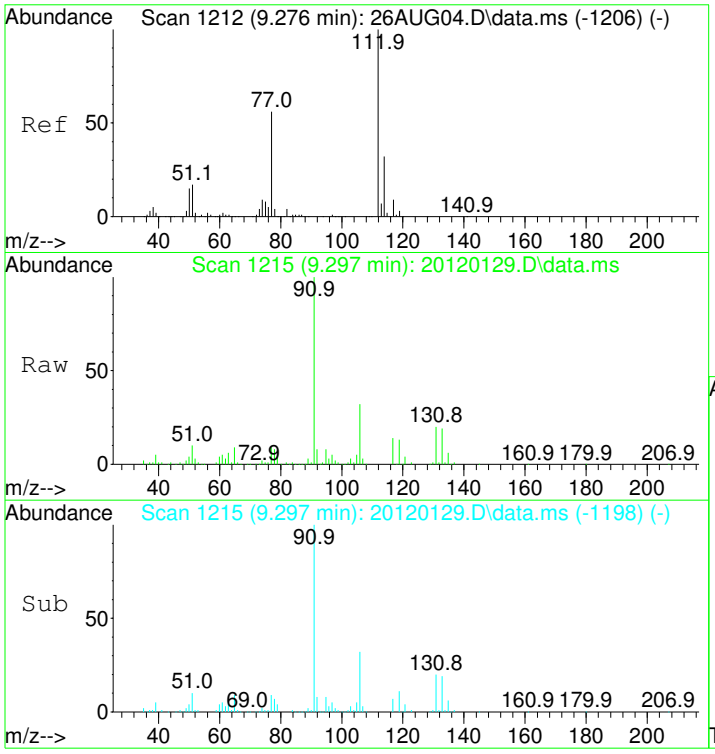


#81
Chlorobenzene
Concen: 22.01 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:112 Resp: 281289

Ion	Ratio	Lower	Upper
112	100		
114	33.6	13.6	53.6
77	60.6	41.7	81.7

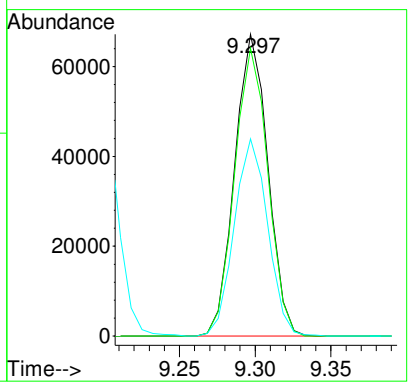


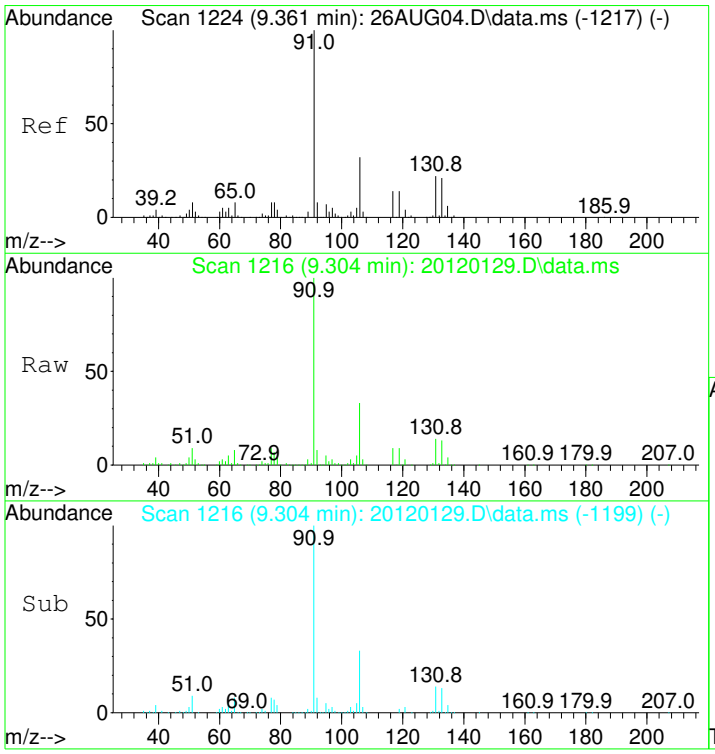


#82
1,1,1,2-Tetrachloroethane
Concen: 20.68 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:131 Resp: 102307

Ion	Ratio	Lower	Upper
131	100		
133	95.6	74.4	114.4
119	66.0	45.7	85.7

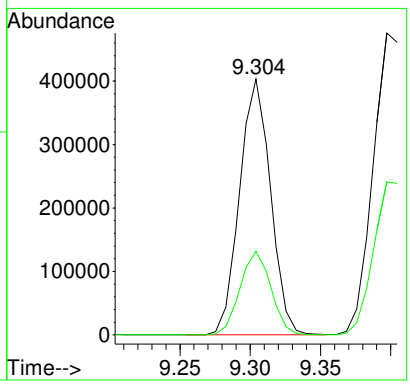


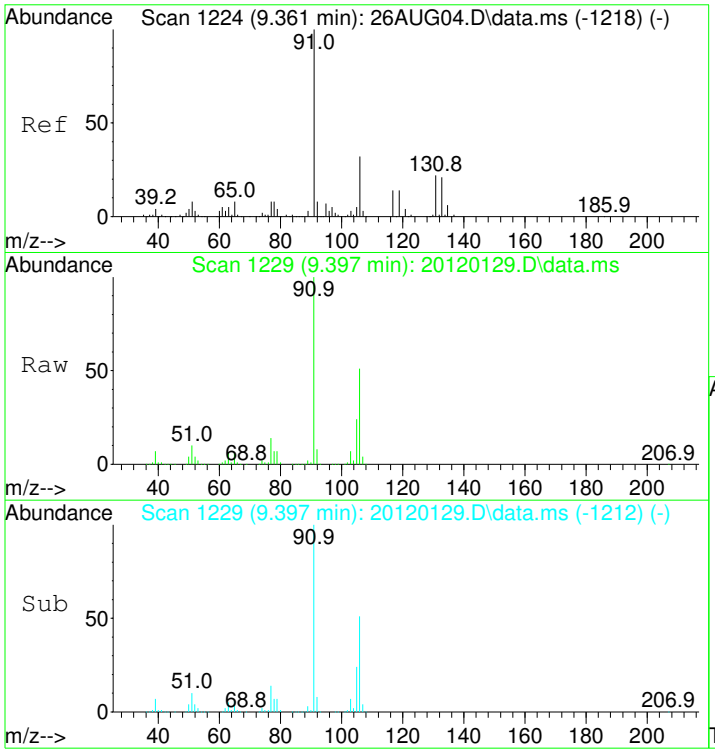


#83
Ethylbenzene
Concen: 27.50 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 618251

Ion	Ratio	Lower	Upper
91	100		
106	32.5	13.6	53.6

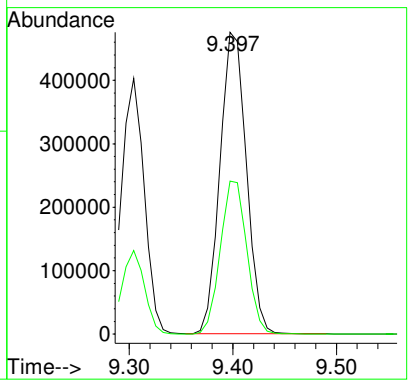


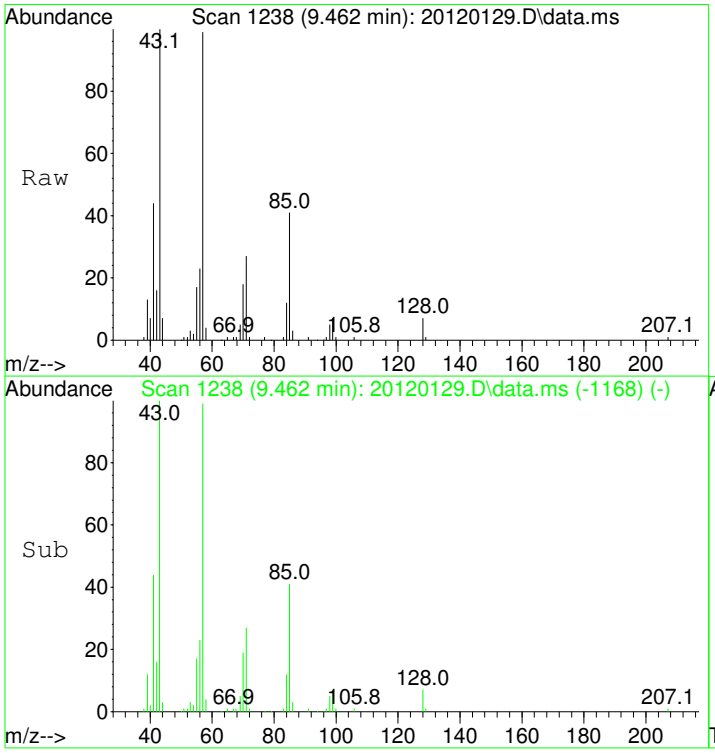


#84
m/p-Xylene
Concen: 46.62 ug/L
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 846522

Ion	Ratio	Lower	Upper
91	100		
106	50.6	34.2	74.2

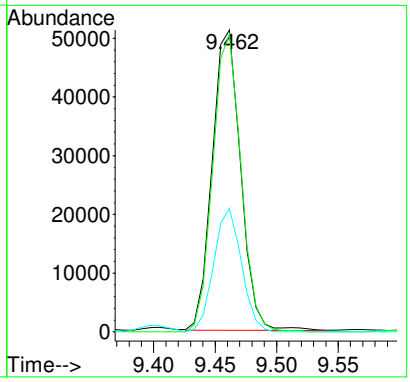


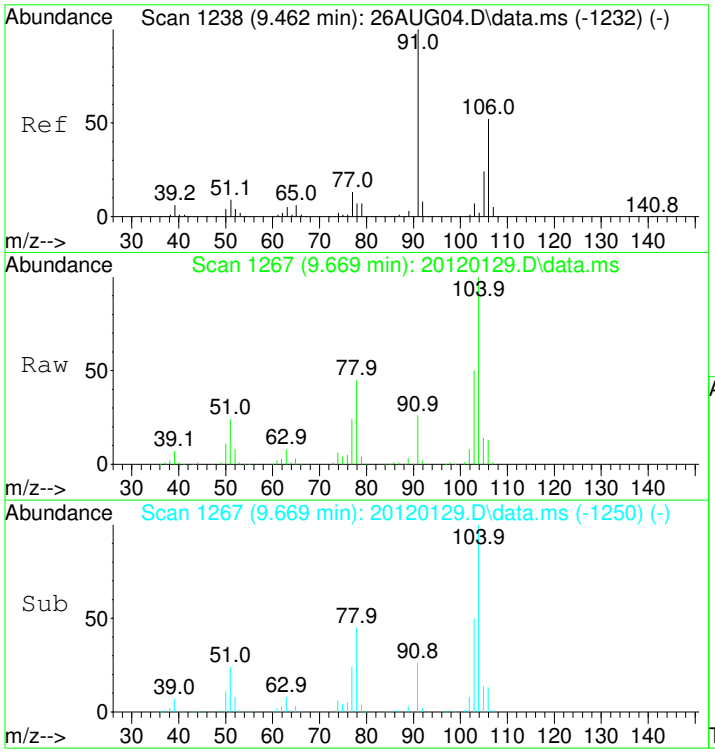


#85
Nonane
Concen: 30.33 ug/L
RT: 9.462 min Scan# 1238
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 82300

Ion	Ratio	Lower	Upper
43	100		
57	98.0	67.9	127.9
85	39.9	10.4	70.4

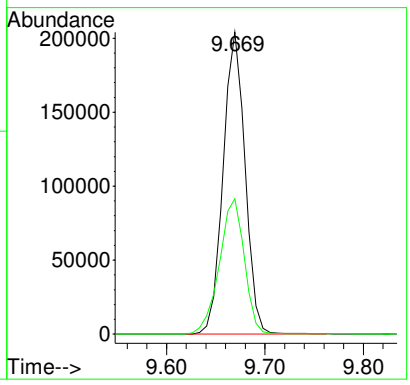


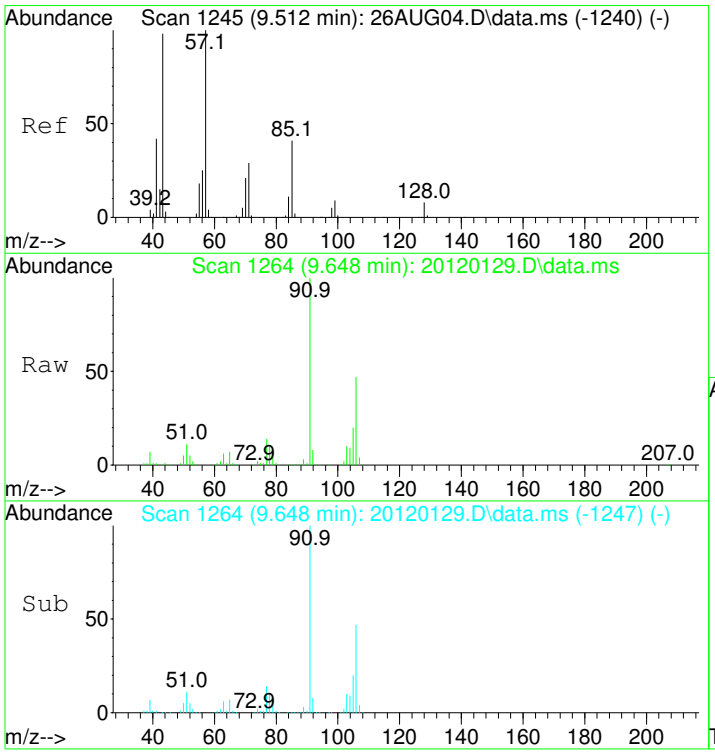


#86
Styrene
Concen: 20.27 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:104 Resp: 316779

Ion	Ratio	Lower	Upper
104	100		
78	51.0	32.3	72.3

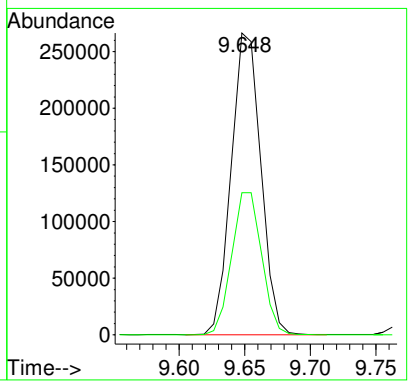


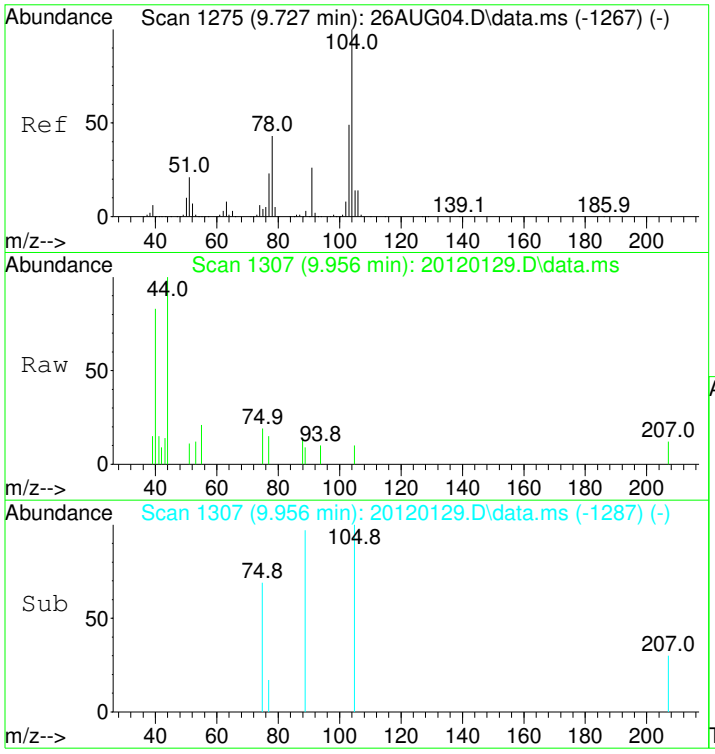


#87
o-Xylene
Concen: 20.59 ug/L
RT: 9.648 min Scan# 1264
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 418672

Ion	Ratio	Lower	Upper
91	100		
106	47.7	30.3	70.3

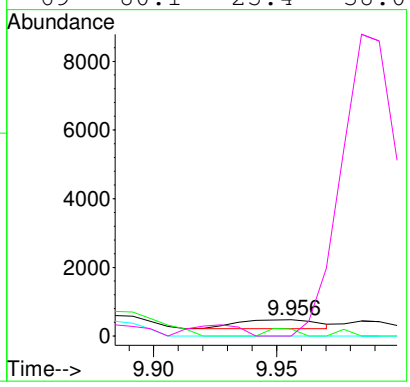


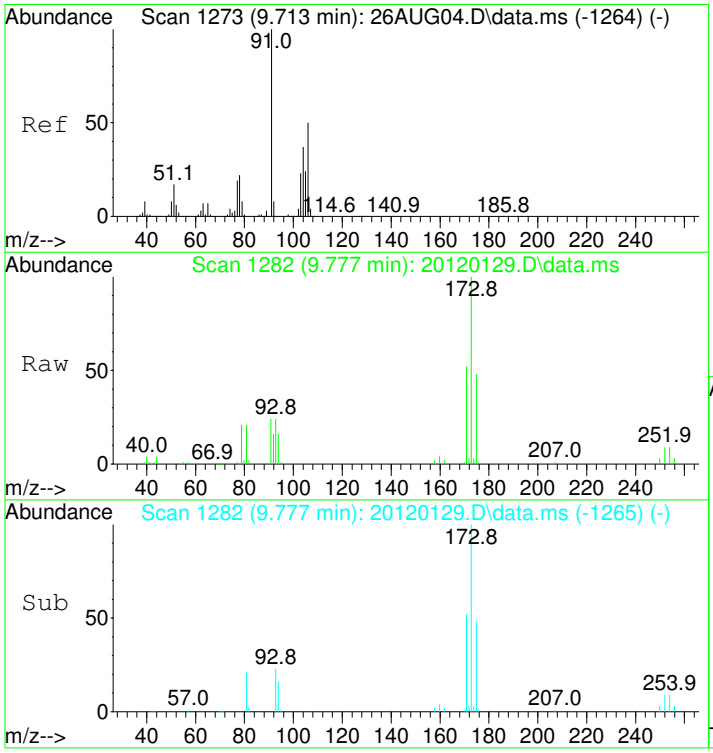


#88
Cyclohexanone
Concen: Below Cal
RT: 9.956 min Scan# 1307
Delta R.T. 0.022 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 55 Resp: 587

Ion	Ratio	Lower	Upper
55	100		
42	32.0	48.0	72.0#
98	0.0	38.2	57.2#
69	80.1	25.4	38.0#

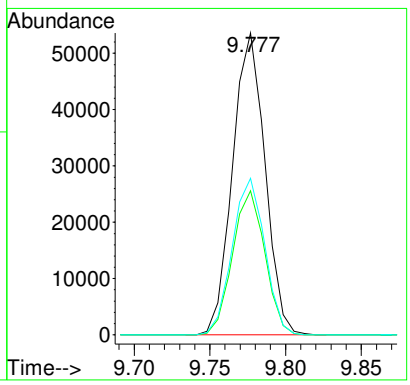


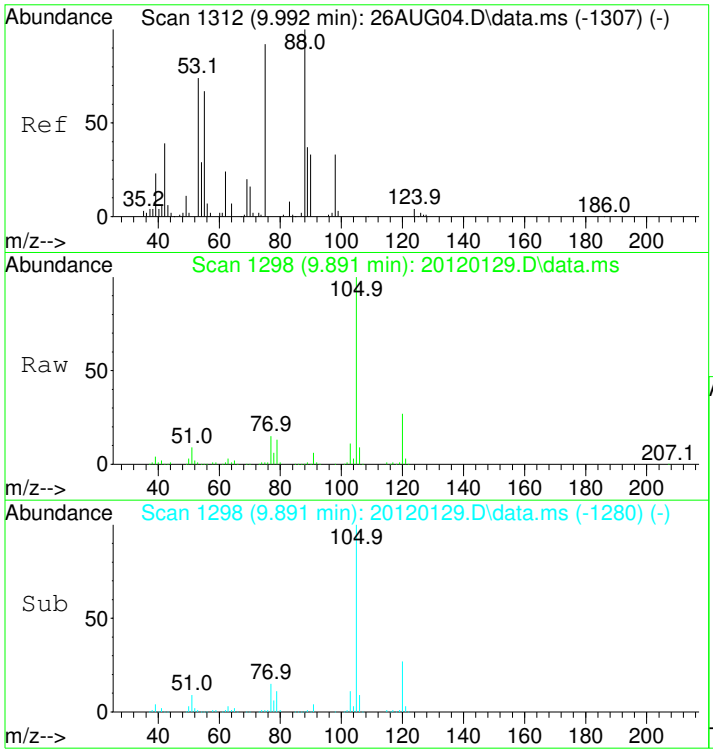


#89
Bromoform
Concen: 17.49 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:173 Resp: 79665

Ion	Ratio	Lower	Upper
173	100		
175	47.5	28.4	68.4
171	52.0	31.7	71.7

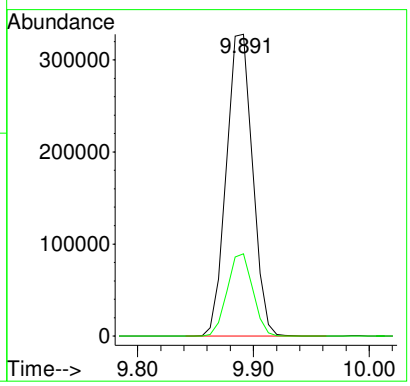


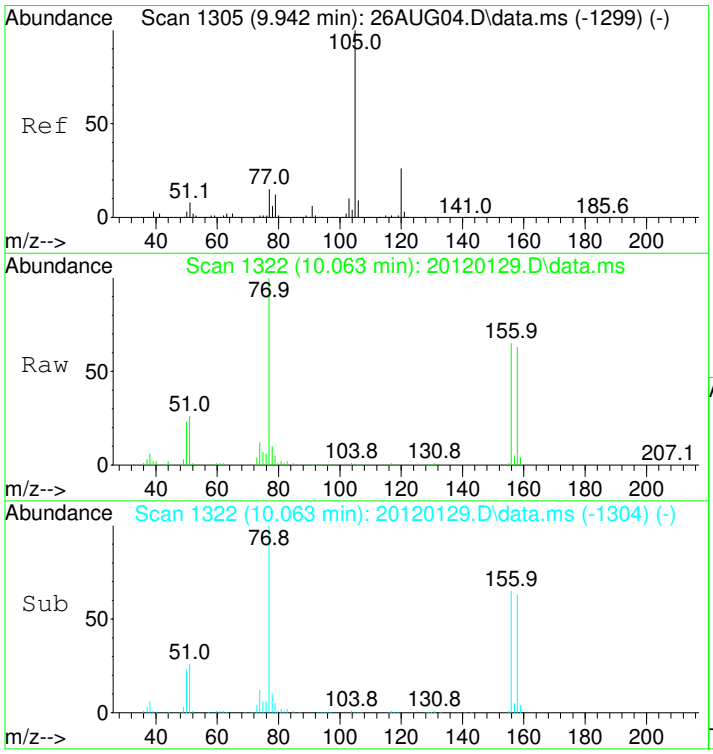


#90
Isopropylbenzene
Concen: 22.19 ug/L
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:105 Resp: 515067

Ion	Ratio	Lower	Upper
105	100		
120	26.6	8.0	48.0

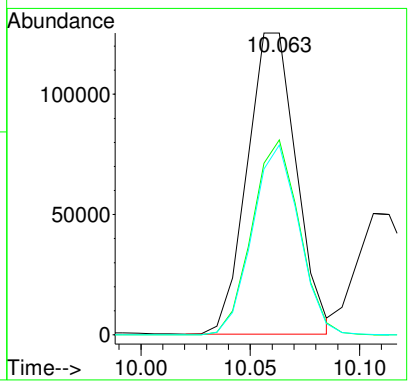


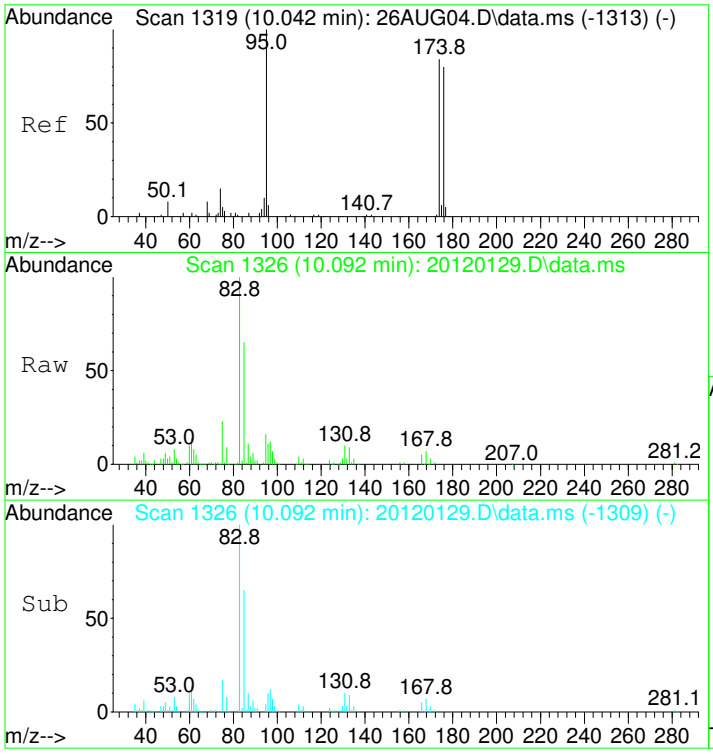


#92
Bromobenzene
Concen: 20.70 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 77 Resp: 196203

Ion	Ratio	Lower	Upper
77	100		
156	62.0	40.2	80.2
158	60.0	38.1	78.1

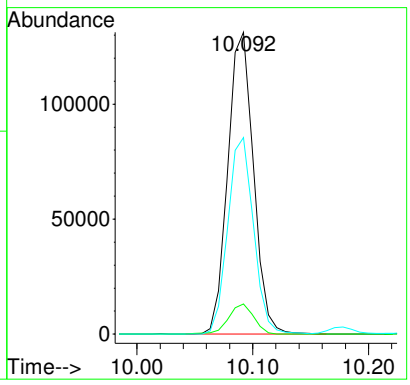


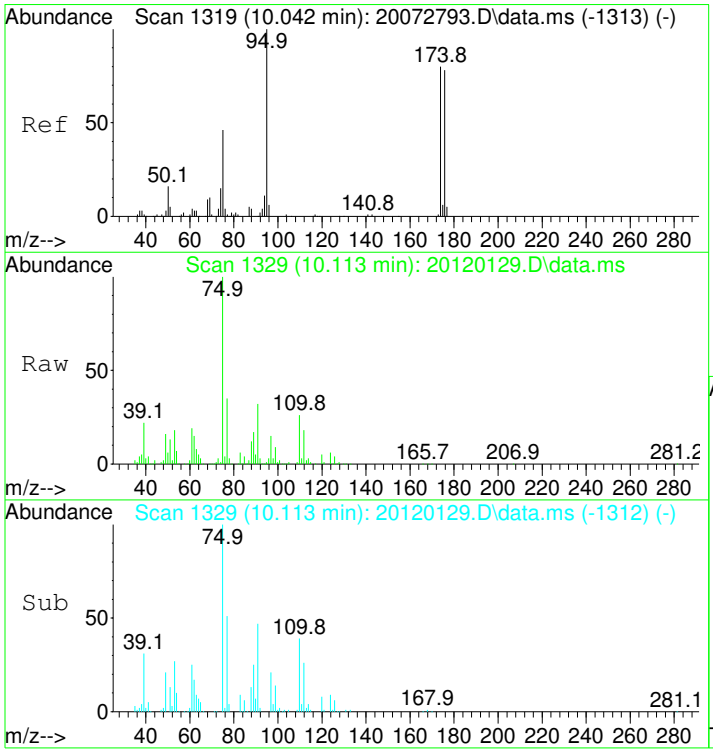


#93
1,1,2,2-Tetrachloroethane
Concen: 22.43 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 83 Resp: 201976

Ion	Ratio	Lower	Upper
83	100		
131	9.9	0.0	35.0
85	65.3	46.4	86.4

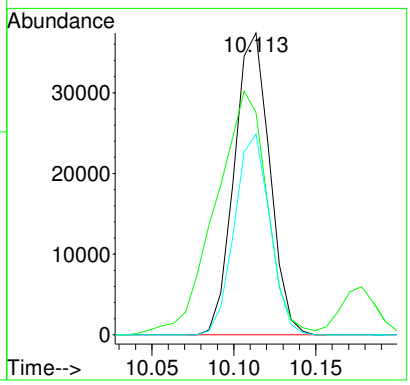


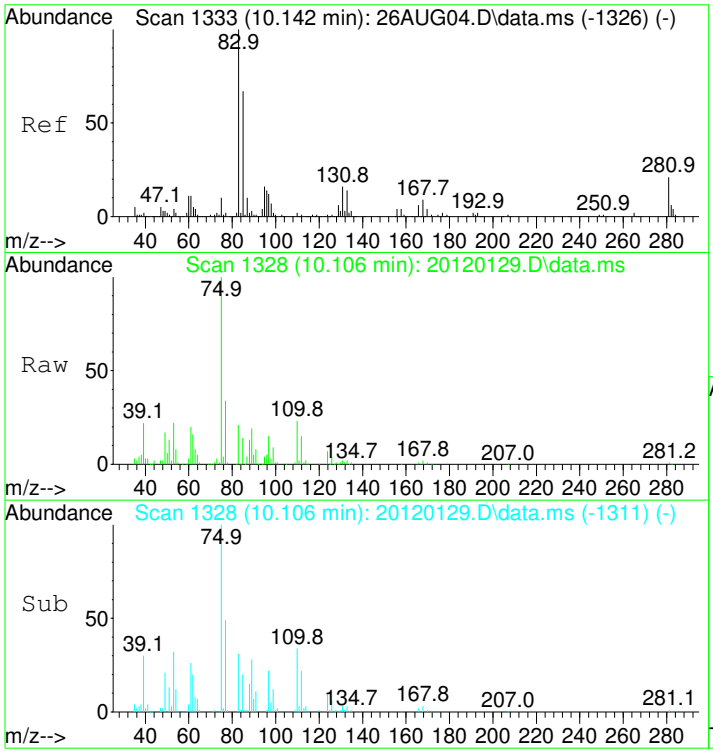


#94
1,2,3-Trichloropropane
Concen: 19.87 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:110 Resp: 56386

Ion	Ratio	Lower	Upper
110	100		
61	116.8	97.0	137.0
112	66.3	44.1	84.1

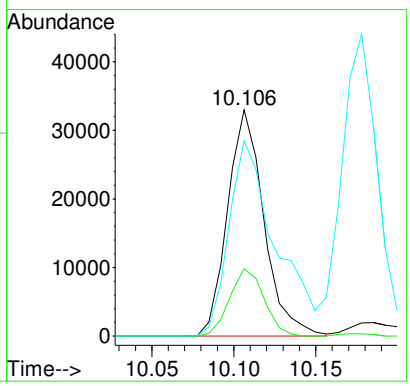


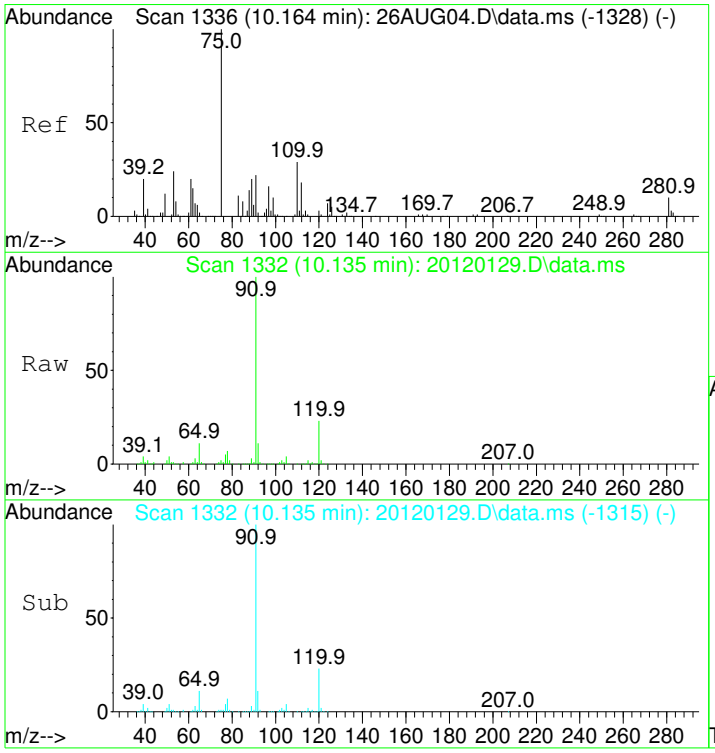


#95
trans-1,4-Dichloro-2-butene
Concen: 17.02 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 53 Resp: 50975

Ion	Ratio	Lower	Upper
53	100		
124	28.1	7.2	47.2
89	110.1	79.3	119.3

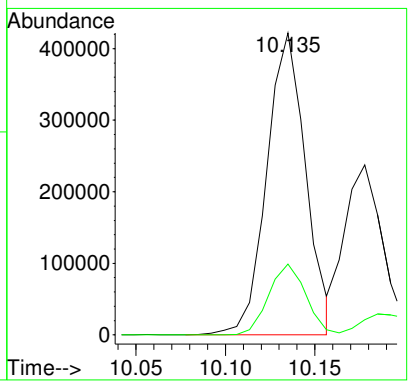


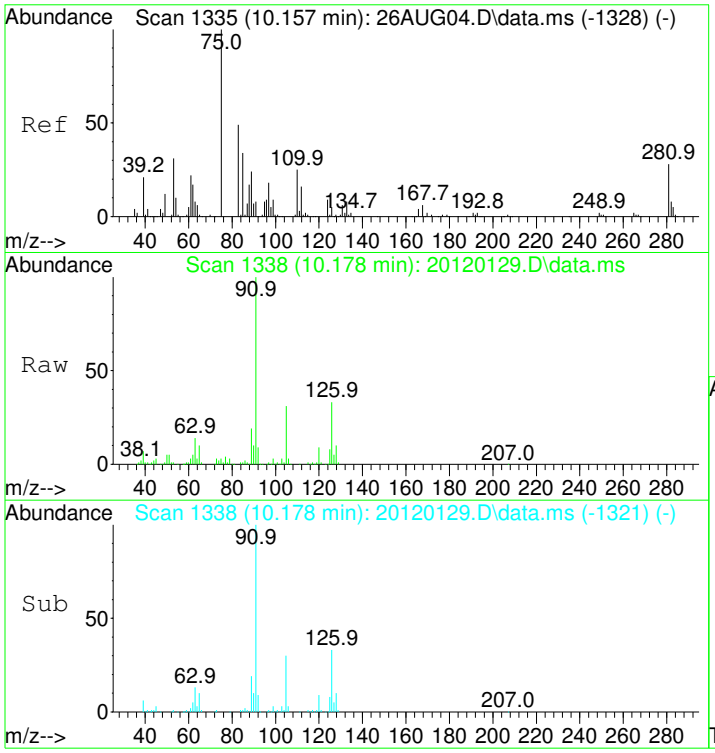


#96
n-Propylbenzene
Concen: 22.77 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 638479

Ion	Ratio	Lower	Upper
91	100		
120	22.4	3.7	43.7

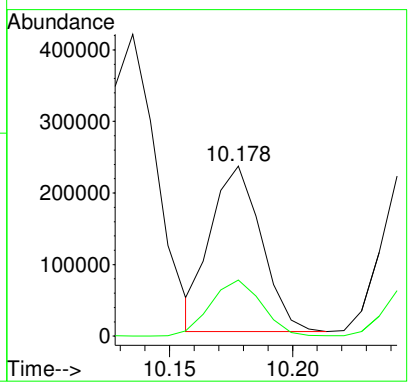


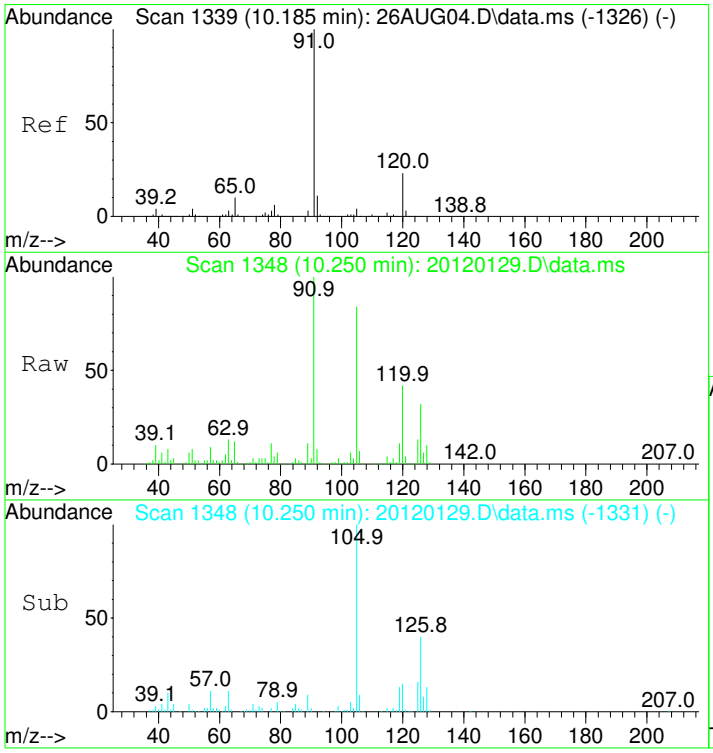


#97
2-Chlorotoluene
Concen: 23.53 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 332458

Ion	Ratio	Lower	Upper
91	100		
126	34.5	17.3	57.3

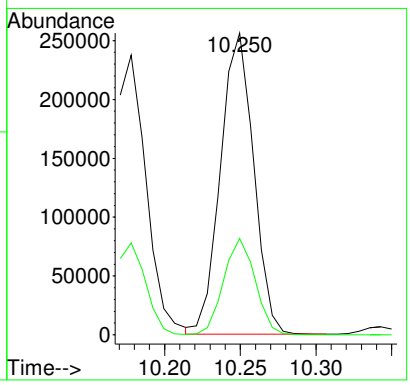


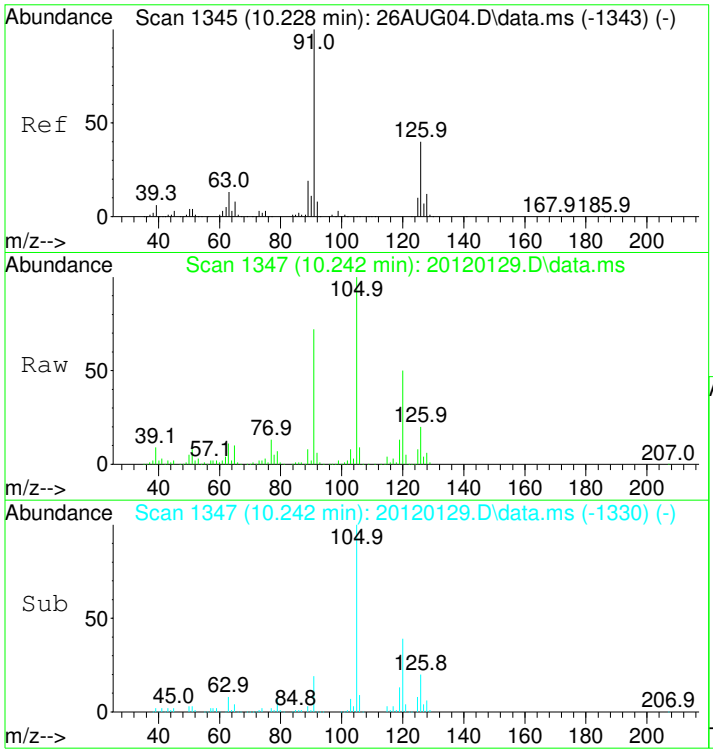


#98
4-Chlorotoluene
Concen: 20.21 ug/L
RT: 10.250 min Scan# 1348
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 389557

Ion	Ratio	Lower	Upper
91	100		
126	30.5	12.4	52.4

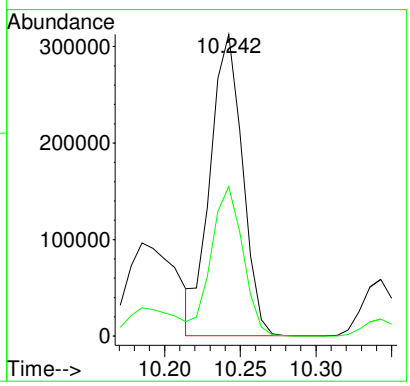


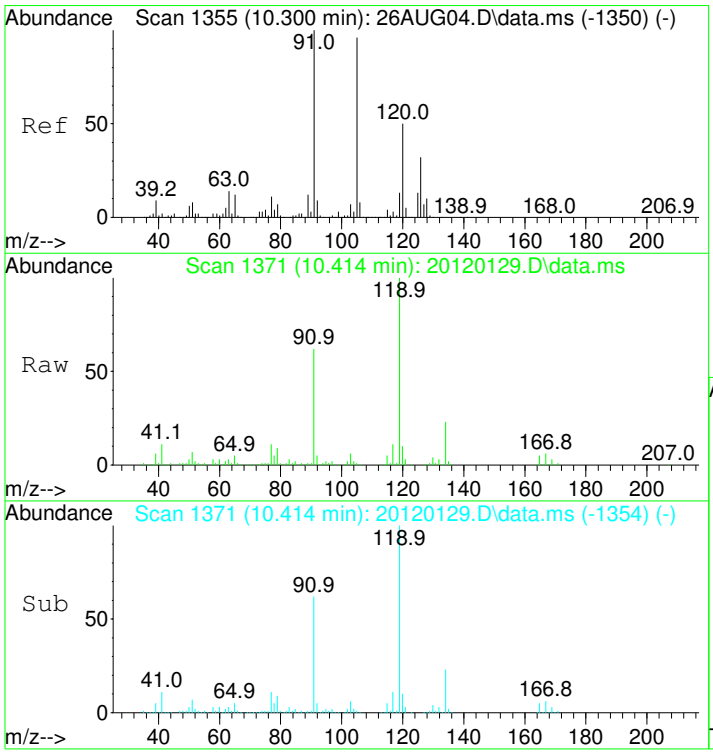


#99
1,3,5-Trimethylbenzene
Concen: 23.70 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:105 Resp: 463769

Ion	Ratio	Lower	Upper
105	100		
120	49.0	31.9	71.9

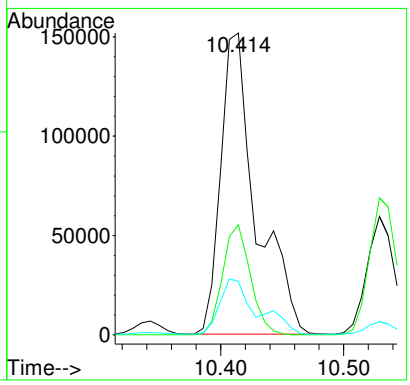


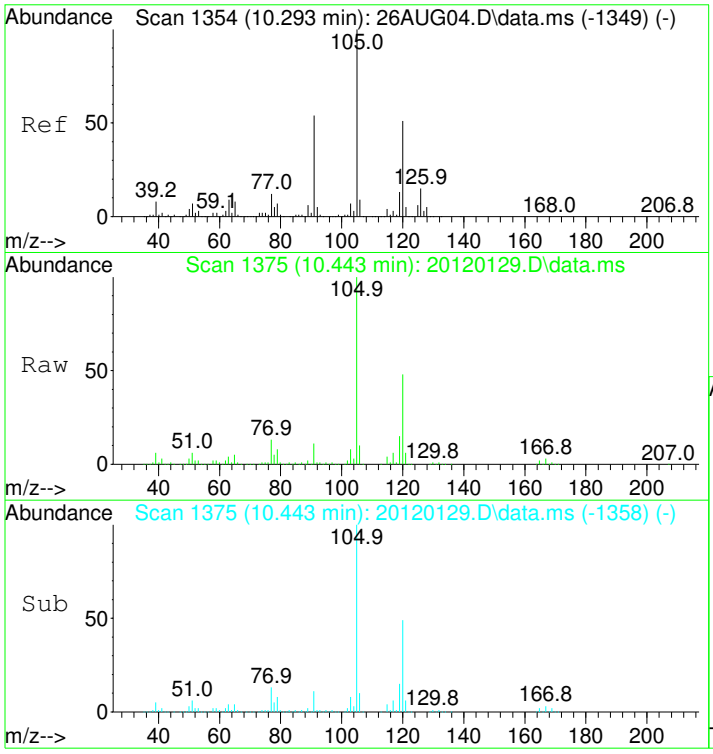


#100
tert-Butylbenzene
Concen: 24.52 ug/L
RT: 10.414 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 303501

Ion	Ratio	Lower	Upper
91	100		
134	28.7	9.7	49.7
41	19.3	0.0	39.3

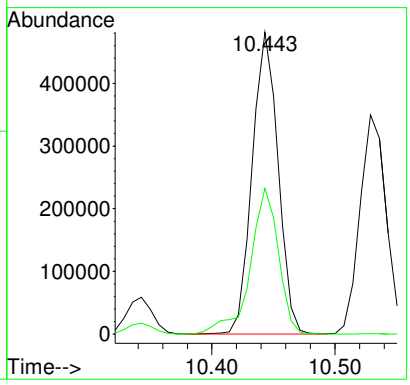


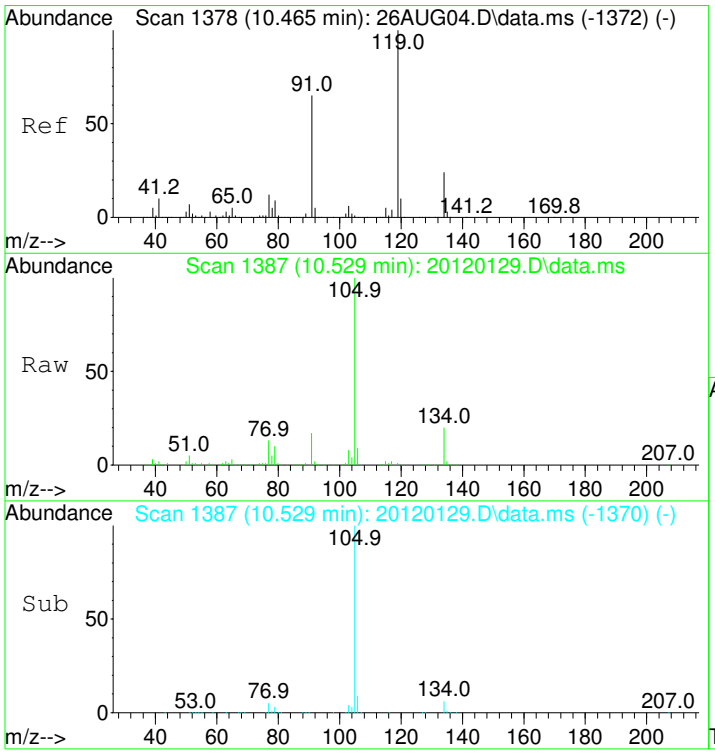


#101
1,2,4-Trimethylbenzene
Concen: 36.21 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:105 Resp: 700684

Ion	Ratio	Lower	Upper
105	100		
120	52.7	37.7	77.7

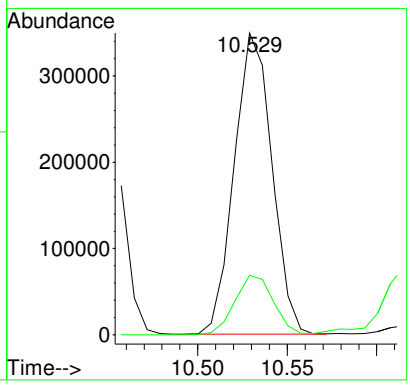


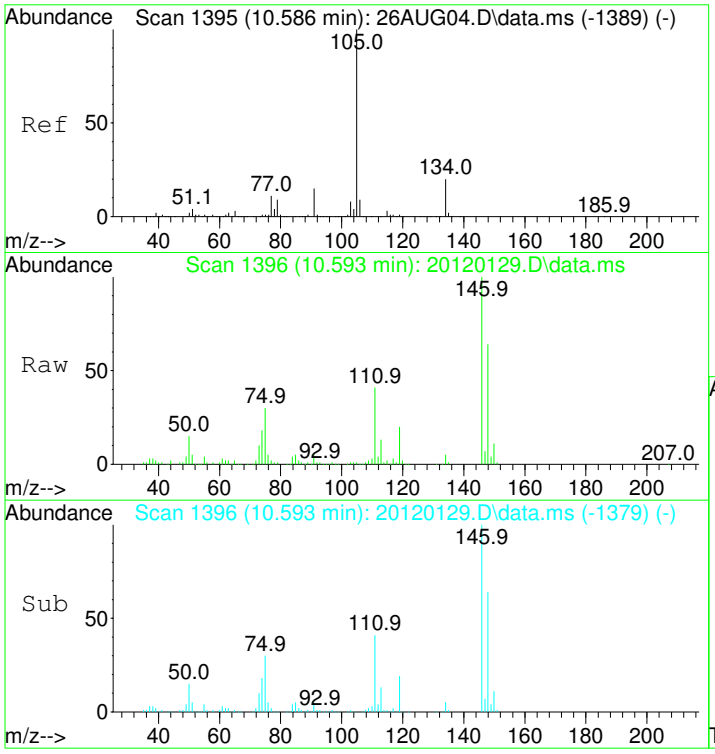


#102
sec-Butylbenzene
Concen: 21.44 ug/L
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:105 Resp: 513019

Ion	Ratio	Lower	Upper
105	100		
134	20.3	1.1	41.1

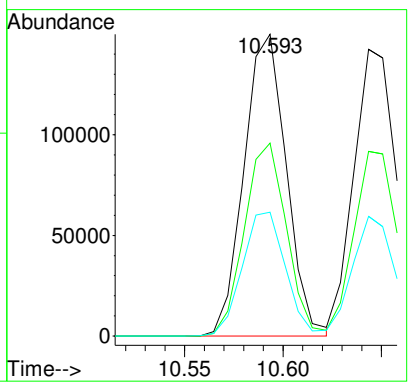


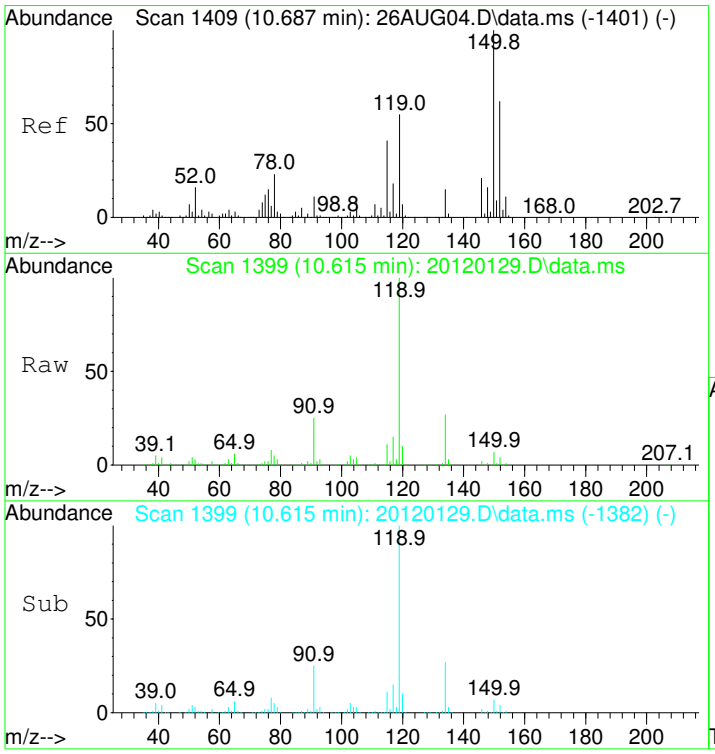


#104
1,3-Dichlorobenzene
Concen: 21.73 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:146 Resp: 224779

Ion	Ratio	Lower	Upper
146	100		
148	63.7	46.5	86.5
111	41.8	22.6	62.6

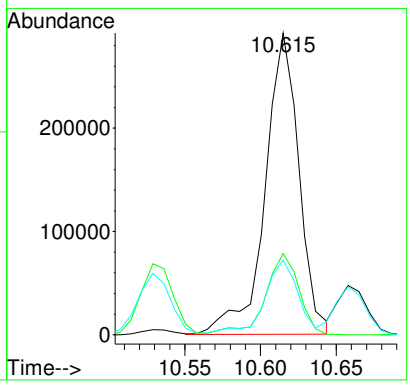


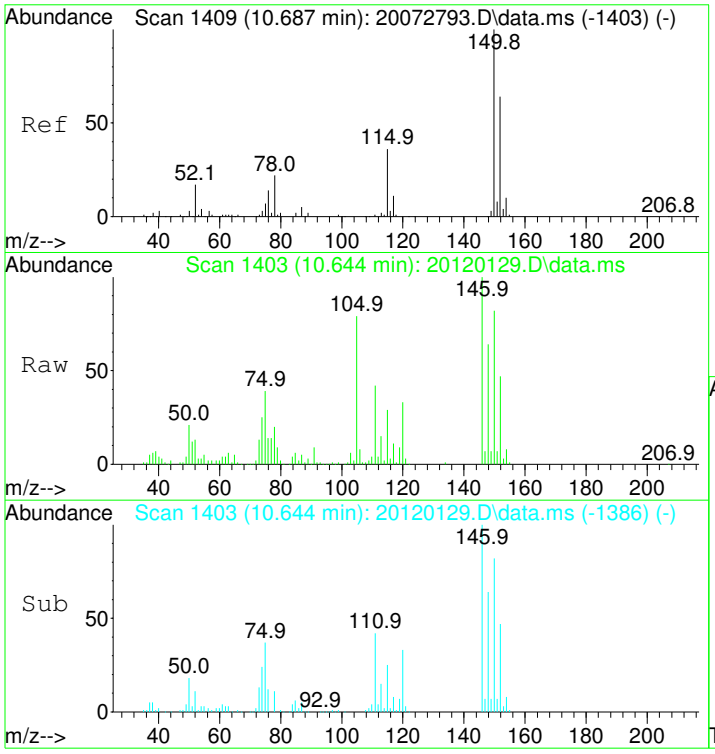


#105
p-Isopropyltoluene
Concen: 27.01 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:119 Resp: 454584

Ion	Ratio	Lower	Upper
119	100		
134	26.7	8.1	48.1
91	23.8	5.2	45.2

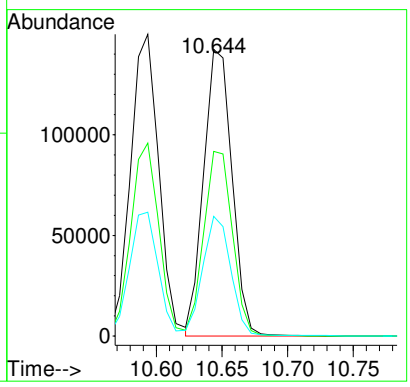


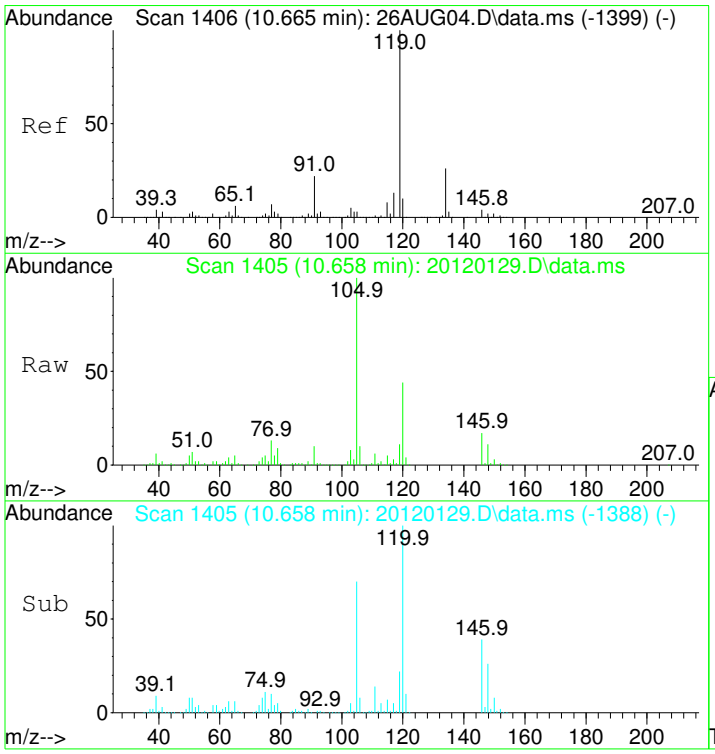


#106
1,4-Dichlorobenzene
Concen: 21.53 ug/L
RT: 10.644 min Scan# 1403
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:146 Resp: 214485

Ion	Ratio	Lower	Upper
146	100		
148	64.8	37.3	97.3
111	41.4	12.5	72.5

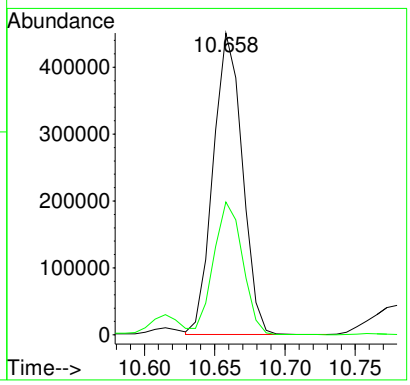


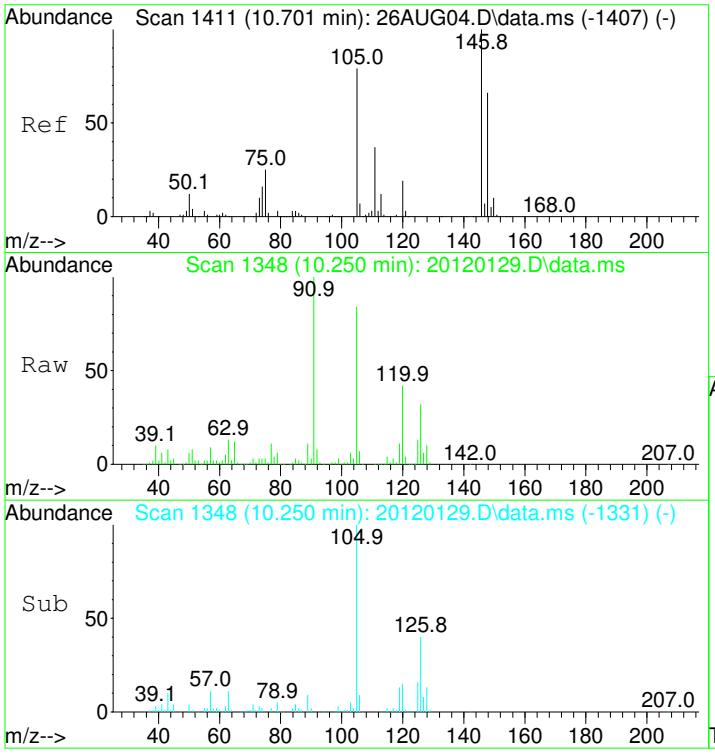


#107
1,2,3-Trimethylbenzene
Concen: 38.93 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:105 Resp: 651385

Ion	Ratio	Lower	Upper
105	100		
120	43.3	35.5	53.3

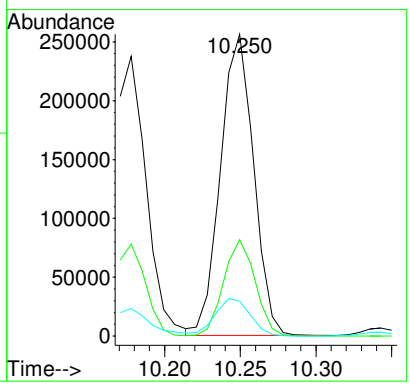


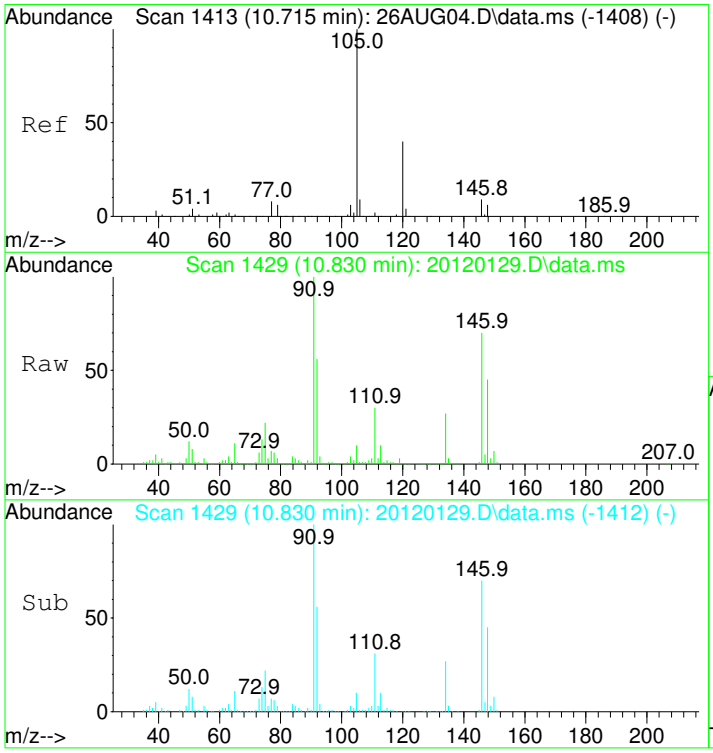


#108
Benzyl chloride
Concen: 20.87 ug/L
RT: 10.250 min Scan# 1348
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 389557

Ion	Ratio	Lower	Upper
91	100		
126	30.5	12.4	52.4
65	13.4	0.0	33.3

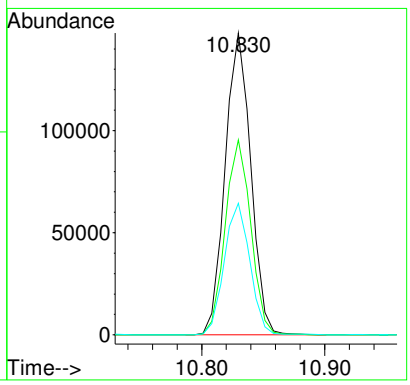


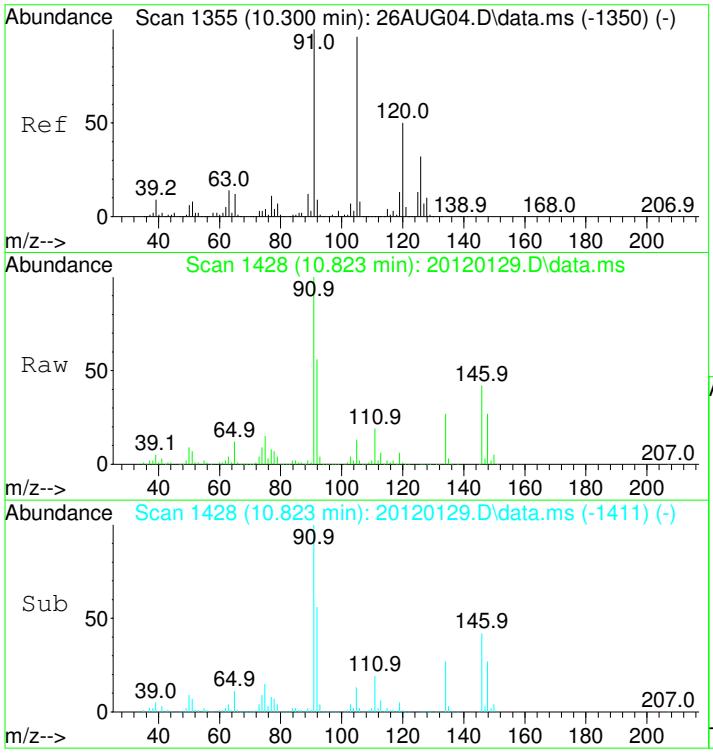


#109
1,2-Dichlorobenzene
Concen: 21.12 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:146 Resp: 213429

Ion	Ratio	Lower	Upper
146	100		
148	64.5	45.6	85.6
111	43.8	24.1	64.1

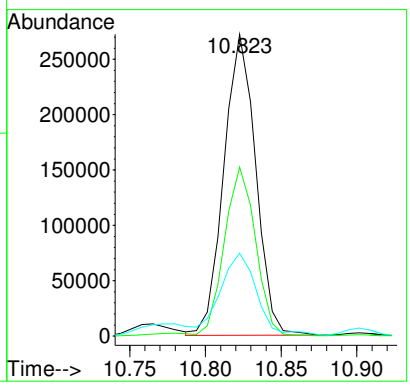


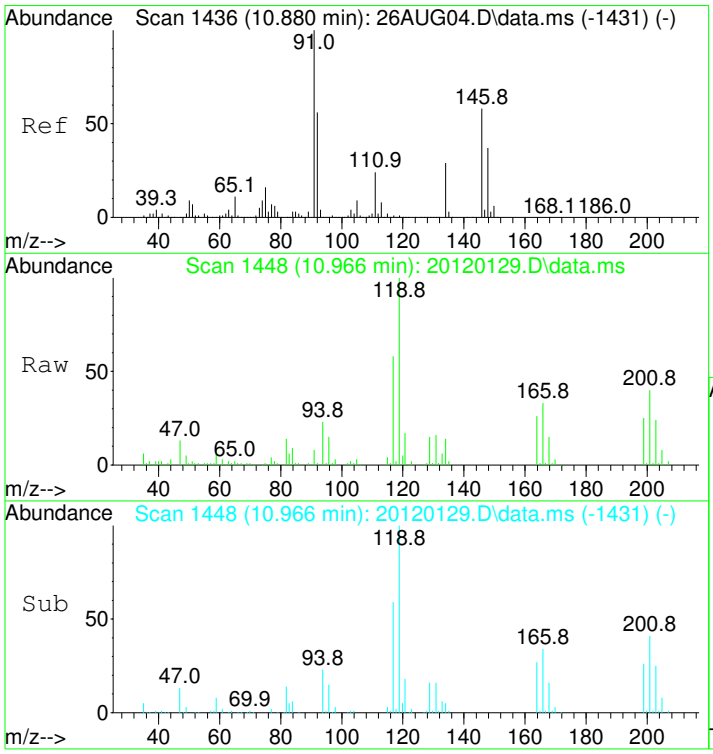


#110
n-Butylbenzene
Concen: 22.02 ug/L
RT: 10.823 min Scan# 1428
Delta R.T. 0.001 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 91 Resp: 397464

Ion	Ratio	Lower	Upper
91	100		
92	56.2	39.3	79.3
134	30.4	7.5	47.5

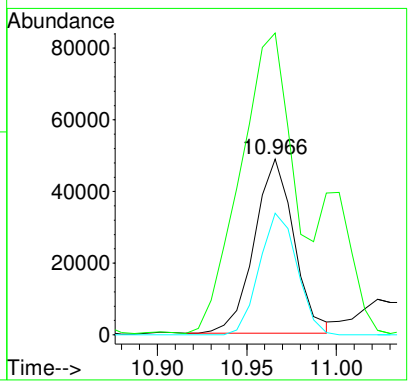


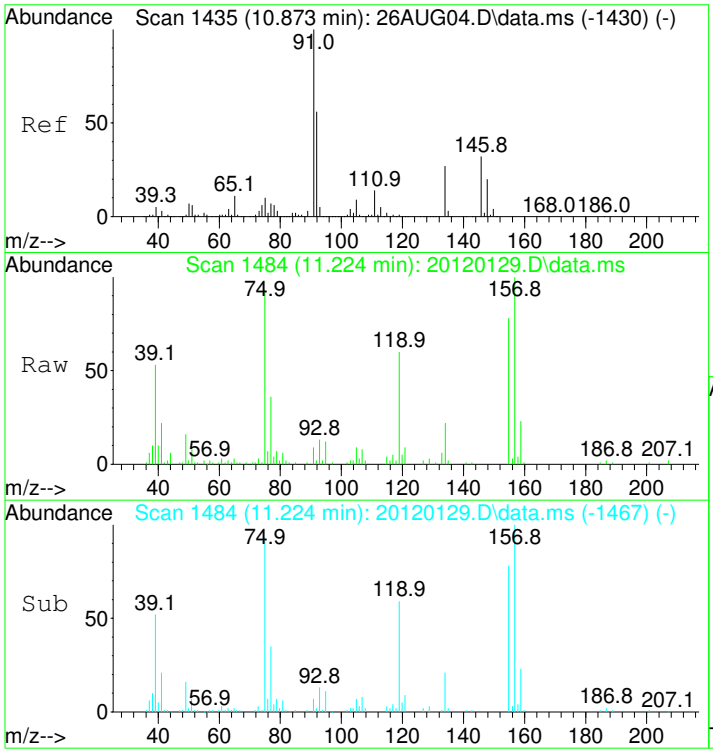


#111
Hexachloroethane
Concen: 19.80 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:117 Resp: 75464

Ion	Ratio	Lower	Upper
117	100		
119	233.3	75.9	115.9#
201	66.0	49.2	89.2

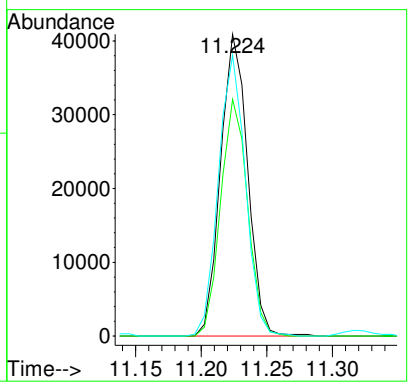


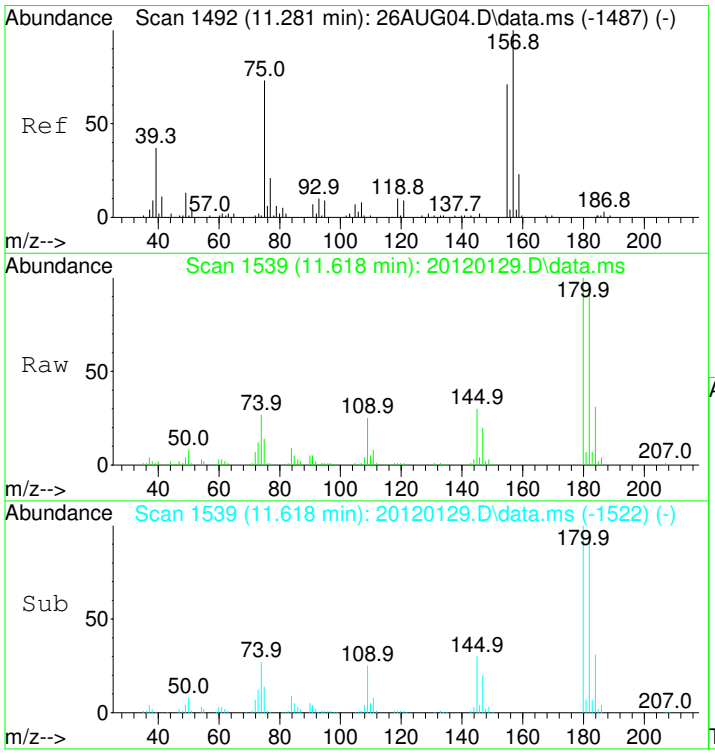


#112
1,2-Dibromo-3-chloropropane
Concen: 20.89 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:157 Resp: 58956

Ion	Ratio	Lower	Upper
157	100		
155	77.7	54.4	94.4
75	92.6	72.1	112.1

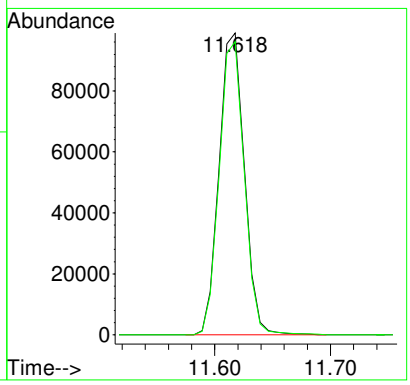


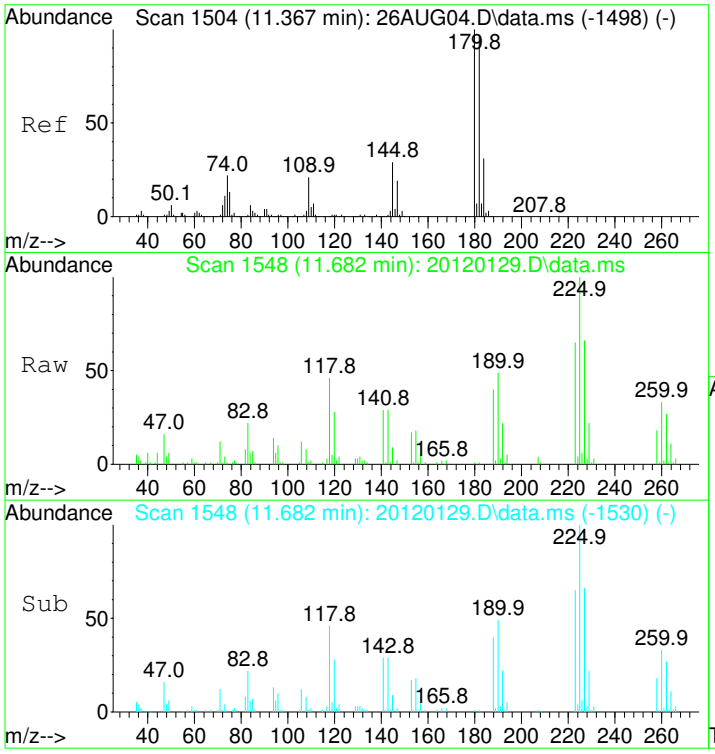


#114
1,2,4-Trichlorobenzene
Concen: 19.59 ug/L
RT: 11.618 min Scan# 1539
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:180 Resp: 150011

Ion	Ratio	Lower	Upper
180	100		
182	96.2	76.7	116.7

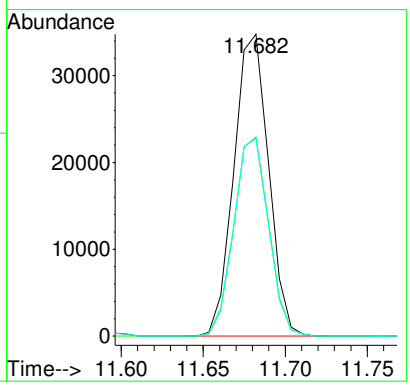


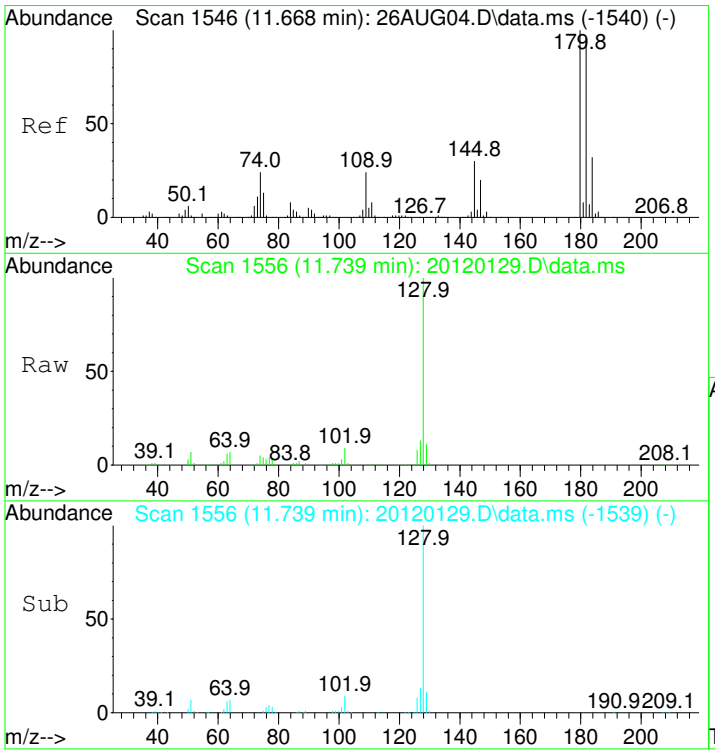


#115
Hexachlorobutadiene
Concen: 19.75 ug/L
RT: 11.682 min Scan# 1548
Delta R.T. 0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:225 Resp: 51171

Ion	Ratio	Lower	Upper
225	100		
227	66.0	50.9	76.3
223	65.9	50.5	75.7

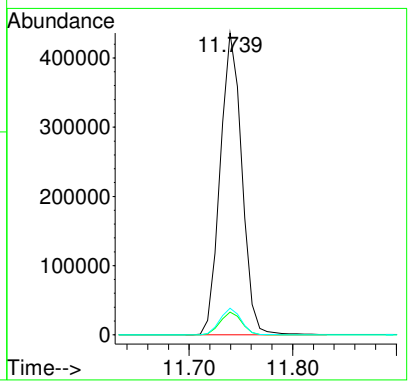


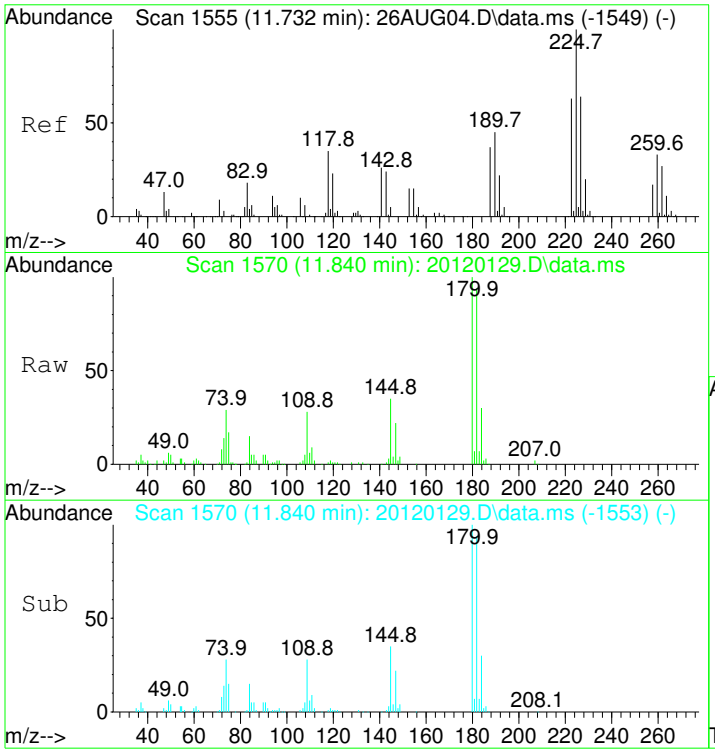


#116
Naphthalene
Concen: 21.74 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:128 Resp: 636381

Ion	Ratio	Lower	Upper
128	100		
126	7.5	0.0	28.2
102	8.6	0.0	30.0

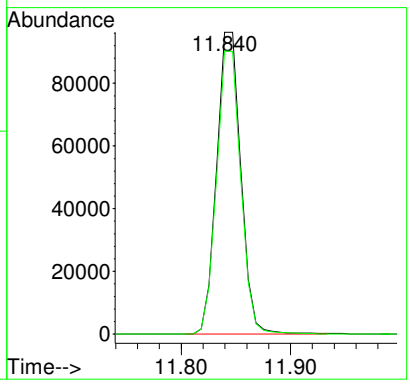


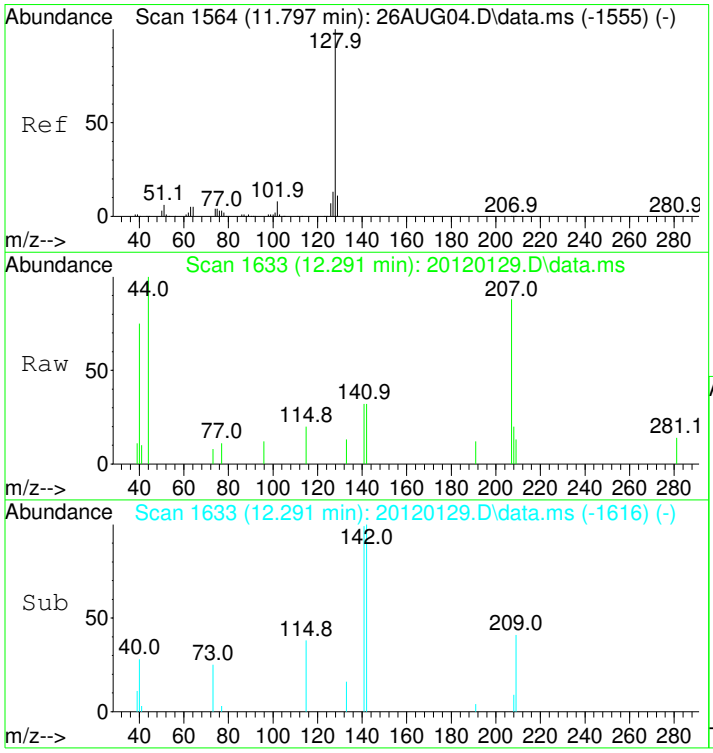


#117
1,2,3-Trichlorobenzene
Concen: 20.27 ug/L
RT: 11.840 min Scan# 1570
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:180 Resp: 148359

Ion	Ratio	Lower	Upper
180	100		
182	93.7	78.4	118.4

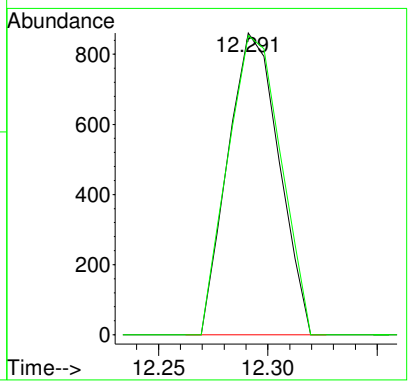


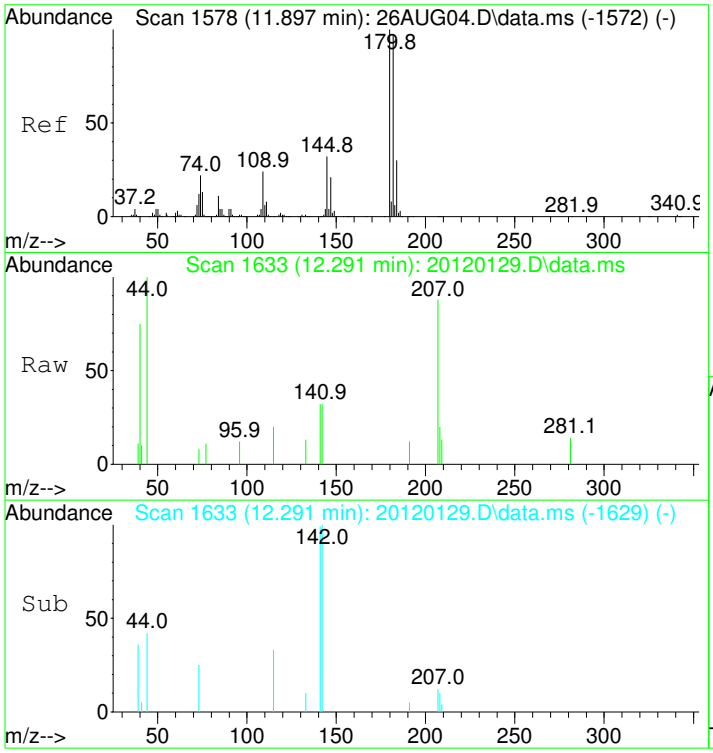


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:142 Resp: 1402

Ion	Ratio	Lower	Upper
142	100		
141	102.9	65.0	105.0

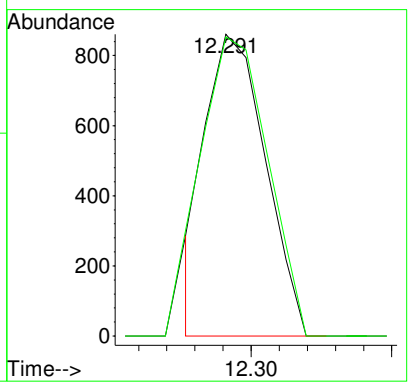


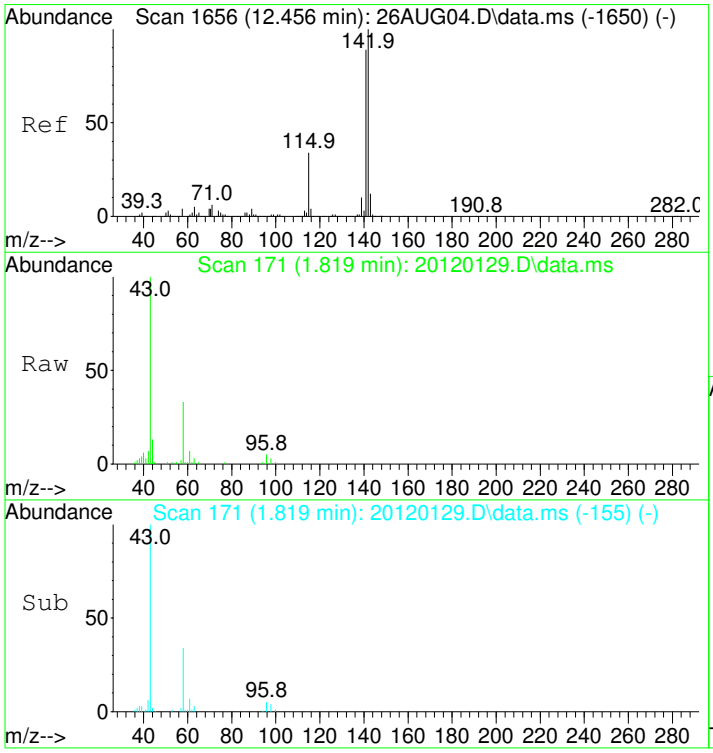


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.093 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion:142 Resp: 1279

Ion	Ratio	Lower	Upper
142	100		
141	102.7	69.8	104.8

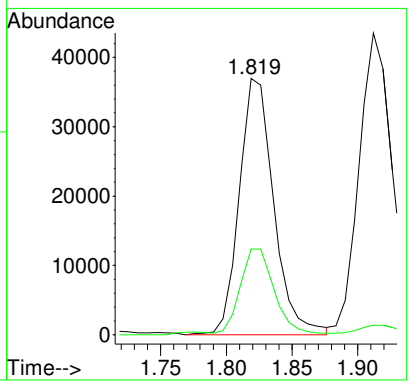


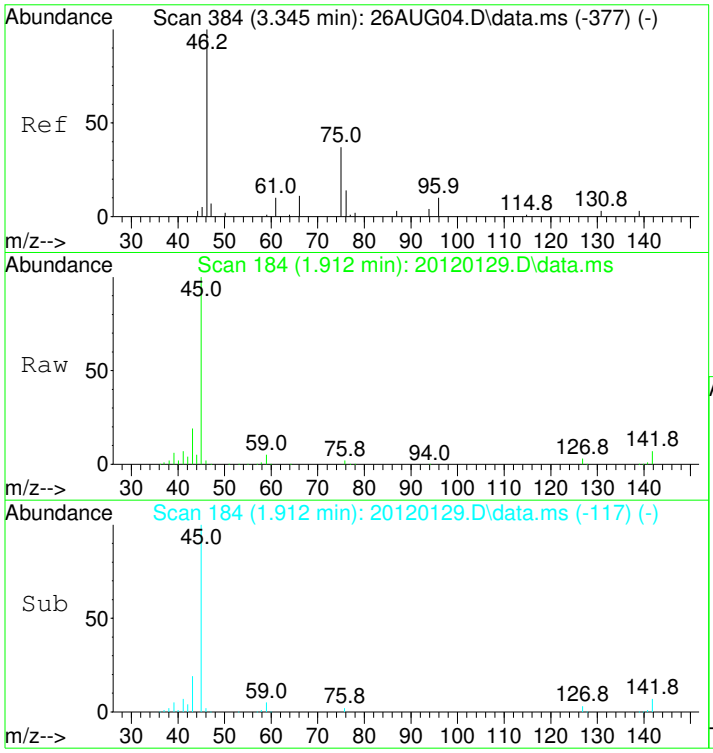


#121
2-Propanone
Concen: 22.11 ug/L
RT: 1.819 min Scan# 171
Delta R.T. -0.007 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 67818

Ion	Ratio	Lower	Upper
43	100		
58	32.0	28.2	42.2

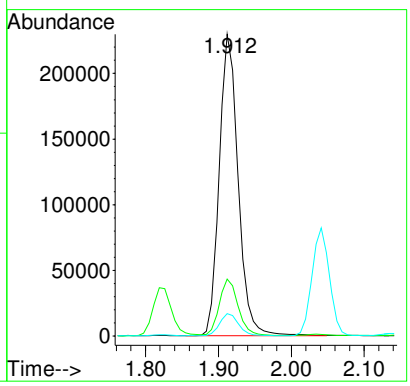


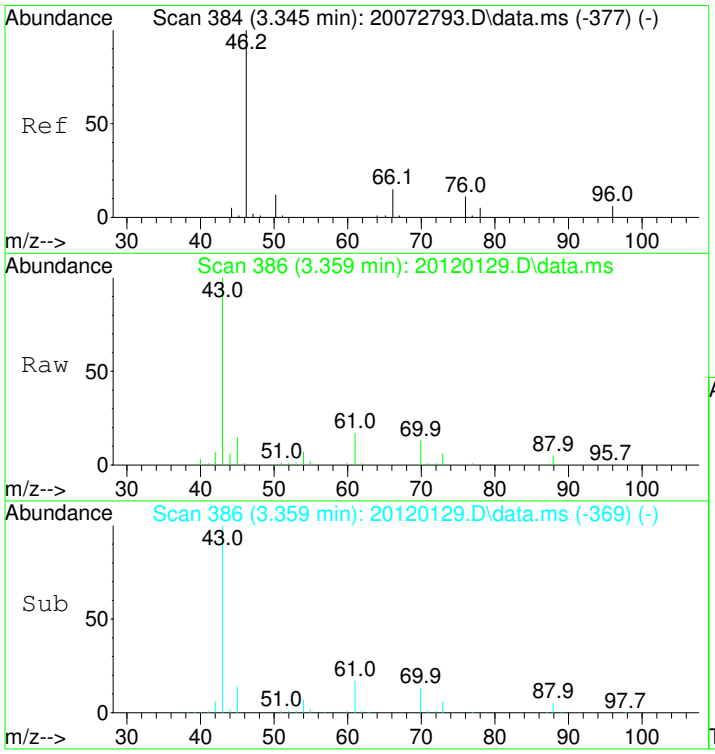


#122
Isopropyl Alcohol
Concen: 398.25 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.021 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 45 Resp: 414134

Ion	Ratio	Lower	Upper
45	100		
43	18.8	14.6	21.8
41	7.4	5.7	8.5

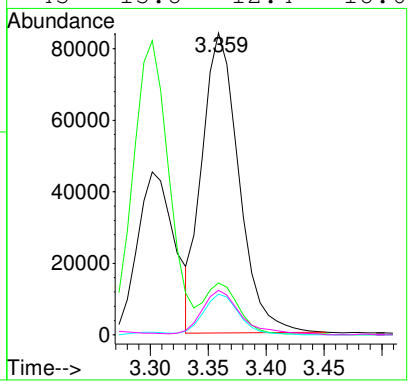


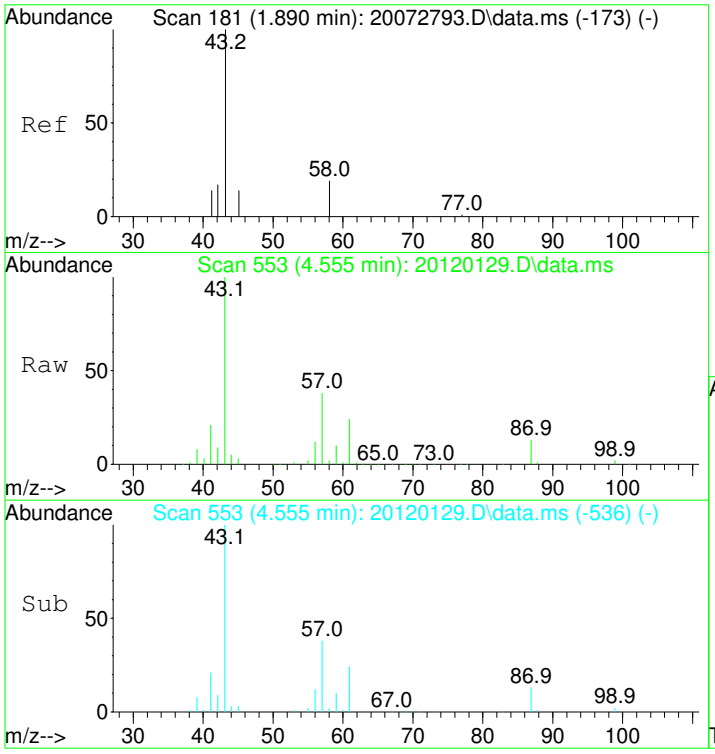


#123
Acetic Ether
Concen: 19.77 ug/L
RT: 3.359 min Scan# 386
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 186230

Ion	Ratio	Lower	Upper
43	100		
61	15.6	11.9	17.9
70	13.2	9.7	14.5
45	15.8	12.4	18.6

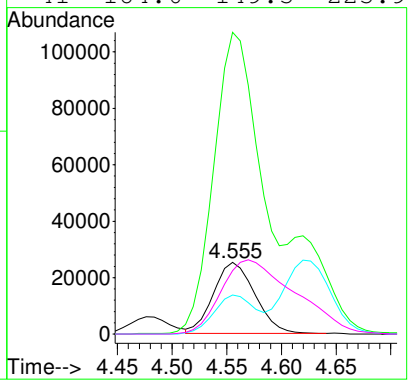


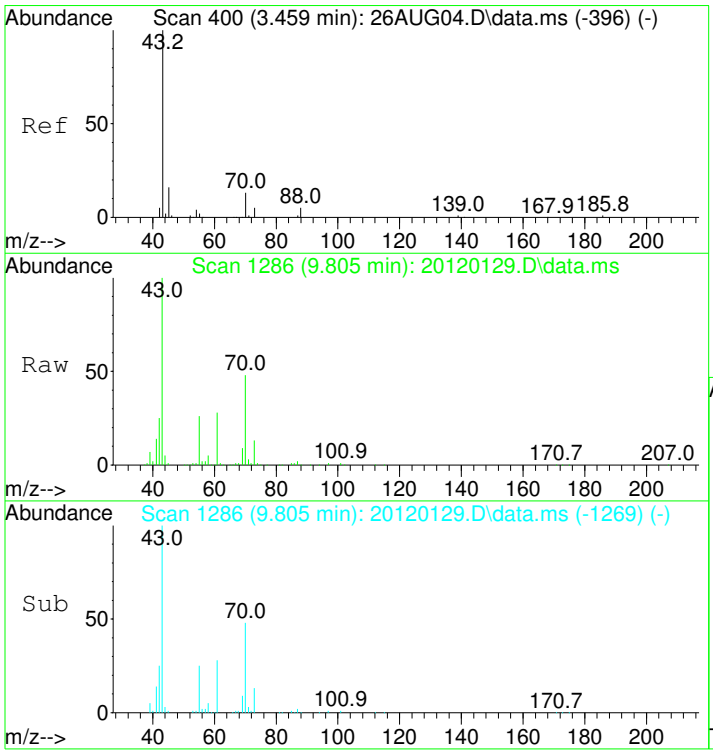


#124
Isopropyl Acetate
Concen: 19.42 ug/L
RT: 4.555 min Scan# 553
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 61 Resp: 65854

Ion	Ratio	Lower	Upper
61	100		
43	496.9	392.6	589.0
87	56.1	46.2	69.2
41	184.6	149.3	223.9

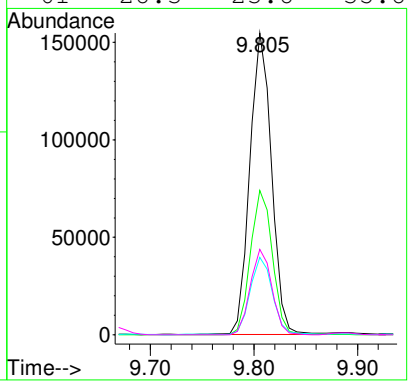




#125
Amyl Acetate
Concen: 17.79 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. 0.000 min
Lab File: 20120129.D
Acq: 1 Dec 2020 5:58 pm

Tgt Ion: 43 Resp: 224201

Ion	Ratio	Lower	Upper
43	100		
70	48.8	39.8	59.6
55	26.2	21.8	32.8
61	28.3	23.8	35.8



1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120130.D
Acq On : 1 Dec 2020 6:14 pm
Operator : MF
Sample : 20111803-03A MSD DF50
Misc : IS 200-21725
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Dec 02 08:48:12 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.989	168	199250	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	335930	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.196	117	309899	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	156275	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	97440	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	105519	19.66	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 98.30%				
50) 1,2-Dichloroethane-d4	4.362	65	122159	18.77	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 93.85%				
69) Toluene-d8	7.836	98	382809	19.96	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 99.80%				
91) Bromofluorobenzene	9.992	95	155545	19.97	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 99.85%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	104046	20.52	ug/L		98
3) Dichlorofluoromethane	1.453	67	168670	14.75	ug/L		98
4) Chloromethane	1.052	50	139826	12.67	ug/L		98
6) Vinyl chloride	1.110	62	133871	19.97	ug/L		97
7) Bromomethane	1.274	96	82200	77.41	ug/L		81
8) Chloroethane	1.339	64	72218	25.57	ug/L		75
9) Trichlorofluoromethane	1.475	101	126817	16.07	ug/L		98
10) Ethanol	1.575	45	168780	295.48	ug/L		82
11) Ethyl ether	1.640	59	93360	19.55	ug/L		98
12) Acrolein	1.711	56	317	Below Cal		#	1
13) 1,1-Dichloroethene	1.790	61	161461	21.86	ug/L		98
16) Acetone	1.826	43	65900	19.92	ug/L		98
17) Chloroprene	2.757	53	89	Below Cal		#	1
18) Carbon disulfide	1.941	76	321133	21.77	ug/L		100
19) 2-Propanol	1.912	45	422355	372.98	ug/L		99
20) Allyl chloride	2.041	41	137083	16.18	ug/L		91
21) Methyl acetate	2.034	43	2279	Below Cal		#	1
22) Acetonitrile	2.041	41	137083	16.17	ug/L		94
23) Methylene chloride	2.134	49	130272	16.79	ug/L		98
24) trans-1,2-Dichloroethene	2.349	61	153389	21.10	ug/L		100
25) t-Butanol	2.220	59	214523	95.71	ug/L		99
26) Acrylonitrile	2.320	53	76669	19.95	ug/L		99
27) Methyl tert-butyl ether	2.342	73	341781	20.65	ug/L		99
28) Hexane	2.578	57	1822	Below Cal		#	58
29) 1,1-Dichloroethane	2.728	63	207912	19.91	ug/L		99
30) Diisopropyl ether	2.764	45	317296	20.69	ug/L	#	50
32) Methylcyclopentane	3.173	56	203815	17.80	ug/L		81
33) Ethyl tert butyl ether	3.122	59	341627	19.55	ug/L		99
34) 2,2-Dichloropropane	3.301	77	164203	19.06	ug/L		99
35) cis-1,2-Dichloroethene	3.301	61	180423	20.50	ug/L		97
36) 2-Butanone	3.301	43	102917	20.26	ug/L		100
37) Ethyl Acetate	3.359	43	187086	19.01	ug/L		96
38) Methyl acrylate	3.402	55	178006	20.28	ug/L		99
40) Bromochloromethane	3.567	49	91685	20.07	ug/L		99
41) Tetrahydrofuran	3.588	42	73203	19.60	ug/L		99
42) Methacrylonitrile	3.545	41	142147	19.25	ug/L		99
43) Chloroform	3.710	83	199620	18.69	ug/L		99
44) Cyclohexane	3.989	56	4088	Below Cal		#	21
46) 1,1,1-Trichloroethane	3.889	97	175466	21.18	ug/L		99
48) Carbon tetrachloride	4.082	117	138839	19.55	ug/L		98

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120130.D
Acq On : 1 Dec 2020 6:14 pm
Operator : MF
Sample : 20111803-03A MSD DF50
Misc : IS 200-21725
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Dec 02 08:48:12 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49)	1,1-Dichloropropene	4.104	75	149553	21.37	ug/L		99
51)	1,2-Dichloroethane	4.476	62	152977	19.67	ug/L		98
52)	Benzene	4.369	78	446582	22.00	ug/L		99
53)	Tertiaryamylmethylether	4.627	73	329120	21.34	ug/L	#	80
54)	Isobutyl Alcohol	4.555	43	333419	21.05	ug/L		98
55)	Heptane	4.913	43	1108	Below Cal		#	32
59)	Trichloroethene	5.486	130	117216	20.65	ug/L		97
60)	1,2-Dichloropropane	5.973	63	118094	20.68	ug/L		99
61)	Dibromomethane	6.138	93	79932	19.82	ug/L		99
62)	Methyl methacrylate	6.245	41	128211	19.49	ug/L		96
63)	Bromodichloromethane	6.589	83	154555	19.97	ug/L		100
64)	2-Chloroethyl vinyl ether	7.348	43	497	Below Cal		#	23
65)	2-Nitropropane	7.126	43	59559	19.59	ug/L		97
66)	cis-1,3-Dichloropropene	7.499	75	189322	19.90	ug/L		99
68)	4-Methyl-2-pentanone	7.764	43	302946	33.30	ug/L		77
70)	Toluene	7.921	91	461712	22.91	ug/L		98
71)	trans-1,3-Dichloropropene	8.251	75	178268	20.60	ug/L		93
73)	Ethyl methacrylate	8.358	69	199026	21.10	ug/L		98
74)	1,1,2-Trichloroethane	8.437	97	117309	21.24	ug/L		99
75)	Tetrachloroethene	8.459	166	113886	22.47	ug/L		98
76)	1,3-Dichloropropane	8.573	76	186651	20.33	ug/L		99
77)	2-Hexanone	8.666	43	158077	21.84	ug/L		100
78)	Chlorodibromomethane	8.752	129	112393	18.60	ug/L		99
79)	Butyl acetate	8.802	43	249040	21.78	ug/L		98
80)	1,2-Dibromoethane	8.824	107	128297	22.46	ug/L		96
81)	Chlorobenzene	9.218	112	289158	22.33	ug/L		97
82)	1,1,1,2-Tetrachloroethane	9.297	131	102721	20.49	ug/L		98
83)	Ethylbenzene	9.304	91	630048	27.66	ug/L		98
84)	m/p-Xylene	9.397	91	863946	46.98	ug/L		96
85)	Nonane	9.461	43	85414	31.07	ug/L		98
86)	Styrene	9.669	104	322669	20.38	ug/L		98
87)	o-Xylene	9.655	91	434715	21.13	ug/L		95
88)	Cyclohexanone	9.934	55	190	Below Cal		#	14
89)	Bromoform	9.777	173	81873	17.73	ug/L		99
90)	Isopropylbenzene	9.891	105	529272	22.53	ug/L		97
92)	Bromobenzene	10.063	77	209172	21.80	ug/L		98
93)	1,1,2,2-Tetrachloroethane	10.092	83	203952	22.35	ug/L		96
94)	1,2,3-Trichloropropane	10.113	110	57885	20.13	ug/L		98
95)	trans-1,4-Dichloro-2-b...	10.106	53	54651	18.03	ug/L		94
96)	n-Propylbenzene	10.135	91	654014	23.04	ug/L		98
97)	2-Chlorotoluene	10.178	91	333311	23.27	ug/L		97
98)	4-Chlorotoluene	10.249	91	393074	20.11	ug/L		95
99)	1,3,5-Trimethylbenzene	10.242	105	473404	23.89	ug/L		96
100)	tert-Butylbenzene	10.414	91	309512	24.67	ug/L		100
101)	1,2,4-Trimethylbenzene	10.443	105	718501	36.70	ug/L		92
102)	sec-Butylbenzene	10.529	105	520912	21.48	ug/L		98
104)	1,3-Dichlorobenzene	10.593	146	231316	21.59	ug/L		98
105)	p-Isopropyltoluene	10.615	119	475044	27.25	ug/L		96
106)	1,4-Dichlorobenzene	10.643	146	222125	21.52	ug/L		97
107)	1,2,3-Trimethylbenzene	10.658	105	668378	38.56	ug/L		99
108)	Benzyl chloride	10.249	91	393074	20.28	ug/L		96
109)	1,2-Dichlorobenzene	10.830	146	223457	21.35	ug/L		98
110)	n-Butylbenzene	10.822	91	405112	21.64	ug/L		95
111)	Hexachloroethane	10.966	117	78459	19.87	ug/L	#	17
112)	1,2-Dibromo-3-chloropr...	11.224	157	57847	19.76	ug/L		97
114)	1,2,4-Trichlorobenzene	11.617	180	159143	20.07	ug/L		98
115)	Hexachlorobutadiene	11.682	225	52964	19.73	ug/L		98
116)	Naphthalene	11.739	128	650819	21.44	ug/L		97

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120130.D
Acq On : 1 Dec 2020 6:14 pm
Operator : MF
Sample : 20111803-03A MSD DF50
Misc : IS 200-21725
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Dec 02 08:48:12 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

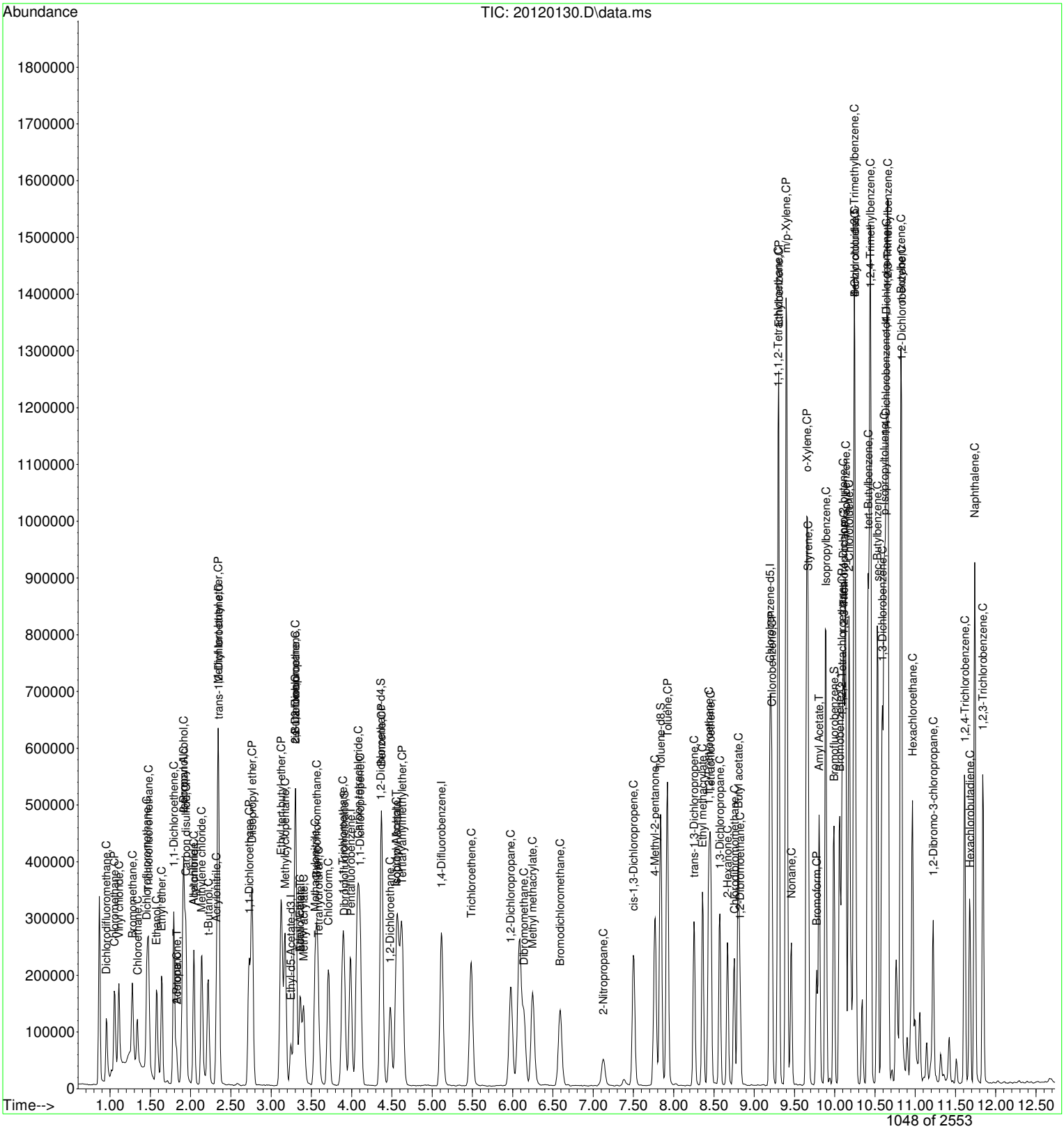
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) 1,2,3-Trichlorobenzene	11.839	180	153683	20.27	ug/L	95
118) 2-Methylnaphthalene	12.291	142	1217	Below Cal		94
119) 1-Methylnaphthalene	12.291	142	1096	Below Cal		98
121) 2-Propanone	1.826	43	65900	21.62	ug/L	98
122) Isopropyl Alcohol	1.912	45	422355	409.49	ug/L	99
123) Acetic Ether	3.359	43	187284	20.03	ug/L	98
124) Isopropyl Acetate	4.555	61	66102	19.64	ug/L	96
125) Amyl Acetate	9.805	43	232091	18.59	ug/L	97

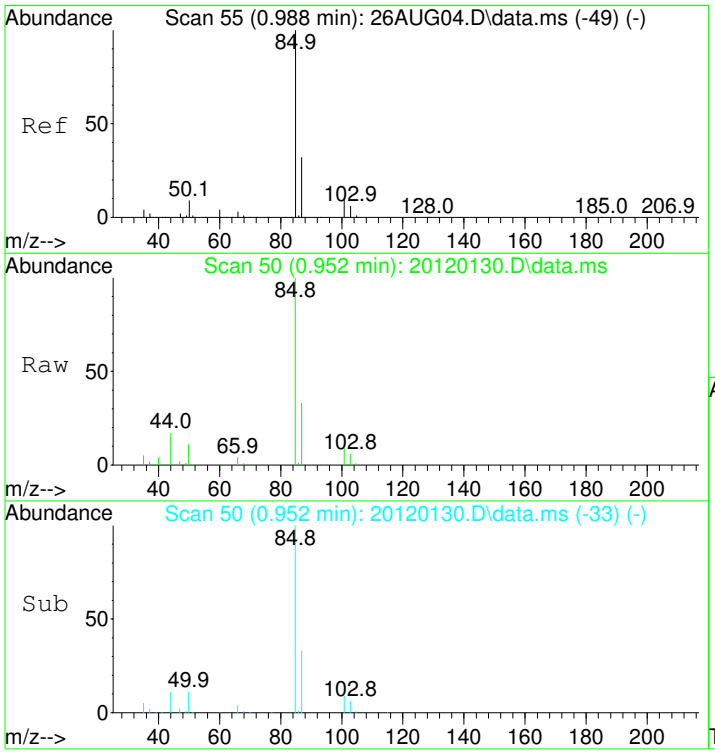
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120130.D
Acq On : 1 Dec 2020 6:14 pm
Operator : MF
Sample : 20111803-03A MSD DF50
Misc : IS 200-21725
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Dec 02 08:48:12 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

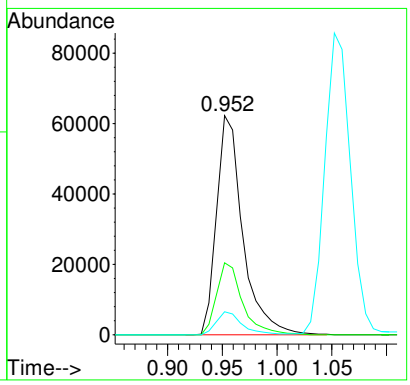


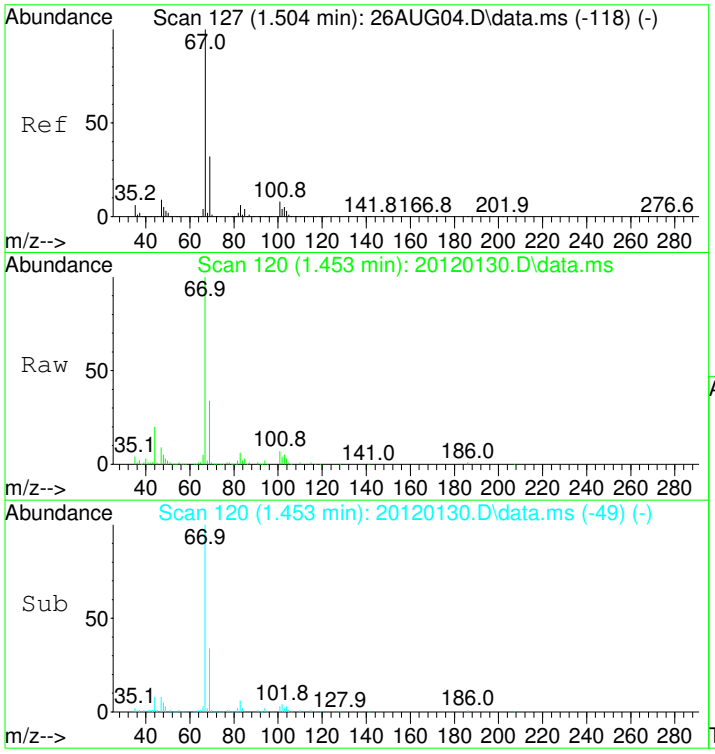


#2
Dichlorodifluoromethane
Concen: 20.52 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 85 Resp: 104046

Ion	Ratio	Lower	Upper
85	100		
87	32.5	3.6	63.6
50	10.5	0.0	40.5

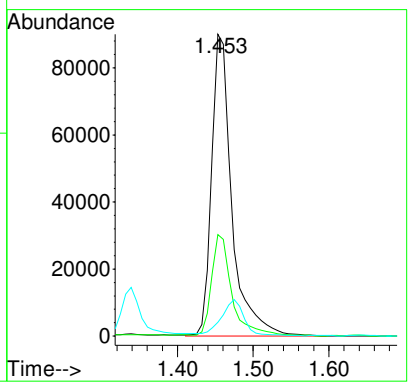


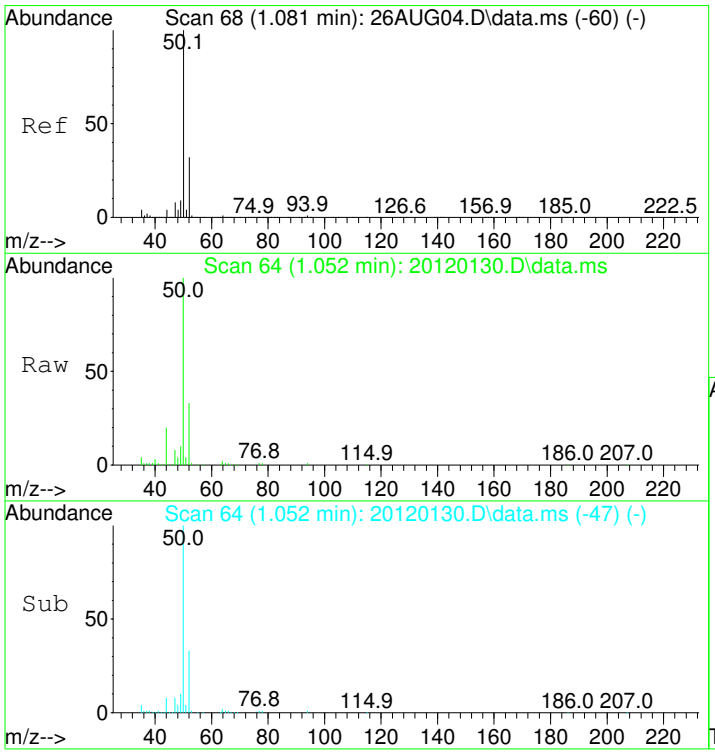


#3
Dichlorofluoromethane
Concen: 14.75 ug/L
RT: 1.453 min Scan# 120
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 67 Resp: 168670

Ion	Ratio	Lower	Upper
67	100		
69	34.4	23.7	44.1
66	13.9	8.1	15.0

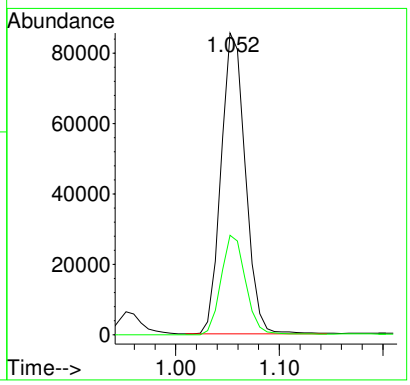


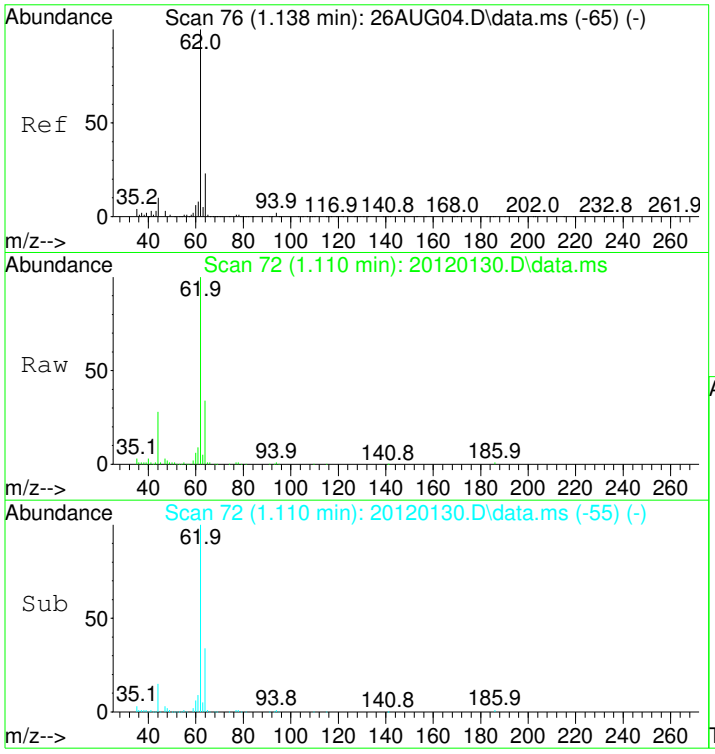


#4
Chloromethane
Concen: 12.67 ug/L
RT: 1.052 min Scan# 64
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 50 Resp: 139826

Ion	Ratio	Lower	Upper
50	100		
52	33.9	4.9	64.9

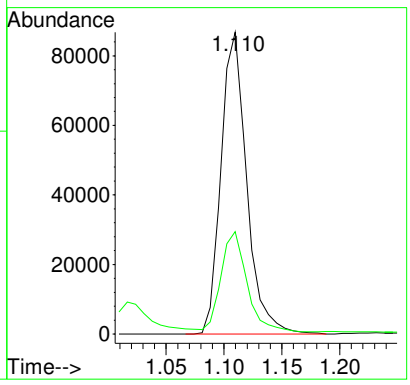


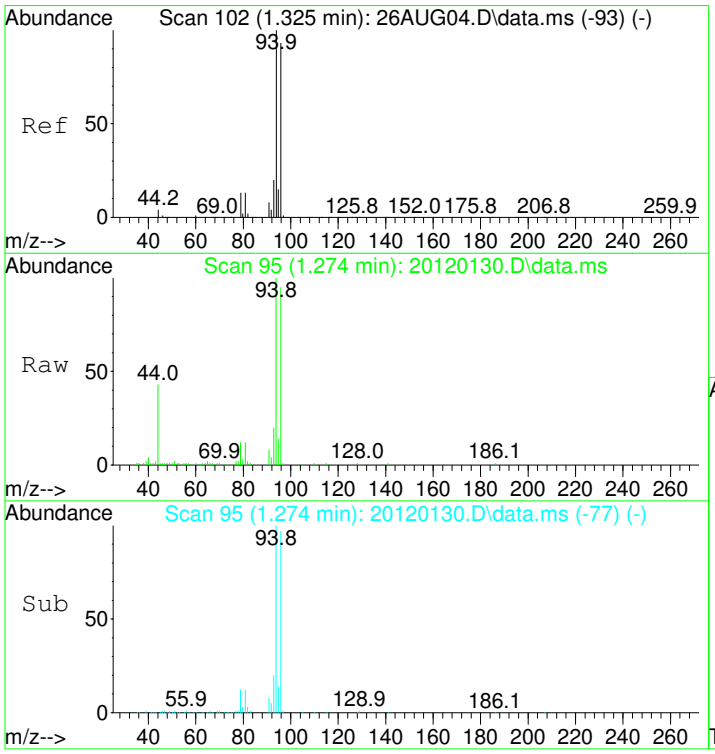


#6
Vinyl chloride
Concen: 19.97 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 62 Resp: 133871

Ion	Ratio	Lower	Upper
62	100		
64	33.7	1.9	61.9

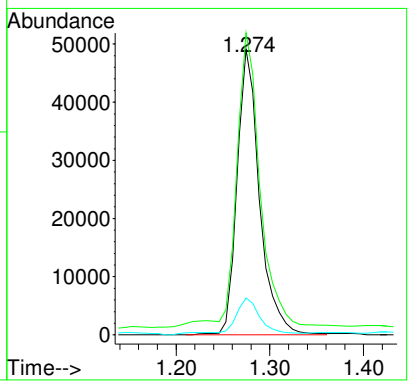


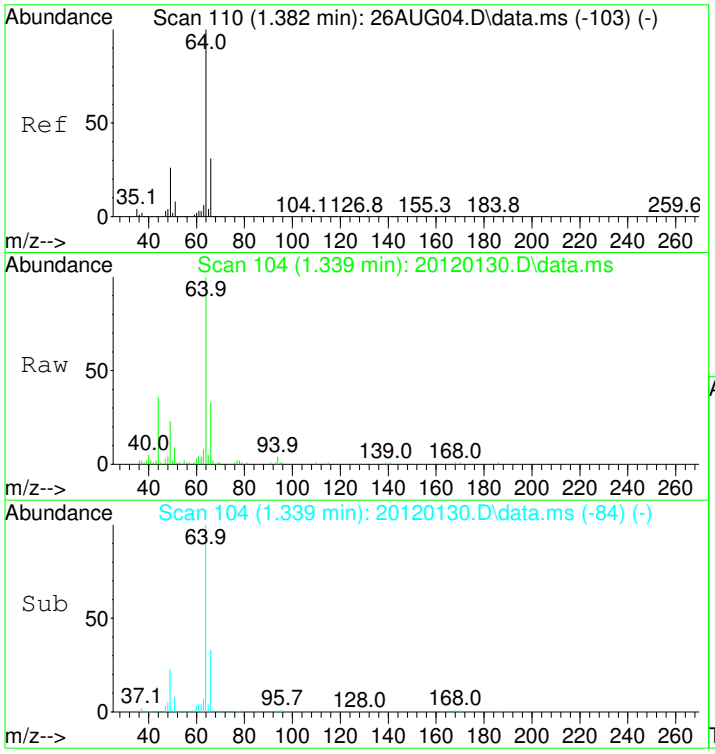


#7
Bromomethane
Concen: 77.41 ug/L
RT: 1.274 min Scan# 95
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 96 Resp: 82200

Ion	Ratio	Lower	Upper
96	100		
94	108.8	103.4	163.4
79	15.3	0.0	49.6

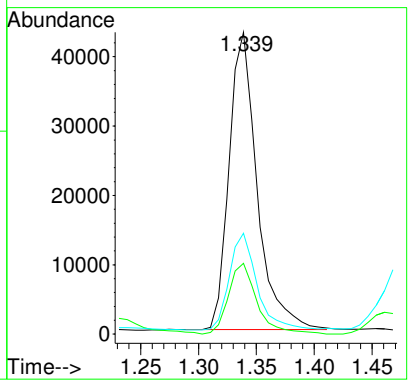


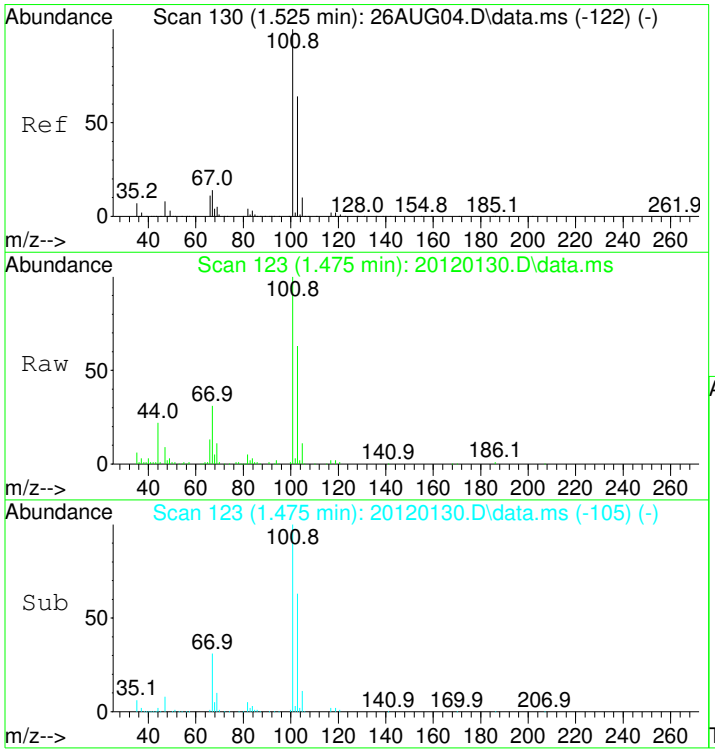


#8
Chloroethane
Concen: 25.57 ug/L
RT: 1.339 min Scan# 104
Delta R.T. 0.022 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 64 Resp: 72218

Ion	Ratio	Lower	Upper
64	100		
49	24.2	0.0	41.3
66	32.0	0.0	52.2

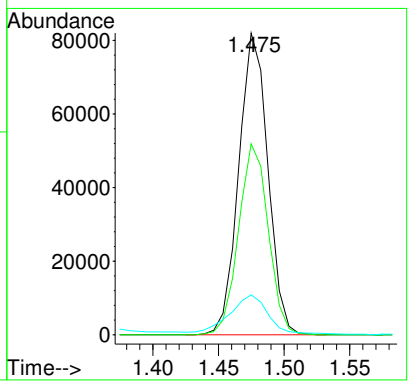


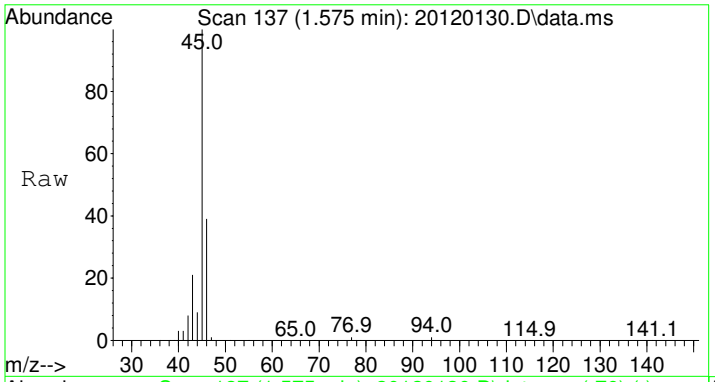


#9
Trichlorofluoromethane
Concen: 16.07 ug/L
RT: 1.475 min Scan# 123
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:101 Resp: 126817

Ion	Ratio	Lower	Upper
101	100		
103	64.3	45.1	85.1
66	17.1	0.0	35.4

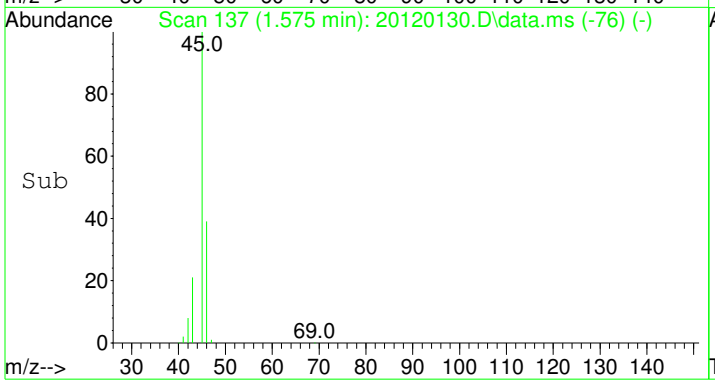


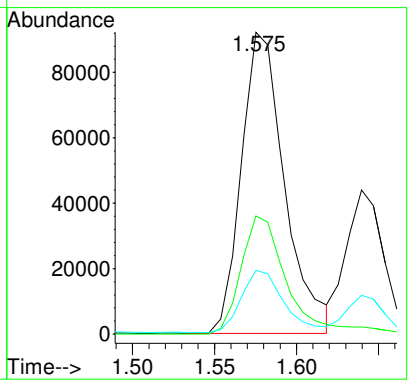


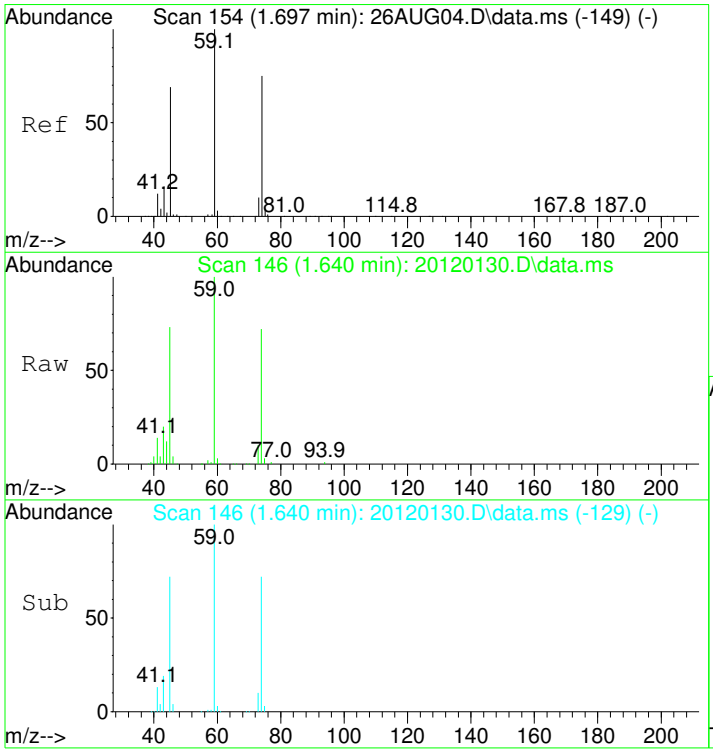
#10
Ethanol
Concen: 295.48 ug/L
RT: 1.575 min Scan# 137
Delta R.T. -0.065 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 45 Resp: 168780

Ion	Ratio	Lower	Upper
45	100		
46	42.2	0.0	57.3
43	20.4	0.0	52.4



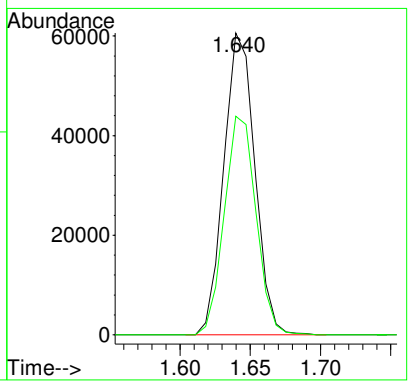


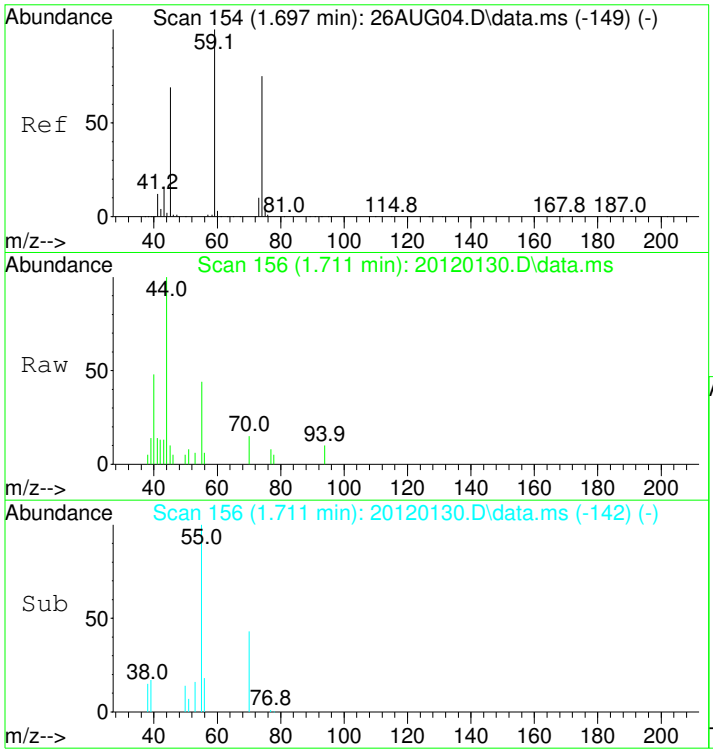


#11
Ethyl ether
Concen: 19.55 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 59 Resp: 93360

Ion	Ratio	Lower	Upper
59	100		
74	74.1	42.6	102.6

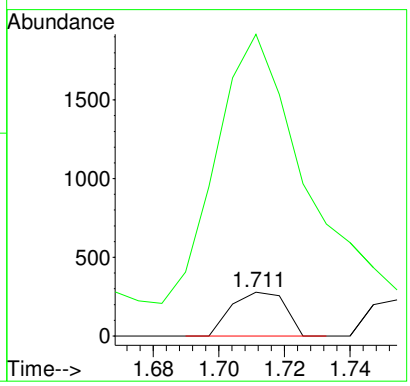


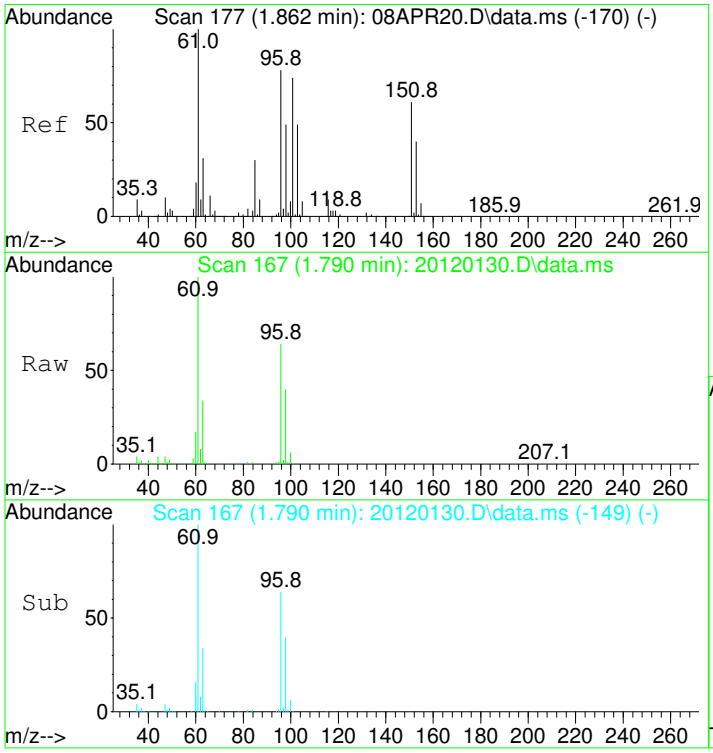


#12
Acrolein
Concen: Below Cal
RT: 1.711 min Scan# 156
Delta R.T. -0.022 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 56 Resp: 317

Ion	Ratio	Lower	Upper
56	100		
55	1004.7	17.3	77.3#

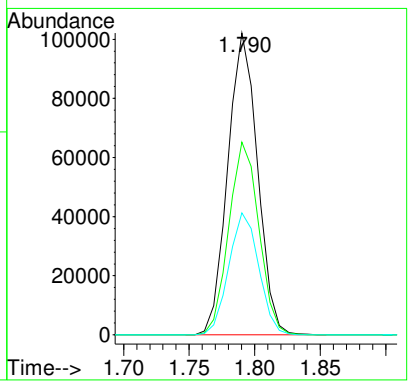


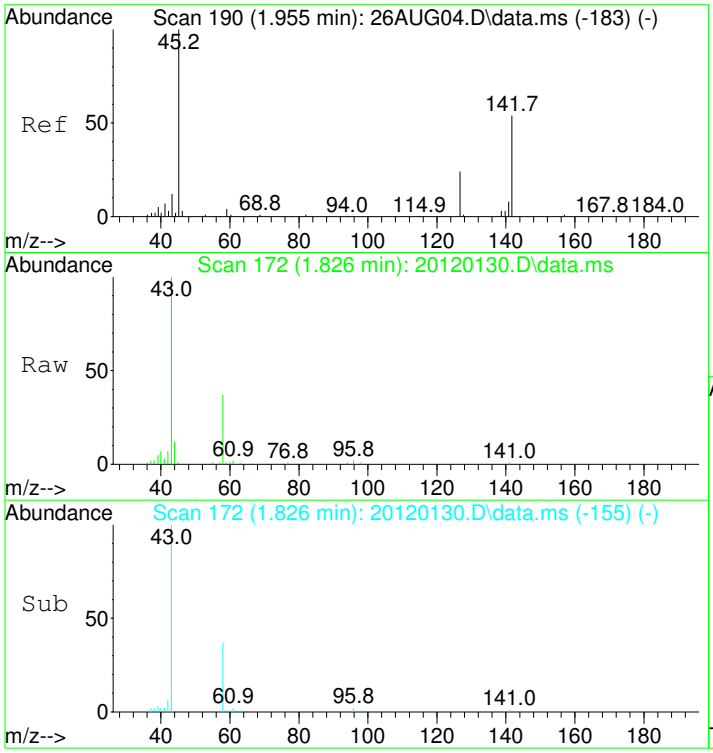


#13
1,1-Dichloroethene
Concen: 21.86 ug/L
RT: 1.790 min Scan# 167
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 61 Resp: 161461

Ion	Ratio	Lower	Upper
61	100		
96	64.4	32.6	92.6
98	40.6	10.4	70.4

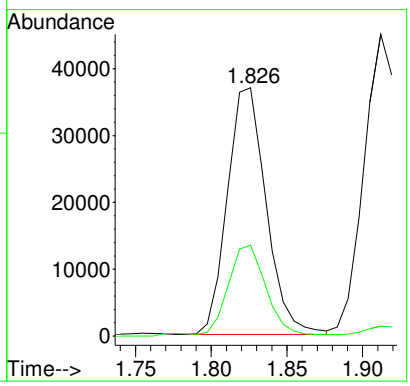


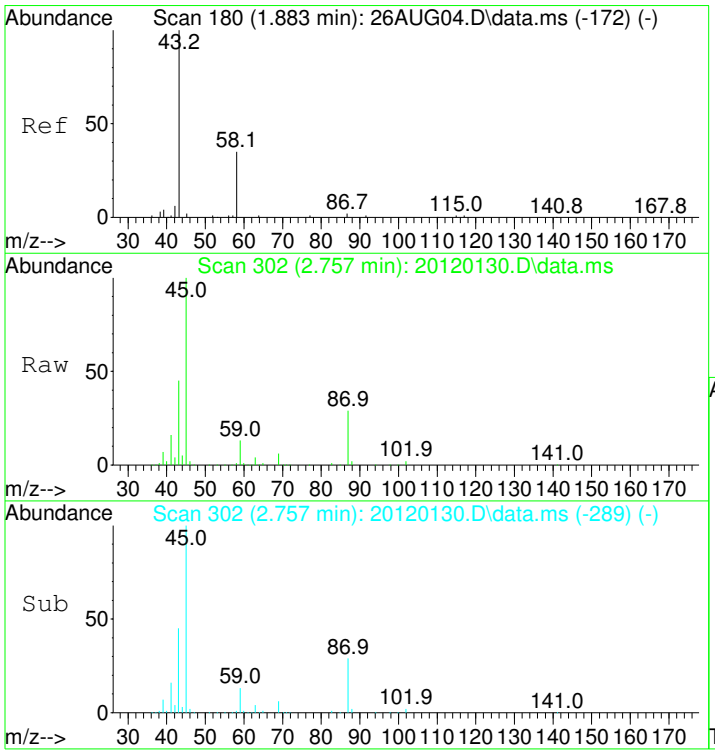


#16
Acetone
Concen: 19.92 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 65900

Ion	Ratio	Lower	Upper
43	100		
58	34.3	5.2	65.2

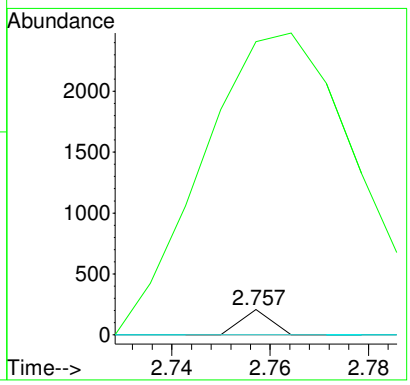


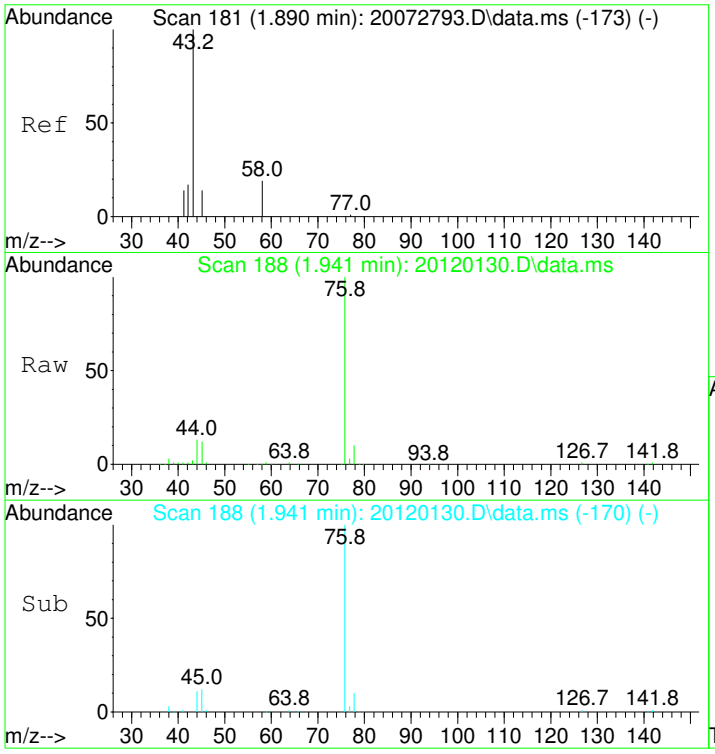


#17
Chloroprene
Concen: Below Cal
RT: 2.757 min Scan# 302
Delta R.T. -0.029 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 53 Resp: 89

Ion	Ratio	Lower	Upper
53	100		
88	6070.8	43.7	81.1#
52	0.0	17.3	32.1#

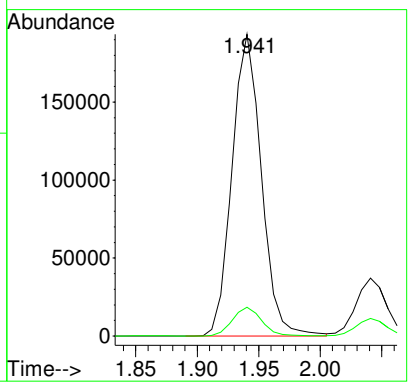


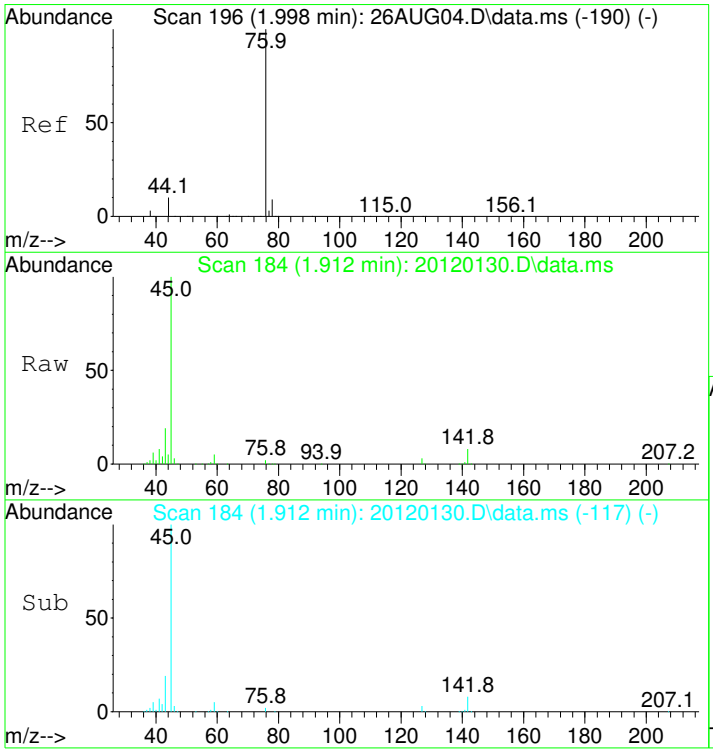


#18
Carbon disulfide
Concen: 21.77 ug/L
RT: 1.941 min Scan# 188
Delta R.T. 0.008 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 76 Resp: 321133

Ion	Ratio	Lower	Upper
76	100		
78	9.7	0.0	39.5

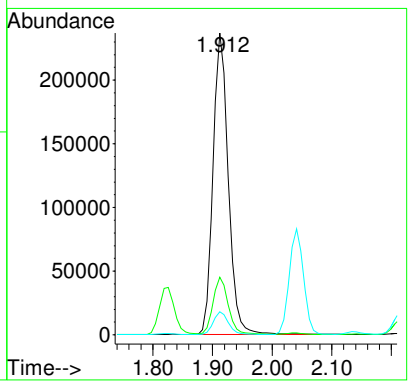


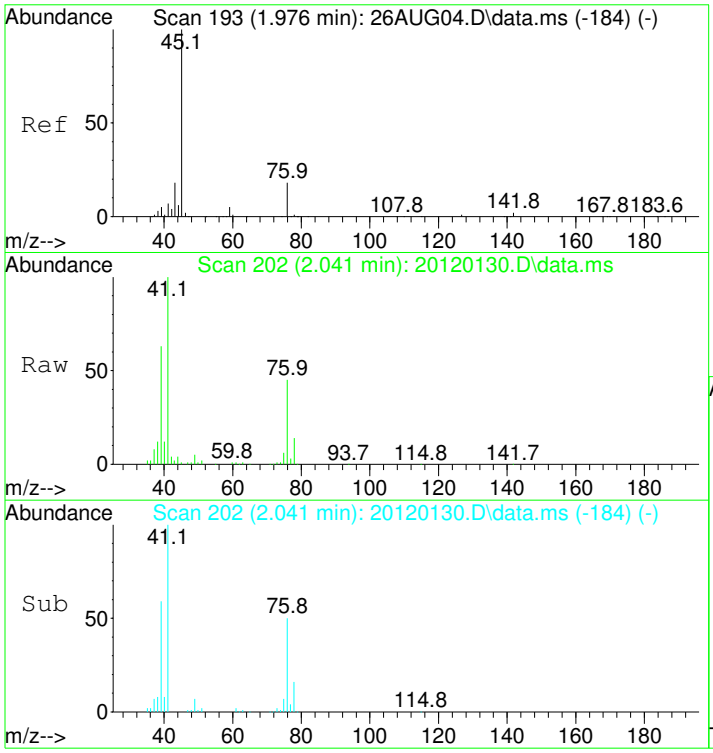


#19
2-Propanol
Concen: 372.98 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.021 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 45 Resp: 422355

Ion	Ratio	Lower	Upper
45	100		
43	18.9	0.0	48.2
41	7.3	0.0	37.1

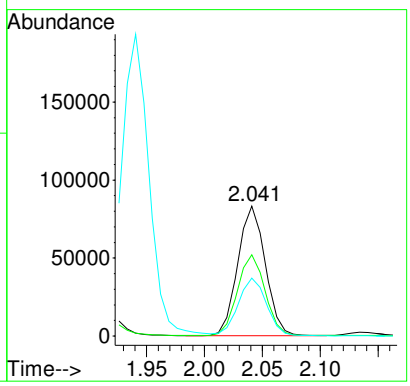


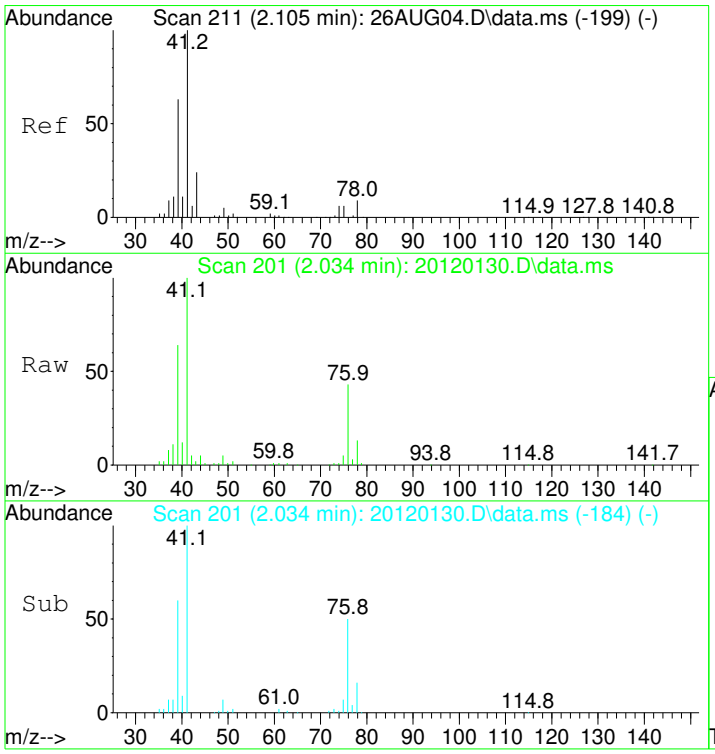


#20
Allyl chloride
Concen: 16.18 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 41 Resp: 137083

Ion	Ratio	Lower	Upper
41	100		
39	62.3	29.0	89.0
76	46.7	7.3	67.3

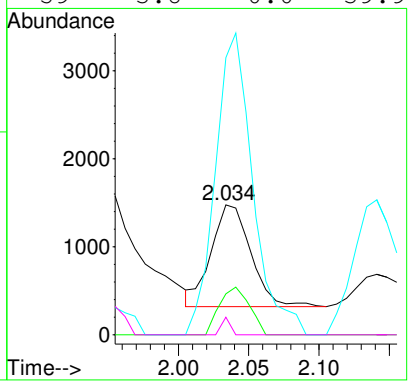


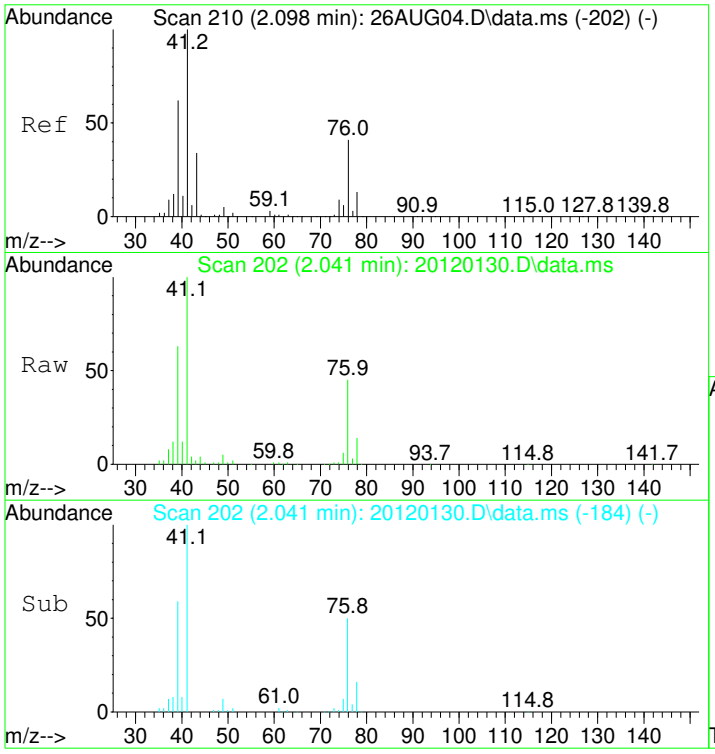


#21
Methyl acetate
Concen: Below Cal
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 2279

Ion	Ratio	Lower	Upper
43	100		
74	35.4	0.0	56.2
42	280.0	0.0	44.2#
59	3.8	0.0	39.9

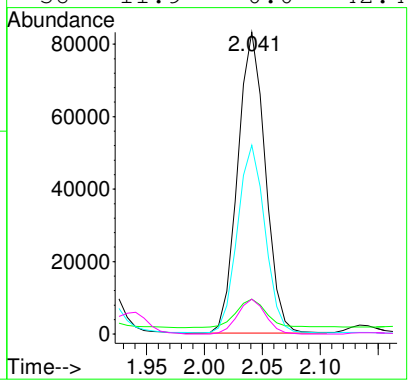


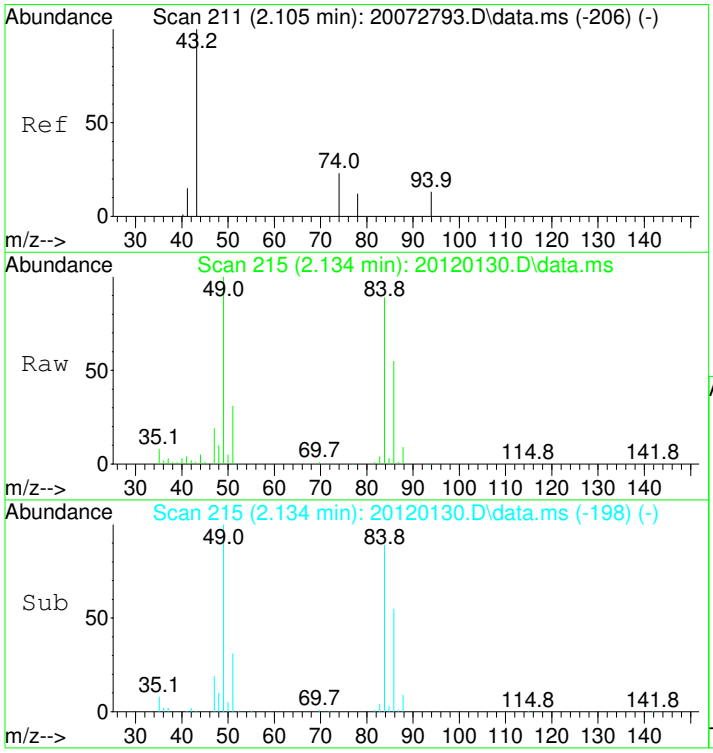


#22
Acetonitrile
Concen: 16.17 ug/L
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 41 Resp: 137083

Ion	Ratio	Lower	Upper
41	100		
40	10.8	0.0	47.5
39	62.3	29.0	89.0
38	11.9	0.0	42.4

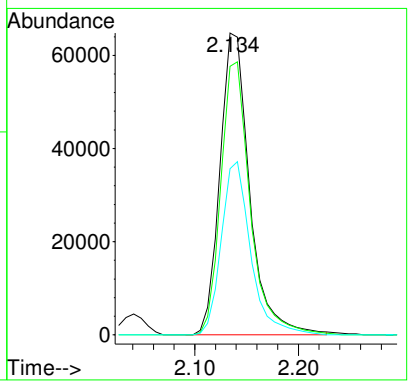


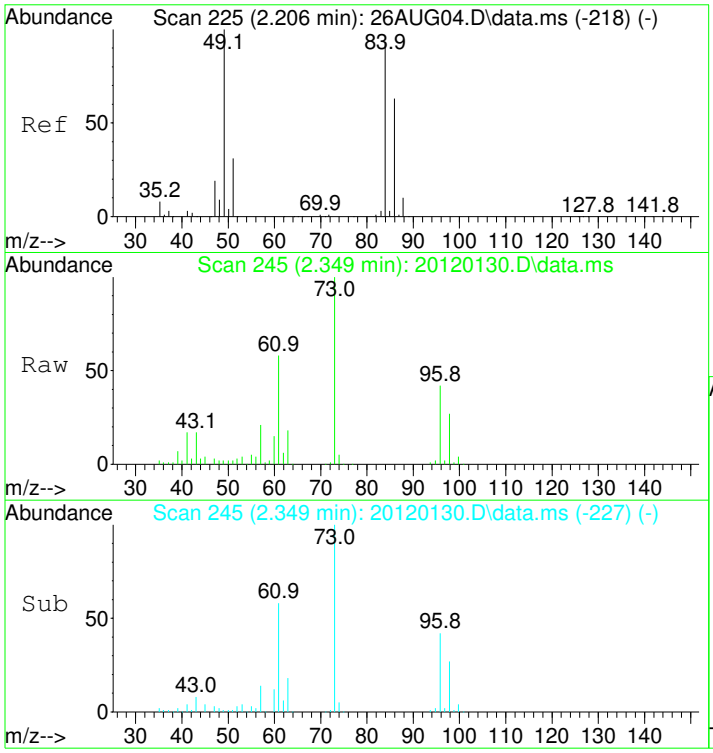


#23
Methylene chloride
Concen: 16.79 ug/L
RT: 2.134 min Scan# 215
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 49 Resp: 130272

Ion	Ratio	Lower	Upper
49	100		
84	89.2	57.4	117.4
86	56.6	27.7	87.7

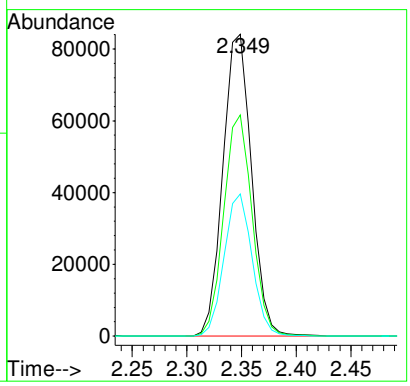


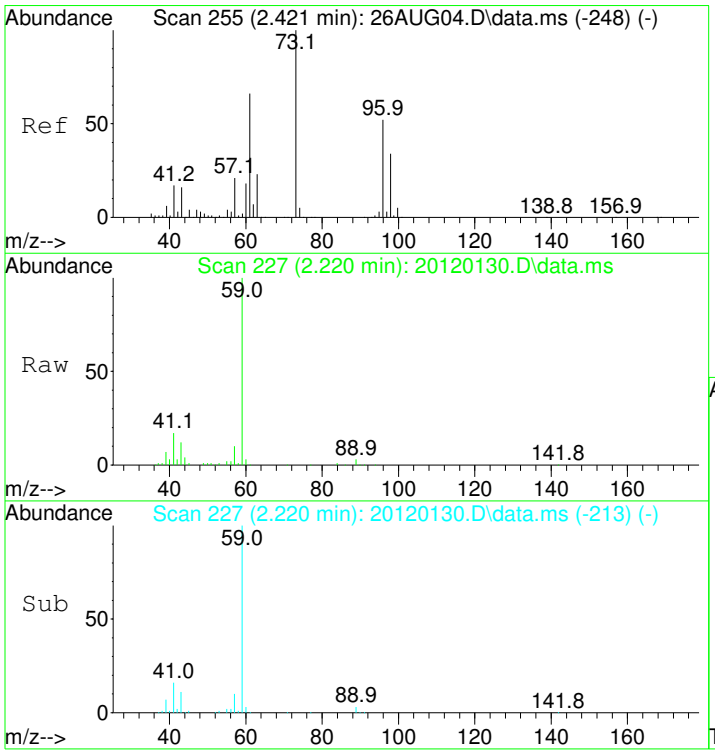


#24
trans-1,2-Dichloroethene
Concen: 21.10 ug/L
RT: 2.349 min Scan# 245
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 61 Resp: 153389

Ion	Ratio	Lower	Upper
61	100		
96	72.5	42.3	102.3
98	46.0	16.1	76.1

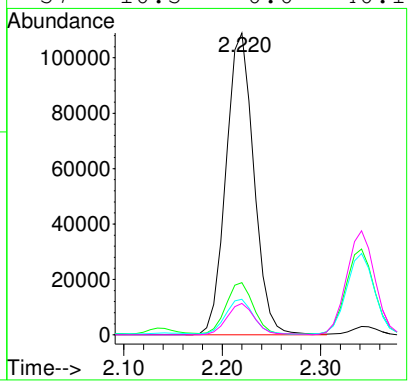


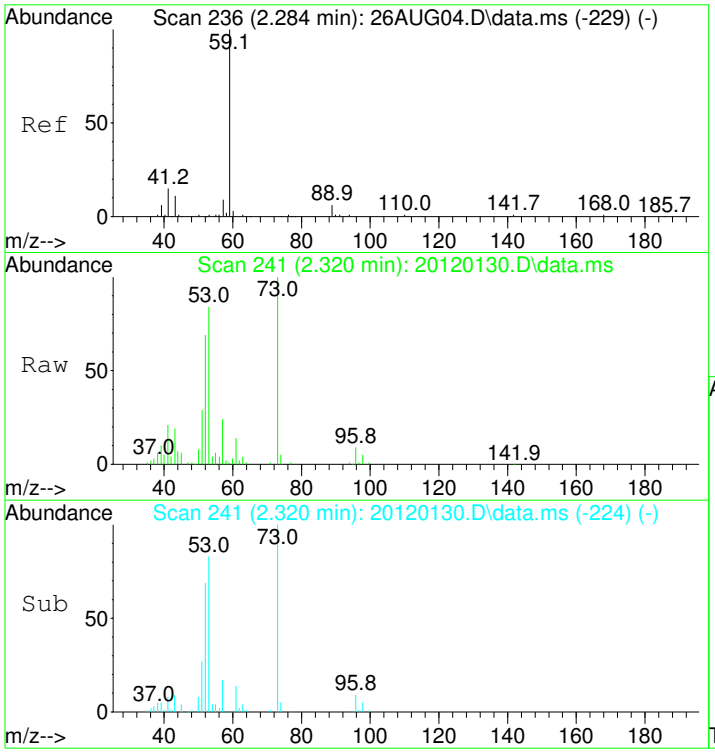


#25
t-Butanol
Concen: 95.71 ug/L
RT: 2.220 min Scan# 227
Delta R.T. -0.021 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 59 Resp: 214523

Ion	Ratio	Lower	Upper
59	100		
41	16.5	0.0	46.1
43	11.6	0.0	41.4
57	10.5	0.0	40.1

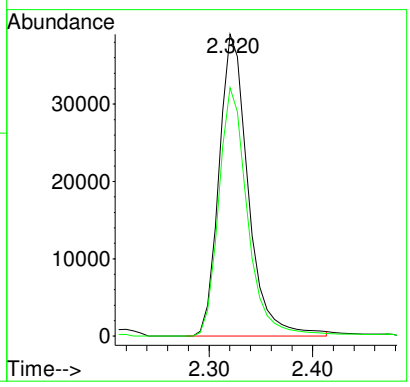


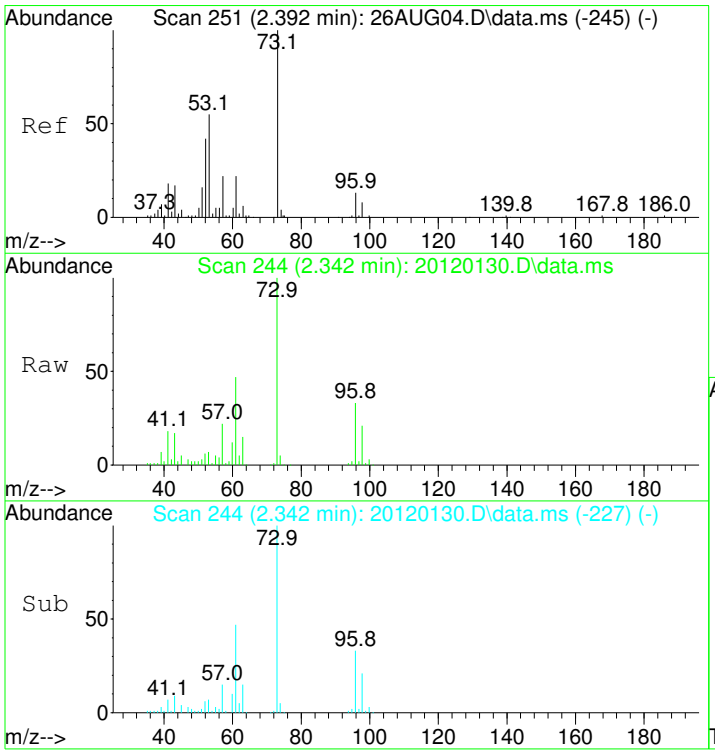


#26
Acrylonitrile
Concen: 19.95 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 53 Resp: 76669

Ion	Ratio	Lower	Upper
53	100		
52	80.8	51.9	111.9

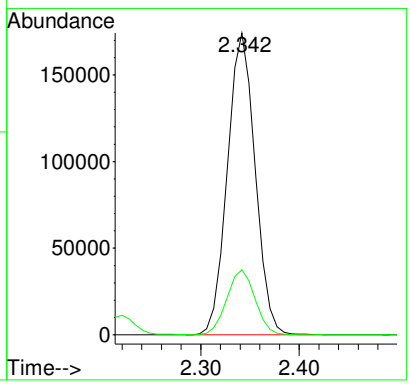


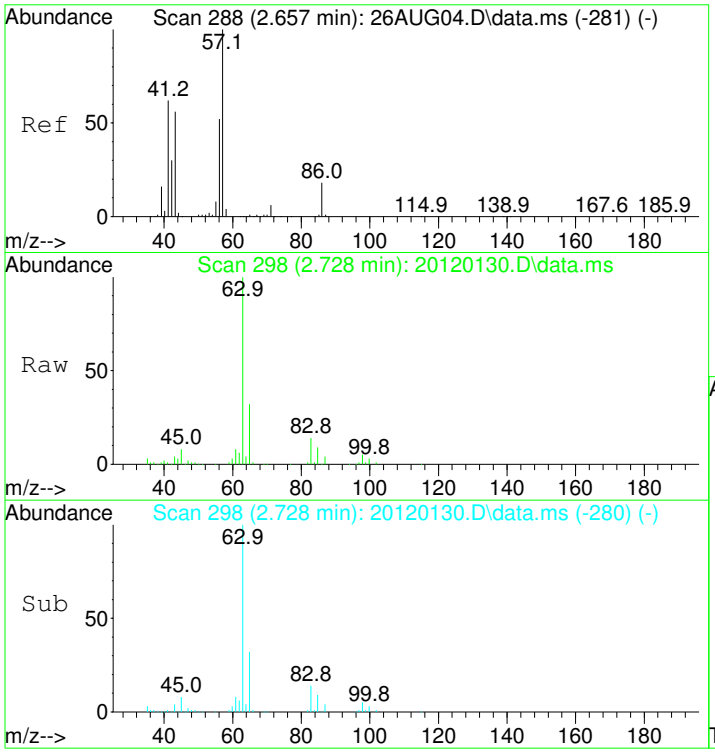


#27
Methyl tert-butyl ether
Concen: 20.65 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 73 Resp: 341781

Ion	Ratio	Lower	Upper
73	100		
57	21.9	0.0	52.4

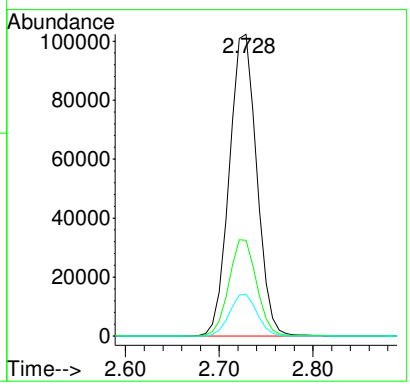


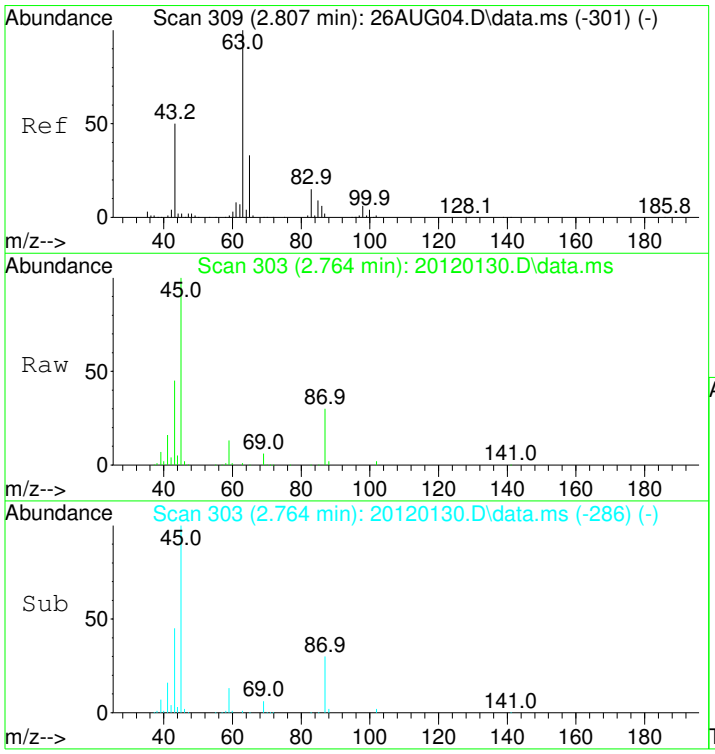


#29
1,1-Dichloroethane
Concen: 19.91 ug/L
RT: 2.728 min Scan# 298
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 63 Resp: 207912

Ion	Ratio	Lower	Upper
63	100		
65	32.4	2.8	62.8
83	13.9	0.0	43.7

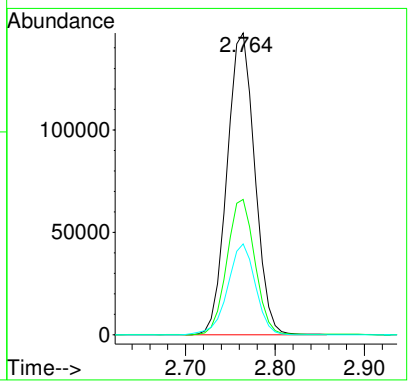


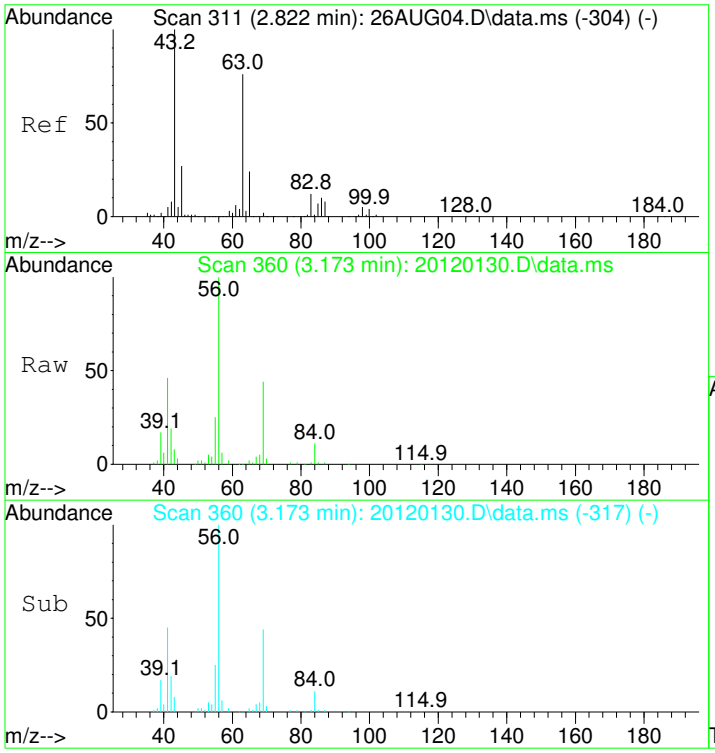


#30
Diisopropyl ether
Concen: 20.69 ug/L
RT: 2.764 min Scan# 303
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 45 Resp: 317296

Ion	Ratio	Lower	Upper
45	100		
43	45.3	79.6	147.8#
87	30.3	22.1	41.1

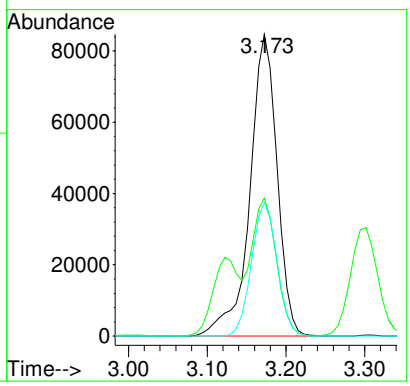


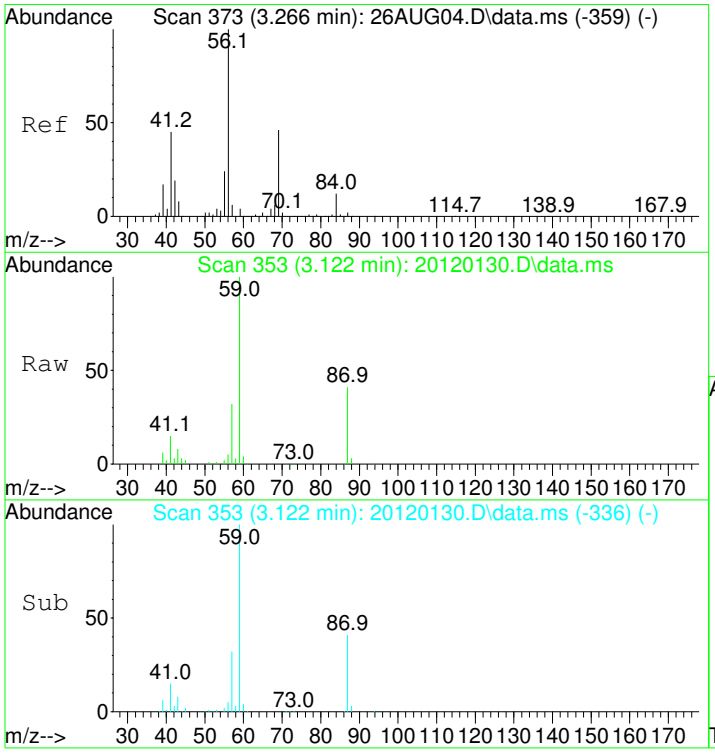


#32
Methylcyclopentane
Concen: 17.80 ug/L
RT: 3.173 min Scan# 360
Delta R.T. 0.008 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 56 Resp: 203815

Ion	Ratio	Lower	Upper
56	100		
41	41.8	36.7	96.7
69	41.5	11.3	71.3

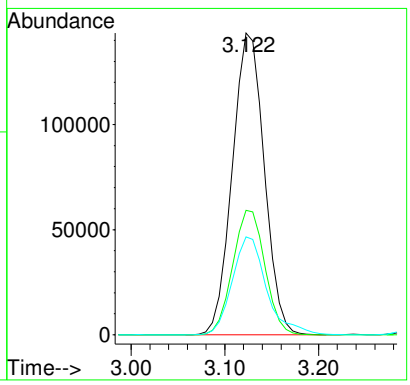


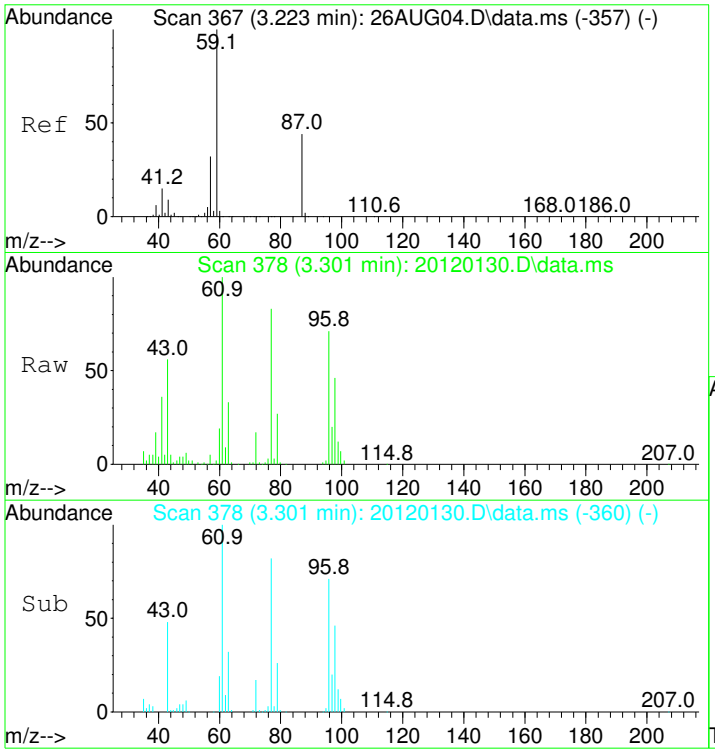


#33
Ethyl tert butyl ether
Concen: 19.55 ug/L
RT: 3.122 min Scan# 353
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 59 Resp: 341627

Ion	Ratio	Lower	Upper
59	100		
87	41.6	12.5	72.5
57	35.0	4.4	64.4

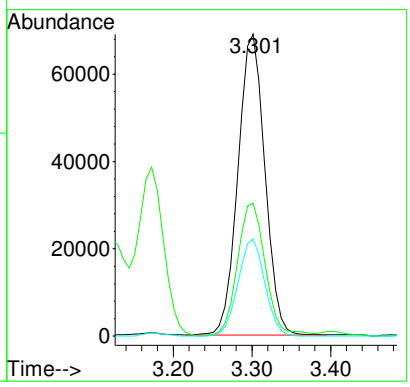


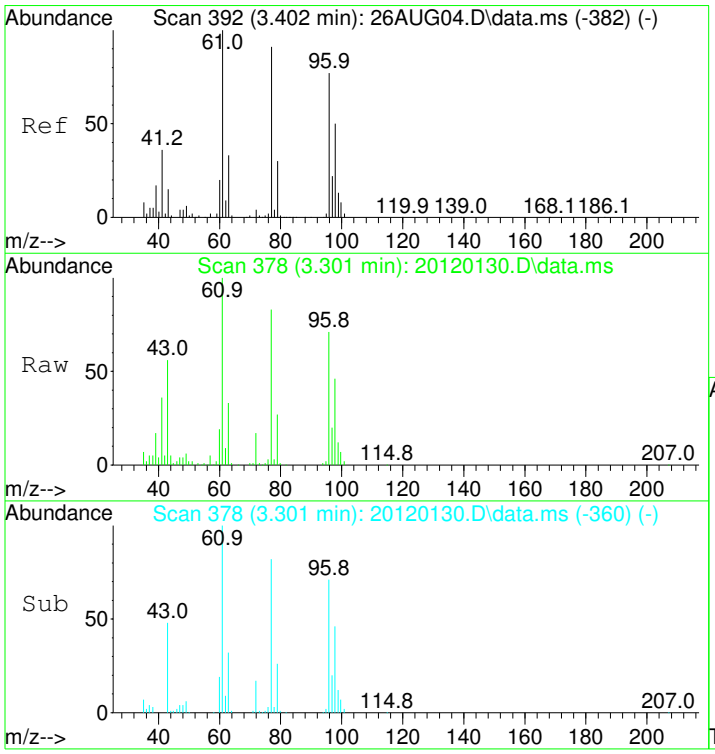


#34
2,2-Dichloropropane
Concen: 19.06 ug/L
RT: 3.301 min Scan# 378
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 77 Resp: 164203

Ion	Ratio	Lower	Upper
77	100		
41	46.1	16.4	76.4
79	32.0	2.4	62.4

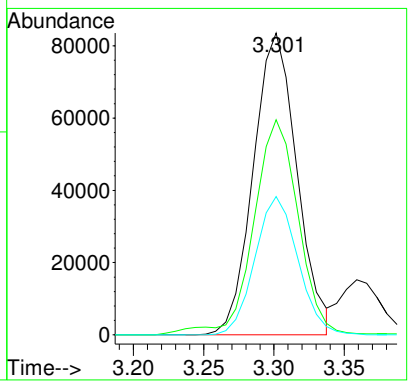


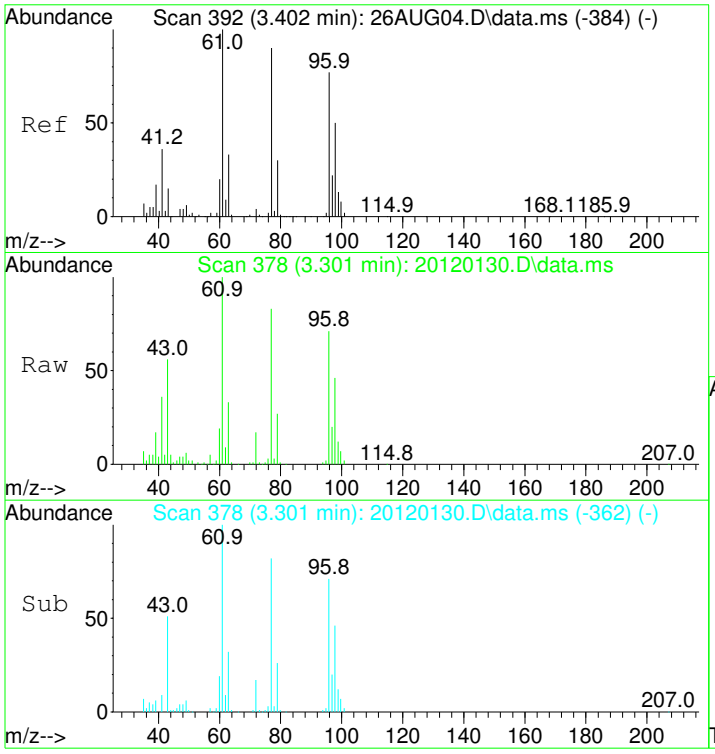


#35
cis-1,2-Dichloroethene
Concen: 20.50 ug/L
RT: 3.301 min Scan# 378
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 61 Resp: 180423

Ion	Ratio	Lower	Upper
61	100		
96	73.2	39.5	99.5
98	45.2	14.9	74.9

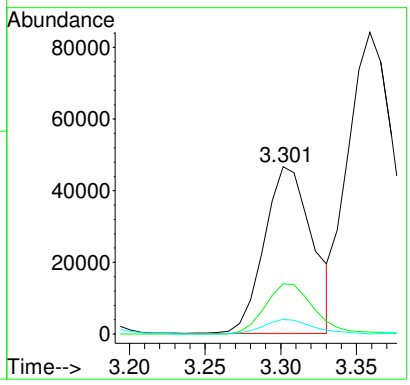


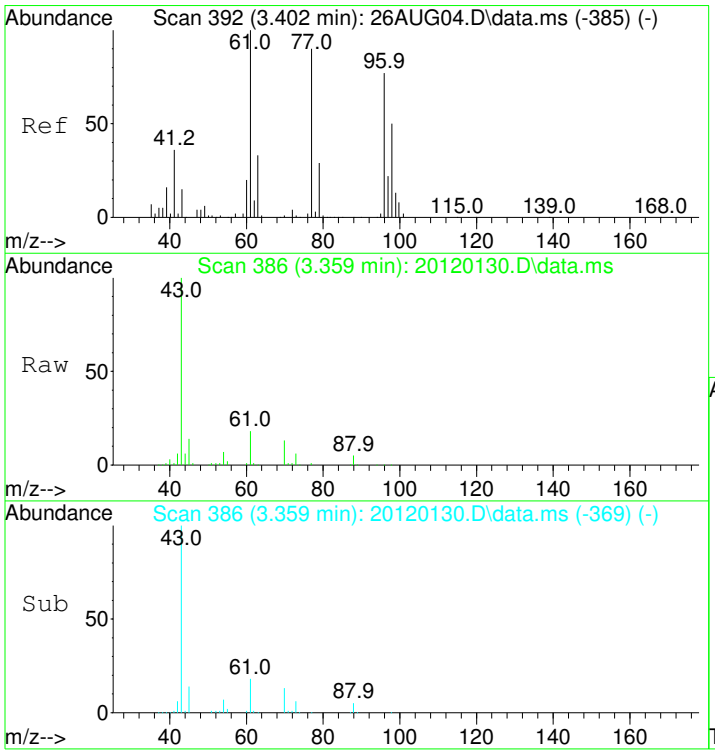


#36
2-Butanone
Concen: 20.26 ug/L
RT: 3.301 min Scan# 378
Delta R.T. -0.008 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 102917

Ion	Ratio	Lower	Upper
43	100		
72	30.9	11.0	51.0
57	9.2	0.0	28.7

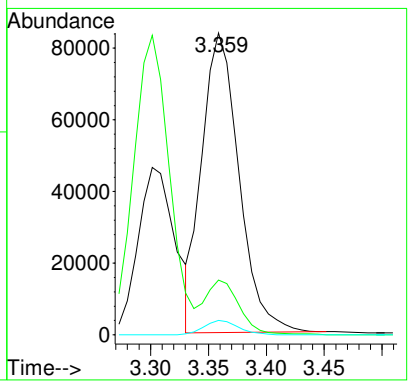


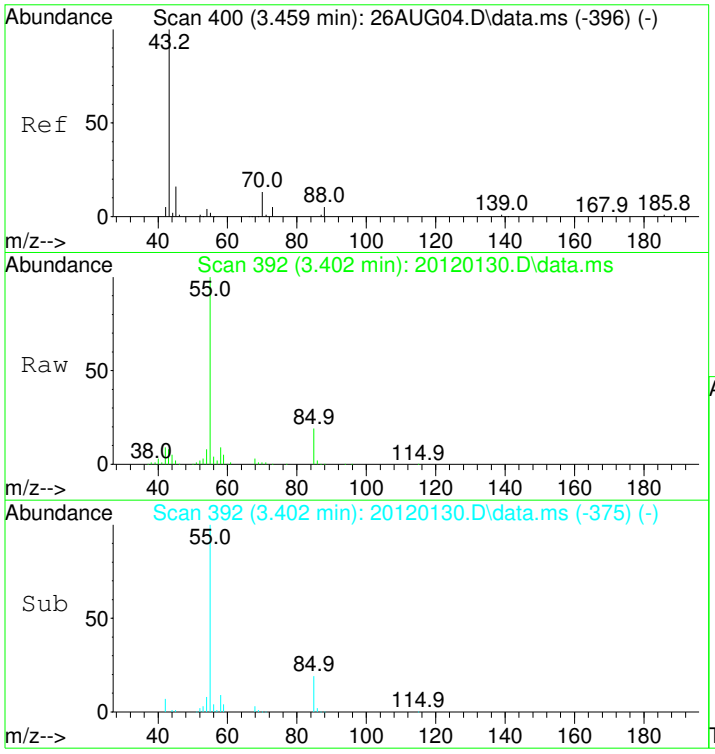


#37
Ethyl Acetate
Concen: 19.01 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 187086

Ion	Ratio	Lower	Upper
43	100		
61	17.0	0.0	34.9
88	4.5	0.0	24.3

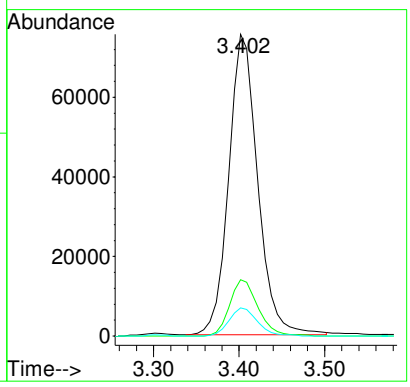


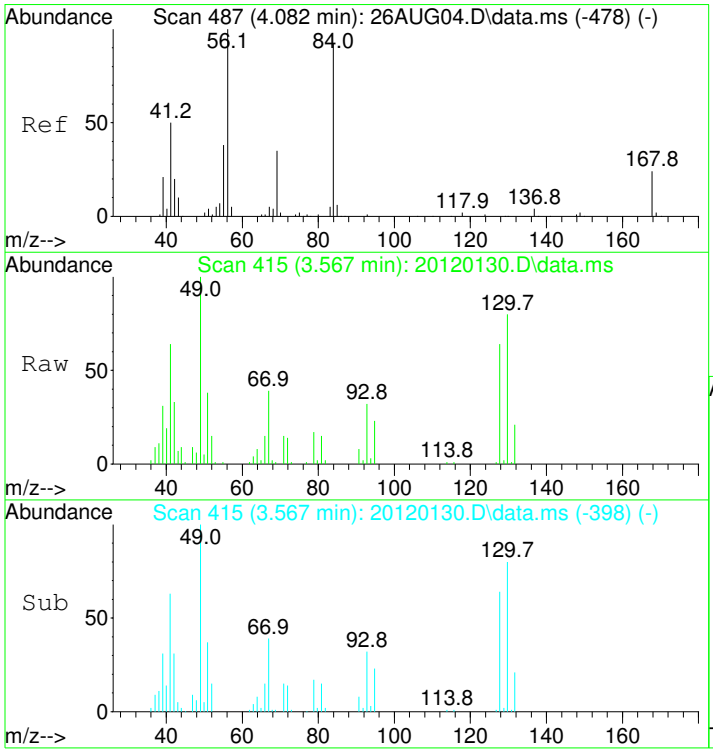


#38
Methyl acrylate
Concen: 20.28 ug/L
RT: 3.402 min Scan# 392
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 55 Resp: 178006

Ion	Ratio	Lower	Upper
55	100		
85	18.4	14.4	21.6
58	9.3	7.4	11.2

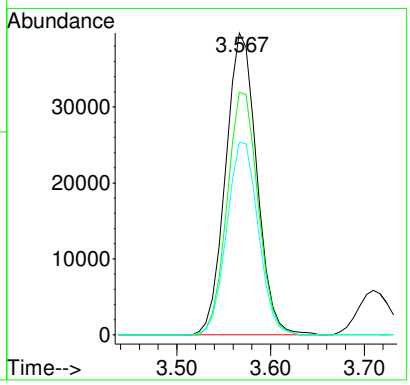


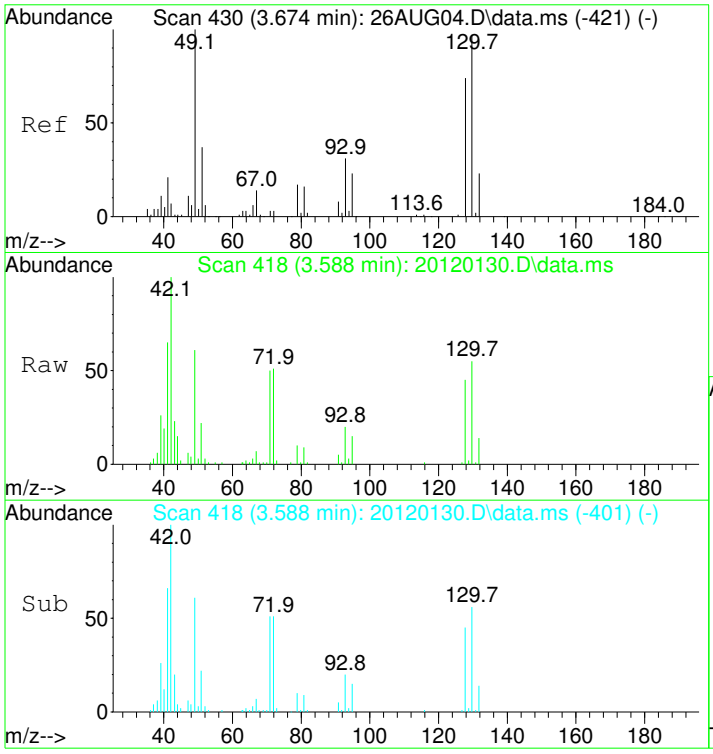


#40
Bromochloromethane
Concen: 20.07 ug/L
RT: 3.567 min Scan# 415
Delta R.T. -0.001 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 49 Resp: 91685

Ion	Ratio	Lower	Upper
49	100		
130	79.6	60.4	100.4
128	64.6	43.3	83.3

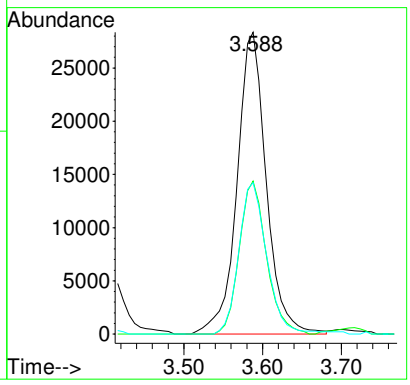


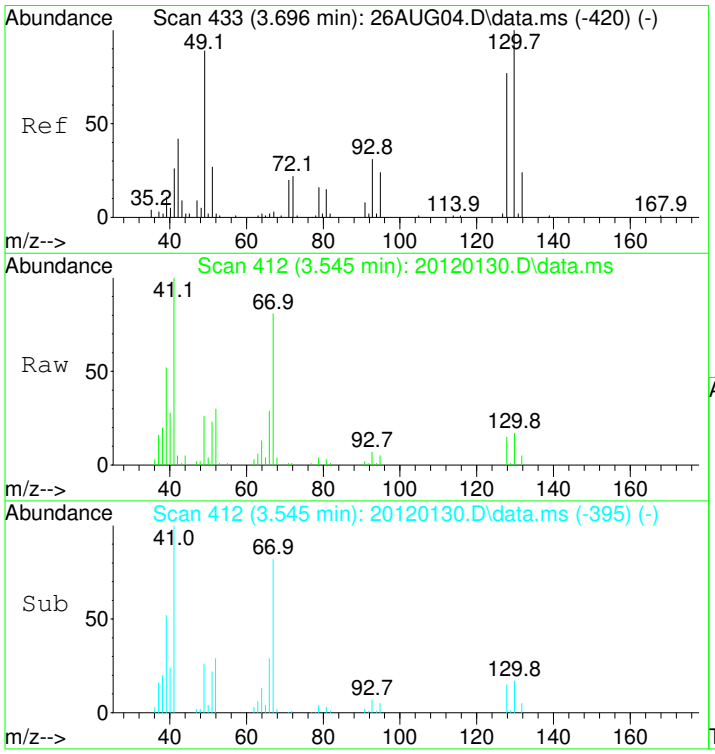


#41
Tetrahydrofuran
Concen: 19.60 ug/L
RT: 3.588 min Scan# 418
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 42 Resp: 73203

Ion	Ratio	Lower	Upper
42	100		
72	47.2	27.6	67.6
71	48.0	26.5	66.5

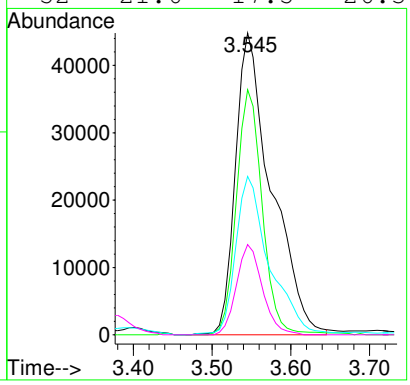


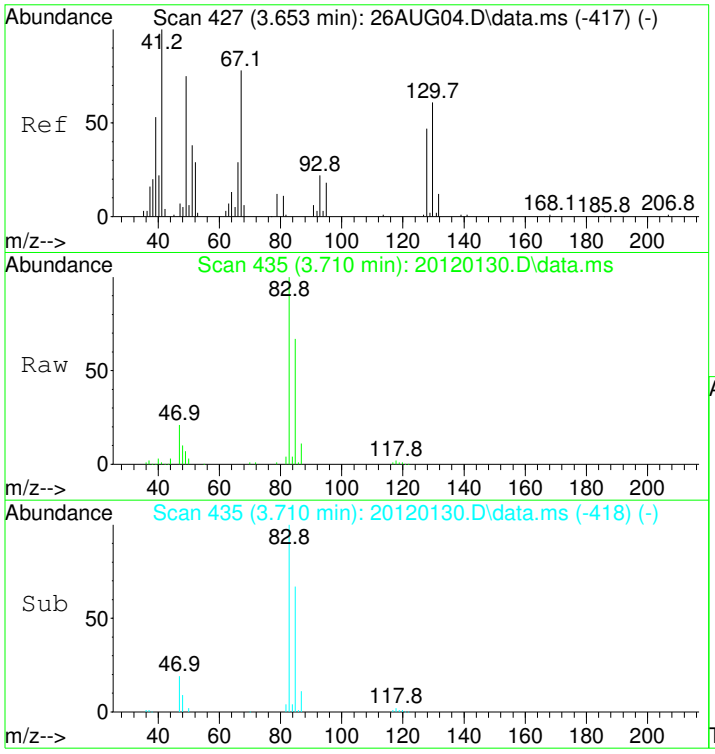


#42
Methacrylonitrile
Concen: 19.25 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 41 Resp: 142147

Ion	Ratio	Lower	Upper
41	100		
67	58.5	47.8	71.6
39	48.9	38.6	57.8
52	21.6	17.5	26.3

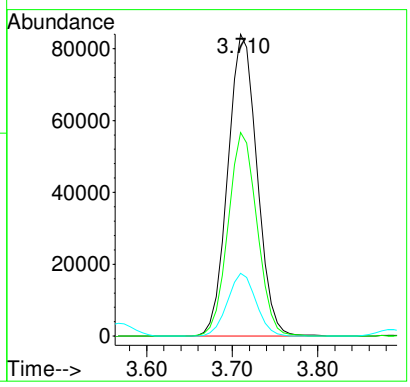


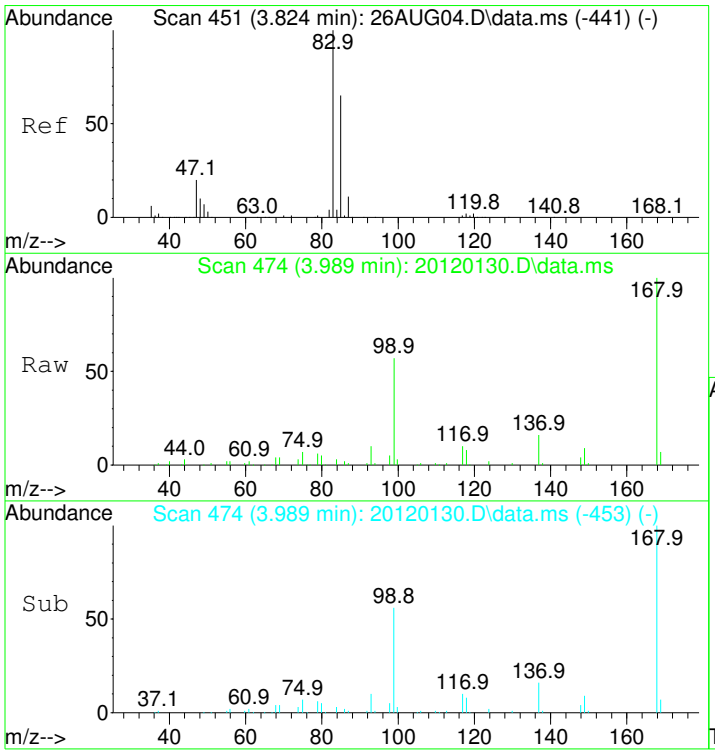


#43
Chloroform
Concen: 18.69 ug/L
RT: 3.710 min Scan# 435
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 83 Resp: 199620

Ion	Ratio	Lower	Upper
83	100		
85	66.7	46.1	86.1
47	20.3	1.2	41.2

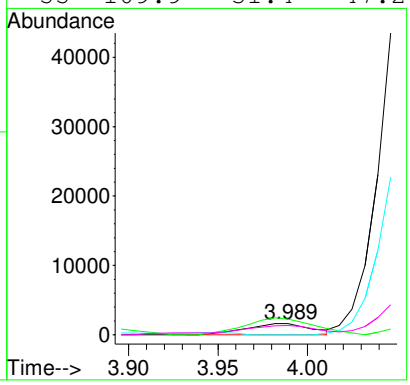


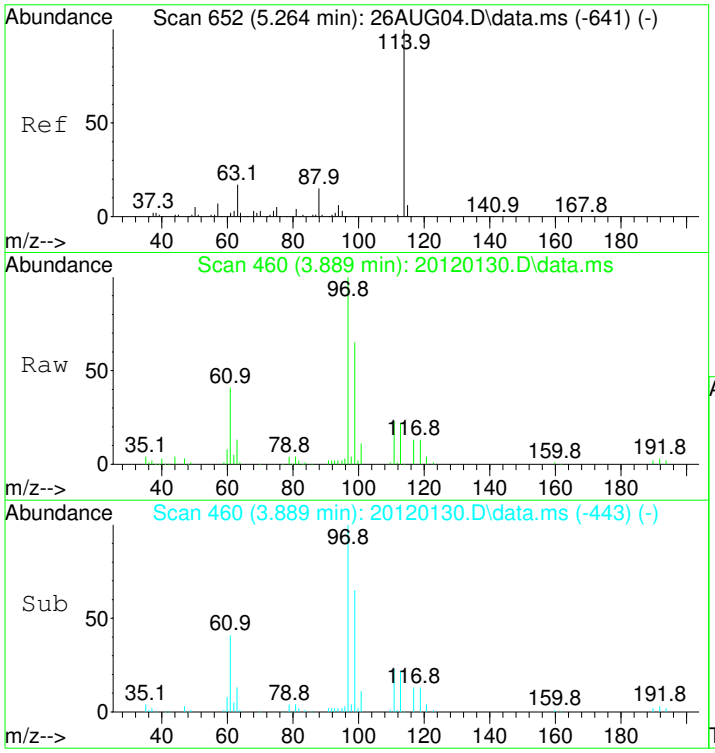


#44
Cyclohexane
Concen: Below Cal
RT: 3.989 min Scan# 474
Delta R.T. 0.028 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 56 Resp: 4088

Ion	Ratio	Lower	Upper
56	100		
84	160.2	69.5	104.3#
41	14.3	39.4	59.0#
55	109.9	31.4	47.2#

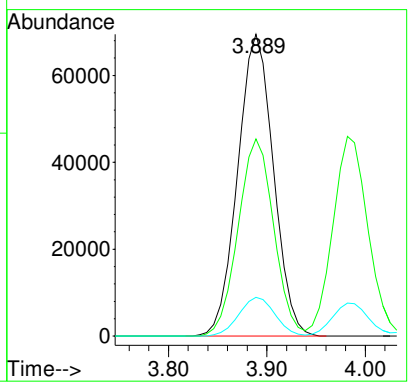


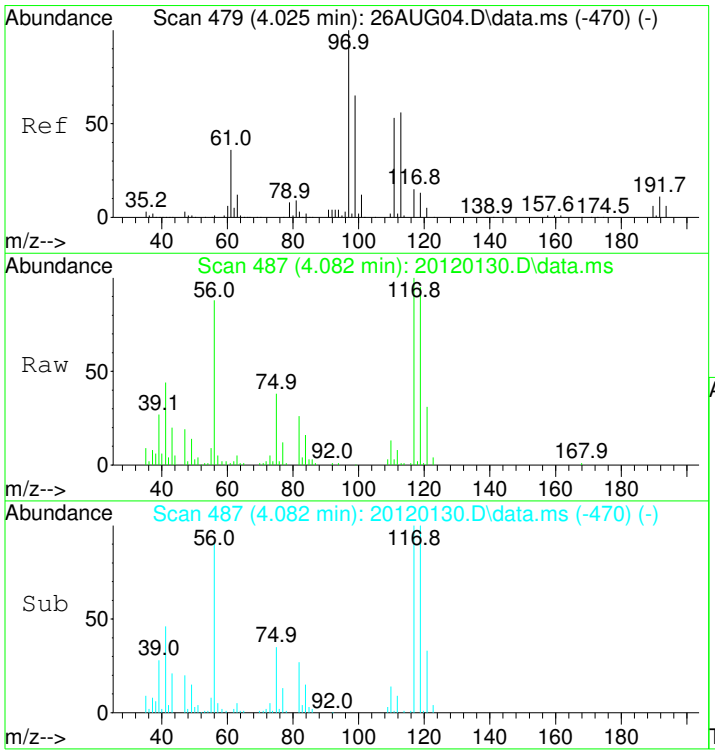


#46
1,1,1-Trichloroethane
Concen: 21.18 ug/L
RT: 3.889 min Scan# 460
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 97 Resp: 175466

Ion	Ratio	Lower	Upper
97	100		
99	65.2	45.8	85.8
117	13.0	0.0	33.4

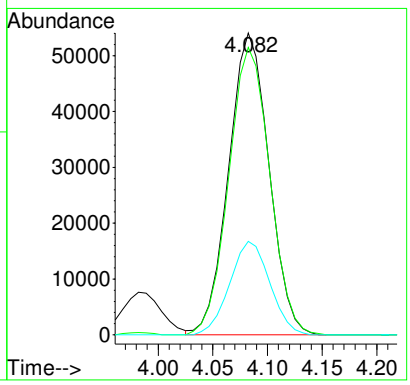


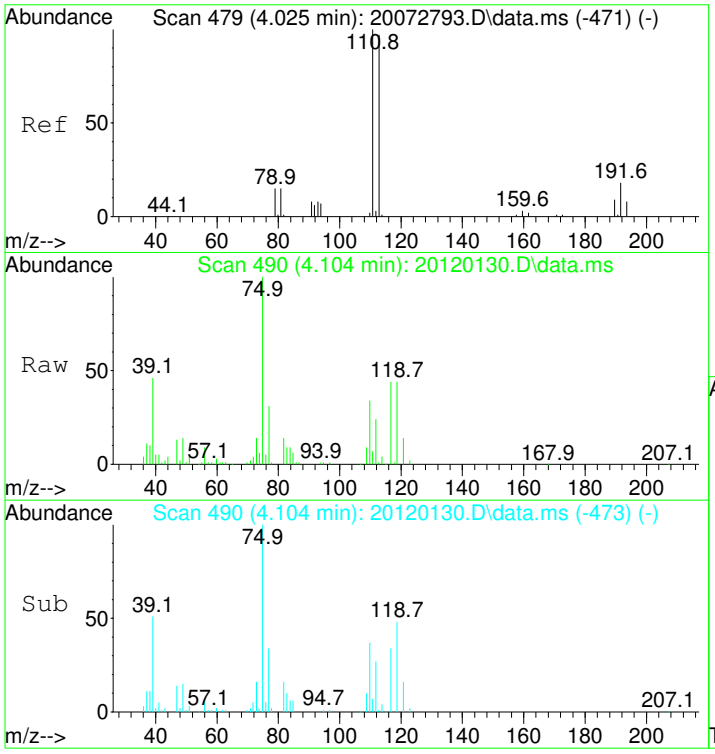


#48
Carbon tetrachloride
Concen: 19.55 ug/L
RT: 4.082 min Scan# 487
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:117 Resp: 138839

Ion	Ratio	Lower	Upper
117	100		
119	96.7	78.7	118.7
121	30.8	11.8	51.8

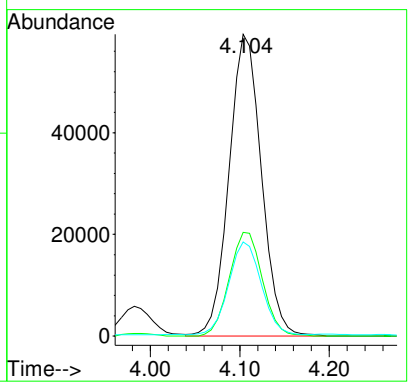


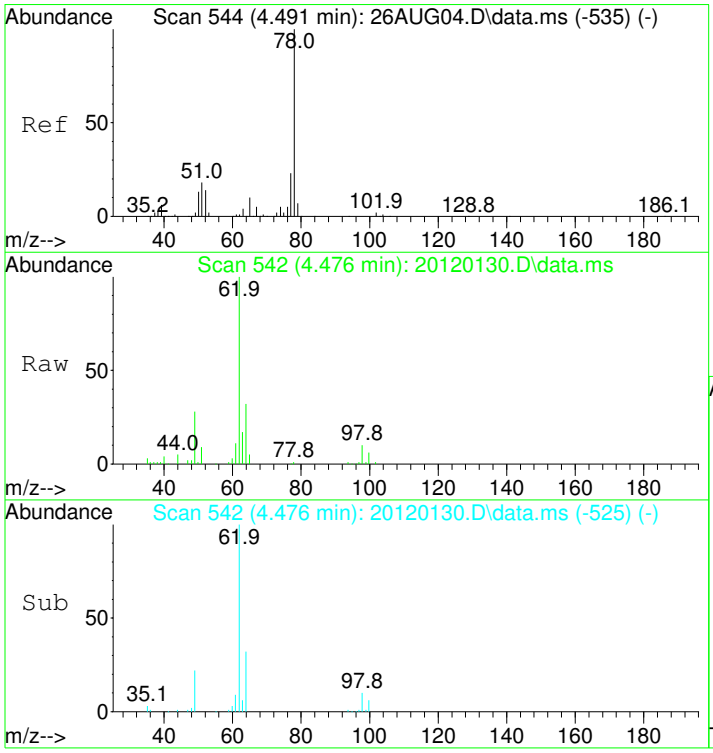


#49
1,1-Dichloropropene
Concen: 21.37 ug/L
RT: 4.104 min Scan# 490
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 75 Resp: 149553

Ion	Ratio	Lower	Upper
75	100		
110	35.2	16.0	56.0
77	30.7	11.0	51.0

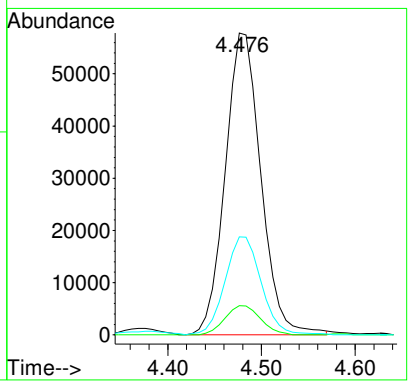


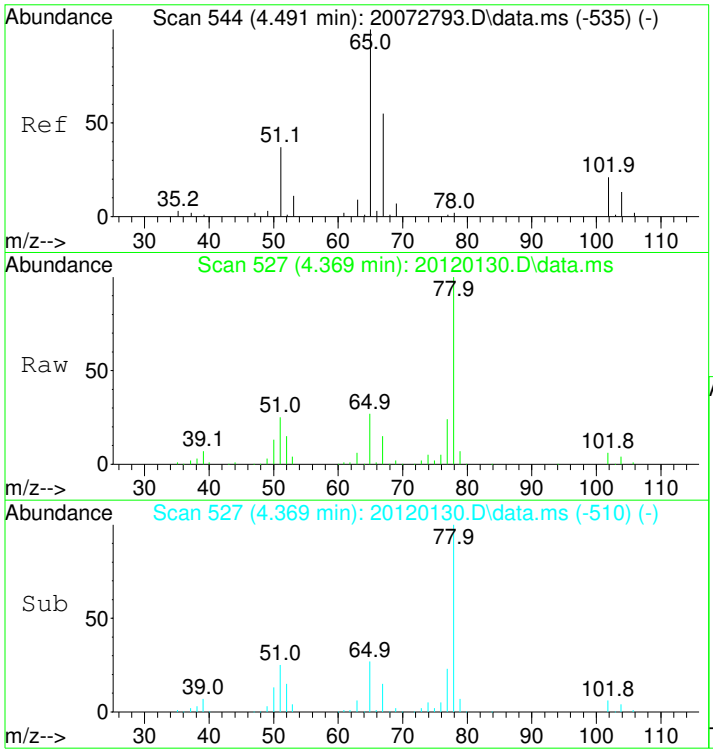


#51
1,2-Dichloroethane
Concen: 19.67 ug/L
RT: 4.476 min Scan# 542
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 62 Resp: 152977

Ion	Ratio	Lower	Upper
62	100		
98	9.7	0.0	29.0
64	32.9	13.9	53.9

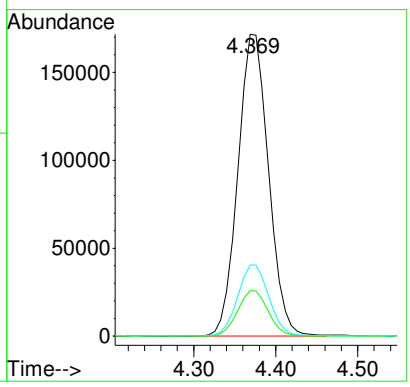


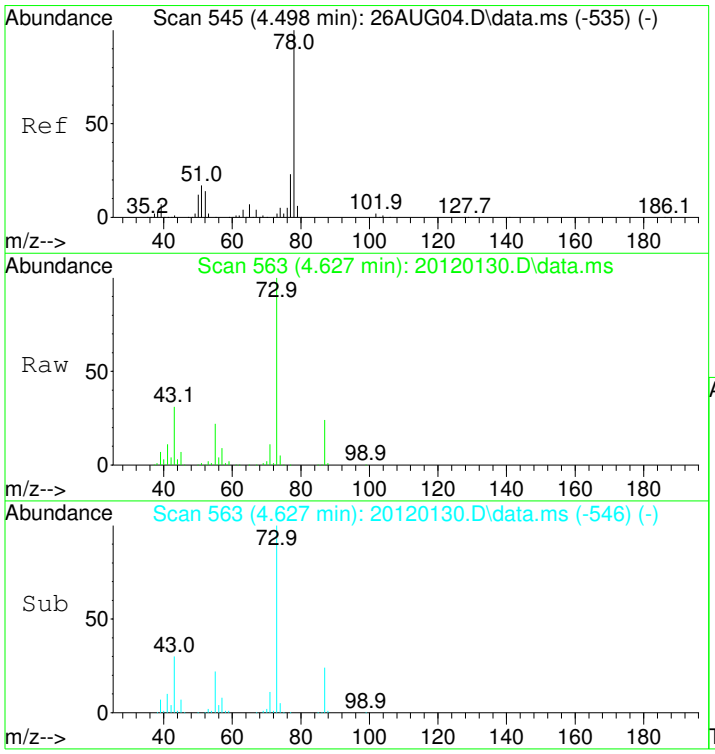


#52
Benzene
Concen: 22.00 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 78 Resp: 446582

Ion	Ratio	Lower	Upper
78	100		
52	15.0	0.0	35.8
77	23.7	3.7	43.7

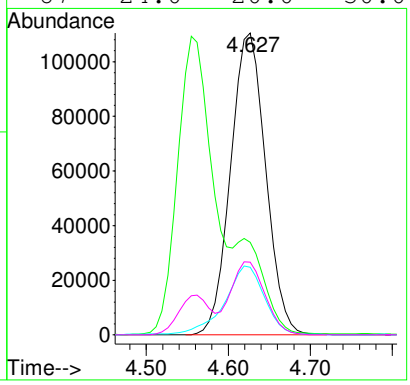


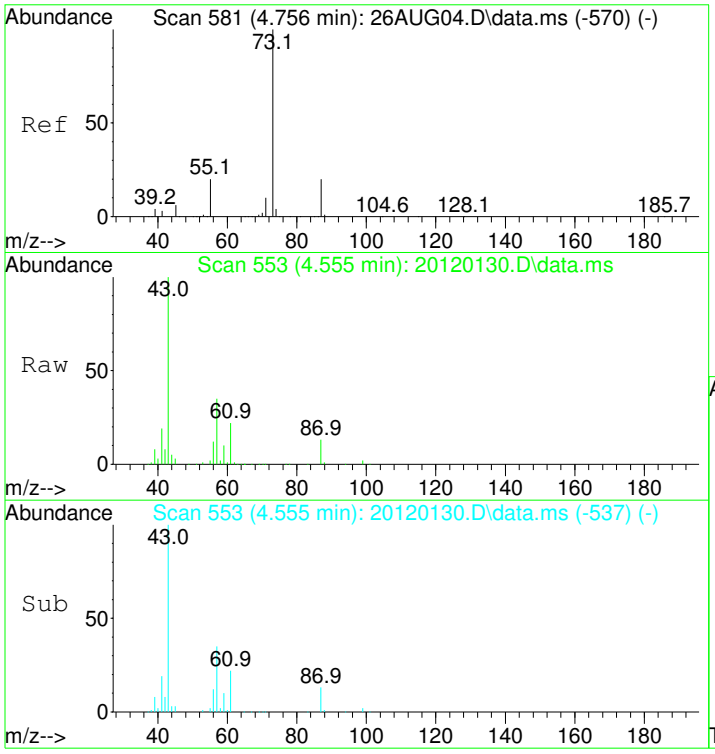


#53
Tertiaryamylmethylether
Concen: 21.34 ug/L
RT: 4.627 min Scan# 563
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 73 Resp: 329120

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	26.1	21.0	31.6
87	24.0	20.0	30.0

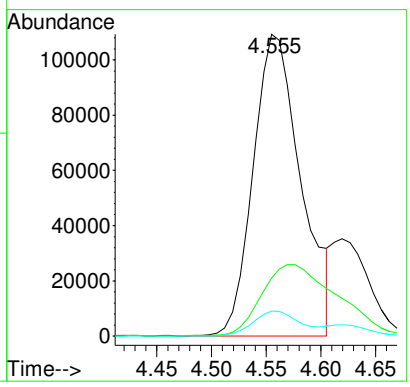


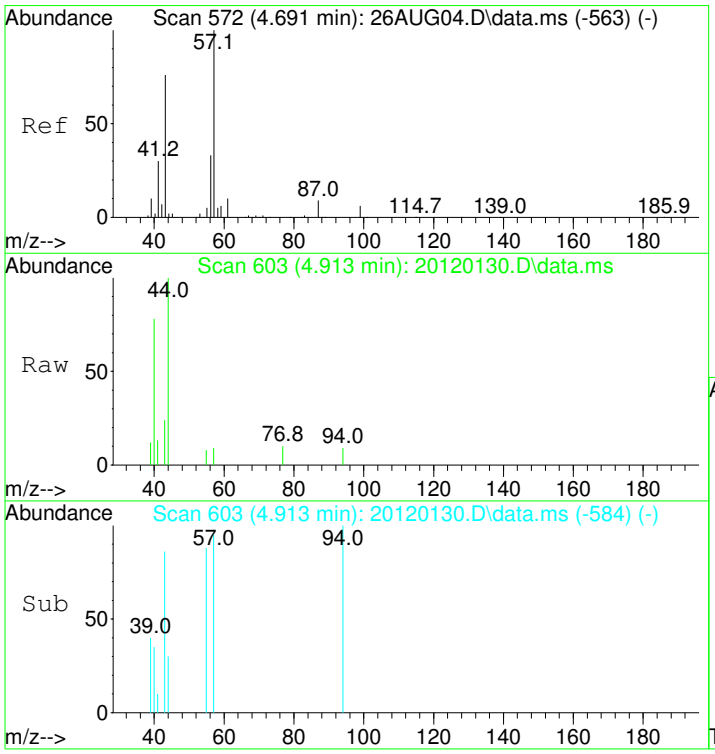


#54
Isobutyl Alcohol
Concen: 21.05 ug/L
RT: 4.555 min Scan# 553
Delta R.T. -0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 333419

Ion	Ratio	Lower	Upper
43	100		
41	36.9	30.7	46.1
42	8.2	6.4	9.6

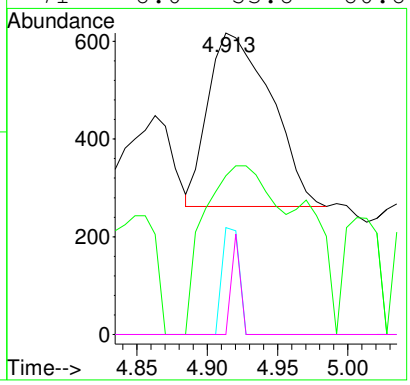


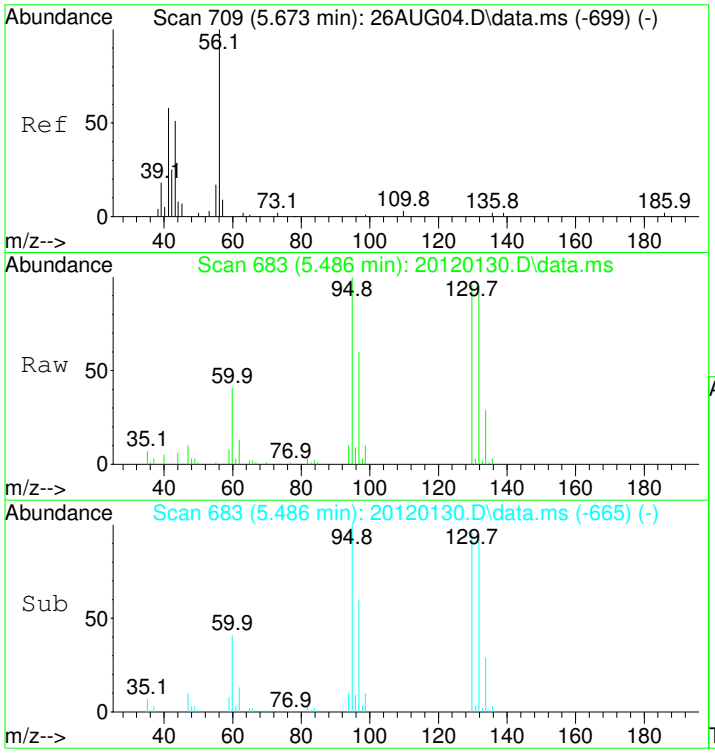


#55
Heptane
Concen: Below Cal
RT: 4.913 min Scan# 603
Delta R.T. 0.014 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 1108

Ion	Ratio	Lower	Upper
43	100		
41	112.6	46.8	70.2#
57	16.7	47.5	71.3#
71	8.0	53.8	80.8#

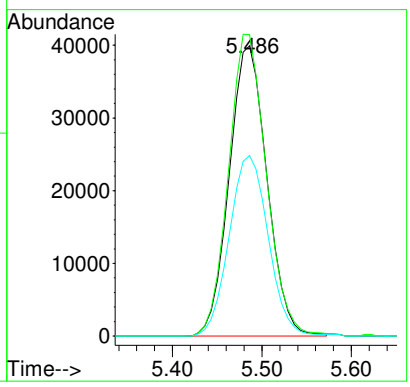


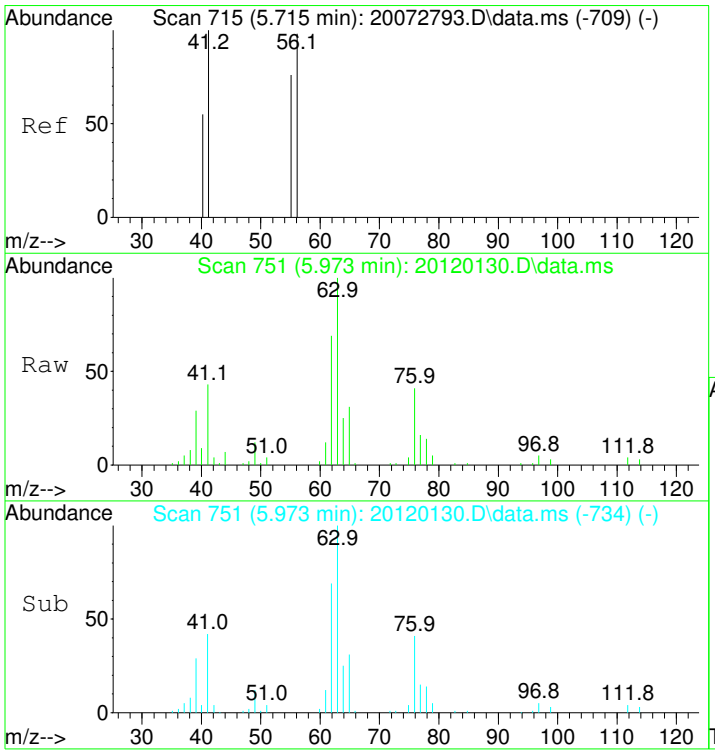


#59
Trichloroethene
Concen: 20.65 ug/L
RT: 5.486 min Scan# 683
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:130 Resp: 117216

Ion	Ratio	Lower	Upper
130	100		
95	104.1	82.7	122.7
97	64.1	47.6	87.6

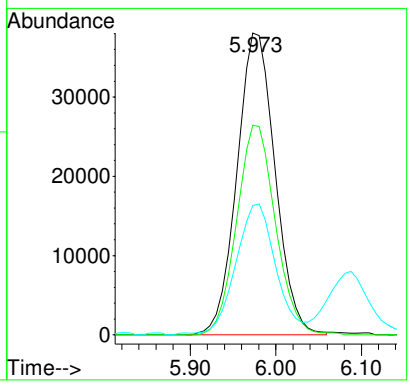


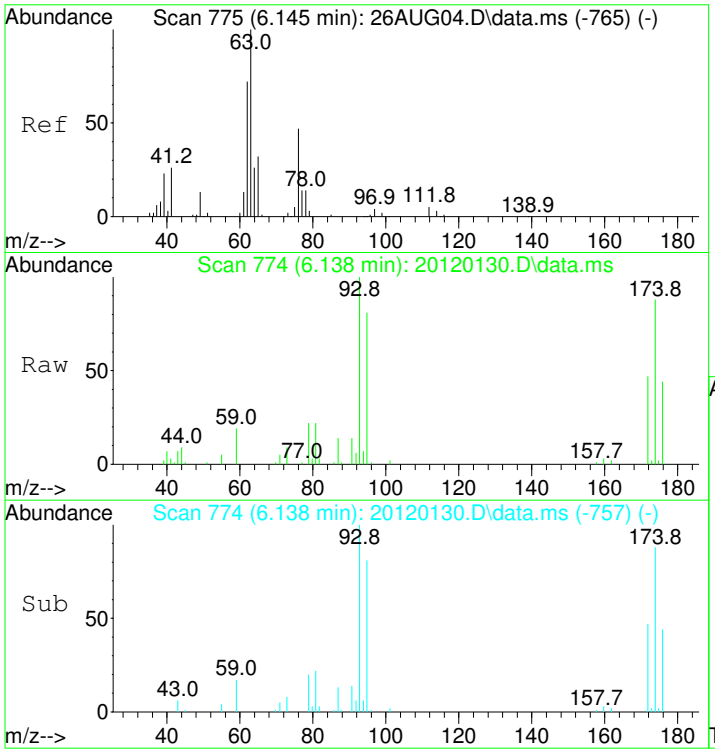


#60
1,2-Dichloropropane
Concen: 20.68 ug/L
RT: 5.973 min Scan# 751
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 63 Resp: 118094

Ion	Ratio	Lower	Upper
63	100		
62	70.4	51.5	91.5
41	45.3	26.1	66.1

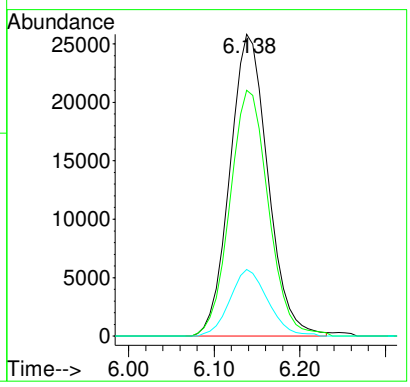


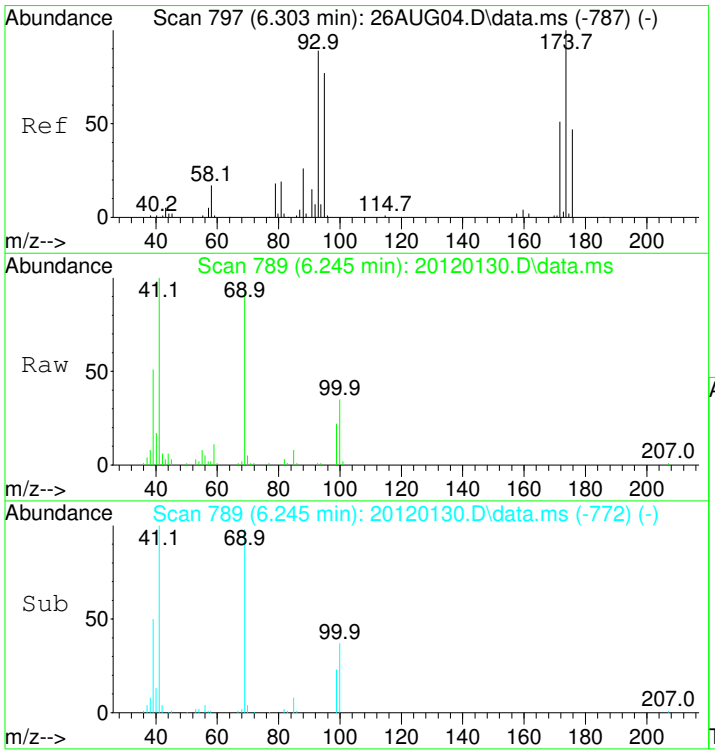


#61
Dibromomethane
Concen: 19.82 ug/L
RT: 6.138 min Scan# 774
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 93 Resp: 79932

Ion	Ratio	Lower	Upper
93	100		
95	82.2	63.0	103.0
81	22.0	3.4	43.4

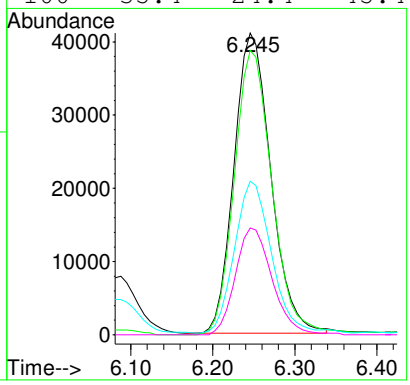


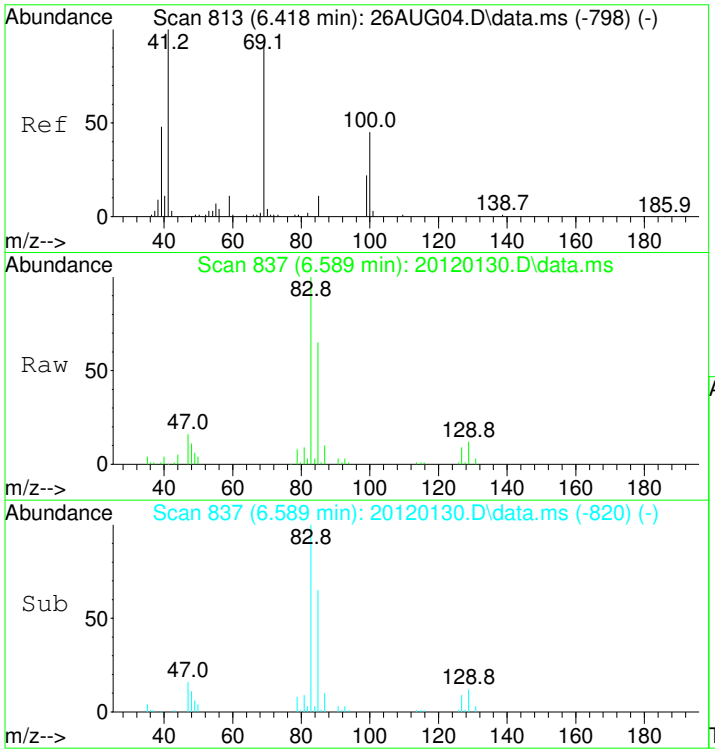


#62
Methyl methacrylate
Concen: 19.49 ug/L
RT: 6.245 min Scan# 789
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 41 Resp: 128211

Ion	Ratio	Lower	Upper
41	100		
69	96.4	72.2	108.4
39	50.3	41.1	61.7
100	35.4	24.4	45.4

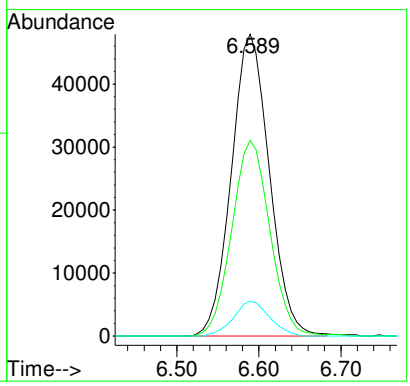


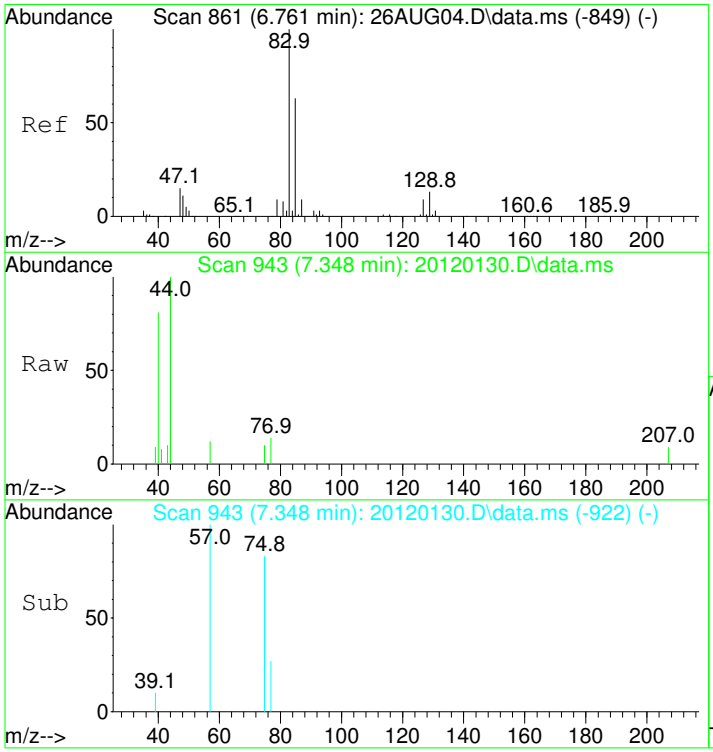


#63
Bromodichloromethane
Concen: 19.97 ug/L
RT: 6.589 min Scan# 837
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 83 Resp: 154555

Ion	Ratio	Lower	Upper
83	100		
85	64.7	44.3	84.3
129	11.0	0.0	31.0

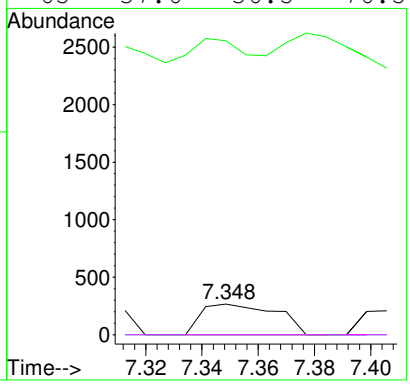


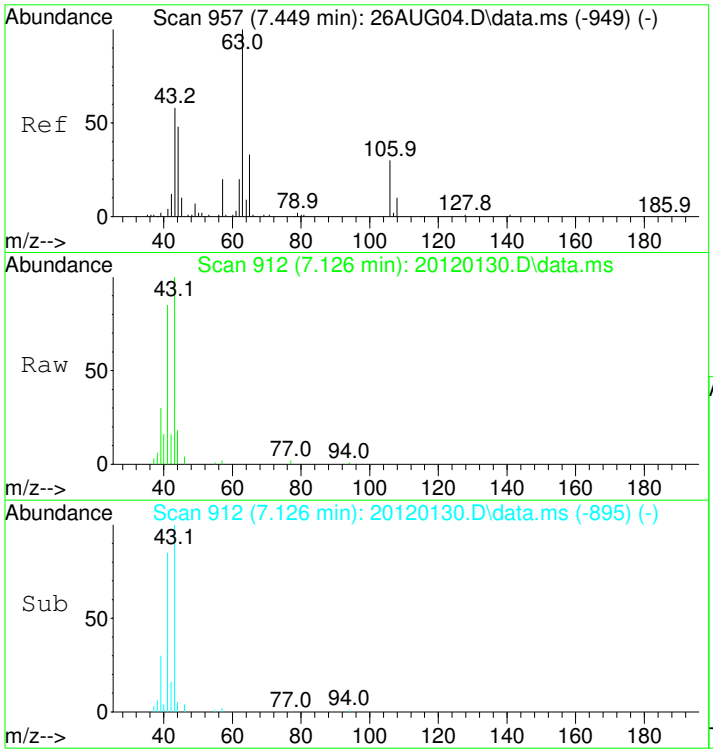


#64
2-Chloroethyl vinyl ether
Concen: Below Cal
RT: 7.348 min Scan# 943
Delta R.T. 0.028 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 497

Ion	Ratio	Lower	Upper
43	100		
44	71.0	51.0	111.0
63	0.0	141.4	201.4#
65	37.6	36.5	76.5

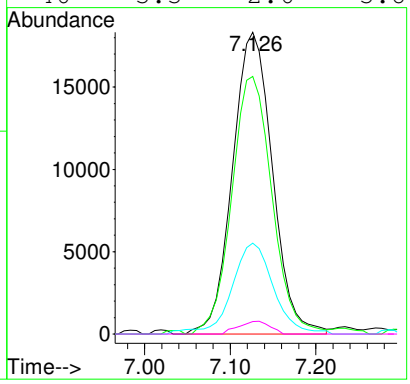


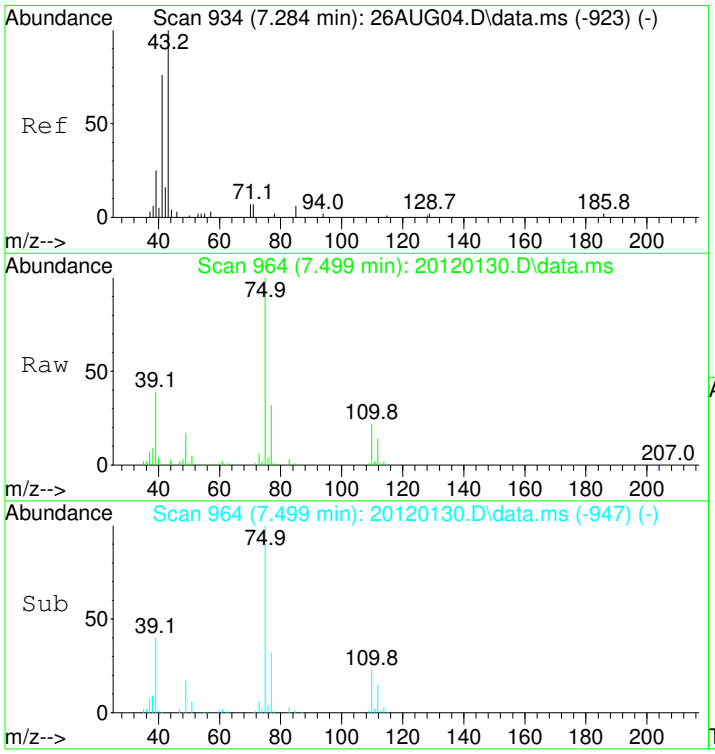


#65
2-Nitropropane
Concen: 19.59 ug/L
RT: 7.126 min Scan# 912
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 59559

Ion	Ratio	Lower	Upper
43	100		
41	86.0	67.9	101.9
39	31.5	21.8	32.8
46	3.3	2.6	3.8

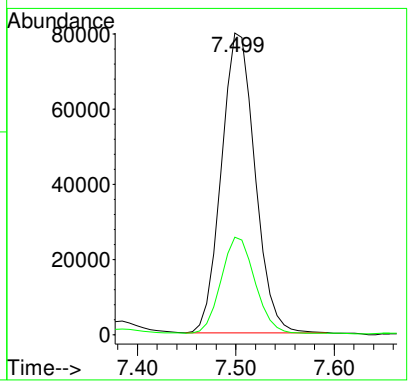


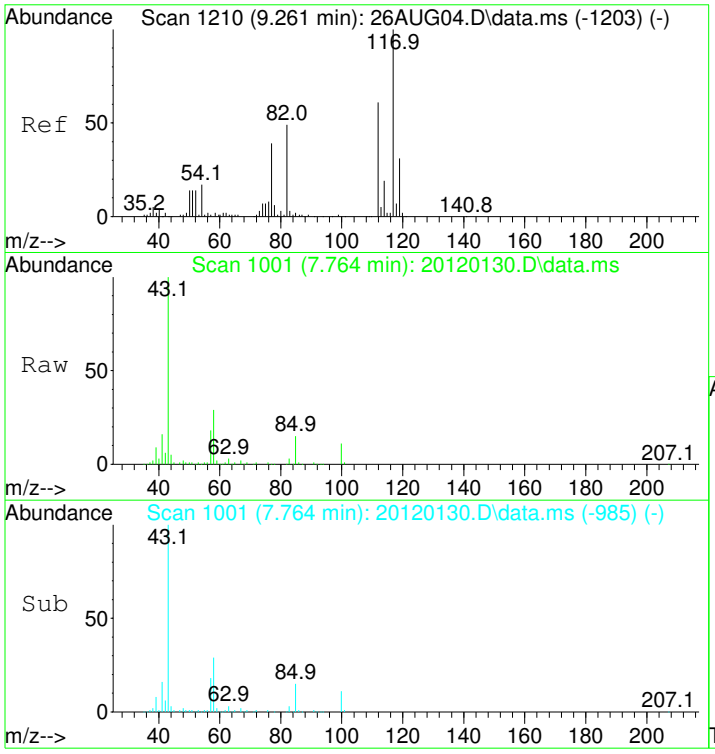


#66
cis-1,3-Dichloropropene
Concen: 19.90 ug/L
RT: 7.499 min Scan# 964
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 75 Resp: 189322

Ion	Ratio	Lower	Upper
75	100		
77	32.2	11.9	51.9

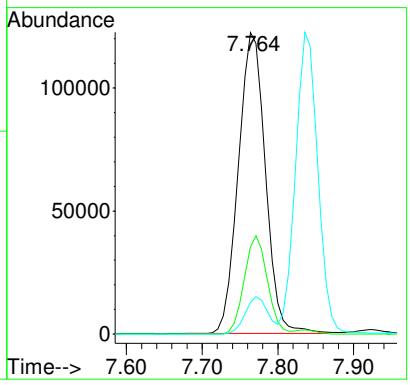


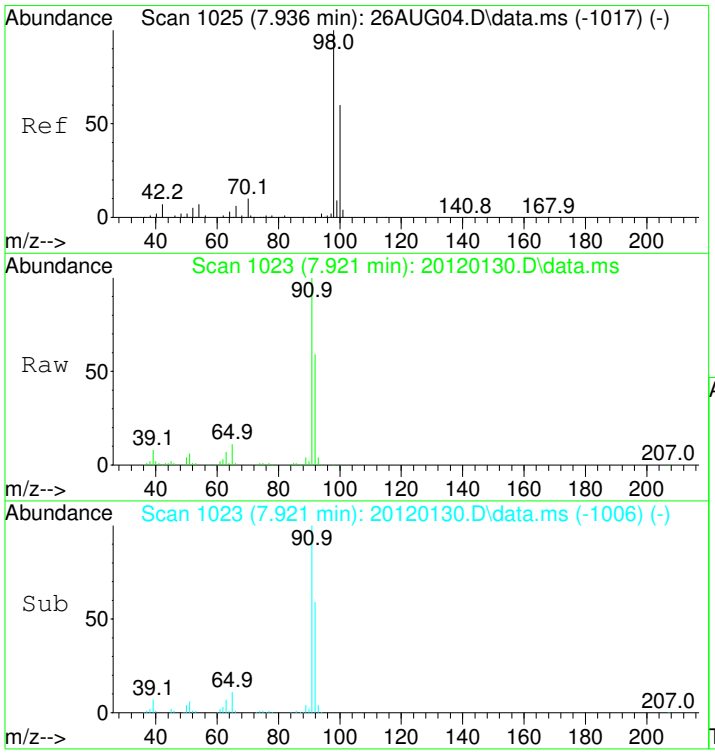


#68
4-Methyl-2-pentanone
Concen: 33.30 ug/L
RT: 7.764 min Scan# 1001
Delta R.T. -0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 302946

Ion	Ratio	Lower	Upper
43	100		
58	27.9	25.4	65.4
100	10.6	0.0	36.2

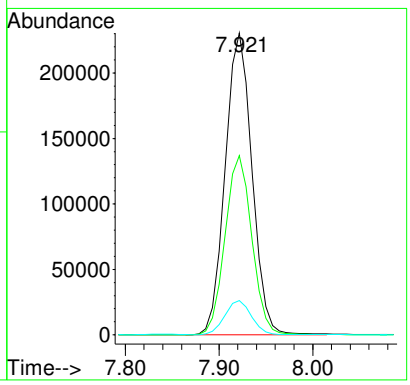


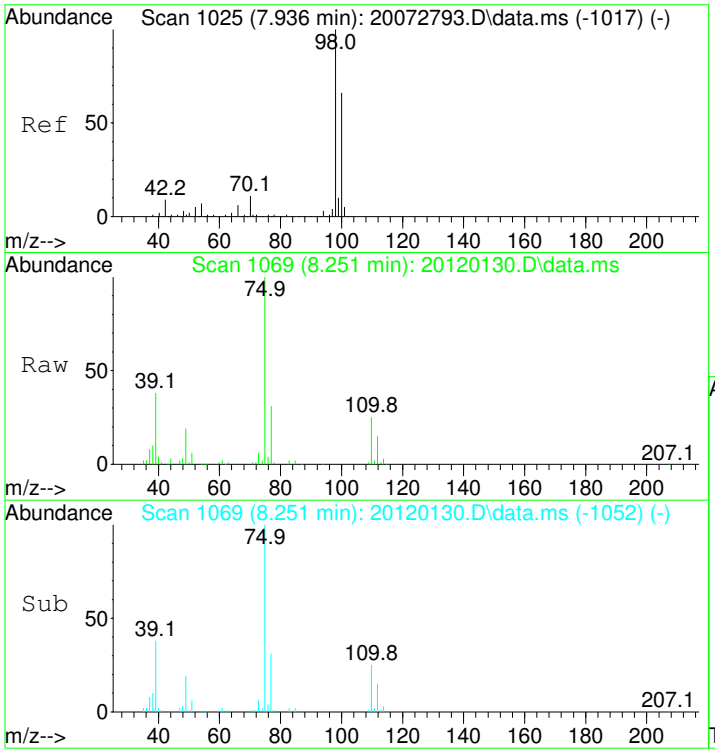


#70
Toluene
Concen: 22.91 ug/L
RT: 7.921 min Scan# 1023
Delta R.T. -0.001 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 461712

Ion	Ratio	Lower	Upper
91	100		
92	59.2	40.7	80.7
65	11.5	0.0	31.5

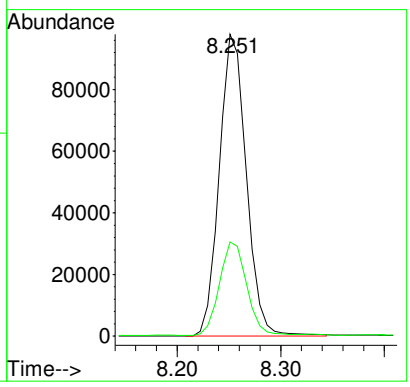


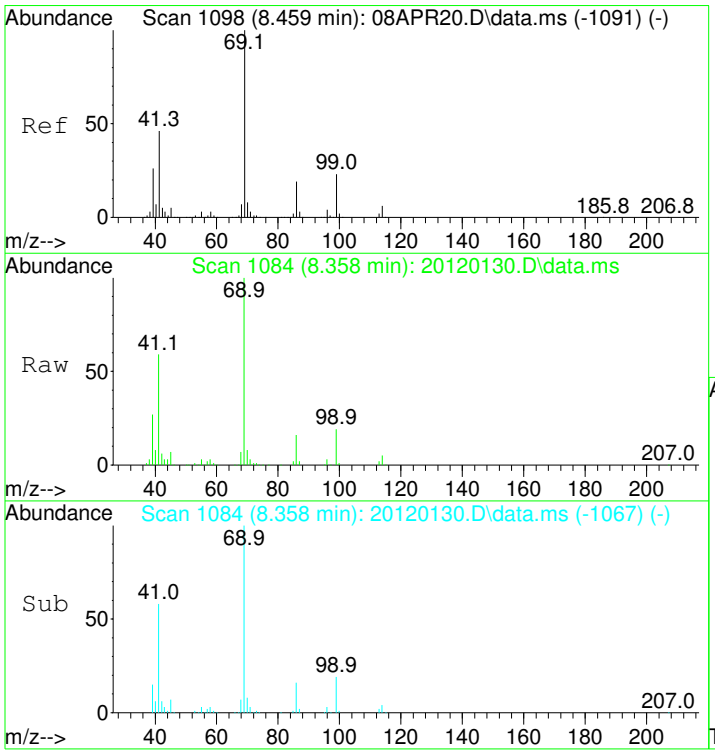


#71
trans-1,3-Dichloropropene
Concen: 20.60 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 75 Resp: 178268

Ion	Ratio	Lower	Upper
75	100		
77	31.2	15.0	55.0

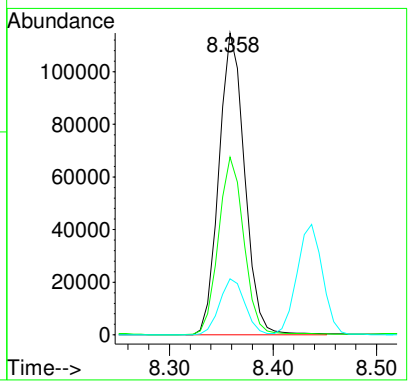


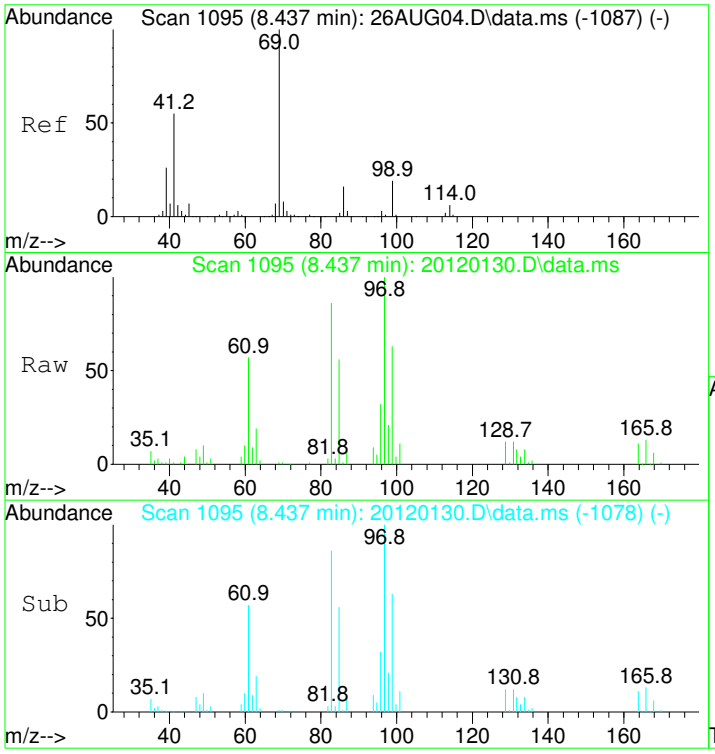


#73
Ethyl methacrylate
Concen: 21.10 ug/L
RT: 8.358 min Scan# 1084
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 69 Resp: 199026

Ion	Ratio	Lower	Upper
69	100		
41	58.6	39.9	79.9
99	18.4	0.0	39.7

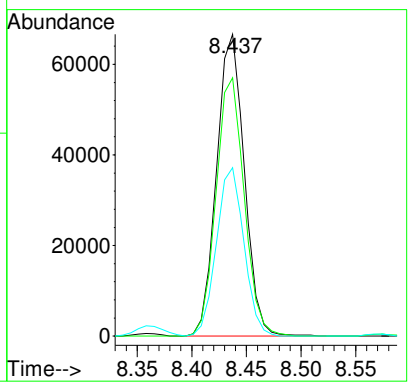


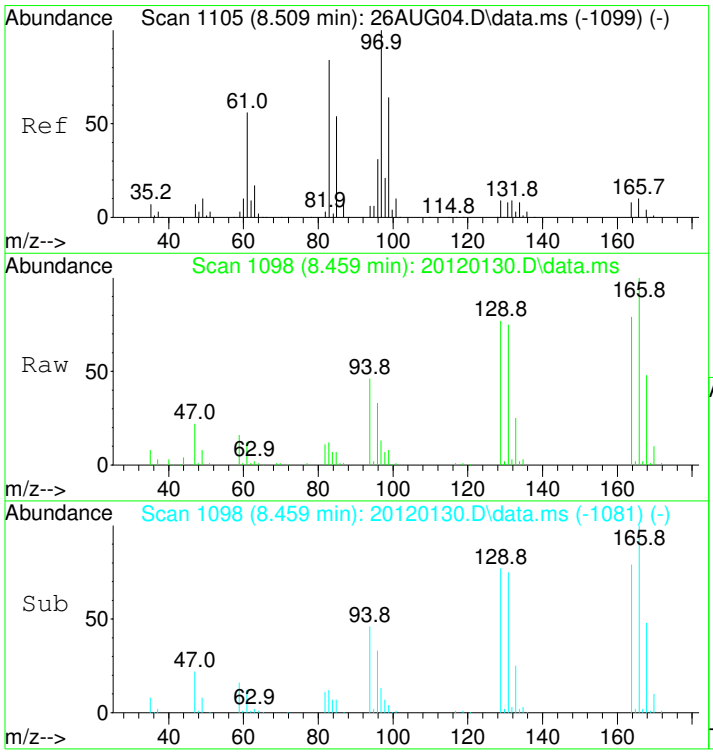


#74
1,1,2-Trichloroethane
Concen: 21.24 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 97 Resp: 117309

Ion	Ratio	Lower	Upper
97	100		
83	86.8	66.1	106.1
85	55.4	36.8	76.8

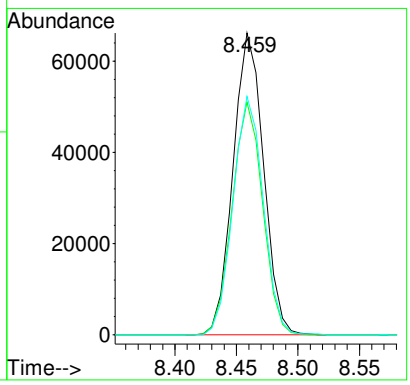


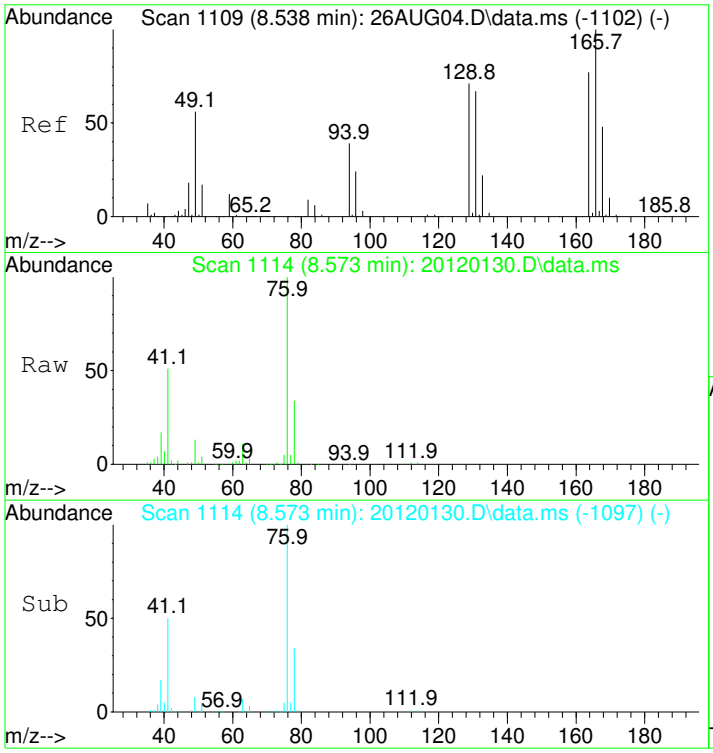


#75
Tetrachloroethene
Concen: 22.47 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:166 Resp: 113886

Ion	Ratio	Lower	Upper
166	100		
129	76.9	59.1	99.1
164	78.4	59.1	99.1

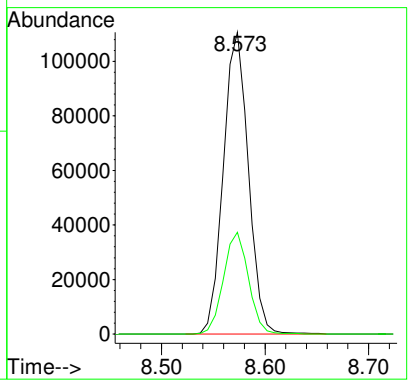


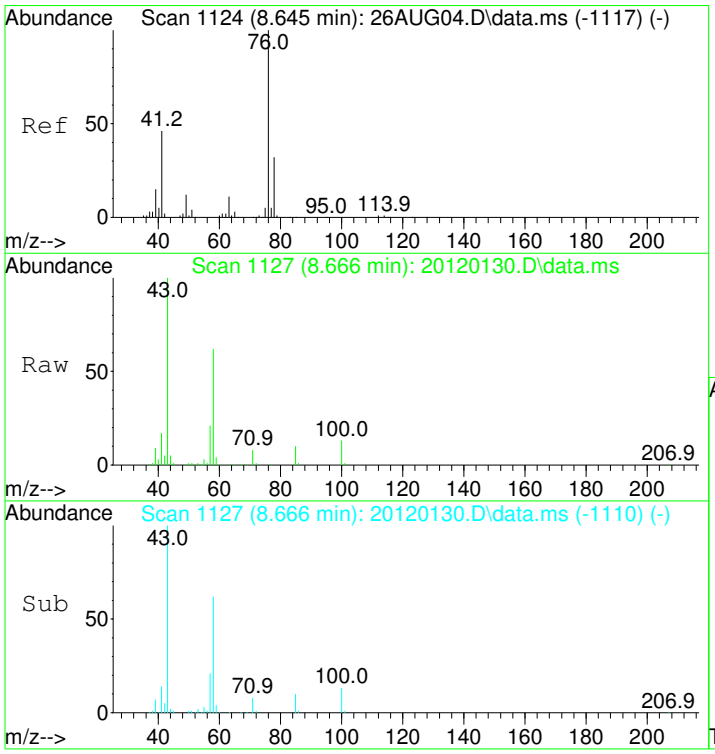


#76
1,3-Dichloropropane
Concen: 20.33 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 76 Resp: 186651

Ion	Ratio	Lower	Upper
76	100		
78	33.6	13.2	53.2

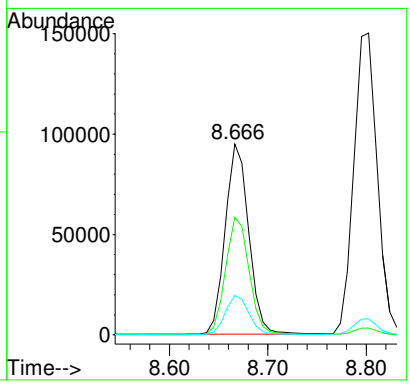


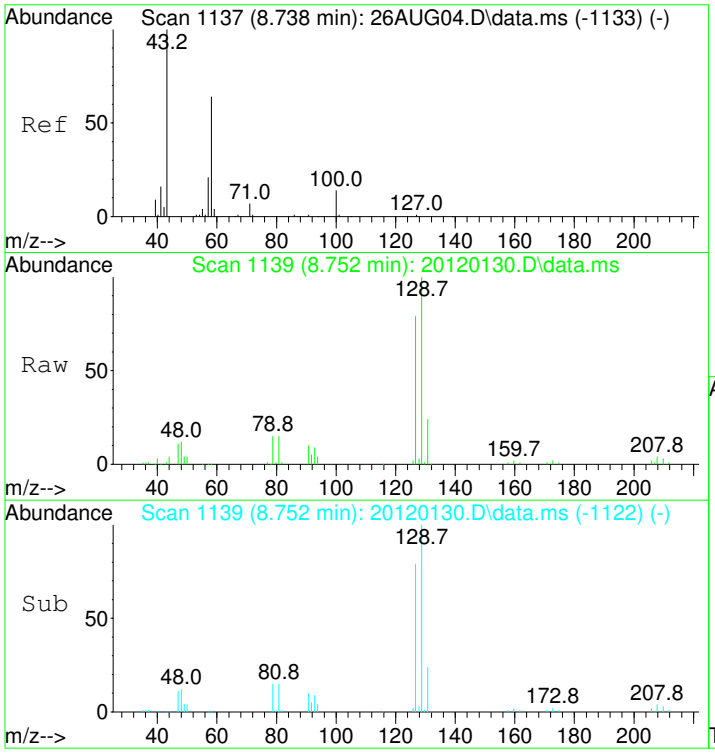


#77
2-Hexanone
Concen: 21.84 ug/L
RT: 8.666 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 158077

Ion	Ratio	Lower	Upper
43	100		
58	62.3	42.3	82.3
57	21.5	1.0	41.0

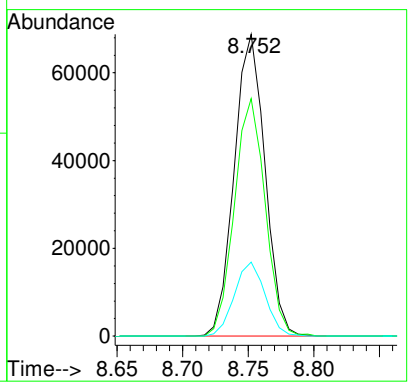


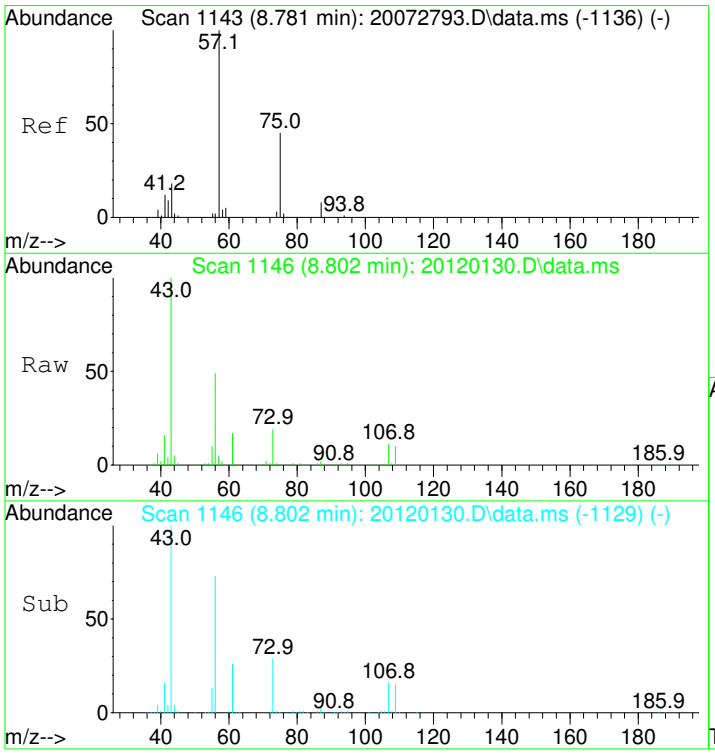


#78
Chlorodibromomethane
Concen: 18.60 ug/L
RT: 8.752 min Scan# 1139
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:129 Resp: 112393

Ion	Ratio	Lower	Upper
129	100		
127	78.4	57.8	97.8
131	24.5	4.2	44.2

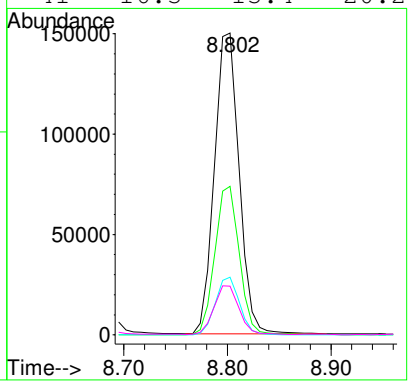


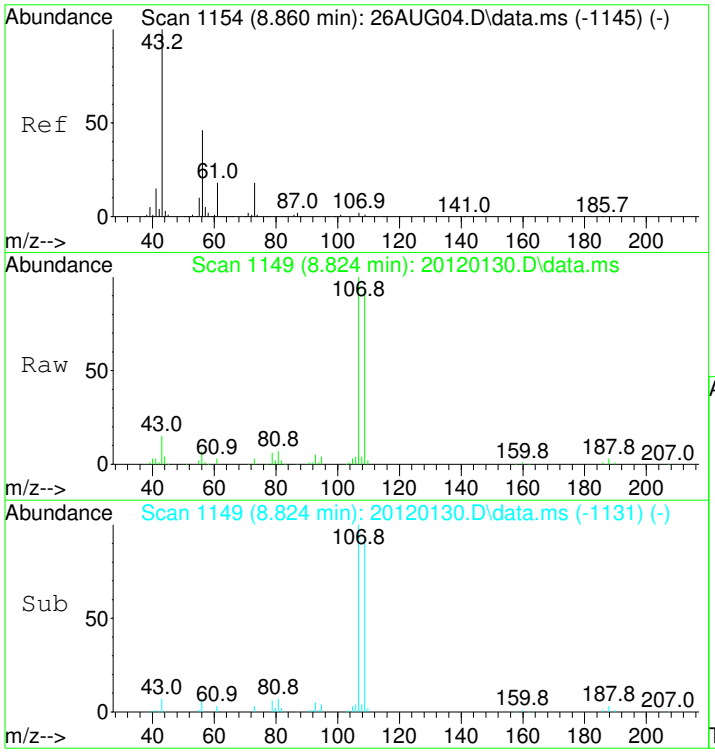


#79
Butyl acetate
Concen: 21.78 ug/L
RT: 8.802 min Scan# 1146
Delta R.T. -0.001 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 249040

Ion	Ratio	Lower	Upper
43	100		
56	49.1	38.0	57.0
73	18.8	15.0	22.4
41	16.3	13.4	20.2

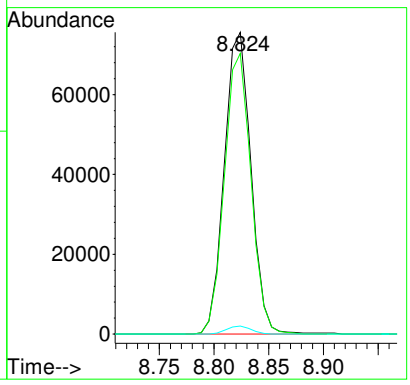


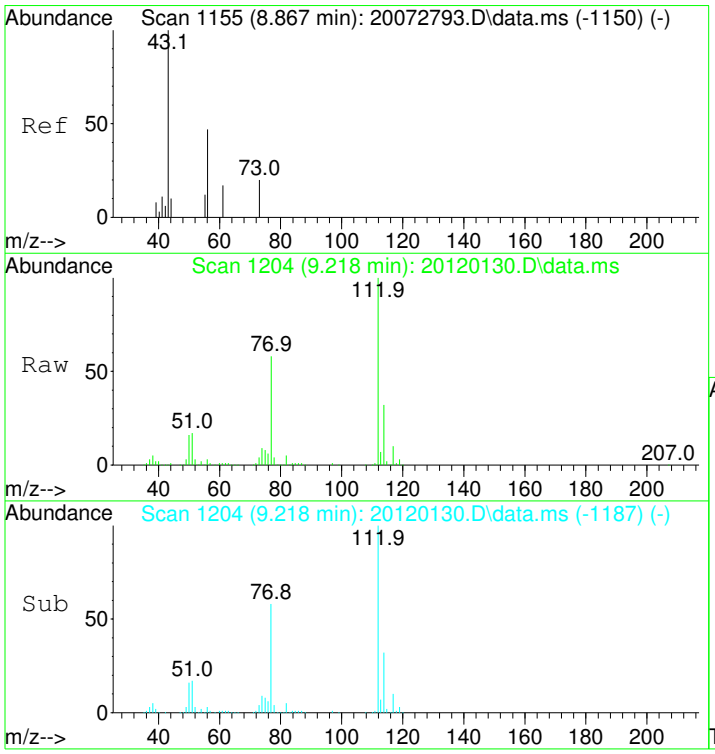


#80
1,2-Dibromoethane
Concen: 22.46 ug/L
RT: 8.824 min Scan# 1149
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:107 Resp: 128297

Ion	Ratio	Lower	Upper
107	100		
109	92.6	76.6	116.6
188	2.4	0.0	22.9

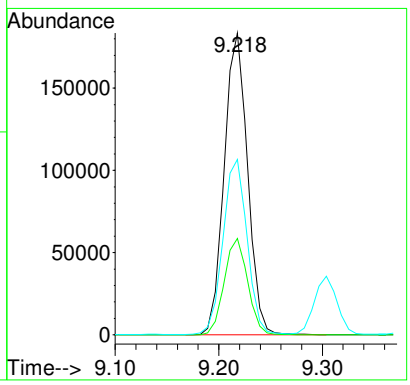


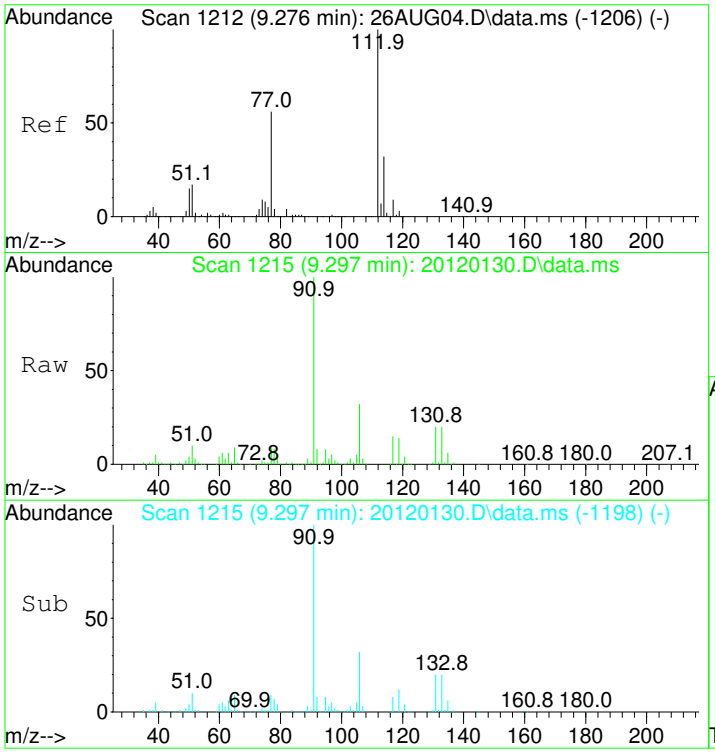


#81
Chlorobenzene
Concen: 22.33 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:112 Resp: 289158

Ion	Ratio	Lower	Upper
112	100		
114	31.9	13.6	53.6
77	59.7	41.7	81.7

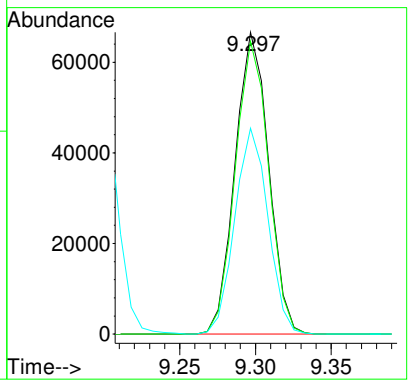


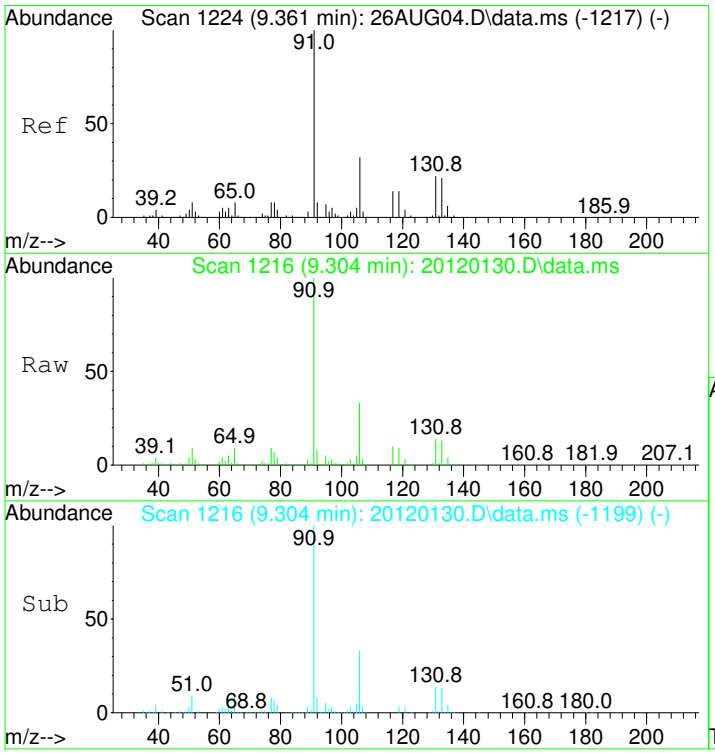


#82
1,1,1,2-Tetrachloroethane
Concen: 20.49 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:131 Resp: 102721

Ion	Ratio	Lower	Upper
131	100		
133	96.1	74.4	114.4
119	67.4	45.7	85.7

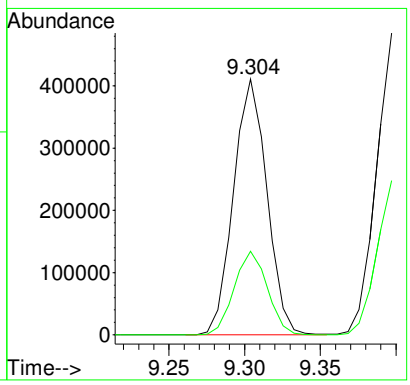


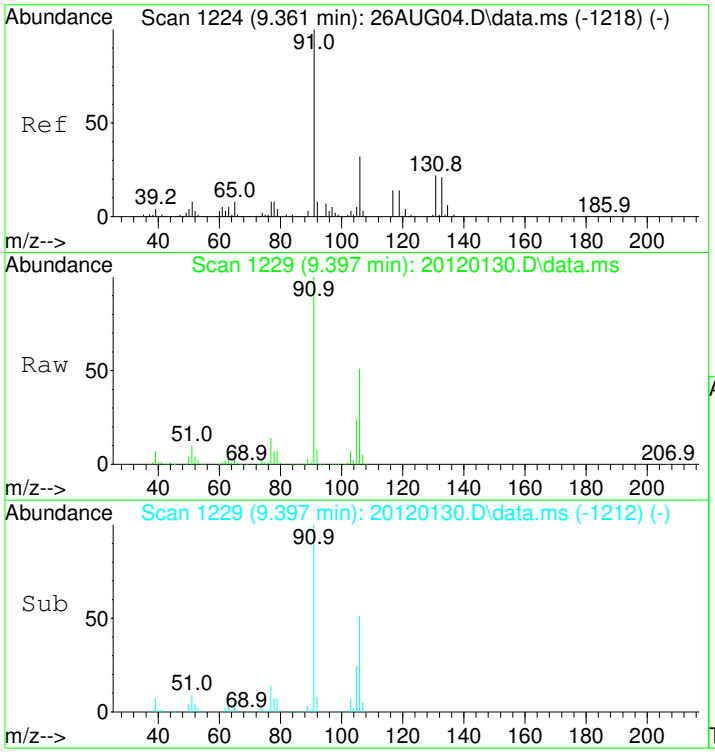


#83
Ethylbenzene
Concen: 27.66 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 630048

Ion	Ratio	Lower	Upper
91	100		
106	32.4	13.6	53.6

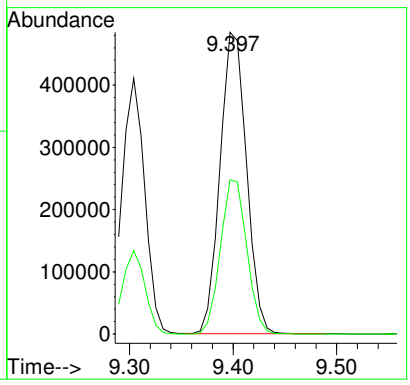


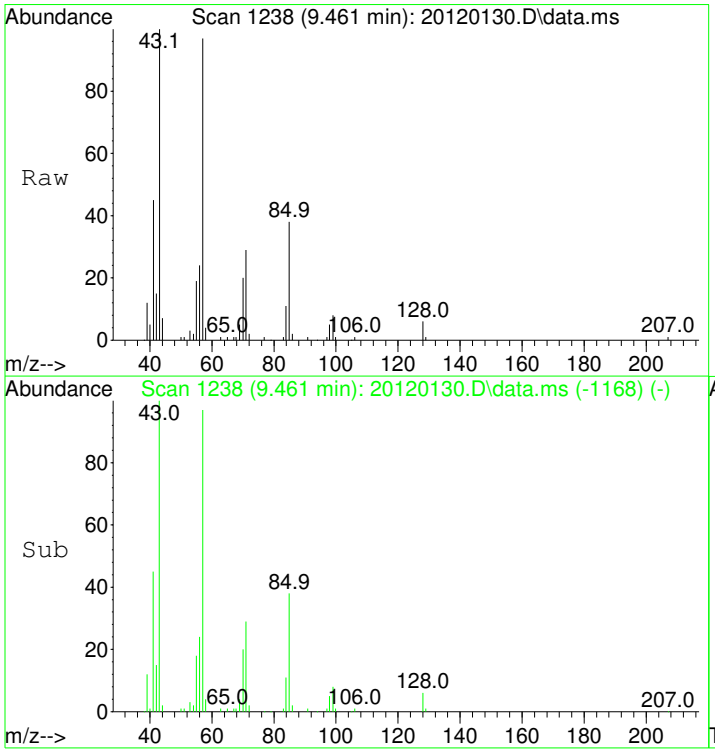


#84
m/p-Xylene
Concen: 46.98 ug/L
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 863946

Ion	Ratio	Lower	Upper
91	100		
106	51.2	34.2	74.2

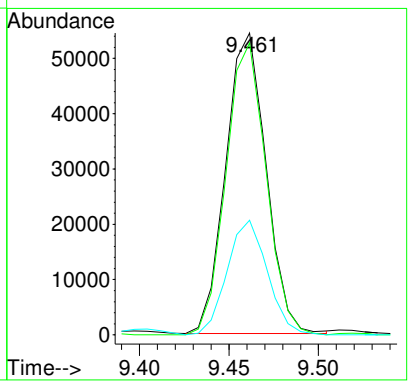


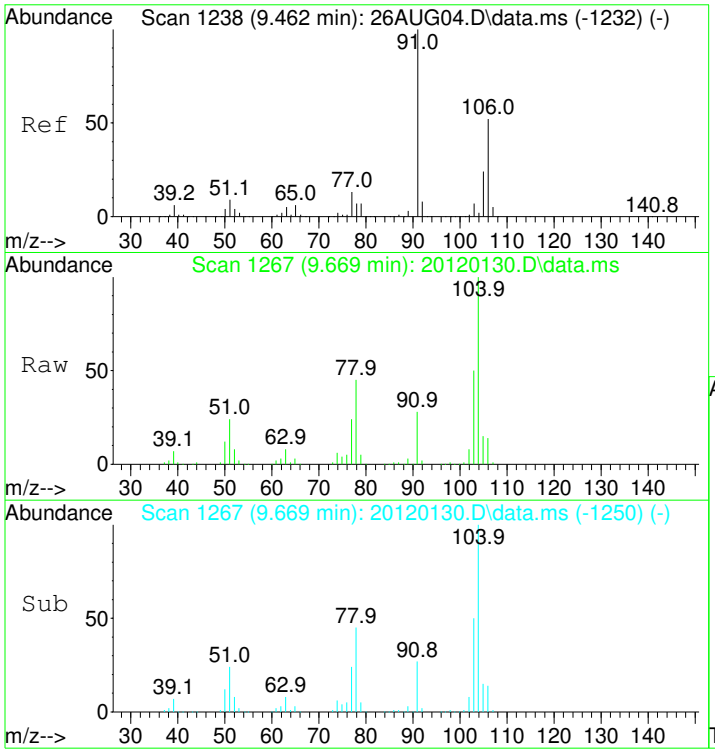


#85
Nonane
Concen: 31.07 ug/L
RT: 9.461 min Scan# 1238
Delta R.T. -0.001 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 85414

Ion	Ratio	Lower	Upper
43	100		
57	96.5	67.9	127.9
85	38.0	10.4	70.4

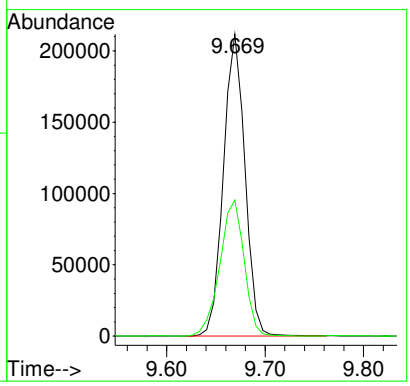


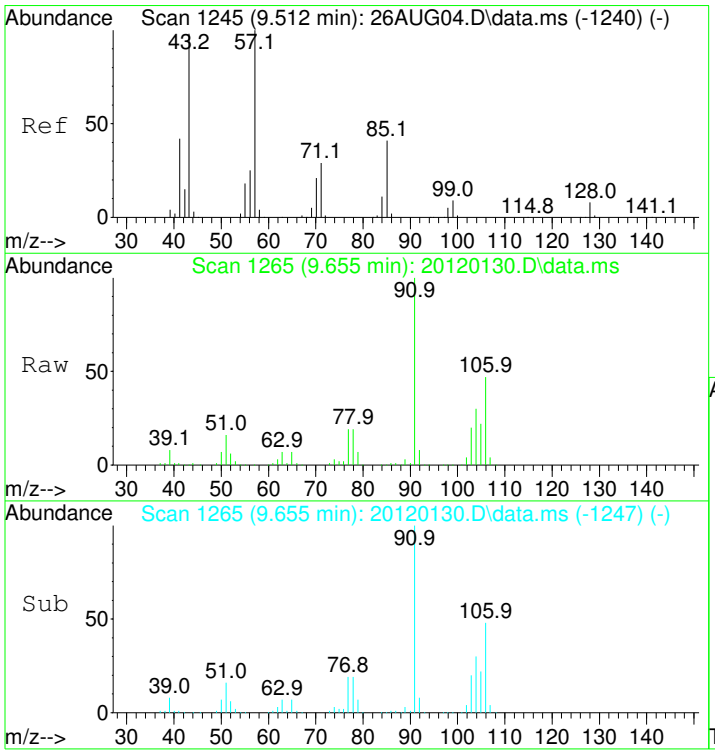


#86
Styrene
Concen: 20.38 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:104 Resp: 322669

Ion	Ratio	Lower	Upper
104	100		
78	50.8	32.3	72.3

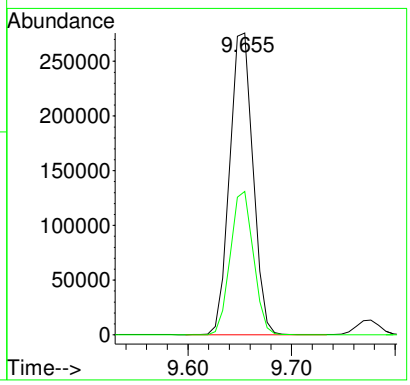


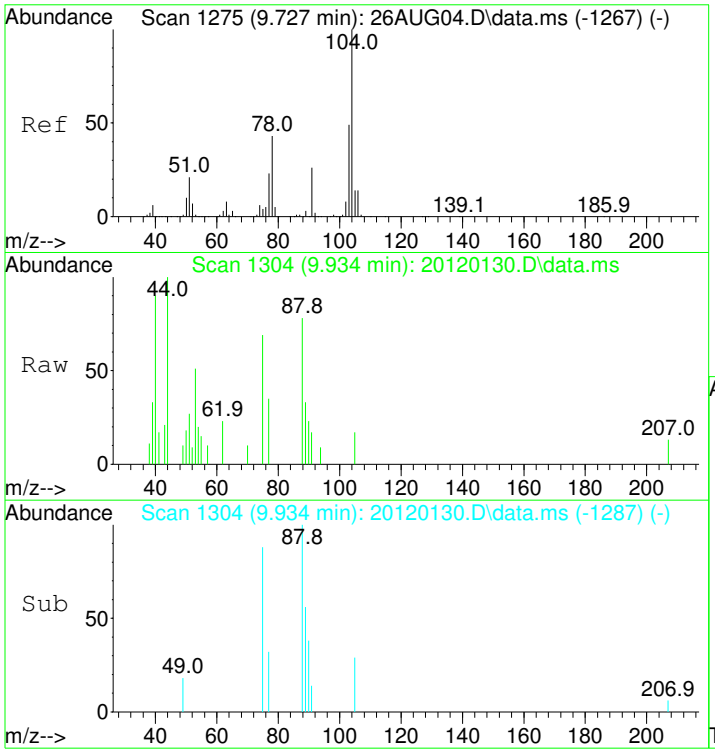


#87
o-Xylene
Concen: 21.13 ug/L
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 434715

Ion	Ratio	Lower	Upper
91	100		
106	46.9	30.3	70.3

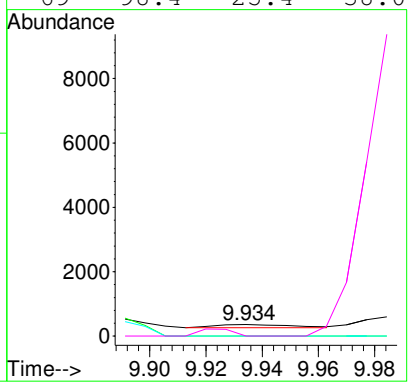


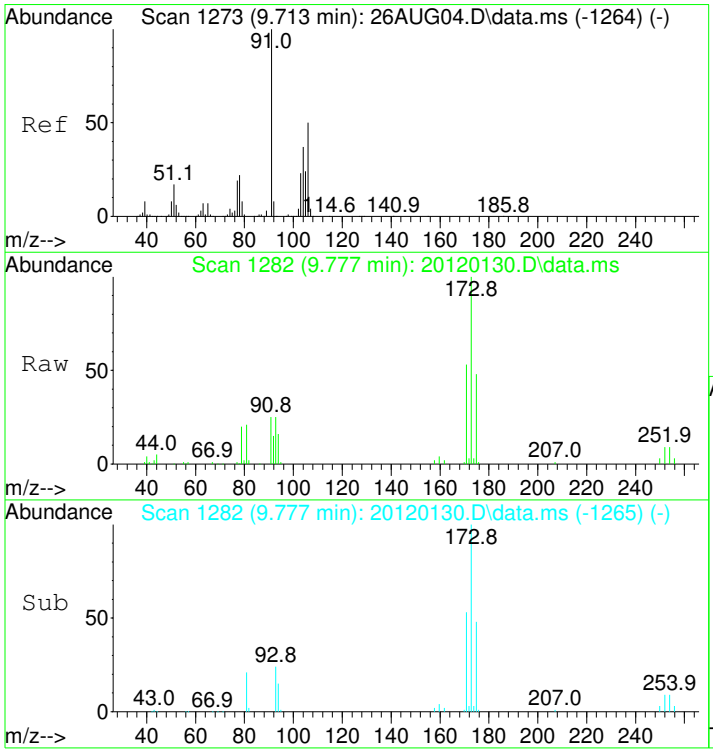


#88
Cyclohexanone
Concen: Below Cal
RT: 9.934 min Scan# 1304
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 55 Resp: 190

Ion	Ratio	Lower	Upper
55	100		
42	0.0	48.0	72.0#
98	0.0	38.2	57.2#
69	98.4	25.4	38.0#

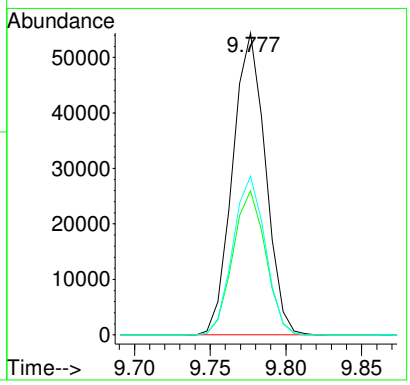


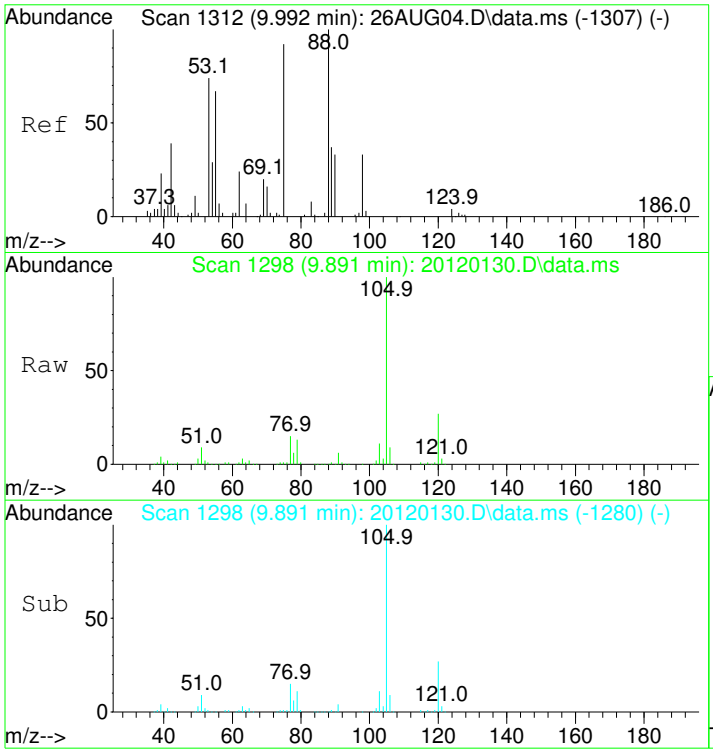


#89
Bromoform
Concen: 17.73 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:173 Resp: 81873

Ion	Ratio	Lower	Upper
173	100		
175	47.6	28.4	68.4
171	51.8	31.7	71.7

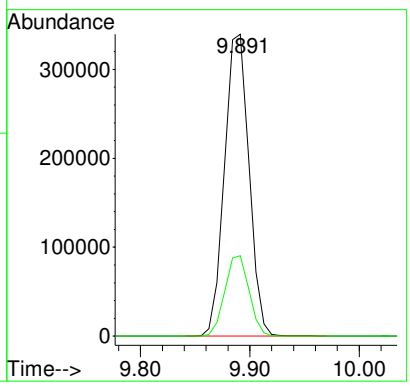


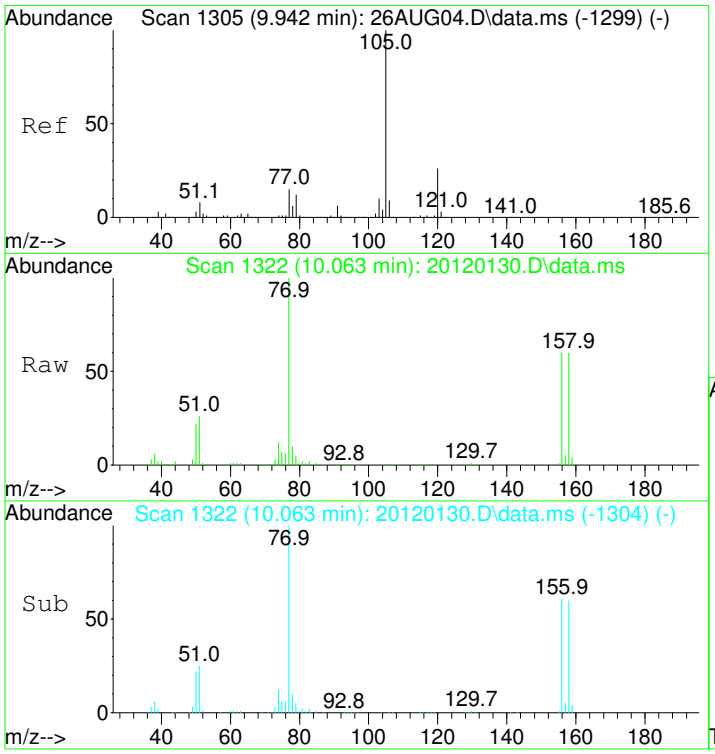


#90
Isopropylbenzene
Concen: 22.53 ug/L
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:105 Resp: 529272

Ion	Ratio	Lower	Upper
105	100		
120	26.2	8.0	48.0

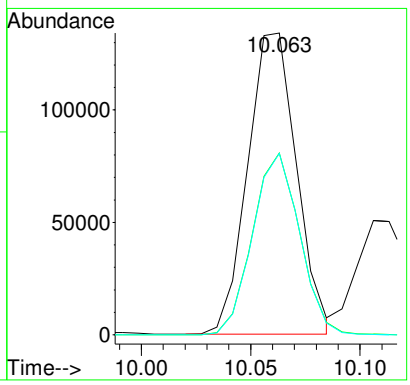


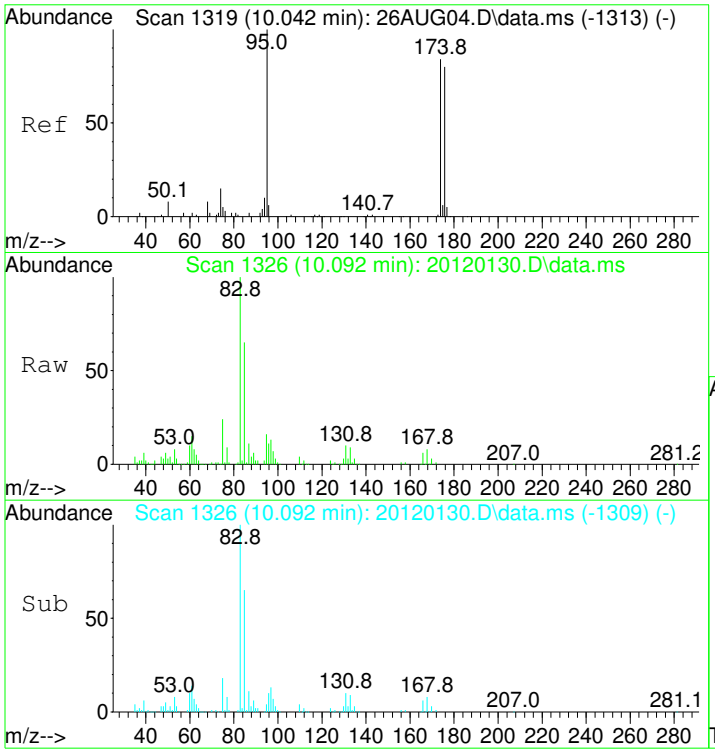


#92
Bromobenzene
Concen: 21.80 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 77 Resp: 209172

Ion	Ratio	Lower	Upper
77	100		
156	58.3	40.2	80.2
158	57.8	38.1	78.1

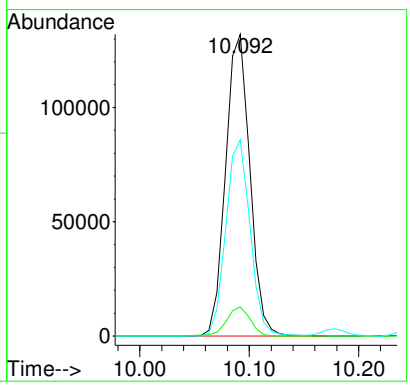


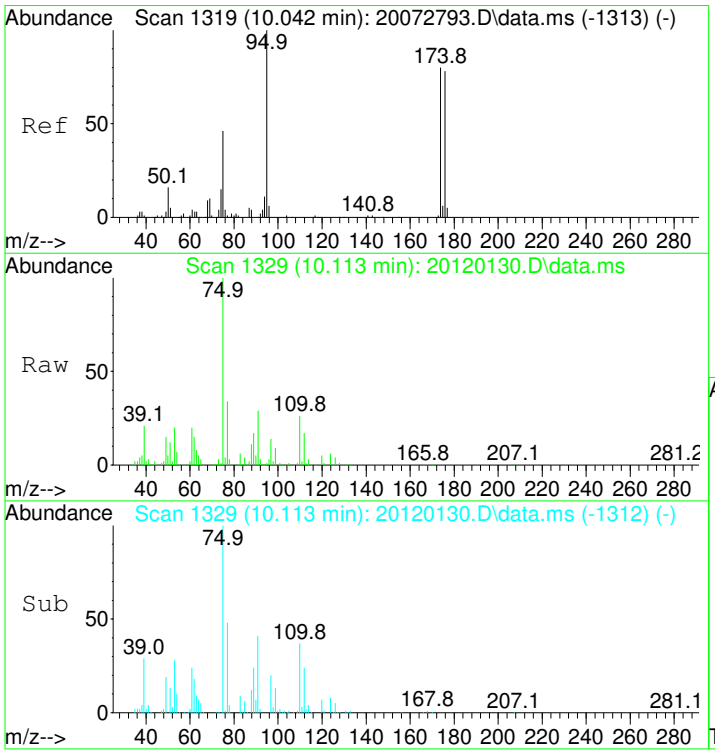


#93
1,1,2,2-Tetrachloroethane
Concen: 22.35 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 83 Resp: 203952

Ion	Ratio	Lower	Upper
83	100		
131	9.6	0.0	35.0
85	64.9	46.4	86.4

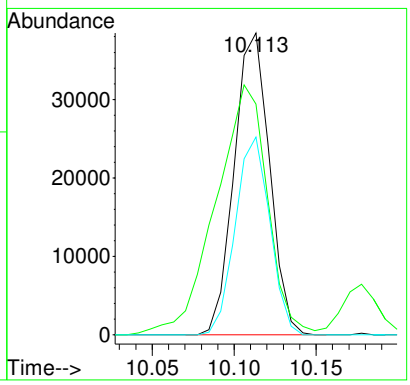


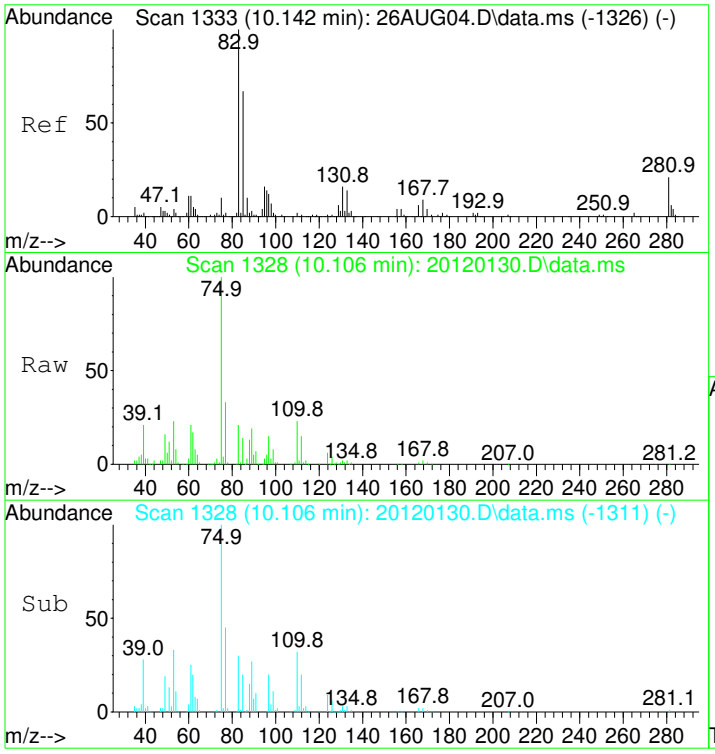


#94
1,2,3-Trichloropropane
Concen: 20.13 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:110 Resp: 57885

Ion	Ratio	Lower	Upper
110	100		
61	120.5	97.0	137.0
112	63.8	44.1	84.1

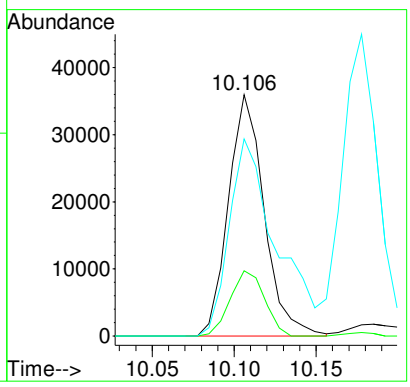


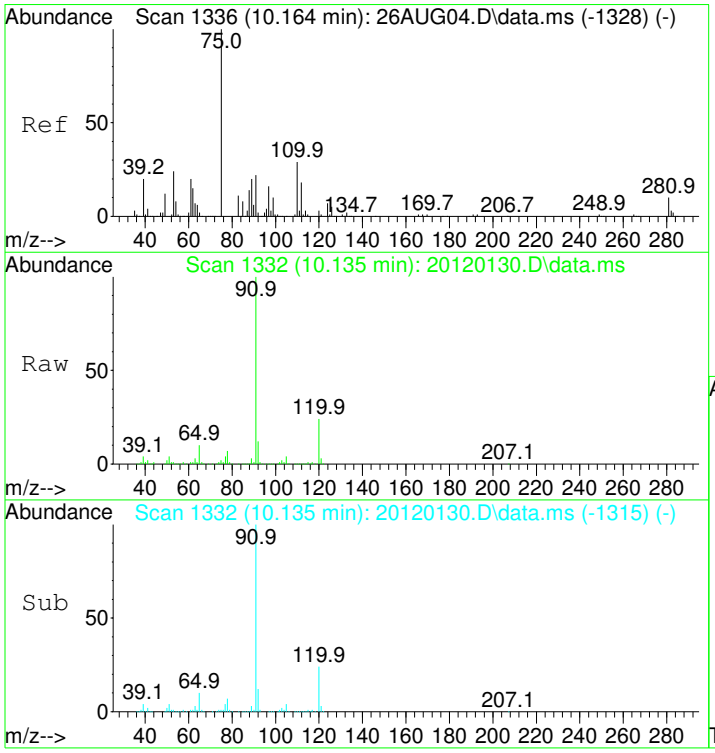


#95
trans-1,4-Dichloro-2-butene
Concen: 18.03 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 53 Resp: 54651

Ion	Ratio	Lower	Upper
53	100		
124	26.0	7.2	47.2
89	106.1	79.3	119.3

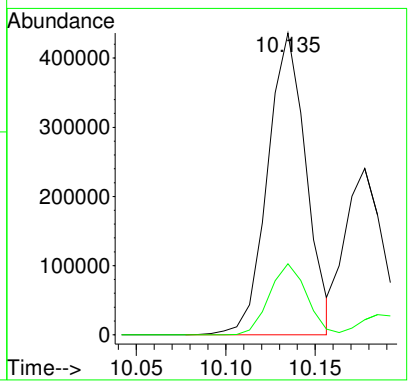


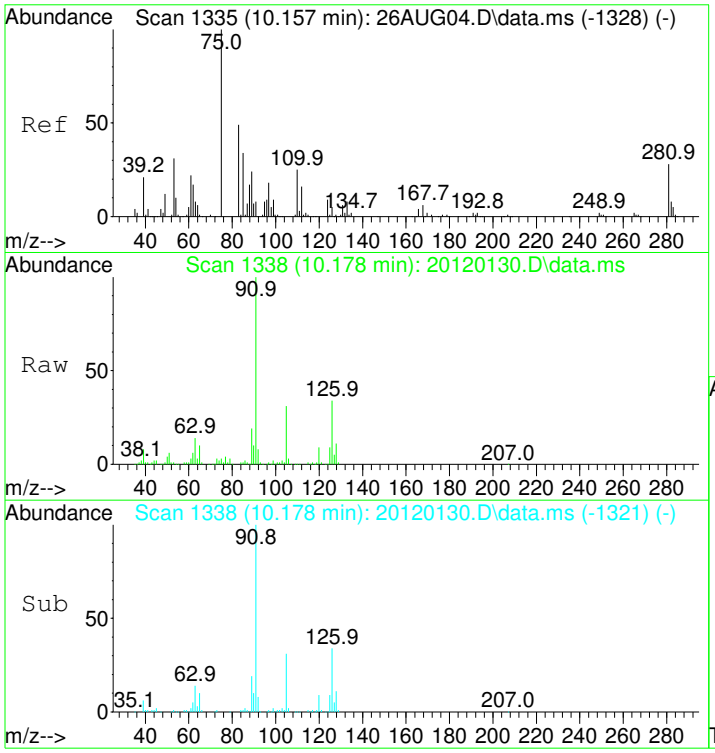


#96
n-Propylbenzene
Concen: 23.04 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 654014

Ion	Ratio	Lower	Upper
91	100		
120	22.8	3.7	43.7

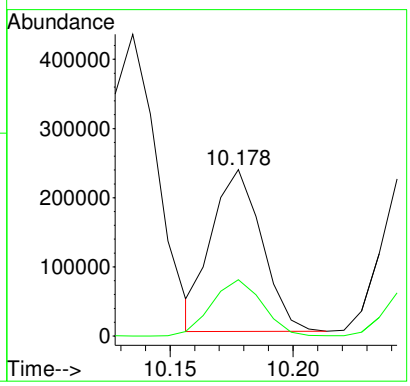


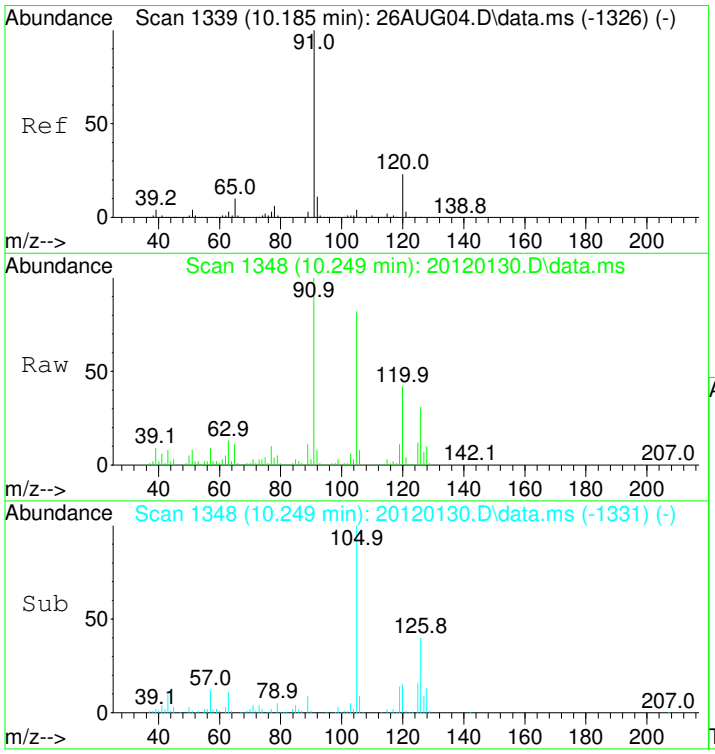


#97
2-Chlorotoluene
Concen: 23.27 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 333311

Ion	Ratio	Lower	Upper
91	100		
126	35.4	17.3	57.3

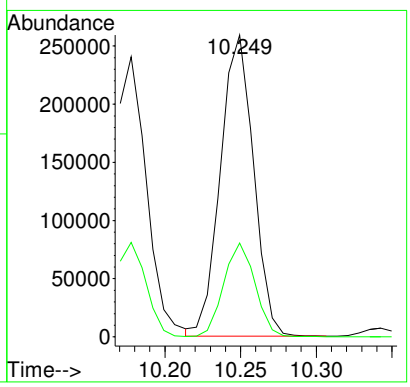


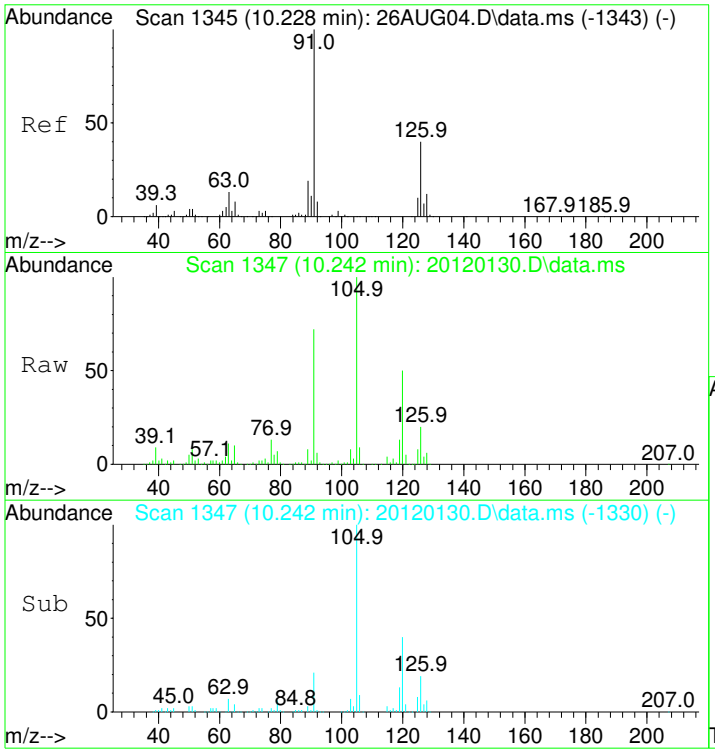


#98
4-Chlorotoluene
Concen: 20.11 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 393074

Ion	Ratio	Lower	Upper
91	100		
126	29.6	12.4	52.4

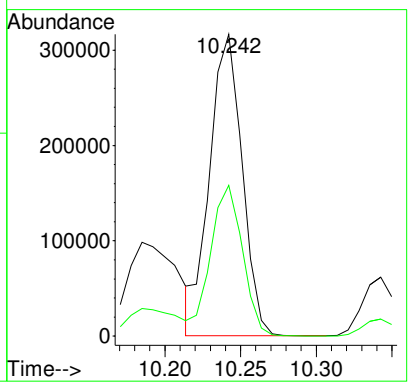


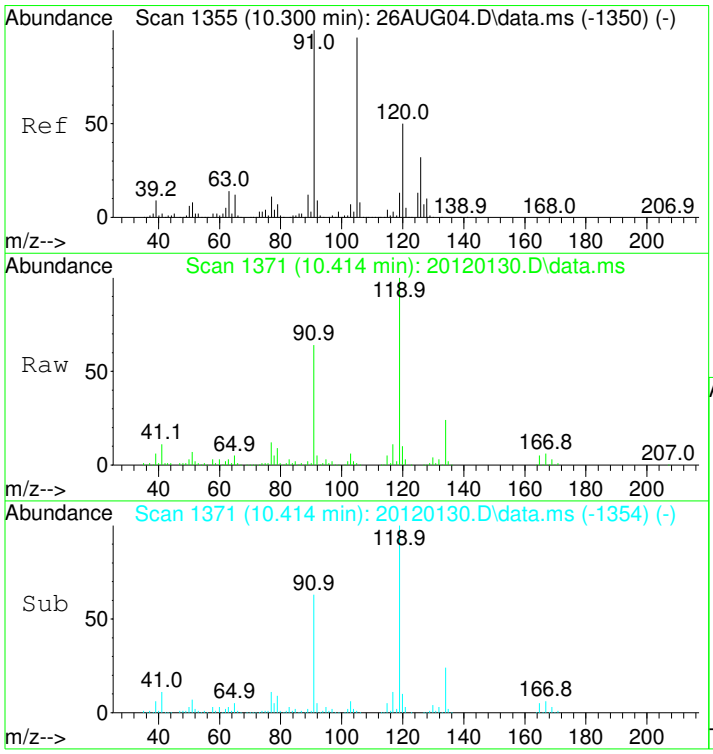


#99
1,3,5-Trimethylbenzene
Concen: 23.89 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:105 Resp: 473404

Ion	Ratio	Lower	Upper
105	100		
120	49.2	31.9	71.9

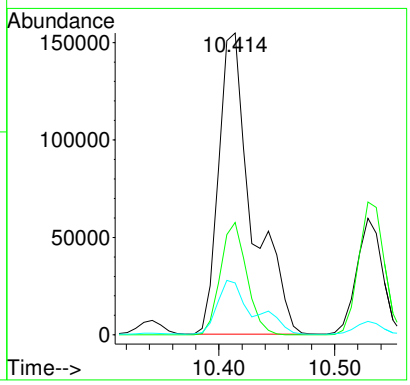


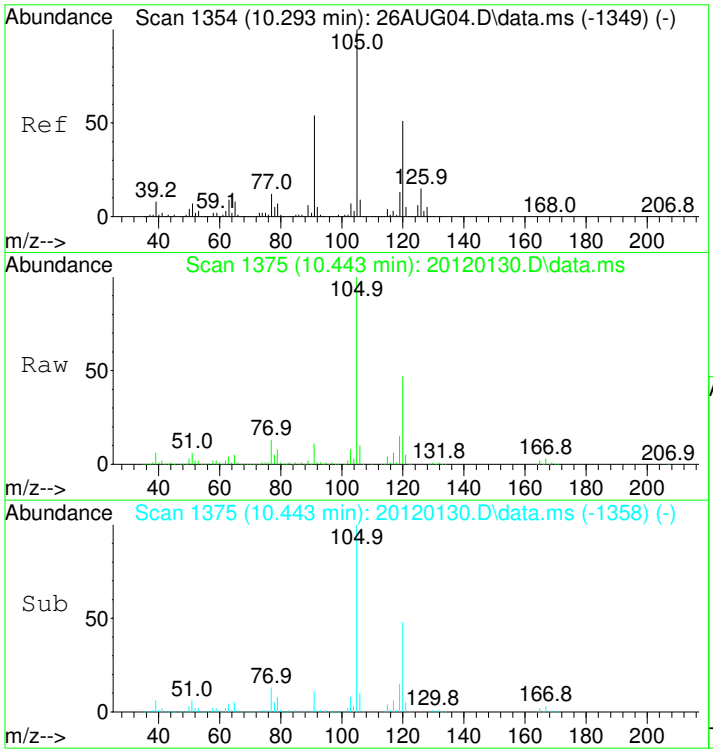


#100
tert-Butylbenzene
Concen: 24.67 ug/L
RT: 10.414 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 309512

Ion	Ratio	Lower	Upper
91	100		
134	29.4	9.7	49.7
41	19.3	0.0	39.3

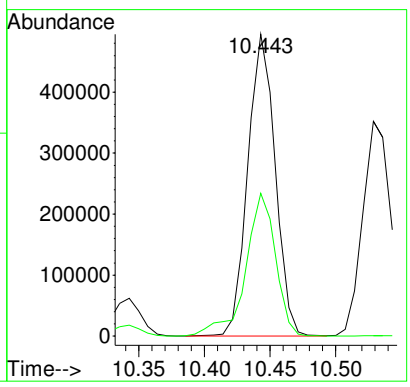


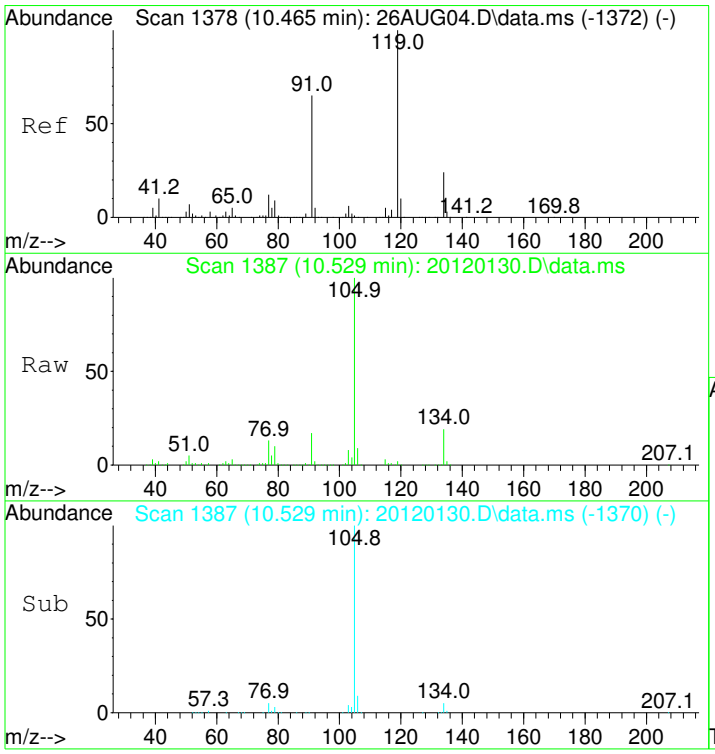


#101
1,2,4-Trimethylbenzene
Concen: 36.70 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:105 Resp: 718501

Ion	Ratio	Lower	Upper
105	100		
120	52.0	37.7	77.7

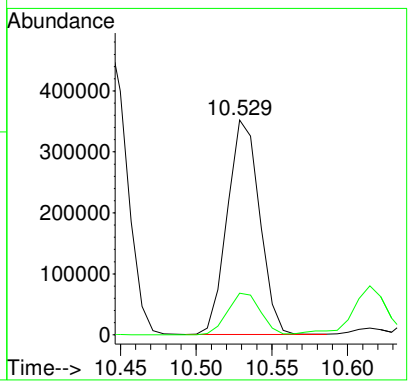


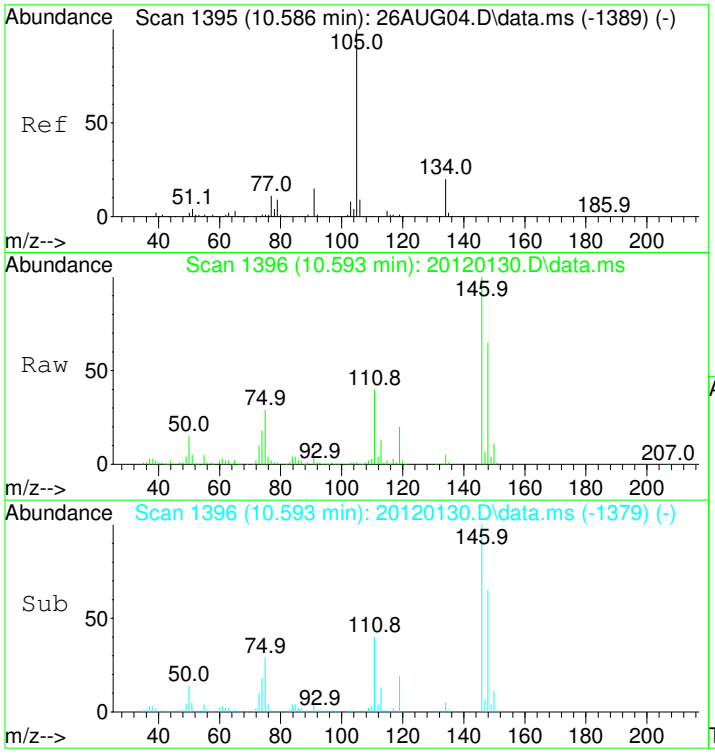


#102
sec-Butylbenzene
Concen: 21.48 ug/L
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:105 Resp: 520912

Ion	Ratio	Lower	Upper
105	100		
134	20.1	1.1	41.1

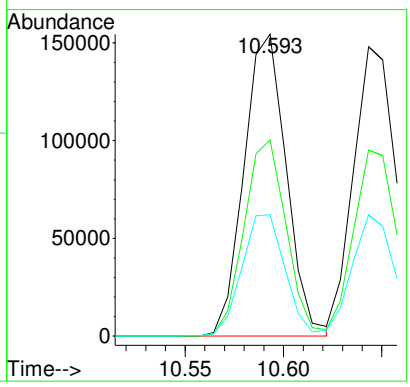


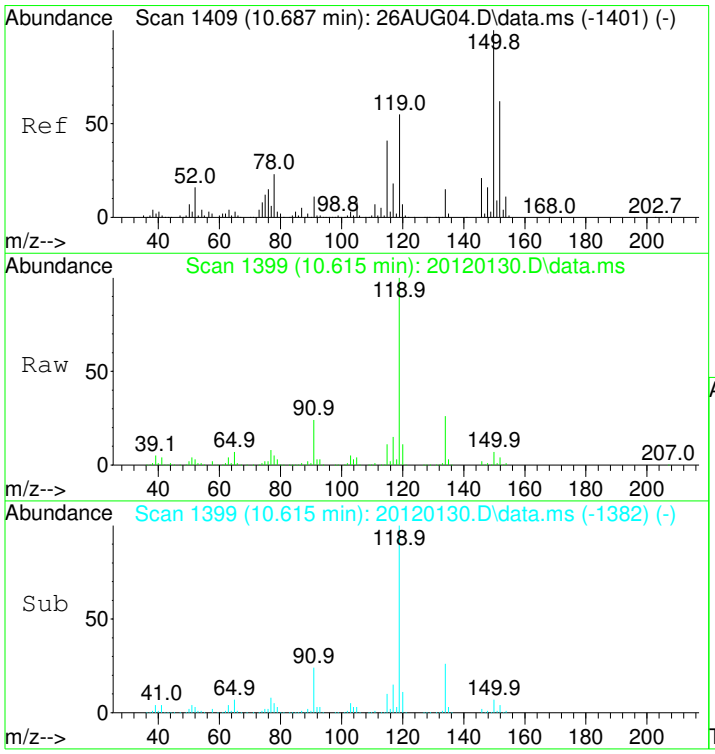


#104
1,3-Dichlorobenzene
Concen: 21.59 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:146 Resp: 231316

Ion	Ratio	Lower	Upper
146	100		
148	64.9	46.5	86.5
111	41.0	22.6	62.6

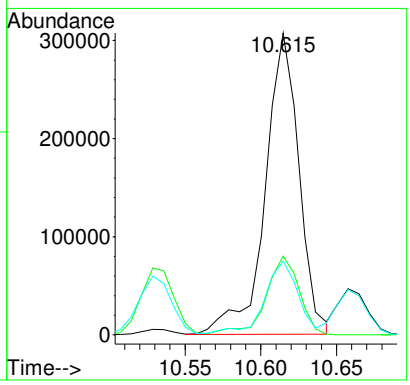


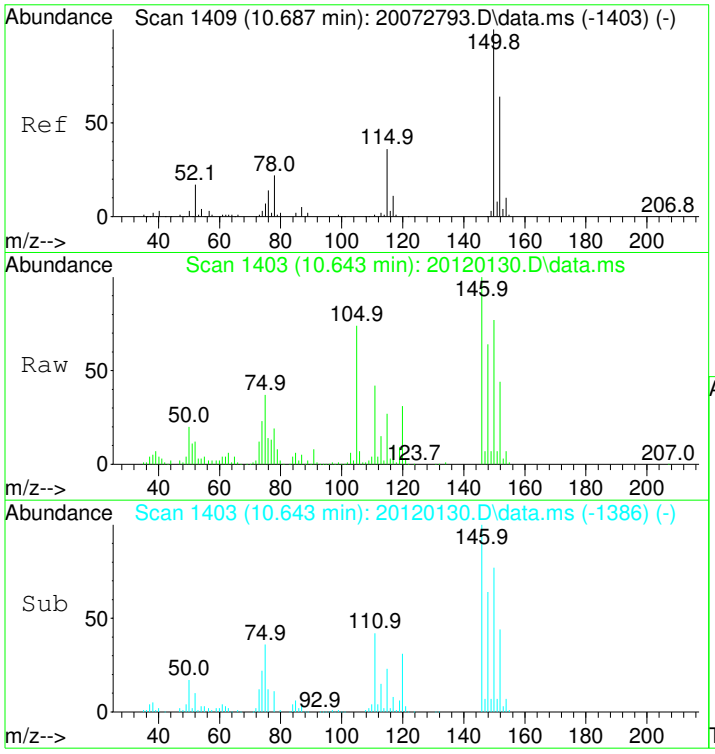


#105
p-Isopropyltoluene
Concen: 27.25 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:119 Resp: 475044

Ion	Ratio	Lower	Upper
119	100		
134	25.9	8.1	48.1
91	23.3	5.2	45.2

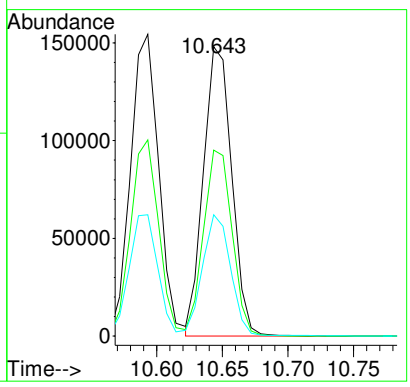


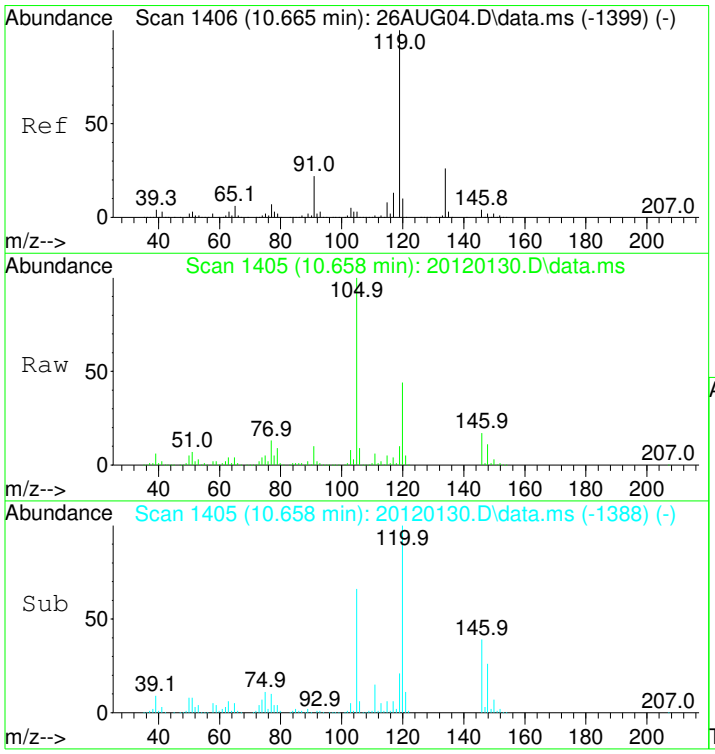


#106
1,4-Dichlorobenzene
Concen: 21.52 ug/L
RT: 10.643 min Scan# 1403
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:146 Resp: 222125

Ion	Ratio	Lower	Upper
146	100		
148	64.6	37.3	97.3
111	41.4	12.5	72.5

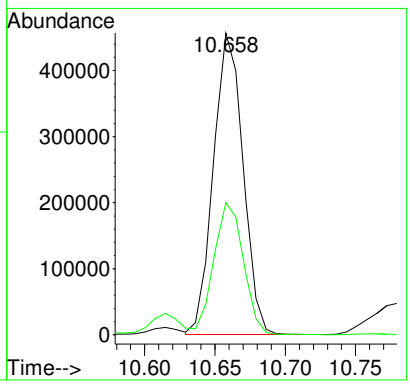


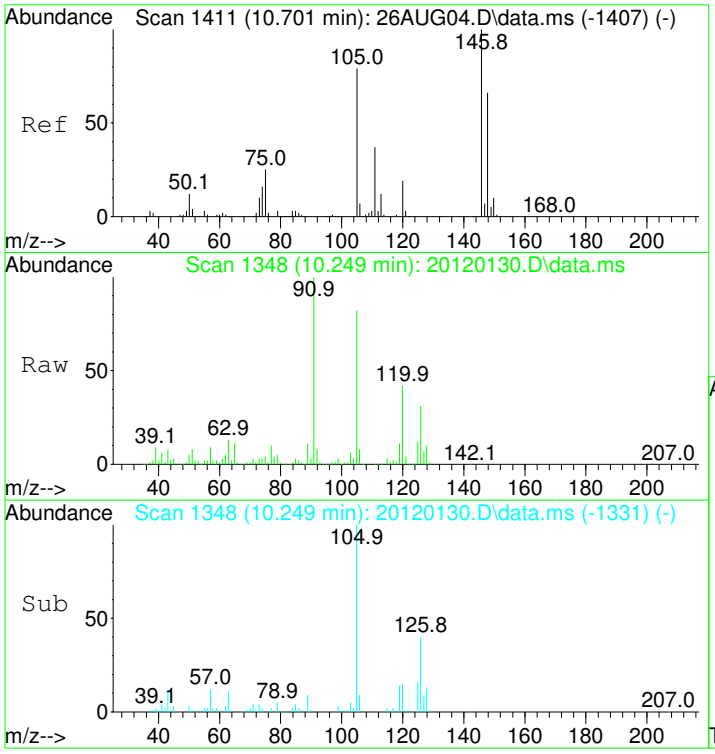


#107
1,2,3-Trimethylbenzene
Concen: 38.56 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:105 Resp: 668378

Ion	Ratio	Lower	Upper
105	100		
120	43.6	35.5	53.3

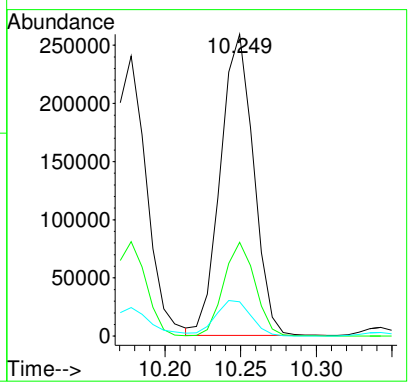


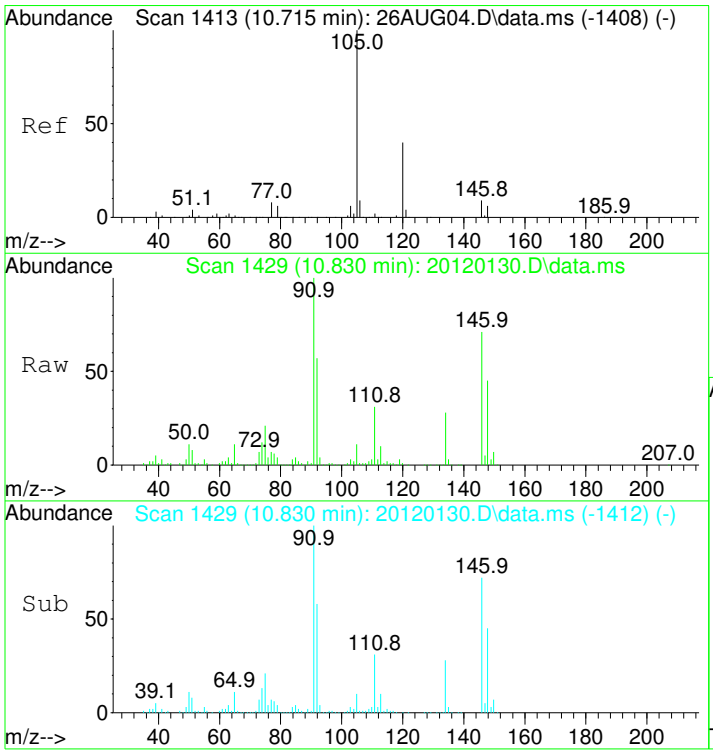


#108
Benzyl chloride
Concen: 20.28 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 393074

Ion	Ratio	Lower	Upper
91	100		
126	29.6	12.4	52.4
65	12.9	0.0	33.3

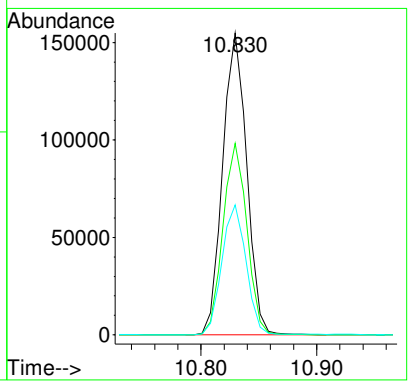


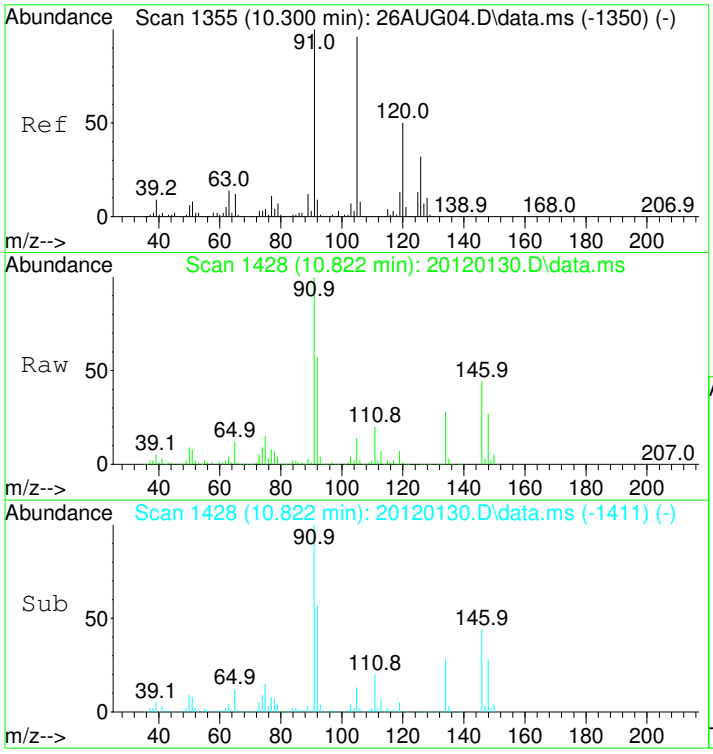


#109
1,2-Dichlorobenzene
Concen: 21.35 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:146 Resp: 223457

Ion	Ratio	Lower	Upper
146	100		
148	63.1	45.6	85.6
111	43.4	24.1	64.1

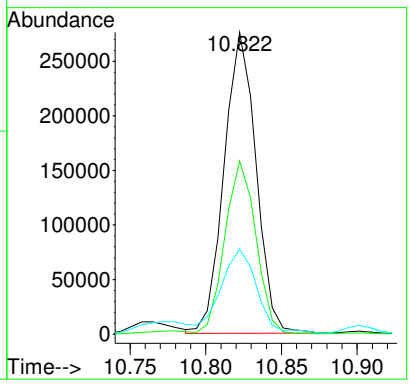


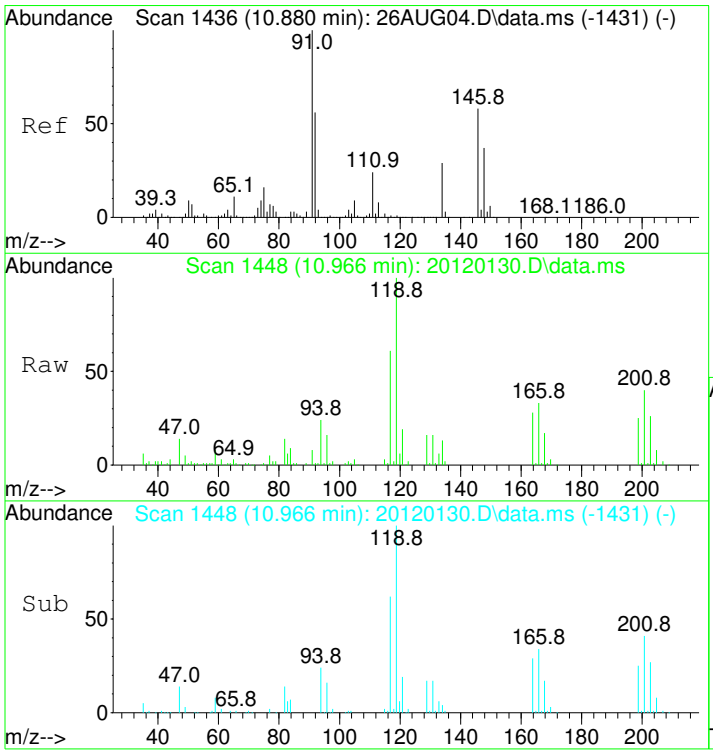


#110
n-Butylbenzene
Concen: 21.64 ug/L
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 91 Resp: 405112

Ion	Ratio	Lower	Upper
91	100		
92	55.6	39.3	79.3
134	31.0	7.5	47.5

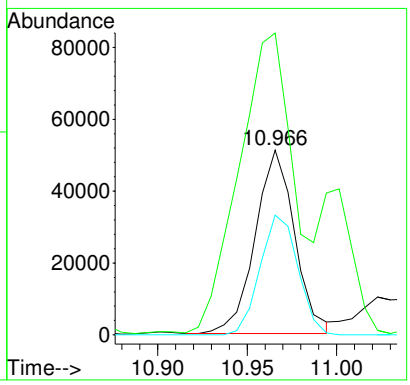


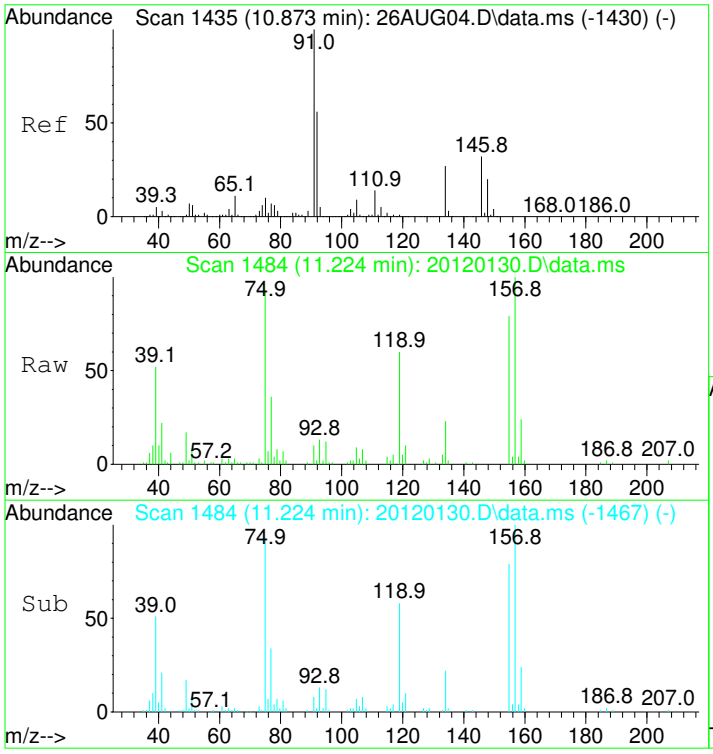


#111
Hexachloroethane
Concen: 19.87 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:117 Resp: 78459

Ion	Ratio	Lower	Upper
117	100		
119	229.6	75.9	115.9#
201	62.5	49.2	89.2

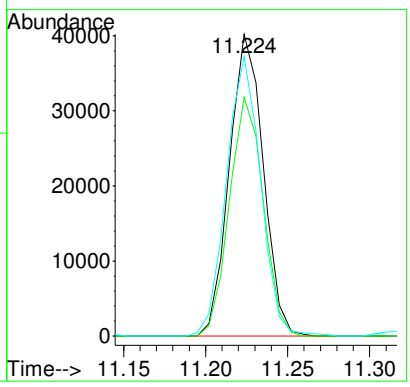


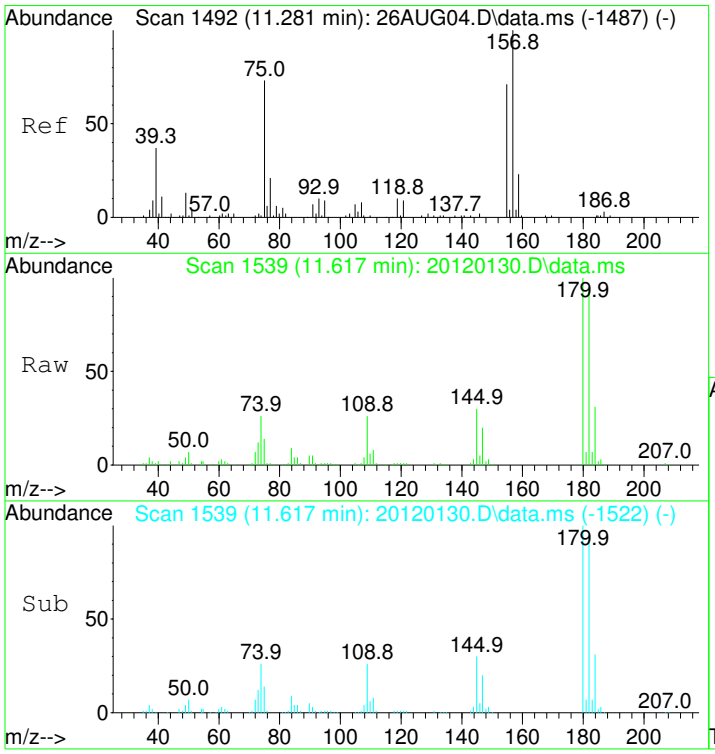


#112
1,2-Dibromo-3-chloropropane
Concen: 19.76 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.001 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:157 Resp: 57847

Ion	Ratio	Lower	Upper
157	100		
155	78.9	54.4	94.4
75	93.5	72.1	112.1

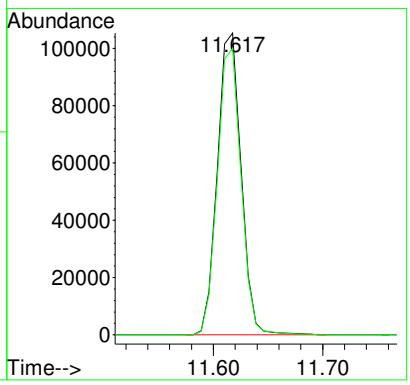


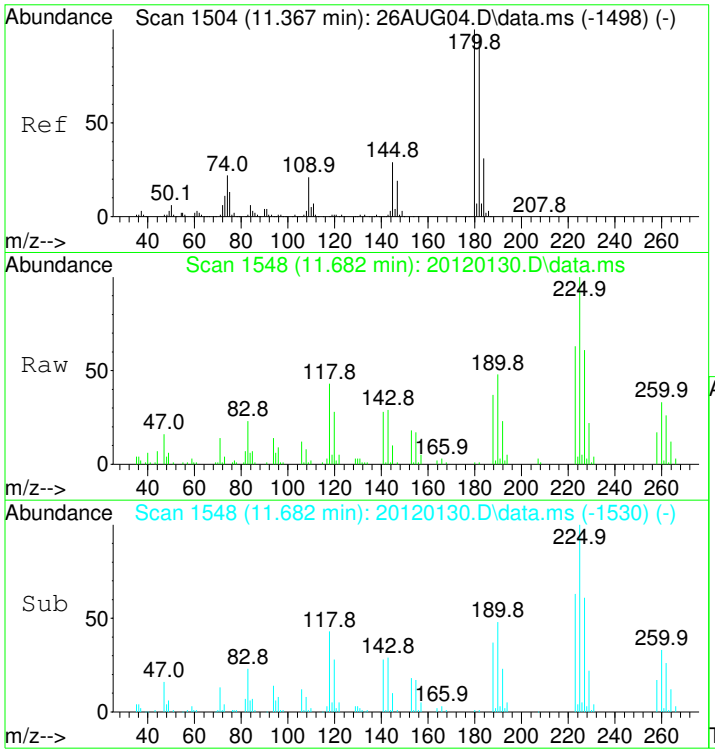


#114
1,2,4-Trichlorobenzene
Concen: 20.07 ug/L
RT: 11.617 min Scan# 1539
Delta R.T. -0.001 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:180 Resp: 159143

Ion	Ratio	Lower	Upper
180	100		
182	94.6	76.7	116.7

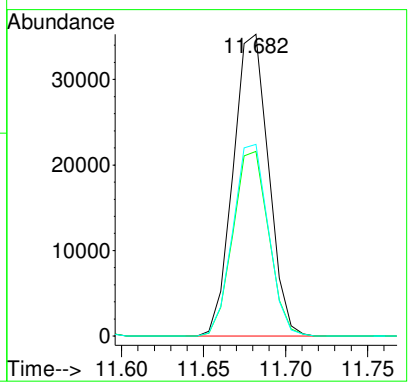


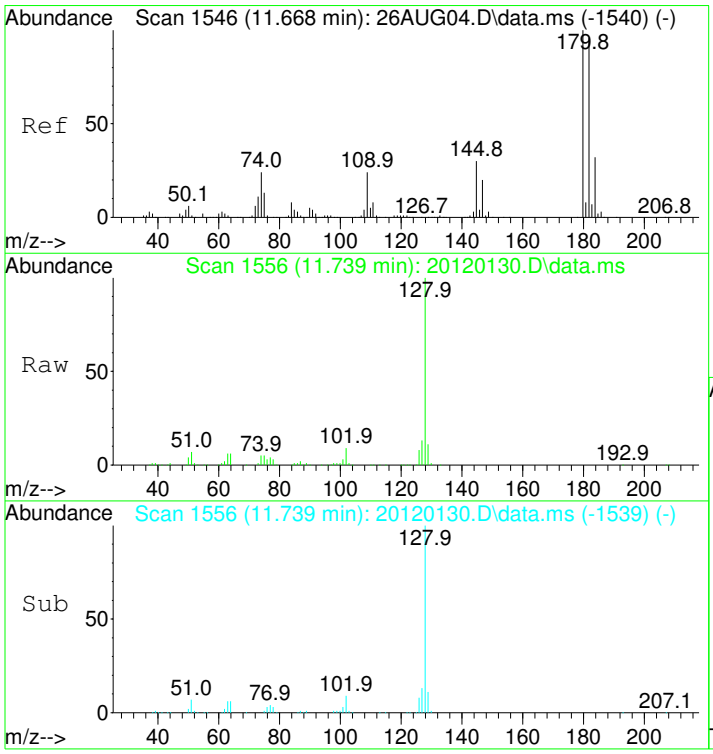


#115
Hexachlorobutadiene
Concen: 19.73 ug/L
RT: 11.682 min Scan# 1548
Delta R.T. 0.007 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:225 Resp: 52964

Ion	Ratio	Lower	Upper
225	100		
227	61.8	50.9	76.3
223	63.7	50.5	75.7

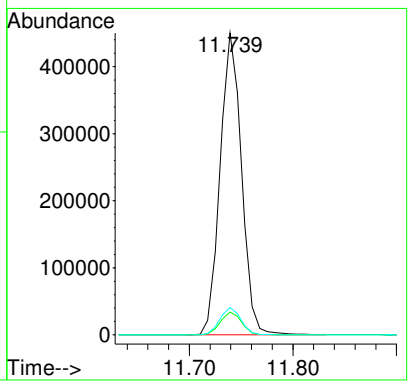


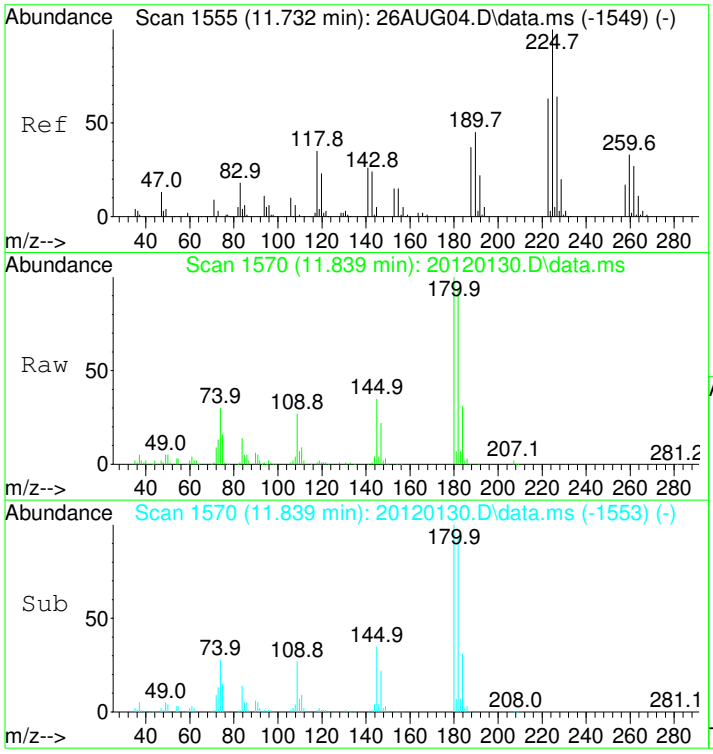


#116
Naphthalene
Concen: 21.44 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:128 Resp: 650819

Ion	Ratio	Lower	Upper
128	100		
126	7.5	0.0	28.2
102	8.9	0.0	30.0

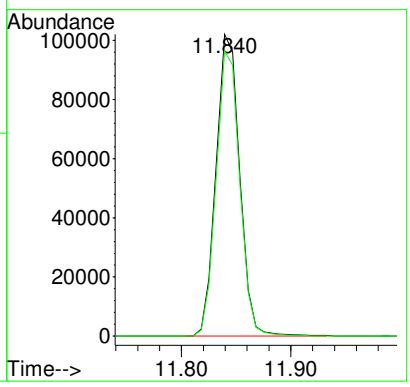


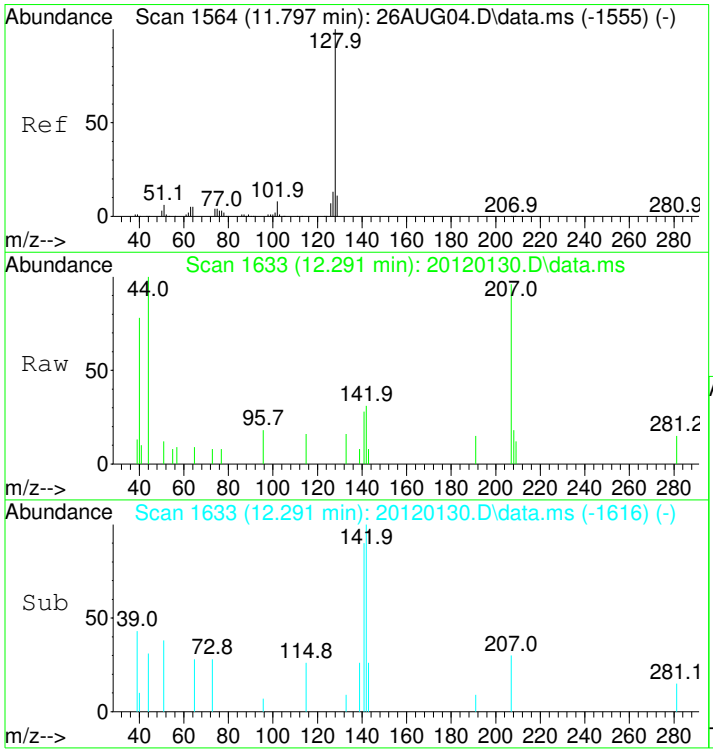


#117
1,2,3-Trichlorobenzene
Concen: 20.27 ug/L
RT: 11.839 min Scan# 1570
Delta R.T. -0.001 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:180 Resp: 153683

Ion	Ratio	Lower	Upper
180	100		
182	93.9	78.4	118.4

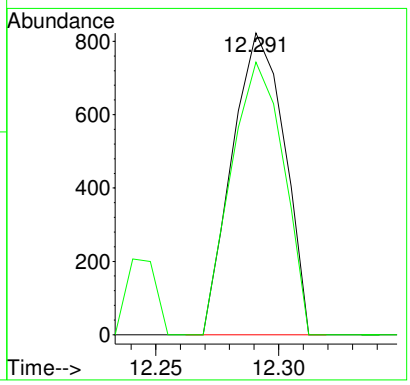


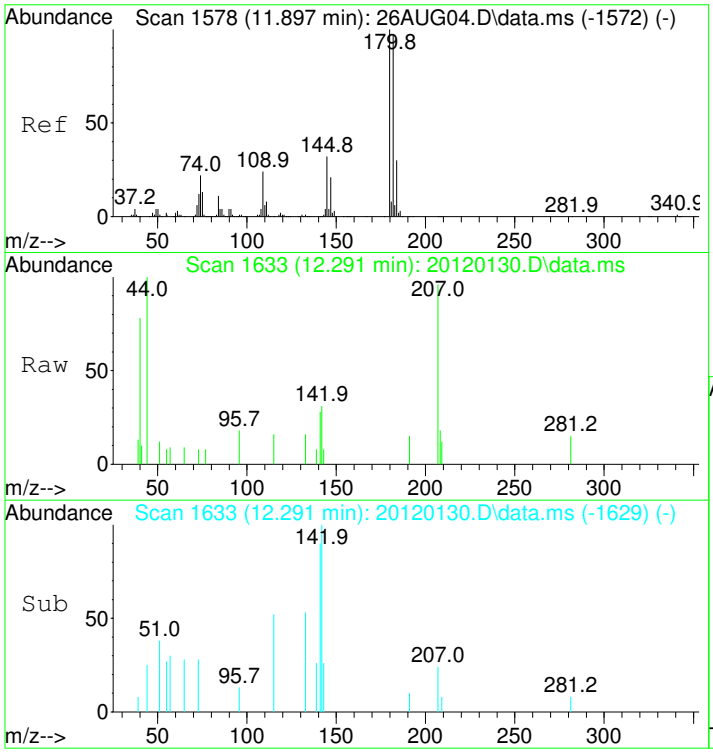


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:142 Resp: 1217

Ion	Ratio	Lower	Upper
142	100		
141	90.6	65.0	105.0

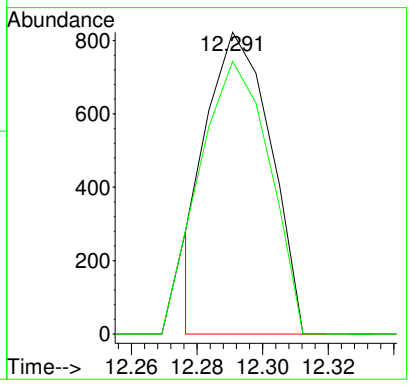


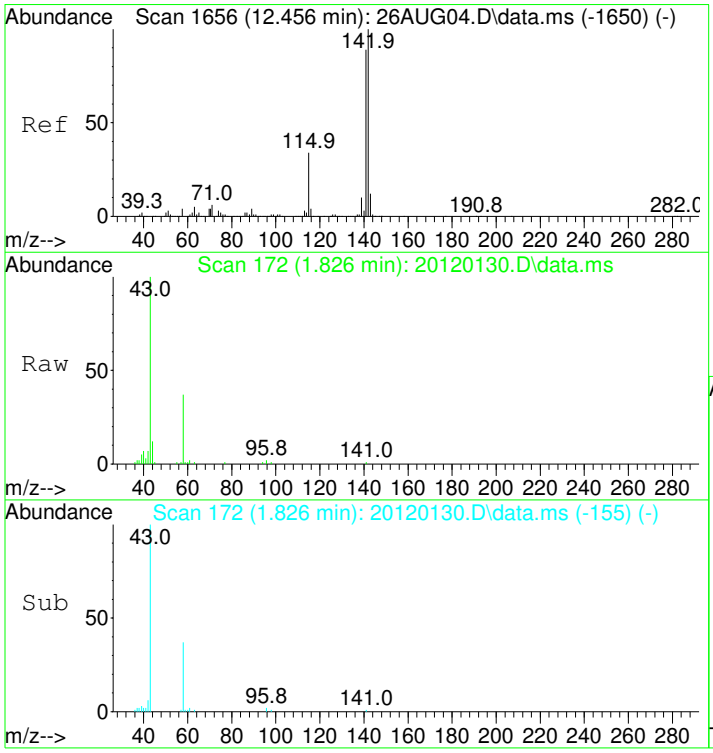


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.093 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion:142 Resp: 1096

Ion	Ratio	Lower	Upper
142	100		
141	89.5	69.8	104.8

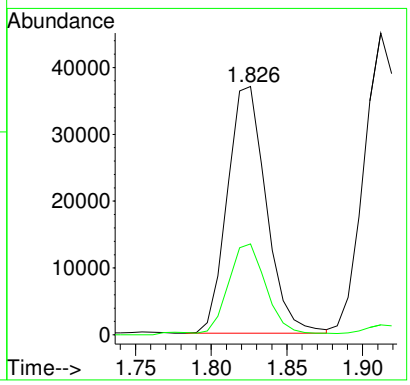


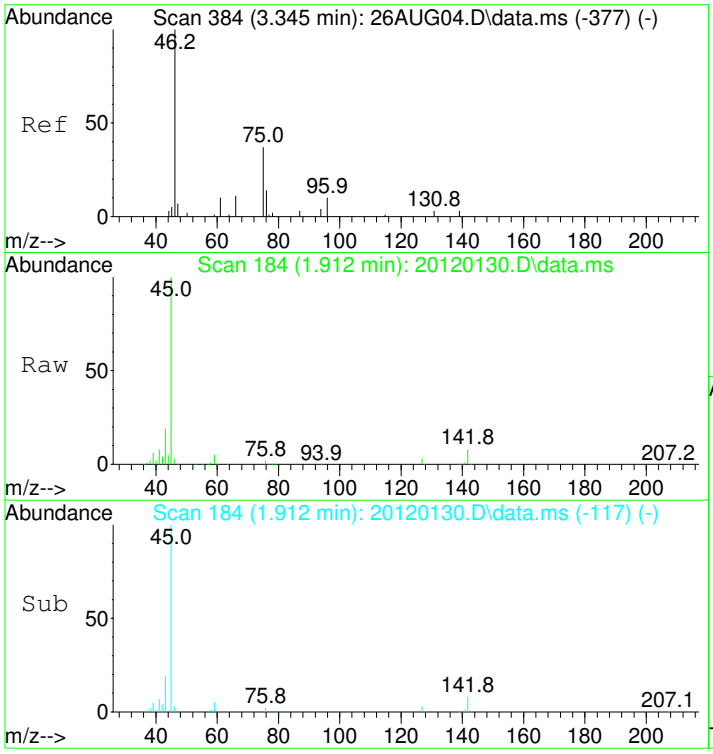


#121
2-Propanone
Concen: 21.62 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 65900

Ion	Ratio	Lower	Upper
43	100		
58	34.3	28.2	42.2

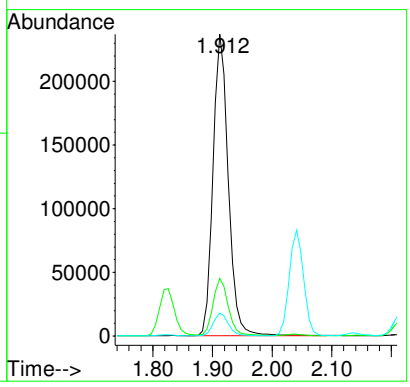


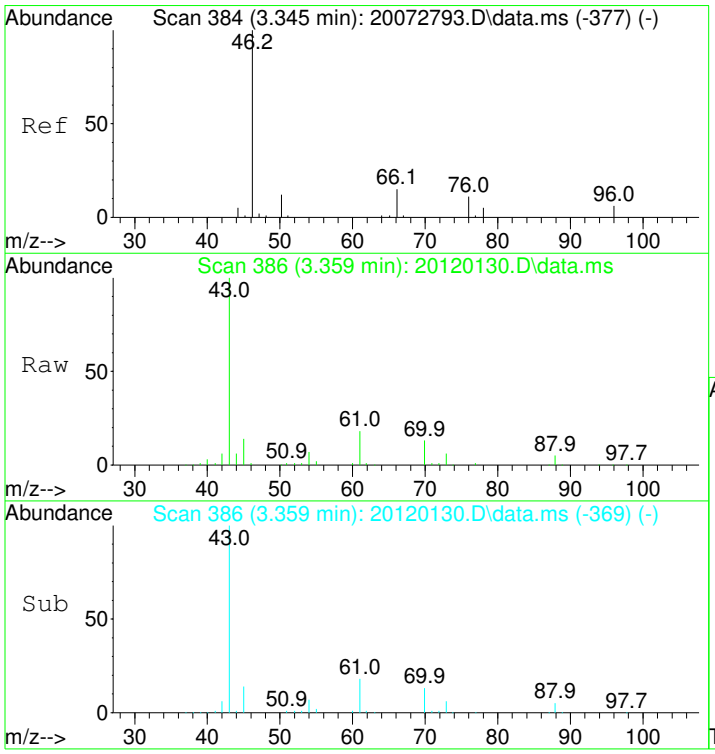


#122
Isopropyl Alcohol
Concen: 409.49 ug/L
RT: 1.912 min Scan# 184
Delta R.T. -0.022 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 45 Resp: 422355

Ion	Ratio	Lower	Upper
45	100		
43	18.9	14.6	21.8
41	7.3	5.7	8.5

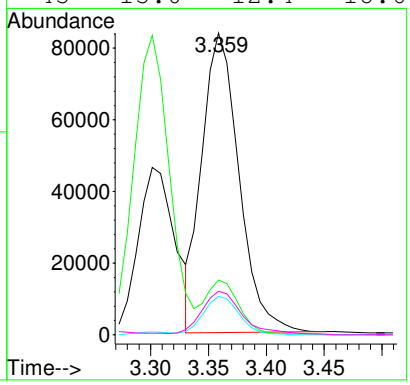


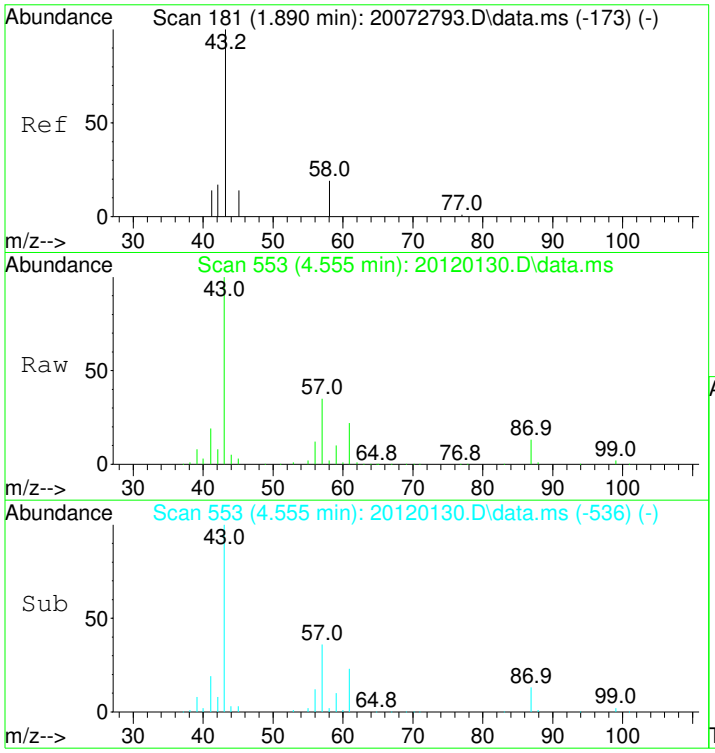


#123
Acetic Ether
Concen: 20.03 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 187284

Ion	Ratio	Lower	Upper
43	100		
61	16.9	11.9	17.9
70	12.4	9.7	14.5
45	15.0	12.4	18.6

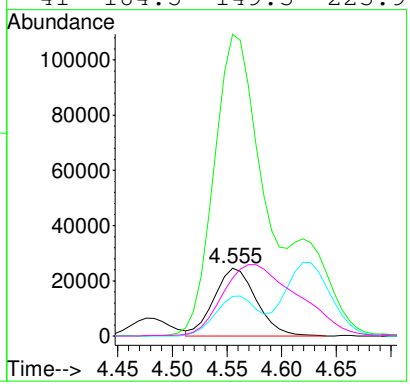


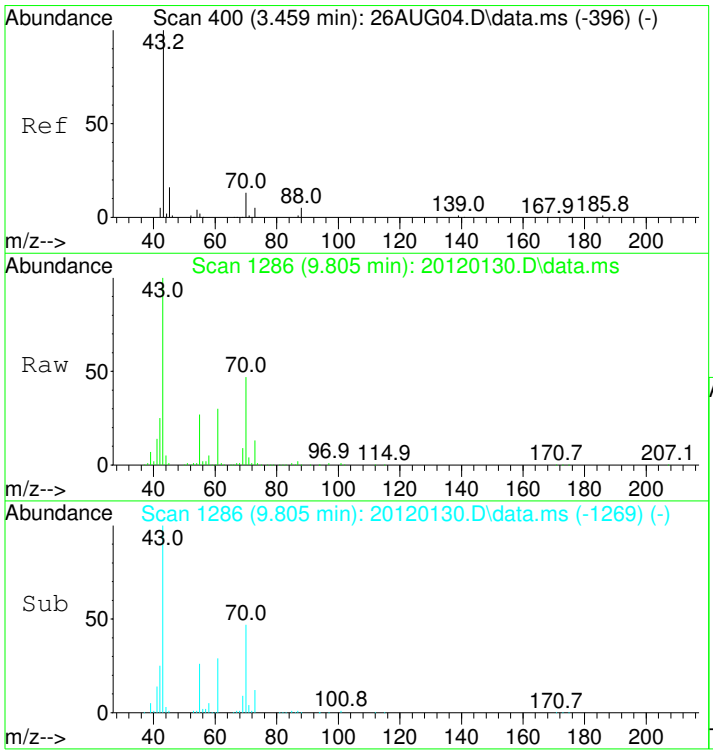


#124
Isopropyl Acetate
Concen: 19.64 ug/L
RT: 4.555 min Scan# 553
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 61 Resp: 66102

Ion	Ratio	Lower	Upper
61	100		
43	504.4	392.6	589.0
87	58.4	46.2	69.2
41	184.5	149.3	223.9

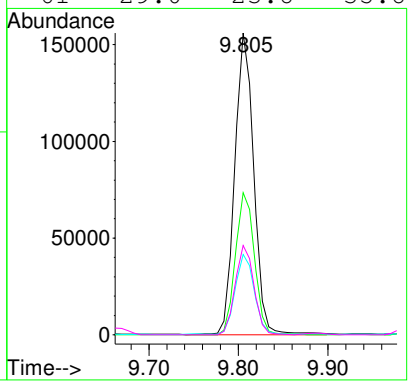




#125
Amyl Acetate
Concen: 18.59 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. -0.000 min
Lab File: 20120130.D
Acq: 1 Dec 2020 6:14 pm

Tgt Ion: 43 Resp: 232091

Ion	Ratio	Lower	Upper
43	100		
70	46.9	39.8	59.6
55	26.4	21.8	32.8
61	29.0	23.8	35.8



Quantitation Report (QT Reviewed)

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120106.D
Acq On : 1 Dec 2020 11:20 am
Operator : MF
Sample : VBLKW1-201201
Misc : IS 200-21725
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 02 09:39:00 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.989	168	198280	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.121	114	337335	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.196	117	317620	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	161452	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	102857	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	110151	20.43	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 102.15%				
50) 1,2-Dichloroethane-d4	4.369	65	129662	19.84	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 99.20%				
69) Toluene-d8	7.843	98	399962	20.34	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 101.70%				
91) Bromofluorobenzene	9.992	95	162740	20.38	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 101.90%				
Target Compounds							Qvalue
3) Dichlorofluoromethane	1.446	67	1790	Below Cal		#	1
6) Vinyl chloride	1.138	62	295	Below Cal			63
7) Bromomethane	1.282	96	1085	Below Cal			95
10) Ethanol	1.625	45	187	Below Cal		#	1
12) Acrolein	1.747	56	86	Below Cal		#	29
16) Acetone	1.826	43	5985	1.25	ug/L		92
18) Carbon disulfide	1.941	76	2641	Below Cal			94
19) 2-Propanol	1.919	45	8504	Below Cal			88
20) Allyl chloride	2.041	41	626	Below Cal		#	1
21) Methyl acetate	2.034	43	547	Below Cal		#	58
22) Acetonitrile	2.041	41	626	Below Cal		#	1
23) Methylene chloride	2.141	49	86	Below Cal		#	1
24) trans-1,2-Dichloroethene	2.349	61	187	Below Cal		#	59
28) Hexane	2.585	57	722	Below Cal		#	43
32) Methylcyclopentane	3.187	56	185	Below Cal		#	1
34) 2,2-Dichloropropane	3.244	77	2260	Below Cal		#	42
36) 2-Butanone	3.316	43	2071	Below Cal		#	53
37) Ethyl Acetate	3.316	43	1524	Below Cal		#	69
38) Methyl acrylate	3.409	55	186	Below Cal		#	64
41) Tetrahydrofuran	3.602	42	435	Below Cal		#	30
42) Methacrylonitrile	3.509	41	180	Below Cal		#	1
43) Chloroform	3.717	83	92	Below Cal		#	26
44) Cyclohexane	3.982	56	4188	Below Cal		#	28
49) 1,1-Dichloropropene	4.111	75	181	Below Cal		#	38
52) Benzene	4.376	78	652	Below Cal		#	1
54) Isobutyl Alcohol	4.612	43	1515	Below Cal		#	65
55) Heptane	4.920	43	1074	Below Cal		#	59
62) Methyl methacrylate	6.274	41	190	Below Cal		#	38
64) 2-Chloroethyl vinyl ether	7.313	43	298	Below Cal		#	1
65) 2-Nitropropane	7.148	43	88	Below Cal		#	77
68) 4-Methyl-2-pentanone	7.785	43	128	Below Cal		#	39
70) Toluene	7.922	91	838	Below Cal		#	55
71) trans-1,3-Dichloropropene	8.272	75	87	Below Cal		#	1
77) 2-Hexanone	8.674	43	760	Below Cal		#	28
79) Butyl acetate	8.774	43	790	Below Cal		#	31
81) Chlorobenzene	9.218	112	341	Below Cal		#	1
83) Ethylbenzene	9.304	91	1211	Below Cal		#	41
84) m/p-Xylene	9.404	91	2142	Below Cal			76
85) Nonane	9.462	43	1712	Below Cal		#	63
86) Styrene	9.669	104	454	Below Cal		#	22

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120106.D
Acq On : 1 Dec 2020 11:20 am
Operator : MF
Sample : VBLKW1-201201
Misc : IS 200-21725
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 02 09:39:00 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

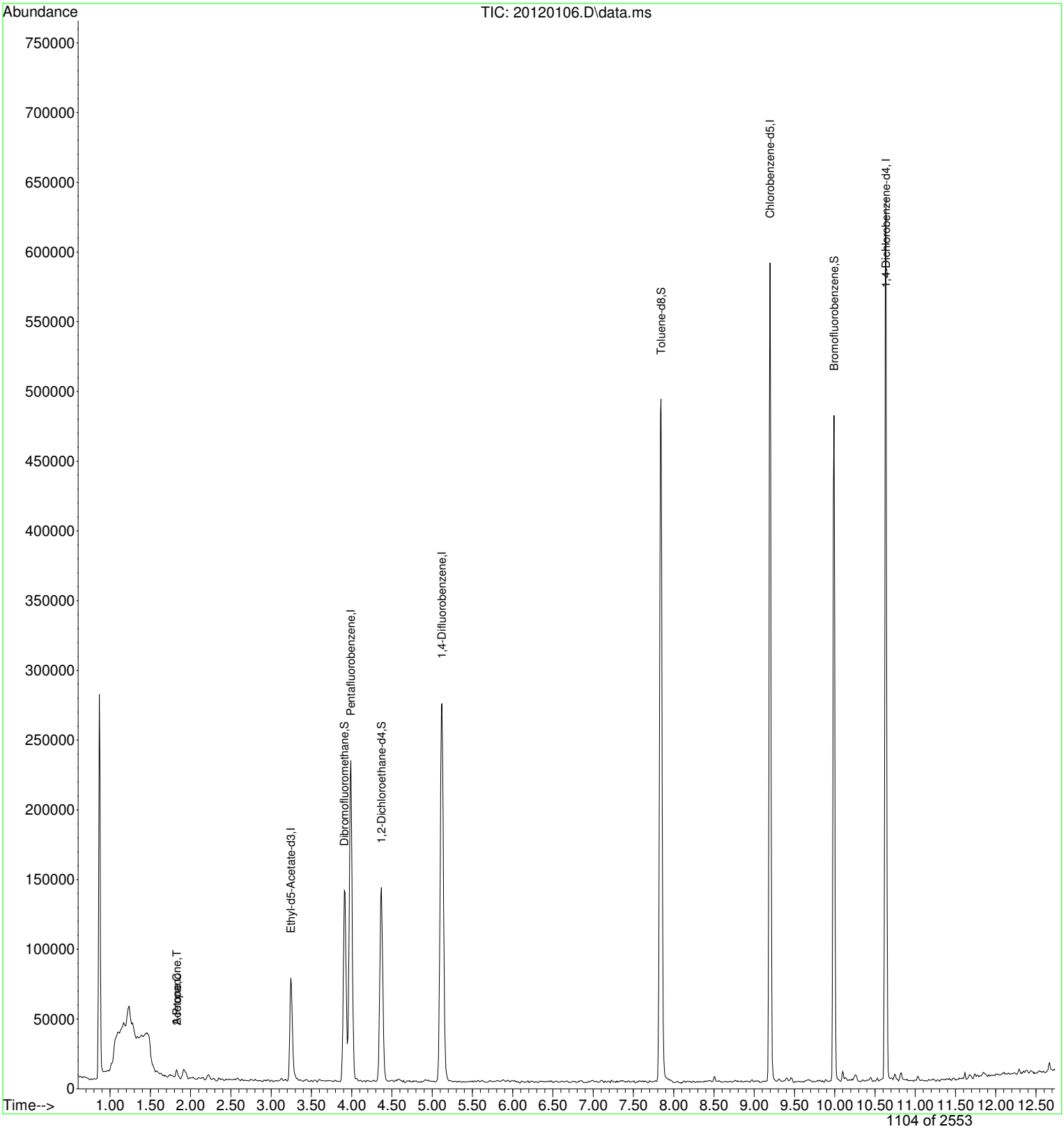
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
87) o-Xylene	9.655	91	710	Below Cal	#	27
88) Cyclohexanone	9.992	55	1102	Below Cal	#	1
90) Isopropylbenzene	9.891	105	942	Below Cal	#	47
92) Bromobenzene	10.070	77	583	Below Cal	#	21
96) n-Propylbenzene	10.135	91	2242	Below Cal		100
97) 2-Chlorotoluene	10.249	91	1290	Below Cal		67
98) 4-Chlorotoluene	10.249	91	1387	Below Cal		72
99) 1,3,5-Trimethylbenzene	10.242	105	824	Below Cal		97
100) tert-Butylbenzene	10.407	91	342	Below Cal	#	14
101) 1,2,4-Trimethylbenzene	10.443	105	1815	Below Cal		80
102) sec-Butylbenzene	10.529	105	1431	Below Cal		83
104) 1,3-Dichlorobenzene	10.593	146	692	Below Cal		82
105) p-Isopropyltoluene	10.615	119	1361	Below Cal	#	70
106) 1,4-Dichlorobenzene	10.593	146	692	Below Cal		82
107) 1,2,3-Trimethylbenzene	10.658	105	711	Below Cal	#	71
108) Benzyl chloride	10.249	91	1387	Below Cal		79
109) 1,2-Dichlorobenzene	10.837	146	253	Below Cal	#	60
110) n-Butylbenzene	10.822	91	2518	Below Cal		92
114) 1,2,4-Trichlorobenzene	11.618	180	864	Below Cal		92
115) Hexachlorobutadiene	11.675	225	198	Below Cal	#	6
116) Naphthalene	11.739	128	3216	Below Cal	#	75
117) 1,2,3-Trichlorobenzene	11.847	180	661	Below Cal		85
118) 2-Methylnaphthalene	12.291	142	1482	Below Cal	#	71
119) 1-Methylnaphthalene	12.391	142	613	Below Cal	#	1
121) 2-Propanone	1.826	43	5985	1.25 ug/L		92
122) Isopropyl Alcohol	1.919	45	8504	Below Cal	#	88
123) Acetic Ether	3.316	43	1524	Below Cal	#	65
125) Amyl Acetate	9.820	43	1263	Below Cal	#	44

(#) = qualifier out of range (m) = manual integration (+) = signals summed

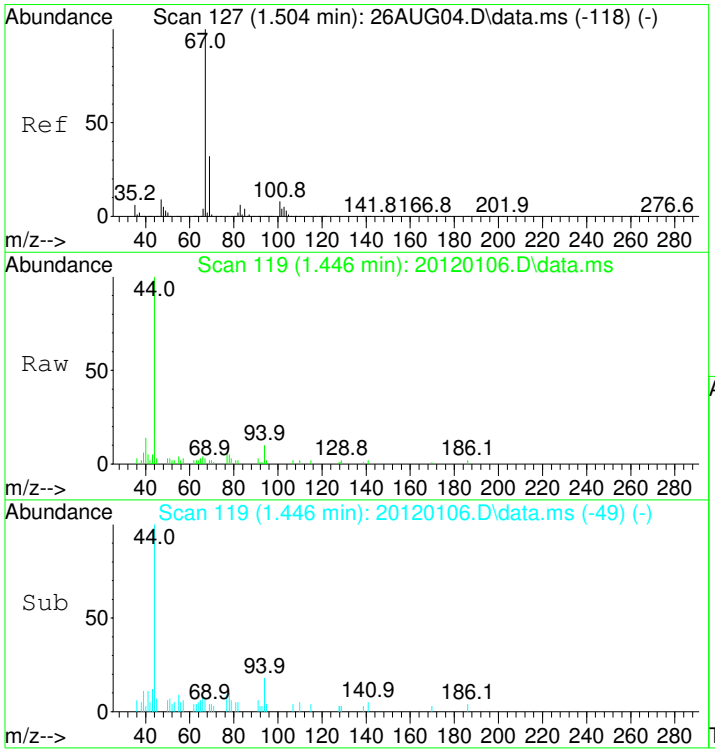
1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120106.D
Acq On : 1 Dec 2020 11:20 am
Operator : MF
Sample : VBLKW1-201201
Misc : IS 200-21725
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 02 09:39:00 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration



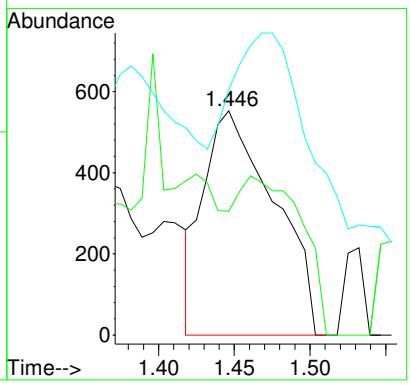
1104 of 2553

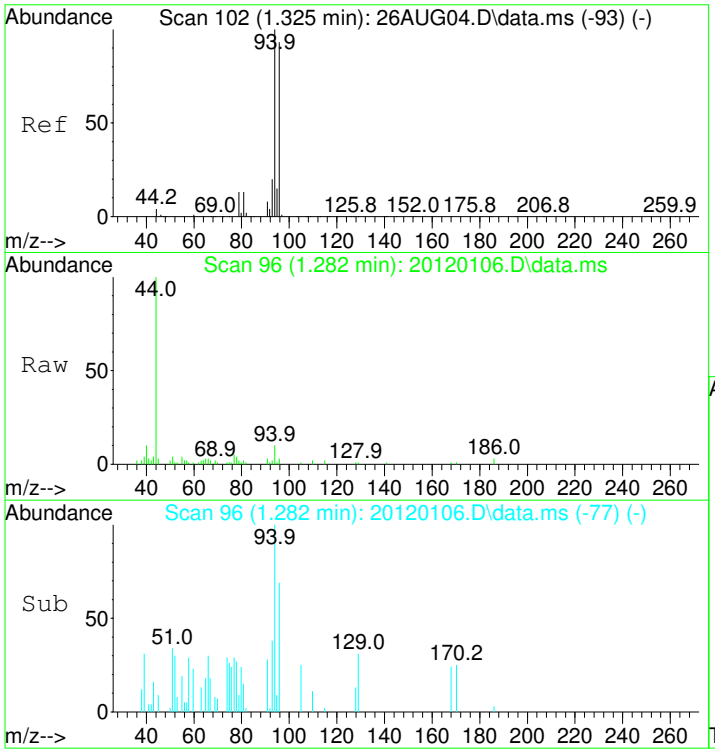


#3
Dichlorofluoromethane
Concen: Below Cal
RT: 1.446 min Scan# 119
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 67 Resp: 1790

Ion	Ratio	Lower	Upper
67	100		
69	63.4	23.7	44.1#
66	197.9	8.1	15.0#

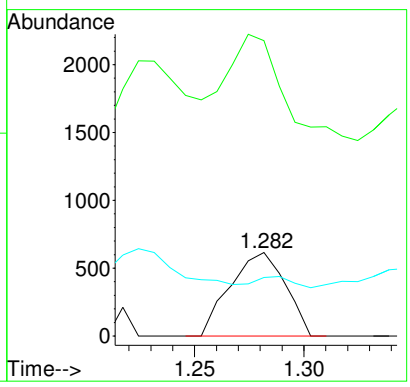


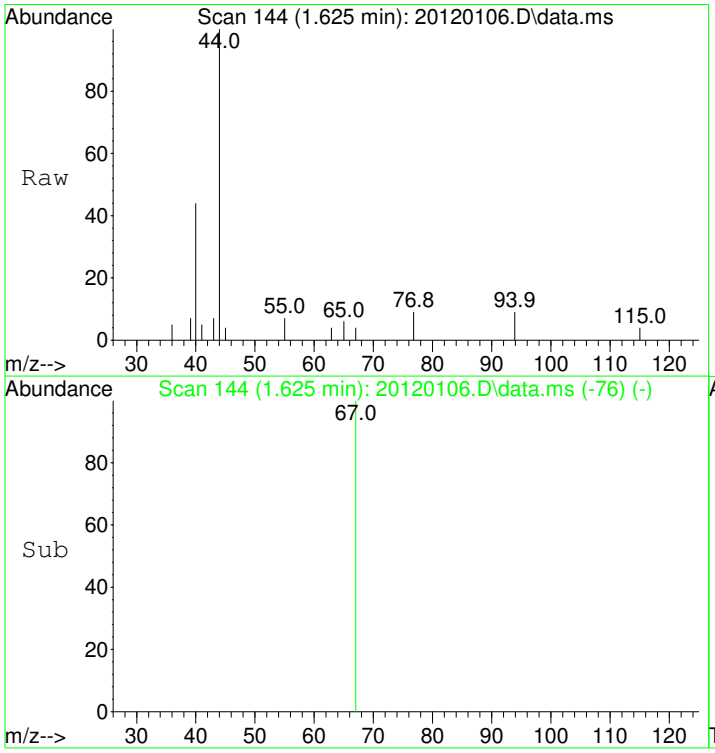


#7
Bromomethane
Concen: Below Cal
RT: 1.282 min Scan# 96
Delta R.T. 0.015 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 96 Resp: 1085

Ion	Ratio	Lower	Upper
96	100		
94	140.2	103.4	163.4
79	19.9	0.0	49.6

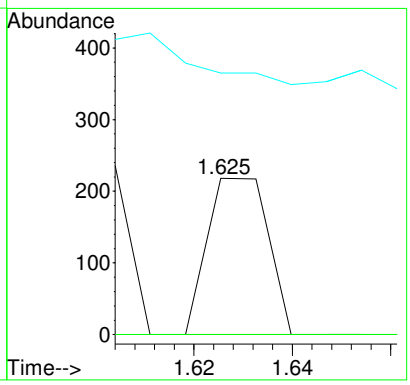


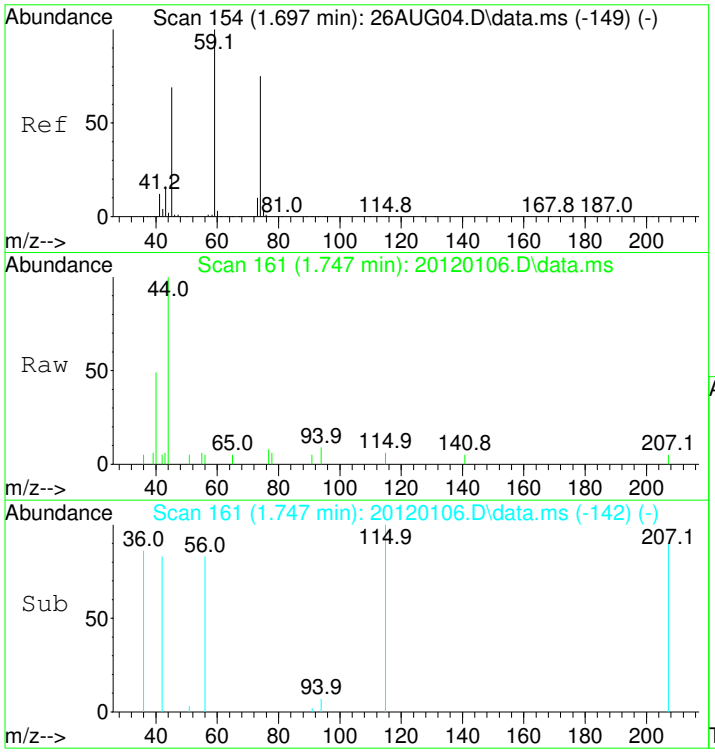


#10
Ethanol
Concen: Below Cal
RT: 1.625 min Scan# 144
Delta R.T. -0.015 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 45 Resp: 187

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	57.3
43	135.8	0.0	52.4#

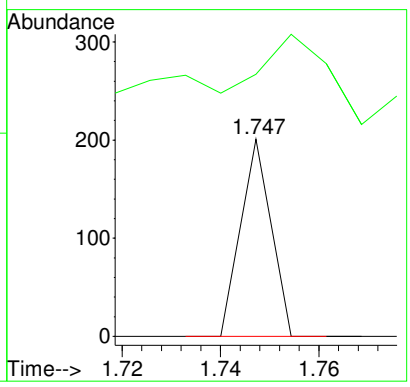


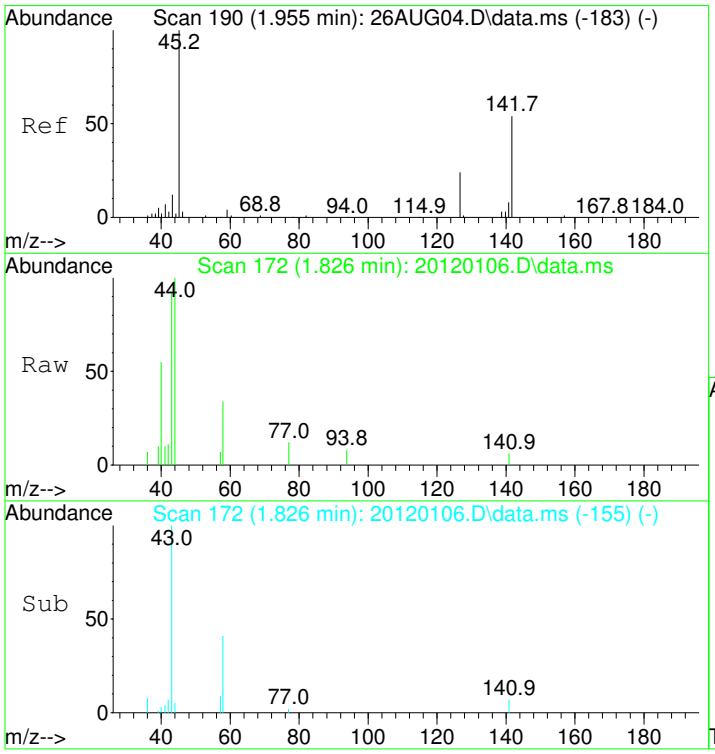


#12
Acrolein
Concen: Below Cal
RT: 1.747 min Scan# 161
Delta R.T. 0.014 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 56 Resp: 86

Ion	Ratio	Lower	Upper
56	100		
55	0.0	17.3	77.3#

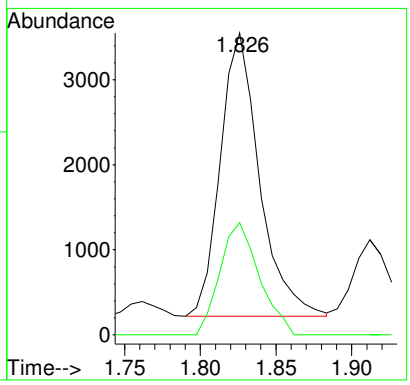


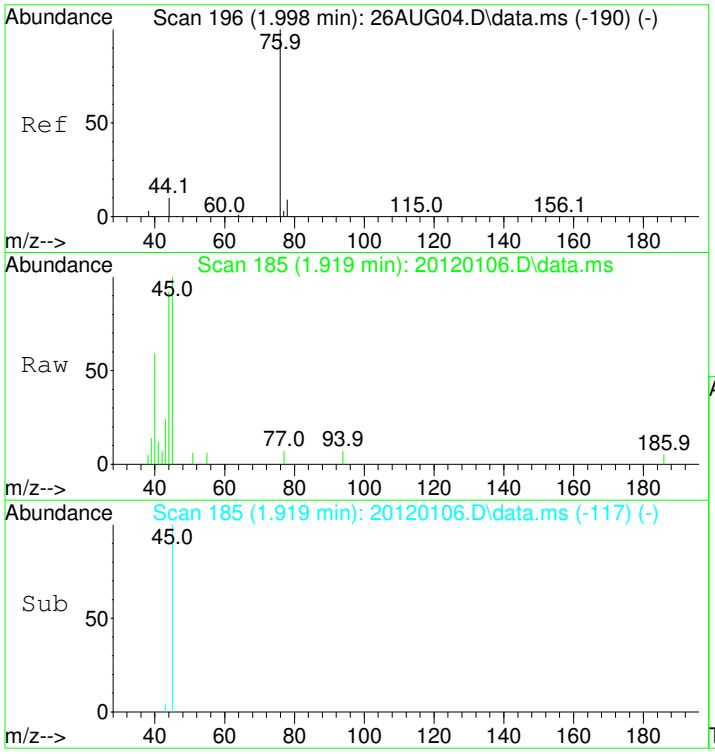


#16
Acetone
Concen: 1.25 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 5985

Ion	Ratio	Lower	Upper
43	100		
58	39.7	5.2	65.2

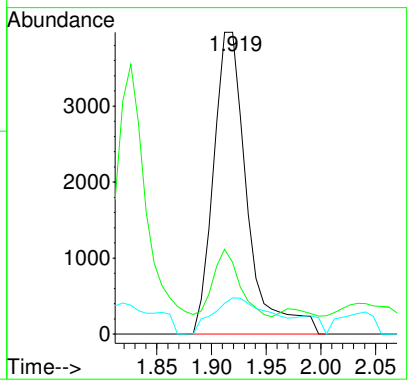


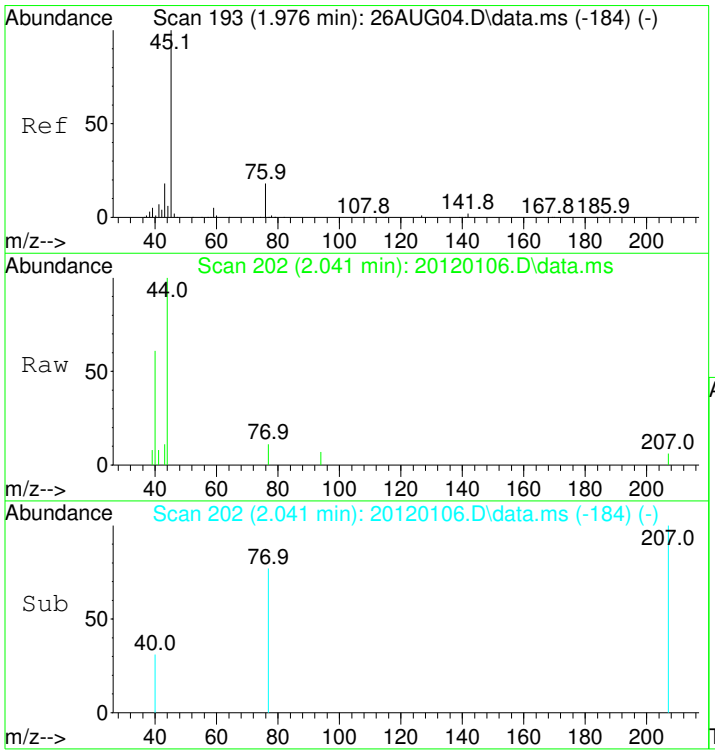


#19
2-Propanol
Concen: Below Cal
RT: 1.919 min Scan# 185
Delta R.T. -0.014 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 45 Resp: 8504

Ion	Ratio	Lower	Upper
45	100		
43	17.2	0.0	48.2
41	19.6	0.0	37.1

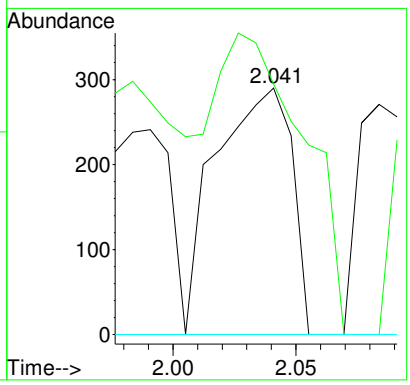


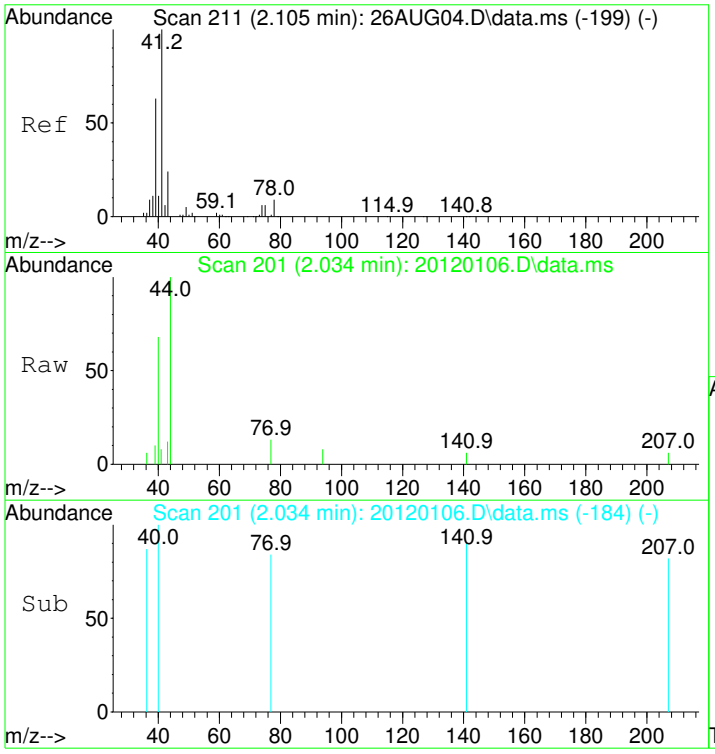


#20
Allyl chloride
Concen: Below Cal
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 41 Resp: 626

Ion	Ratio	Lower	Upper
41	100		
39	152.9	29.0	89.0#
76	0.0	7.3	67.3#

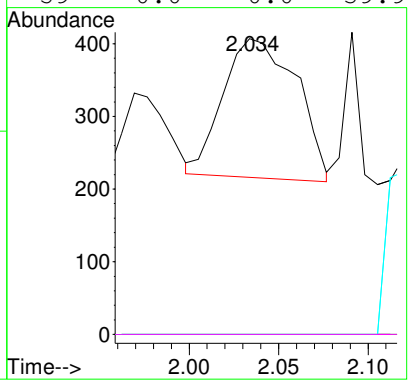


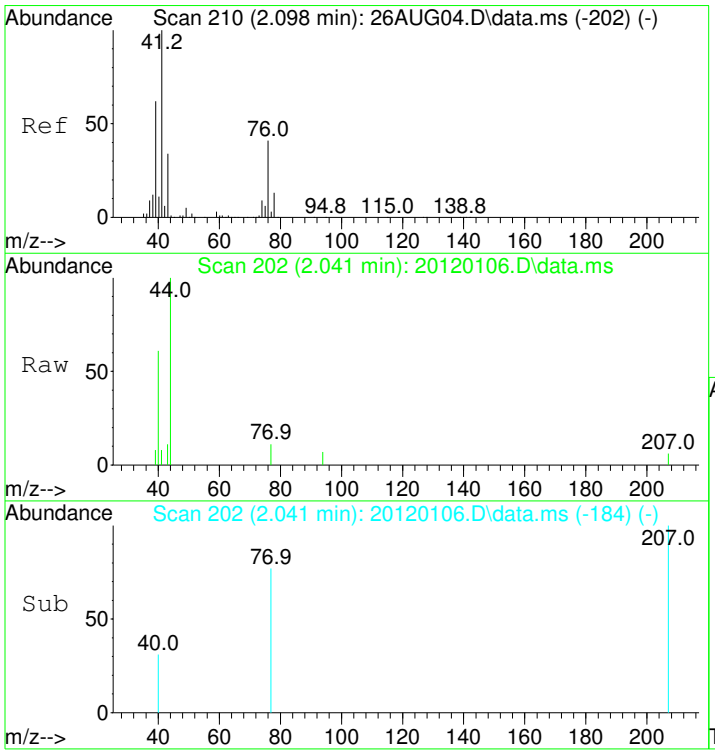


#21
Methyl acetate
Concen: Below Cal
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 547

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.0	56.2
42	0.0	0.0	44.2
59	0.0	0.0	39.9

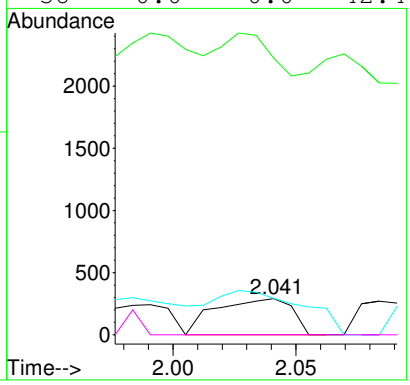


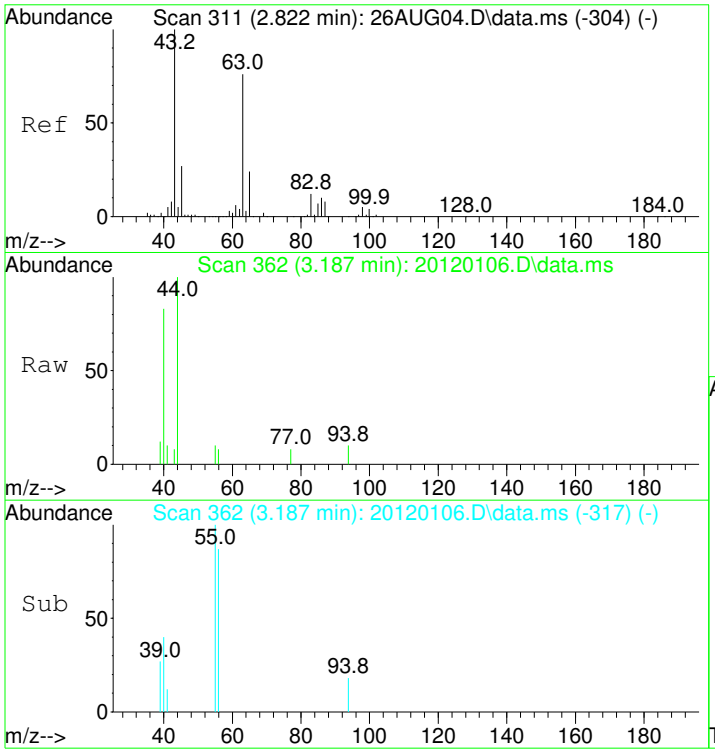


#22
Acetonitrile
Concen: Below Cal
RT: 2.041 min Scan# 202
Delta R.T. 0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 41 Resp: 626

Ion	Ratio	Lower	Upper
41	100		
40	71.9	0.0	47.5#
39	152.9	29.0	89.0#
38	0.0	0.0	42.4

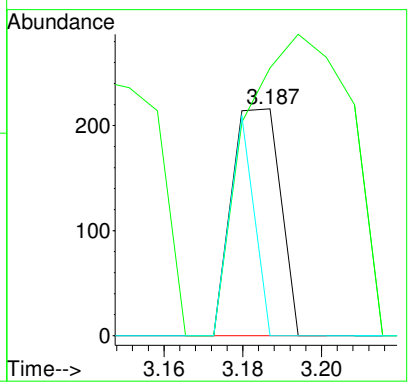


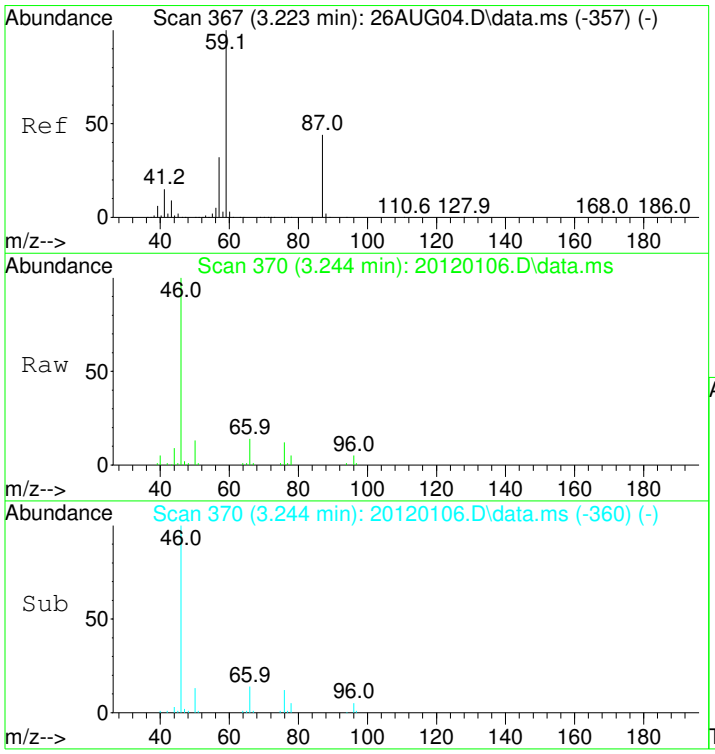


#32
Methylcyclopentane
Concen: Below Cal
RT: 3.187 min Scan# 362
Delta R.T. 0.022 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 56 Resp: 185

Ion	Ratio	Lower	Upper
56	100		
41	285.4	36.7	96.7#
69	48.6	11.3	71.3

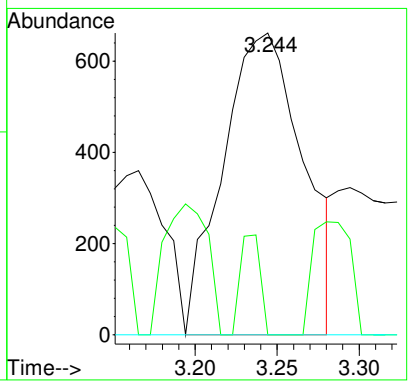


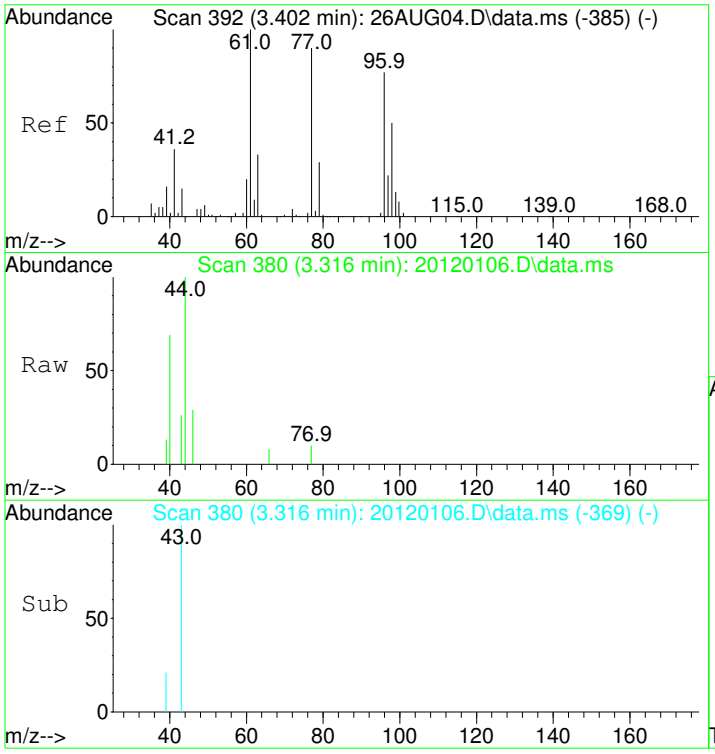


#34
2,2-Dichloropropane
Concen: Below Cal
RT: 3.244 min Scan# 370
Delta R.T. -0.050 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 77 Resp: 2260

Ion	Ratio	Lower	Upper
77	100		
41	8.3	16.4	76.4#
79	0.0	2.4	62.4#

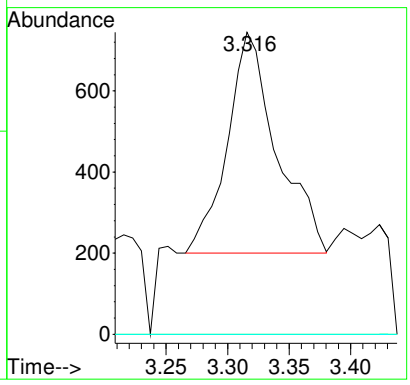


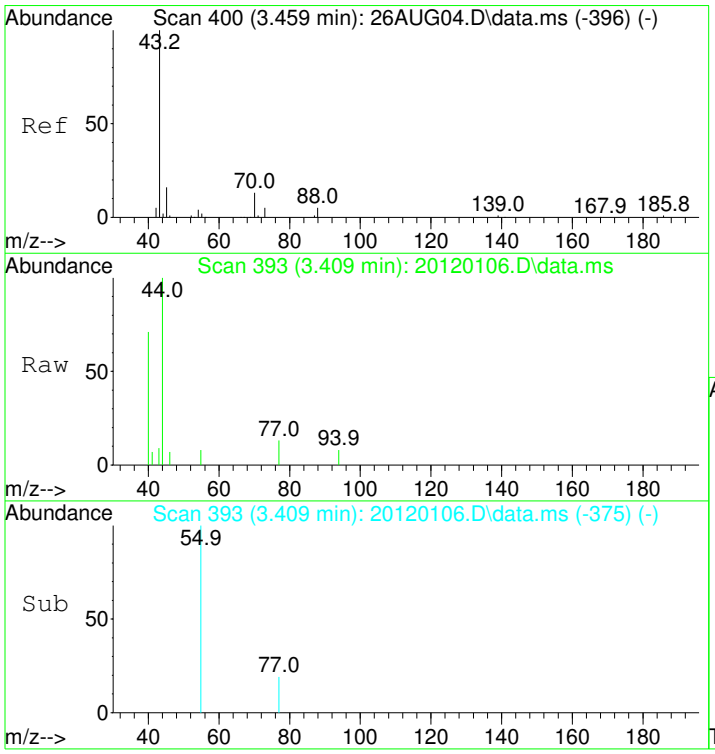


#37
Ethyl Acetate
Concen: Below Cal
RT: 3.316 min Scan# 380
Delta R.T. -0.043 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 1524

Ion	Ratio	Lower	Upper
43	100		
61	0.0	0.0	34.9
88	0.0	0.0	24.3

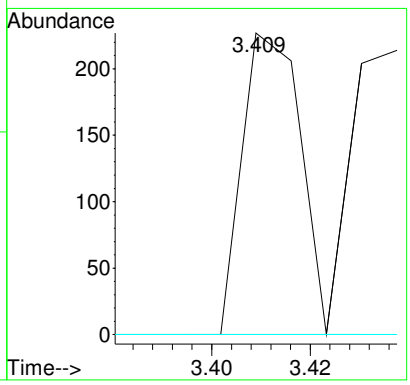


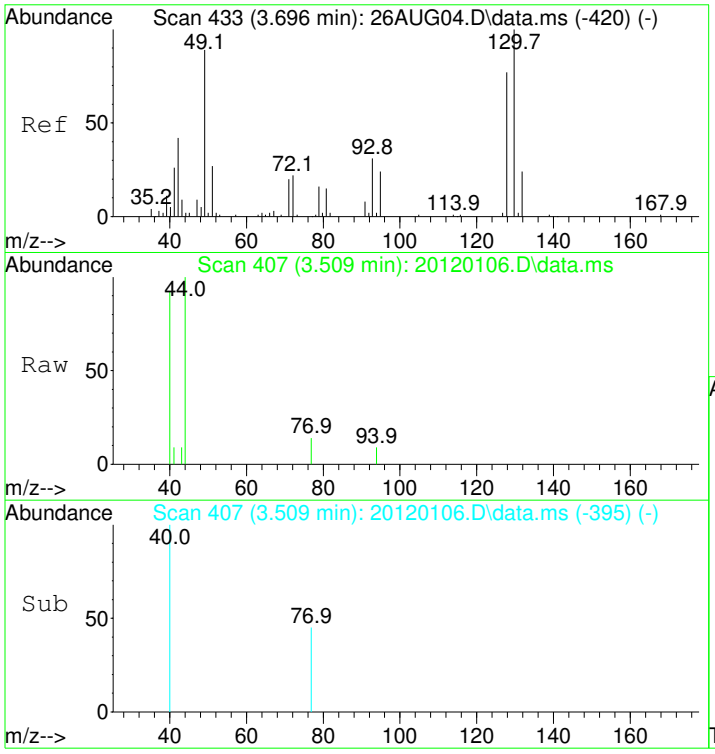


#38
Methyl acrylate
Concen: Below Cal
RT: 3.409 min Scan# 393
Delta R.T. 0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 55 Resp: 186

Ion	Ratio	Lower	Upper
55	100		
85	0.0	14.4	21.6#
58	0.0	7.4	11.2#

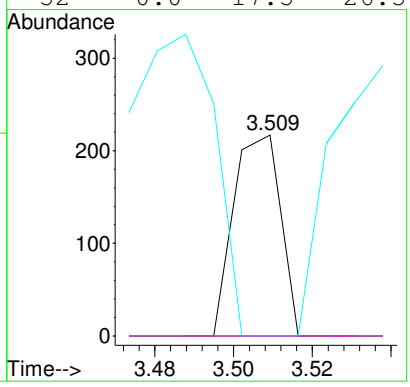


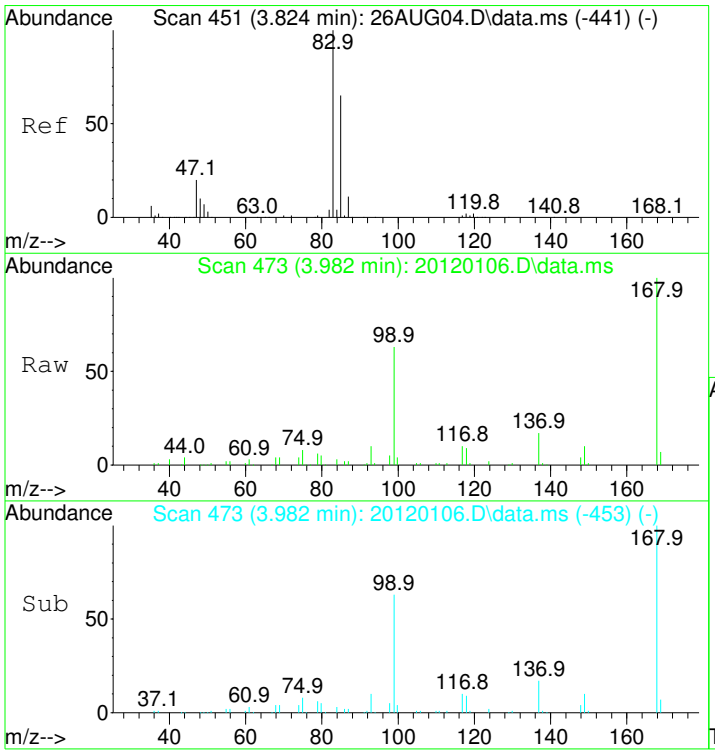


#42
Methacrylonitrile
Concen: Below Cal
RT: 3.509 min Scan# 407
Delta R.T. -0.036 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 41 Resp: 180

Ion	Ratio	Lower	Upper
41	100		
67	0.0	47.8	71.6#
39	268.9	38.6	57.8#
52	0.0	17.5	26.3#

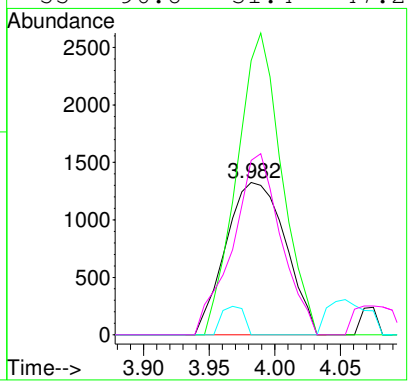


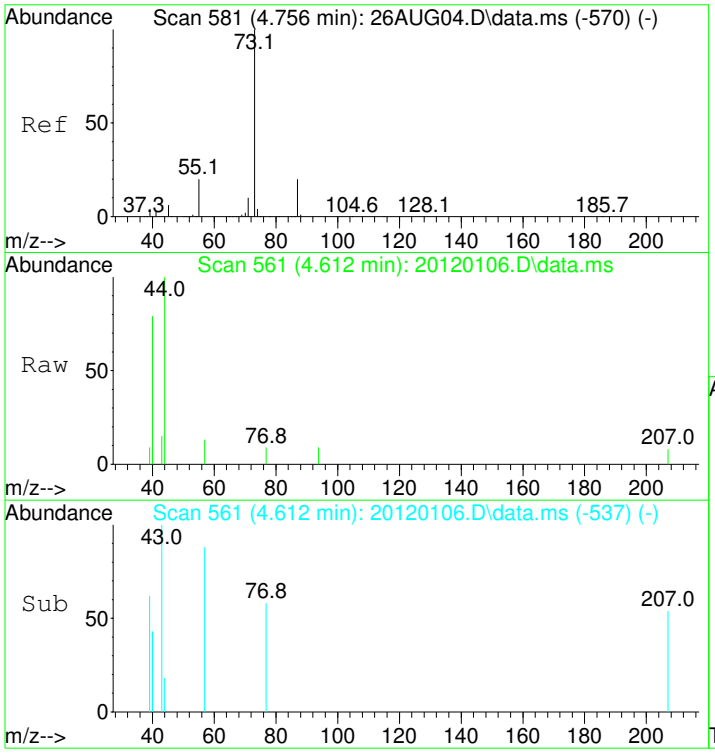


#44
Cyclohexane
Concen: Below Cal
RT: 3.982 min Scan# 473
Delta R.T. 0.021 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 56 Resp: 4188

Ion	Ratio	Lower	Upper
56	100		
84	149.4	69.5	104.3#
41	7.1	39.4	59.0#
55	96.8	31.4	47.2#

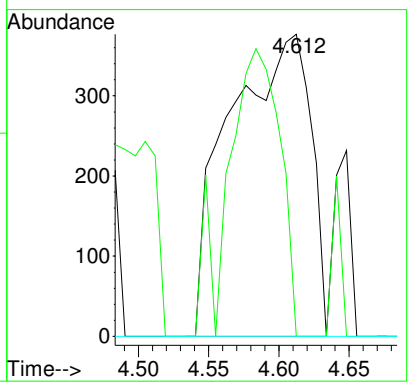


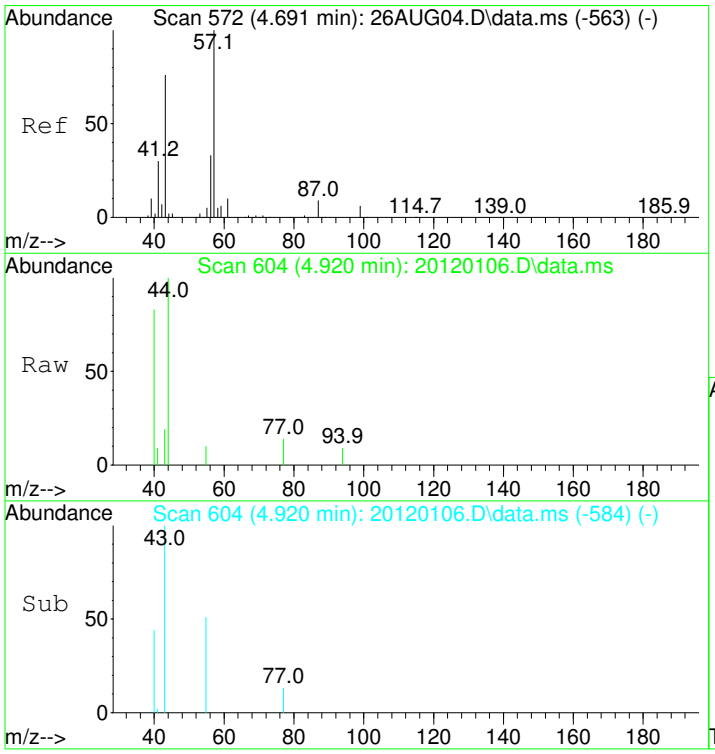


#54
Isobutyl Alcohol
Concen: Below Cal
RT: 4.612 min Scan# 561
Delta R.T. 0.050 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 1515

Ion	Ratio	Lower	Upper
43	100		
41	61.2	30.7	46.1#
42	0.0	6.4	9.6#

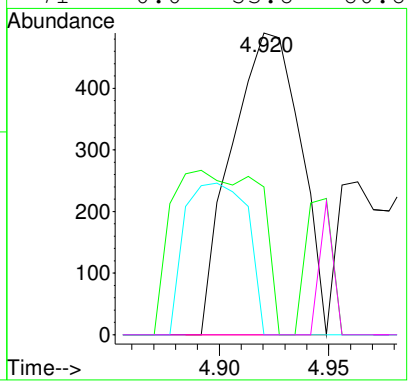


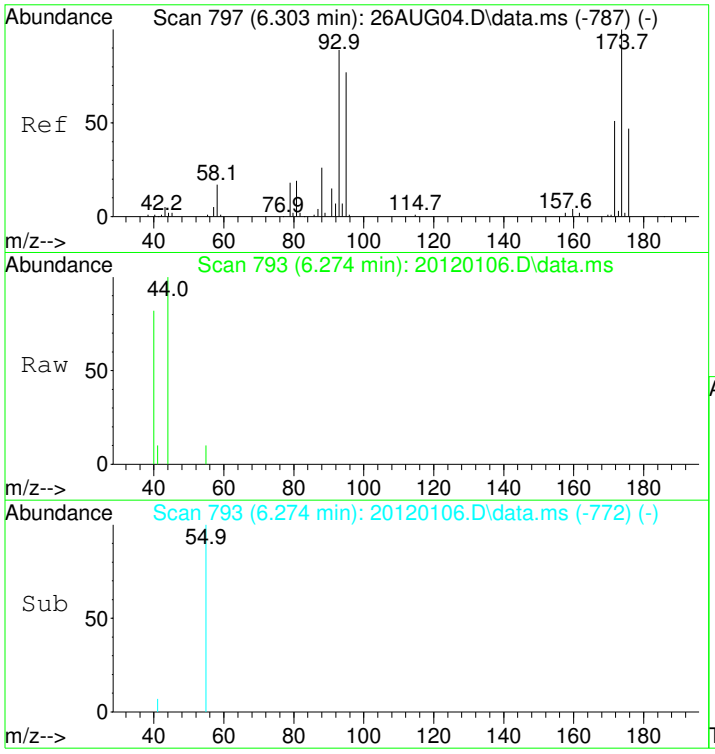


#55
Heptane
Concen: Below Cal
RT: 4.920 min Scan# 604
Delta R.T. 0.021 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 1074

Ion	Ratio	Lower	Upper
43	100		
41	69.3	46.8	70.2
57	45.4	47.5	71.3#
71	0.0	53.8	80.8#

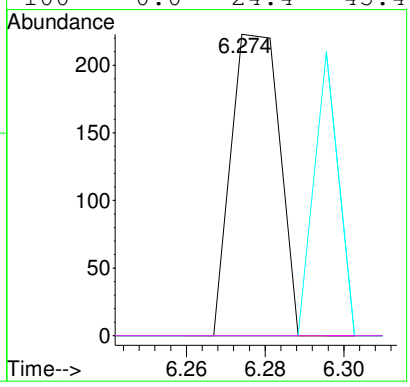


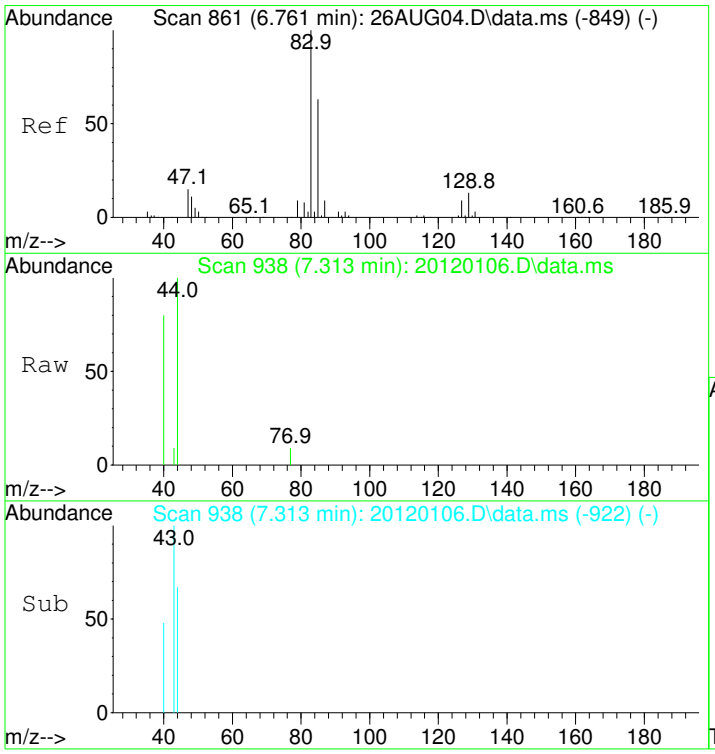


#62
Methyl methacrylate
Concen: Below Cal
RT: 6.274 min Scan# 793
Delta R.T. 0.029 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 41 Resp: 190

Ion	Ratio	Lower	Upper
41	100		
69	0.0	72.2	108.4#
39	47.4	41.1	61.7
100	0.0	24.4	45.4#

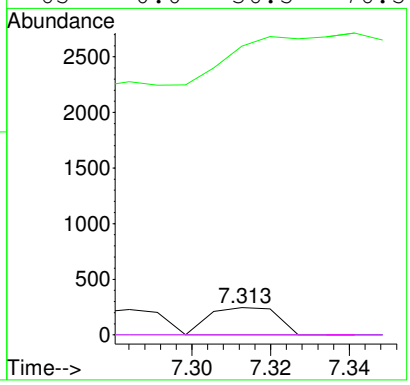


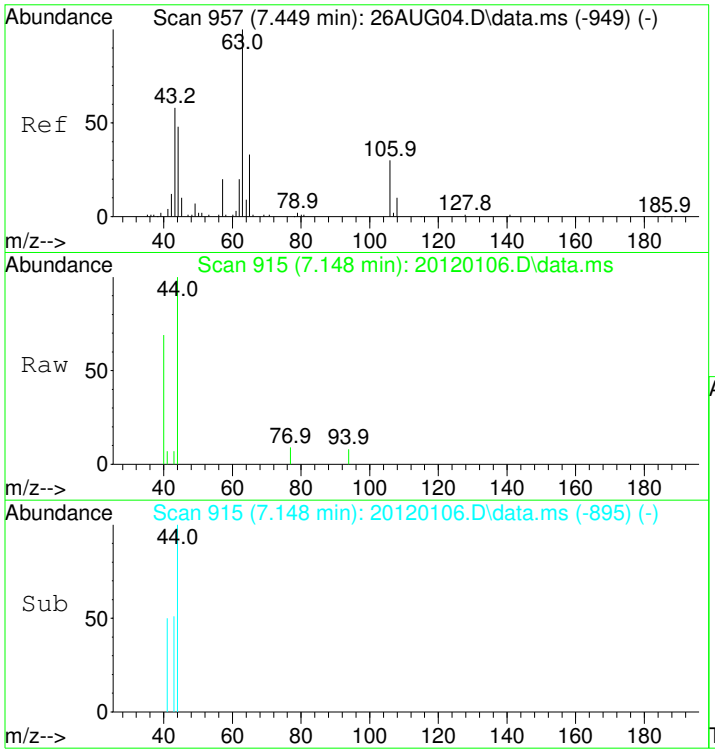


#64
2-Chloroethyl vinyl ether
Concen: Below Cal
RT: 7.313 min Scan# 938
Delta R.T. -0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 298

Ion	Ratio	Lower	Upper
43	100		
44	474.8	51.0	111.0#
63	0.0	141.4	201.4#
65	0.0	36.5	76.5#

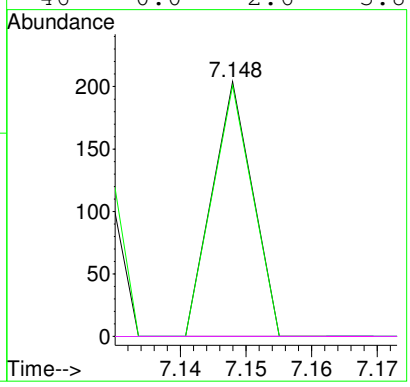


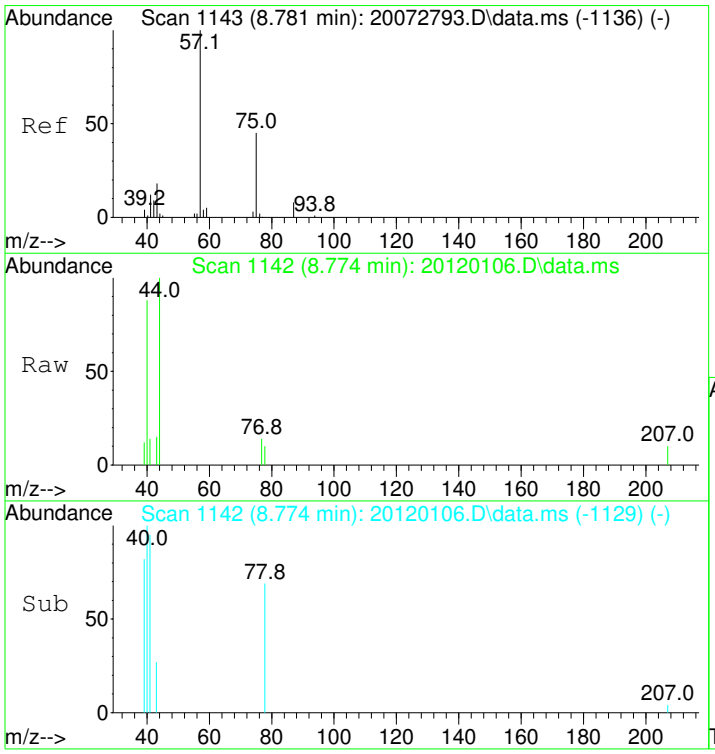


#65
2-Nitropropane
Concen: Below Cal
RT: 7.148 min Scan# 915
Delta R.T. 0.022 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 88

Ion	Ratio	Lower	Upper
43	100		
41	97.7	67.9	101.9
39	0.0	21.8	32.8#
46	0.0	2.6	3.8#

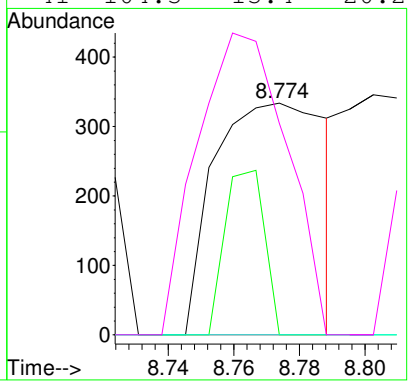


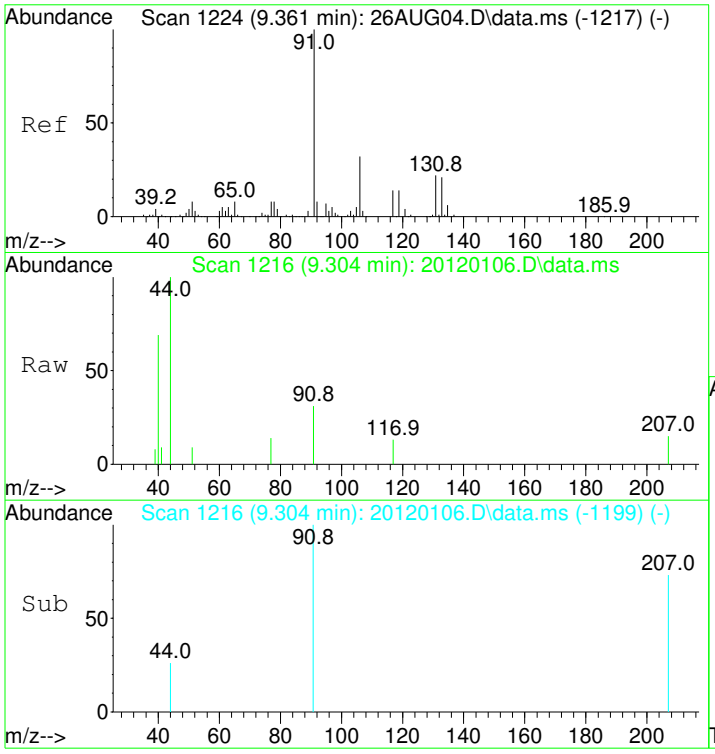


#79
Butyl acetate
Concen: Below Cal
RT: 8.774 min Scan# 1142
Delta R.T. -0.029 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 790

Ion	Ratio	Lower	Upper
43	100		
56	25.3	38.0	57.0#
73	0.0	15.0	22.4#
41	104.3	13.4	20.2#

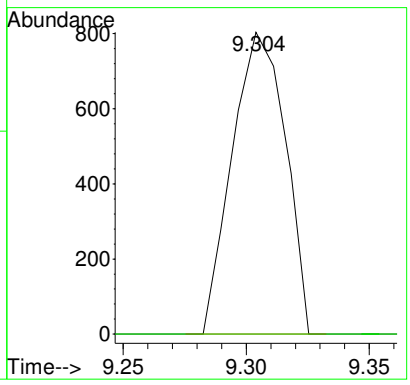


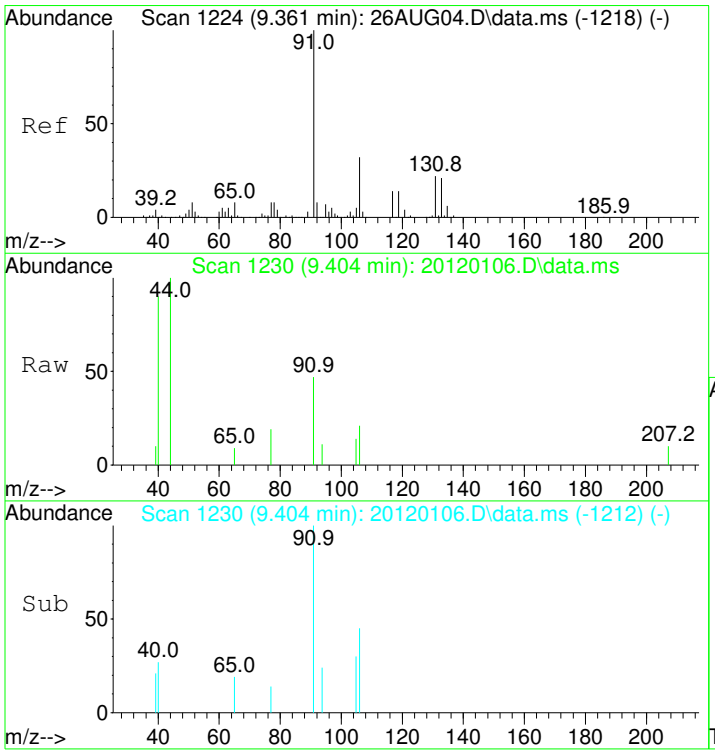


#83
Ethylbenzene
Concen: Below Cal
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 1211

Ion	Ratio	Lower	Upper
91	100		
106	0.0	13.6	53.6#

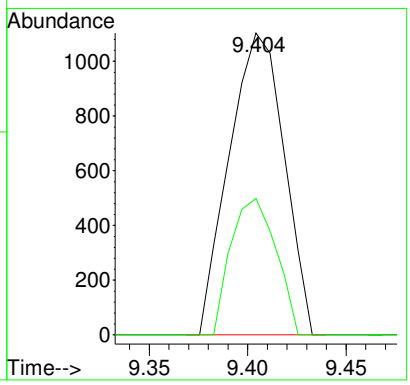


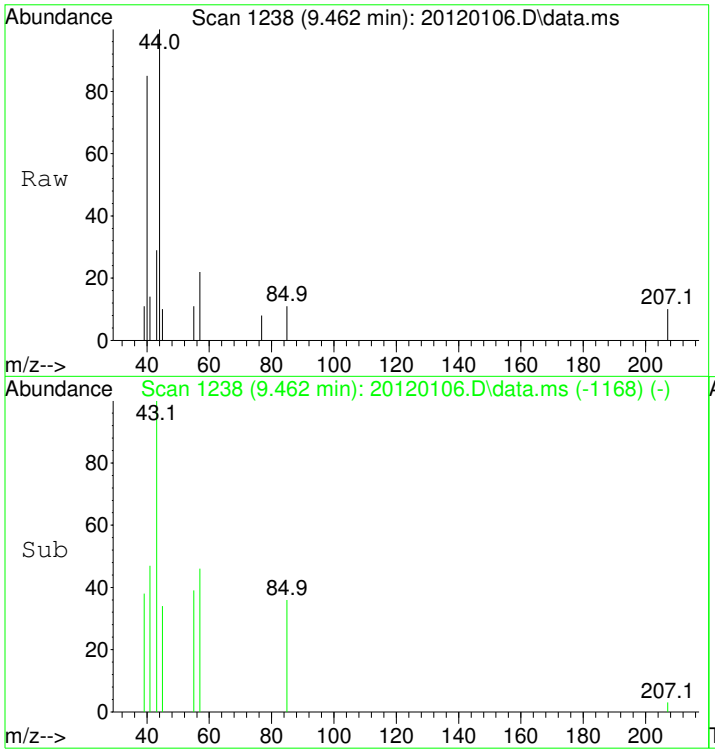


#84
m/p-Xylene
Concen: Below Cal
RT: 9.404 min Scan# 1230
Delta R.T. 0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 2142

Ion	Ratio	Lower	Upper
91	100		
106	37.2	34.2	74.2

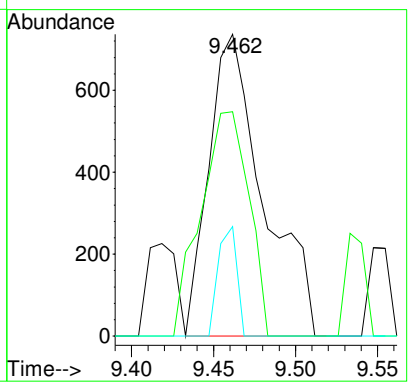


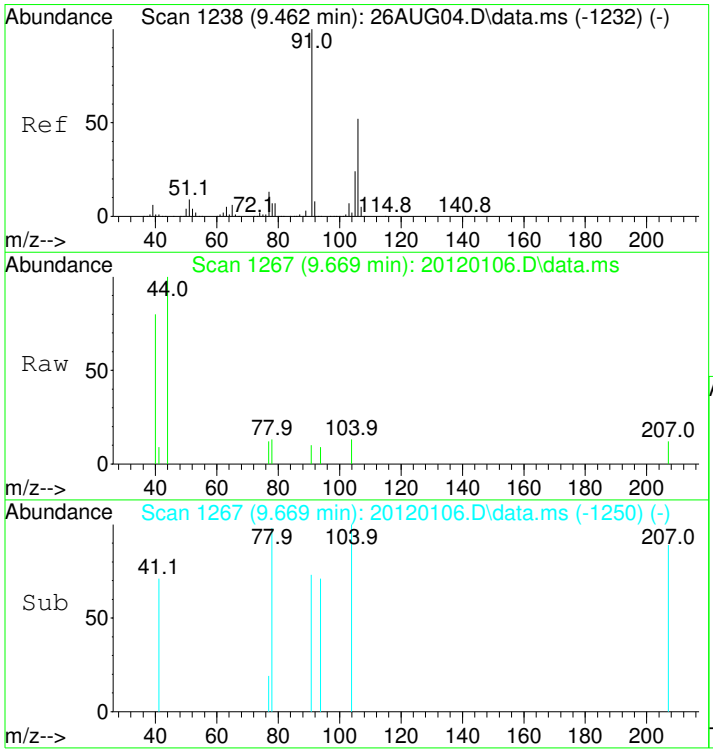


#85
Nonane
Concen: Below Cal
RT: 9.462 min Scan# 1238
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 1712

Ion	Ratio	Lower	Upper
43	100		
57	65.2	67.9	127.9#
85	12.4	10.4	70.4

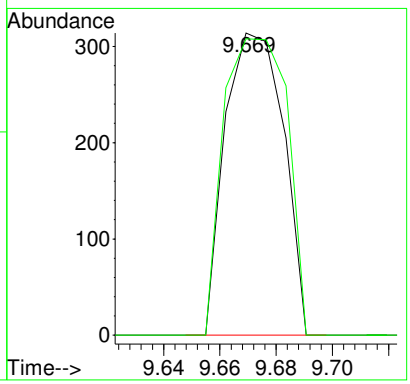


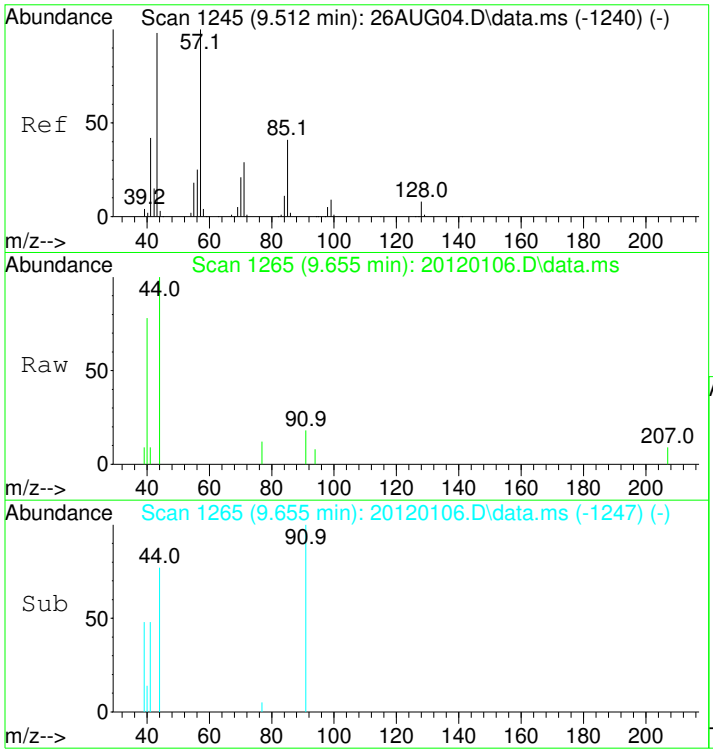


#86
Styrene
Concen: Below Cal
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:104 Resp: 454

Ion	Ratio	Lower	Upper
104	100		
78	107.0	32.3	72.3#

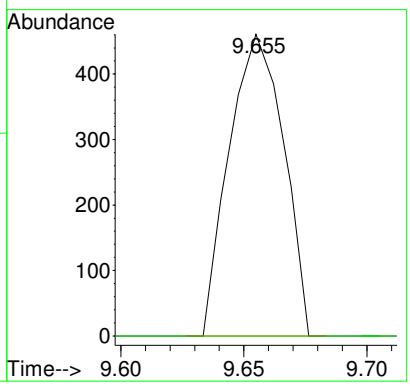


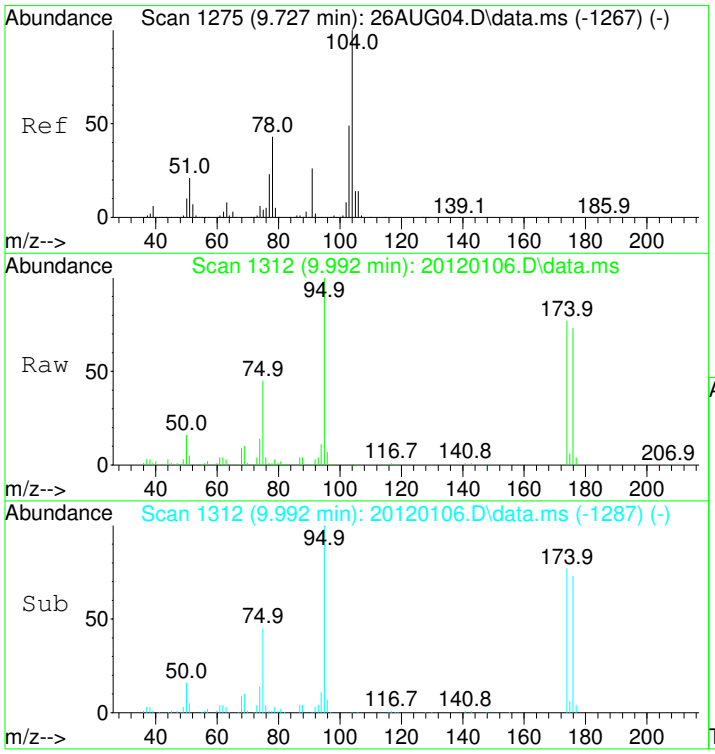


#87
o-Xylene
Concen: Below Cal
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 710

Ion	Ratio	Lower	Upper
91	100		
106	0.0	30.3	70.3#

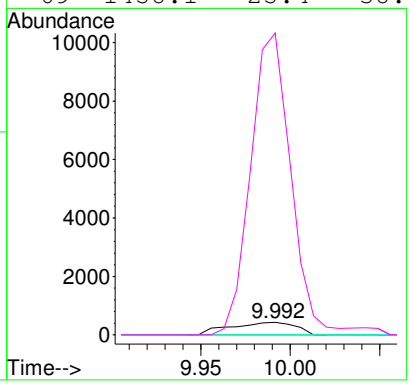


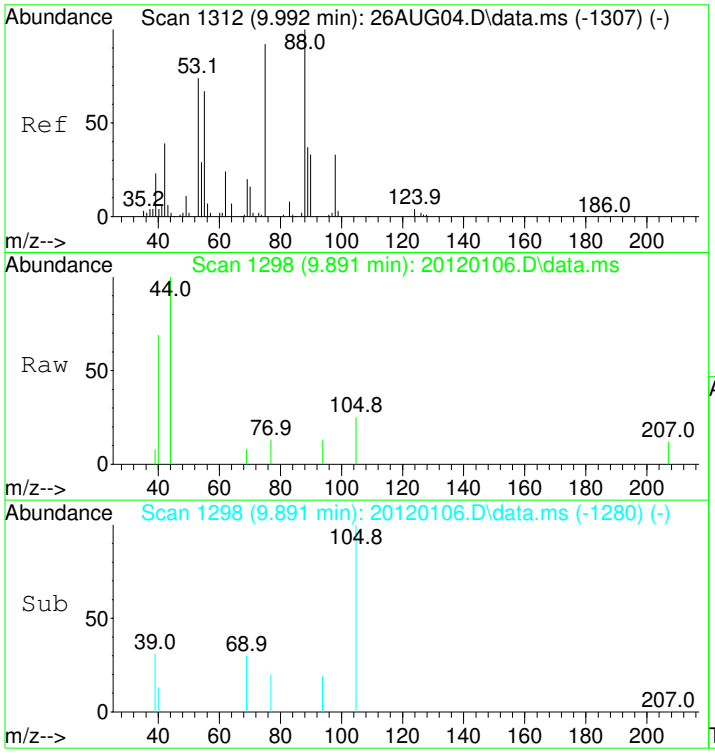


#88
Cyclohexanone
Concen: Below Cal
RT: 9.992 min Scan# 1312
Delta R.T. 0.058 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 55 Resp: 1102

Ion	Ratio	Lower	Upper
55	100		
42	0.0	48.0	72.0#
98	0.0	38.2	57.2#
69	1458.1	25.4	38.0#

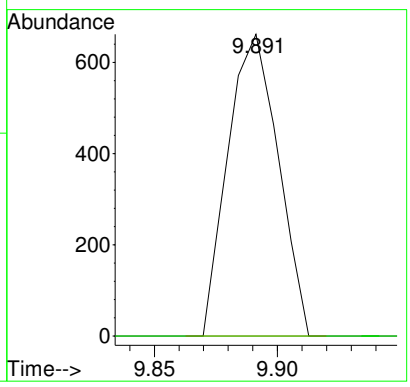


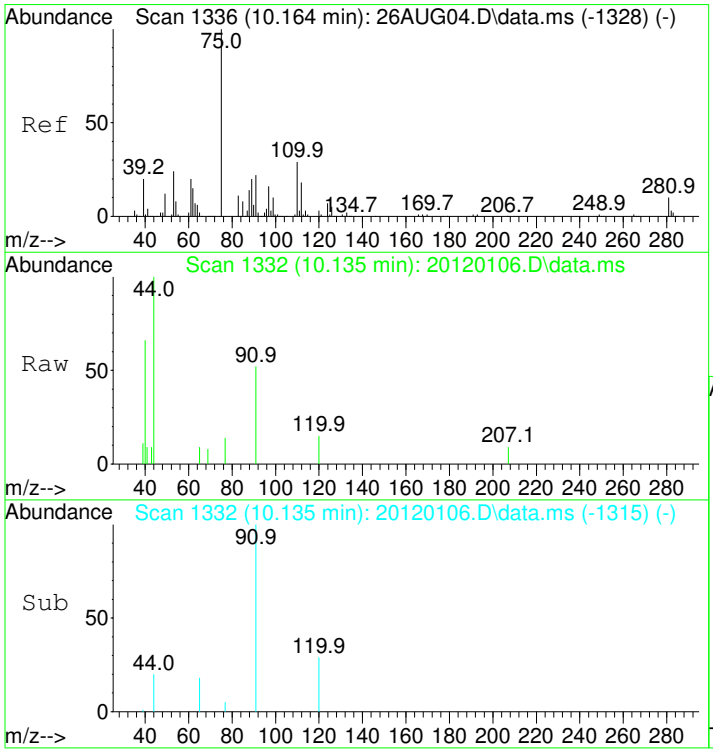


#90
Isopropylbenzene
Concen: Below Cal
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:105 Resp: 942

Ion	Ratio	Lower	Upper
105	100		
120	0.0	8.0	48.0#

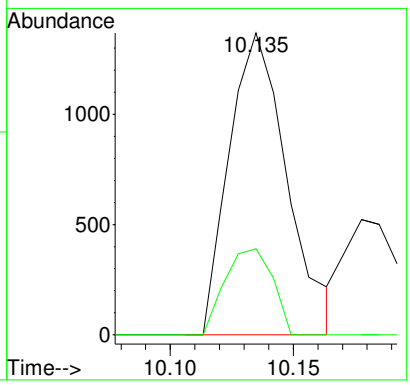


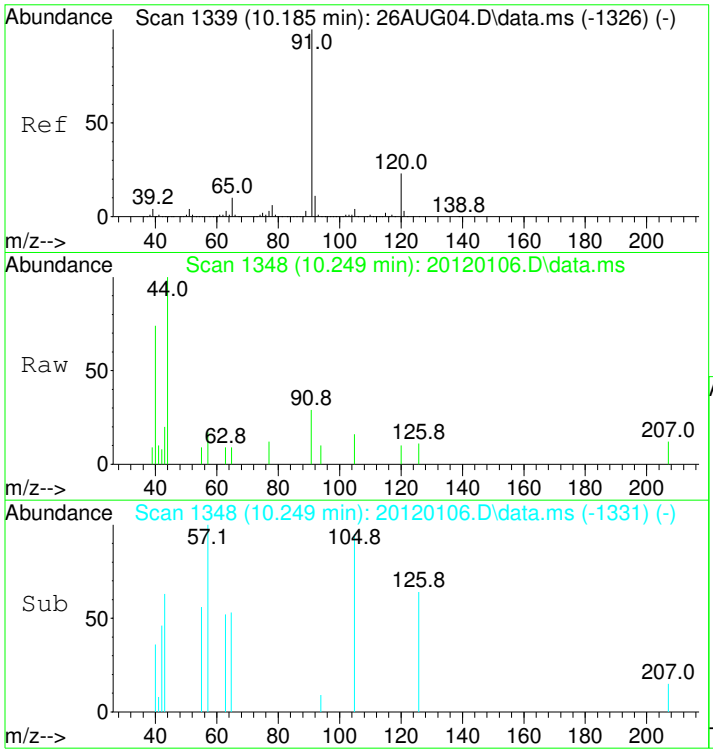


#96
n-Propylbenzene
Concen: Below Cal
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 2242

Ion	Ratio	Lower	Upper
91	100		
120	23.5	3.7	43.7

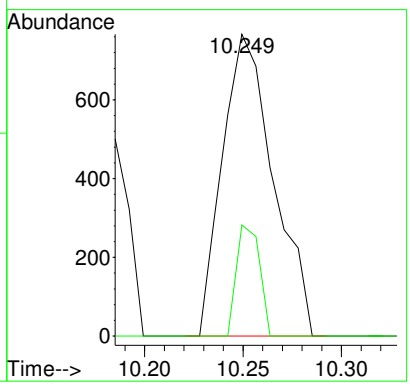


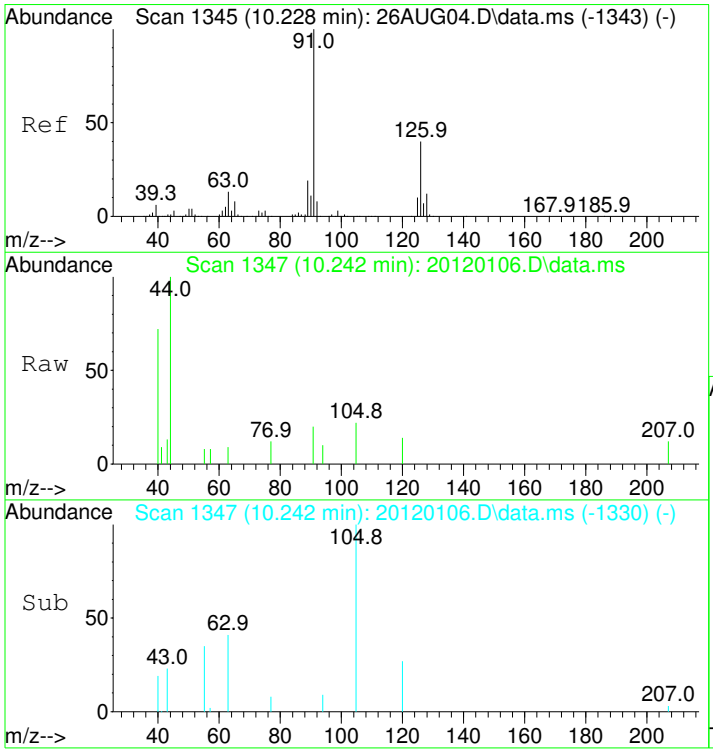


#98
4-Chlorotoluene
Concen: Below Cal
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 1387

Ion	Ratio	Lower	Upper
91	100		
126	16.6	12.4	52.4

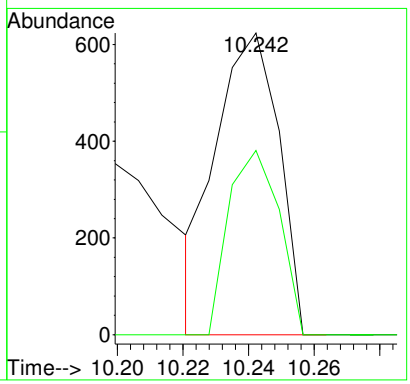


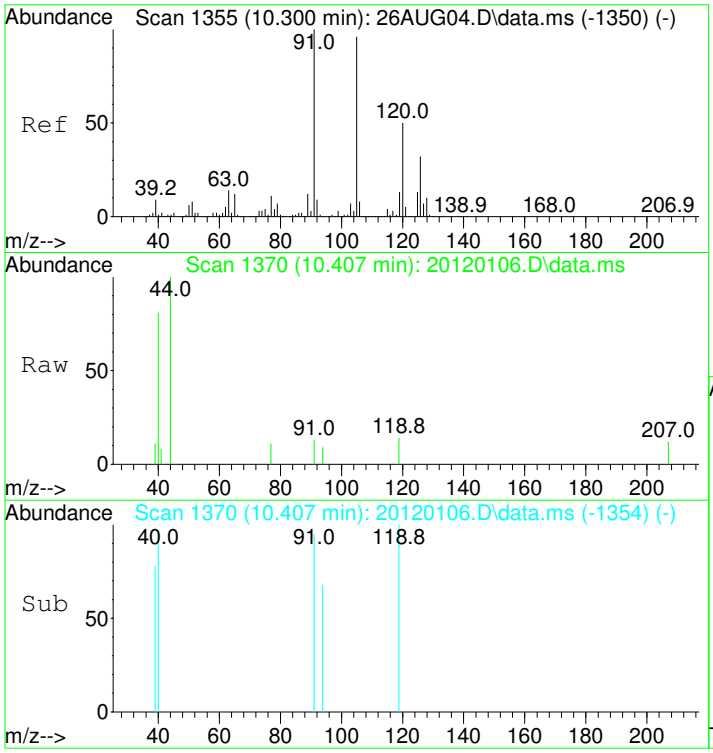


#99
1,3,5-Trimethylbenzene
Concen: Below Cal
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:105 Resp: 824

Ion	Ratio	Lower	Upper
105	100		
120	49.5	31.9	71.9

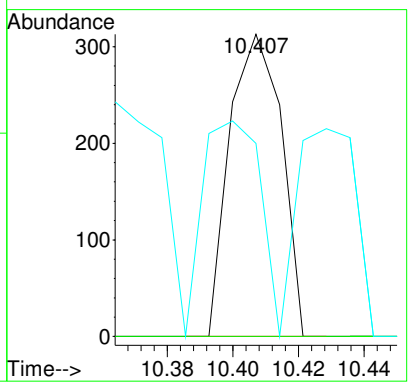


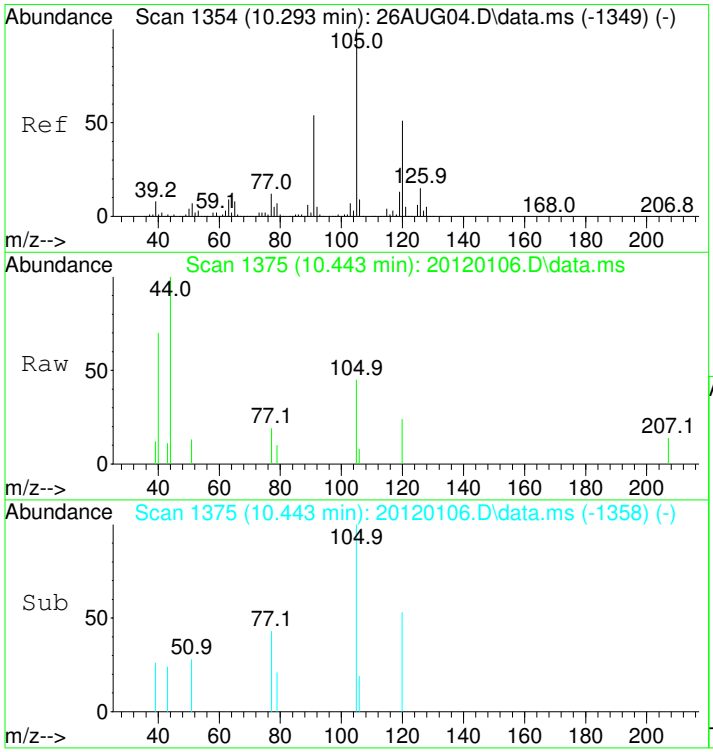


#100
tert-Butylbenzene
Concen: Below Cal
RT: 10.407 min Scan# 1370
Delta R.T. -0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 342

Ion	Ratio	Lower	Upper
91	100		
134	0.0	9.7	49.7#
41	79.5	0.0	39.3#

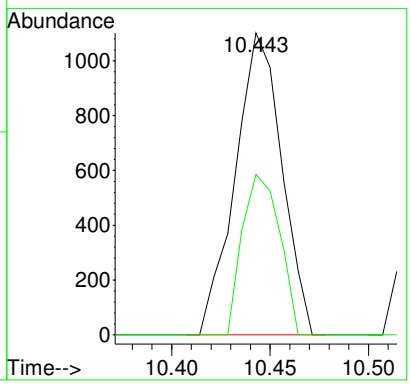


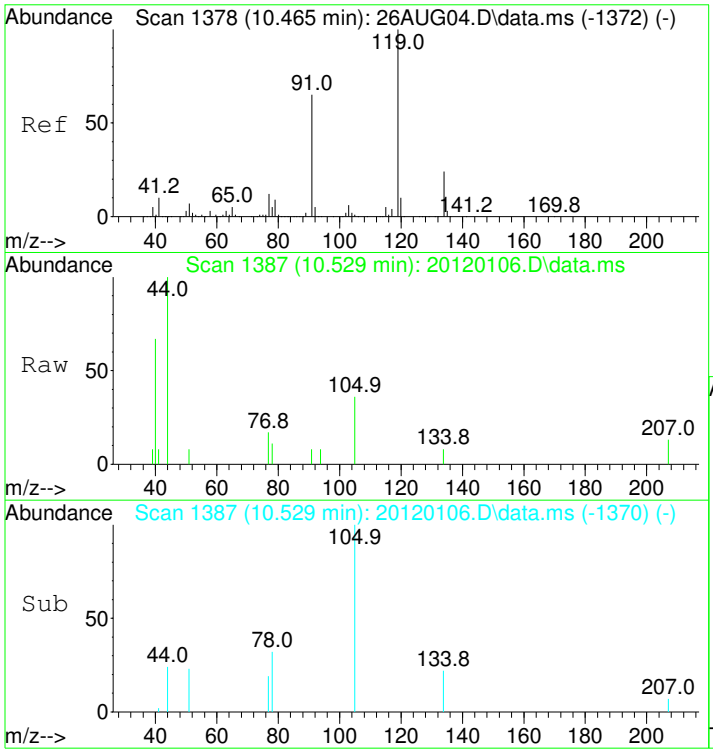


#101
1,2,4-Trimethylbenzene
Concen: Below Cal
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:105 Resp: 1815

Ion	Ratio	Lower	Upper
105	100		
120	42.7	37.7	77.7

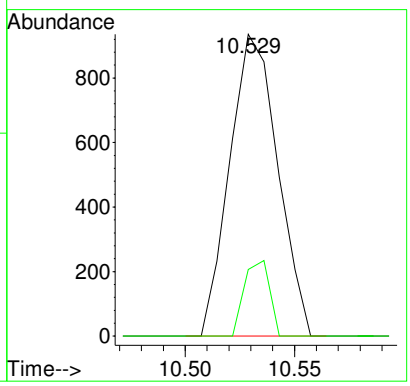


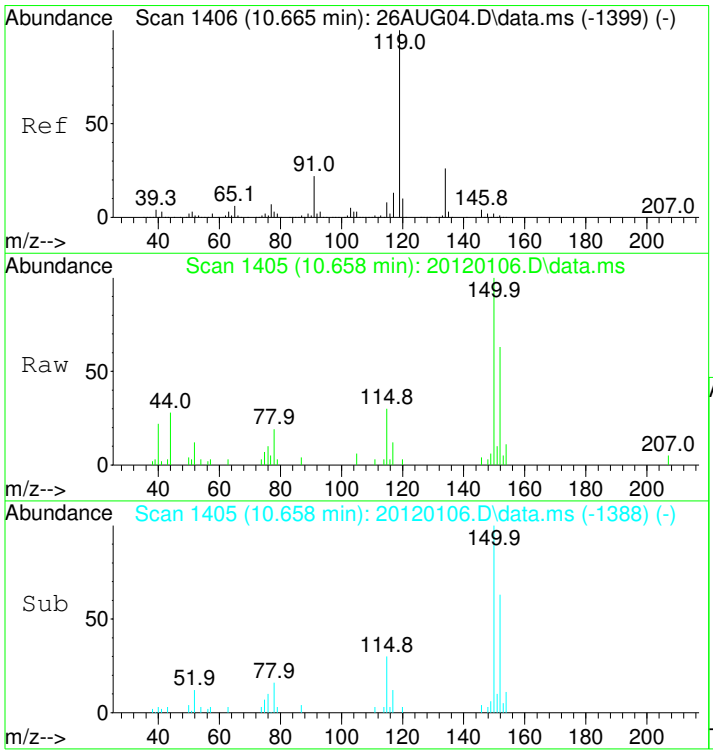


#102
sec-Butylbenzene
Concen: Below Cal
RT: 10.529 min Scan# 1387
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:105 Resp: 1431

Ion	Ratio	Lower	Upper
105	100		
134	13.3	1.1	41.1

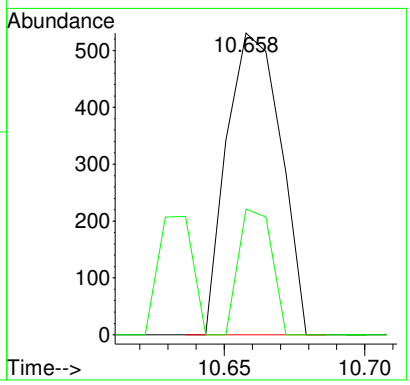


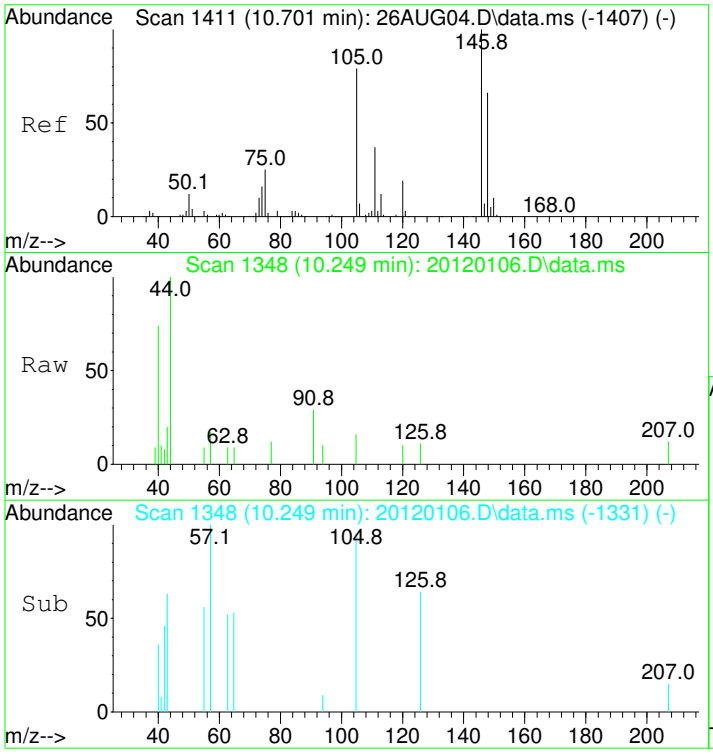


#107
1,2,3-Trimethylbenzene
Concen: Below Cal
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:105 Resp: 711

Ion	Ratio	Lower	Upper
105	100		
120	25.9	35.5	53.3#

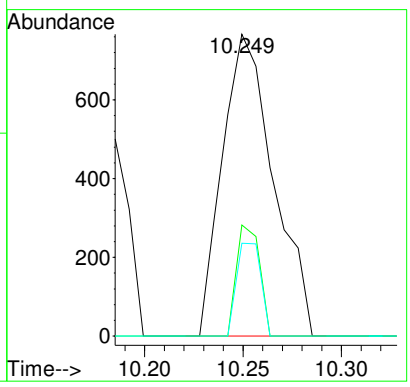


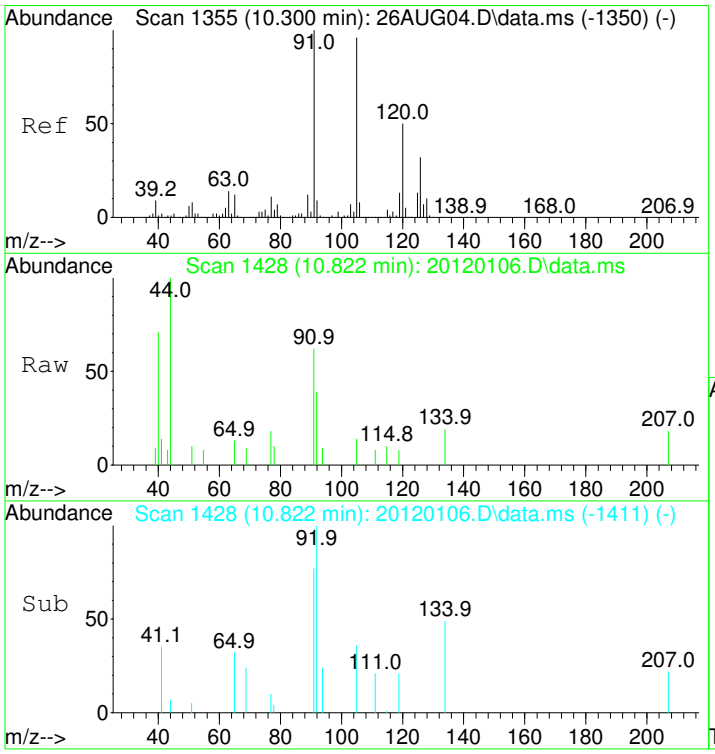


#108
Benzyl chloride
Concen: Below Cal
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 1387

Ion	Ratio	Lower	Upper
91	100		
126	16.6	12.4	52.4
65	14.6	0.0	33.3

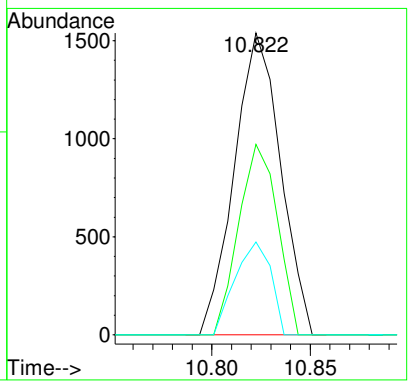


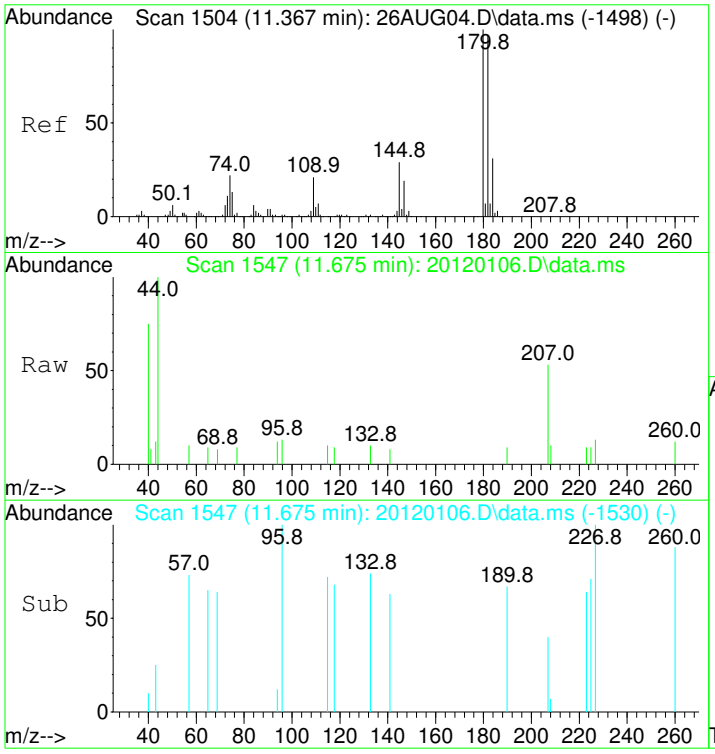


#110
n-Butylbenzene
Concen: Below Cal
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 91 Resp: 2518

Ion	Ratio	Lower	Upper
91	100		
92	52.8	39.3	79.3
134	23.8	7.5	47.5

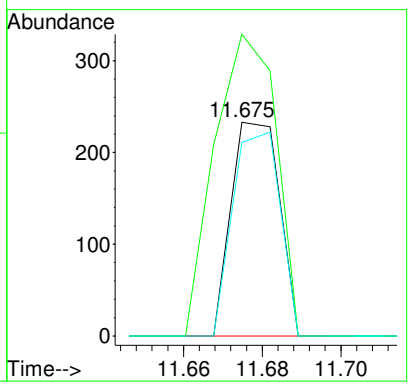


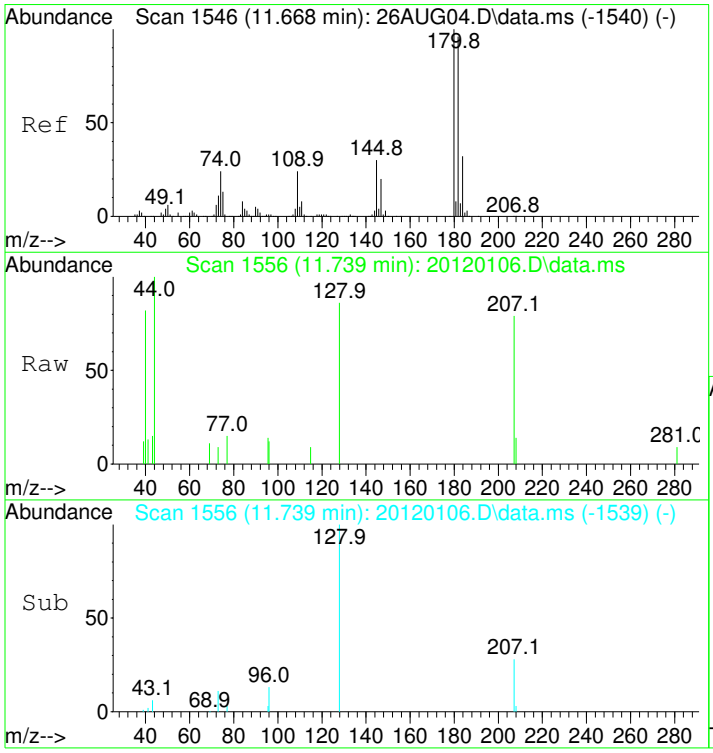


#115
Hexachlorobutadiene
Concen: Below Cal
RT: 11.675 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:225 Resp: 198

Ion	Ratio	Lower	Upper
225	100		
227	179.3	50.9	76.3#
223	93.9	50.5	75.7#

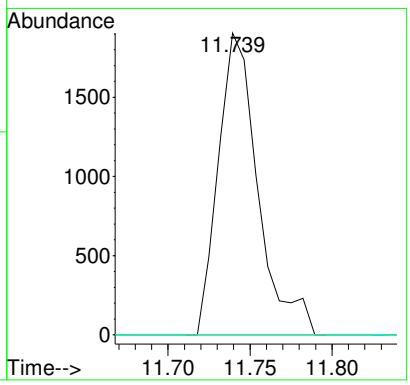


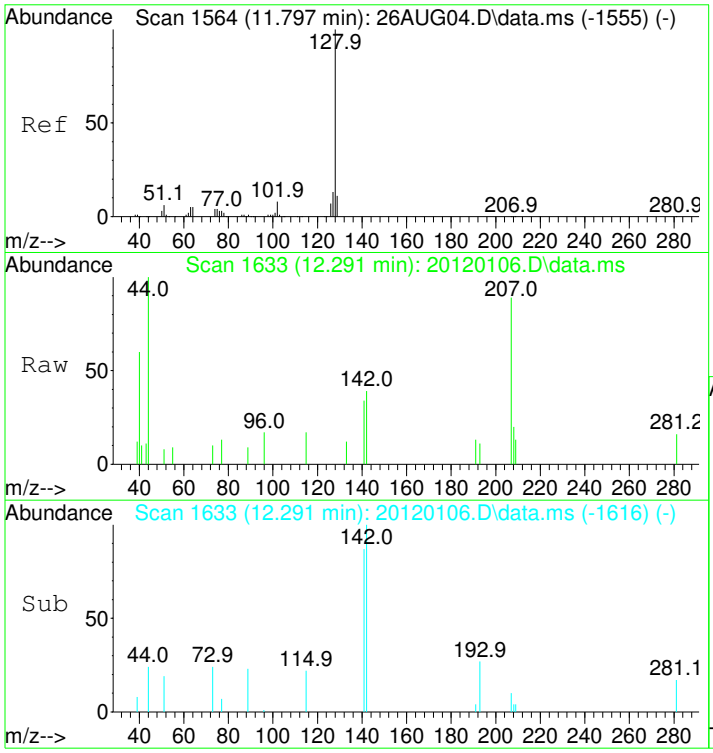


#116
Naphthalene
Concen: Below Cal
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:128 Resp: 3216

Ion	Ratio	Lower	Upper
128	100		
126	0.0	0.0	28.2
102	0.0	0.0	30.0

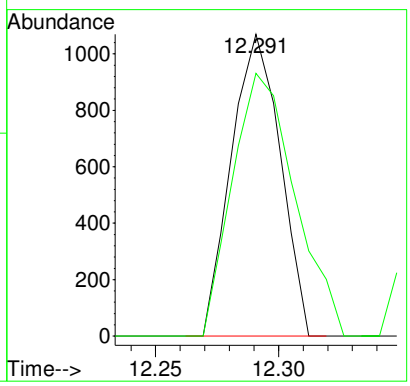


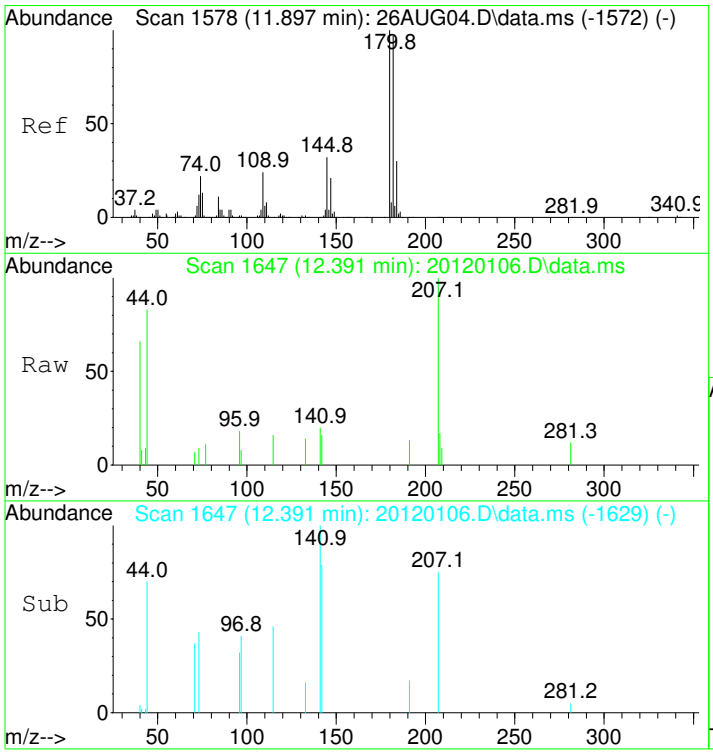


#118
2-Methylnaphthalene
Concen: Below Cal
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:142 Resp: 1482

Ion	Ratio	Lower	Upper
142	100		
141	111.3	65.0	105.0#

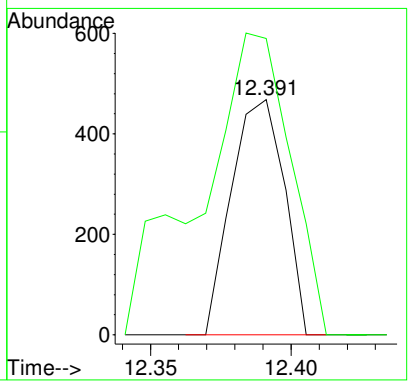


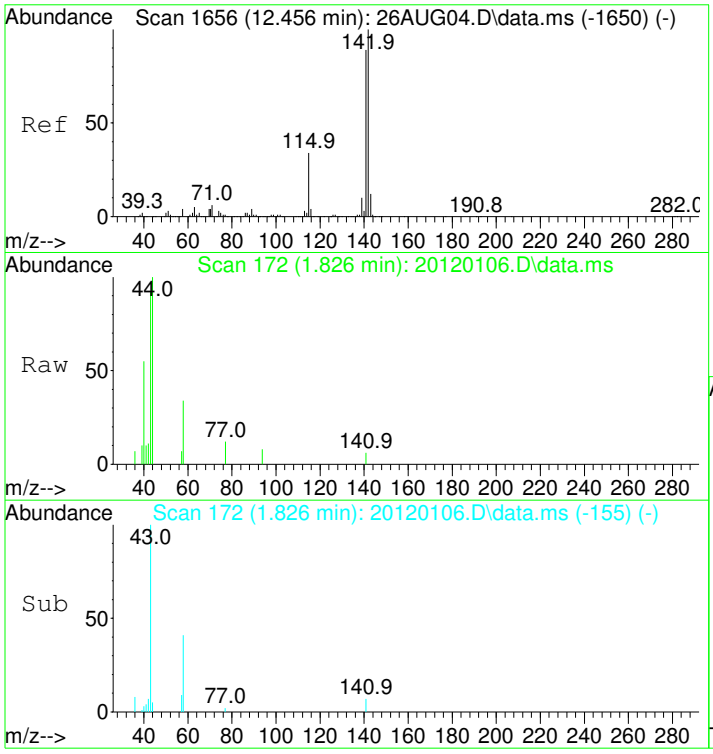


#119
1-Methylnaphthalene
Concen: Below Cal
RT: 12.391 min Scan# 1647
Delta R.T. 0.007 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion:142 Resp: 613

Ion	Ratio	Lower	Upper
142	100		
141	220.2	69.8	104.8#

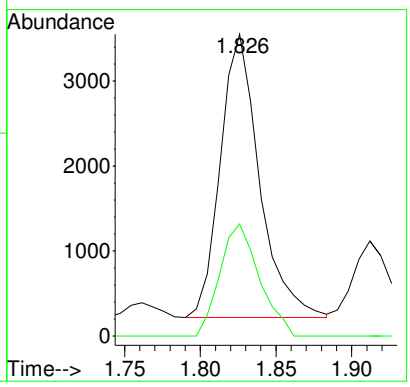


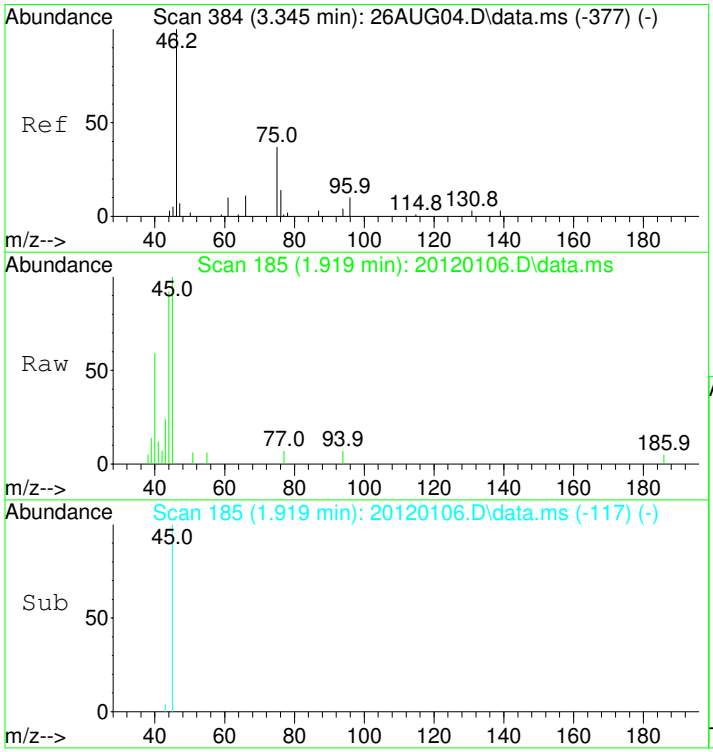


#121
2-Propanone
Concen: 1.25 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 5985

Ion	Ratio	Lower	Upper
43	100		
58	39.7	28.2	42.2

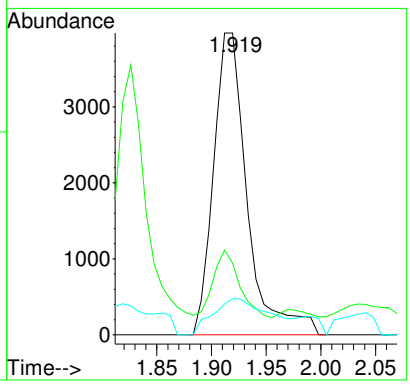


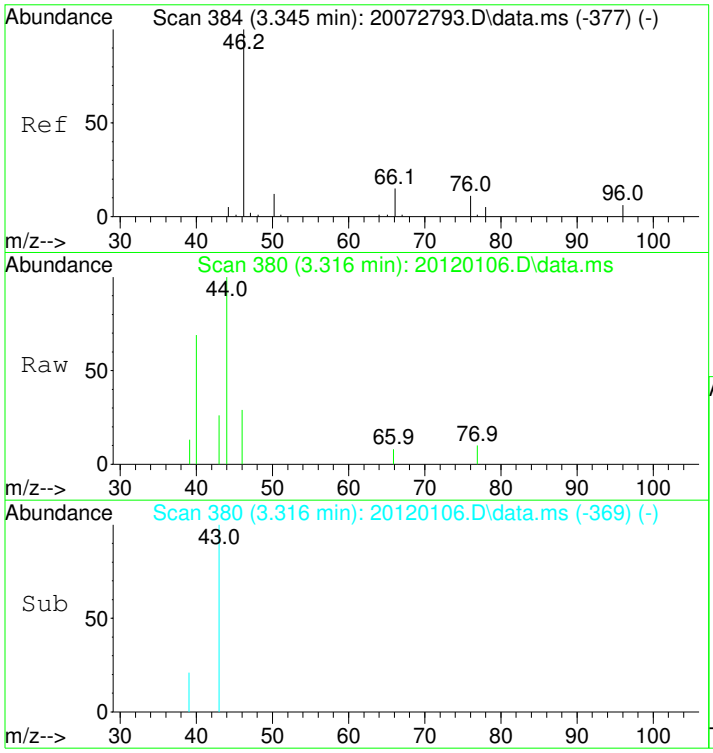


#122
Isopropyl Alcohol
Concen: Below Cal
RT: 1.919 min Scan# 185
Delta R.T. -0.014 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 45 Resp: 8504

Ion	Ratio	Lower	Upper
45	100		
43	17.2	14.6	21.8
41	19.6	5.7	8.5#

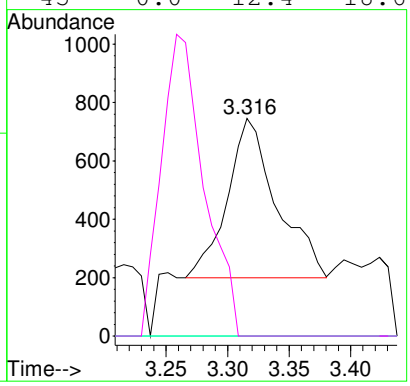


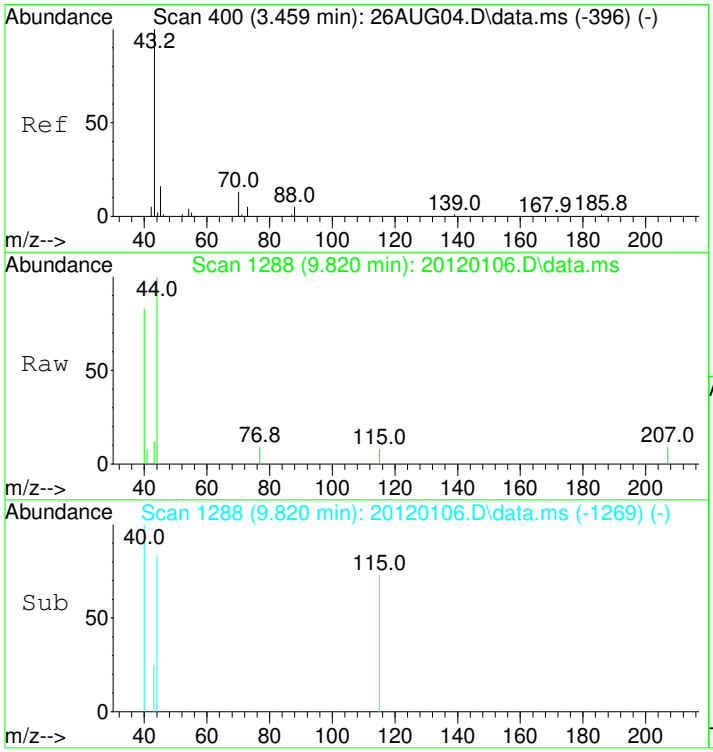


#123
Acetic Ether
Concen: Below Cal
RT: 3.316 min Scan# 380
Delta R.T. -0.043 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 1524

Ion	Ratio	Lower	Upper
43	100		
61	0.0	11.9	17.9#
70	0.0	9.7	14.5#
45	0.0	12.4	18.6#

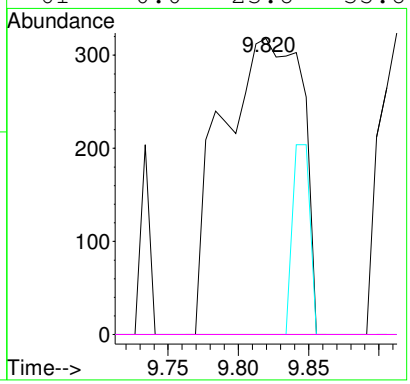




#125
Amyl Acetate
Concen: Below Cal
RT: 9.820 min Scan# 1288
Delta R.T. 0.014 min
Lab File: 20120106.D
Acq: 1 Dec 2020 11:20 am

Tgt Ion: 43 Resp: 1263

Ion	Ratio	Lower	Upper
43	100		
70	0.0	39.8	59.6#
55	13.9	21.8	32.8#
61	0.0	23.8	35.8#



1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120103.D
Acq On : 1 Dec 2020 10:31 am
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21725; 20PPB 200-21728
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 09:37:33 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	190594	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.107	114	329988	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.197	117	308789	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	154234	20.00	ug/L	#	0.00
120) Ethyl-d5-Acetate-d3	3.244	46	94624	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.903	111	101887	19.32	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 96.60%				
50) 1,2-Dichloroethane-d4	4.355	65	117913	18.44	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 92.20%				
69) Toluene-d8	7.836	98	374900	19.61	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 98.05%				
91) Bromofluorobenzene	9.992	95	154590	19.92	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 99.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	132372	27.31	ug/L		99
3) Dichlorofluoromethane	1.447	67	178113	16.32	ug/L	#	84
4) Chloromethane	1.053	50	164490	15.62	ug/L		99
6) Vinyl chloride	1.110	62	148890	23.25	ug/L		96
7) Bromomethane	1.267	96	37295	42.21	ug/L		94
8) Chloroethane	1.318	64	72110m	26.63	ug/L		
9) Trichlorofluoromethane	1.468	101	122924	16.28	ug/L		96
10) Ethanol	1.640	45	267119m	494.89	ug/L		
11) Ethyl ether	1.640	59	96582	21.17	ug/L		96
12) Acrolein	1.733	56	600	Below Cal		#	29
13) 1,1-Dichloroethene	1.783	61	164083	23.25	ug/L		99
16) Acetone	1.826	43	76395	24.21	ug/L		98
17) Chloroprene	2.786	53	349	Below Cal		#	28
18) Carbon disulfide	1.934	76	348008	24.70	ug/L		99
19) 2-Propanol	1.934	45	479071	444.57	ug/L		98
20) Allyl chloride	2.034	41	138150	17.06	ug/L		88
22) Acetonitrile	2.034	41	138150	17.05	ug/L		91
23) Methylene chloride	2.134	49	138102	18.63	ug/L		99
24) trans-1,2-Dichloroethene	2.342	61	153807	22.14	ug/L		99
25) t-Butanol	2.242	59	235068	109.87	ug/L		98
26) Acrylonitrile	2.320	53	79746	21.72	ug/L		99
27) Methyl tert-butyl ether	2.342	73	359856	22.76	ug/L		98
28) Hexane	2.571	57	1965	Below Cal		#	5
29) 1,1-Dichloroethane	2.721	63	211399	21.17	ug/L		99
30) Diisopropyl ether	2.757	45	327975	22.39	ug/L	#	50
32) Methylcyclopentane	3.166	56	207862	18.99	ug/L		81
33) Ethyl tert butyl ether	3.123	59	357646	21.41	ug/L		99
34) 2,2-Dichloropropane	3.295	77	173308	21.06	ug/L		98
35) cis-1,2-Dichloroethene	3.295	61	181215	21.53	ug/L		98
36) 2-Butanone	3.302	43	100765	20.75	ug/L		96
37) Ethyl Acetate	3.359	43	201305	21.42	ug/L		99
38) Methyl acrylate	3.402	55	182973	21.81	ug/L		97
40) Bromochloromethane	3.567	49	92683	21.23	ug/L		99
41) Tetrahydrofuran	3.581	42	77743	21.81	ug/L		96
42) Methacrylonitrile	3.545	41	146215	20.73	ug/L		99
43) Chloroform	3.703	83	203849	19.97	ug/L		98
44) Cyclohexane	3.975	56	3880	Below Cal		#	9
46) 1,1,1-Trichloroethane	3.882	97	177041	21.77	ug/L		99
48) Carbon tetrachloride	4.075	117	134438	19.27	ug/L		99
49) 1,1-Dichloropropene	4.097	75	150115	21.84	ug/L		99

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120103.D
Acq On : 1 Dec 2020 10:31 am
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21725; 20PPB 200-21728
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 09:37:33 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
51) 1,2-Dichloroethane	4.476	62	158678	20.79 ug/L		99
52) Benzene	4.369	78	450961	22.63 ug/L		99
53) Tertiaryamylmethylether	4.620	73	344354	22.75 ug/L	#	79
54) Isobutyl Alcohol	4.555	43	346588	22.29 ug/L		99
55) Heptane	4.913	43	3680	0.22 ug/L	#	22
57) Methylcyclohexane	5.866	83	548	Below Cal	#	1
58) n-Butanol	5.551	56	1917	5.47 ug/L	#	47
59) Trichloroethene	5.479	130	121641	21.83 ug/L		99
60) 1,2-Dichloropropane	5.966	63	124429	22.20 ug/L		96
61) Dibromomethane	6.131	93	80848	20.41 ug/L		99
62) Methyl methacrylate	6.238	41	138187	21.42 ug/L		97
63) Bromodichloromethane	6.582	83	160695	21.15 ug/L		100
65) 2-Nitropropane	7.119	43	63577	21.28 ug/L		97
66) cis-1,3-Dichloropropene	7.499	75	198180	21.23 ug/L		100
68) 4-Methyl-2-pentanone	7.764	43	318315	35.12 ug/L		80
70) Toluene	7.915	91	467080	23.27 ug/L		99
71) trans-1,3-Dichloropropene	8.251	75	190375	22.10 ug/L		96
73) Ethyl methacrylate	8.359	69	206506	21.99 ug/L		98
74) 1,1,2-Trichloroethane	8.437	97	122150	22.21 ug/L		99
75) Tetrachloroethene	8.459	166	119633	23.70 ug/L		98
76) 1,3-Dichloropropane	8.573	76	198501	21.73 ug/L		97
77) 2-Hexanone	8.667	43	169000	23.45 ug/L		99
78) Chlorodibromomethane	8.753	129	121604	20.22 ug/L		98
79) Butyl acetate	8.803	43	265603	23.35 ug/L		99
80) 1,2-Dibromoethane	8.824	107	131424	23.15 ug/L		98
81) Chlorobenzene	9.218	112	297796	23.09 ug/L		99
82) 1,1,1,2-Tetrachloroethane	9.297	131	109308	21.90 ug/L		98
83) Ethylbenzene	9.304	91	499104	21.45 ug/L		98
84) m/p-Xylene	9.397	91	787141	42.53 ug/L		95
85) Nonane	9.462	43	94882	34.72 ug/L		98
86) Styrene	9.669	104	341270	21.74 ug/L		98
87) o-Xylene	9.655	91	436378	21.30 ug/L		96
88) Cyclohexanone	9.942	55	431	Below Cal	#	27
89) Bromoform	9.777	173	87264	18.97 ug/L		99
90) Isopropylbenzene	9.891	105	505774	21.52 ug/L		97
92) Bromobenzene	10.063	77	211779	22.15 ug/L		99
93) 1,1,2,2-Tetrachloroethane	10.092	83	225329	24.84 ug/L		97
94) 1,2,3-Trichloropropane	10.113	110	61712	21.56 ug/L		99
95) trans-1,4-Dichloro-2-b...	10.106	53	60802	20.20 ug/L		96
96) n-Propylbenzene	10.135	91	599090	21.00 ug/L		97
97) 2-Chlorotoluene	10.178	91	347648	24.38 ug/L		95
98) 4-Chlorotoluene	10.250	91	406499	20.94 ug/L		97
99) 1,3,5-Trimethylbenzene	10.242	105	412984	20.66 ug/L		96
100) tert-Butylbenzene	10.414	91	285785	22.83 ug/L		97
101) 1,2,4-Trimethylbenzene	10.443	105	414382	20.00 ug/L		97
102) sec-Butylbenzene	10.536	105	515992	21.35 ug/L		96
104) 1,3-Dichlorobenzene	10.593	146	246823	23.37 ug/L		98
105) p-Isopropyltoluene	10.615	119	431980	25.06 ug/L		97
106) 1,4-Dichlorobenzene	10.651	146	239722	23.58 ug/L		96
107) 1,2,3-Trimethylbenzene	10.658	105	418615	24.25 ug/L		99
108) Benzyl chloride	10.250	91	406499	21.33 ug/L		98
109) 1,2-Dichlorobenzene	10.830	146	235686	22.85 ug/L		99
110) n-Butylbenzene	10.823	91	388040	20.96 ug/L		96
111) Hexachloroethane	10.966	117	75118	19.28 ug/L		99
112) 1,2-Dibromo-3-chloropr...	11.224	157	68809	23.89 ug/L		97
113) 1,3,5-Trichlorobenzene	11.317	180	1463	Below Cal	#	75
114) 1,2,4-Trichlorobenzene	11.618	180	176487	22.60 ug/L		98
115) Hexachlorobutadiene	11.682	225	62802	23.75 ug/L		98

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120103.D
Acq On : 1 Dec 2020 10:31 am
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21725; 20PPB 200-21728
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 09:37:33 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

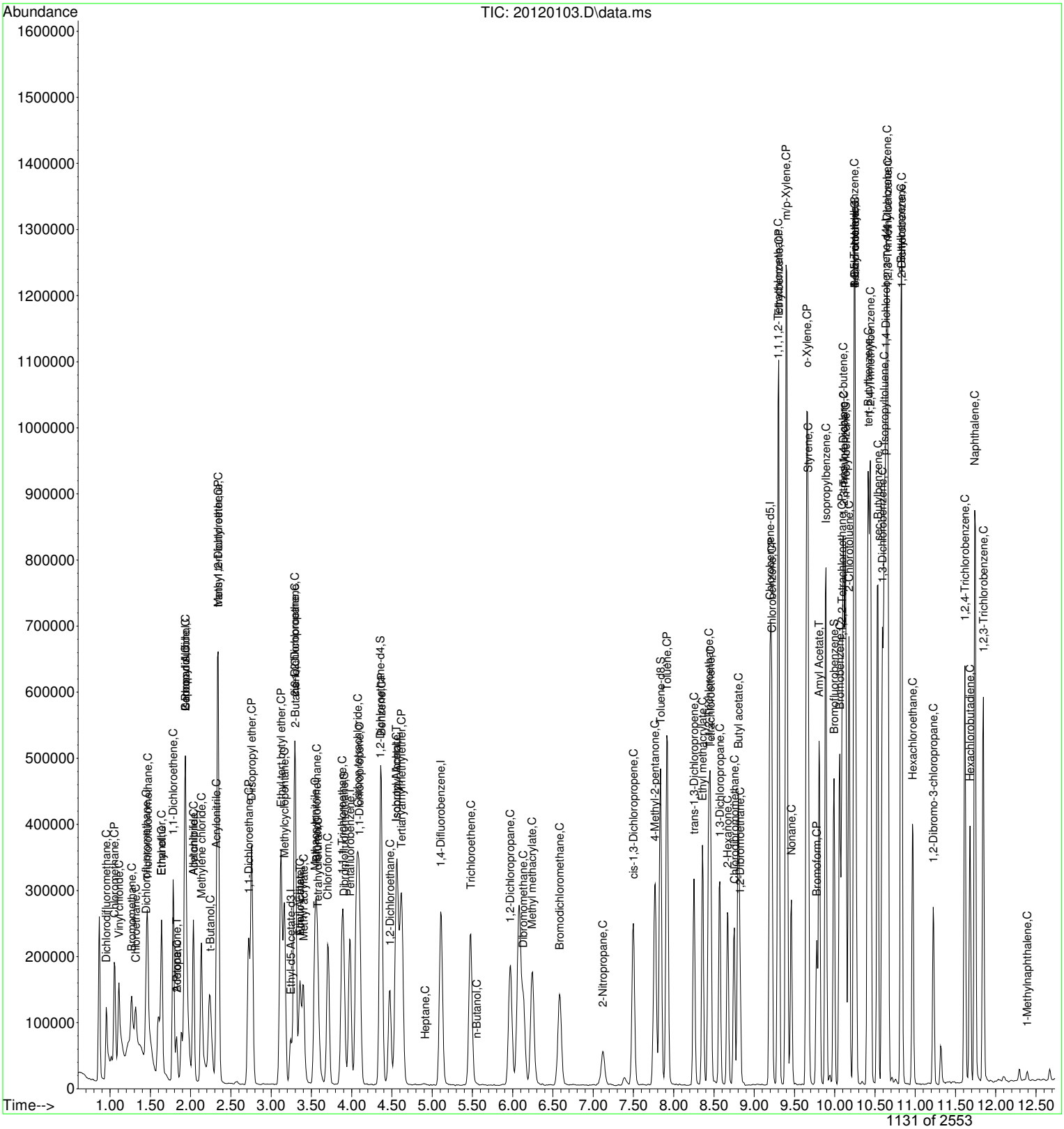
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Naphthalene	11.739	128	647333	21.62	ug/L	98
117) 1,2,3-Trichlorobenzene	11.847	180	161878	21.66	ug/L	100
119) 1-Methylnaphthalene	12.391	142	7411	0.21	ug/L	90
121) 2-Propanone	1.826	43	76395	25.91	ug/L	98
122) Isopropyl Alcohol	1.934	45	479071	480.83	ug/L	98
123) Acetic Ether	3.359	43	201305	22.24	ug/L	99
124) Isopropyl Acetate	4.555	61	70880	21.74	ug/L	99
125) Amyl Acetate	9.805	43	255380	21.23	ug/L	98

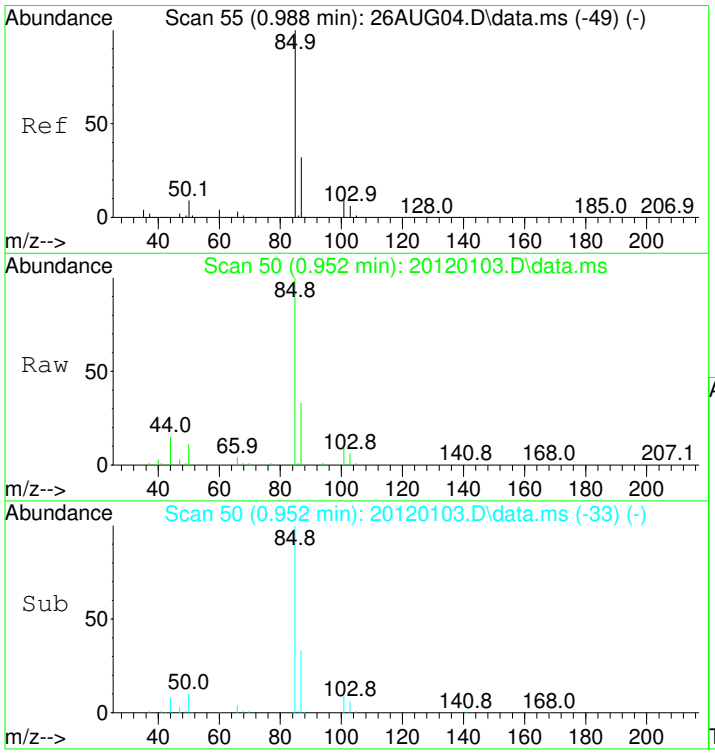
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120103.D
Acq On : 1 Dec 2020 10:31 am
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21725; 20PPB 200-21728
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 09:37:33 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

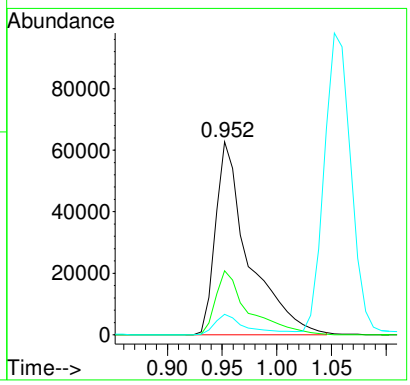


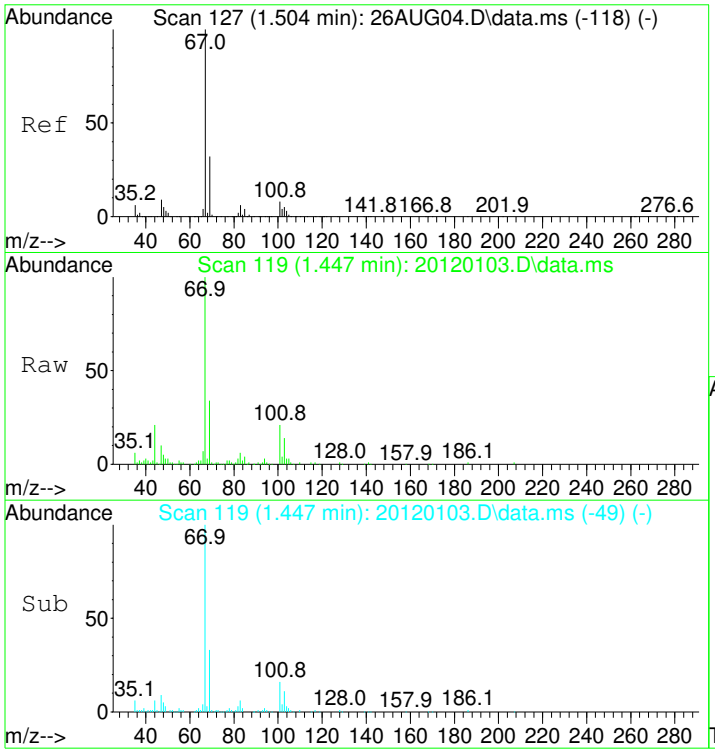


#2
Dichlorodifluoromethane
Concen: 27.31 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 85 Resp: 132372

Ion	Ratio	Lower	Upper
85	100		
87	32.6	3.6	63.6
50	10.6	0.0	40.5

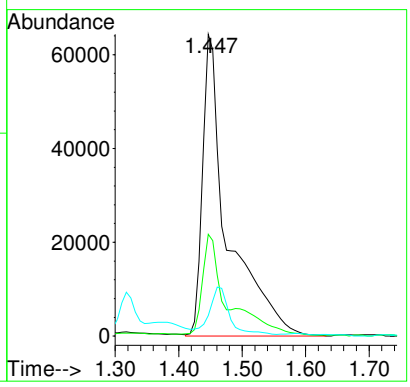


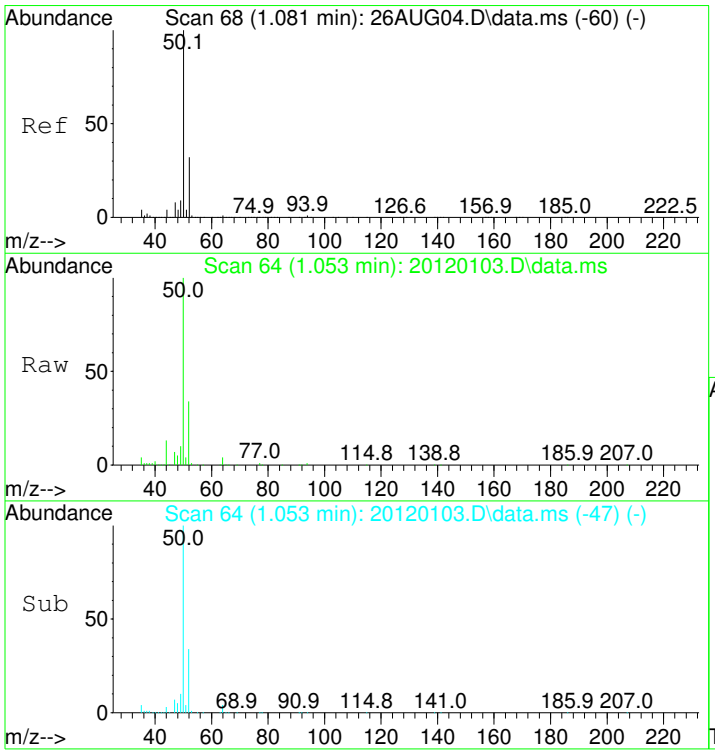


#3
Dichlorofluoromethane
Concen: 16.32 ug/L
RT: 1.447 min Scan# 119
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 67 Resp: 178113

Ion	Ratio	Lower	Upper
67	100		
69	22.1	23.7	44.1#
66	12.2	8.1	15.0

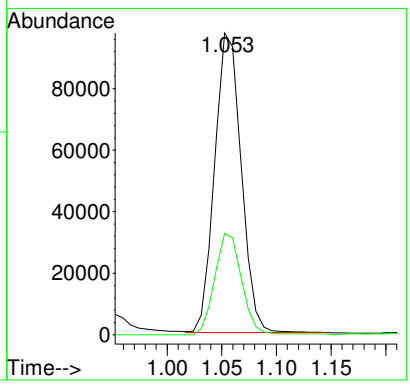


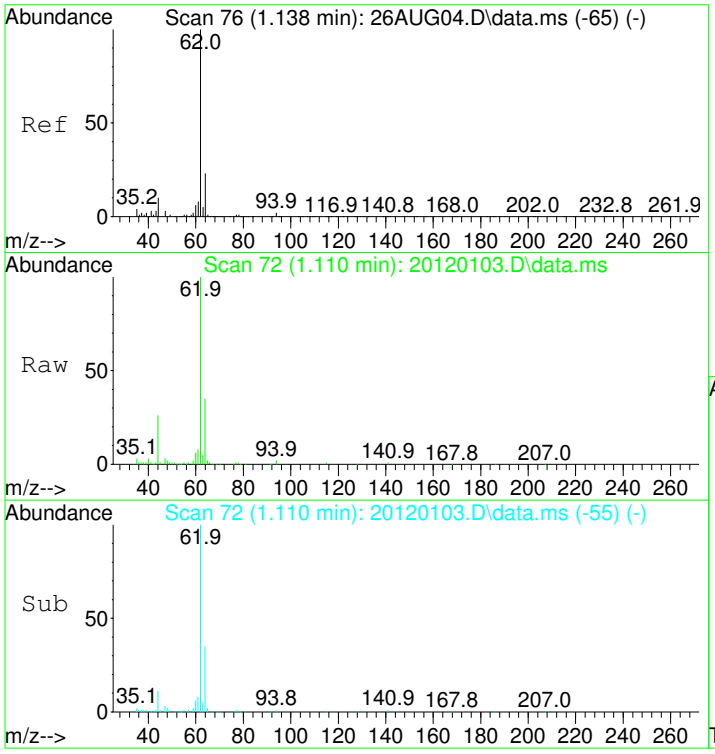


#4
Chloromethane
Concen: 15.62 ug/L
RT: 1.053 min Scan# 64
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 50 Resp: 164490

Ion	Ratio	Lower	Upper
50	100		
52	34.2	4.9	64.9

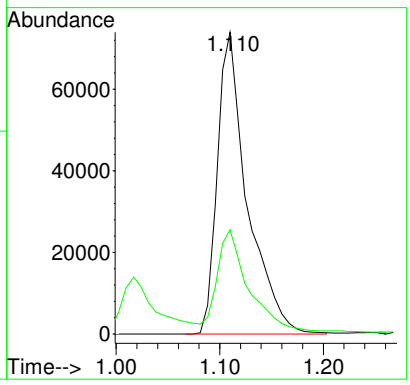


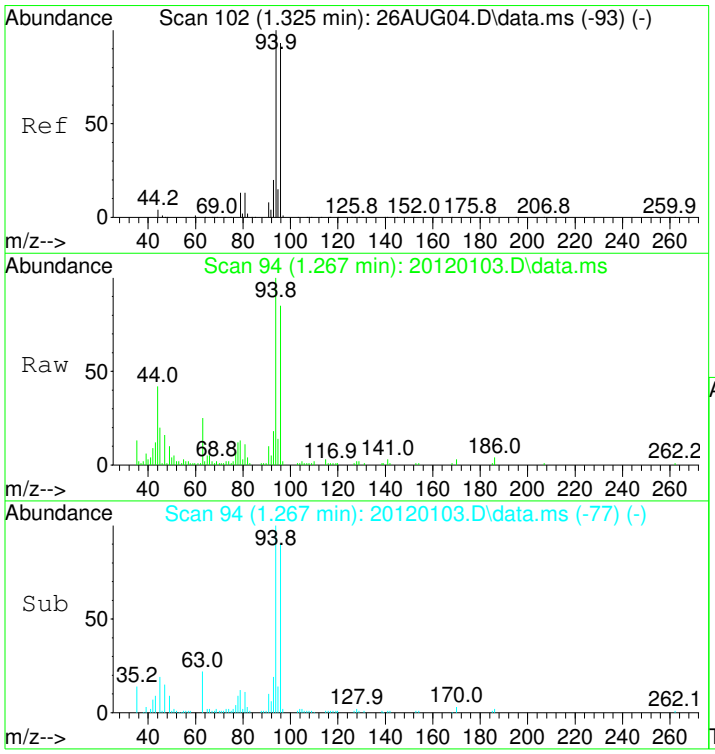


#6
Vinyl chloride
Concen: 23.25 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 62 Resp: 148890

Ion	Ratio	Lower	Upper
62	100		
64	34.2	1.9	61.9

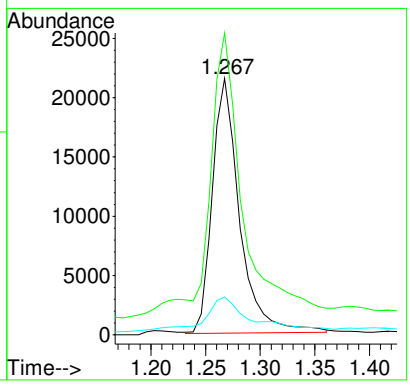


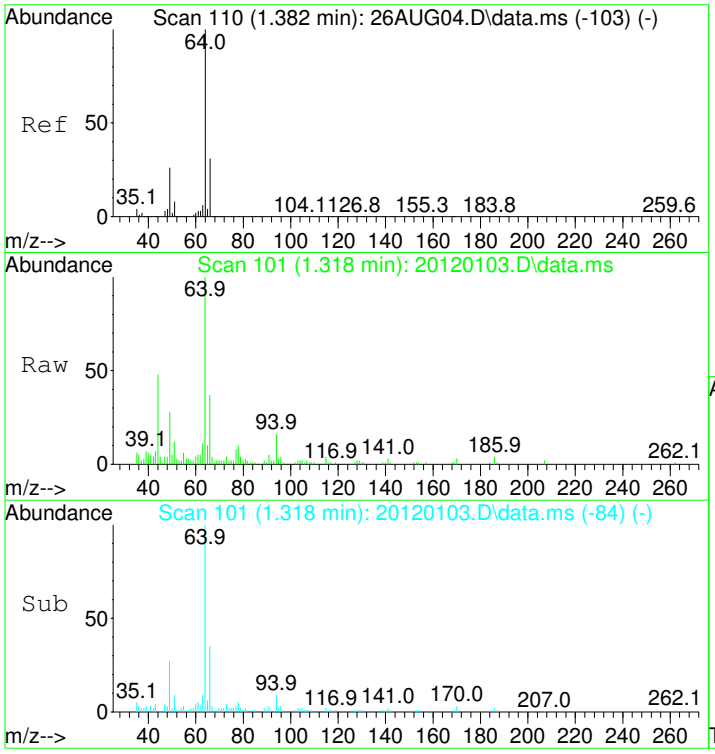


#7
Bromomethane
Concen: 42.21 ug/L
RT: 1.267 min Scan# 94
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 96 Resp: 37295

Ion	Ratio	Lower	Upper
96	100		
94	139.1	103.4	163.4
79	24.3	0.0	49.6

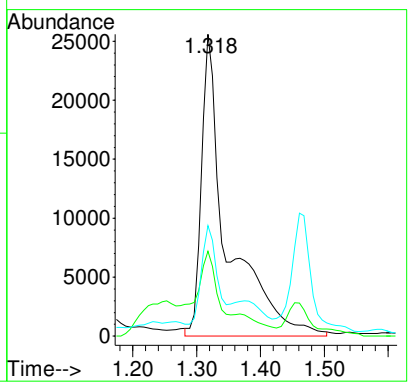


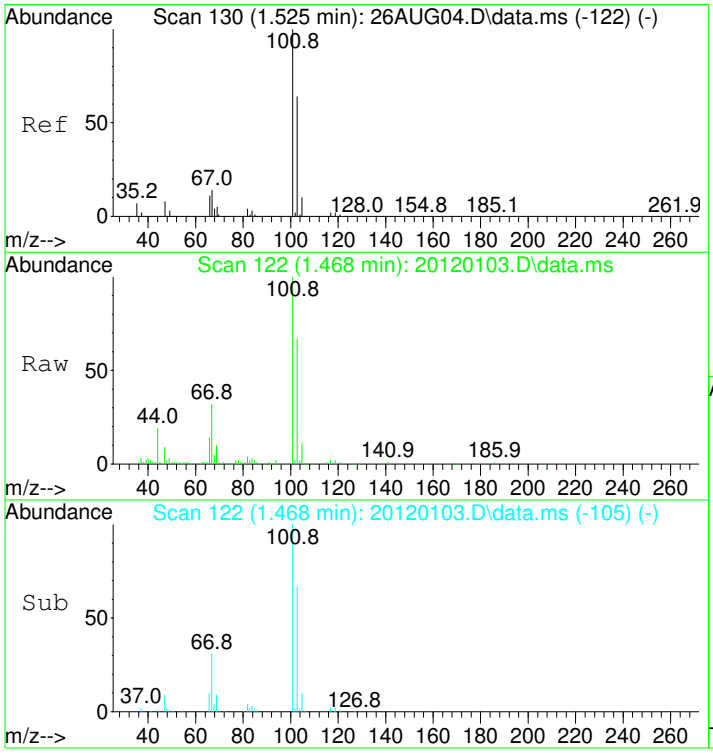


#8
Chloroethane
Concen: 26.63 ug/L m
RT: 1.318 min Scan# 101
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 64 Resp: 72110

Ion	Ratio	Lower	Upper
64	100		
49	12.0	0.0	41.3
66	20.5	0.0	52.2

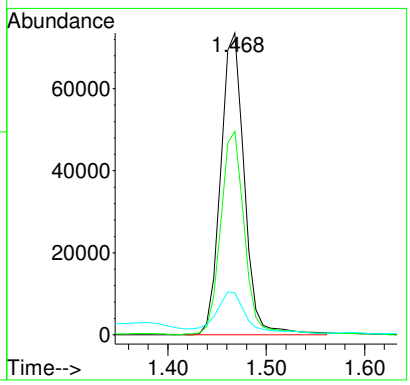


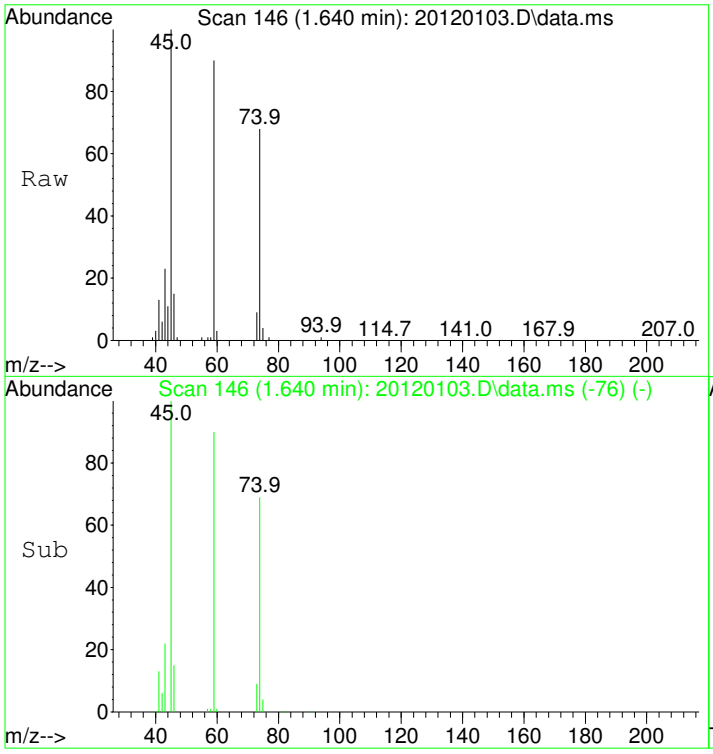


#9
Trichlorofluoromethane
Concen: 16.28 ug/L
RT: 1.468 min Scan# 122
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:101 Resp: 122924

Ion	Ratio	Lower	Upper
101	100		
103	68.3	45.1	85.1
66	17.7	0.0	35.4

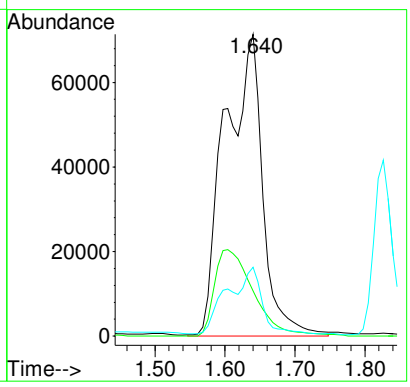


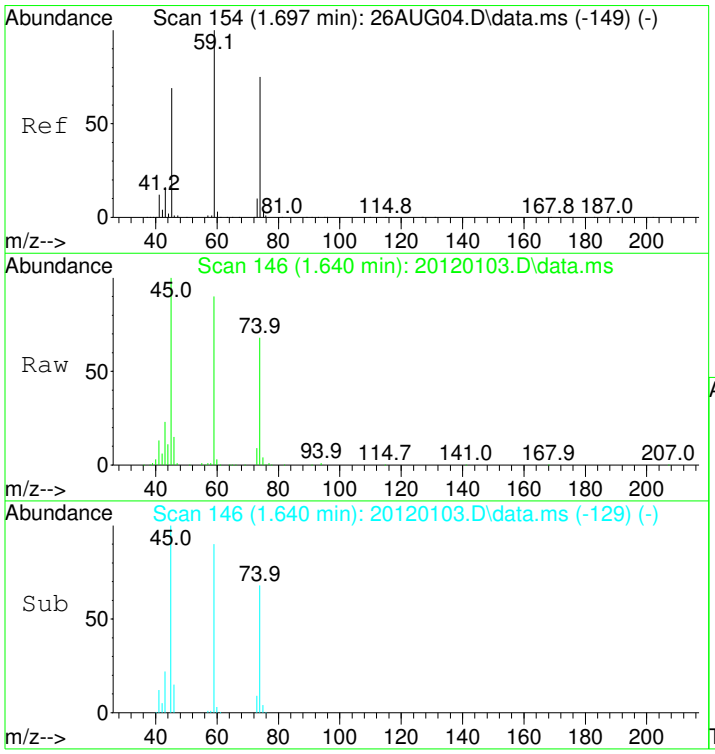


#10
Ethanol
Concen: 494.89 ug/L m
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 45 Resp: 267119

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	57.3
43	11.1	0.0	52.4

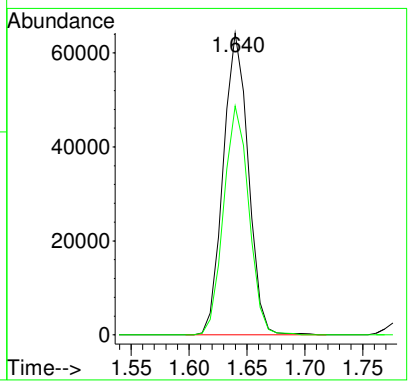


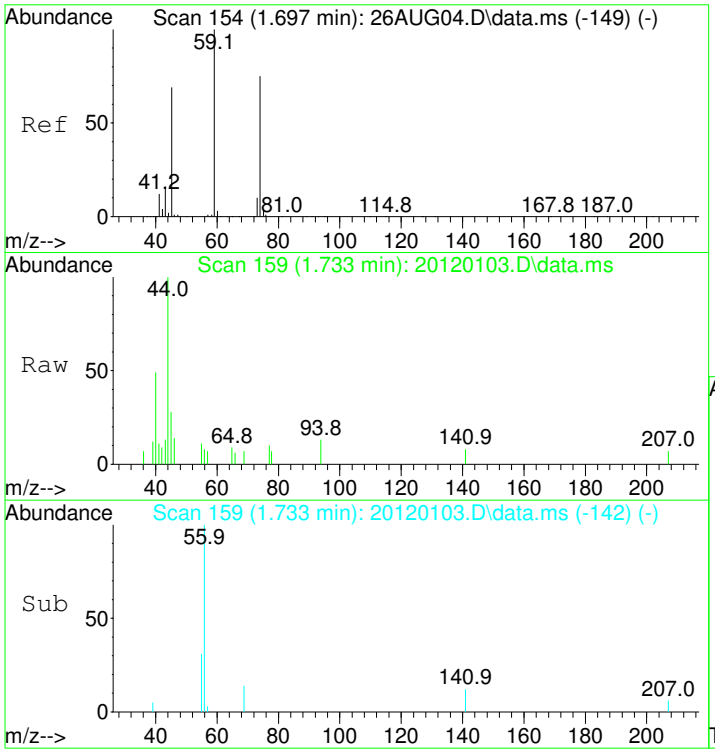


#11
Ethyl ether
Concen: 21.17 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 59 Resp: 96582

Ion	Ratio	Lower	Upper
59	100		
74	76.1	42.6	102.6

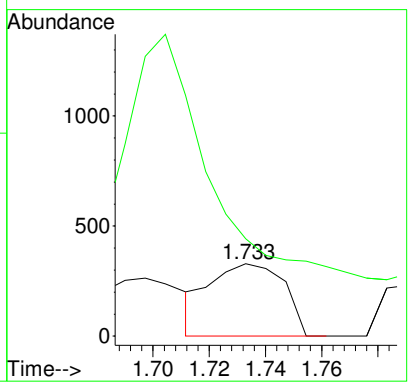


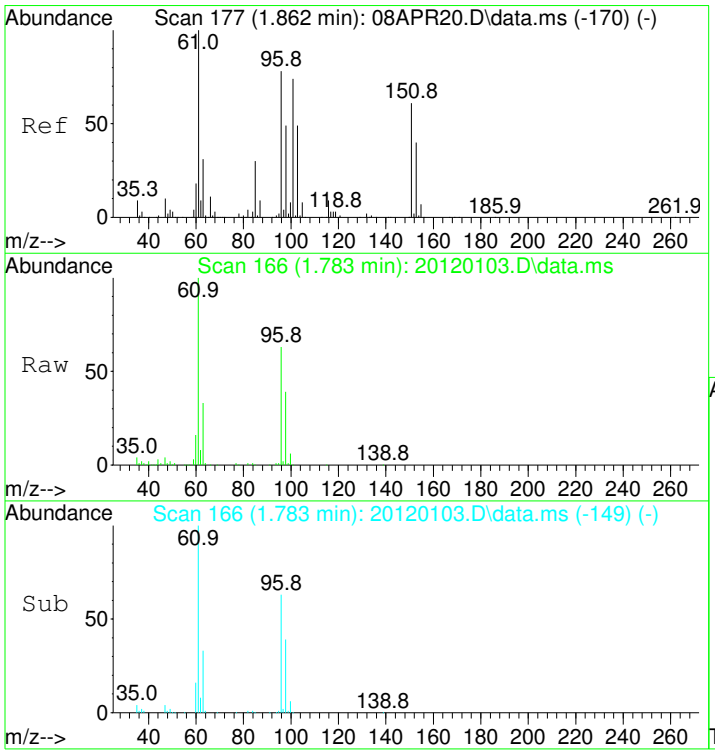


#12
Acrolein
Concen: Below Cal
RT: 1.733 min Scan# 159
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 56 Resp: 600

Ion	Ratio	Lower	Upper
56	100		
55	0.0	17.3	77.3#

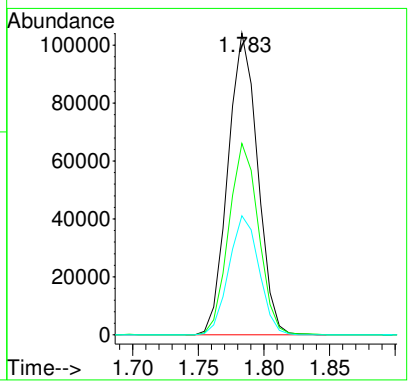


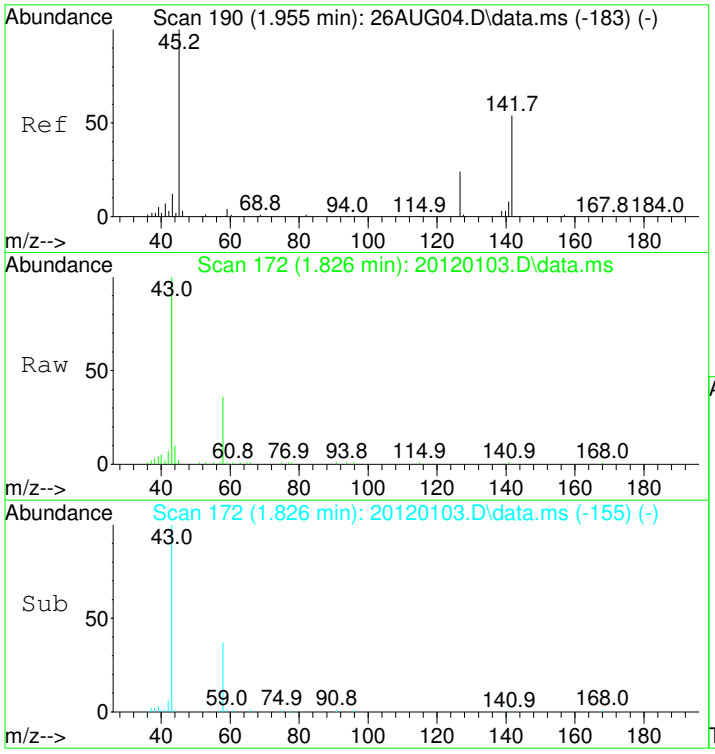


#13
1,1-Dichloroethene
Concen: 23.25 ug/L
RT: 1.783 min Scan# 166
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 61 Resp: 164083

Ion	Ratio	Lower	Upper
61	100		
96	63.8	32.6	92.6
98	40.1	10.4	70.4

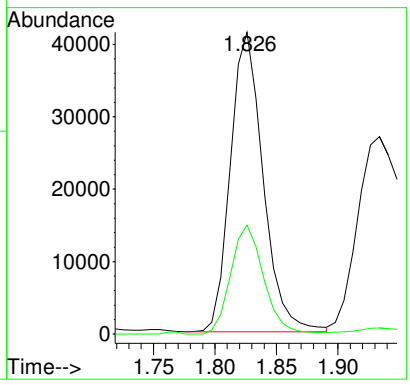


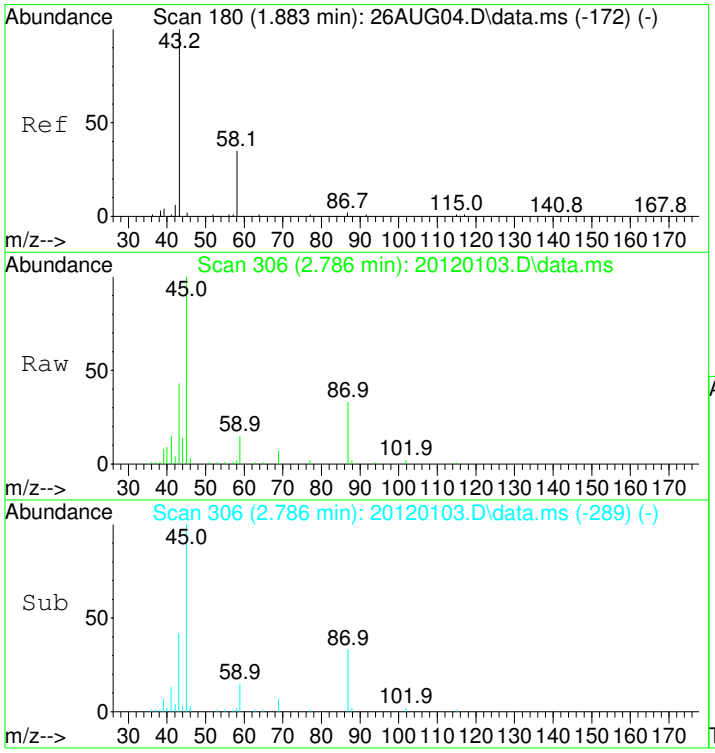


#16
Acetone
Concen: 24.21 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 76395

Ion	Ratio	Lower	Upper
43	100		
58	36.5	5.2	65.2

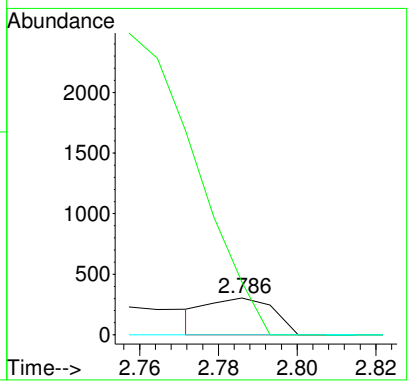


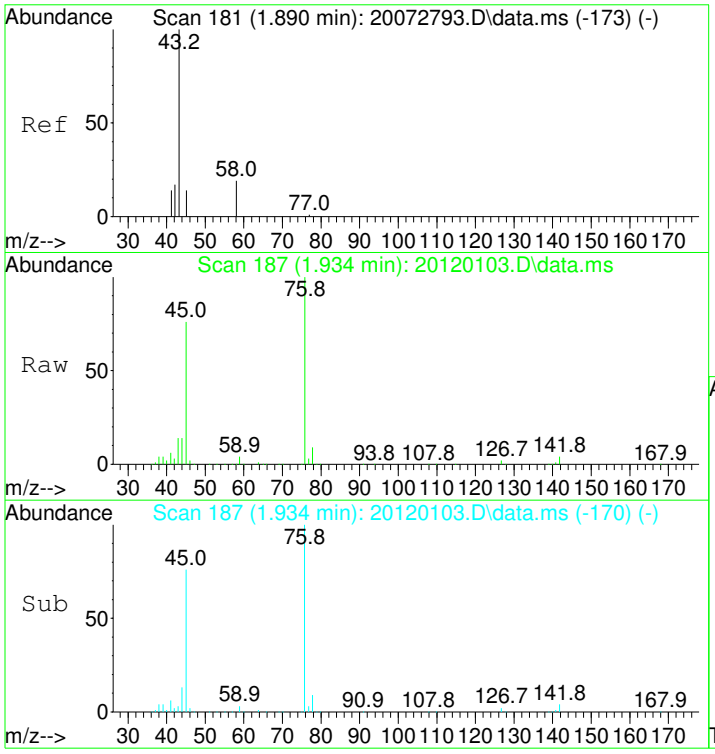


#17
Chloroprene
Concen: Below Cal
RT: 2.786 min Scan# 306
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 53 Resp: 349

Ion	Ratio	Lower	Upper
53	100		
88	0.0	43.7	81.1#
52	0.0	17.3	32.1#

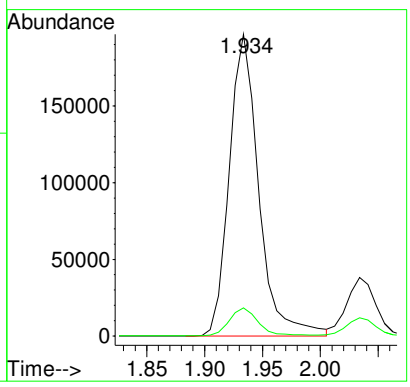


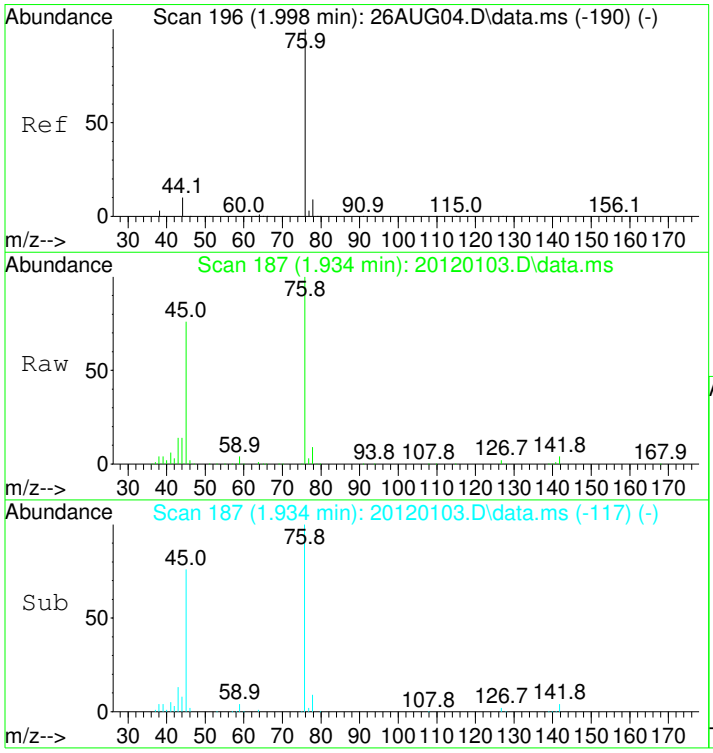


#18
Carbon disulfide
Concen: 24.70 ug/L
RT: 1.934 min Scan# 187
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 76 Resp: 348008

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	39.5

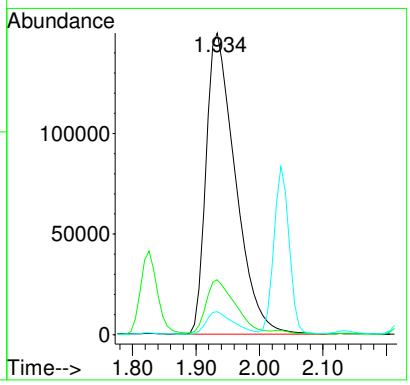


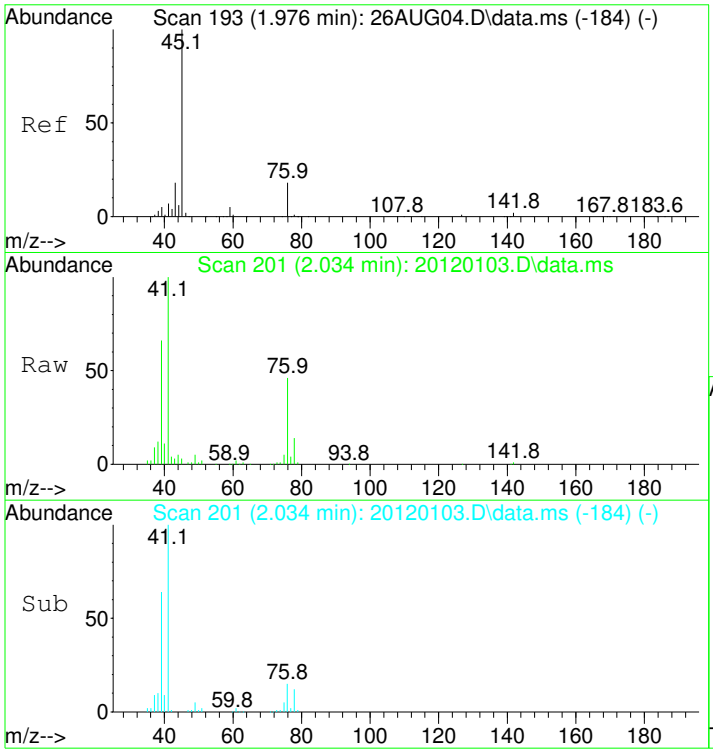


#19
2-Propanol
Concen: 444.57 ug/L
RT: 1.934 min Scan# 187
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 45 Resp: 479071

Ion	Ratio	Lower	Upper
45	100		
43	17.2	0.0	48.2
41	7.0	0.0	37.1

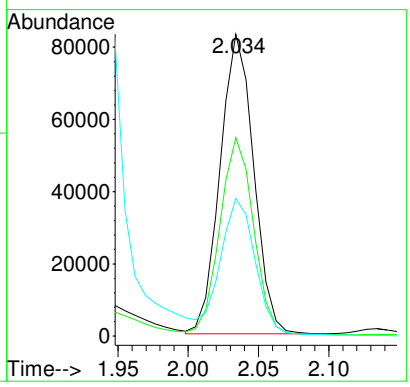


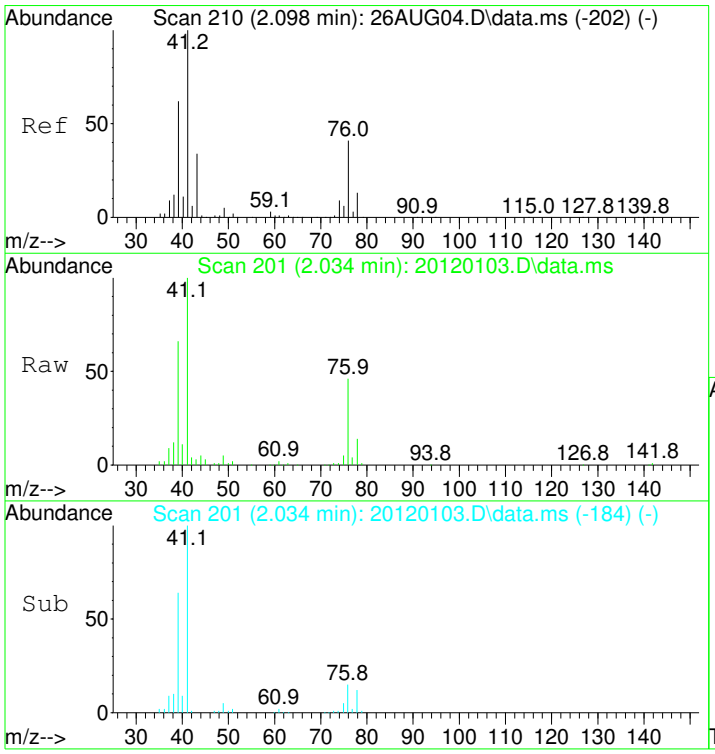


#20
Allyl chloride
Concen: 17.06 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 41 Resp: 138150

Ion	Ratio	Lower	Upper
41	100		
39	65.7	29.0	89.0
76	47.7	7.3	67.3

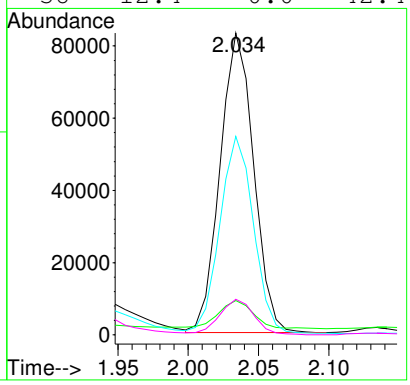


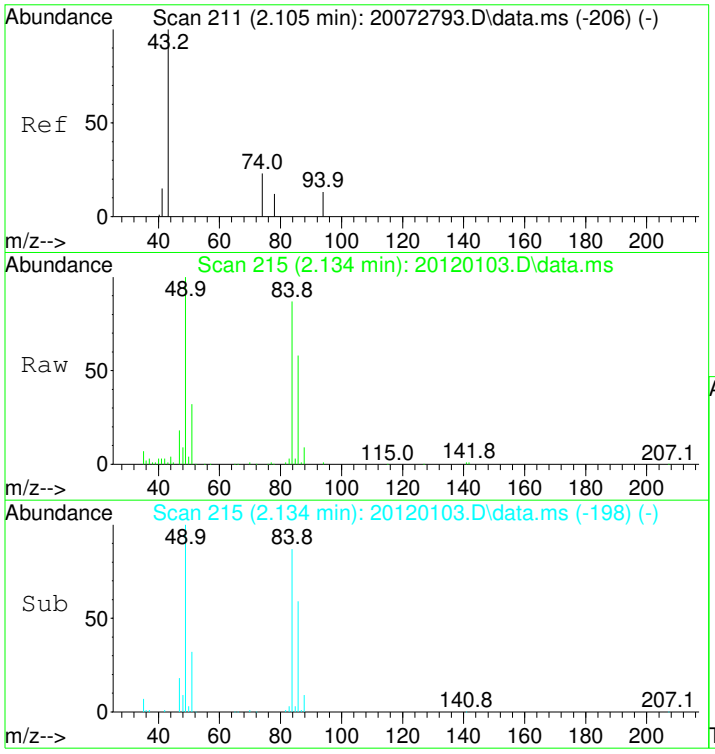


#22
Acetonitrile
Concen: 17.05 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 41 Resp: 138150

Ion	Ratio	Lower	Upper
41	100		
40	9.9	0.0	47.5
39	65.7	29.0	89.0
38	12.4	0.0	42.4

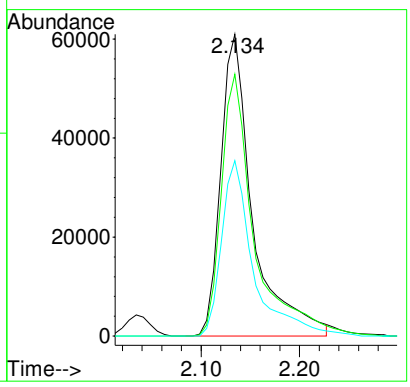


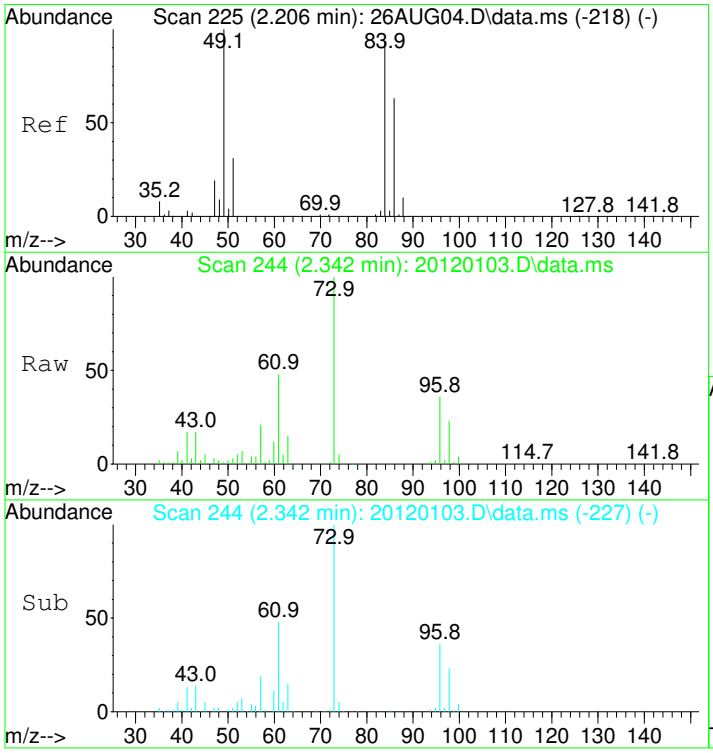


#23
Methylene chloride
Concen: 18.63 ug/L
RT: 2.134 min Scan# 215
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 49 Resp: 138102

Ion	Ratio	Lower	Upper
49	100		
84	87.9	57.4	117.4
86	57.4	27.7	87.7

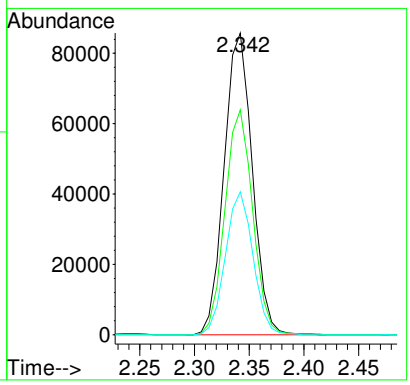


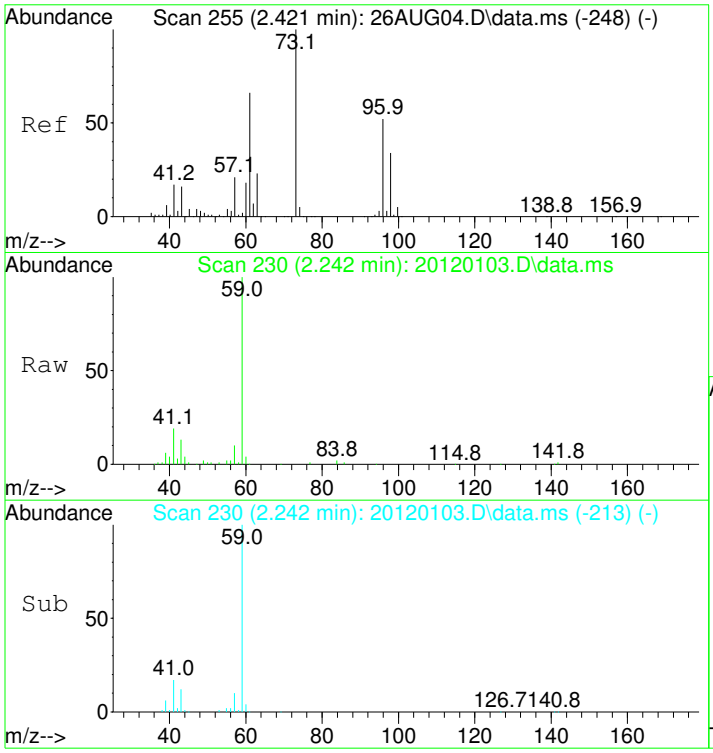


#24
trans-1,2-Dichloroethene
Concen: 22.14 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 61 Resp: 153807

Ion	Ratio	Lower	Upper
61	100		
96	73.5	42.3	102.3
98	46.4	16.1	76.1

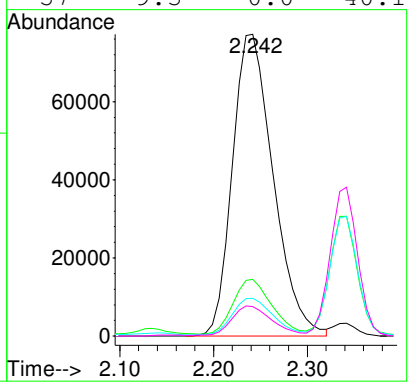


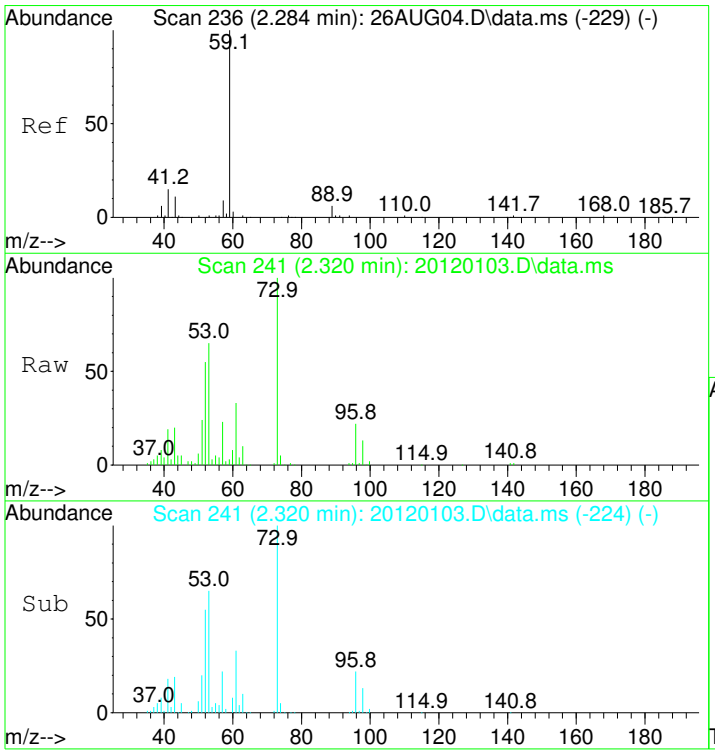


#25
t-Butanol
Concen: 109.87 ug/L
RT: 2.242 min Scan# 230
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 59 Resp: 235068

Ion	Ratio	Lower	Upper
59	100		
41	17.1	0.0	46.1
43	11.8	0.0	41.4
57	9.3	0.0	40.1

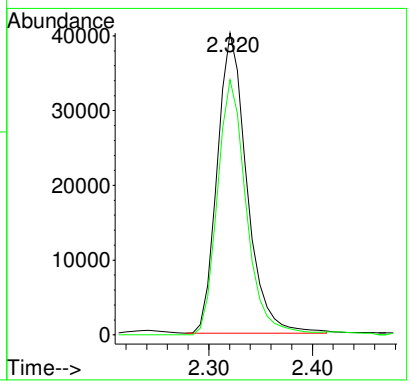


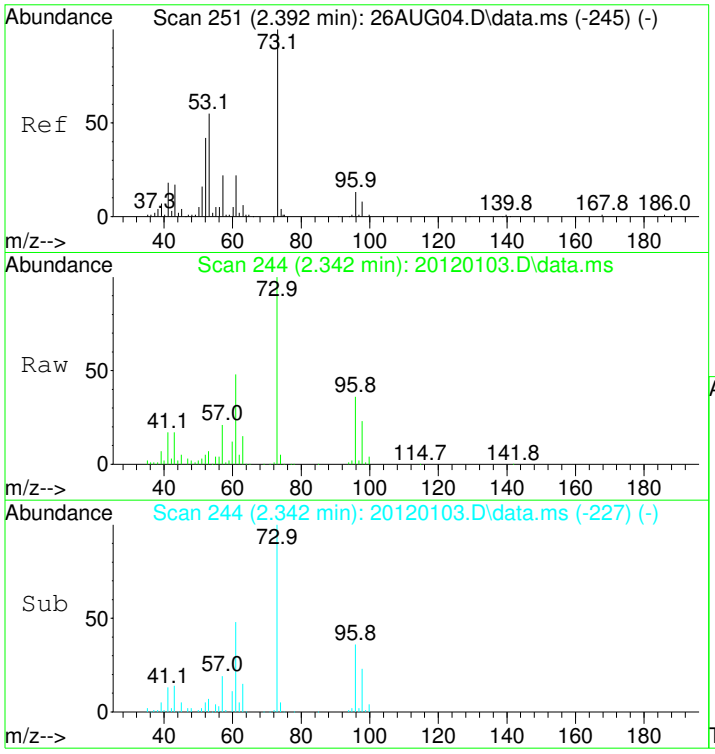


#26
Acrylonitrile
Concen: 21.72 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 53 Resp: 79746

Ion	Ratio	Lower	Upper
53	100		
52	82.8	51.9	111.9

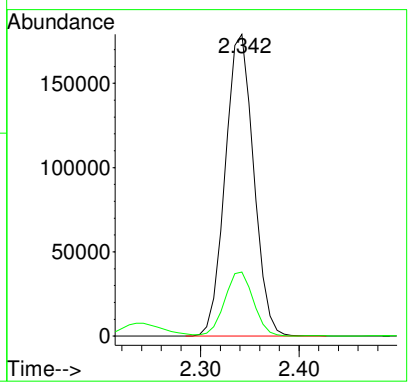


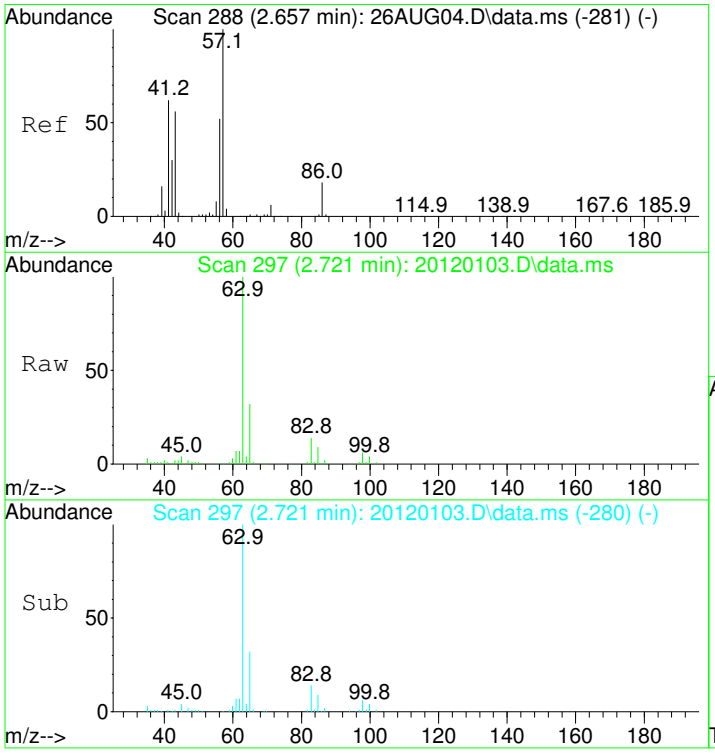


#27
Methyl tert-butyl ether
Concen: 22.76 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 73 Resp: 359856

Ion	Ratio	Lower	Upper
73	100		
57	21.5	0.0	52.4

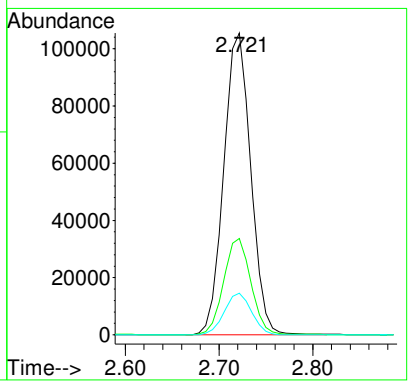


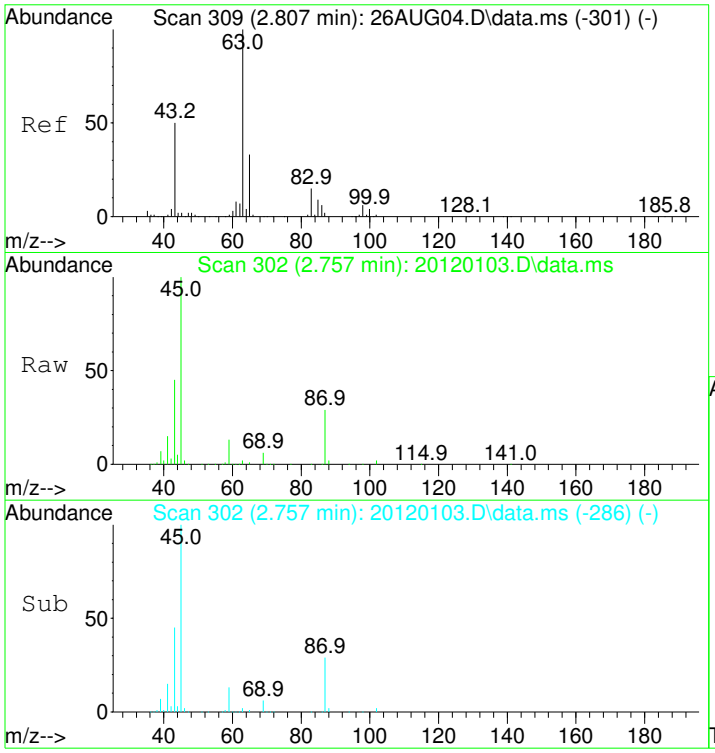


#29
1,1-Dichloroethane
Concen: 21.17 ug/L
RT: 2.721 min Scan# 297
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 63 Resp: 211399

Ion	Ratio	Lower	Upper
63	100		
65	32.3	2.8	62.8
83	13.9	0.0	43.7

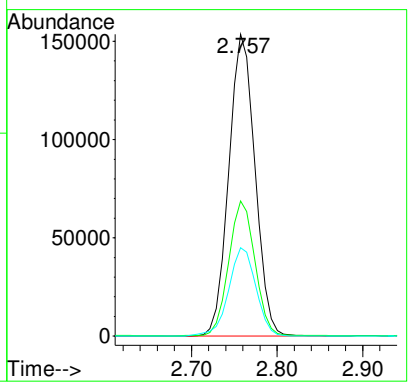


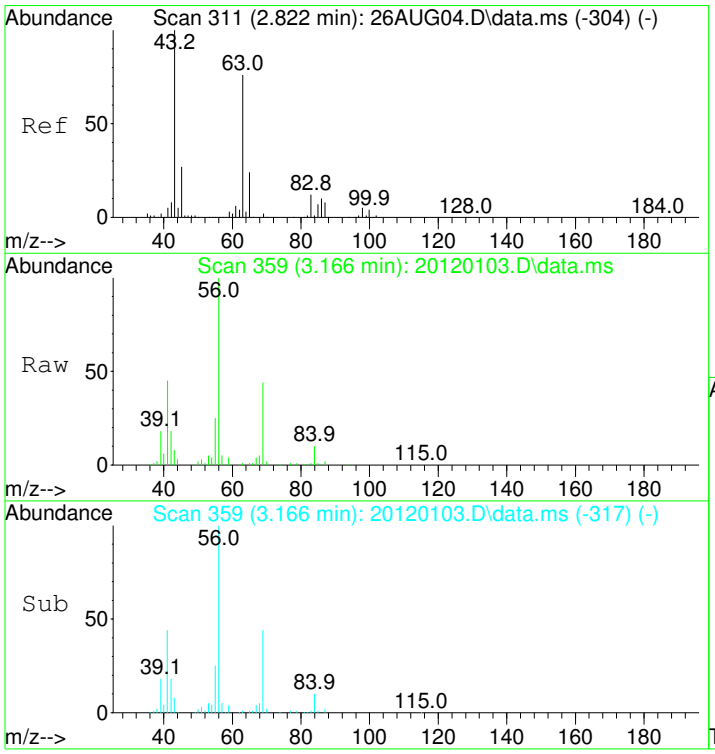


#30
Diisopropyl ether
Concen: 22.39 ug/L
RT: 2.757 min Scan# 302
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 45 Resp: 327975

Ion	Ratio	Lower	Upper
45	100		
43	45.0	79.6	147.8#
87	30.3	22.1	41.1

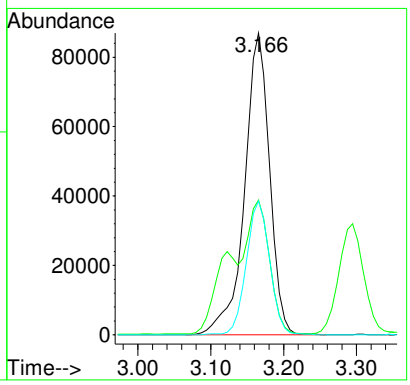


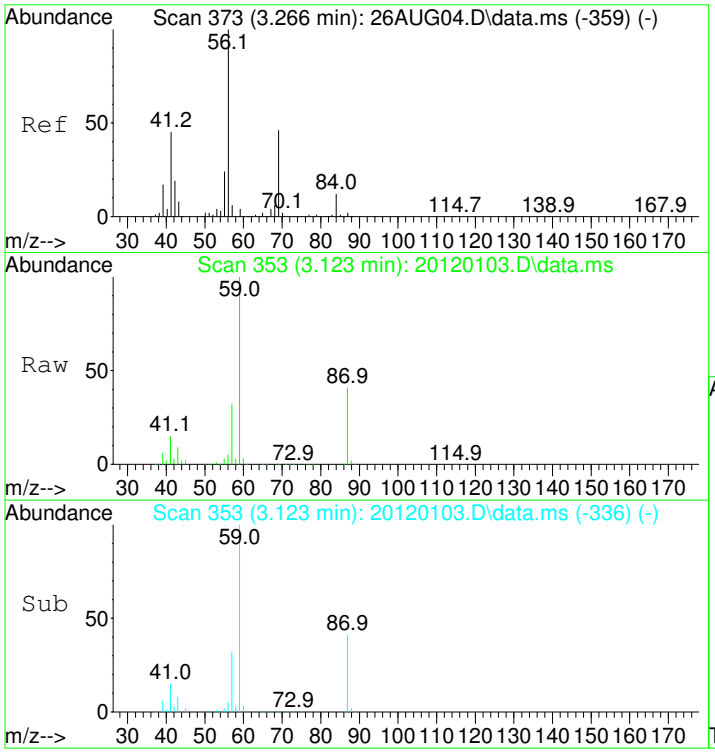


#32
Methylcyclopentane
Concen: 18.99 ug/L
RT: 3.166 min Scan# 359
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 56 Resp: 207862

Ion	Ratio	Lower	Upper
56	100		
41	41.8	36.7	96.7
69	41.6	11.3	71.3

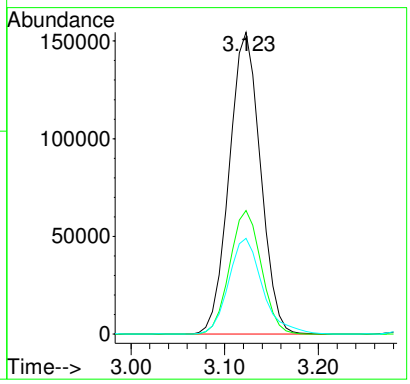


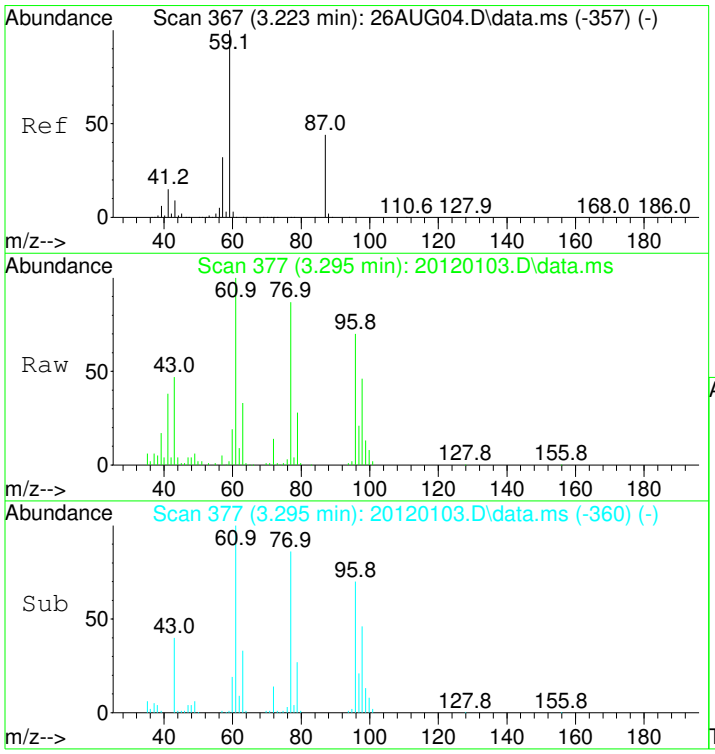


#33
Ethyl tert butyl ether
Concen: 21.41 ug/L
RT: 3.123 min Scan# 353
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 59 Resp: 357646

Ion	Ratio	Lower	Upper
59	100		
87	41.3	12.5	72.5
57	34.5	4.4	64.4

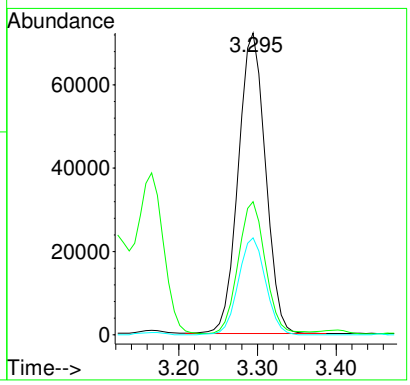


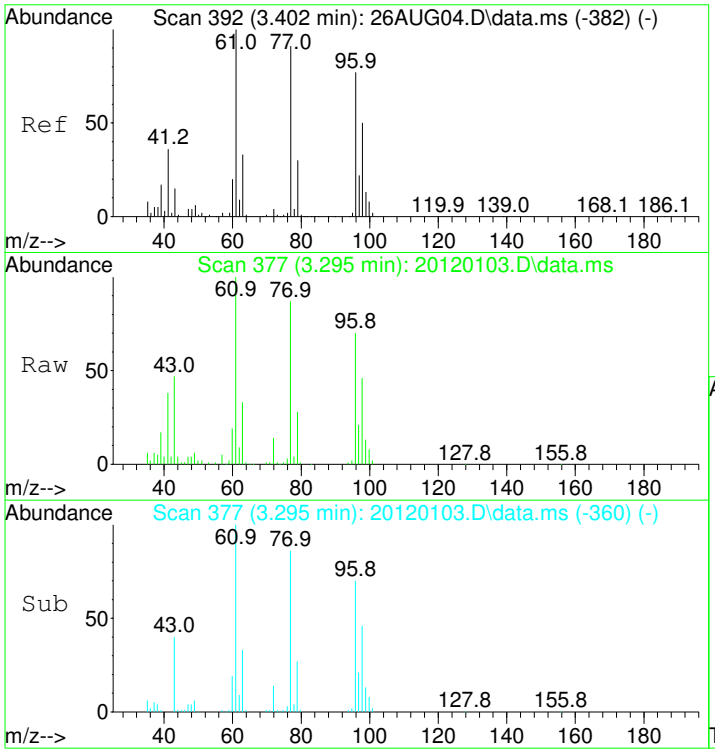


#34
2,2-Dichloropropane
Concen: 21.06 ug/L
RT: 3.295 min Scan# 377
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 77 Resp: 173308

Ion	Ratio	Lower	Upper
77	100		
41	43.7	16.4	76.4
79	32.3	2.4	62.4

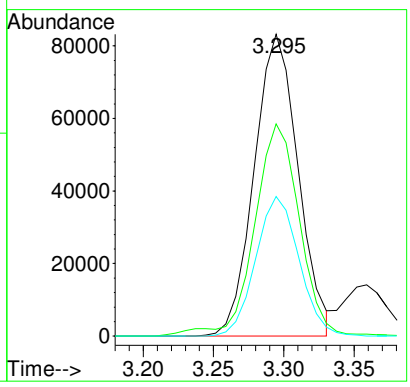


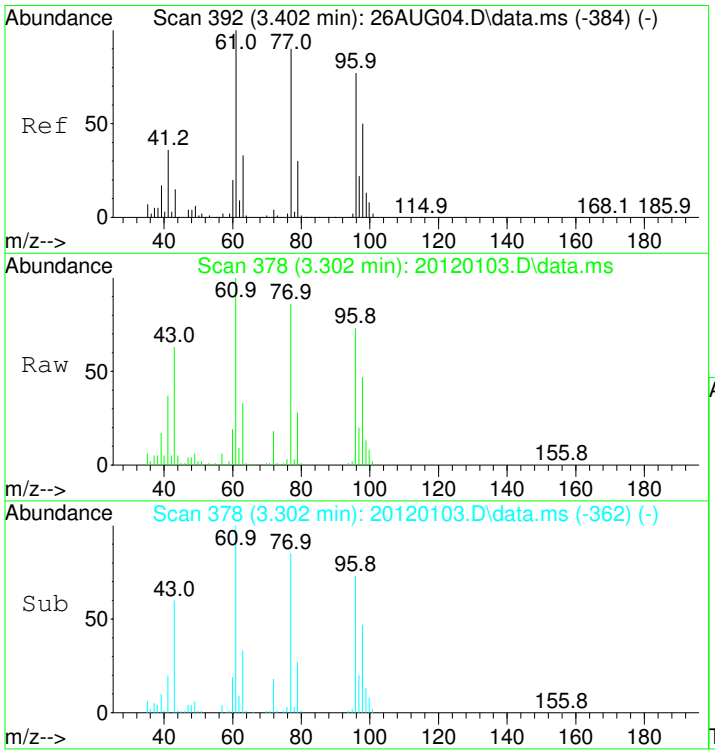


#35
cis-1,2-Dichloroethene
Concen: 21.53 ug/L
RT: 3.295 min Scan# 377
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 61 Resp: 181215

Ion	Ratio	Lower	Upper
61	100		
96	72.2	39.5	99.5
98	45.6	14.9	74.9

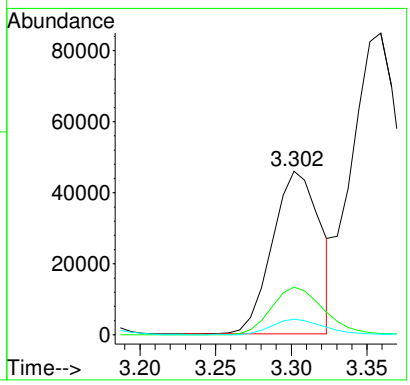


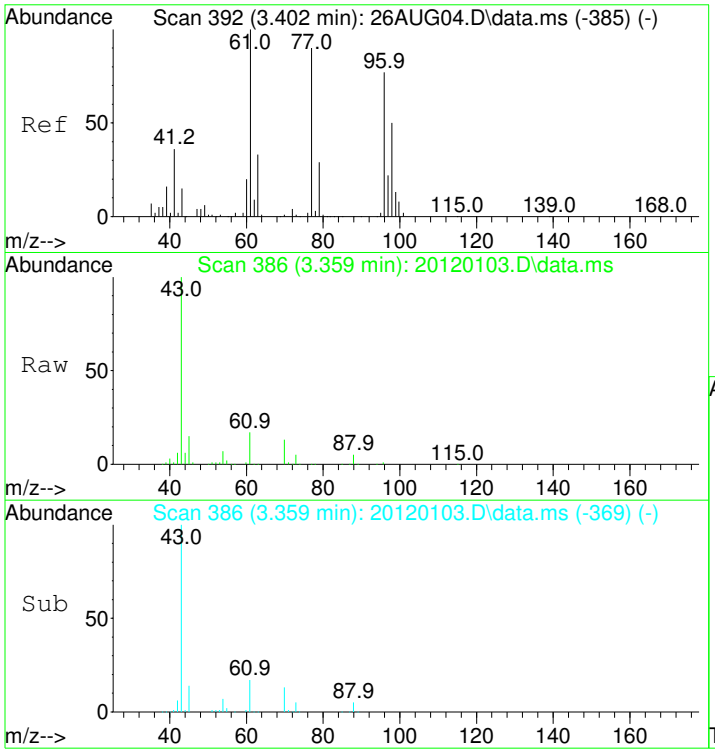


#36
2-Butanone
Concen: 20.75 ug/L
RT: 3.302 min Scan# 378
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 100765

Ion	Ratio	Lower	Upper
43	100		
72	32.7	11.0	51.0
57	10.6	0.0	28.7

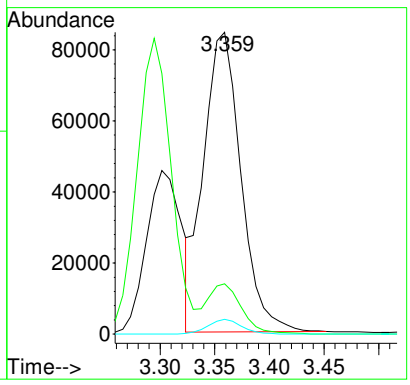


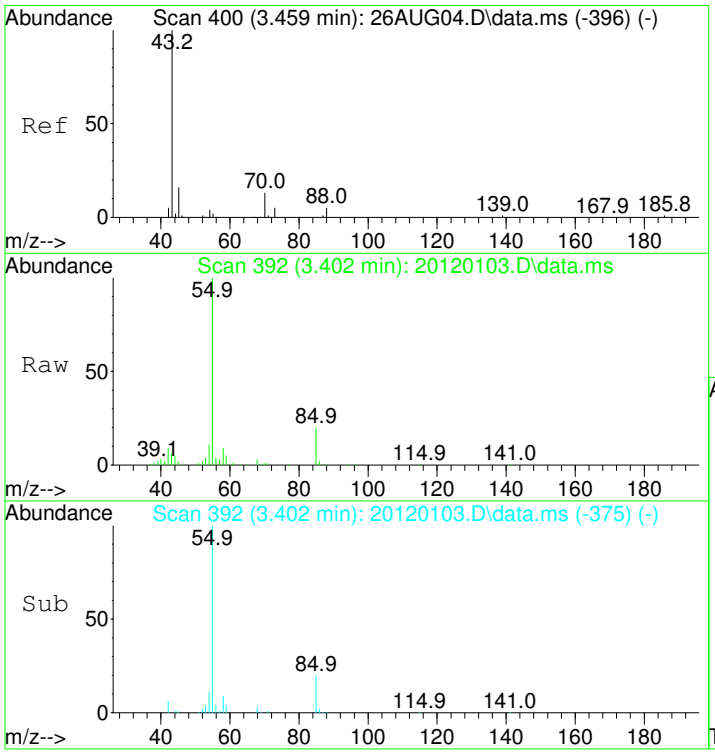


#37
Ethyl Acetate
Concen: 21.42 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 201305

Ion	Ratio	Lower	Upper
43	100		
61	14.4	0.0	34.9
88	4.4	0.0	24.3

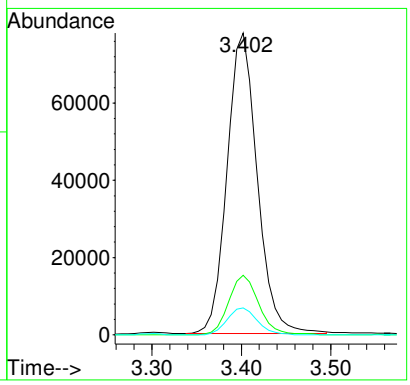


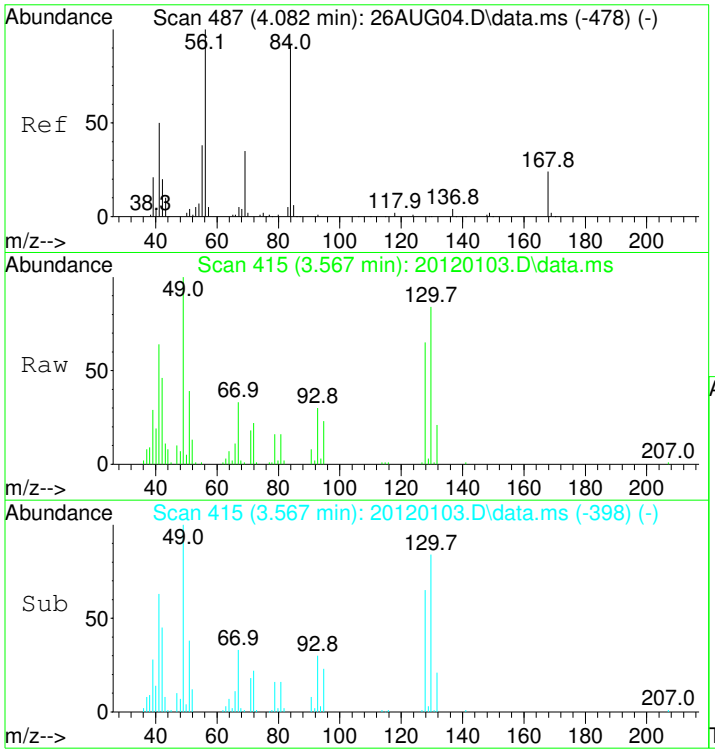


#38
Methyl acrylate
Concen: 21.81 ug/L
RT: 3.402 min Scan# 392
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 55 Resp: 182973

Ion	Ratio	Lower	Upper
55	100		
85	19.8	14.4	21.6
58	8.9	7.4	11.2

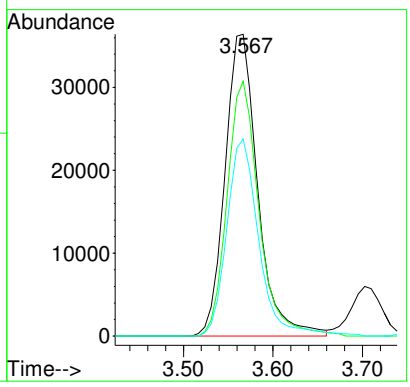


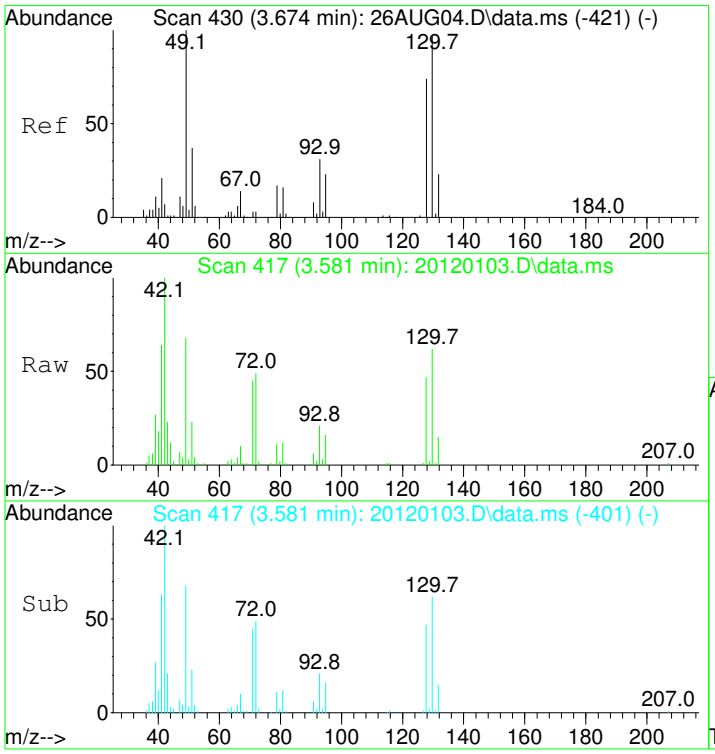


#40
Bromochloromethane
Concen: 21.23 ug/L
RT: 3.567 min Scan# 415
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 49 Resp: 92683

Ion	Ratio	Lower	Upper
49	100		
130	81.9	60.4	100.4
128	63.3	43.3	83.3

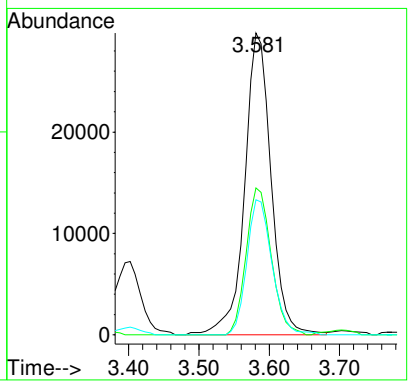


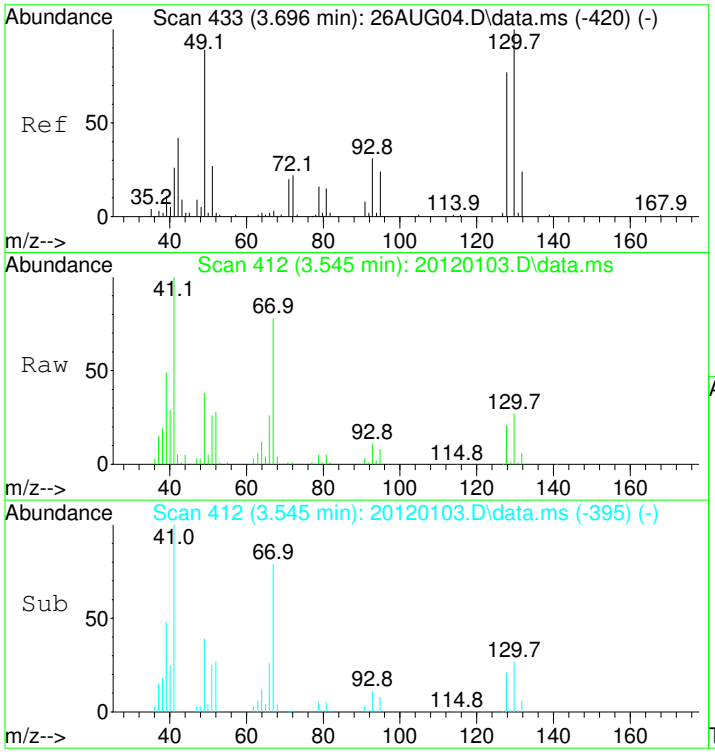


#41
Tetrahydrofuran
Concen: 21.81 ug/L
RT: 3.581 min Scan# 417
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 42 Resp: 77743

Ion	Ratio	Lower	Upper
42	100		
72	46.3	27.6	67.6
71	42.8	26.5	66.5

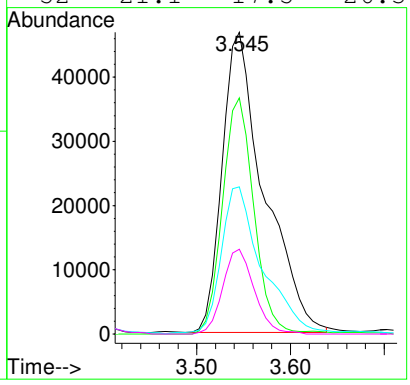


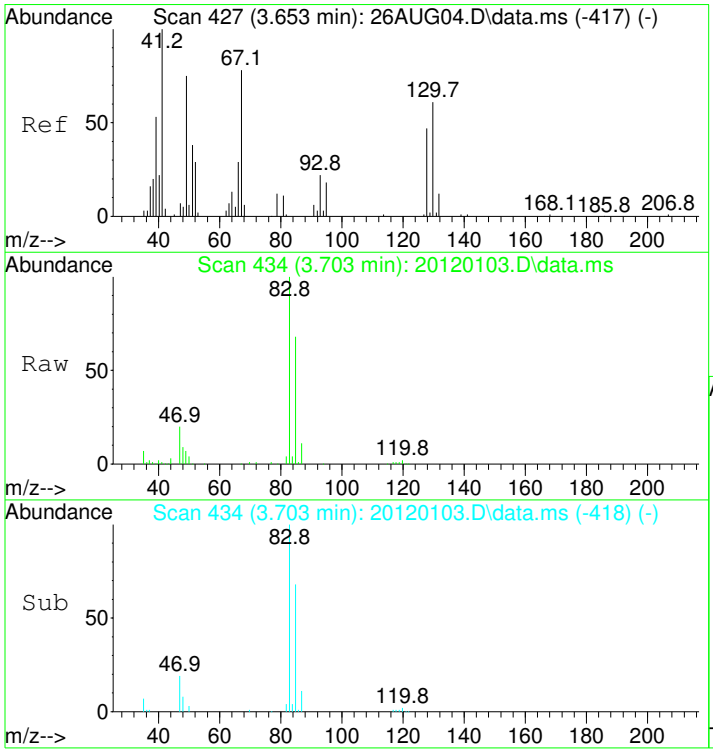


#42
Methacrylonitrile
Concen: 20.73 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 41 Resp: 146215

Ion	Ratio	Lower	Upper
41	100		
67	58.8	47.8	71.6
39	48.0	38.6	57.8
52	21.1	17.5	26.3

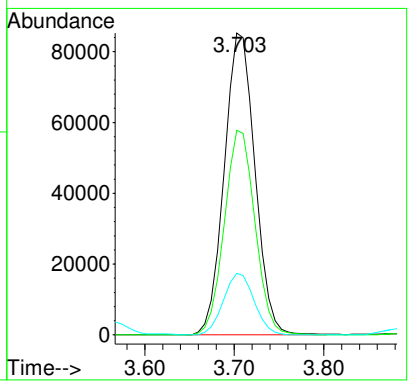


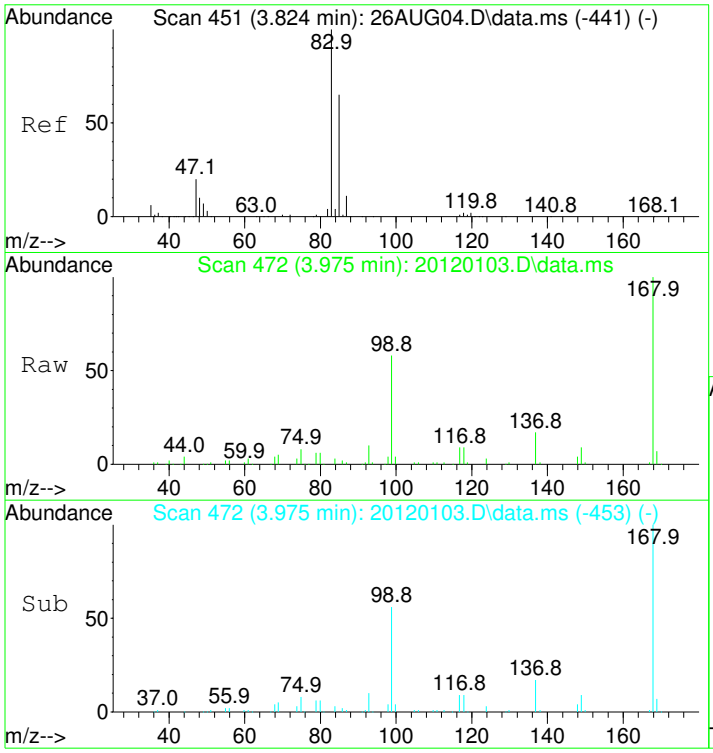


#43
Chloroform
Concen: 19.97 ug/L
RT: 3.703 min Scan# 434
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 83 Resp: 203849

Ion	Ratio	Lower	Upper
83	100		
85	67.4	46.1	86.1
47	20.3	1.2	41.2

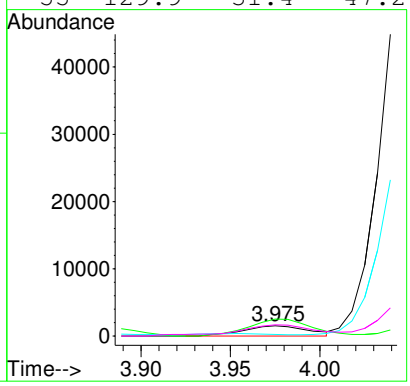


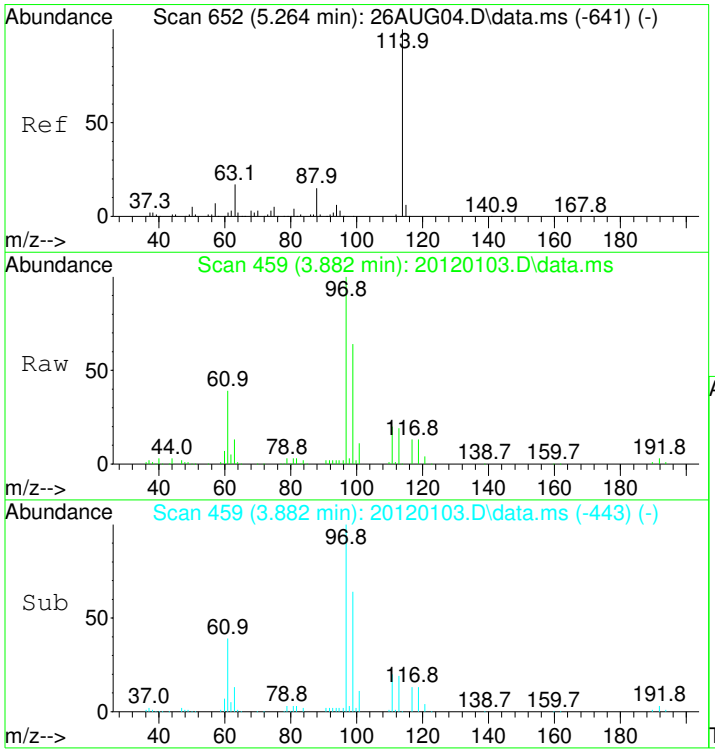


#44
Cyclohexane
Concen: Below Cal
RT: 3.975 min Scan# 472
Delta R.T. 0.014 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 56 Resp: 3880

Ion	Ratio	Lower	Upper
56	100		
84	164.1	69.5	104.3#
41	9.5	39.4	59.0#
55	129.9	31.4	47.2#

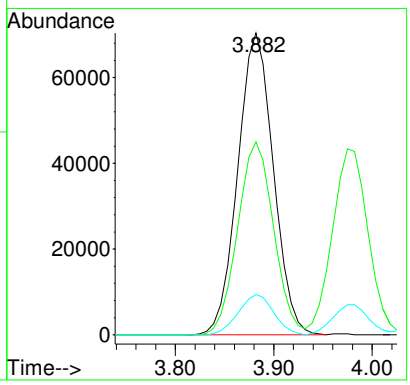


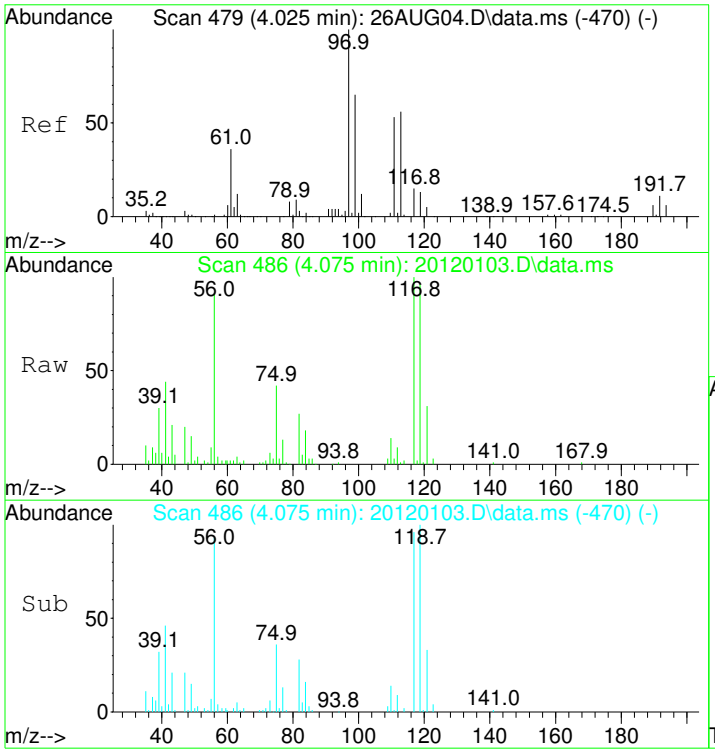


#46
1,1,1-Trichloroethane
Concen: 21.77 ug/L
RT: 3.882 min Scan# 459
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 97 Resp: 177041

Ion	Ratio	Lower	Upper
97	100		
99	64.7	45.8	85.8
117	13.3	0.0	33.4

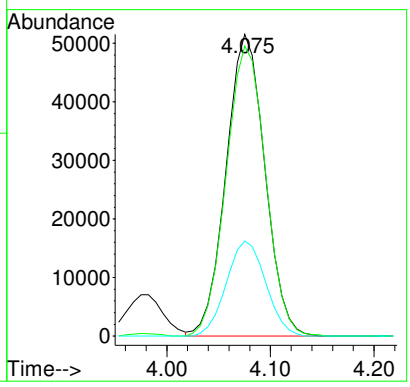


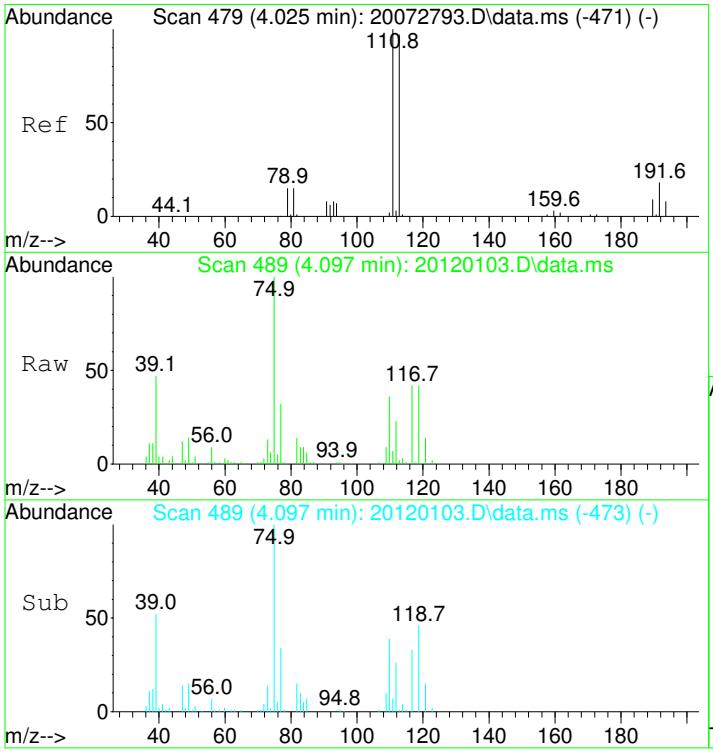


#48
Carbon tetrachloride
Concen: 19.27 ug/L
RT: 4.075 min Scan# 486
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:117 Resp: 134438

Ion	Ratio	Lower	Upper
117	100		
119	97.5	78.7	118.7
121	31.8	11.8	51.8

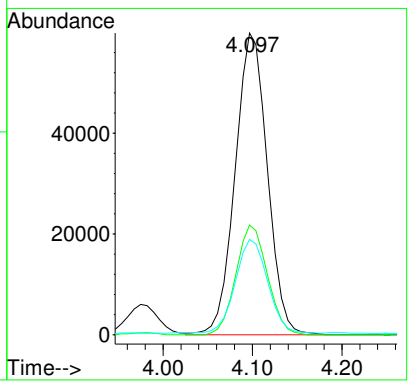


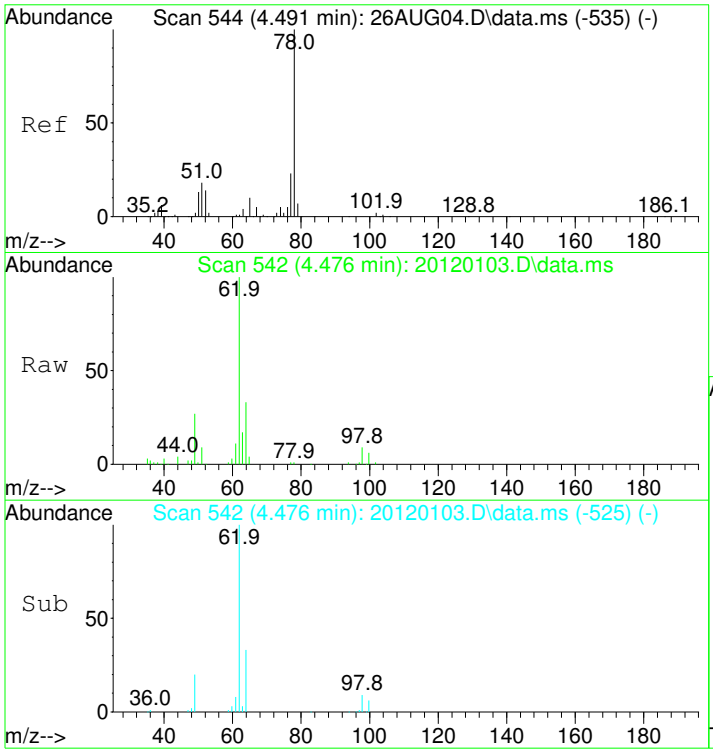


#49
1,1-Dichloropropene
Concen: 21.84 ug/L
RT: 4.097 min Scan# 489
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 75 Resp: 150115

Ion	Ratio	Lower	Upper
75	100		
110	35.5	16.0	56.0
77	31.0	11.0	51.0

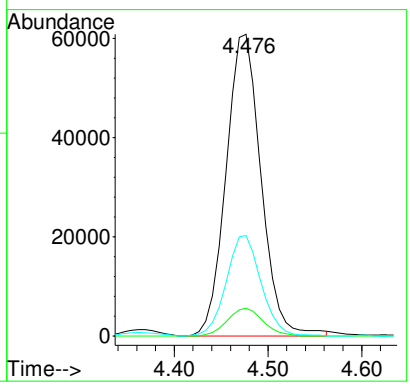


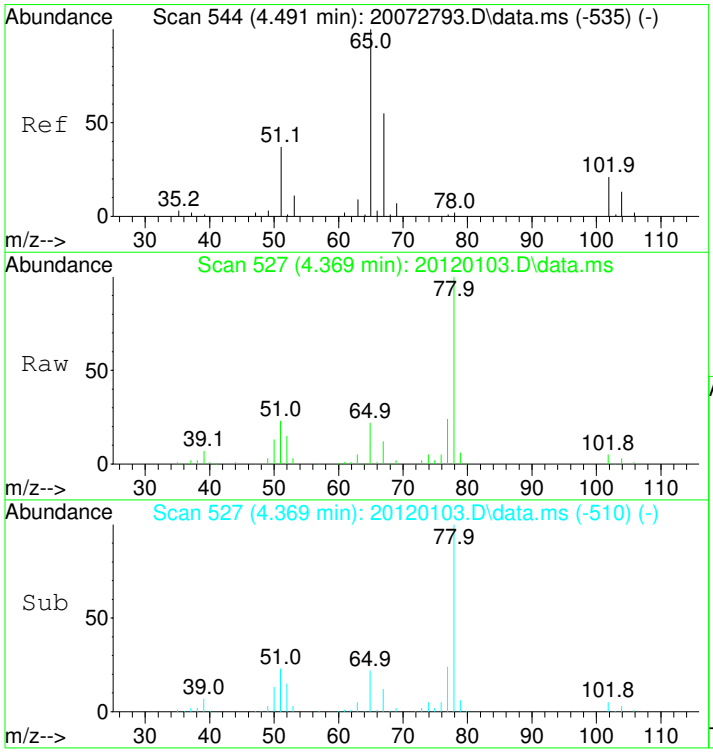


#51
1,2-Dichloroethane
Concen: 20.79 ug/L
RT: 4.476 min Scan# 542
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 62 Resp: 158678

Ion	Ratio	Lower	Upper
62	100		
98	9.5	0.0	29.0
64	33.2	13.9	53.9

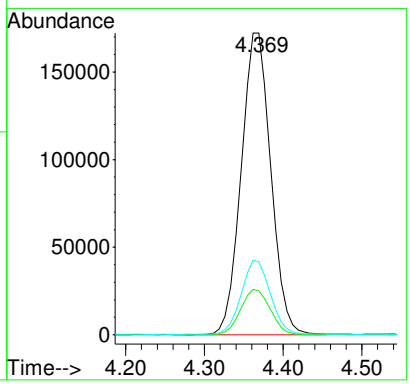


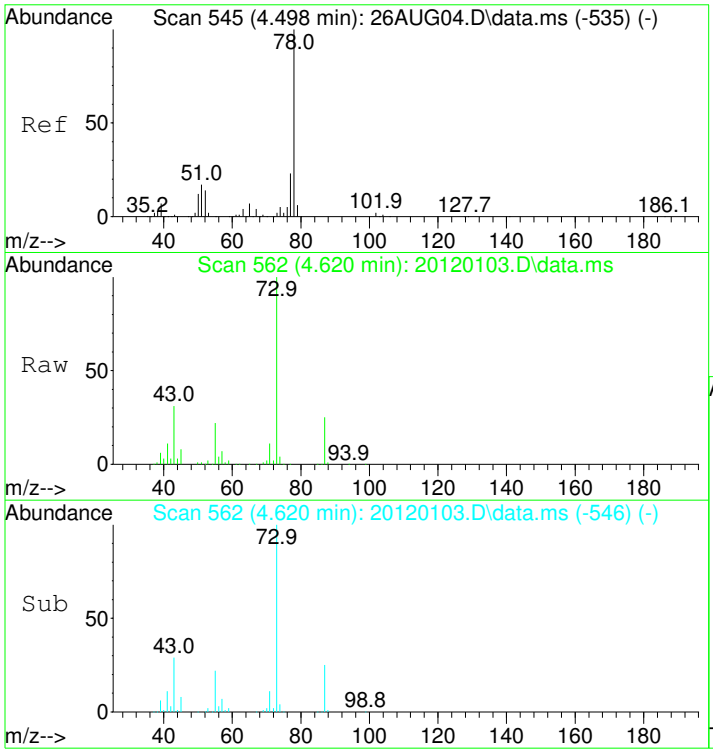


#52
Benzene
Concen: 22.63 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 78 Resp: 450961

Ion	Ratio	Lower	Upper
78	100		
52	15.0	0.0	35.8
77	24.1	3.7	43.7

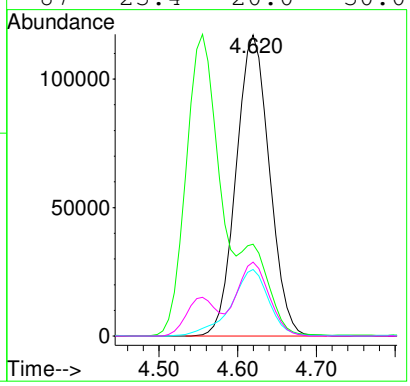


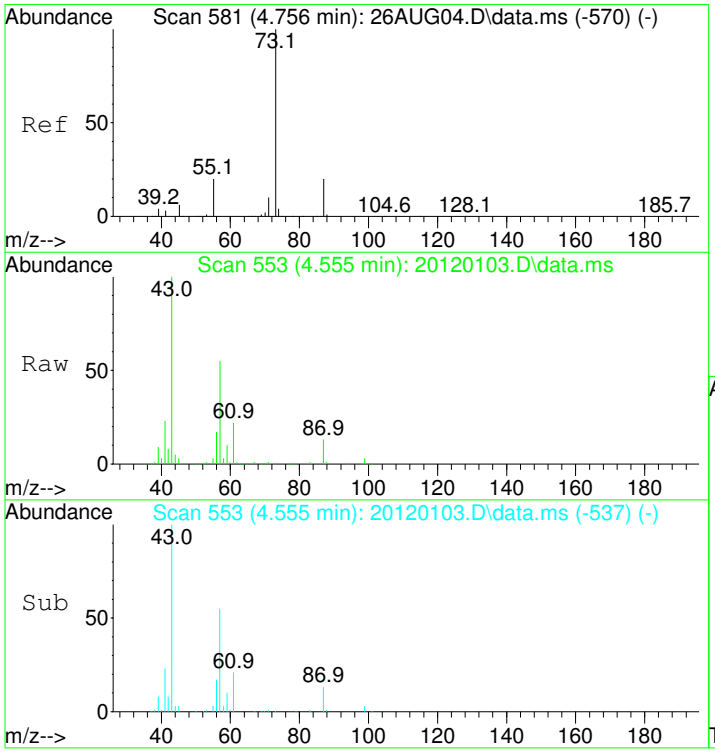


#53
Tertiaryamylmethylether
Concen: 22.75 ug/L
RT: 4.620 min Scan# 562
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 73 Resp: 344354

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	25.3	21.0	31.6
87	23.4	20.0	30.0

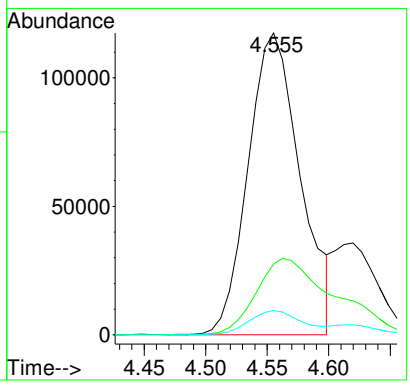


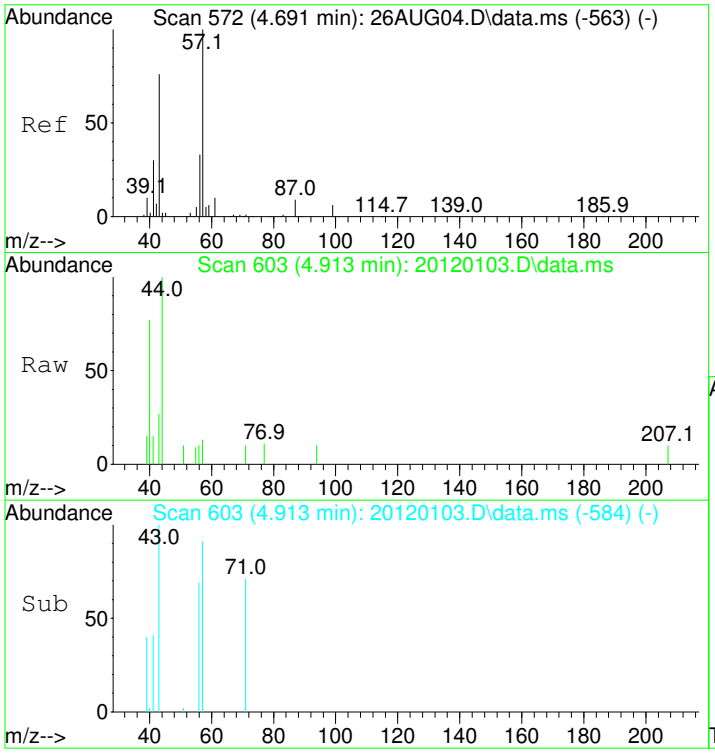


#54
Isobutyl Alcohol
Concen: 22.29 ug/L
RT: 4.555 min Scan# 553
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 346588

Ion	Ratio	Lower	Upper
43	100		
41	37.5	30.7	46.1
42	8.4	6.4	9.6

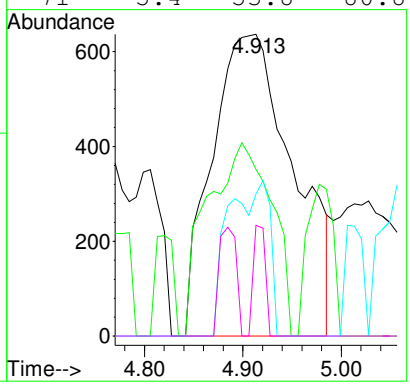


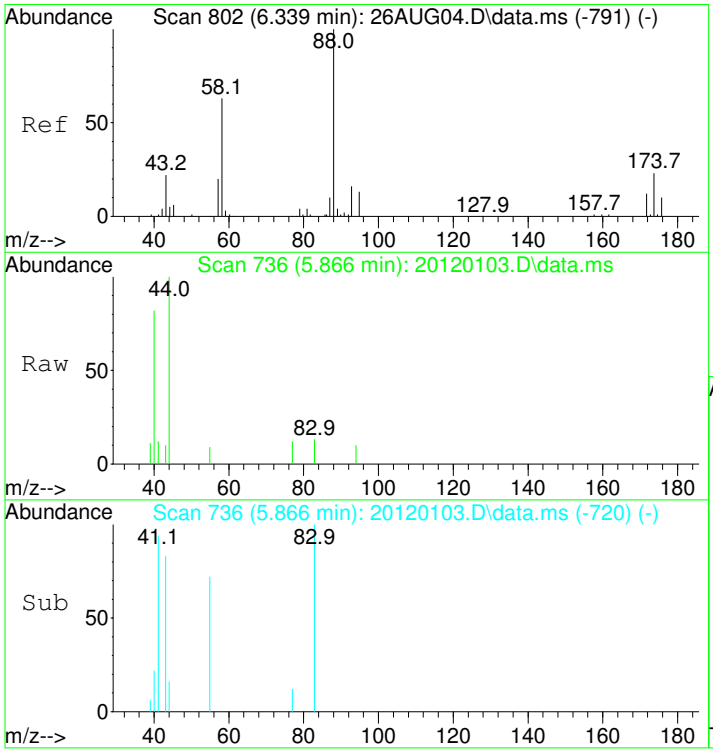


#55
Heptane
Concen: 0.22 ug/L
RT: 4.913 min Scan# 603
Delta R.T. 0.014 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 3680

Ion	Ratio	Lower	Upper
43	100		
41	0.0	46.8	70.2#
57	0.0	47.5	71.3#
71	5.4	53.8	80.8#

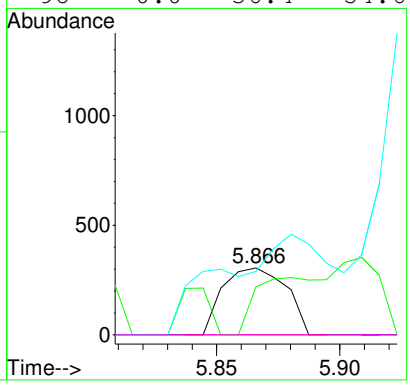


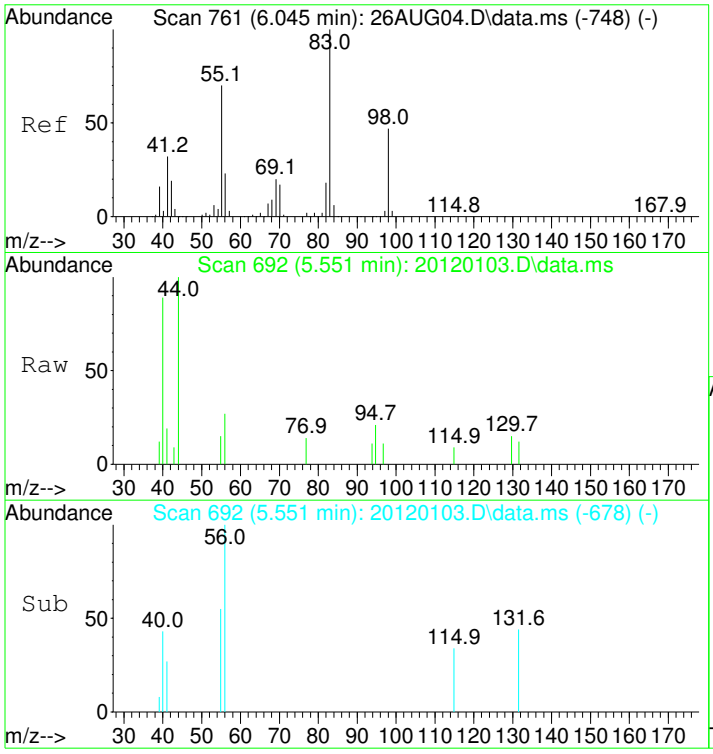


#57
Methylcyclohexane
Concen: Below Cal
RT: 5.866 min Scan# 736
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 83 Resp: 548

Ion	Ratio	Lower	Upper
83	100		
55	33.4	61.7	92.5#
41	254.6	28.5	42.7#
98	0.0	36.4	54.6#

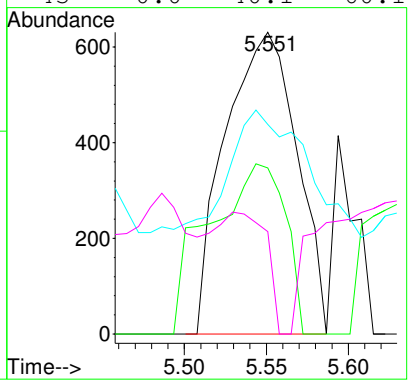


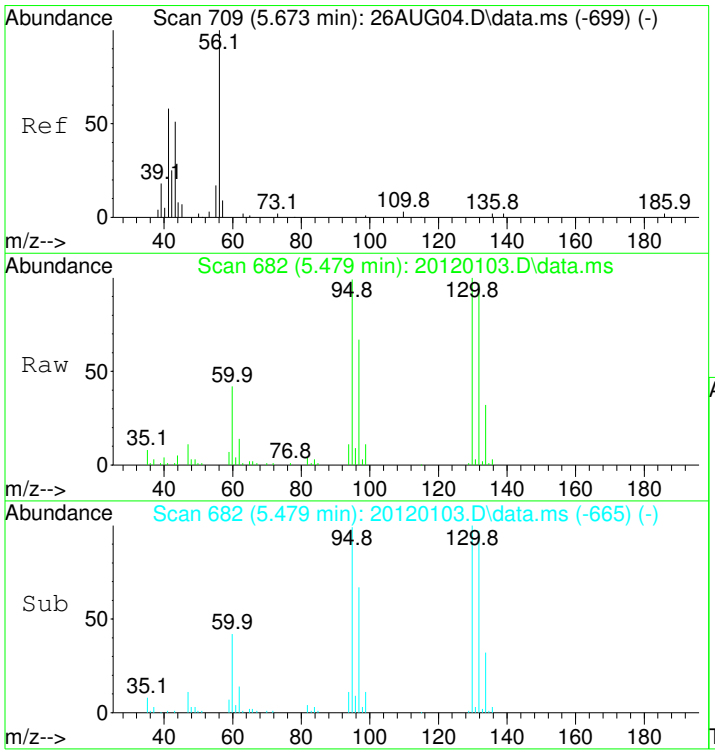


#58
n-Butanol
Concen: 5.47 ug/L
RT: 5.551 min Scan# 692
Delta R.T. -0.021 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 56 Resp: 1917

Ion	Ratio	Lower	Upper
56	100		
55	60.3	15.4	23.2#
41	43.6	50.9	76.3#
43	0.0	40.1	60.1#

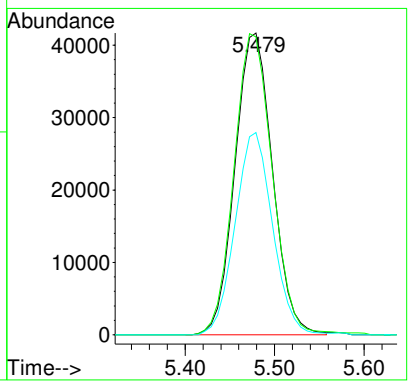


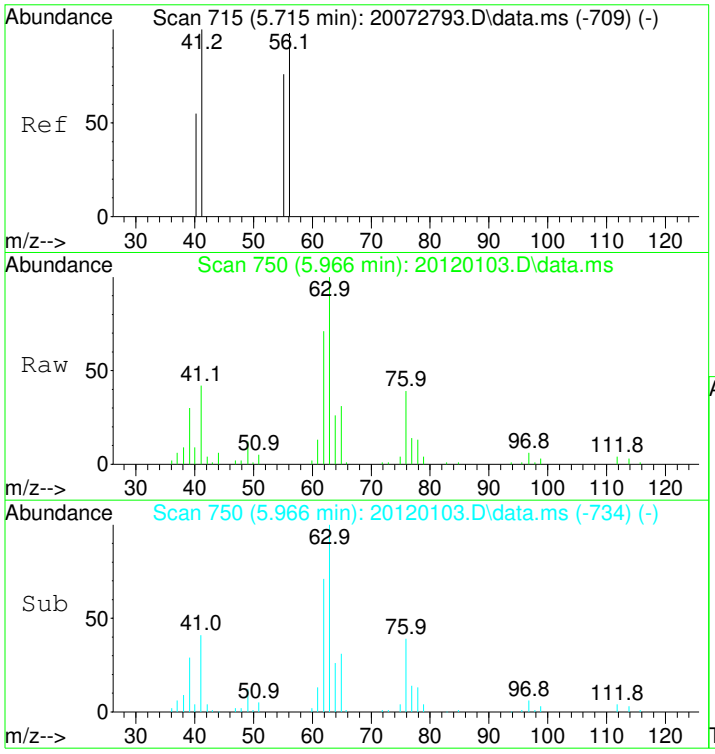


#59
Trichloroethene
Concen: 21.83 ug/L
RT: 5.479 min Scan# 682
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:130 Resp: 121641

Ion	Ratio	Lower	Upper
130	100		
95	101.4	82.7	122.7
97	66.9	47.6	87.6

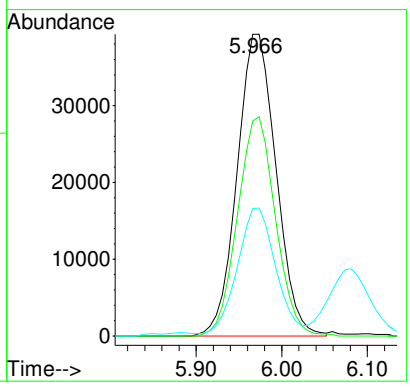


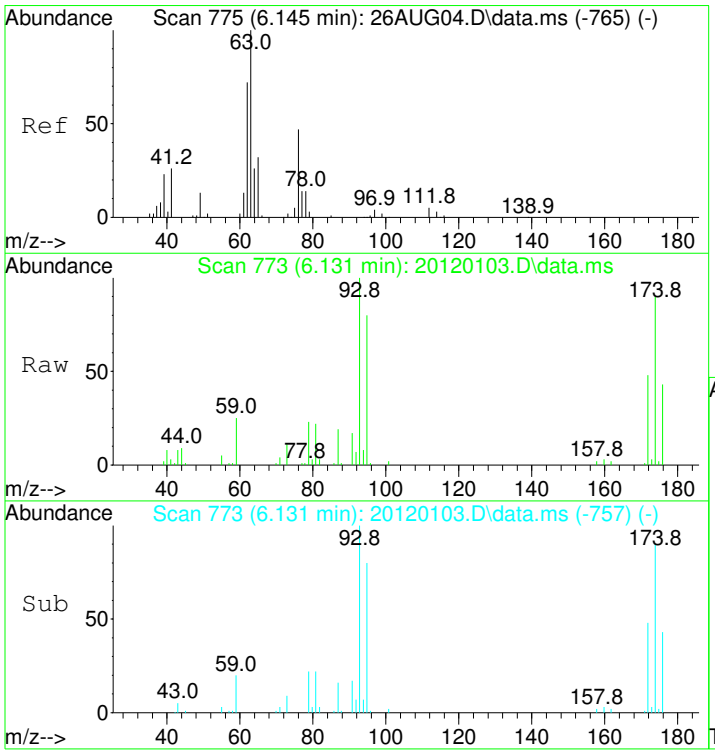


#60
1,2-Dichloropropane
Concen: 22.20 ug/L
RT: 5.966 min Scan# 750
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 63 Resp: 124429

Ion	Ratio	Lower	Upper
63	100		
62	70.6	51.5	91.5
41	40.4	26.1	66.1

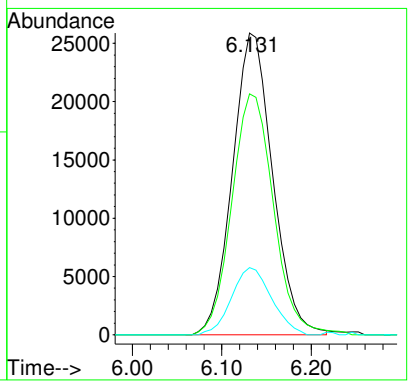


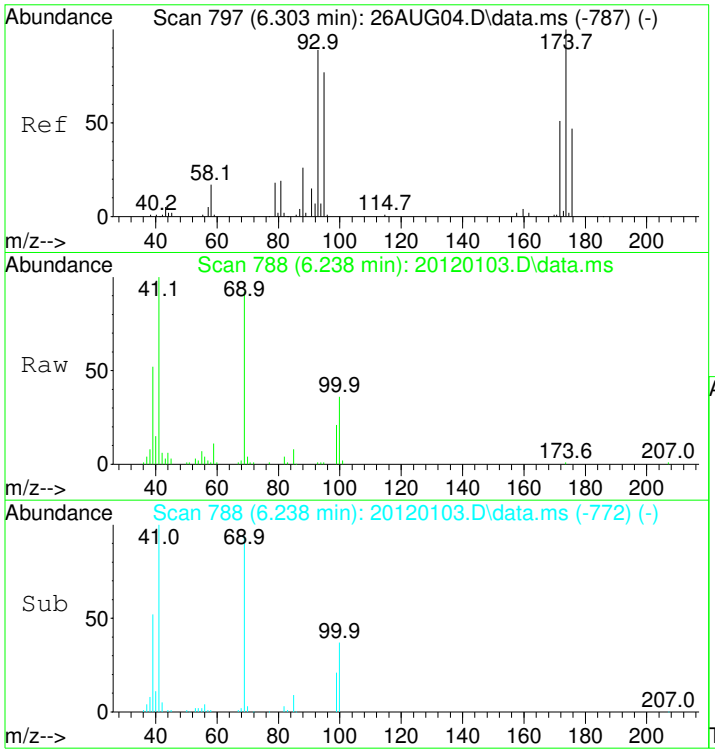


#61
Dibromomethane
Concen: 20.41 ug/L
RT: 6.131 min Scan# 773
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 93 Resp: 80848

Ion	Ratio	Lower	Upper
93	100		
95	82.5	63.0	103.0
81	22.2	3.4	43.4

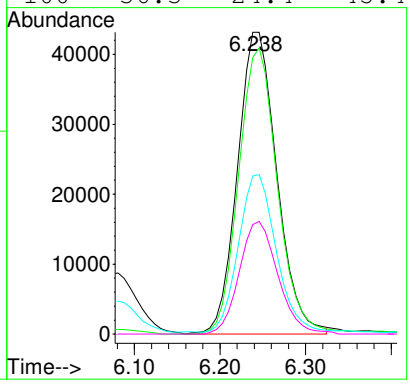


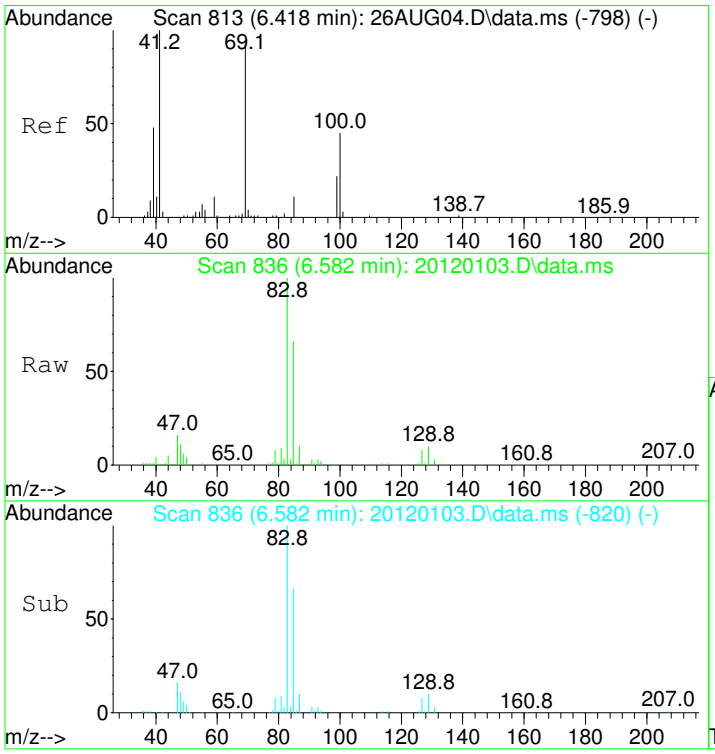


#62
Methyl methacrylate
Concen: 21.42 ug/L
RT: 6.238 min Scan# 788
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 41 Resp: 138187

Ion	Ratio	Lower	Upper
41	100		
69	92.7	72.2	108.4
39	49.6	41.1	61.7
100	36.3	24.4	45.4

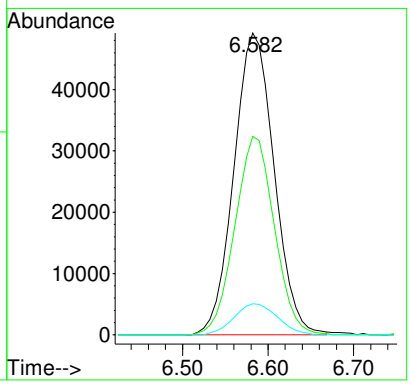


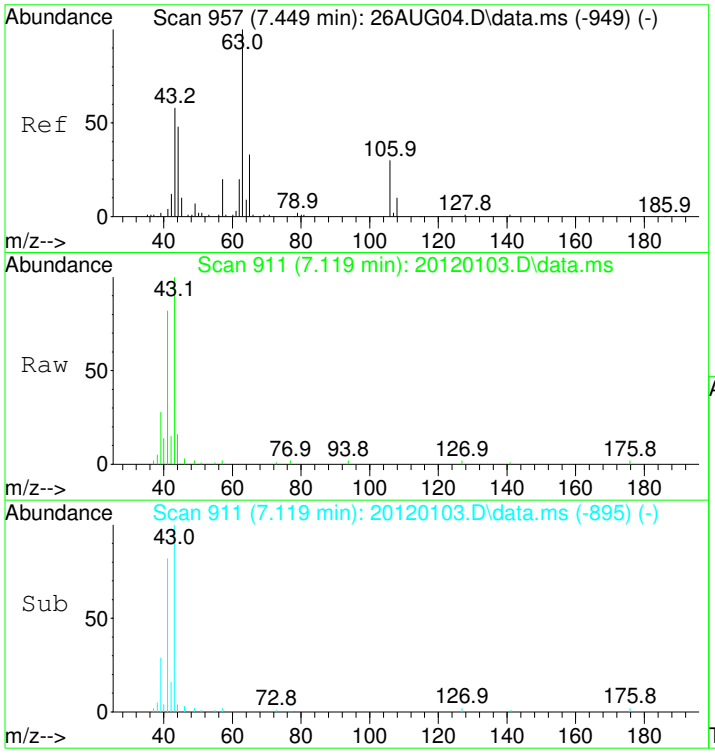


#63
Bromodichloromethane
Concen: 21.15 ug/L
RT: 6.582 min Scan# 836
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 83 Resp: 160695

Ion	Ratio	Lower	Upper
83	100		
85	64.5	44.3	84.3
129	11.1	0.0	31.0

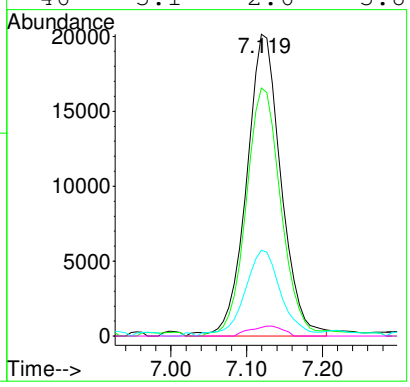


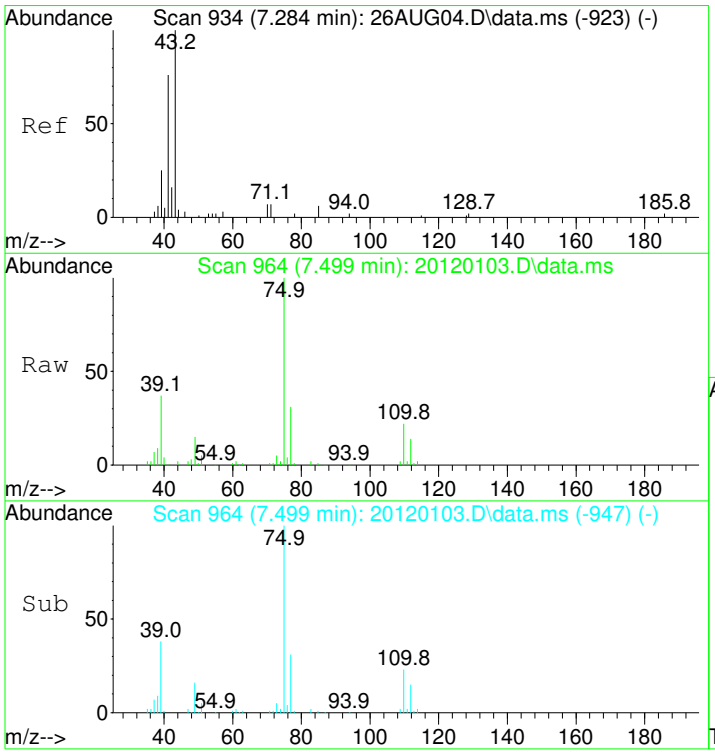


#65
2-Nitropropane
Concen: 21.28 ug/L
RT: 7.119 min Scan# 911
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 63577

Ion	Ratio	Lower	Upper
43	100		
41	82.6	67.9	101.9
39	29.7	21.8	32.8
46	3.1	2.6	3.8

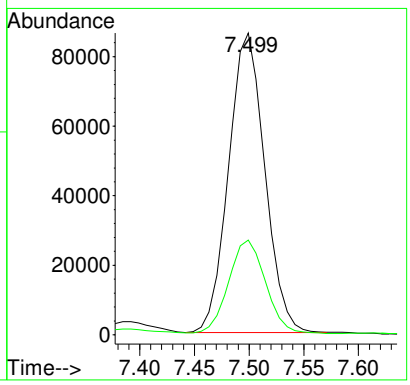


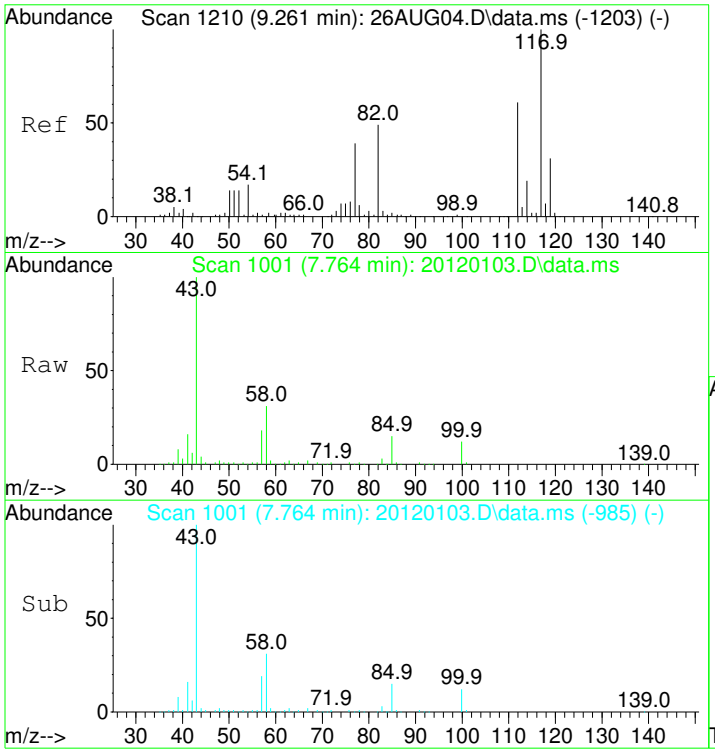


#66
cis-1,3-Dichloropropene
Concen: 21.23 ug/L
RT: 7.499 min Scan# 964
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 75 Resp: 198180

Ion	Ratio	Lower	Upper
75	100		
77	31.9	11.9	51.9

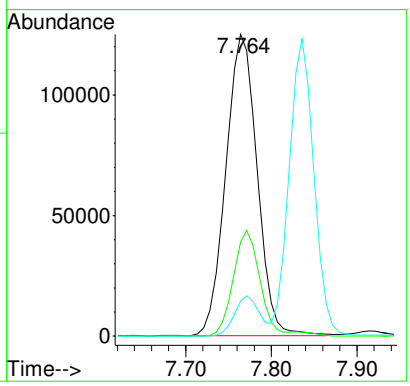


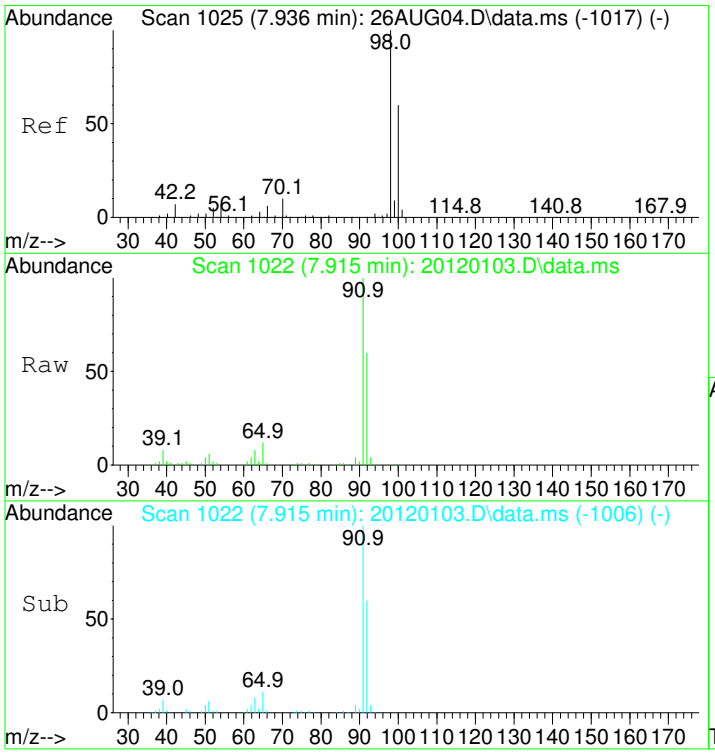


#68
4-Methyl-2-pentanone
Concen: 35.12 ug/L
RT: 7.764 min Scan# 1001
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 318315

Ion	Ratio	Lower	Upper
43	100		
58	30.5	25.4	65.4
100	11.1	0.0	36.2

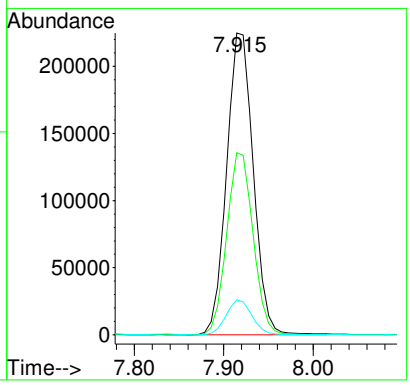


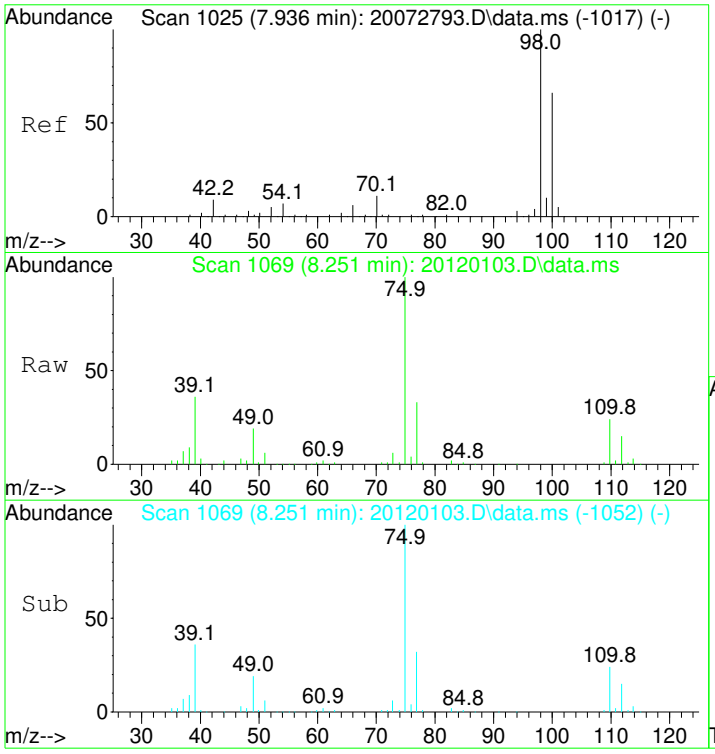


#70
Toluene
Concen: 23.27 ug/L
RT: 7.915 min Scan# 1022
Delta R.T. -0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 467080

Ion	Ratio	Lower	Upper
91	100		
92	59.6	40.7	80.7
65	11.4	0.0	31.5

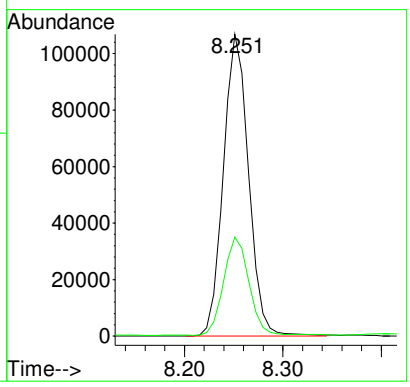


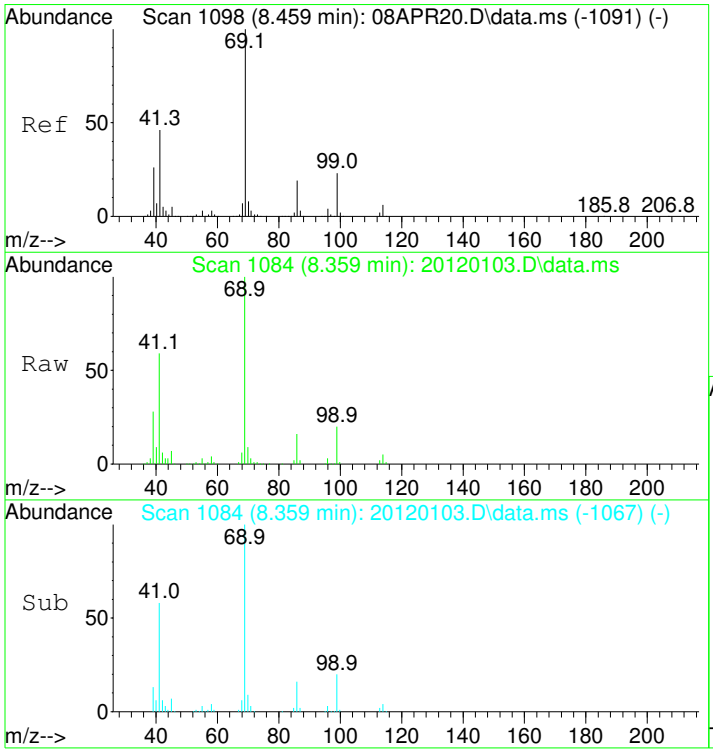


#71
trans-1,3-Dichloropropene
Concen: 22.10 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 75 Resp: 190375

Ion	Ratio	Lower	Upper
75	100		
77	32.8	15.0	55.0

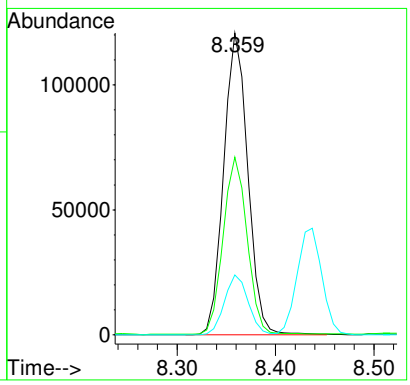


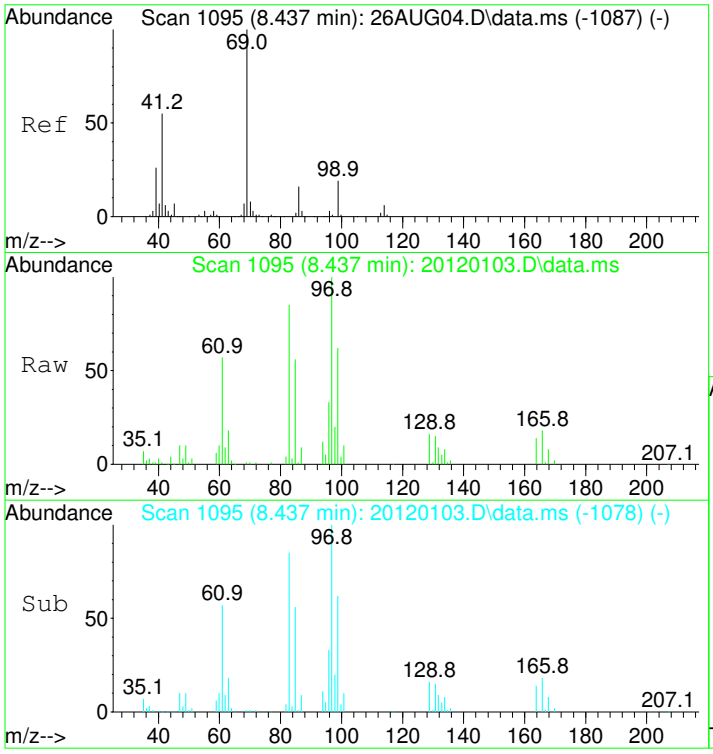


#73
Ethyl methacrylate
Concen: 21.99 ug/L
RT: 8.359 min Scan# 1084
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 69 Resp: 206506

Ion	Ratio	Lower	Upper
69	100		
41	58.3	39.9	79.9
99	19.5	0.0	39.7

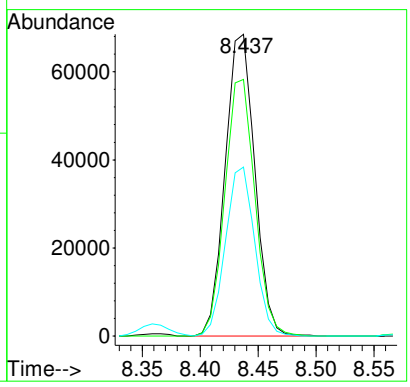


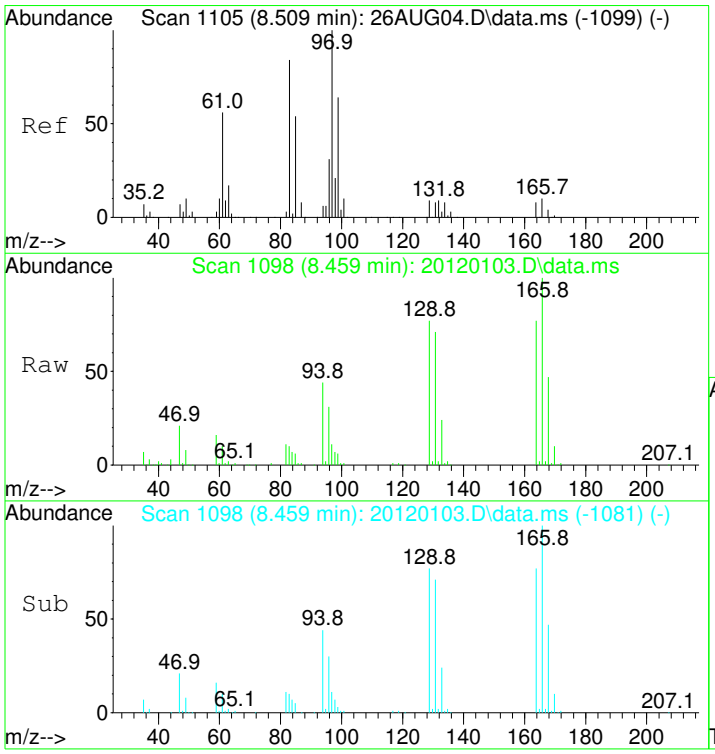


#74
1,1,2-Trichloroethane
Concen: 22.21 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 97 Resp: 122150

Ion	Ratio	Lower	Upper
97	100		
83	85.9	66.1	106.1
85	55.1	36.8	76.8

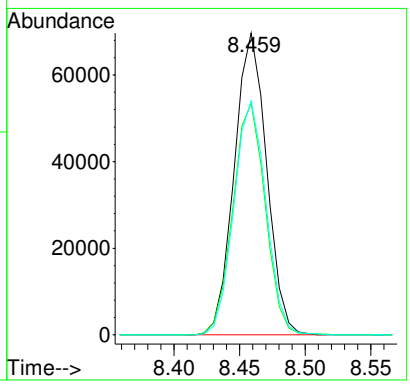


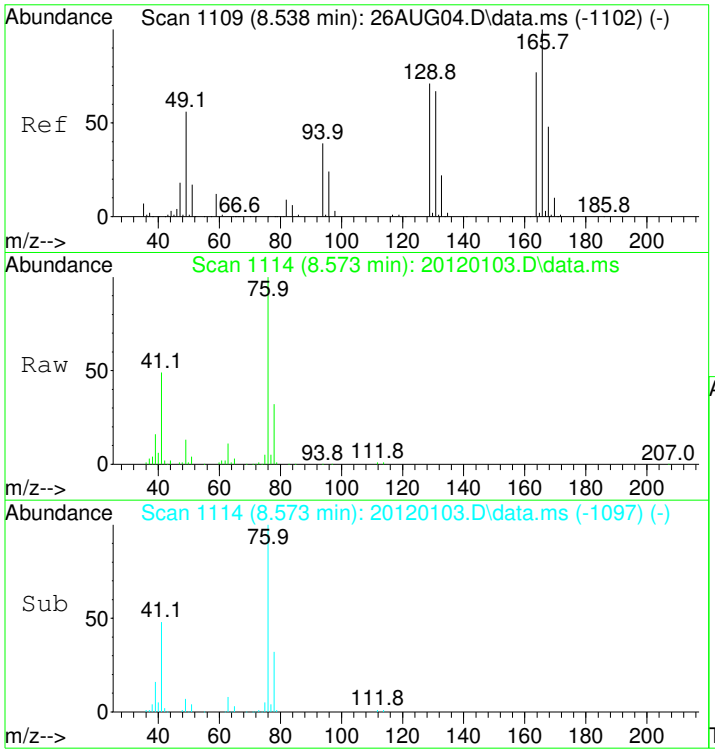


#75
Tetrachloroethene
Concen: 23.70 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:166 Resp: 119633

Ion	Ratio	Lower	Upper
166	100		
129	76.8	59.1	99.1
164	77.0	59.1	99.1

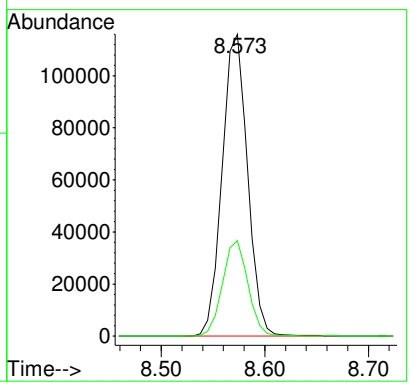


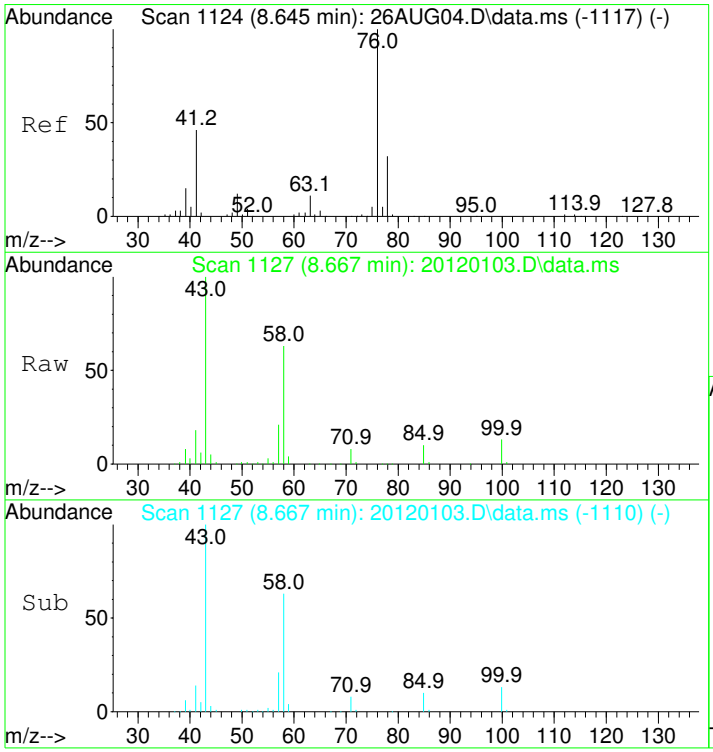


#76
1,3-Dichloropropane
Concen: 21.73 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 76 Resp: 198501

Ion	Ratio	Lower	Upper
76	100		
78	31.6	13.2	53.2

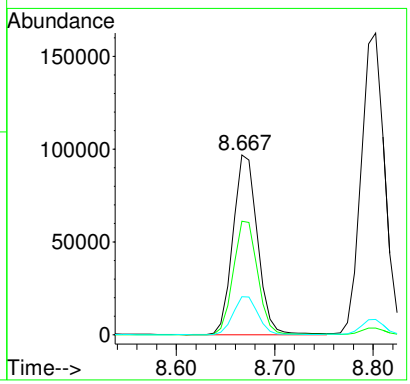


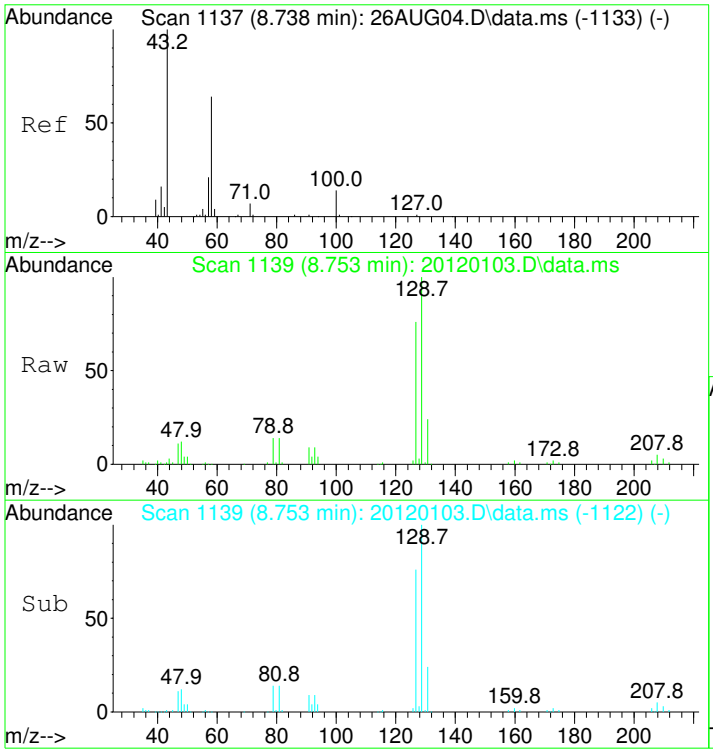


#77
2-Hexanone
Concen: 23.45 ug/L
RT: 8.667 min Scan# 1127
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 169000

Ion	Ratio	Lower	Upper
43	100		
58	62.4	42.3	82.3
57	21.7	1.0	41.0

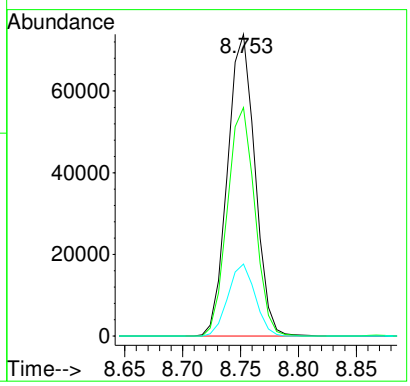


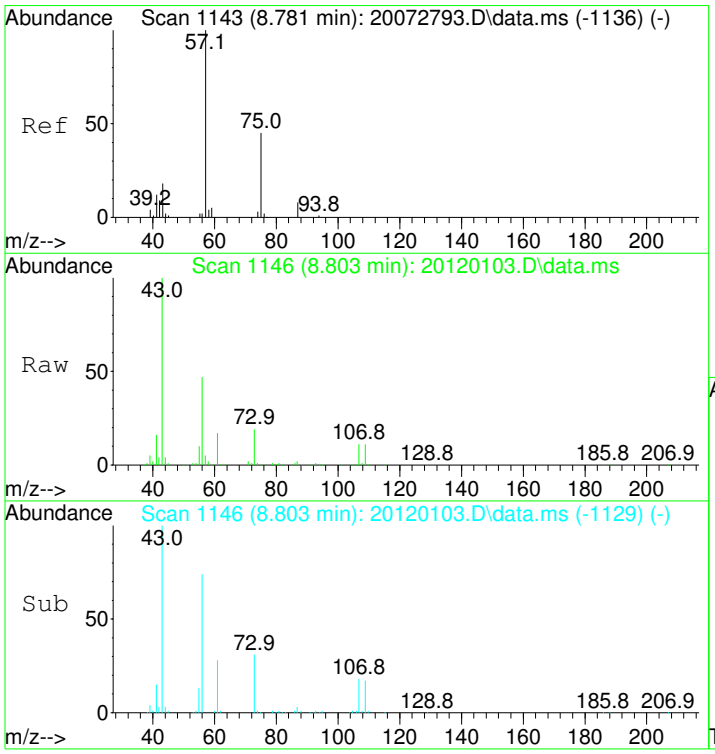


#78
Chlorodibromomethane
Concen: 20.22 ug/L
RT: 8.753 min Scan# 1139
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:129 Resp: 121604

Ion	Ratio	Lower	Upper
129	100		
127	75.7	57.8	97.8
131	23.6	4.2	44.2

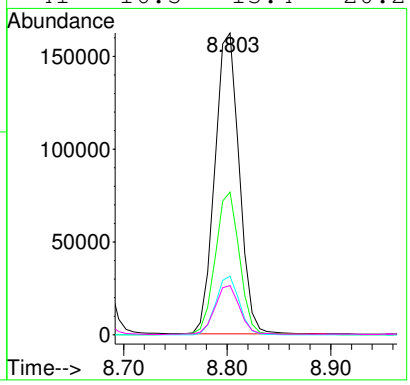


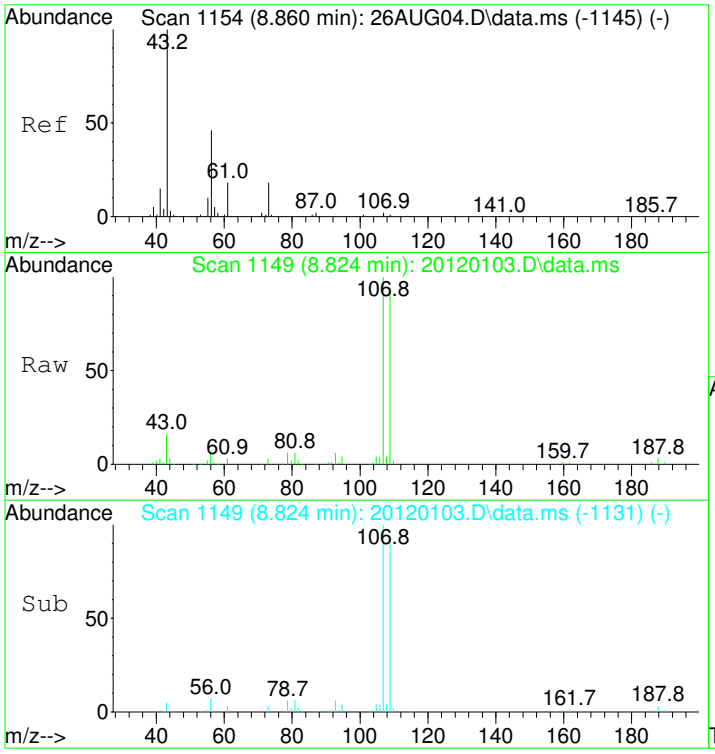


#79
Butyl acetate
Concen: 23.35 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 265603

Ion	Ratio	Lower	Upper
43	100		
56	47.8	38.0	57.0
73	18.9	15.0	22.4
41	16.5	13.4	20.2

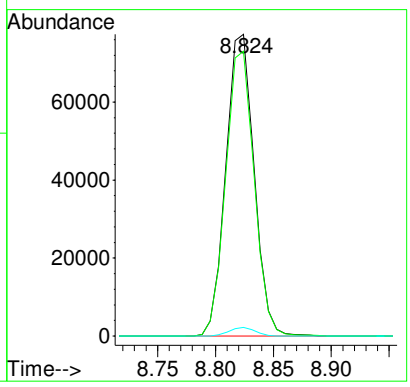


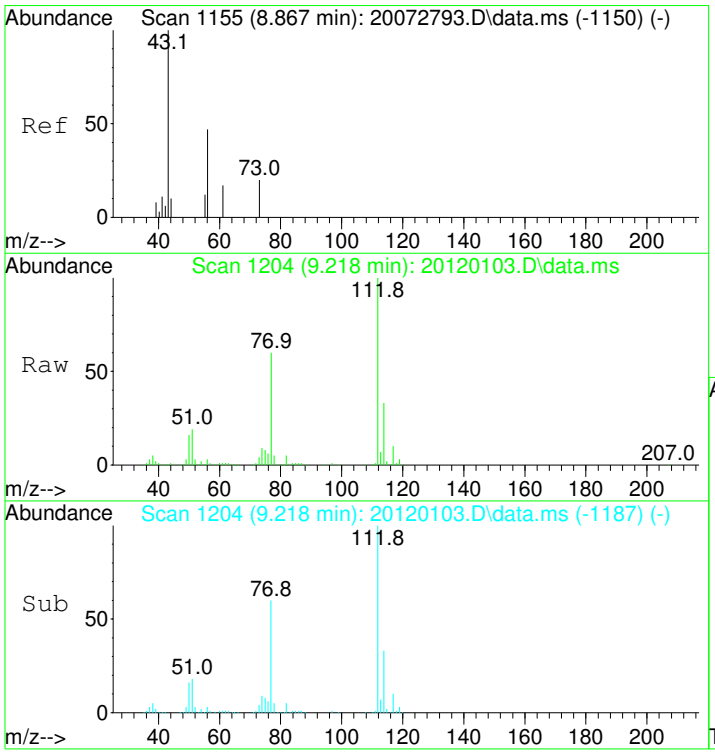


#80
1,2-Dibromoethane
Concen: 23.15 ug/L
RT: 8.824 min Scan# 1149
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:107 Resp: 131424

Ion	Ratio	Lower	Upper
107	100		
109	95.1	76.6	116.6
188	2.6	0.0	22.9

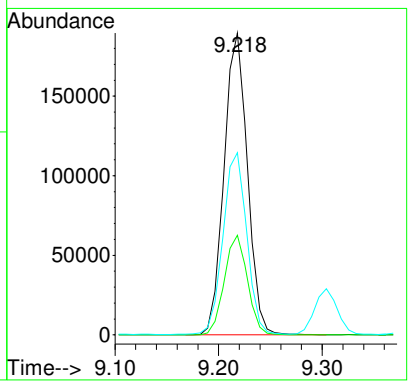


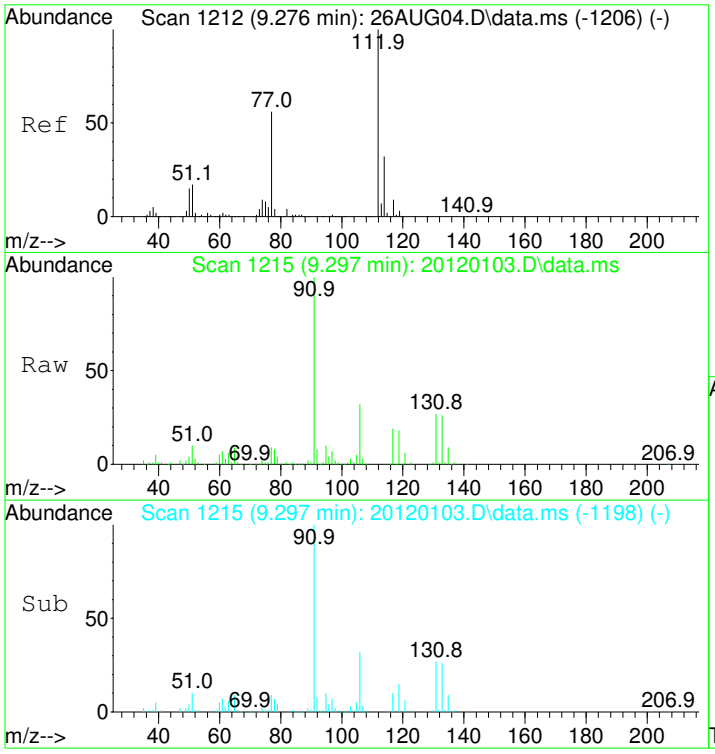


#81
Chlorobenzene
Concen: 23.09 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:112 Resp: 297796

Ion	Ratio	Lower	Upper
112	100		
114	32.6	13.6	53.6
77	61.2	41.7	81.7

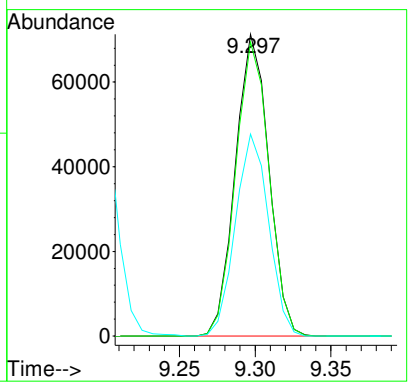


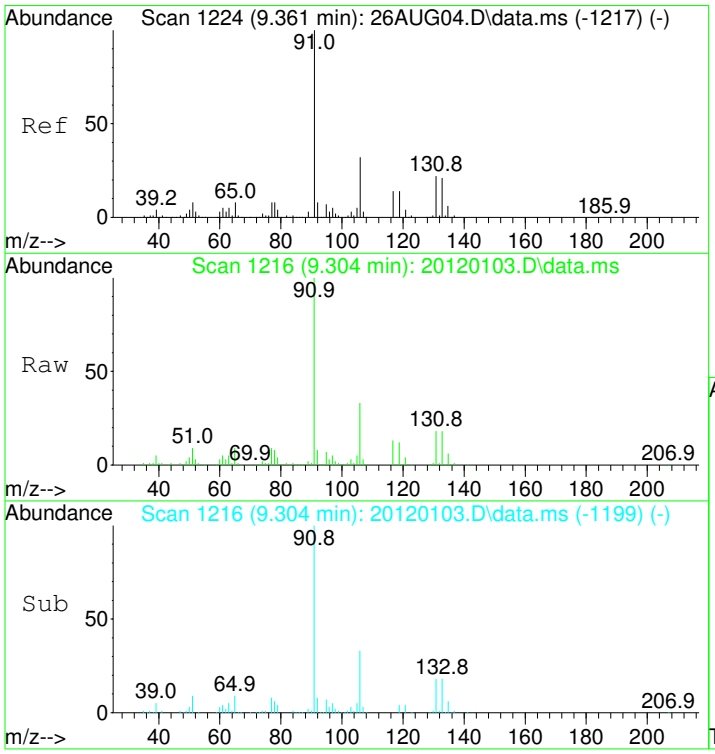


#82
1,1,1,2-Tetrachloroethane
Concen: 21.90 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:131 Resp: 109308

Ion	Ratio	Lower	Upper
131	100		
133	97.2	74.4	114.4
119	66.5	45.7	85.7

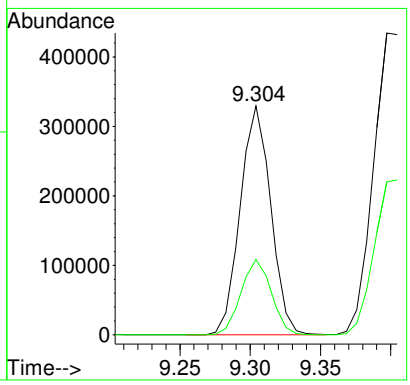


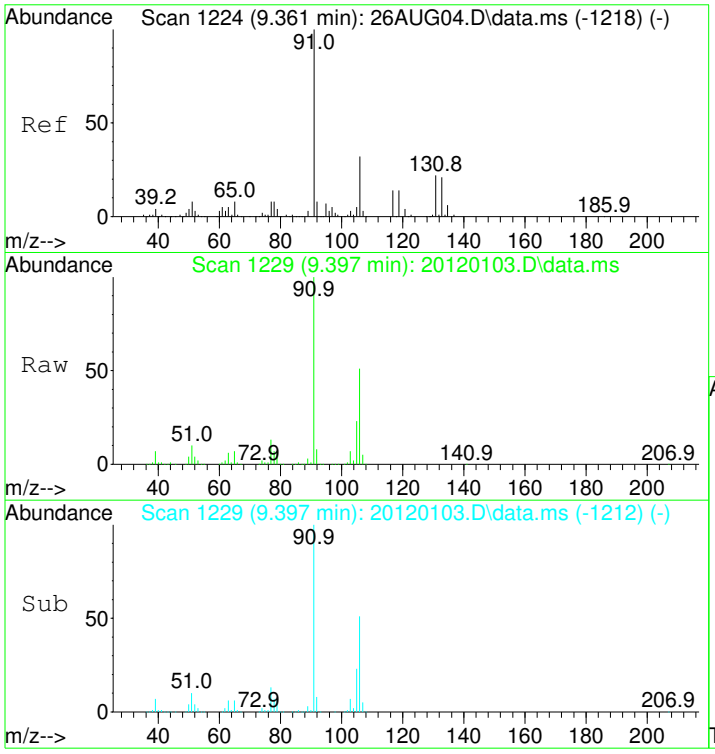


#83
Ethylbenzene
Concen: 21.45 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 499104

Ion	Ratio	Lower	Upper
91	100		
106	32.5	13.6	53.6

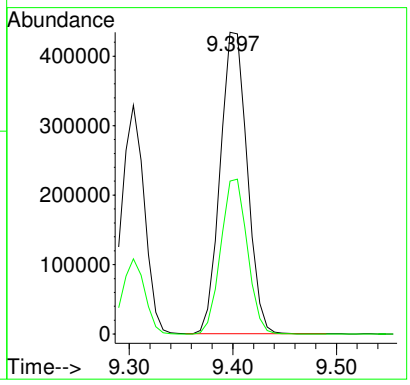


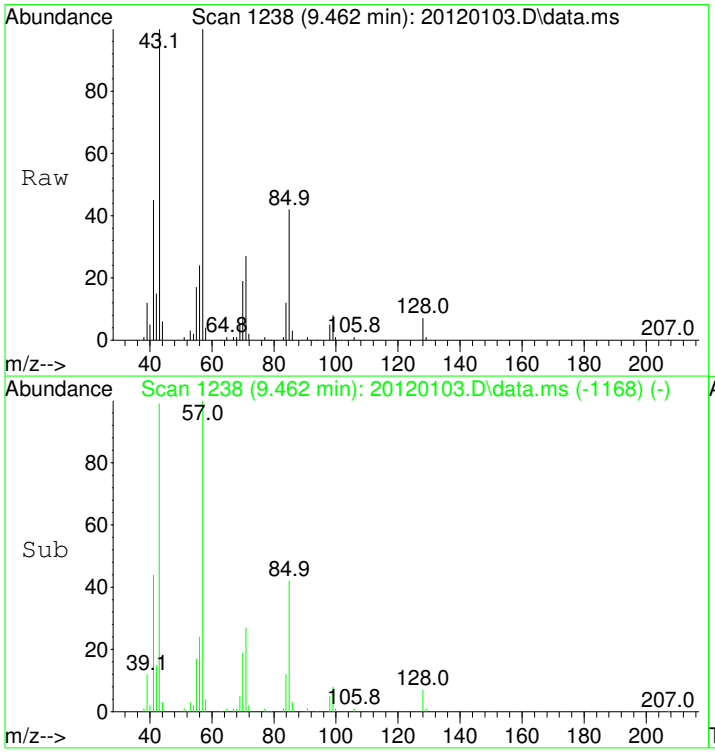


#84
m/p-Xylene
Concen: 42.53 ug/L
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 787141

Ion	Ratio	Lower	Upper
91	100		
106	50.9	34.2	74.2

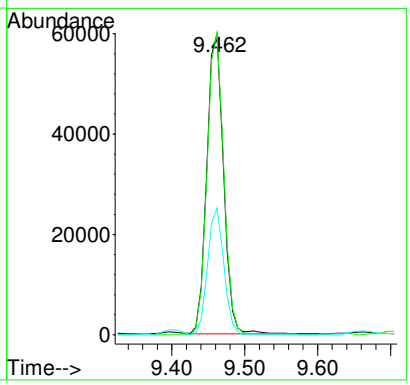


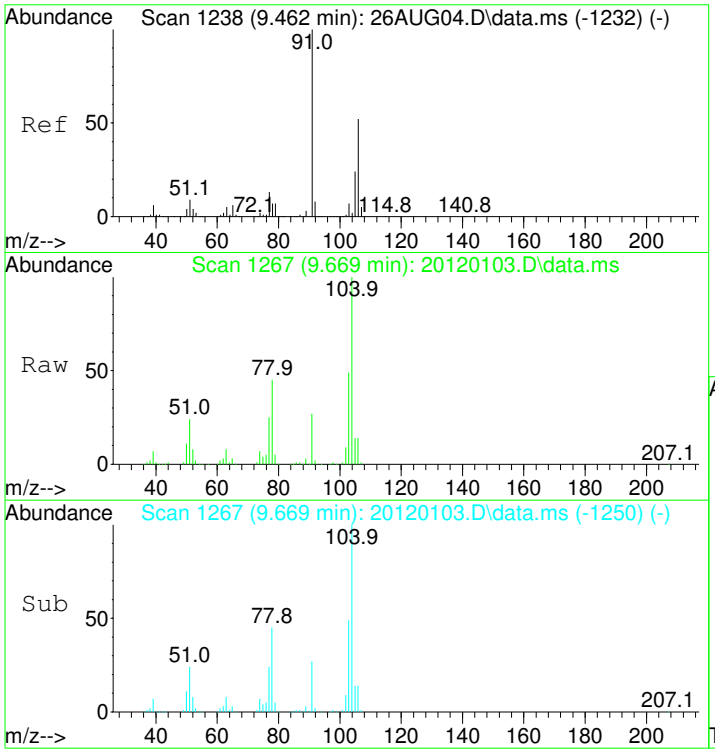


#85
Nonane
Concen: 34.72 ug/L
RT: 9.462 min Scan# 1238
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 94882

Ion	Ratio	Lower	Upper
43	100		
57	100.8	67.9	127.9
85	41.1	10.4	70.4

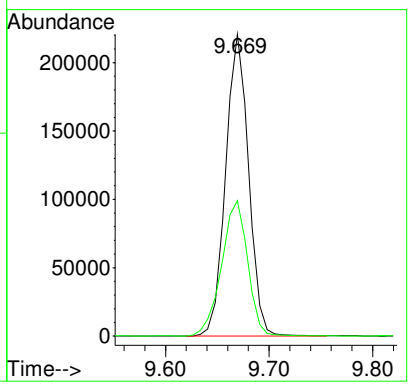


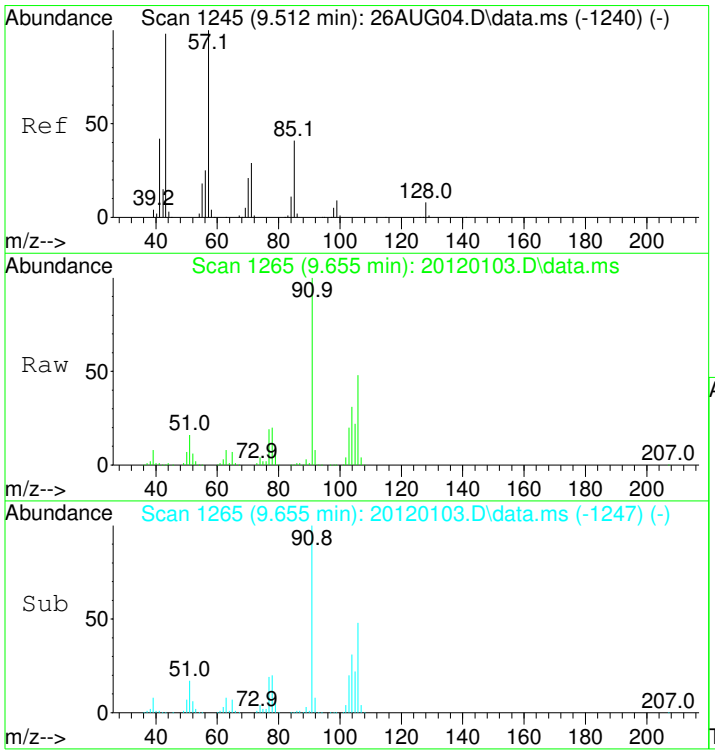


#86
Styrene
Concen: 21.74 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:104 Resp: 341270

Ion	Ratio	Lower	Upper
104	100		
78	51.1	32.3	72.3

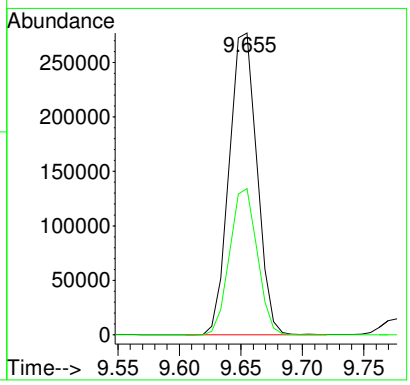


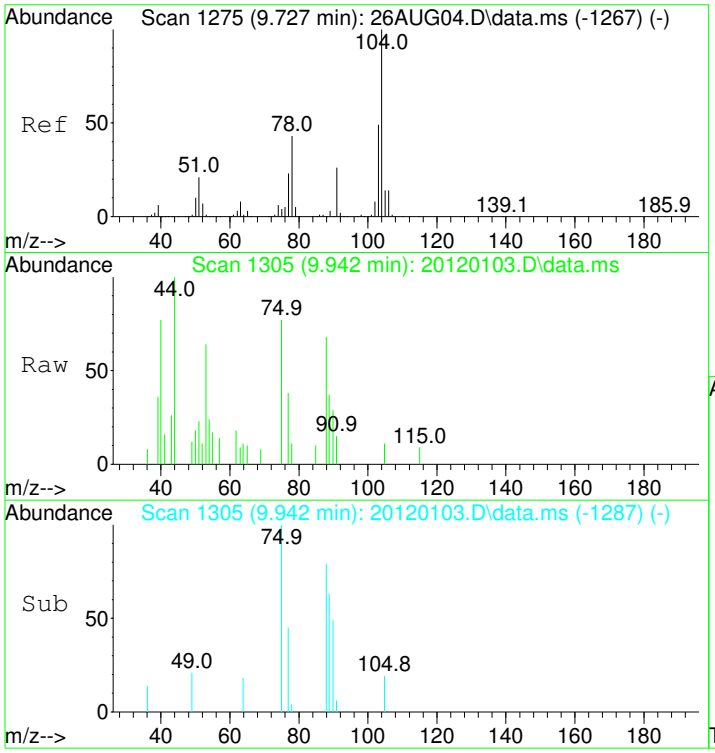


#87
o-Xylene
Concen: 21.30 ug/L
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 436378

Ion	Ratio	Lower	Upper
91	100		
106	47.8	30.3	70.3

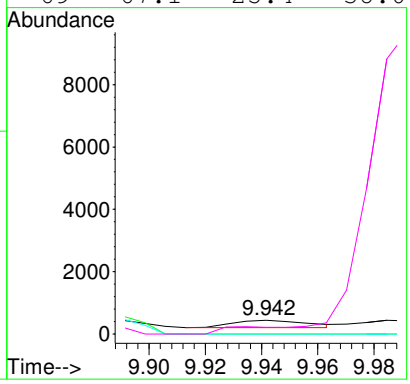


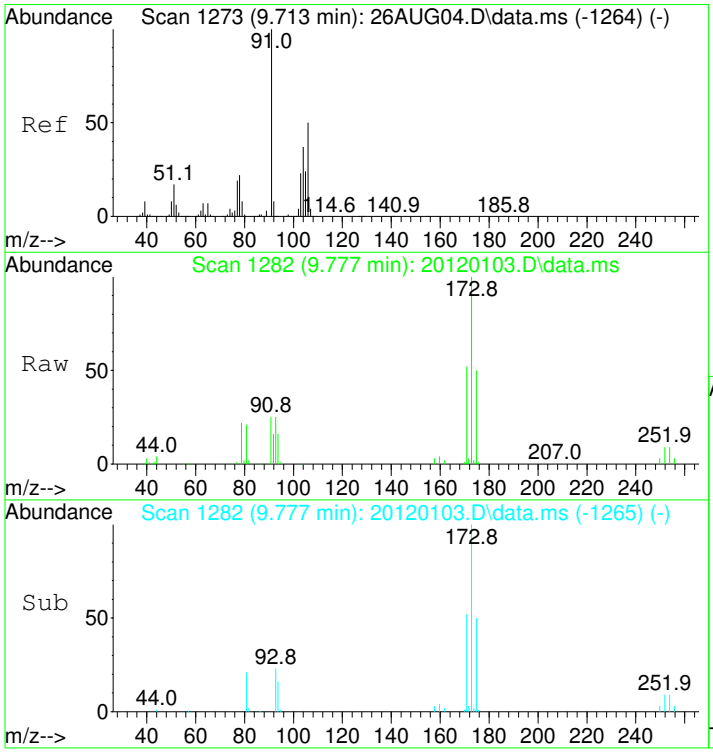


#88
Cyclohexanone
Concen: Below Cal
RT: 9.942 min Scan# 1305
Delta R.T. 0.008 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 55 Resp: 431

Ion	Ratio	Lower	Upper
55	100		
42	0.0	48.0	72.0#
98	0.0	38.2	57.2#
69	67.1	25.4	38.0#

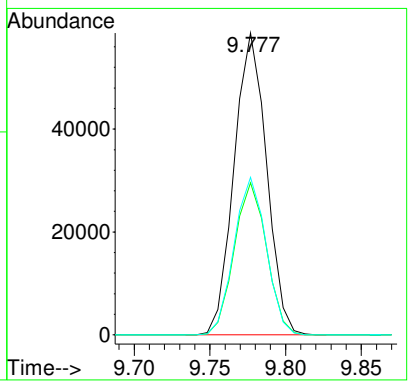


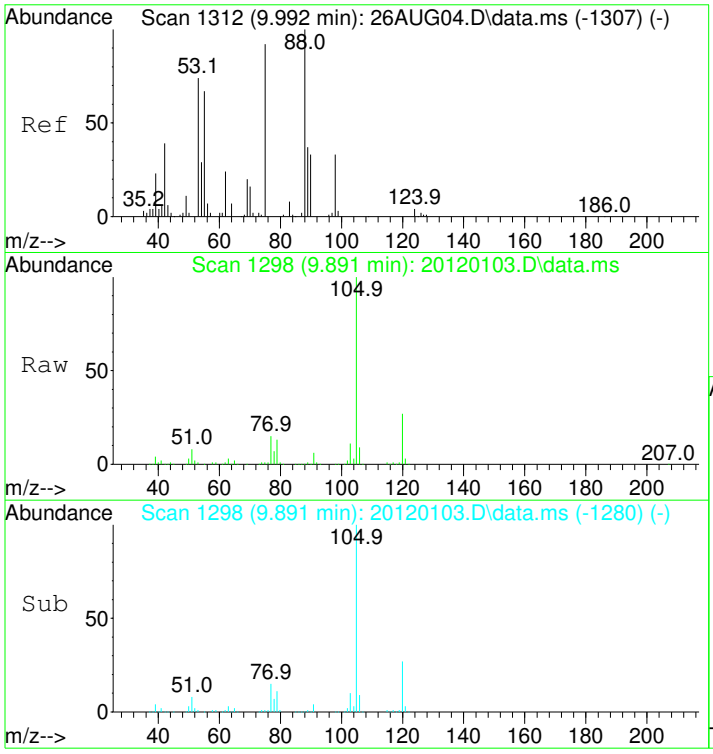


#89
Bromoform
Concen: 18.97 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:173 Resp: 87264

Ion	Ratio	Lower	Upper
173	100		
175	50.2	28.4	68.4
171	51.7	31.7	71.7

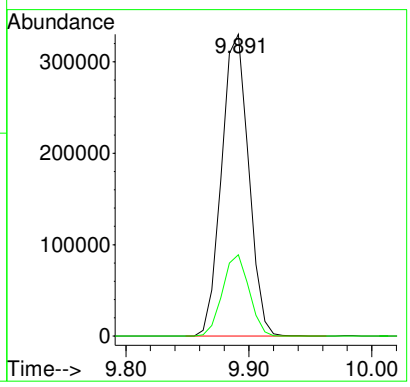


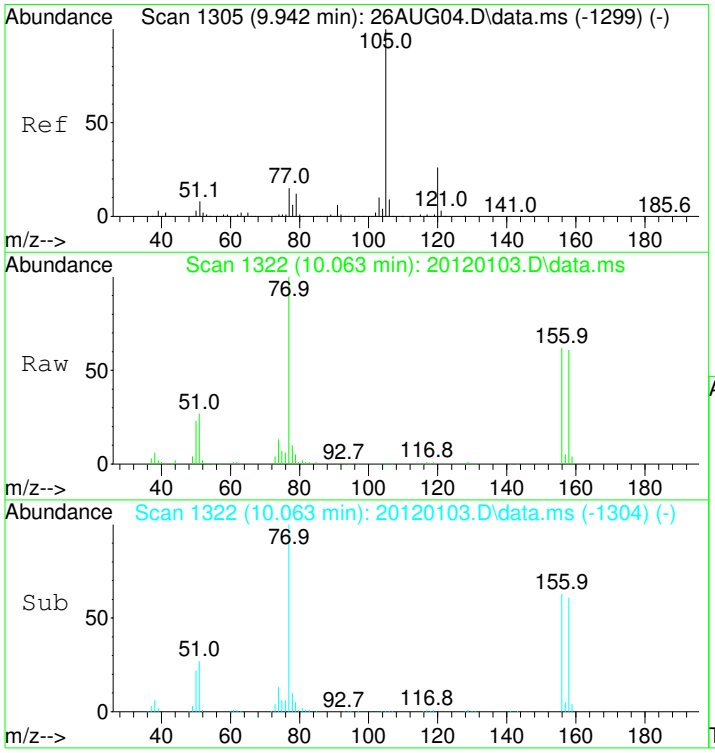


#90
Isopropylbenzene
Concen: 21.52 ug/L
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:105 Resp: 505774

Ion	Ratio	Lower	Upper
105	100		
120	26.4	8.0	48.0

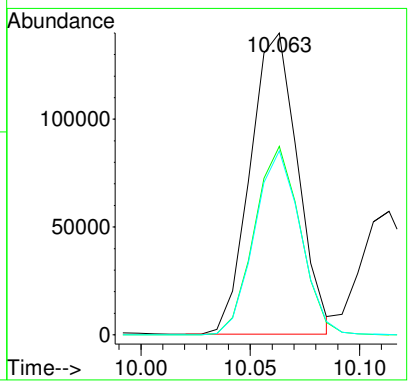


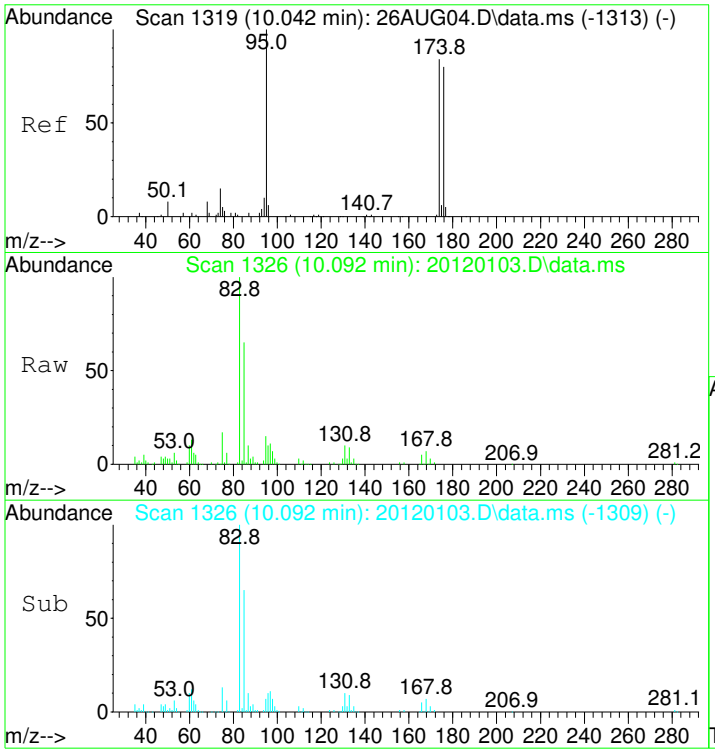


#92
Bromobenzene
Concen: 22.15 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 77 Resp: 211779

Ion	Ratio	Lower	Upper
77	100		
156	60.4	40.2	80.2
158	59.4	38.1	78.1

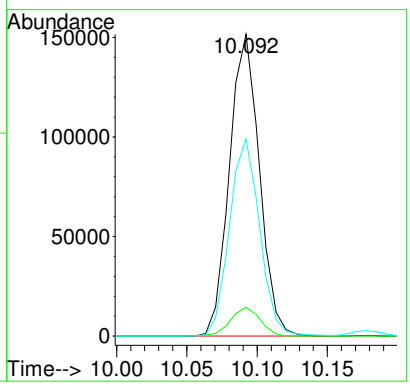


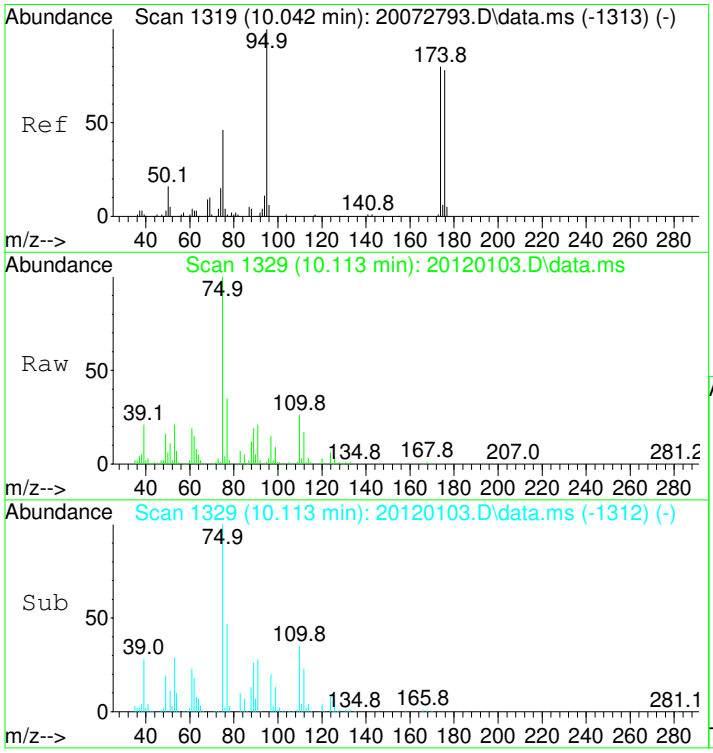


#93
1,1,2,2-Tetrachloroethane
Concen: 24.84 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 83 Resp: 225329

Ion	Ratio	Lower	Upper
83	100		
131	9.5	0.0	35.0
85	65.9	46.4	86.4

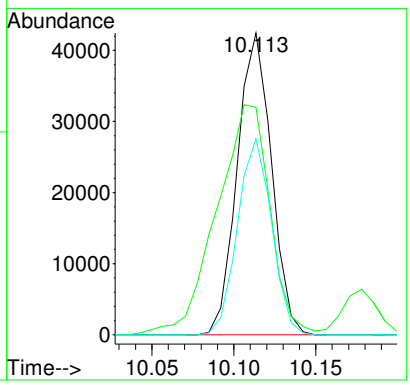


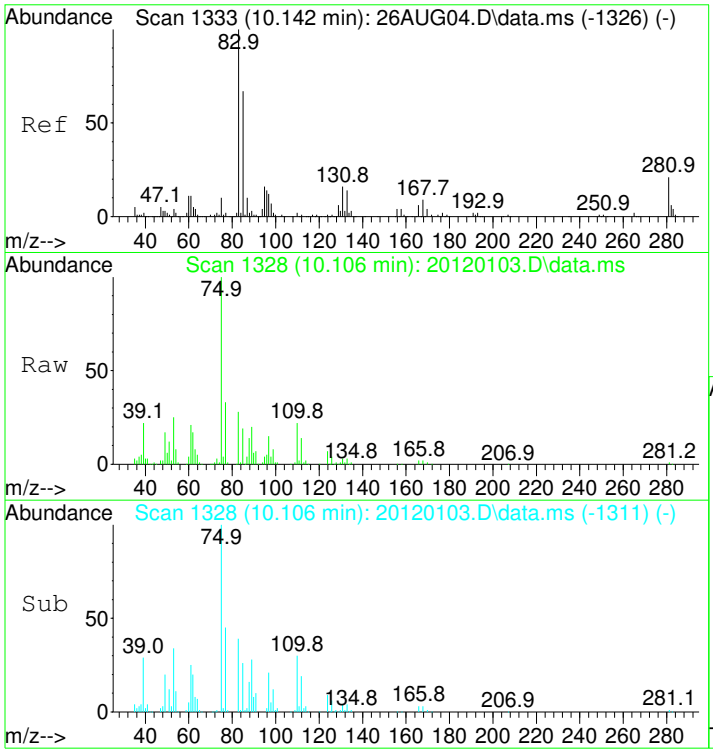


#94
1,2,3-Trichloropropane
Concen: 21.56 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:110 Resp: 61712

Ion	Ratio	Lower	Upper
110	100		
61	118.2	97.0	137.0
112	64.6	44.1	84.1

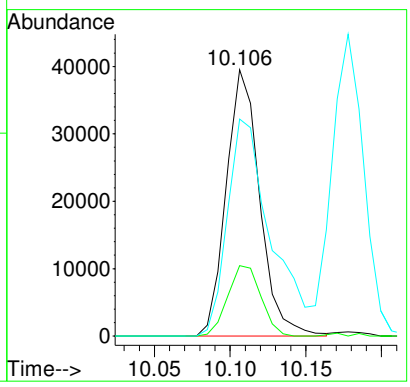


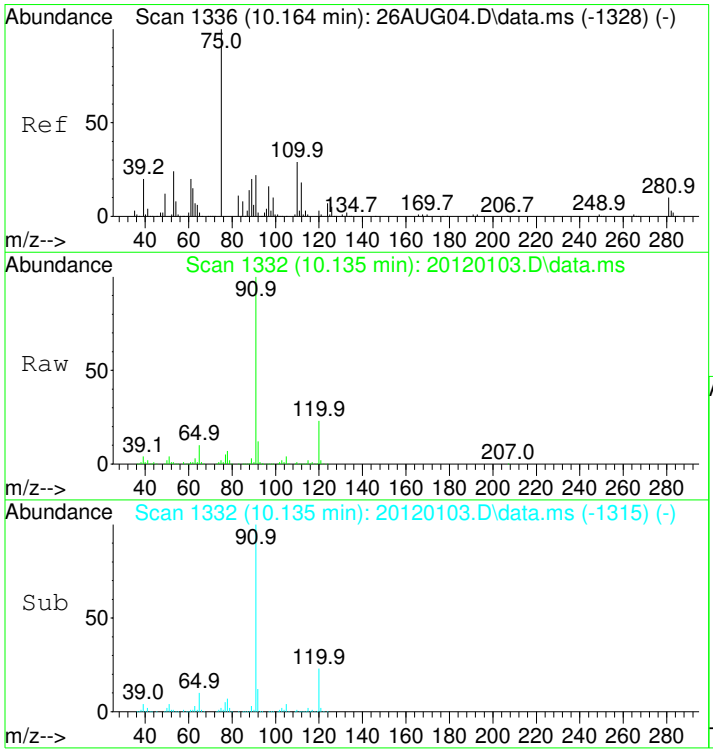


#95
trans-1,4-Dichloro-2-butene
Concen: 20.20 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 53 Resp: 60802

Ion	Ratio	Lower	Upper
53	100		
124	26.3	7.2	47.2
89	103.9	79.3	119.3

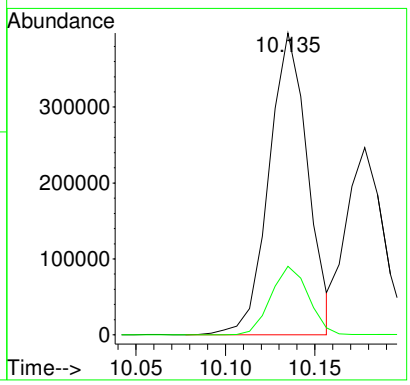


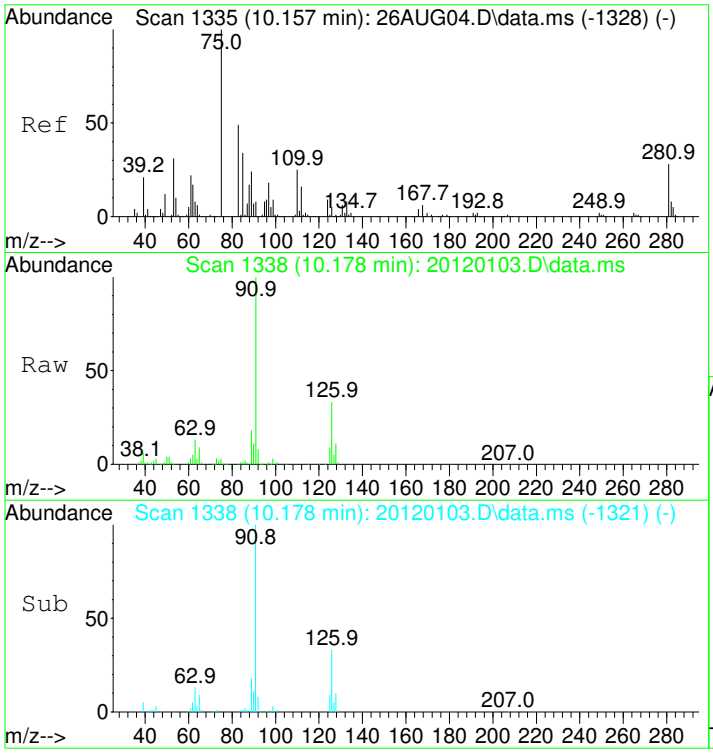


#96
n-Propylbenzene
Concen: 21.00 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 599090

Ion	Ratio	Lower	Upper
91	100		
120	22.1	3.7	43.7

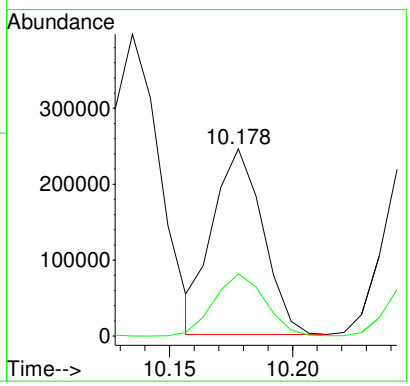


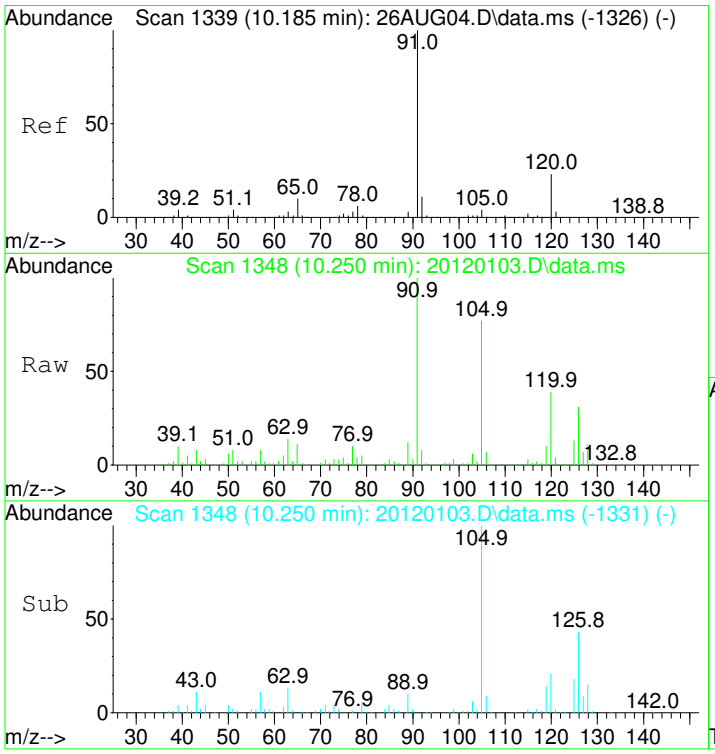


#97
2-Chlorotoluene
Concen: 24.38 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 347648

Ion	Ratio	Lower	Upper
91	100		
126	34.2	17.3	57.3

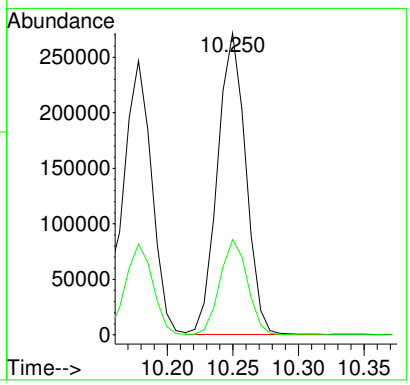


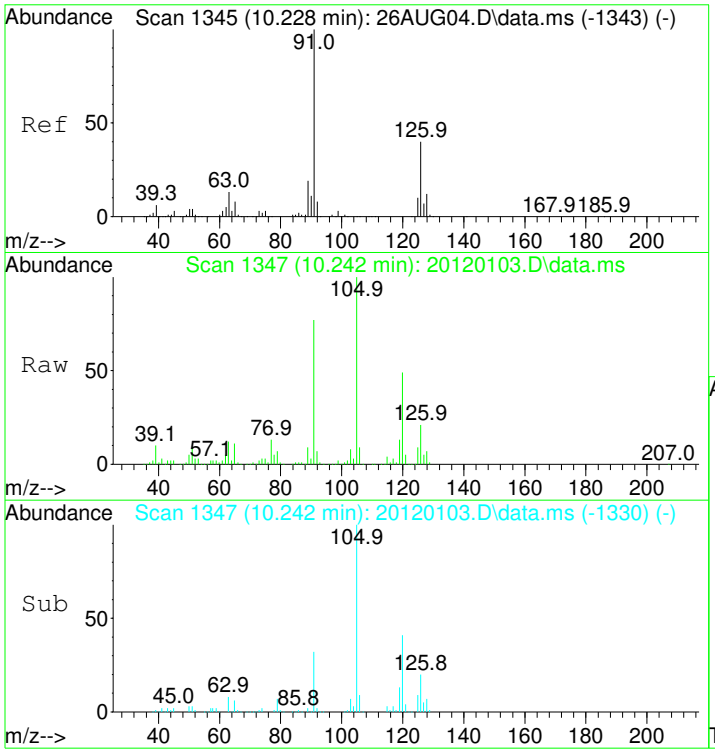


#98
4-Chlorotoluene
Concen: 20.94 ug/L
RT: 10.250 min Scan# 1348
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 406499

Ion	Ratio	Lower	Upper
91	100		
126	30.8	12.4	52.4

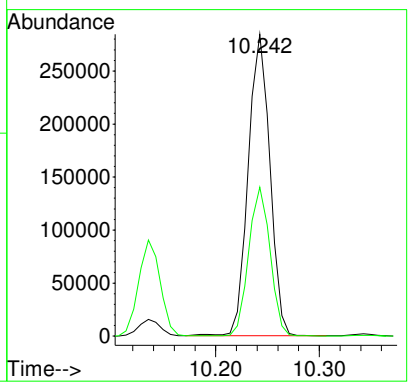


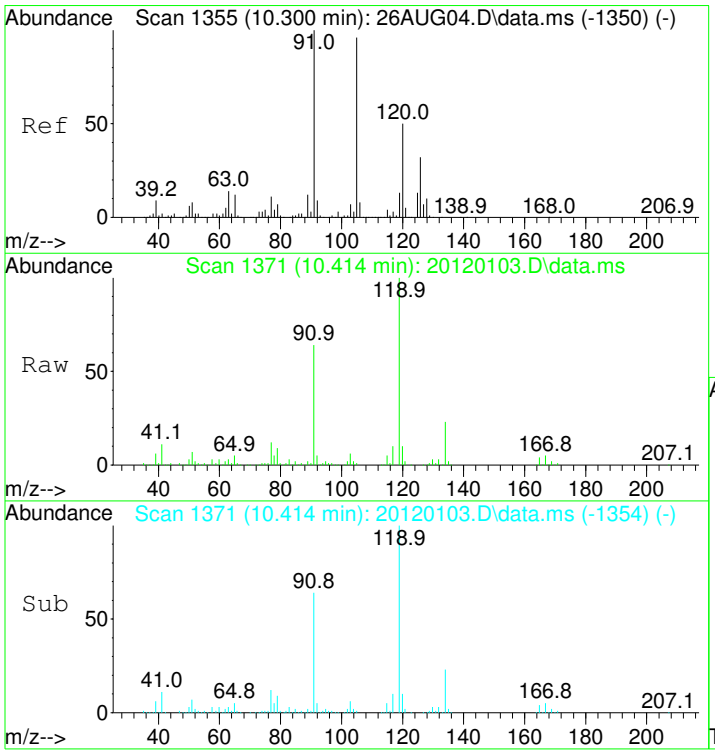


#99
1,3,5-Trimethylbenzene
Concen: 20.66 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:105 Resp: 412984

Ion	Ratio	Lower	Upper
105	100		
120	48.8	31.9	71.9

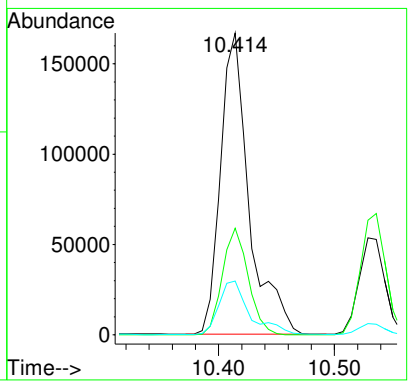


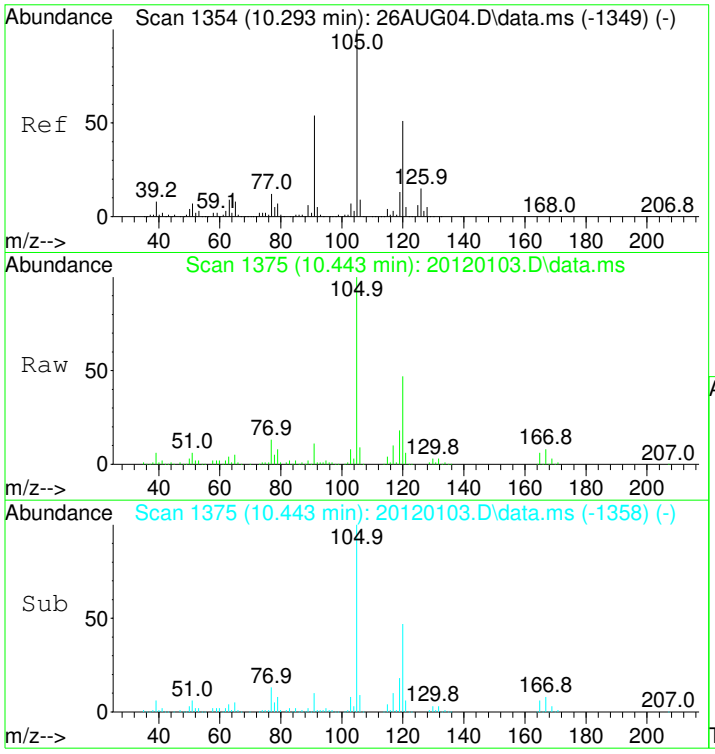


#100
tert-Butylbenzene
Concen: 22.83 ug/L
RT: 10.414 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 285785

Ion	Ratio	Lower	Upper
91	100		
134	32.0	9.7	49.7
41	19.2	0.0	39.3

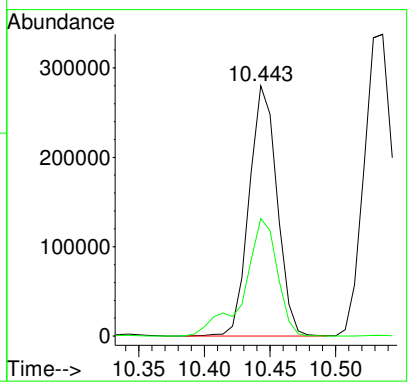


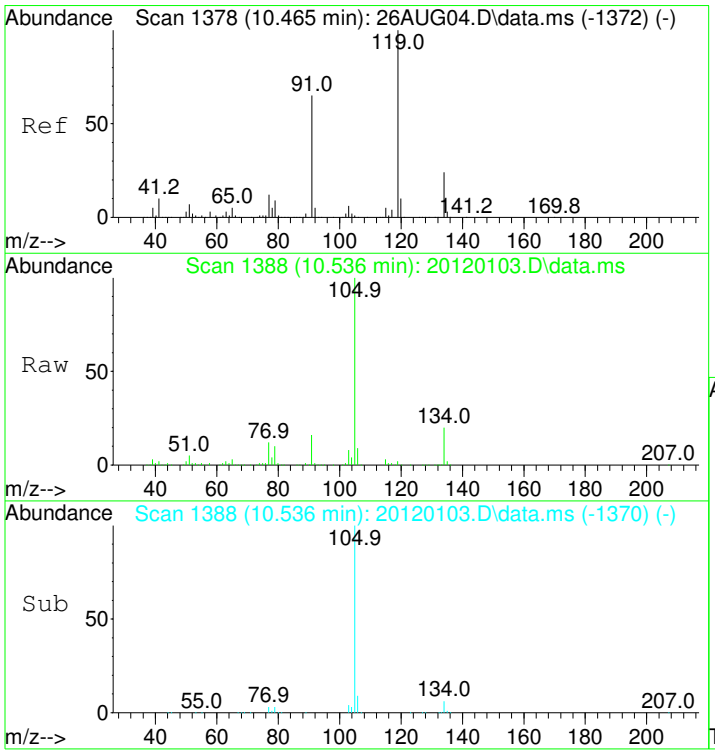


#101
1,2,4-Trimethylbenzene
Concen: 20.00 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:105 Resp: 414382

Ion	Ratio	Lower	Upper
105	100		
120	55.5	37.7	77.7

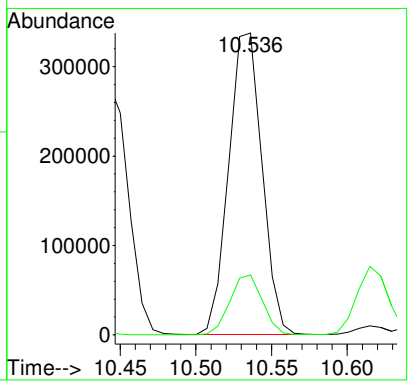


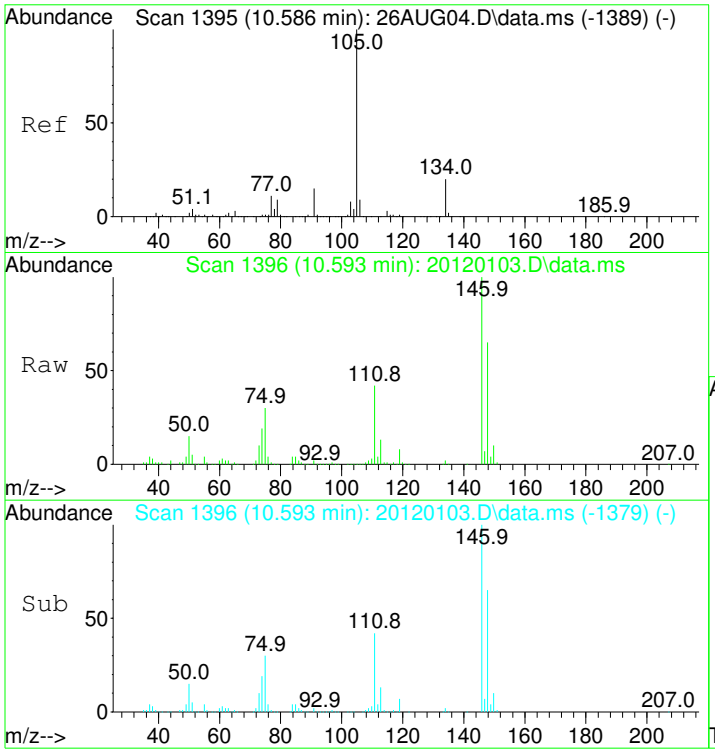


#102
sec-Butylbenzene
Concen: 21.35 ug/L
RT: 10.536 min Scan# 1388
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:105 Resp: 515992

Ion	Ratio	Lower	Upper
105	100		
134	19.4	1.1	41.1

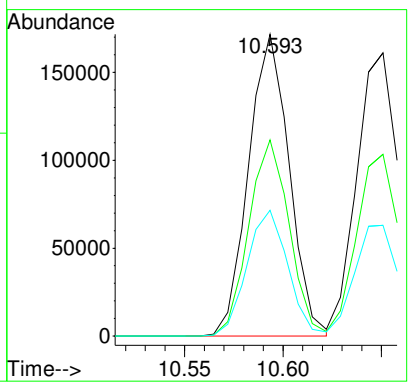


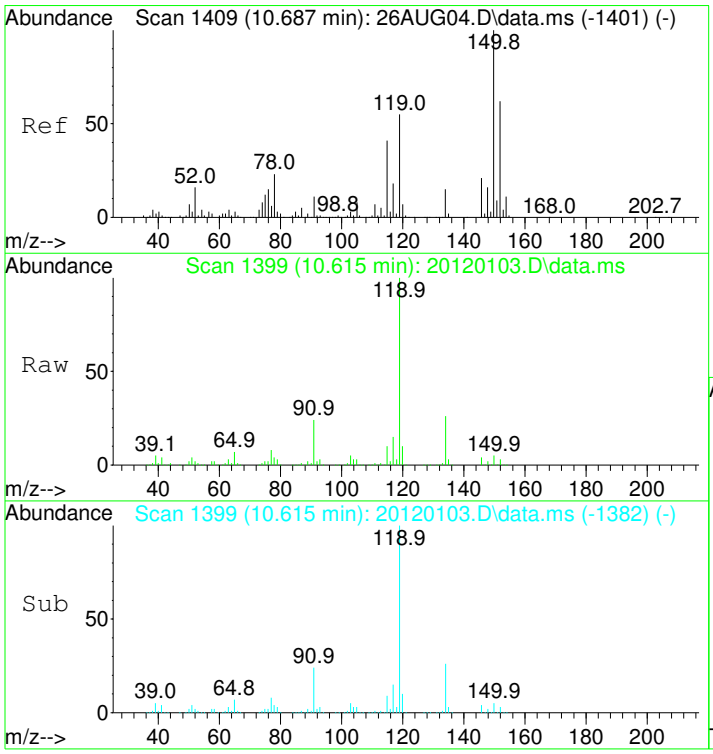


#104
1,3-Dichlorobenzene
Concen: 23.37 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:146 Resp: 246823

Ion	Ratio	Lower	Upper
146	100		
148	64.6	46.5	86.5
111	42.1	22.6	62.6

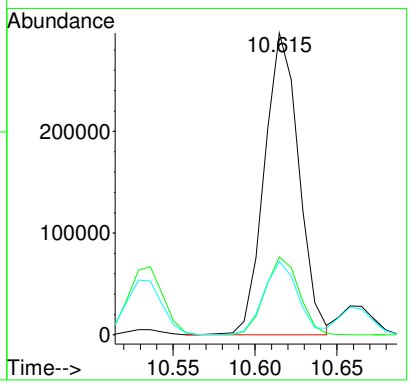


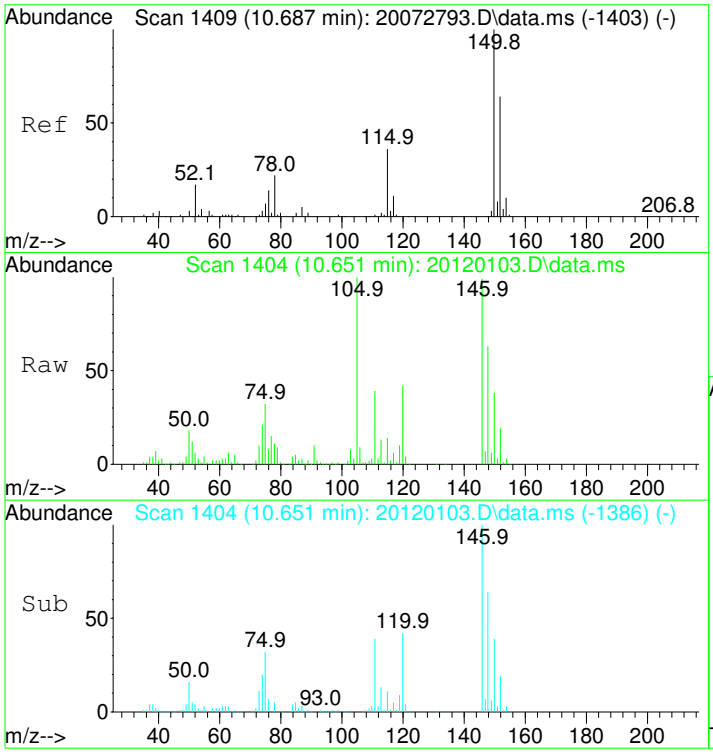


#105
p-Isopropyltoluene
Concen: 25.06 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:119 Resp: 431980

Ion	Ratio	Lower	Upper
119	100		
134	25.7	8.1	48.1
91	24.0	5.2	45.2

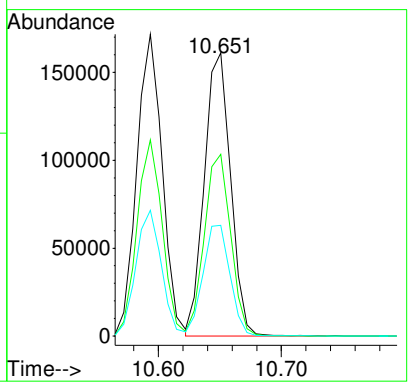


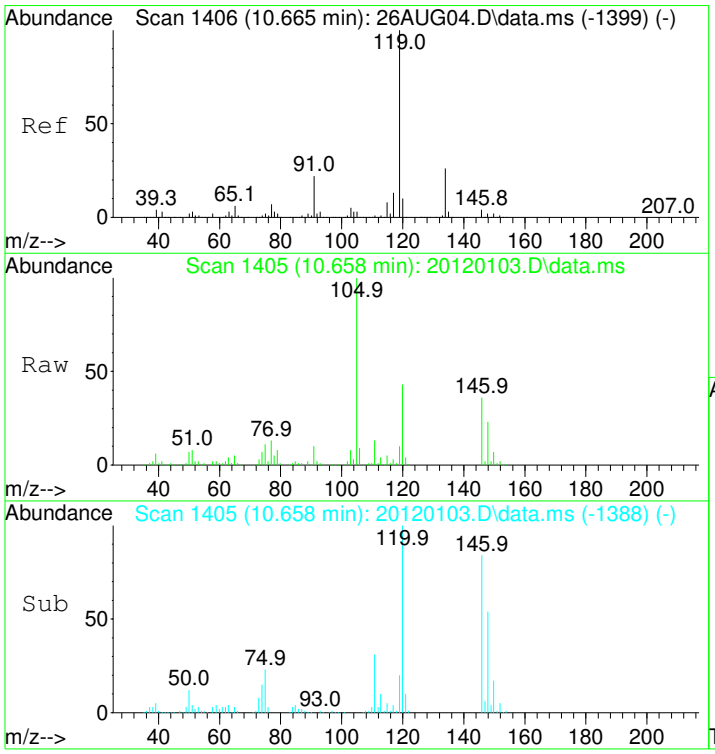


#106
1,4-Dichlorobenzene
Concen: 23.58 ug/L
RT: 10.651 min Scan# 1404
Delta R.T. 0.008 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:146 Resp: 239722

Ion	Ratio	Lower	Upper
146	100		
148	64.3	37.3	97.3
111	39.8	12.5	72.5

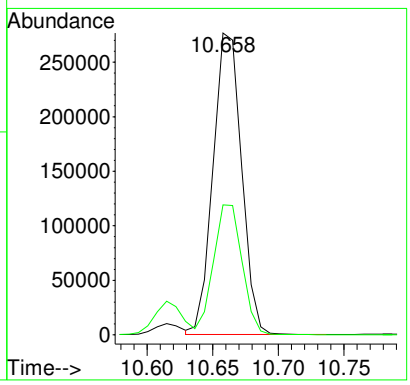


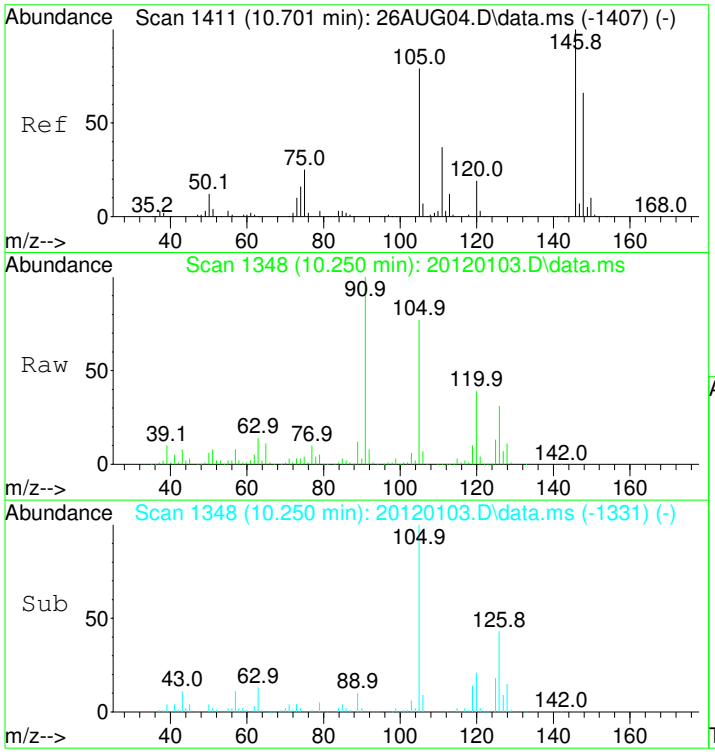


#107
1,2,3-Trimethylbenzene
Concen: 24.25 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:105 Resp: 418615

Ion	Ratio	Lower	Upper
105	100		
120	43.5	35.5	53.3

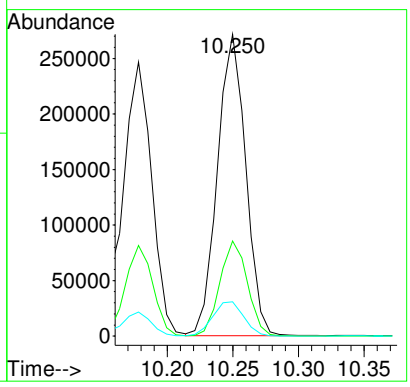


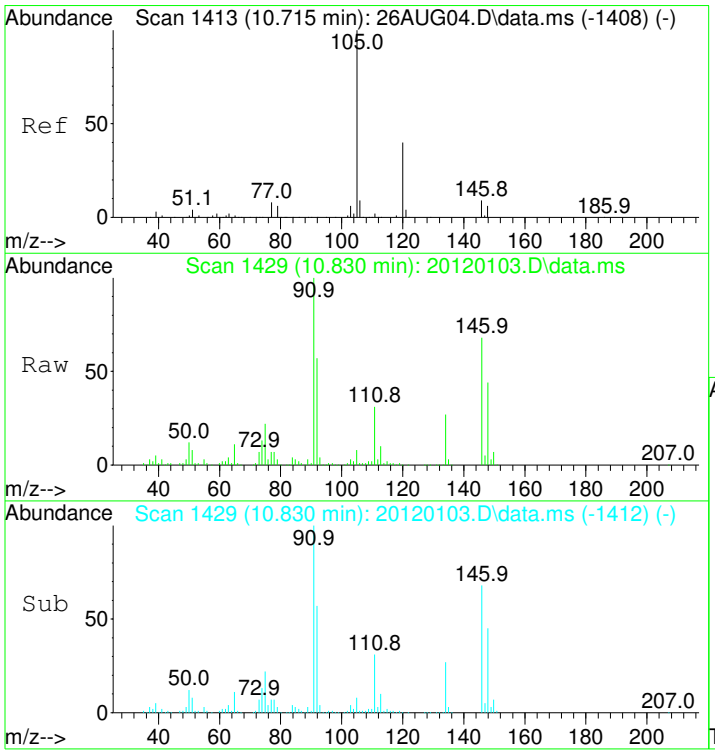


#108
Benzyl chloride
Concen: 21.33 ug/L
RT: 10.250 min Scan# 1348
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 406499

Ion	Ratio	Lower	Upper
91	100		
126	30.8	12.4	52.4
65	12.7	0.0	33.3

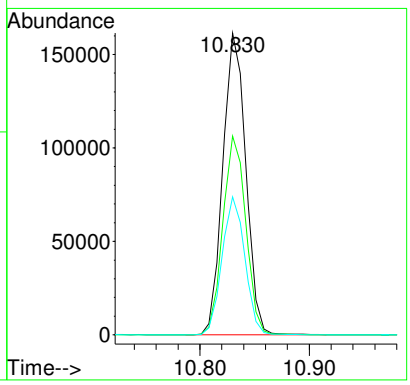


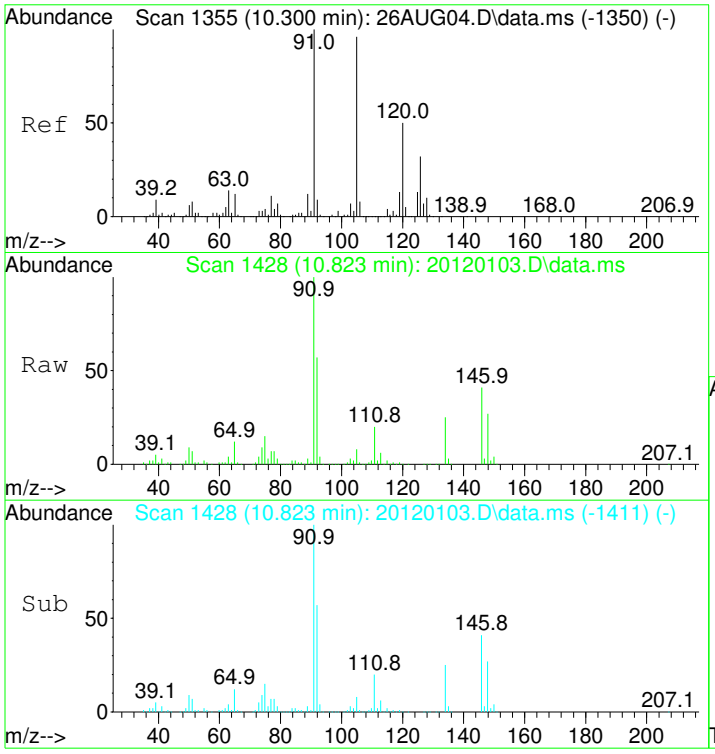


#109
1,2-Dichlorobenzene
Concen: 22.85 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:146 Resp: 235686

Ion	Ratio	Lower	Upper
146	100		
148	65.8	45.6	85.6
111	45.4	24.1	64.1

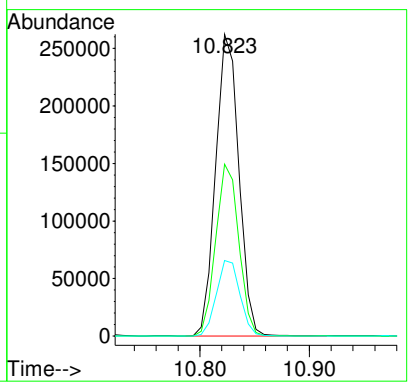


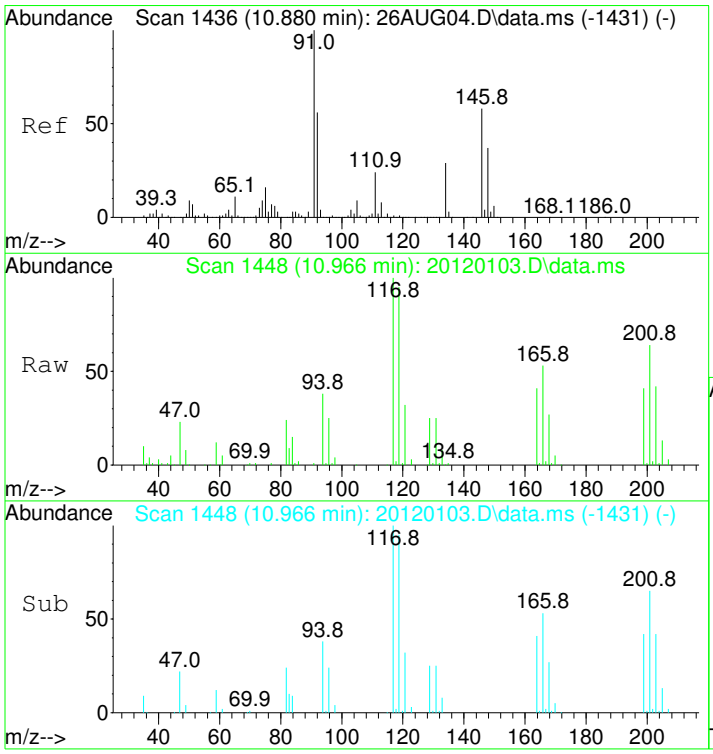


#110
n-Butylbenzene
Concen: 20.96 ug/L
RT: 10.823 min Scan# 1428
Delta R.T. 0.001 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 91 Resp: 388040

Ion	Ratio	Lower	Upper
91	100		
92	56.4	39.3	79.3
134	25.3	7.5	47.5

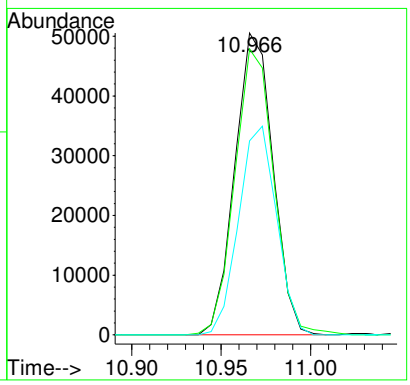


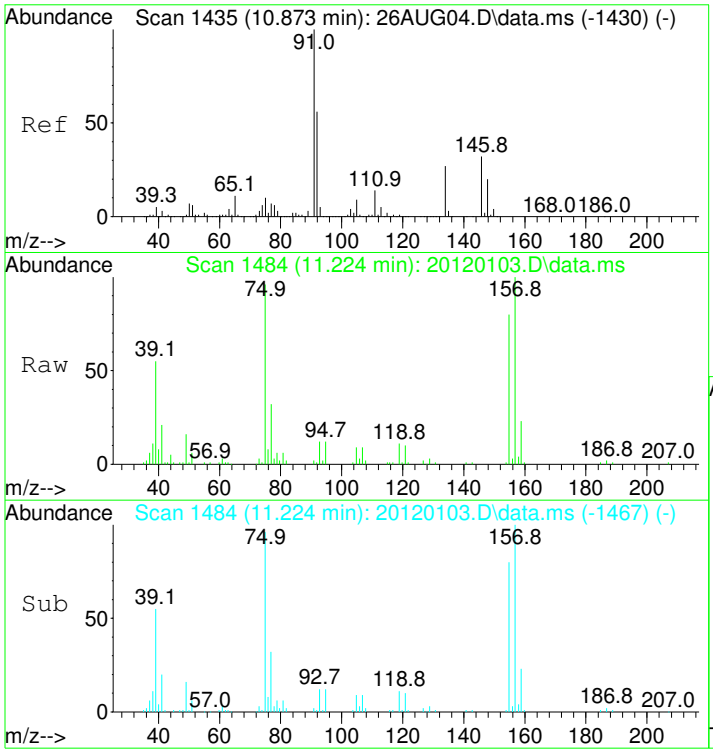


#111
Hexachloroethane
Concen: 19.28 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:117 Resp: 75118

Ion	Ratio	Lower	Upper
117	100		
119	96.6	75.9	115.9
201	68.9	49.2	89.2

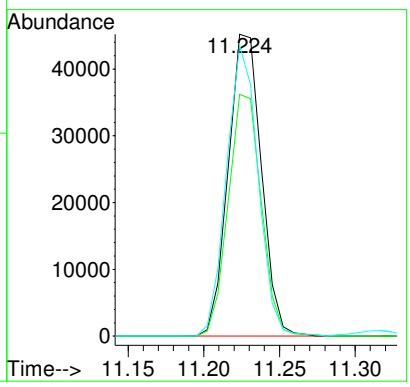


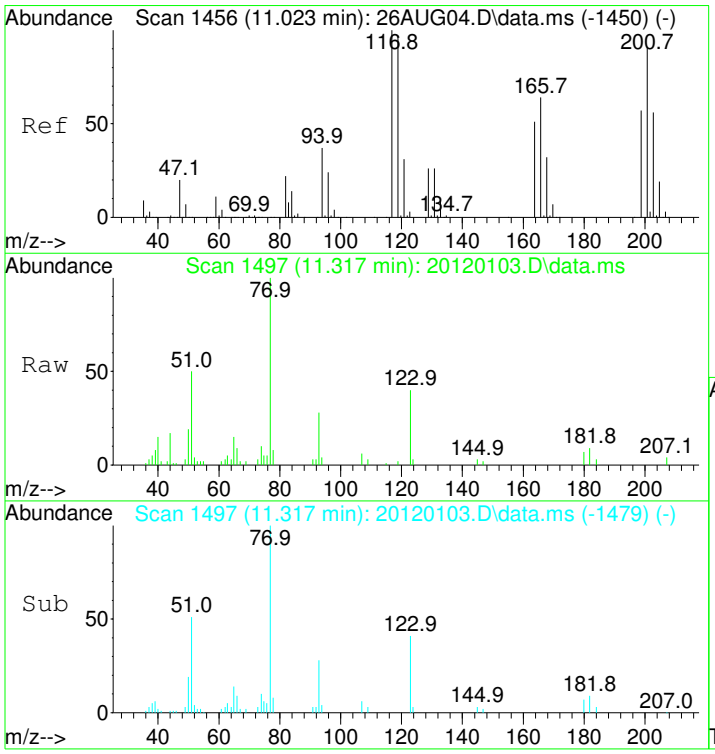


#112
1,2-Dibromo-3-chloropropane
Concen: 23.89 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:157 Resp: 68809

Ion	Ratio	Lower	Upper
157	100		
155	79.7	54.4	94.4
75	91.8	72.1	112.1

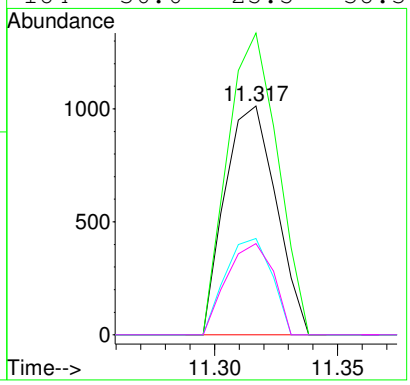


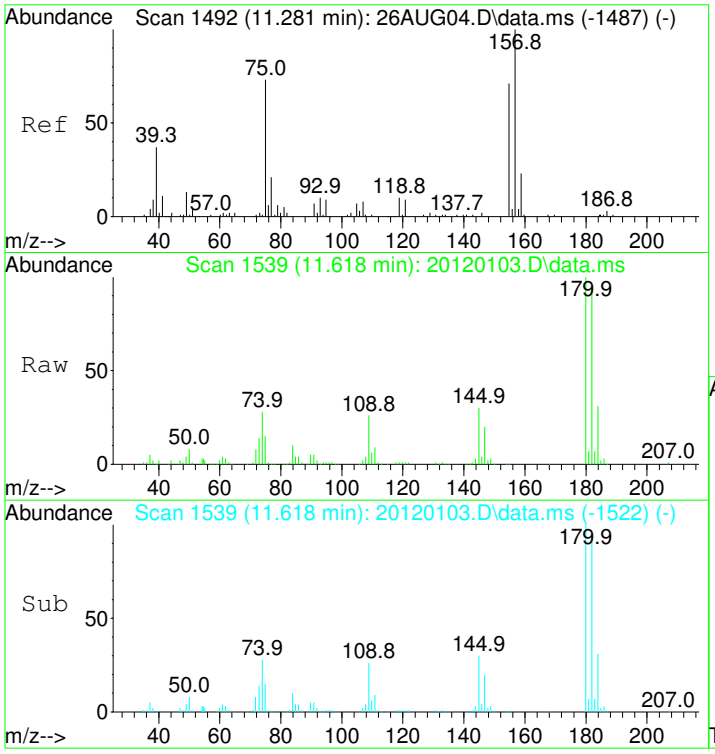


#113
1,3,5-Trichlorobenzene
Concen: Below Cal
RT: 11.317 min Scan# 1497
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:180 Resp: 1463

Ion	Ratio	Lower	Upper
180	100		
182	129.3	76.9	115.3#
145	38.2	24.9	37.3#
184	36.6	25.5	38.3

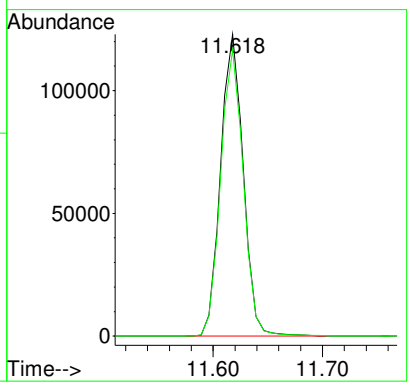


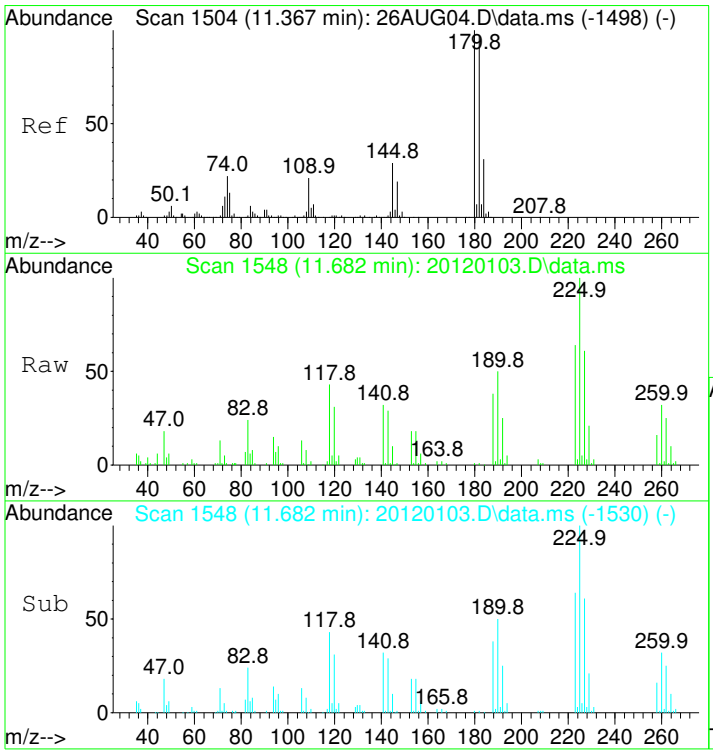


#114
1,2,4-Trichlorobenzene
Concen: 22.60 ug/L
RT: 11.618 min Scan# 1539
Delta R.T. -0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:180 Resp: 176487

Ion	Ratio	Lower	Upper
180	100		
182	95.2	76.7	116.7

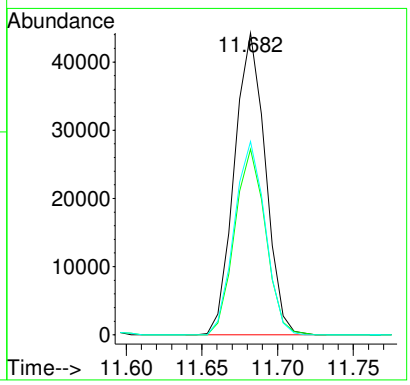


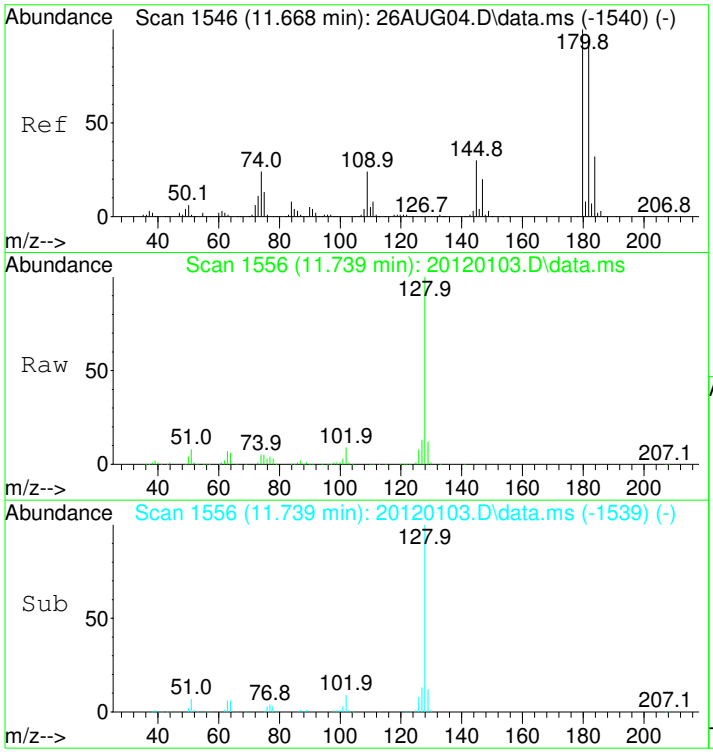


#115
Hexachlorobutadiene
Concen: 23.75 ug/L
RT: 11.682 min Scan# 1548
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:225 Resp: 62802

Ion	Ratio	Lower	Upper
225	100		
227	61.3	50.9	76.3
223	63.8	50.5	75.7

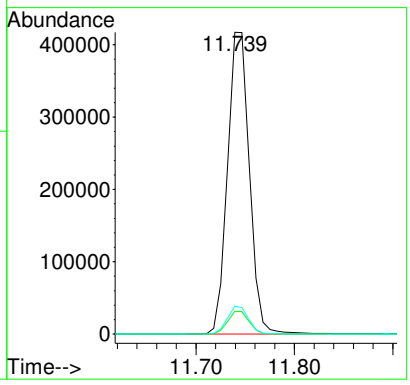


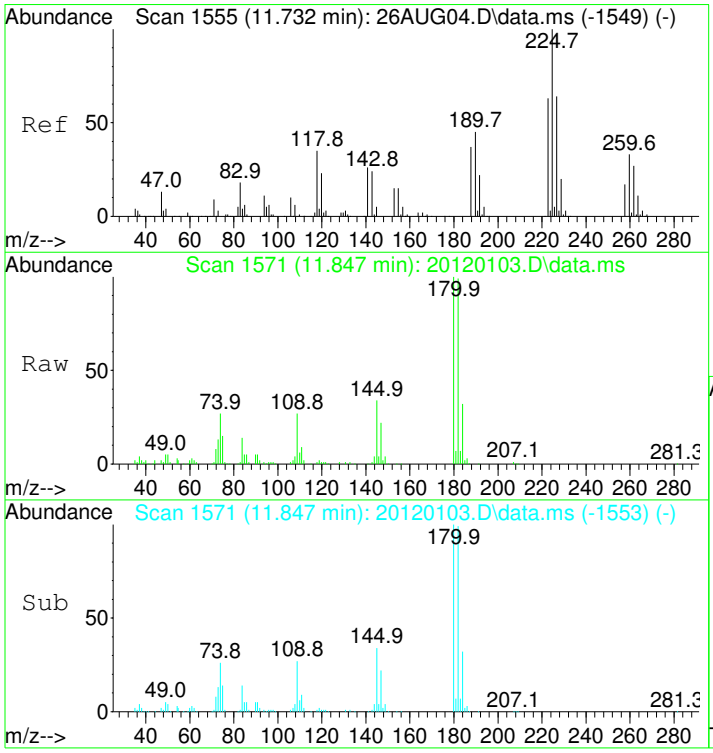


#116
Naphthalene
Concen: 21.62 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:128 Resp: 647333

Ion	Ratio	Lower	Upper
128	100		
126	7.4	0.0	28.2
102	9.0	0.0	30.0

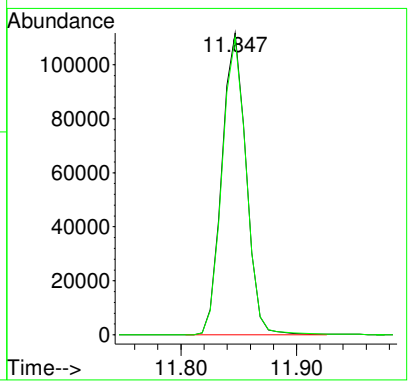


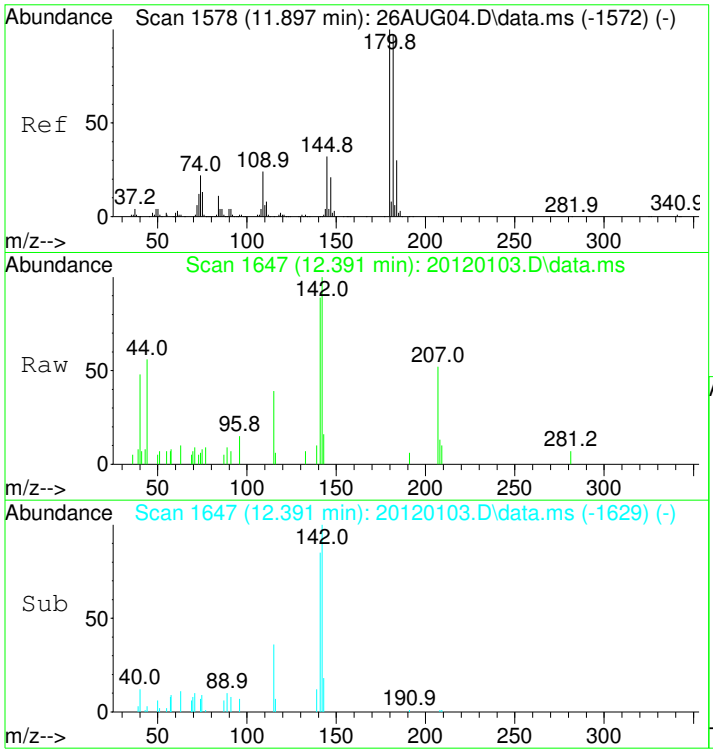


#117
1,2,3-Trichlorobenzene
Concen: 21.66 ug/L
RT: 11.847 min Scan# 1571
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:180 Resp: 161878

Ion	Ratio	Lower	Upper
180	100		
182	98.6	78.4	118.4

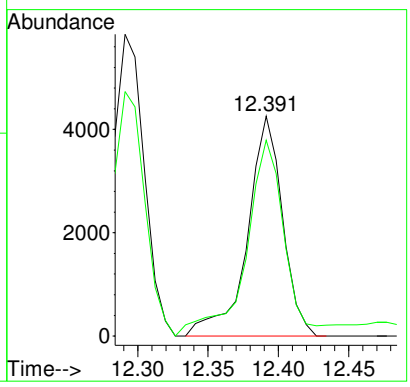


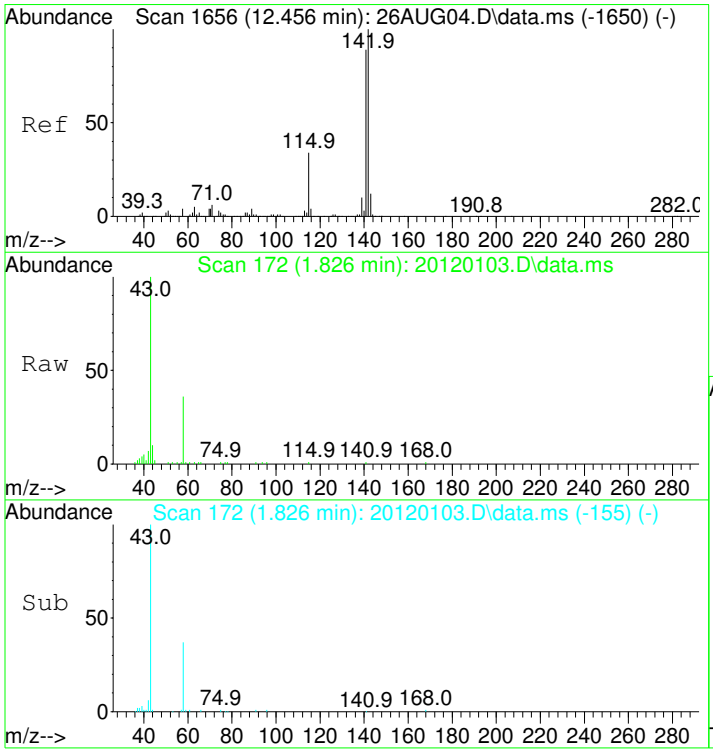


#119
1-Methylnaphthalene
Concen: 0.21 ug/L
RT: 12.391 min Scan# 1647
Delta R.T. 0.007 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion:142 Resp: 7411

Ion	Ratio	Lower	Upper
142	100		
141	96.6	69.8	104.8

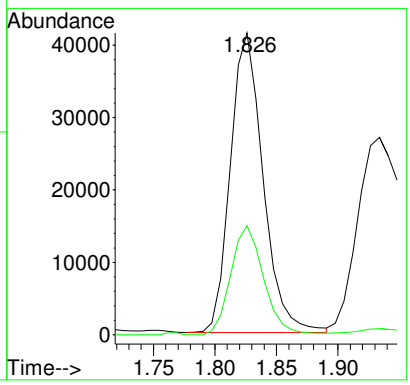


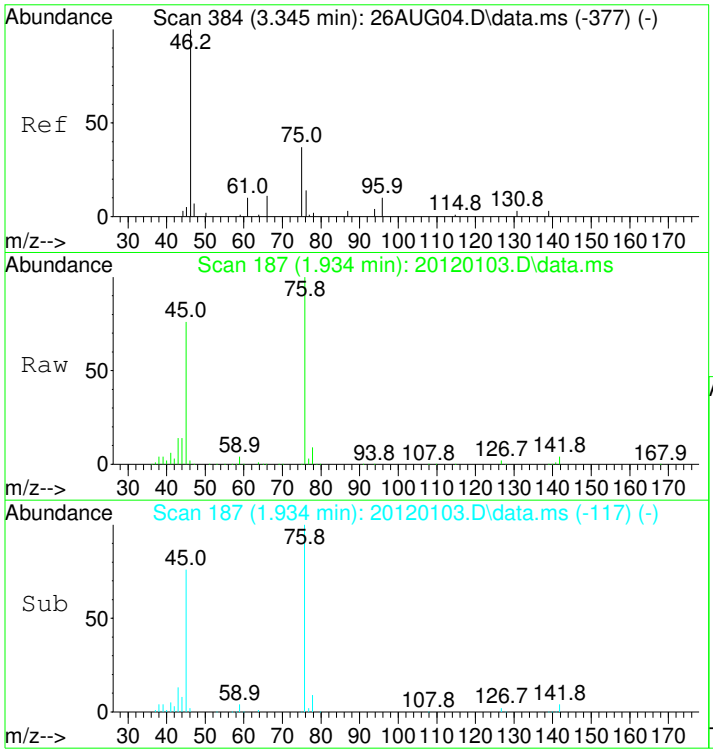


#121
2-Propanone
Concen: 25.91 ug/L
RT: 1.826 min Scan# 172
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 76395

Ion	Ratio	Lower	Upper
43	100		
58	36.5	28.2	42.2

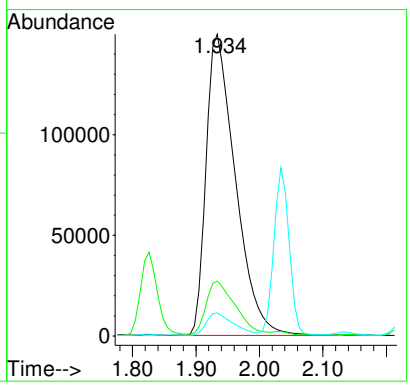


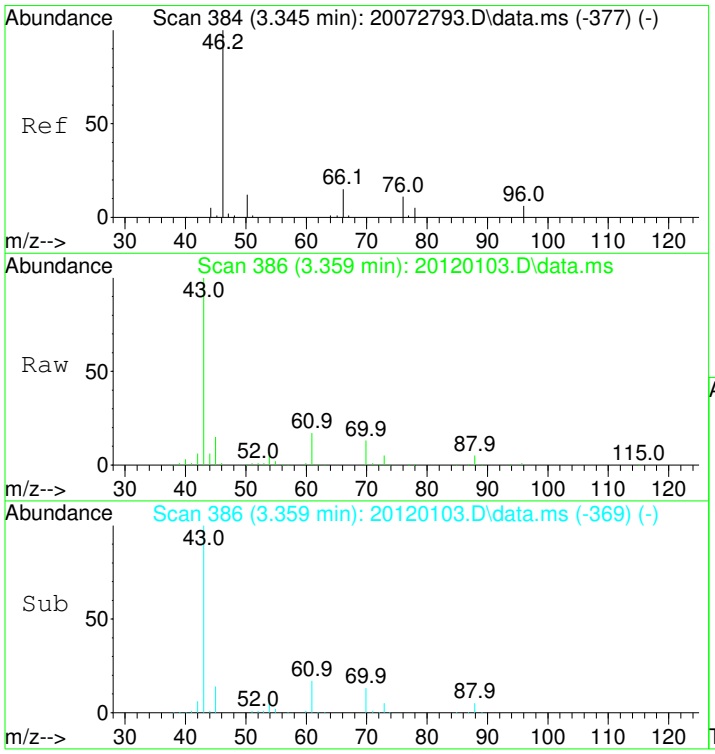


#122
Isopropyl Alcohol
Concen: 480.83 ug/L
RT: 1.934 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 45 Resp: 479071

Ion	Ratio	Lower	Upper
45	100		
43	17.2	14.6	21.8
41	7.0	5.7	8.5

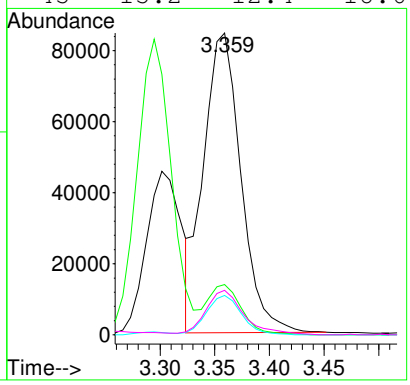


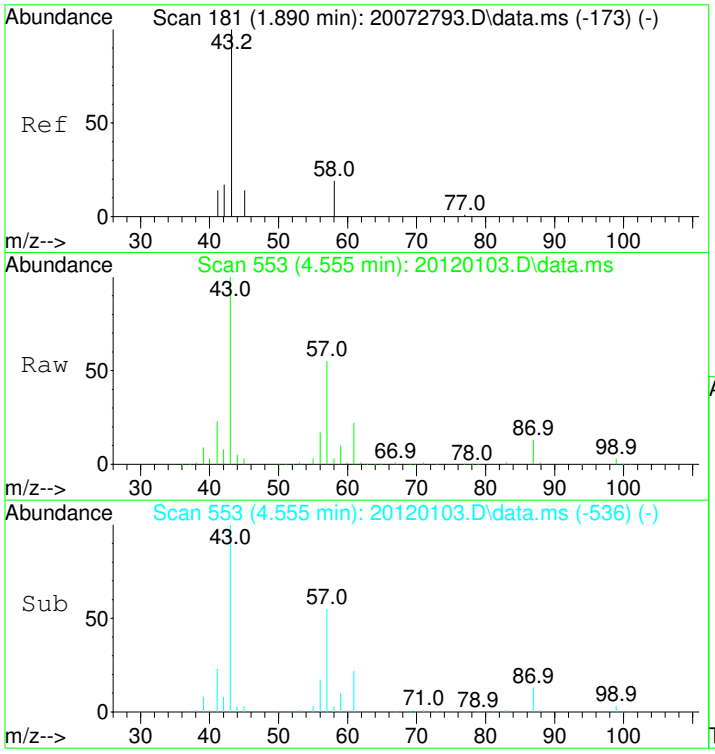


#123
Acetic Ether
Concen: 22.24 ug/L
RT: 3.359 min Scan# 386
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 201305

Ion	Ratio	Lower	Upper
43	100		
61	14.4	11.9	17.9
70	12.4	9.7	14.5
45	15.2	12.4	18.6

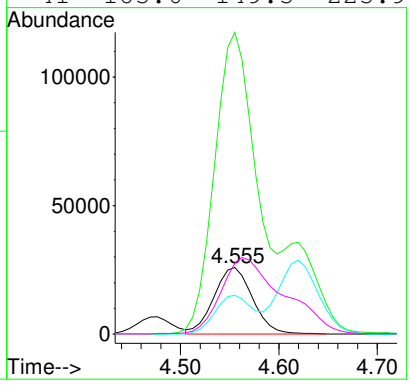


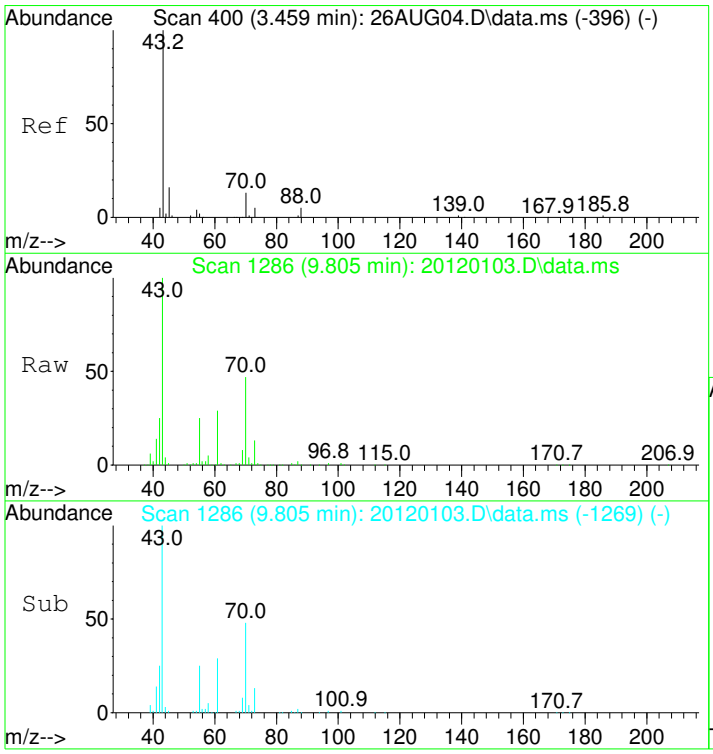


#124
Isopropyl Acetate
Concen: 21.74 ug/L
RT: 4.555 min Scan# 553
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 61 Resp: 70880

Ion	Ratio	Lower	Upper
61	100		
43	489.0	392.6	589.0
87	59.9	46.2	69.2
41	183.6	149.3	223.9

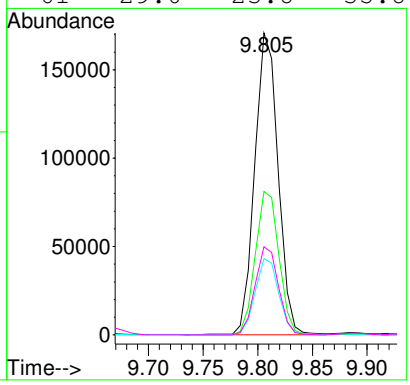




#125
Amyl Acetate
Concen: 21.23 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. 0.000 min
Lab File: 20120103.D
Acq: 1 Dec 2020 10:31 am

Tgt Ion: 43 Resp: 255380

Ion	Ratio	Lower	Upper
43	100		
70	48.0	39.8	59.6
55	25.6	21.8	32.8
61	29.0	23.8	35.8

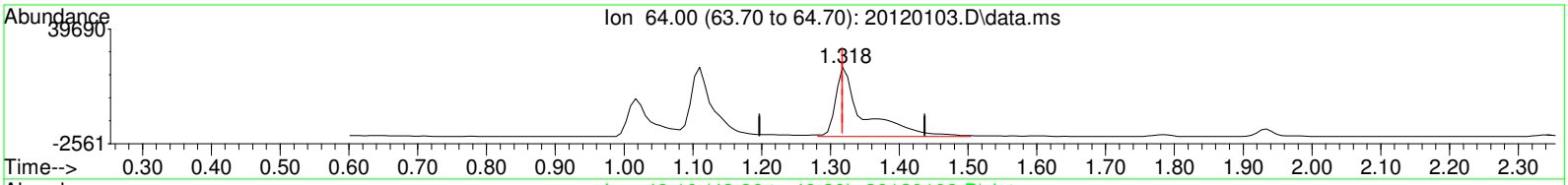


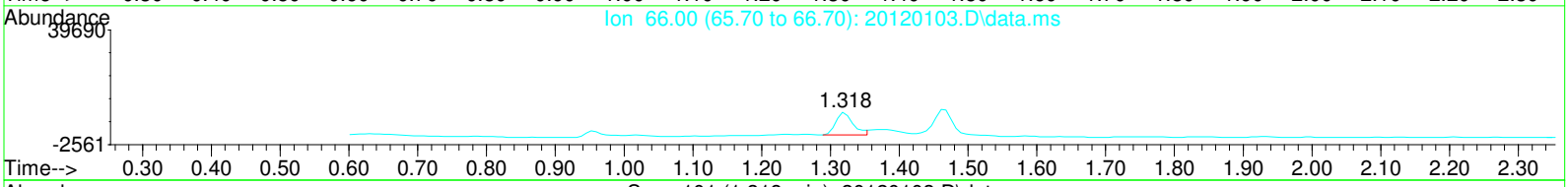
1st /S/ MF 12/02/20

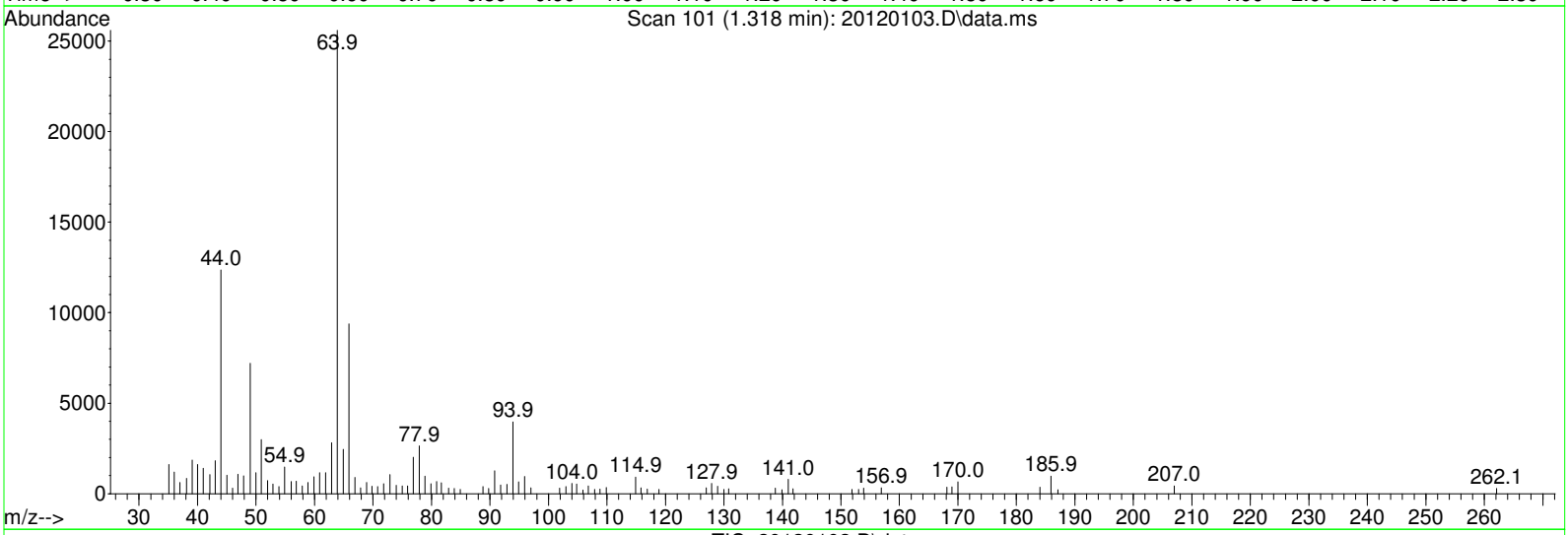
2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120103.D
Acq On : 1 Dec 2020 10:31 am
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21725; 20PPB 200-21728
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 08:45:00 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration







TIC: 20120103.D\data.ms

(8) Chloroethane (C)

1.318min (+ 0.001) 26.63 ug/L m

response 72110

Ion	Exp%	Act%
64.00	100.00	100.00
49.10	11.30	12.04
66.00	22.20	20.54
0.00	0.00	0.00

Manual Integration:

After

M3-Tailing Peak

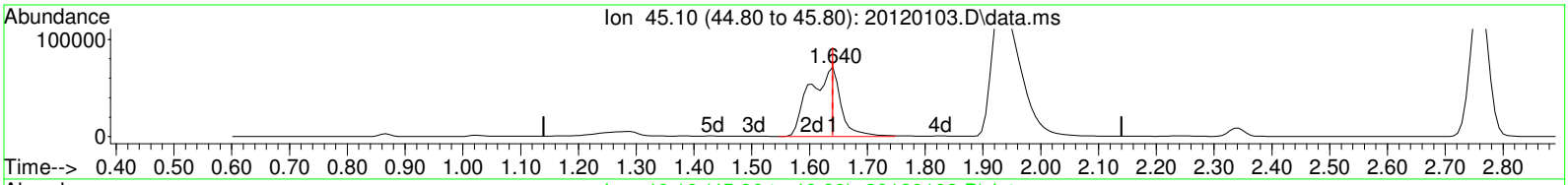
12/02/20

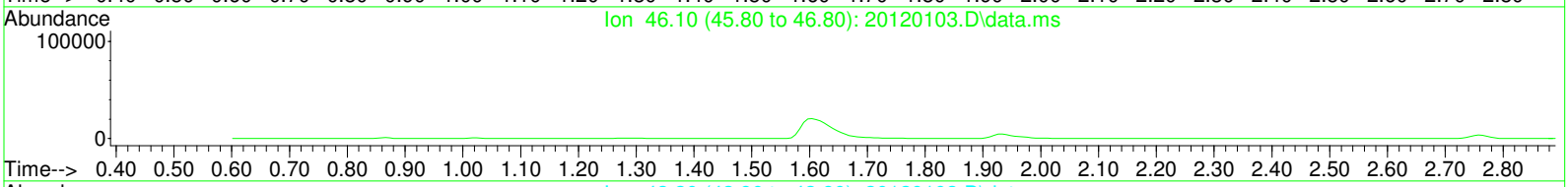
1st /S/ MF 12/02/20

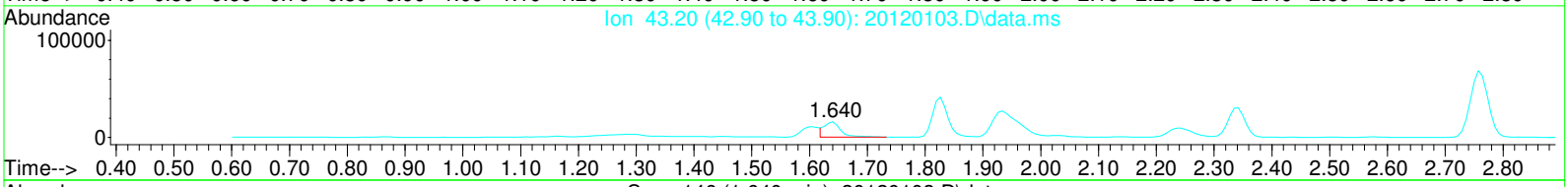
2nd /S/ BG 12/02/20

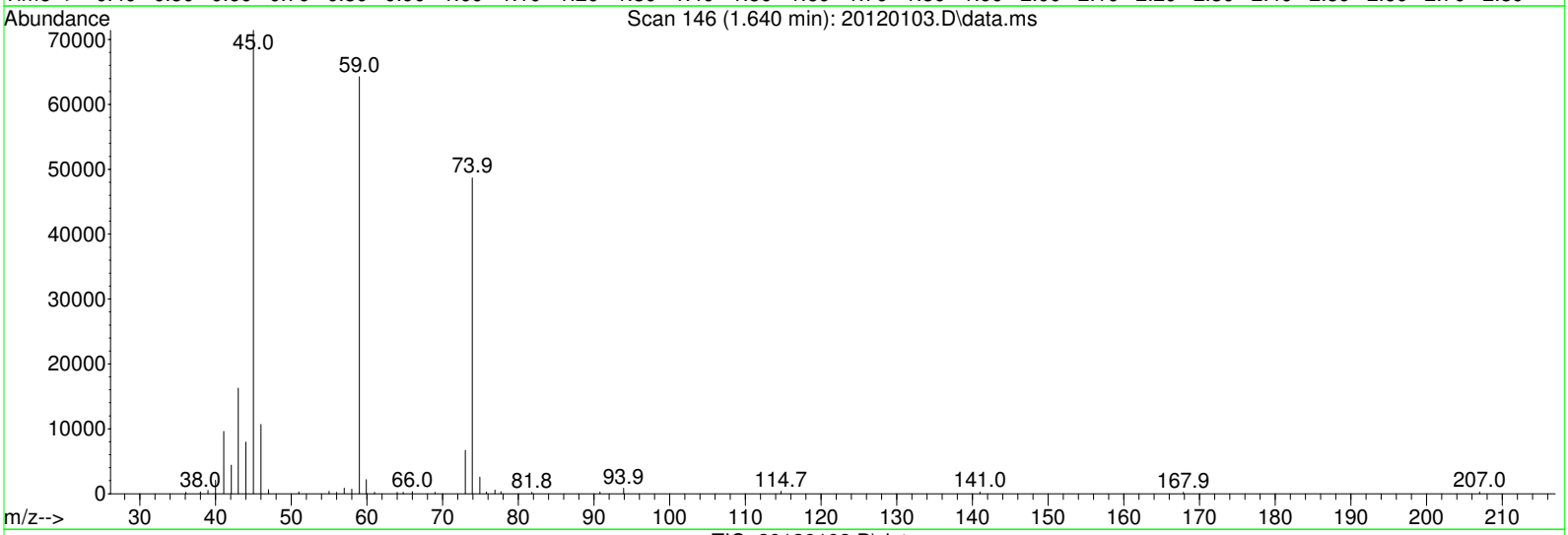
Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120103.D
Acq On : 1 Dec 2020 10:31 am
Operator : MF
Sample : VLCSW1-201201
Misc : IS 200-21725; 20PPB 200-21728
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 02 08:45:00 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration









TIC: 20120103.D\data.ms

(10) Ethanol (C)

1.640min (-0.000) 494.89 ug/L m

response 267119

Ion	Exp%	Act%
45.10	100.00	100.00
46.10	27.30	0.00
43.20	22.40	11.11
0.00	0.00	0.00

Manual Integration:

After

M6-Split Peak Correction

12/02/20

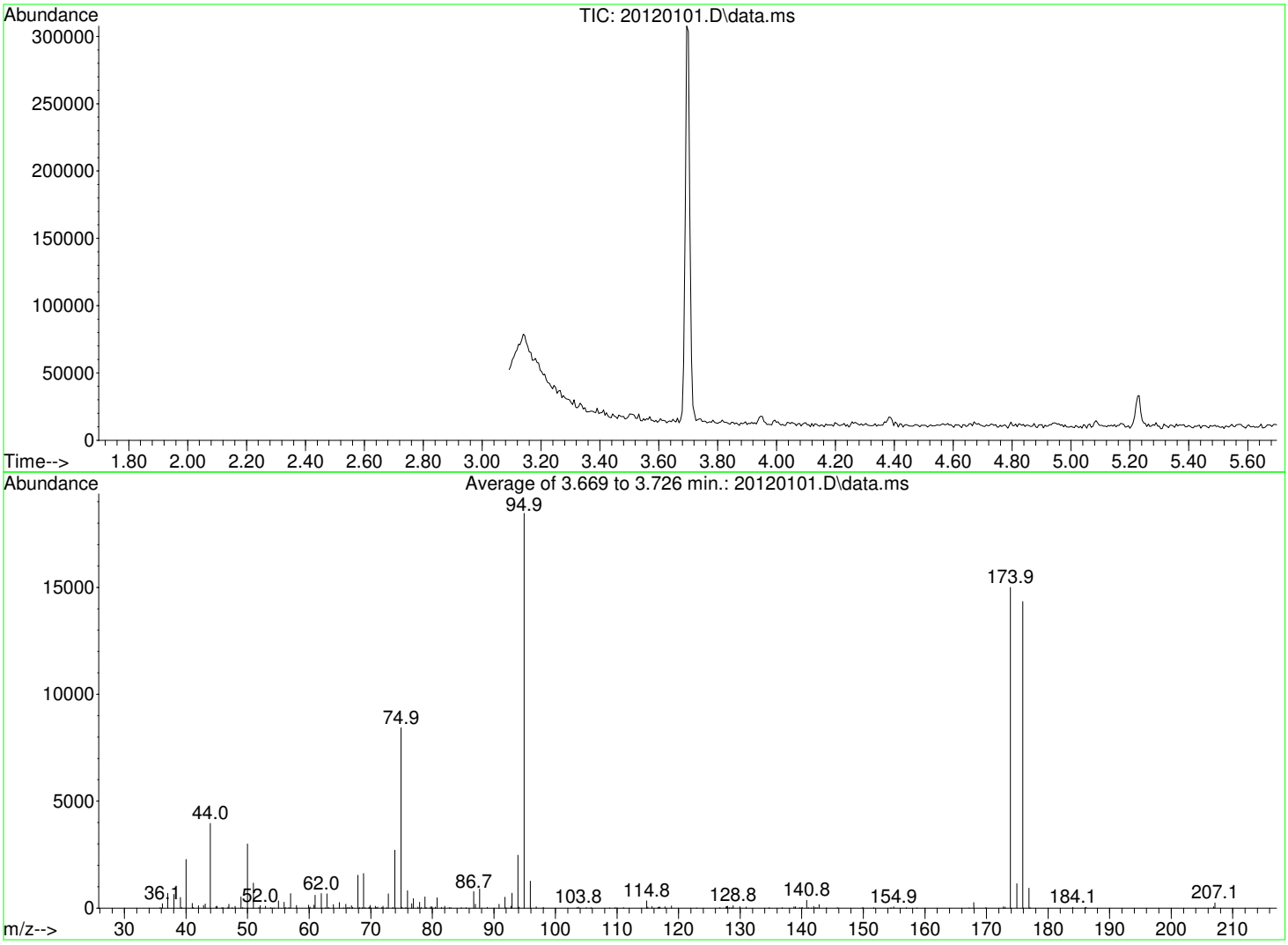
1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120101.D
Acq On : 1 Dec 2020 9:34 am
Operator : MF
Sample : BFB_TUNE1-201201
Misc : BFB 200-21734
ALS Vial : 1 Sample Multiplier: 1

Integration File: 8260.P

Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Title : 8260B/624 Volatile Calibration
Last Update : Sat Nov 28 12:03:56 2020



Spectrum Information: Average of 3.669 to 3.726 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.2	2999	PASS
75	95	30	60	45.7	8435	PASS
95	95	100	100	100.0	18456	PASS
96	95	5	9	6.8	1262	PASS
173	174	0.00	2	0.4	63	PASS
174	95	50	120	81.3	14996	PASS
175	174	5	9	7.6	1138	PASS
176	174	95	101	95.6	14335	PASS
177	176	5	9	6.5	932	PASS

1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	20.000	20.000	0.0	82	0.00
2	C	Dichlorodifluoromethane	40.000	32.440	18.9	67	0.00
3	C	Dichlorofluoromethane	40.000	38.915	2.7	80	0.00
4	CP	Chloromethane	40.000	38.917	2.7	75	0.00
5	C	1,3-Butadiene	40.000	0.000	100.0#	0	0.00
6	C	Vinyl chloride	40.000	38.528	3.7	78	0.00
7	C	Bromomethane	40.000	53.317	-33.3#	112	0.00
8	C	Chloroethane	40.000	45.072	-12.7	92	0.00
9	C	Trichlorofluoromethane	40.000	38.120	4.7	79	0.00
10	C	Ethanol	800.000	864.307	-8.0	89	0.00
11	C	Ethyl ether	40.000	41.366	-3.4	82	0.00
12	C	Acrolein	40.000	44.518	-11.3	93	0.00
13	C	1,1-Dichloroethene	40.000	43.046	-7.6	85	0.00
14	C	1,1,2-Trichlorotrifluoroeth	40.000	41.231	-3.1	88	0.00
15	C	Methyl iodide	40.000	0.000	100.0#	0	0.00
16	C	Acetone	40.000	42.181	-5.5	87	0.00
17	C	Chloroprene	40.000	41.385	-3.5	84	0.00
18	C	Carbon disulfide	40.000	42.522	-6.3	86	0.00
19	C	2-Propanol	800.000	937.599	-17.2	95	0.00
20	C	Allyl chloride	40.000	42.816	-7.0	86	0.00
21	C	Methyl acetate	40.000	41.748	-4.4	84	0.00
22	C	Acetonitrile	40.000	42.819	-7.0	86	0.00
23	C	Methylene chloride	40.000	40.904	-2.3	83	0.00
24	C	trans-1,2-Dichloroethene	40.000	42.778	-6.9	85	0.00
25	C	t-Butanol	200.000	220.773	-10.4	90	0.00
26	C	Acrylonitrile	40.000	43.189	-8.0	90	0.00
27	CP	Methyl tert-butyl ether	40.000	43.124	-7.8	85	0.00
28	C	Hexane	40.000	44.568	-11.4	93	0.00
29	CP	1,1-Dichloroethane	40.000	41.084	-2.7	83	0.00
30	CP	Diisopropyl ether	40.000	42.433	-6.1	84	0.00
31	C	Vinyl acetate	40.000	50.460	-26.2#	108	0.00
32	C	Methylcyclopentane	40.000	42.819	-7.0	86	0.00
33	CP	Ethyl tert butyl ether	40.000	41.538	-3.8	82	0.00
34	C	2,2-Dichloropropane	40.000	42.031	-5.1	84	0.00
35	C	cis-1,2-Dichloroethene	40.000	42.125	-5.3	84	0.00
36	C	2-Butanone	40.000	45.730	-14.3	92	0.00
37	C	Ethyl Acetate	40.000	42.105	-5.3	83	0.00
38	C	Methyl acrylate	40.000	42.961	-7.4	88	0.00
39	C	Propionitrile	40.000	42.594	-6.5	85	0.00
40	C	Bromochloromethane	40.000	41.134	-2.8	84	0.00
41	C	Tetrahydrofuran	40.000	44.030	-10.1	90	0.00
42	C	Methacrylonitrile	40.000	42.546	-6.4	86	0.00
43	C	Chloroform	40.000	41.631	-4.1	84	0.00
44	C	Cyclohexane	40.000	42.197	-5.5	86	0.00
45	I	1,4-Difluorobenzene	20.000	20.000	0.0	81	0.00
46	C	1,1,1-Trichloroethane	40.000	42.946	-7.4	85	0.00
47	S	Dibromofluoromethane	20.000	19.041	4.8	76	0.00
48	C	Carbon tetrachloride	40.000	44.151	-10.4	86	0.00
49	C	1,1-Dichloropropene	40.000	43.553	-8.9	85	0.00
50	S	1,2-Dichloroethane-d4	20.000	18.516	7.4	77	0.00
51	C	1,2-Dichloroethane	40.000	40.557	-1.4	80	0.00
52	CP	Benzene	40.000	43.944	-9.9	85	0.00
53	CP	Tertiaryamylmethylether	40.000	42.633	-6.6	82	0.00

1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
54	C	Isobutyl Alcohol	40.000	42.335	-5.8	81	0.00
55	C	Heptane	40.000	45.522	-13.8	90	0.00
56	C	1,4-Dioxane	4000.000	3941.721	1.5	78	0.00
57	C	Methylcyclohexane	40.000	43.378	-8.4	88	0.00
58	C	n-Butanol	400.000	516.139	-29.0#	106	0.00
59	C	Trichloroethene	40.000	42.523	-6.3	84	0.00
60	C	1,2-Dichloropropane	40.000	41.944	-4.9	83	0.00
61	C	Dibromomethane	40.000	41.406	-3.5	83	0.00
62	C	Methyl methacrylate	40.000	42.620	-6.5	84	0.00
63	C	Bromodichloromethane	40.000	41.454	-3.6	82	0.00
64	C	2-Chloroethyl vinyl ether	40.000	43.640	-9.1	83	0.00
65	C	2-Nitropropane	40.000	43.427	-8.6	88	0.00
66	C	cis-1,3-Dichloropropene	40.000	43.334	-8.3	85	0.00
67	I	Chlorobenzene-d5	20.000	20.000	0.0	83	0.00
68	C	4-Methyl-2-pentanone	40.000	41.596	-4.0	84	0.00
69	S	Toluene-d8	20.000	19.488	2.6	83	0.00
70	CP	Toluene	40.000	43.832	-9.6	86	0.00
71	C	trans-1,3-Dichloropropene	40.000	42.767	-6.9	84	0.00
72	C	Chloropicrin	400.000	0.000	100.0#	0	0.00
73	C	Ethyl methacrylate	40.000	41.696	-4.2	84	0.00
74	C	1,1,2-Trichloroethane	40.000	41.773	-4.4	84	0.00
75	C	Tetrachloroethene	40.000	43.363	-8.4	87	0.00
76	C	1,3-Dichloropropane	40.000	41.359	-3.4	83	0.00
77	C	2-Hexanone	40.000	43.235	-8.1	87	0.00
78	C	Chlorodibromomethane	40.000	41.406	-3.5	85	0.00
79	C	Butyl acetate	40.000	42.762	-6.9	83	0.00
80	C	1,2-Dibromoethane	40.000	39.906	0.2	83	0.00
81	CP	Chlorobenzene	40.000	43.264	-8.2	86	0.00
82	C	1,1,1,2-Tetrachloroethane	40.000	42.178	-5.4	85	0.00
83	CP	Ethylbenzene	40.000	40.815	-2.0	86	0.00
84	CP	m/p-Xylene	80.000	80.416	-0.5	86	0.00
85	C	Nonane	40.000	43.234	-8.1	87	0.00
86	C	Styrene	40.000	41.334	-3.3	87	0.00
87	CP	o-Xylene	40.000	40.368	-0.9	85	0.00
88	C	Cyclohexanone	200.000	231.575	-15.8	89	0.00
89	CP	Bromoform	40.000	39.633	0.9	85	0.00
90	C	Isopropylbenzene	40.000	40.806	-2.0	86	0.00
91	S	Bromofluorobenzene	20.000	19.284	3.6	82	0.00
92	C	Bromobenzene	40.000	42.015	-5.0	82	0.00
93	CP	1,1,2,2-Tetrachloroethane	40.000	44.926	-12.3	88	0.00
94	C	1,2,3-Trichloropropane	40.000	41.559	-3.9	85	0.00
95	C	trans-1,4-Dichloro-2-butene	40.000	42.557	-6.4	85	0.00
96	C	n-Propylbenzene	40.000	40.182	-0.5	85	0.00
97	C	2-Chlorotoluene	40.000	44.909	-12.3	87	0.00
98	C	4-Chlorotoluene	40.000	40.221	-0.6	85	0.00
99	C	1,3,5-Trimethylbenzene	40.000	39.663	0.8	84	0.00
100	C	tert-Butylbenzene	40.000	43.460	-8.7	85	0.00
101	C	1,2,4-Trimethylbenzene	40.000	40.246	-0.6	85	0.00
102	C	sec-Butylbenzene	40.000	41.158	-2.9	87	0.00
103	I	1,4-Dichlorobenzene-d4	20.000	20.000	0.0	82	0.00
104	C	1,3-Dichlorobenzene	40.000	43.766	-9.4	86	0.00
105	C	p-Isopropyltoluene	40.000	46.098	-15.2	87	0.00

1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
106	C	1,4-Dichlorobenzene	40.000	44.333	-10.8	87	0.00
107	C	1,2,3-Trimethylbenzene	40.000	45.013	-12.5	84	0.00
108	C	Benzyl chloride	40.000	41.059	-2.6	85	0.00
109	C	1,2-Dichlorobenzene	40.000	43.367	-8.4	85	0.00
110	C	n-Butylbenzene	40.000	41.955	-4.9	86	0.00
111	C	Hexachloroethane	40.000	39.747	0.6	84	0.00
112	C	1,2-Dibromo-3-chloropropane	40.000	48.393	-21.0#	90	0.00
113	C	1,3,5-Trichlorobenzene	40.000	43.634	-9.1	85	0.00
114	C	1,2,4-Trichlorobenzene	40.000	44.058	-10.1	87	0.00
115	C	Hexachlorobutadiene	40.000	44.515	-11.3	93	0.00
116	C	Naphthalene	40.000	43.662	-9.2	89	0.00
117	C	1,2,3-Trichlorobenzene	40.000	43.181	-8.0	87	0.00
118	C	2-Methylnaphthalene	40.000	44.351	-10.9	90	0.00
119	C	1-Methylnaphthalene	40.000	43.782	-9.5	89	0.00
120	I	Ethyl-d5-Acetate-d3	20.000	20.000	0.0	80	0.00
121	T	2-Propanone	40.000	43.234	-8.1	87	0.00
122	C	Isopropyl Alcohol	800.000	968.435	-21.1#	95	0.00
123	T	Acetic Ether	40.000	42.293	-5.7	83	0.00
124	T	Isopropyl Acetate	40.000	41.070	-2.7	82	0.00
125	T	Amyl Acetate	40.000	41.204	-3.0	82	0.00

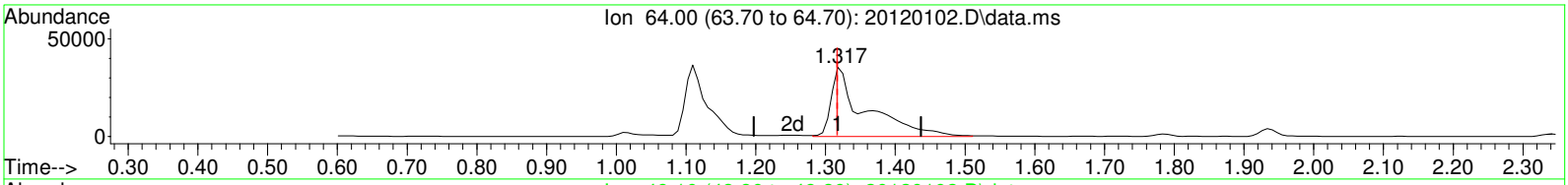
(#) = Out of Range SPCC's out = 0 CCC's out = 8

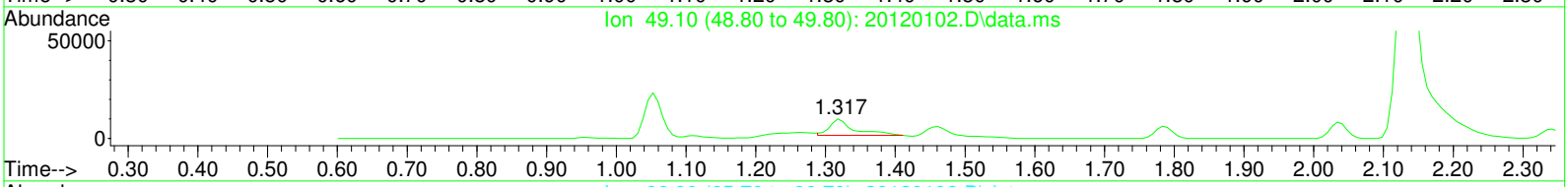
1st /S/ MF 12/02/20

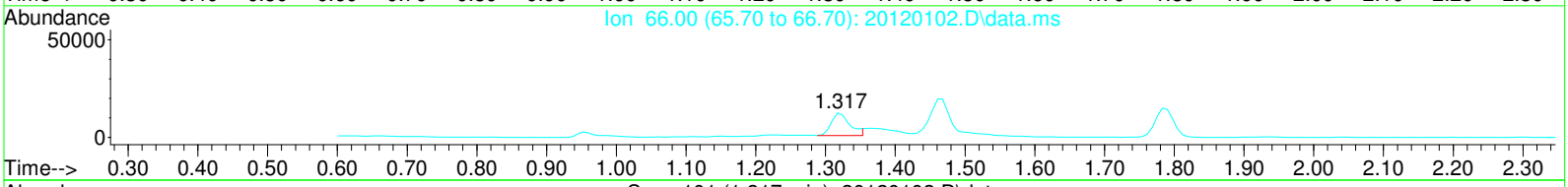
2nd /S/ BG 12/02/20

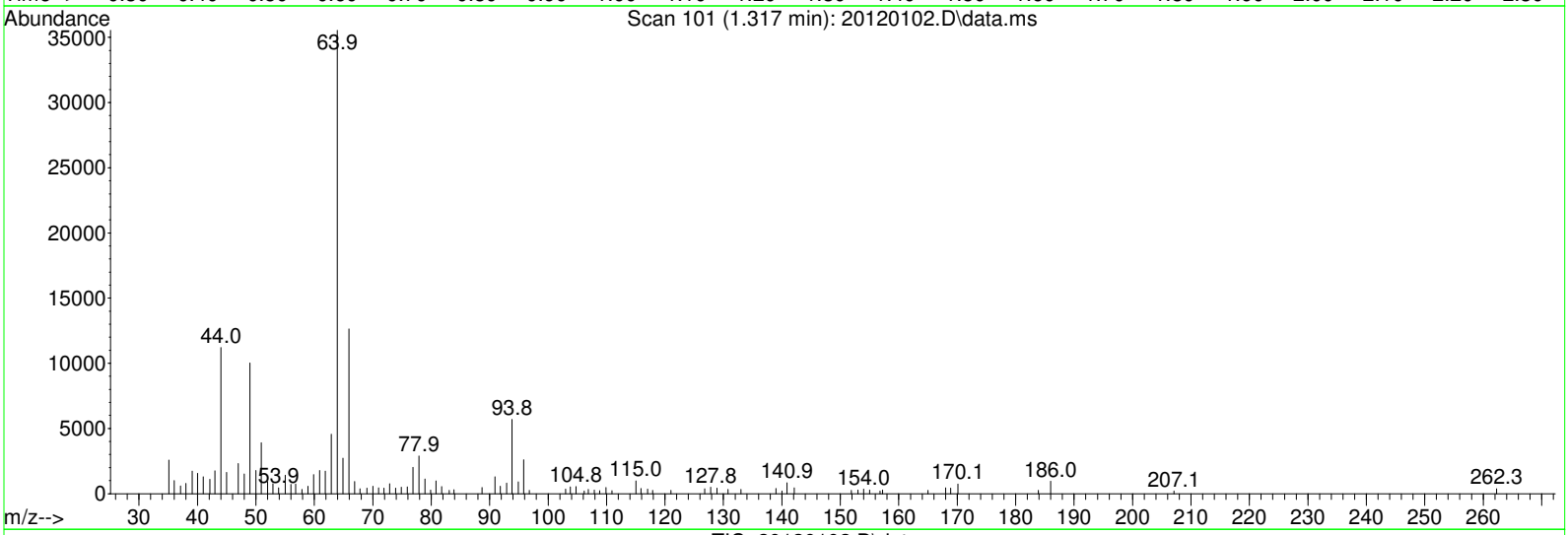
Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 08:44:48 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration









TIC: 20120102.D\data.ms

(8) Chloroethane (C)

1.317min (+ 0.000) 45.07 ug/L m

response 121340

Ion	Exp%	Act%
64.00	100.00	100.00
49.10	11.30	16.21
66.00	22.20	17.88
0.00	0.00	0.00

Manual Integration:

After

M3-Tailing Peak

12/02/20

Evaluate Continuing Calibration Report

1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	82	0.00
2	C	Dichlorodifluoromethane	0.518	0.412	20.5#	67	0.00
3	C	Dichlorofluoromethane	1.355	1.101	18.7	80	0.00
4	CP	Chloromethane	1.231	1.067	13.3	75	0.00
5	C	1,3-Butadiene	0.000	0.002	0.0	0#	0.00
6	C	Vinyl chloride	0.712	0.645	9.4	78	0.00
7	C	Bromomethane	0.207	0.128	38.2#	112	0.00
8	C	Chloroethane	0.279	0.334	-19.7	92	0.00
9	C	Trichlorofluoromethane	0.792	0.755	4.7	79	0.00
10	C	Ethanol	0.072	0.061	15.3	89	0.00
11	C	Ethyl ether	0.514	0.493	4.1	82	0.00
12	C	Acrolein	0.106	0.018	83.0#	93	0.00
13	C	1,1-Dichloroethene	0.829	0.791	4.6	85	0.00
14	C	1,1,2-Trichlorotrifluoroeth	0.369	0.380	-3.0	88	0.00
15	C	Methyl iodide	0.000	0.089	0.0	0#	0.00
16	C	Acetone	0.455	0.349	23.3#	87	0.00
17	C	Chloroprene	0.896	0.807	9.9	84	0.00
18	C	Carbon disulfide	1.736	1.564	9.9	86	0.00
19	C	2-Propanol	0.153	0.131	14.4	95	0.00
20	C	Allyl chloride	0.906	0.903	0.3	86	0.00
21	C	Methyl acetate	0.921	0.797	13.5	84	0.00
22	C	Acetonitrile	0.965	0.903	6.4	86	0.00
23	C	Methylene chloride	0.864	0.791	8.4	83	0.00
24	C	trans-1,2-Dichloroethene	0.857	0.775	9.6	85	0.00
25	C	t-Butanol	0.264	0.246	6.8	90	0.00
26	C	Acrylonitrile	0.420	0.413	1.7	90	0.00
27	CP	Methyl tert-butyl ether	1.983	1.776	10.4	85	0.00
28	C	Hexane	0.803	0.745	7.2	93	0.00
29	CP	1,1-Dichloroethane	1.193	1.070	10.3	83	0.00
30	CP	Diisopropyl ether	1.801	1.621	10.0	84	0.00
31	C	Vinyl acetate	0.132	0.157	-18.9	108	0.00
32	C	Methylcyclopentane	1.320	1.220	7.6	86	0.00
33	CP	Ethyl tert butyl ether	1.980	1.811	8.5	82	0.00
34	C	2,2-Dichloropropane	1.021	0.901	11.8	84	0.00
35	C	cis-1,2-Dichloroethene	1.025	0.924	9.9	84	0.00
36	C	2-Butanone	0.663	0.575	13.3	92	0.00
37	C	Ethyl Acetate	1.170	1.030	12.0	83	0.00
38	C	Methyl acrylate	1.025	0.939	8.4	88	0.00
39	C	Propionitrile	0.056	0.059	-5.4	85	0.00
40	C	Bromochloromethane	0.558	0.467	16.3	84	0.00
41	C	Tetrahydrofuran	0.476	0.407	14.5	90	0.00
42	C	Methacrylonitrile	0.874	0.781	10.6	86	0.00
43	C	Chloroform	1.225	1.108	9.6	84	0.00
44	C	Cyclohexane	1.214	0.893	26.4#	86	0.00
45	I	1,4-Difluorobenzene	1.000	1.000	0.0	81	0.00
46	C	1,1,1-Trichloroethane	0.575	0.526	8.5	85	0.00
47	S	Dibromofluoromethane	0.320	0.304	5.0	76	0.00
48	C	Carbon tetrachloride	0.473	0.464	1.9	86	0.00
49	C	1,1-Dichloropropene	0.501	0.450	10.2	85	0.00
50	S	1,2-Dichloroethane-d4	0.387	0.359	7.2	77	0.00
51	C	1,2-Dichloroethane	0.540	0.466	13.7	80	0.00
52	CP	Benzene	1.491	1.316	11.7	85	0.00
53	CP	Tertiaryamylmethylether	1.097	0.971	11.5	82	0.00

1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	C	Isobutyl Alcohol	1.027	0.991	3.5	81	0.00
55	C	Heptane	0.413	0.362	12.3	90	0.00
56	C	1,4-Dioxane	0.012	0.011	8.3	78	0.00
57	C	Methylcyclohexane	0.562	0.523	6.9	88	0.00
58	C	n-Butanol	0.027	0.035	-29.6#	106	0.00
59	C	Trichloroethene	0.378	0.357	5.6	84	0.00
60	C	1,2-Dichloropropane	0.412	0.353	14.3	83	0.00
61	C	Dibromomethane	0.272	0.247	9.2	83	0.00
62	C	Methyl methacrylate	0.473	0.413	12.7	84	0.00
63	C	Bromodichloromethane	0.523	0.475	9.2	82	0.00
64	C	2-Chloroethyl vinyl ether	0.195	0.183	6.2	83	0.00
65	C	2-Nitropropane	0.198	0.200	-1.0	88	0.00
66	C	cis-1,3-Dichloropropene	0.658	0.609	7.4	85	0.00
67	I	Chlorobenzene-d5	1.000	1.000	0.0	83	0.00
68	C	4-Methyl-2-pentanone	0.674	0.610	9.5	84	0.00
69	S	Toluene-d8	1.238	1.206	2.6	83	0.00
70	CP	Toluene	1.645	1.412	14.2	86	0.00
71	C	trans-1,3-Dichloropropene	0.665	0.592	11.0	84	0.00
72	C	Chloropicrin	0.000	0.015	0.0	0#	0.00
73	C	Ethyl methacrylate	0.739	0.629	14.9	84	0.00
74	C	1,1,2-Trichloroethane	0.426	0.369	13.4	84	0.00
75	C	Tetrachloroethene	0.372	0.353	5.1	87	0.00
76	C	1,3-Dichloropropane	0.728	0.607	16.6	83	0.00
77	C	2-Hexanone	0.563	0.501	11.0	87	0.00
78	C	Chlorodibromomethane	0.430	0.401	6.7	85	0.00
79	C	Butyl acetate	0.926	0.781	15.7	83	0.00
80	C	1,2-Dibromoethane	0.449	0.348	22.5#	83	0.00
81	CP	Chlorobenzene	1.031	0.896	13.1	86	0.00
82	C	1,1,1,2-Tetrachloroethane	0.383	0.339	11.5	85	0.00
83	CP	Ethylbenzene	1.753	1.424	18.8	86	0.00
84	CP	m/p-Xylene	1.389	1.110	20.1#	86	0.00
85	C	Nonane	0.254	0.191	24.8#	87	0.00
86	C	Styrene	1.102	0.984	10.7	87	0.00
87	CP	o-Xylene	1.517	1.253	17.4	85	0.00
88	C	Cyclohexanone	0.068	0.059	13.2	89	0.00
89	CP	Bromoform	0.298	0.295	1.0	85	0.00
90	C	Isopropylbenzene	1.744	1.450	16.9	86	0.00
91	S	Bromofluorobenzene	0.503	0.485	3.6	82	0.00
92	C	Bromobenzene	0.768	0.645	16.0	82	0.00
93	CP	1,1,2,2-Tetrachloroethane	0.776	0.654	15.7	88	0.00
94	C	1,2,3-Trichloropropane	0.225	0.191	15.1	85	0.00
95	C	trans-1,4-Dichloro-2-butene	0.228	0.205	10.1	85	0.00
96	C	n-Propylbenzene	2.136	1.717	19.6	85	0.00
97	C	2-Chlorotoluene	1.237	1.026	17.1	87	0.00
98	C	4-Chlorotoluene	1.391	1.176	15.5	85	0.00
99	C	1,3,5-Trimethylbenzene	1.469	1.198	18.4	84	0.00
100	C	tert-Butylbenzene	1.059	0.872	17.7	85	0.00
101	C	1,2,4-Trimethylbenzene	1.542	1.256	18.5	85	0.00
102	C	sec-Butylbenzene	1.778	1.499	15.7	87	0.00
103	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	82	0.00
104	C	1,3-Dichlorobenzene	1.711	1.486	13.2	86	0.00
105	C	p-Isopropyltoluene	2.901	2.552	12.0	87	0.00

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : C:\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
106	C	1,4-Dichlorobenzene	1.662	1.449	12.8	87	0.00
107	C	1,2,3-Trimethylbenzene	3.005	2.491	17.1	84	0.00
108	C	Benzyl chloride	2.705	2.384	11.9	85	0.00
109	C	1,2-Dichlorobenzene	1.703	1.436	15.7	85	0.00
110	C	n-Butylbenzene	2.523	2.360	6.5	86	0.00
111	C	Hexachloroethane	0.505	0.502	0.6	84	0.00
112	C	1,2-Dibromo-3-chloropropane	0.449	0.449	0.0	90	0.00
113	C	1,3,5-Trichlorobenzene	1.163	1.085	6.7	85	0.00
114	C	1,2,4-Trichlorobenzene	1.232	1.107	10.1	87	0.00
115	C	Hexachlorobutadiene	0.382	0.380	0.5	93	0.00
116	C	Naphthalene	4.528	3.900	13.9	89	0.00
117	C	1,2,3-Trichlorobenzene	1.156	1.038	10.2	87	0.00
118	C	2-Methylnaphthalene	2.607	2.415	7.4	90	0.00
119	C	1-Methylnaphthalene	2.359	2.197	6.9	89	0.00
120	I	Ethyl-d5-Acetate-d3	1.000	1.000	0.0	80	0.00
121	T	2-Propanone	0.869	0.670	22.9	87	0.00
122	C	Isopropyl Alcohol	0.292	0.250	14.4	95	0.00
123	T	Acetic Ether	2.130	1.976	7.2	83	0.00
124	T	Isopropyl Acetate	0.751	0.693	7.7	82	0.00
125	T	Amyl Acetate	2.929	2.484	15.2	82	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 9

Quantitation Report (QT Reviewed)

1st /S/ MF 12/02/20

2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.982	168	181813	20.00	ug/L		0.00
45) 1,4-Difluorobenzene	5.114	114	323957	20.00	ug/L		0.00
67) Chlorobenzene-d5	9.196	117	315233	20.00	ug/L		0.00
103) 1,4-Dichlorobenzene-d4	10.636	152	155580	20.00	ug/L		0.00
120) Ethyl-d5-Acetate-d3	3.244	46	94822	20.00	ug/L		0.00
System Monitoring Compounds							
47) Dibromofluoromethane	3.910	111	98576	19.04	ug/L		0.00
Spiked Amount 20.000	Range 85 - 115		Recovery = 95.20%				
50) 1,2-Dichloroethane-d4	4.362	65	116214	18.52	ug/L		0.00
Spiked Amount 20.000	Range 75 - 120		Recovery = 92.60%				
69) Toluene-d8	7.836	98	380243	19.49	ug/L		0.00
Spiked Amount 20.000	Range 85 - 110		Recovery = 97.45%				
91) Bromofluorobenzene	9.992	95	152818	19.28	ug/L		0.00
Spiked Amount 20.000	Range 80 - 110		Recovery = 96.40%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.952	85	149971	32.44	ug/L		98
3) Dichlorofluoromethane	1.446	67	400508	38.92	ug/L		99
4) Chloromethane	1.052	50	387864	38.92	ug/L		99
6) Vinyl chloride	1.110	62	234611	38.53	ug/L		99
7) Bromomethane	1.267	96	46688	53.32	ug/L		94
8) Chloroethane	1.317	64	121340m	45.07	ug/L		
9) Trichlorofluoromethane	1.468	101	274546	38.12	ug/L		99
10) Ethanol	1.640	45	441565	864.31	ug/L		97
11) Ethyl ether	1.640	59	179094	41.37	ug/L		98
12) Acrolein	1.733	56	6618	44.52	ug/L	#	1
13) 1,1-Dichloroethene	1.783	61	287734	43.05	ug/L		98
14) 1,1,2-Trichlorotrifluo...	1.790	151	138129	41.23	ug/L		97
16) Acetone	1.826	43	127085	42.18	ug/L		98
17) Chloroprene	2.786	53	293272	41.38	ug/L		96
18) Carbon disulfide	1.933	76	568674	42.52	ug/L		100
19) 2-Propanol	1.933	45	950109	937.60	ug/L		98
20) Allyl chloride	2.034	41	328265	42.82	ug/L		97
21) Methyl acetate	2.034	43	289663	41.75	ug/L		99
22) Acetonitrile	2.034	41	328265	42.82	ug/L		97
23) Methylene chloride	2.134	49	287672	40.90	ug/L		99
24) trans-1,2-Dichloroethene	2.342	61	281678	42.78	ug/L		99
25) t-Butanol	2.241	59	447504	220.77	ug/L		99
26) Acrylonitrile	2.320	53	150298	43.19	ug/L		100
27) Methyl tert-butyl ether	2.342	73	645867	43.12	ug/L		99
28) Hexane	2.571	57	270786	44.57	ug/L		98
29) 1,1-Dichloroethane	2.721	63	389139	41.08	ug/L		100
30) Diisopropyl ether	2.757	45	589374	42.43	ug/L		89
31) Vinyl acetate	2.728	86	56935	50.46	ug/L	#	71
32) Methylcyclopentane	3.165	56	443711	42.82	ug/L		97
33) Ethyl tert butyl ether	3.122	59	658522	41.54	ug/L		100
34) 2,2-Dichloropropane	3.294	77	327450	42.03	ug/L		97
35) cis-1,2-Dichloroethene	3.294	61	336052	42.12	ug/L		99
36) 2-Butanone	3.301	43	208998	45.73	ug/L		99
37) Ethyl Acetate	3.359	43	374711	42.11	ug/L		100
38) Methyl acrylate	3.402	55	341595	42.96	ug/L		100
39) Propionitrile	3.960	54	21545	42.59	ug/L		87
40) Bromochloromethane	3.567	49	169812	41.13	ug/L		98
41) Tetrahydrofuran	3.588	42	148090	44.03	ug/L		99
42) Methacrylonitrile	3.545	41	284140	42.55	ug/L		99
43) Chloroform	3.710	83	402768	41.63	ug/L		98

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Cyclohexane	3.960	56	324829	42.20	ug/L		98
46) 1,1,1-Trichloroethane	3.882	97	340744	42.95	ug/L		97
48) Carbon tetrachloride	4.075	117	300615	44.15	ug/L		99
49) 1,1-Dichloropropene	4.097	75	291548	43.55	ug/L		100
51) 1,2-Dichloroethane	4.476	62	301875	40.56	ug/L		96
52) Benzene	4.369	78	852472	43.94	ug/L		99
53) Tertiaryamylmethylether	4.619	73	629073	42.63	ug/L	#	80
54) Isobutyl Alcohol	4.555	43	642265	42.33	ug/L		99
55) Heptane	4.899	43	234536	45.52	ug/L		99
56) 1,4-Dioxane	6.195	88	682090	3941.72	ug/L		100
57) Methylcyclohexane	5.873	83	339115	43.38	ug/L		99
58) n-Butanol	5.565	56	228148	516.14	ug/L		99
59) Trichloroethene	5.479	130	231580	42.52	ug/L		100
60) 1,2-Dichloropropane	5.973	63	228996	41.94	ug/L		98
61) Dibromomethane	6.131	93	160110	41.41	ug/L		99
62) Methyl methacrylate	6.245	41	267738	42.62	ug/L		97
63) Bromodichloromethane	6.589	83	307547	41.45	ug/L		100
64) 2-Chloroethyl vinyl ether	7.320	43	118376	43.64	ug/L		97
65) 2-Nitropropane	7.126	43	129403	43.43	ug/L		99
66) cis-1,3-Dichloropropene	7.499	75	394530	43.33	ug/L		100
68) 4-Methyl-2-pentanone	7.771	43	384421	41.60	ug/L		99
70) Toluene	7.922	91	889954	43.83	ug/L		100
71) trans-1,3-Dichloropropene	8.251	75	373473	42.77	ug/L		98
73) Ethyl methacrylate	8.358	69	396592	41.70	ug/L		98
74) 1,1,2-Trichloroethane	8.437	97	232922	41.77	ug/L		99
75) Tetrachloroethene	8.459	166	222491	43.36	ug/L		98
76) 1,3-Dichloropropane	8.573	76	382400	41.36	ug/L		99
77) 2-Hexanone	8.666	43	315850	43.23	ug/L		98
78) Chlorodibromomethane	8.752	129	253117	41.41	ug/L		98
79) Butyl acetate	8.803	43	492433	42.76	ug/L		99
80) 1,2-Dibromoethane	8.824	107	219265	39.91	ug/L		99
81) Chlorobenzene	9.218	112	565045	43.26	ug/L		99
82) 1,1,1,2-Tetrachloroethane	9.297	131	213431	42.18	ug/L		99
83) Ethylbenzene	9.304	91	898095	40.81	ug/L		100
84) m/p-Xylene	9.397	91	1399989	80.42	ug/L		99
85) Nonane	9.461	43	120122	43.23	ug/L		96
86) Styrene	9.669	104	620616	41.33	ug/L		98
87) o-Xylene	9.655	91	790272	40.37	ug/L		99
88) Cyclohexanone	9.934	55	184442	231.57	ug/L		97
89) Bromoform	9.777	173	186162	39.63	ug/L		100
90) Isopropylbenzene	9.891	105	914187	40.81	ug/L		99
92) Bromobenzene	10.063	77	406474	42.02	ug/L		97
93) 1,1,2,2-Tetrachloroethane	10.092	83	412042	44.93	ug/L		99
94) 1,2,3-Trichloropropane	10.113	110	120459	41.56	ug/L		99
95) trans-1,4-Dichloro-2-b...	10.106	53	128984	42.56	ug/L		99
96) n-Propylbenzene	10.135	91	1082424	40.18	ug/L		99
97) 2-Chlorotoluene	10.178	91	646676	44.91	ug/L		98
98) 4-Chlorotoluene	10.249	91	741651	40.22	ug/L		99
99) 1,3,5-Trimethylbenzene	10.242	105	755241	39.66	ug/L		100
100) tert-Butylbenzene	10.414	91	549486	43.46	ug/L		98
101) 1,2,4-Trimethylbenzene	10.443	105	791602	40.25	ug/L		98
102) sec-Butylbenzene	10.536	105	945267	41.16	ug/L		98
104) 1,3-Dichlorobenzene	10.593	146	462293	43.77	ug/L		99
105) p-Isopropyltoluene	10.615	119	794114	46.10	ug/L		98
106) 1,4-Dichlorobenzene	10.651	146	450742	44.33	ug/L		98
107) 1,2,3-Trimethylbenzene	10.658	105	775119	45.01	ug/L		99
108) Benzyl chloride	10.249	91	741651	41.06	ug/L		99
109) 1,2-Dichlorobenzene	10.830	146	446939	43.37	ug/L		99

1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration

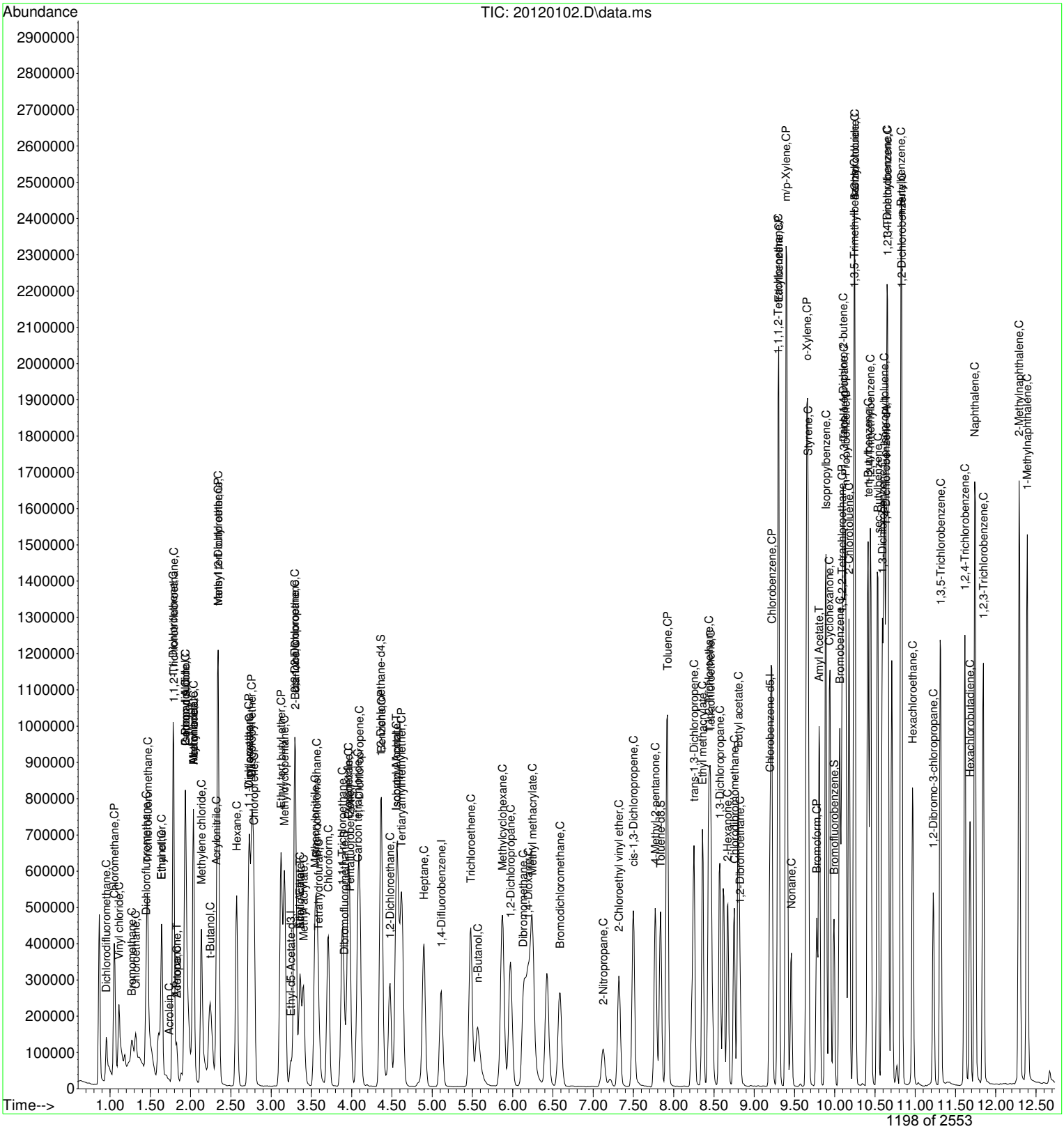
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) n-Butylbenzene	10.822	91	734295	41.95	ug/L	98
111) Hexachloroethane	10.966	117	156218	39.75	ug/L	97
112) 1,2-Dibromo-3-chloropr...	11.224	157	139563	48.39	ug/L	97
113) 1,3,5-Trichlorobenzene	11.317	180	337569	43.63	ug/L	99
114) 1,2,4-Trichlorobenzene	11.617	180	344339	44.06	ug/L	100
115) Hexachlorobutadiene	11.682	225	118306	44.52	ug/L	99
116) Naphthalene	11.739	128	1213520	43.66	ug/L	99
117) 1,2,3-Trichlorobenzene	11.847	180	323106	43.18	ug/L	98
118) 2-Methylnaphthalene	12.291	142	751315	44.35	ug/L	99
119) 1-Methylnaphthalene	12.391	142	683656	43.78	ug/L	100
121) 2-Propanone	1.826	43	127085	43.23	ug/L	98
122) Isopropyl Alcohol	1.933	45	950109	968.44	ug/L	98
123) Acetic Ether	3.359	43	374711	42.29	ug/L	98
124) Isopropyl Acetate	4.555	61	131470	41.07	ug/L	99
125) Amyl Acetate	9.805	43	471072	41.20	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

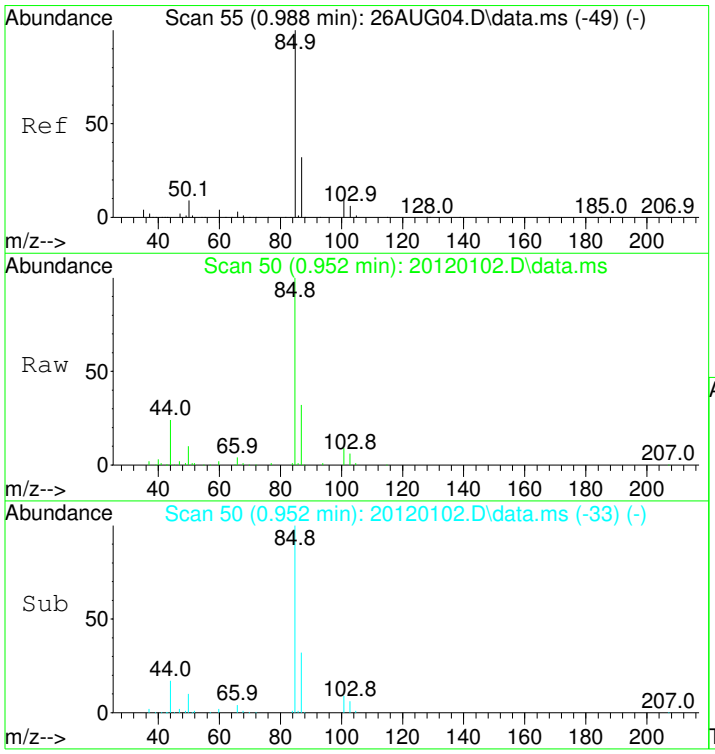
1st /S/ MF 12/02/20
2nd /S/ BG 12/02/20

Data Path : \\NAHLLW7016\msdchem\1\data\VMS8-201201\
Data File : 20120102.D
Acq On : 1 Dec 2020 9:58 am
Operator : MF
Sample : VCCV1-201201
Misc : IS 200-21725; 40PPB 200-21731, 21733, 21727
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 09:36:49 2020
Quant Method : C:\msdchem\1\methods\VMS8-201127-WS.M
Quant Title : 8260B/624 Volatile Calibration
QLast Update : Sat Nov 28 12:03:56 2020
Response via : Initial Calibration



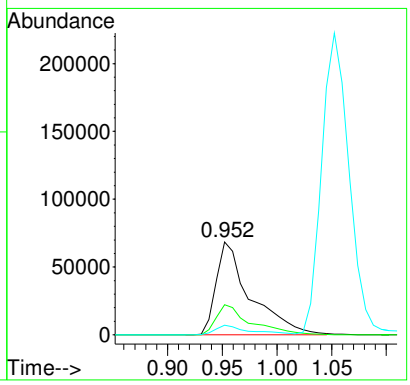
1198 of 2553

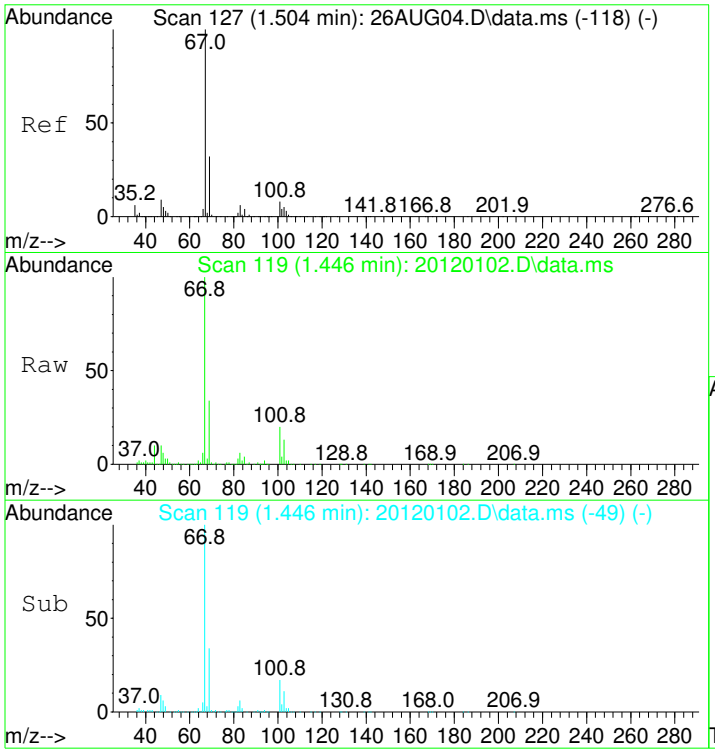


#2
Dichlorodifluoromethane
Concen: 32.44 ug/L
RT: 0.952 min Scan# 50
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 85 Resp: 149971

Ion	Ratio	Lower	Upper
85	100		
87	32.4	3.6	63.6
50	10.4	0.0	40.5

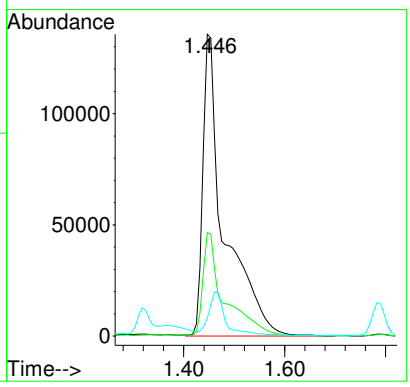


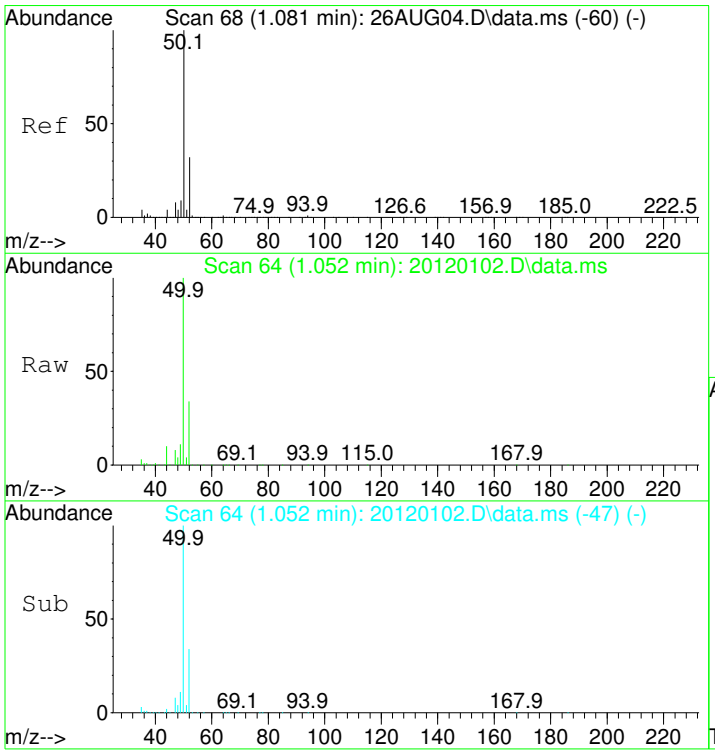


#3
Dichlorofluoromethane
Concen: 38.92 ug/L
RT: 1.446 min Scan# 119
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 67 Resp: 400508

Ion	Ratio	Lower	Upper
67	100		
69	33.2	23.7	44.1
66	11.6	8.1	15.0

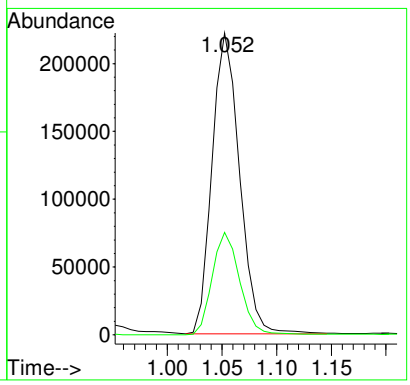


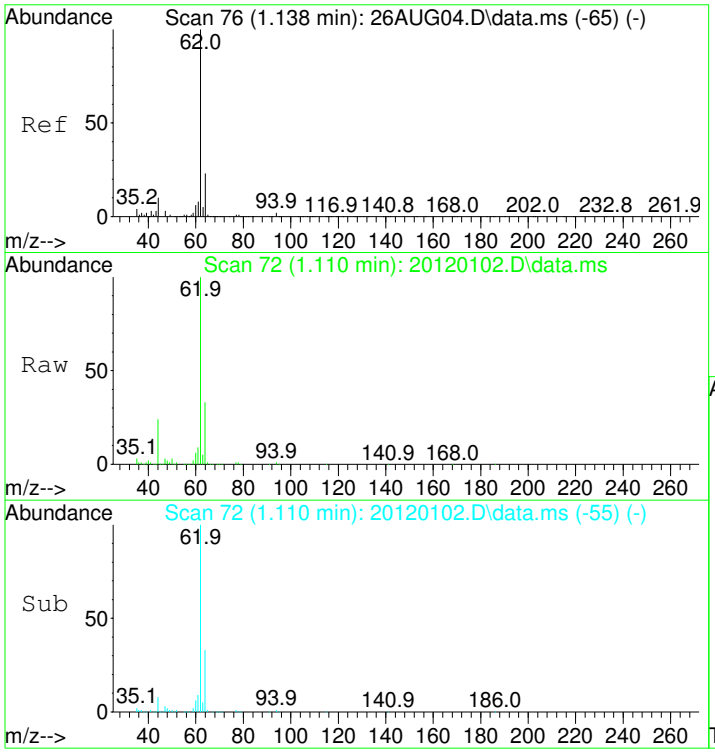


#4
Chloromethane
Concen: 38.92 ug/L
RT: 1.052 min Scan# 64
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 50 Resp: 387864

Ion	Ratio	Lower	Upper
50	100		
52	34.3	4.9	64.9

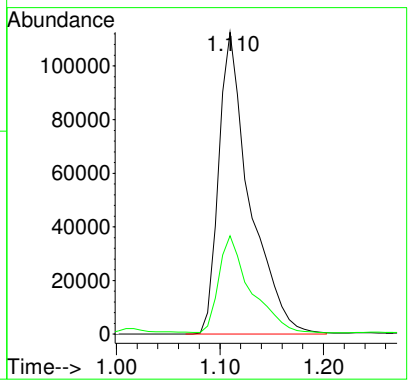


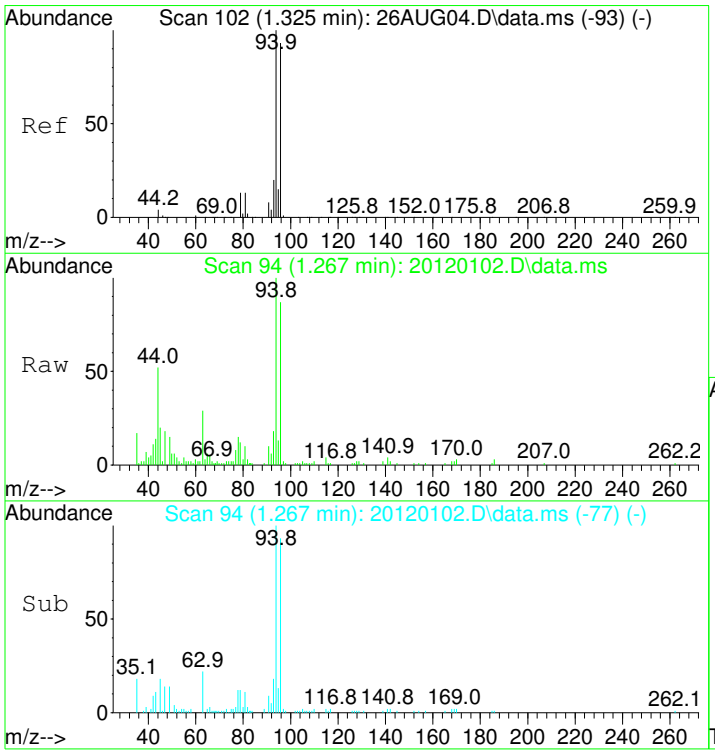


#6
Vinyl chloride
Concen: 38.53 ug/L
RT: 1.110 min Scan# 72
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 62 Resp: 234611

Ion	Ratio	Lower	Upper
62	100		
64	32.7	1.9	61.9

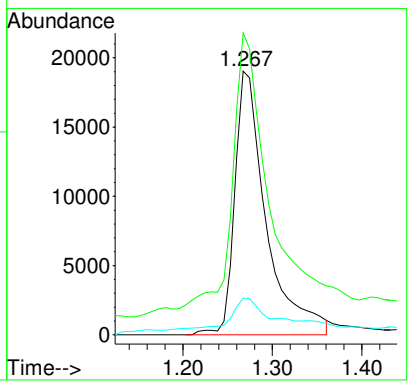


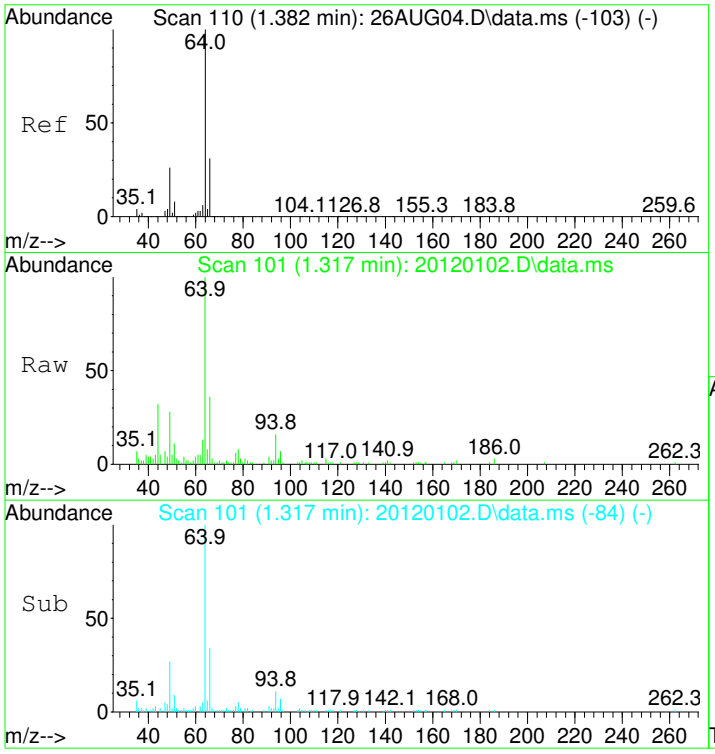


#7
Bromomethane
Concen: 53.32 ug/L
RT: 1.267 min Scan# 94
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 96 Resp: 46688

Ion	Ratio	Lower	Upper
96	100		
94	126.3	103.4	163.4
79	17.4	0.0	49.6

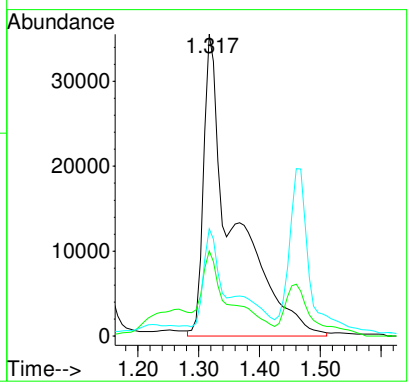


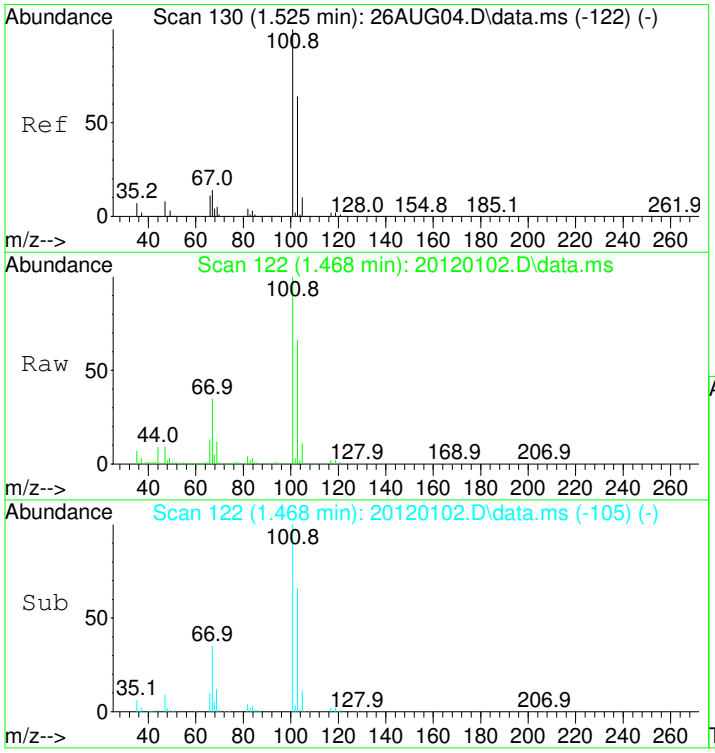


#8
Chloroethane
Concen: 45.07 ug/L m
RT: 1.317 min Scan# 101
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 64 Resp: 121340

Ion	Ratio	Lower	Upper
64	100		
49	16.2	0.0	41.3
66	17.9	0.0	52.2

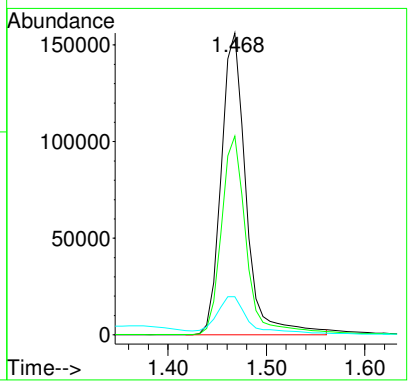


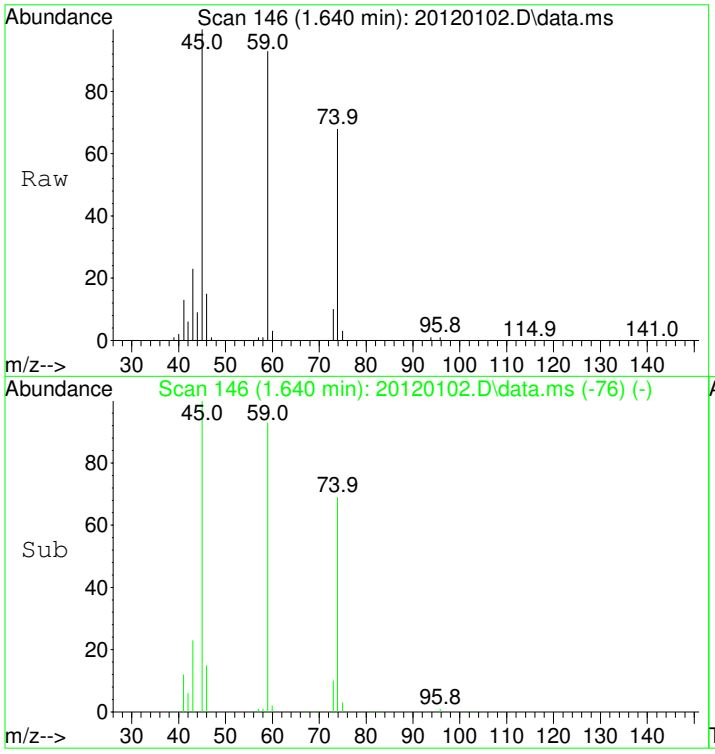


#9
Trichlorofluoromethane
Concen: 38.12 ug/L
RT: 1.468 min Scan# 122
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:101 Resp: 274546

Ion	Ratio	Lower	Upper
101	100		
103	65.6	45.1	85.1
66	14.5	0.0	35.4

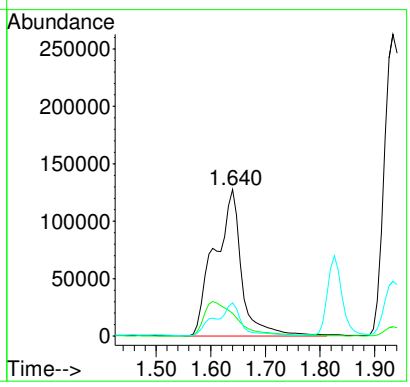


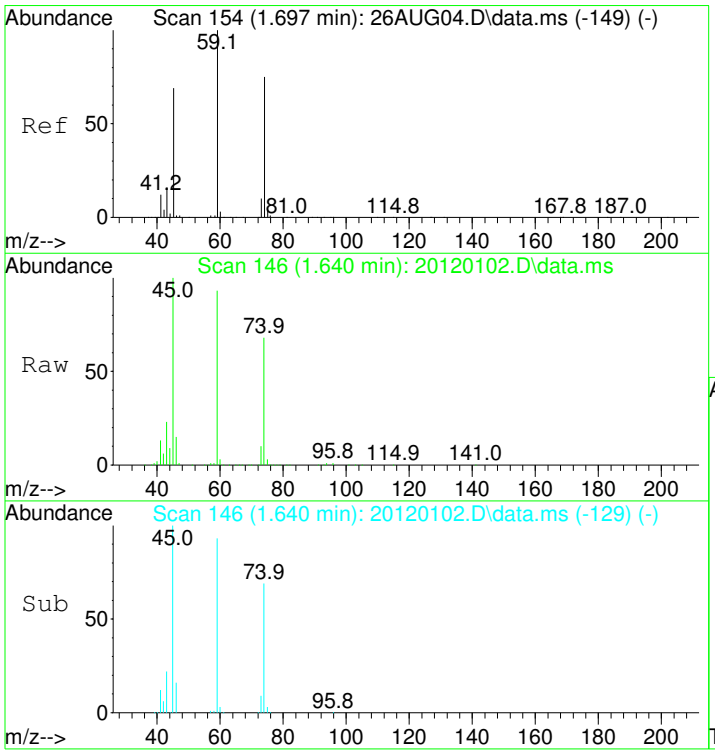


#10
Ethanol
Concen: 864.31 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 45 Resp: 441565

Ion	Ratio	Lower	Upper
45	100		
46	28.8	0.0	57.3
43	21.0	0.0	52.4

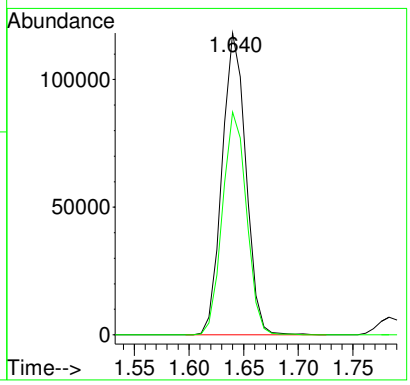


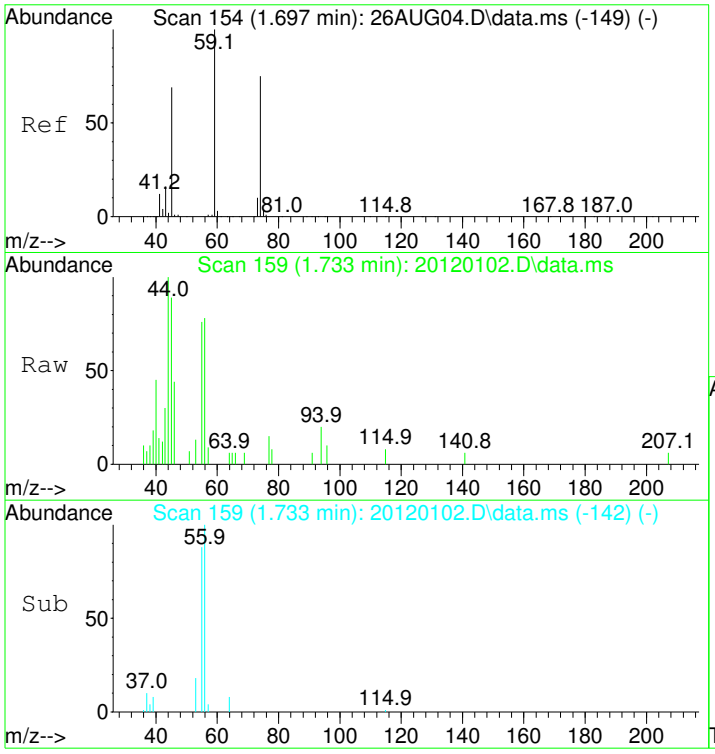


#11
Ethyl ether
Concen: 41.37 ug/L
RT: 1.640 min Scan# 146
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 59 Resp: 179094

Ion	Ratio	Lower	Upper
59	100		
74	74.5	42.6	102.6

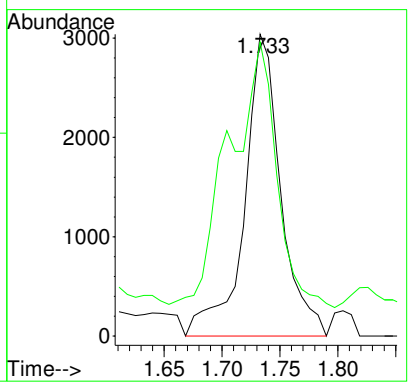


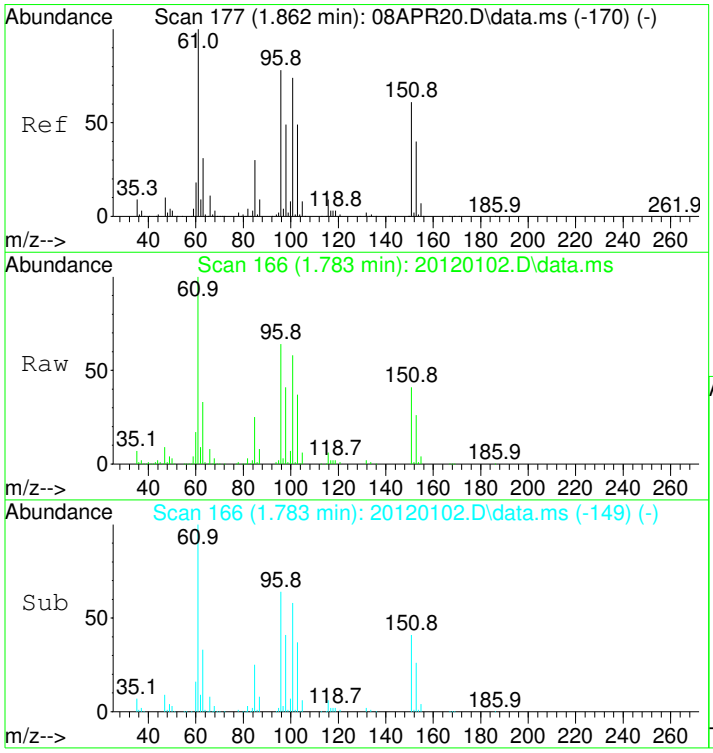


#12
Acrolein
Concen: 44.52 ug/L
RT: 1.733 min Scan# 159
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 56 Resp: 6618

Ion	Ratio	Lower	Upper
56	100		
55	115.2	17.3	77.3#

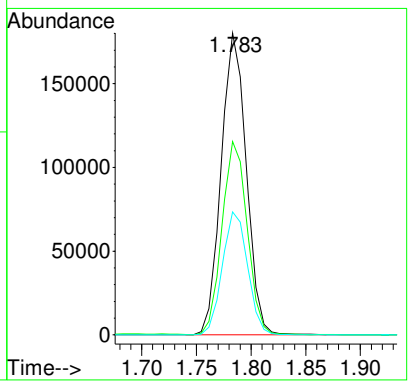


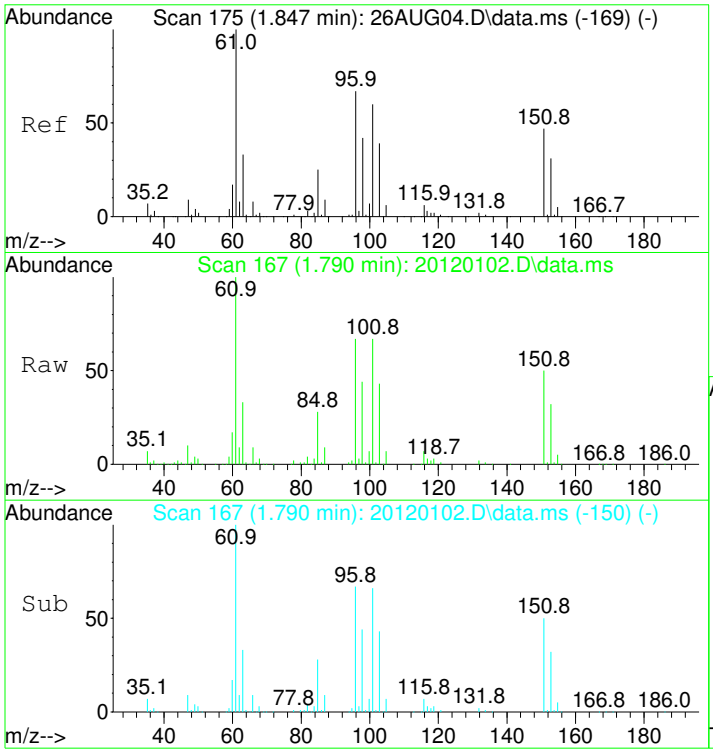


#13
1,1-Dichloroethene
Concen: 43.05 ug/L
RT: 1.783 min Scan# 166
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 61 Resp: 287734

Ion	Ratio	Lower	Upper
61	100		
96	64.3	32.6	92.6
98	40.9	10.4	70.4

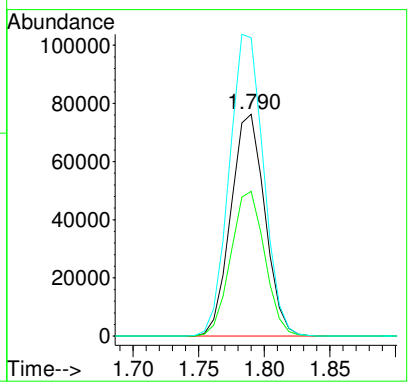


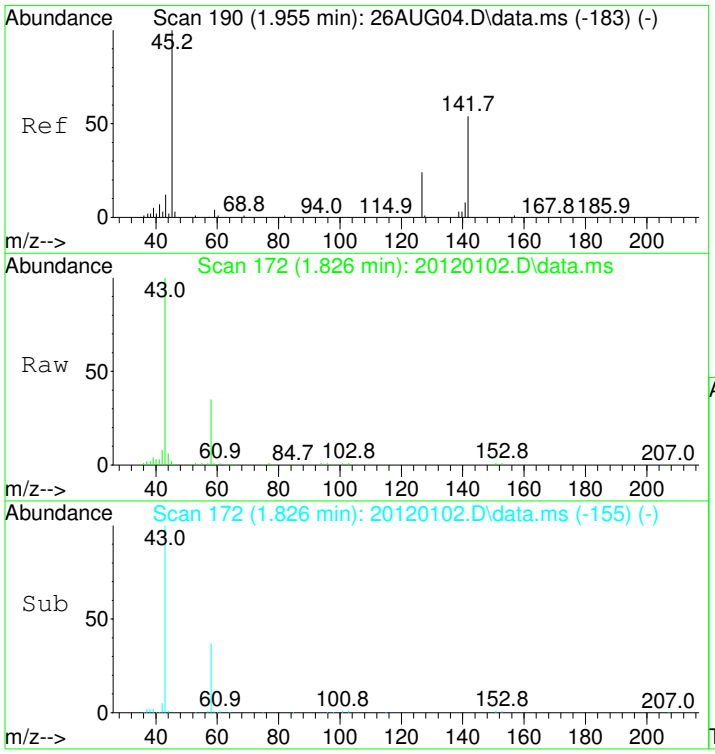


#14
1,1,2-Trichlorotrifluoroethane
Concen: 41.23 ug/L
RT: 1.790 min Scan# 167
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:151 Resp: 138129

Ion	Ratio	Lower	Upper
151	100		
153	65.0	33.0	93.0
101	136.5	110.1	170.1

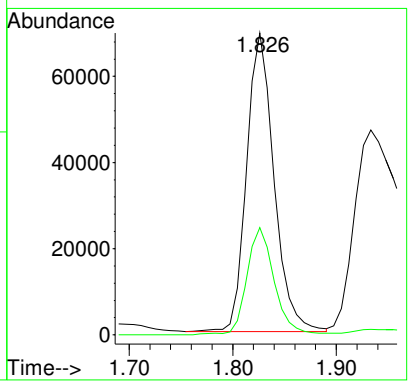


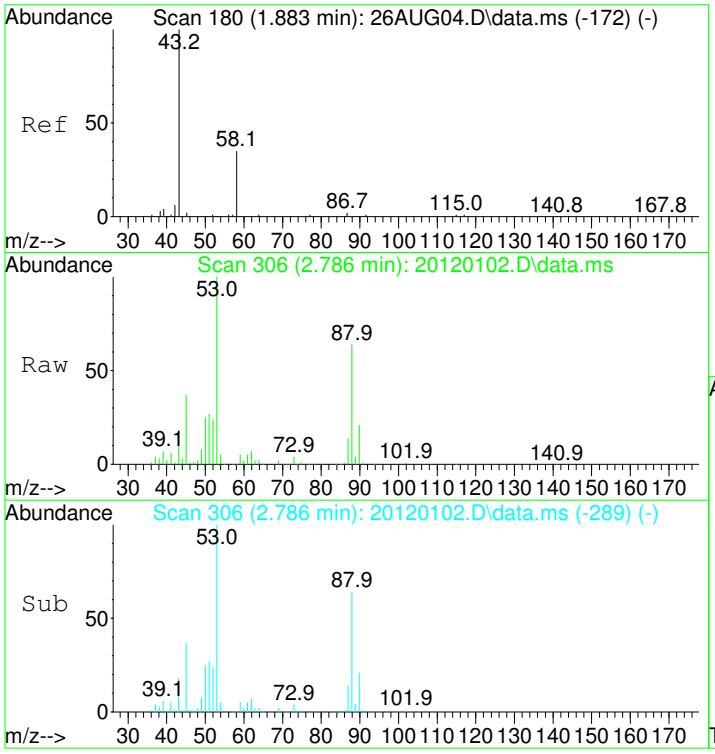


#16
Acetone
Concen: 42.18 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 127085

Ion	Ratio	Lower	Upper
43	100		
58	36.2	5.2	65.2

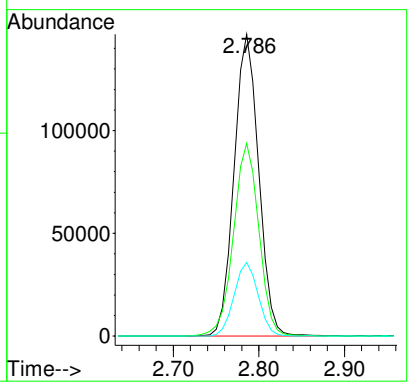


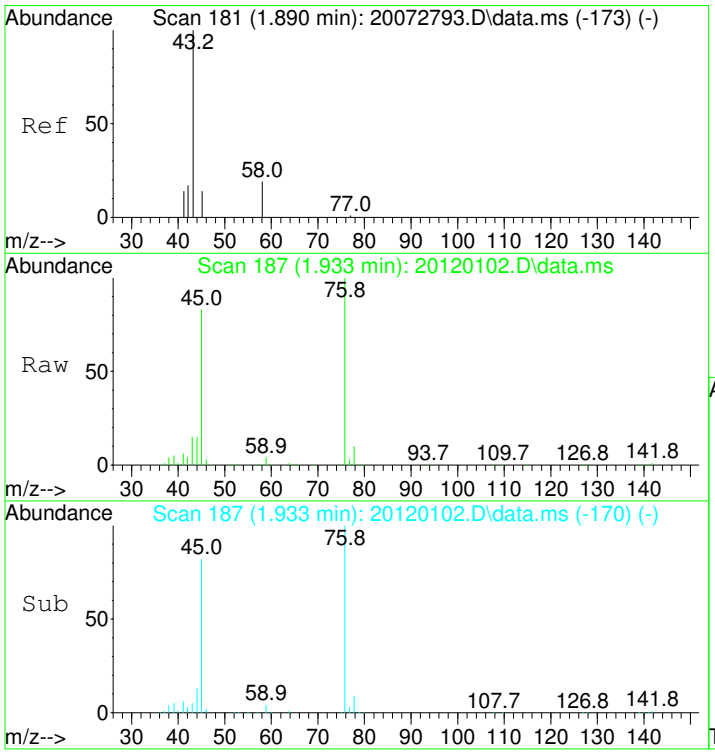


#17
Chloroprene
Concen: 41.38 ug/L
RT: 2.786 min Scan# 306
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 53 Resp: 293272

Ion	Ratio	Lower	Upper
53	100		
88	66.0	43.7	81.1
52	23.9	17.3	32.1

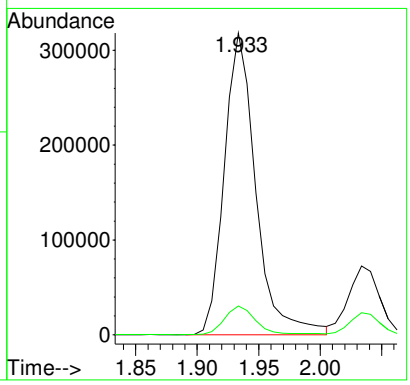


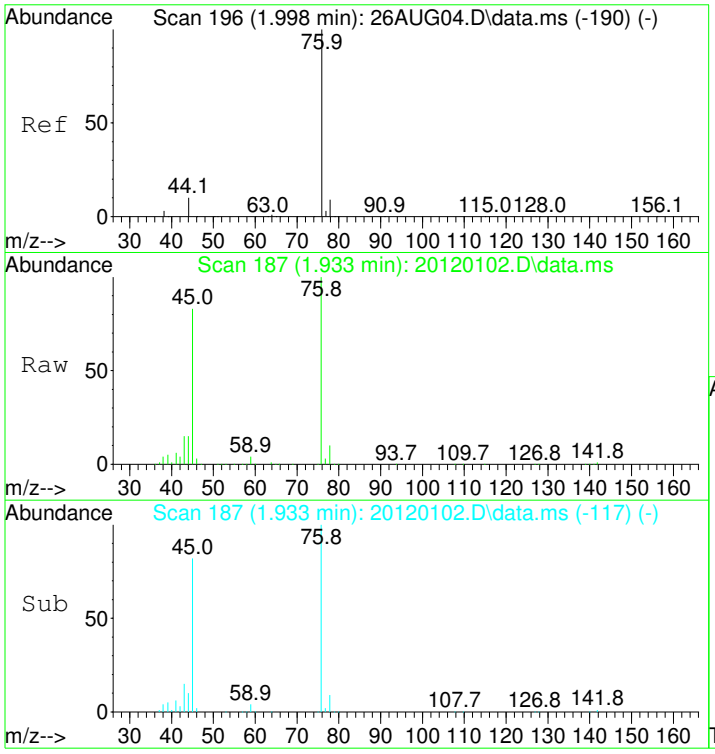


#18
Carbon disulfide
Concen: 42.52 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 76 Resp: 568674

Ion	Ratio	Lower	Upper
76	100		
78	9.4	0.0	39.5

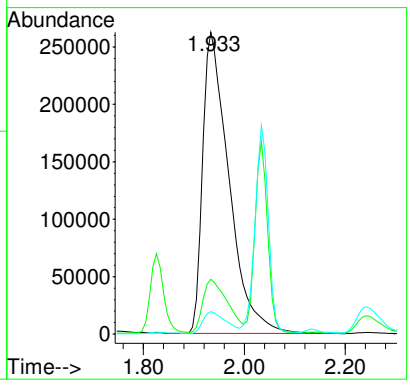


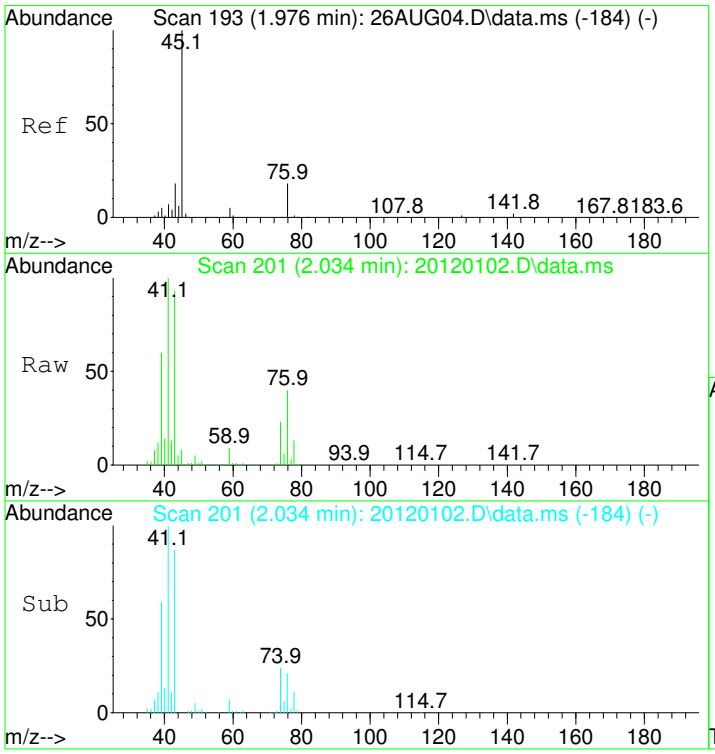


#19
2-Propanol
Concen: 937.60 ug/L
RT: 1.933 min Scan# 187
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 45 Resp: 950109

Ion	Ratio	Lower	Upper
45	100		
43	17.0	0.0	48.2
41	6.5	0.0	37.1

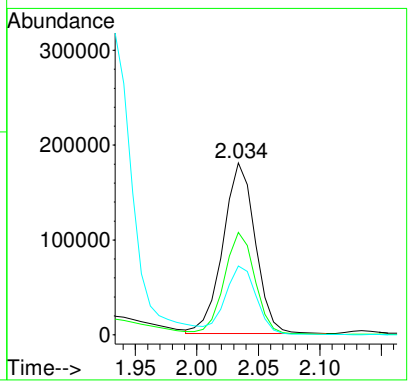


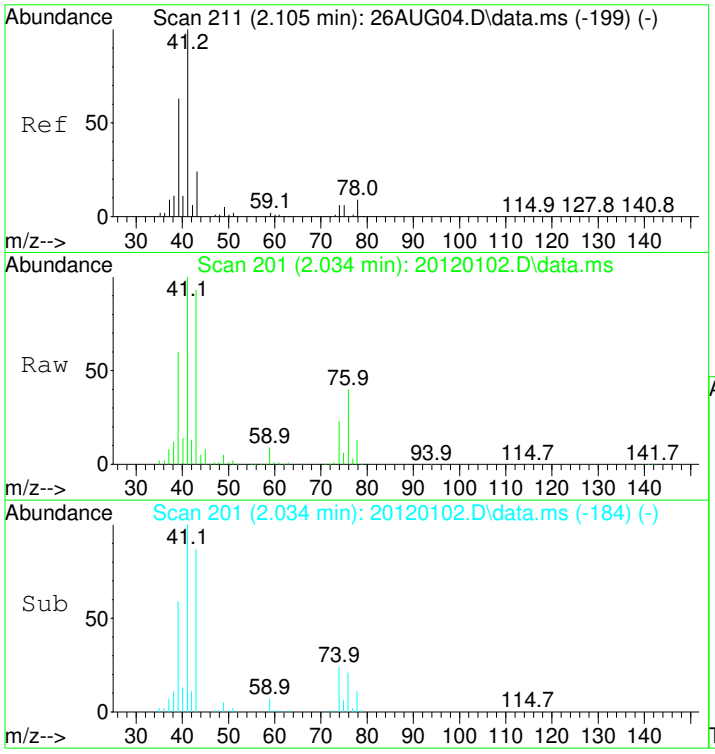


#20
Allyl chloride
Concen: 42.82 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 41 Resp: 328265

Ion	Ratio	Lower	Upper
41	100		
39	56.8	29.0	89.0
76	38.9	7.3	67.3

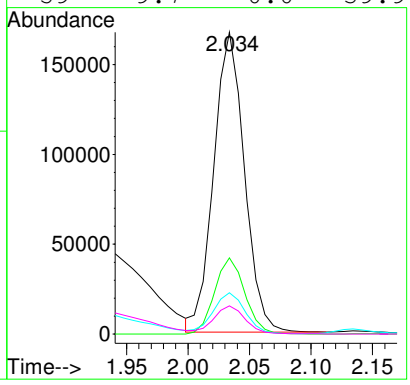


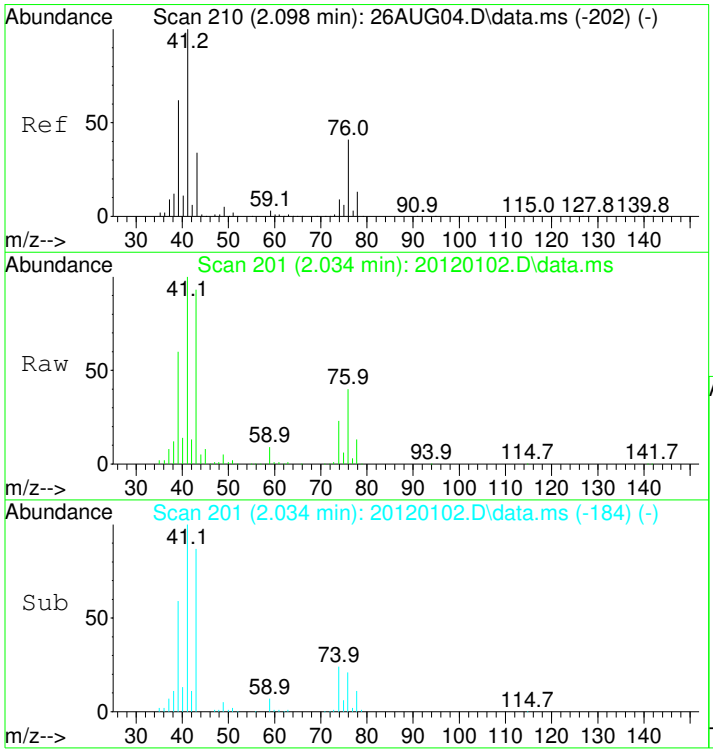


#21
Methyl acetate
Concen: 41.75 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 289663

Ion	Ratio	Lower	Upper
43	100		
74	25.0	0.0	56.2
42	14.2	0.0	44.2
59	9.7	0.0	39.9

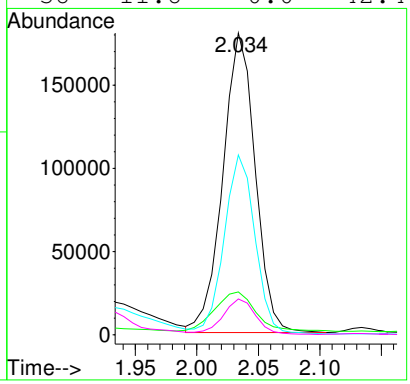


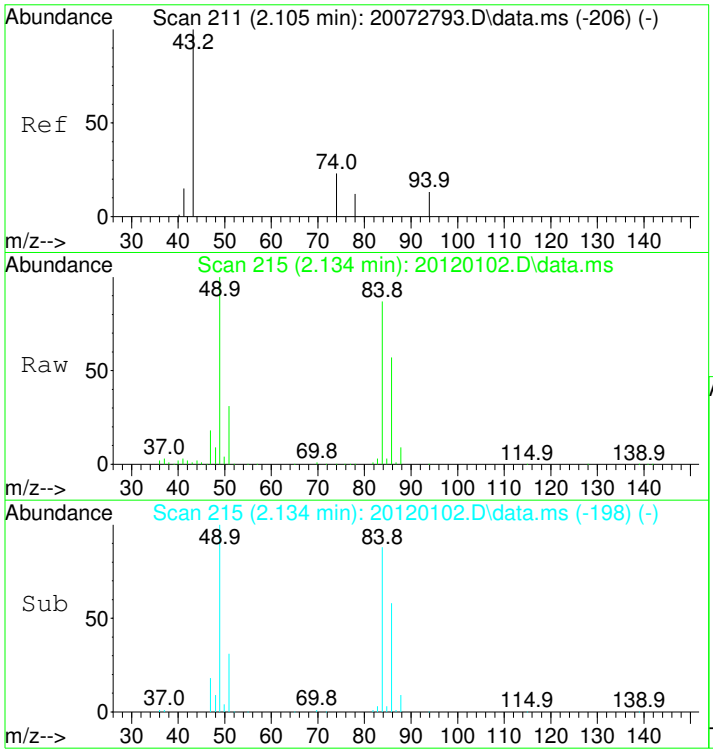


#22
Acetonitrile
Concen: 42.82 ug/L
RT: 2.034 min Scan# 201
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 41 Resp: 328265

Ion	Ratio	Lower	Upper
41	100		
40	16.7	0.0	47.5
39	56.8	29.0	89.0
38	11.8	0.0	42.4

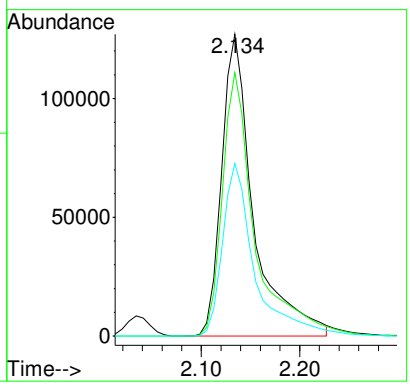


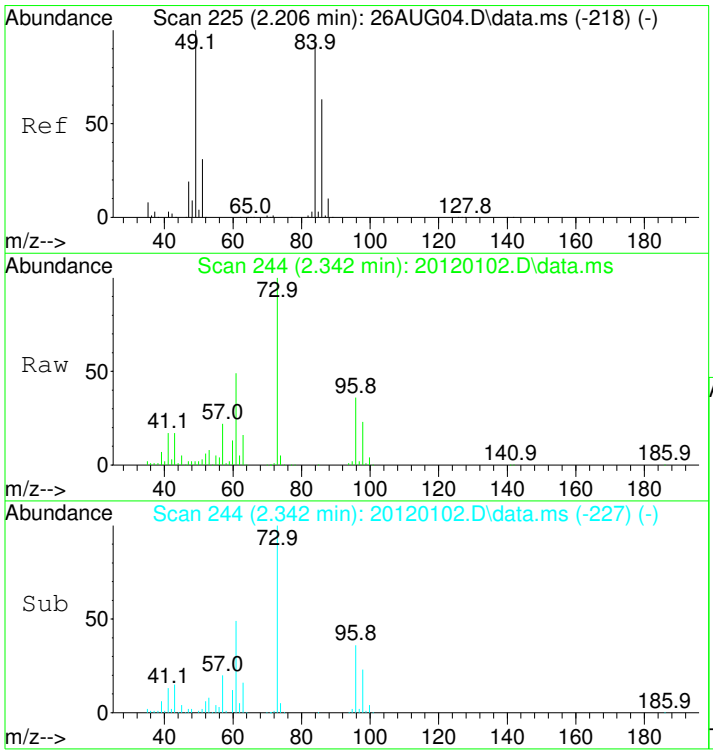


#23
Methylene chloride
Concen: 40.90 ug/L
RT: 2.134 min Scan# 215
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 49 Resp: 287672

Ion	Ratio	Lower	Upper
49	100		
84	87.2	57.4	117.4
86	56.5	27.7	87.7

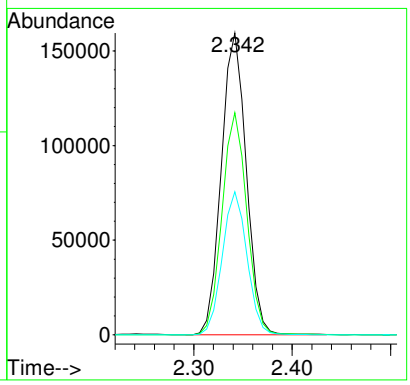


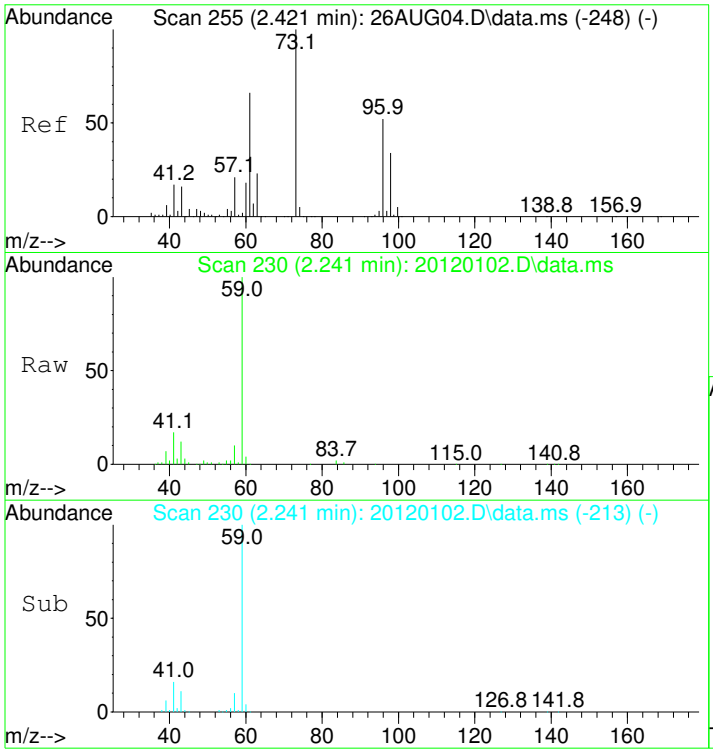


#24
trans-1,2-Dichloroethene
Concen: 42.78 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 61 Resp: 281678

Ion	Ratio	Lower	Upper
61	100		
96	73.2	42.3	102.3
98	46.9	16.1	76.1

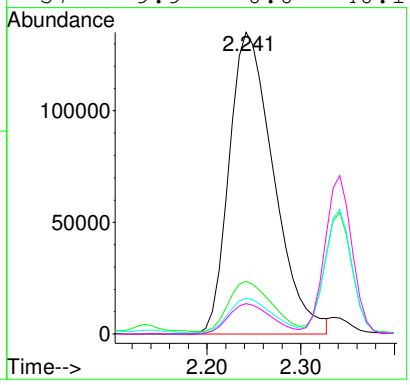


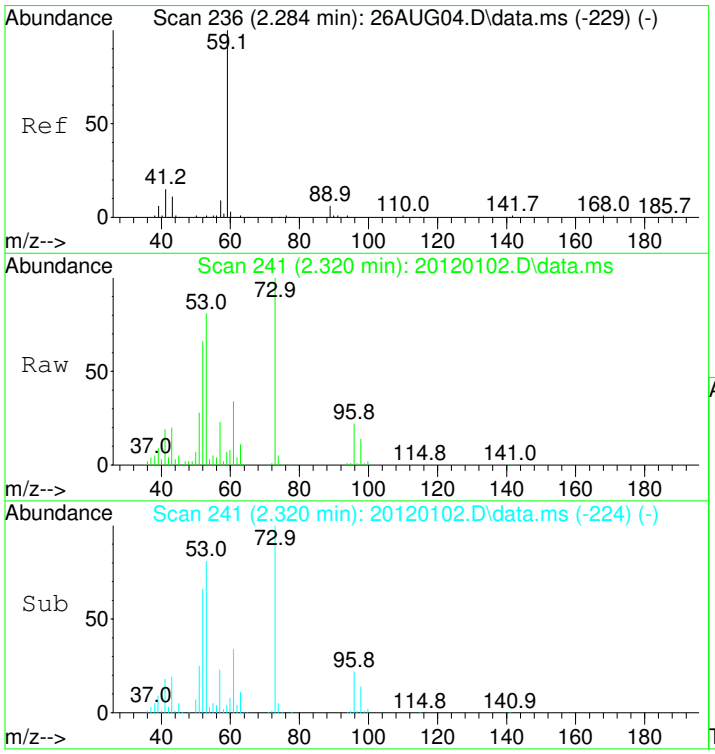


#25
t-Butanol
Concen: 220.77 ug/L
RT: 2.241 min Scan# 230
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 59 Resp: 447504

Ion	Ratio	Lower	Upper
59	100		
41	15.9	0.0	46.1
43	11.1	0.0	41.4
57	9.9	0.0	40.1

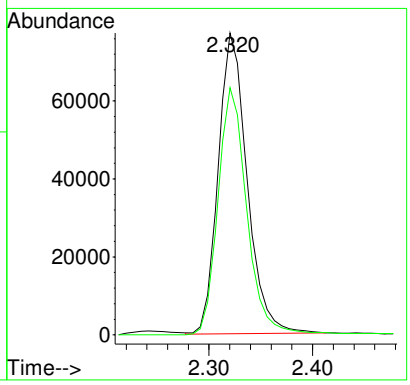


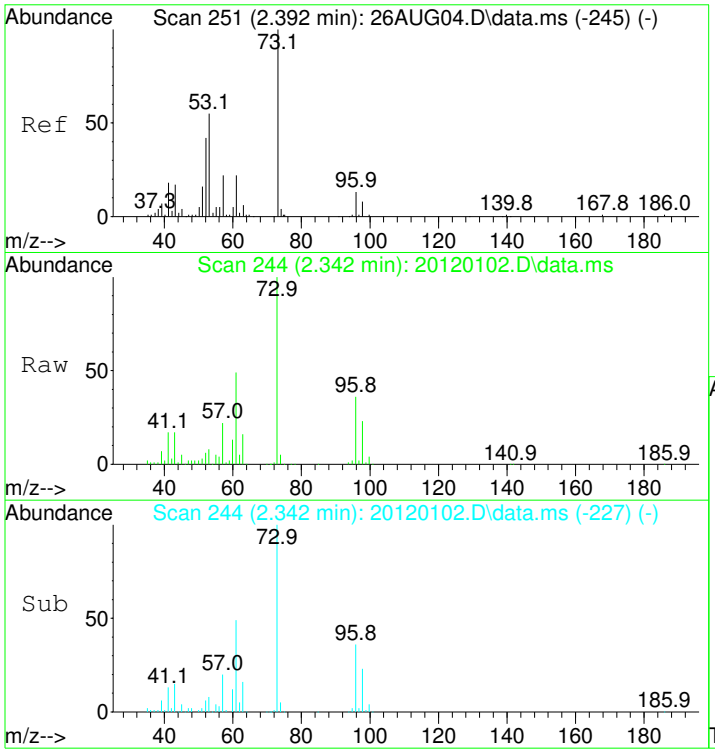


#26
Acrylonitrile
Concen: 43.19 ug/L
RT: 2.320 min Scan# 241
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 53 Resp: 150298

Ion	Ratio	Lower	Upper
53	100		
52	81.7	51.9	111.9

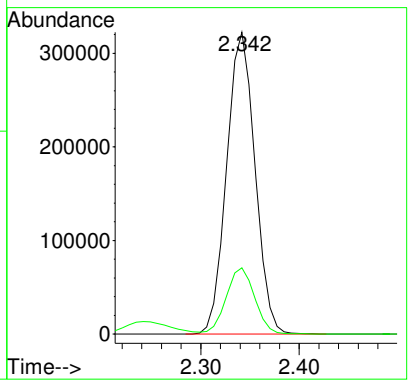


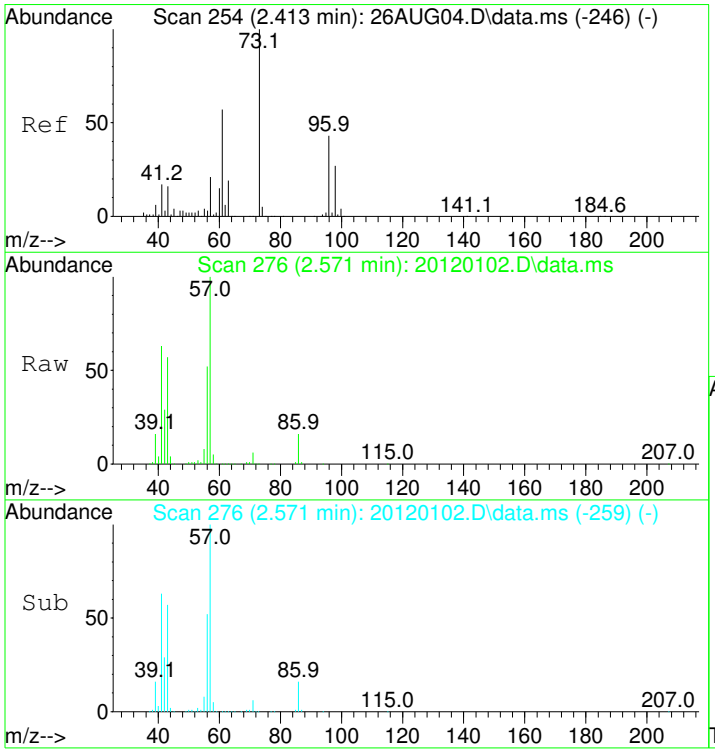


#27
Methyl tert-butyl ether
Concen: 43.12 ug/L
RT: 2.342 min Scan# 244
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 73 Resp: 645867

Ion	Ratio	Lower	Upper
73	100		
57	21.9	0.0	52.4

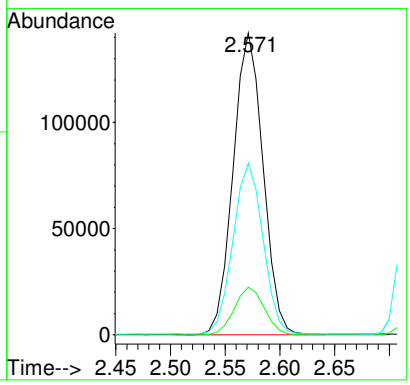


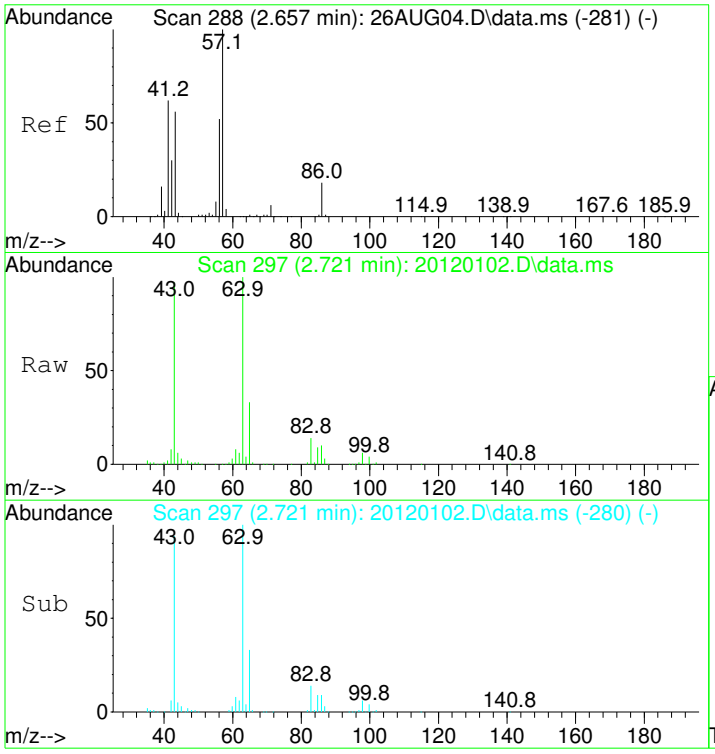


#28
Hexane
Concen: 44.57 ug/L
RT: 2.571 min Scan# 276
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 57 Resp: 270786

Ion	Ratio	Lower	Upper
57	100		
86	15.8	0.0	46.9
43	56.4	27.9	87.9

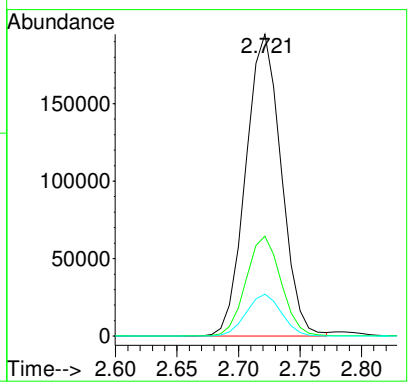


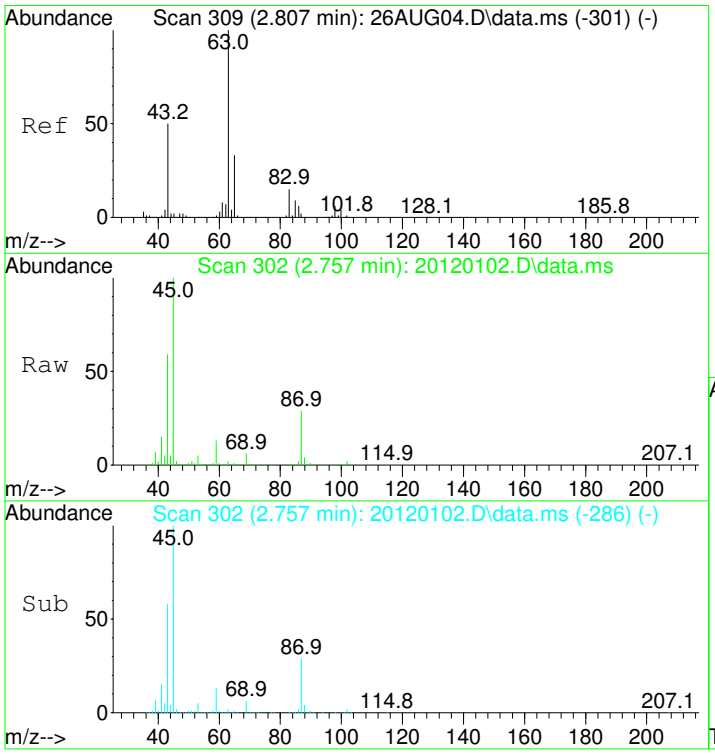


#29
1,1-Dichloroethane
Concen: 41.08 ug/L
RT: 2.721 min Scan# 297
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 63 Resp: 389139

Ion	Ratio	Lower	Upper
63	100		
65	32.9	2.8	62.8
83	13.8	0.0	43.7

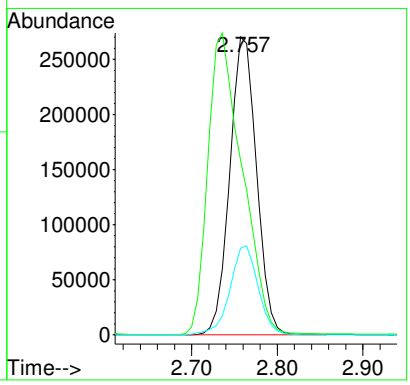


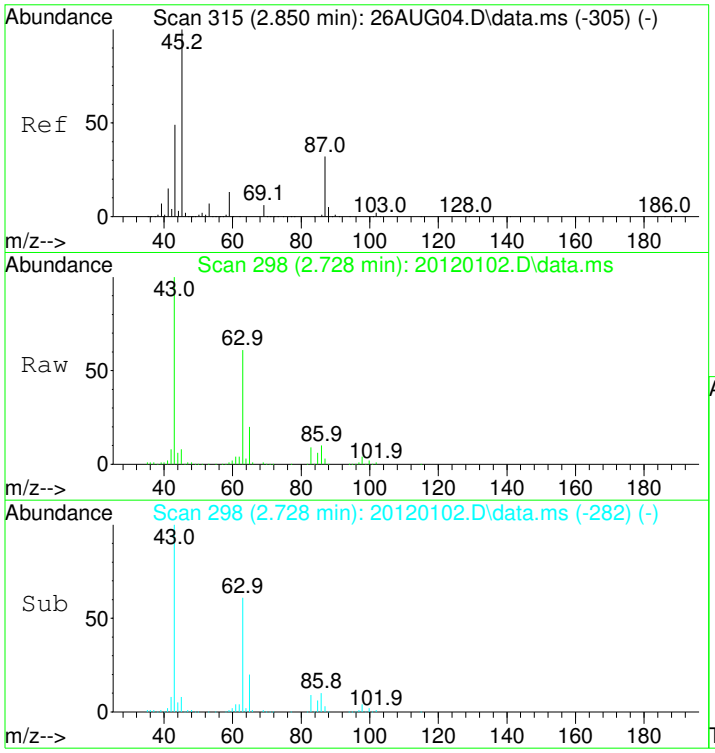


#30
Diisopropyl ether
Concen: 42.43 ug/L
RT: 2.757 min Scan# 302
Delta R.T. -0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 45 Resp: 589374

Ion	Ratio	Lower	Upper
45	100		
43	129.3	79.6	147.8
87	31.4	22.1	41.1

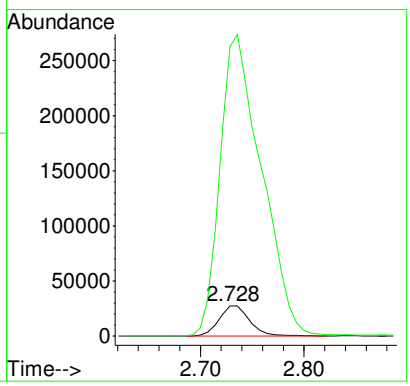


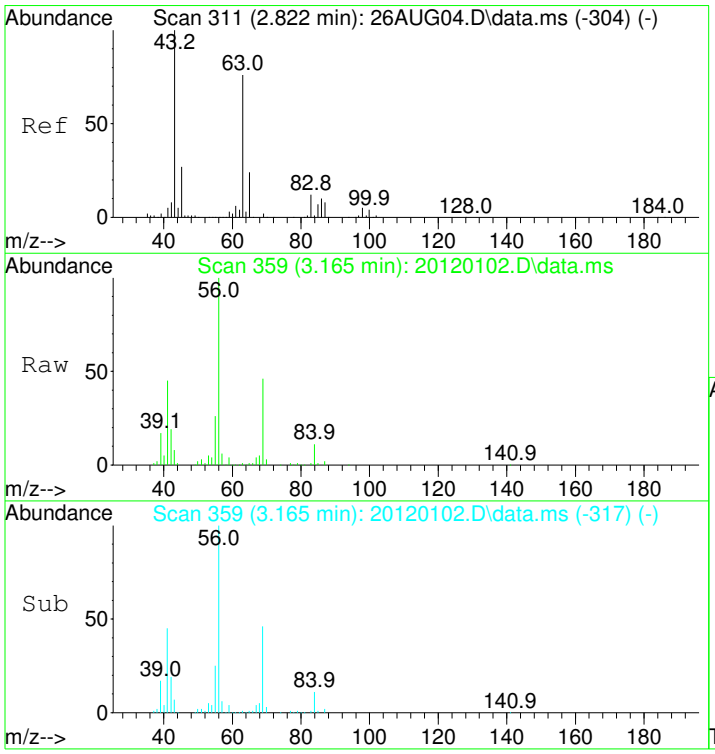


#31
Vinyl acetate
Concen: 50.46 ug/L
RT: 2.728 min Scan# 298
Delta R.T. -0.008 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 86 Resp: 56935

Ion	Ratio	Lower	Upper
86	100		
43	1336.6	1480.0	1540.0#

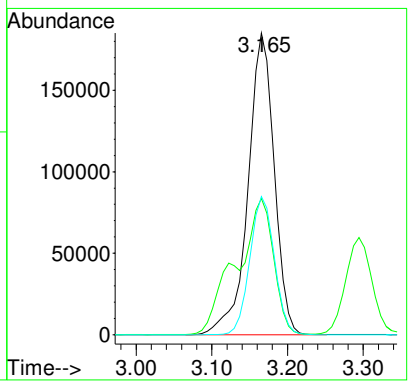


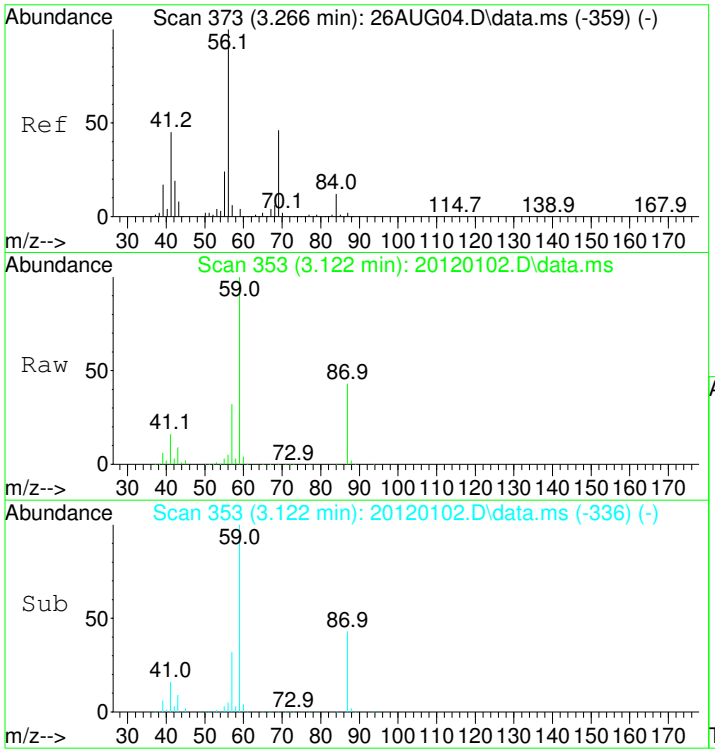


#32
Methylcyclopentane
Concen: 42.82 ug/L
RT: 3.165 min Scan# 359
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 56 Resp: 443711

Ion	Ratio	Lower	Upper
56	100		
41	63.9	36.7	96.7
69	43.1	11.3	71.3

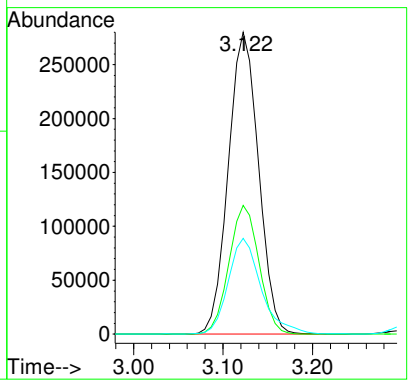


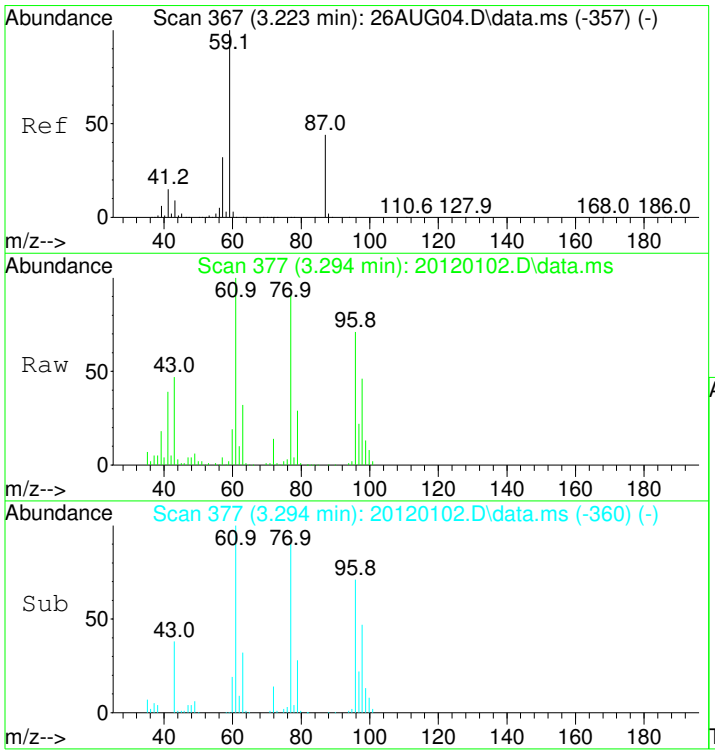


#33
Ethyl tert butyl ether
Concen: 41.54 ug/L
RT: 3.122 min Scan# 353
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 59 Resp: 658522

Ion	Ratio	Lower	Upper
59	100		
87	42.3	12.5	72.5
57	34.3	4.4	64.4

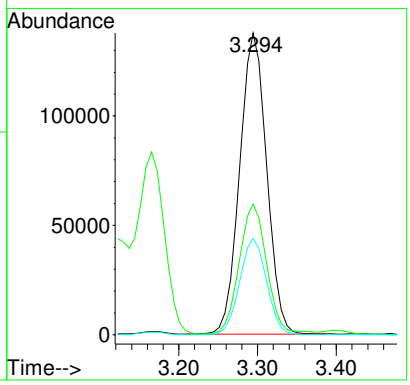


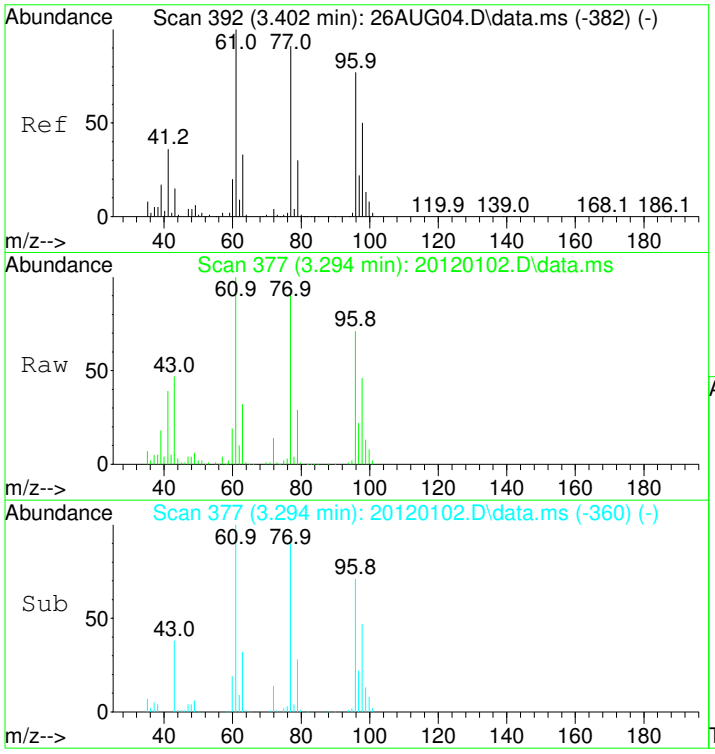


#34
2,2-Dichloropropane
Concen: 42.03 ug/L
RT: 3.294 min Scan# 377
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 77 Resp: 327450

Ion	Ratio	Lower	Upper
77	100		
41	43.9	16.4	76.4
79	31.8	2.4	62.4

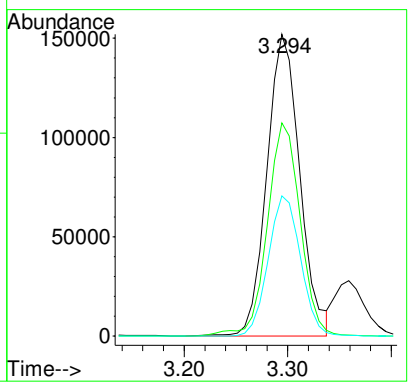


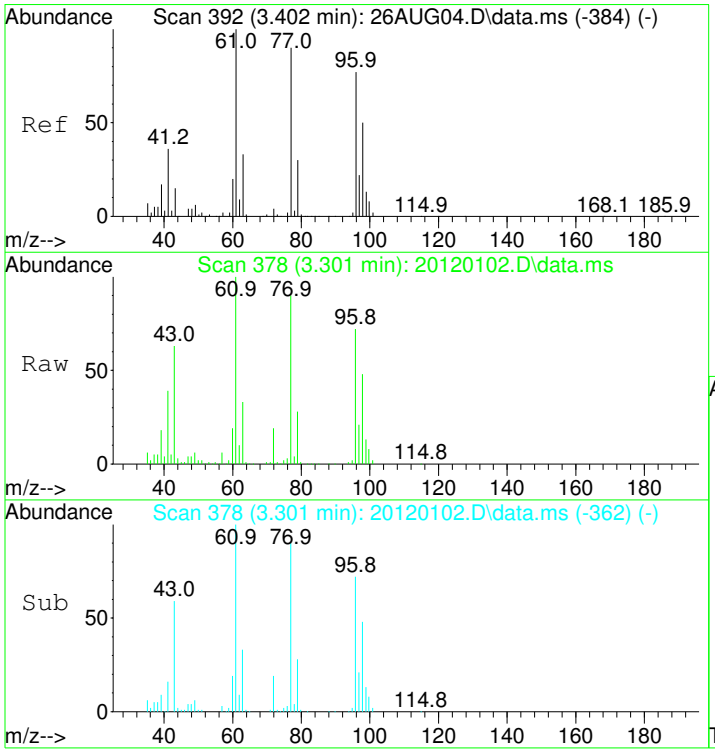


#35
cis-1,2-Dichloroethene
Concen: 42.12 ug/L
RT: 3.294 min Scan# 377
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 61 Resp: 336052

Ion	Ratio	Lower	Upper
61	100		
96	70.4	39.5	99.5
98	45.6	14.9	74.9

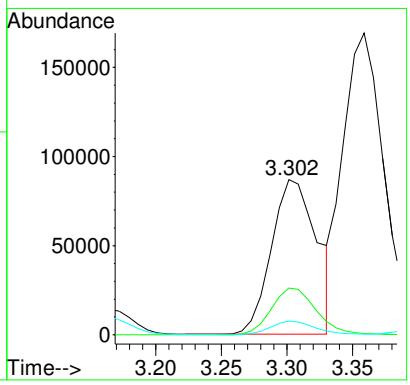


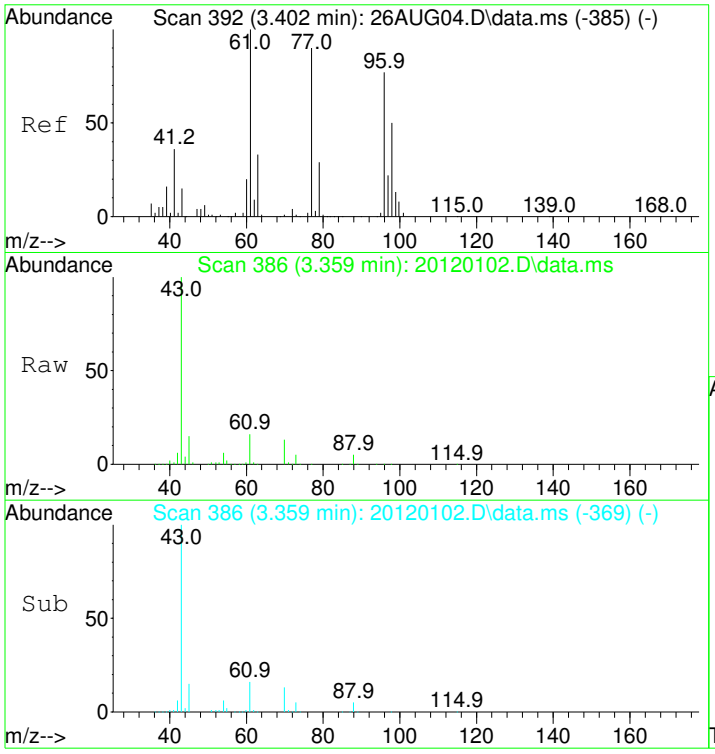


#36
2-Butanone
Concen: 45.73 ug/L
RT: 3.301 min Scan# 378
Delta R.T. -0.008 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 208998

Ion	Ratio	Lower	Upper
43	100		
72	30.1	11.0	51.0
57	8.9	0.0	28.7

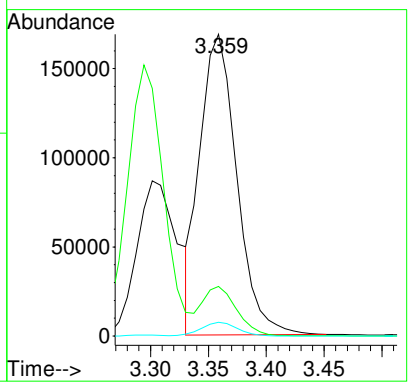


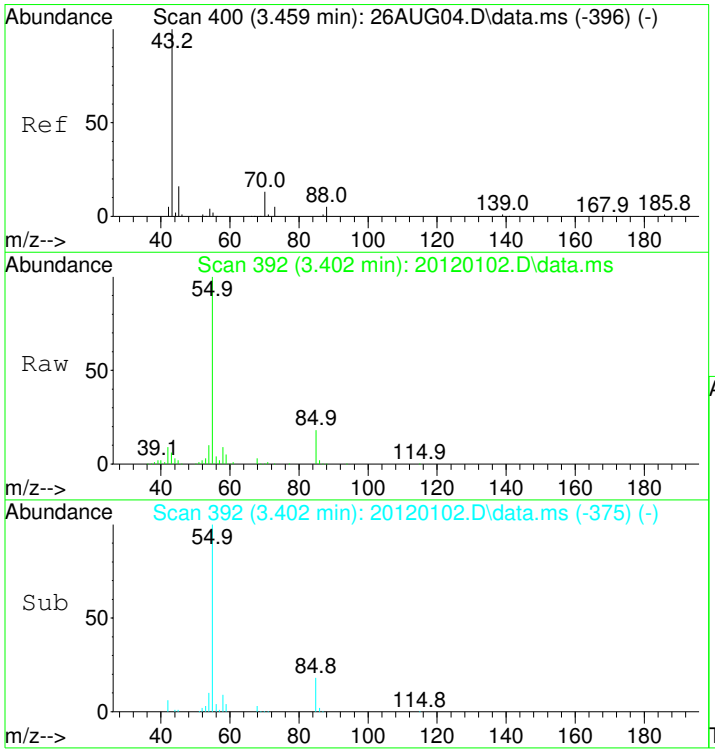


#37
Ethyl Acetate
Concen: 42.11 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 374711

Ion	Ratio	Lower	Upper
43	100		
61	14.8	0.0	34.9
88	4.6	0.0	24.3

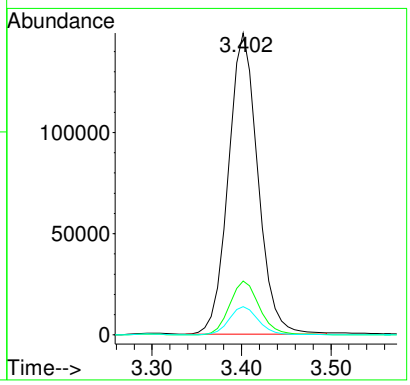


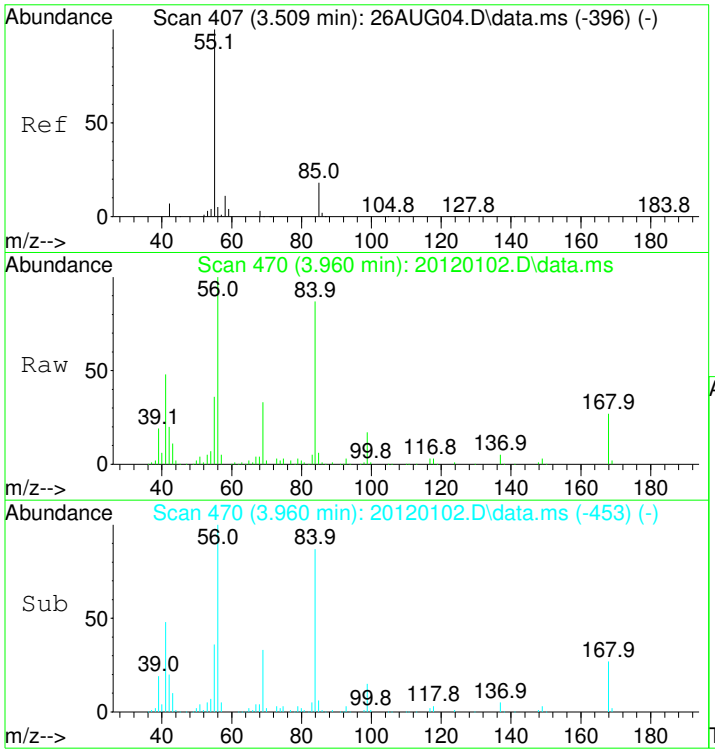


#38
Methyl acrylate
Concen: 42.96 ug/L
RT: 3.402 min Scan# 392
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 55 Resp: 341595

Ion	Ratio	Lower	Upper
55	100		
85	18.1	14.4	21.6
58	9.3	7.4	11.2

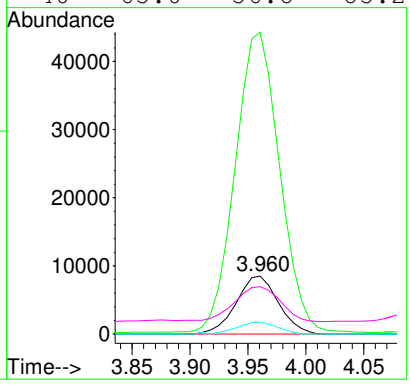


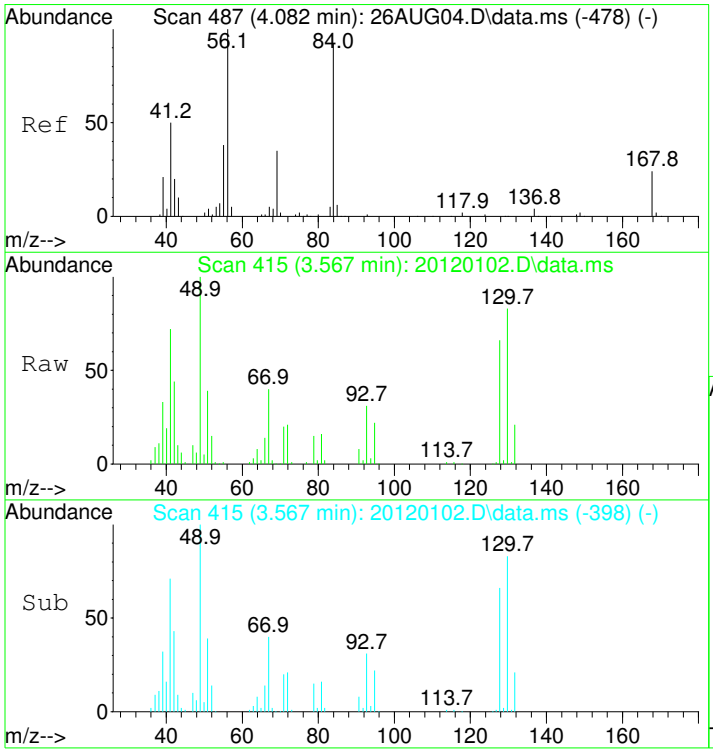


#39
Propionitrile
Concen: 42.59 ug/L
RT: 3.960 min Scan# 470
Delta R.T. -0.001 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 54 Resp: 21545

Ion	Ratio	Lower	Upper
54	100		
55	543.3	470.1	705.1
52	20.0	17.5	26.3
40	65.0	56.8	85.2

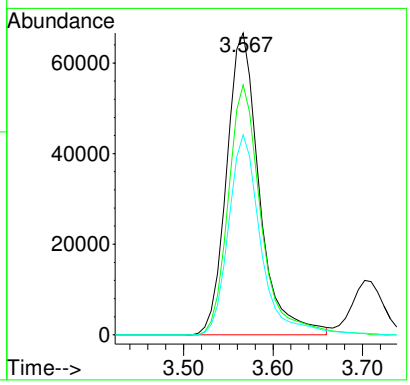


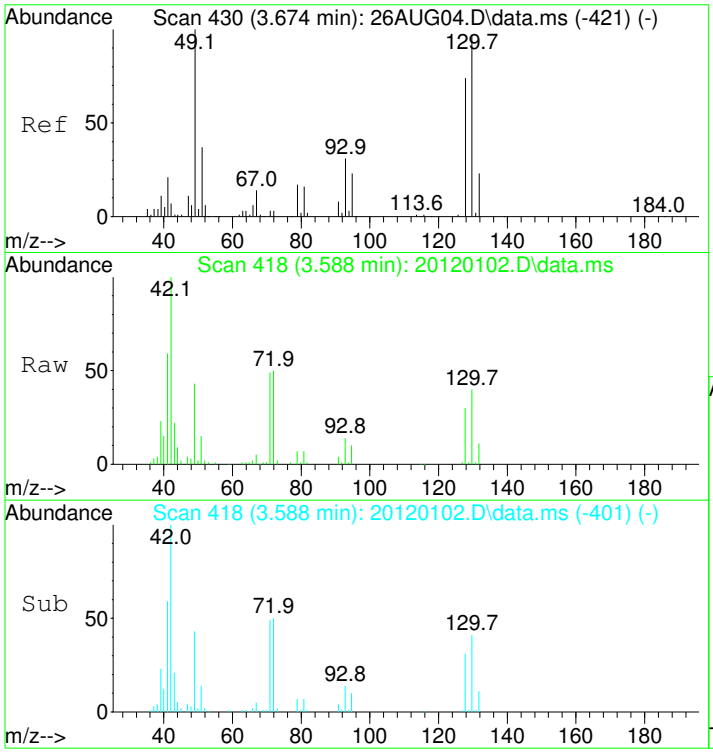


#40
Bromochloromethane
Concen: 41.13 ug/L
RT: 3.567 min Scan# 415
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 49 Resp: 169812

Ion	Ratio	Lower	Upper
49	100		
130	81.8	60.4	100.4
128	64.4	43.3	83.3

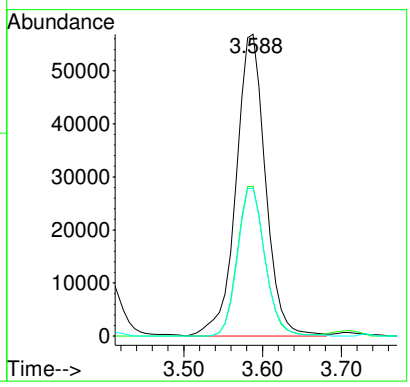


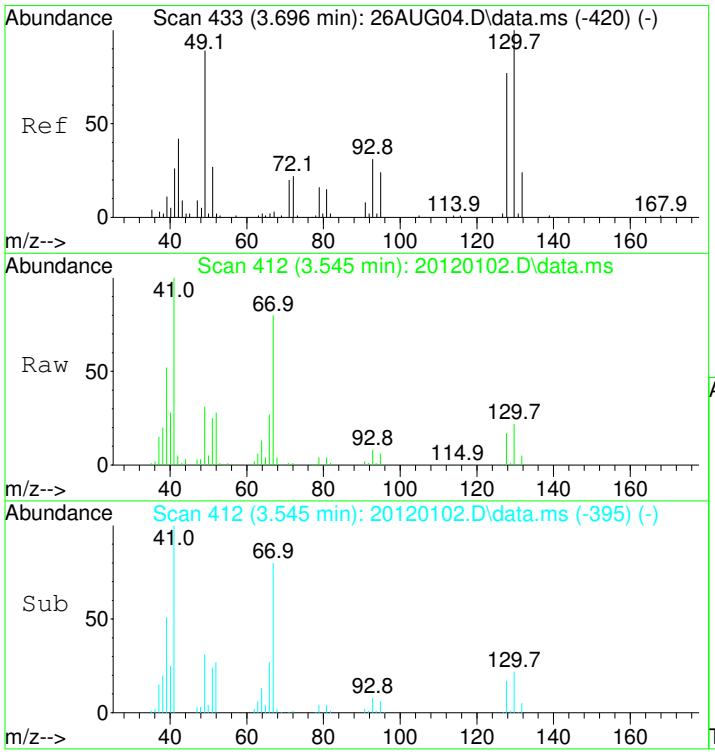


#41
Tetrahydrofuran
Concen: 44.03 ug/L
RT: 3.588 min Scan# 418
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 42 Resp: 148090

Ion	Ratio	Lower	Upper
42	100		
72	46.5	27.6	67.6
71	45.8	26.5	66.5

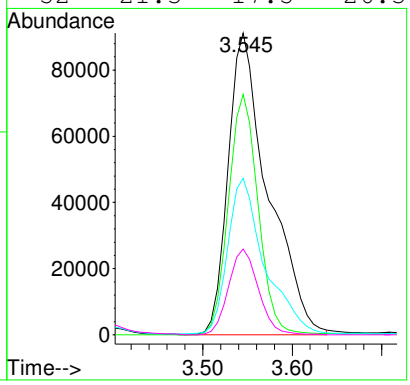


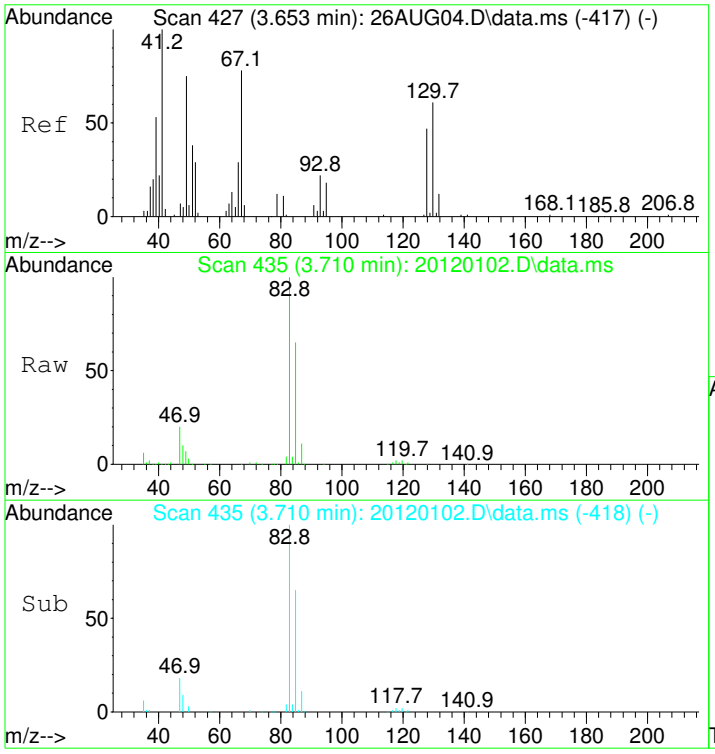


#42
Methacrylonitrile
Concen: 42.55 ug/L
RT: 3.545 min Scan# 412
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 41 Resp: 284140

Ion	Ratio	Lower	Upper
41	100		
67	59.1	47.8	71.6
39	47.4	38.6	57.8
52	21.3	17.5	26.3

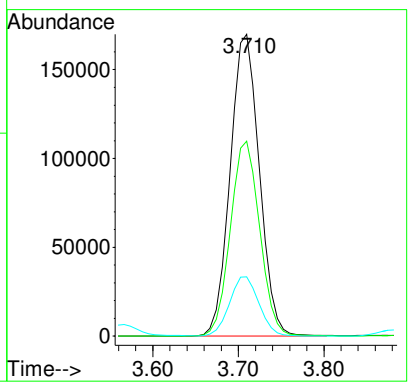


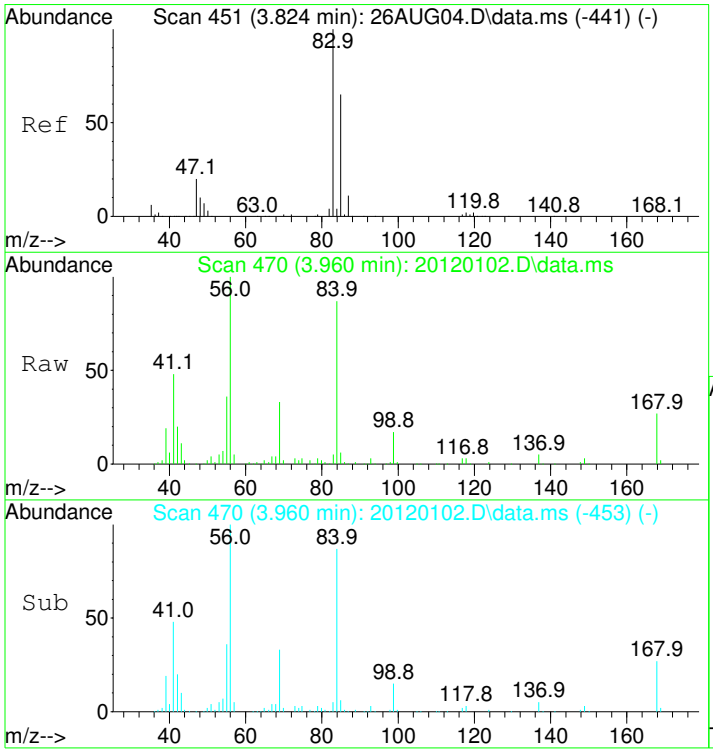


#43
Chloroform
Concen: 41.63 ug/L
RT: 3.710 min Scan# 435
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 83 Resp: 402768

Ion	Ratio	Lower	Upper
83	100		
85	64.9	46.1	86.1
47	19.9	1.2	41.2

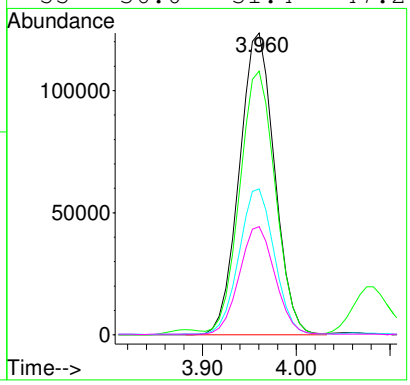


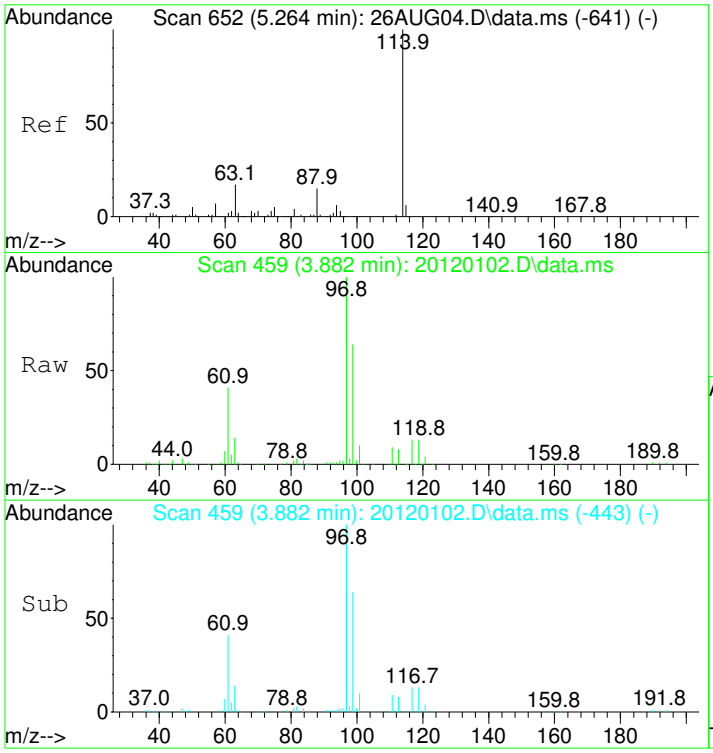


#44
Cyclohexane
Concen: 42.20 ug/L
RT: 3.960 min Scan# 470
Delta R.T. -0.001 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 56 Resp: 324829

Ion	Ratio	Lower	Upper
56	100		
84	87.4	69.5	104.3
41	48.2	39.4	59.0
55	36.0	31.4	47.2

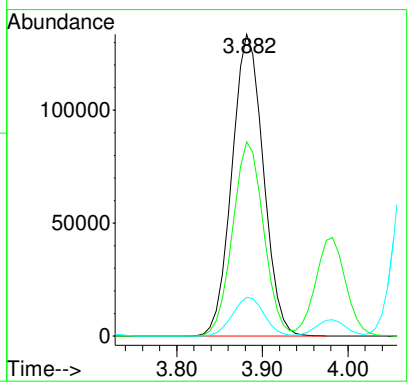


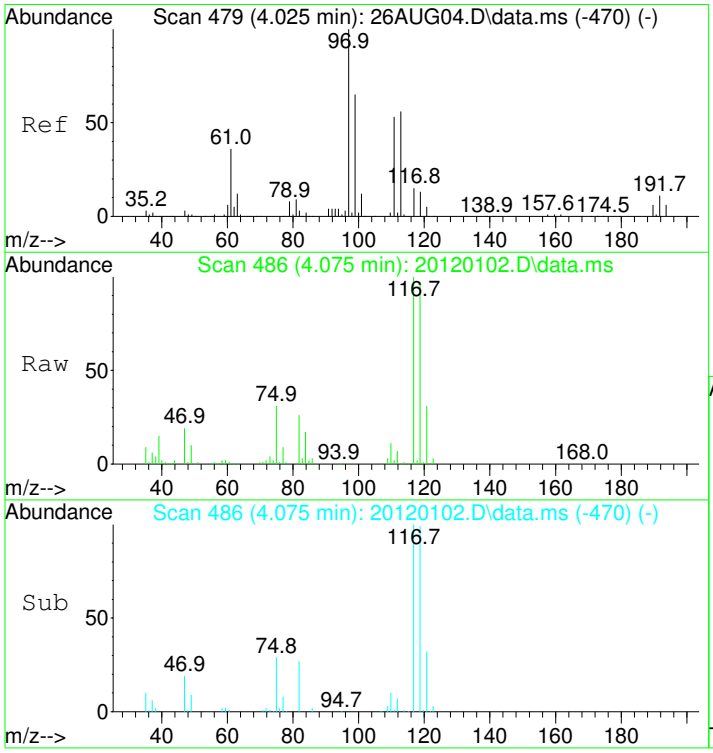


#46
1,1,1-Trichloroethane
Concen: 42.95 ug/L
RT: 3.882 min Scan# 459
Delta R.T. -0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 97 Resp: 340744

Ion	Ratio	Lower	Upper
97	100		
99	63.5	45.8	85.8
117	13.0	0.0	33.4

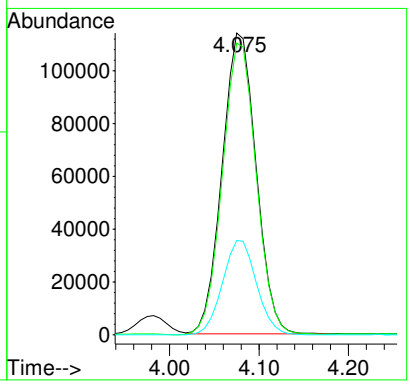


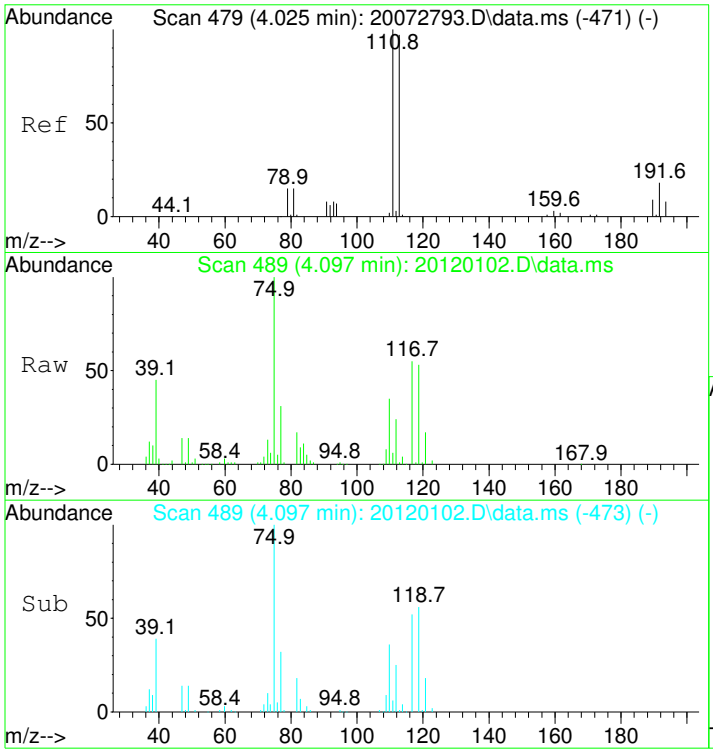


#48
Carbon tetrachloride
Concen: 44.15 ug/L
RT: 4.075 min Scan# 486
Delta R.T. -0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:117 Resp: 300615

Ion	Ratio	Lower	Upper
117	100		
119	96.9	78.7	118.7
121	31.4	11.8	51.8

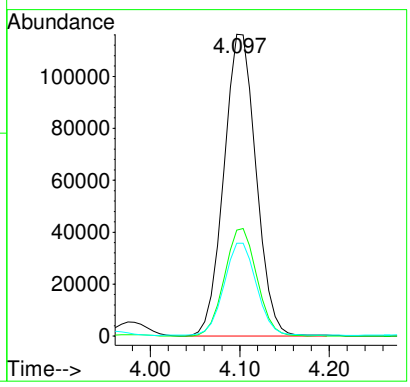


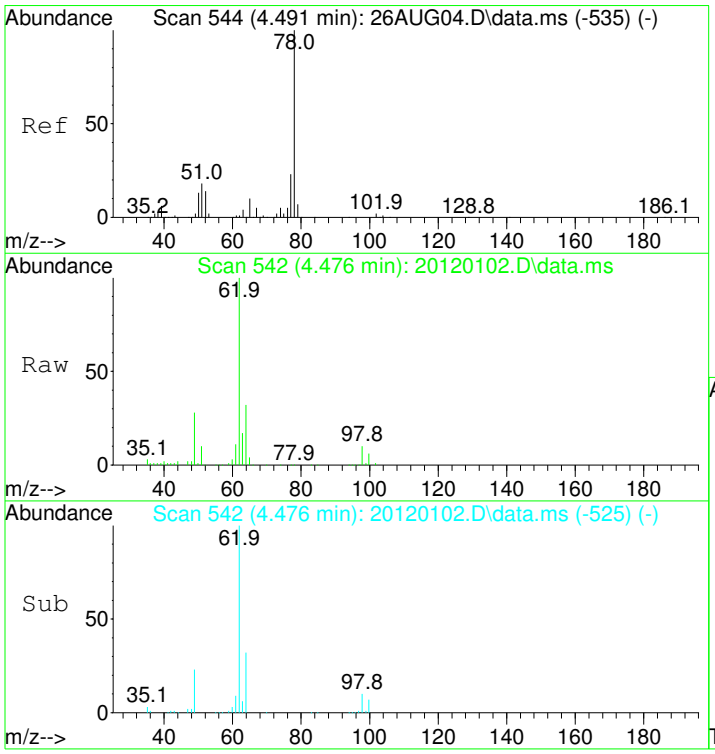


#49
1,1-Dichloropropene
Concen: 43.55 ug/L
RT: 4.097 min Scan# 489
Delta R.T. -0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 75 Resp: 291548

Ion	Ratio	Lower	Upper
75	100		
110	35.8	16.0	56.0
77	30.7	11.0	51.0

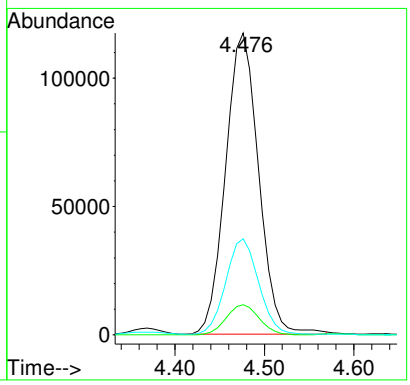


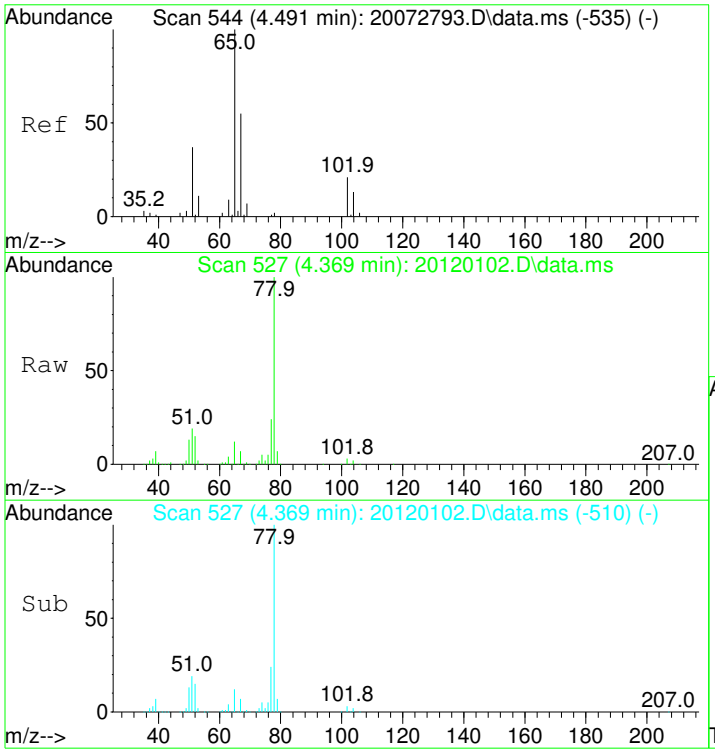


#51
1,2-Dichloroethane
Concen: 40.56 ug/L
RT: 4.476 min Scan# 542
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 62 Resp: 301875

Ion	Ratio	Lower	Upper
62	100		
98	9.9	0.0	29.0
64	31.3	13.9	53.9

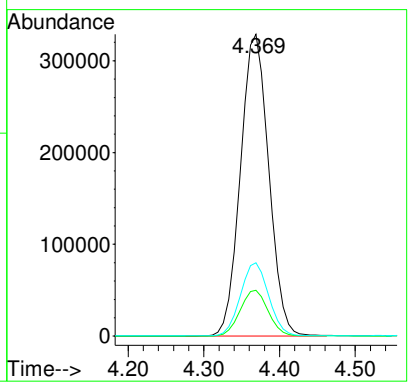


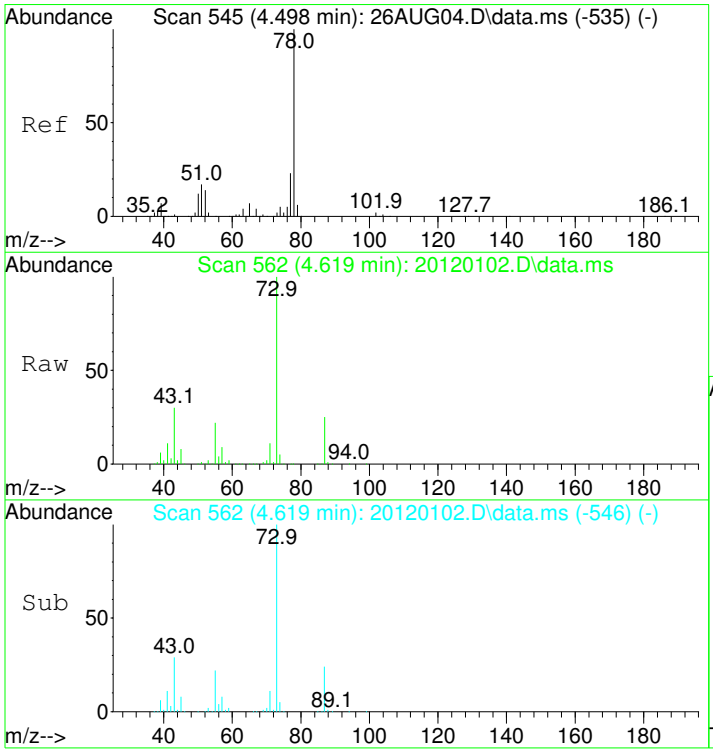


#52
Benzene
Concen: 43.94 ug/L
RT: 4.369 min Scan# 527
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 78 Resp: 852472

Ion	Ratio	Lower	Upper
78	100		
52	15.1	0.0	35.8
77	24.0	3.7	43.7

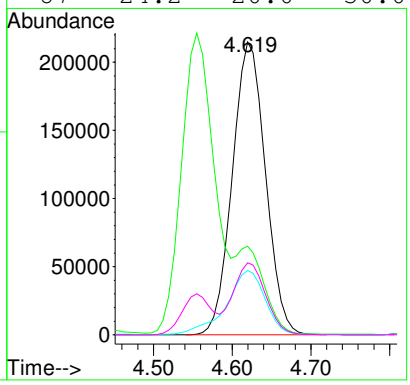


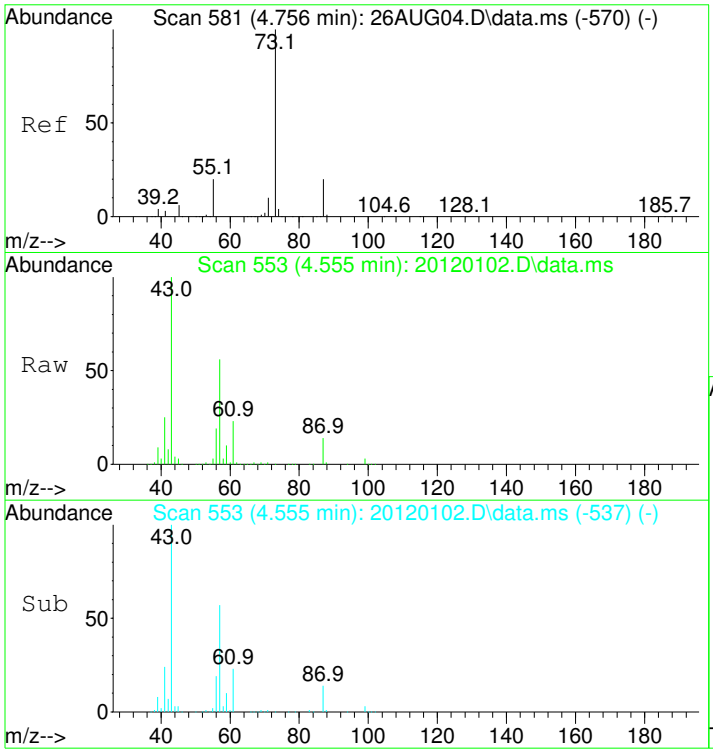


#53
Tertiaryamylmethylether
Concen: 42.63 ug/L
RT: 4.619 min Scan# 562
Delta R.T. -0.008 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 73 Resp: 629073

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.9	34.3#
55	25.4	21.0	31.6
87	24.2	20.0	30.0

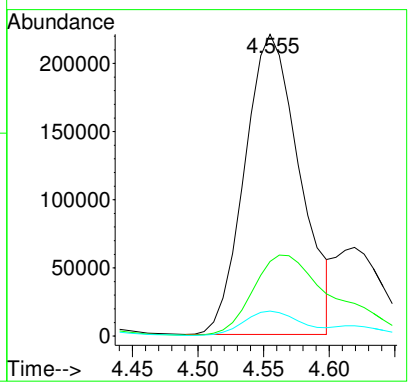


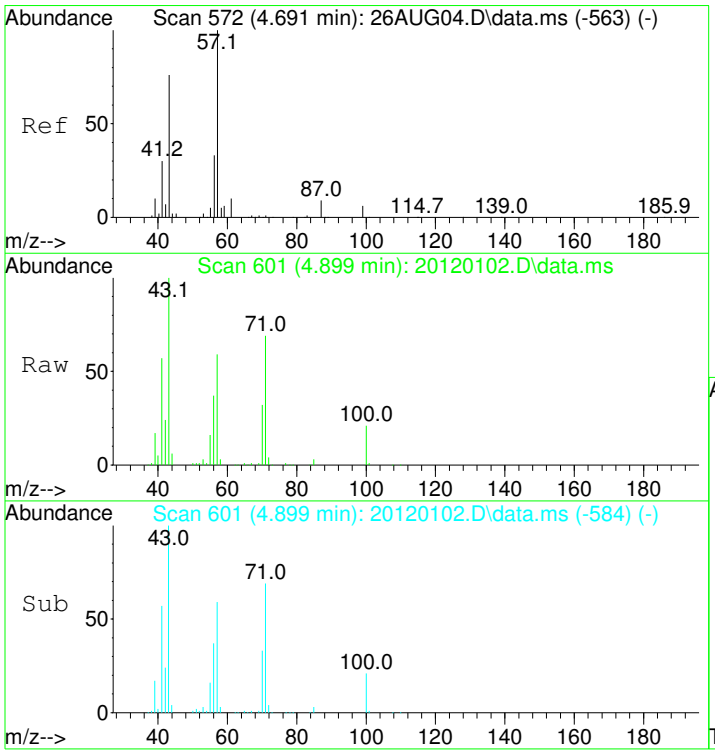


#54
Isobutyl Alcohol
Concen: 42.33 ug/L
RT: 4.555 min Scan# 553
Delta R.T. -0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 642265

Ion	Ratio	Lower	Upper
43	100		
41	38.7	30.7	46.1
42	8.4	6.4	9.6

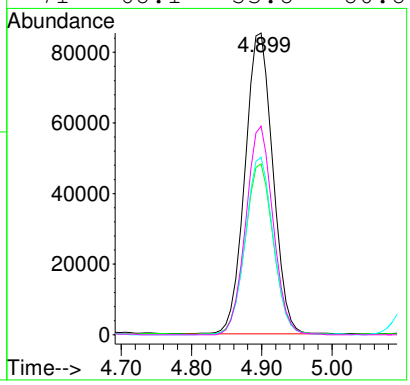


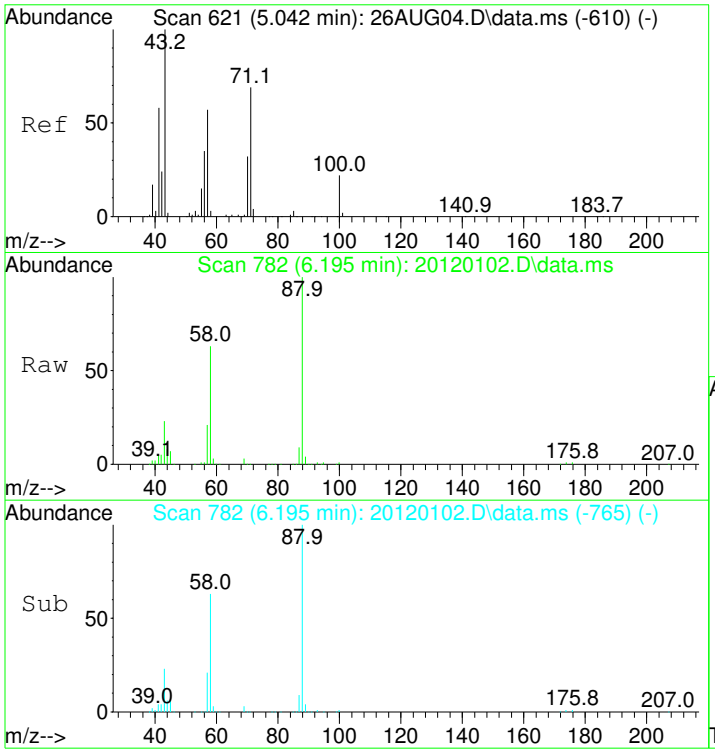


#55
Heptane
Concen: 45.52 ug/L
RT: 4.899 min Scan# 601
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 234536

Ion	Ratio	Lower	Upper
43	100		
41	57.2	46.8	70.2
57	59.5	47.5	71.3
71	68.1	53.8	80.8

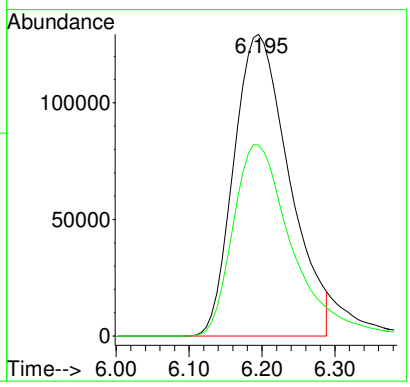


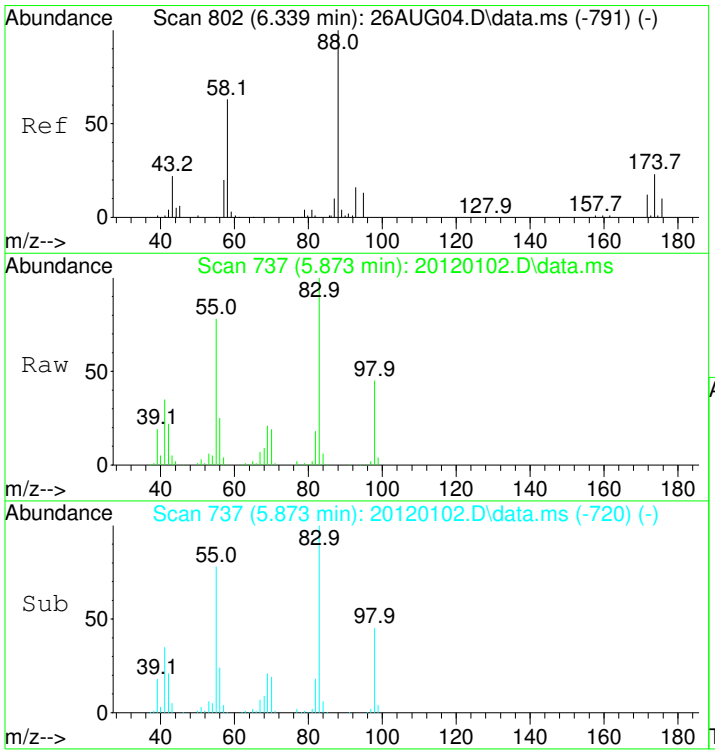


#56
1,4-Dioxane
Concen: 3941.72 ug/L
RT: 6.195 min Scan# 782
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 88 Resp: 682090

Ion	Ratio	Lower	Upper
88	100		
58	63.5	50.7	76.1

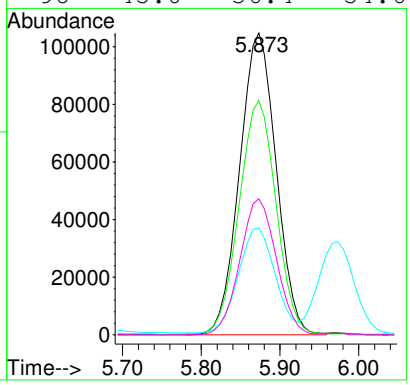


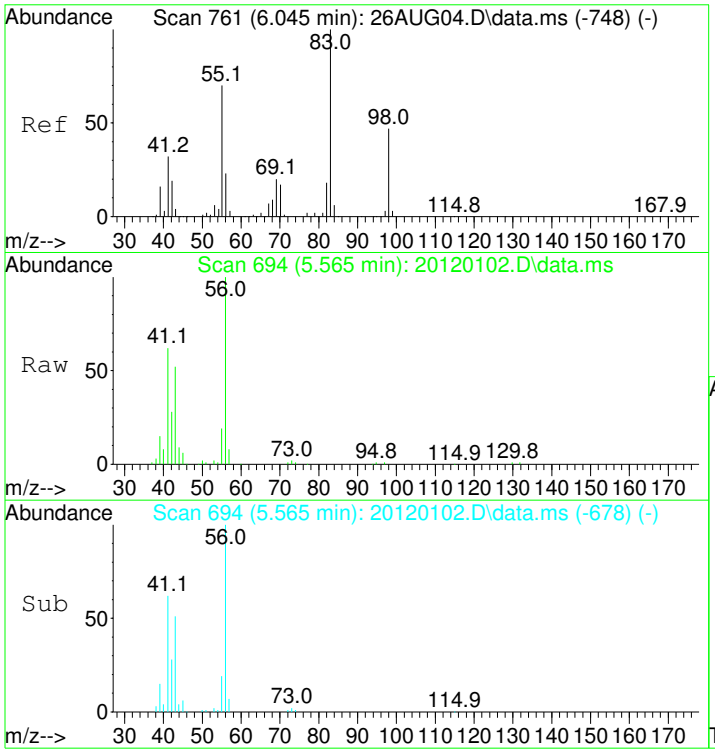


#57
Methylcyclohexane
Concen: 43.38 ug/L
RT: 5.873 min Scan# 737
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 83 Resp: 339115

Ion	Ratio	Lower	Upper
83	100		
55	77.9	61.7	92.5
41	35.0	28.5	42.7
98	45.0	36.4	54.6

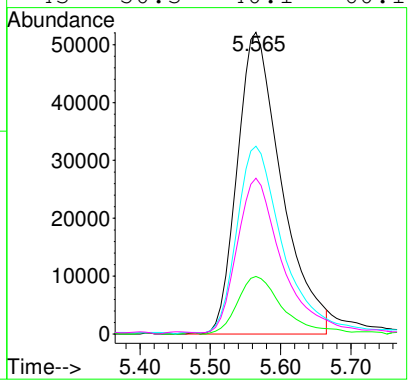


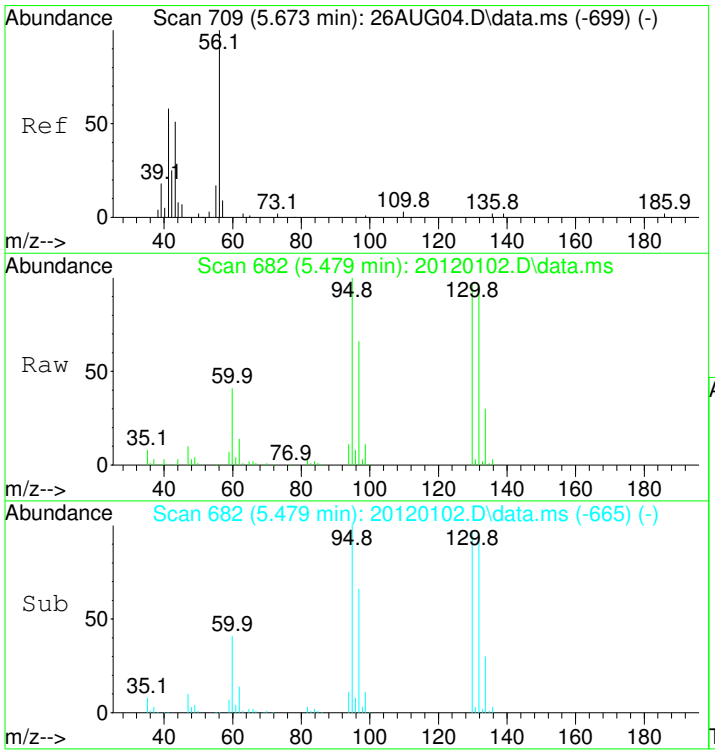


#58
n-Butanol
Concen: 516.14 ug/L
RT: 5.565 min Scan# 694
Delta R.T. -0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 56 Resp: 228148

Ion	Ratio	Lower	Upper
56	100		
55	19.0	15.4	23.2
41	61.9	50.9	76.3
43	50.3	40.1	60.1

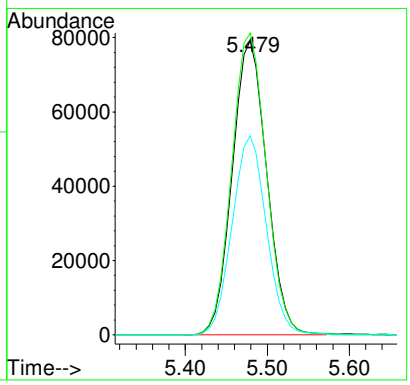


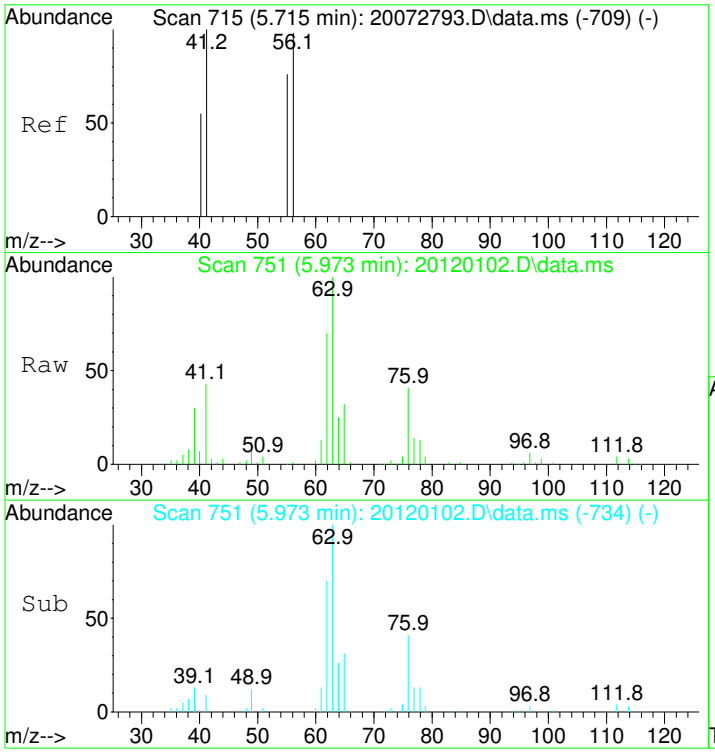


#59
Trichloroethene
Concen: 42.52 ug/L
RT: 5.479 min Scan# 682
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:130 Resp: 231580

Ion	Ratio	Lower	Upper
130	100		
95	103.0	82.7	122.7
97	67.2	47.6	87.6

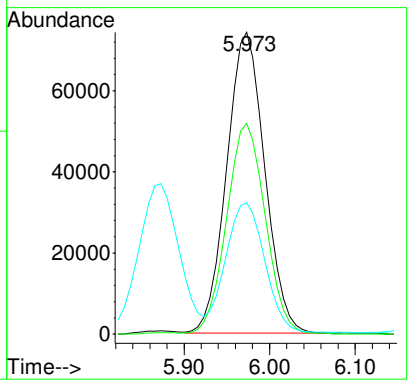


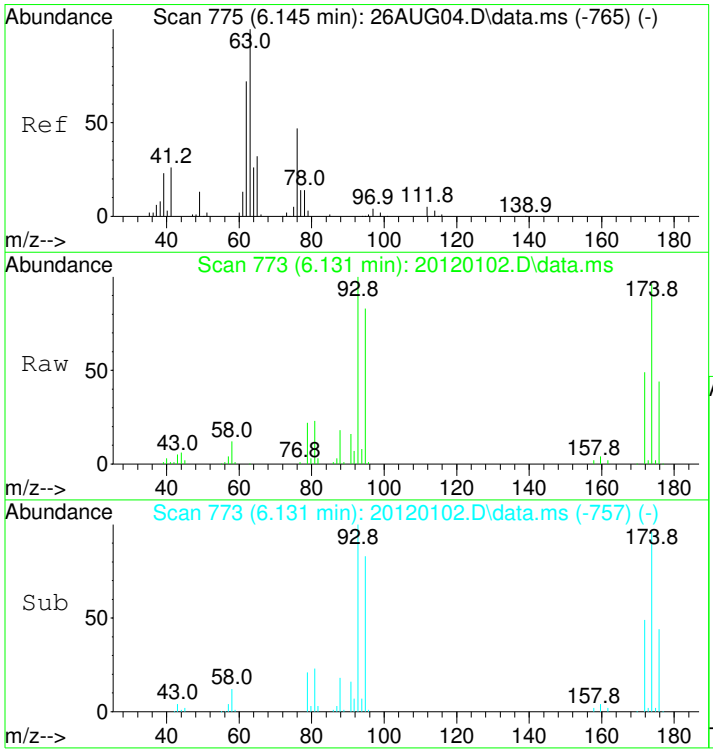


#60
1,2-Dichloropropane
Concen: 41.94 ug/L
RT: 5.973 min Scan# 751
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 63 Resp: 228996

Ion	Ratio	Lower	Upper
63	100		
62	70.3	51.5	91.5
41	44.0	26.1	66.1

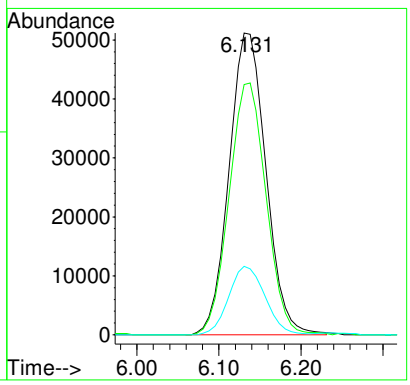


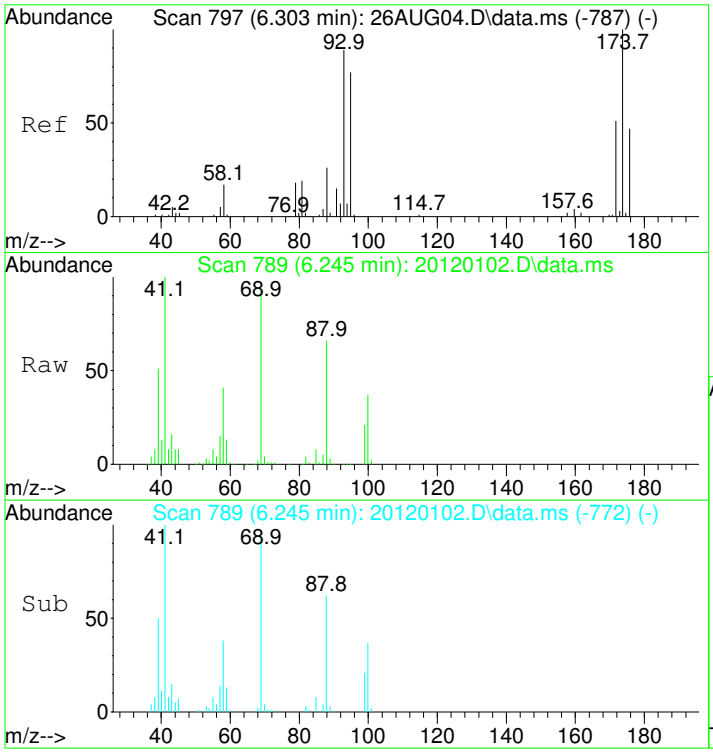


#61
Dibromomethane
Concen: 41.41 ug/L
RT: 6.131 min Scan# 773
Delta R.T. -0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 93 Resp: 160110

Ion	Ratio	Lower	Upper
93	100		
95	83.7	63.0	103.0
81	22.4	3.4	43.4

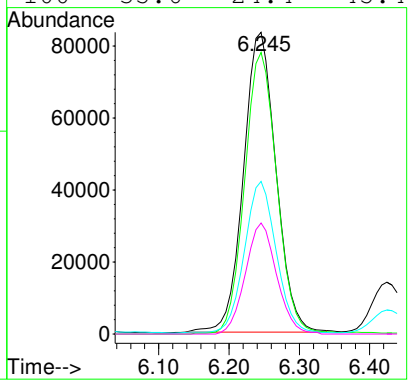


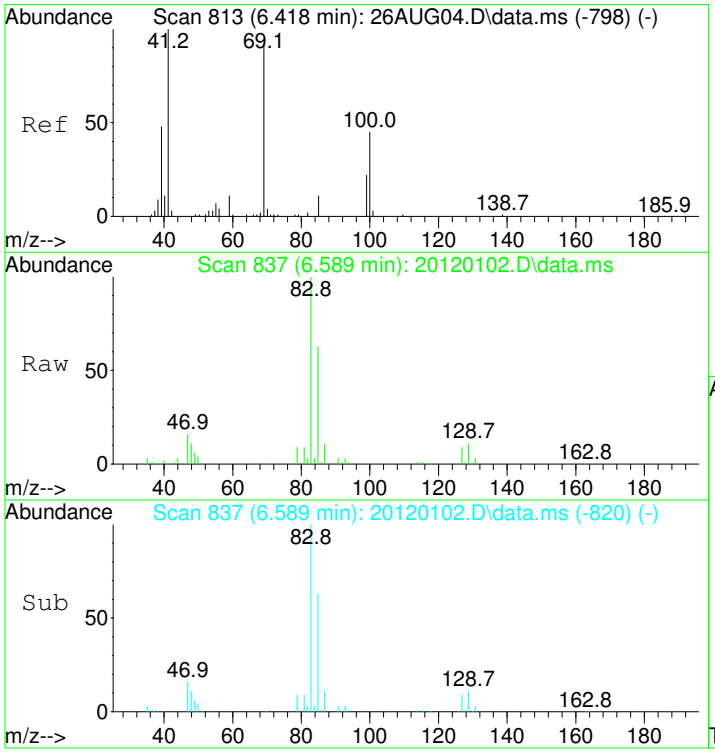


#62
Methyl methacrylate
Concen: 42.62 ug/L
RT: 6.245 min Scan# 789
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 41 Resp: 267738

Ion	Ratio	Lower	Upper
41	100		
69	93.0	72.2	108.4
39	48.9	41.1	61.7
100	35.6	24.4	45.4

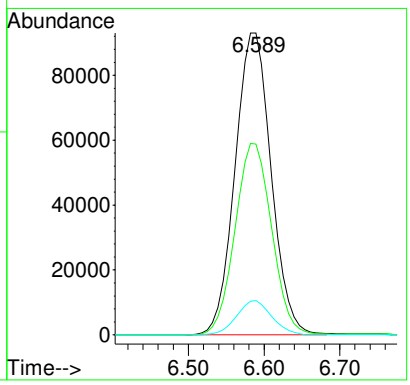


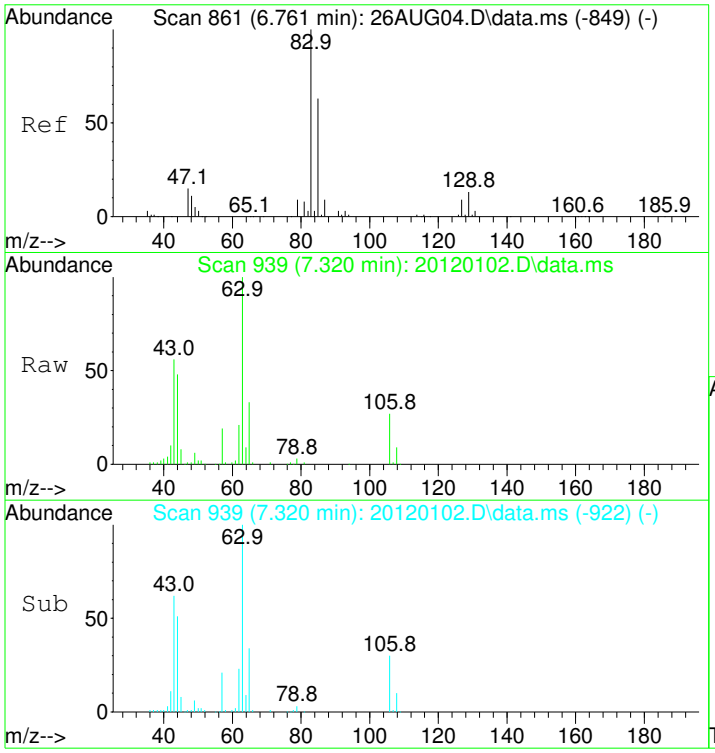


#63
Bromodichloromethane
Concen: 41.45 ug/L
RT: 6.589 min Scan# 837
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 83 Resp: 307547

Ion	Ratio	Lower	Upper
83	100		
85	64.2	44.3	84.3
129	11.0	0.0	31.0

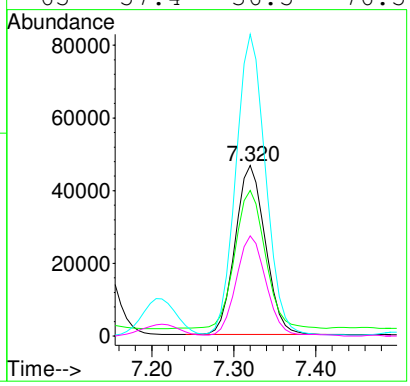


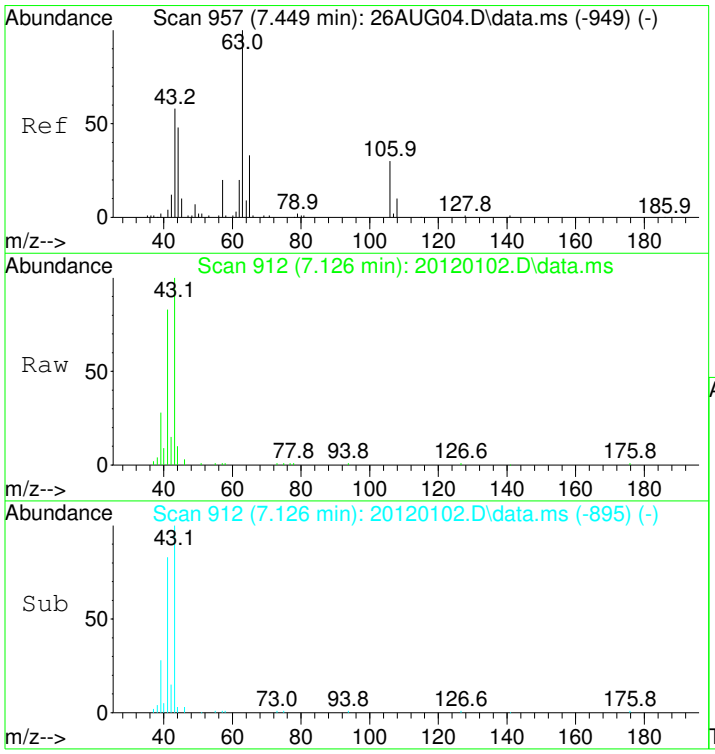


#64
2-Chloroethyl vinyl ether
Concen: 43.64 ug/L
RT: 7.320 min Scan# 939
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 118376

Ion	Ratio	Lower	Upper
43	100		
44	83.4	51.0	111.0
63	175.3	141.4	201.4
65	57.4	36.5	76.5

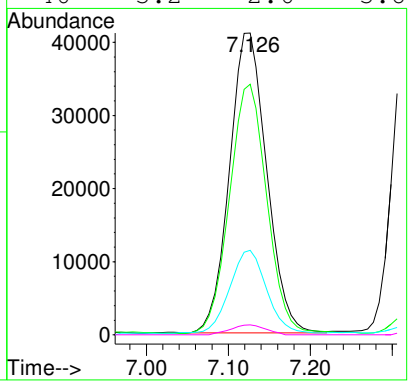


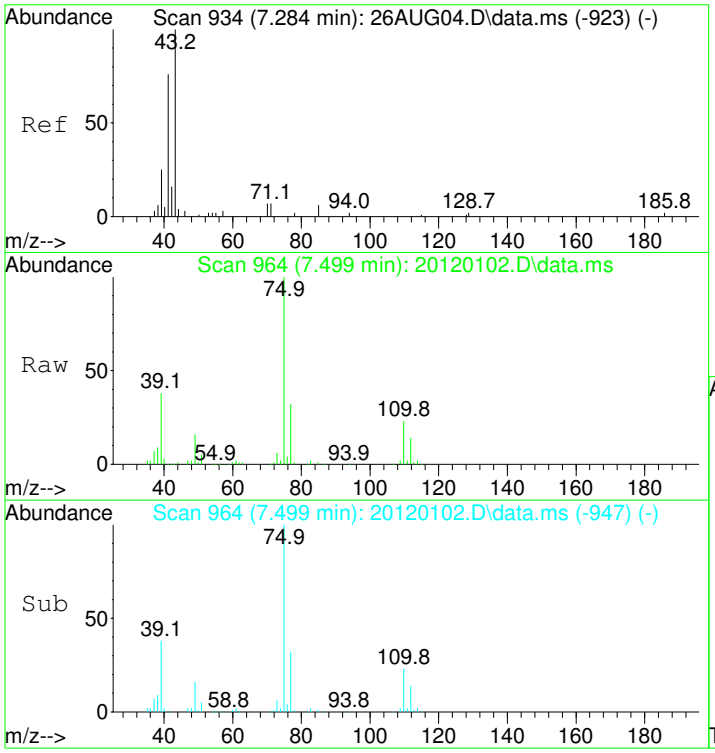


#65
2-Nitropropane
Concen: 43.43 ug/L
RT: 7.126 min Scan# 912
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 129403

Ion	Ratio	Lower	Upper
43	100		
41	83.2	67.9	101.9
39	27.3	21.8	32.8
46	3.2	2.6	3.8

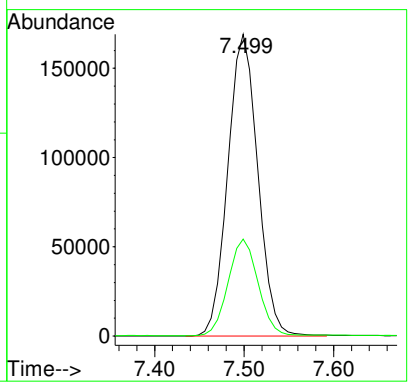


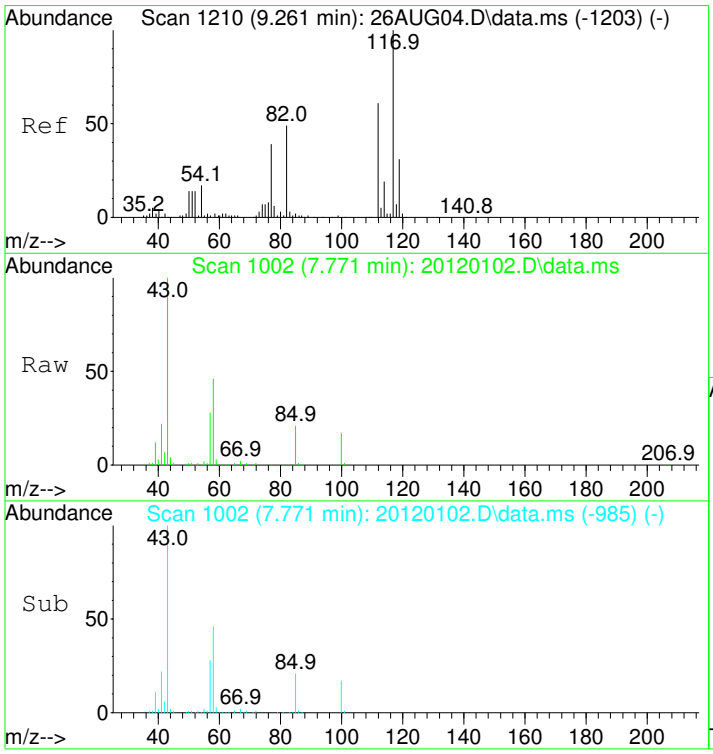


#66
cis-1,3-Dichloropropene
Concen: 43.33 ug/L
RT: 7.499 min Scan# 964
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 75 Resp: 394530

Ion	Ratio	Lower	Upper
75	100		
77	31.8	11.9	51.9

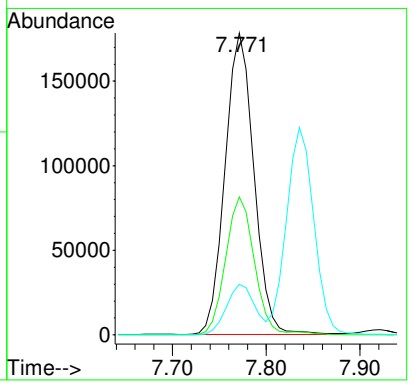


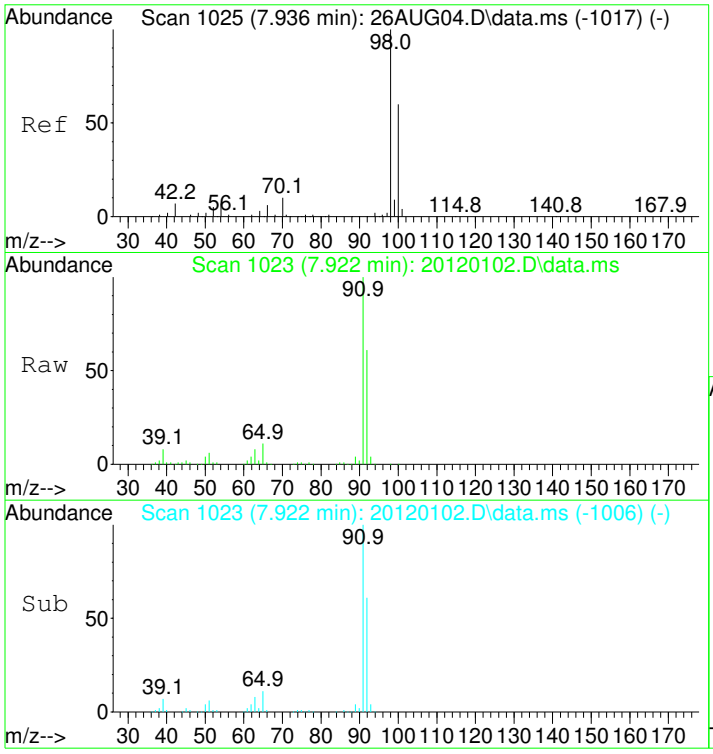


#68
4-Methyl-2-pentanone
Concen: 41.60 ug/L
RT: 7.771 min Scan# 1002
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 384421

Ion	Ratio	Lower	Upper
43	100		
58	45.8	25.4	65.4
100	16.7	0.0	36.2

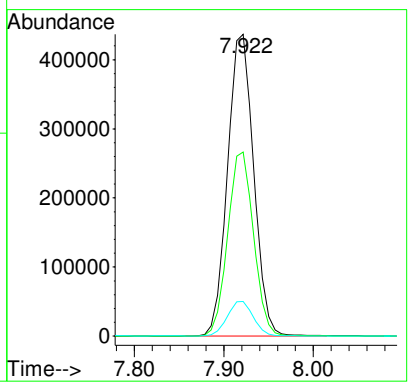


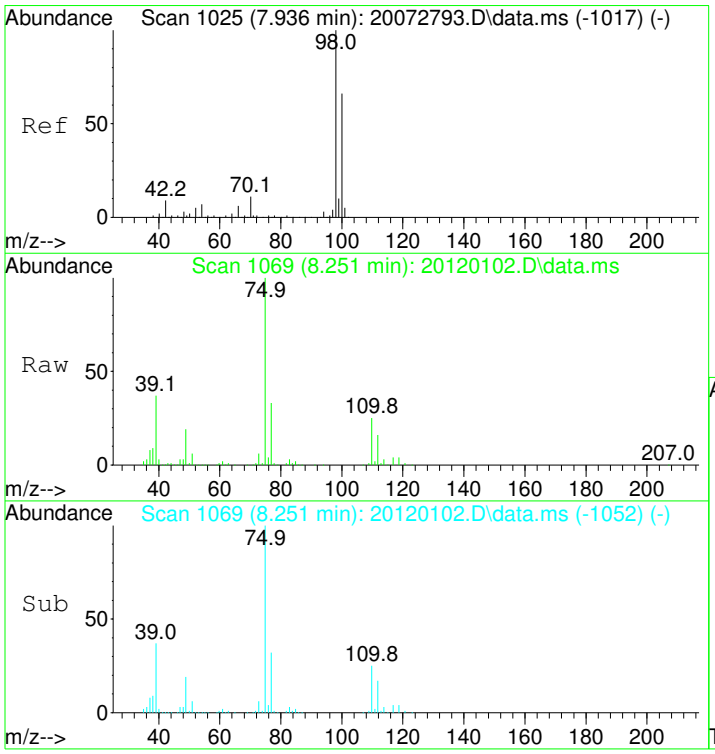


#70
Toluene
Concen: 43.83 ug/L
RT: 7.922 min Scan# 1023
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 889954

Ion	Ratio	Lower	Upper
91	100		
92	60.3	40.7	80.7
65	11.6	0.0	31.5

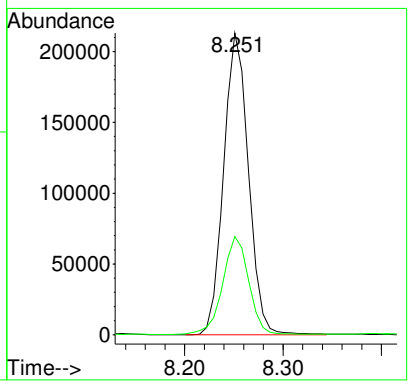


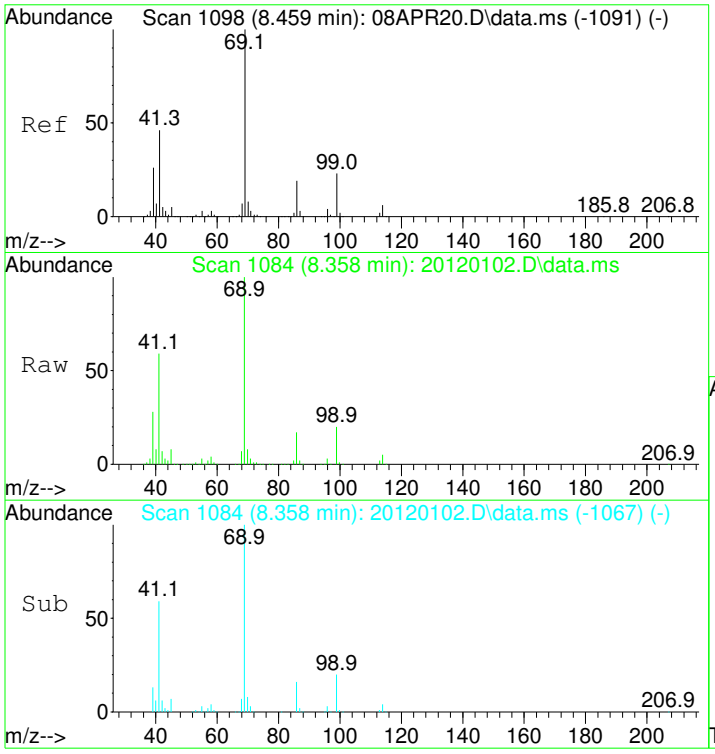


#71
trans-1,3-Dichloropropene
Concen: 42.77 ug/L
RT: 8.251 min Scan# 1069
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 75 Resp: 373473

Ion	Ratio	Lower	Upper
75	100		
77	34.0	15.0	55.0

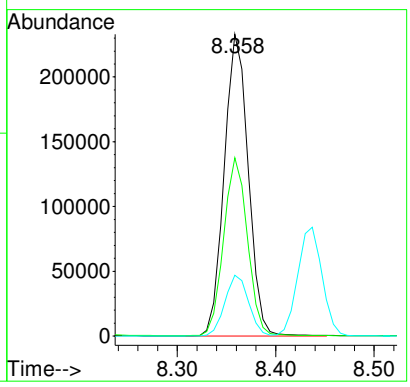


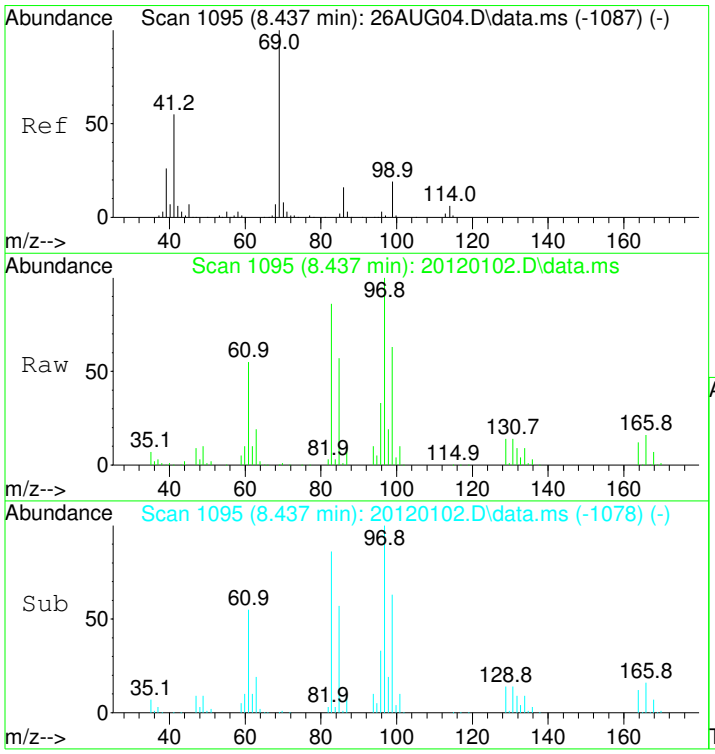


#73
Ethyl methacrylate
Concen: 41.70 ug/L
RT: 8.358 min Scan# 1084
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 69 Resp: 396592

Ion	Ratio	Lower	Upper
69	100		
41	57.9	39.9	79.9
99	19.9	0.0	39.7

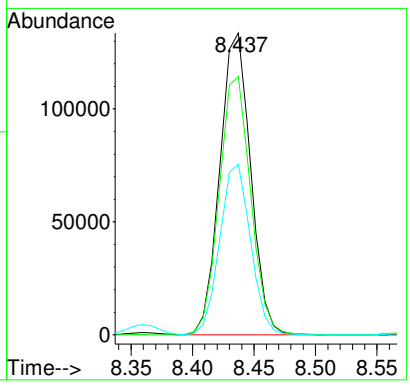


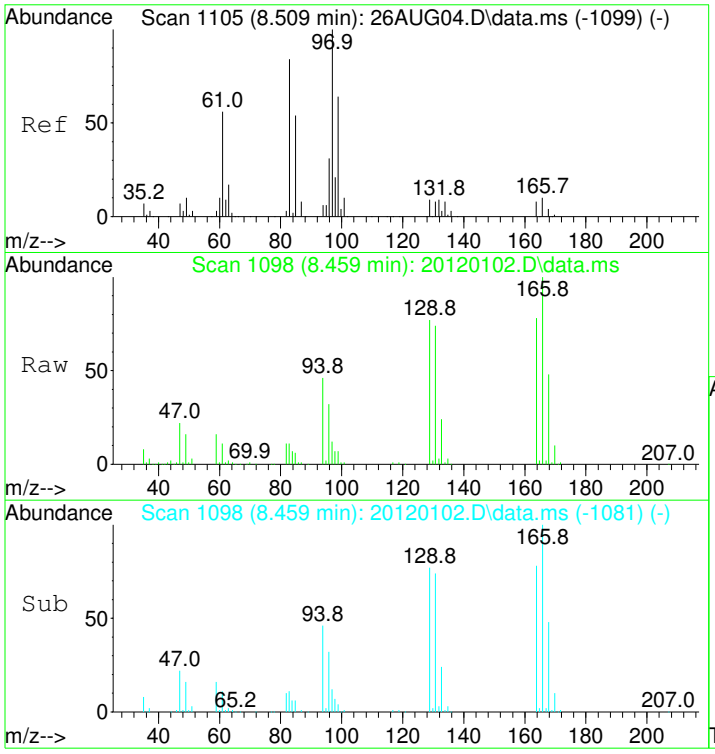


#74
1,1,2-Trichloroethane
Concen: 41.77 ug/L
RT: 8.437 min Scan# 1095
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 97 Resp: 232922

Ion	Ratio	Lower	Upper
97	100		
83	87.7	66.1	106.1
85	56.6	36.8	76.8

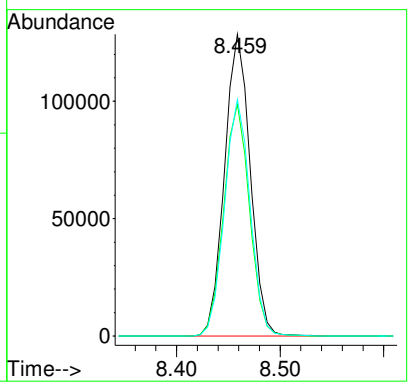


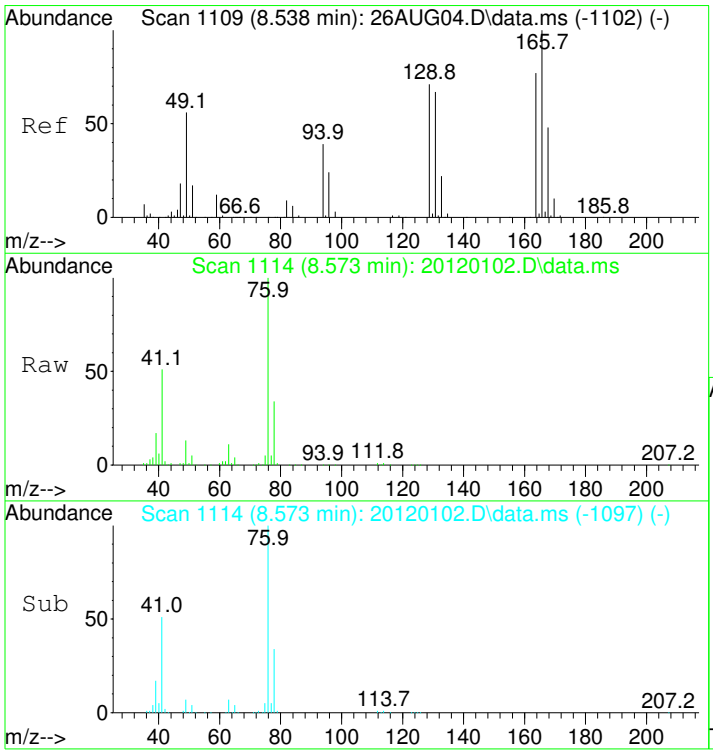


#75
Tetrachloroethene
Concen: 43.36 ug/L
RT: 8.459 min Scan# 1098
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:166 Resp: 222491

Ion	Ratio	Lower	Upper
166	100		
129	76.9	59.1	99.1
164	77.8	59.1	99.1

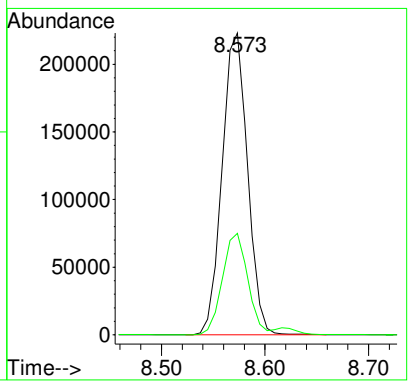


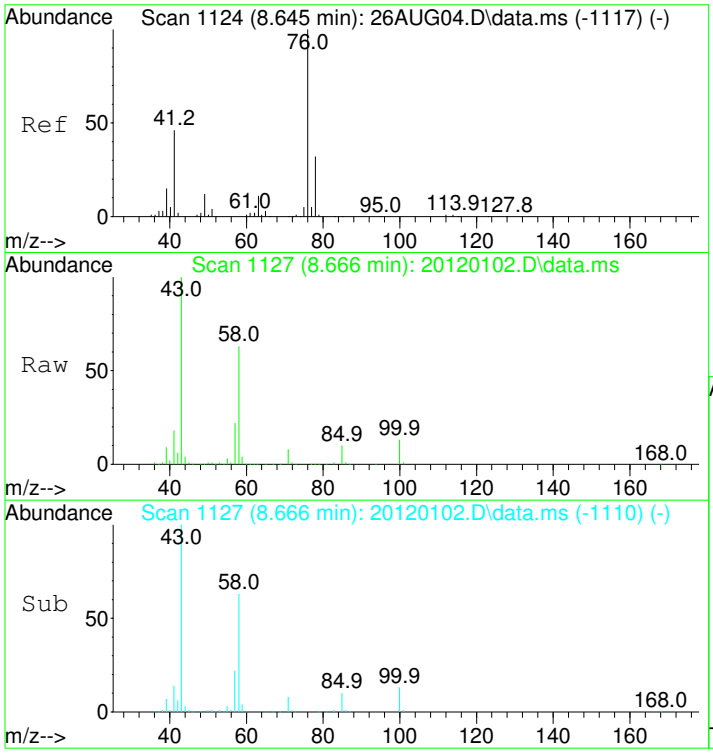


#76
1,3-Dichloropropane
Concen: 41.36 ug/L
RT: 8.573 min Scan# 1114
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 76 Resp: 382400

Ion	Ratio	Lower	Upper
76	100		
78	33.9	13.2	53.2

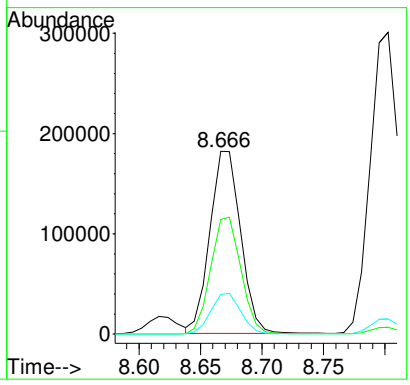


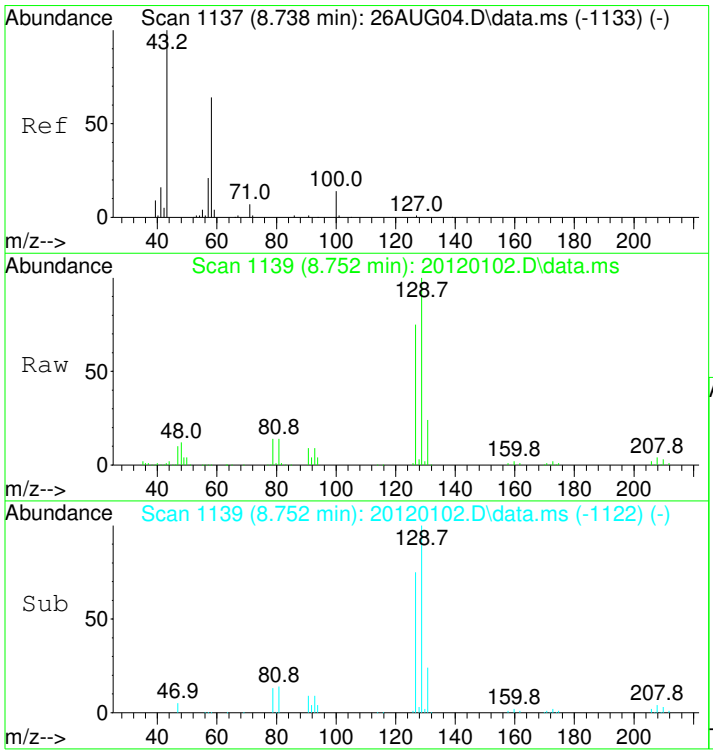


#77
2-Hexanone
Concen: 43.23 ug/L
RT: 8.666 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 315850

Ion	Ratio	Lower	Upper
43	100		
58	63.3	42.3	82.3
57	22.2	1.0	41.0

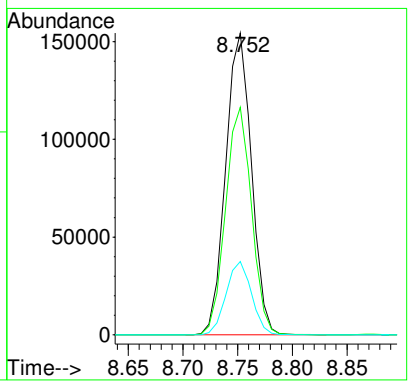


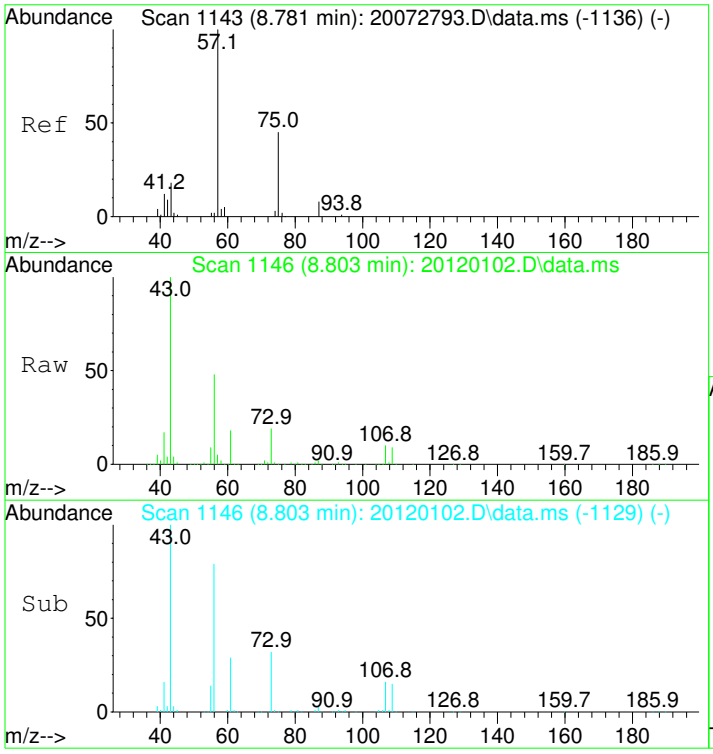


#78
Chlorodibromomethane
Concen: 41.41 ug/L
RT: 8.752 min Scan# 1139
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:129 Resp: 253117

Ion	Ratio	Lower	Upper
129	100		
127	75.9	57.8	97.8
131	24.0	4.2	44.2

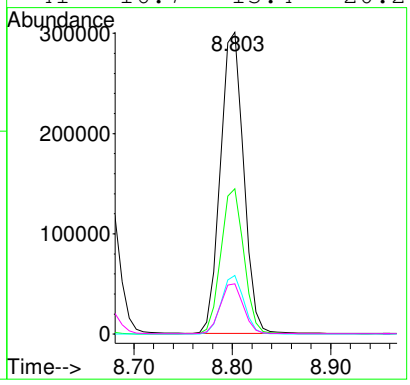


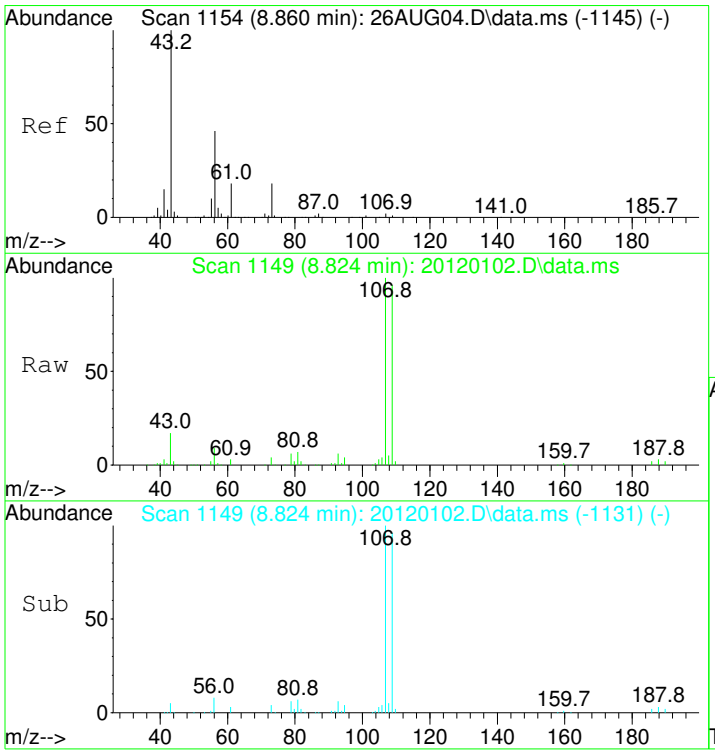


#79
Butyl acetate
Concen: 42.76 ug/L
RT: 8.803 min Scan# 1146
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 492433

Ion	Ratio	Lower	Upper
43	100		
56	48.3	38.0	57.0
73	19.0	15.0	22.4
41	16.7	13.4	20.2

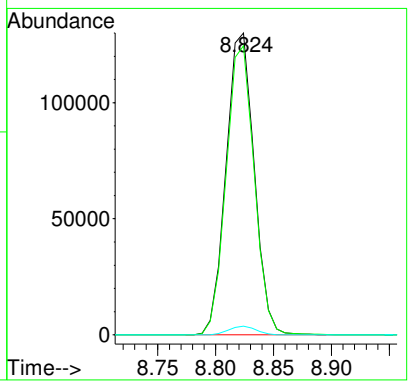


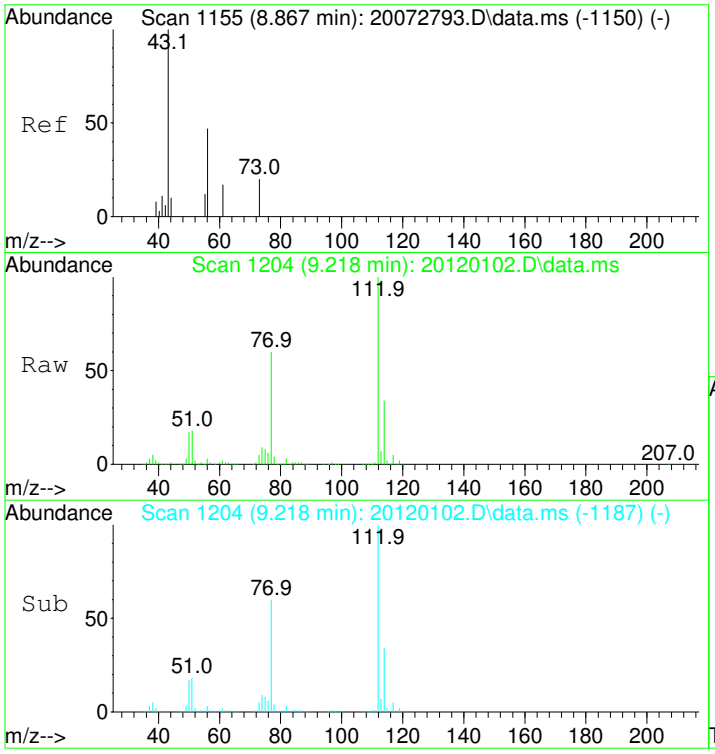


#80
1,2-Dibromoethane
Concen: 39.91 ug/L
RT: 8.824 min Scan# 1149
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:107 Resp: 219265

Ion	Ratio	Lower	Upper
107	100		
109	95.6	76.6	116.6
188	2.7	0.0	22.9

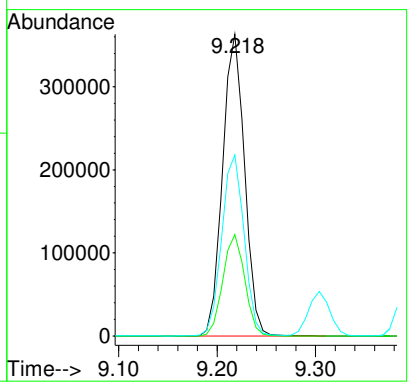


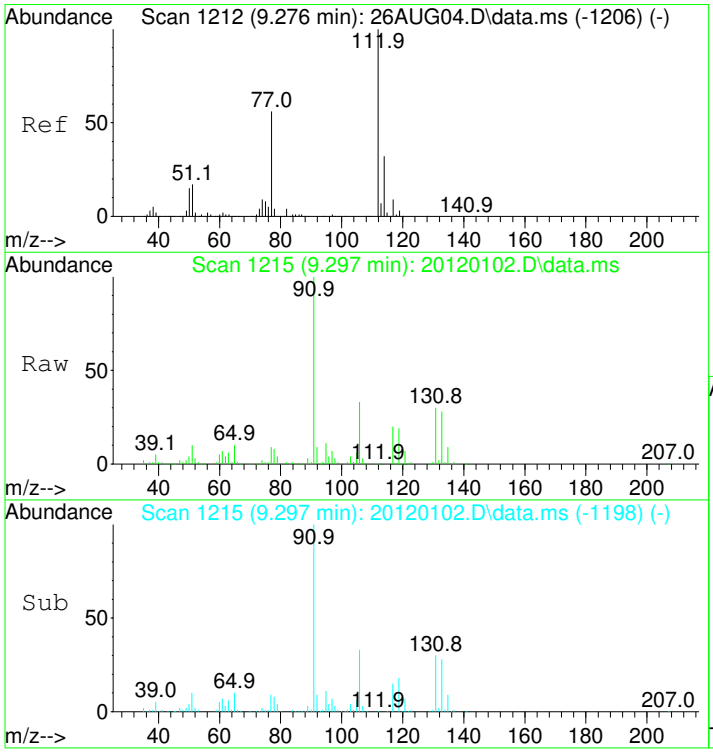


#81
Chlorobenzene
Concen: 43.26 ug/L
RT: 9.218 min Scan# 1204
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:112 Resp: 565045

Ion	Ratio	Lower	Upper
112	100		
114	33.4	13.6	53.6
77	61.0	41.7	81.7

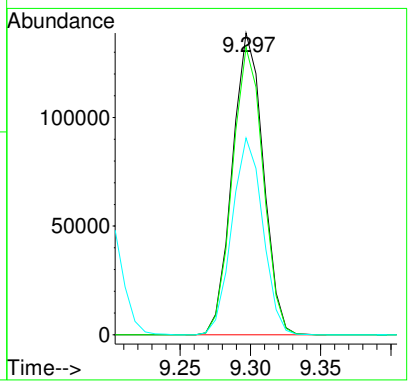


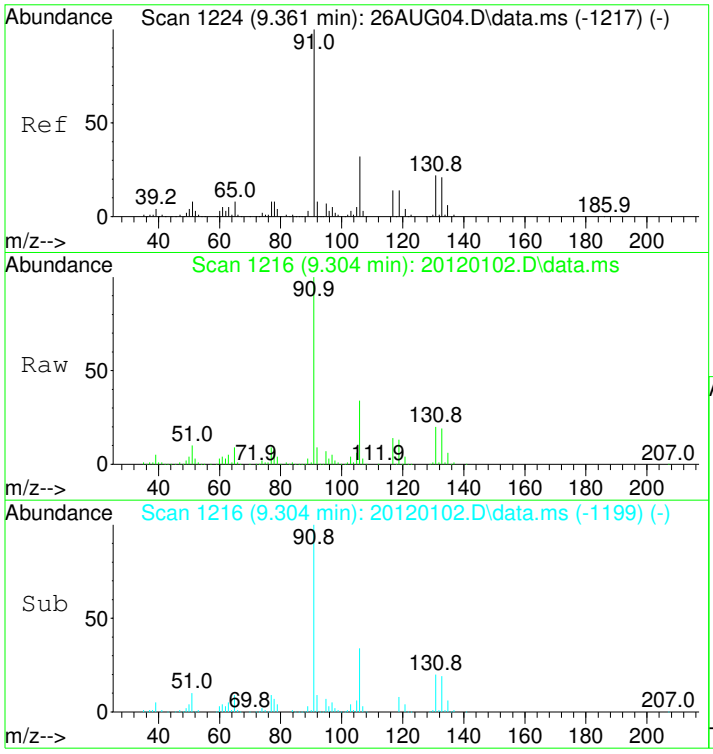


#82
1,1,1,2-Tetrachloroethane
Concen: 42.18 ug/L
RT: 9.297 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:131 Resp: 213431

Ion	Ratio	Lower	Upper
131	100		
133	94.8	74.4	114.4
119	65.1	45.7	85.7

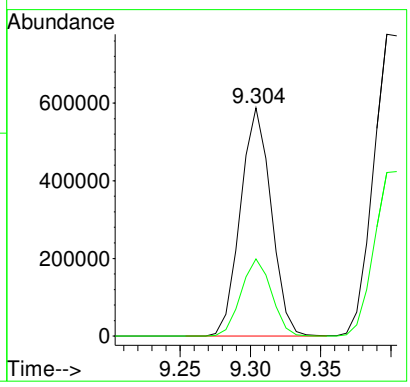


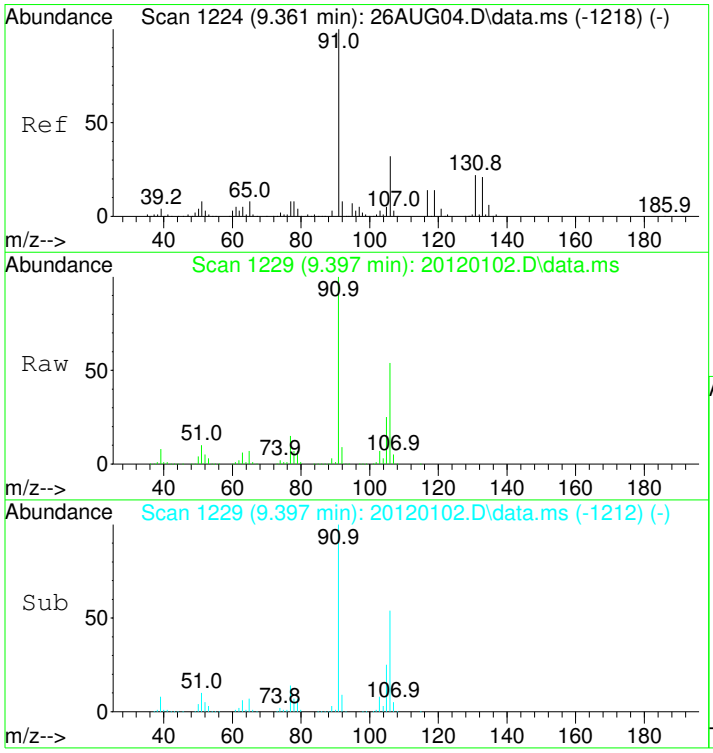


#83
Ethylbenzene
Concen: 40.81 ug/L
RT: 9.304 min Scan# 1216
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 898095

Ion	Ratio	Lower	Upper
91	100		
106	33.5	13.6	53.6

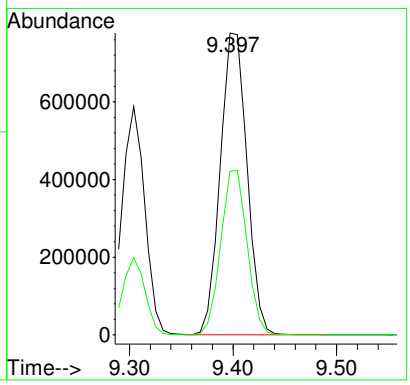


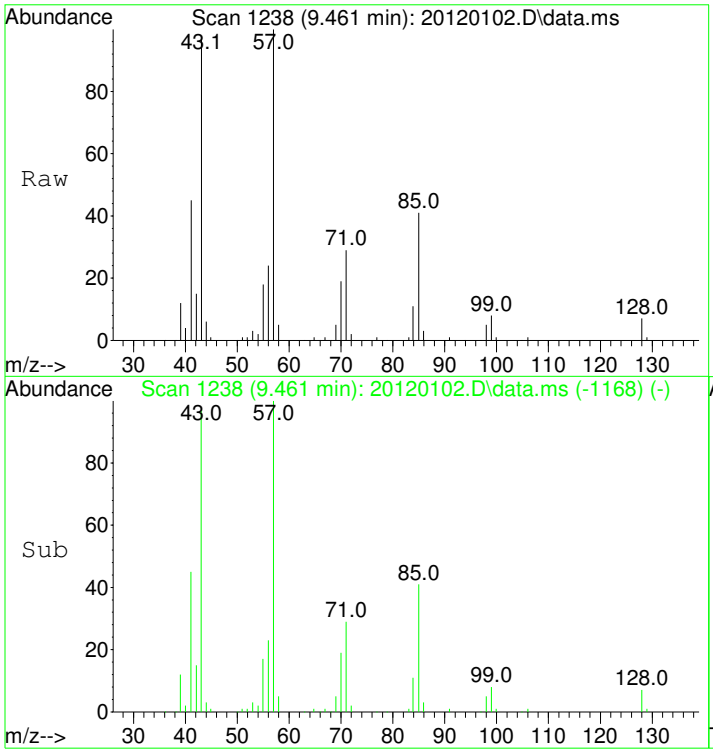


#84
m/p-Xylene
Concen: 80.42 ug/L
RT: 9.397 min Scan# 1229
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 1399989

Ion	Ratio	Lower	Upper
91	100		
106	53.5	34.2	74.2

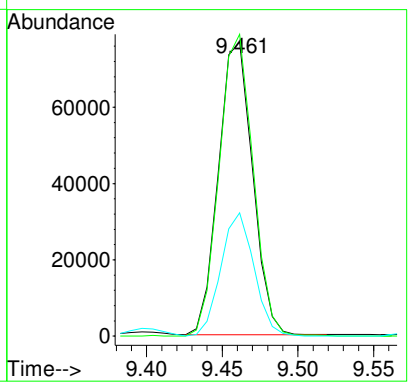


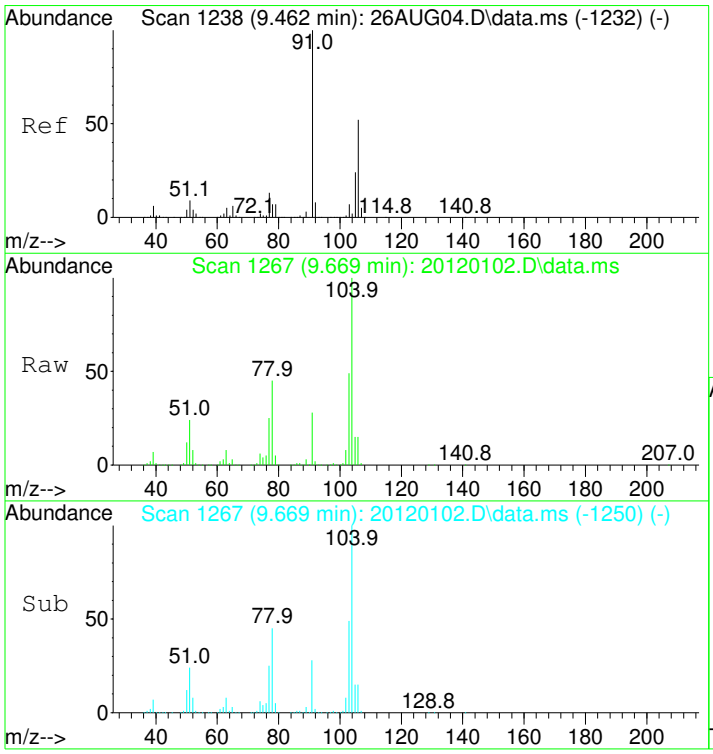


#85
Nonane
Concen: 43.23 ug/L
RT: 9.461 min Scan# 1238
Delta R.T. -0.001 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 120122

Ion	Ratio	Lower	Upper
43	100		
57	102.6	67.9	127.9
85	40.8	10.4	70.4

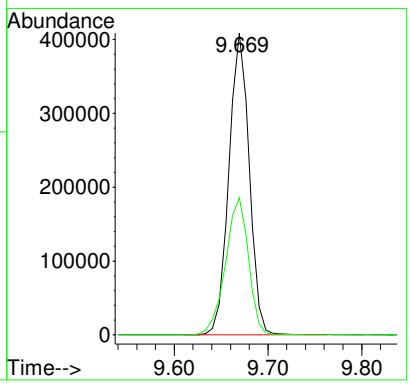


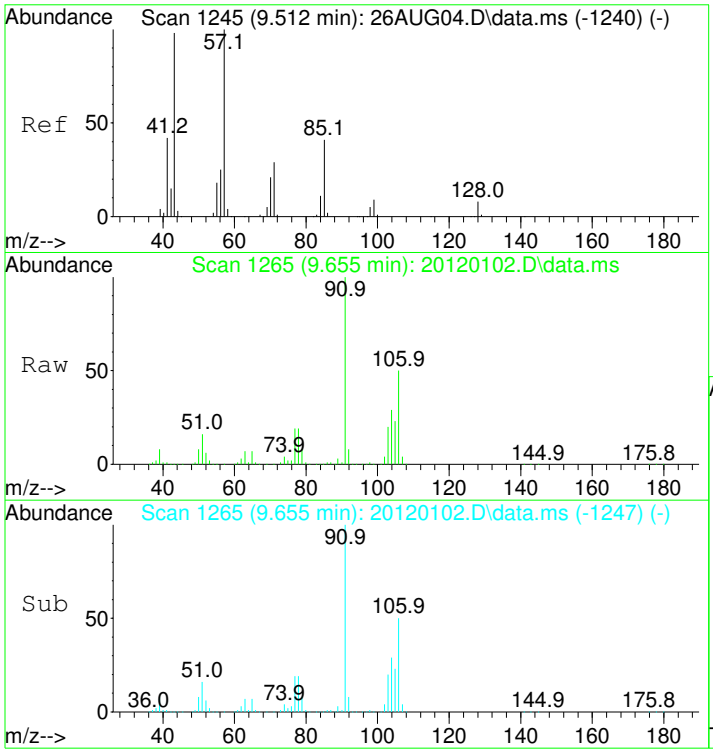


#86
Styrene
Concen: 41.33 ug/L
RT: 9.669 min Scan# 1267
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:104 Resp: 620616

Ion	Ratio	Lower	Upper
104	100		
78	51.2	32.3	72.3

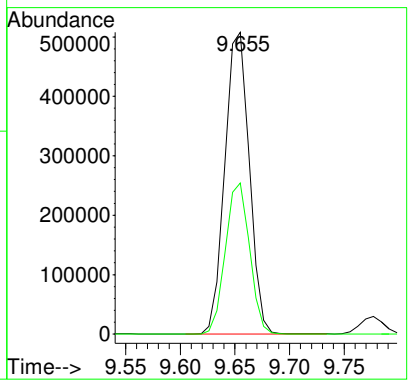


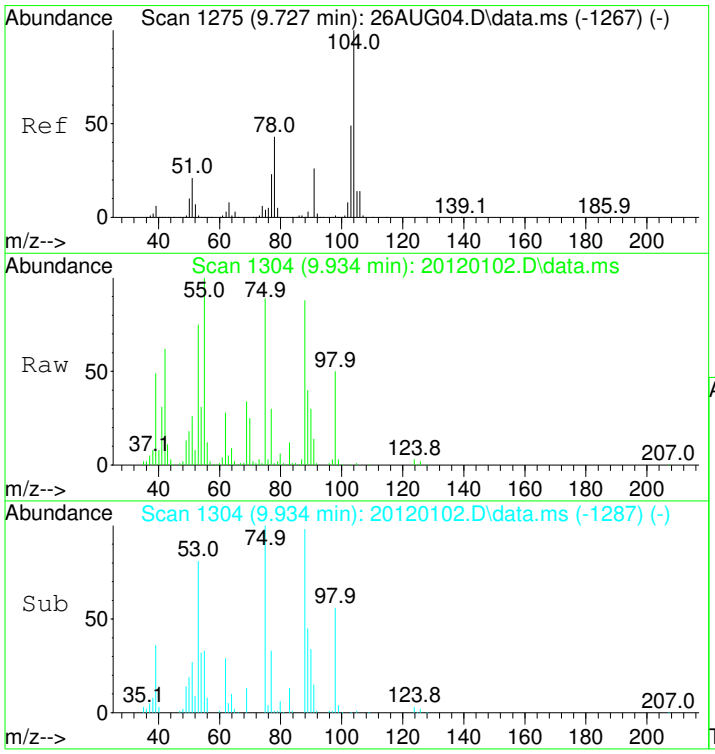


#87
o-Xylene
Concen: 40.37 ug/L
RT: 9.655 min Scan# 1265
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 790272

Ion	Ratio	Lower	Upper
91	100		
106	49.5	30.3	70.3

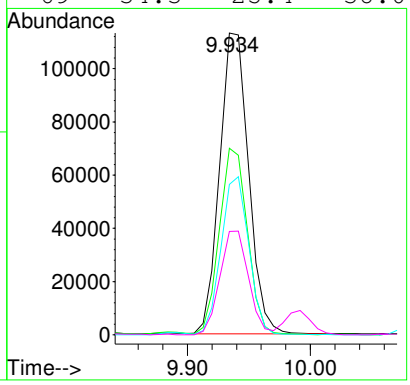


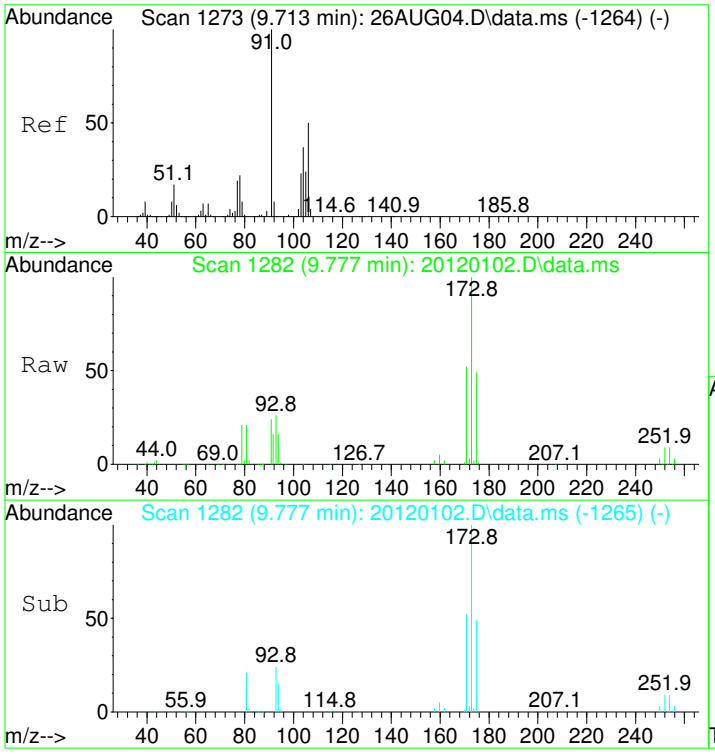


#88
Cyclohexanone
Concen: 231.57 ug/L
RT: 9.934 min Scan# 1304
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 55 Resp: 184442

Ion	Ratio	Lower	Upper
55	100		
42	60.4	48.0	72.0
98	50.6	38.2	57.2
69	34.3	25.4	38.0

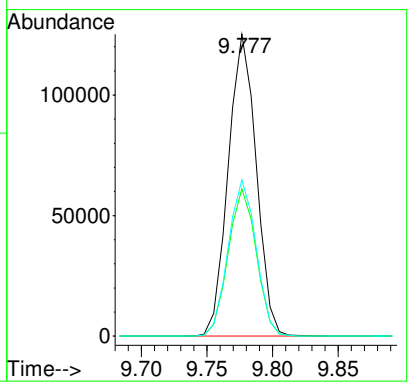


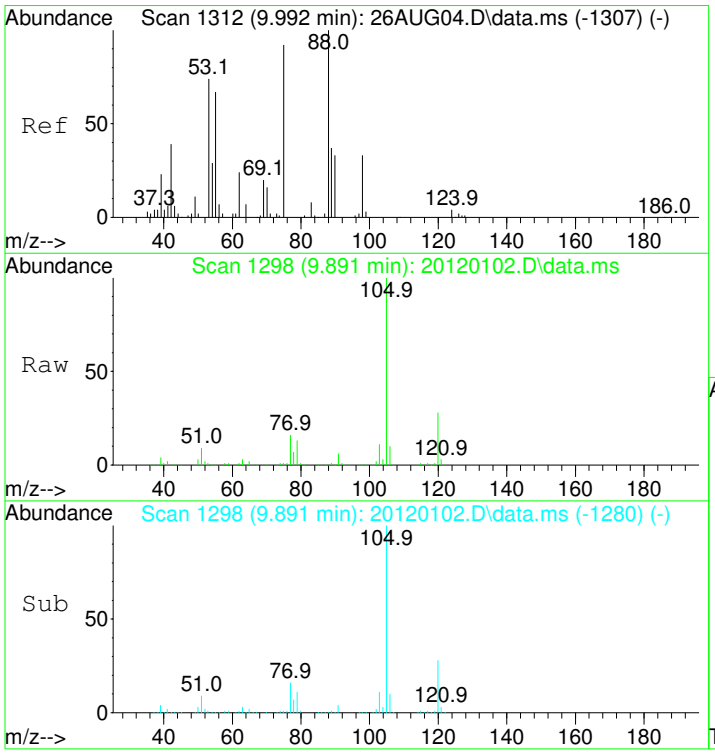


#89
Bromoform
Concen: 39.63 ug/L
RT: 9.777 min Scan# 1282
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:173 Resp: 186162

Ion	Ratio	Lower	Upper
173	100		
175	48.9	28.4	68.4
171	51.7	31.7	71.7

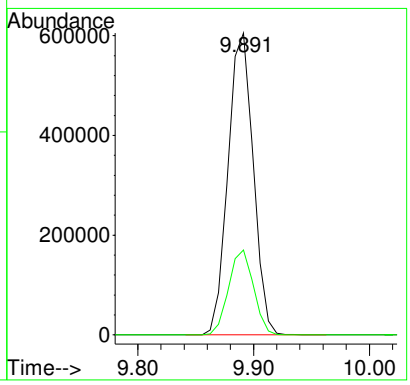


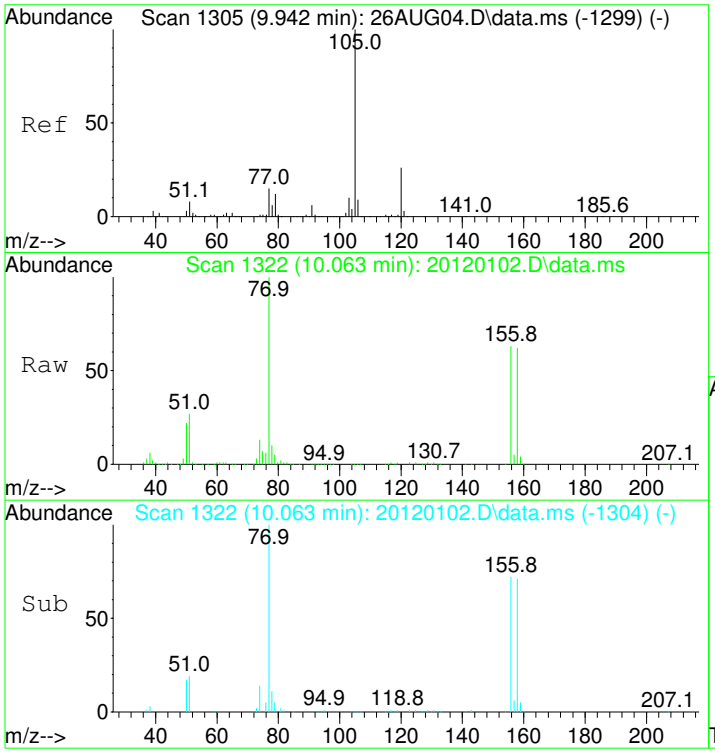


#90
Isopropylbenzene
Concen: 40.81 ug/L
RT: 9.891 min Scan# 1298
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:105 Resp: 914187

Ion	Ratio	Lower	Upper
105	100		
120	27.7	8.0	48.0

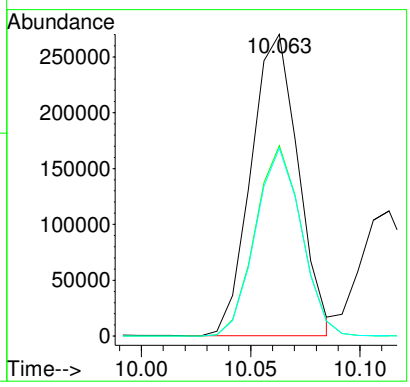


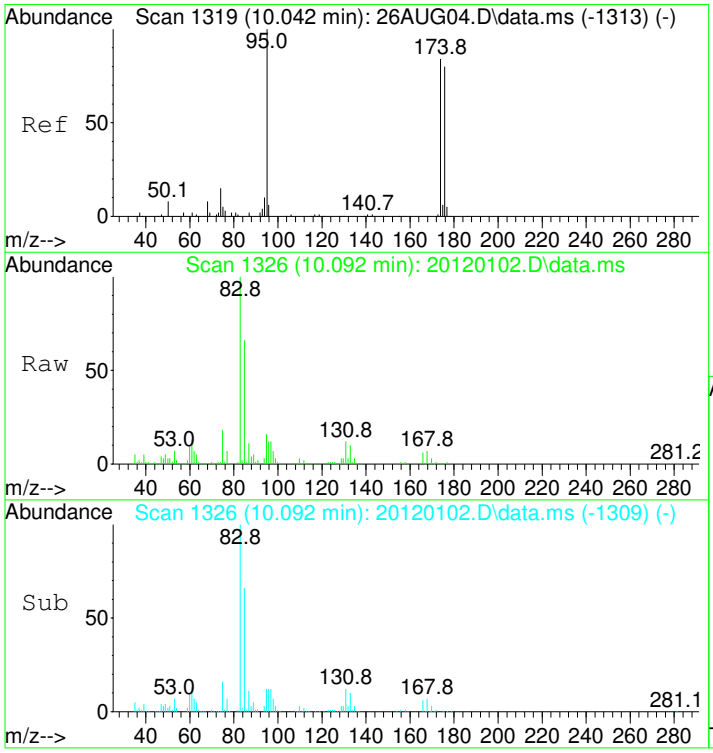


#92
Bromobenzene
Concen: 42.02 ug/L
RT: 10.063 min Scan# 1322
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 77 Resp: 406474

Ion	Ratio	Lower	Upper
77	100		
156	61.9	40.2	80.2
158	60.8	38.1	78.1

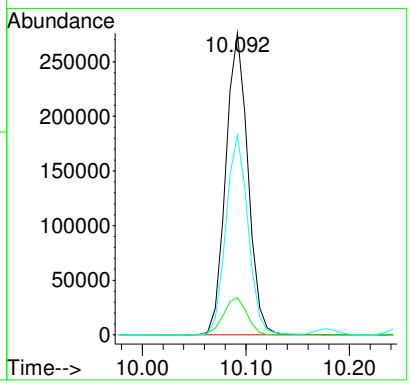


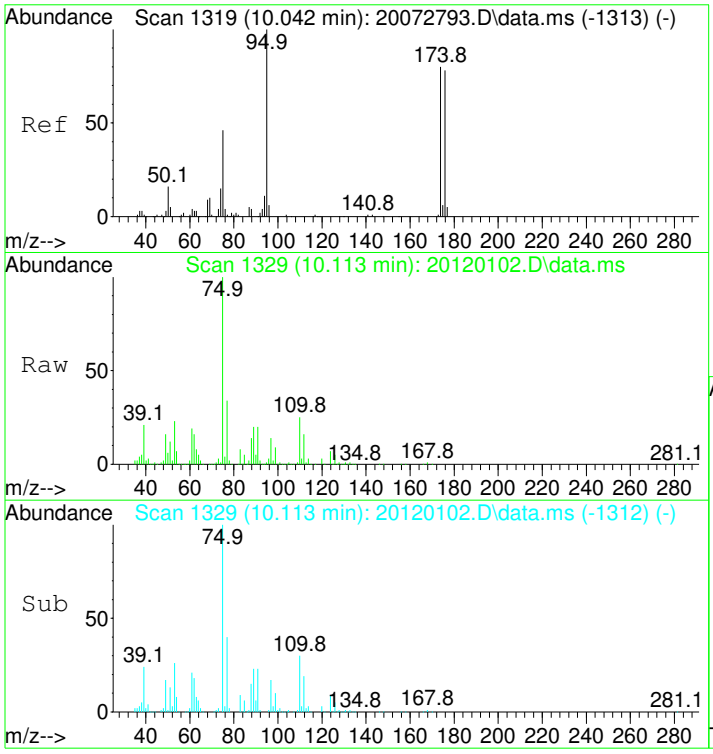


#93
1,1,2,2-Tetrachloroethane
Concen: 44.93 ug/L
RT: 10.092 min Scan# 1326
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 83 Resp: 412042

Ion	Ratio	Lower	Upper
83	100		
131	13.2	0.0	35.0
85	66.1	46.4	86.4

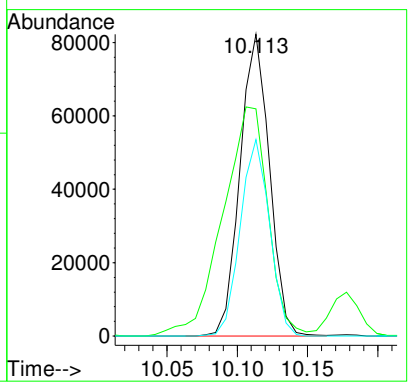


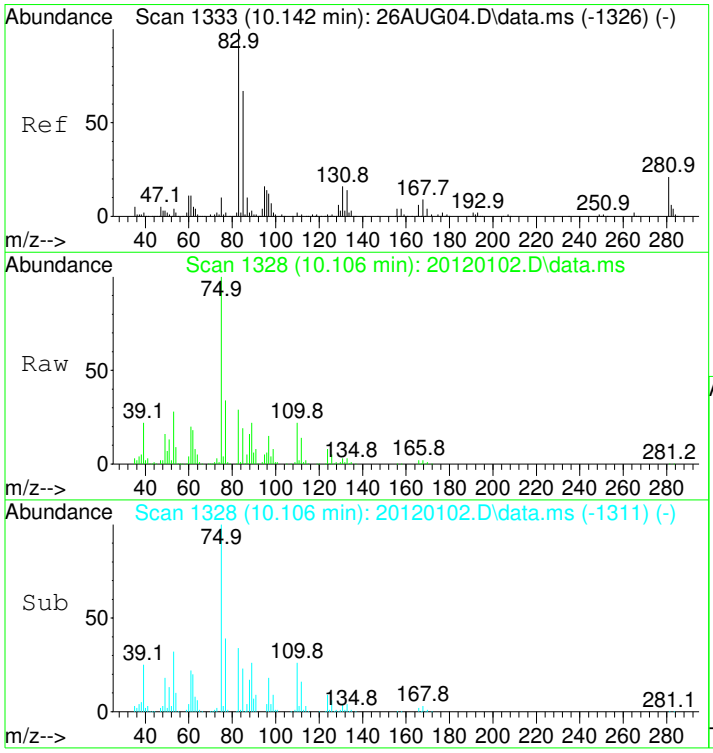


#94
1,2,3-Trichloropropane
Concen: 41.56 ug/L
RT: 10.113 min Scan# 1329
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:110 Resp: 120459

Ion	Ratio	Lower	Upper
110	100		
61	115.7	97.0	137.0
112	64.8	44.1	84.1

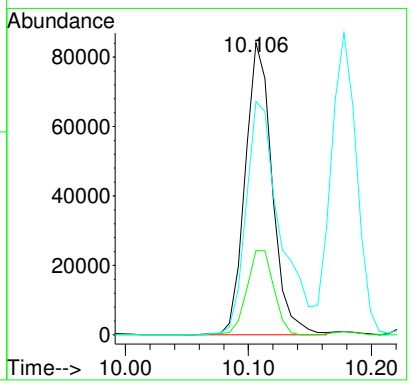


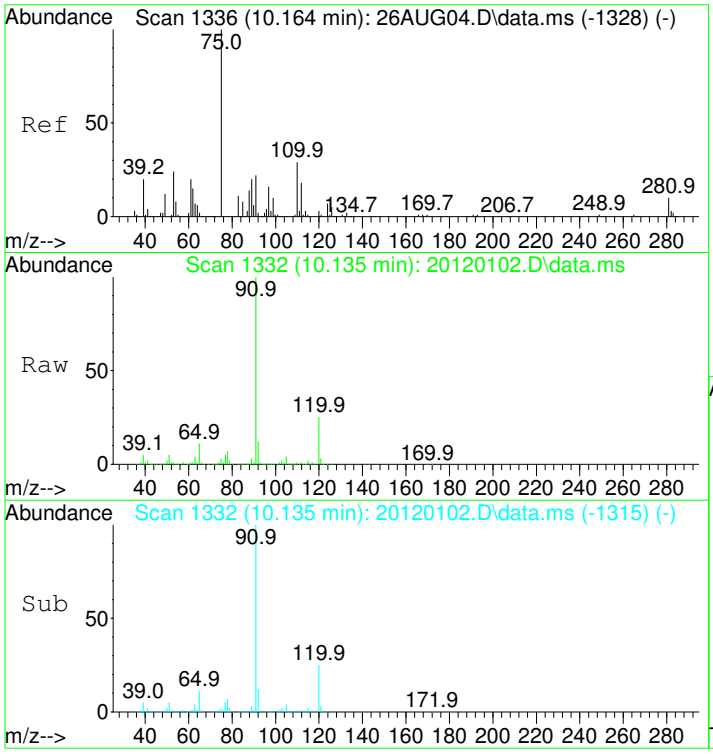


#95
trans-1,4-Dichloro-2-butene
Concen: 42.56 ug/L
RT: 10.106 min Scan# 1328
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 53 Resp: 128984

Ion	Ratio	Lower	Upper
53	100		
124	28.8	7.2	47.2
89	99.5	79.3	119.3

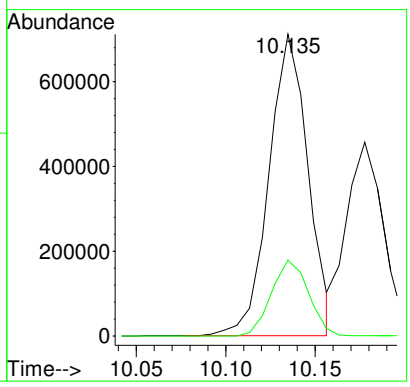


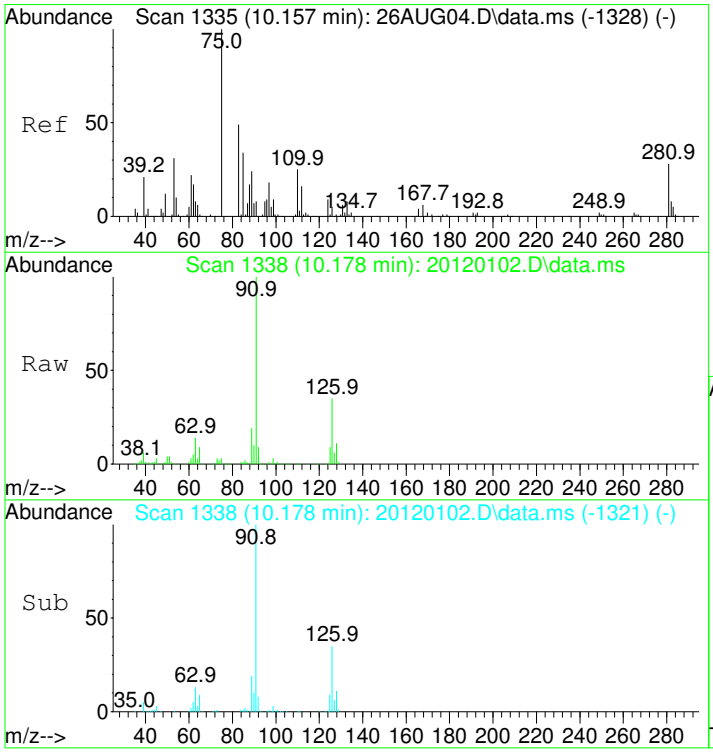


#96
n-Propylbenzene
Concen: 40.18 ug/L
RT: 10.135 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 1082424

Ion	Ratio	Lower	Upper
91	100		
120	24.0	3.7	43.7

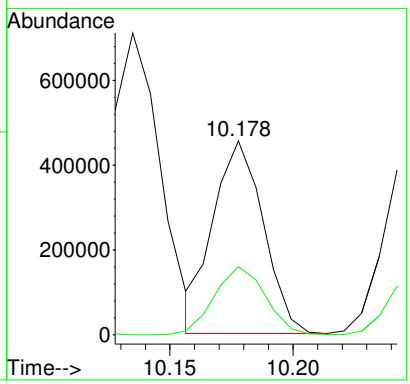


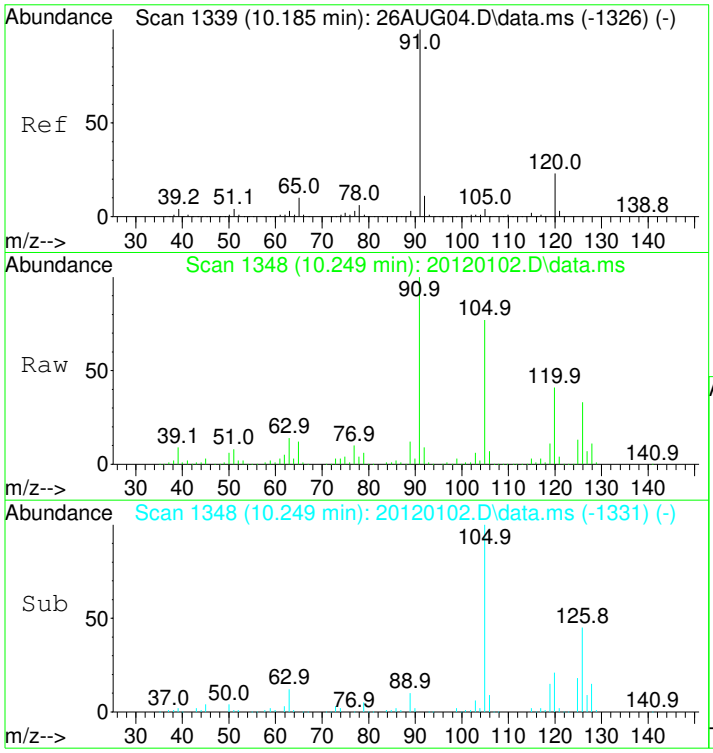


#97
2-Chlorotoluene
Concen: 44.91 ug/L
RT: 10.178 min Scan# 1338
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 646676

Ion	Ratio	Lower	Upper
91	100		
126	36.0	17.3	57.3

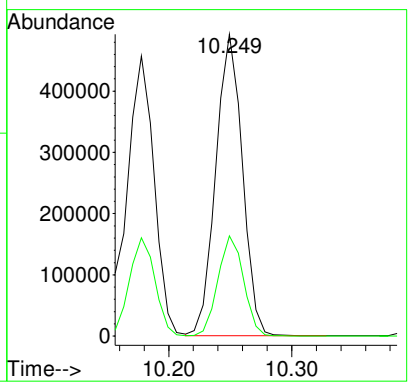


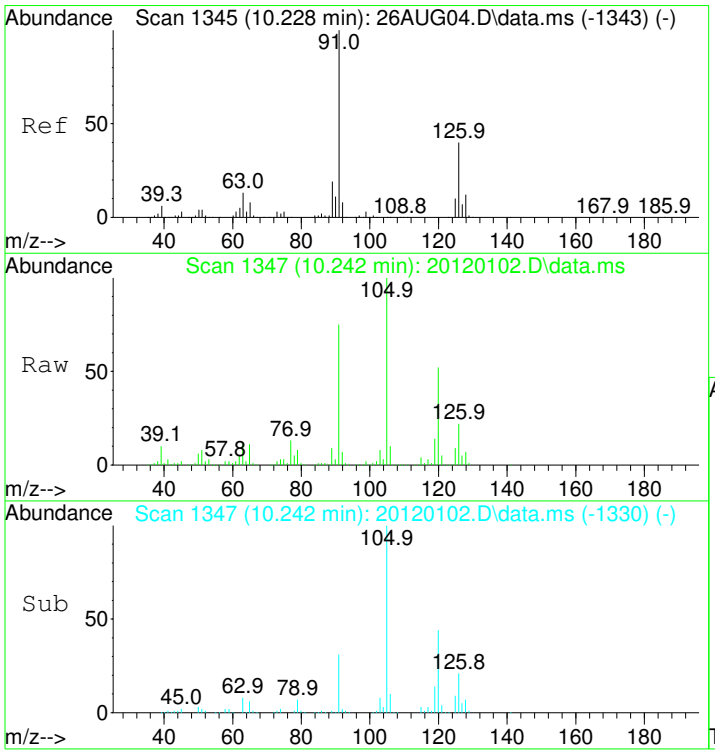


#98
4-Chlorotoluene
Concen: 40.22 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 741651

Ion	Ratio	Lower	Upper
91	100		
126	32.0	12.4	52.4

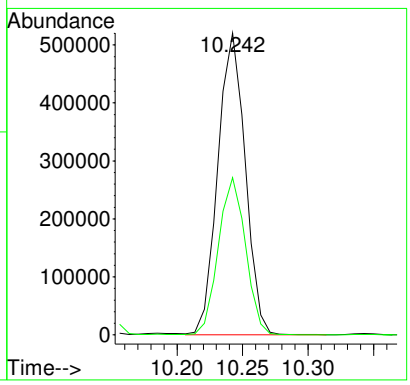


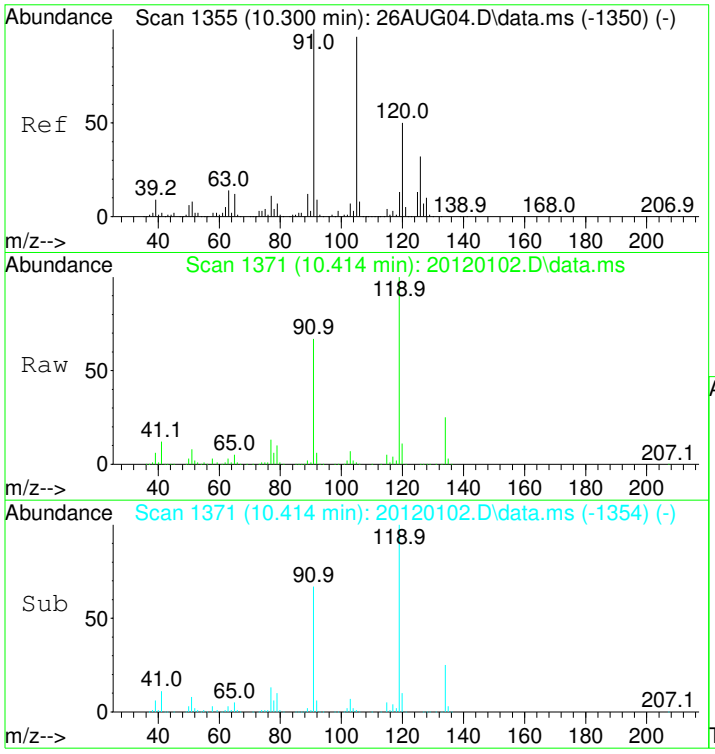


#99
1,3,5-Trimethylbenzene
Concen: 39.66 ug/L
RT: 10.242 min Scan# 1347
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:105 Resp: 755241

Ion	Ratio	Lower	Upper
105	100		
120	51.7	31.9	71.9

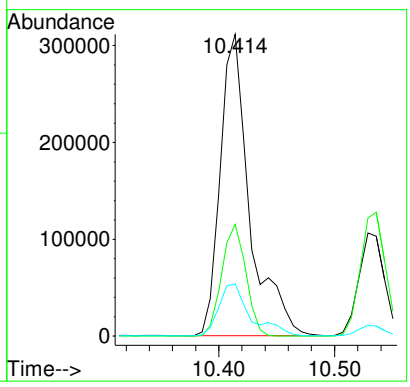


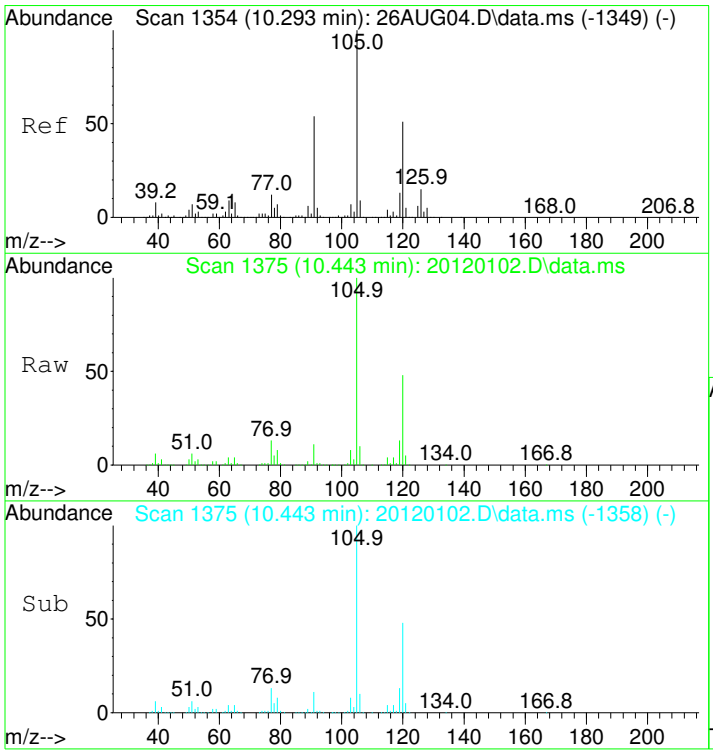


#100
tert-Butylbenzene
Concen: 43.46 ug/L
RT: 10.414 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 549486

Ion	Ratio	Lower	Upper
91	100		
134	30.4	9.7	49.7
41	18.4	0.0	39.3

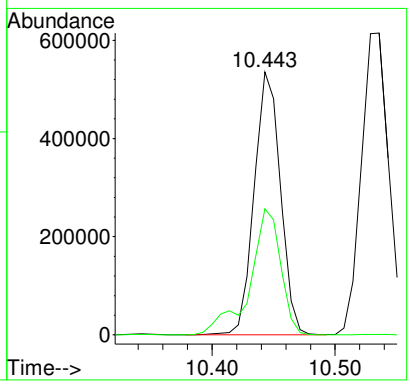


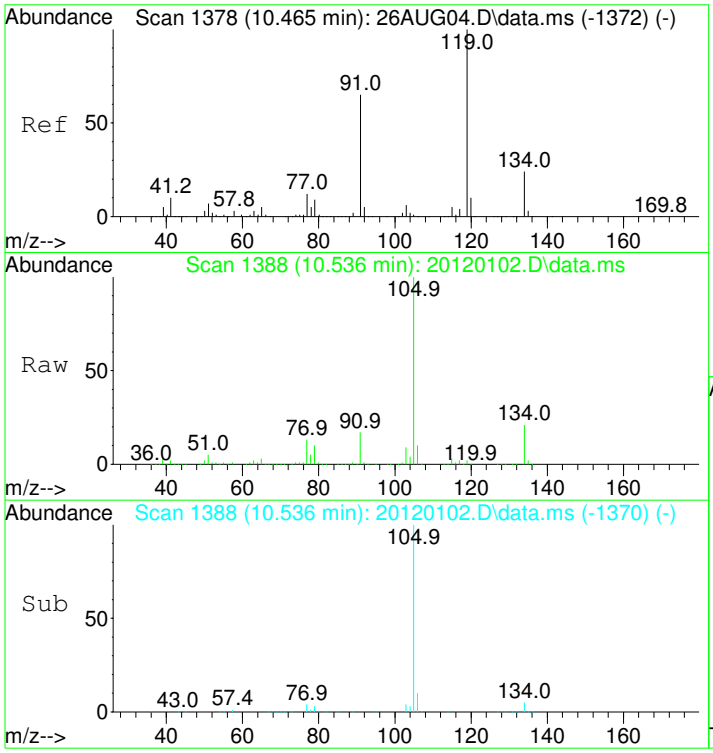


#101
1,2,4-Trimethylbenzene
Concen: 40.25 ug/L
RT: 10.443 min Scan# 1375
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:105 Resp: 791602

Ion	Ratio	Lower	Upper
105	100		
120	56.4	37.7	77.7

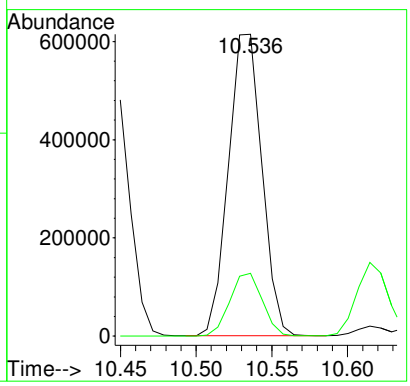


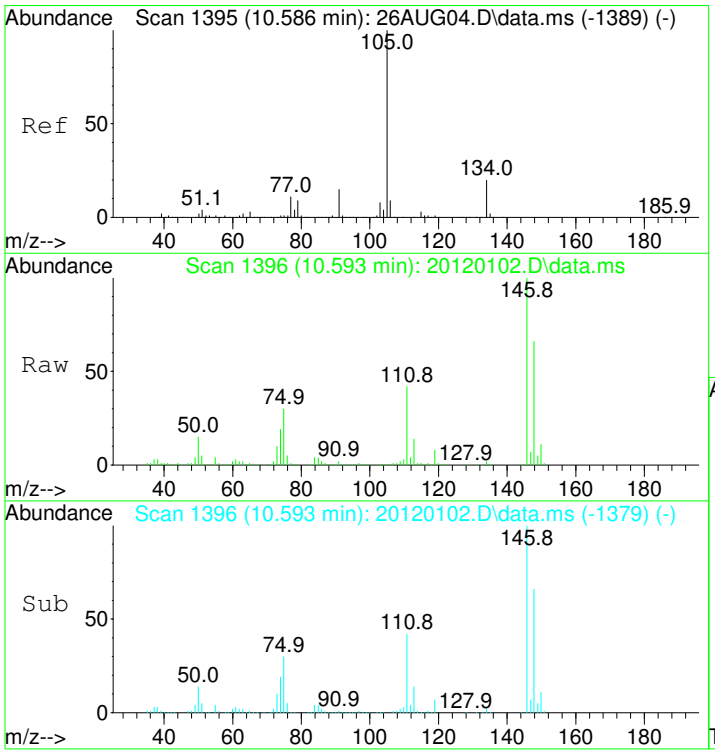


#102
sec-Butylbenzene
Concen: 41.16 ug/L
RT: 10.536 min Scan# 1388
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:105 Resp: 945267

Ion	Ratio	Lower	Upper
105	100		
134	20.3	1.1	41.1

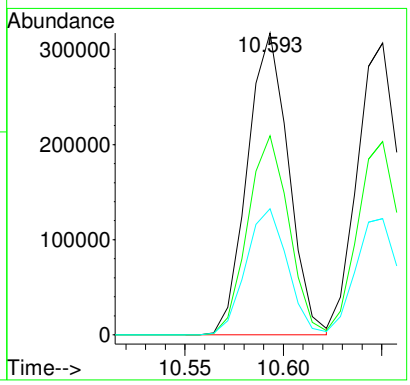


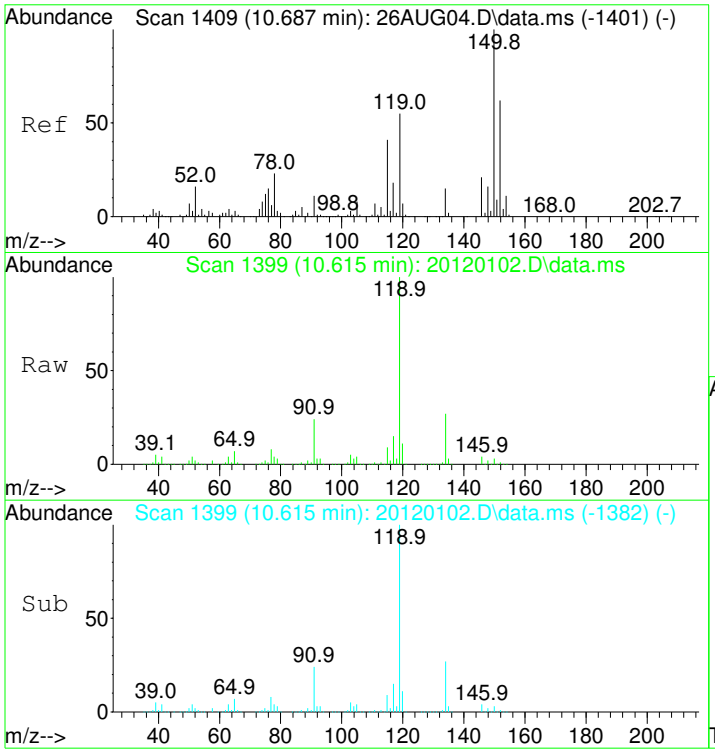


#104
1,3-Dichlorobenzene
Concen: 43.77 ug/L
RT: 10.593 min Scan# 1396
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:146 Resp: 462293

Ion	Ratio	Lower	Upper
146	100		
148	65.9	46.5	86.5
111	42.4	22.6	62.6

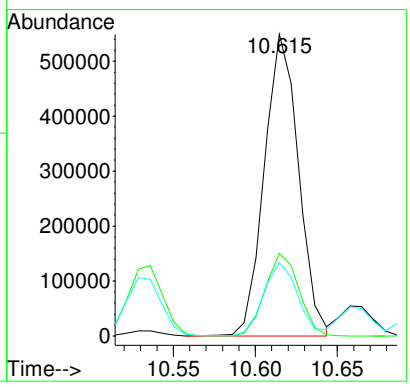


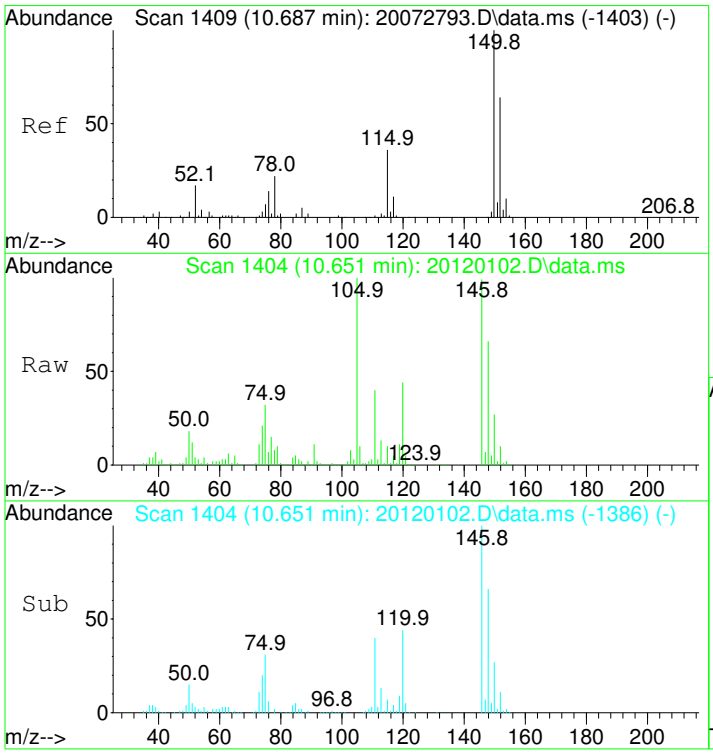


#105
p-Isopropyltoluene
Concen: 46.10 ug/L
RT: 10.615 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:119 Resp: 794114

Ion	Ratio	Lower	Upper
119	100		
134	27.2	8.1	48.1
91	24.4	5.2	45.2

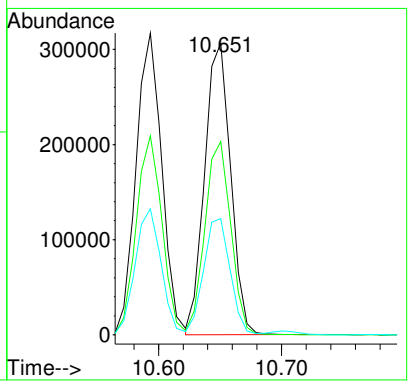


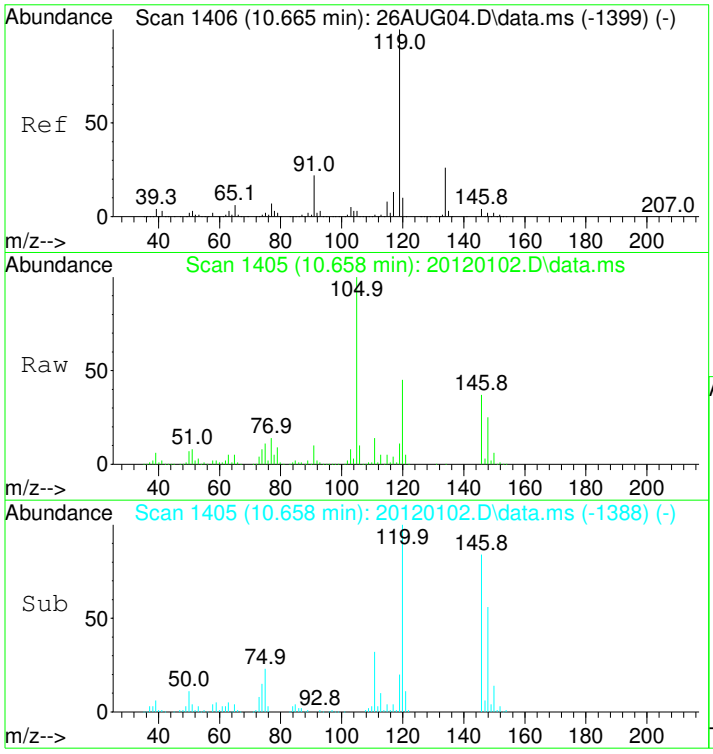


#106
1,4-Dichlorobenzene
Concen: 44.33 ug/L
RT: 10.651 min Scan# 1404
Delta R.T. 0.008 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:146 Resp: 450742

Ion	Ratio	Lower	Upper
146	100		
148	66.0	37.3	97.3
111	40.7	12.5	72.5

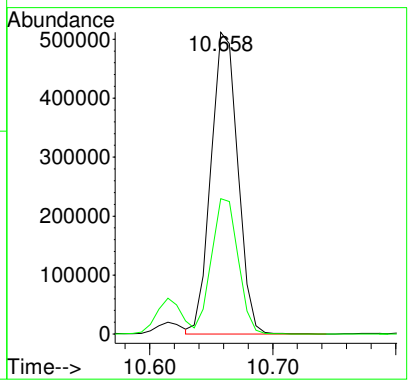


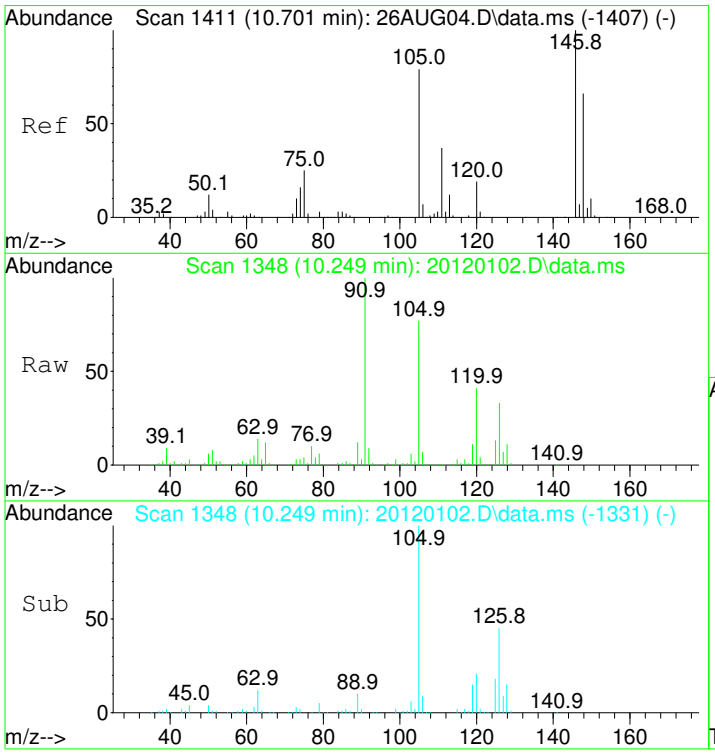


#107
1,2,3-Trimethylbenzene
Concen: 45.01 ug/L
RT: 10.658 min Scan# 1405
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:105 Resp: 775119

Ion	Ratio	Lower	Upper
105	100		
120	44.8	35.5	53.3

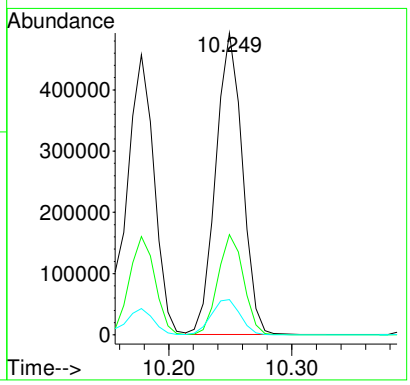


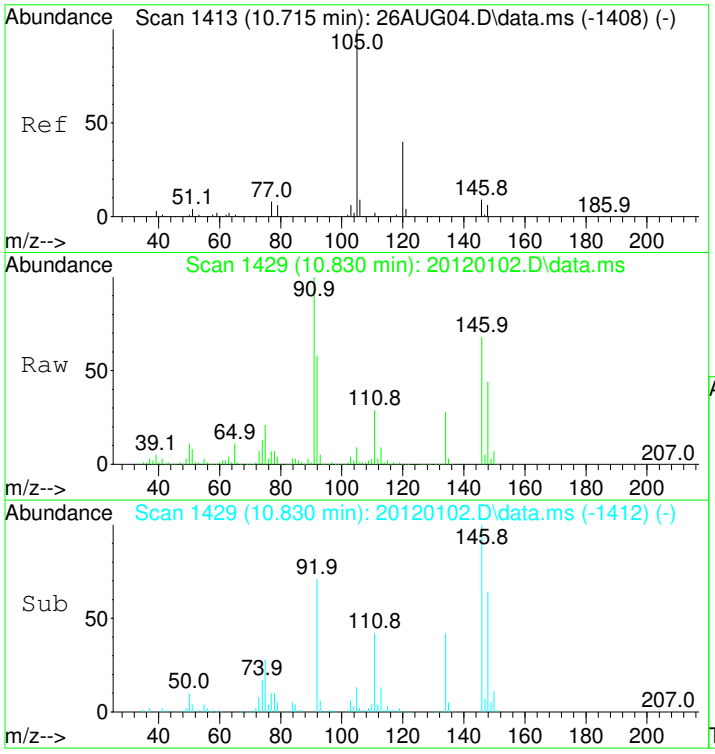


#108
Benzyl chloride
Concen: 41.06 ug/L
RT: 10.249 min Scan# 1348
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 741651

Ion	Ratio	Lower	Upper
91	100		
126	32.0	12.4	52.4
65	12.8	0.0	33.3

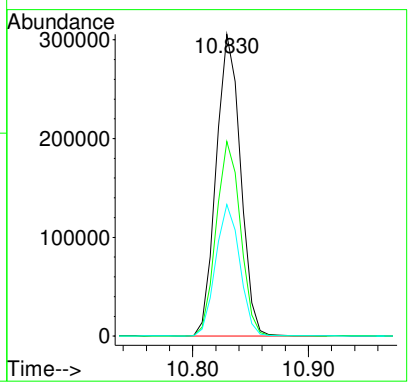


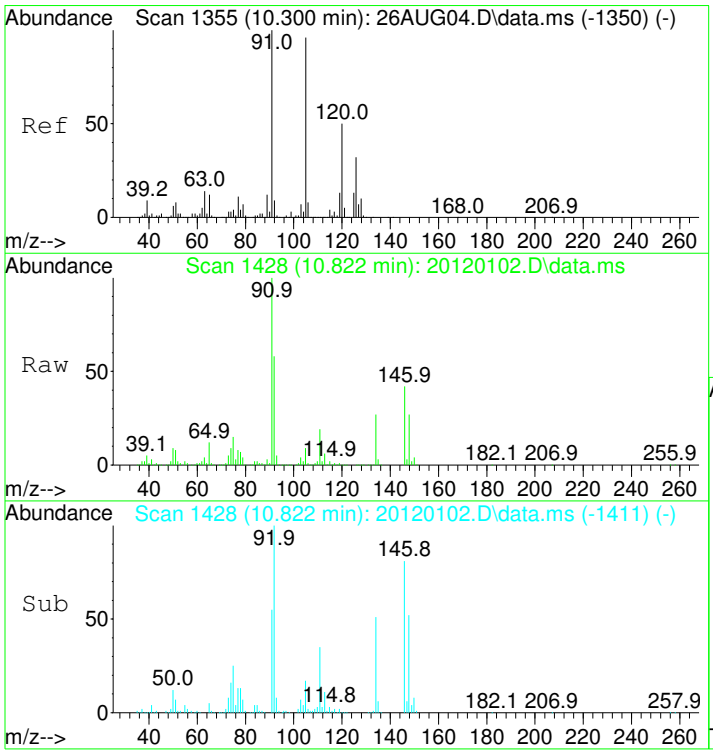


#109
1,2-Dichlorobenzene
Concen: 43.37 ug/L
RT: 10.830 min Scan# 1429
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:146 Resp: 446939

Ion	Ratio	Lower	Upper
146	100		
148	64.4	45.6	85.6
111	43.4	24.1	64.1

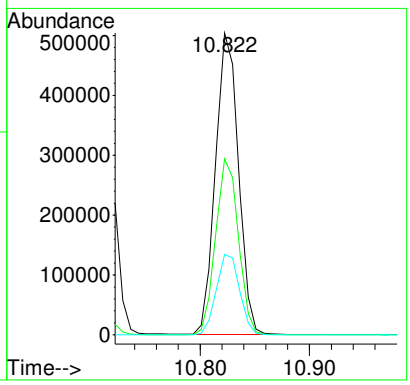


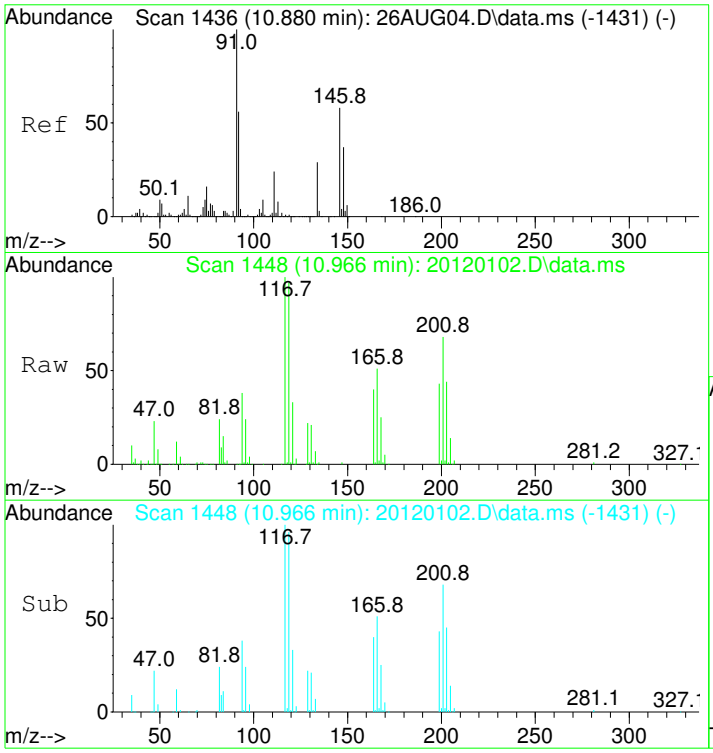


#110
n-Butylbenzene
Concen: 41.95 ug/L
RT: 10.822 min Scan# 1428
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 91 Resp: 734295

Ion	Ratio	Lower	Upper
91	100		
92	57.9	39.3	79.3
134	27.1	7.5	47.5

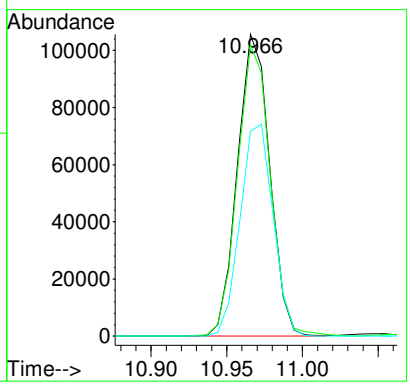


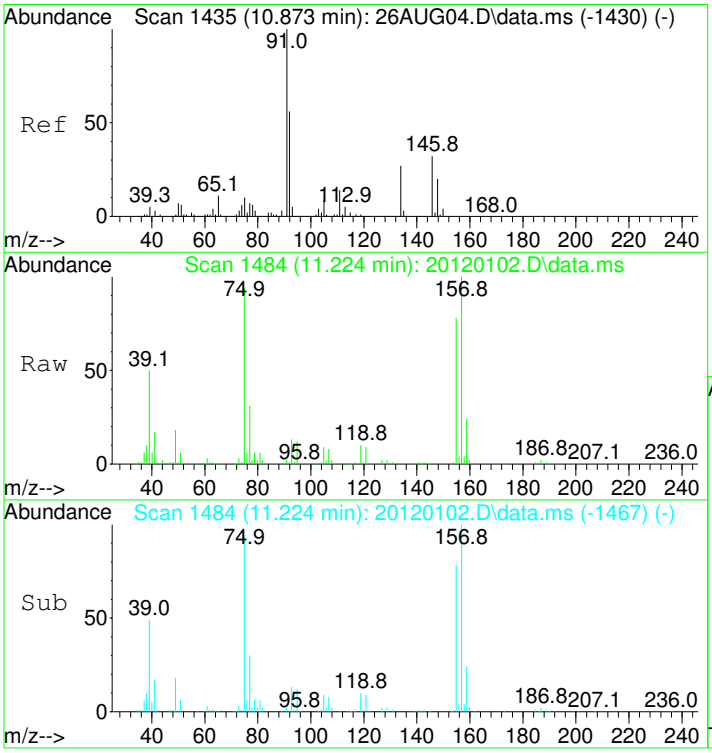


#111
Hexachloroethane
Concen: 39.75 ug/L
RT: 10.966 min Scan# 1448
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:117 Resp: 156218

Ion	Ratio	Lower	Upper
117	100		
119	98.1	75.9	115.9
201	71.8	49.2	89.2

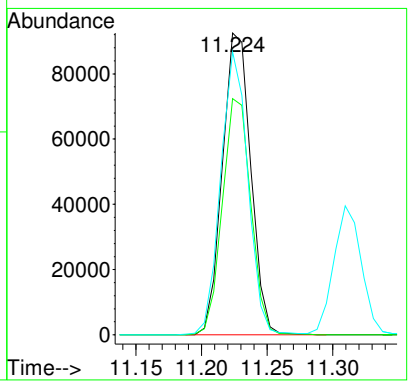


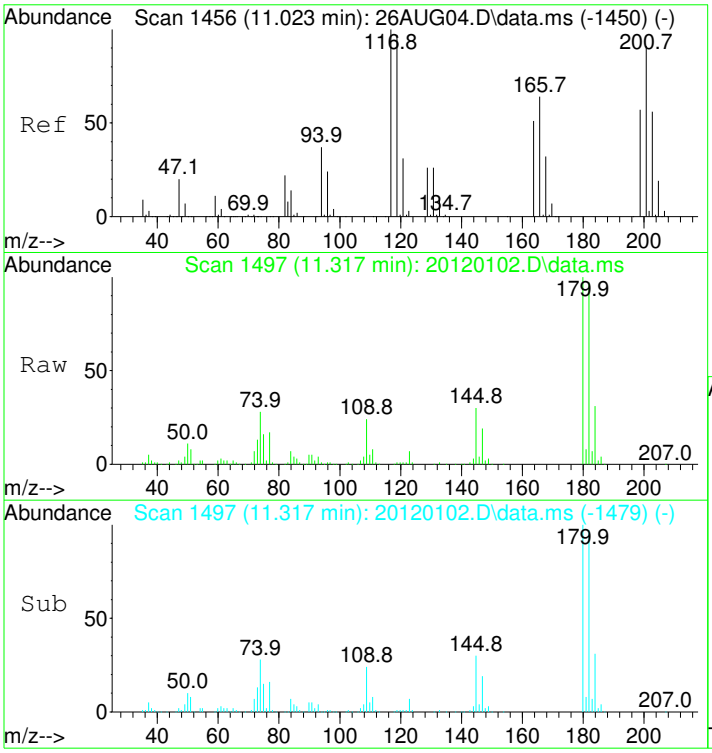


#112
1,2-Dibromo-3-chloropropane
Concen: 48.39 ug/L
RT: 11.224 min Scan# 1484
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:157 Resp: 139563

Ion	Ratio	Lower	Upper
157	100		
155	78.5	54.4	94.4
75	89.9	72.1	112.1

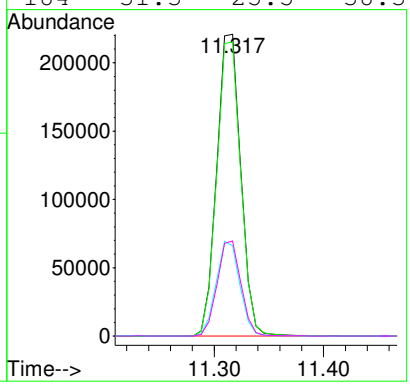


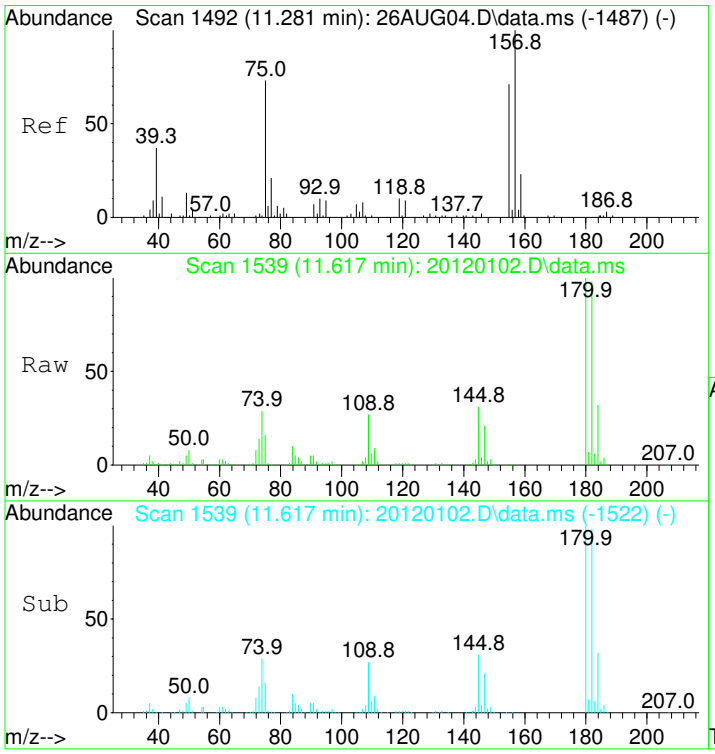


#113
1,3,5-Trichlorobenzene
Concen: 43.63 ug/L
RT: 11.317 min Scan# 1497
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:180 Resp: 337569

Ion	Ratio	Lower	Upper
180	100		
182	97.6	76.9	115.3
145	31.0	24.9	37.3
184	31.3	25.5	38.3

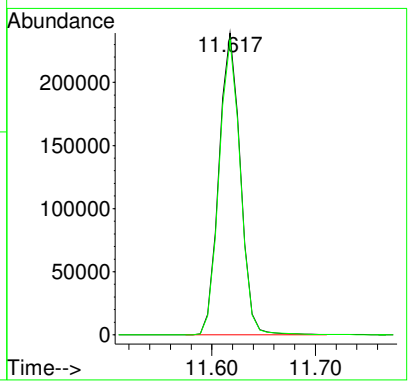


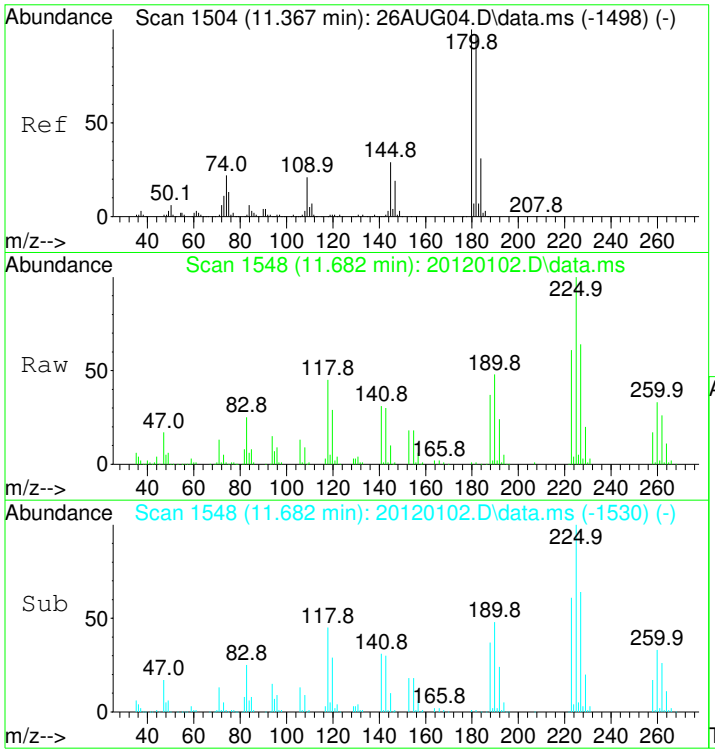


#114
1,2,4-Trichlorobenzene
Concen: 44.06 ug/L
RT: 11.617 min Scan# 1539
Delta R.T. -0.001 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:180 Resp: 344339

Ion	Ratio	Lower	Upper
180	100		
182	97.1	76.7	116.7

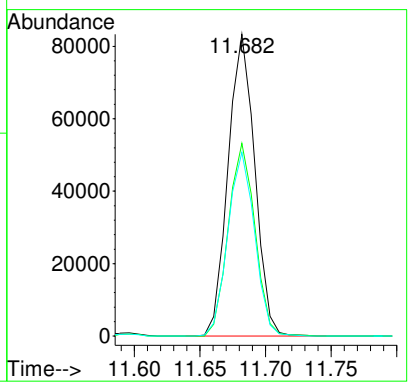


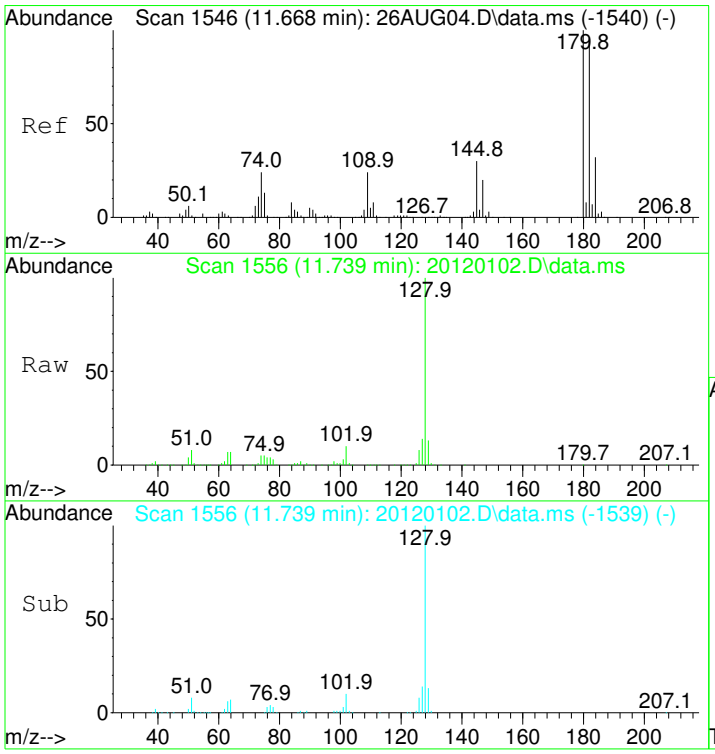


#115
Hexachlorobutadiene
Concen: 44.52 ug/L
RT: 11.682 min Scan# 1548
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:225 Resp: 118306

Ion	Ratio	Lower	Upper
225	100		
227	63.6	50.9	76.3
223	60.8	50.5	75.7

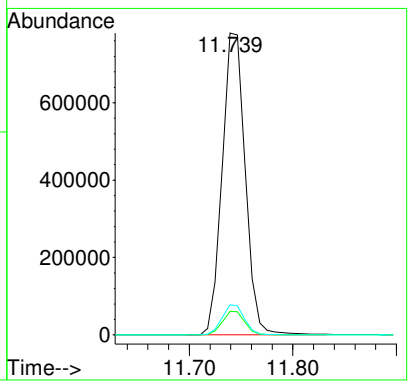


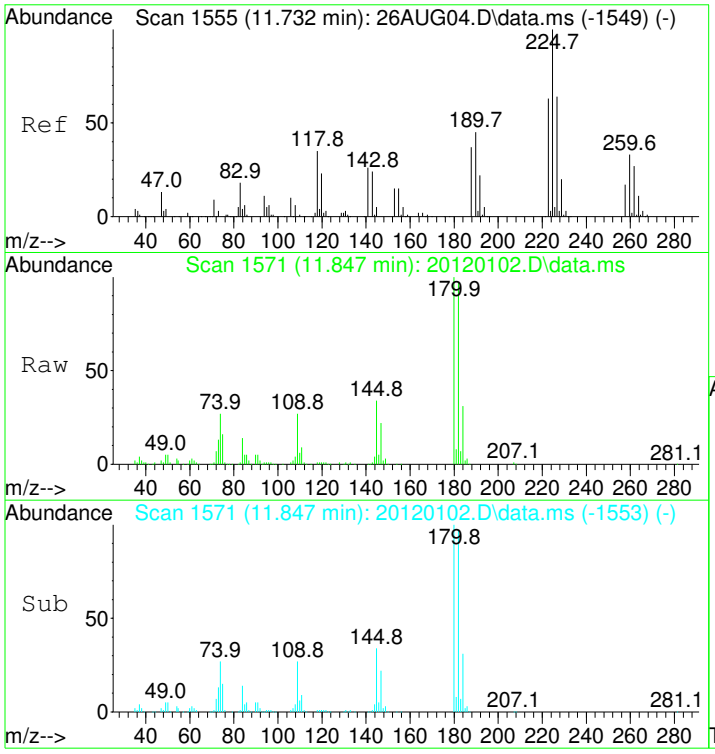


#116
Naphthalene
Concen: 43.66 ug/L
RT: 11.739 min Scan# 1556
Delta R.T. 0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:128 Resp: 1213520

Ion	Ratio	Lower	Upper
128	100		
126	7.6	0.0	28.2
102	9.7	0.0	30.0

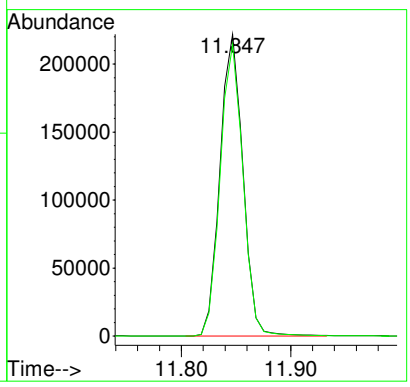


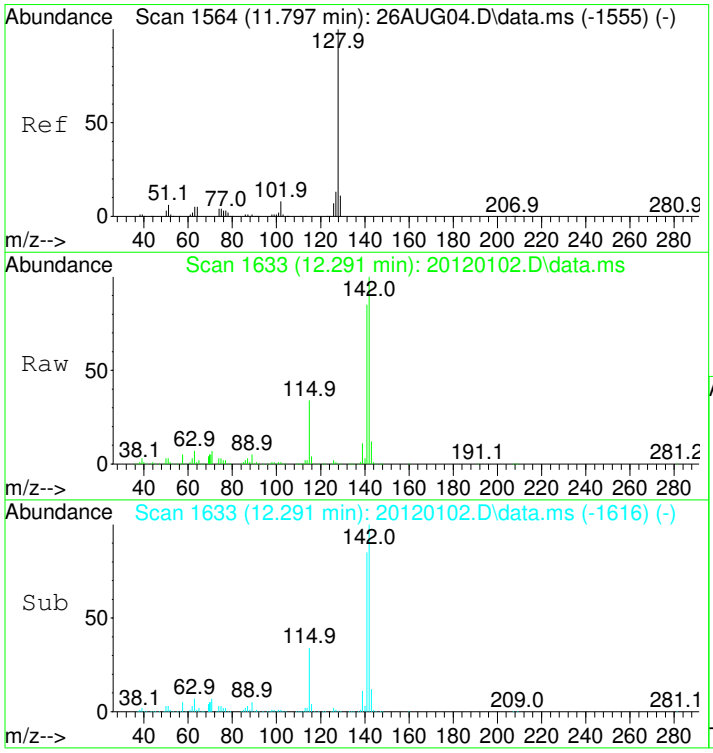


#117
1,2,3-Trichlorobenzene
Concen: 43.18 ug/L
RT: 11.847 min Scan# 1571
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:180 Resp: 323106

Ion	Ratio	Lower	Upper
180	100		
182	96.1	78.4	118.4

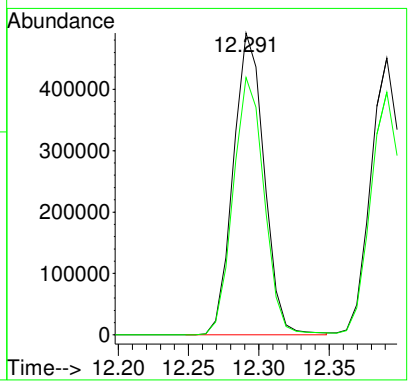


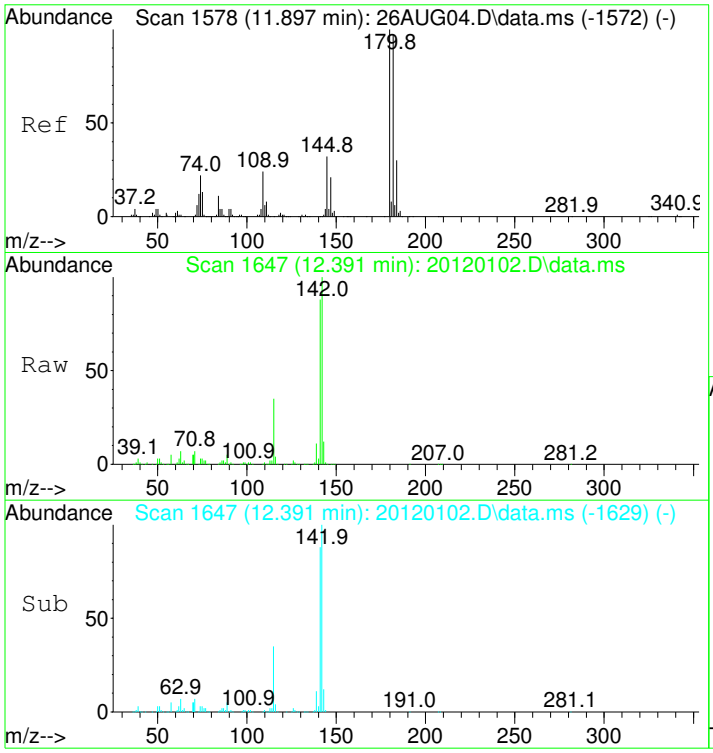


#118
2-Methylnaphthalene
Concen: 44.35 ug/L
RT: 12.291 min Scan# 1633
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:142 Resp: 751315

Ion	Ratio	Lower	Upper
142	100		
141	85.5	65.0	105.0

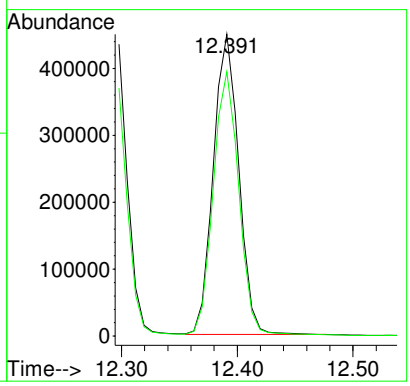


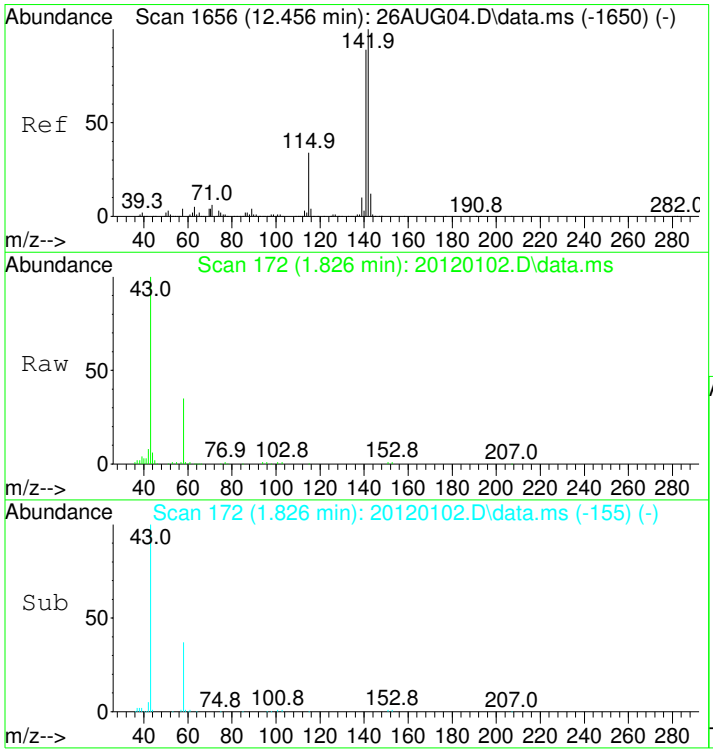


#119
1-Methylnaphthalene
Concen: 43.78 ug/L
RT: 12.391 min Scan# 1647
Delta R.T. 0.007 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion:142 Resp: 683656

Ion	Ratio	Lower	Upper
142	100		
141	87.7	69.8	104.8

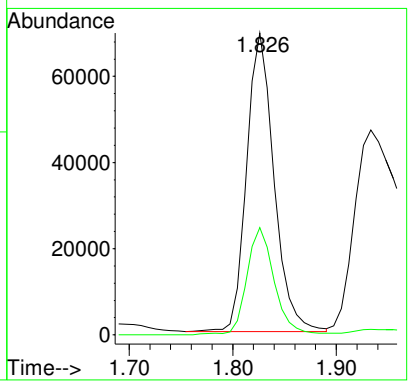


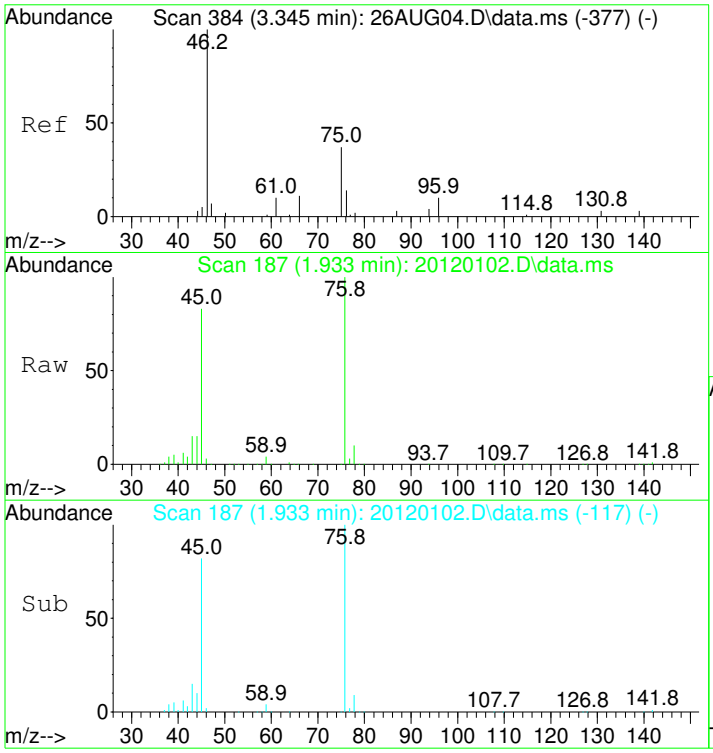


#121
2-Propanone
Concen: 43.23 ug/L
RT: 1.826 min Scan# 172
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 127085

Ion	Ratio	Lower	Upper
43	100		
58	36.2	28.2	42.2

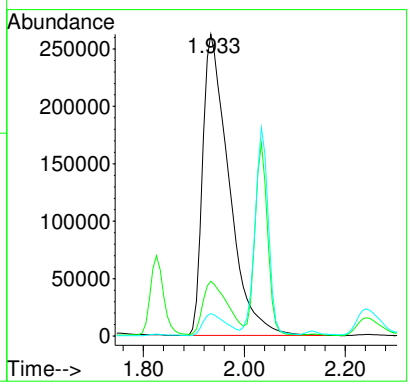


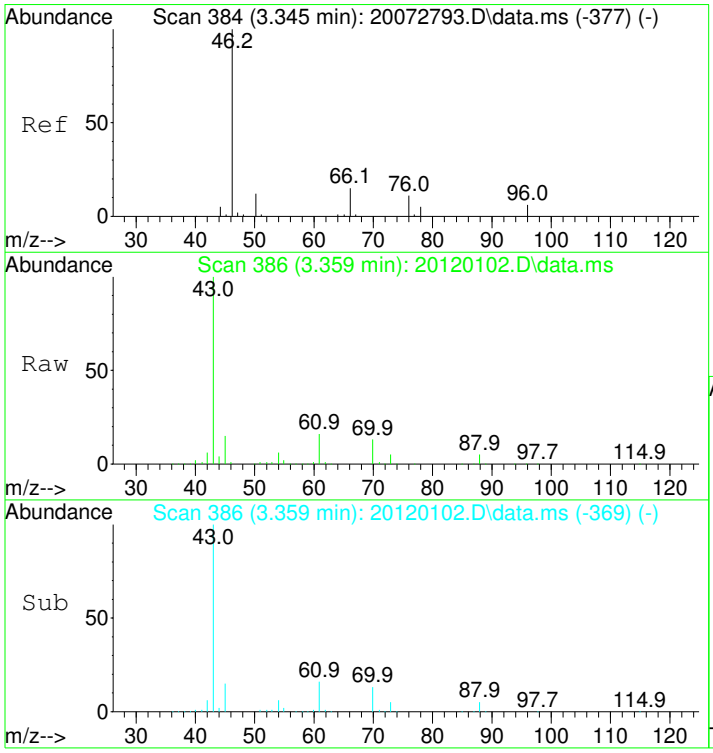


#122
Isopropyl Alcohol
Concen: 968.44 ug/L
RT: 1.933 min Scan# 187
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 45 Resp: 950109

Ion	Ratio	Lower	Upper
45	100		
43	17.0	14.6	21.8
41	6.5	5.7	8.5

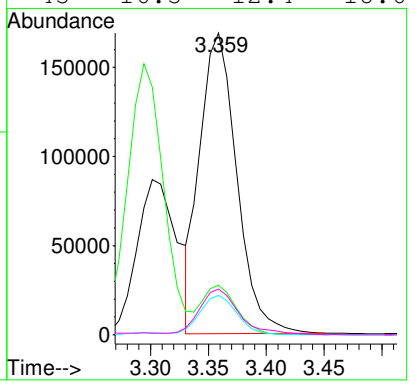


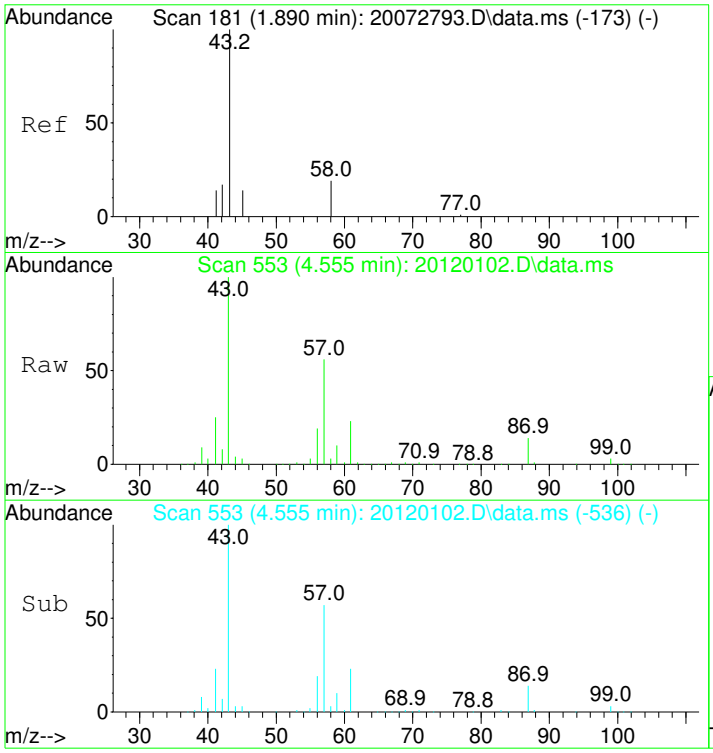


#123
Acetic Ether
Concen: 42.29 ug/L
RT: 3.359 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 374711

Ion	Ratio	Lower	Upper
43	100		
61	14.8	11.9	17.9
70	13.3	9.7	14.5
45	16.5	12.4	18.6

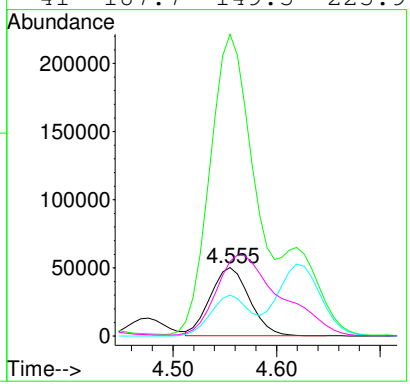


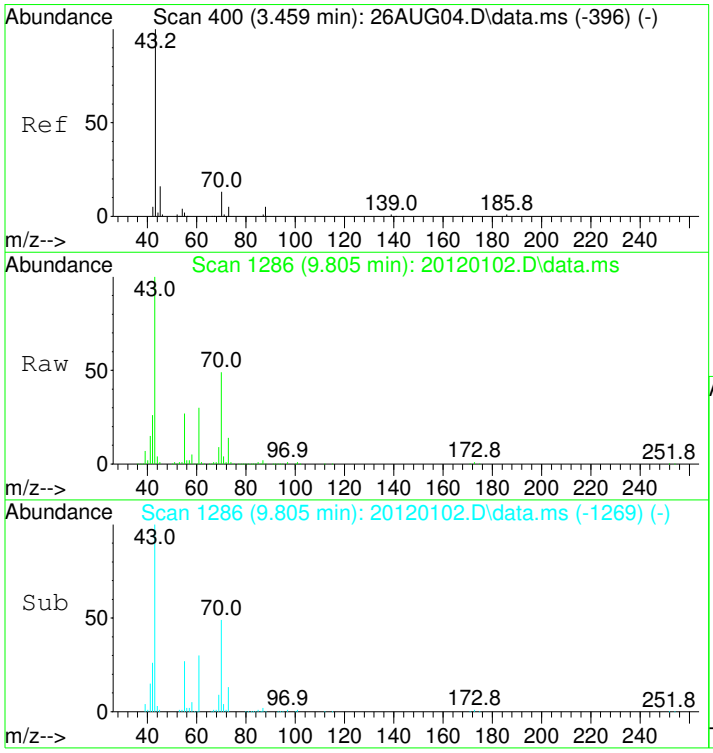


#124
Isopropyl Acetate
Concen: 41.07 ug/L
RT: 4.555 min Scan# 553
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 61 Resp: 131470

Ion	Ratio	Lower	Upper
61	100		
43	488.5	392.6	589.0
87	61.1	46.2	69.2
41	187.7	149.3	223.9

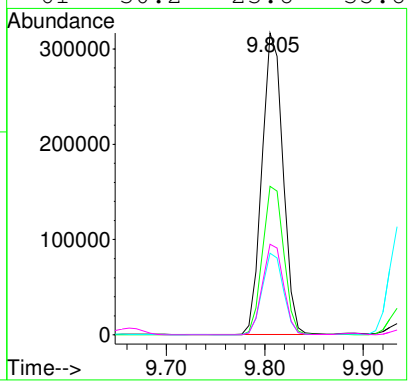




#125
Amyl Acetate
Concen: 41.20 ug/L
RT: 9.805 min Scan# 1286
Delta R.T. -0.000 min
Lab File: 20120102.D
Acq: 1 Dec 2020 9:58 am

Tgt Ion: 43 Resp: 471072

Ion	Ratio	Lower	Upper
43	100		
70	49.9	39.8	59.6
55	27.3	21.8	32.8
61	30.2	23.8	35.8



```
  Starting sequence Tue Dec 01 14:08:43 2020

Instrument Name: VMS7
  Sequence File: C:\GCMS\1\sequence\VMS7-201201.sequence.xml
        Comment:
       Operator: MF
      Data Path: C:\MSDCHEM\1\DATA\VMS7-201201\

  Line  Type          Vials    DataFile                      Sample Name
  ---------------------------------------------------------------------
  Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
  Acquisition Method File: BFB.M
    1) Sample           1      20120101              BFB_TUNE1-201201
       Comment: 200-21588
  Sequence Table edit performed Tue Dec 01 14:18:13 2020

  Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
  Acquisition Method File: 7V8260.M
    2) Sample           1      20120102              VCCV1-201201
       Comment: IS 200-21532; 40PPB 200-21629, 21625, 21630
  Sequence Table edit performed Tue Dec 01 14:49:04 2020
    3) Sample           1      20120103              VCCV2-201201
       Comment: IS 200-21532; 40PPB 200-21629, 21625, 21630
  Sequence Table edit performed Tue Dec 01 15:17:56 2020
    4) Sample           1      20120104              EMPTY
       Comment: IS 200-21725                                    Cleaned Sparge tube and restarted
  Sequence Table edit performed Tue Dec 01 15:42:17 2020
    5) Sample           1      20120105              BLK
       Comment: IS 200-21725

  Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
  Acquisition Method File: BFB.M
    6) Sample           1      20120106              BFB_TUNE1-201201
       Comment: 200-21588                                       Tune failed, reran
  Sequence Table edit performed Tue Dec 01 16:28:58 2020
    7) Sample           1      20120107              BFB_TUNE1-201201
       Comment: 200-21588                                       Tune passed
  Sequence Table edit performed Tue Dec 01 16:38:07 2020

  Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
  Acquisition Method File: 7V8260.M
    8) Sample           1      20120108              VCCV1-201201
       Comment: IS 200-21532; 40PPB 200-21629, 21625, 21630
  Sequence Table edit performed Tue Dec 01 17:03:45 2020
    9) Sample           2      20120109              VLCSW1-201201
       Comment: IS 200-21532; 20PPB 200-21627
   10) Sample           3      20120110              LCS-
       Comment: IS 200-21532; 20PPB 200-21627
   11) Sample           4      20120111              BLK
       Comment: IS 200-21532
```

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 12) Sample           5      20120112               VBLKW1-201201
     Comment: IS 200-21532
Sequence Table edit performed Tue Dec 01 18:17:35 2020
 13) Sample           6      20120113               MBLK-
     Comment: IS 200-21532
 14) Sample           7      20120114               20112086-01A
     Comment: IS 200-21725
 15) Sample           8      20120115               20112086-02A
     Comment: IS 200-21725
 16) Sample           9      20120116               20112086-06A
     Comment: IS 200-21725
 17) Sample          10      20120117               20111985-07A
     Comment: IS 200-21725
 18) Sample          11      20120118               20112419-17A
     Comment: IS 200-21725
 19) Sample          12      20120119               20112419-03A
     Comment: IS 200-21725
 20) Sample          13      20120120               20112419-28A
     Comment: IS 200-21725
 21) Sample          14      20120121               20111985-08A
     Comment: IS 200-21725
 22) Sample          15      20120122               20111985-09A
     Comment: IS 200-21725
 23) Sample          16      20120123               20111985-03A
     Comment: IS 200-21725
 24) Sample          17      20120124               20111985-01A
     Comment: IS 200-21725
 25) Sample          18      20120125               20111985-02A
     Comment: IS 200-21725
 26) Sample          19      20120126               20111985-06A
     Comment: IS 200-21725
 27) Sample          20      20120127               20111985-05A
     Comment: IS 200-21725
 28) Sample          21      20120128               20111985-04A
     Comment: IS 200-21725
 29) Sample          22      20120129               20112085-03A
     Comment: IS 200-21725
 30) Sample          23      20120130               20111764-02A DF20
     Comment: IS 200-21725
 31) Sample          24      20120131               20112199-01A
     Comment: IS 200-21725
 32) Sample          25      20120132               20112200-01A
     Comment: IS 200-21725
 33) Sample          26      20120133               20112201-01A
     Comment: IS 200-21725
 34) Sample          27      20120134               20111985-06A MS
     Comment: IS 200-21725
 35) Sample          28      20120135               20111985-06A MSD
     Comment: IS 200-21725
 36) Sample          29      20120136               BLK
```

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     Comment: IS 200-21725

Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
Acquisition Method File: BFB.M
 37) Sample          30      20120137              BFB_TUNE2-201201
     Comment: 200-21734

Acquisition Method Path: C:\GCMS\1\methods\Run Methods\
Acquisition Method File: 7V8260.M
 38) Sample          31      20120138              VCCV3-201201
     Comment: IS 200-21735; 40PPB 200-21733, 21733, 21727
 39) Sample          32      20120139              VCCV4-201201
     Comment: IS 200-21735; 40PPB 200-21733, 21733, 21727
 40) Sample          33      20120140              VLCSW2-201201
     Comment: IS 200-21725; 20PPB 200-21728
 41) Sample          34      20120141              LCS-
     Comment: IS 200-21725; 20PPB 200-21728
 42) Sample          35      20120142              BLK
     Comment: IS 200-21725
 43) Sample          36      20120143              VBLKW2-201201
     Comment: IS 200-21725
 44) Sample          37      20120144              MBLK-
     Comment: IS 200-21725
 45) Sample          38      20120145              20111975-09A
     Comment: IS 200-21725
 46) Sample          39      20120146              20111975-01A
     Comment: IS 200-21725
 47) Sample          40      20120147              20111975-02A
     Comment: IS 200-21725
 48) Sample          41      20120148              20111975-03A
     Comment: IS 200-21725
 49) Sample          42      20120149              20111975-04A
     Comment: IS 200-21725
 50) Sample          43      20120150              20111975-05A
     Comment: IS 200-21725
 51) Sample          44      20120151              20111975-6A
     Comment: IS 200-21725
 52) Sample          45      20120152              20111975-07A
     Comment: IS 200-21725
 53) Sample          46      20120153              20111975-08A
     Comment: IS 200-21725
 54) Sample          47      20120154              20112135-01A
     Comment: IS 200-21725
 55) Sample          48      20120155              20112135-02A
     Comment: IS 200-21725
 56) Sample          49      20120156              20112231-02A DF20
     Comment: IS 200-21725
 57) Sample          50      20120157              20112226-02A DF20
     Comment: IS 200-21725
 58) Sample          51      20120158              20112231-05A DF20
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    Comment: IS 200-21725
 59) Sample          52      20120159              20112231-03A DF20
    Comment: IS 200-21725
 60) Sample          53      20120160              20112231-06A DF100
    Comment: IS 200-21725
 61) Sample          54      20120161              20111946-23A DF50
    Comment: IS 200-21725
 62) Sample          55      20120162              20111946-26A DF50
    Comment: IS 200-21725
 63) Sample          56      20120163              20111946-27A DF50
    Comment: IS 200-21725
 64) Sample          57      20120164              20111975-07A MS
    Comment: IS 200-21725
 65) Sample          58      20120165              20111975-07A MSD
    Comment: IS 200-21725
 66) Sample          59      20120166              BLK
    Comment: IS 200-21725

Sequence completed Wed Dec 02 09:01:43 2020

  C:\MSDCHEM\1\DATA\VMS7-201201\2020 Dec 01 1408 Quality Log.LOG
  C:\MSDCHEM\1\DATA\VMS7-201201\2020 Dec 01 1408 Sequence Log .LOG
```

Starting sequence Fri Nov 27 12:10:29 2020

Instrument Name: VMS8
Sequence File: C:\msdchem\1\sequence\VMS8-201127.s
Comment:
Operator: js
Data Path: C:\MSDCHEM\1\DATA\VMS8-201127\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
1)	Sample	1	20112701	BFB	BFB_TUNE1-201127
	Sequence Table edit performed Fri Nov 27 12:23:22 2020				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
2)	Sample	1	20112702	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
3)	Sample	2	20112703	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
4)	Sample	3	20112704	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
5)	Sample	4	20112705	8GO8260B	CCV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
6)	Sample	5	20112706	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
7)	Sample	6	20112707	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
8)	Sample	7	20112708	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
9)	Sample	8	20112709	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
10)	Sample	9	20112710	8GO8260B	VBLKW1-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
11)	Sample	10	20112711	8GO8260B	0.4PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
12)	Sample	11	20112712	8GO8260B	0.6PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
13)	Sample	12	20112713	8GO8260B	2PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
14)	Sample	13	20112714	8GO8260B	4PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
15)	Sample	14	20112715	8GO8260B	10PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
16)	Sample	15	20112716	8GO8260B	40PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
17)	Sample	16	20112717	8GO8260B	70PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
18)	Sample	17	20112718	8GO8260B	100PPB
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
19)	Sample	18	20112719	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
20)	Sample	19	20112720	8GO8260B	ICV
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
21)	Sample	20	20112721	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
22)	Sample	21	20112722	BFB	BFB_TUNE2-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
23)	Sample	22	20112723	8GO8260B	VCCV1-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
24)	Sample	23	20112724	8GO8260B	VCCV2-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
25)	Sample	24	20112725	8GO8260B	VLCSW1-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
26)	Sample	25	20112726	8GO8260B	LCS-
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
27)	Sample	26	20112727	8GO8260B	BLK
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
28)	Sample	27	20112728	8GO8260B	VBLKW2-201127
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
29)	Sample	28	20112729	8GO8260B	MBLK-
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
30)	Sample	29	20112730	8GO8260B	20111800-05A
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
31)	Sample	30	20112731	8GO8260B	20111585-11A
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
32)	Sample	31	20112732	8GO8260B	20111800-01F

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Limits fail: Pump Oil (Days), Tune Time (Hours)
 33) Sample        32  20112733  8GO8260B  20111800-02F DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
 34) Sample        33  20112734  8GO8260B  20111800-03F
Limits fail: Pump Oil (Days), Tune Time (Hours)
 35) Sample        34  20112735  8GO8260B  20111800-04F DF500
Limits fail: Pump Oil (Days), Tune Time (Hours)
 36) Sample        35  20112736  8GO8260B  20111585-01A DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
 37) Sample        36  20112737  8GO8260B  20111585-02A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 38) Sample        37  20112738  8GO8260B  20111585-03A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 39) Sample        38  20112739  8GO8260B  20111585-04A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 40) Sample        39  20112740  8GO8260B  20111585-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 41) Sample        40  20112741  8GO8260B  20111585-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 42) Sample        41  20112742  8GO8260B  20111585-07A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 43) Sample        42  20112743  8GO8260B  20111585-08A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 44) Sample        43  20112744  8GO8260B  20111585-09A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 45) Sample        44  20112745  8GO8260B  20111585-10A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 46) Sample        45  20112746  8GO8260B  20111720-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 47) Sample        46  20112747  8GO8260B  20111720-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 48) Sample        47  20112748  8GO8260B  20111720-01A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 49) Sample        48  20112749  8GO8260B  20111764-04A DF20
Limits fail: Pump Oil (Days), Tune Time (Hours)
 50) Sample        49  20112750  8GO8260B  20111800-04F MS DF500
Limits fail: Pump Oil (Days), Tune Time (Hours)
 51) Sample        50  20112751  8GO8260B  20111800-04F MSD DF500
Limits fail: Pump Oil (Days), Tune Time (Hours)
 52) Sample        51  20112752  8GO8260B  20111720-06A MS
Limits fail: Pump Oil (Days), Tune Time (Hours)
 53) Sample        52  20112753  8GO8260B  20111720-06A MSD
Limits fail: Pump Oil (Days), Tune Time (Hours)
 54) Sample        53  20112754  8GO8260B  BLK
Limits fail: Pump Oil (Days), Tune Time (Hours)
 55) Sample        54  20112755  BFB       BFB_TUNE3-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
 56) Sample        55  20112756  8GO8260B  VCCV3-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
 57) Sample        56  20112757  8GO8260B  VCCV4-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
 58) Sample        57  20112758  8GO8260B  VLCSW2-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
 59) Sample        58  20112759  8GO8260B  LCS-
Limits fail: Pump Oil (Days), Tune Time (Hours)
 60) Sample        59  20112760  8GO8260B  BLK
Limits fail: Pump Oil (Days), Tune Time (Hours)
 61) Sample        60  20112761  8GO8260B  VBLKW3-201127
Limits fail: Pump Oil (Days), Tune Time (Hours)
 62) Sample        61  20112762  8GO8260B  MBLK-
Limits fail: Pump Oil (Days), Tune Time (Hours)
 63) Sample        62  20112763  8GO8260B  20111623-07A DF2000
Limits fail: Pump Oil (Days), Tune Time (Hours)
 64) Sample        63  20112764  8GO8260B  20111724-11A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 65) Sample        64  20112765  8GO8260B  20111700-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 66) Sample        65  20112766  8GO8260B  20111700-01A DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
 67) Sample        66  20112767  8GO8260B  20111700-02A DF100
Limits fail: Pump Oil (Days), Tune Time (Hours)
 68) Sample        67  20112768  8GO8260B  20111700-03A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 69) Sample        68  20112769  8GO8260B  20111700-04A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 70) Sample        69  20112770  8GO8260B  20111700-05A
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Limits fail: Pump Oil (Days), Tune Time (Hours)
 71) Sample         70  20112771  8GO8260B  20111724-01A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 72) Sample         71  20112772  8GO8260B  20111724-02A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 73) Sample         72  20112773  8GO8260B  20111724-03A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 74) Sample         73  20112774  8GO8260B  20111724-04A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 75) Sample         74  20112775  8GO8260B  20111724-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 76) Sample         75  20112776  8GO8260B  20111724-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 77) Sample         76  20112777  8GO8260B  20111724-07A DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 78) Sample         77  20112778  8GO8260B  20111724-08A DF20
Limits fail: Pump Oil (Days), Tune Time (Hours)
 79) Sample         78  20112779  8GO8260B  20111724-09A DF20
Limits fail: Pump Oil (Days), Tune Time (Hours)
 80) Sample         79  20112780  8GO8260B  20111724-10A DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 81) Sample         80  20112781  8GO8260B  20111825-21A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 82) Sample          1  20112782  8GO8260B  20111825-22A DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
 83) Sample          2  20112783  8GO8260B  20111825-22A MS DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
 84) Sample          3  20112784  8GO8260B  20111825-22A MSD DF200
Limits fail: Pump Oil (Days), Tune Time (Hours)
 85) Sample          4  20112785  8GO8260B  BLK

Sequence completed Sat Nov 28 11:07:04 2020

  C:\MSDCHEM\1\DATA\VMS8-201127\2020 Nov 27 1210 Quality Log.LOG
  C:\MSDCHEM\1\DATA\VMS8-201127\2020 Nov 27 1210 Sequence Log .LOG
```

2020 Dec 01 0913 Sequence Log

Starting sequence Tue Dec 01 09:13:53 2020

Instrument Name: VMS8
Sequence File: C:\msdchem\1\sequence\VMS8-201201.s
Comment:
Operator: MF
Data Path: C:\MSDCHEM\1\DATA\VMS8-201201\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
	This computer is now swap bound.				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
1)	Sample	1	20120101	BFB	BFB_TUNE1-201201
	Sequence Table edit performed Tue Dec 01 09:46:27 2020				
	This computer is now swap bound.				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
2)	Sample	1	20120102	8GO8260B	VCCV1-201201
	Sequence Table edit performed Tue Dec 01 10:20:33 2020				
	This computer is now swap bound.				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
3)	Sample	2	20120103	8GO8260B	VLCSW1-201201
	This computer is now swap bound.				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
4)	Sample	3	20120104	8GO8260B	LCS-
	This computer is now swap bound.				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
5)	Sample	4	20120105	8GO8260B	BLK
	This computer is now swap bound.				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
6)	Sample	5	20120106	8GO8260B	VBLKW1-201201
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
7)	Sample	6	20120107	8GO8260B	MBLK-
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
8)	Sample	7	20120108	8GO8260B	20111908-04A DF100
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
9)	Sample	8	20120109	8GO8260B	20111908-16A
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
10)	Sample	9	20120110	8GO8260B	20111907-08C
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
11)	Sample	10	20120111	8GO8260B	20111803-10A
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
12)	Sample	11	20120112	8GO8260B	20111803-09A DF50
	Sequence Table edit performed Tue Dec 01 13:17:35 2020				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
13)	Sample	12	20120113	8GO8260B	20111803-09A
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
14)	Sample	13	20120114	8GO8260B	20111764-06A DF20
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
15)	Sample	14	20120115	8GO8260B	20111977-01B DF100
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
16)	Sample	15	20120116	8GO8260B	20112053-01A DF100
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
17)	Sample	16	20120117	8GO8260B	20111994-01B
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
18)	Sample	17	20120118	8GO8260B	20111994-02B
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
19)	Sample	18	20120119	8GO8260B	20111994-03B
	Sequence Table edit performed Tue Dec 01 15:22:49 2020				
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
20)	Sample	19	20120120	8GO8260B	20111994-04B
	Limits fail: Pump Oil (Days), Tune Time (Hours)				
21)	Sample	20	20120121	8GO8260B	20111771-06A

2020 Dec 01 0913 Sequence Log

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Limits fail: Pump Oil (Days), Tune Time (Hours)
 22) Sample        21  20120122  8GO8260B  20111803-03A DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 23) Sample        22  20120123  8GO8260B  20111803-04A DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 24) Sample        23  20120124  8GO8260B  20112419-27A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 25) Sample        24  20120125  8GO8260B  20111803-01A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 26) Sample        25  20120126  8GO8260B  20111803-02A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 27) Sample        26  20120127  8GO8260B  20112419-12A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 28) Sample        27  20120128  8GO8260B  20111771-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 29) Sample        28  20120129  8GO8260B  20111803-03A MS DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 30) Sample        29  20120130  8GO8260B  20111803-03A MSD DF50
Limits fail: Pump Oil (Days), Tune Time (Hours)
 31) Sample        30  20120131  8GO8260B  20111994-02B MS
Limits fail: Pump Oil (Days), Tune Time (Hours)
 32) Sample        31  20120132  8GO8260B  20111994-02B MSD
Limits fail: Pump Oil (Days), Tune Time (Hours)
 33) Sample        32  20120133  8GO8260B  BFB_TUNE2-201201
Limits fail: Pump Oil (Days), Tune Time (Hours)
 34) Sample        33  20120134  BFB       BLK
Limits fail: Pump Oil (Days), Tune Time (Hours)
 35) Sample        34  20120135  8GO8260B  VCCV3-201201
Limits fail: Pump Oil (Days), Tune Time (Hours)
 36) Sample        35  20120136  8GO8260B  VCCV4-201201
Limits fail: Pump Oil (Days), Tune Time (Hours)
 37) Sample        36  20120137  8GO8260B  VLCSW2-201201
Limits fail: Pump Oil (Days), Tune Time (Hours)
 38) Sample        37  20120138  8GO8260B  LCS-
Limits fail: Pump Oil (Days), Tune Time (Hours)
 39) Sample        38  20120139  8GO8260B  BLK
Limits fail: Pump Oil (Days), Tune Time (Hours)
 40) Sample        39  20120140  8GO8260B  VBLKW2-201201
Limits fail: Pump Oil (Days), Tune Time (Hours)
 41) Sample        40  20120141  8GO8260B  MBLK-
Limits fail: Pump Oil (Days), Tune Time (Hours)
 42) Sample        41  20120142  8GO8260B  20111994-08A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 43) Sample        42  20120143  8GO8260B  20111994-07A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 44) Sample        43  20120144  8GO8260B  20111741-07A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 45) Sample        44  20120145  8GO8260B  20112419-24A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 46) Sample        45  20120146  8GO8260B  20112419-21A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 47) Sample        46  20120147  8GO8260B  20111803-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 48) Sample        47  20120148  8GO8260B  20111803-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 49) Sample        48  20120149  8GO8260B  20111803-07A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 50) Sample        49  20120150  8GO8260B  20111803-08A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 51) Sample        50  20120151  8GO8260B  20112419-06A DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
 52) Sample        51  20120152  8GO8260B  20112419-09A DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
```

```
                        2020 Dec 01 0913 Sequence Log
 53) Sample        52  20120153  8GO8260B  20112419-14A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 54) Sample        53  20120154  8GO8260B  20111994-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 55) Sample        54  20120155  8GO8260B  20111994-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 56) Sample        55  20120156  8GO8260B  20111741-01A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 57) Sample        56  20120157  8GO8260B  20111741-02A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 58) Sample        57  20120158  8GO8260B  20111741-03A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 59) Sample        58  20120159  8GO8260B  20111741-04A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 60) Sample        59  20120160  8GO8260B  20111741-05A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 61) Sample        60  20120161  8GO8260B  20111741-06A
Limits fail: Pump Oil (Days), Tune Time (Hours)
 62) Sample        61  20120162  8GO8260B  20112419-09A MS DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
 63) Sample        62  20120163  8GO8260B  20112419-09A MSD DF10
Limits fail: Pump Oil (Days), Tune Time (Hours)
 64) Sample        63  20120164  8GO8260B  BLK

Sequence completed Wed Dec 02 03:37:16 2020

  C:\MSDCHEM\1\DATA\VMS8-201201\2020 Dec 01 0913 Quality Log.LOG
  C:\MSDCHEM\1\DATA\VMS8-201201\2020 Dec 01 0913 Sequence Log .LOG
```

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Volatile Organic Compounds by GCMS

Analysis Lot:VMS7_201201A
Analysis Method: SW8260C **Instrument ID:**VMS7

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
20120108.D	VCCV1-201201	VCCV1-201201	12/01/2020	16:48	
20120109.D	VLCSW1-201201	VLCSW1-201201	12/01/2020	17:14	
20120112.D	VBLKW1-201201	VBLKW1-201201	12/01/2020	18:04	
20120130.D	IDA001:E2-3:S00010	20111764-02	12/01/2020	23:00	
20120134.D	20111985-06A MS	20111985-06A MS	12/02/2020	00:06	
20120135.D	20111985-06A MSD	20111985-06A MSD	12/02/2020	00:22	

Analysis Lot:VMS8_201127A
Analysis Method: SW8260C **Instrument ID:**VMS8

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
20112724.D	VCCV2-201127	VCCV2-201127	11/27/2020	18:29	
20112725.D	VLCSW1-201127	VLCSW1-201127	11/27/2020	18:45	
20112728.D	VBLKW2-201127	VBLKW2-201127	11/27/2020	19:34	
20112749.D	IDA001:C5-3:S00010	20111764-04	11/28/2020	01:14	
20112750.D	20111800-04F MS	20111800-04F MS	11/28/2020	01:30	
20112751.D	20111800-04F MSD	20111800-04F MSD	11/28/2020	01:46	

Analysis Lot:VMS8_201201A
Analysis Method: SW8260C **Instrument ID:**VMS8

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
20120102.D	VCCV1-201201	VCCV1-201201	12/01/2020	09:58	
20120103.D	VLCSW1-201201	VLCSW1-201201	12/01/2020	10:31	
20120106.D	VBLKW1-201201	VBLKW1-201201	12/01/2020	11:20	
20120114.D	IDA001:B8-3:S00010	20111764-06	12/01/2020	13:46	
20120129.D	20111803-03A MS	20111803-03A MS	12/01/2020	17:58	
20120130.D	20111803-03A MSD	20111803-03A MSD	12/01/2020	18:14	

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168263** Prep Code: **TCLP_1311_ZHE**

Start Date: **11/24/2020 6:47:57 PM** End Date: **11/25/2020 12:36:25 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol: 1
FinSampVol: 1 mL
OriginalFac: 1
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111733-02A	Tclp Extract		1		0	1	1
20111764-04A	Tclp Extract		1		0	1	1
20111764-06A	Tclp Extract		1		0	1	1
20111984-01A	Tclp Extract		1		0	1	1
	straight filter						
20111984-02A	Tclp Extract		1		0	1	1
20111984-03A	Tclp Extract		1		0	1	1
20111984-04A	Tclp Extract		1		0	1	1
	straight filter						
20111984-05A	Tclp Extract		1		0	1	1
	straight filter						

Notes: *Screen: 10414601-0296-FB/10414601-0300-FB; Filter: 112167-0311-D; Tedlar bag: 0707-7000-GD; Tubing: TB7000GD-TUBING*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168263** Prep Code: **TCLP_1311_ZHE**

Start Date: **11/24/2020 6:47:57 PM** End Date: **11/25/2020 12:36:25 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	1
FinSampVol:	1 mL
OriginalFac:	1
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *Screen: 10414601-0296-FB/10414601-0300-FB; Filter: 112167-0311-D; Tedlar bag: 0707-7000-GD; Tubing: TB7000GD-TUBING*

Semivolatile Organic Compounds by GCMS

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

TCBA_8270_S

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S00010	**Units:**	ug/L
Lab Code:	20111764-02	**Basis:**	Wet

Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Prep Method: SW3510

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
2,4,5-Trichlorophenol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
2,4,6-Trichlorophenol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
2,4-Dinitrotoluene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Hexachloro-1,3-butadiene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Hexachlorobenzene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Hexachloroethane	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
m-Cresol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Nitrobenzene	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
o-Cresol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
p-Cresol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Pentachlorophenol	100 U	100	1	12/01/20 01:20	11/27/20 12:49	
Pyridine	200 U	200	1	12/01/20 01:20	11/27/20 12:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorophenol	33.4	13 - 56	12/01/20 01:20	
Phenol-d6	23.0	10 - 35	12/01/20 01:20	
Nitrobenzene-d5	45.6	29 - 80	12/01/20 01:20	
2-Fluorobiphenyl	47.2	26 - 79	12/01/20 01:20	
2,4,6-Tribromophenol	52.3	27 - 83	12/01/20 01:20	
4-Terphenyl-d14	71.1	43 - 106	12/01/20 01:20	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Units:**	ug/L
Lab Code:	20111764-04	**Basis:**	Wet

Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Prep Method: SW3510

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
2,4,5-Trichlorophenol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
2,4,6-Trichlorophenol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
2,4-Dinitrotoluene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Hexachloro-1,3-butadiene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Hexachlorobenzene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Hexachloroethane	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
m-Cresol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Nitrobenzene	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
o-Cresol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
p-Cresol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Pentachlorophenol	100 U	100	1	12/01/20 01:43	11/27/20 12:49	
Pyridine	200 U	200	1	12/01/20 01:43	11/27/20 12:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorophenol	39.3	13 - 56	12/01/20 01:43	
Phenol-d6	27.5	10 - 35	12/01/20 01:43	
Nitrobenzene-d5	51.5	29 - 80	12/01/20 01:43	
2-Fluorobiphenyl	50.4	26 - 79	12/01/20 01:43	
2,4,6-Tribromophenol	58.5	27 - 83	12/01/20 01:43	
4-Terphenyl-d14	72.7	43 - 106	12/01/20 01:43	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Units:**	ug/L
Lab Code:	20111764-06	**Basis:**	Wet

Semivolatile Organic Compounds by GCMS

Analysis Method: SW8270D
Prep Method: SW3510

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
2,4,5-Trichlorophenol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
2,4,6-Trichlorophenol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
2,4-Dinitrotoluene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Hexachloro-1,3-butadiene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Hexachlorobenzene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Hexachloroethane	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
m-Cresol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Nitrobenzene	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
o-Cresol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
p-Cresol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Pentachlorophenol	100 U	100	1	12/01/20 02:07	11/27/20 12:49	
Pyridine	200 U	200	1	12/01/20 02:07	11/27/20 12:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorophenol	39.0	13 - 56	12/01/20 02:07	
Phenol-d6	26.1	10 - 35	12/01/20 02:07	
Nitrobenzene-d5	52.6	29 - 80	12/01/20 02:07	
2-Fluorobiphenyl	52.8	26 - 79	12/01/20 02:07	
2,4,6-Tribromophenol	55.8	27 - 83	12/01/20 02:07	
4-Terphenyl-d14	75.1	43 - 106	12/01/20 02:07	

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113036.D
Acq On : 01 Dec 2020 12:08 am
Operator : EE/EEW
Sample : 20111733-02A MS
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 01 10:30:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	139067	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	322085	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	192325	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.298	188	356579	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	346487	40.00	ug/ml	0.00
95) Perylene-d12	12.622	264	355063	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.657	112	54744	21.83	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 43.66%			
7) Phenol-d6	4.199	99	44259	15.15	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 30.30%			
26) Nitrobenzene-d5	4.746	82	66294	32.61	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 65.22%			
55) 2-Fluorobiphenyl	5.851	172	210244	31.48	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 62.96%			
76) 2,4,6-Tribromophenol	6.816	330	46501	35.37	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 70.74%			
89) 4-Terphenyl-d14	8.610	244	326593	39.71	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 79.42%			
Target Compounds						Qvalue
3) Pyridine	2.887	79	20820	8.26	ug/ml	98
4) N-Nitrosodimethylamine	2.840	42	4701	9.51	ug/ml	93
6) Benzaldehyde	4.157	77	21657	12.88	ug/ml	99
8) Phenol	4.205	94	22489	6.82	ug/ml#	35
9) Aniline	4.216	93	51168	14.35	ug/ml	85
10) Bis(2-chloroethyl)ether	4.246	93	31551	13.23	ug/ml	99
11) 2-Chlorophenol	4.299	128	39511	14.68	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	30291	8.66	ug/ml	99
13) 1,4-Dichlorobenzene	4.422	146	31801	8.94	ug/ml	99
14) Benzyl alcohol	4.493	108	23913	13.93	ug/ml	98
15) 1,2-Dichlorobenzene	4.516	146	31896	9.50	ug/ml	99
16) 2-Methylphenol	4.557	108	30471	12.61	ug/ml	98
17) 2,2`-Oxybis(1-chloropr...	4.563	45	21810	12.94	ug/ml	98
18) Bis(2-chloroisopropyl)...	4.563	45	21848	12.96	ug/ml	99
19) 3-Methylphenol	4.646	107	31861	12.10	ug/ml	95
20) 4-Methylphenol	4.646	107	31861	12.10	ug/ml	95
21) 3&4-Methylphenol	4.646	107	32115	12.08	ug/ml	95
22) Acetophenone	4.652	105	45397	13.69	ug/ml	97
23) N-Nitrosodi-n-propylamine	4.640	70	19102	14.09	ug/ml	99
24) Hexachloroethane	4.722	117	9067	8.44	ug/ml	96
27) Nitrobenzene	4.757	77	25957	13.52	ug/ml	98
28) Isophorone	4.899	82	56331	14.13	ug/ml	99
29) 2-Nitrophenol	4.952	139	21880	13.29	ug/ml	99
30) 2,4-Dimethylphenol	4.969	107	29454	11.24	ug/ml	100
31) Bis(2-chloroethoxy)met	5.016	93	38506	13.50	ug/ml	97
33) 2,4-Dichlorophenol	5.104	162	37001	13.88	ug/ml	100
34) 1,2,4-Trichlorobenzene	5.146	180	30923	11.06	ug/ml	99
36) Naphthalene	5.204	128	102856	11.55	ug/ml	100
37) 4-Chloroaniline	5.228	127	56339	15.41	ug/ml	98
38) 2,6-Dichlorophenol	5.234	162	36699	13.45	ug/ml	99

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113036.D
Acq On : 01 Dec 2020 12:08 am
Operator : EE/EEW
Sample : 20111733-02A MS
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 01 10:30:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) Hexachlorobutadiene	5.269	225	13479	9.47	ug/ml	98
40) Caprolactam	5.452	55	3833	5.40	ug/ml	92
41) 4-Chloro-3-methylphenol	5.528	107	33990	15.27	ug/ml	98
42) 2-Methylnaphthalene	5.628	142	77555	12.47	ug/ml	100
43) 1-Methylnaphthalene	5.693	142	72787	12.53	ug/ml	99
44) 1,2,4,5-Tetrachloroben...	5.734	216	35656	11.57	ug/ml	99
45) 1,1-Biphenyl	5.916	154	101268	13.14	ug/ml	99
46) 2,3,5,6-Tetrachlorophenol	6.481	232	23243	14.50	ug/ml	99
47) 2,3,4,6-Tetrachlorophenol	6.510	232	26548	14.81	ug/ml	99
48) 1,4-Dinitrobenzene	6.081	168	14554	14.81	ug/ml	99
49) 1,3-Dinitrobenzene	6.128	168	18032	14.85	ug/ml	99
50) 1,2-Dinitrobenzene	6.187	168	12414	14.46	ug/ml#	87
52) Hexachlorocyclopentadiene	5.722	237	7199	5.45	ug/ml	99
53) 2,4,6-Trichlorophenol	5.804	196	26778	13.71	ug/ml	99
54) 2,4,5-Trichlorophenol	5.840	196	30665	14.72	ug/ml	99
56) 2-Chloronaphthalene	5.940	162	76569	12.43	ug/ml	99
57) 2-Nitroaniline	5.999	65	14660	14.48	ug/ml	97
58) Dimethylphthalate	6.099	163	93500	14.51	ug/ml	99
59) Acenaphthylene	6.204	152	130530	14.08	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	22775	13.97	ug/ml	99
61) 3-Nitroaniline	6.263	138	27297	14.97	ug/ml	98
62) Acenaphthene	6.316	154	84539	13.82	ug/ml	100
63) 2,4-Dinitrophenol	6.328	184	8521	13.58	ug/ml	96
64) Dibenzofuran	6.428	168	119145	14.11	ug/ml	99
65) 4-Nitrophenol	6.387	65	4940	8.07	ug/ml#	79
66) 2,4-Dinitrotoluene	6.404	165	31230	14.41	ug/ml	91
67) Diethylphthalate	6.551	149	86144	14.20	ug/ml	100
68) Fluorene	6.651	166	97789	13.70	ug/ml	100
69) 4-Chlorophenyl phenyl	6.640	204	47369	14.60	ug/ml	99
70) 4-Nitroaniline	6.663	138	28055	14.68	ug/ml	99
71) Atrazine	7.069	200	28117	15.21	ug/ml	99
73) 4,6-Dinitro-2-methylph	6.675	198	14030	13.50	ug/ml	98
74) N-Nitrosodiphenylamine	6.722	169	87669	15.07	ug/ml	99
75) 1,2-Diphenylhydrazine	6.746	77	59057	14.83	ug/ml	100
77) 4-Bromophenyl phenyl e	6.975	248	29236	14.49	ug/ml	99
78) Hexachlorobenzene	7.022	284	34257	13.97	ug/ml	99
79) Pentachlorophenol	7.157	266	17053	15.08	ug/ml	98
80) Phenanthrene	7.310	178	149288	14.03	ug/ml	100
81) Anthracene	7.351	178	150341	14.18	ug/ml	99
82) Carbazole	7.457	167	145809	15.38	ug/ml	99
83) Di-n-butylphthalate	7.681	149	152384	15.70	ug/ml	100
84) Fluoranthene	8.251	202	160707	14.35	ug/ml	99
88) Pyrene	8.475	202	167524	15.31	ug/ml	99
90) Butylbenzylphthalate	9.169	149	66859	16.50	ug/ml	97
91) Benzo[a]anthracene	9.957	228	151366	14.91	ug/ml	99
92) 3,3'-Dichlorobenzidine	9.922	252	59194	13.54	ug/ml	99
93) Chrysene	10.016	228	159537	14.69	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.016	149	91799	16.67	ug/ml	99
96) Di-n-octylphthalate	11.198	149	157465	17.22	ug/ml	99
97) Benzo(b)fluoranthene	11.851	252	151279	15.08	ug/ml	98
98) Benzo(k)fluoranthene	11.904	252	153674	14.55	ug/ml	98
99) Benzo(a)pyrene	12.498	252	132966	14.60	ug/ml	100
100) Indeno(1,2,3-cd)pyrene	14.857	276	134160	14.41	ug/ml	97

Quantitation Report (QT Reviewed)

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113036.D
Acq On : 01 Dec 2020 12:08 am
Operator : EE/EEW
Sample : 20111733-02A MS
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 01 10:30:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
101) Dibenz(a,h)anthracene	14.927	278	142195	14.47 ug/ml	99
102) Benzo(g,h,i)perylene	15.410	276	151877	14.31 ug/ml	99

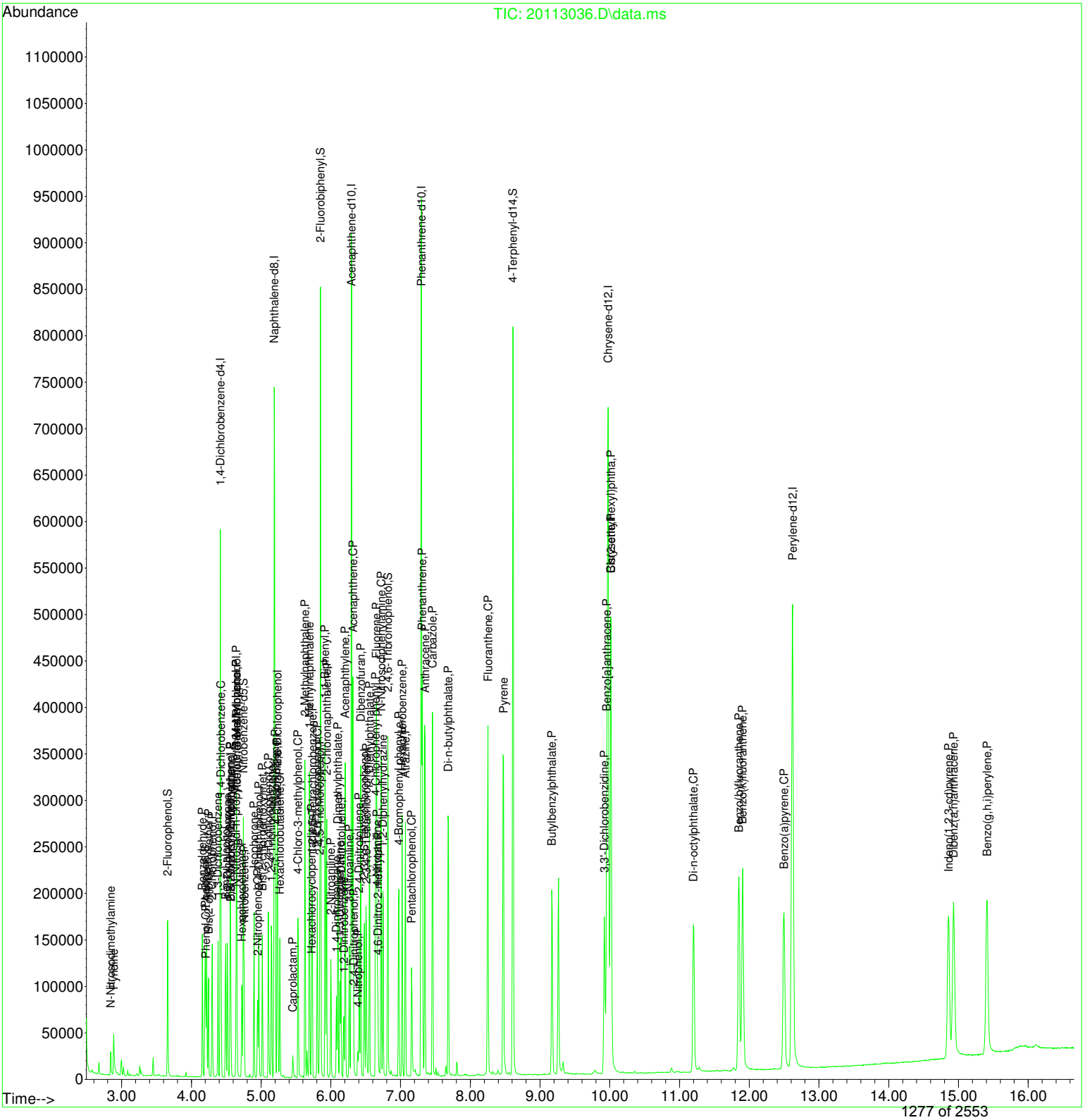
(#) = qualifier out of range (m) = manual integration (+) = signals summed

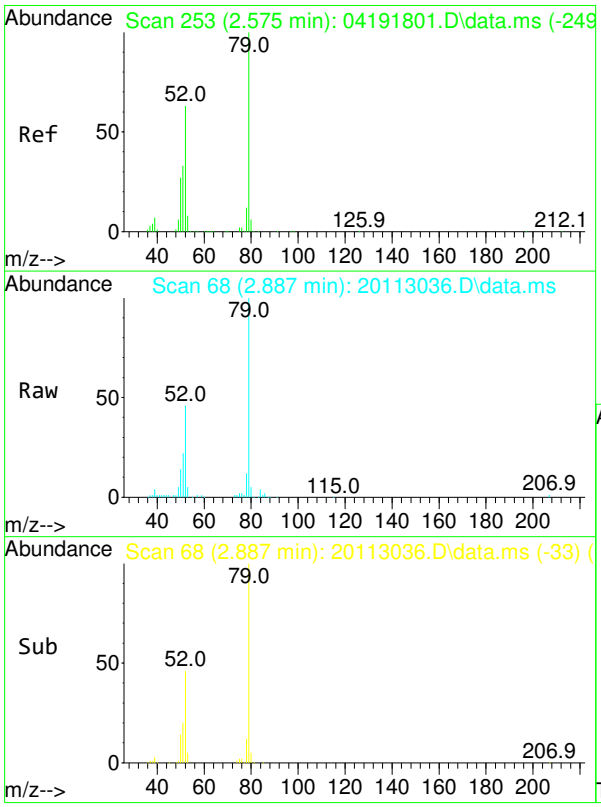
1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113036.D
Acq On : 01 Dec 2020 12:08 am
Operator : EE/EEW
Sample : 20111733-02A MS
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 01 10:30:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

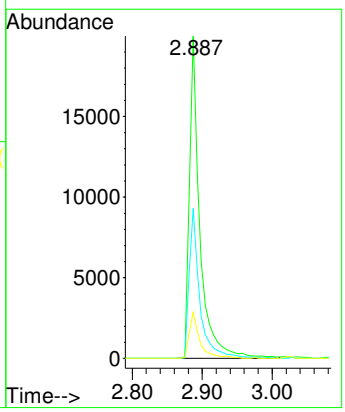


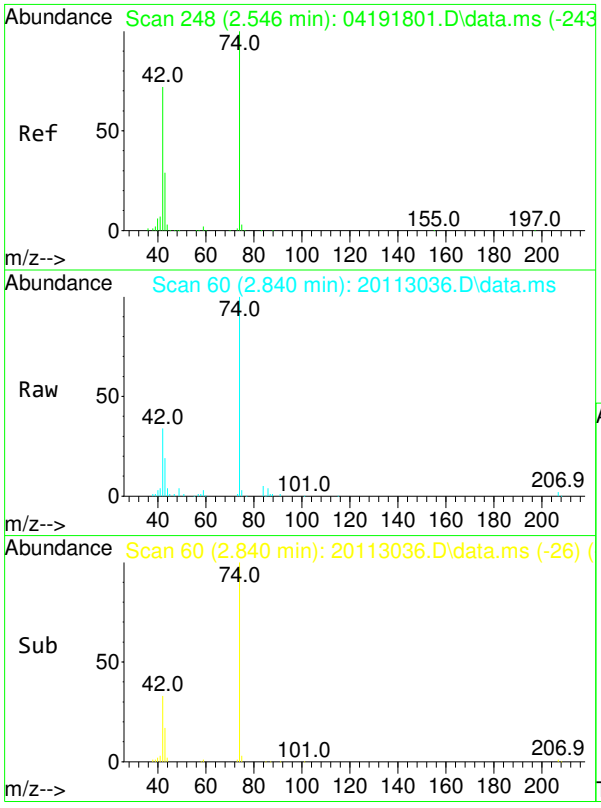


#3
Pyridine
Concen: 8.26 ug/ml
RT: 2.887 min Scan# 68
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 79 Resp: 20820

Ion	Ratio	Lower	Upper
79	100		
52	46.9	15.6	75.6
50	14.4	0.0	44.3

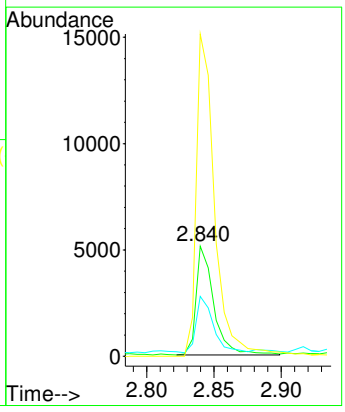


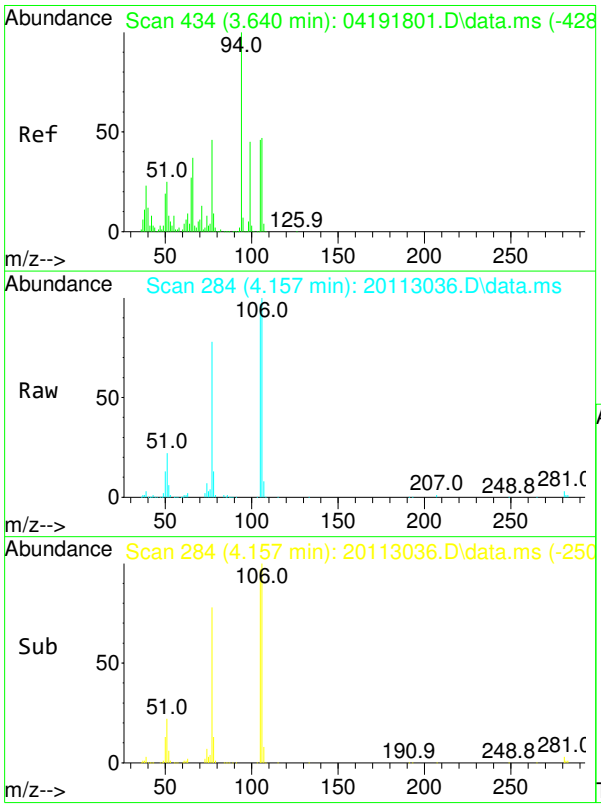


#4
N-Nitrosodimethylamine
Concen: 9.51 ug/ml
RT: 2.840 min Scan# 60
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 42 Resp: 4701

Ion	Ratio	Lower	Upper
42	100		
43	46.8	19.5	79.5
74	310.2	266.1	326.1

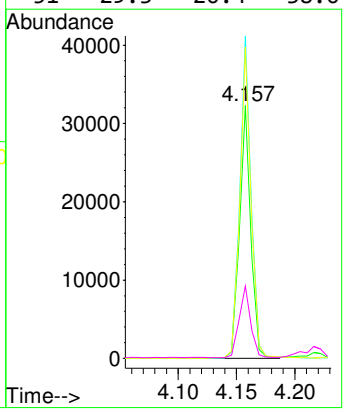


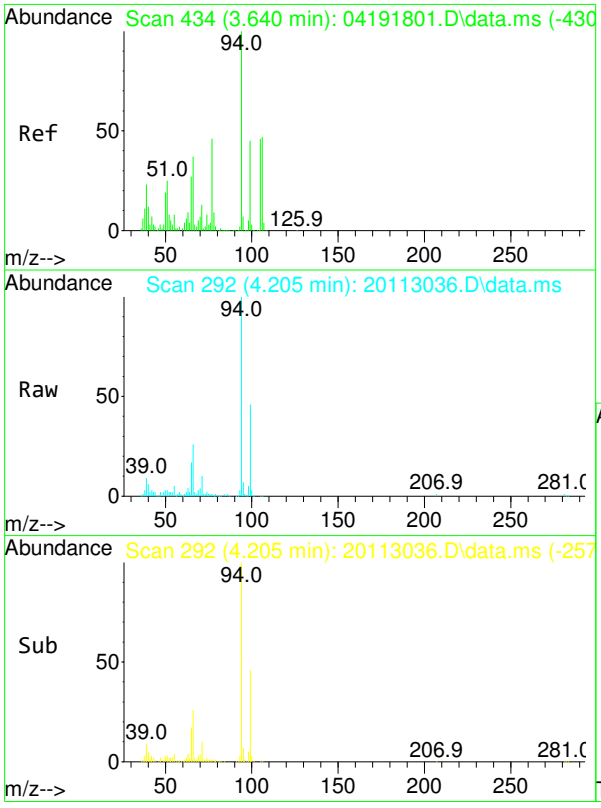


#6
Benzaldehyde
Concen: 12.88 ug/ml
RT: 4.157 min Scan# 284
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 77 Resp: 21657

Ion	Ratio	Lower	Upper
77	100		
106	127.4	89.2	165.8
105	123.1	87.2	161.9
51	29.3	20.4	38.0

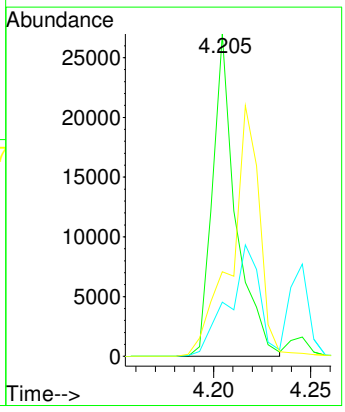


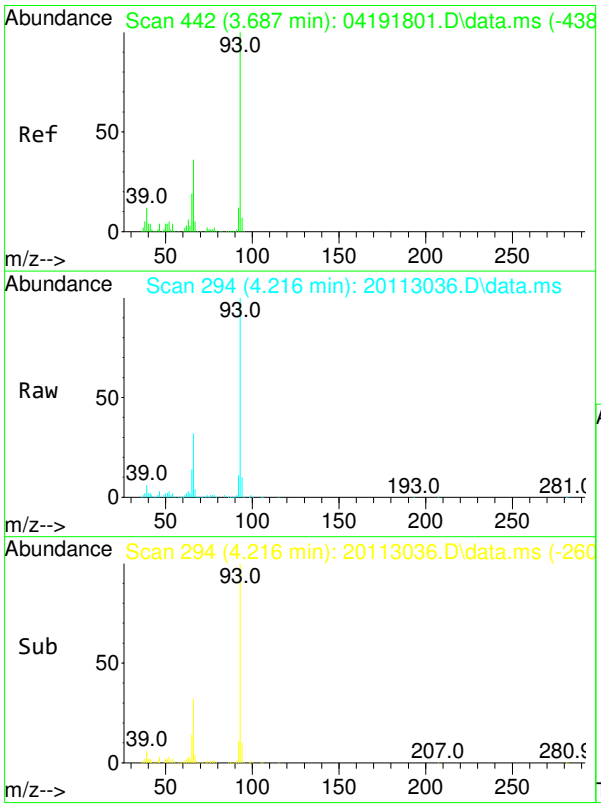


#8
Phenol
Concen: 6.82 ug/ml
RT: 4.205 min Scan# 292
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 94 Resp: 22489

Ion	Ratio	Lower	Upper
94	100		
65	46.6	0.0	48.0
66	95.7	0.0	30.0#

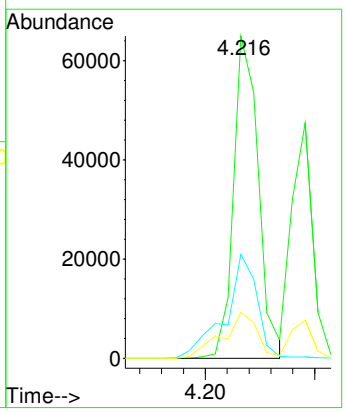


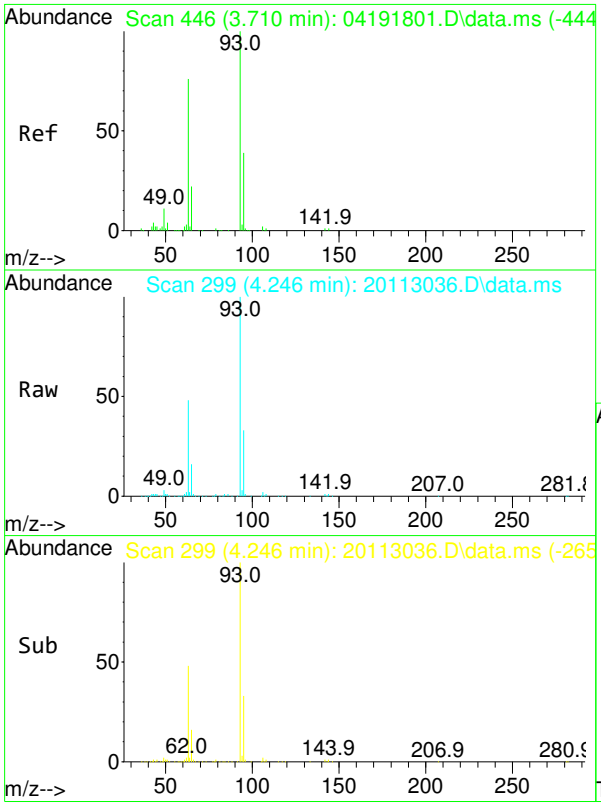


#9
Aniline
Concen: 14.35 ug/ml
RT: 4.216 min Scan# 294
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 93 Resp: 51168

Ion	Ratio	Lower	Upper
93	100		
66	42.1	21.2	81.2
65	20.5	0.0	42.0

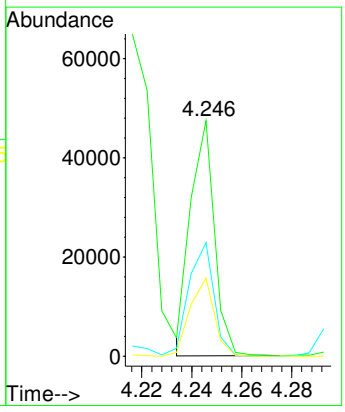


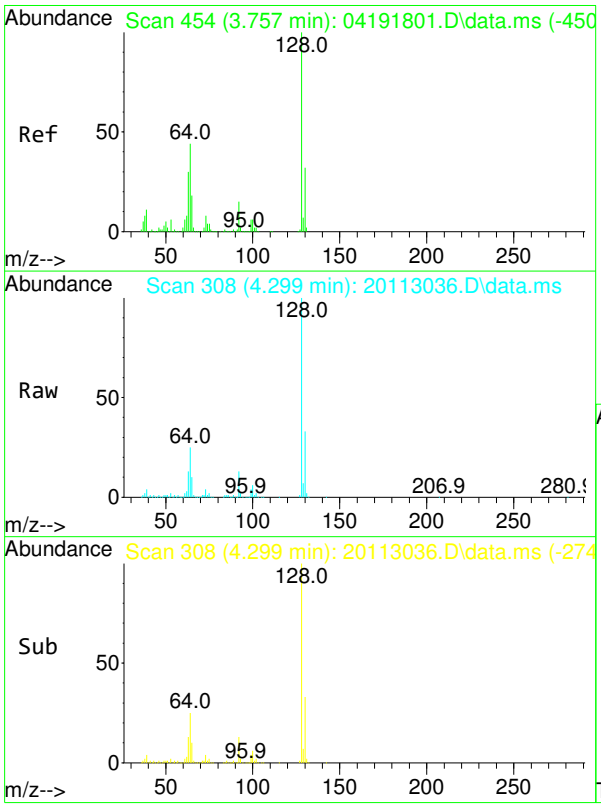


#10
Bis(2-chloroethyl)ether
Concen: 13.23 ug/ml
RT: 4.246 min Scan# 299
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 93 Resp: 31551

Ion	Ratio	Lower	Upper
93	100		
63	51.0	20.3	80.3
95	34.3	3.5	63.5

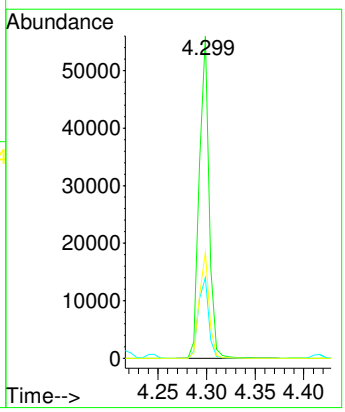


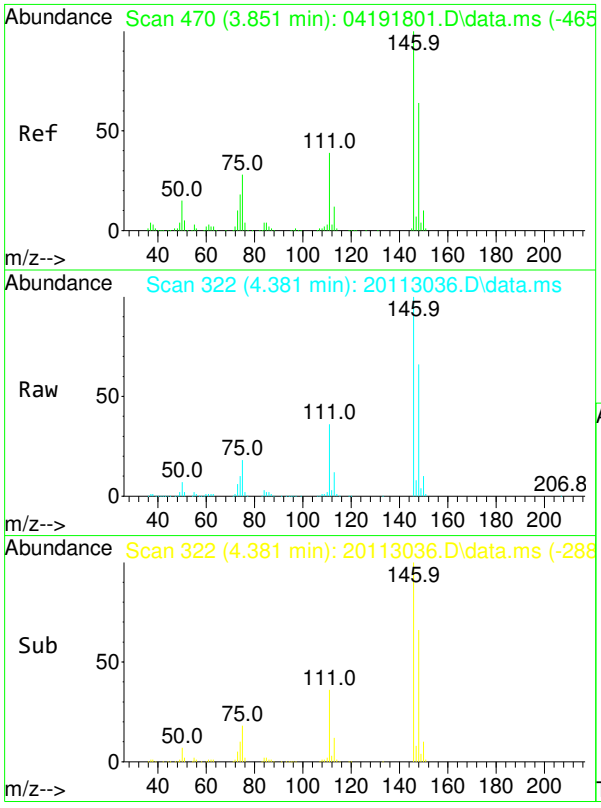


#11
2-Chlorophenol
Concen: 14.68 ug/ml
RT: 4.299 min Scan# 308
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:128 Resp: 39511

Ion	Ratio	Lower	Upper
128	100		
64	26.4	0.0	56.6
130	32.7	2.4	62.4

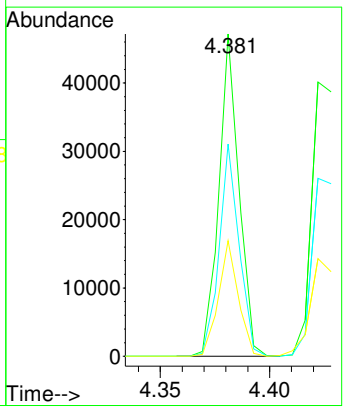


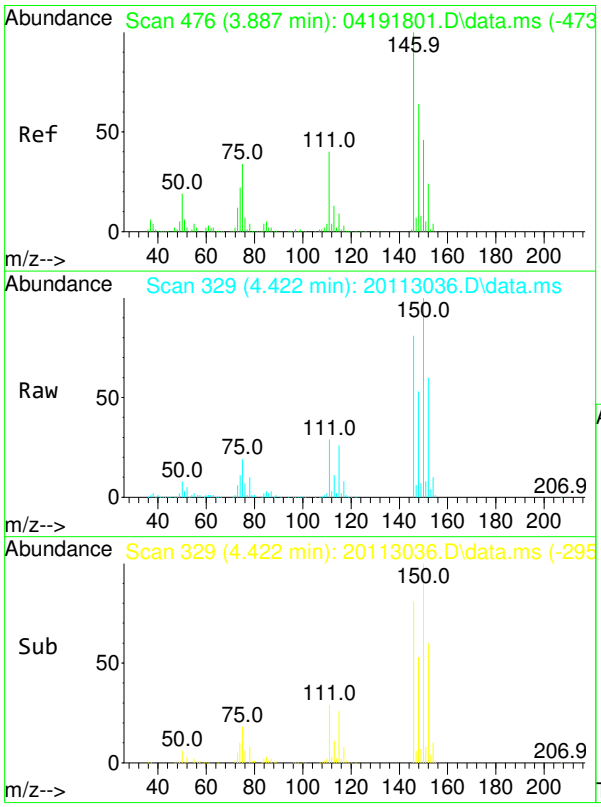


#12
1,3-Dichlorobenzene
Concen: 8.66 ug/ml
RT: 4.381 min Scan# 322
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:146 Resp: 30291

Ion	Ratio	Lower	Upper
146	100		
148	65.3	34.4	94.4
111	35.5	4.8	64.8

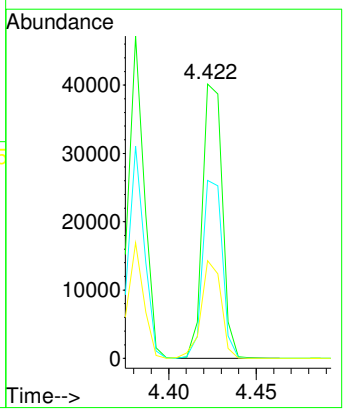


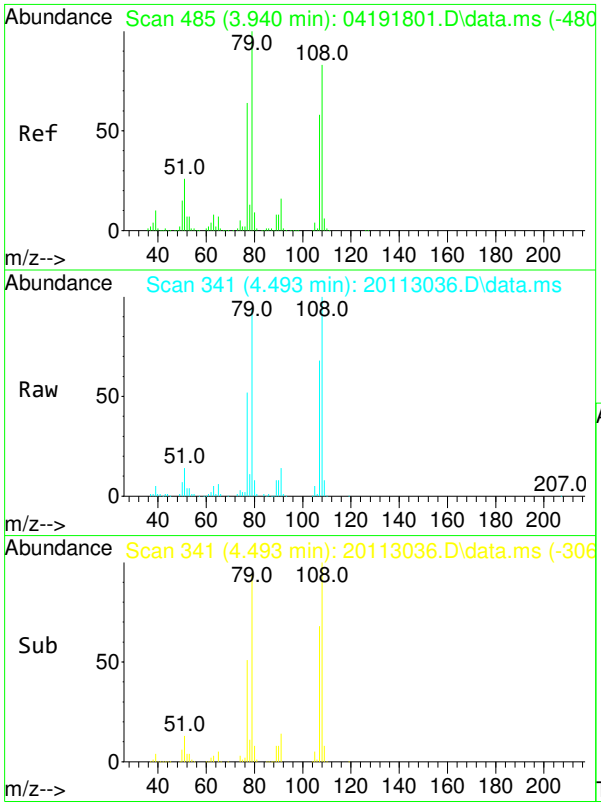


#13
1,4-Dichlorobenzene
Concen: 8.94 ug/ml
RT: 4.422 min Scan# 329
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:146 Resp: 31801

Ion	Ratio	Lower	Upper
146	100		
148	64.6	34.4	94.4
111	35.8	4.4	64.4

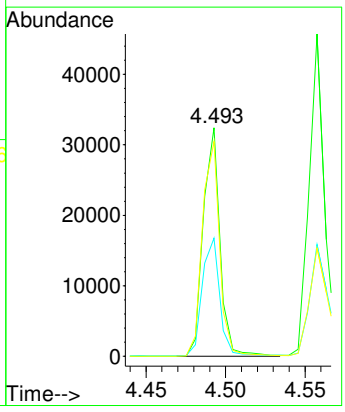


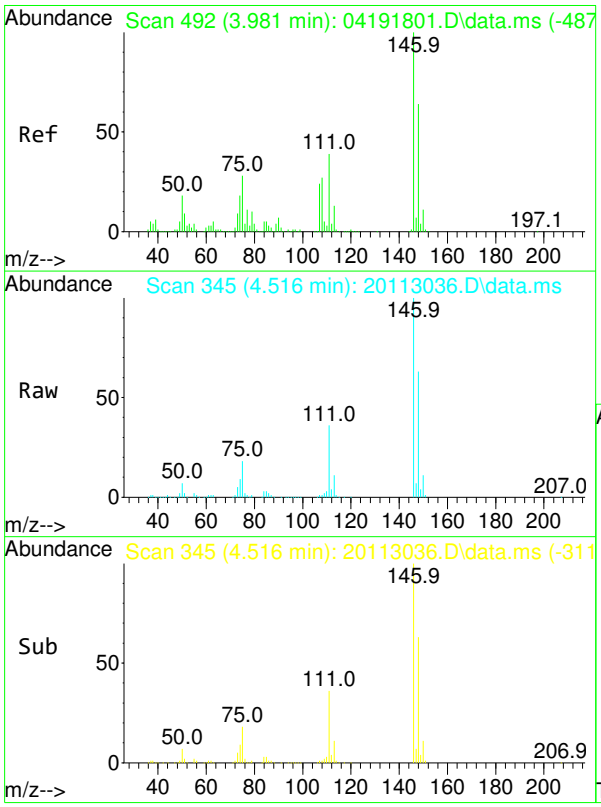


#14
Benzyl alcohol
Concen: 13.93 ug/ml
RT: 4.493 min Scan# 341
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:108 Resp: 23913

Ion	Ratio	Lower	Upper
108	100		
77	53.9	23.7	83.7
79	96.5	63.7	123.7

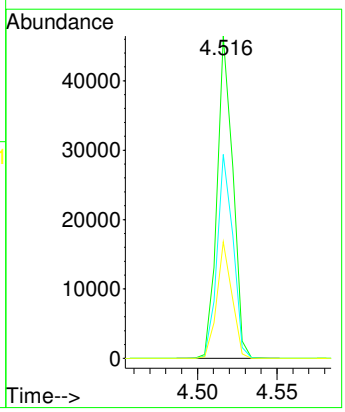


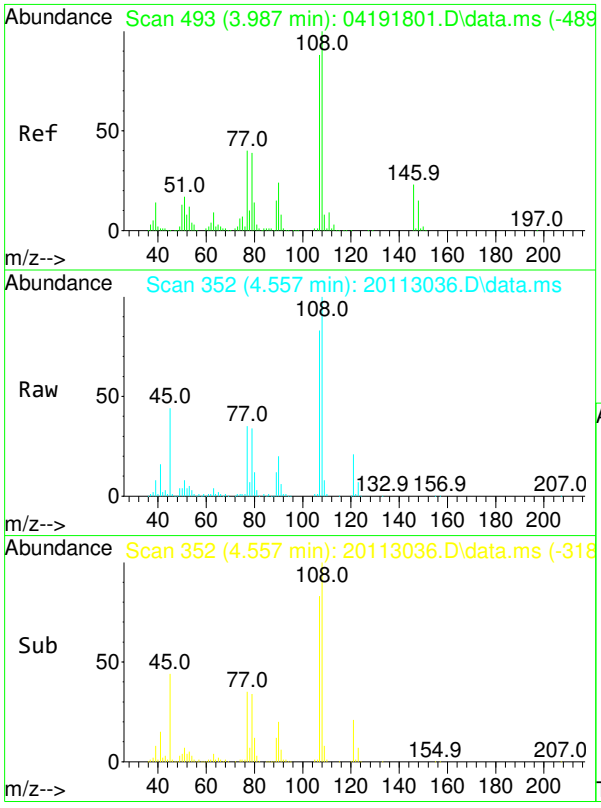


#15
1,2-Dichlorobenzene
Concen: 9.50 ug/ml
RT: 4.516 min Scan# 345
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:146 Resp: 31896

Ion	Ratio	Lower	Upper
146	100		
148	63.4	34.3	94.3
111	34.6	5.6	65.6

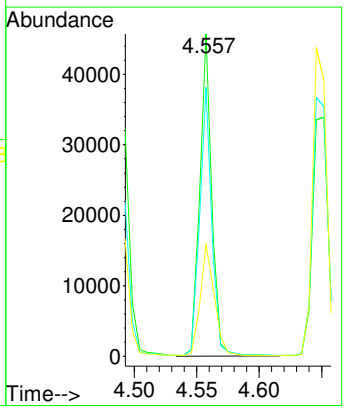


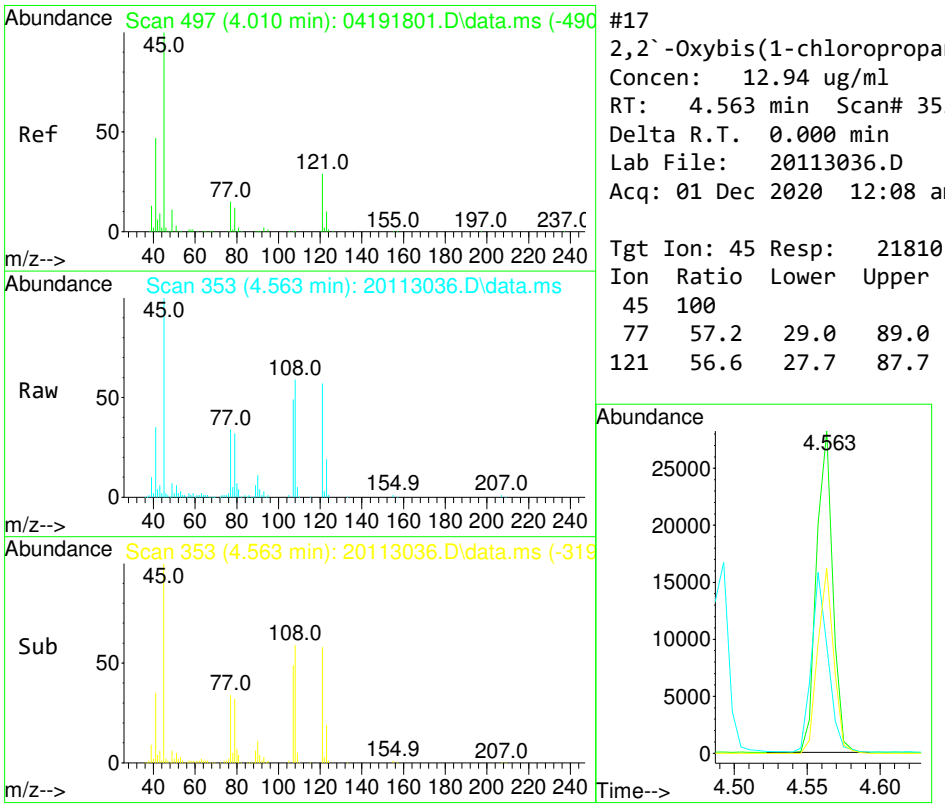


#16
2-Methylphenol
Concen: 12.61 ug/ml
RT: 4.557 min Scan# 352
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:108 Resp: 30471

Ion	Ratio	Lower	Upper
108	100		
107	84.0	56.1	116.1
77	40.9	10.6	70.6

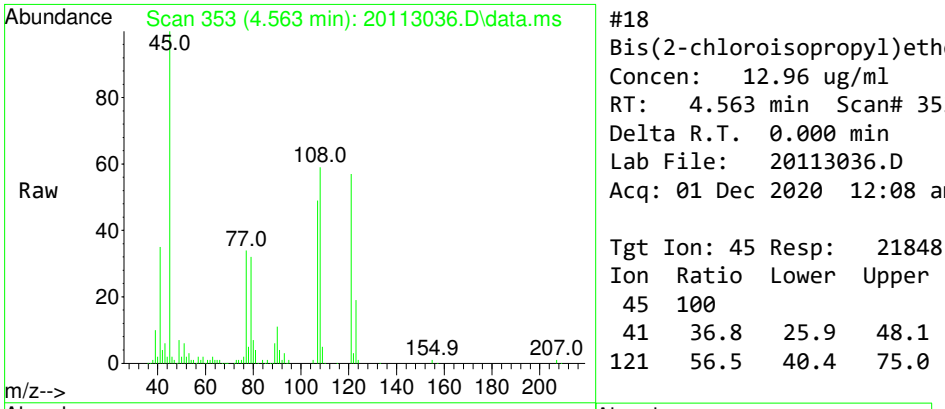




#17
2,2`-Oxybis(1-chloropropane)
Concen: 12.94 ug/ml
RT: 4.563 min Scan# 353
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 45 Resp: 21810

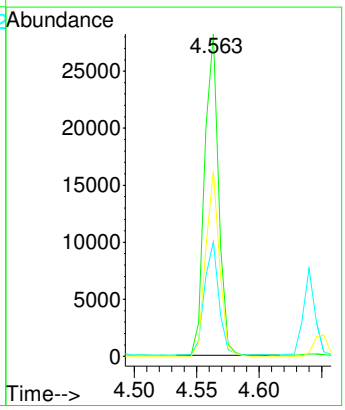
Ion	Ratio	Lower	Upper
45	100		
77	57.2	29.0	89.0
121	56.6	27.7	87.7

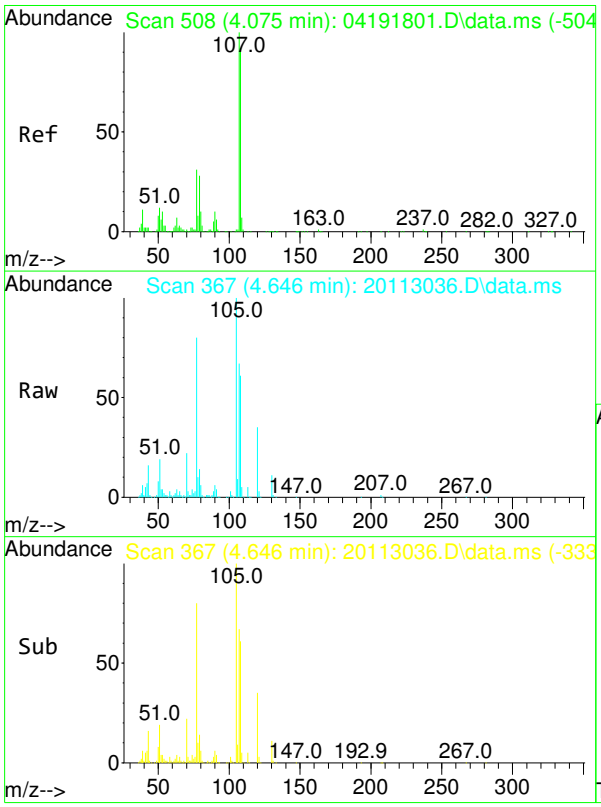


#18
Bis(2-chloroisopropyl)ether
Concen: 12.96 ug/ml
RT: 4.563 min Scan# 353
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 45 Resp: 21848

Ion	Ratio	Lower	Upper
45	100		
41	36.8	25.9	48.1
121	56.5	40.4	75.0

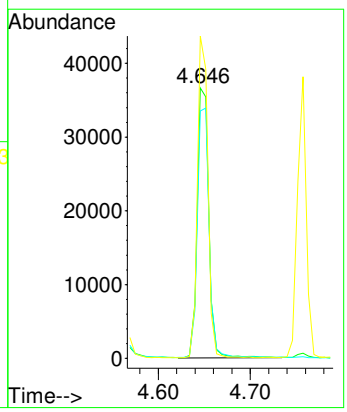


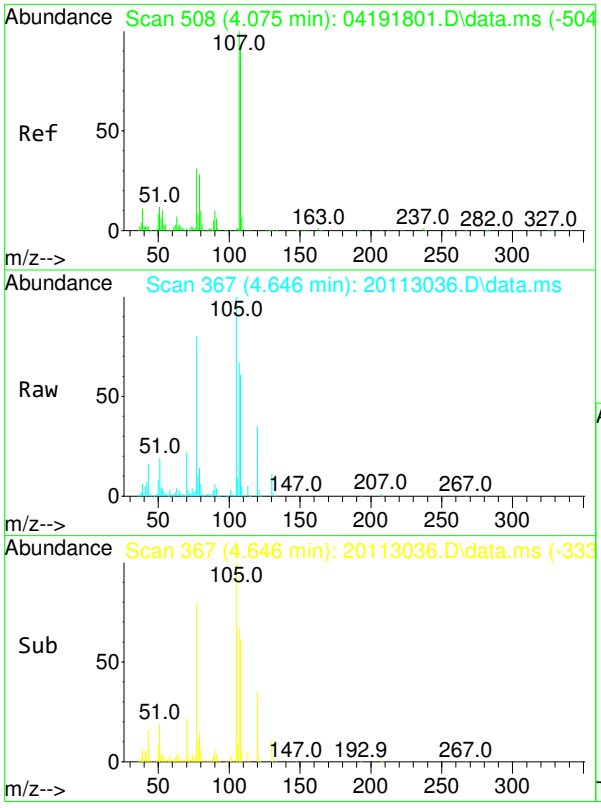


#19
3-Methylphenol
Concen: 12.10 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:107 Resp: 31861

Ion	Ratio	Lower	Upper
107	100		
108	94.1	65.1	125.1
77	107.7	68.3	128.3

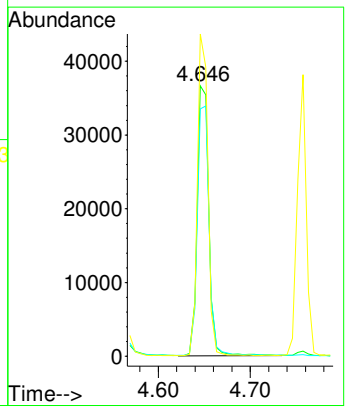


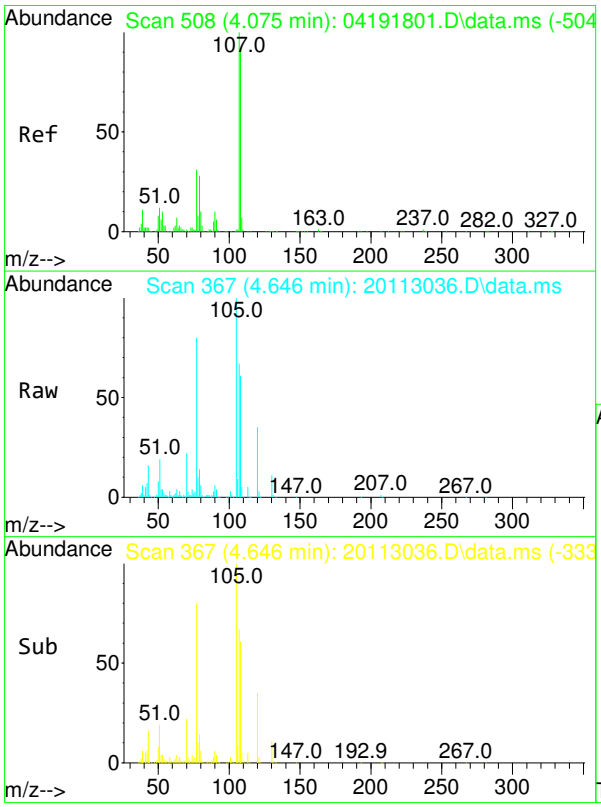


#20
4-Methylphenol
Concen: 12.10 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:107 Resp: 31861

Ion	Ratio	Lower	Upper
107	100		
108	94.1	65.1	125.1
77	107.7	68.3	128.3

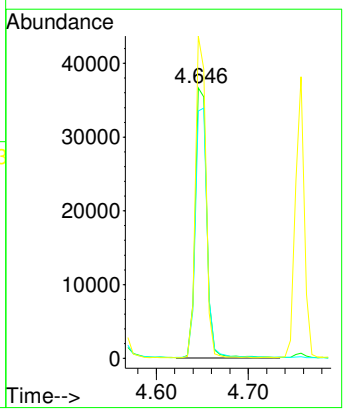


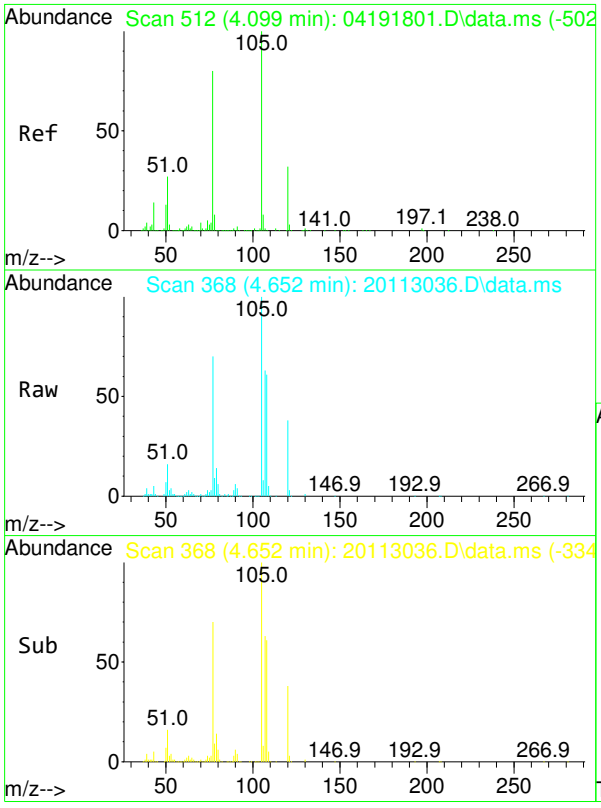


#21
3&4-Methylphenol
Concen: 12.08 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:107 Resp: 32115

Ion	Ratio	Lower	Upper
107	100		
108	95.2	67.0	124.4
77	107.2	68.5	127.1

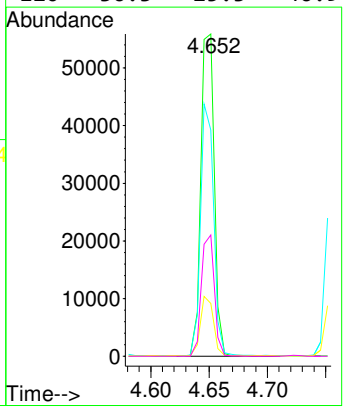


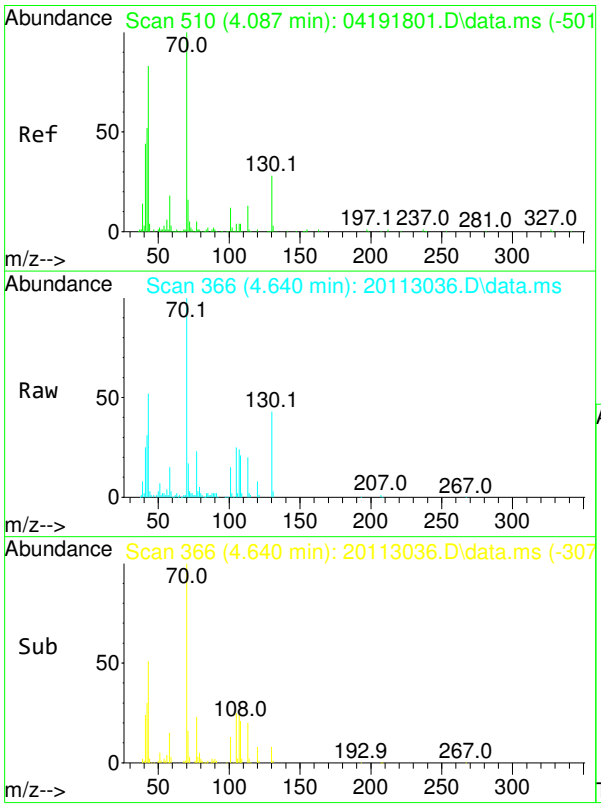


#22
Acetophenone
Concen: 13.69 ug/ml
RT: 4.652 min Scan# 368
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:105 Resp: 45397

Ion	Ratio	Lower	Upper
105	100		
77	75.6	55.3	102.7
51	17.8	13.0	24.1
120	36.3	25.3	46.9

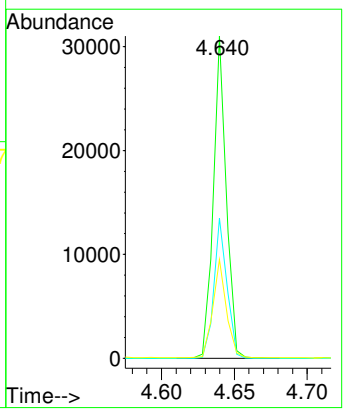


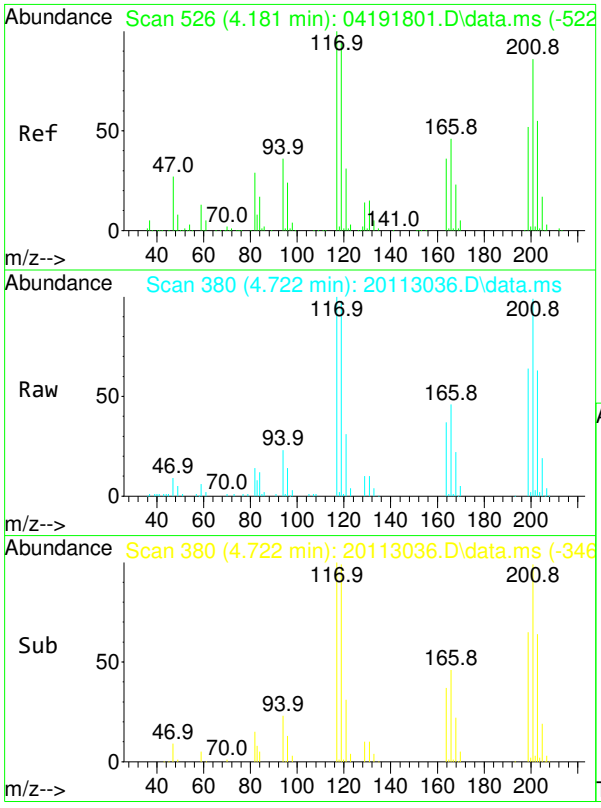


#23
N-Nitrosodi-n-propylamine
Concen: 14.09 ug/ml
RT: 4.640 min Scan# 366
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 70 Resp: 19102

Ion	Ratio	Lower	Upper
70	100		
130	43.5	14.0	74.0
42	31.9	2.7	62.7

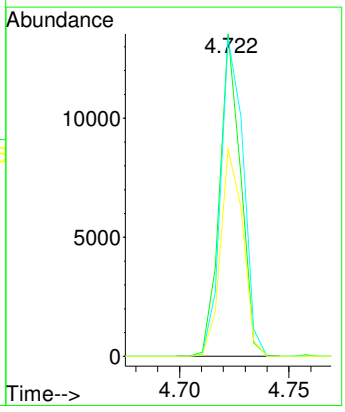


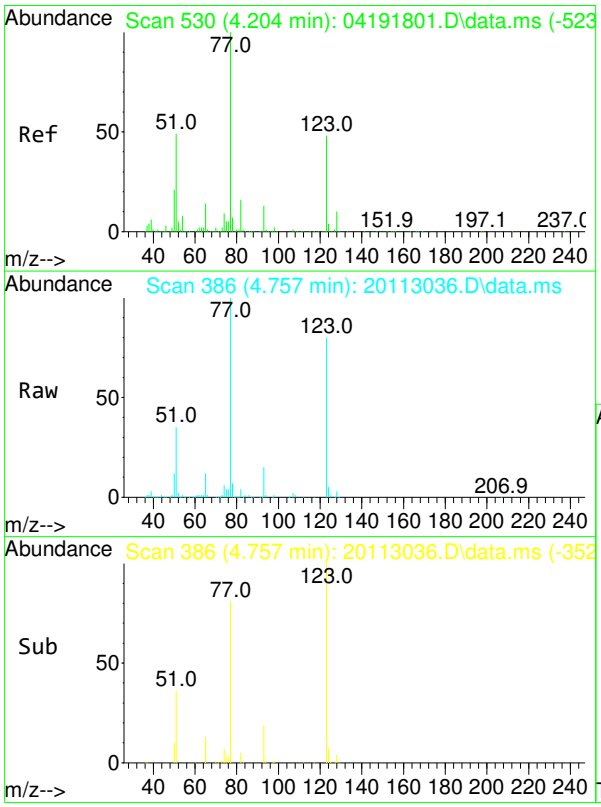


#24
Hexachloroethane
Concen: 8.44 ug/ml
RT: 4.722 min Scan# 380
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:117 Resp: 9067

Ion	Ratio	Lower	Upper
117	100		
201	106.6	81.5	141.5
199	68.4	40.0	100.0

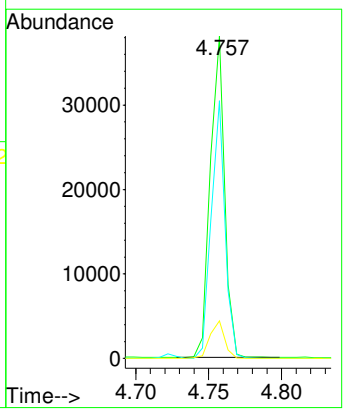


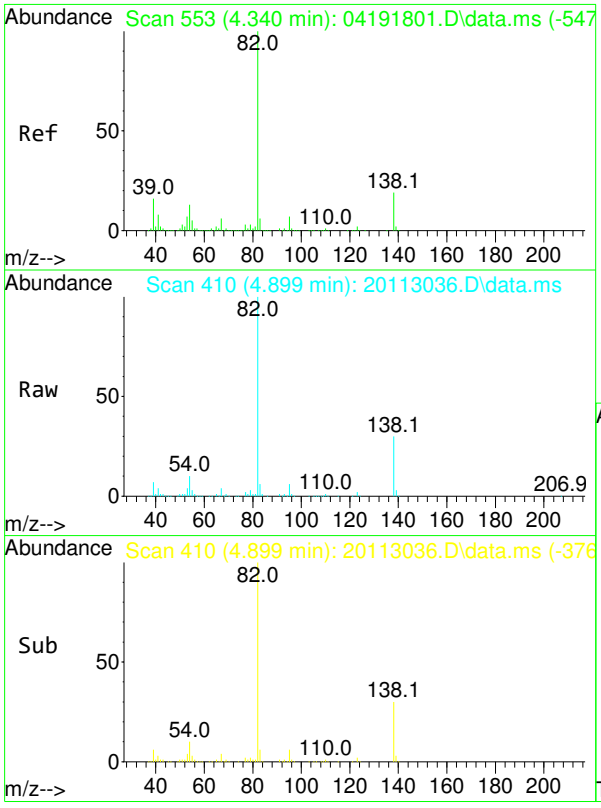


#27
Nitrobenzene
Concen: 13.52 ug/ml
RT: 4.757 min Scan# 386
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 77 Resp: 25957

Ion	Ratio	Lower	Upper
77	100		
123	77.1	45.3	105.3
65	12.0	0.0	41.6

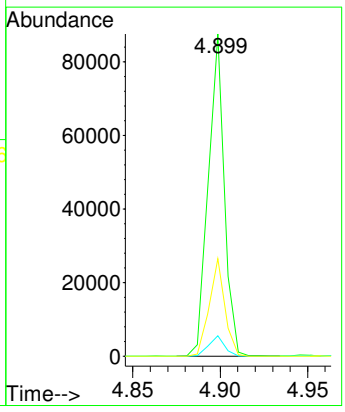


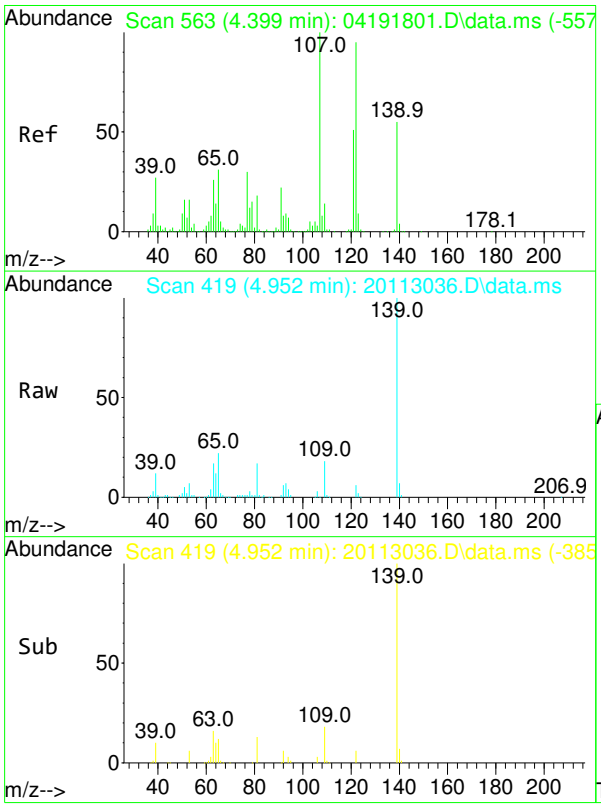


#28
Isophorone
Concen: 14.13 ug/ml
RT: 4.899 min Scan# 410
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 82 Resp: 56331

Ion	Ratio	Lower	Upper
82	100		
95	6.4	0.0	36.4
138	29.3	0.0	58.9

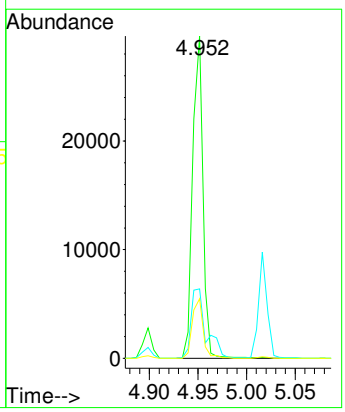


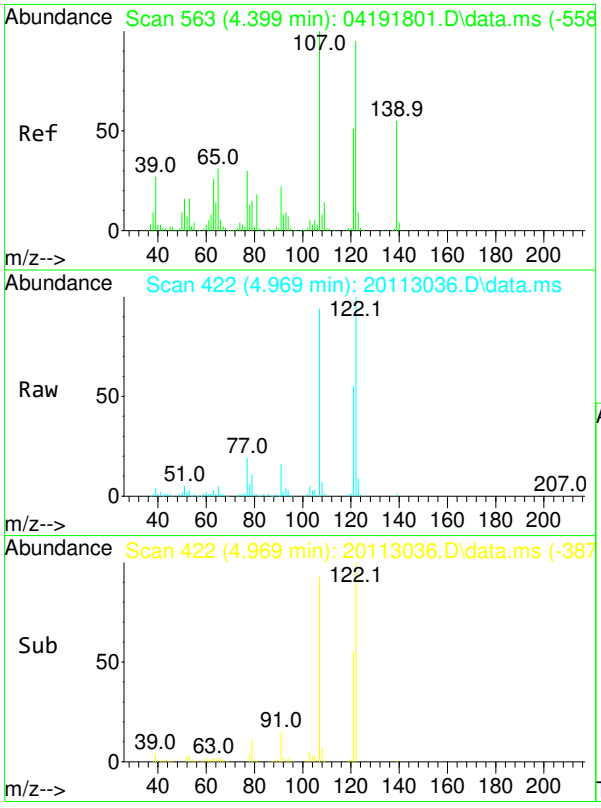


#29
2-Nitrophenol
Concen: 13.29 ug/ml
RT: 4.952 min Scan# 419
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:139 Resp: 21880

Ion	Ratio	Lower	Upper
139	100		
65	31.8	2.3	62.3
109	19.6	0.0	49.8

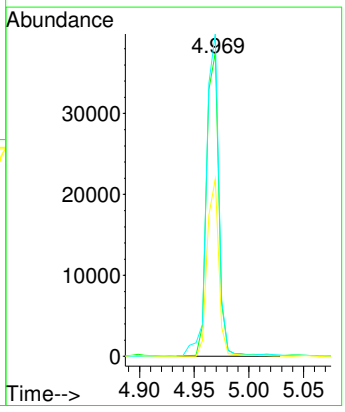


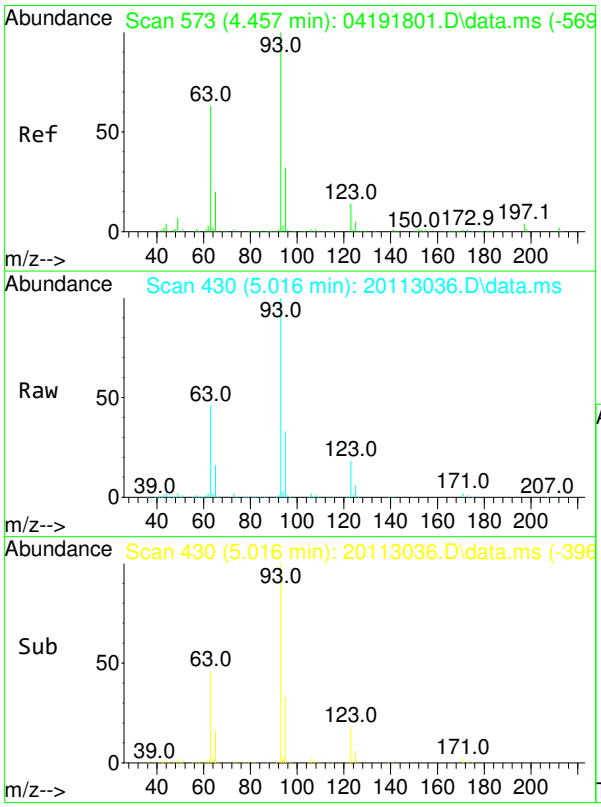


#30
2,4-Dimethylphenol
Concen: 11.24 ug/ml
RT: 4.969 min Scan# 422
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:107 Resp: 29454

Ion	Ratio	Lower	Upper
107	100		
122	107.0	76.7	136.7
121	55.3	25.8	85.8

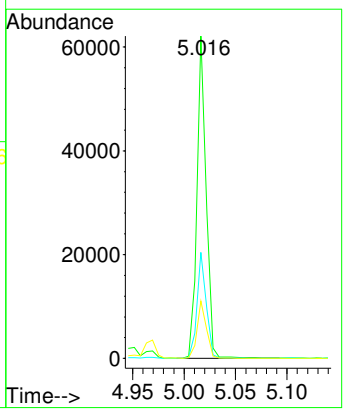


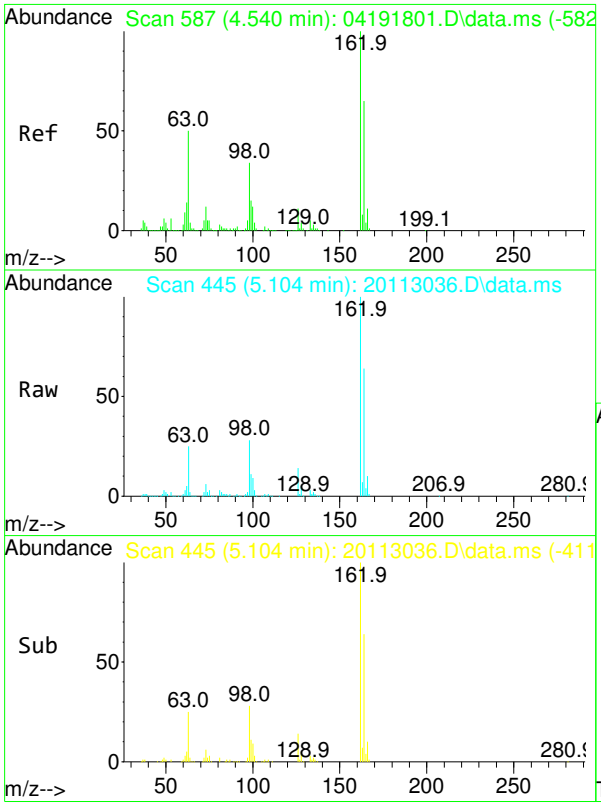


#31
Bis(2-chloroethoxy)met
Concen: 13.50 ug/ml
RT: 5.016 min Scan# 430
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 93 Resp: 38506

Ion	Ratio	Lower	Upper
93	100		
95	33.1	3.1	63.1
123	18.1	0.0	51.5

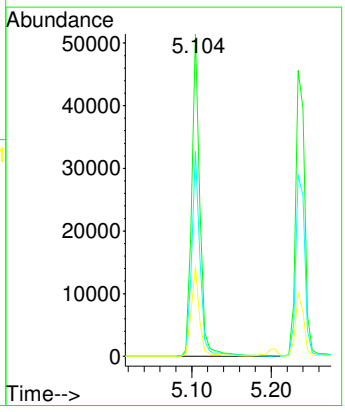


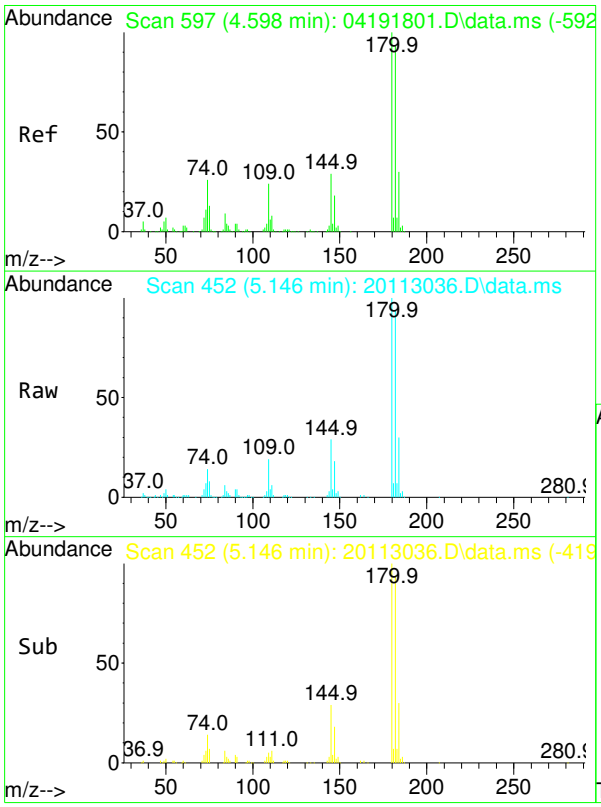


#33
2,4-Dichlorophenol
Concen: 13.88 ug/ml
RT: 5.104 min Scan# 445
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:162 Resp: 37001

Ion	Ratio	Lower	Upper
162	100		
164	64.5	34.3	94.3
98	28.2	0.0	58.1

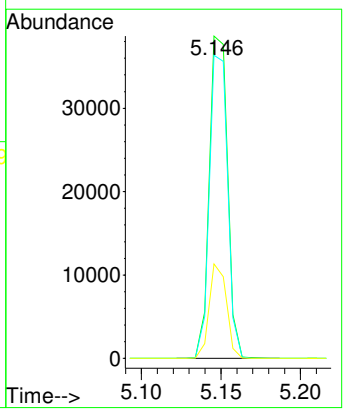


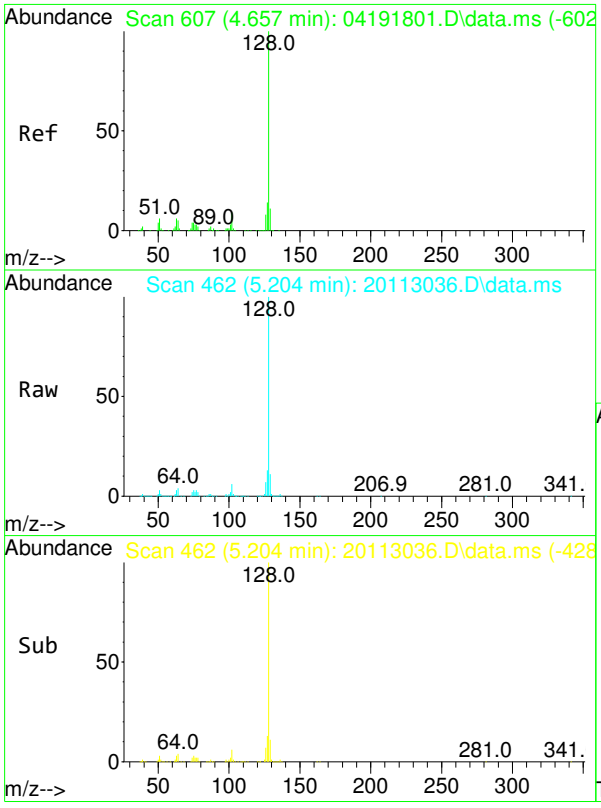


#34
1,2,4-Trichlorobenzene
Concen: 11.06 ug/ml
RT: 5.146 min Scan# 452
Delta R.T. -0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:180 Resp: 30923

Ion	Ratio	Lower	Upper
180	100		
182	93.8	64.8	124.8
145	27.7	0.0	58.2

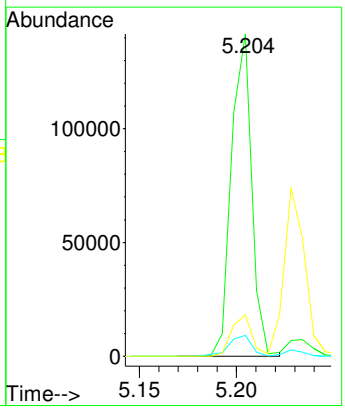


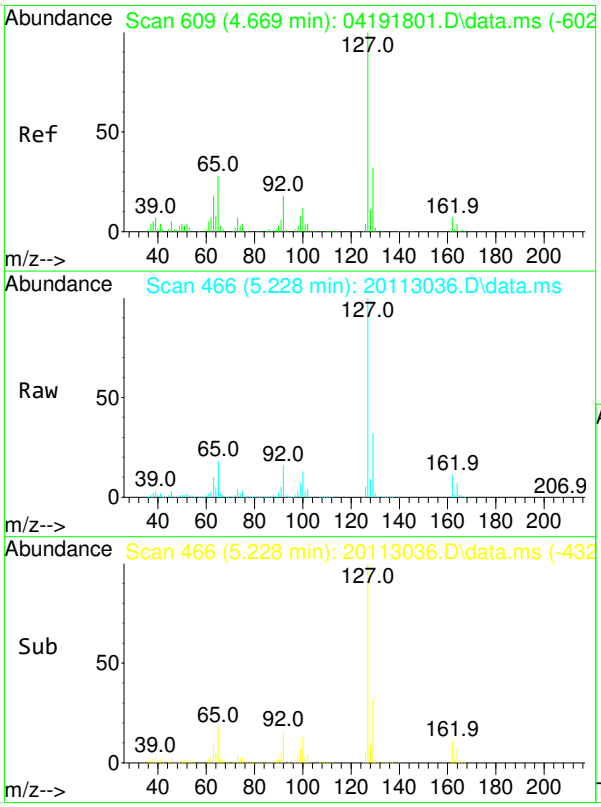


#36
Naphthalene
Concen: 11.55 ug/ml
RT: 5.204 min Scan# 462
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:128 Resp: 102856

Ion	Ratio	Lower	Upper
128	100		
102	7.4	0.0	37.3
127	13.1	0.0	43.2

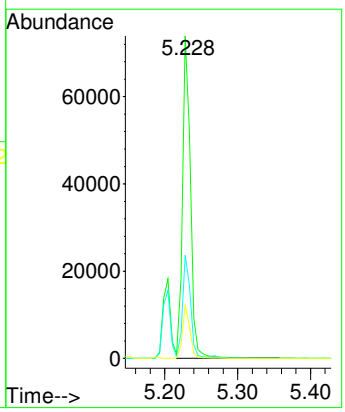


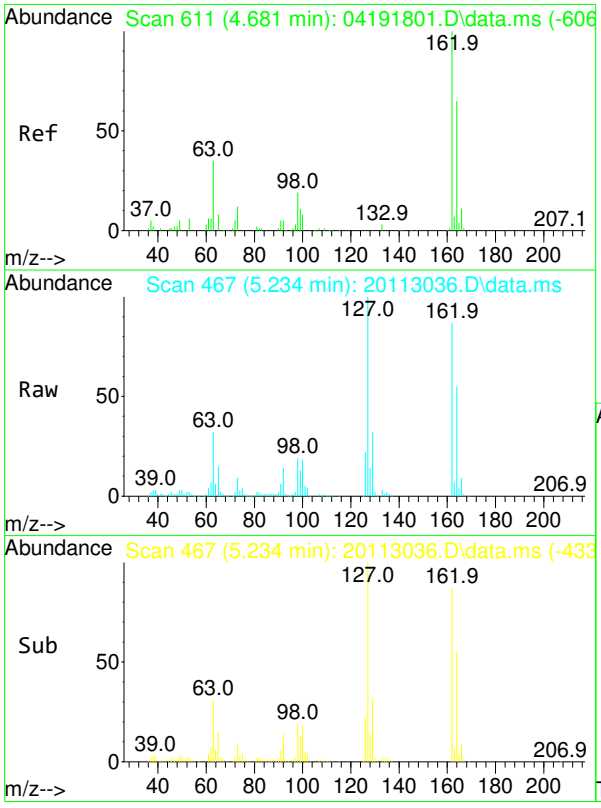


#37
4-Chloroaniline
Concen: 15.41 ug/ml
RT: 5.228 min Scan# 466
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:127 Resp: 56339

Ion	Ratio	Lower	Upper
127	100		
129	30.8	2.3	62.3
92	15.8	0.0	45.7

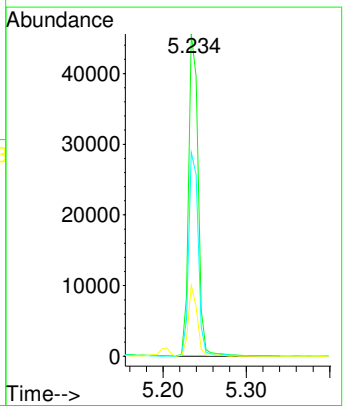


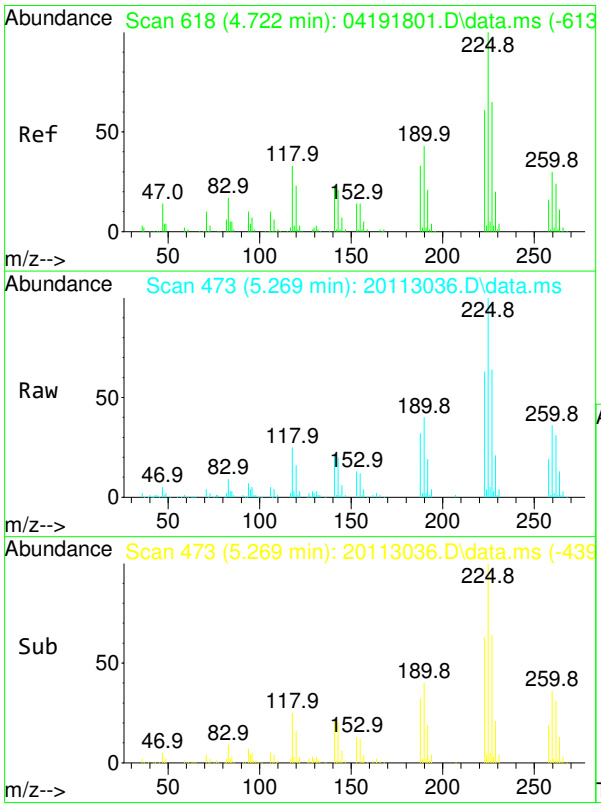


#38
2,6-Dichlorophenol
Concen: 13.45 ug/ml
RT: 5.234 min Scan# 467
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:162 Resp: 36699

Ion	Ratio	Lower	Upper
162	100		
164	64.2	45.7	84.9
98	20.8	14.2	26.4

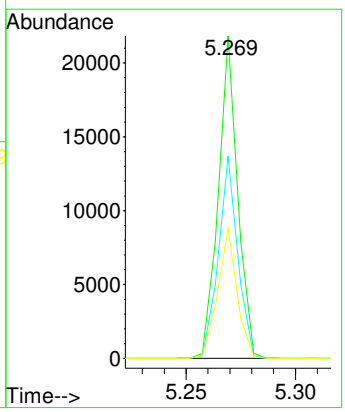


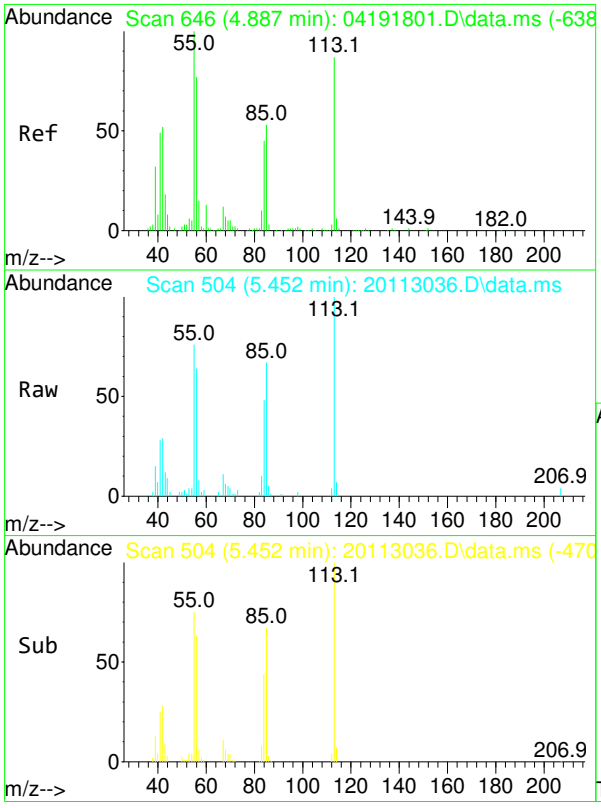


#39
Hexachlorobutadiene
Concen: 9.47 ug/ml
RT: 5.269 min Scan# 473
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:225 Resp: 13479

Ion	Ratio	Lower	Upper
225	100		
223	62.6	31.6	91.6
190	40.3	9.1	69.1

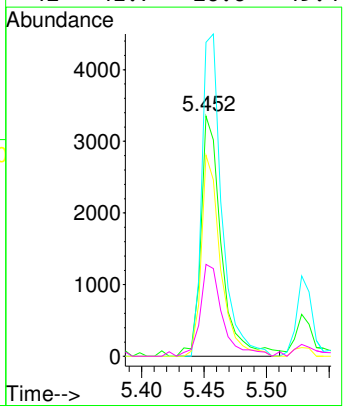


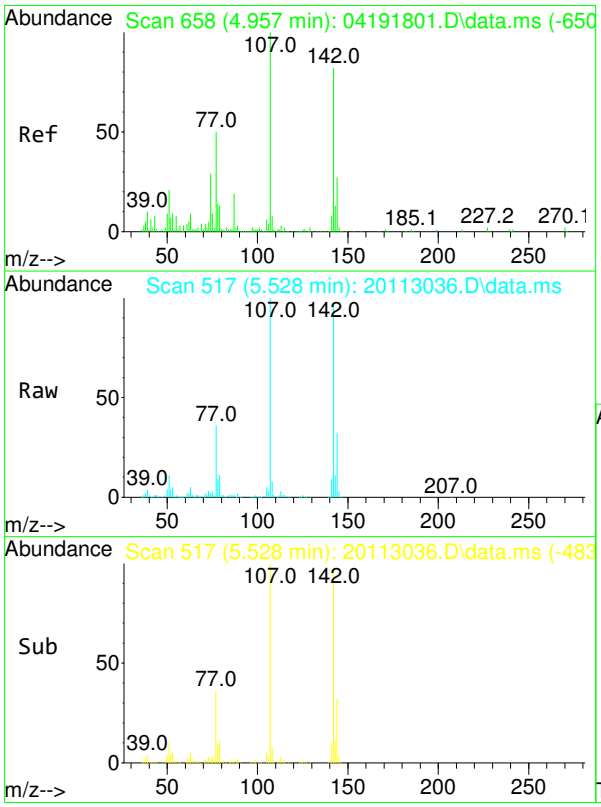


#40
Caprolactam
Concen: 5.40 ug/ml
RT: 5.452 min Scan# 504
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 55 Resp: 3833

Ion	Ratio	Lower	Upper
55	100		
113	130.3	100.4	186.6
56	78.3	56.8	105.6
42	41.7	26.6	49.4

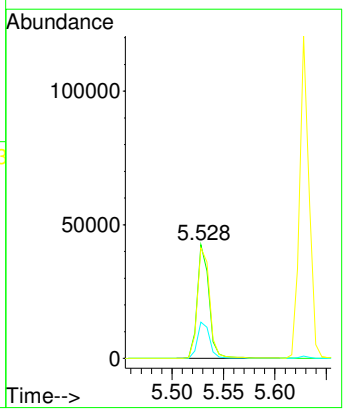


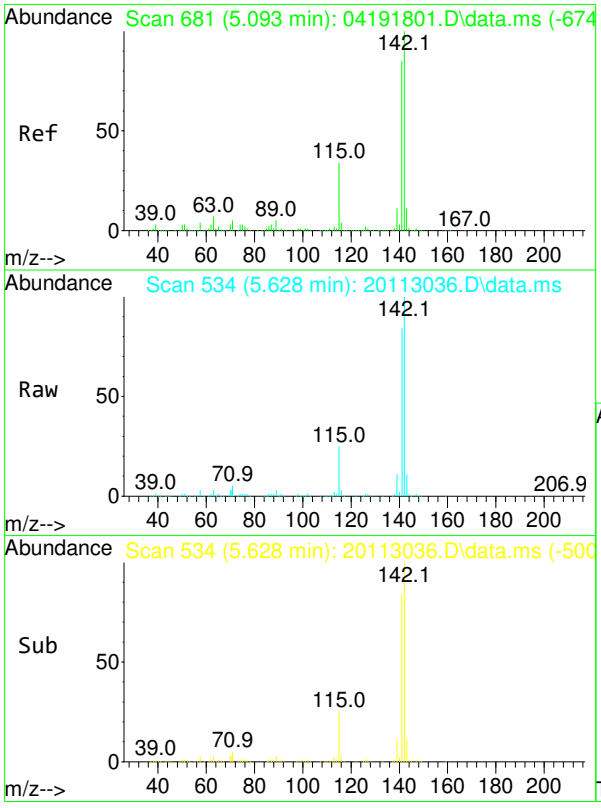


#41
4-Chloro-3-methylphenol
Concen: 15.27 ug/ml
RT: 5.528 min Scan# 517
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:107 Resp: 33990

Ion	Ratio	Lower	Upper
107	100		
144	33.2	2.8	62.8
142	101.7	69.4	129.4

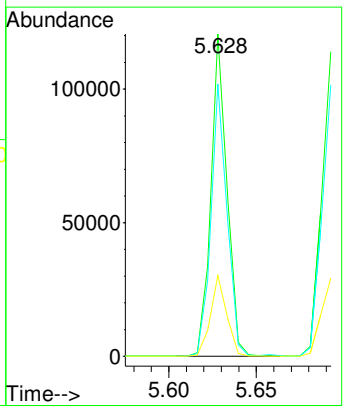


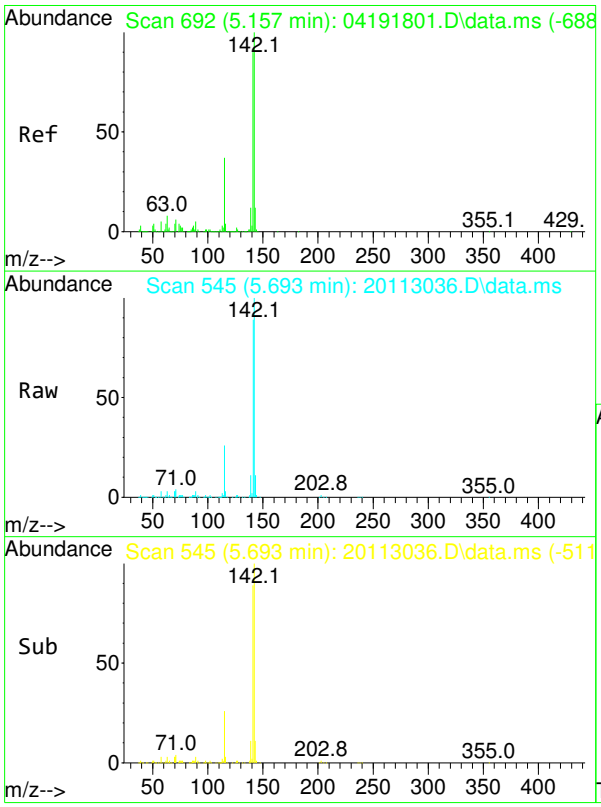


#42
2-Methylnaphthalene
Concen: 12.47 ug/ml
RT: 5.628 min Scan# 534
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:142 Resp: 77555

Ion	Ratio	Lower	Upper
142	100		
141	84.7	59.2	110.0
115	25.4	18.0	33.4

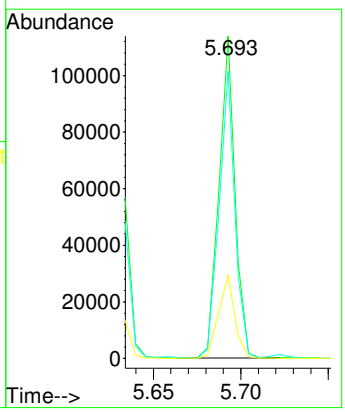


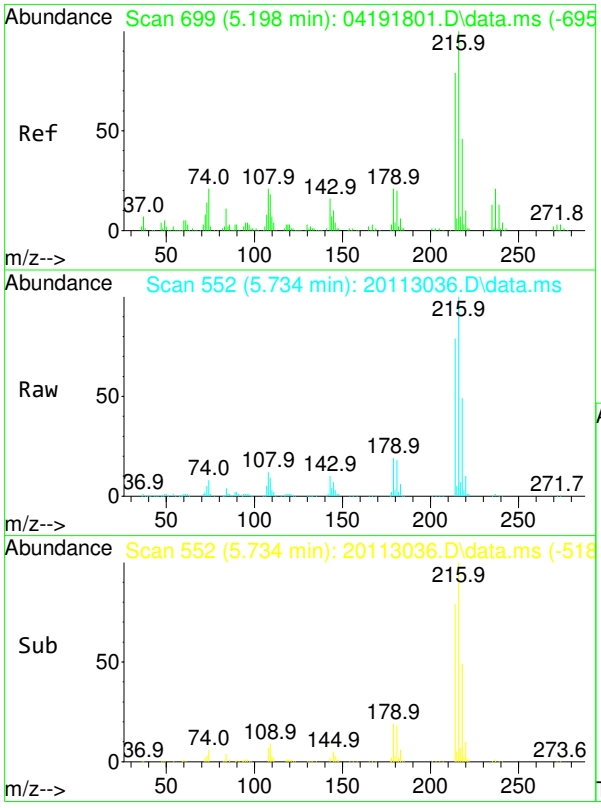


#43
1-Methylnaphthalene
Concen: 12.53 ug/ml
RT: 5.693 min Scan# 545
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:142 Resp: 72787

Ion	Ratio	Lower	Upper
142	100		
141	87.9	58.8	118.8
115	26.4	0.0	57.0

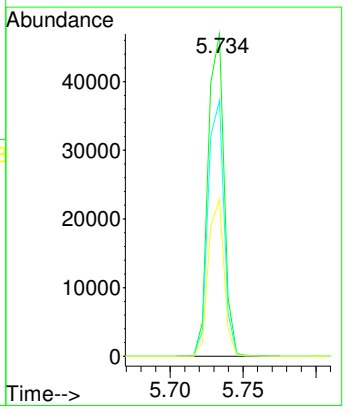


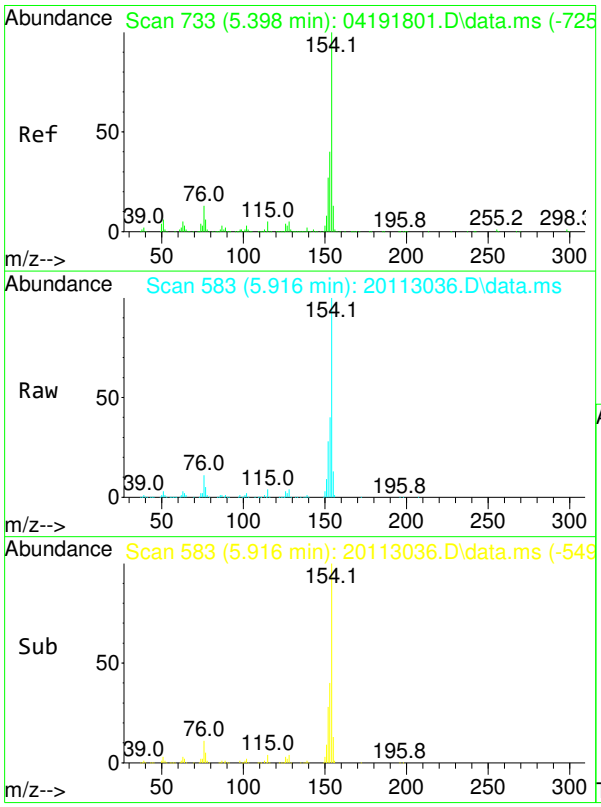


#44
1,2,4,5-Tetrachlorobenzene
Concen: 11.57 ug/ml
RT: 5.734 min Scan# 552
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:216 Resp: 35656

Ion	Ratio	Lower	Upper
216	100		
214	79.2	54.7	101.5
218	47.8	33.2	61.7

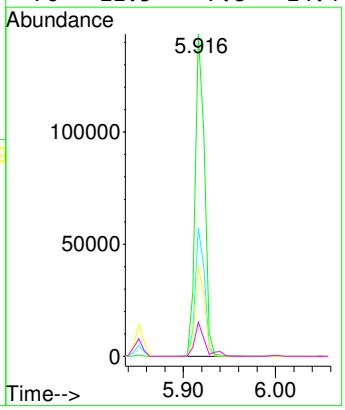


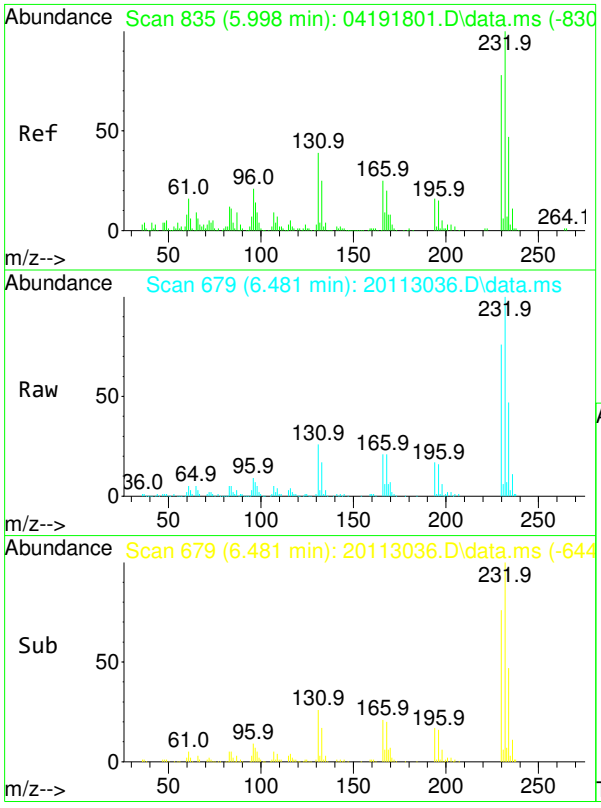


#45
1,1-Biphenyl
Concen: 13.14 ug/ml
RT: 5.916 min Scan# 583
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:154 Resp: 101268

Ion	Ratio	Lower	Upper
154	100		
153	39.9	28.3	52.5
152	27.9	19.4	36.0
76	11.5	7.8	14.4

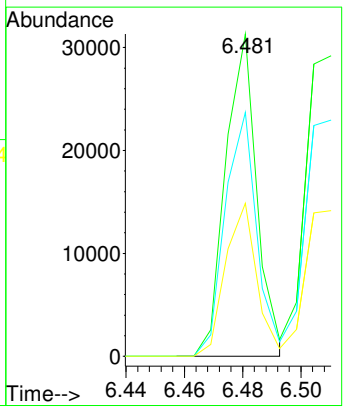


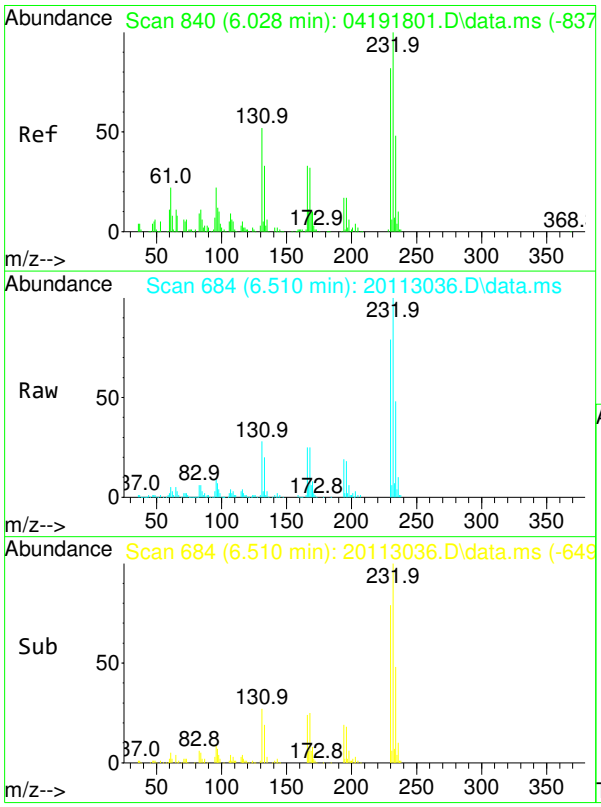


#46
2,3,5,6-Tetrachlorophenol
Concen: 14.50 ug/ml
RT: 6.481 min Scan# 679
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:232 Resp: 23243

Ion	Ratio	Lower	Upper
232	100		
230	77.0	61.4	92.0
234	47.8	37.7	56.5

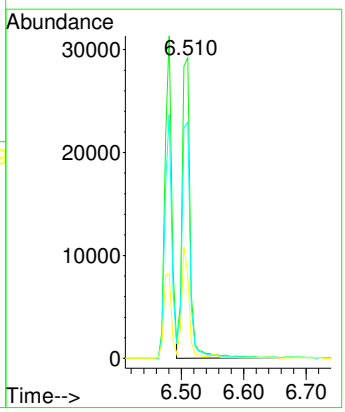


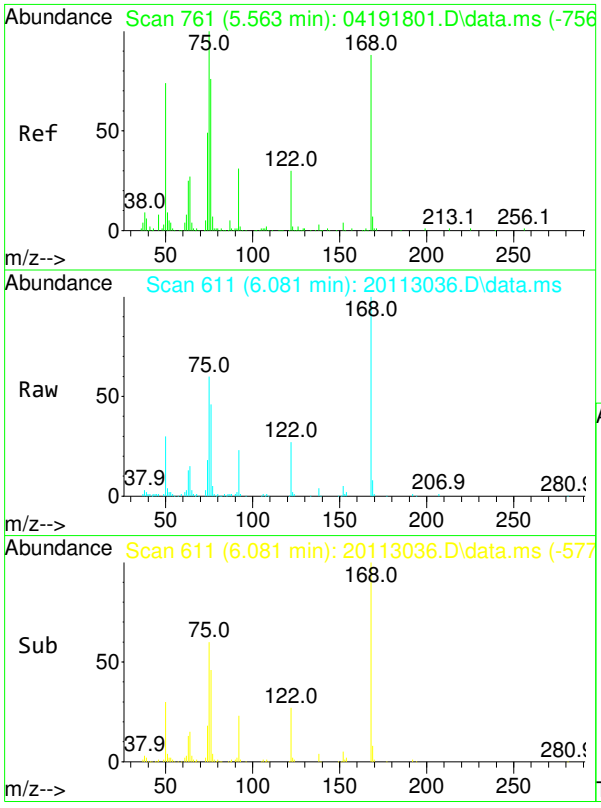


#47
2,3,4,6-Tetrachlorophenol
Concen: 14.81 ug/ml
RT: 6.510 min Scan# 684
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:232 Resp: 26548

Ion	Ratio	Lower	Upper
232	100		
230	79.0	63.6	95.4
131	32.5	25.3	37.9

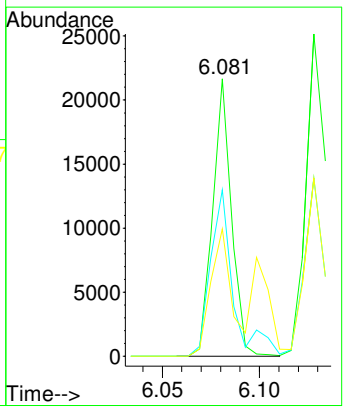


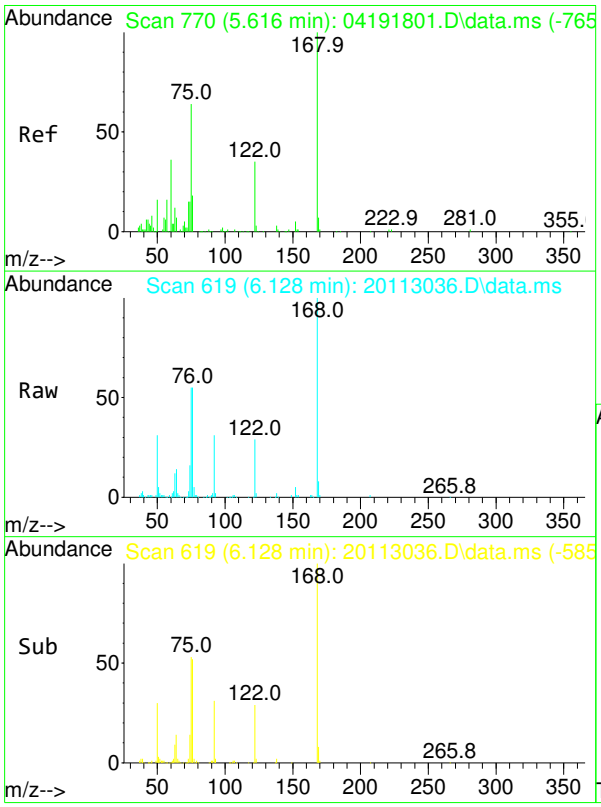


#48
1,4-Dinitrobenzene
Concen: 14.81 ug/ml
RT: 6.081 min Scan# 611
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:168 Resp: 14554

Ion	Ratio	Lower	Upper
168	100		
75	72.2	49.5	91.9
76	51.6	36.3	67.3

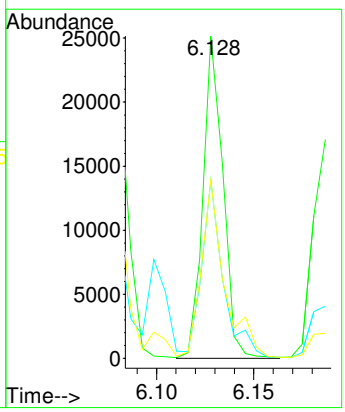


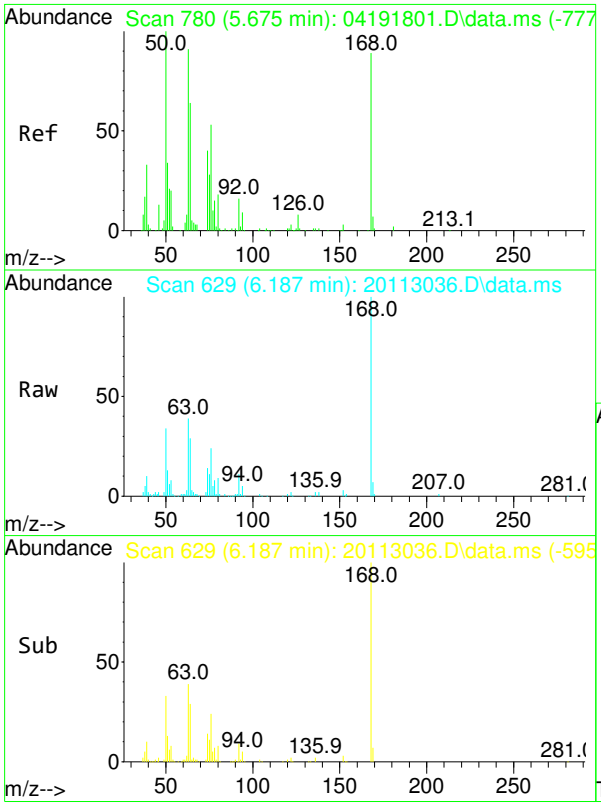


#49
1,3-Dinitrobenzene
Concen: 14.85 ug/ml
RT: 6.128 min Scan# 619
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:168 Resp: 18032

Ion	Ratio	Lower	Upper
168	100		
76	59.8	48.9	73.3
75	65.0	51.8	77.8

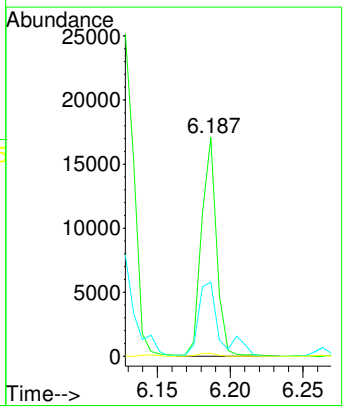


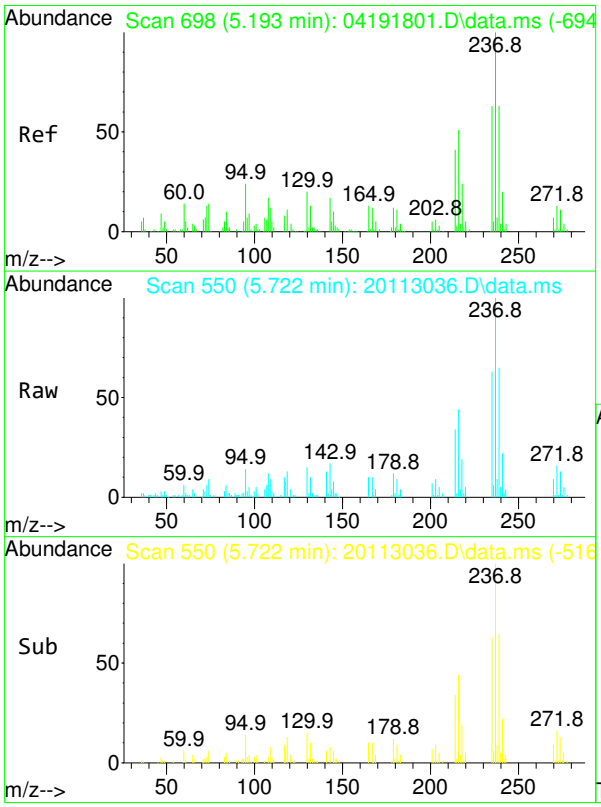


#50
1,2-Dinitrobenzene
Concen: 14.46 ug/ml
RT: 6.187 min Scan# 629
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:168 Resp: 12414

Ion	Ratio	Lower	Upper
168	100		
50	47.5	31.5	47.3#
68	1.7	1.2	1.8

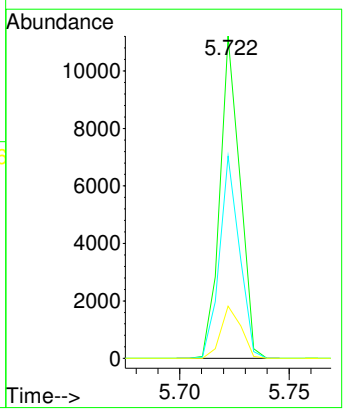


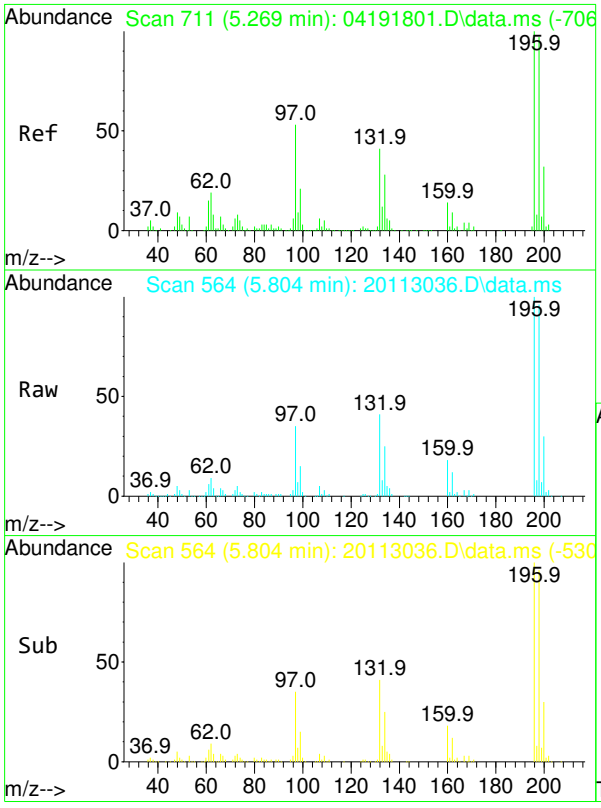


#52
Hexachlorocyclopentadiene
Concen: 5.45 ug/ml
RT: 5.722 min Scan# 550
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:237 Resp: 7199

Ion	Ratio	Lower	Upper
237	100		
235	62.3	31.9	91.9
272	16.4	0.0	46.1

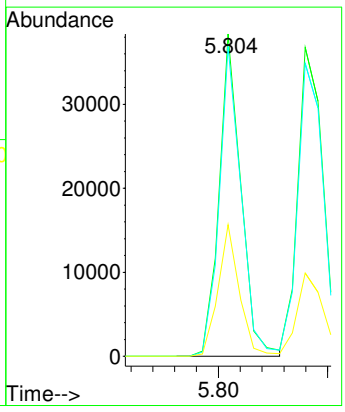


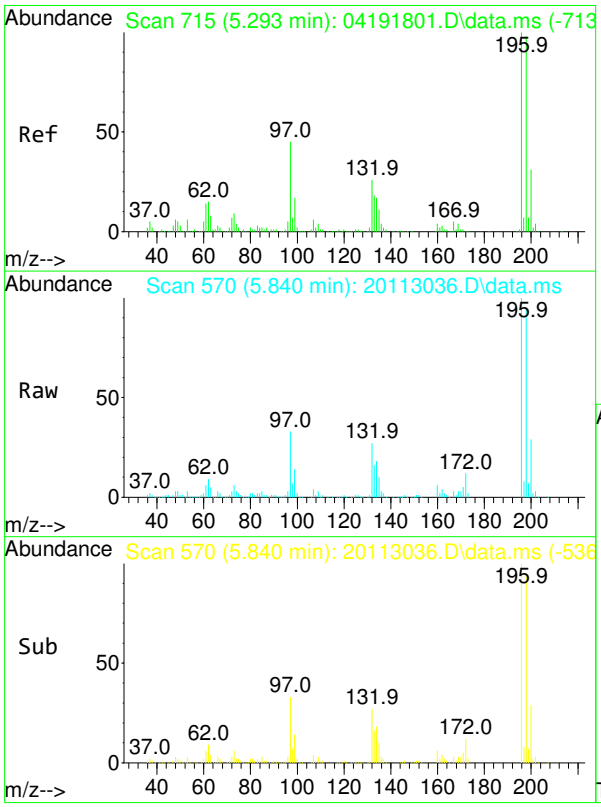


#53
2,4,6-Trichlorophenol
Concen: 13.71 ug/ml
RT: 5.804 min Scan# 564
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:196 Resp: 26778

Ion	Ratio	Lower	Upper
196	100		
198	96.4	67.1	127.1
132	39.9	8.9	68.9

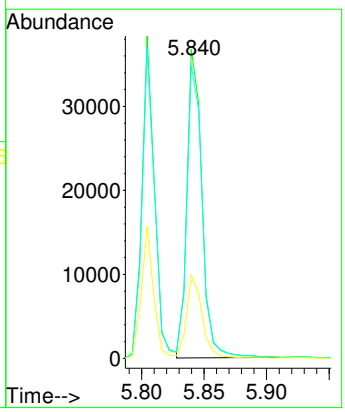


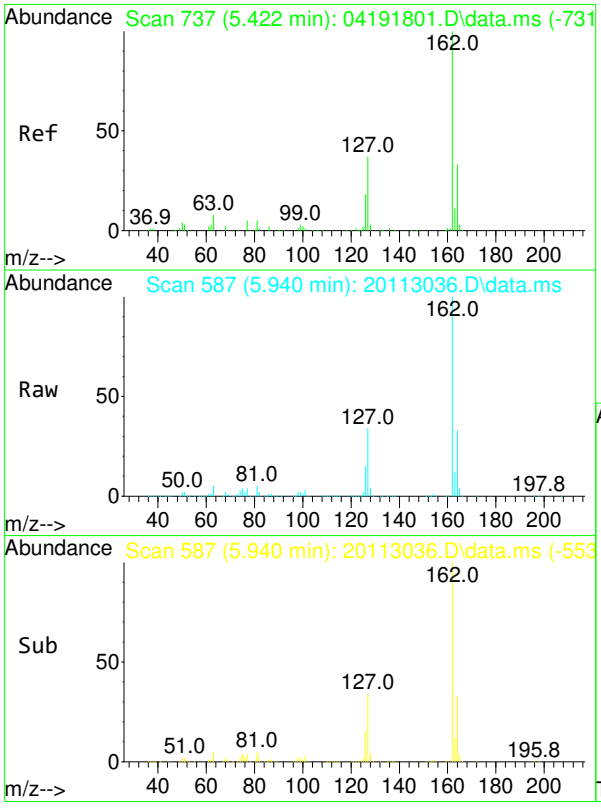


#54
2,4,5-Trichlorophenol
Concen: 14.72 ug/ml
RT: 5.840 min Scan# 570
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:196 Resp: 30665

Ion	Ratio	Lower	Upper
196	100		
198	96.1	66.4	126.4
132	28.0	0.0	55.8

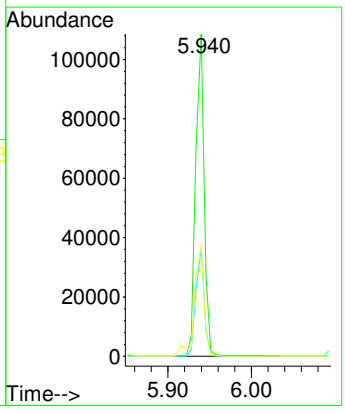


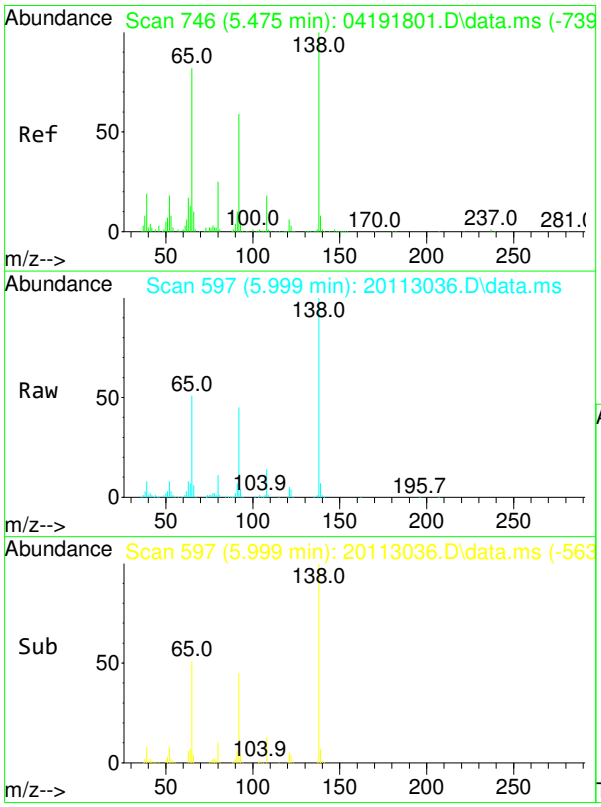


#56
2-Chloronaphthalene
Concen: 12.43 ug/ml
RT: 5.940 min Scan# 587
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:162 Resp: 76569

Ion	Ratio	Lower	Upper
162	100		
164	32.9	2.5	62.5
127	38.5	8.8	68.8

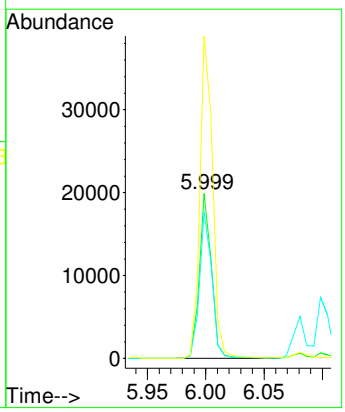


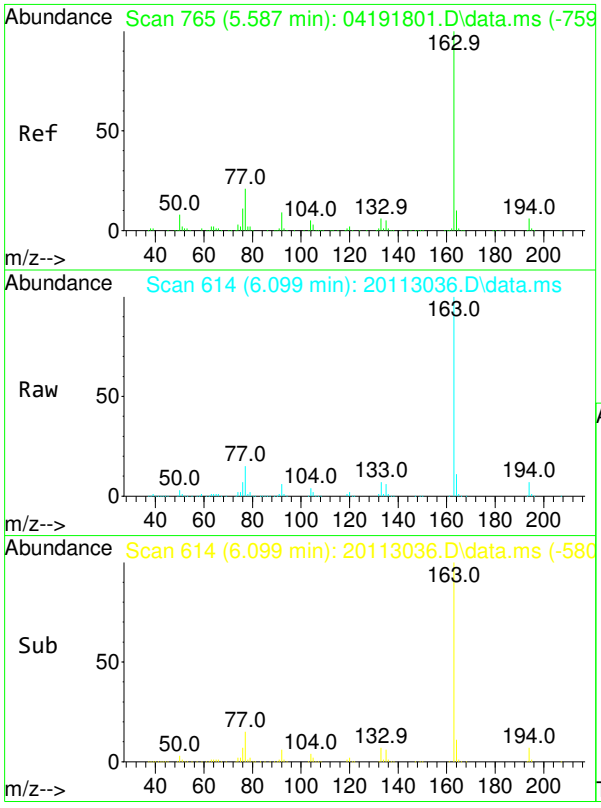


#57
2-Nitroaniline
Concen: 14.48 ug/ml
RT: 5.999 min Scan# 597
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 65 Resp: 14660

Ion	Ratio	Lower	Upper
65	100		
92	90.4	61.5	121.5
138	203.7	178.5	238.5

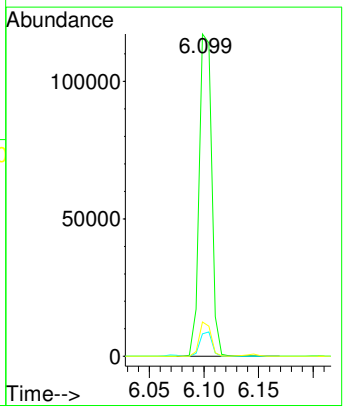


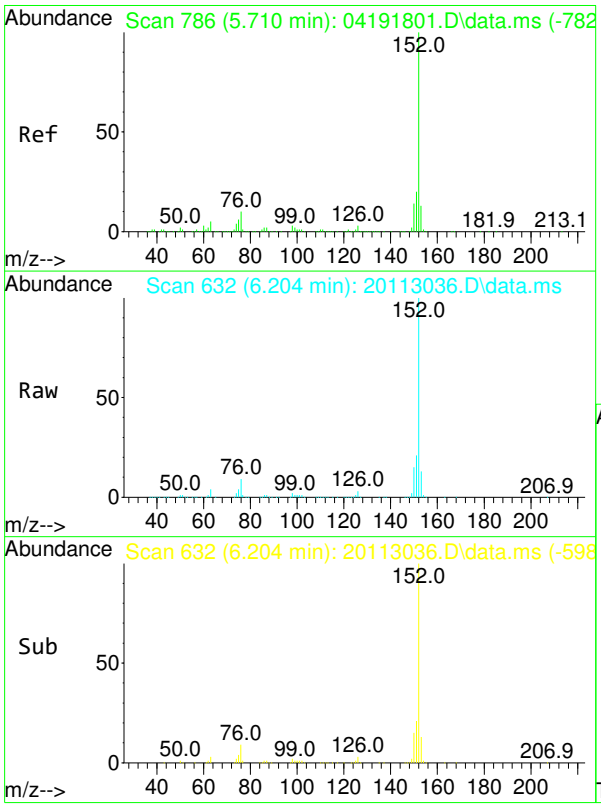


#58
Dimethylphthalate
Concen: 14.51 ug/ml
RT: 6.099 min Scan# 614
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:163 Resp: 93500

Ion	Ratio	Lower	Upper
163	100		
194	7.3	0.0	37.5
164	10.1	0.0	40.3

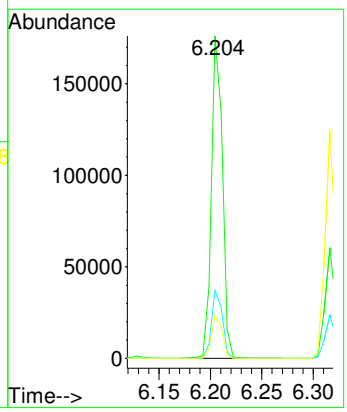


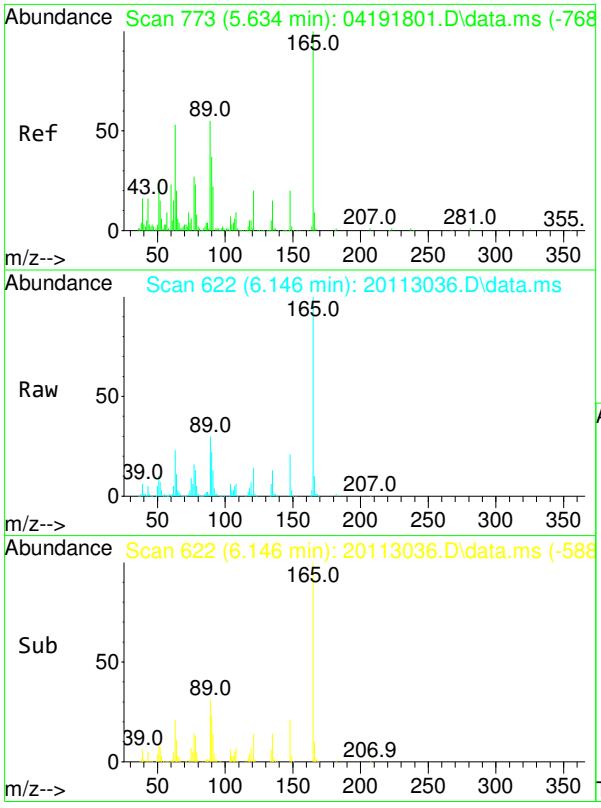


#59
Acenaphthylene
Concen: 14.08 ug/ml
RT: 6.204 min Scan# 632
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:152 Resp: 130530

Ion	Ratio	Lower	Upper
152	100		
151	20.8	0.0	50.6
153	13.2	0.0	43.1

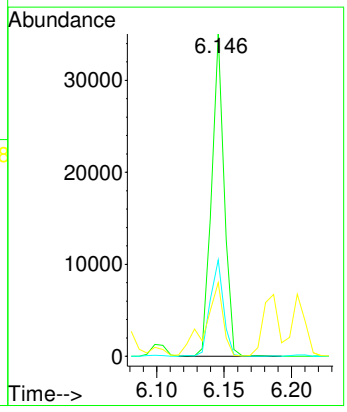


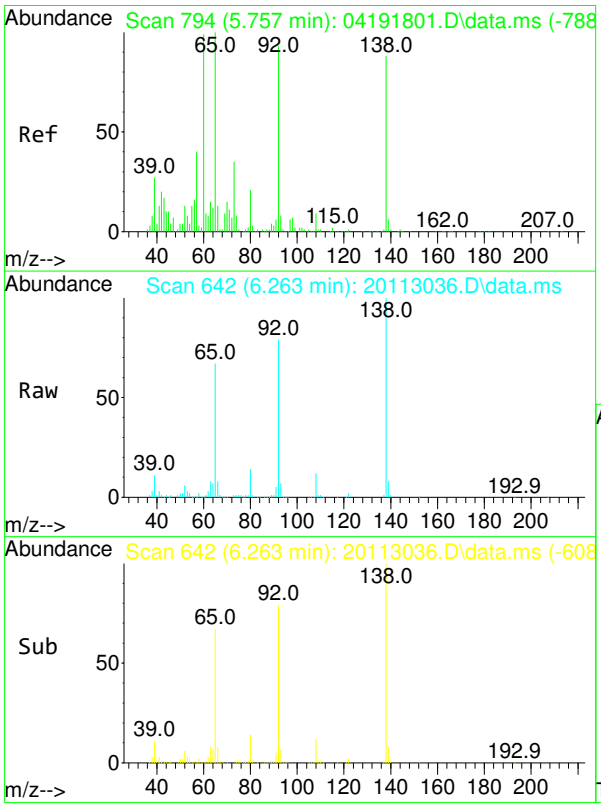


#60
2,6-Dinitrotoluene
Concen: 13.97 ug/ml
RT: 6.146 min Scan# 622
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:165 Resp: 22775

Ion	Ratio	Lower	Upper
165	100		
89	31.7	0.9	60.9
63	32.1	1.9	61.9

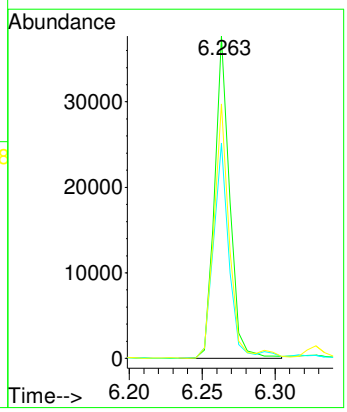


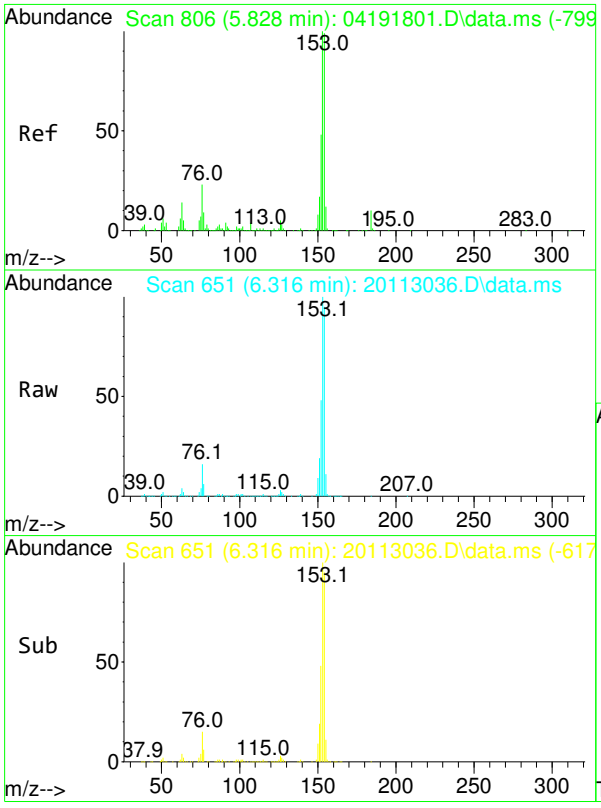


#61
3-Nitroaniline
Concen: 14.97 ug/ml
RT: 6.263 min Scan# 642
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:138 Resp: 27297

Ion	Ratio	Lower	Upper
138	100		
65	67.1	38.4	98.4
92	77.9	50.1	110.1

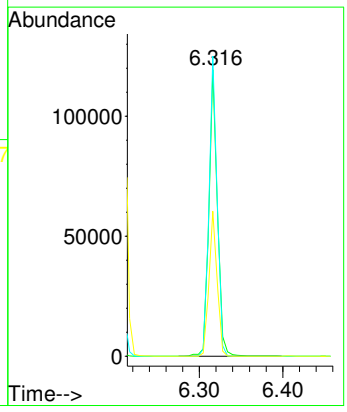


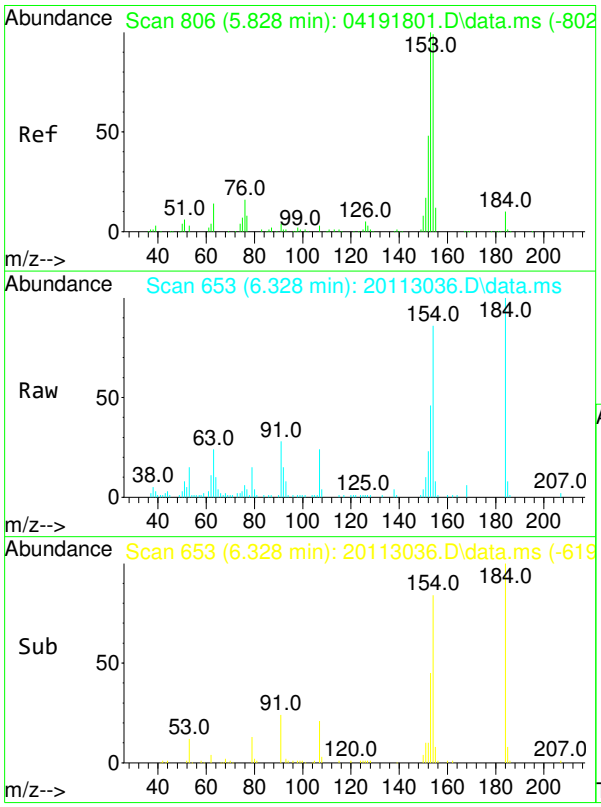


#62
Acenaphthene
Concen: 13.82 ug/ml
RT: 6.316 min Scan# 651
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:154 Resp: 84539

Ion	Ratio	Lower	Upper
154	100		
153	99.7	69.9	129.9
152	48.3	18.4	78.4

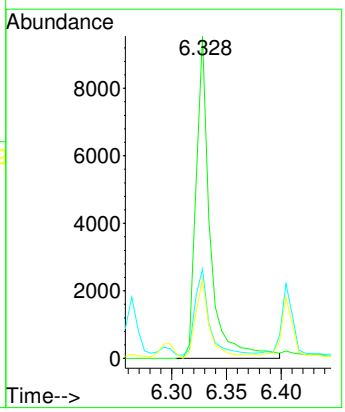


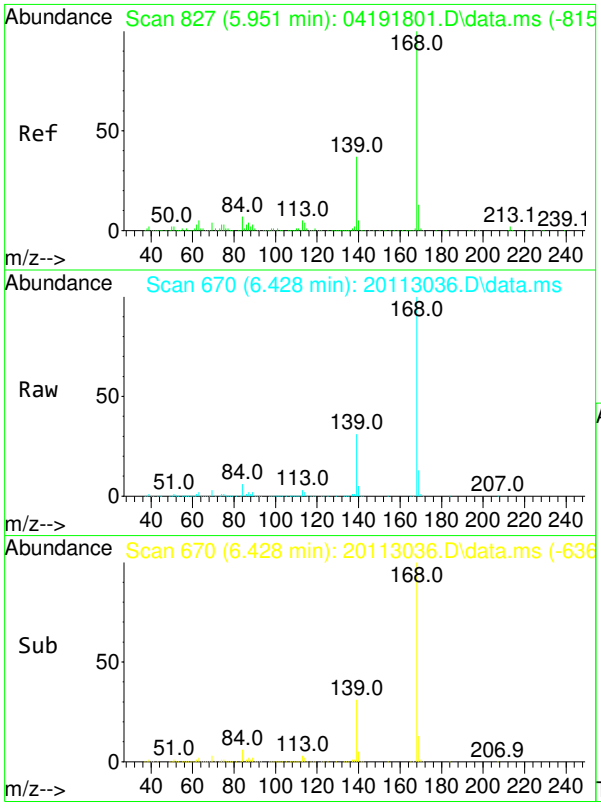


#63
2,4-Dinitrophenol
Concen: 13.58 ug/ml
RT: 6.328 min Scan# 653
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:184 Resp: 8521

Ion	Ratio	Lower	Upper
184	100		
91	27.1	0.0	56.6
107	24.5	0.0	51.3

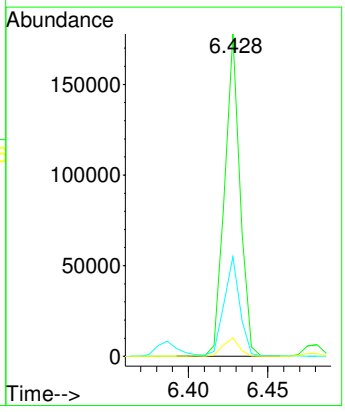


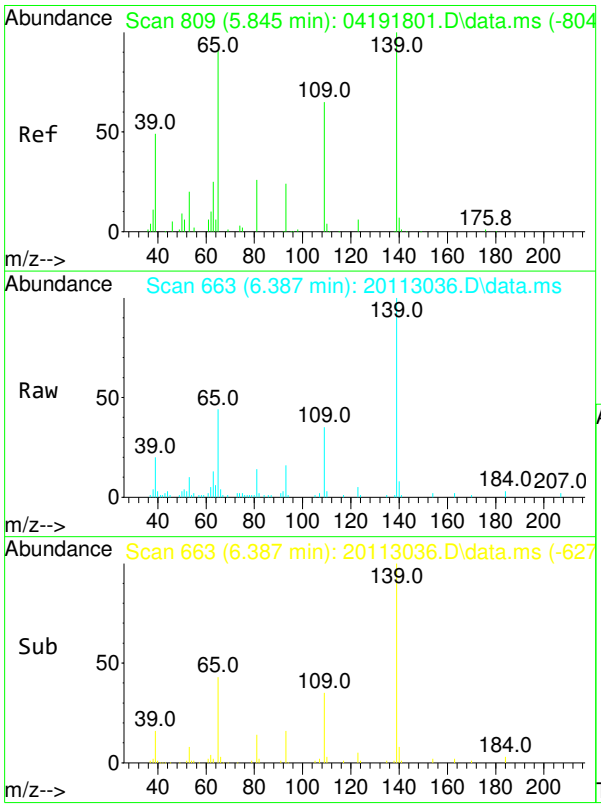


#64
Dibenzofuran
Concen: 14.11 ug/ml
RT: 6.428 min Scan# 670
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:168 Resp: 119145

Ion	Ratio	Lower	Upper
168	100		
139	31.8	2.2	62.2
84	6.1	0.0	35.9

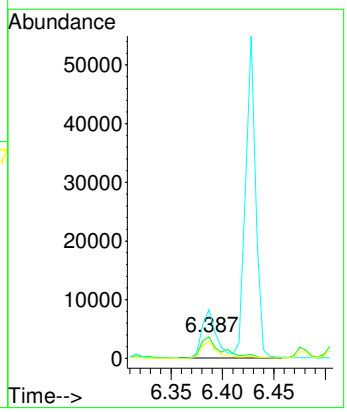


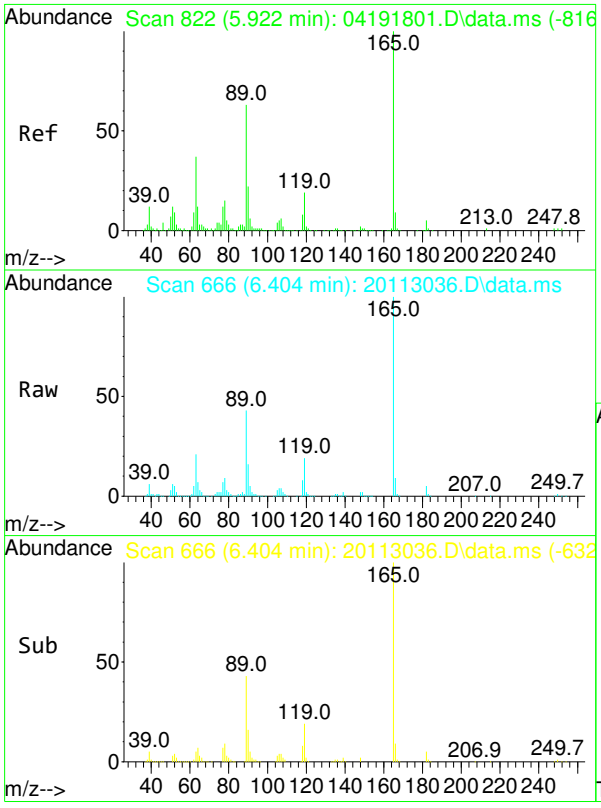


#65
4-Nitrophenol
Concen: 8.07 ug/ml
RT: 6.387 min Scan# 663
Delta R.T. 0.012 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 65 Resp: 4940

Ion	Ratio	Lower	Upper
65	100		
139	165.4	174.2	234.2#
109	69.9	50.2	110.2

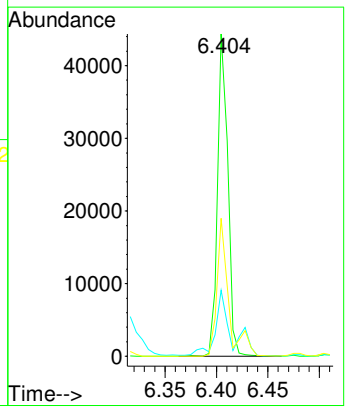


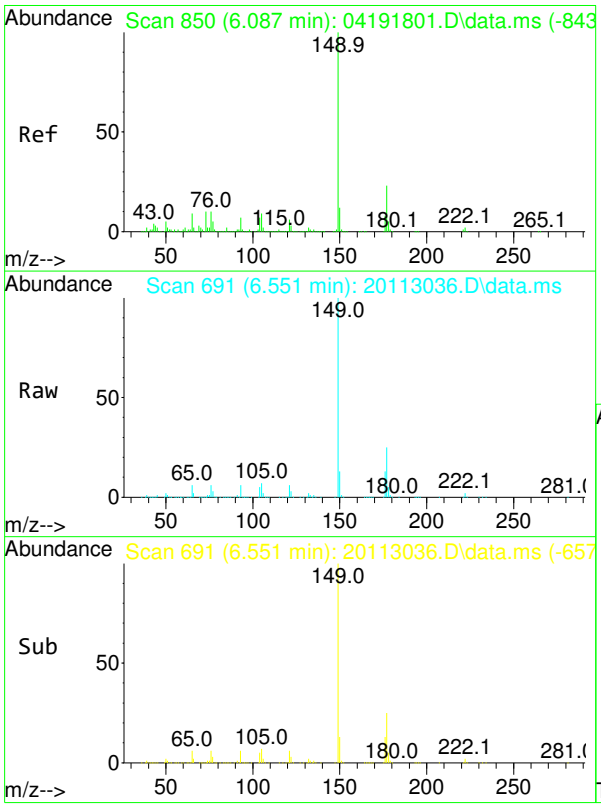


#66
2,4-Dinitrotoluene
Concen: 14.41 ug/ml
RT: 6.404 min Scan# 666
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:165 Resp: 31230

Ion	Ratio	Lower	Upper
165	100		
63	21.7	0.0	49.6
89	42.5	19.9	79.9

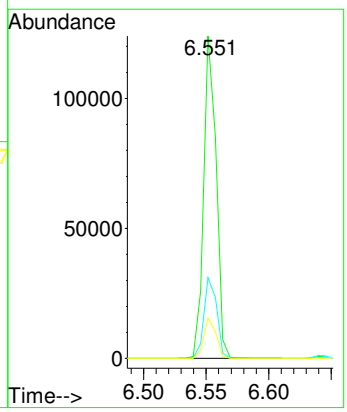


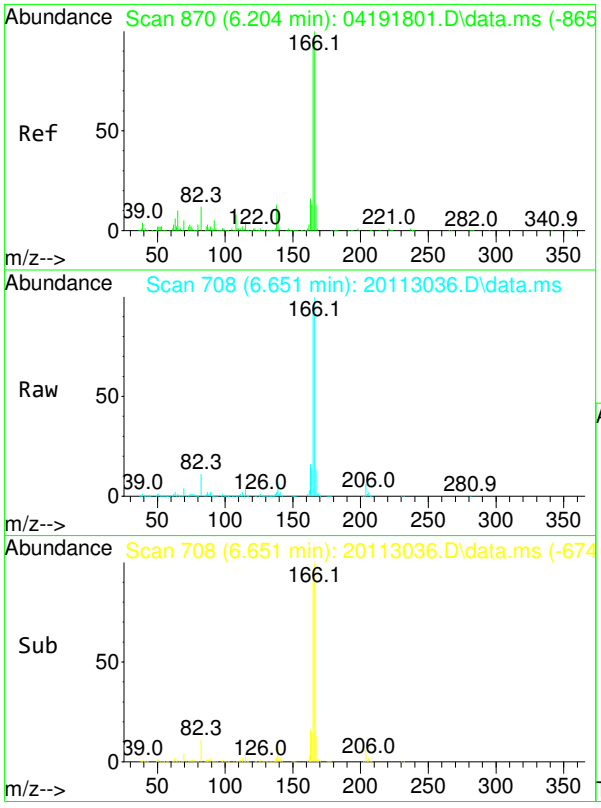


#67
Diethylphthalate
Concen: 14.20 ug/ml
RT: 6.551 min Scan# 691
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:149 Resp: 86144

Ion	Ratio	Lower	Upper
149	100		
177	25.7	0.0	55.7
150	12.4	0.0	42.4

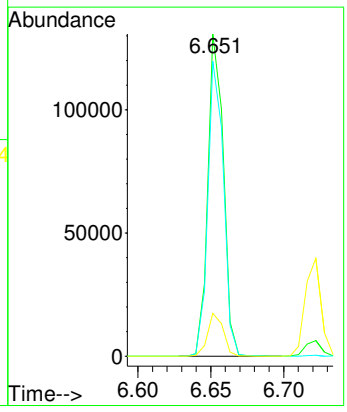


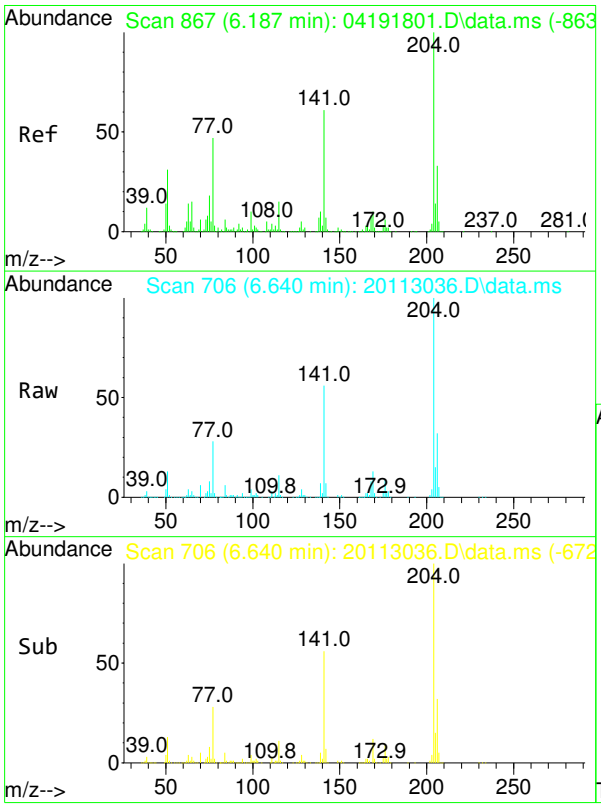


#68
Fluorene
Concen: 13.70 ug/ml
RT: 6.651 min Scan# 708
Delta R.T. -0.001 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:166 Resp: 97789

Ion	Ratio	Lower	Upper
166	100		
165	91.9	62.2	122.2
167	13.6	0.0	43.4

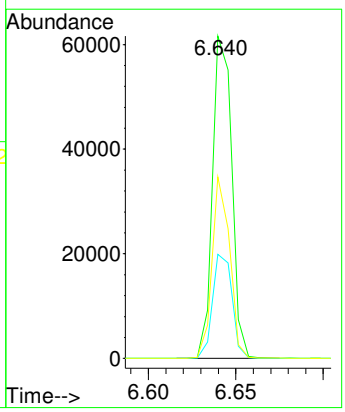


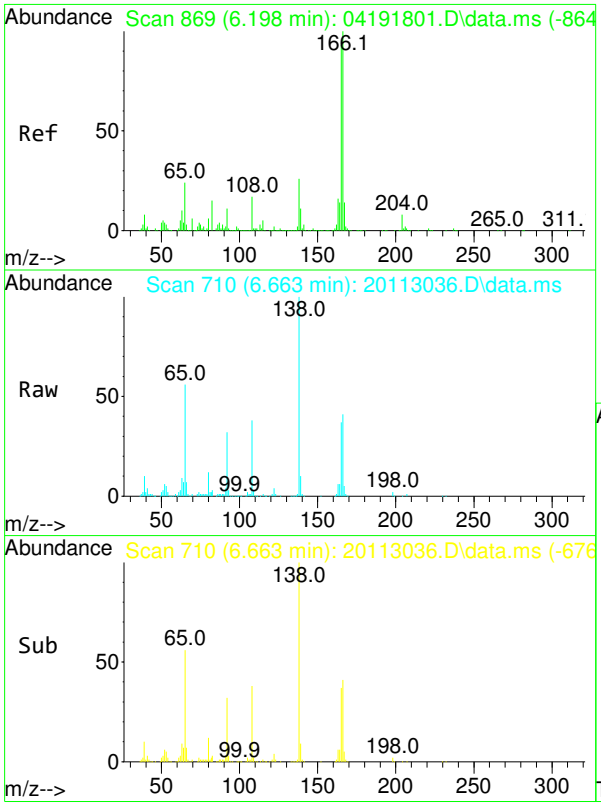


#69
4-Chlorophenyl phenyl
Concen: 14.60 ug/ml
RT: 6.640 min Scan# 706
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:204 Resp: 47369

Ion	Ratio	Lower	Upper
204	100		
206	32.6	2.3	62.3
141	51.5	20.6	80.6

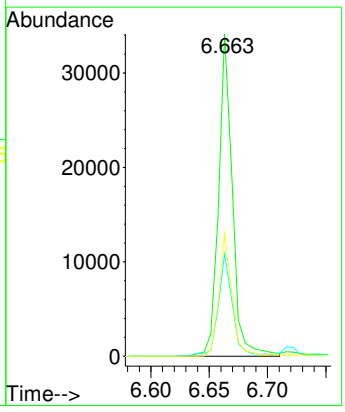


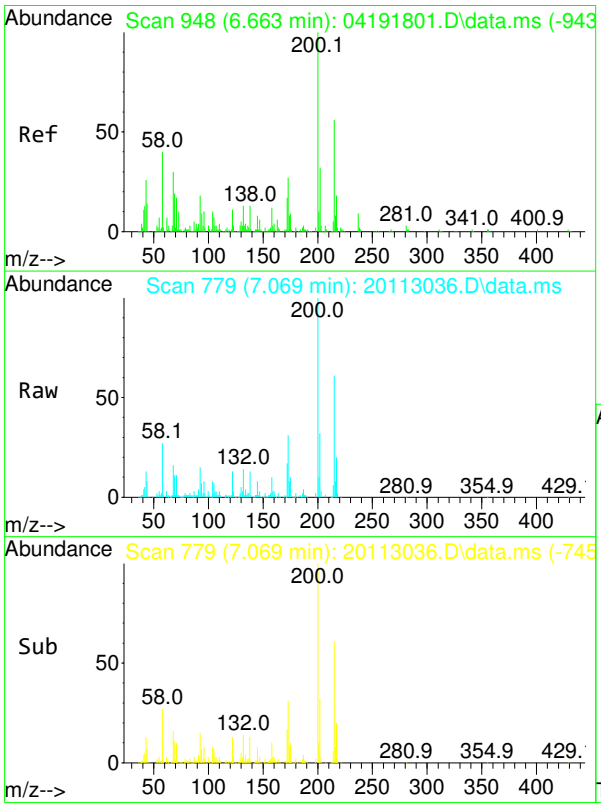


#70
4-Nitroaniline
Concen: 14.68 ug/ml
RT: 6.663 min Scan# 710
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:138 Resp: 28055

Ion	Ratio	Lower	Upper
138	100		
92	32.8	1.7	61.7
108	37.2	7.0	67.0

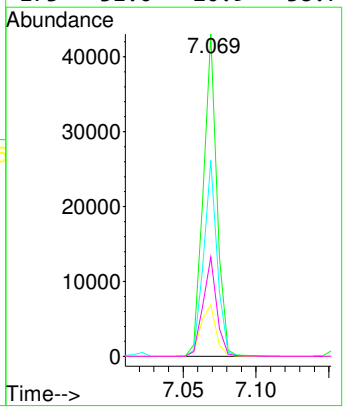


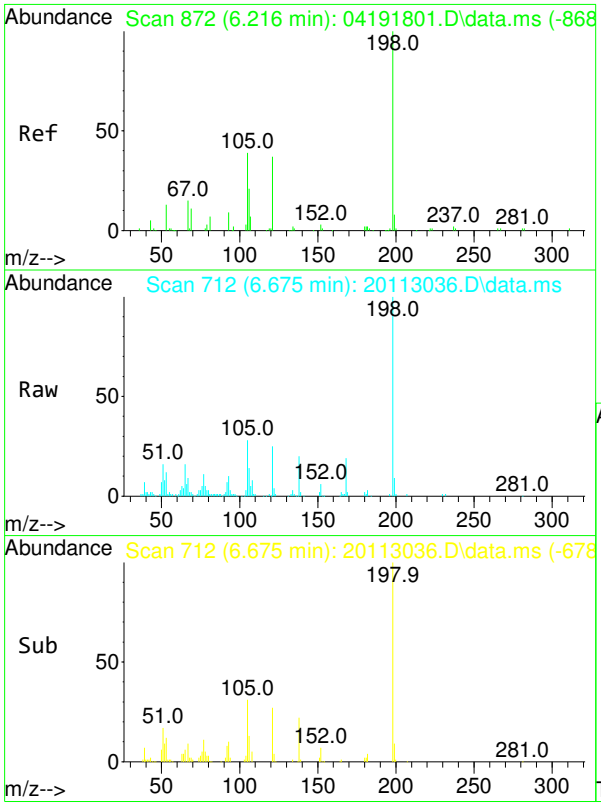


#71
Atrazine
Concen: 15.21 ug/ml
RT: 7.069 min Scan# 779
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:200 Resp: 28117

Ion	Ratio	Lower	Upper
200	100		
215	60.4	42.6	79.0
68	17.7	11.9	22.1
173	31.0	20.9	38.7

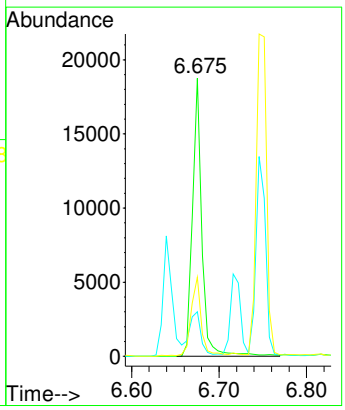


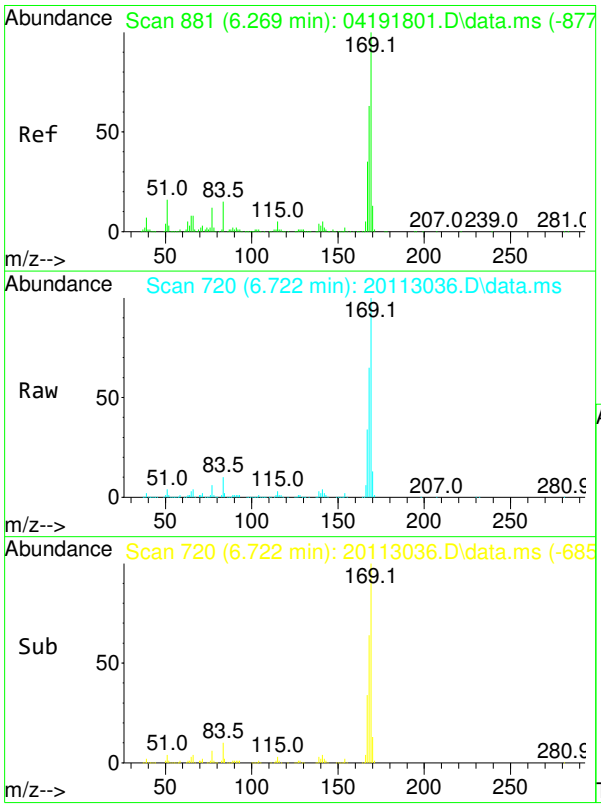


#73
4,6-Dinitro-2-methylph
Concen: 13.50 ug/ml
RT: 6.675 min Scan# 712
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:198 Resp: 14030

Ion	Ratio	Lower	Upper
198	100		
51	19.6	0.0	48.2
105	31.5	0.6	60.6

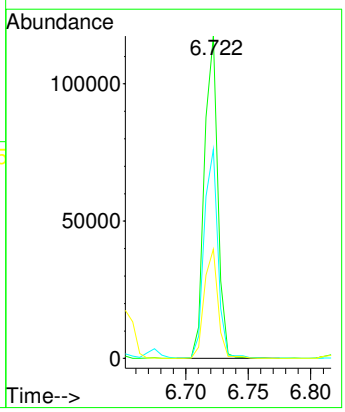


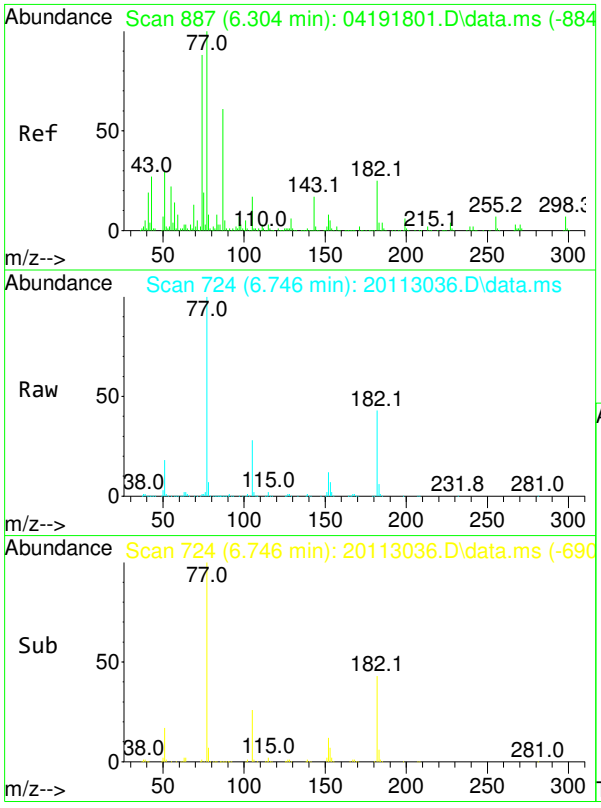


#74
N-Nitrosodiphenylamine
Concen: 15.07 ug/ml
RT: 6.722 min Scan# 720
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:169 Resp: 87669

Ion	Ratio	Lower	Upper
169	100		
168	66.2	36.8	96.8
167	34.7	5.2	65.2

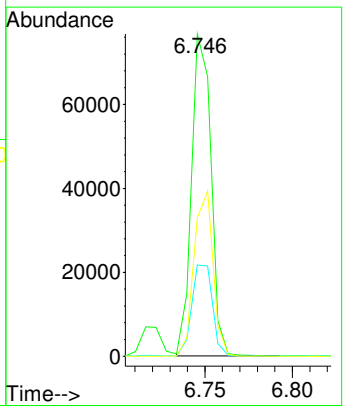


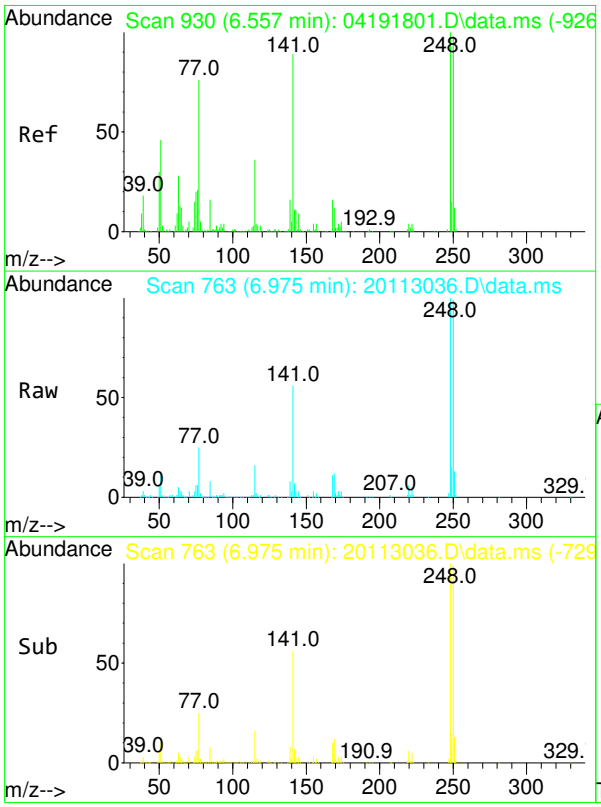


#75
1,2-Diphenylhydrazine
Concen: 14.83 ug/ml
RT: 6.746 min Scan# 724
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion: 77 Resp: 59057

Ion	Ratio	Lower	Upper
77	100		
105	30.0	0.0	59.9
182	50.7	20.8	80.8

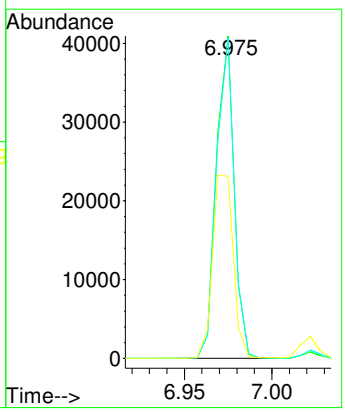


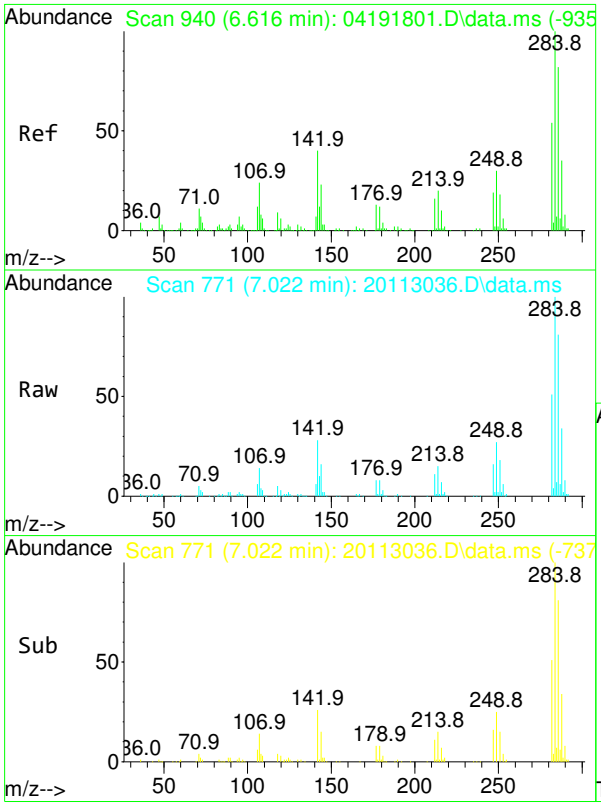


#77
4-Bromophenyl phenyl e
Concen: 14.49 ug/ml
RT: 6.975 min Scan# 763
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:248 Resp: 29236

Ion	Ratio	Lower	Upper
248	100		
250	98.4	67.8	127.8
141	66.0	35.0	95.0

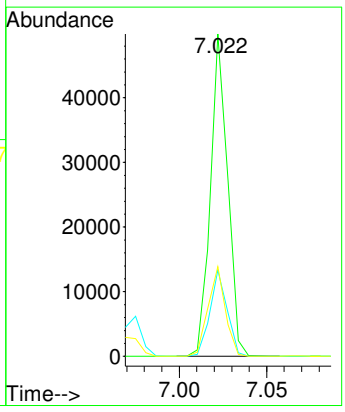


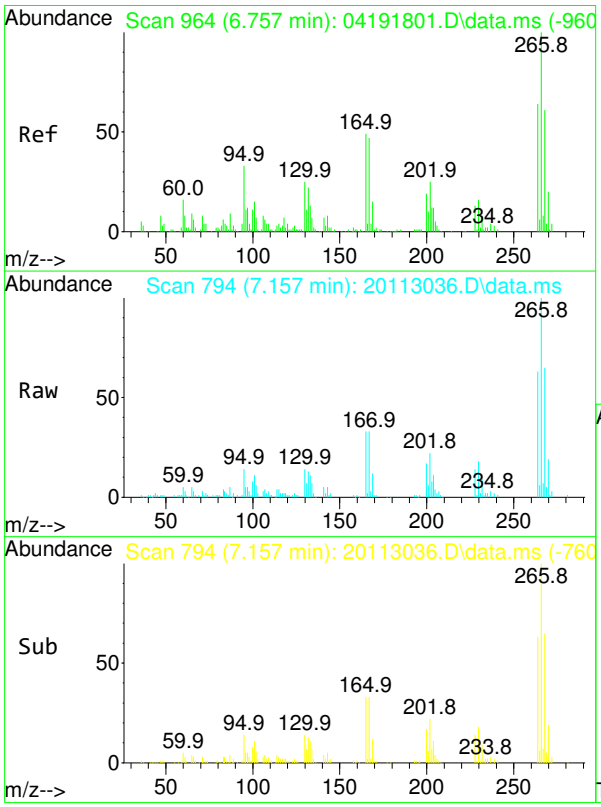


#78
Hexachlorobenzene
Concen: 13.97 ug/ml
RT: 7.022 min Scan# 771
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:284 Resp: 34257

Ion	Ratio	Lower	Upper
284	100		
249	26.8	0.0	56.7
142	27.8	0.0	56.9

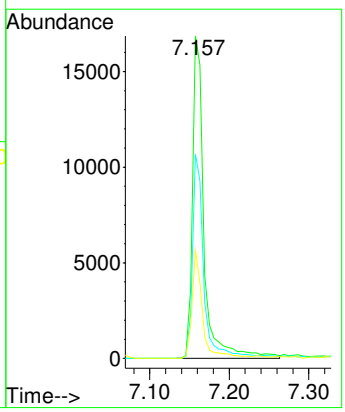


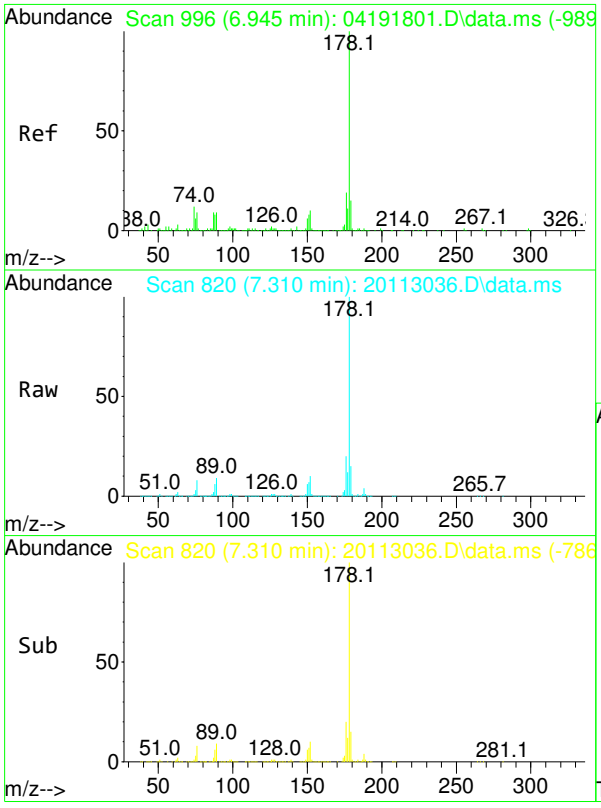


#79
Pentachlorophenol
Concen: 15.08 ug/ml
RT: 7.157 min Scan# 794
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:266 Resp: 17053

Ion	Ratio	Lower	Upper
266	100		
264	62.6	33.1	93.1
165	30.4	2.1	62.1

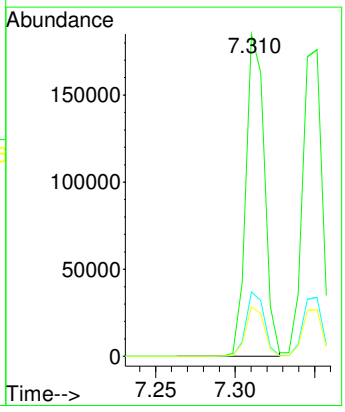


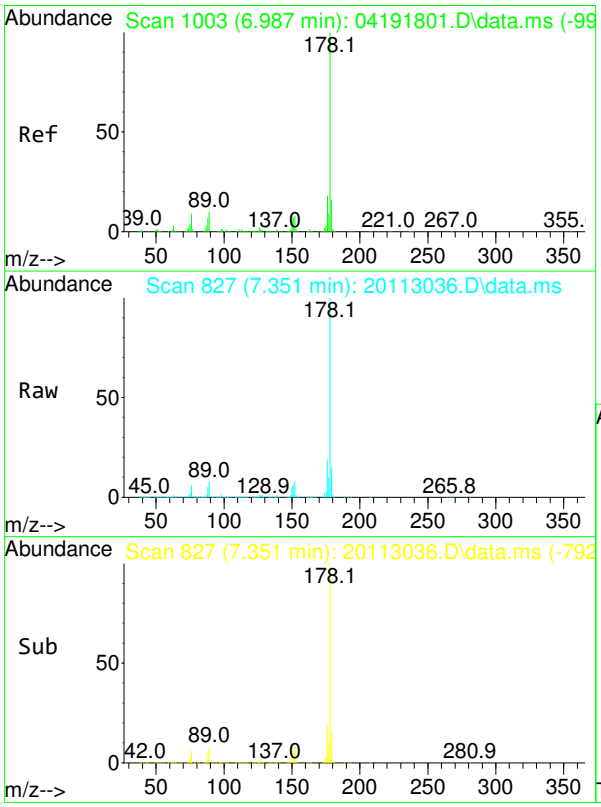


#80
Phenanthrene
Concen: 14.03 ug/ml
RT: 7.310 min Scan# 820
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:178 Resp: 149288

Ion	Ratio	Lower	Upper
178	100		
176	19.9	0.0	49.8
179	15.4	0.0	45.7

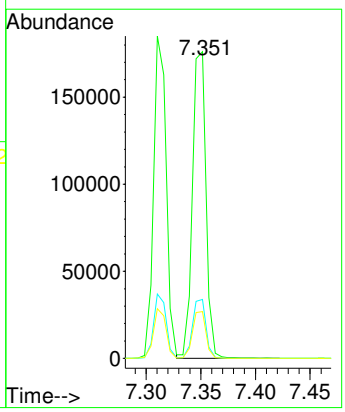


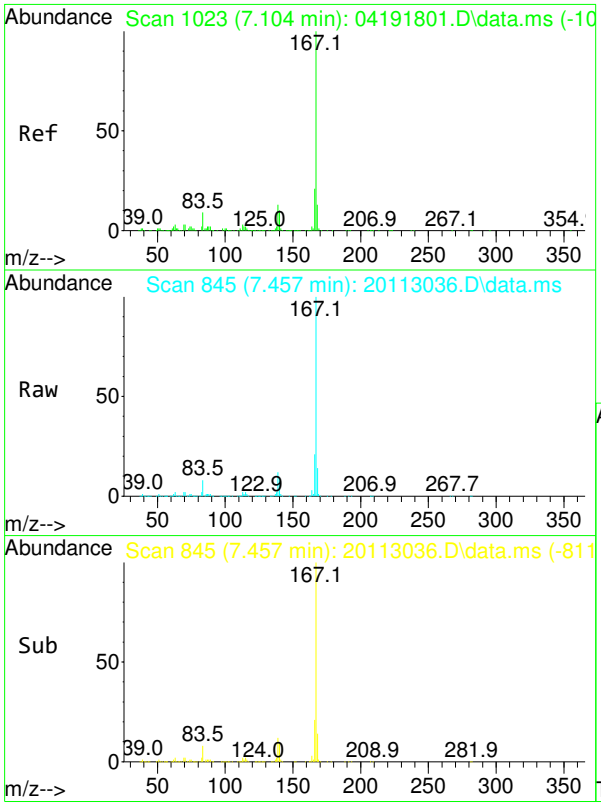


#81
Anthracene
Concen: 14.18 ug/ml
RT: 7.351 min Scan# 827
Delta R.T. 0.005 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:178 Resp: 150341

Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	49.3
179	15.4	0.0	45.6

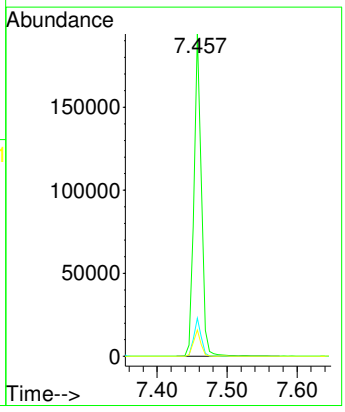


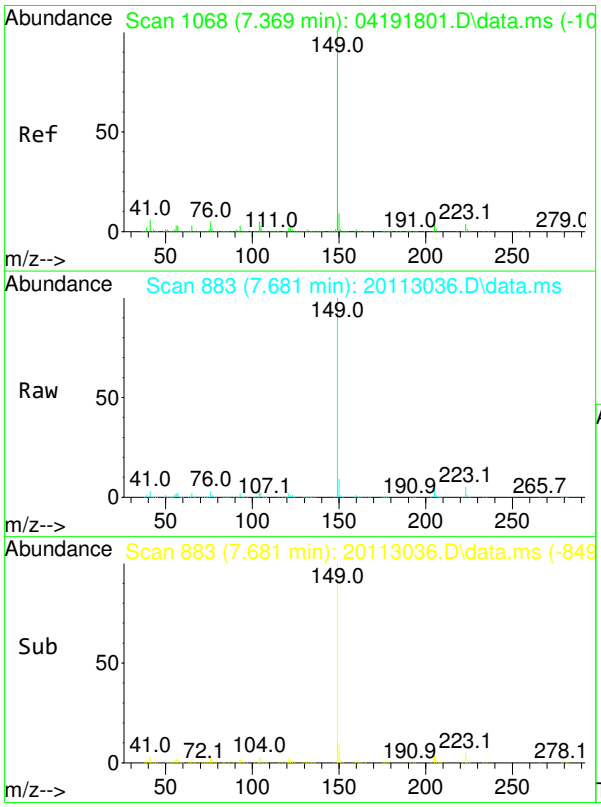


#82
Carbazole
Concen: 15.38 ug/ml
RT: 7.457 min Scan# 845
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:167 Resp: 145809

Ion	Ratio	Lower	Upper
167	100		
139	11.7	0.0	41.8
84	7.9	0.0	38.3

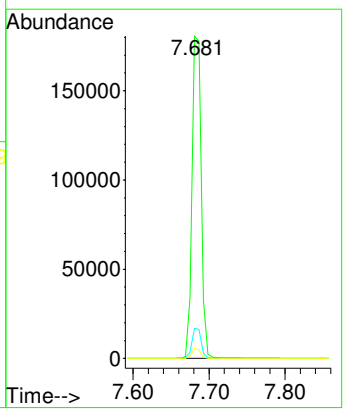


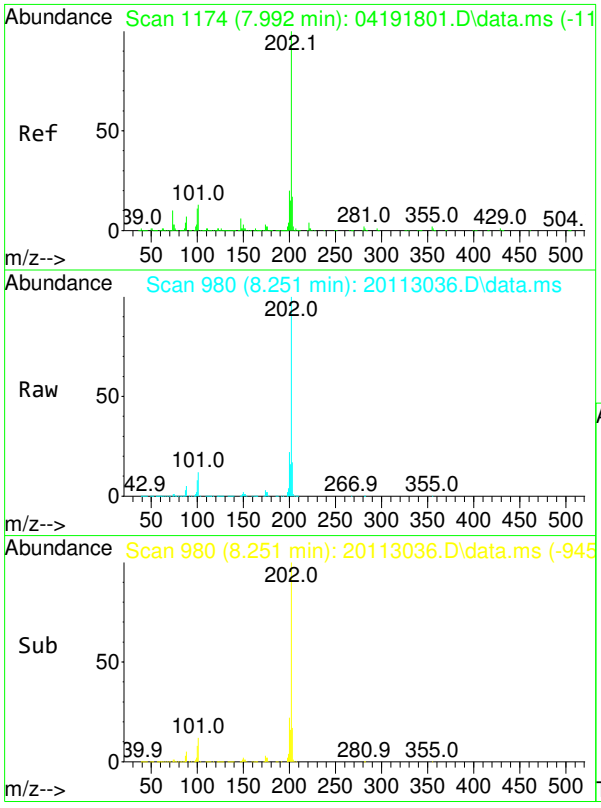


#83
Di-n-butylphthalate
Concen: 15.70 ug/ml
RT: 7.681 min Scan# 883
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:149 Resp: 152384

Ion	Ratio	Lower	Upper
149	100		
150	9.2	0.0	39.2
104	2.9	0.0	32.9

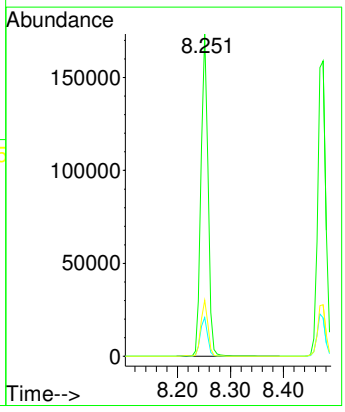


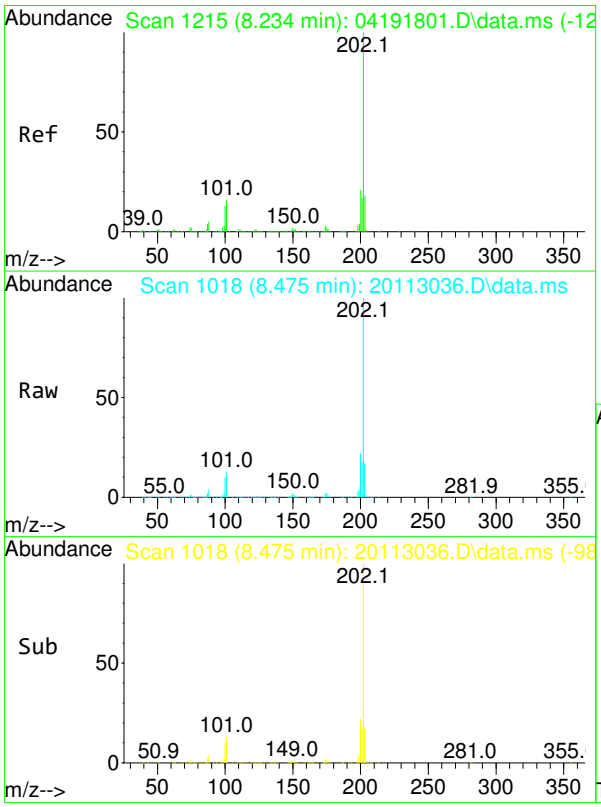


#84
Fluoranthene
Concen: 14.35 ug/ml
RT: 8.251 min Scan# 980
Delta R.T. 0.005 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:202 Resp: 160707

Ion	Ratio	Lower	Upper
202	100		
101	12.4	0.0	41.8
203	17.6	0.0	47.4

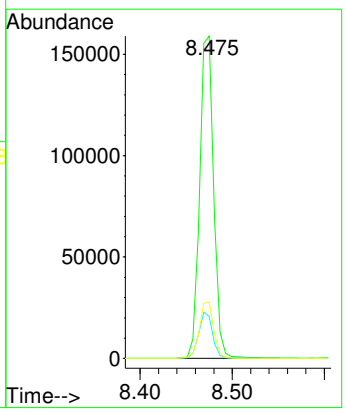


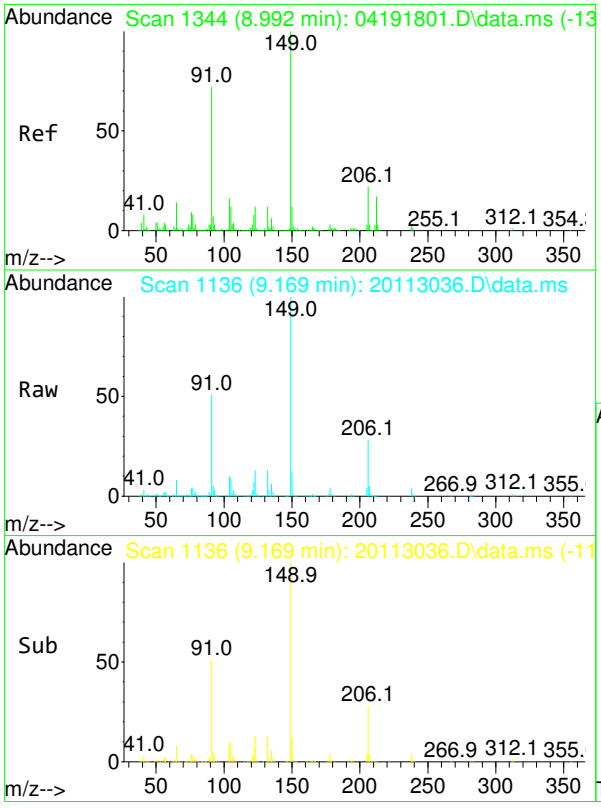


#88
Pyrene
Concen: 15.31 ug/ml
RT: 8.475 min Scan# 1018
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:202 Resp: 167524

Ion	Ratio	Lower	Upper
202	100		
101	14.5	0.0	43.9
203	17.8	0.0	47.8

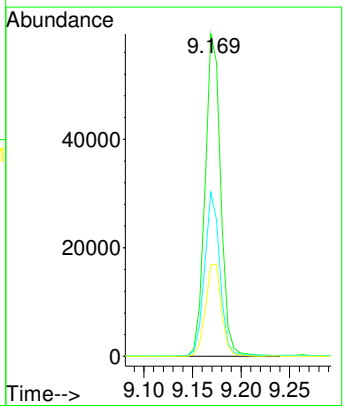


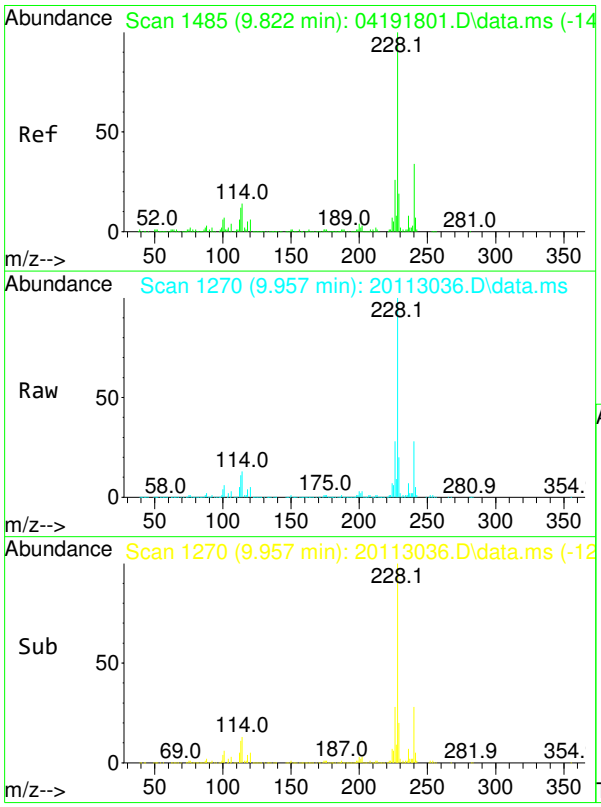


#90
Butylbenzylphthalate
Concen: 16.50 ug/ml
RT: 9.169 min Scan# 1136
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:149 Resp: 66859

Ion	Ratio	Lower	Upper
149	100		
91	49.4	21.9	81.9
206	29.5	0.3	60.3

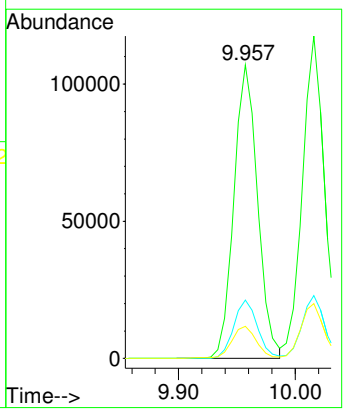


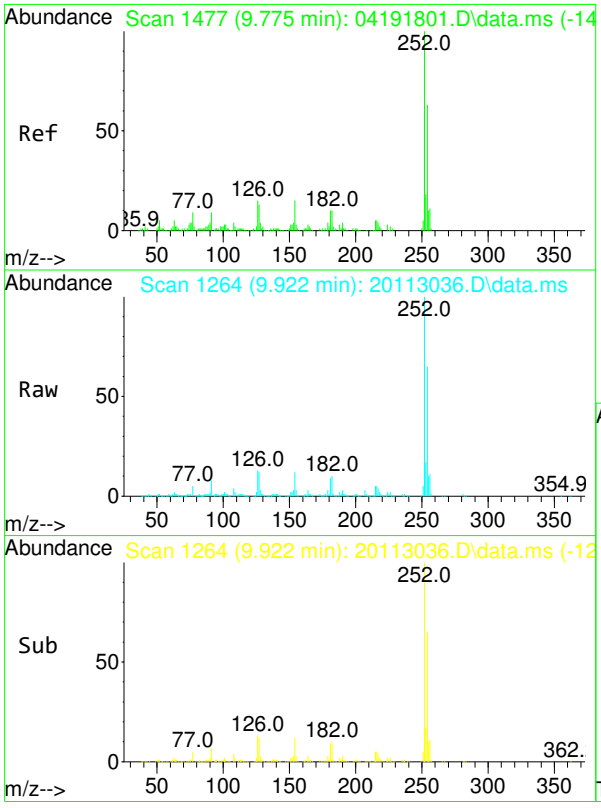


#91
Benzo[a]anthracene
Concen: 14.91 ug/ml
RT: 9.957 min Scan# 1270
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:228 Resp: 151366

Ion	Ratio	Lower	Upper
228	100		
229	19.9	0.0	49.7
113	11.5	0.0	40.7

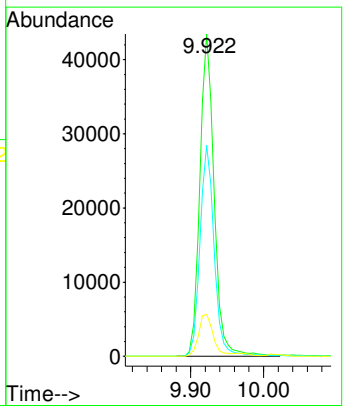


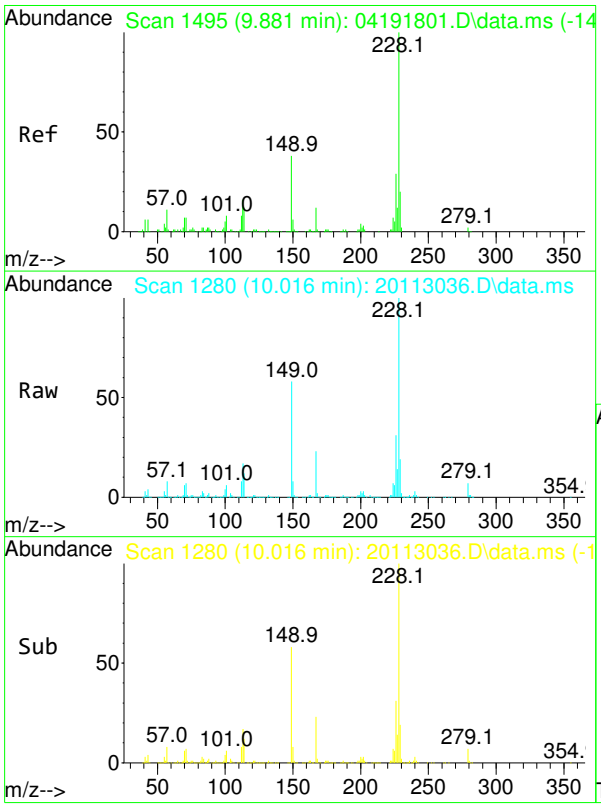


#92
3,3'-Dichlorobenzidine
Concen: 13.54 ug/ml
RT: 9.922 min Scan# 1264
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:252 Resp: 59194

Ion	Ratio	Lower	Upper
252	100		
254	65.4	34.2	94.2
126	13.5	0.0	43.2

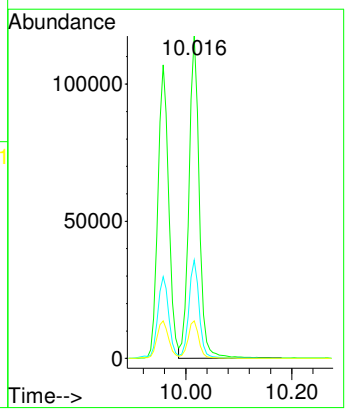


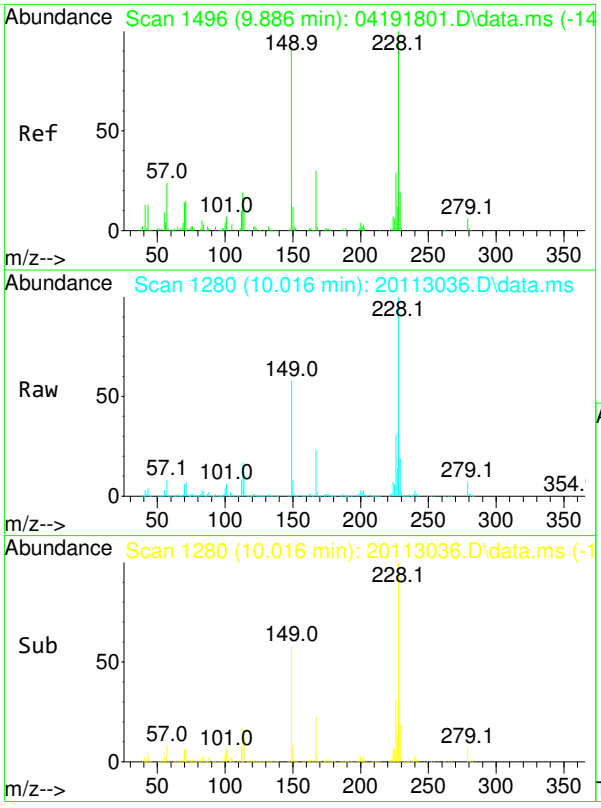


#93
Chrysene
Concen: 14.69 ug/ml
RT: 10.016 min Scan# 1280
Delta R.T. 0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:228 Resp: 159537

Ion	Ratio	Lower	Upper
228	100		
226	30.6	0.6	60.6
114	12.1	0.0	41.5

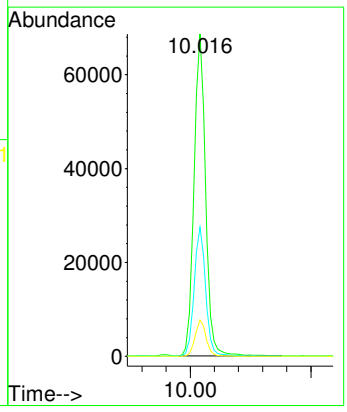


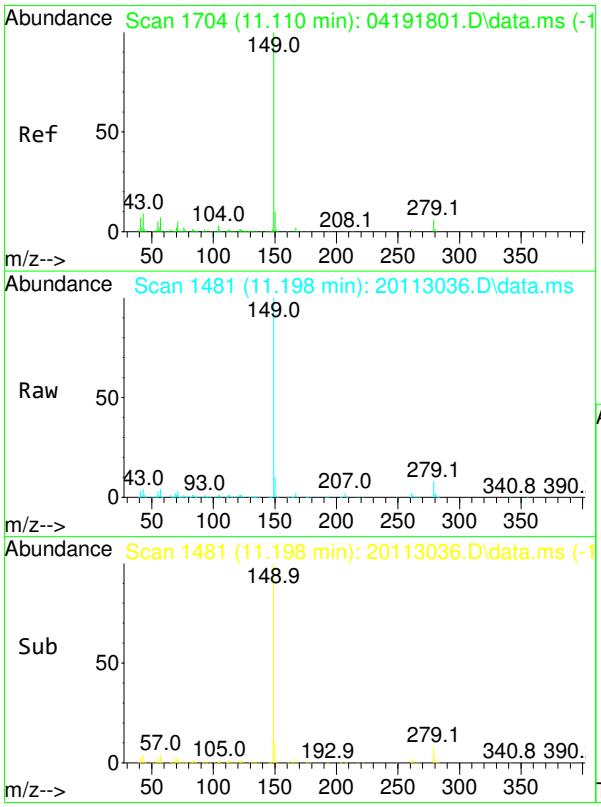


#94
Bis(2-ethylhexyl)phtha
Concen: 16.67 ug/ml
RT: 10.016 min Scan# 1280
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:149 Resp: 91799

Ion	Ratio	Lower	Upper
149	100		
167	40.1	10.5	70.5
279	10.8	0.0	41.3

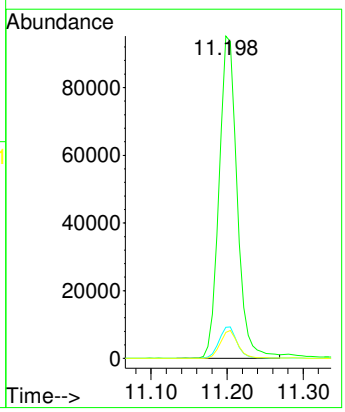


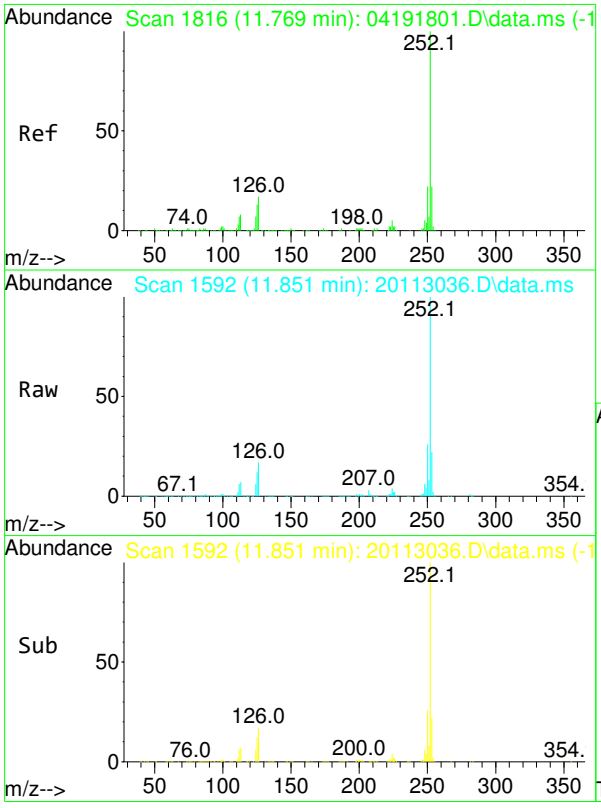


#96
Di-n-octylphthalate
Concen: 17.22 ug/ml
RT: 11.198 min Scan# 1481
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:149 Resp: 157465

Ion	Ratio	Lower	Upper
149	100		
150	10.0	0.0	39.8
279	8.5	0.0	38.7

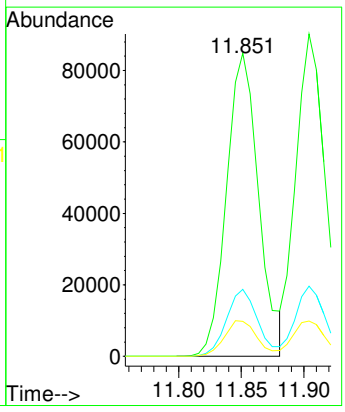


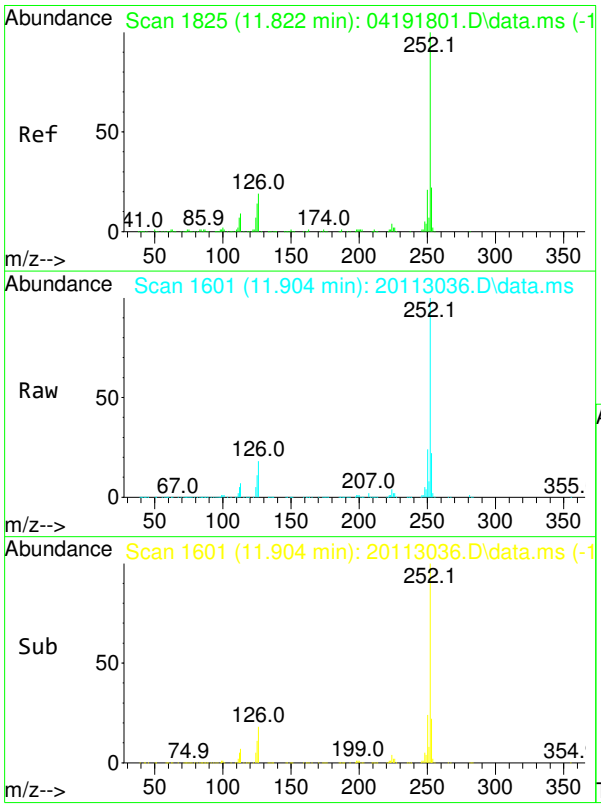


#97
Benzo(b)fluoranthene
Concen: 15.08 ug/ml
RT: 11.851 min Scan# 1592
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:252 Resp: 151279

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.9
125	11.8	0.0	41.3

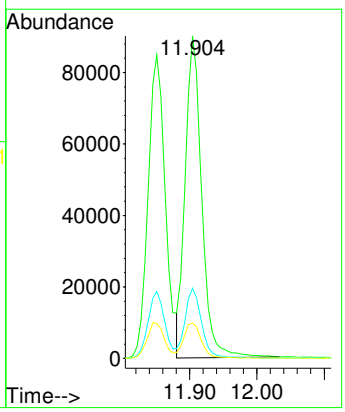


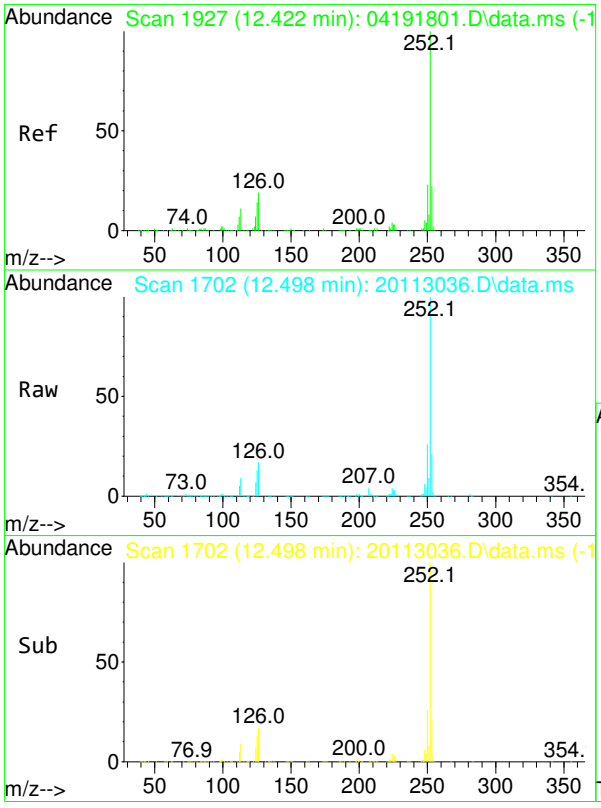


#98
Benzo(k)fluoranthene
Concen: 14.55 ug/ml
RT: 11.904 min Scan# 1601
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:252 Resp: 153674

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.8
125	11.9	0.0	40.8

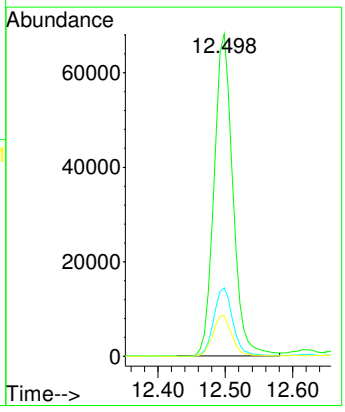


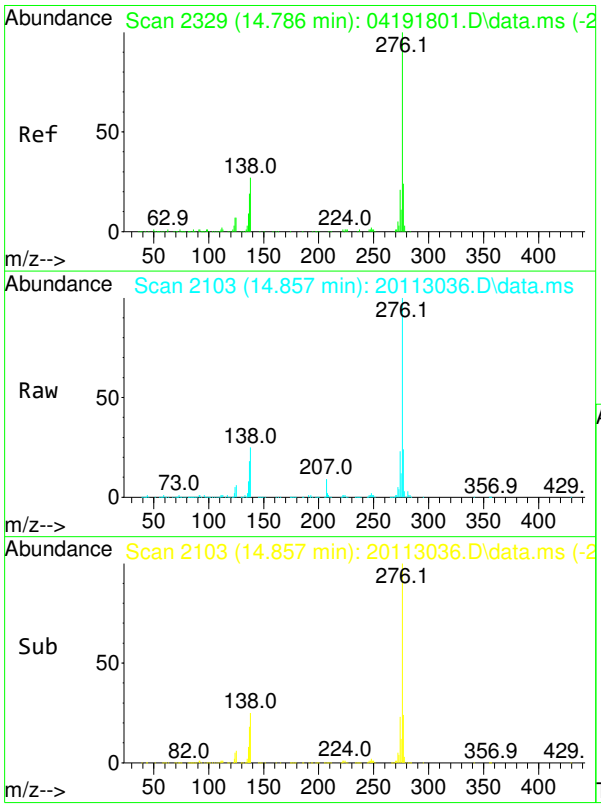


#99
Benzo(a)pyrene
Concen: 14.60 ug/ml
RT: 12.498 min Scan# 1702
Delta R.T. 0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:252 Resp: 132966

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.9
125	13.1	0.0	42.8

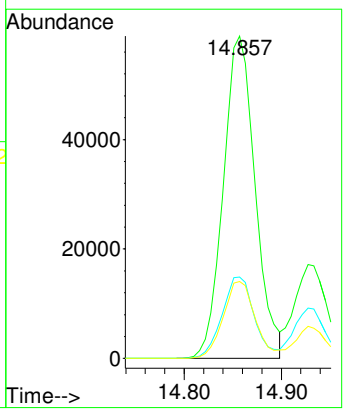


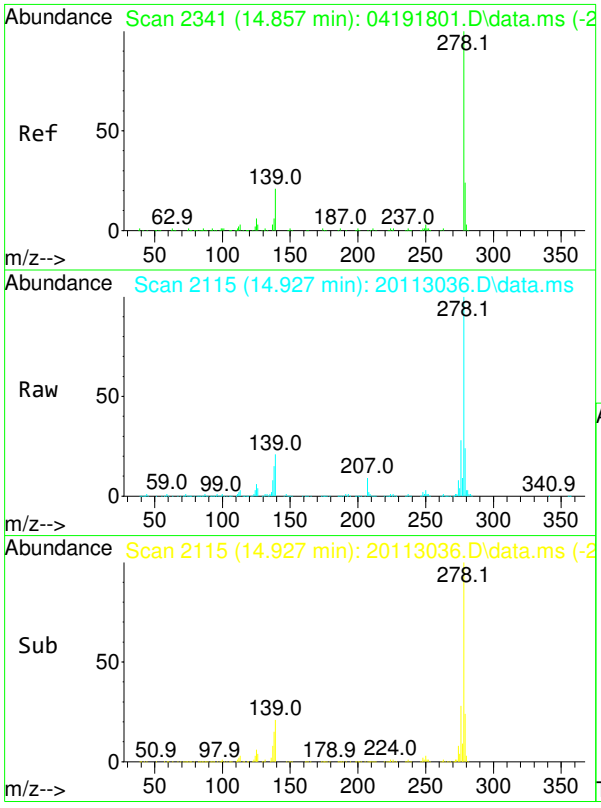


#100
Indeno(1,2,3-cd)pyrene
Concen: 14.41 ug/ml
RT: 14.857 min Scan# 2103
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:276 Resp: 134160

Ion	Ratio	Lower	Upper
276	100		
138	25.8	0.0	53.4
277	23.6	0.0	54.0

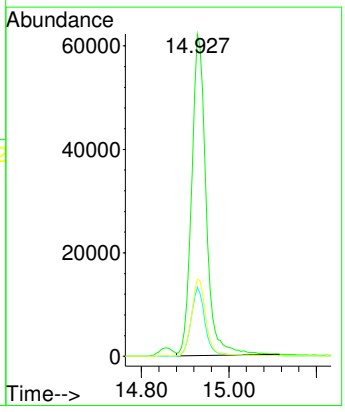


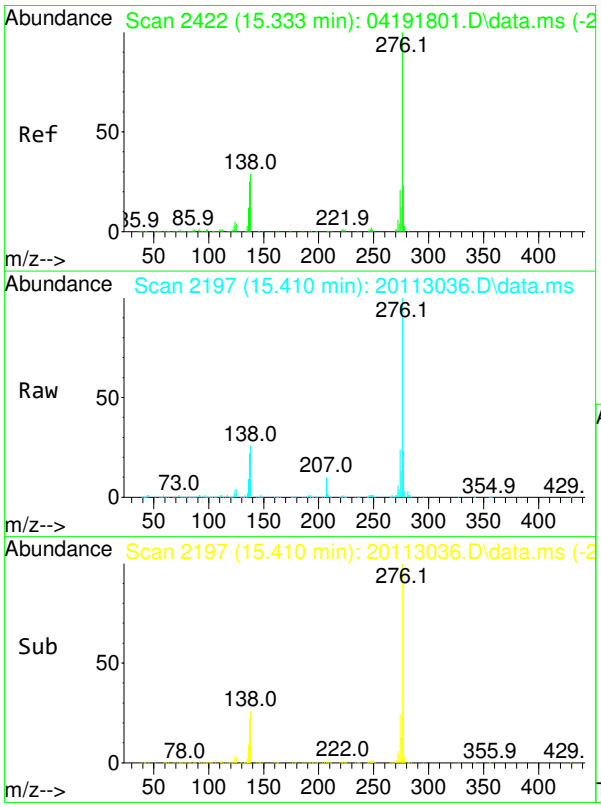


#101
Dibenz(a,h)anthracene
Concen: 14.47 ug/ml
RT: 14.927 min Scan# 2115
Delta R.T. -0.006 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:278 Resp: 142195

Ion	Ratio	Lower	Upper
278	100		
139	21.1	0.0	50.6
279	23.7	0.0	54.0

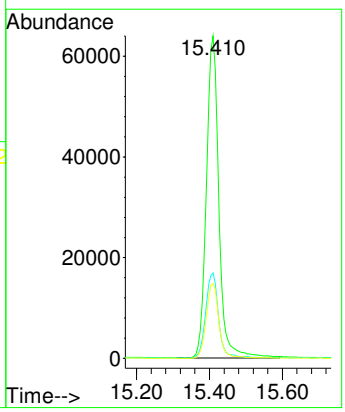




#102
Benzo(g,h,i)perylene
Concen: 14.31 ug/ml
RT: 15.410 min Scan# 2197
Delta R.T. -0.000 min
Lab File: 20113036.D
Acq: 01 Dec 2020 12:08 am

Tgt Ion:276 Resp: 151877

Ion	Ratio	Lower	Upper
276	100		
138	26.8	0.0	55.8
277	23.8	0.0	54.0



1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113037.D
Acq On : 01 Dec 2020 12:32 am
Operator : EE/EEW
Sample : 20111733-02A MSD
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 01 10:30:40 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	132862	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	307258	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	183527	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	342599	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	334470	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	346010	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	54884	22.96	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 45.92%			
7) Phenol-d6	4.193	99	43544	15.61	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 31.22%			
26) Nitrobenzene-d5	4.746	82	66091	34.14	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 68.28%			
55) 2-Fluorobiphenyl	5.852	172	206769	32.53	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 65.06%			
76) 2,4,6-Tribromophenol	6.816	330	44678	35.37	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 70.74%			
89) 4-Terphenyl-d14	8.610	244	313799	39.52	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 79.04%			
Target Compounds						Qvalue
3) Pyridine	2.887	79	19699	8.18	ug/ml	98
4) N-Nitrosodimethylamine	2.840	42	4706	9.96	ug/ml	98
6) Benzaldehyde	4.158	77	20918	13.03	ug/ml	100
8) Phenol	4.205	94	22295	7.08	ug/ml#	34
9) Aniline	4.217	93	51404	15.09	ug/ml	84
10) Bis(2-chloroethyl)ether	4.246	93	31438	13.81	ug/ml	99
11) 2-Chlorophenol	4.299	128	39254	15.26	ug/ml	99
12) 1,3-Dichlorobenzene	4.381	146	35722	10.75	ug/ml	99
13) 1,4-Dichlorobenzene	4.422	146	37620	11.15	ug/ml	99
14) Benzyl alcohol	4.493	108	22655	13.81	ug/ml	98
15) 1,2-Dichlorobenzene	4.517	146	36486	11.44	ug/ml	100
16) 2-Methylphenol	4.558	108	29492	12.78	ug/ml	98
17) 2,2`-Oxybis(1-chloropr...	4.564	45	22405	13.96	ug/ml	96
18) Bis(2-chloroisopropyl)...	4.564	45	22405	13.96	ug/ml	97
19) 3-Methylphenol	4.646	107	30444	12.10	ug/ml	93
20) 4-Methylphenol	4.646	107	30444	12.10	ug/ml	93
21) 3&4-Methylphenol	4.646	107	30722	12.10	ug/ml	92
22) Acetophenone	4.646	105	44867	14.19	ug/ml	98
23) N-Nitrosodi-n-propylamine	4.640	70	18550	14.33	ug/ml	99
24) Hexachloroethane	4.722	117	11044	10.84	ug/ml	96
27) Nitrobenzene	4.758	77	25956	14.18	ug/ml	99
28) Isophorone	4.899	82	53750	14.14	ug/ml	99
29) 2-Nitrophenol	4.952	139	21422	13.63	ug/ml	99
30) 2,4-Dimethylphenol	4.969	107	27394	10.95	ug/ml	99
31) Bis(2-chloroethoxy)met	5.017	93	37444	13.76	ug/ml	96
33) 2,4-Dichlorophenol	5.105	162	35799	14.08	ug/ml	99
34) 1,2,4-Trichlorobenzene	5.146	180	33705	12.64	ug/ml	100
36) Naphthalene	5.205	128	107102	12.64	ug/ml	100
37) 4-Chloroaniline	5.228	127	53601	15.37	ug/ml	98
38) 2,6-Dichlorophenol	5.234	162	35549	13.66	ug/ml	99

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113037.D
Acq On : 01 Dec 2020 12:32 am
Operator : EE/EEW
Sample : 20111733-02A MSD
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 01 10:30:40 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) Hexachlorobutadiene	5.269	225	15731	11.59	ug/ml	98
40) Caprolactam	5.452	55	3371	4.97	ug/ml	96
41) 4-Chloro-3-methylphenol	5.528	107	32710	15.41	ug/ml	99
42) 2-Methylnaphthalene	5.628	142	79164	13.36	ug/ml	99
43) 1-Methylnaphthalene	5.693	142	72510	13.10	ug/ml	99
44) 1,2,4,5-Tetrachloroben...	5.734	216	36279	12.36	ug/ml	99
45) 1,1-Biphenyl	5.916	154	100024	13.61	ug/ml	99
46) 2,3,5,6-Tetrachlorophenol	6.481	232	22814	14.90	ug/ml	99
47) 2,3,4,6-Tetrachlorophenol	6.505	232	25796	15.09	ug/ml	98
48) 1,4-Dinitrobenzene	6.081	168	13912	14.84	ug/ml	97
49) 1,3-Dinitrobenzene	6.128	168	17454	15.06	ug/ml	99
50) 1,2-Dinitrobenzene	6.187	168	12015	14.67	ug/ml	89
52) Hexachlorocyclopentadiene	5.722	237	8174	6.40	ug/ml	98
53) 2,4,6-Trichlorophenol	5.805	196	25730	13.81	ug/ml	98
54) 2,4,5-Trichlorophenol	5.840	196	29352	14.76	ug/ml	98
56) 2-Chloronaphthalene	5.940	162	76410	13.01	ug/ml	100
57) 2-Nitroaniline	5.999	65	14025	14.51	ug/ml	99
58) Dimethylphthalate	6.099	163	89228	14.52	ug/ml	100
59) Acenaphthylene	6.205	152	126833	14.34	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	21867	14.05	ug/ml	99
61) 3-Nitroaniline	6.263	138	25818	14.84	ug/ml	98
62) Acenaphthene	6.316	154	82342	14.11	ug/ml	100
63) 2,4-Dinitrophenol	6.328	184	8062	13.49	ug/ml	97
64) Dibenzofuran	6.428	168	116181	14.42	ug/ml	100
65) 4-Nitrophenol	6.387	65	4057	7.02	ug/ml	93
66) 2,4-Dinitrotoluene	6.405	165	29763	14.39	ug/ml	96
67) Diethylphthalate	6.552	149	83299	14.40	ug/ml	100
68) Fluorene	6.652	166	94944	13.95	ug/ml	99
69) 4-Chlorophenyl phenyl	6.640	204	45439	14.67	ug/ml	98
70) 4-Nitroaniline	6.663	138	27329	14.98	ug/ml	99
71) Atrazine	7.069	200	27349	15.50	ug/ml	99
73) 4,6-Dinitro-2-methylph	6.675	198	13400	13.43	ug/ml	99
74) N-Nitrosodiphenylamine	6.716	169	83552	14.95	ug/ml	99
75) 1,2-Diphenylhydrazine	6.746	77	57055	14.91	ug/ml	99
77) 4-Bromophenyl phenyl e	6.975	248	28408	14.66	ug/ml	99
78) Hexachlorobenzene	7.022	284	32873	13.95	ug/ml	98
79) Pentachlorophenol	7.158	266	15968	14.73	ug/ml	99
80) Phenanthrene	7.311	178	143310	14.01	ug/ml	99
81) Anthracene	7.346	178	146663	14.40	ug/ml	100
82) Carbazole	7.458	167	141015	15.48	ug/ml	100
83) Di-n-butylphthalate	7.681	149	146272	15.69	ug/ml	100
84) Fluoranthene	8.252	202	154696	14.38	ug/ml	99
88) Pyrene	8.469	202	162848	15.42	ug/ml	99
90) Butylbenzylphthalate	9.169	149	63935	16.35	ug/ml	96
91) Benzo[a]anthracene	9.952	228	147160	15.02	ug/ml	99
92) 3,3'-Dichlorobenzidine	9.916	252	56739	13.45	ug/ml	99
93) Chrysene	10.010	228	156601	14.95	ug/ml	99
94) Bis(2-ethylhexyl)phtha	10.010	149	87719	16.50	ug/ml	100
96) Di-n-octylphthalate	11.199	149	151385	17.00	ug/ml	99
97) Benzo(b)fluoranthene	11.846	252	146291	14.97	ug/ml	99
98) Benzo(k)fluoranthene	11.904	252	153590	14.92	ug/ml	99
99) Benzo(a)pyrene	12.493	252	130505	14.70	ug/ml	100
100) Indeno(1,2,3-cd)pyrene	14.857	276	132075	14.55	ug/ml	98

Quantitation Report (QT Reviewed)

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113037.D
Acq On : 01 Dec 2020 12:32 am
Operator : EE/EEW
Sample : 20111733-02A MSD
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 01 10:30:40 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

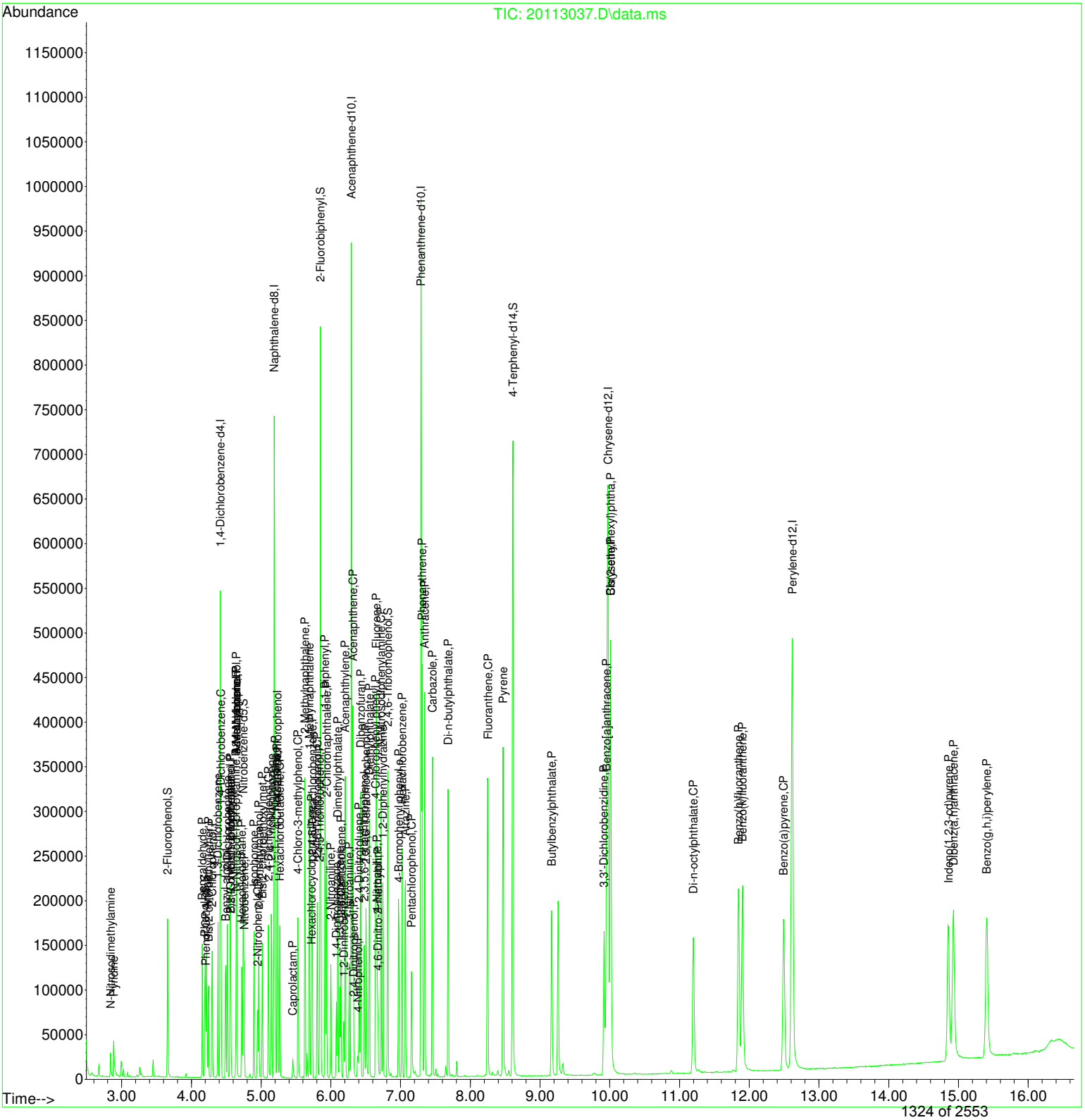
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
101) Dibenz(a,h)anthracene	14.928	278	138589	14.47	ug/ml	99
102) Benzo(g,h,i)perylene	15.404	276	149480	14.45	ug/ml	98

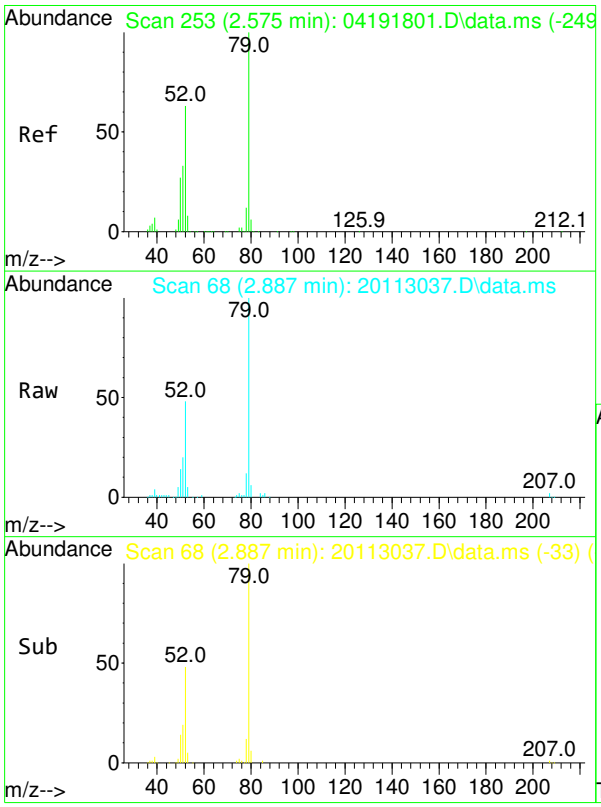
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ EE 12/01/20
2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113037.D
Acq On : 01 Dec 2020 12:32 am
Operator : EE/EEW
Sample : 20111733-02A MSD
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 01 10:30:40 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

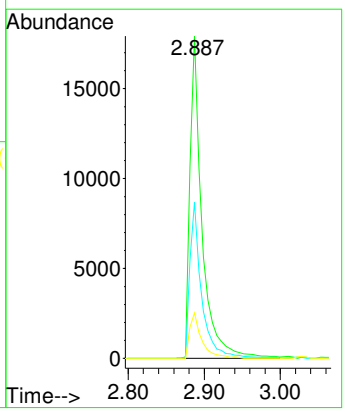


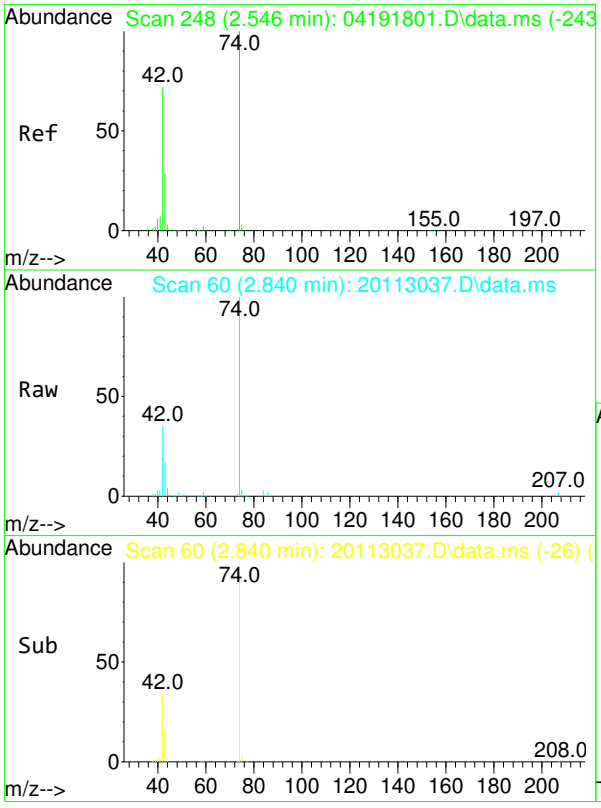


#3
Pyridine
Concen: 8.18 ug/ml
RT: 2.887 min Scan# 68
Delta R.T. 0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 79 Resp: 19699

Ion	Ratio	Lower	Upper
79	100		
52	47.7	15.6	75.6
50	14.3	0.0	44.3

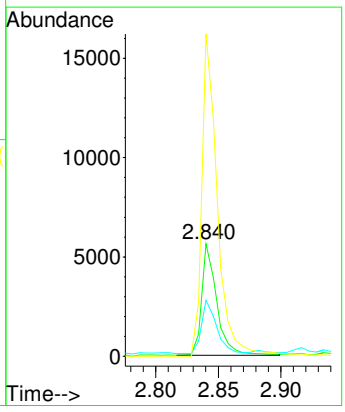


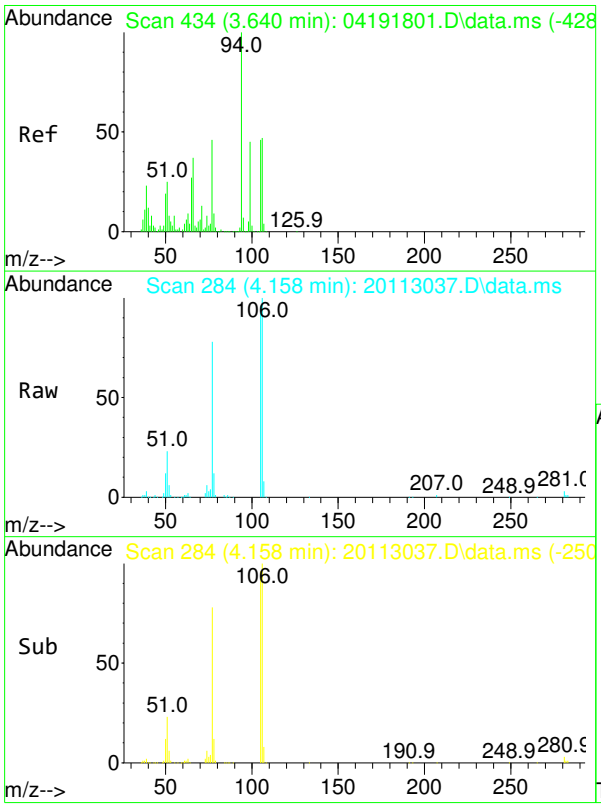


#4
N-Nitrosodimethylamine
Concen: 9.96 ug/ml
RT: 2.840 min Scan# 60
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 42 Resp: 4706

Ion	Ratio	Lower	Upper
42	100		
43	48.5	19.5	79.5
74	300.7	266.1	326.1

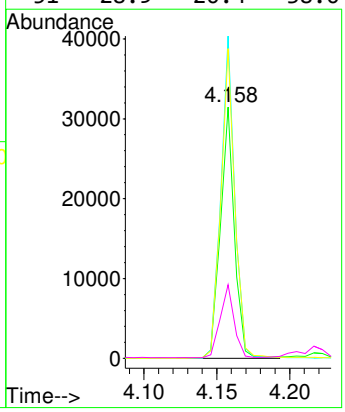


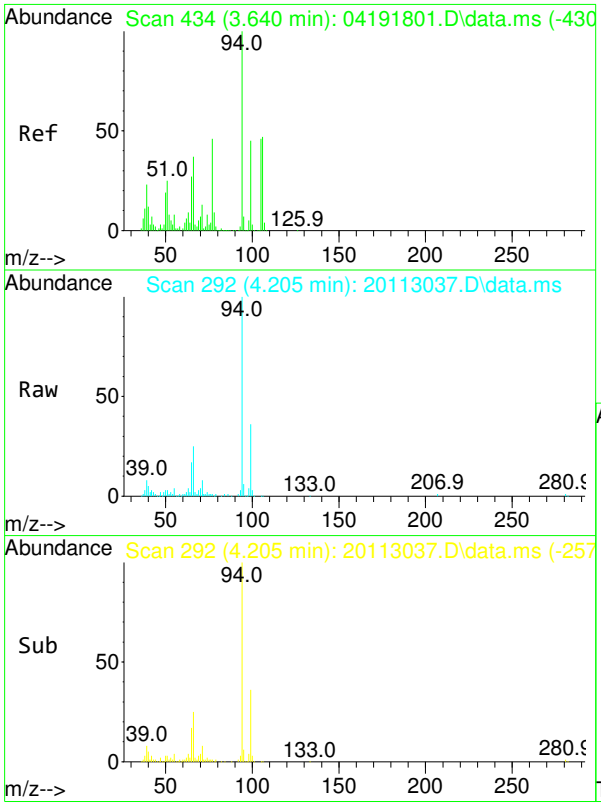


#6
Benzaldehyde
Concen: 13.03 ug/ml
RT: 4.158 min Scan# 284
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 77 Resp: 20918

Ion	Ratio	Lower	Upper
77	100		
106	127.3	89.2	165.8
105	124.9	87.2	161.9
51	28.9	20.4	38.0

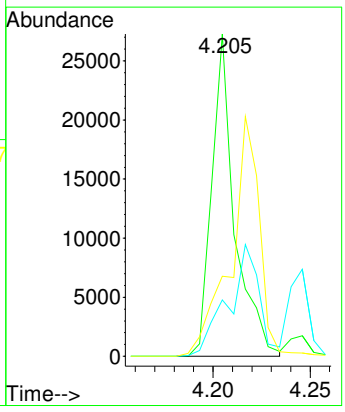


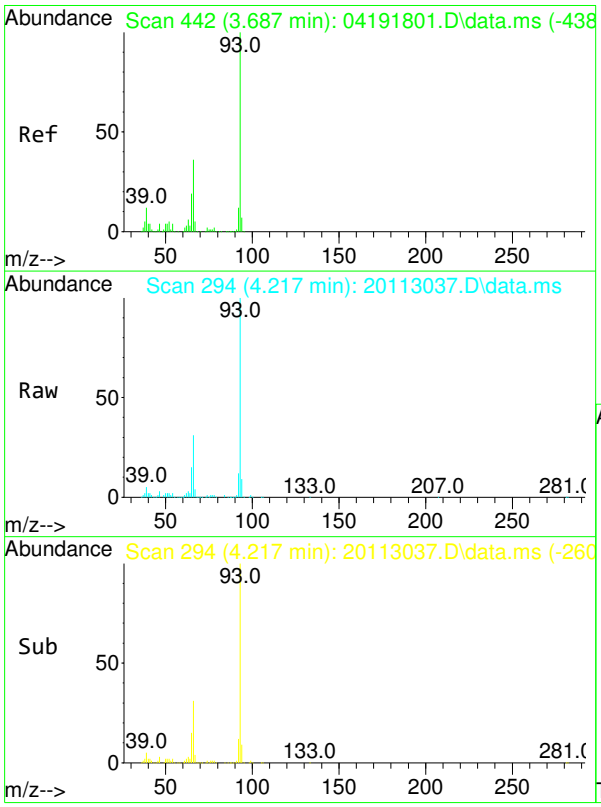


#8
Phenol
Concen: 7.08 ug/ml
RT: 4.205 min Scan# 292
Delta R.T. 0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 94 Resp: 22295

Ion	Ratio	Lower	Upper
94	100		
65	47.4	0.0	48.0
66	93.9	0.0	30.0#

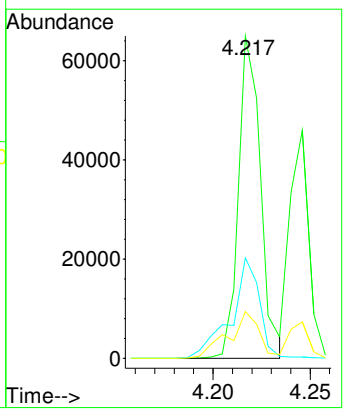


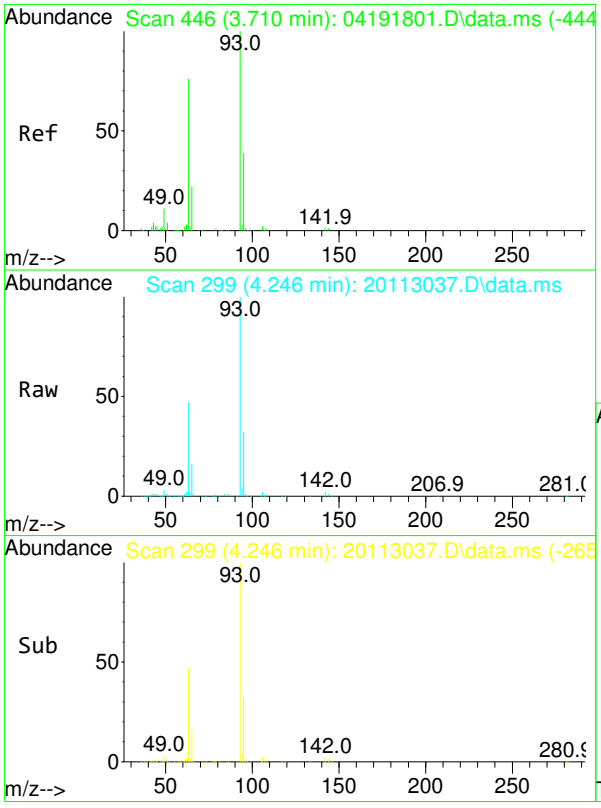


#9
Aniline
Concen: 15.09 ug/ml
RT: 4.217 min Scan# 294
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 93 Resp: 51404

Ion	Ratio	Lower	Upper
93	100		
66	40.7	21.2	81.2
65	20.5	0.0	42.0

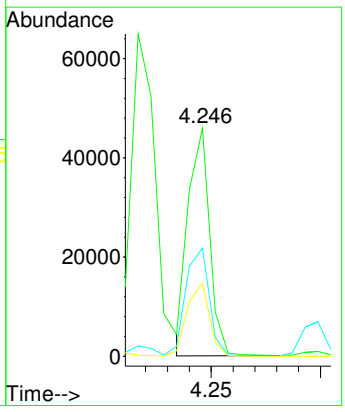


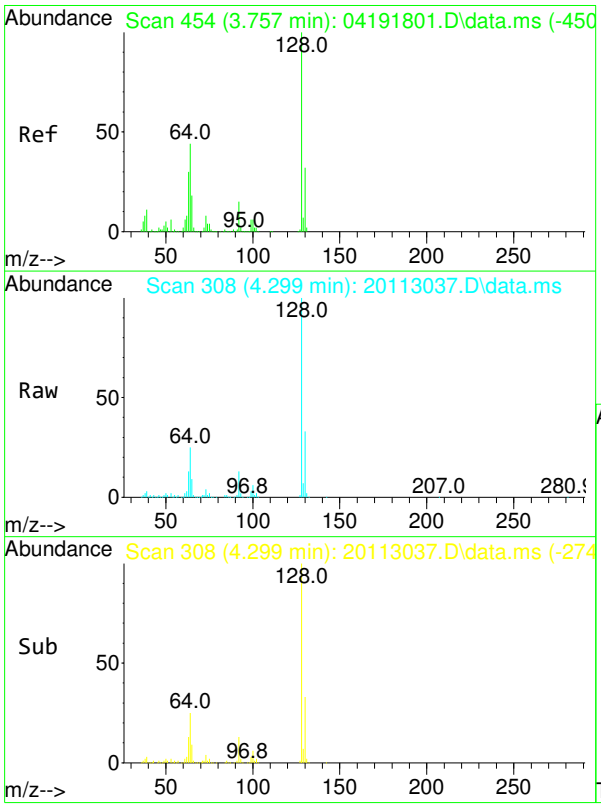


#10
Bis(2-chloroethyl)ether
Concen: 13.81 ug/ml
RT: 4.246 min Scan# 299
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 93 Resp: 31438

Ion	Ratio	Lower	Upper
93	100		
63	51.9	20.3	80.3
95	33.5	3.5	63.5

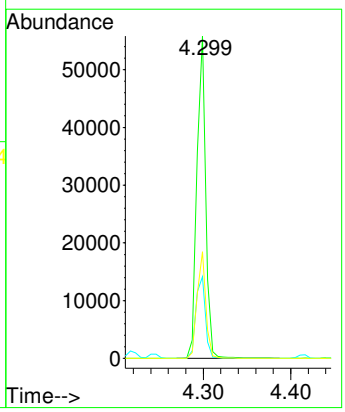


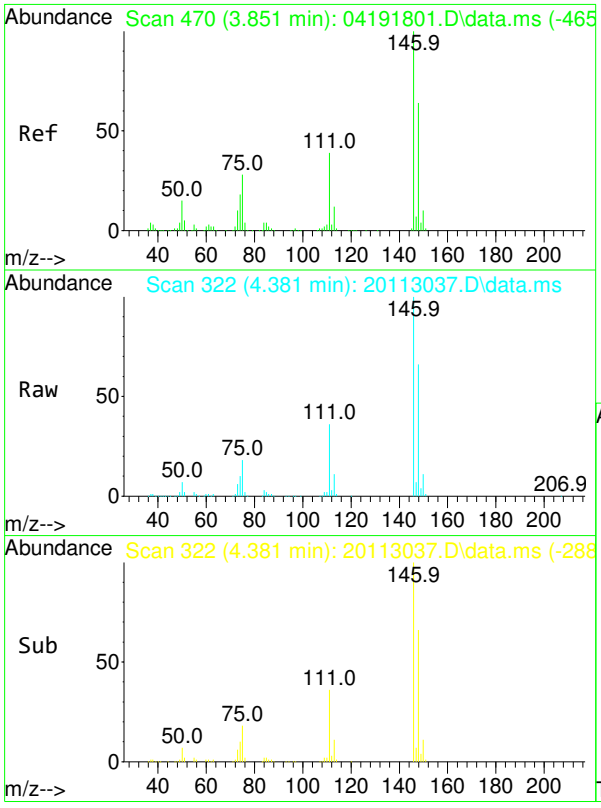


#11
2-Chlorophenol
Concen: 15.26 ug/ml
RT: 4.299 min Scan# 308
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:128 Resp: 39254

Ion	Ratio	Lower	Upper
128	100		
64	27.3	0.0	56.6
130	32.8	2.4	62.4

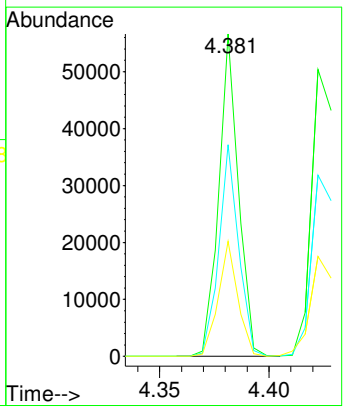


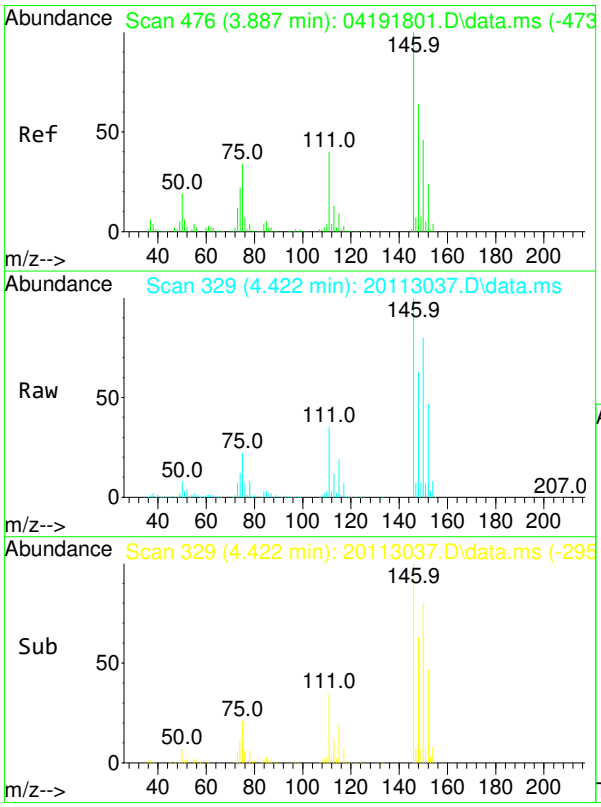


#12
1,3-Dichlorobenzene
Concen: 10.75 ug/ml
RT: 4.381 min Scan# 322
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:146 Resp: 35722

Ion	Ratio	Lower	Upper
146	100		
148	65.7	34.4	94.4
111	35.4	4.8	64.8

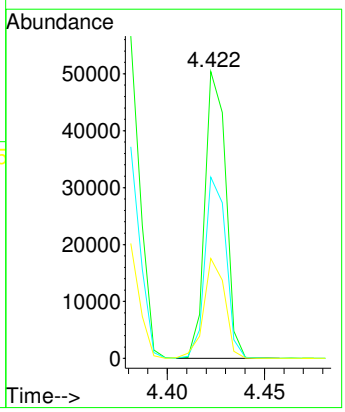


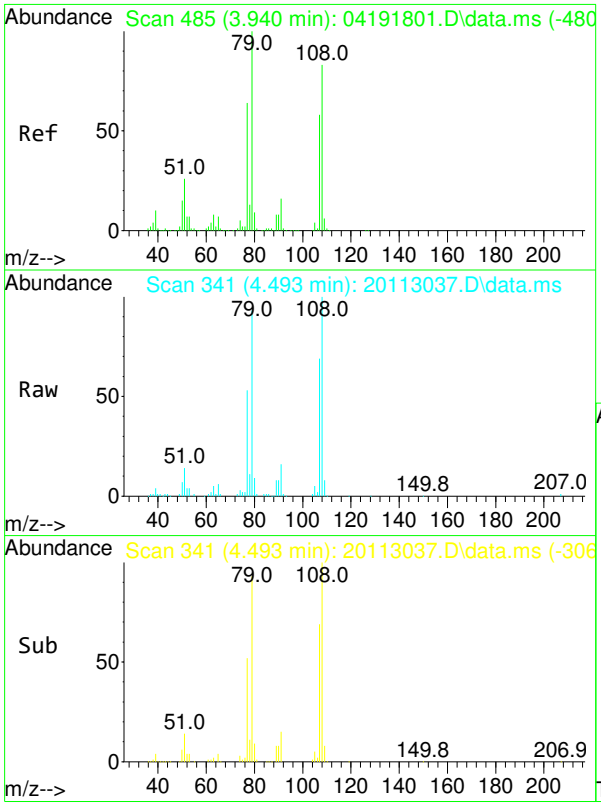


#13
1,4-Dichlorobenzene
Concen: 11.15 ug/ml
RT: 4.422 min Scan# 329
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:146 Resp: 37620

Ion	Ratio	Lower	Upper
146	100		
148	63.9	34.4	94.4
111	35.3	4.4	64.4

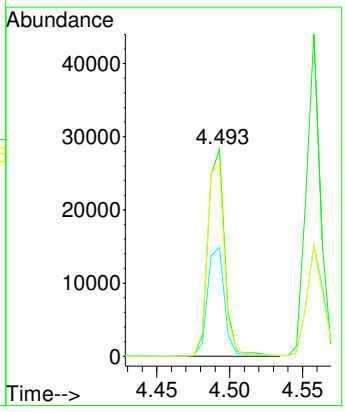


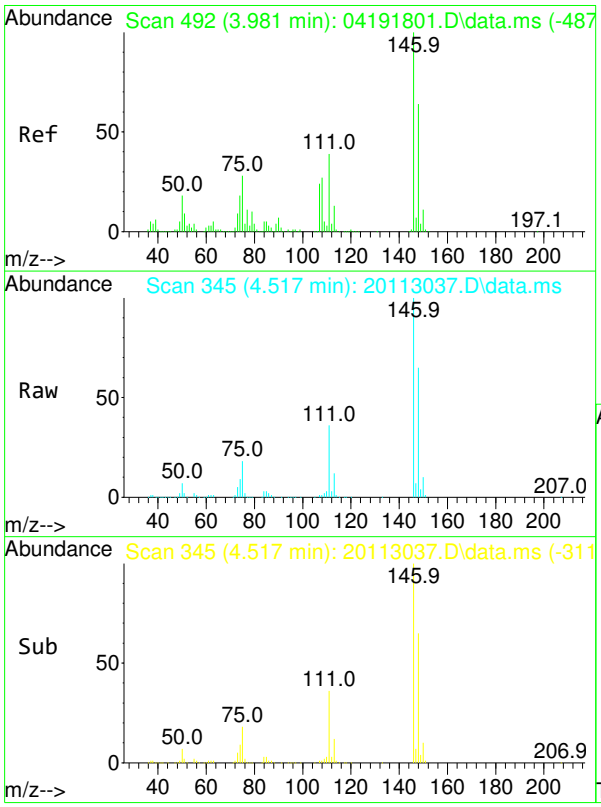


#14
Benzyl alcohol
Concen: 13.81 ug/ml
RT: 4.493 min Scan# 341
Delta R.T. 0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:108 Resp: 22655

Ion	Ratio	Lower	Upper
108	100		
77	54.4	23.7	83.7
79	96.3	63.7	123.7

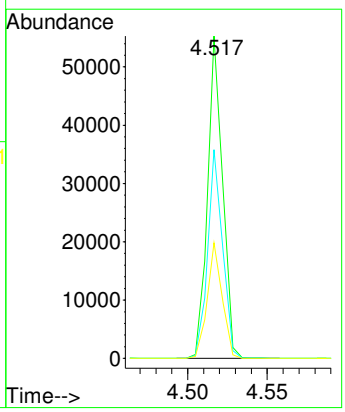


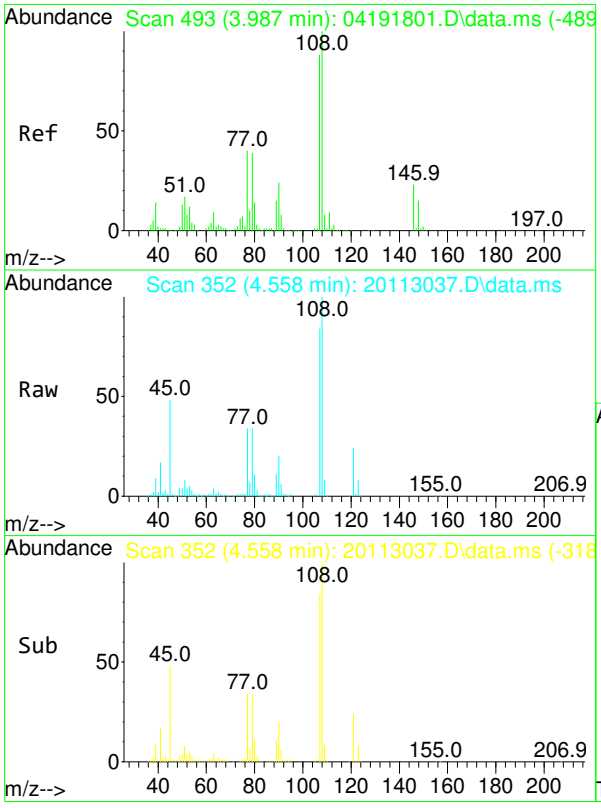


#15
1,2-Dichlorobenzene
Concen: 11.44 ug/ml
RT: 4.517 min Scan# 345
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:146 Resp: 36486

Ion	Ratio	Lower	Upper
146	100		
148	64.1	34.3	94.3
111	35.5	5.6	65.6

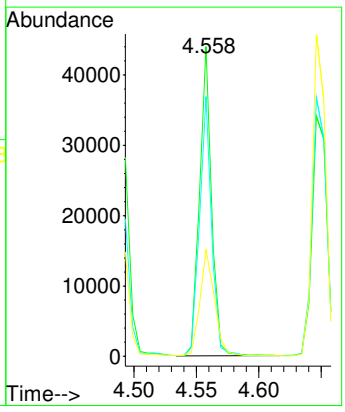


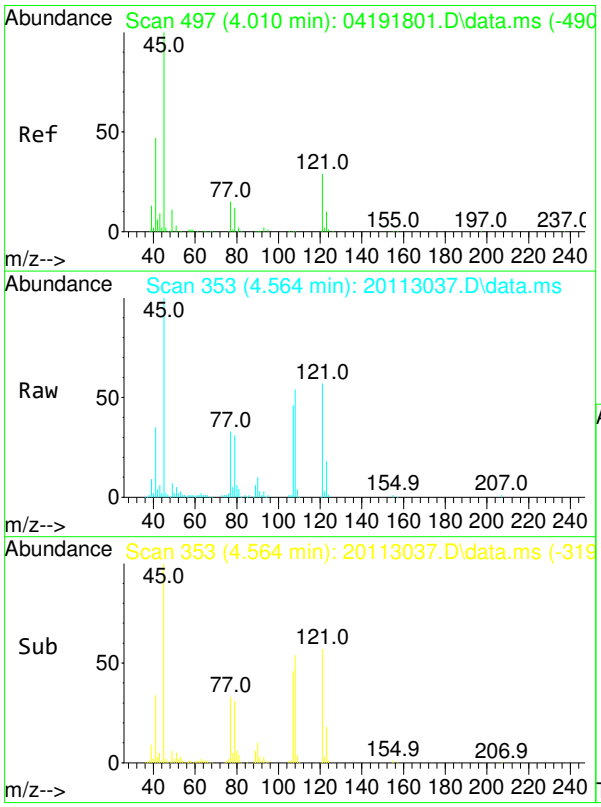


#16
2-Methylphenol
Concen: 12.78 ug/ml
RT: 4.558 min Scan# 352
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:108 Resp: 29492

Ion	Ratio	Lower	Upper
108	100		
107	84.4	56.1	116.1
77	41.7	10.6	70.6

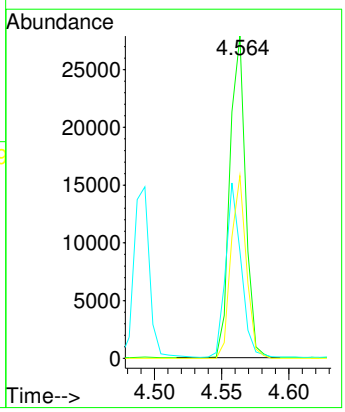


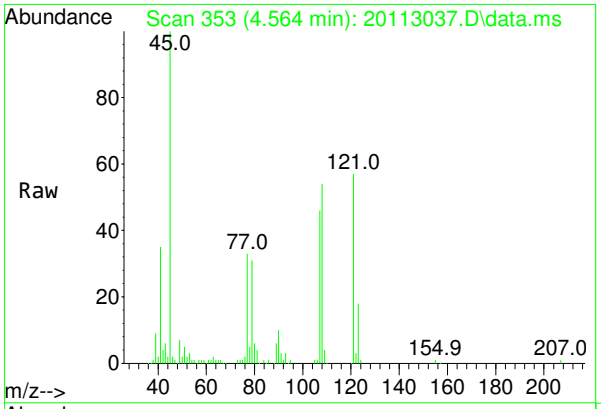


#17
2,2`-Oxybis(1-chloropropane)
Concen: 13.96 ug/ml
RT: 4.564 min Scan# 353
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 45 Resp: 22405

Ion	Ratio	Lower	Upper
45	100		
77	54.9	29.0	89.0
121	55.6	27.7	87.7

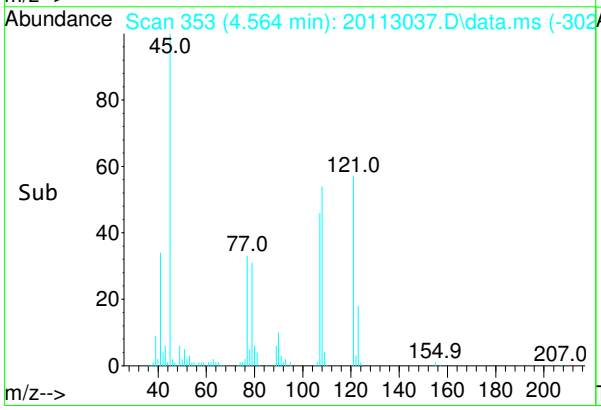


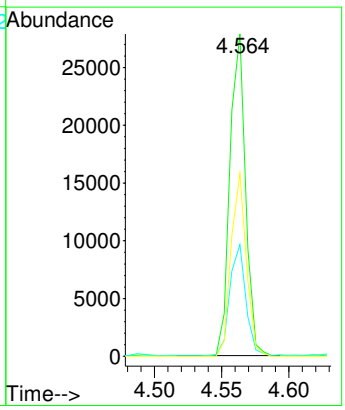


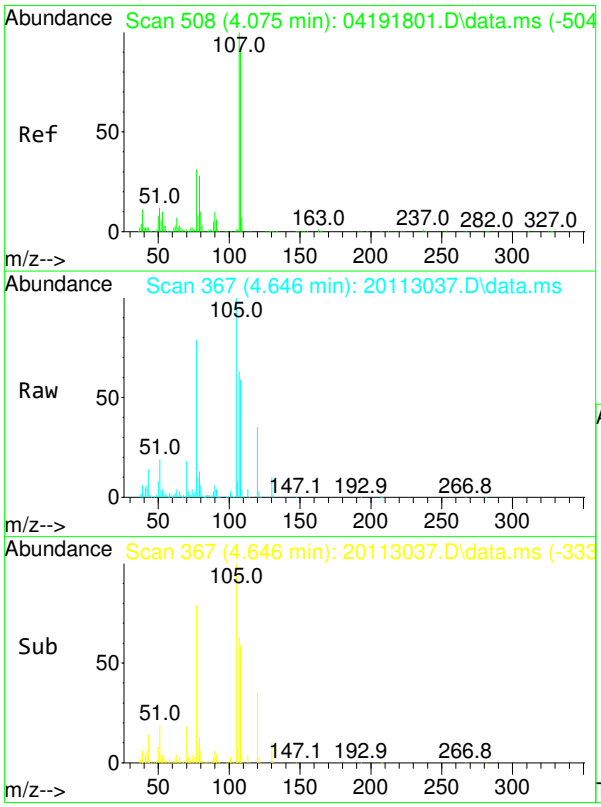
#18
Bis(2-chloroisopropyl)ether
Concen: 13.96 ug/ml
RT: 4.564 min Scan# 353
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 45 Resp: 22405

Ion	Ratio	Lower	Upper
45	100		
41	35.4	25.9	48.1
121	55.6	40.4	75.0



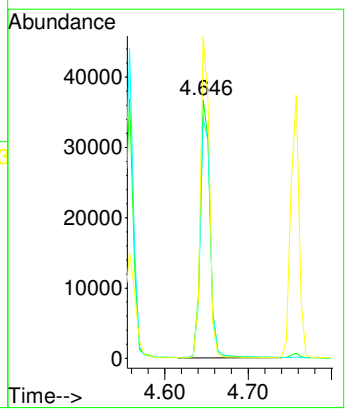


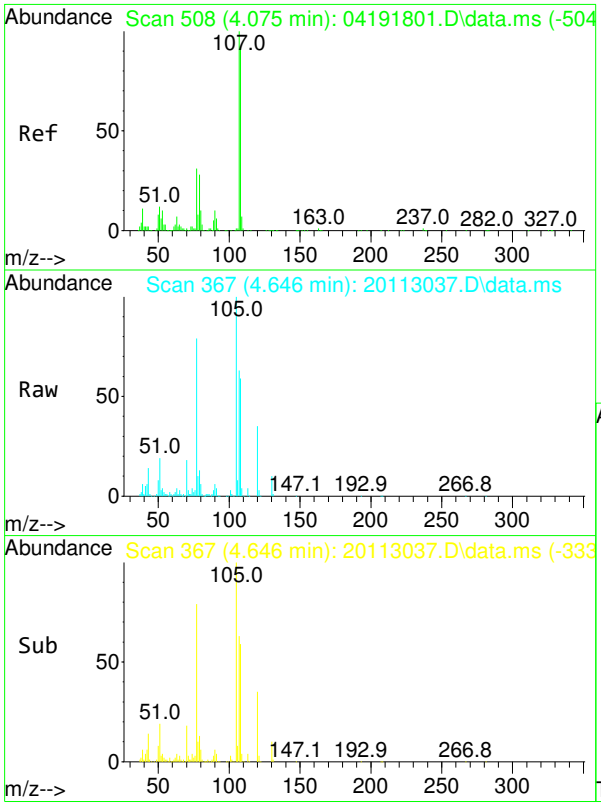


#19
3-Methylphenol
Concen: 12.10 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:107 Resp: 30444

Ion	Ratio	Lower	Upper
107	100		
108	95.2	65.1	125.1
77	112.4	68.3	128.3

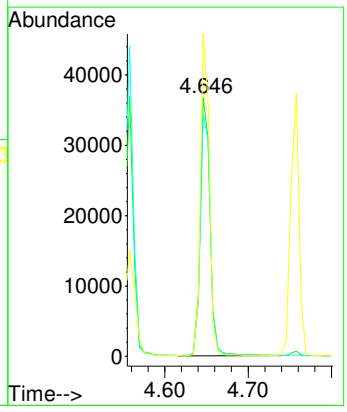


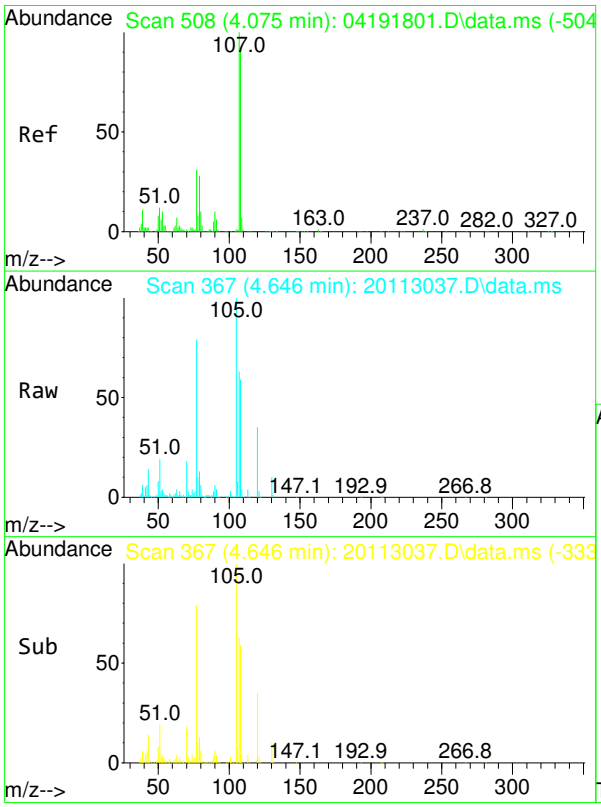


#20
4-Methylphenol
Concen: 12.10 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:107 Resp: 30444

Ion	Ratio	Lower	Upper
107	100		
108	95.2	65.1	125.1
77	112.4	68.3	128.3

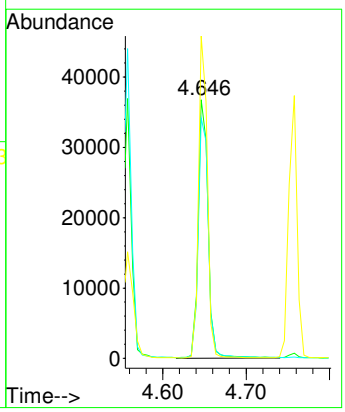


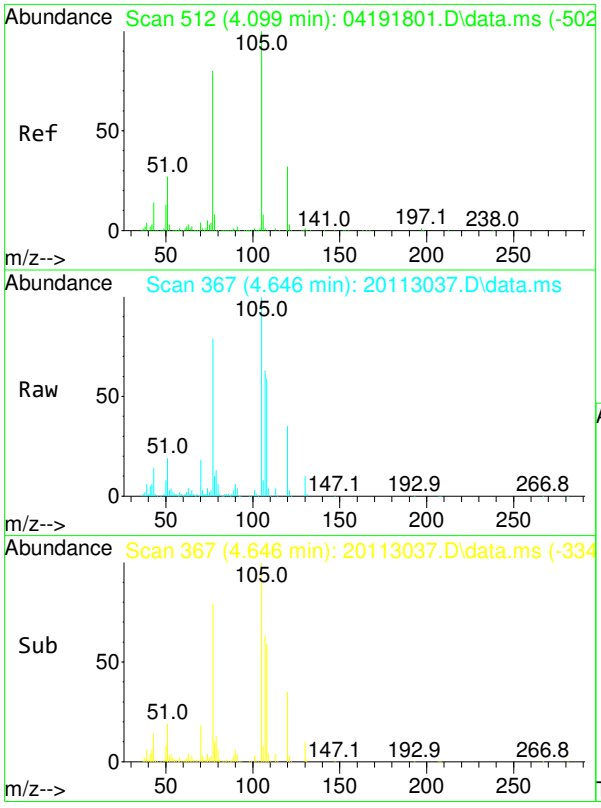


#21
3&4-Methylphenol
Concen: 12.10 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:107 Resp: 30722

Ion	Ratio	Lower	Upper
107	100		
108	98.0	67.0	124.4
77	111.2	68.5	127.1

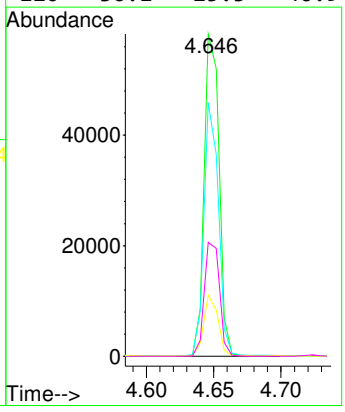


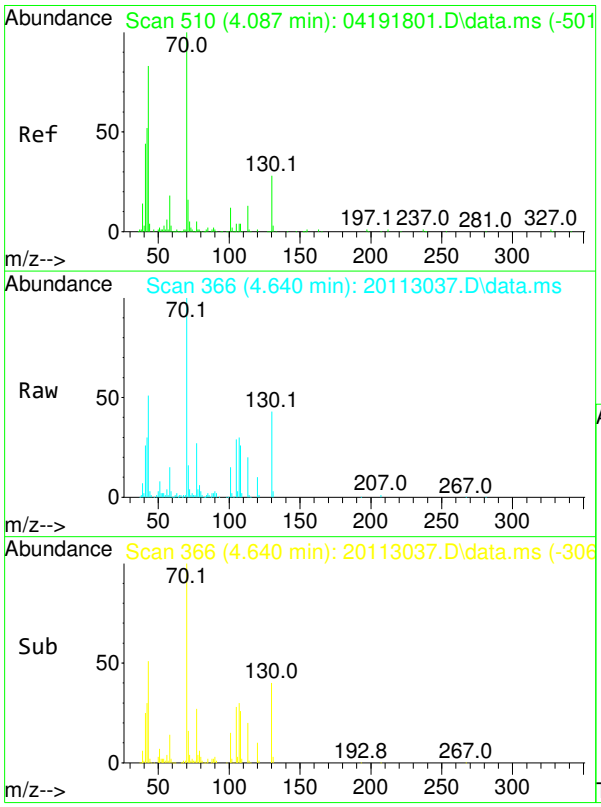


#22
Acetophenone
Concen: 14.19 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:105 Resp: 44867

Ion	Ratio	Lower	Upper
105	100		
77	76.1	55.3	102.7
51	17.9	13.0	24.1
120	36.1	25.3	46.9

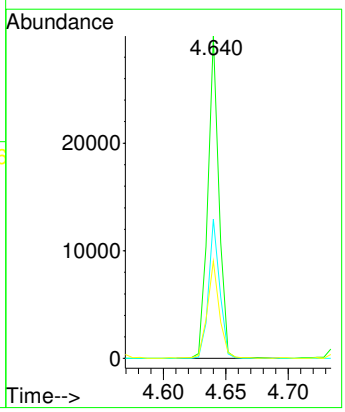


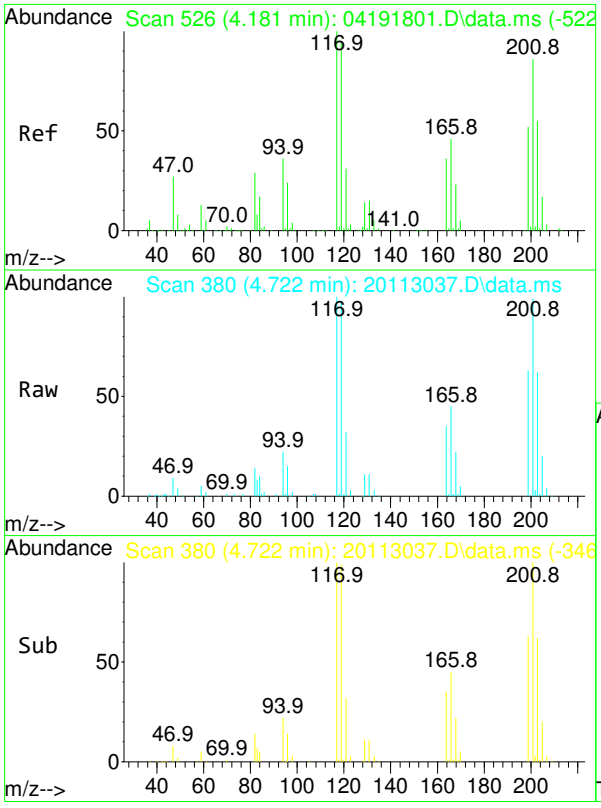


#23
N-Nitrosodi-n-propylamine
Concen: 14.33 ug/ml
RT: 4.640 min Scan# 366
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 70 Resp: 18550

Ion	Ratio	Lower	Upper
70	100		
130	42.9	14.0	74.0
42	33.0	2.7	62.7

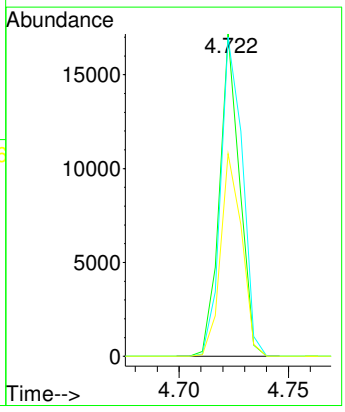


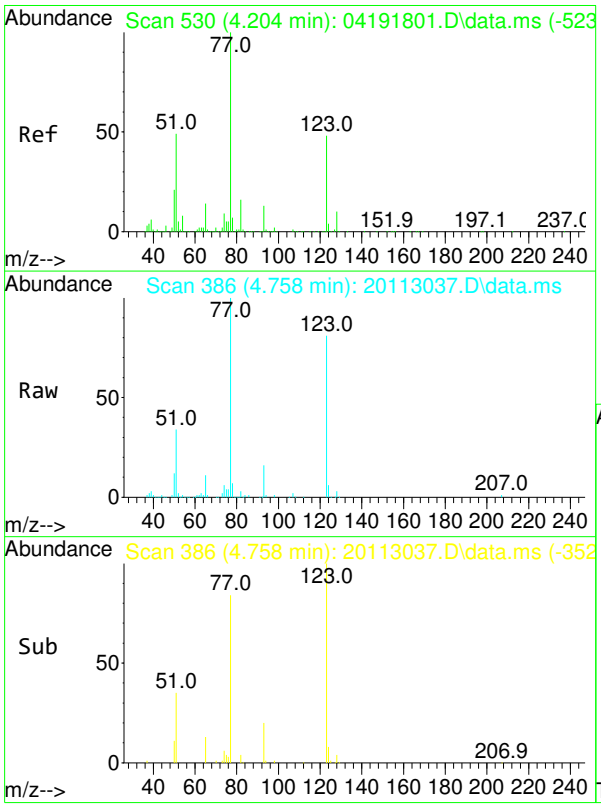


#24
Hexachloroethane
Concen: 10.84 ug/ml
RT: 4.722 min Scan# 380
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:117 Resp: 11044

Ion	Ratio	Lower	Upper
117	100		
201	107.4	81.5	141.5
199	66.2	40.0	100.0

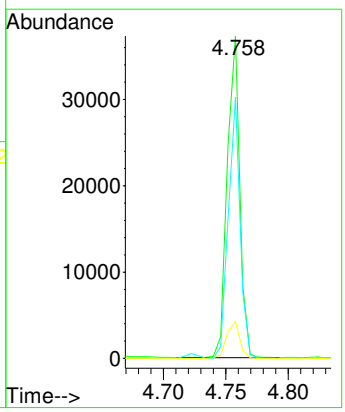


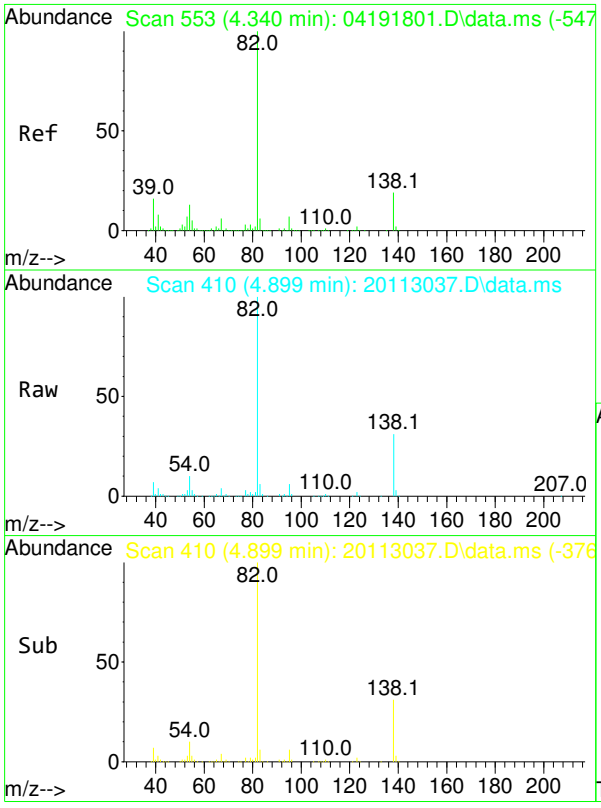


#27
Nitrobenzene
Concen: 14.18 ug/ml
RT: 4.758 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 77 Resp: 25956

Ion	Ratio	Lower	Upper
77	100		
123	76.3	45.3	105.3
65	12.0	0.0	41.6

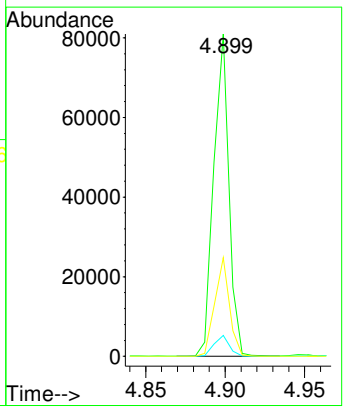


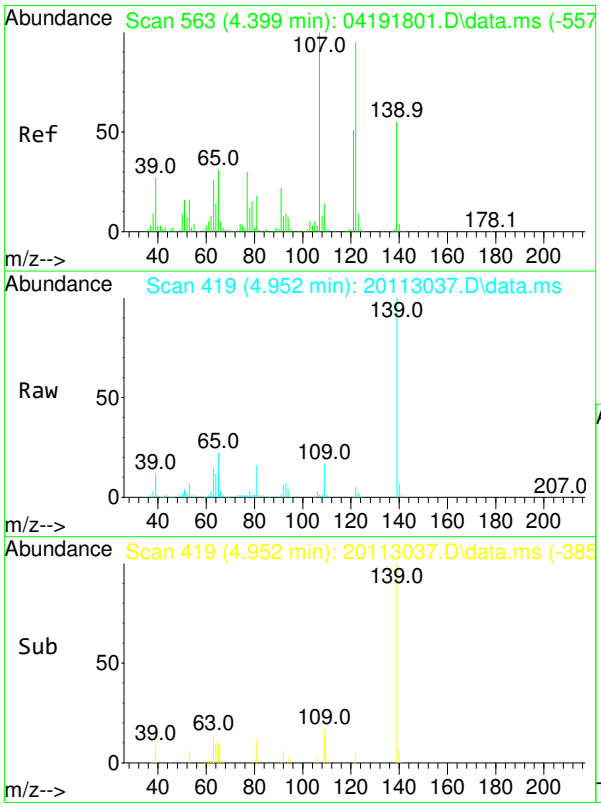


#28
Isophorone
Concen: 14.14 ug/ml
RT: 4.899 min Scan# 410
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 82 Resp: 53750

Ion	Ratio	Lower	Upper
82	100		
95	6.5	0.0	36.4
138	29.5	0.0	58.9

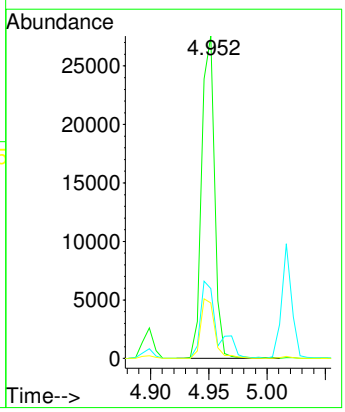


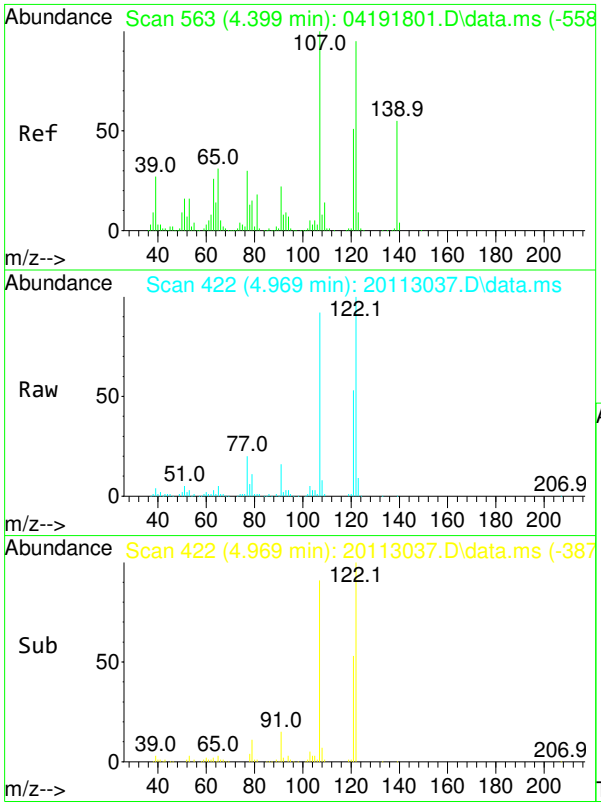


#29
2-Nitrophenol
Concen: 13.63 ug/ml
RT: 4.952 min Scan# 419
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:139 Resp: 21422

Ion	Ratio	Lower	Upper
139	100		
65	31.4	2.3	62.3
109	19.8	0.0	49.8

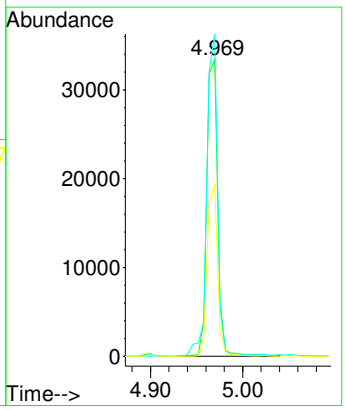


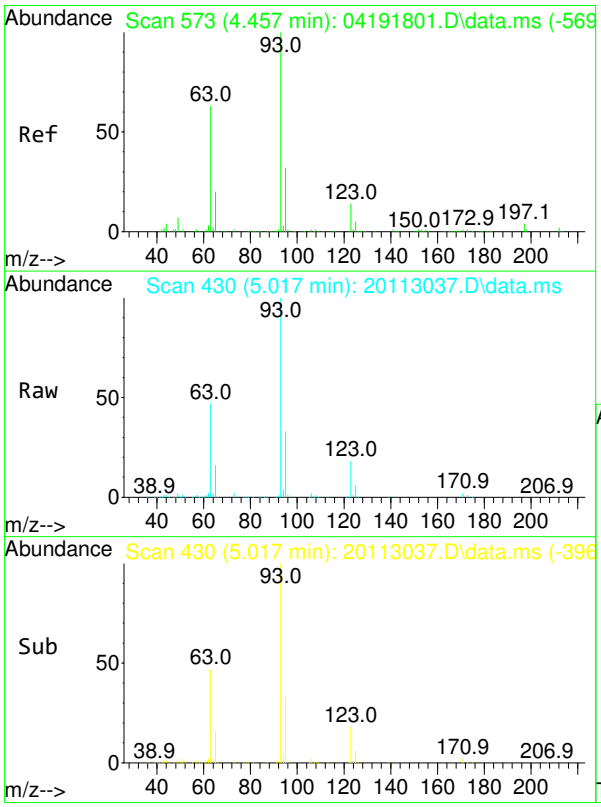


#30
2,4-Dimethylphenol
Concen: 10.95 ug/ml
RT: 4.969 min Scan# 422
Delta R.T. 0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:107 Resp: 27394

Ion	Ratio	Lower	Upper
107	100		
122	107.3	76.7	136.7
121	55.4	25.8	85.8

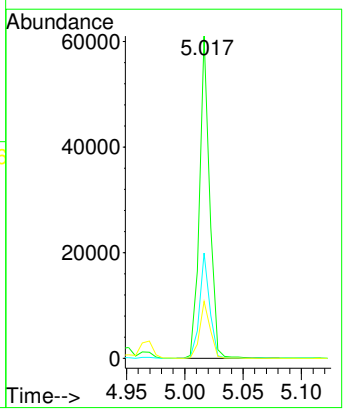


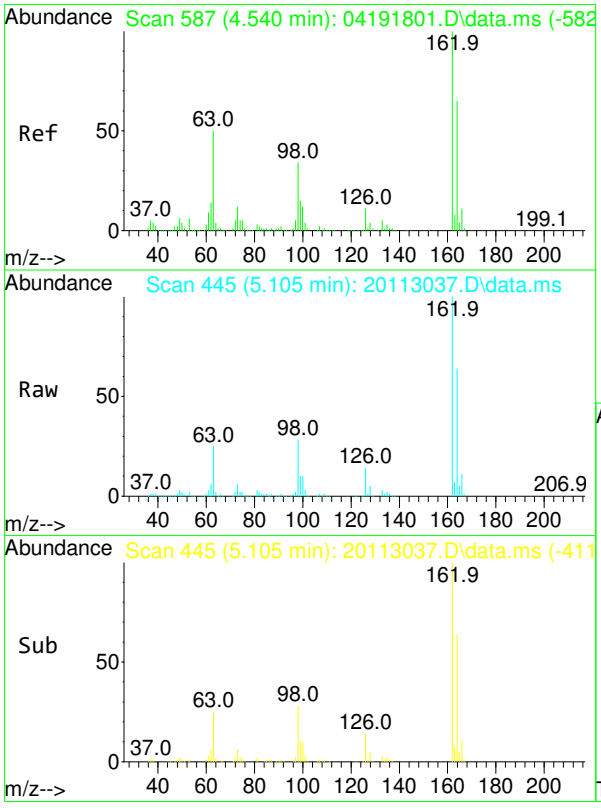


#31
Bis(2-chloroethoxy)met
Concen: 13.76 ug/ml
RT: 5.017 min Scan# 430
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 93 Resp: 37444

Ion	Ratio	Lower	Upper
93	100		
95	32.3	3.1	63.1
123	18.3	0.0	51.5

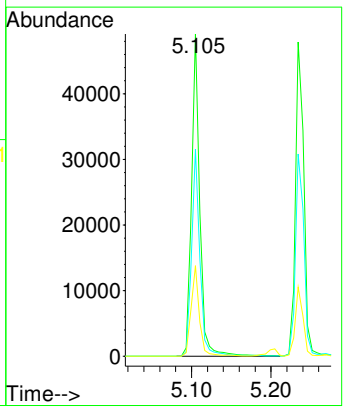


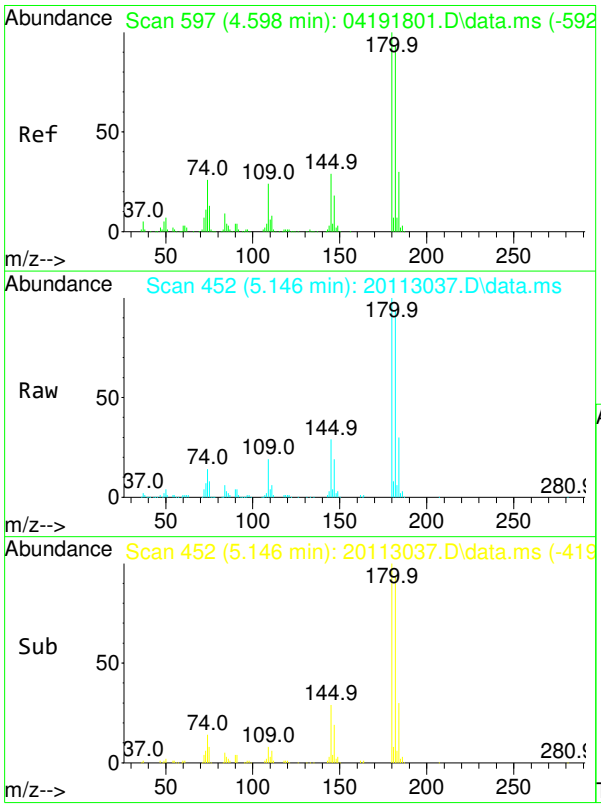


#33
2,4-Dichlorophenol
Concen: 14.08 ug/ml
RT: 5.105 min Scan# 445
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:162 Resp: 35799

Ion	Ratio	Lower	Upper
162	100		
164	65.1	34.3	94.3
98	28.3	0.0	58.1

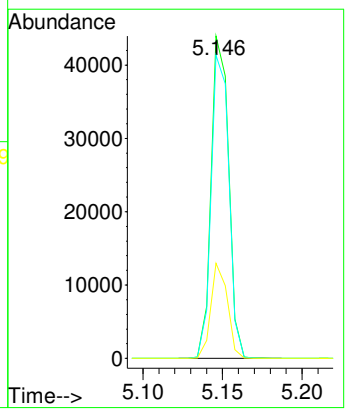


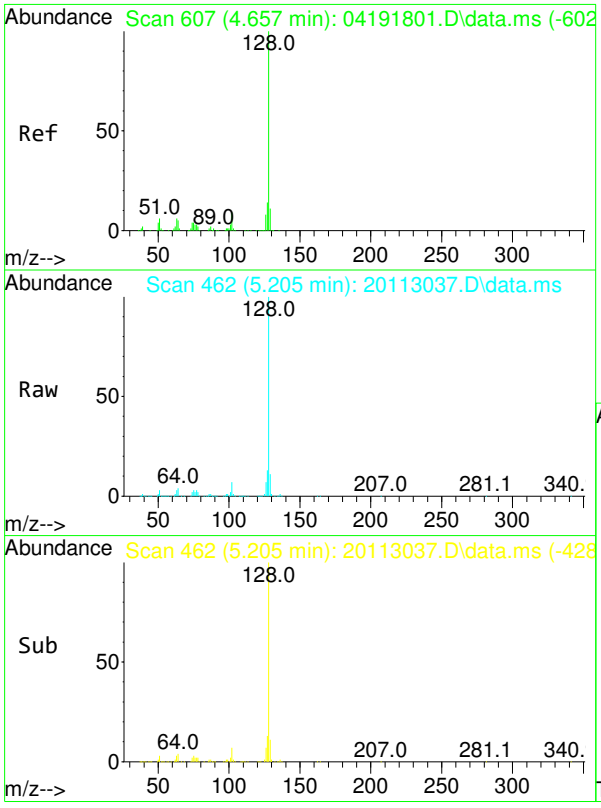


#34
1,2,4-Trichlorobenzene
Concen: 12.64 ug/ml
RT: 5.146 min Scan# 452
Delta R.T. -0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:180 Resp: 33705

Ion	Ratio	Lower	Upper
180	100		
182	95.3	64.8	124.8
145	27.9	0.0	58.2

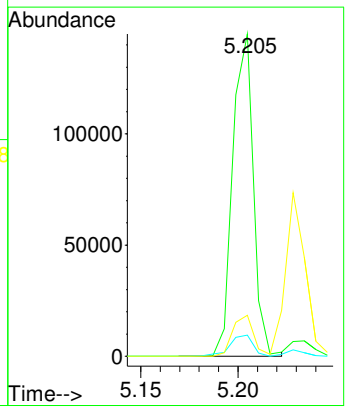


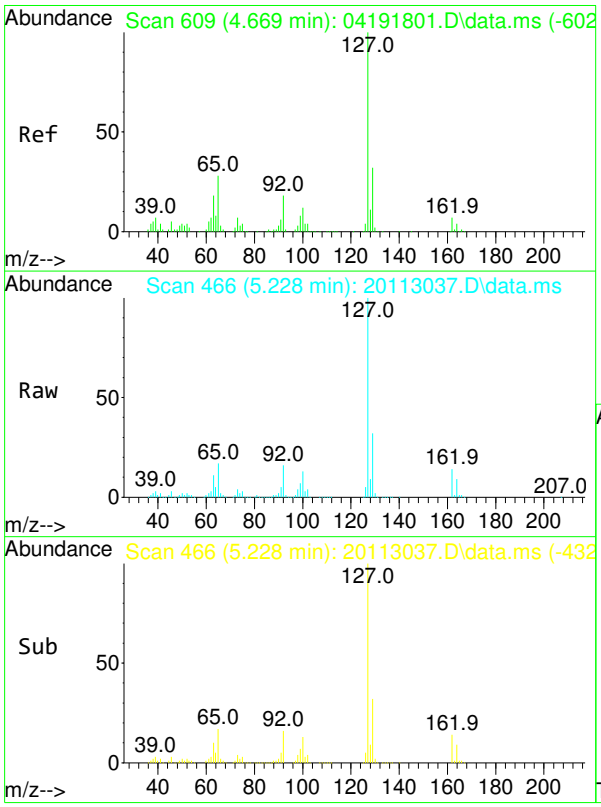


#36
Naphthalene
Concen: 12.64 ug/ml
RT: 5.205 min Scan# 462
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:128 Resp: 107102

Ion	Ratio	Lower	Upper
128	100		
102	7.5	0.0	37.3
127	13.1	0.0	43.2

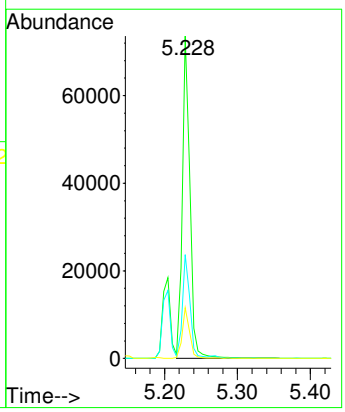


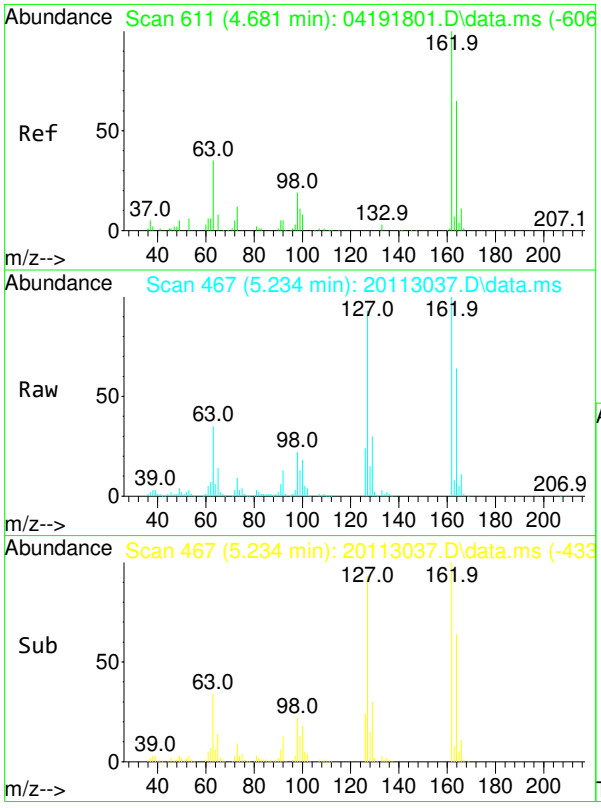


#37
4-Chloroaniline
Concen: 15.37 ug/ml
RT: 5.228 min Scan# 466
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:127 Resp: 53601

Ion	Ratio	Lower	Upper
127	100		
129	30.9	2.3	62.3
92	15.6	0.0	45.7

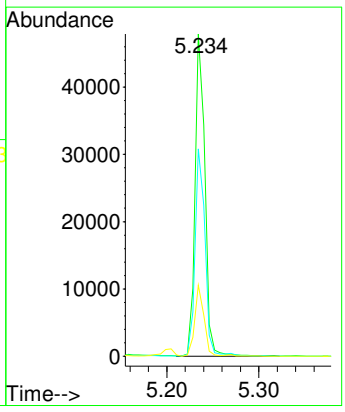


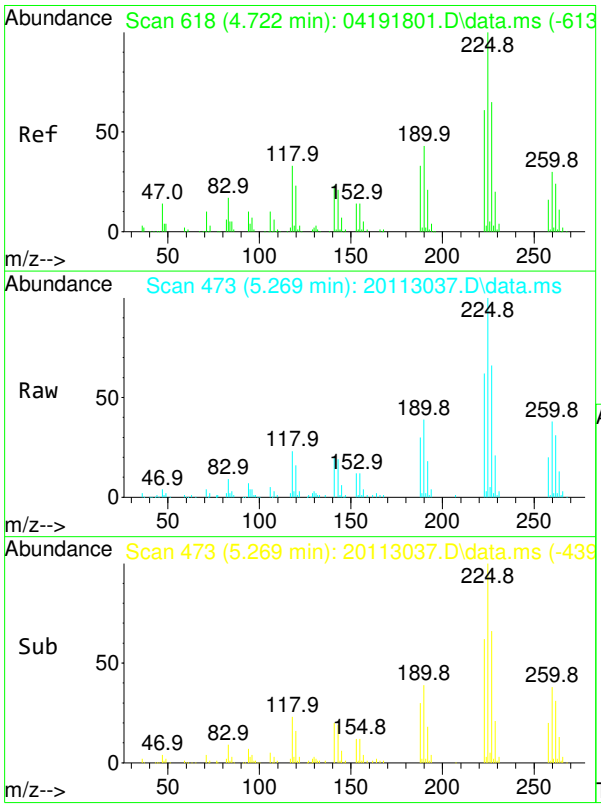


#38
2,6-Dichlorophenol
Concen: 13.66 ug/ml
RT: 5.234 min Scan# 467
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:162 Resp: 35549

Ion	Ratio	Lower	Upper
162	100		
164	65.3	45.7	84.9
98	21.3	14.2	26.4

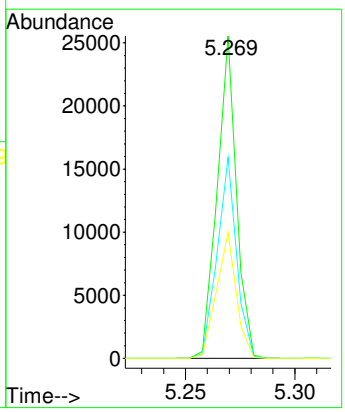


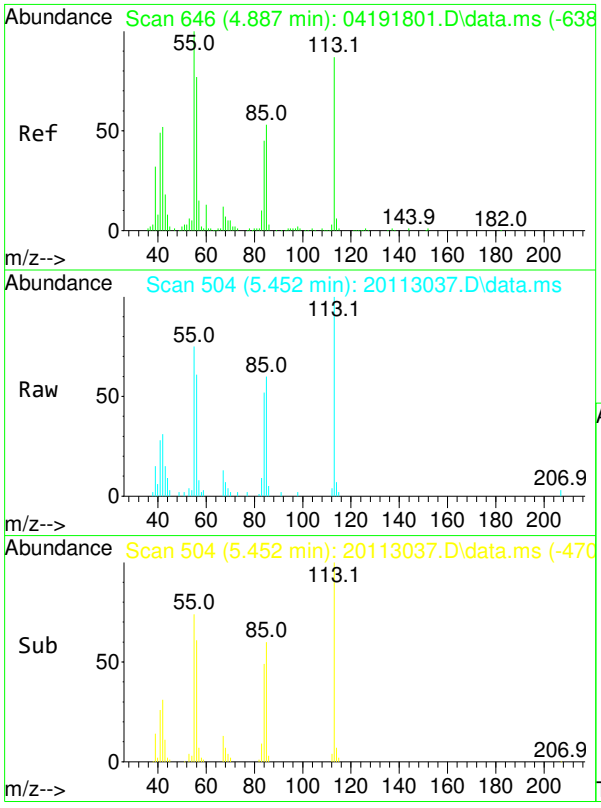


#39
Hexachlorobutadiene
Concen: 11.59 ug/ml
RT: 5.269 min Scan# 473
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:225 Resp: 15731

Ion	Ratio	Lower	Upper
225	100		
223	62.8	31.6	91.6
190	40.0	9.1	69.1

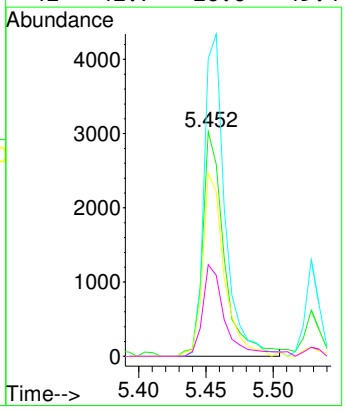


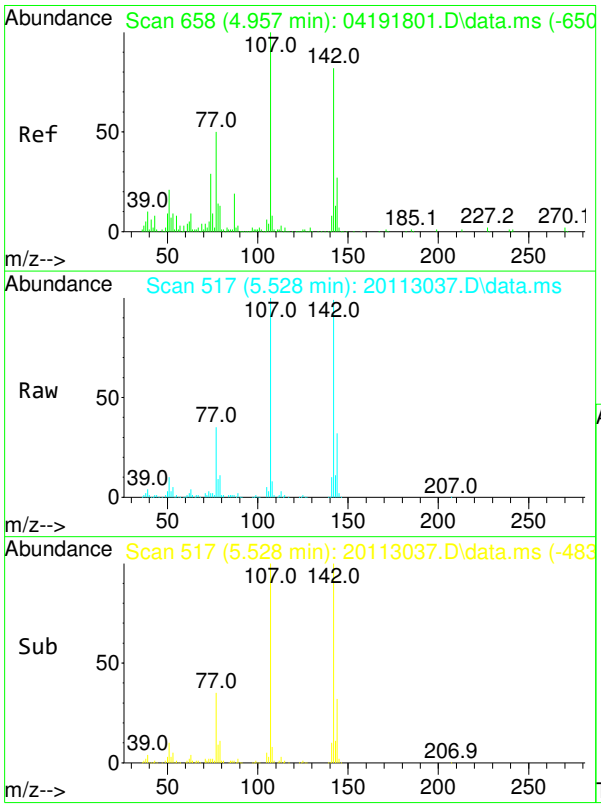


#40
Caprolactam
Concen: 4.97 ug/ml
RT: 5.452 min Scan# 504
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 55 Resp: 3371

Ion	Ratio	Lower	Upper
55	100		
113	137.9	100.4	186.6
56	81.3	56.8	105.6
42	42.7	26.6	49.4

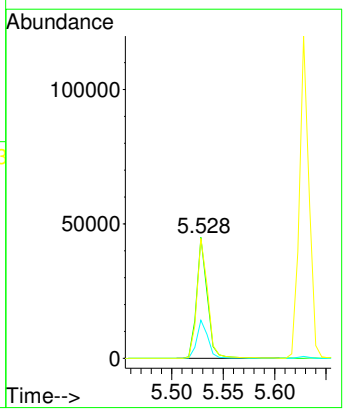


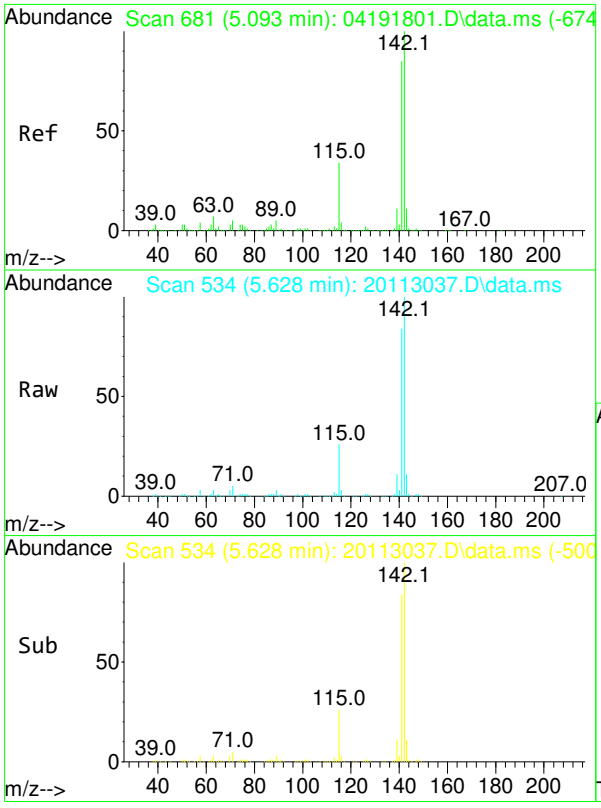


#41
4-Chloro-3-methylphenol
Concen: 15.41 ug/ml
RT: 5.528 min Scan# 517
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:107 Resp: 32710

Ion	Ratio	Lower	Upper
107	100		
144	32.6	2.8	62.8
142	100.9	69.4	129.4

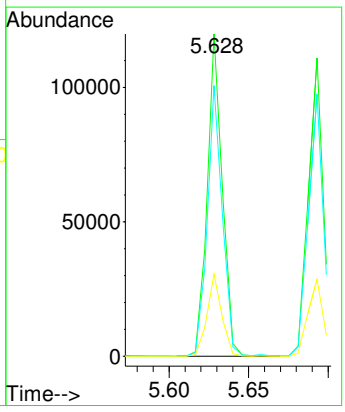


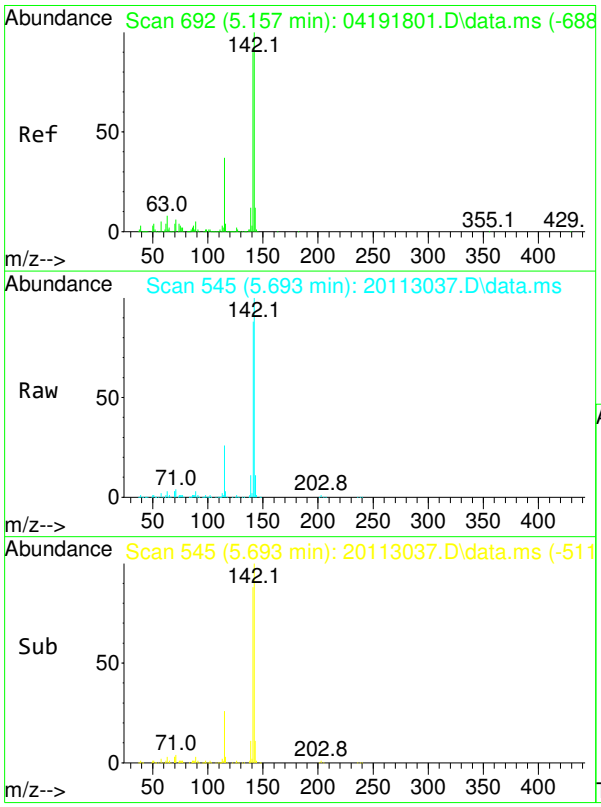


#42
2-Methylnaphthalene
Concen: 13.36 ug/ml
RT: 5.628 min Scan# 534
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:142 Resp: 79164

Ion	Ratio	Lower	Upper
142	100		
141	83.9	59.2	110.0
115	25.0	18.0	33.4

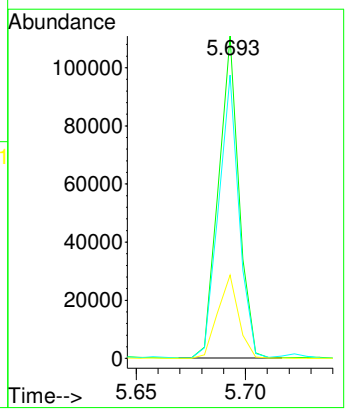


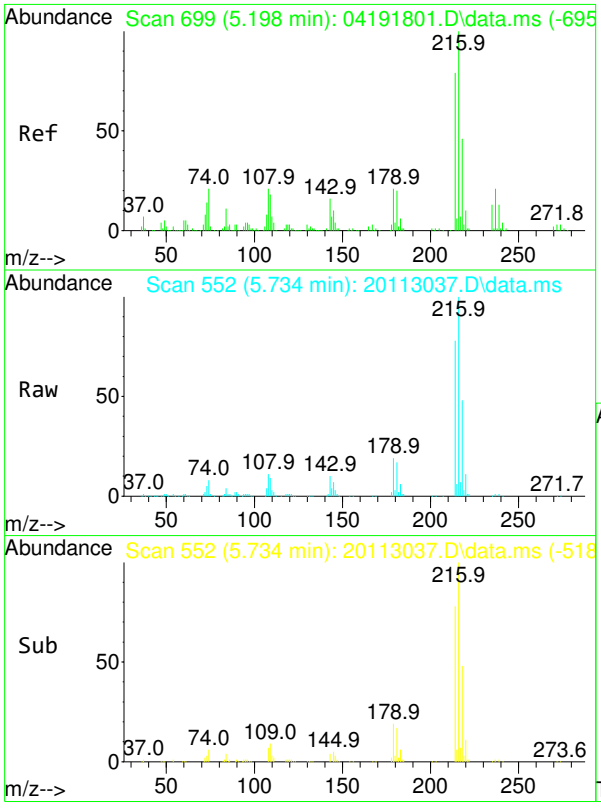


#43
1-Methylnaphthalene
Concen: 13.10 ug/ml
RT: 5.693 min Scan# 545
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:142 Resp: 72510

Ion	Ratio	Lower	Upper
142	100		
141	87.8	58.8	118.8
115	26.5	0.0	57.0

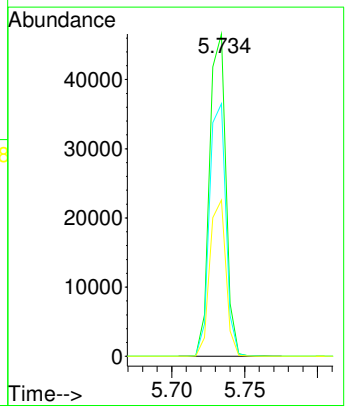


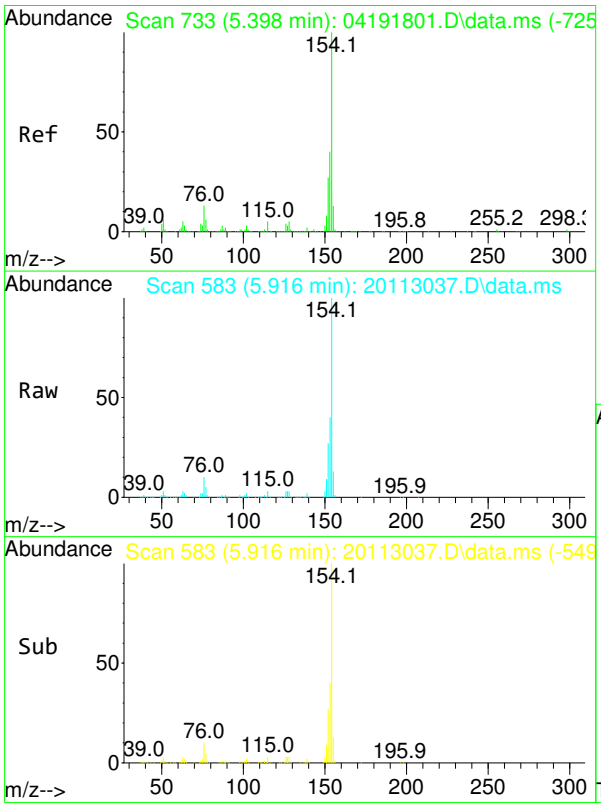


#44
1,2,4,5-Tetrachlorobenzene
Concen: 12.36 ug/ml
RT: 5.734 min Scan# 552
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:216 Resp: 36279

Ion	Ratio	Lower	Upper
216	100		
214	79.2	54.7	101.5
218	47.9	33.2	61.7

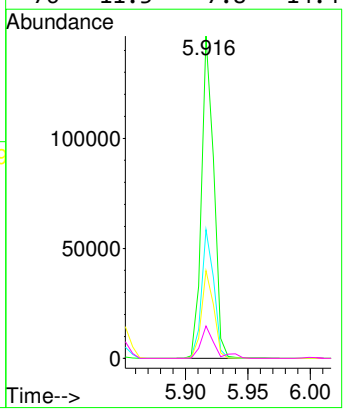


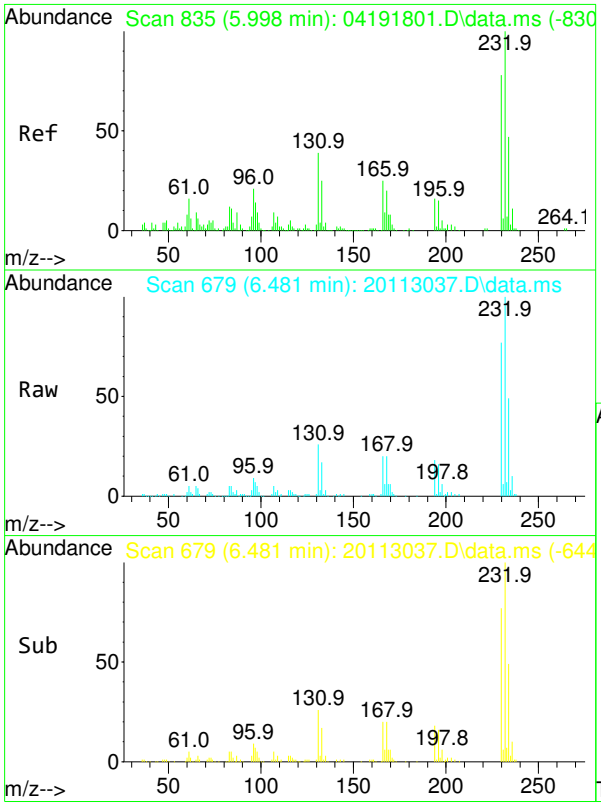


#45
1,1-Biphenyl
Concen: 13.61 ug/ml
RT: 5.916 min Scan# 583
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:154 Resp: 100024

Ion	Ratio	Lower	Upper
154	100		
153	40.2	28.3	52.5
152	27.3	19.4	36.0
76	11.3	7.8	14.4

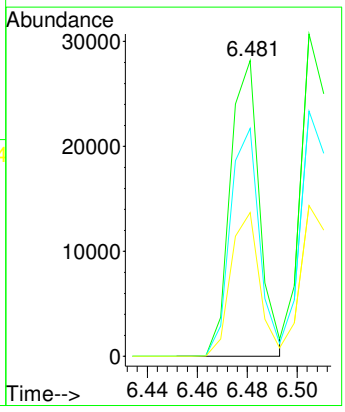


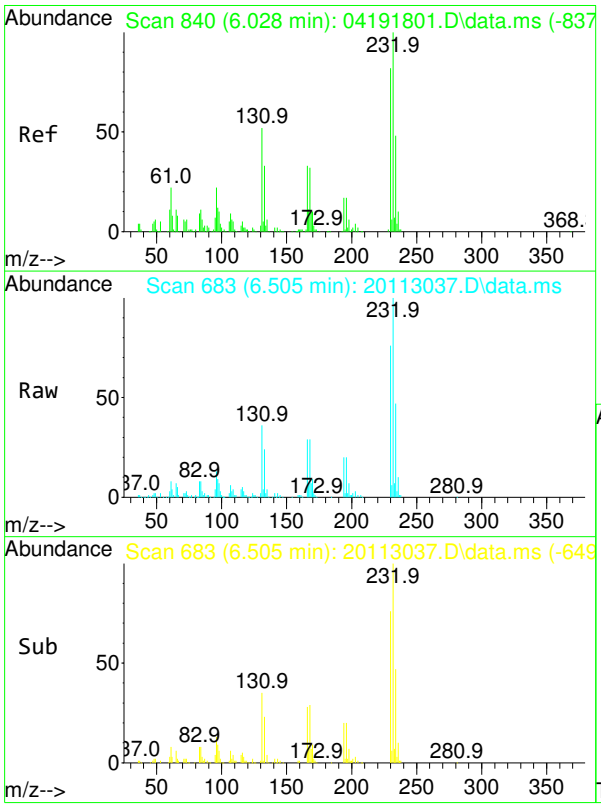


#46
2,3,5,6-Tetrachlorophenol
Concen: 14.90 ug/ml
RT: 6.481 min Scan# 679
Delta R.T. 0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:232 Resp: 22814

Ion	Ratio	Lower	Upper
232	100		
230	77.4	61.4	92.0
234	48.2	37.7	56.5

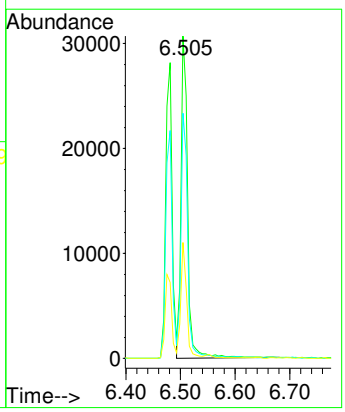


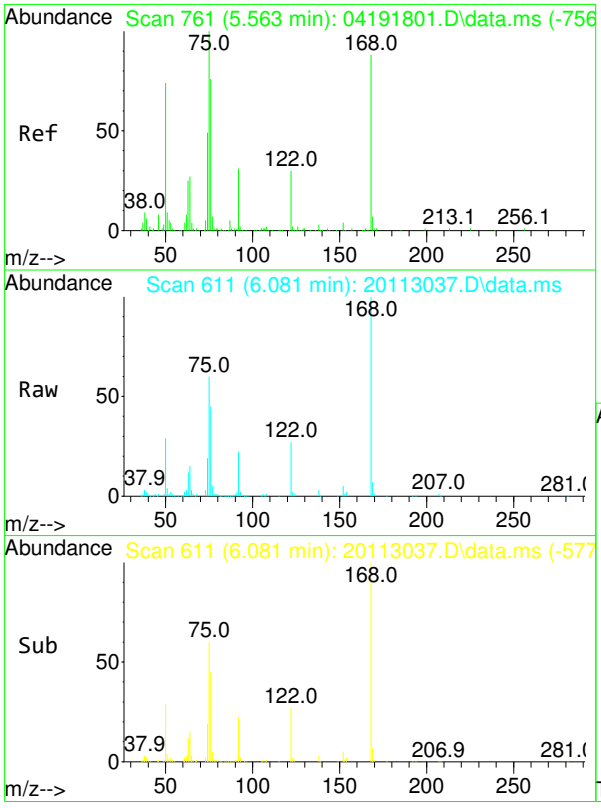


#47
2,3,4,6-Tetrachlorophenol
Concen: 15.09 ug/ml
RT: 6.505 min Scan# 683
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:232 Resp: 25796

Ion	Ratio	Lower	Upper
232	100		
230	77.0	63.6	95.4
131	31.9	25.3	37.9

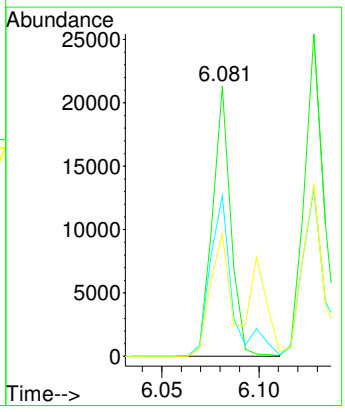


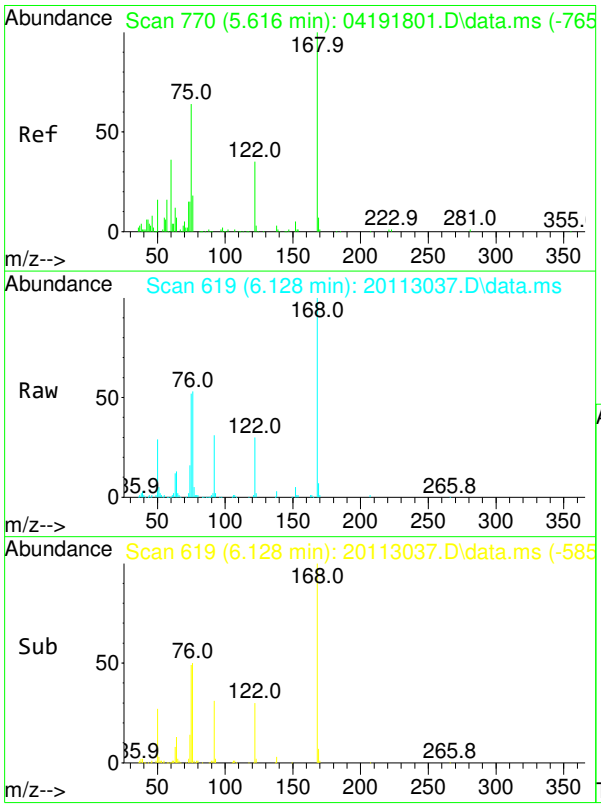


#48
1,4-Dinitrobenzene
Concen: 14.84 ug/ml
RT: 6.081 min Scan# 611
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:168 Resp: 13912

Ion	Ratio	Lower	Upper
168	100		
75	72.7	49.5	91.9
76	53.8	36.3	67.3

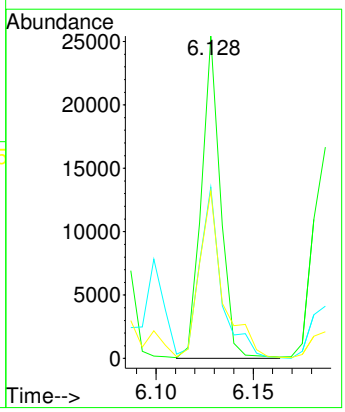


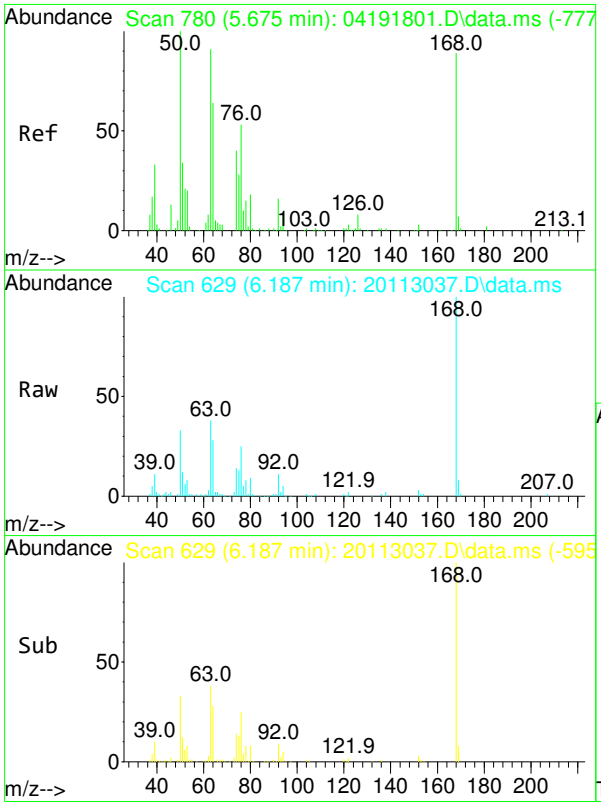


#49
1,3-Dinitrobenzene
Concen: 15.06 ug/ml
RT: 6.128 min Scan# 619
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:168 Resp: 17454

Ion	Ratio	Lower	Upper
168	100		
76	61.4	48.9	73.3
75	64.0	51.8	77.8

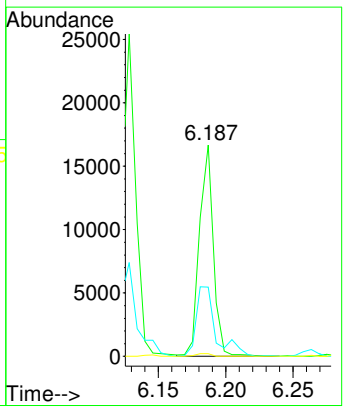


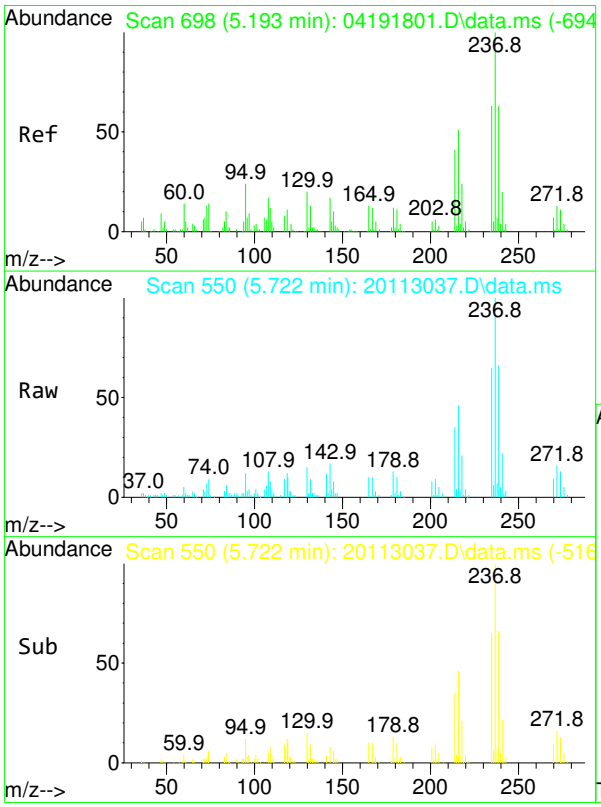


#50
1,2-Dinitrobenzene
Concen: 14.67 ug/ml
RT: 6.187 min Scan# 629
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:168 Resp: 12015

Ion	Ratio	Lower	Upper
168	100		
50	46.3	31.5	47.3
68	1.4	1.2	1.8

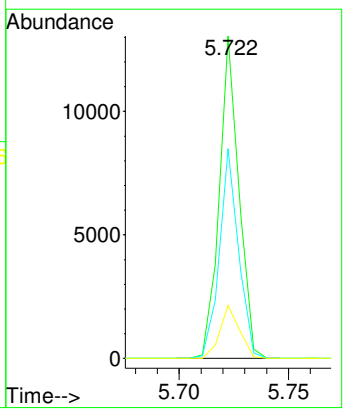


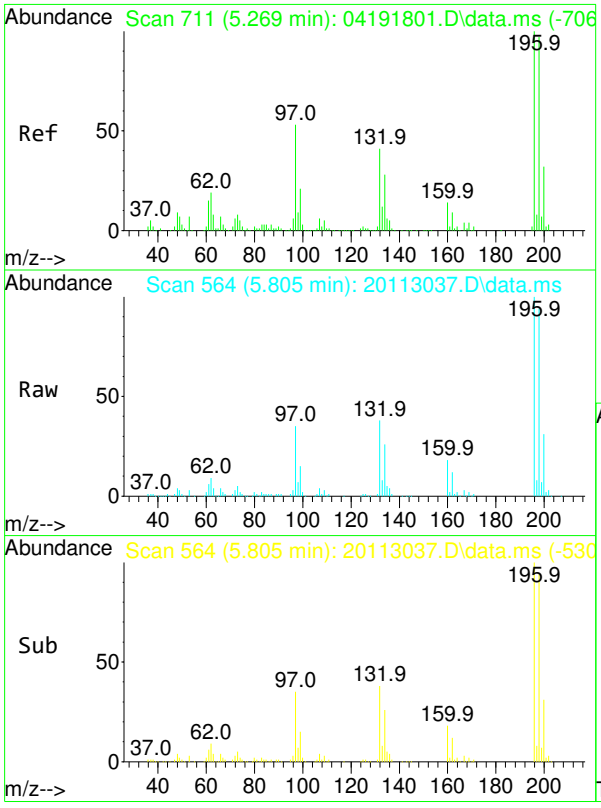


#52
Hexachlorocyclopentadiene
Concen: 6.40 ug/ml
RT: 5.722 min Scan# 550
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:237 Resp: 8174

Ion	Ratio	Lower	Upper
237	100		
235	63.4	31.9	91.9
272	16.4	0.0	46.1

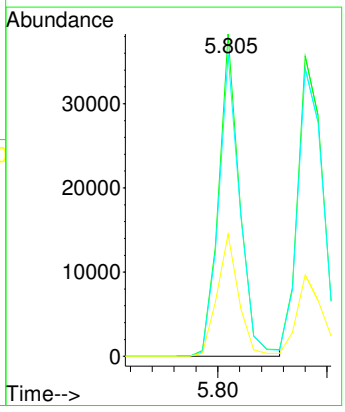


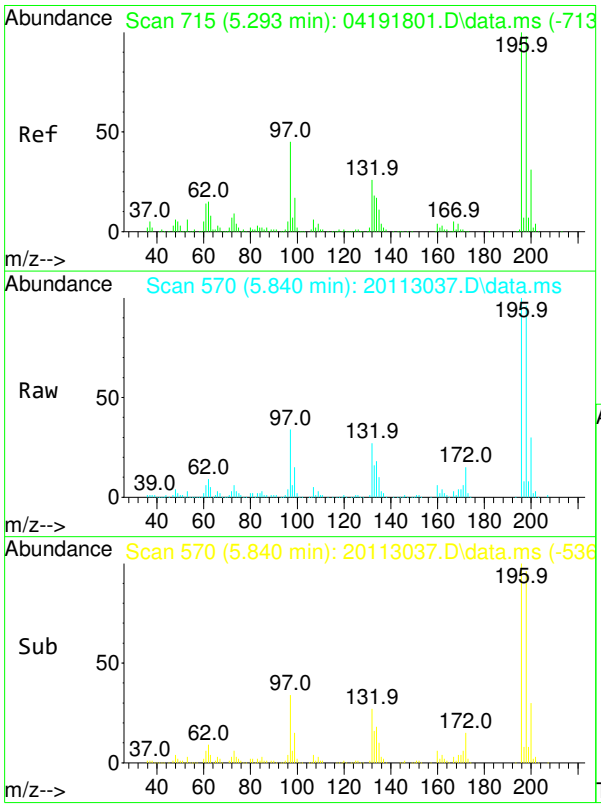


#53
2,4,6-Trichlorophenol
Concen: 13.81 ug/ml
RT: 5.805 min Scan# 564
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:196 Resp: 25730

Ion	Ratio	Lower	Upper
196	100		
198	95.1	67.1	127.1
132	38.5	8.9	68.9

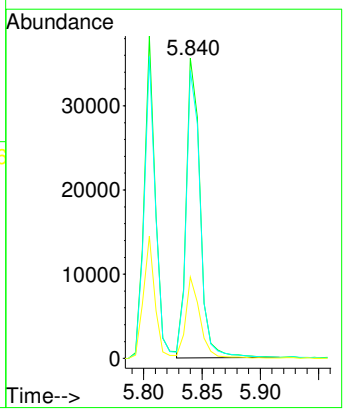


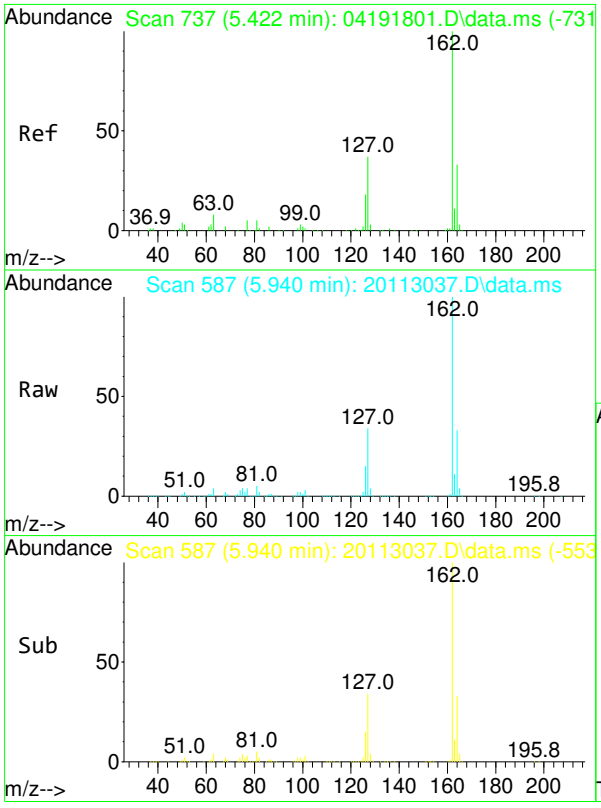


#54
2,4,5-Trichlorophenol
Concen: 14.76 ug/ml
RT: 5.840 min Scan# 570
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:196 Resp: 29352

Ion	Ratio	Lower	Upper
196	100		
198	97.0	66.4	126.4
132	28.2	0.0	55.8

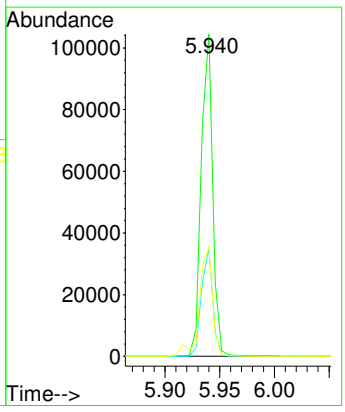


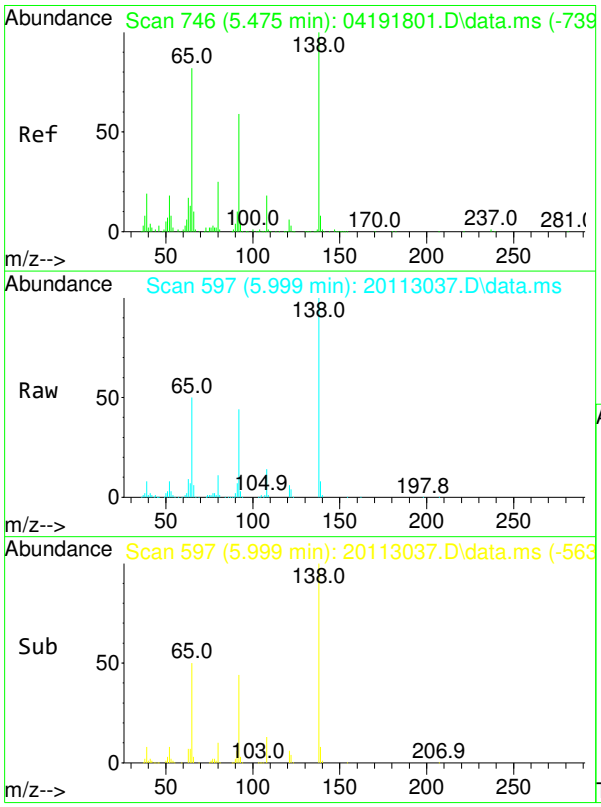


#56
2-Chloronaphthalene
Concen: 13.01 ug/ml
RT: 5.940 min Scan# 587
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:162 Resp: 76410

Ion	Ratio	Lower	Upper
162	100		
164	32.6	2.5	62.5
127	38.6	8.8	68.8

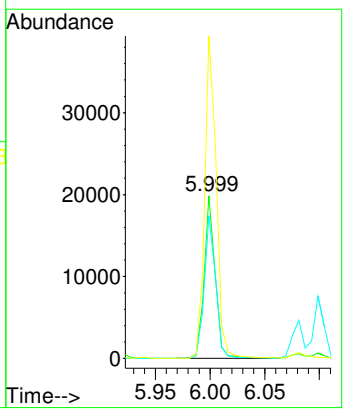


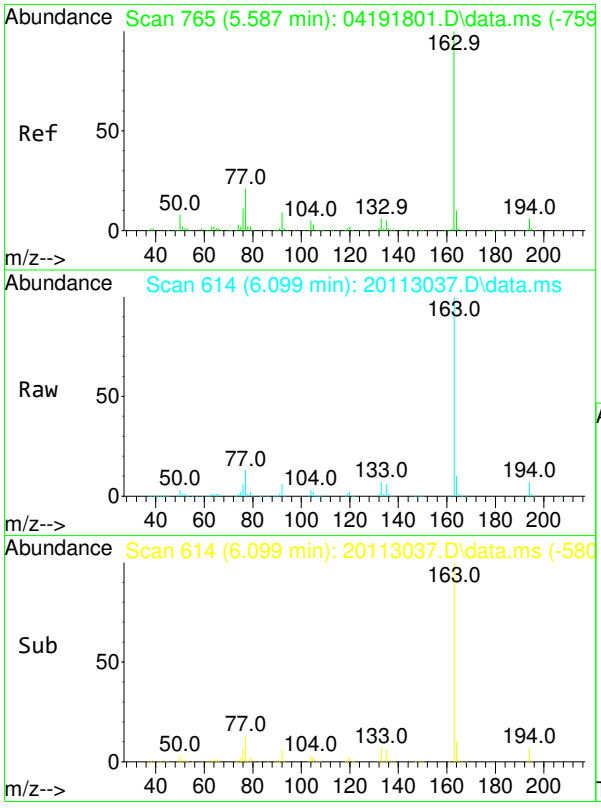


#57
2-Nitroaniline
Concen: 14.51 ug/ml
RT: 5.999 min Scan# 597
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 65 Resp: 14025

Ion	Ratio	Lower	Upper
65	100		
92	90.3	61.5	121.5
138	207.7	178.5	238.5

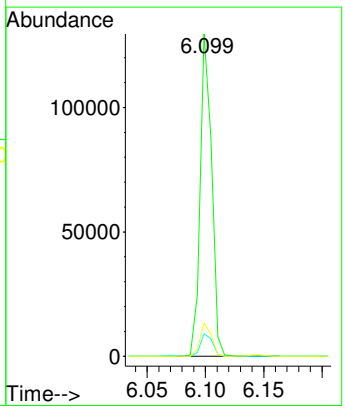


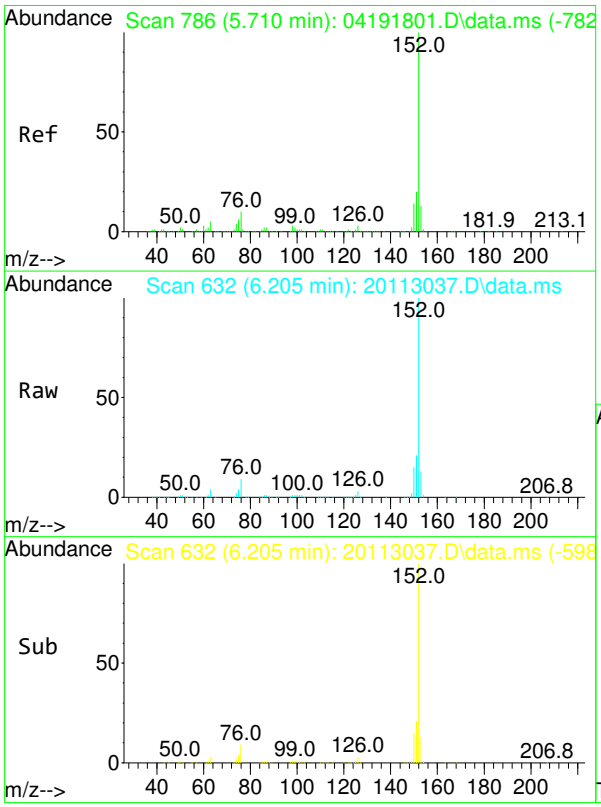


#58
Dimethylphthalate
Concen: 14.52 ug/ml
RT: 6.099 min Scan# 614
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:163 Resp: 89228

Ion	Ratio	Lower	Upper
163	100		
194	7.3	0.0	37.5
164	10.3	0.0	40.3

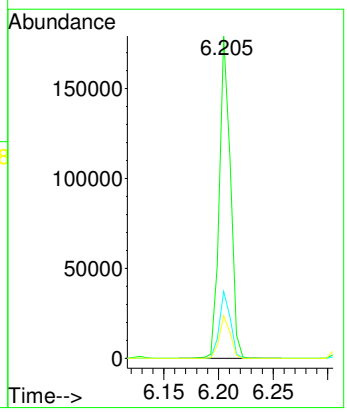


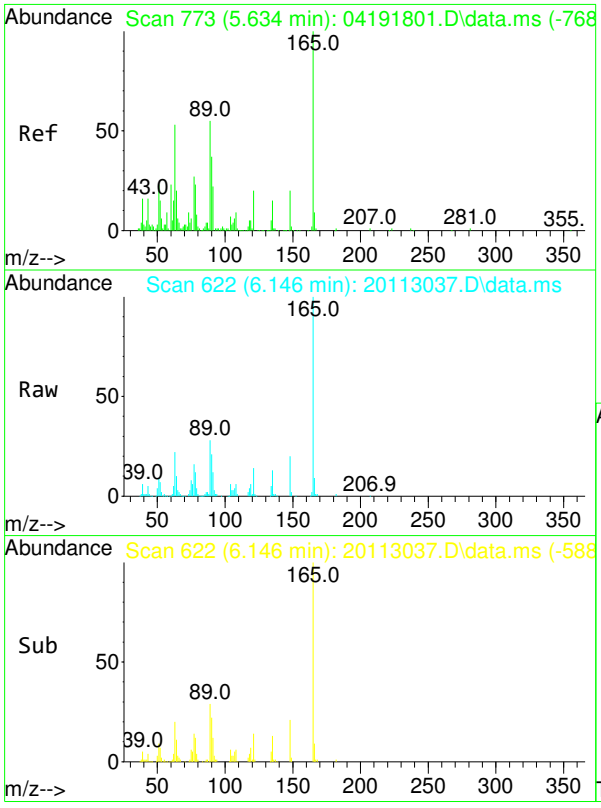


#59
Acenaphthylene
Concen: 14.34 ug/ml
RT: 6.205 min Scan# 632
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:152 Resp: 126833

Ion	Ratio	Lower	Upper
152	100		
151	20.7	0.0	50.6
153	13.2	0.0	43.1

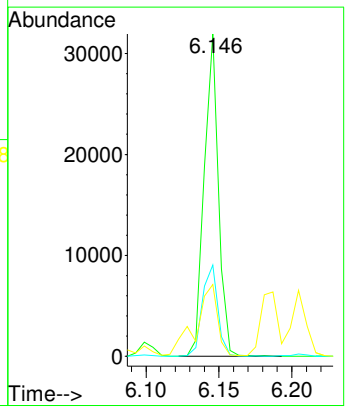


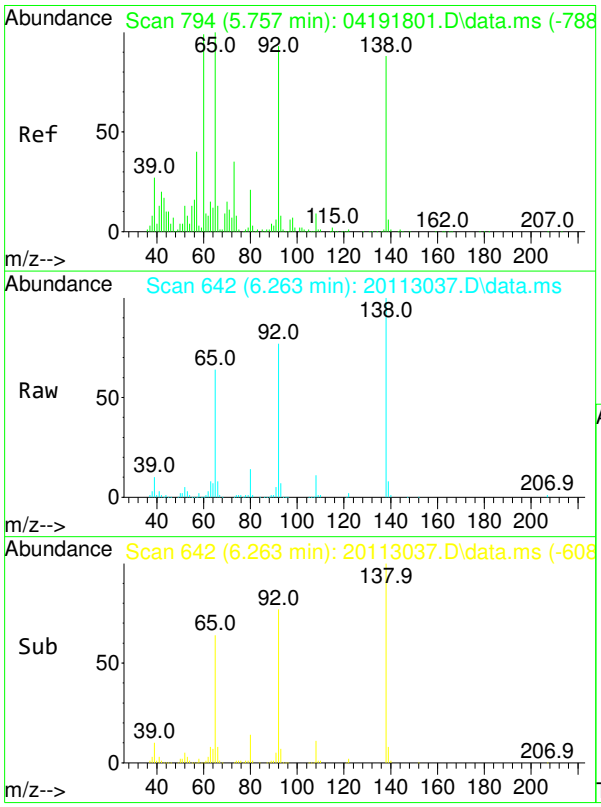


#60
2,6-Dinitrotoluene
Concen: 14.05 ug/ml
RT: 6.146 min Scan# 622
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:165 Resp: 21867

Ion	Ratio	Lower	Upper
165	100		
89	30.9	0.9	60.9
63	33.0	1.9	61.9

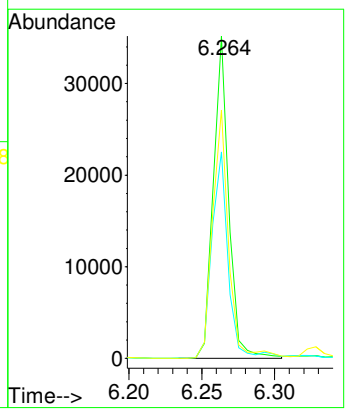


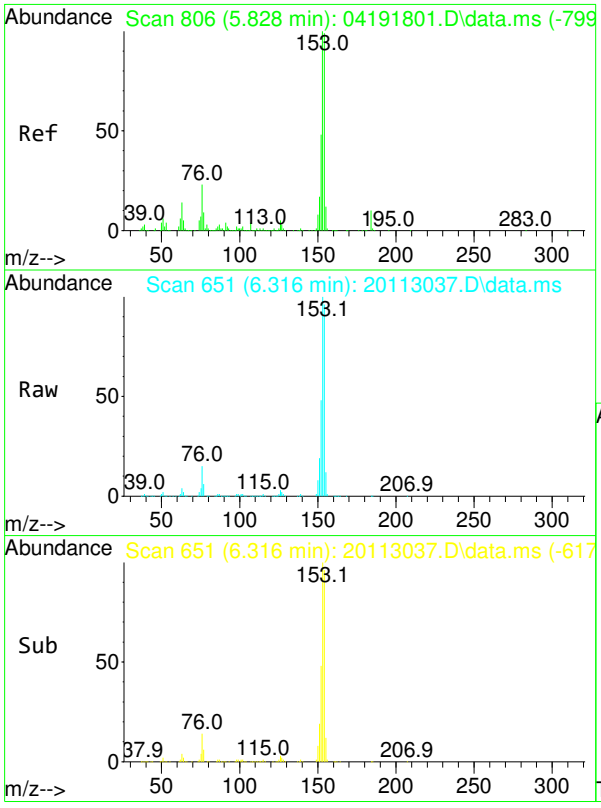


#61
3-Nitroaniline
Concen: 14.84 ug/ml
RT: 6.263 min Scan# 642
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:138 Resp: 25818

Ion	Ratio	Lower	Upper
138	100		
65	65.7	38.4	98.4
92	80.4	50.1	110.1

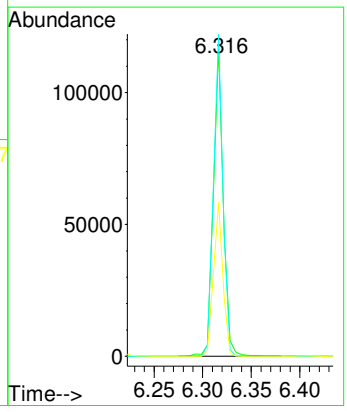


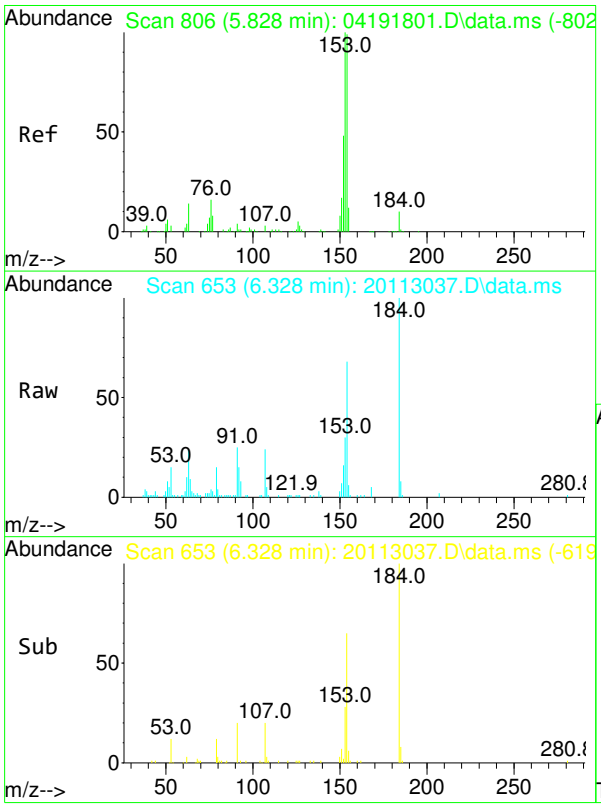


#62
Acenaphthene
Concen: 14.11 ug/ml
RT: 6.316 min Scan# 651
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:154 Resp: 82342

Ion	Ratio	Lower	Upper
154	100		
153	99.8	69.9	129.9
152	48.1	18.4	78.4

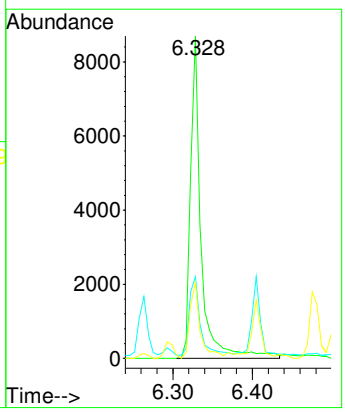


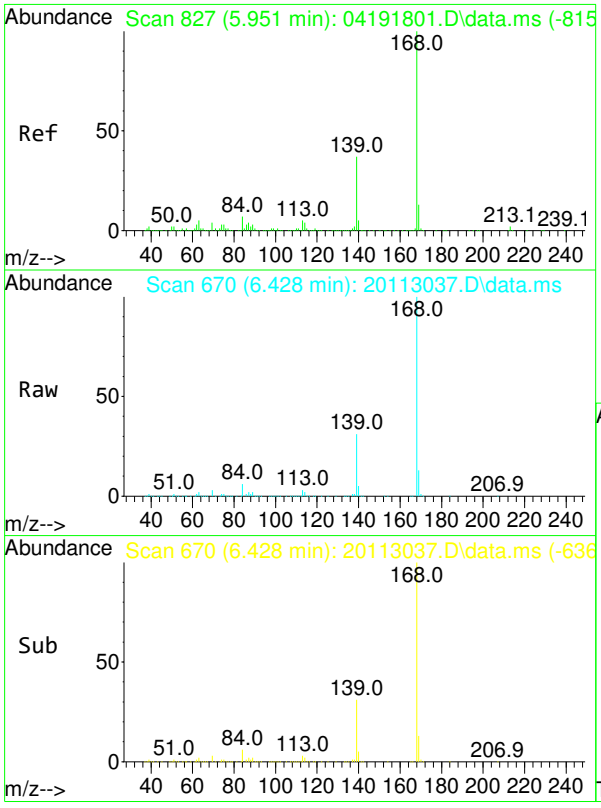


#63
2,4-Dinitrophenol
Concen: 13.49 ug/ml
RT: 6.328 min Scan# 653
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:184 Resp: 8062

Ion	Ratio	Lower	Upper
184	100		
91	25.7	0.0	56.6
107	23.2	0.0	51.3

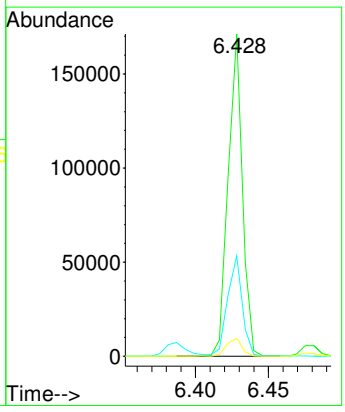


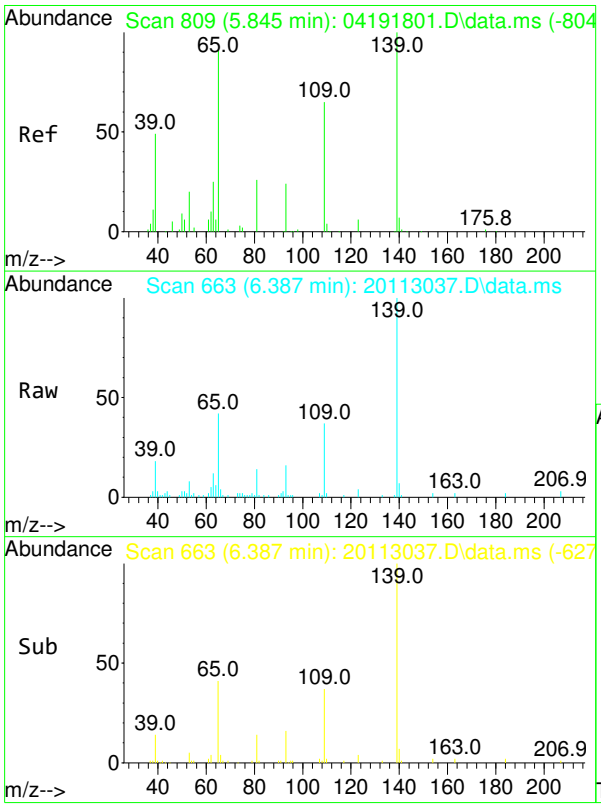


#64
Dibenzofuran
Concen: 14.42 ug/ml
RT: 6.428 min Scan# 670
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:168 Resp: 116181

Ion	Ratio	Lower	Upper
168	100		
139	32.1	2.2	62.2
84	6.1	0.0	35.9

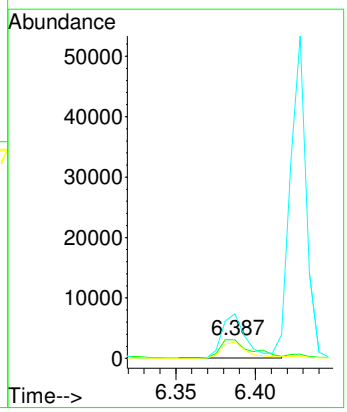


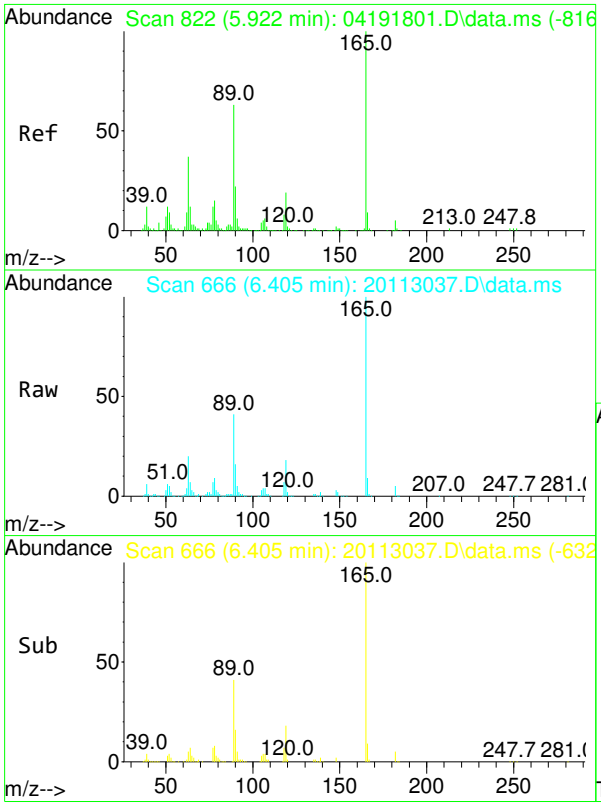


#65
4-Nitrophenol
Concen: 7.02 ug/ml
RT: 6.387 min Scan# 663
Delta R.T. 0.012 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 65 Resp: 4057

Ion	Ratio	Lower	Upper
65	100		
139	192.4	174.2	234.2
109	76.4	50.2	110.2

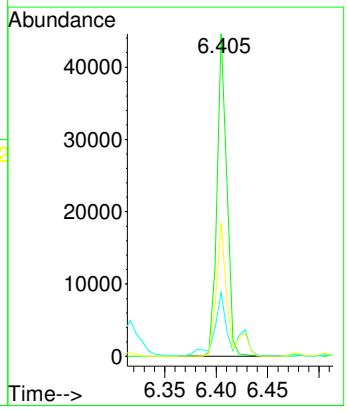


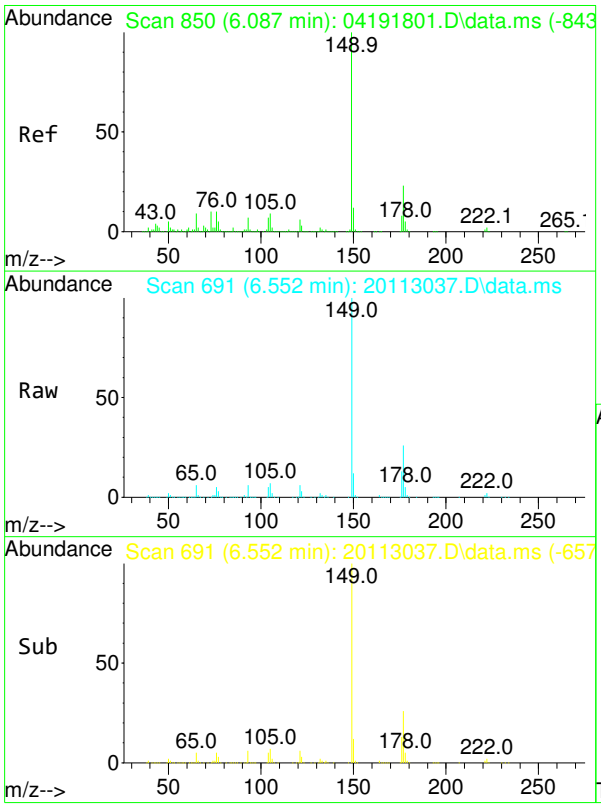


#66
2,4-Dinitrotoluene
Concen: 14.39 ug/ml
RT: 6.405 min Scan# 666
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:165 Resp: 29763

Ion	Ratio	Lower	Upper
165	100		
63	23.0	0.0	49.6
89	48.3	19.9	79.9

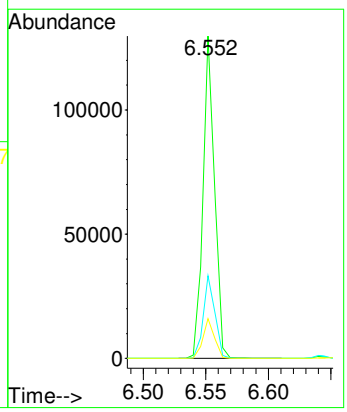


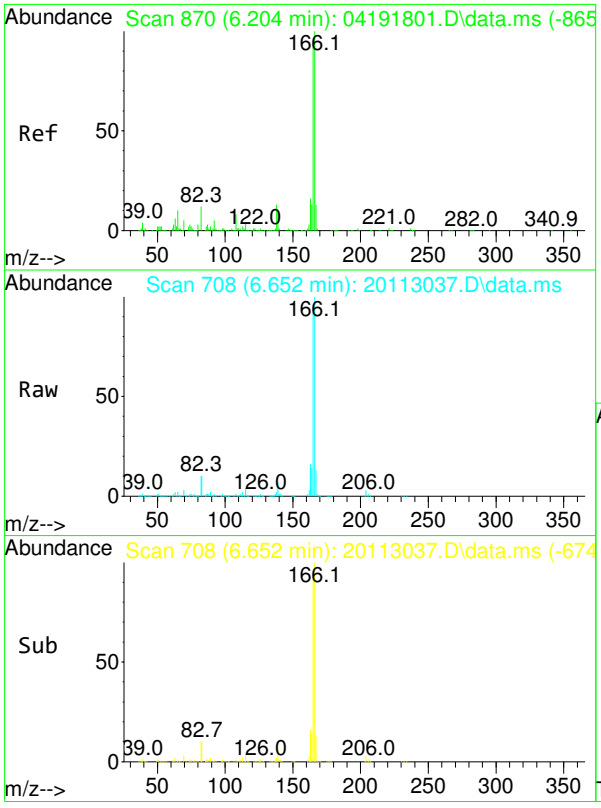


#67
Diethylphthalate
Concen: 14.40 ug/ml
RT: 6.552 min Scan# 691
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:149 Resp: 83299

Ion	Ratio	Lower	Upper
149	100		
177	25.9	0.0	55.7
150	12.3	0.0	42.4

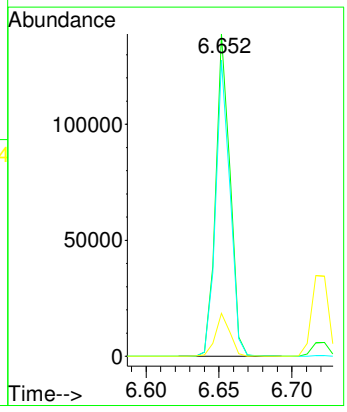


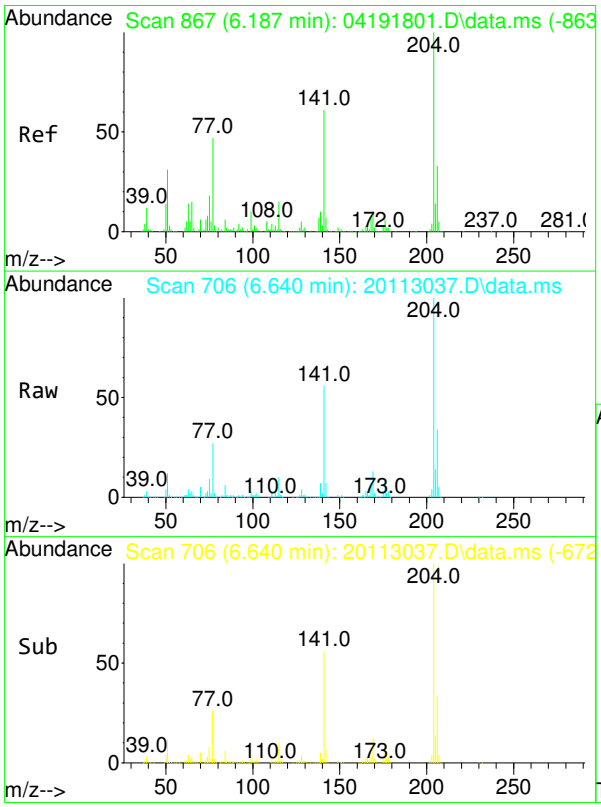


#68
Fluorene
Concen: 13.95 ug/ml
RT: 6.652 min Scan# 708
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:166 Resp: 94944

Ion	Ratio	Lower	Upper
166	100		
165	91.7	62.2	122.2
167	13.5	0.0	43.4

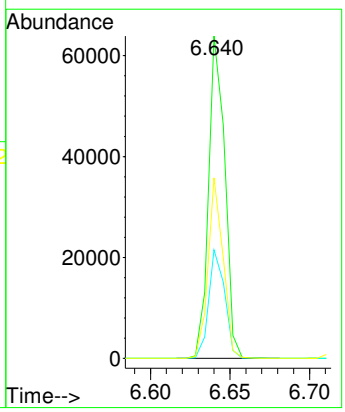


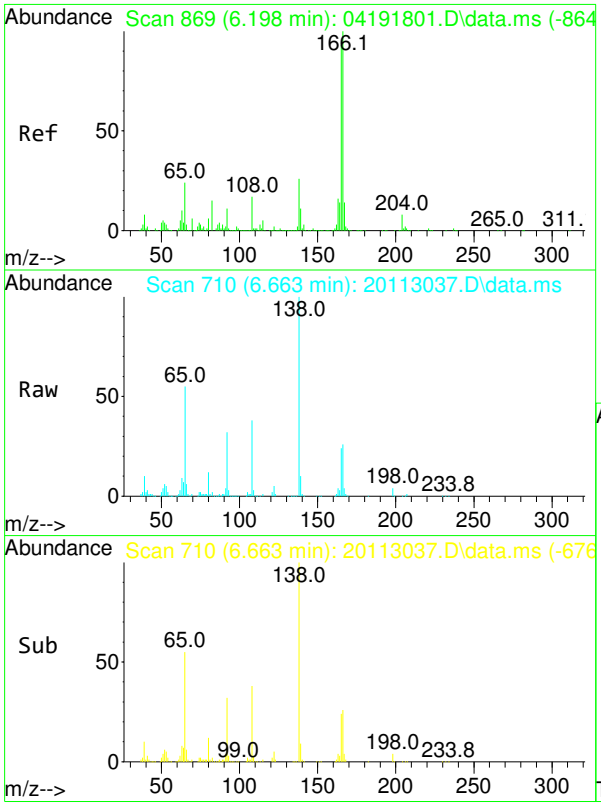


#69
4-Chlorophenyl phenyl
Concen: 14.67 ug/ml
RT: 6.640 min Scan# 706
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:204 Resp: 45439

Ion	Ratio	Lower	Upper
204	100		
206	33.2	2.3	62.3
141	52.0	20.6	80.6

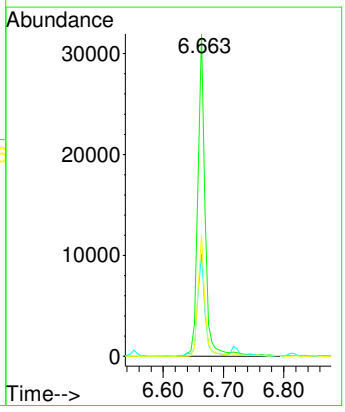


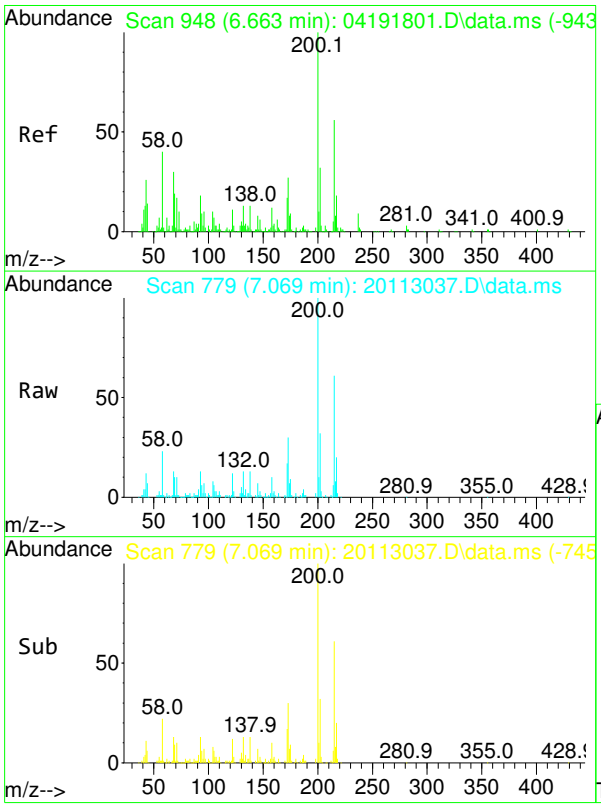


#70
4-Nitroaniline
Concen: 14.98 ug/ml
RT: 6.663 min Scan# 710
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:138 Resp: 27329

Ion	Ratio	Lower	Upper
138	100		
92	31.8	1.7	61.7
108	36.4	7.0	67.0

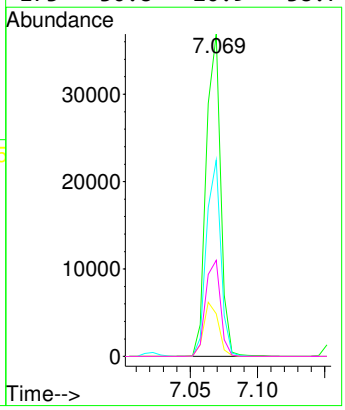


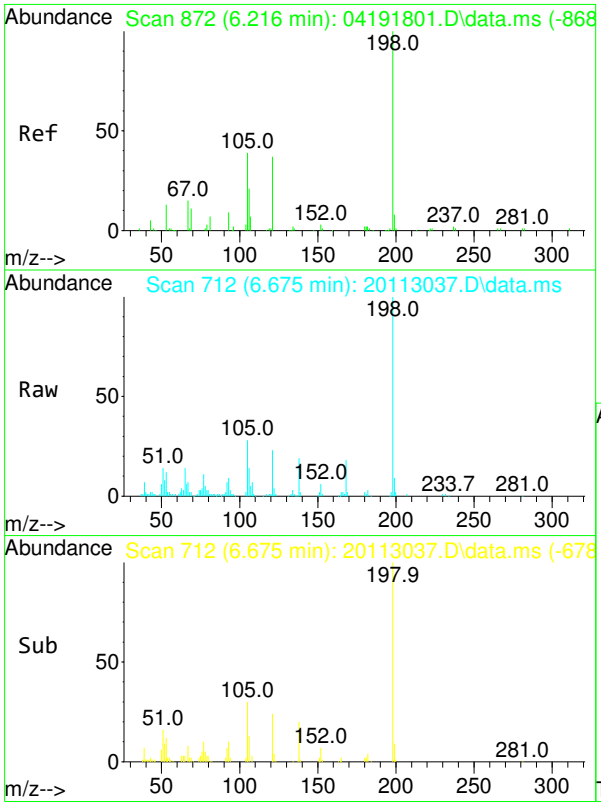


#71
Atrazine
Concen: 15.50 ug/ml
RT: 7.069 min Scan# 779
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:200 Resp: 27349

Ion	Ratio	Lower	Upper
200	100		
215	60.5	42.6	79.0
68	17.2	11.9	22.1
173	30.8	20.9	38.7

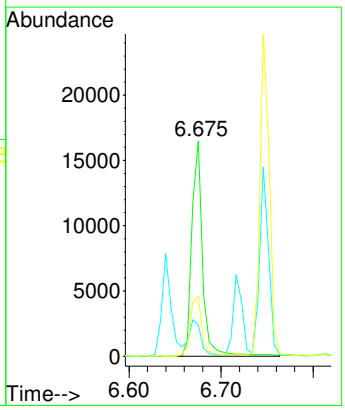


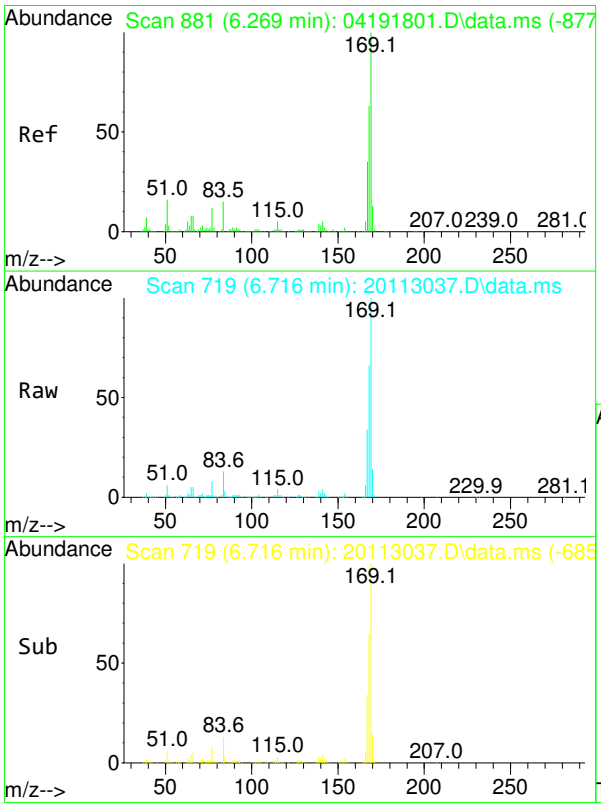


#73
4,6-Dinitro-2-methylph
Concen: 13.43 ug/ml
RT: 6.675 min Scan# 712
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:198 Resp: 13400

Ion	Ratio	Lower	Upper
198	100		
51	19.0	0.0	48.2
105	30.8	0.6	60.6

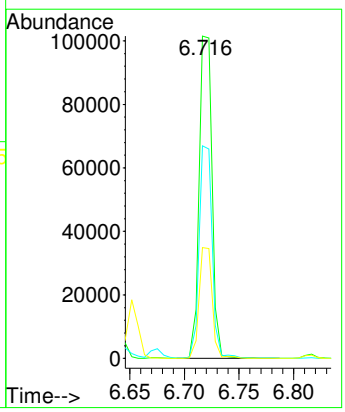


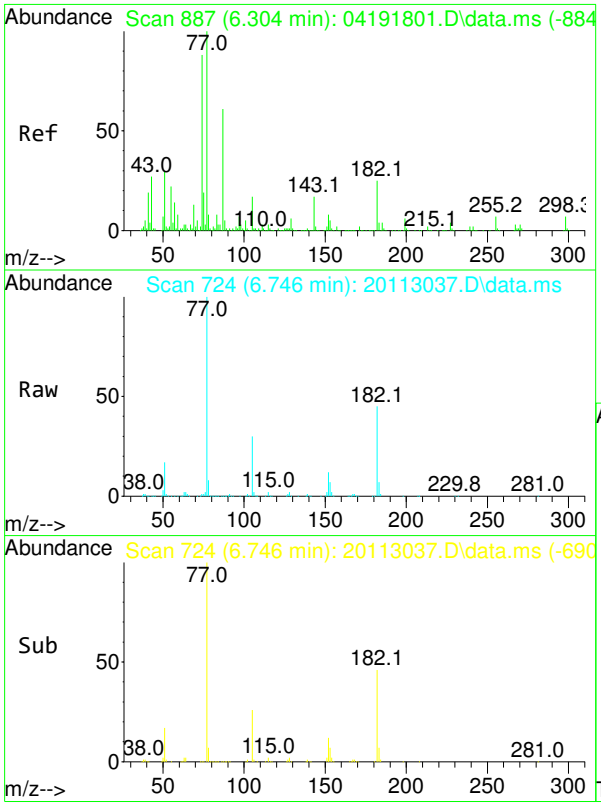


#74
N-Nitrosodiphenylamine
Concen: 14.95 ug/ml
RT: 6.716 min Scan# 719
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:169 Resp: 83552

Ion	Ratio	Lower	Upper
169	100		
168	66.0	36.8	96.8
167	34.9	5.2	65.2

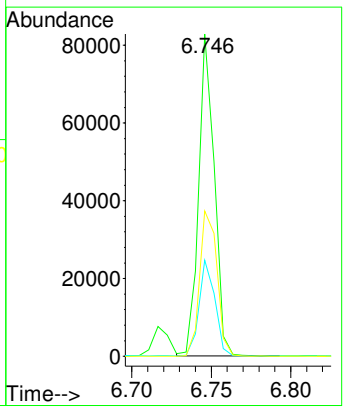


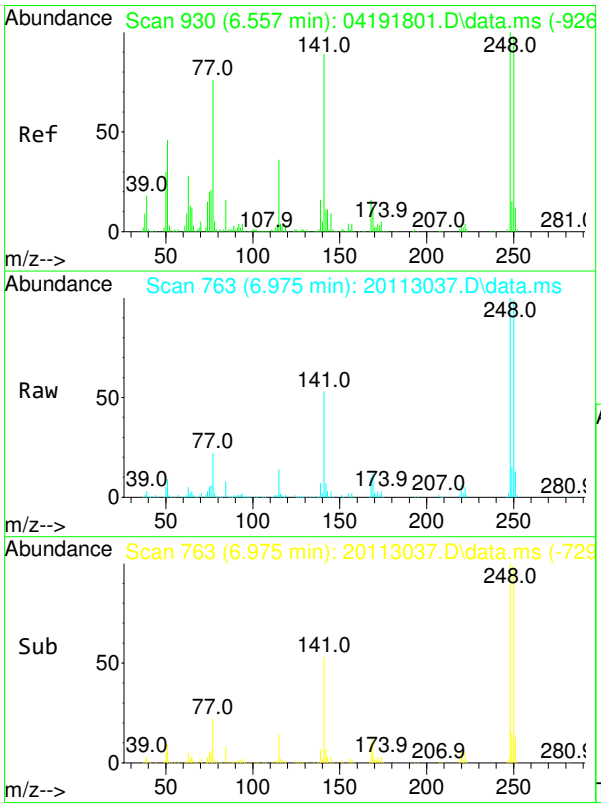


#75
1,2-Diphenylhydrazine
Concen: 14.91 ug/ml
RT: 6.746 min Scan# 724
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion: 77 Resp: 57055

Ion	Ratio	Lower	Upper
77	100		
105	30.3	0.0	59.9
182	50.3	20.8	80.8

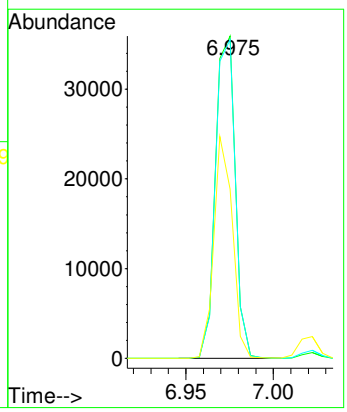


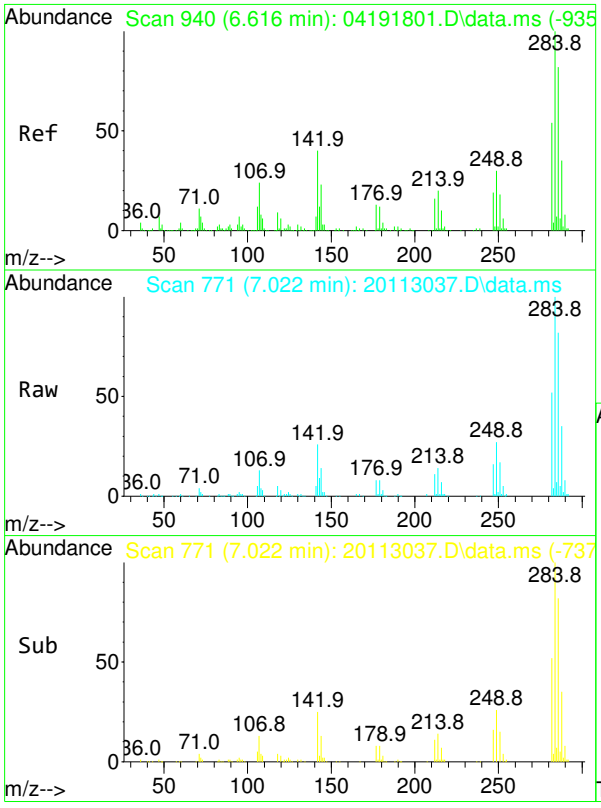


#77
4-Bromophenyl phenyl e
Concen: 14.66 ug/ml
RT: 6.975 min Scan# 763
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:248 Resp: 28408

Ion	Ratio	Lower	Upper
248	100		
250	98.9	67.8	127.8
141	64.7	35.0	95.0

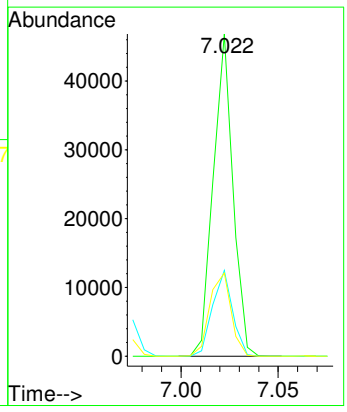


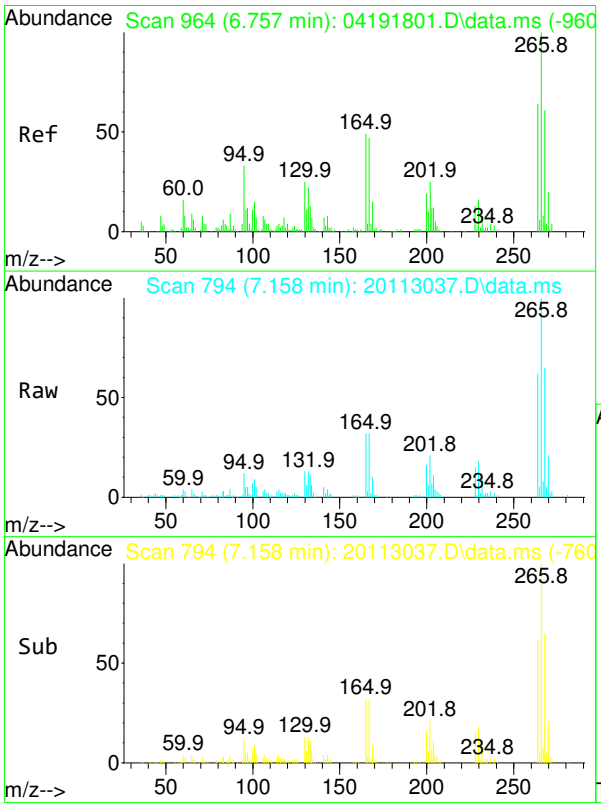


#78
Hexachlorobenzene
Concen: 13.95 ug/ml
RT: 7.022 min Scan# 771
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:284 Resp: 32873

Ion	Ratio	Lower	Upper
284	100		
249	27.2	0.0	56.7
142	28.3	0.0	56.9

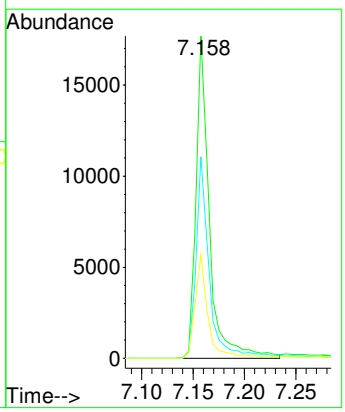


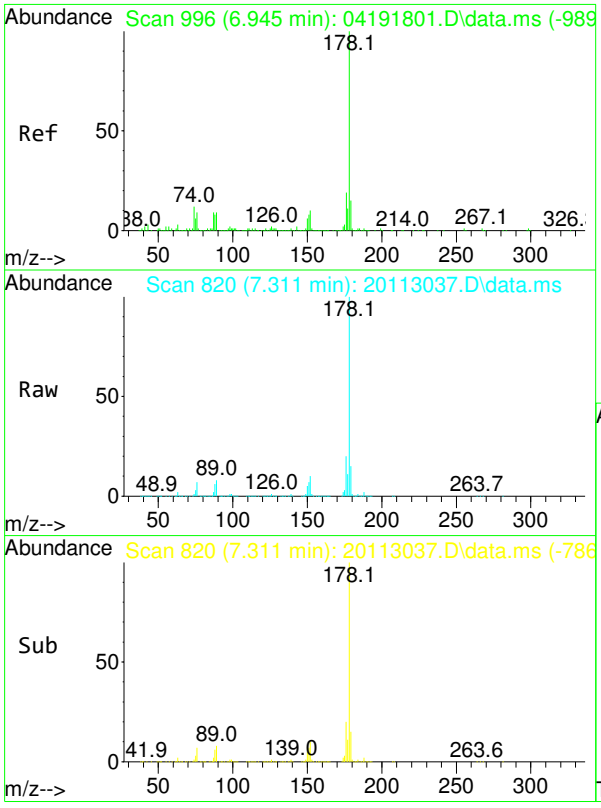


#79
Pentachlorophenol
Concen: 14.73 ug/ml
RT: 7.158 min Scan# 794
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:266 Resp: 15968

Ion	Ratio	Lower	Upper
266	100		
264	64.0	33.1	93.1
165	32.7	2.1	62.1

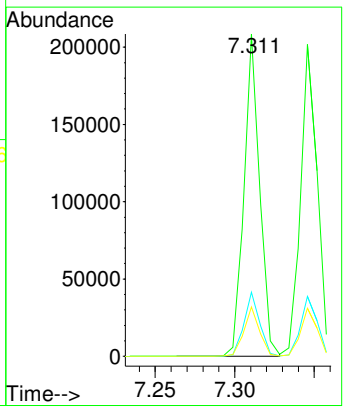


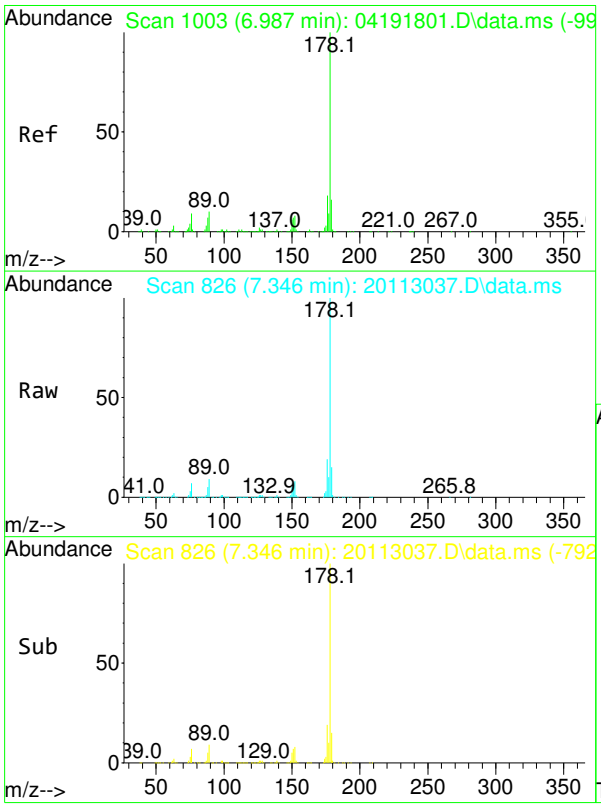


#80
Phenanthrene
Concen: 14.01 ug/ml
RT: 7.311 min Scan# 820
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:178 Resp: 143310

Ion	Ratio	Lower	Upper
178	100		
176	19.9	0.0	49.8
179	15.3	0.0	45.7

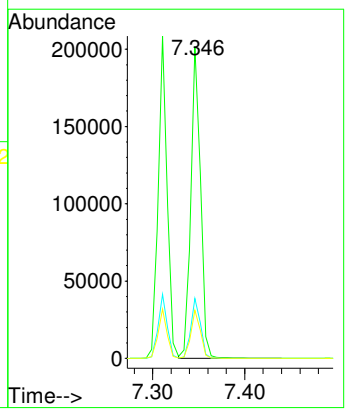


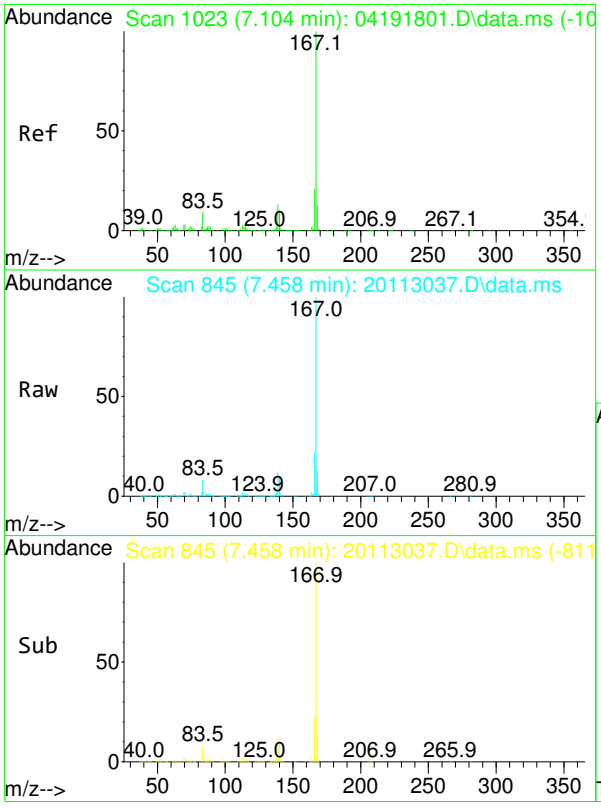


#81
Anthracene
Concen: 14.40 ug/ml
RT: 7.346 min Scan# 826
Delta R.T. -0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:178 Resp: 146663

Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	49.3
179	15.4	0.0	45.6

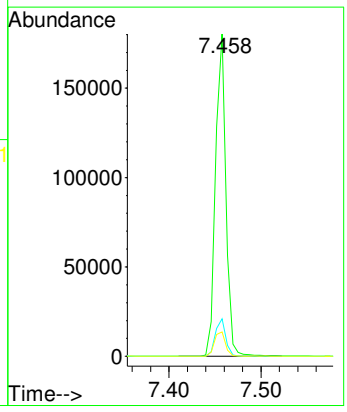


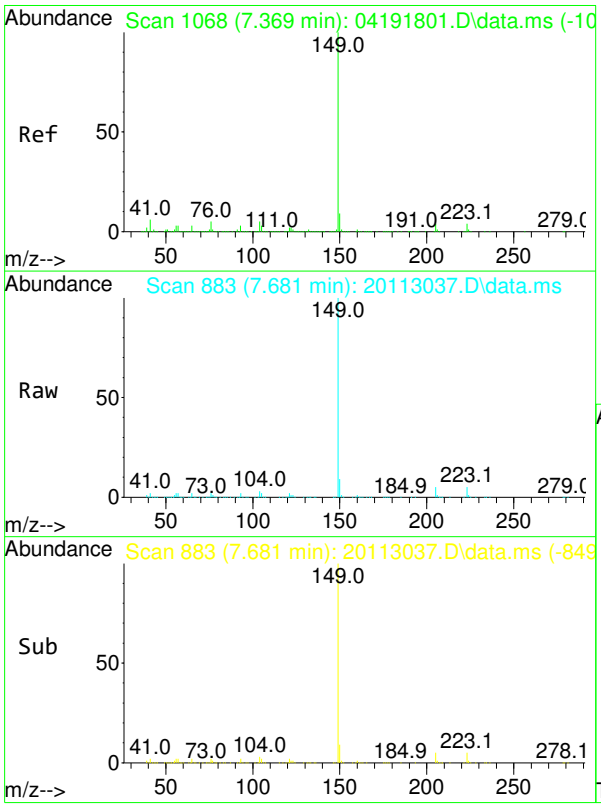


#82
Carbazole
Concen: 15.48 ug/ml
RT: 7.458 min Scan# 845
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:167 Resp: 141015

Ion	Ratio	Lower	Upper
167	100		
139	11.8	0.0	41.8
84	8.1	0.0	38.3

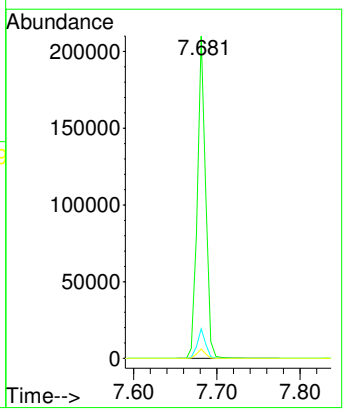


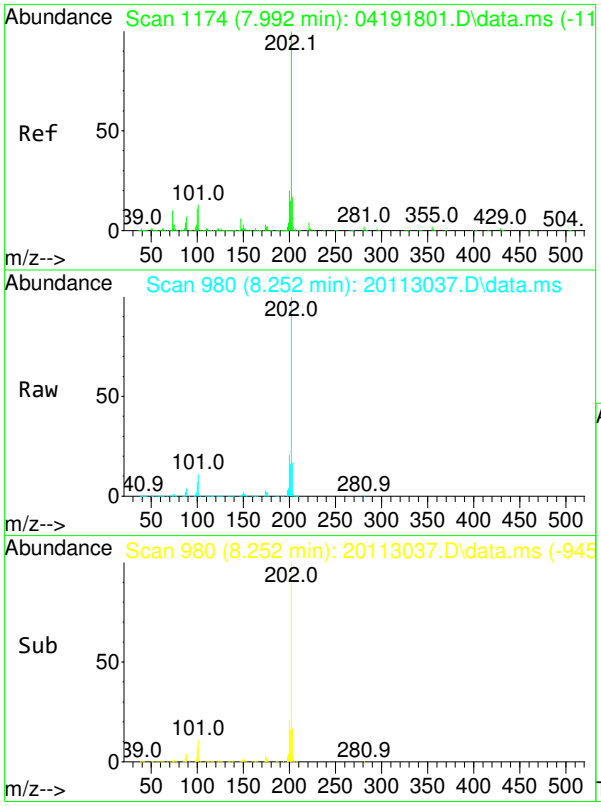


#83
Di-n-butylphthalate
Concen: 15.69 ug/ml
RT: 7.681 min Scan# 883
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:149 Resp: 146272

Ion	Ratio	Lower	Upper
149	100		
150	9.1	0.0	39.2
104	3.0	0.0	32.9

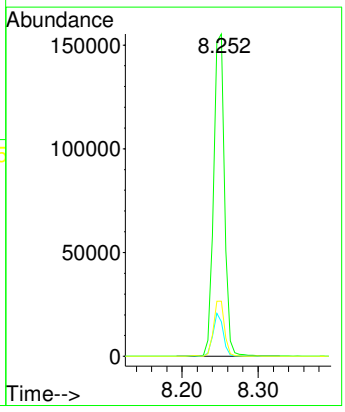


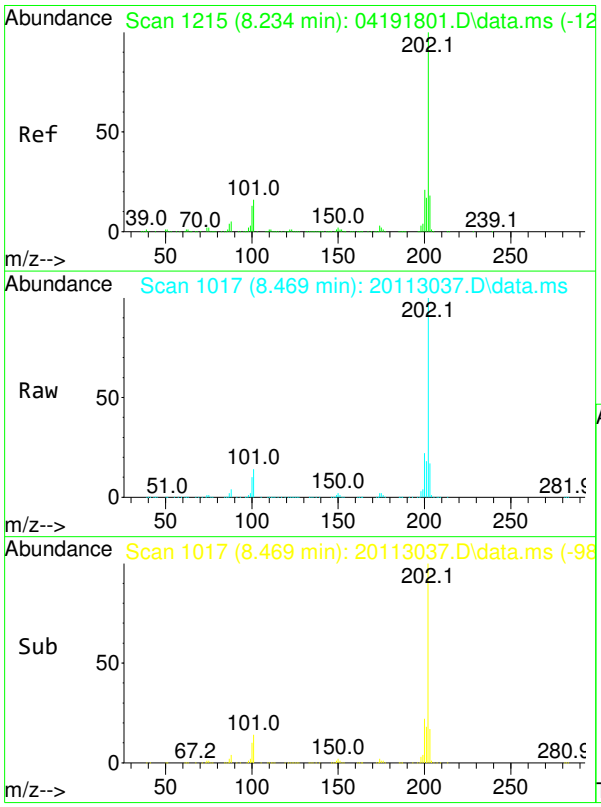


#84
Fluoranthene
Concen: 14.38 ug/ml
RT: 8.252 min Scan# 980
Delta R.T. 0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:202 Resp: 154696

Ion	Ratio	Lower	Upper
202	100		
101	12.6	0.0	41.8
203	17.5	0.0	47.4

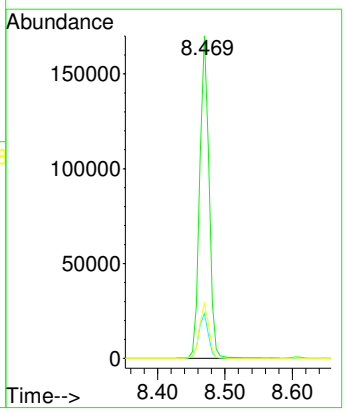


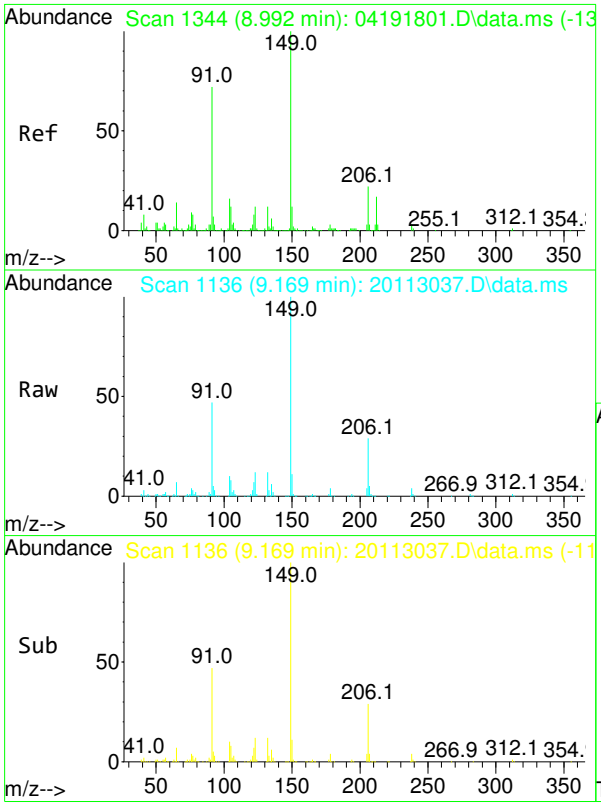


#88
Pyrene
Concen: 15.42 ug/ml
RT: 8.469 min Scan# 1017
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:202 Resp: 162848

Ion	Ratio	Lower	Upper
202	100		
101	14.2	0.0	43.9
203	17.5	0.0	47.8

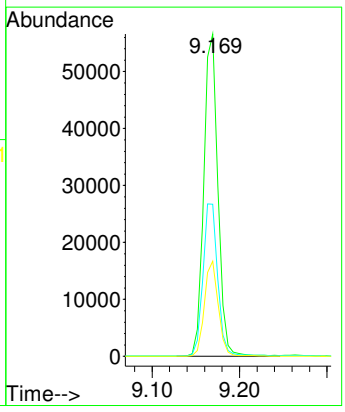


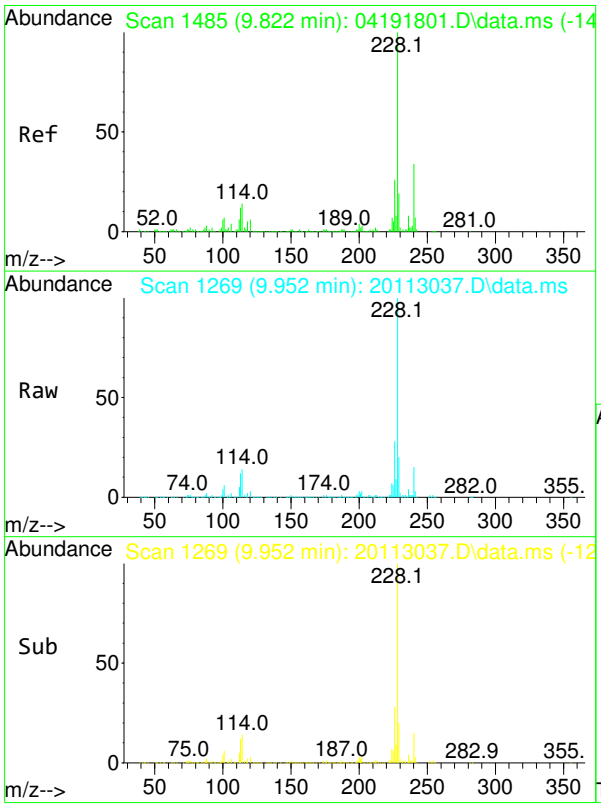


#90
Butylbenzylphthalate
Concen: 16.35 ug/ml
RT: 9.169 min Scan# 1136
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:149 Resp: 63935

Ion	Ratio	Lower	Upper
149	100		
91	48.9	21.9	81.9
206	29.1	0.3	60.3

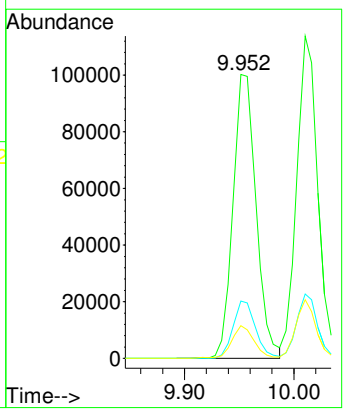


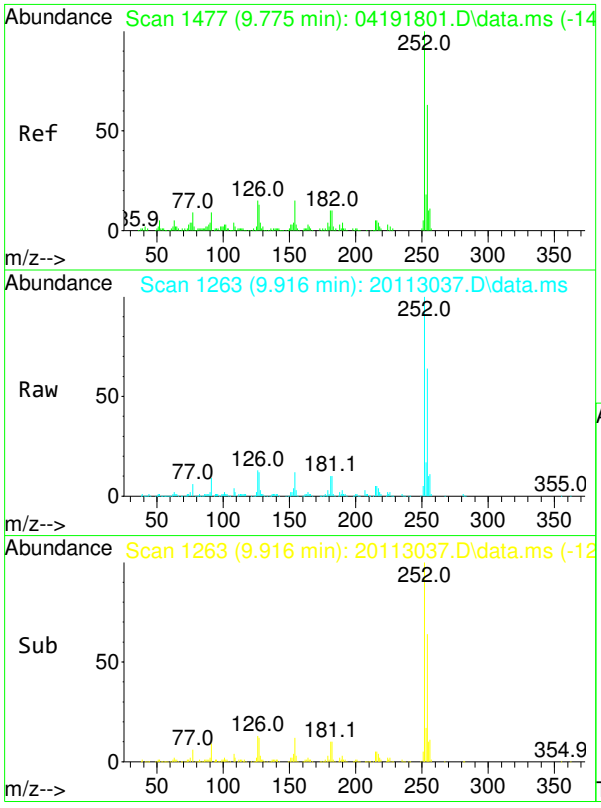


#91
Benzo[a]anthracene
Concen: 15.02 ug/ml
RT: 9.952 min Scan# 1269
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:228 Resp: 147160

Ion	Ratio	Lower	Upper
228	100		
229	19.7	0.0	49.7
113	11.2	0.0	40.7

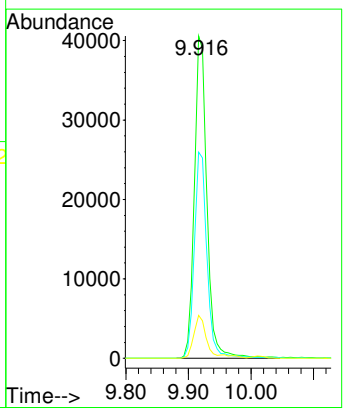


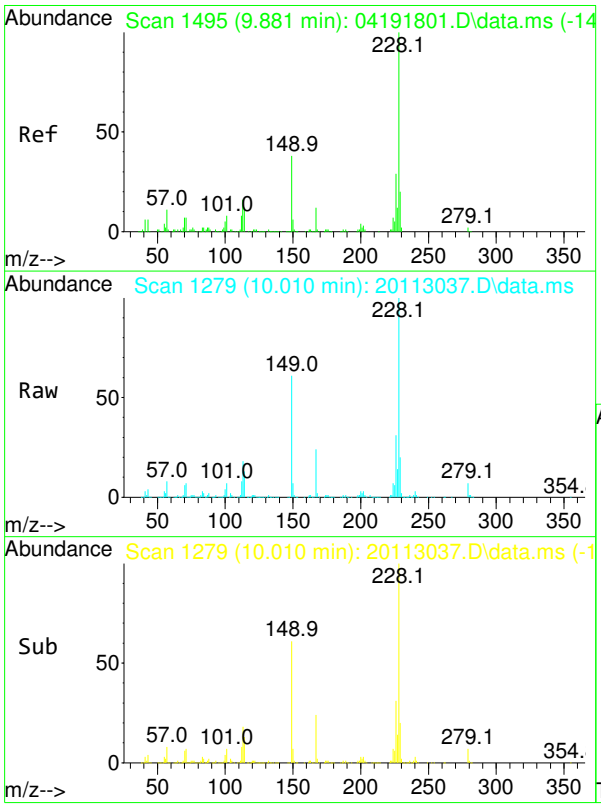


#92
3,3'-Dichlorobenzidine
Concen: 13.45 ug/ml
RT: 9.916 min Scan# 1263
Delta R.T. -0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:252 Resp: 56739

Ion	Ratio	Lower	Upper
252	100		
254	64.6	34.2	94.2
126	14.2	0.0	43.2

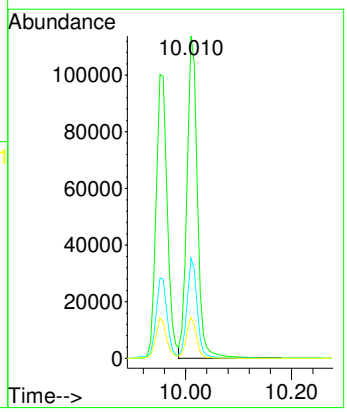


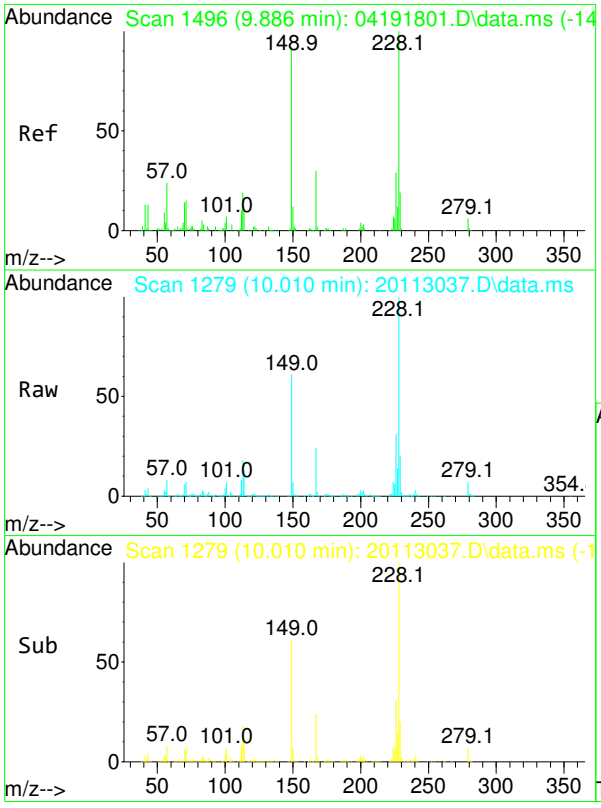


#93
Chrysene
Concen: 14.95 ug/ml
RT: 10.010 min Scan# 1279
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:228 Resp: 156601

Ion	Ratio	Lower	Upper
228	100		
226	30.4	0.6	60.6
114	12.1	0.0	41.5

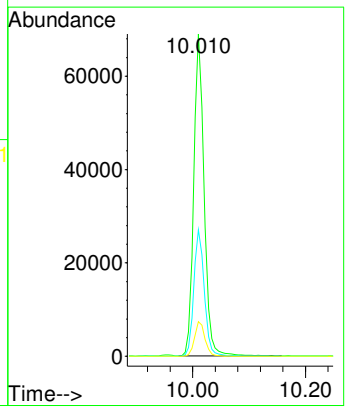


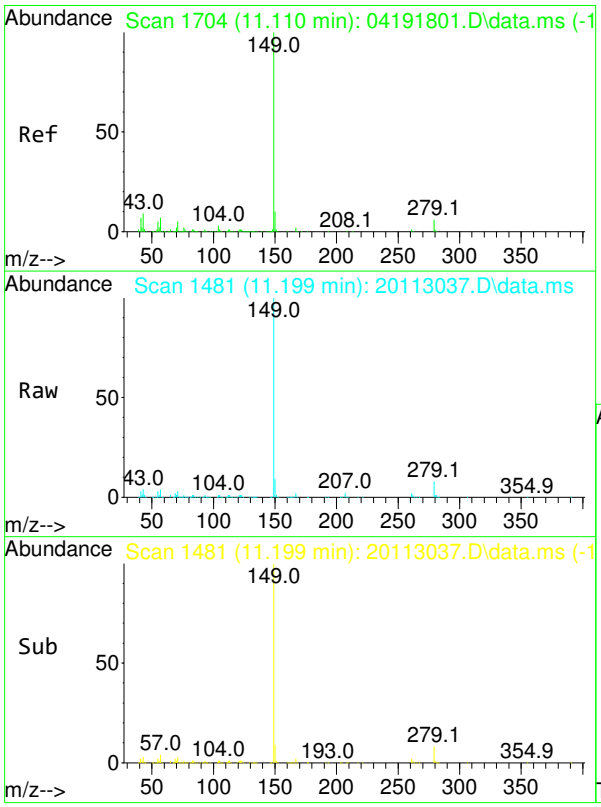


#94
Bis(2-ethylhexyl)phtha
Concen: 16.50 ug/ml
RT: 10.010 min Scan# 1279
Delta R.T. -0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:149 Resp: 87719

Ion	Ratio	Lower	Upper
149	100		
167	40.5	10.5	70.5
279	10.9	0.0	41.3

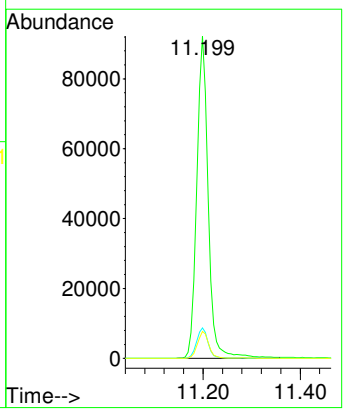


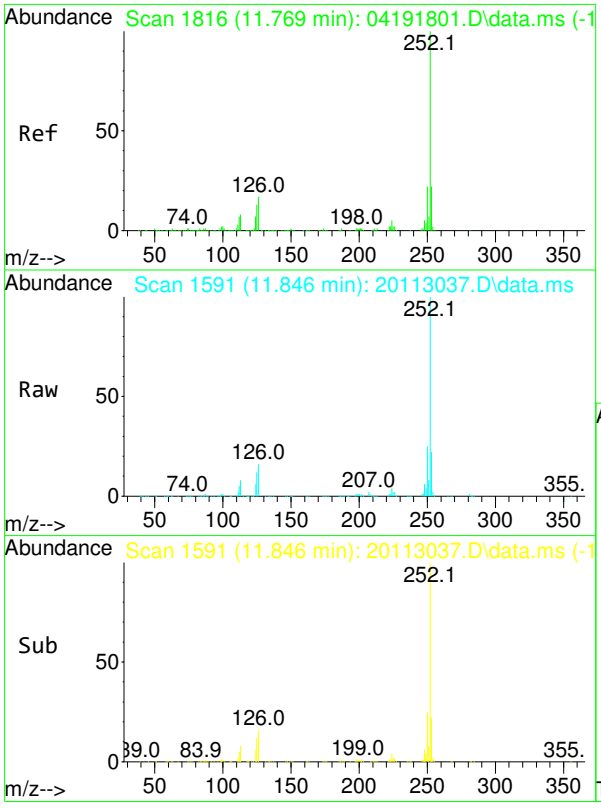


#96
Di-n-octylphthalate
Concen: 17.00 ug/ml
RT: 11.199 min Scan# 1481
Delta R.T. 0.001 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:149 Resp: 151385

Ion	Ratio	Lower	Upper
149	100		
150	9.4	0.0	39.8
279	8.2	0.0	38.7

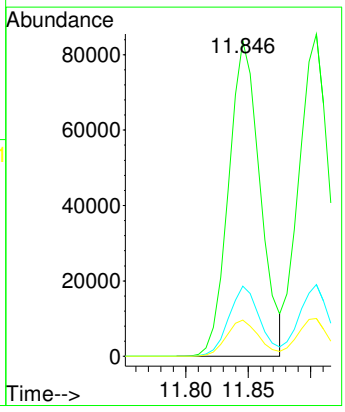


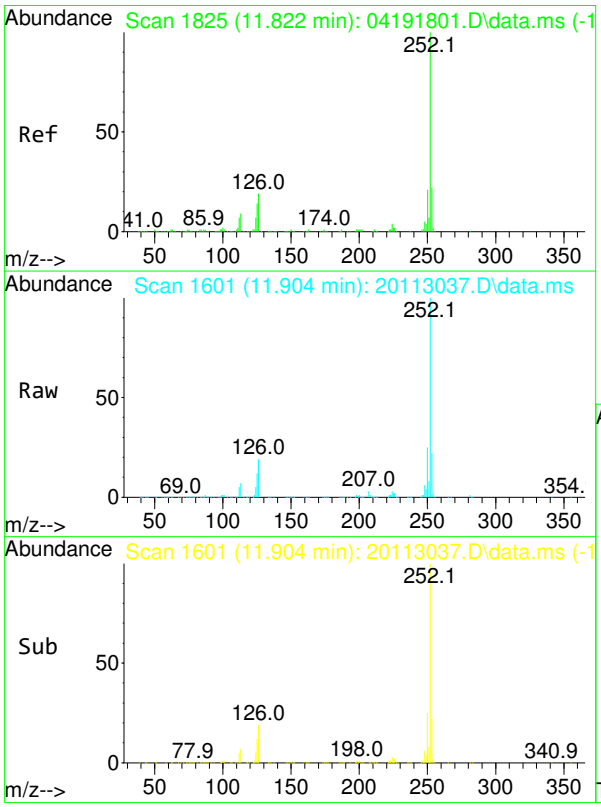


#97
Benzo(b)fluoranthene
Concen: 14.97 ug/ml
RT: 11.846 min Scan# 1591
Delta R.T. -0.005 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:252 Resp: 146291

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.9
125	11.9	0.0	41.3

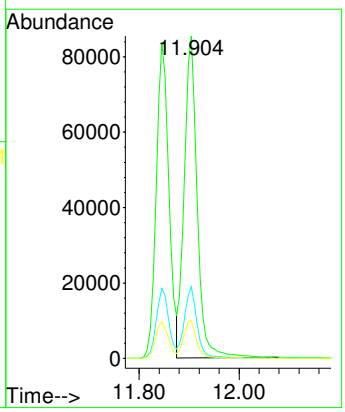


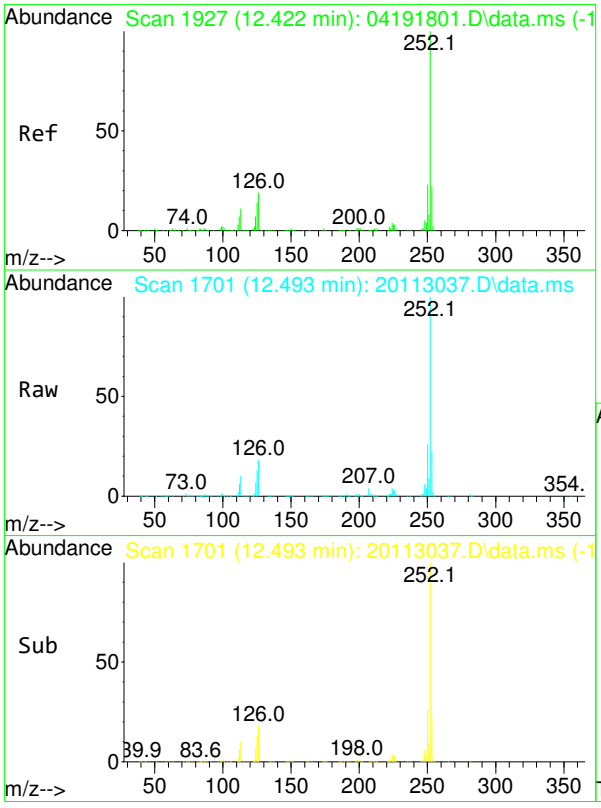


#98
Benzo(k)fluoranthene
Concen: 14.92 ug/ml
RT: 11.904 min Scan# 1601
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:252 Resp: 153590

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.8
125	11.3	0.0	40.8

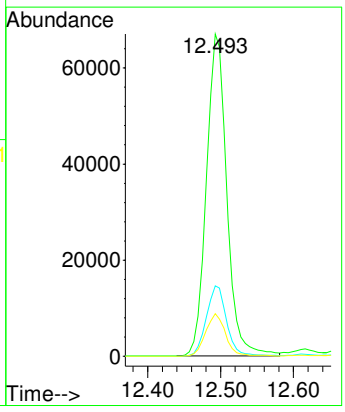


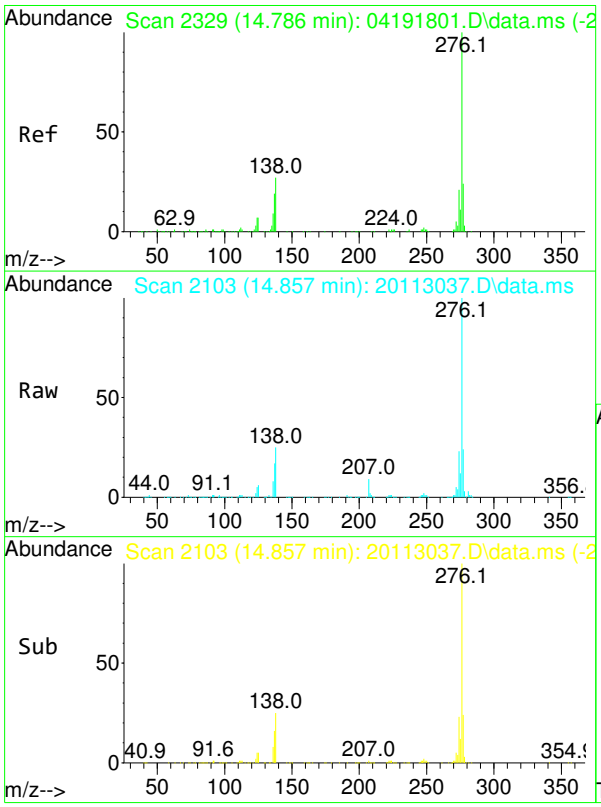


#99
Benzo(a)pyrene
Concen: 14.70 ug/ml
RT: 12.493 min Scan# 1701
Delta R.T. -0.005 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:252 Resp: 130505

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.9
125	13.2	0.0	42.8

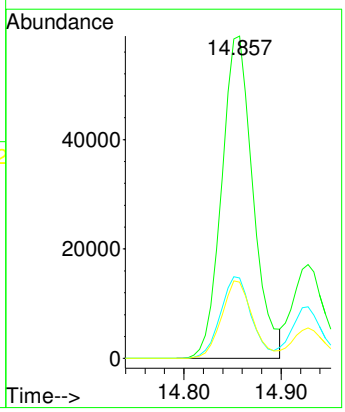


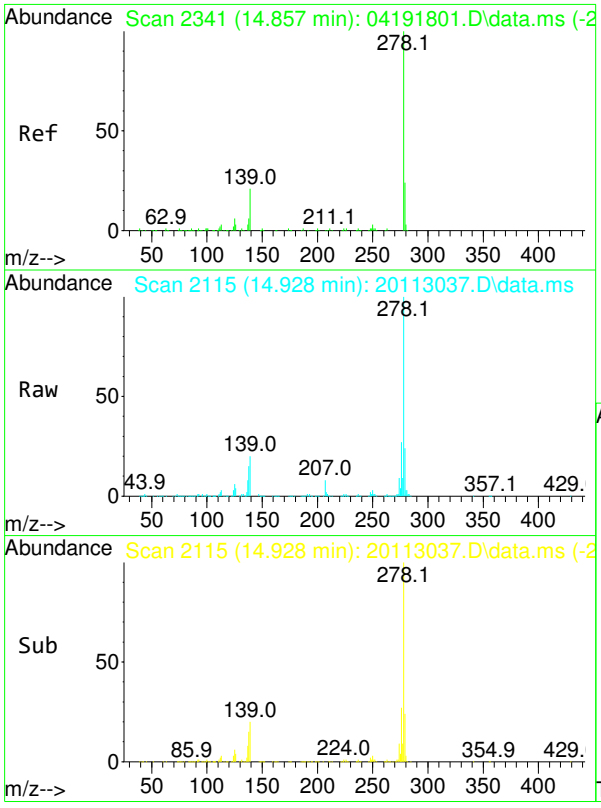


#100
Indeno(1,2,3-cd)pyrene
Concen: 14.55 ug/ml
RT: 14.857 min Scan# 2103
Delta R.T. 0.000 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:276 Resp: 132075

Ion	Ratio	Lower	Upper
276	100		
138	25.1	0.0	53.4
277	23.6	0.0	54.0

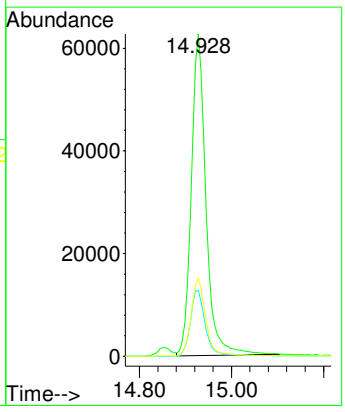


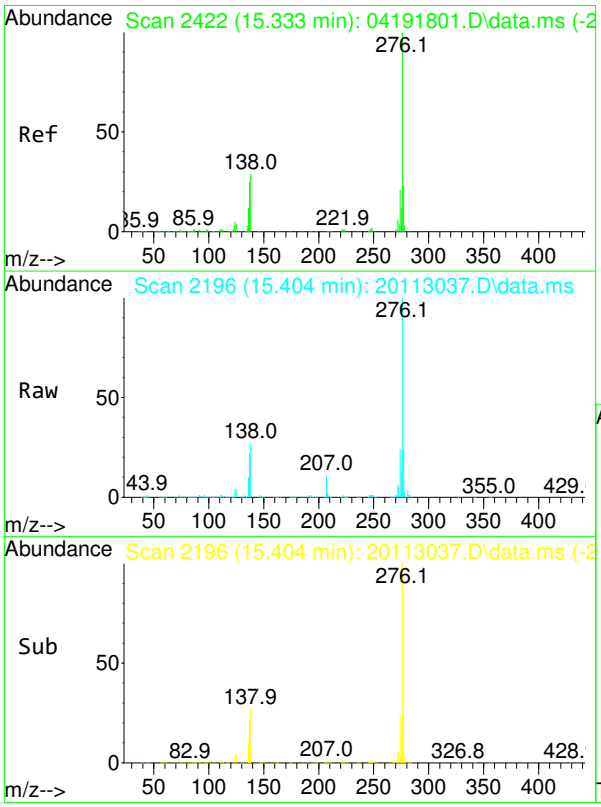


#101
Dibenz(a,h)anthracene
Concen: 14.47 ug/ml
RT: 14.928 min Scan# 2115
Delta R.T. -0.005 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:278 Resp: 138589

Ion	Ratio	Lower	Upper
278	100		
139	21.5	0.0	50.6
279	24.1	0.0	54.0

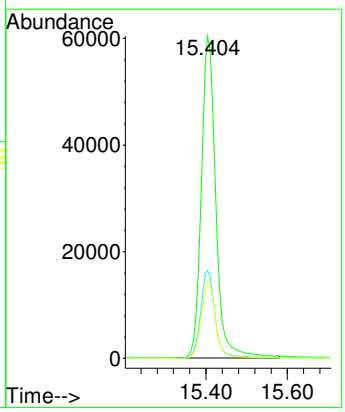




#102
Benzo(g,h,i)perylene
Concen: 14.45 ug/ml
RT: 15.404 min Scan# 2196
Delta R.T. -0.006 min
Lab File: 20113037.D
Acq: 01 Dec 2020 12:32 am

Tgt Ion:276 Resp: 149480

Ion	Ratio	Lower	Upper
276	100		
138	27.5	0.0	55.8
277	24.0	0.0	54.0



Quantitation Report (QT Reviewed)

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113039.D
Acq On : 01 Dec 2020 01:20 am
Operator : EE/EEW
Sample : 20111764-02A
Misc : 1X 20BAW-168343; IS:300-0576; WATER
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 01 10:30:52 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	132595	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	314003	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.299	164	182497	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.299	188	344608	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	328034	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	337815	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	40273	16.68	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 33.36%			
7) Phenol-d6	4.199	99	32197	11.48	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 22.96%			
26) Nitrobenzene-d5	4.746	82	45669	22.80	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 45.60%			
55) 2-Fluorobiphenyl	5.852	172	152689	23.60	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 47.20%			
76) 2,4,6-Tribromophenol	6.816	330	33014	26.13	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 52.26%			
89) 4-Terphenyl-d14	8.611	244	278366	35.57	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 71.14%			

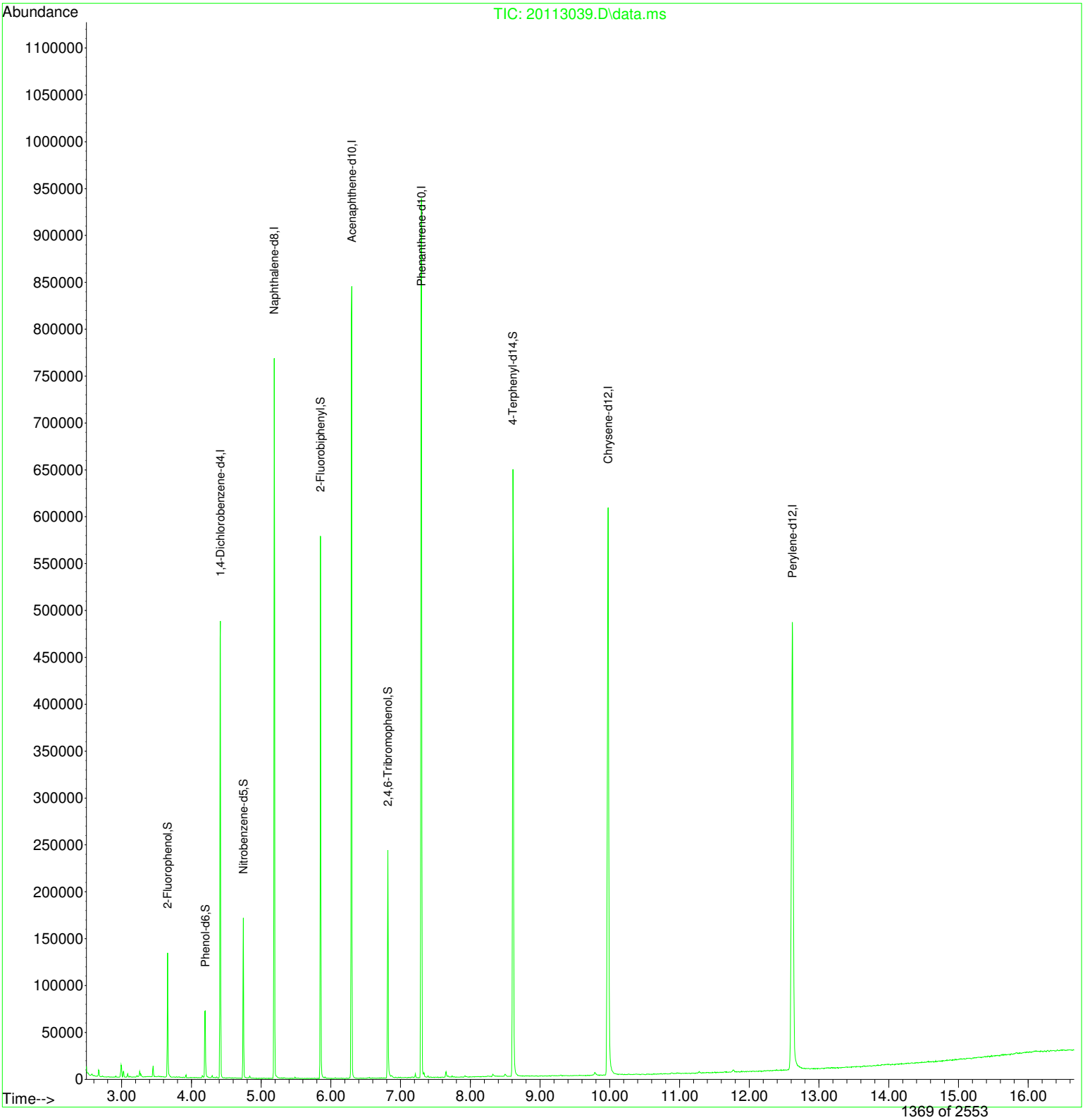
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ EE 12/01/20
2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113039.D
Acq On : 01 Dec 2020 01:20 am
Operator : EE/EEW
Sample : 20111764-02A
Misc : 1X 20BAW-168343; IS:300-0576; WATER
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 01 10:30:52 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration



1369 of 2553

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113040.D
Acq On : 01 Dec 2020 01:43 am
Operator : EE/EEW
Sample : 20111764-04A
Misc : 1X 20BAW-168343; IS:300-0576; WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 01 10:30:57 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	145827	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	346765	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	204787	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	387456	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	371865	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	384068	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	51931	19.67	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 39.34%			
7) Phenol-d6	4.193	99	42298	13.77	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 27.54%			
26) Nitrobenzene-d5	4.746	82	56739	25.73	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 51.46%			
55) 2-Fluorobiphenyl	5.852	172	182314	25.22	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 50.44%			
76) 2,4,6-Tribromophenol	6.816	330	41598	29.23	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 58.46%			
89) 4-Terphenyl-d14	8.610	244	322163	36.35	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 72.70%			

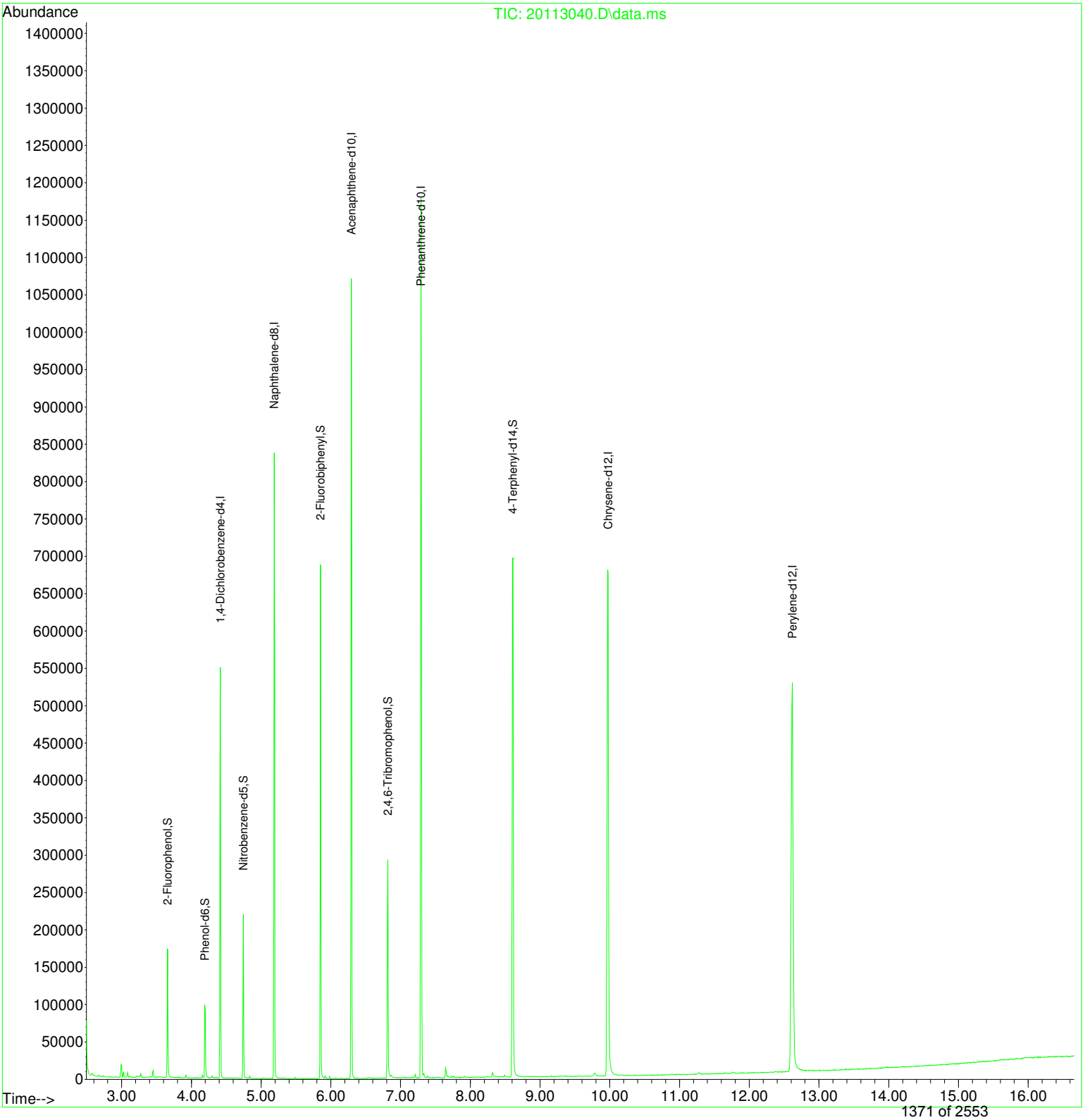
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ EE 12/01/20
2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113040.D
Acq On : 01 Dec 2020 01:43 am
Operator : EE/EEW
Sample : 20111764-04A
Misc : 1X 20BAW-168343; IS:300-0576; WATER
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 01 10:30:57 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113041.D
Acq On : 01 Dec 2020 02:07 am
Operator : EE/EEW
Sample : 20111764-06A
Misc : 1X 20BAW-168343; IS:300-0576; WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 01 10:31:02 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	145355	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	347501	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	209007	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	394838	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	381125	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	399742	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	51341	19.51	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 39.02%			
7) Phenol-d6	4.193	99	40084	13.07	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 26.14%			
26) Nitrobenzene-d5	4.746	82	58085	26.30	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 52.60%			
55) 2-Fluorobiphenyl	5.852	172	194305	26.42	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 52.84%			
76) 2,4,6-Tribromophenol	6.816	330	40468	27.92	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 55.84%			
89) 4-Terphenyl-d14	8.610	244	340580	37.55	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 75.10%			

Target Compounds Qvalue

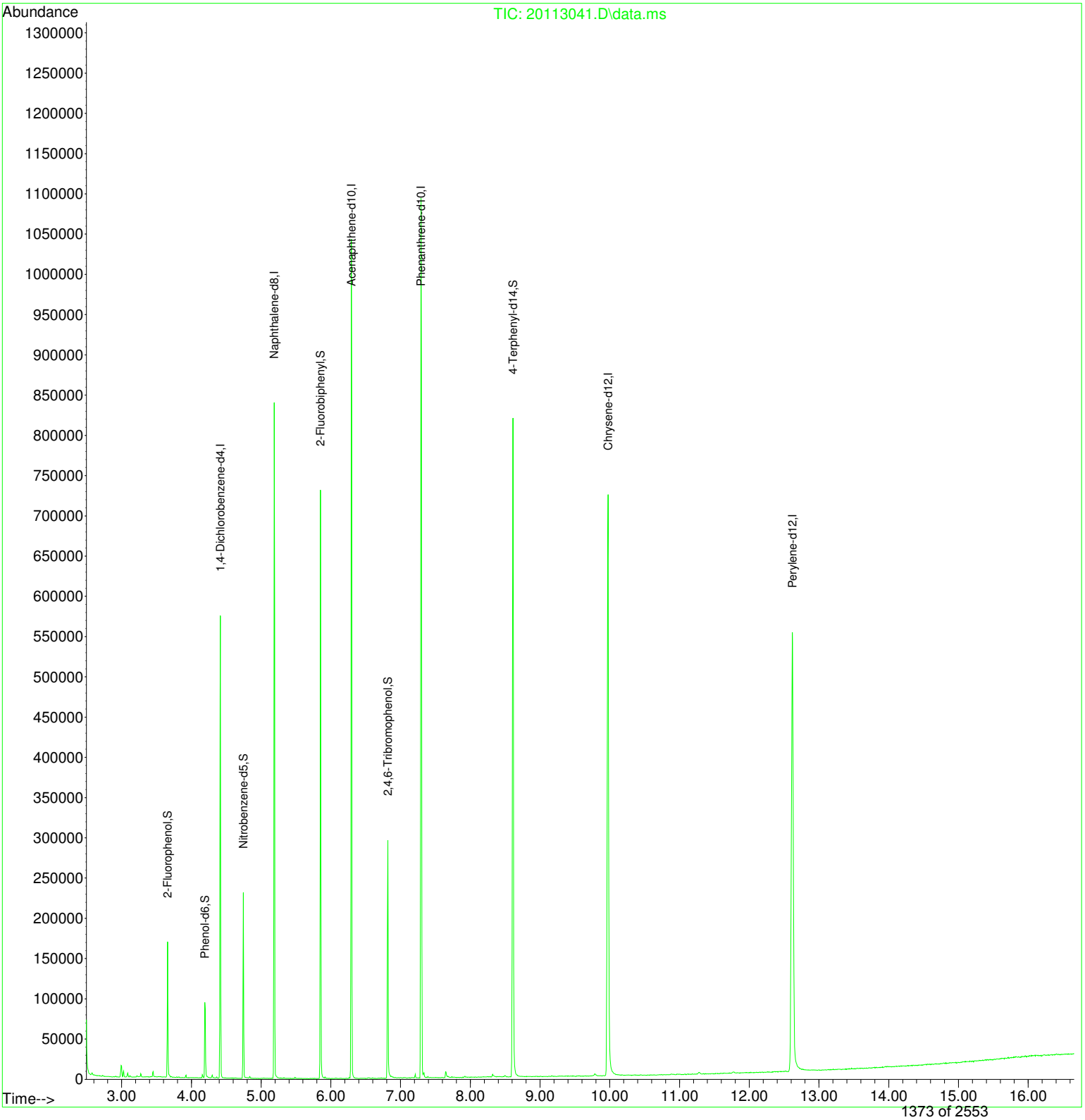
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113041.D
Acq On : 01 Dec 2020 02:07 am
Operator : EE/EEW
Sample : 20111764-06A
Misc : 1X 20BAW-168343; IS:300-0576; WATER
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 01 10:31:02 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st /S/ EE 12/01/20
2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113022.D
Acq On : 30 Nov 2020 06:30 pm
Operator : EE/EEW
Sample : SBLKW1-168341
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 01 10:29:15 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	133064	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	307940	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	178595	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	339607	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	337509	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	359355	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	60548	25.40	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 50.80%			
7) Phenol-d6	4.193	99	44101	15.79	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 31.58%			
26) Nitrobenzene-d5	4.746	82	69236	35.75	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 71.50%			
55) 2-Fluorobiphenyl	5.852	172	220713	36.00	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 72.00%			
76) 2,4,6-Tribromophenol	6.816	330	45259	36.13	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 72.26%			
89) 4-Terphenyl-d14	8.610	244	339423	42.52	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 85.04%			

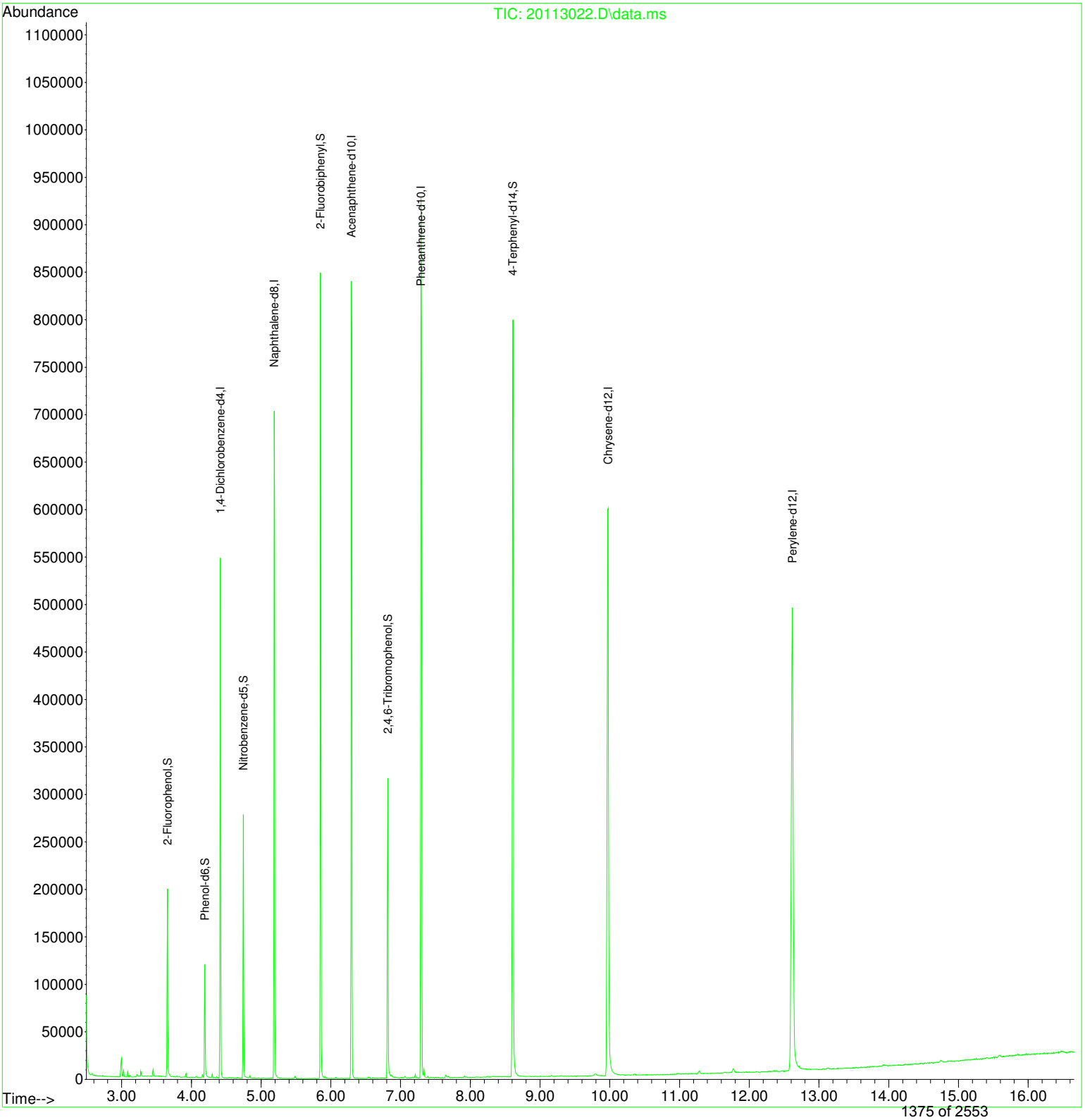
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ EE 12/01/20
2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113022.D
Acq On : 30 Nov 2020 06:30 pm
Operator : EE/EEW
Sample : SBLKW1-168341
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 01 10:29:15 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration



1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113023.D
Acq On : 30 Nov 2020 06:54 pm
Operator : EE/EEW
Sample : SLCSW1-168341
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 01 10:29:20 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	148630	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	334378	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	196921	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	366229	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	378061	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	398417	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	57831	21.57	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 43.14%			
7) Phenol-d6	4.193	99	45031	14.40	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 28.80%			
26) Nitrobenzene-d5	4.746	82	74684	35.50	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 71.00%			
55) 2-Fluorobiphenyl	5.852	172	240445	35.52	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 71.04%			
76) 2,4,6-Tribromophenol	6.816	330	52262	38.63	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 77.26%			
89) 4-Terphenyl-d14	8.605	244	365994	40.84	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 81.68%			
Target Compounds						Qvalue
3) Pyridine	2.887	79	20863	7.74	ug/ml	100
4) N-Nitrosodimethylamine	2.840	42	5225	9.89	ug/ml	96
6) Benzaldehyde	4.158	77	21822	12.12	ug/ml	98
8) Phenol	4.199	94	23689	6.73	ug/ml#	32
9) Aniline	4.217	93	56923	14.94	ug/ml	84
10) Bis(2-chloroethyl)ether	4.246	93	36033	14.17	ug/ml	99
11) 2-Chlorophenol	4.293	128	43019	14.95	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	39360	10.58	ug/ml	99
13) 1,4-Dichlorobenzene	4.422	146	41124	10.88	ug/ml	100
14) Benzyl alcohol	4.487	108	24931	13.59	ug/ml	99
15) 1,2-Dichlorobenzene	4.517	146	39868	11.16	ug/ml	100
16) 2-Methylphenol	4.552	108	33188	12.86	ug/ml	98
17) 2,2`-Oxybis(1-chloropr...	4.564	45	25444	14.18	ug/ml	98
18) Bis(2-chloroisopropyl)...	4.564	45	25444	14.18	ug/ml	100
19) 3-Methylphenol	4.646	107	33947	12.06	ug/ml	90
20) 4-Methylphenol	4.646	107	33947	12.06	ug/ml	90
21) 3&4-Methylphenol	4.646	107	34404	12.11	ug/ml	91
22) Acetophenone	4.646	105	52705	14.94	ug/ml	97
23) N-Nitrosodi-n-propylamine	4.640	70	22121	15.34	ug/ml	98
24) Hexachloroethane	4.722	117	11737	10.28	ug/ml	99
27) Nitrobenzene	4.758	77	29451	14.78	ug/ml	98
28) Isophorone	4.899	82	64678	15.63	ug/ml	99
29) 2-Nitrophenol	4.952	139	23970	14.01	ug/ml	100
30) 2,4-Dimethylphenol	4.964	107	36161	13.30	ug/ml	100
31) Bis(2-chloroethoxy)met	5.017	93	43596	14.74	ug/ml	96
33) 2,4-Dichlorophenol	5.105	162	39913	14.42	ug/ml	99
34) 1,2,4-Trichlorobenzene	5.146	180	37987	13.09	ug/ml	99
36) Naphthalene	5.205	128	121187	13.15	ug/ml	100
37) 4-Chloroaniline	5.228	127	58786	15.49	ug/ml	100
38) 2,6-Dichlorophenol	5.234	162	40446	14.29	ug/ml	99

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113023.D
Acq On : 30 Nov 2020 06:54 pm
Operator : EE/EEW
Sample : SLCSW1-168341
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 01 10:29:20 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39)	Hexachlorobutadiene	5.269	225	17903	12.12	ug/ml	100
40)	Caprolactam	5.458	55	3231	4.38	ug/ml	95
41)	4-Chloro-3-methylphenol	5.522	107	36617	15.85	ug/ml	99
42)	2-Methylnaphthalene	5.628	142	89697	13.93	ug/ml	100
43)	1-Methylnaphthalene	5.693	142	84473	14.05	ug/ml	99
44)	1,2,4,5-Tetrachloroben...	5.728	216	43519	13.66	ug/ml	99
45)	1,1-Biphenyl	5.917	154	114644	14.36	ug/ml	100
46)	2,3,5,6-Tetrachlorophenol	6.475	232	26355	15.78	ug/ml	99
47)	2,3,4,6-Tetrachlorophenol	6.505	232	28656	15.40	ug/ml	98
48)	1,4-Dinitrobenzene	6.081	168	15815	15.46	ug/ml	95
49)	1,3-Dinitrobenzene	6.128	168	19999	15.83	ug/ml	99
50)	1,2-Dinitrobenzene	6.181	168	14065	15.76	ug/ml	90
52)	Hexachlorocyclopentadiene	5.722	237	17443	12.23	ug/ml	98
53)	2,4,6-Trichlorophenol	5.805	196	29584	14.79	ug/ml	99
54)	2,4,5-Trichlorophenol	5.840	196	33377	15.64	ug/ml	98
56)	2-Chloronaphthalene	5.940	162	87620	13.93	ug/ml	100
57)	2-Nitroaniline	5.999	65	15749	15.18	ug/ml	99
58)	Dimethylphthalate	6.099	163	106165	16.10	ug/ml	100
59)	Acenaphthylene	6.205	152	147057	15.49	ug/ml	100
60)	2,6-Dinitrotoluene	6.146	165	26039	15.59	ug/ml	100
61)	3-Nitroaniline	6.258	138	28798	15.42	ug/ml	99
62)	Acenaphthene	6.316	154	95690	15.28	ug/ml	99
63)	2,4-Dinitrophenol	6.322	184	7995	12.72	ug/ml	95
64)	Dibenzofuran	6.428	168	135699	15.69	ug/ml	99
65)	4-Nitrophenol	6.375	65	3412	5.62	ug/ml#	80
66)	2,4-Dinitrotoluene	6.405	165	34904	15.71	ug/ml	98
67)	Diethylphthalate	6.552	149	98679	15.93	ug/ml	100
68)	Fluorene	6.652	166	108871	14.94	ug/ml	100
69)	4-Chlorophenyl phenyl	6.640	204	53825	16.20	ug/ml	99
70)	4-Nitroaniline	6.658	138	28618	14.63	ug/ml	98
71)	Atrazine	7.064	200	31523	16.66	ug/ml	99
73)	4,6-Dinitro-2-methylph	6.669	198	16576	15.35	ug/ml	97
74)	N-Nitrosodiphenylamine	6.716	169	97977	16.40	ug/ml	99
75)	1,2-Diphenylhydrazine	6.746	77	66326	16.21	ug/ml	100
77)	4-Bromophenyl phenyl e	6.969	248	33764	16.30	ug/ml	99
78)	Hexachlorobenzene	7.022	284	40164	15.94	ug/ml	100
79)	Pentachlorophenol	7.158	266	18454	15.80	ug/ml	98
80)	Phenanthrene	7.311	178	168384	15.46	ug/ml	100
81)	Anthracene	7.346	178	169689	15.62	ug/ml	100
82)	Carbazole	7.452	167	161254	16.56	ug/ml	100
83)	Di-n-butylphthalate	7.681	149	165025	16.56	ug/ml	100
84)	Fluoranthene	8.246	202	180647	15.73	ug/ml	99
88)	Pyrene	8.469	202	189384	15.87	ug/ml	100
90)	Butylbenzylphthalate	9.163	149	70376	15.92	ug/ml	98
91)	Benzo[a]anthracene	9.952	228	176366	15.94	ug/ml	100
92)	3,3'-Dichlorobenzidine	9.916	252	64674	13.56	ug/ml	99
93)	Chrysene	10.010	228	188547	15.96	ug/ml	100
94)	Bis(2-ethylhexyl)phtha	10.010	149	95506	15.88	ug/ml	99
96)	Di-n-octylphthalate	11.199	149	160715	15.71	ug/ml	100
97)	Benzo(b)fluoranthene	11.852	252	176634	15.69	ug/ml	100
98)	Benzo(k)fluoranthene	11.904	252	192883	16.27	ug/ml	99
99)	Benzo(a)pyrene	12.493	252	160823	15.73	ug/ml	99
100)	Indeno(1,2,3-cd)pyrene	14.857	276	162286	15.53	ug/ml	99

Quantitation Report (QT Reviewed)

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113023.D
Acq On : 30 Nov 2020 06:54 pm
Operator : EE/EEW
Sample : SLCSW1-168341
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 01 10:29:20 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
101) Dibenz(a,h)anthracene	14.928	278	173236	15.70	ug/ml	99
102) Benzo(g,h,i)perylene	15.410	276	187139	15.72	ug/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113023.D
Acq On : 30 Nov 2020 06:54 pm
Operator : EE/EEW
Sample : SLCSW1-168341
Misc : 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
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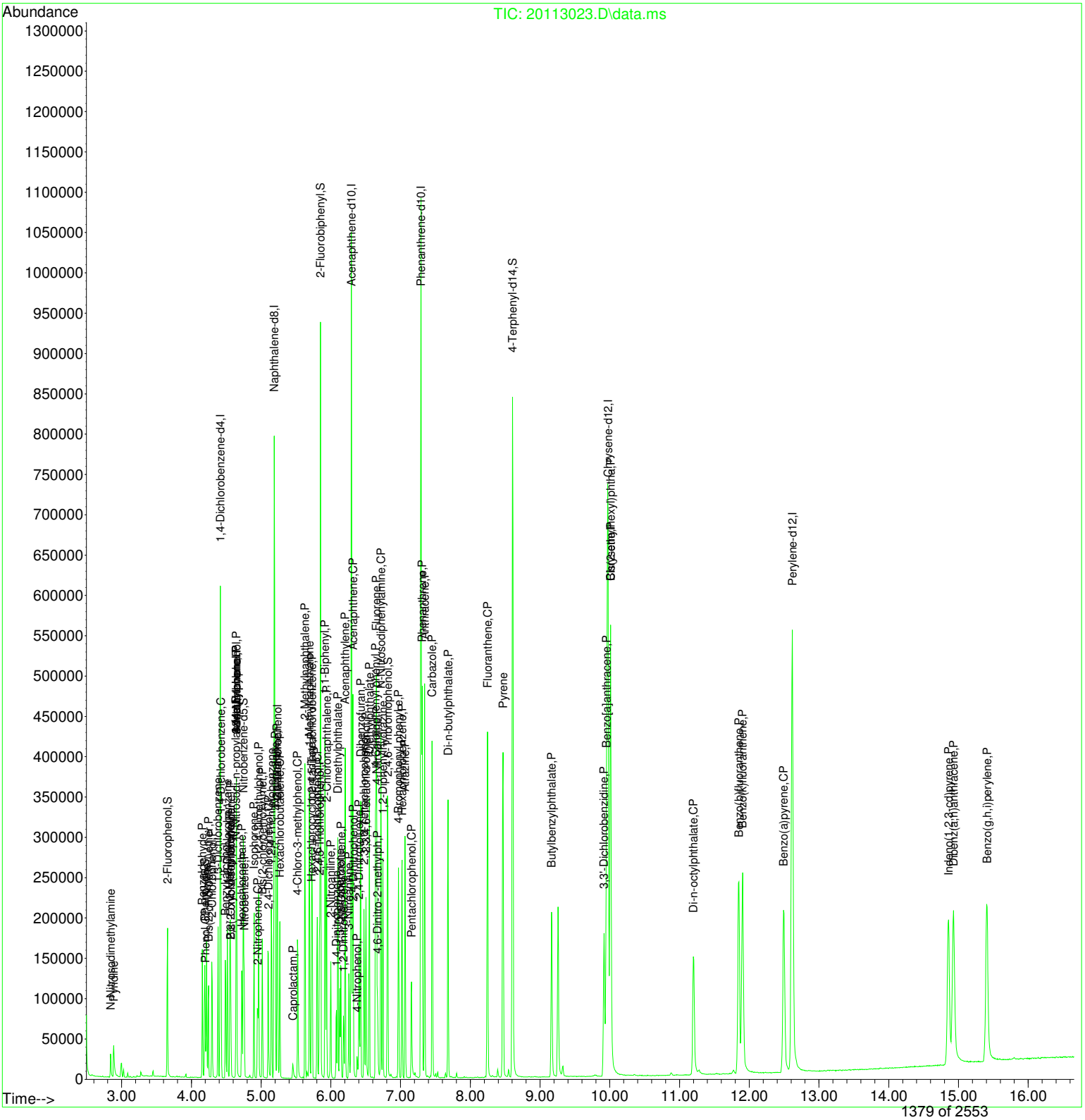
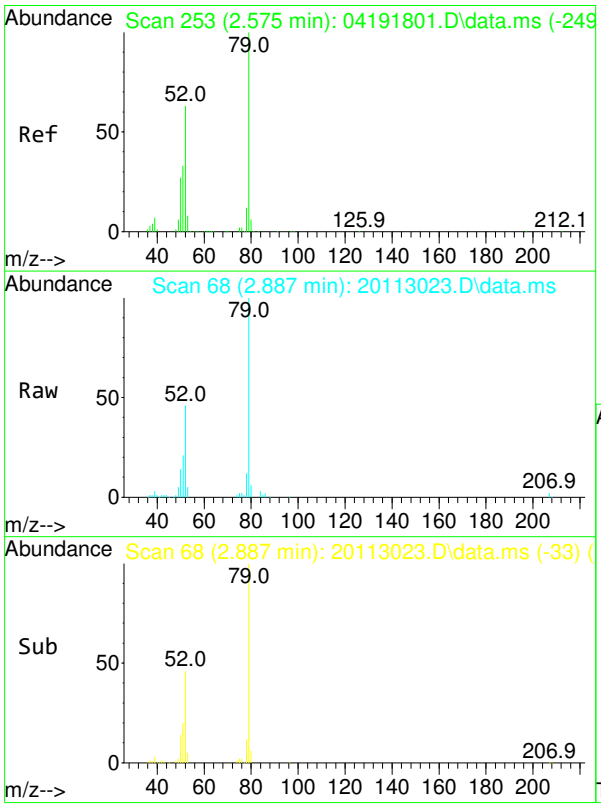
Quant Time: Dec 01 10:29:20 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

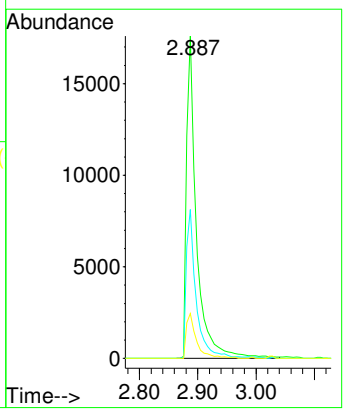


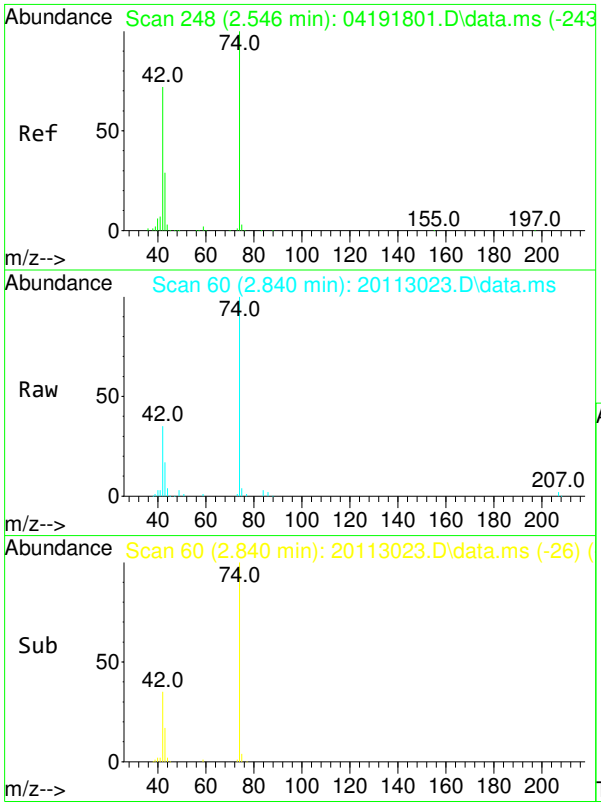


#3
Pyridine
Concen: 7.74 ug/ml
RT: 2.887 min Scan# 68
Delta R.T. 0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 79 Resp: 20863

Ion	Ratio	Lower	Upper
79	100		
52	45.2	15.6	75.6
50	14.3	0.0	44.3

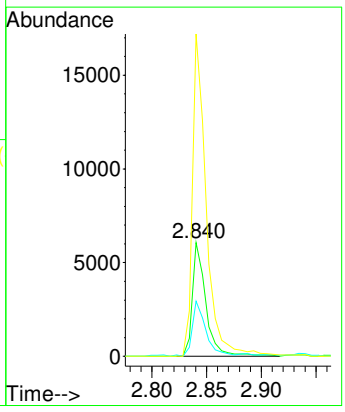


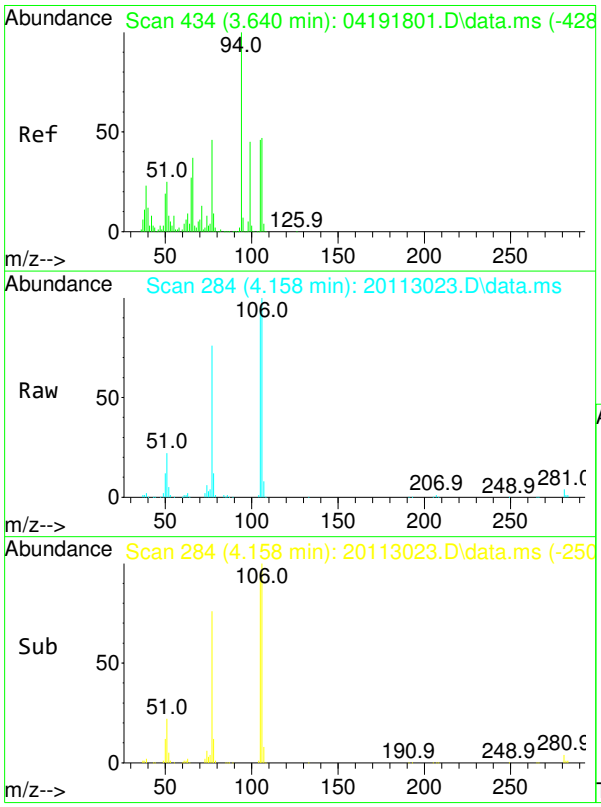


#4
N-Nitrosodimethylamine
Concen: 9.89 ug/ml
RT: 2.840 min Scan# 60
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 42 Resp: 5225

Ion	Ratio	Lower	Upper
42	100		
43	48.3	19.5	79.5
74	288.4	266.1	326.1

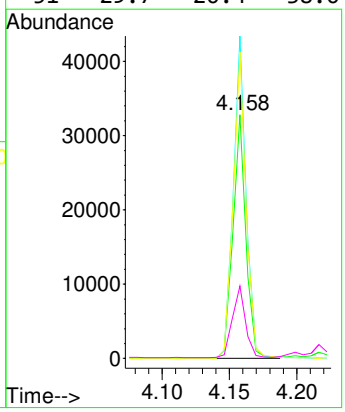


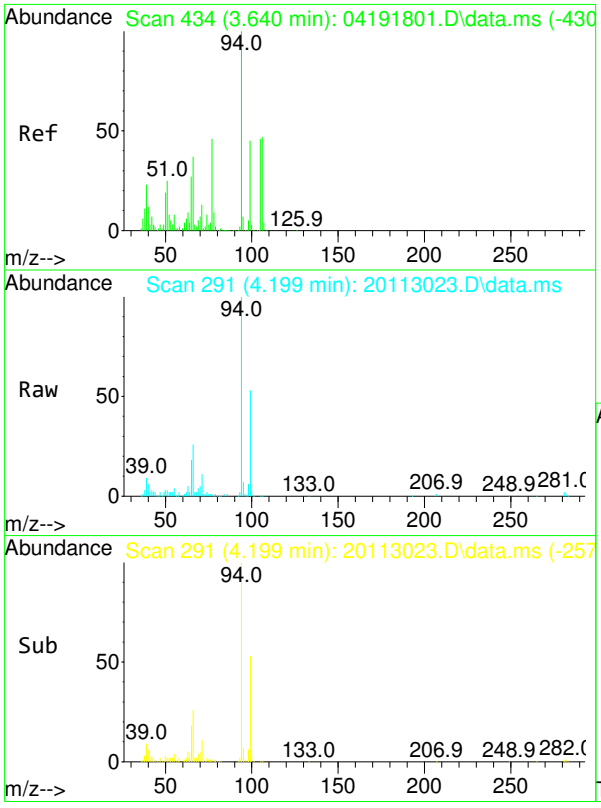


#6
Benzaldehyde
Concen: 12.12 ug/ml
RT: 4.158 min Scan# 284
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 77 Resp: 21822

Ion	Ratio	Lower	Upper
77	100		
106	131.0	89.2	165.8
105	125.6	87.2	161.9
51	29.7	20.4	38.0

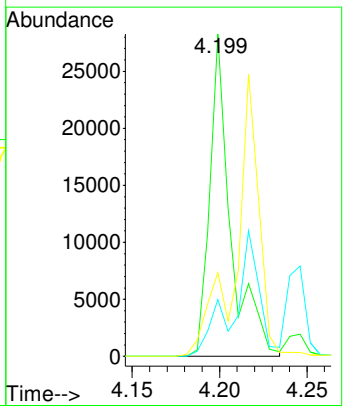


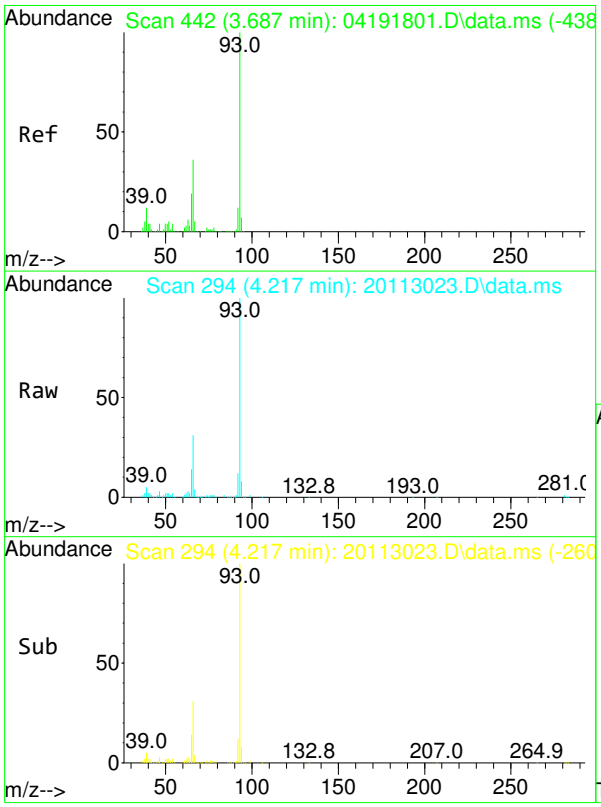


#8
Phenol
Concen: 6.73 ug/ml
RT: 4.199 min Scan# 291
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 94 Resp: 23689

Ion	Ratio	Lower	Upper
94	100		
65	48.0	0.0	48.0
66	97.8	0.0	30.0#

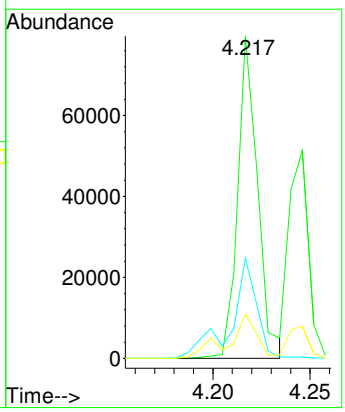


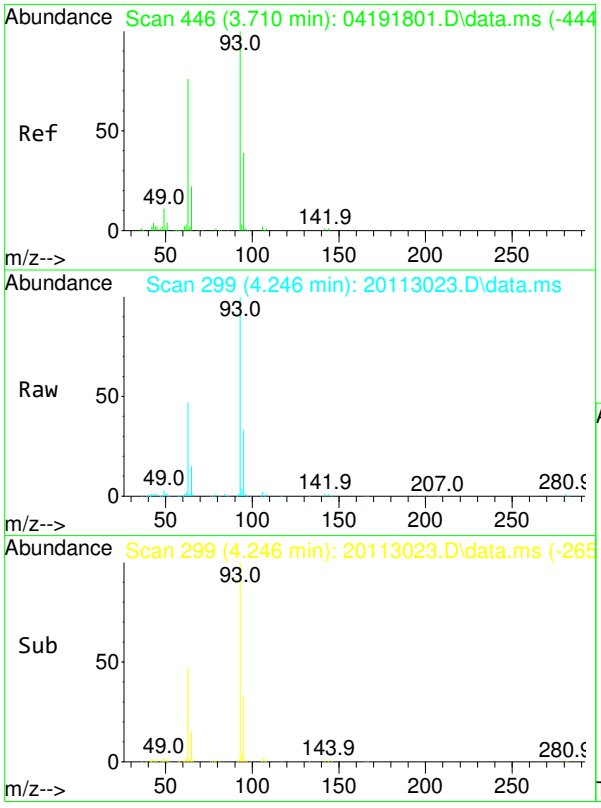


#9
Aniline
Concen: 14.94 ug/ml
RT: 4.217 min Scan# 294
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 93 Resp: 56923

Ion	Ratio	Lower	Upper
93	100		
66	40.7	21.2	81.2
65	20.0	0.0	42.0

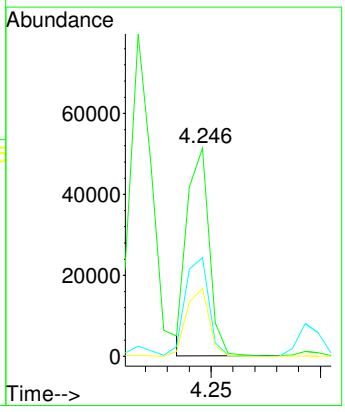


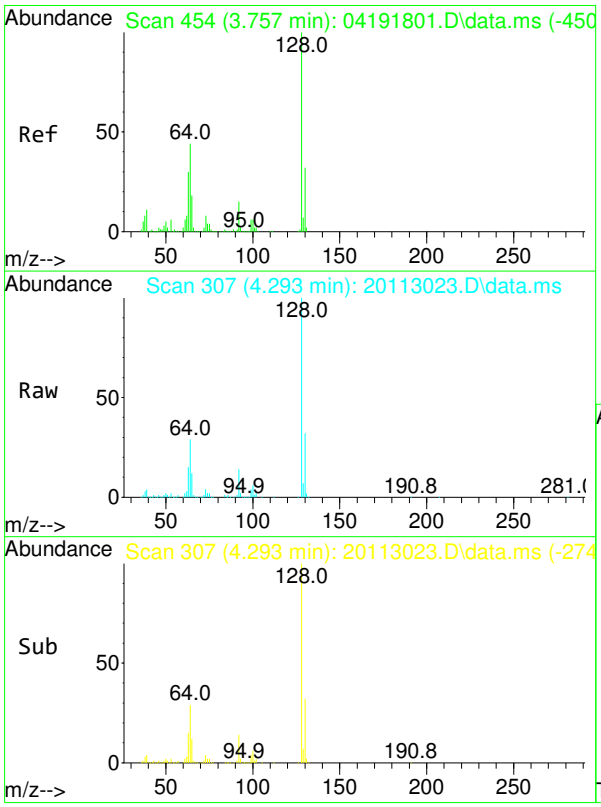


#10
Bis(2-chloroethyl)ether
Concen: 14.17 ug/ml
RT: 4.246 min Scan# 299
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 93 Resp: 36033

Ion	Ratio	Lower	Upper
93	100		
63	51.0	20.3	80.3
95	33.8	3.5	63.5

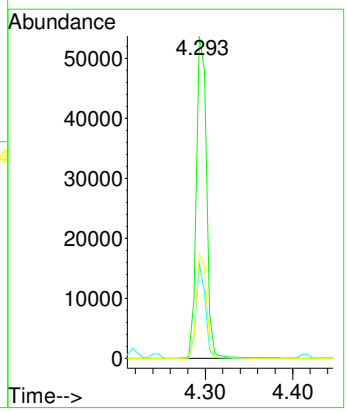


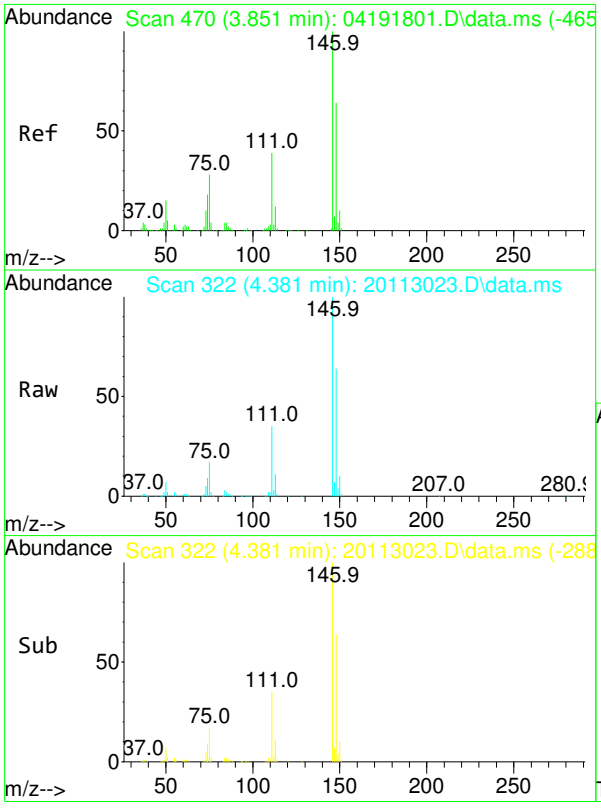


#11
2-Chlorophenol
Concen: 14.95 ug/ml
RT: 4.293 min Scan# 307
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:128 Resp: 43019

Ion	Ratio	Lower	Upper
128	100		
64	26.6	0.0	56.6
130	32.3	2.4	62.4

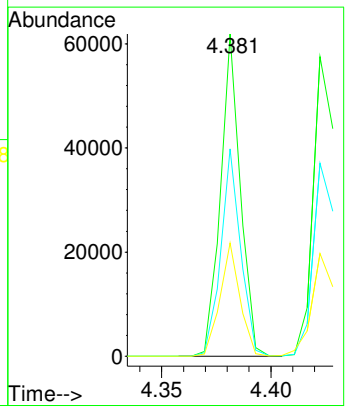


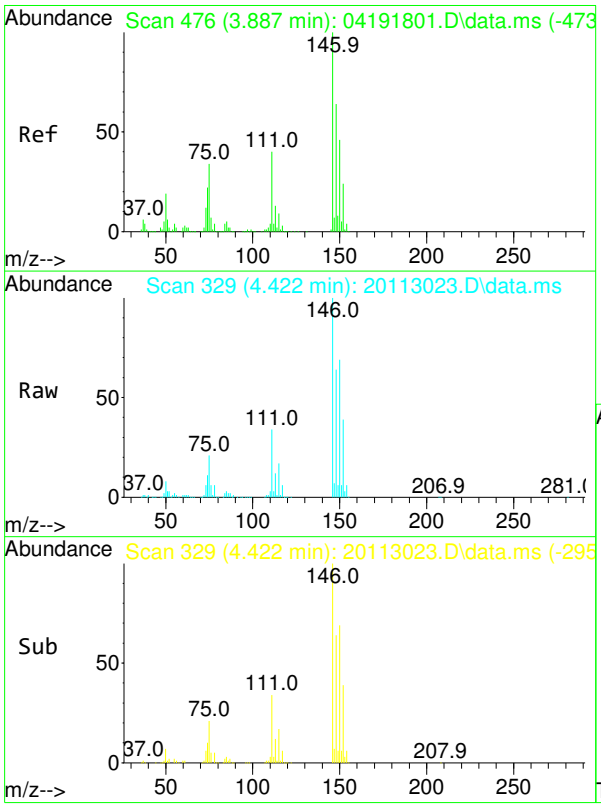


#12
1,3-Dichlorobenzene
Concen: 10.58 ug/ml
RT: 4.381 min Scan# 322
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:146 Resp: 39360

Ion	Ratio	Lower	Upper
146	100		
148	64.2	34.4	94.4
111	35.4	4.8	64.8

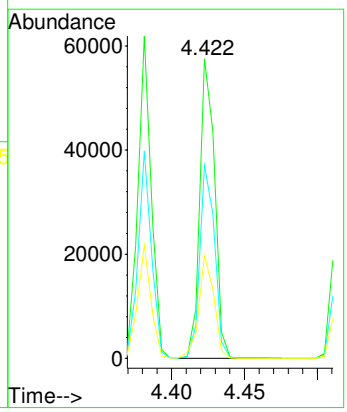


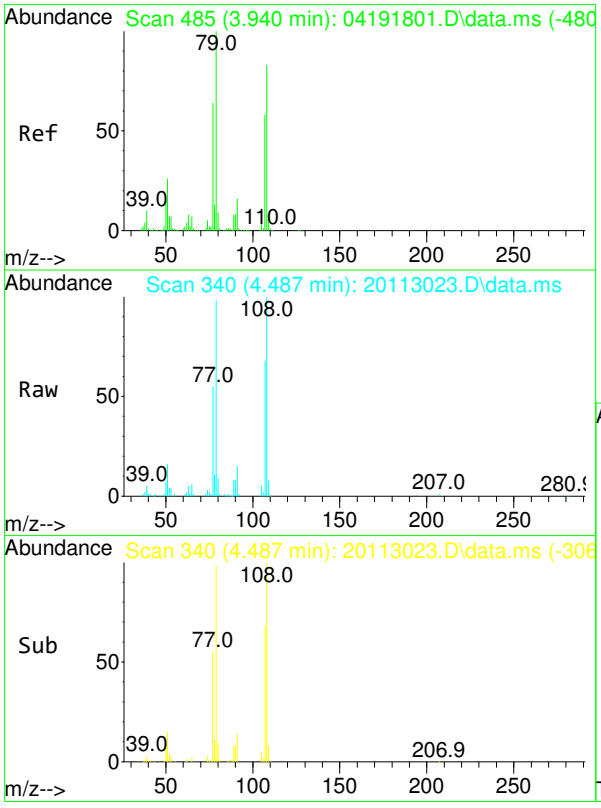


#13
1,4-Dichlorobenzene
Concen: 10.88 ug/ml
RT: 4.422 min Scan# 329
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:146 Resp: 41124

Ion	Ratio	Lower	Upper
146	100		
148	64.4	34.4	94.4
111	35.1	4.4	64.4

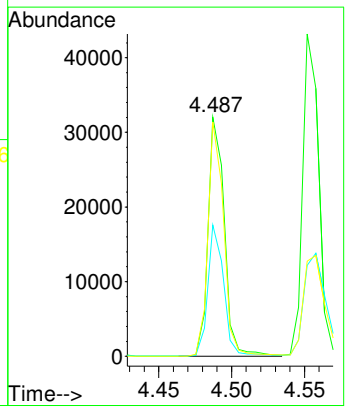


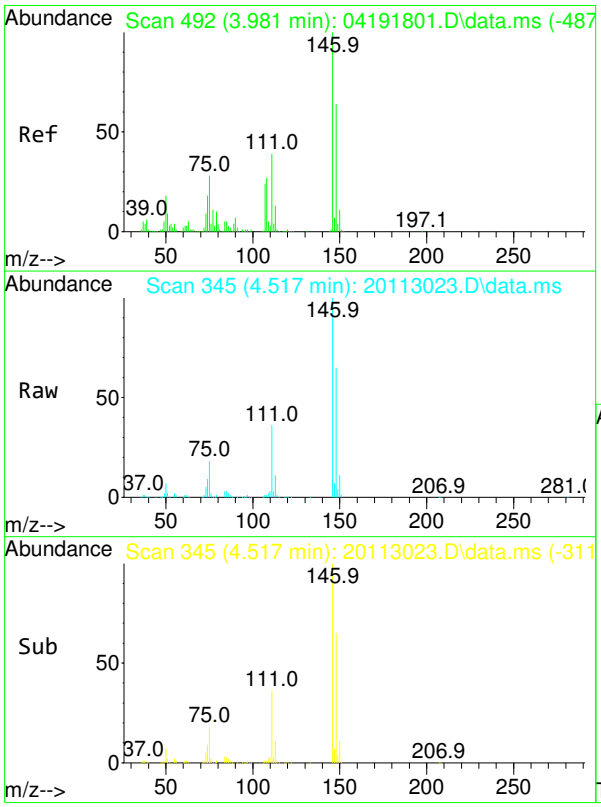


#14
Benzyl alcohol
Concen: 13.59 ug/ml
RT: 4.487 min Scan# 340
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:108 Resp: 24931

Ion	Ratio	Lower	Upper
108	100		
77	54.0	23.7	83.7
79	95.1	63.7	123.7

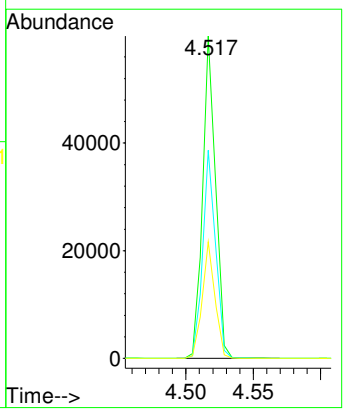


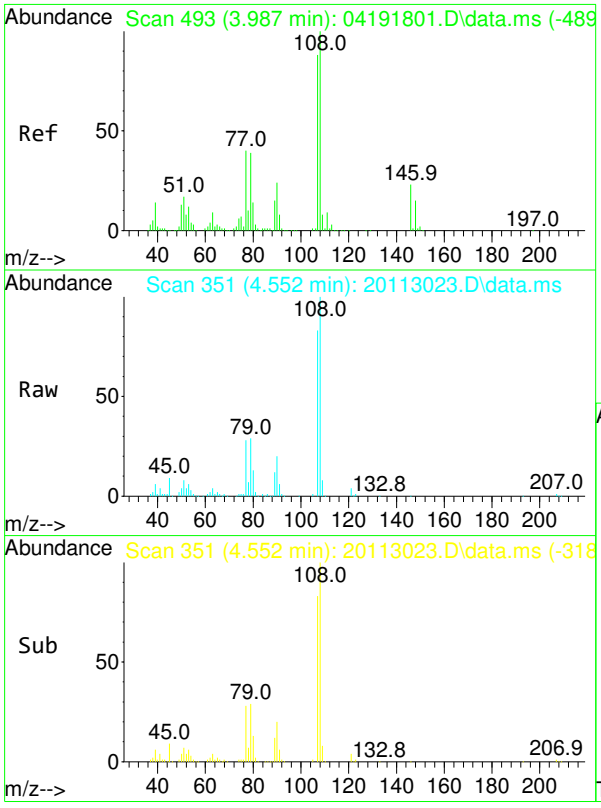


#15
1,2-Dichlorobenzene
Concen: 11.16 ug/ml
RT: 4.517 min Scan# 345
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:146 Resp: 39868

Ion	Ratio	Lower	Upper
146	100		
148	64.0	34.3	94.3
111	35.5	5.6	65.6

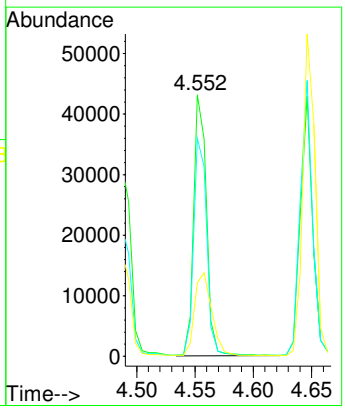


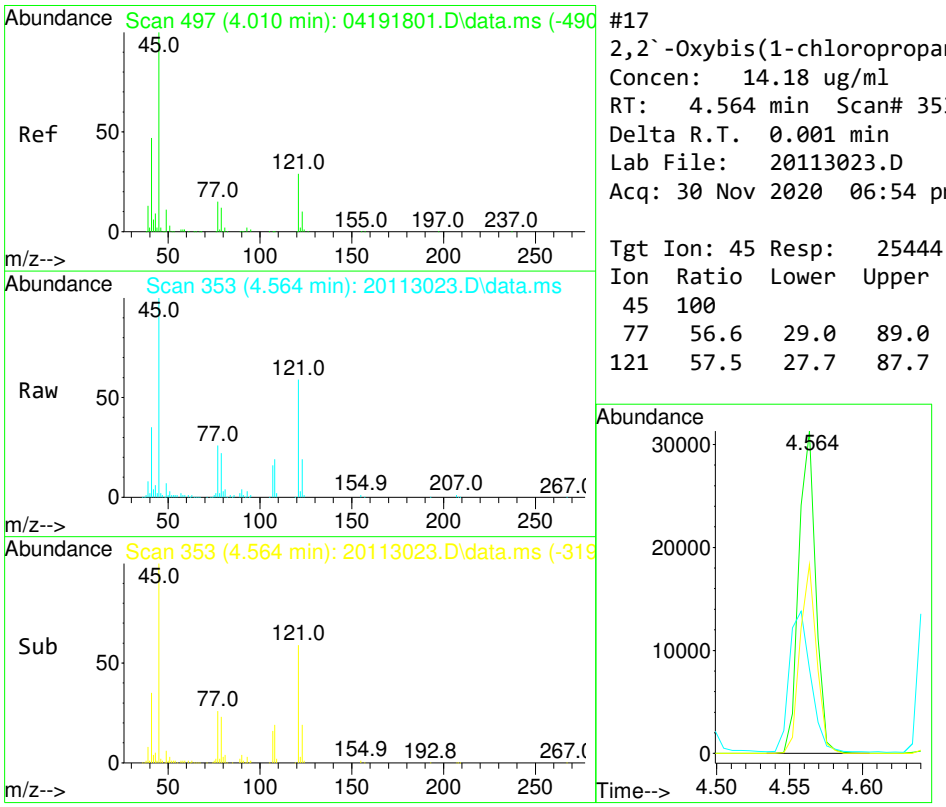


#16
2-Methylphenol
Concen: 12.86 ug/ml
RT: 4.552 min Scan# 351
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:108 Resp: 33188

Ion	Ratio	Lower	Upper
108	100		
107	85.1	56.1	116.1
77	43.4	10.6	70.6

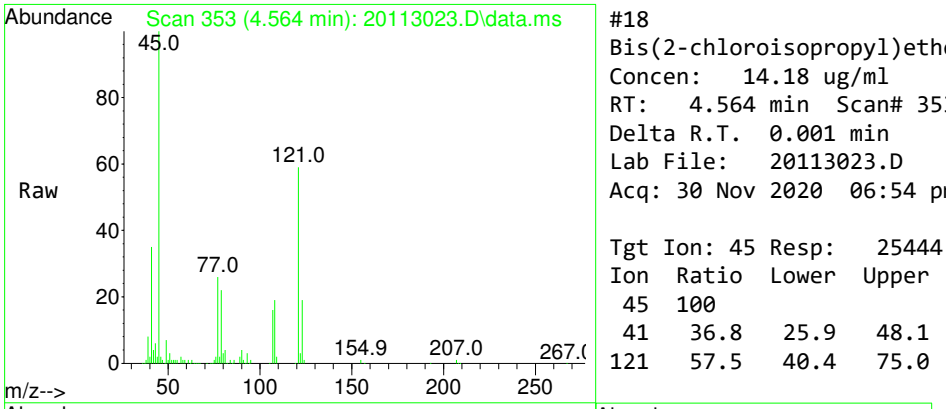




#17
2,2`-Oxybis(1-chloropropane)
Concen: 14.18 ug/ml
RT: 4.564 min Scan# 353
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 45 Resp: 25444

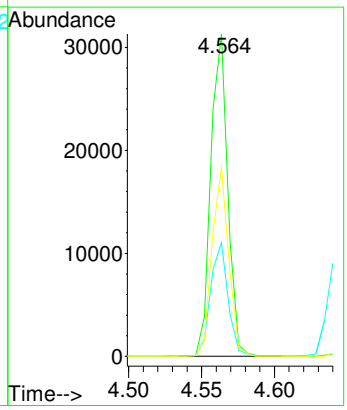
Ion	Ratio	Lower	Upper
45	100		
77	56.6	29.0	89.0
121	57.5	27.7	87.7

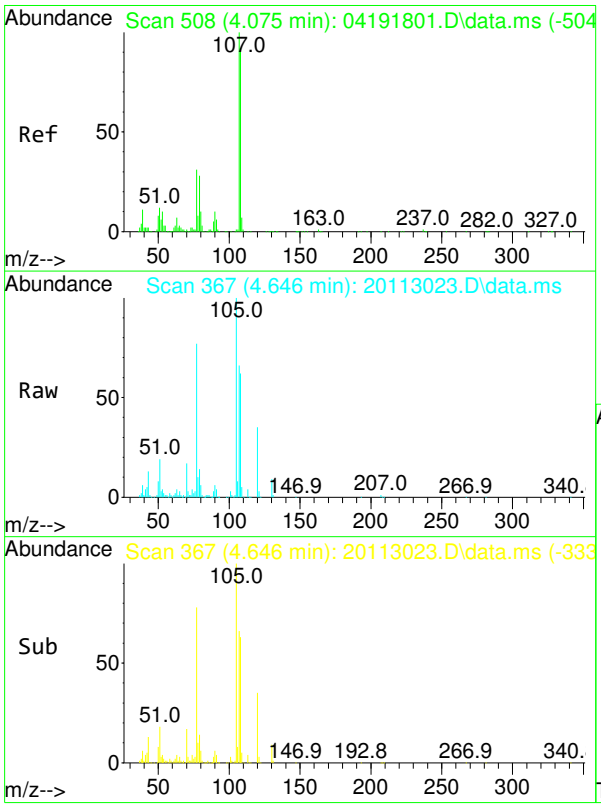


#18
Bis(2-chloroisopropyl)ether
Concen: 14.18 ug/ml
RT: 4.564 min Scan# 353
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 45 Resp: 25444

Ion	Ratio	Lower	Upper
45	100		
41	36.8	25.9	48.1
121	57.5	40.4	75.0

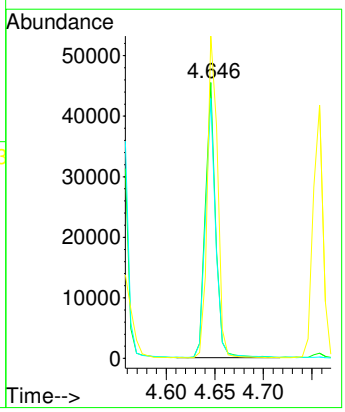


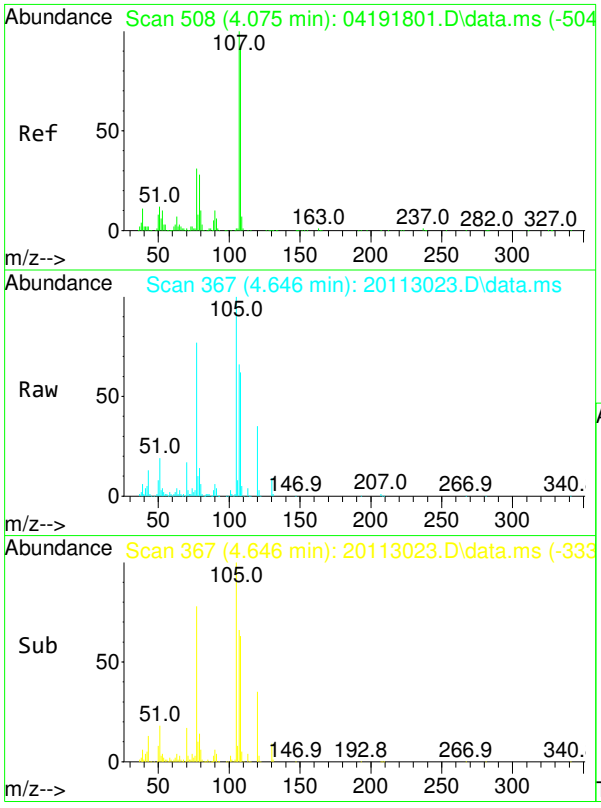


#19
3-Methylphenol
Concen: 12.06 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:107 Resp: 33947

Ion	Ratio	Lower	Upper
107	100		
108	93.6	65.1	125.1
77	117.0	68.3	128.3

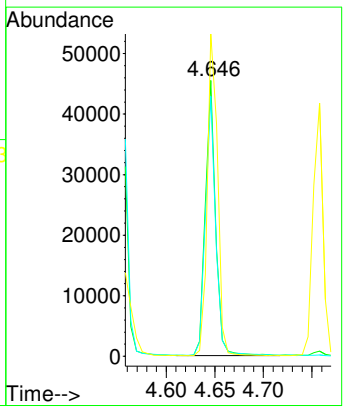


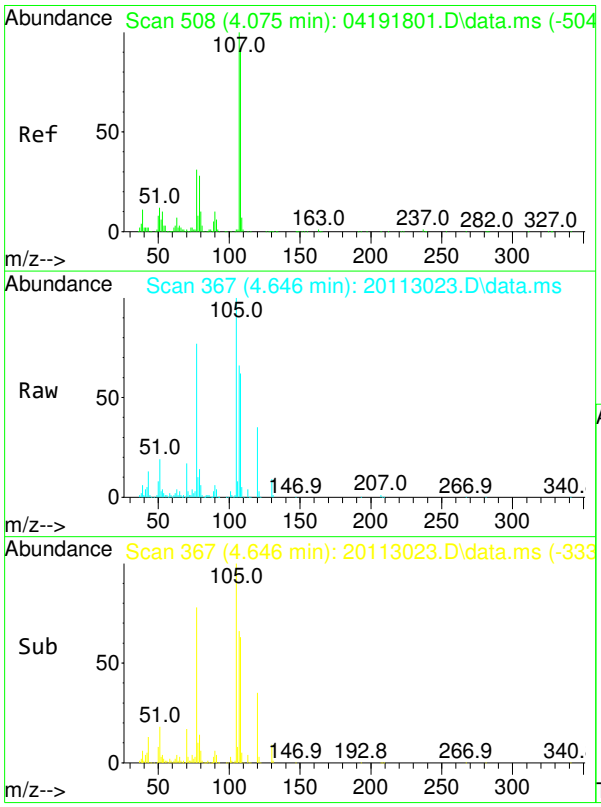


#20
4-Methylphenol
Concen: 12.06 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:107 Resp: 33947

Ion	Ratio	Lower	Upper
107	100		
108	93.6	65.1	125.1
77	117.0	68.3	128.3

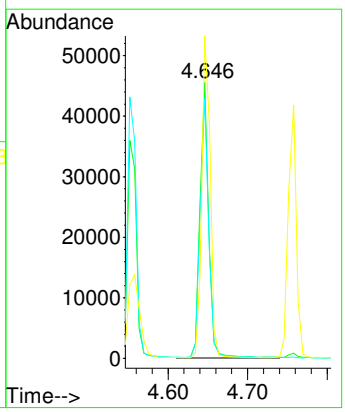


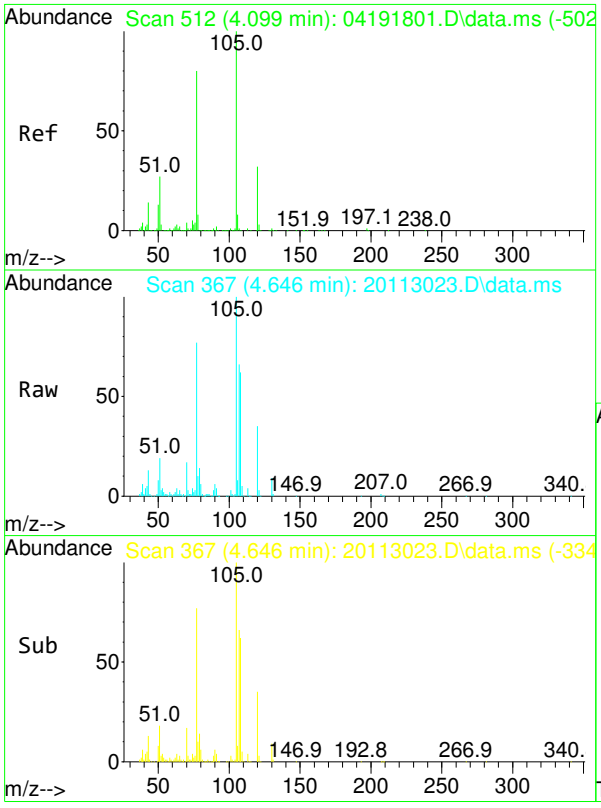


#21
3&4-Methylphenol
Concen: 12.11 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:107 Resp: 34404

Ion	Ratio	Lower	Upper
107	100		
108	94.7	67.0	124.4
77	115.0	68.5	127.1

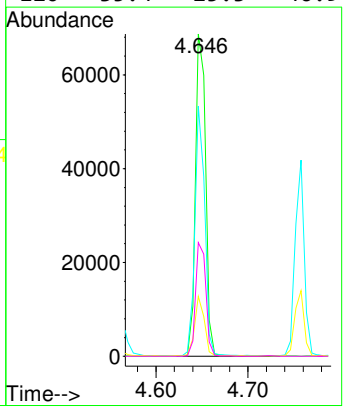


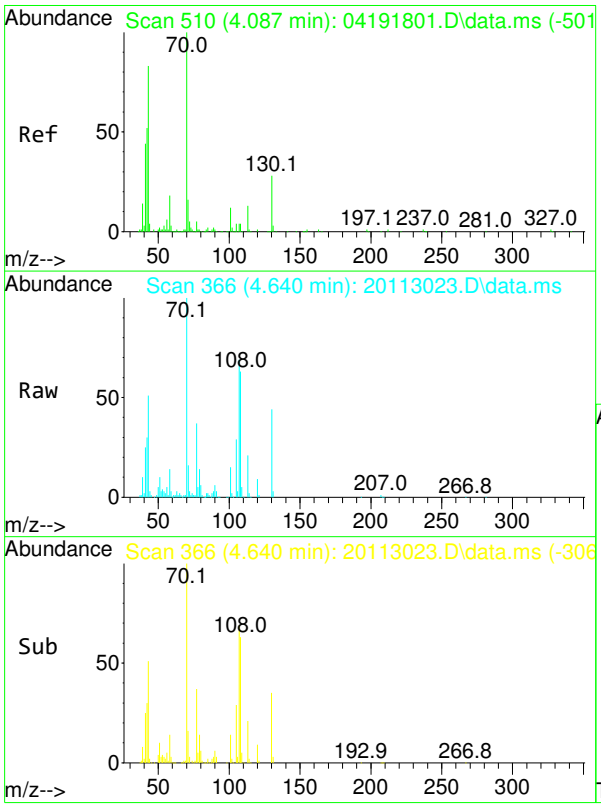


#22
Acetophenone
Concen: 14.94 ug/ml
RT: 4.646 min Scan# 367
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:105 Resp: 52705

Ion	Ratio	Lower	Upper
105	100		
77	75.4	55.3	102.7
51	17.8	13.0	24.1
120	35.4	25.3	46.9

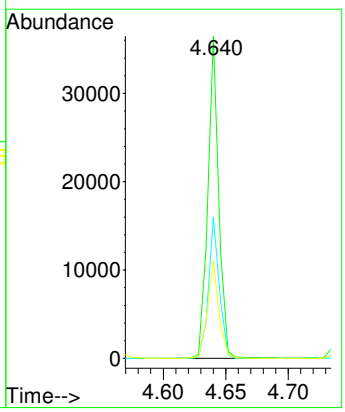


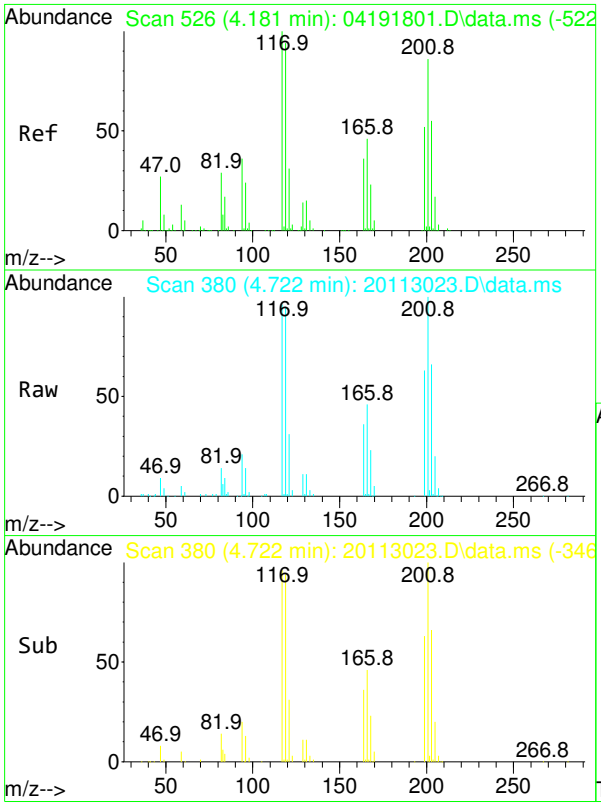


#23
N-Nitrosodi-n-propylamine
Concen: 15.34 ug/ml
RT: 4.640 min Scan# 366
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 70 Resp: 22121

Ion	Ratio	Lower	Upper
70	100		
130	43.1	14.0	74.0
42	31.6	2.7	62.7

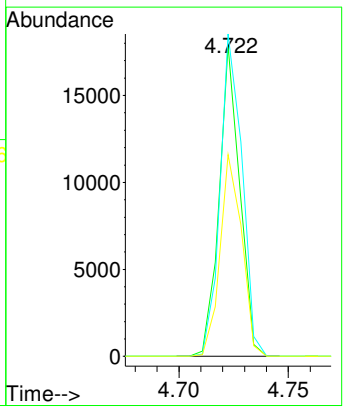


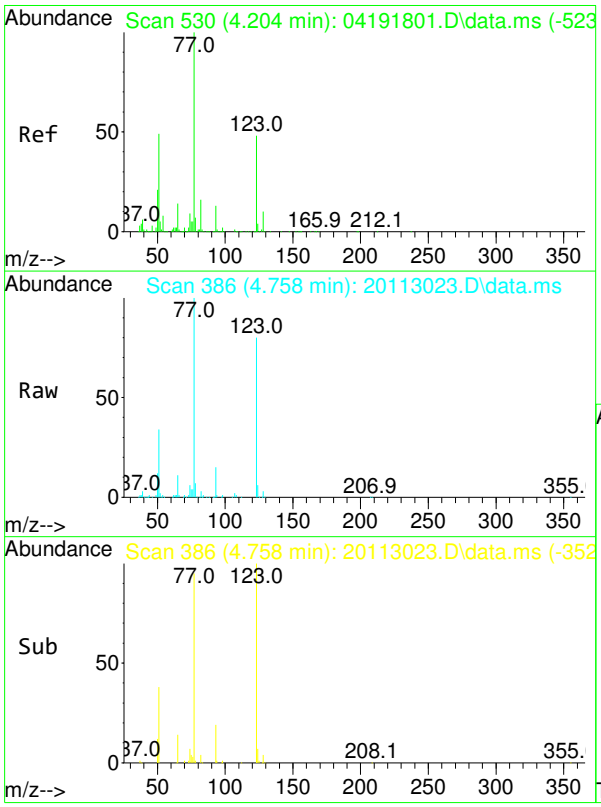


#24
Hexachloroethane
Concen: 10.28 ug/ml
RT: 4.722 min Scan# 380
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:117 Resp: 11737

Ion	Ratio	Lower	Upper
117	100		
201	110.3	81.5	141.5
199	68.4	40.0	100.0

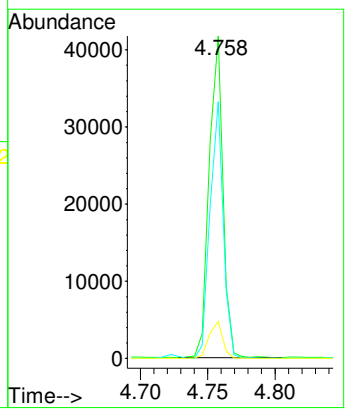


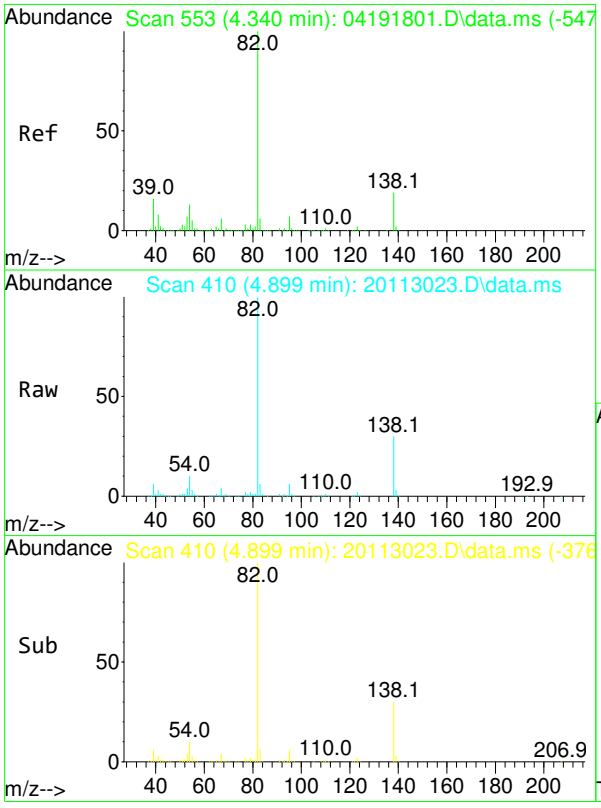


#27
Nitrobenzene
Concen: 14.78 ug/ml
RT: 4.758 min Scan# 386
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 77 Resp: 29451

Ion	Ratio	Lower	Upper
77	100		
123	77.2	45.3	105.3
65	11.6	0.0	41.6

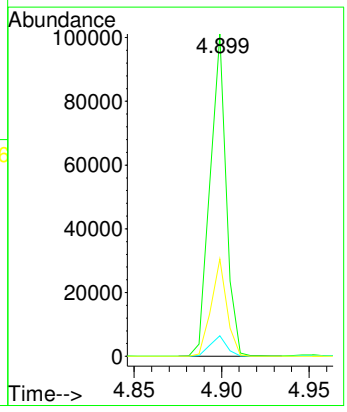


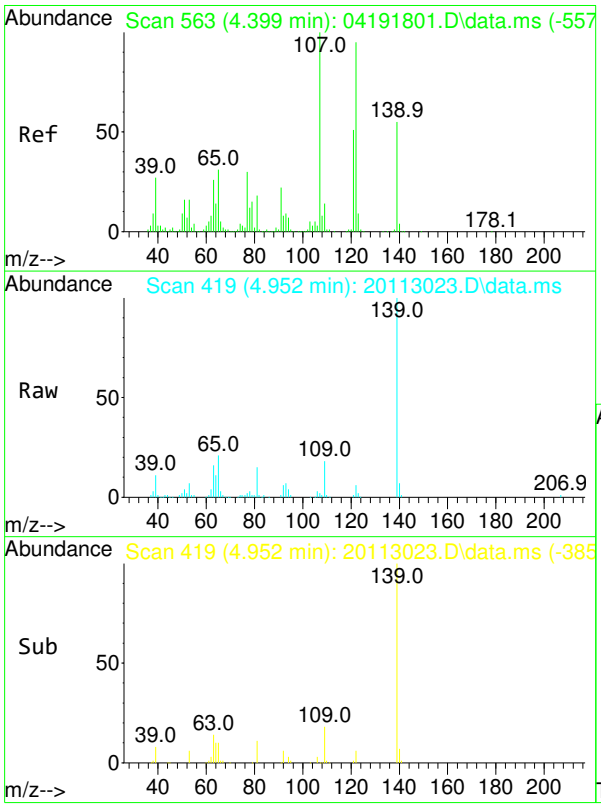


#28
Isophorone
Concen: 15.63 ug/ml
RT: 4.899 min Scan# 410
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 82 Resp: 64678

Ion	Ratio	Lower	Upper
82	100		
95	6.5	0.0	36.4
138	29.4	0.0	58.9

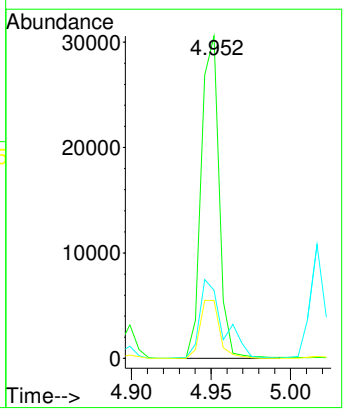


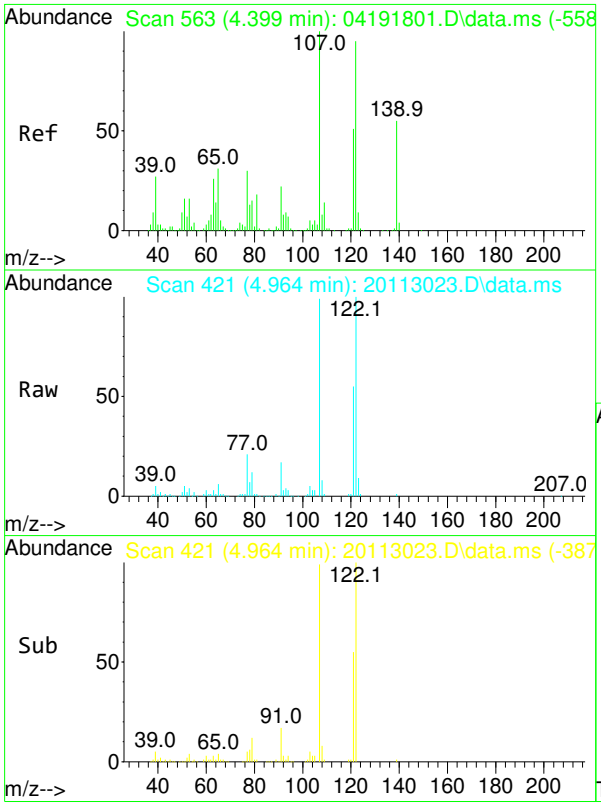


#29
2-Nitrophenol
Concen: 14.01 ug/ml
RT: 4.952 min Scan# 419
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:139 Resp: 23970

Ion	Ratio	Lower	Upper
139	100		
65	32.7	2.3	62.3
109	19.8	0.0	49.8

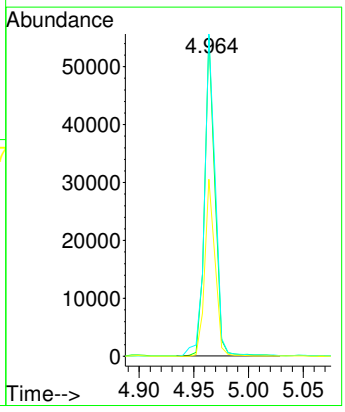


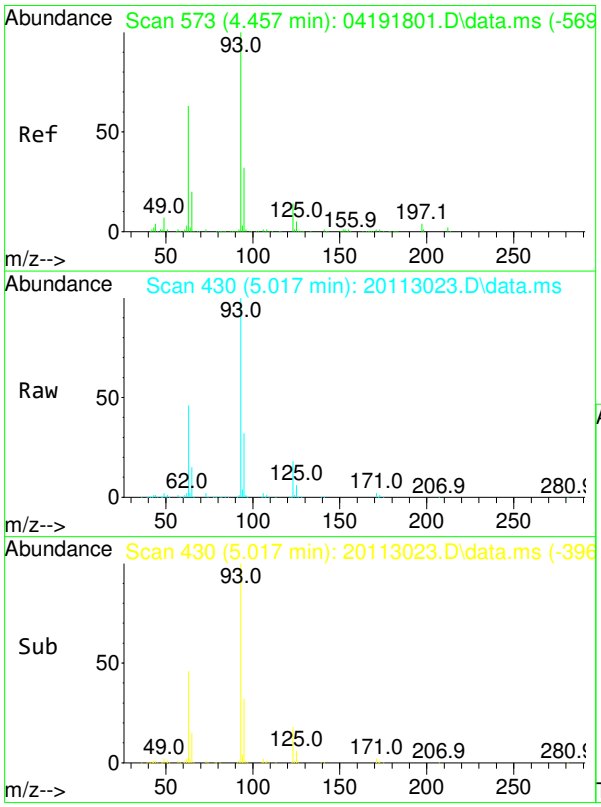


#30
2,4-Dimethylphenol
Concen: 13.30 ug/ml
RT: 4.964 min Scan# 421
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:107 Resp: 36161

Ion	Ratio	Lower	Upper
107	100		
122	107.2	76.7	136.7
121	55.9	25.8	85.8

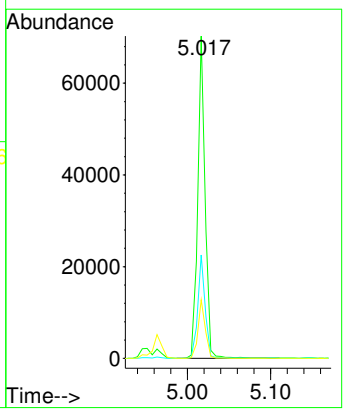


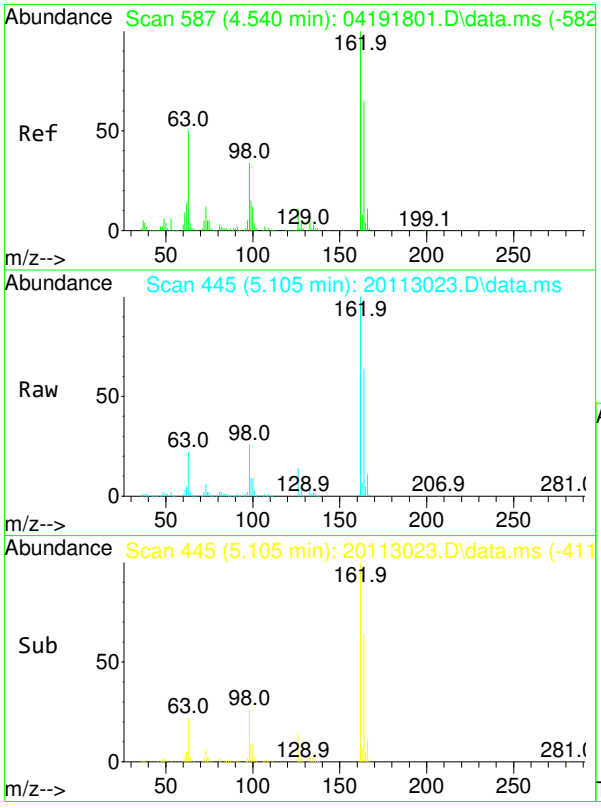


#31
Bis(2-chloroethoxy)met
Concen: 14.74 ug/ml
RT: 5.017 min Scan# 430
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 93 Resp: 43596

Ion	Ratio	Lower	Upper
93	100		
95	32.3	3.1	63.1
123	18.2	0.0	51.5

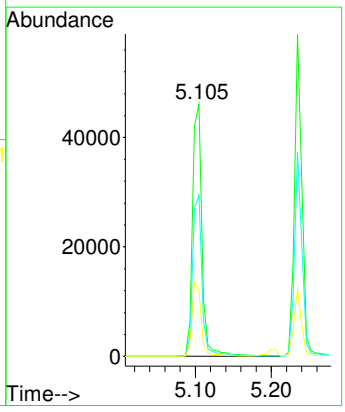


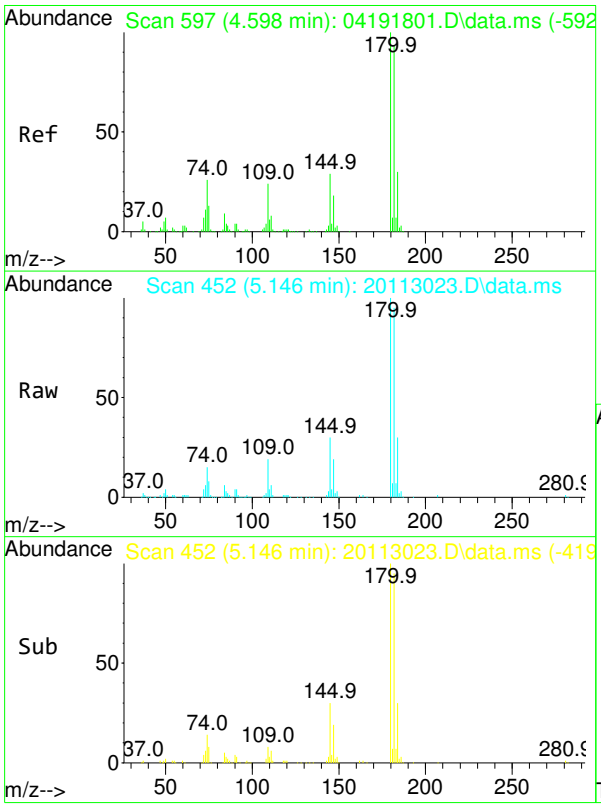


#33
2,4-Dichlorophenol
Concen: 14.42 ug/ml
RT: 5.105 min Scan# 445
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:162 Resp: 39913

Ion	Ratio	Lower	Upper
162	100		
164	63.7	34.3	94.3
98	28.5	0.0	58.1

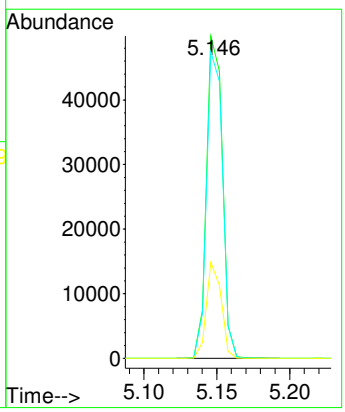


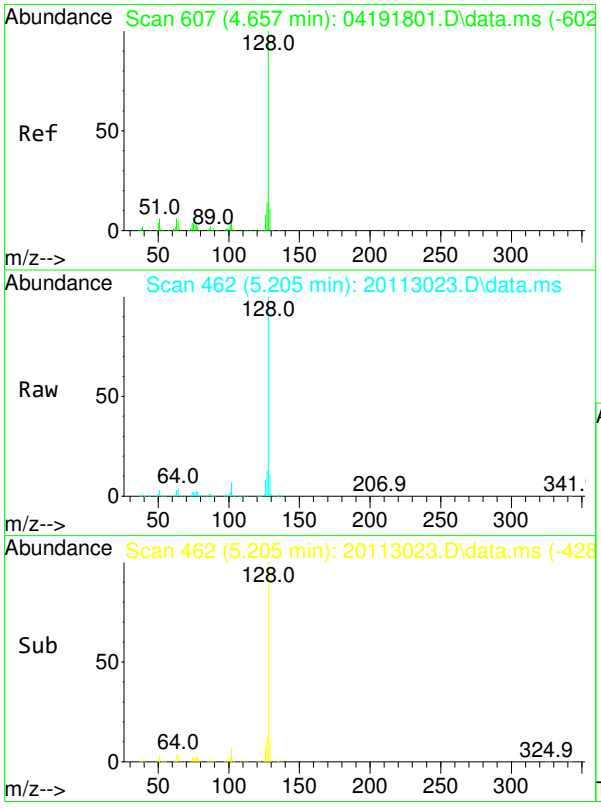


#34
1,2,4-Trichlorobenzene
Concen: 13.09 ug/ml
RT: 5.146 min Scan# 452
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:180 Resp: 37987

Ion	Ratio	Lower	Upper
180	100		
182	95.4	64.8	124.8
145	27.8	0.0	58.2

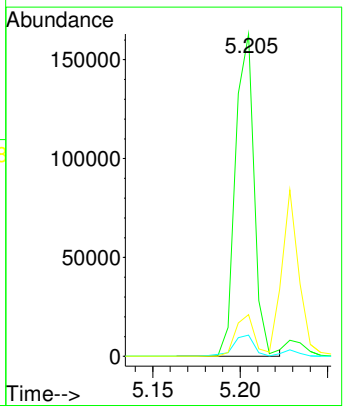


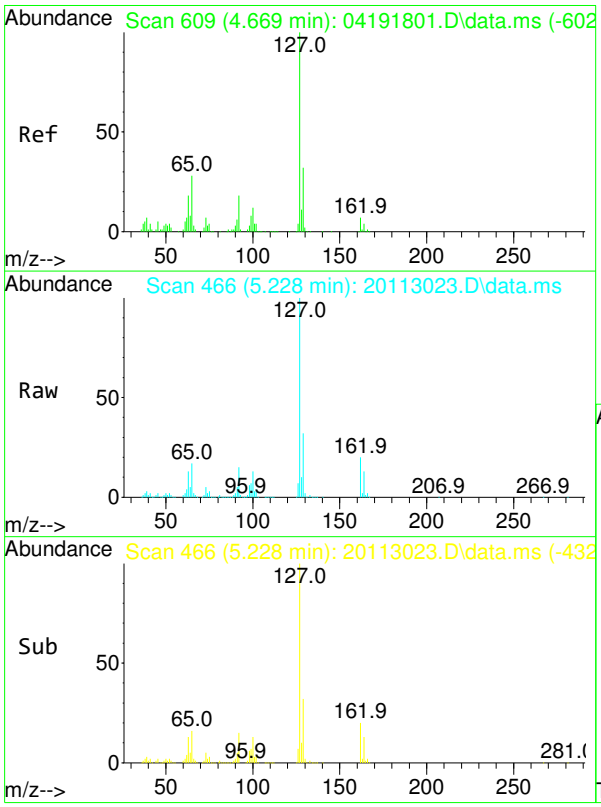


#36
Naphthalene
Concen: 13.15 ug/ml
RT: 5.205 min Scan# 462
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:128 Resp: 121187

Ion	Ratio	Lower	Upper
128	100		
102	7.3	0.0	37.3
127	13.4	0.0	43.2

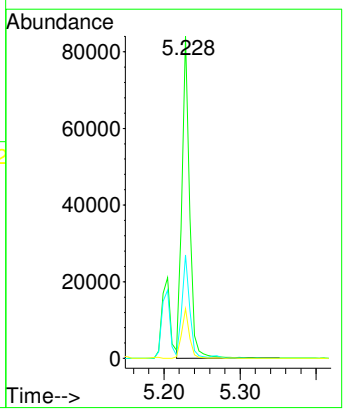


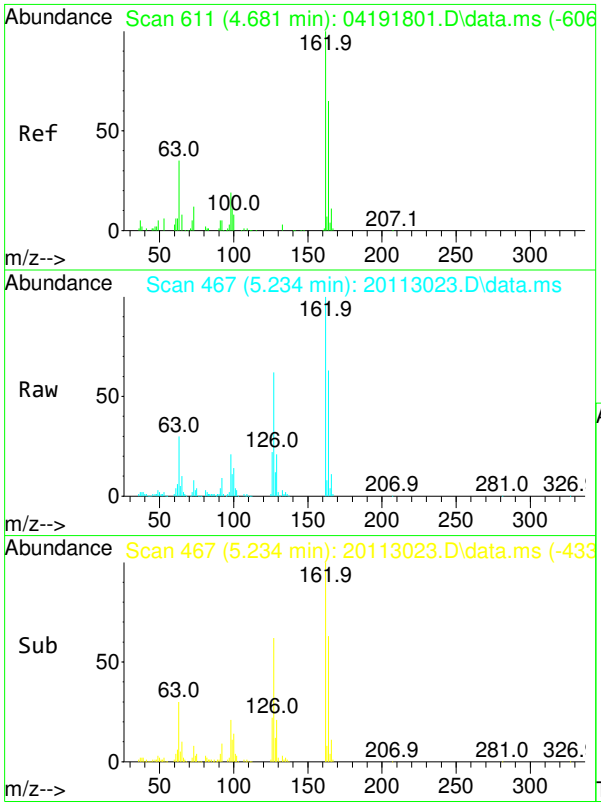


#37
4-Chloroaniline
Concen: 15.49 ug/ml
RT: 5.228 min Scan# 466
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:127 Resp: 58786

Ion	Ratio	Lower	Upper
127	100		
129	32.3	2.3	62.3
92	15.9	0.0	45.7

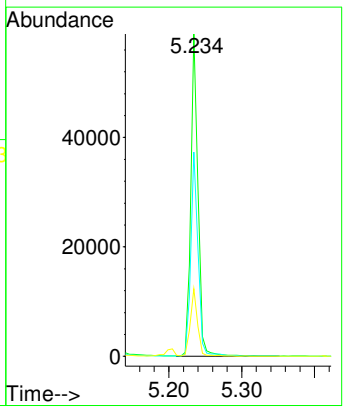


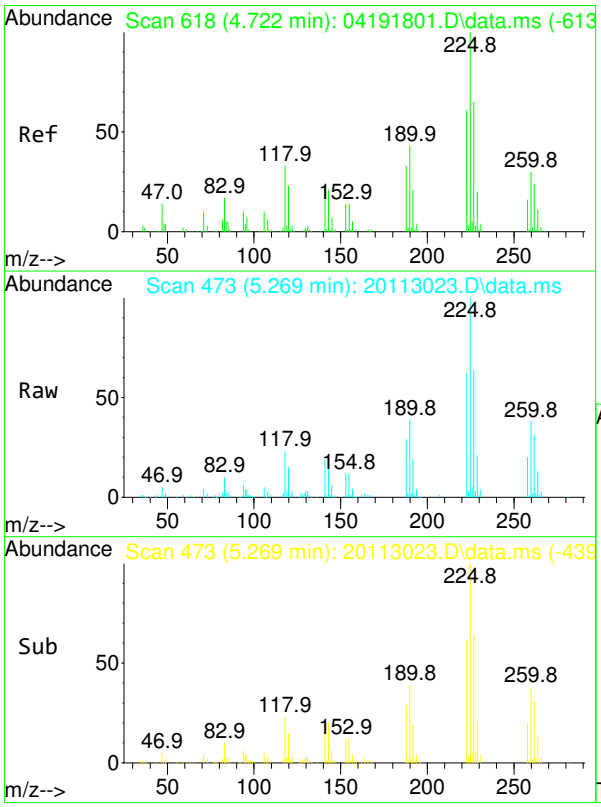


#38
2,6-Dichlorophenol
Concen: 14.29 ug/ml
RT: 5.234 min Scan# 467
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:162 Resp: 40446

Ion	Ratio	Lower	Upper
162	100		
164	64.4	45.7	84.9
98	21.2	14.2	26.4

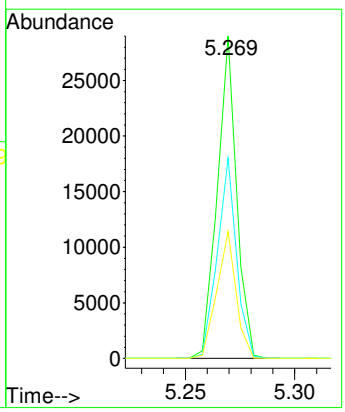


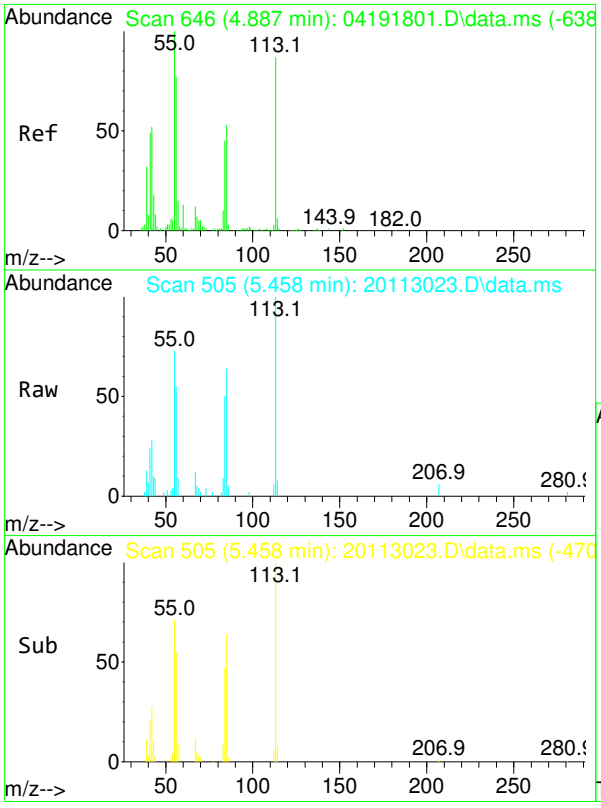


#39
Hexachlorobutadiene
Concen: 12.12 ug/ml
RT: 5.269 min Scan# 473
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:225 Resp: 17903

Ion	Ratio	Lower	Upper
225	100		
223	62.0	31.6	91.6
190	39.3	9.1	69.1

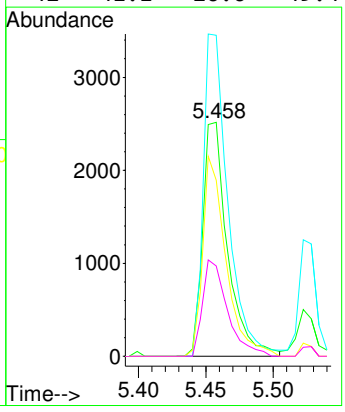


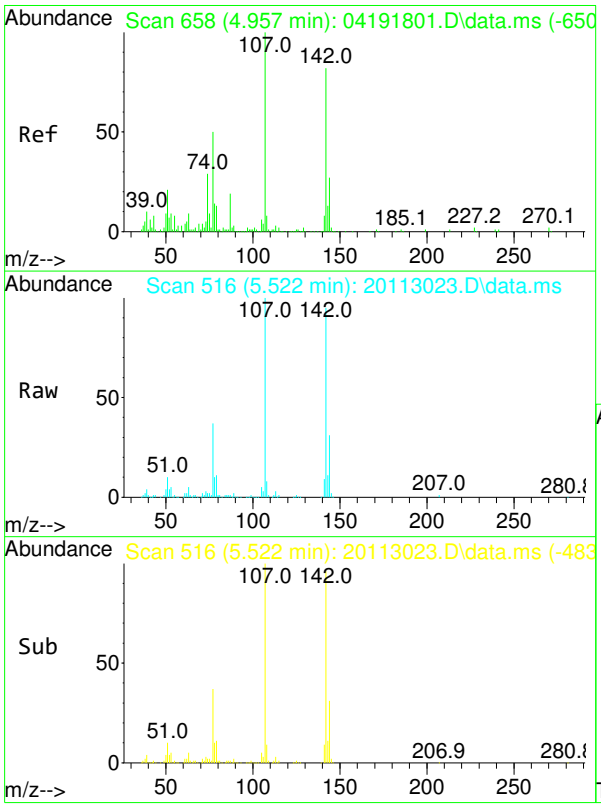


#40
Caprolactam
Concen: 4.38 ug/ml
RT: 5.458 min Scan# 505
Delta R.T. 0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 55 Resp: 3231

Ion	Ratio	Lower	Upper
55	100		
113	135.3	100.4	186.6
56	79.7	56.8	105.6
42	41.1	26.6	49.4

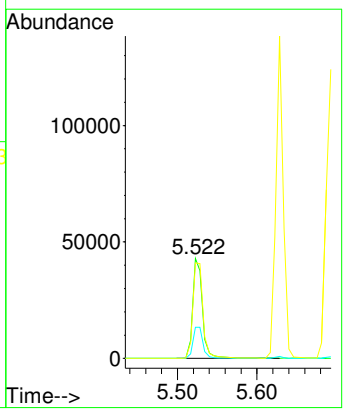


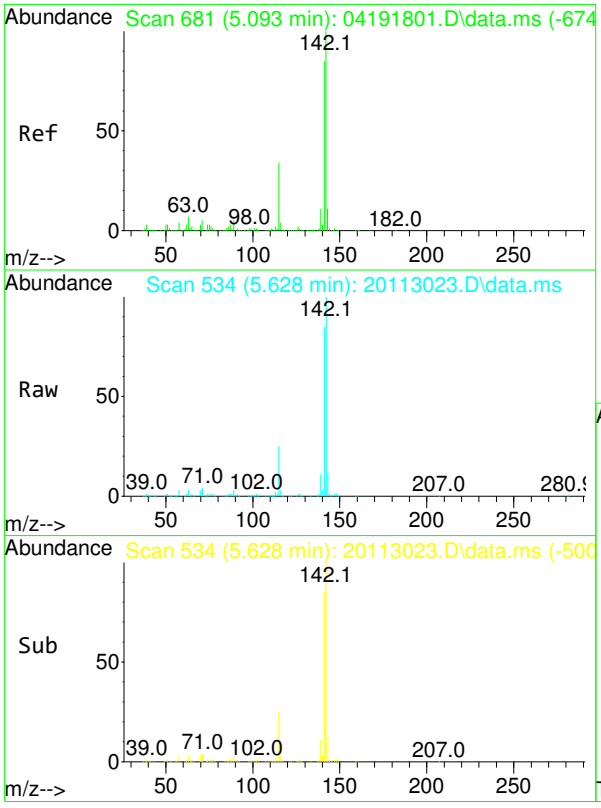


#41
4-Chloro-3-methylphenol
Concen: 15.85 ug/ml
RT: 5.522 min Scan# 516
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:107 Resp: 36617

Ion	Ratio	Lower	Upper
107	100		
144	32.3	2.8	62.8
142	100.5	69.4	129.4

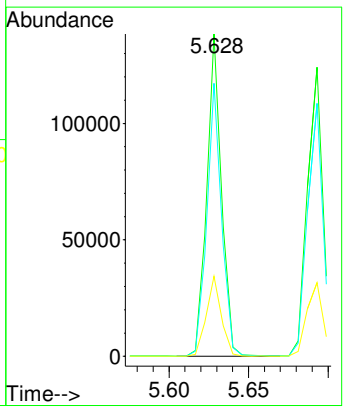


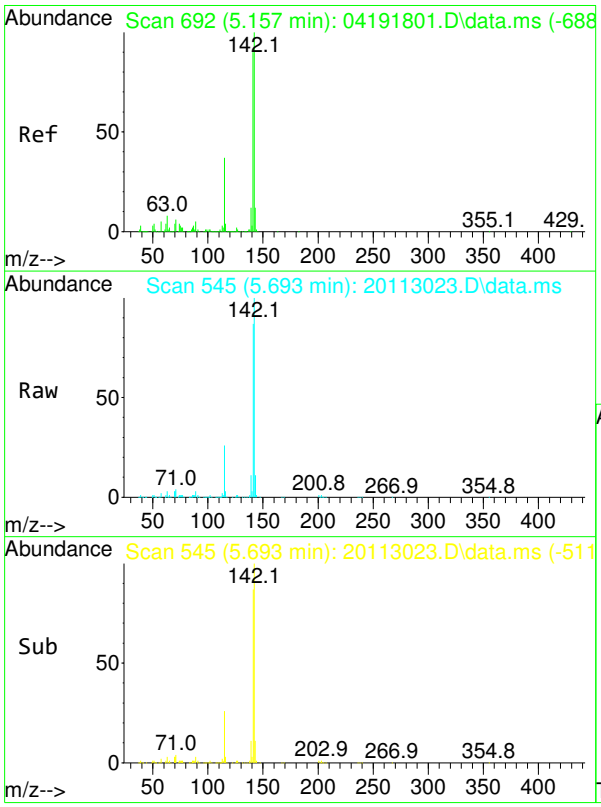


#42
2-Methylnaphthalene
Concen: 13.93 ug/ml
RT: 5.628 min Scan# 534
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:142 Resp: 89697

Ion	Ratio	Lower	Upper
142	100		
141	84.7	59.2	110.0
115	25.3	18.0	33.4

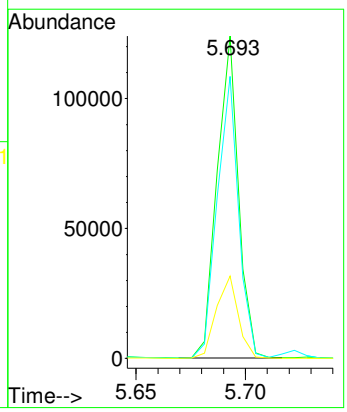


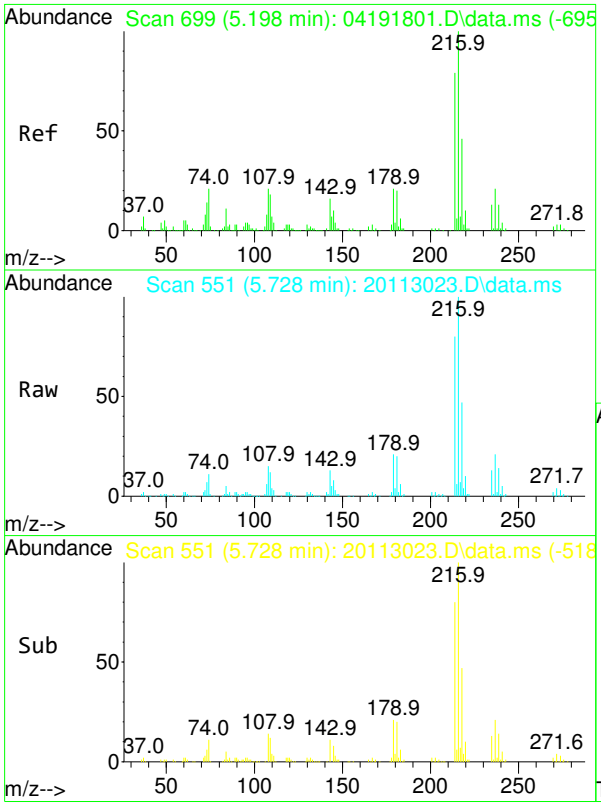


#43
1-Methylnaphthalene
Concen: 14.05 ug/ml
RT: 5.693 min Scan# 545
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:142 Resp: 84473

Ion	Ratio	Lower	Upper
142	100		
141	87.2	58.8	118.8
115	26.6	0.0	57.0

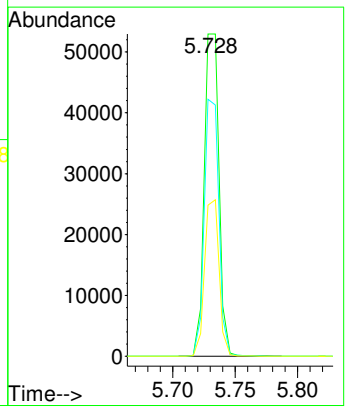


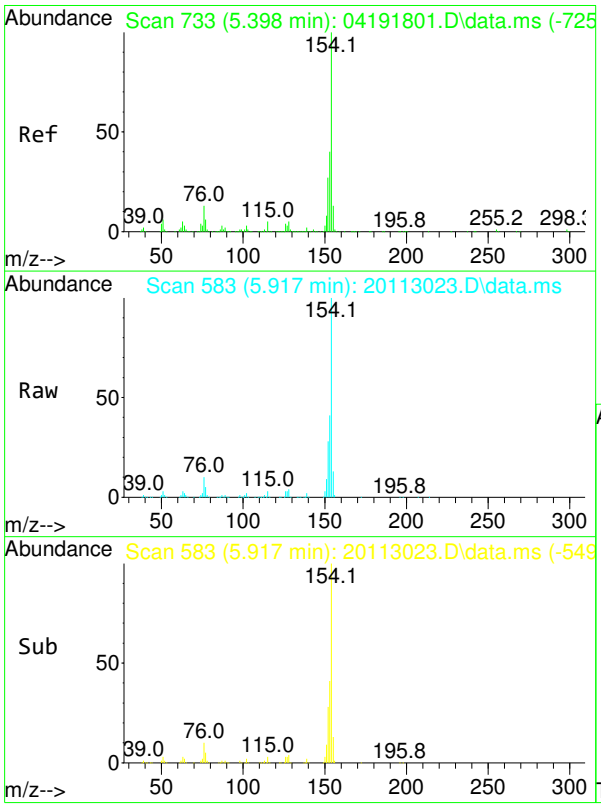


#44
1,2,4,5-Tetrachlorobenzene
Concen: 13.66 ug/ml
RT: 5.728 min Scan# 551
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:216 Resp: 43519

Ion	Ratio	Lower	Upper
216	100		
214	78.8	54.7	101.5
218	47.8	33.2	61.7

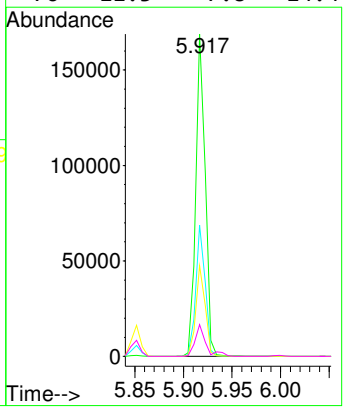


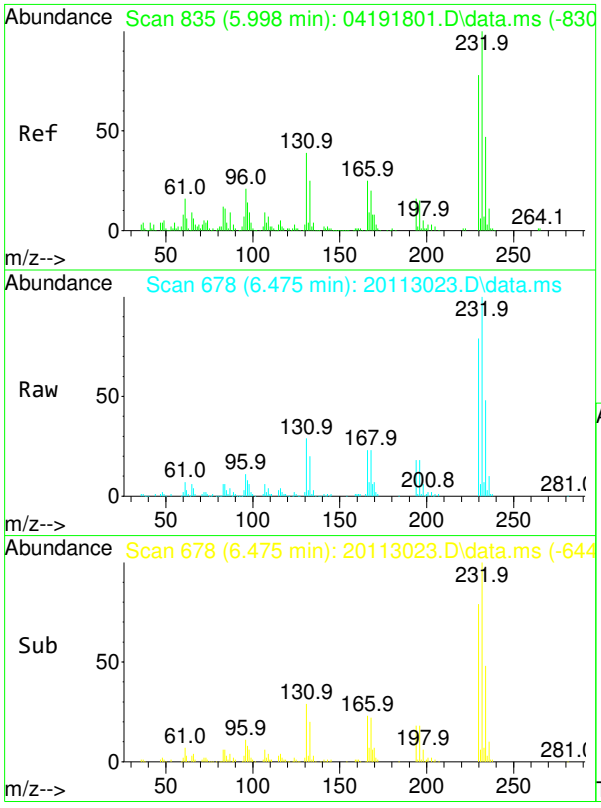


#45
1,1-Biphenyl
Concen: 14.36 ug/ml
RT: 5.917 min Scan# 583
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:154 Resp: 114644

Ion	Ratio	Lower	Upper
154	100		
153	40.6	28.3	52.5
152	27.9	19.4	36.0
76	11.3	7.8	14.4

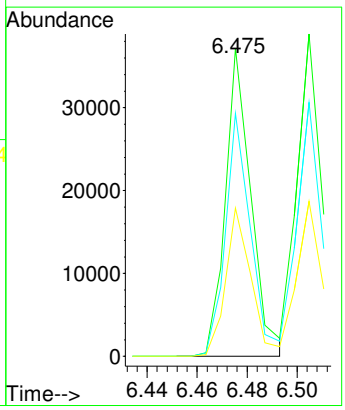


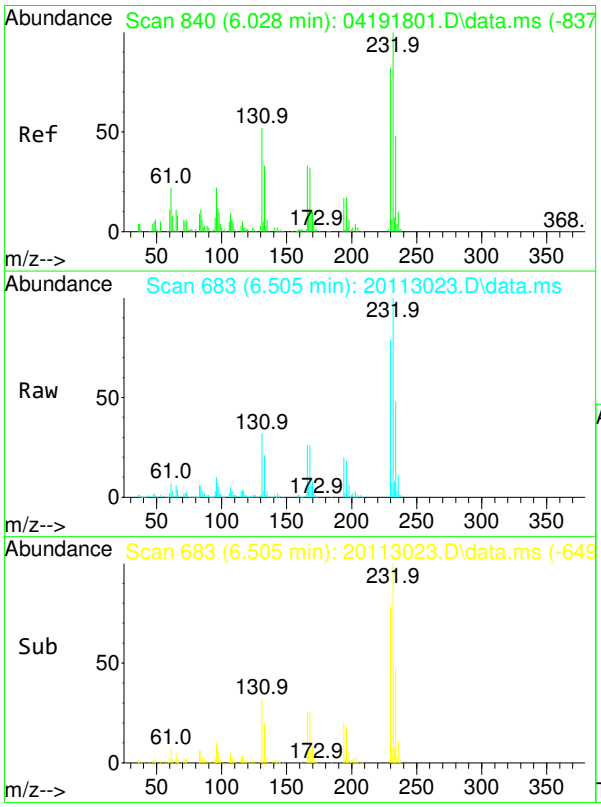


#46
2,3,5,6-Tetrachlorophenol
Concen: 15.78 ug/ml
RT: 6.475 min Scan# 678
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:232 Resp: 26355

Ion	Ratio	Lower	Upper
232	100		
230	77.9	61.4	92.0
234	48.1	37.7	56.5

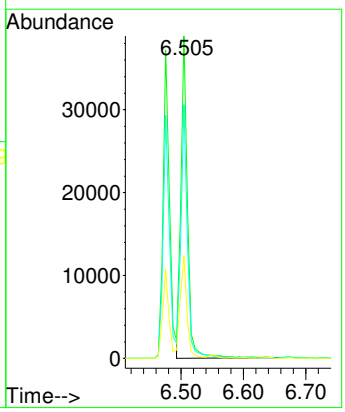


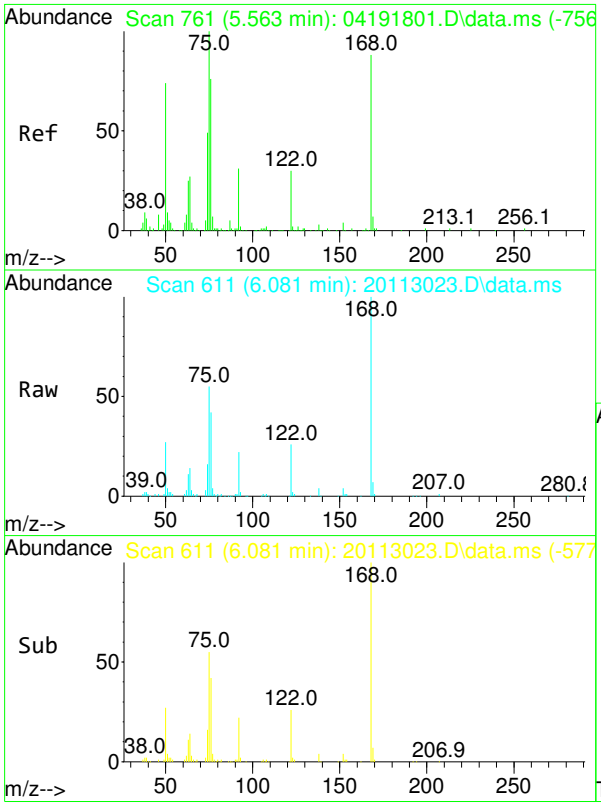


#47
2,3,4,6-Tetrachlorophenol
Concen: 15.40 ug/ml
RT: 6.505 min Scan# 683
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:232 Resp: 28656

Ion	Ratio	Lower	Upper
232	100		
230	77.6	63.6	95.4
131	33.2	25.3	37.9

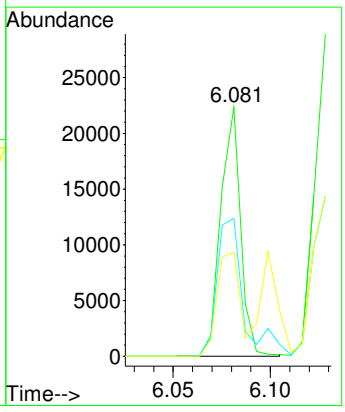


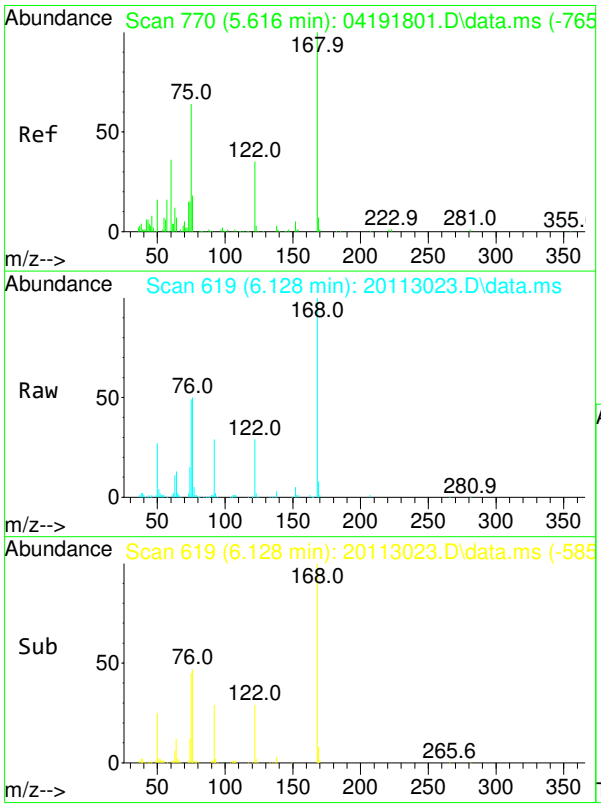


#48
1,4-Dinitrobenzene
Concen: 15.46 ug/ml
RT: 6.081 min Scan# 611
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:168 Resp: 15815

Ion	Ratio	Lower	Upper
168	100		
75	73.9	49.5	91.9
76	47.8	36.3	67.3

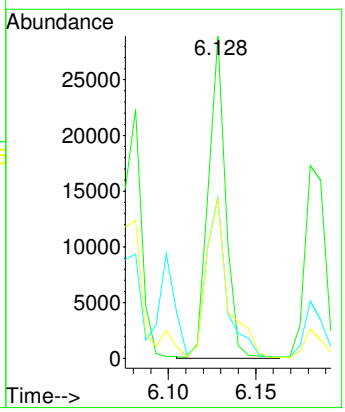


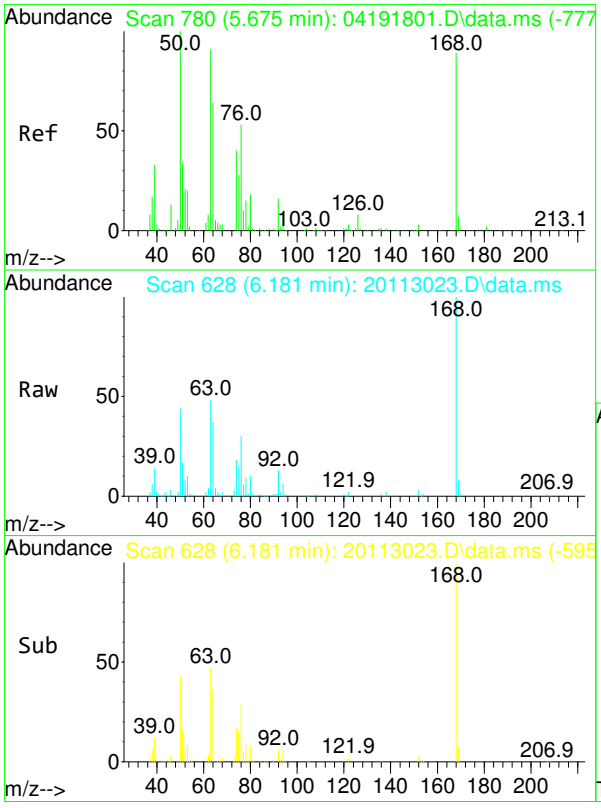


#49
1,3-Dinitrobenzene
Concen: 15.83 ug/ml
RT: 6.128 min Scan# 619
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:168 Resp: 19999

Ion	Ratio	Lower	Upper
168	100		
76	59.8	48.9	73.3
75	63.8	51.8	77.8

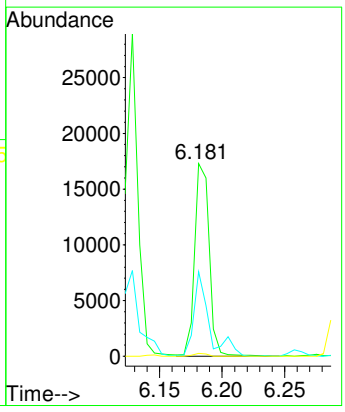


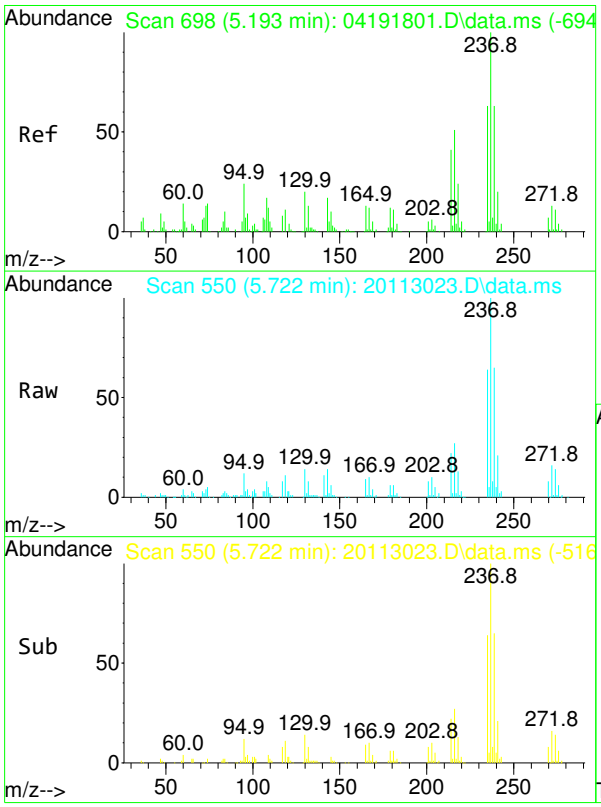


#50
1,2-Dinitrobenzene
Concen: 15.76 ug/ml
RT: 6.181 min Scan# 628
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:168 Resp: 14065

Ion	Ratio	Lower	Upper
168	100		
50	45.7	31.5	47.3
68	1.5	1.2	1.8

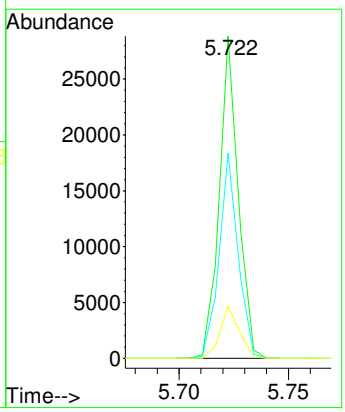


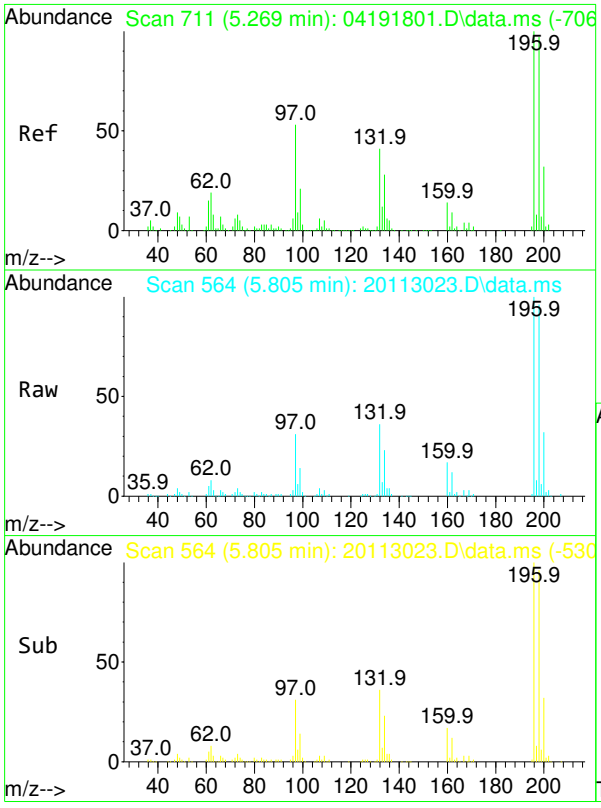


#52
Hexachlorocyclopentadiene
Concen: 12.23 ug/ml
RT: 5.722 min Scan# 550
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:237 Resp: 17443

Ion	Ratio	Lower	Upper
237	100		
235	63.6	31.9	91.9
272	16.4	0.0	46.1

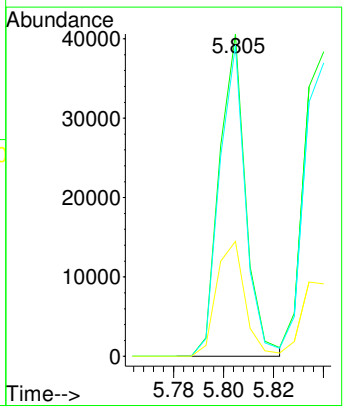


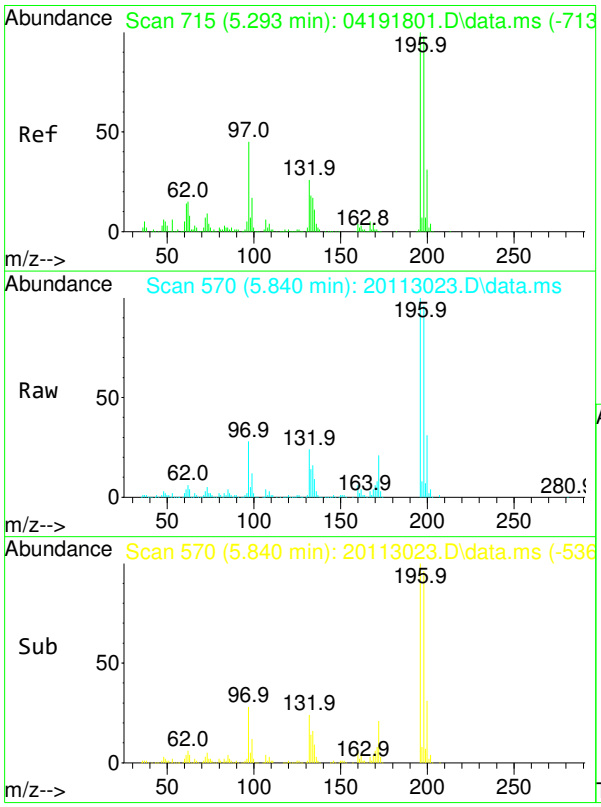


#53
2,4,6-Trichlorophenol
Concen: 14.79 ug/ml
RT: 5.805 min Scan# 564
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:196 Resp: 29584

Ion	Ratio	Lower	Upper
196	100		
198	95.6	67.1	127.1
132	38.7	8.9	68.9

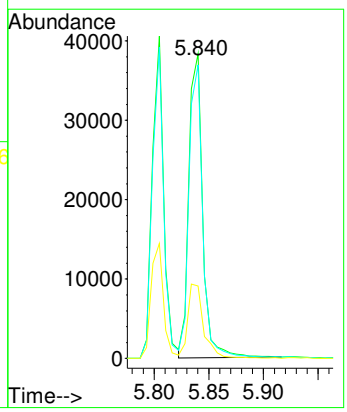


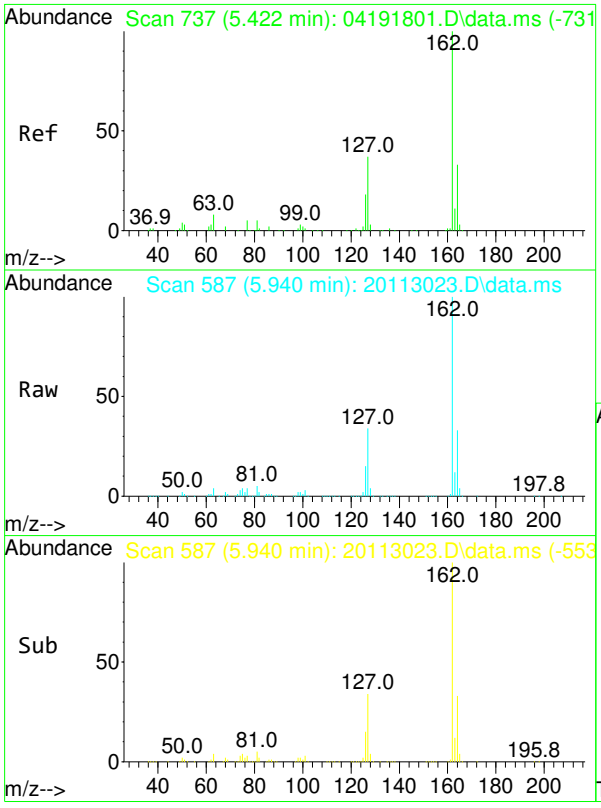


#54
2,4,5-Trichlorophenol
Concen: 15.64 ug/ml
RT: 5.840 min Scan# 570
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:196 Resp: 33377

Ion	Ratio	Lower	Upper
196	100		
198	94.6	66.4	126.4
132	28.3	0.0	55.8

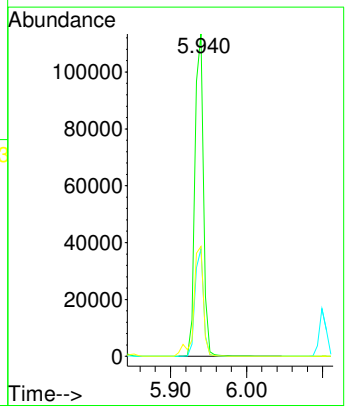


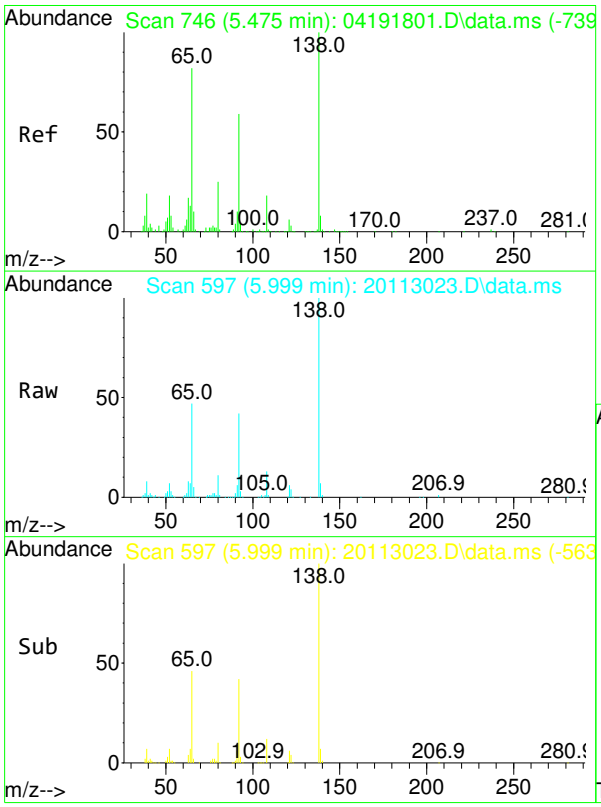


#56
2-Chloronaphthalene
Concen: 13.93 ug/ml
RT: 5.940 min Scan# 587
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:162 Resp: 87620

Ion	Ratio	Lower	Upper
162	100		
164	32.9	2.5	62.5
127	38.9	8.8	68.8

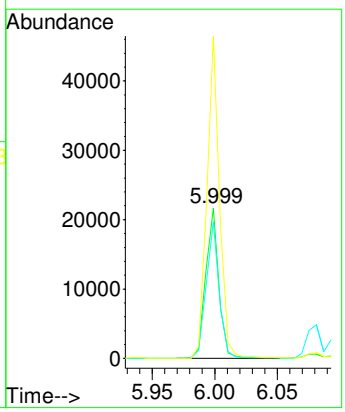


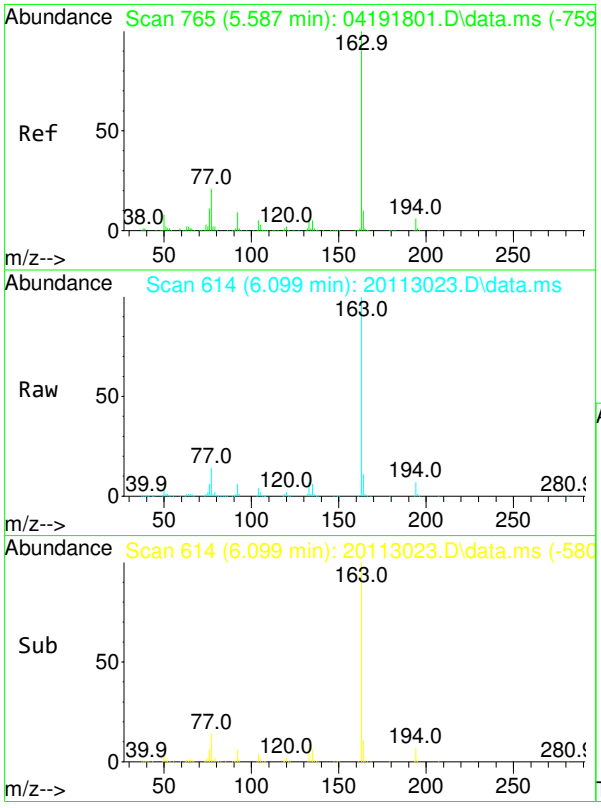


#57
2-Nitroaniline
Concen: 15.18 ug/ml
RT: 5.999 min Scan# 597
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 65 Resp: 15749

Ion	Ratio	Lower	Upper
65	100		
92	90.2	61.5	121.5
138	206.1	178.5	238.5

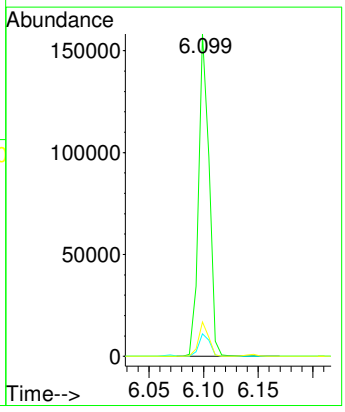


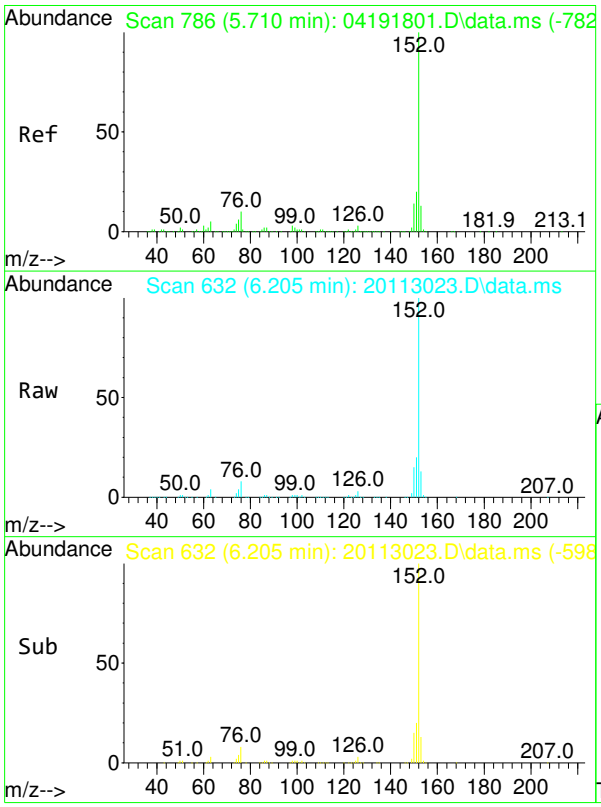


#58
Dimethylphthalate
Concen: 16.10 ug/ml
RT: 6.099 min Scan# 614
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:163 Resp: 106165

Ion	Ratio	Lower	Upper
163	100		
194	7.3	0.0	37.5
164	10.3	0.0	40.3

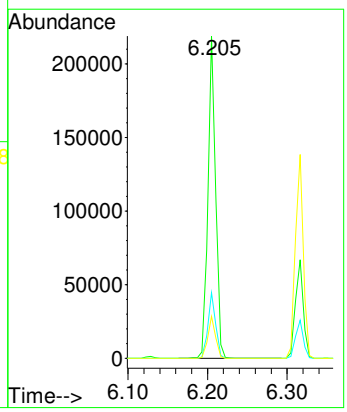


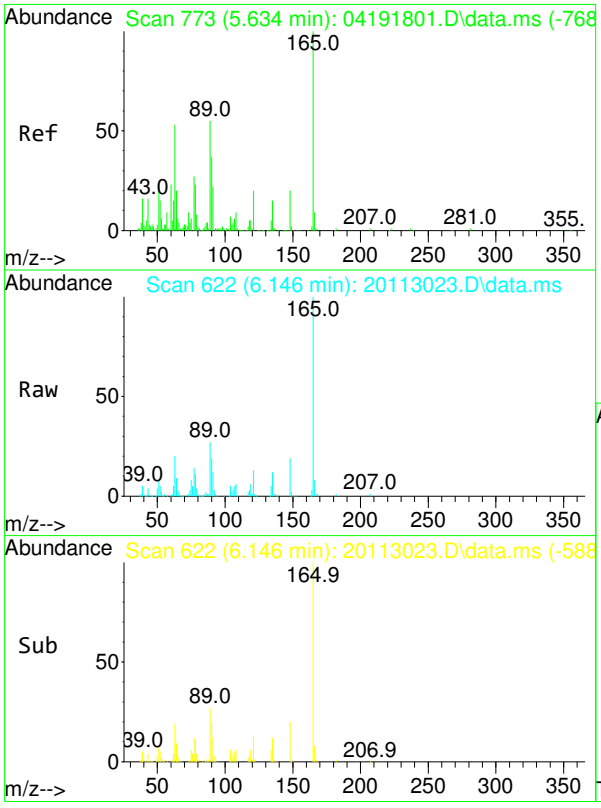


#59
Acenaphthylene
Concen: 15.49 ug/ml
RT: 6.205 min Scan# 632
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:152 Resp: 147057

Ion	Ratio	Lower	Upper
152	100		
151	20.4	0.0	50.6
153	13.1	0.0	43.1

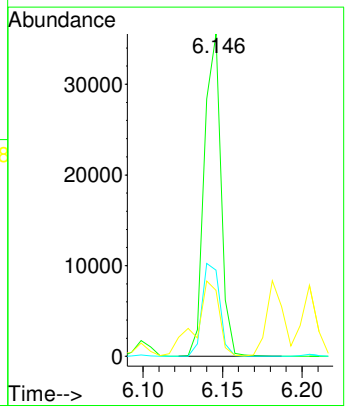


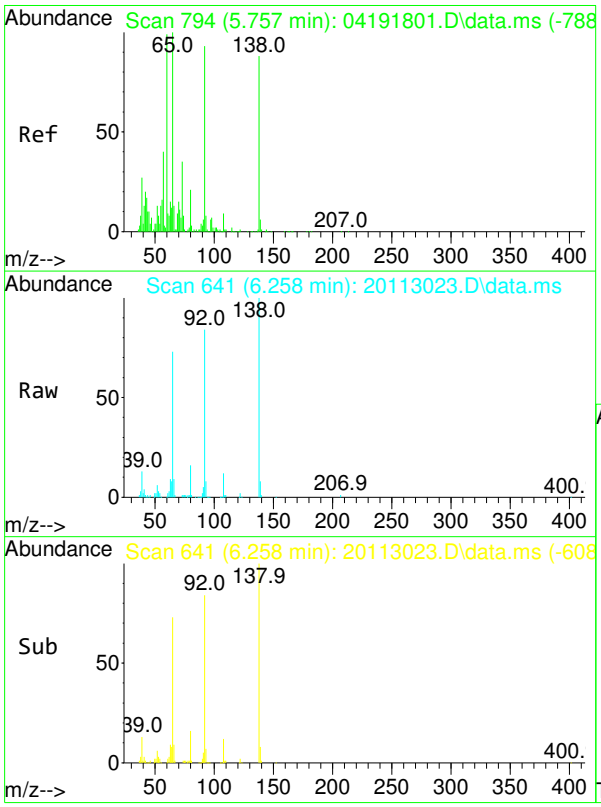


#60
2,6-Dinitrotoluene
Concen: 15.59 ug/ml
RT: 6.146 min Scan# 622
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:165 Resp: 26039

Ion	Ratio	Lower	Upper
165	100		
89	30.6	0.9	60.9
63	32.1	1.9	61.9

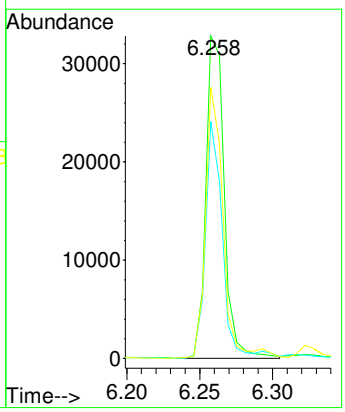


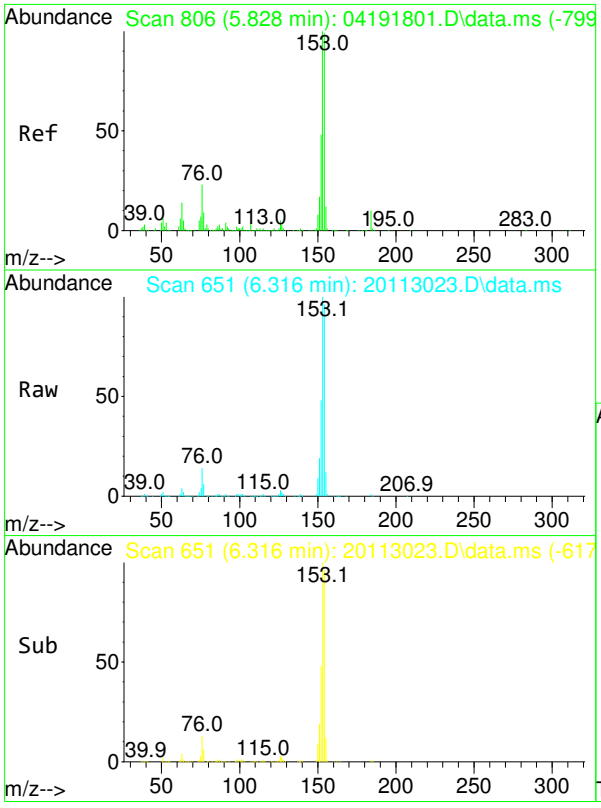


#61
3-Nitroaniline
Concen: 15.42 ug/ml
RT: 6.258 min Scan# 641
Delta R.T. -0.005 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:138 Resp: 28798

Ion	Ratio	Lower	Upper
138	100		
65	66.2	38.4	98.4
92	80.3	50.1	110.1

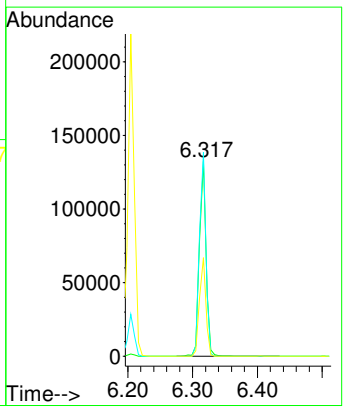


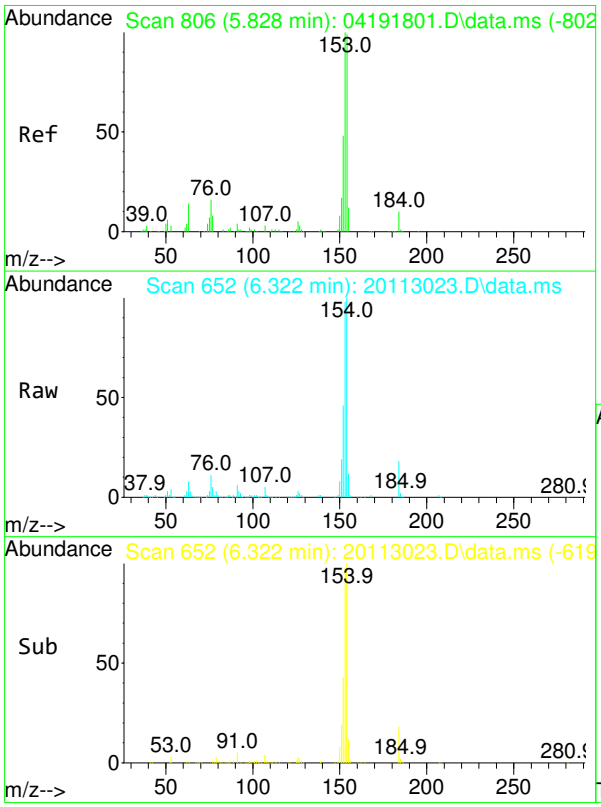


#62
Acenaphthene
Concen: 15.28 ug/ml
RT: 6.316 min Scan# 651
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:154 Resp: 95690

Ion	Ratio	Lower	Upper
154	100		
153	100.7	69.9	129.9
152	48.6	18.4	78.4

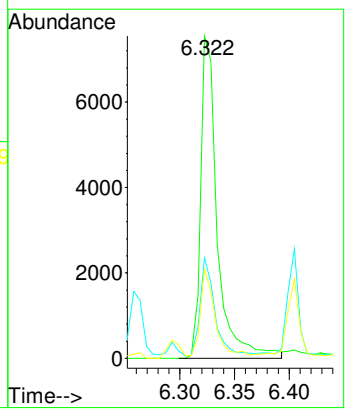


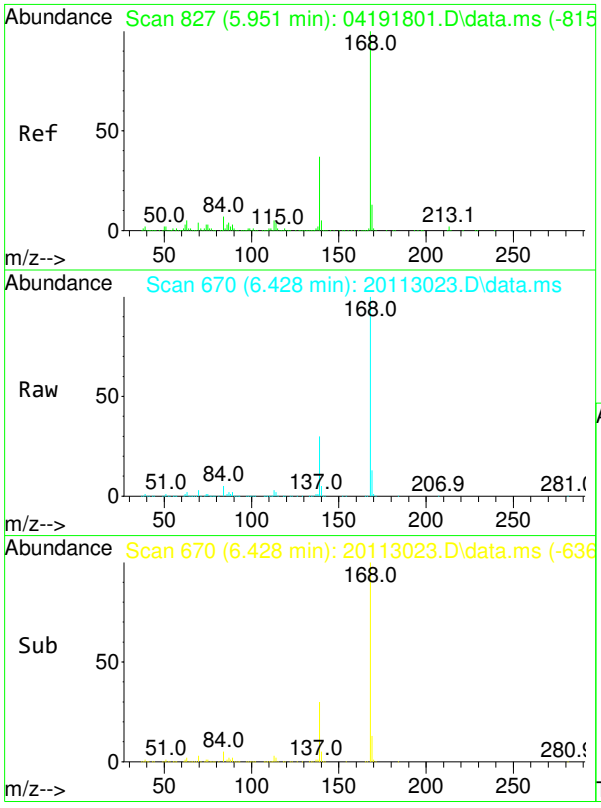


#63
2,4-Dinitrophenol
Concen: 12.72 ug/ml
RT: 6.322 min Scan# 652
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:184 Resp: 7995

Ion	Ratio	Lower	Upper
184	100		
91	29.8	0.0	56.6
107	23.1	0.0	51.3

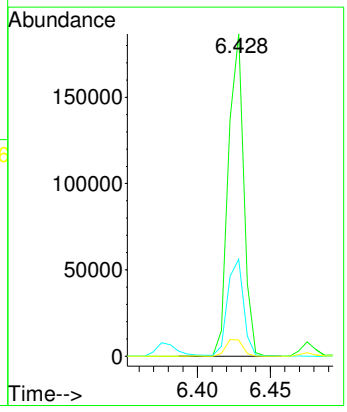


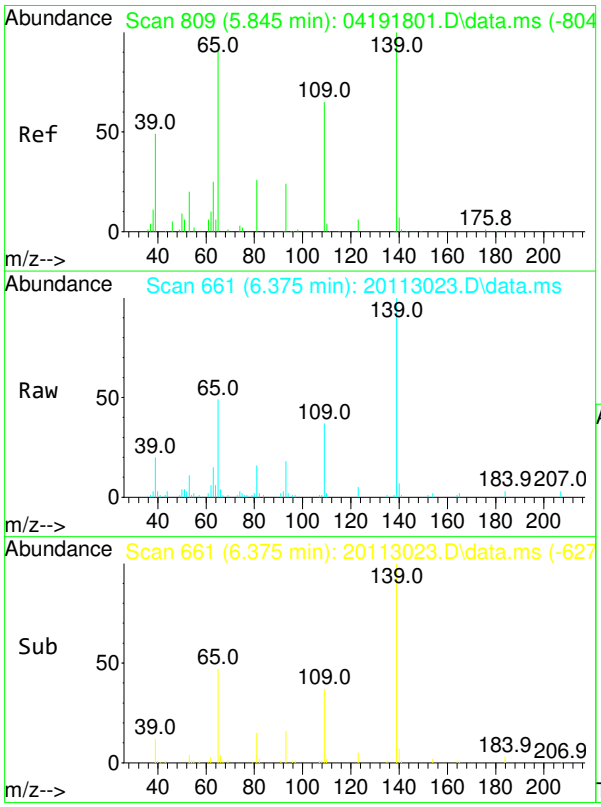


#64
Dibenzofuran
Concen: 15.69 ug/ml
RT: 6.428 min Scan# 670
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:168 Resp: 135699

Ion	Ratio	Lower	Upper
168	100		
139	31.7	2.2	62.2
84	5.9	0.0	35.9

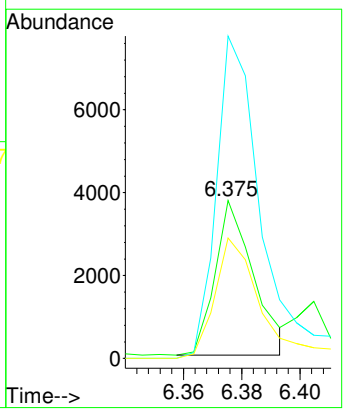


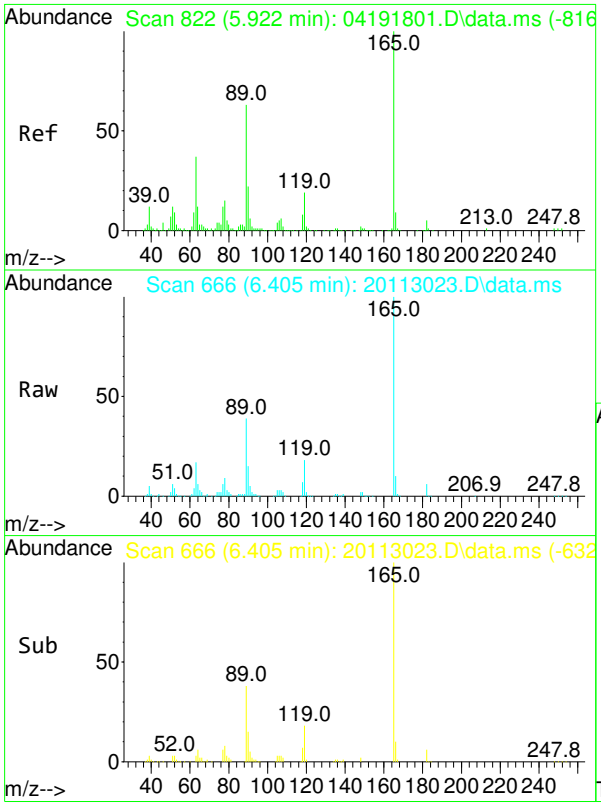


#65
4-Nitrophenol
Concen: 5.62 ug/ml
RT: 6.375 min Scan# 661
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 65 Resp: 3412

Ion	Ratio	Lower	Upper
65	100		
139	237.3	174.2	234.2#
109	94.7	50.2	110.2

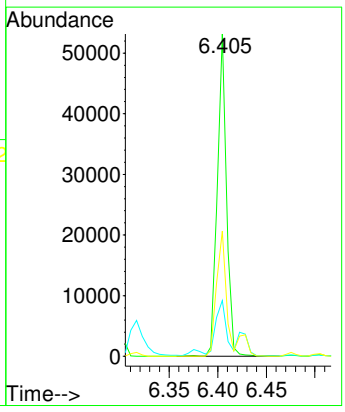


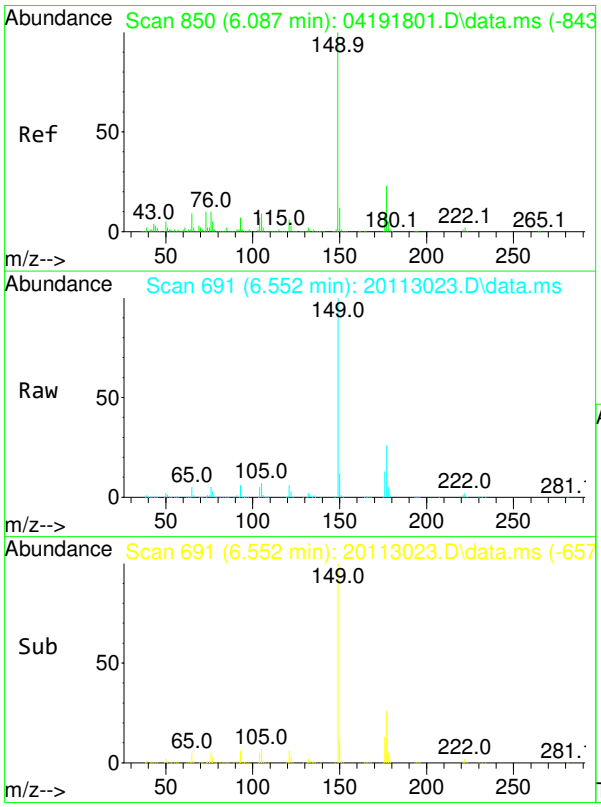


#66
2,4-Dinitrotoluene
Concen: 15.71 ug/ml
RT: 6.405 min Scan# 666
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:165 Resp: 34904

Ion	Ratio	Lower	Upper
165	100		
63	19.8	0.0	49.6
89	48.1	19.9	79.9

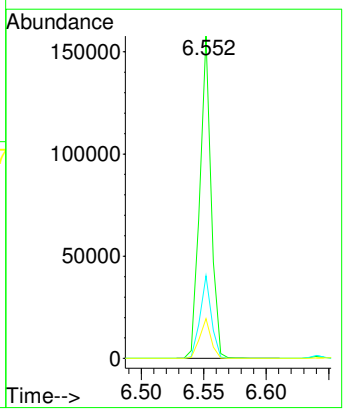


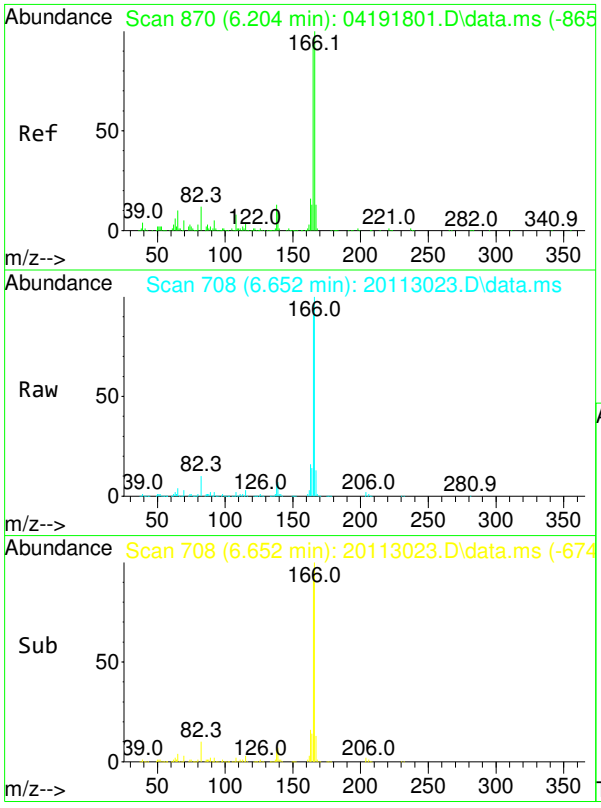


#67
Diethylphthalate
Concen: 15.93 ug/ml
RT: 6.552 min Scan# 691
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:149 Resp: 98679

Ion	Ratio	Lower	Upper
149	100		
177	25.7	0.0	55.7
150	12.4	0.0	42.4

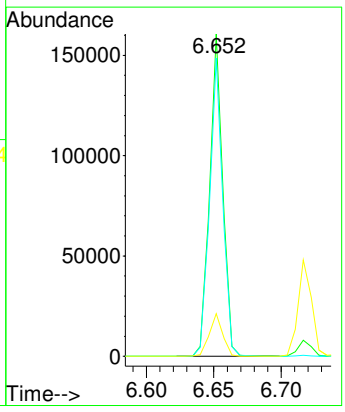


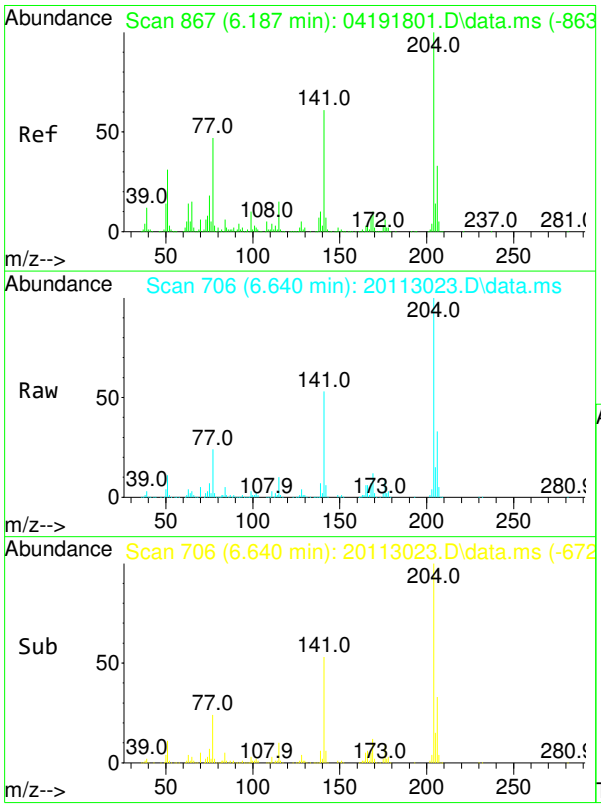


#68
Fluorene
Concen: 14.94 ug/ml
RT: 6.652 min Scan# 708
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:166 Resp: 108871

Ion	Ratio	Lower	Upper
166	100		
165	92.5	62.2	122.2
167	13.5	0.0	43.4

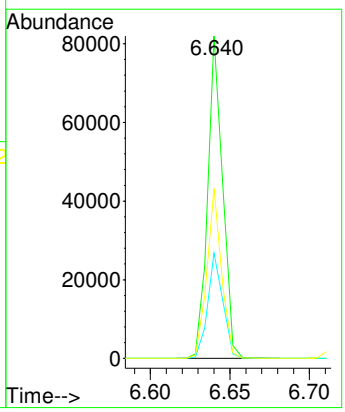


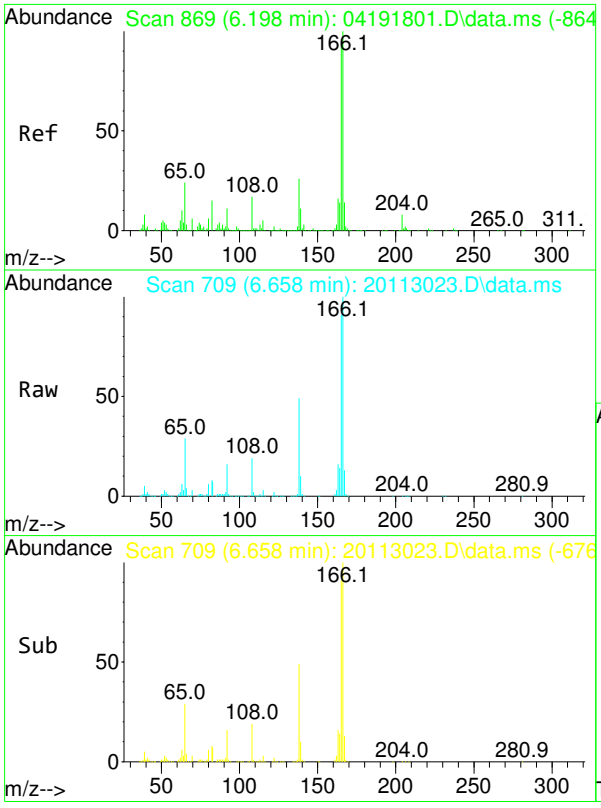


#69
4-Chlorophenyl phenyl
Concen: 16.20 ug/ml
RT: 6.640 min Scan# 706
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:204 Resp: 53825

Ion	Ratio	Lower	Upper
204	100		
206	32.9	2.3	62.3
141	51.7	20.6	80.6

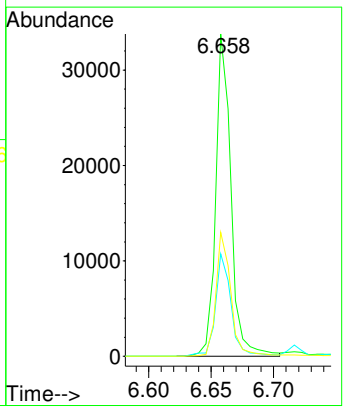


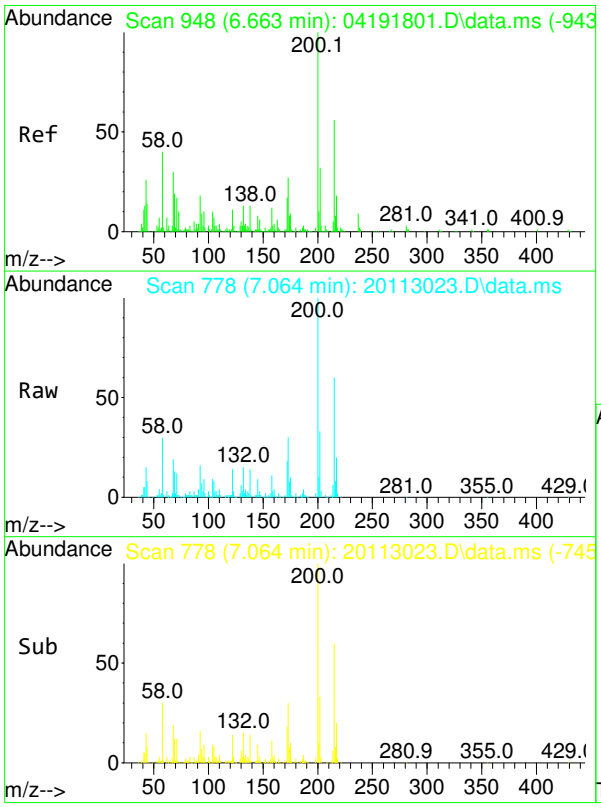


#70
4-Nitroaniline
Concen: 14.63 ug/ml
RT: 6.658 min Scan# 709
Delta R.T. -0.005 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:138 Resp: 28618

Ion	Ratio	Lower	Upper
138	100		
92	32.8	1.7	61.7
108	38.5	7.0	67.0

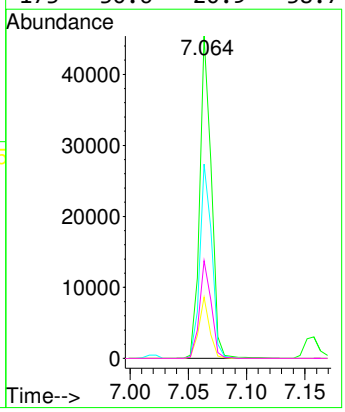


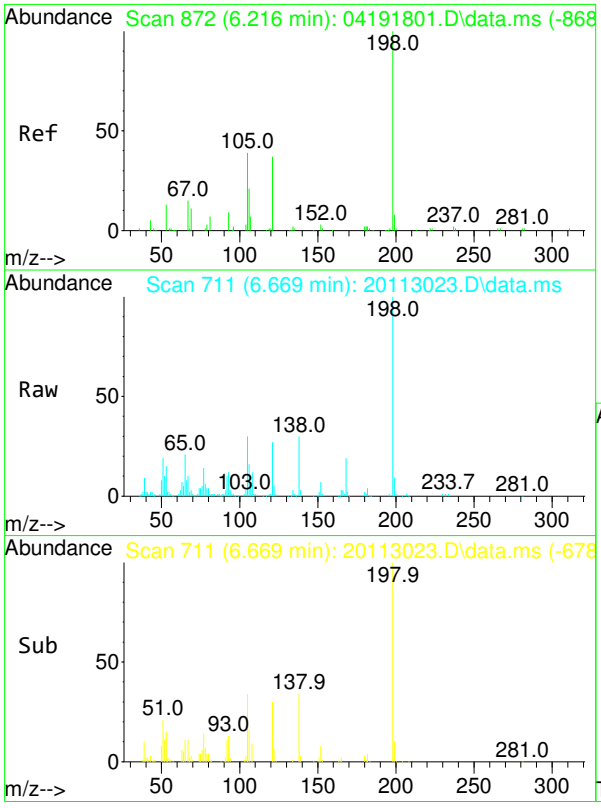


#71
Atrazine
Concen: 16.66 ug/ml
RT: 7.064 min Scan# 778
Delta R.T. -0.005 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:200 Resp: 31523

Ion	Ratio	Lower	Upper
200	100		
215	61.6	42.6	79.0
68	17.8	11.9	22.1
173	30.6	20.9	38.7

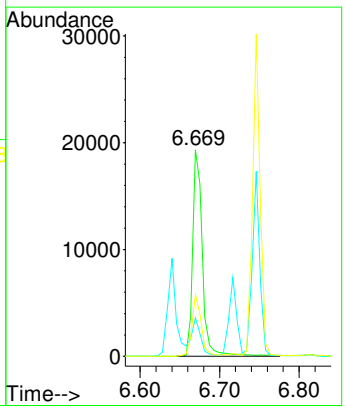


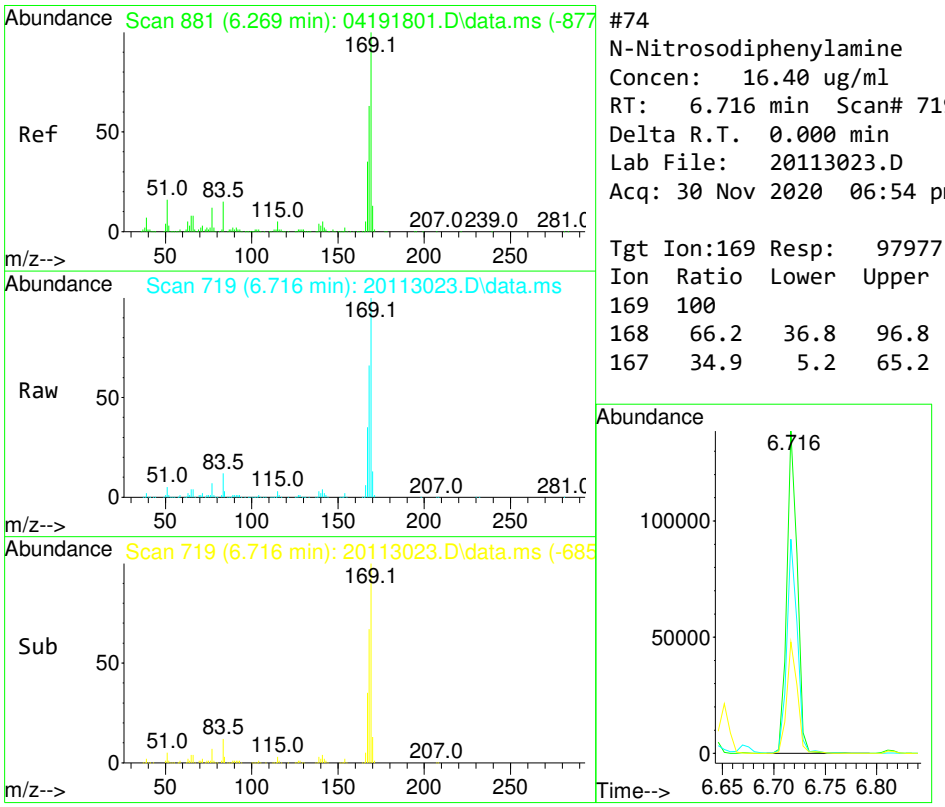


#73
4,6-Dinitro-2-methylph
Concen: 15.35 ug/ml
RT: 6.669 min Scan# 711
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:198 Resp: 16576

Ion	Ratio	Lower	Upper
198	100		
51	17.5	0.0	48.2
105	28.5	0.6	60.6

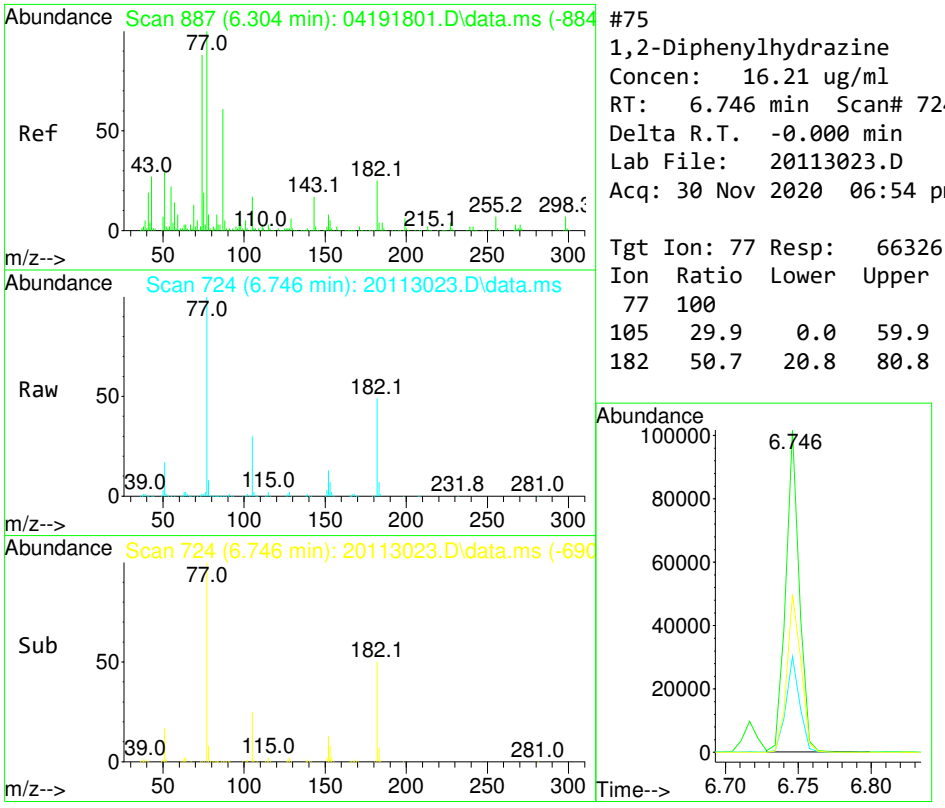




#74
N-Nitrosodiphenylamine
Concen: 16.40 ug/ml
RT: 6.716 min Scan# 719
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:169 Resp: 97977

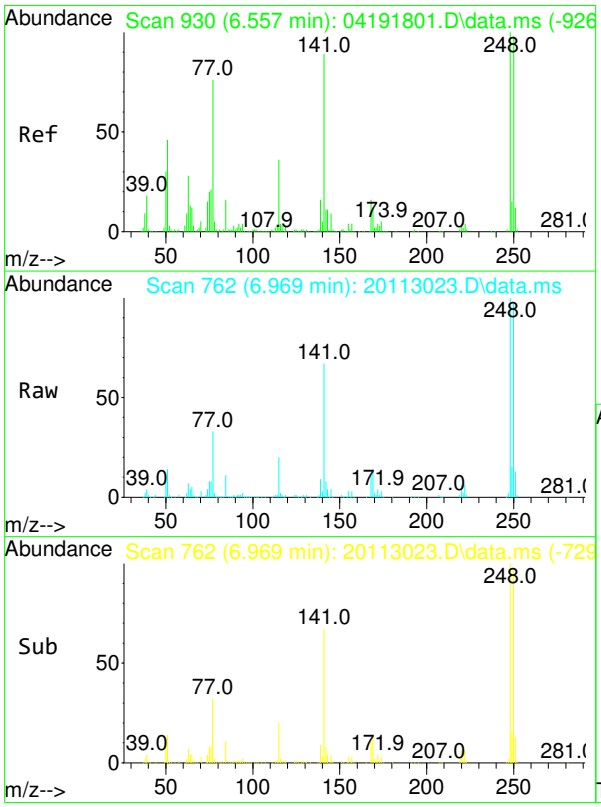
Ion	Ratio	Lower	Upper
169	100		
168	66.2	36.8	96.8
167	34.9	5.2	65.2



#75
1,2-Diphenylhydrazine
Concen: 16.21 ug/ml
RT: 6.746 min Scan# 724
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion: 77 Resp: 66326

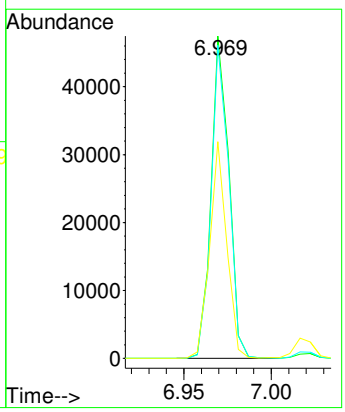
Ion	Ratio	Lower	Upper
77	100		
105	29.9	0.0	59.9
182	50.7	20.8	80.8

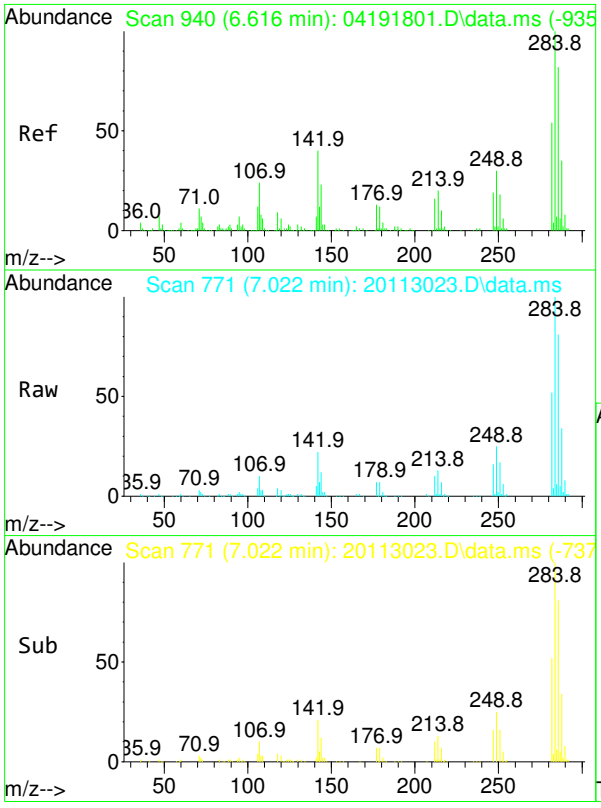


#77
4-Bromophenyl phenyl e
Concen: 16.30 ug/ml
RT: 6.969 min Scan# 762
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:248 Resp: 33764

Ion	Ratio	Lower	Upper
248	100		
250	96.4	67.8	127.8
141	64.7	35.0	95.0

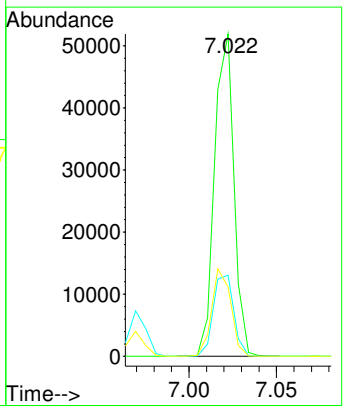


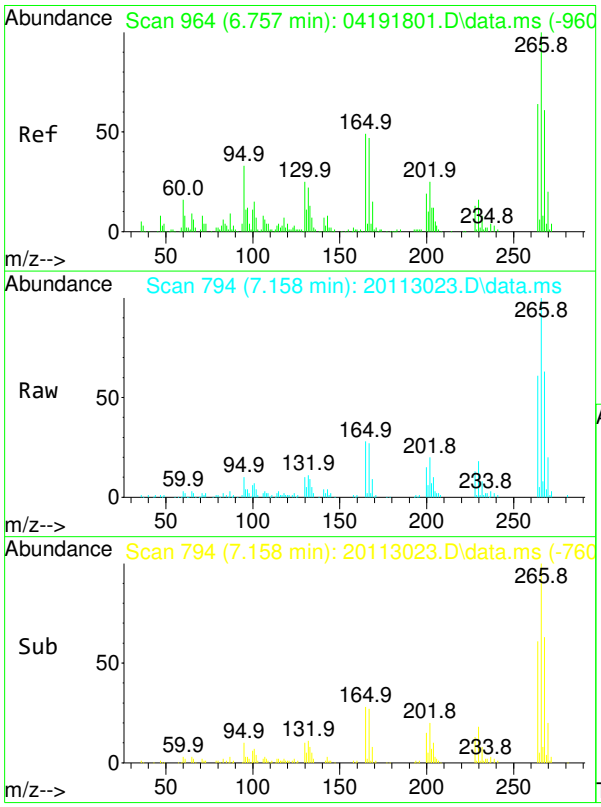


#78
Hexachlorobenzene
Concen: 15.94 ug/ml
RT: 7.022 min Scan# 771
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:284 Resp: 40164

Ion	Ratio	Lower	Upper
284	100		
249	26.8	0.0	56.7
142	26.9	0.0	56.9

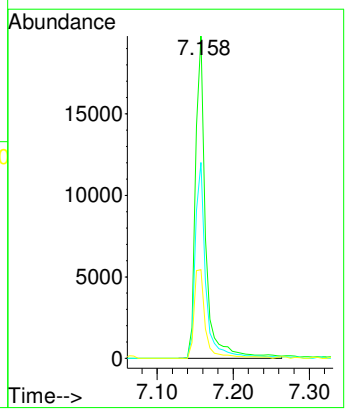


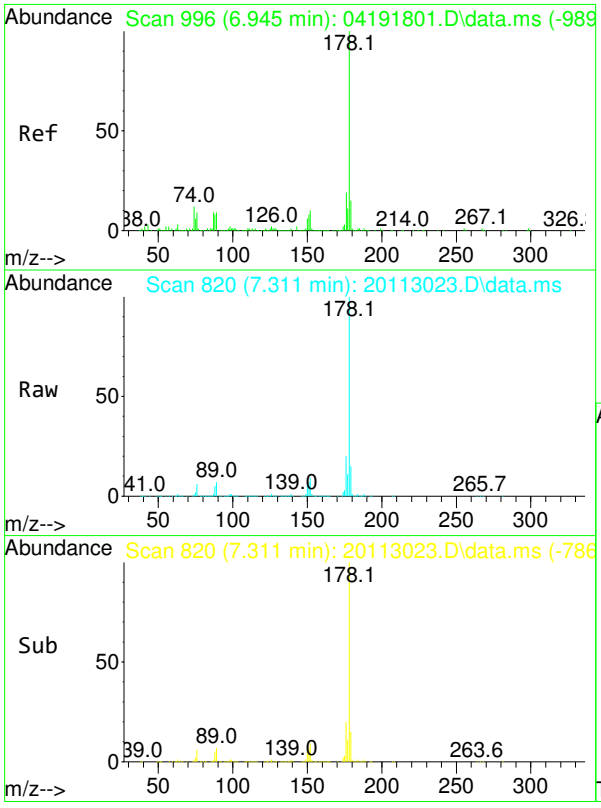


#79
Pentachlorophenol
Concen: 15.80 ug/ml
RT: 7.158 min Scan# 794
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:266 Resp: 18454

Ion	Ratio	Lower	Upper
266	100		
264	63.8	33.1	93.1
165	30.1	2.1	62.1

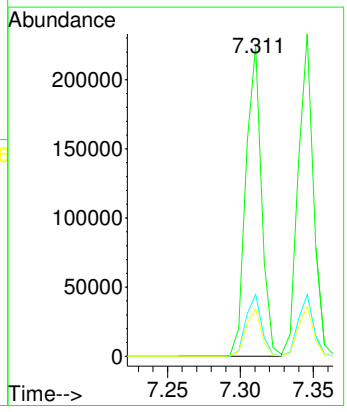


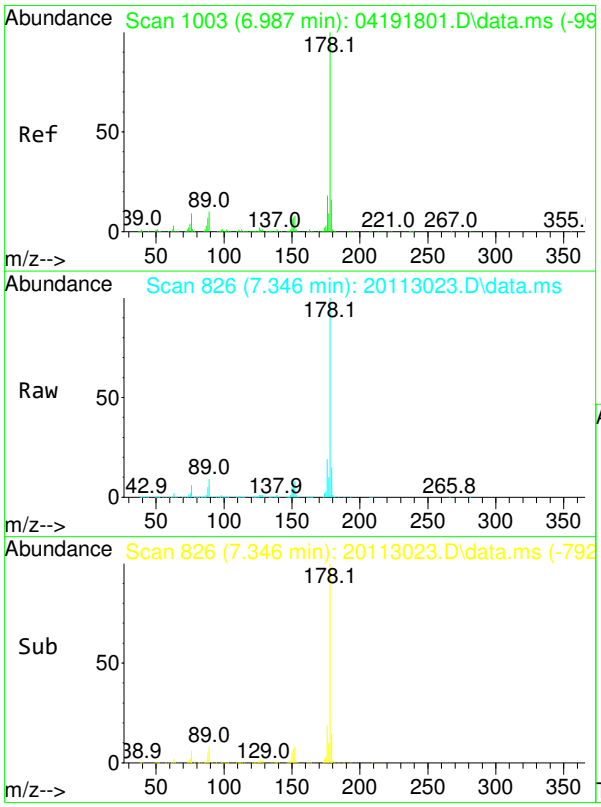


#80
Phenanthrene
Concen: 15.46 ug/ml
RT: 7.311 min Scan# 820
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:178 Resp: 168384

Ion	Ratio	Lower	Upper
178	100		
176	19.9	0.0	49.8
179	15.4	0.0	45.7

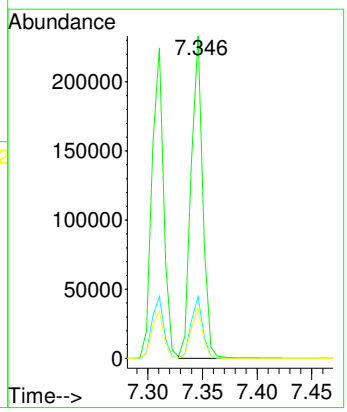


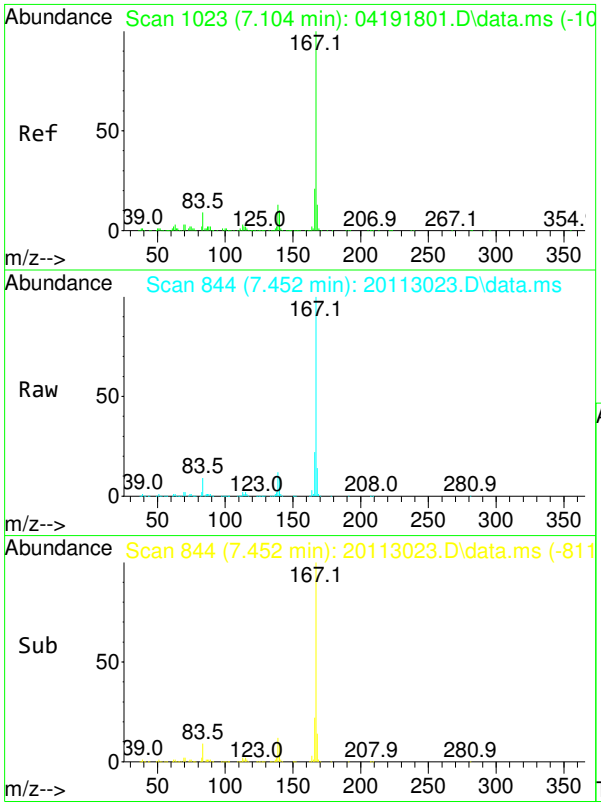


#81
Anthracene
Concen: 15.62 ug/ml
RT: 7.346 min Scan# 826
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:178 Resp: 169689

Ion	Ratio	Lower	Upper
178	100		
176	19.2	0.0	49.3
179	15.6	0.0	45.6

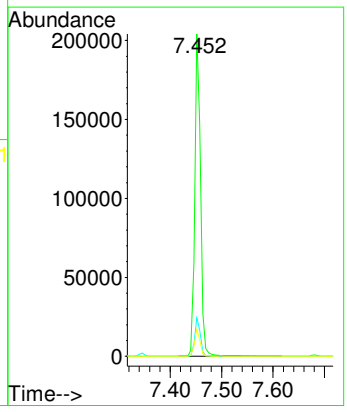


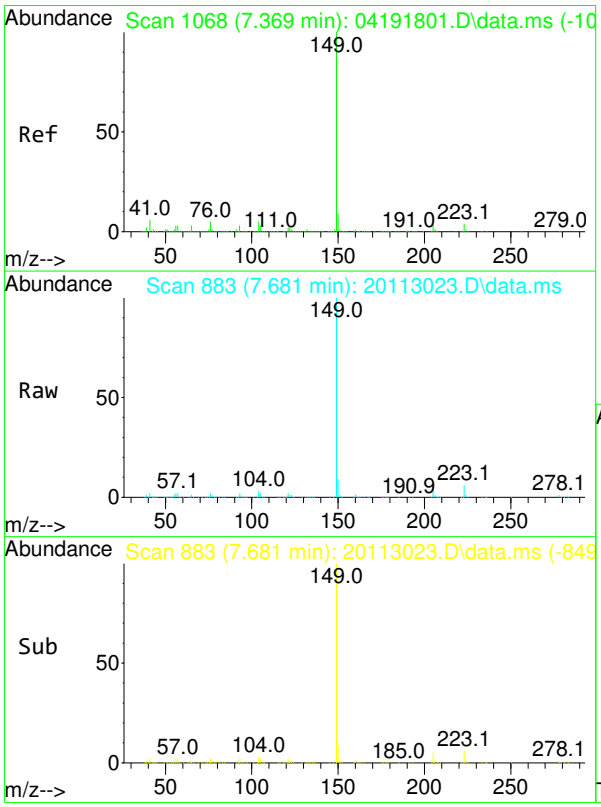


#82
Carbazole
Concen: 16.56 ug/ml
RT: 7.452 min Scan# 844
Delta R.T. -0.005 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:167 Resp: 161254

Ion	Ratio	Lower	Upper
167	100		
139	11.7	0.0	41.8
84	8.1	0.0	38.3

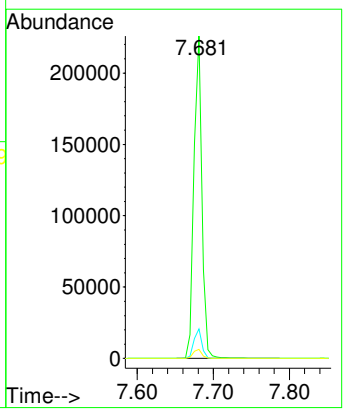


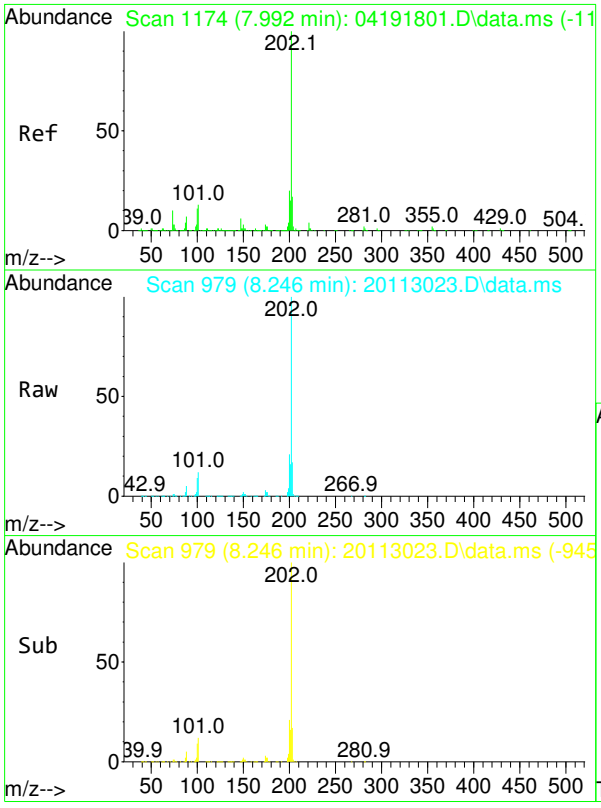


#83
Di-n-butylphthalate
Concen: 16.56 ug/ml
RT: 7.681 min Scan# 883
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:149 Resp: 165025

Ion	Ratio	Lower	Upper
149	100		
150	9.1	0.0	39.2
104	3.0	0.0	32.9

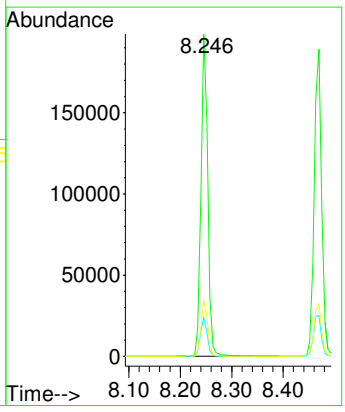


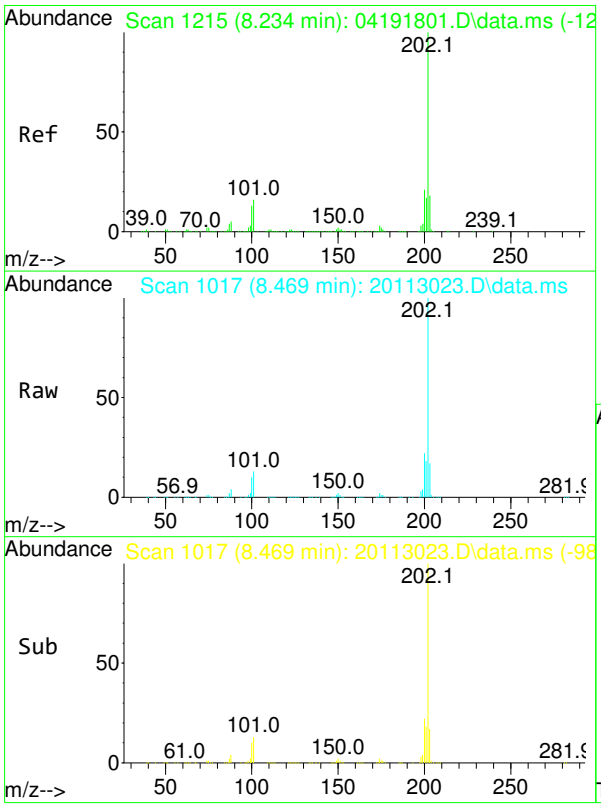


#84
Fluoranthene
Concen: 15.73 ug/ml
RT: 8.246 min Scan# 979
Delta R.T. -0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:202 Resp: 180647

Ion	Ratio	Lower	Upper
202	100		
101	12.1	0.0	41.8
203	17.6	0.0	47.4

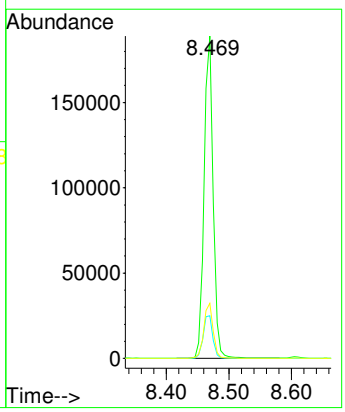


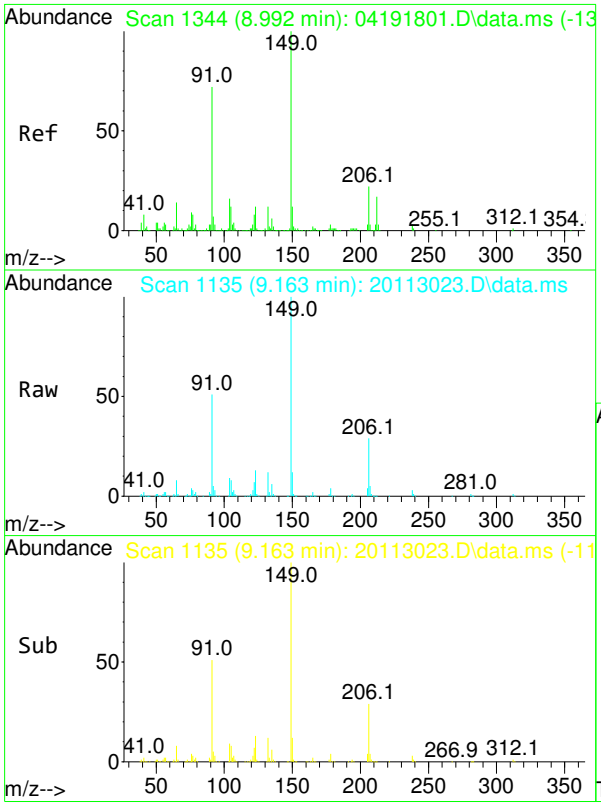


#88
Pyrene
Concen: 15.87 ug/ml
RT: 8.469 min Scan# 1017
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:202 Resp: 189384

Ion	Ratio	Lower	Upper
202	100		
101	14.2	0.0	43.9
203	17.7	0.0	47.8

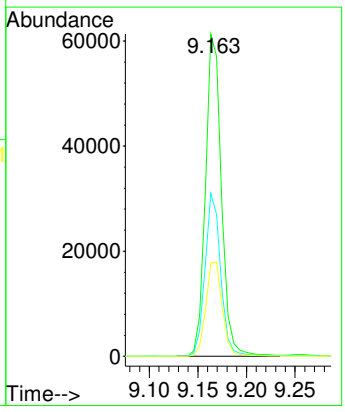


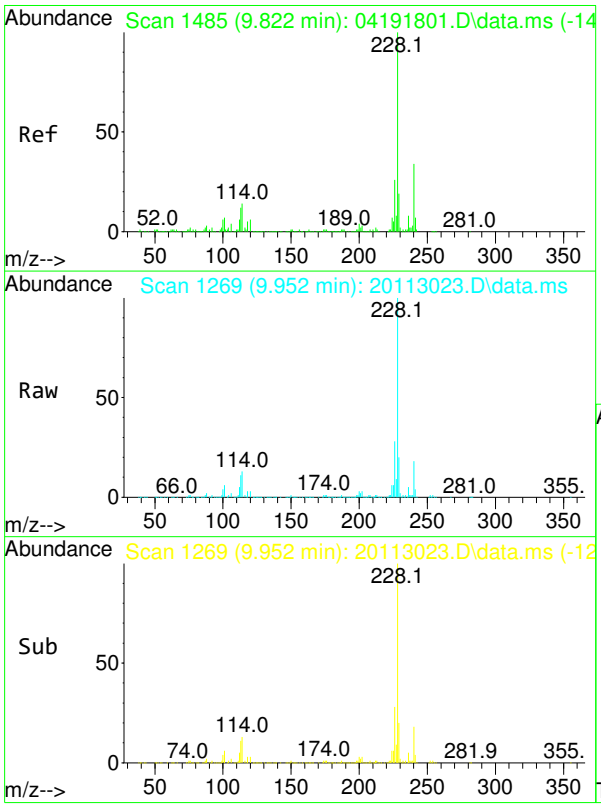


#90
Butylbenzylphthalate
Concen: 15.92 ug/ml
RT: 9.163 min Scan# 1135
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:149 Resp: 70376

Ion	Ratio	Lower	Upper
149	100		
91	50.1	21.9	81.9
206	30.5	0.3	60.3

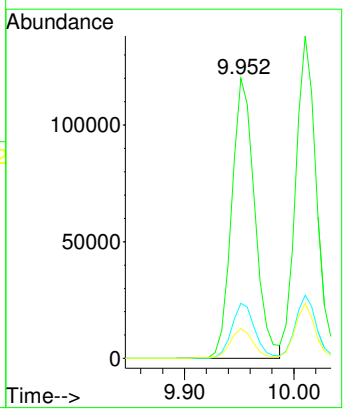


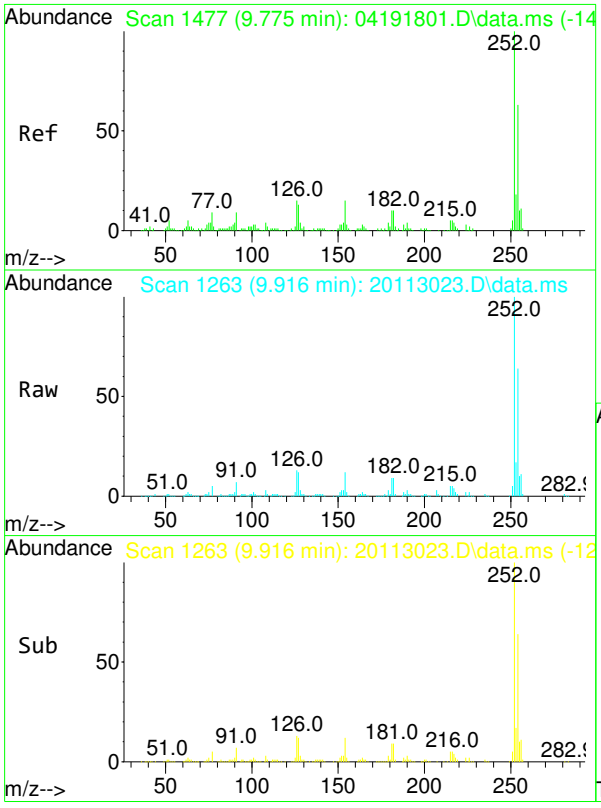


#91
Benzo[a]anthracene
Concen: 15.94 ug/ml
RT: 9.952 min Scan# 1269
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:228 Resp: 176366

Ion	Ratio	Lower	Upper
228	100		
229	19.8	0.0	49.7
113	10.7	0.0	40.7

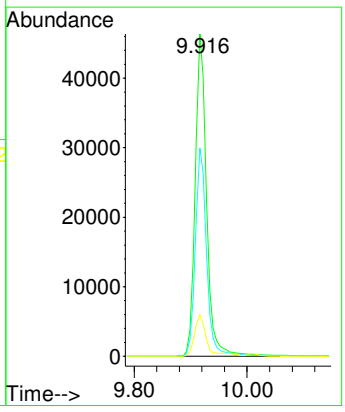


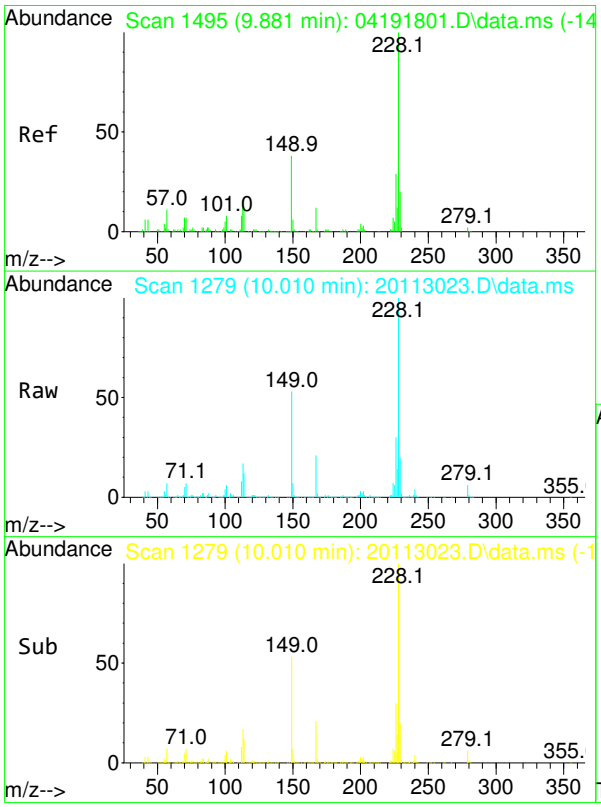


#92
3,3'-Dichlorobenzidine
Concen: 13.56 ug/ml
RT: 9.916 min Scan# 1263
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:252 Resp: 64674

Ion	Ratio	Lower	Upper
252	100		
254	63.9	34.2	94.2
126	13.7	0.0	43.2

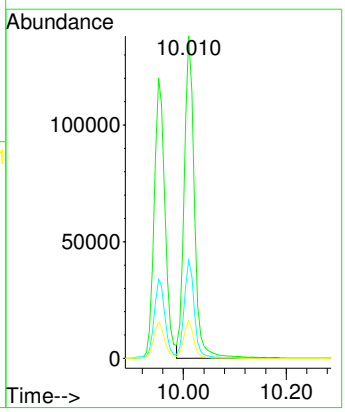


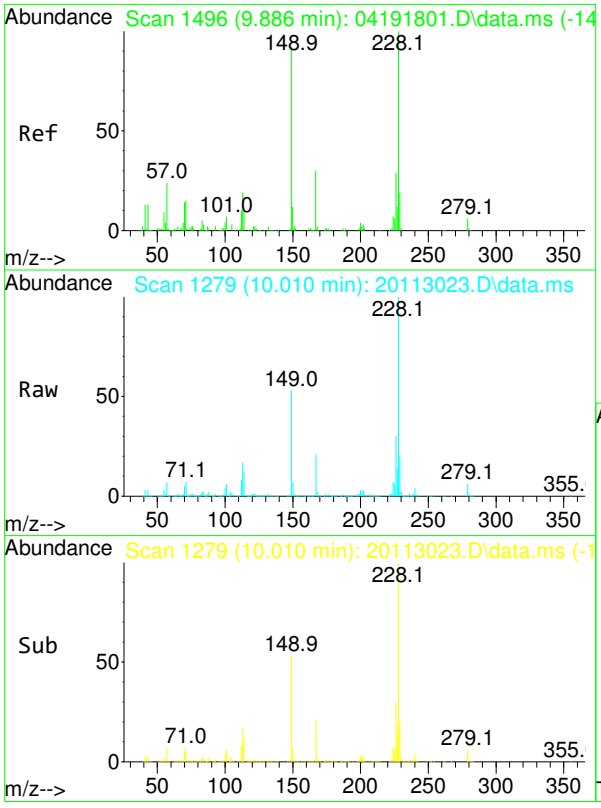


#93
Chrysene
Concen: 15.96 ug/ml
RT: 10.010 min Scan# 1279
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:228 Resp: 188547

Ion	Ratio	Lower	Upper
228	100		
226	30.3	0.6	60.6
114	11.4	0.0	41.5

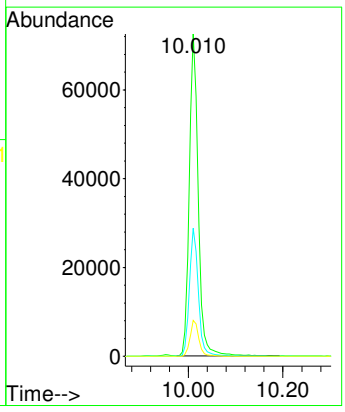


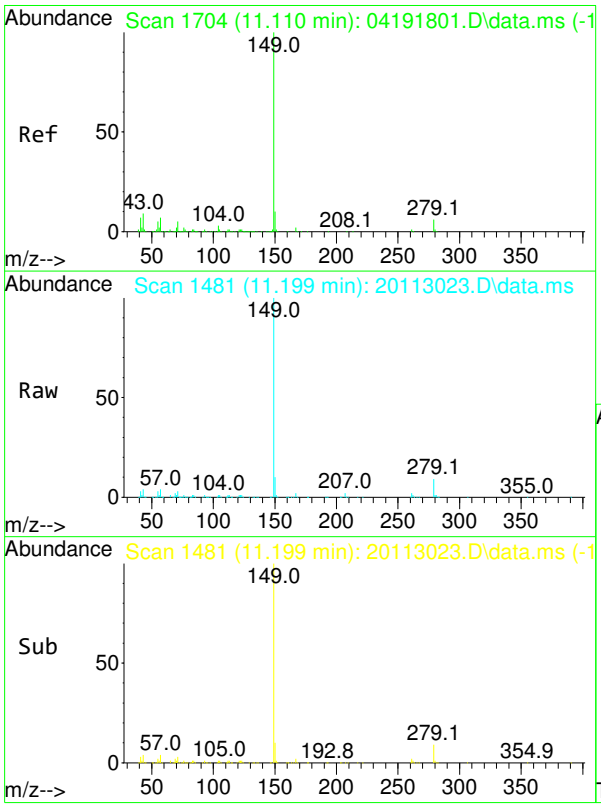


#94
Bis(2-ethylhexyl)phtha
Concen: 15.88 ug/ml
RT: 10.010 min Scan# 1279
Delta R.T. -0.006 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:149 Resp: 95506

Ion	Ratio	Lower	Upper
149	100		
167	40.1	10.5	70.5
279	11.1	0.0	41.3

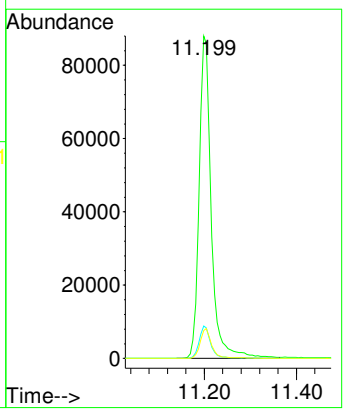


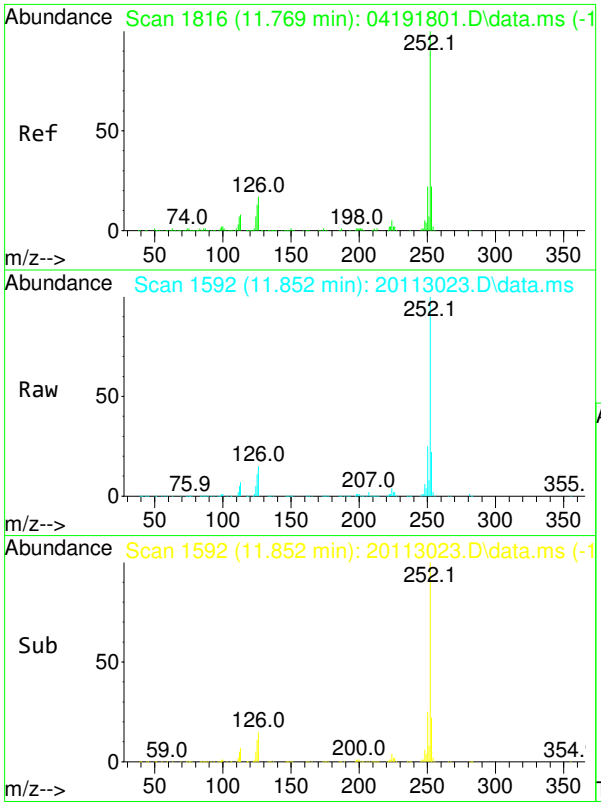


#96
Di-n-octylphthalate
Concen: 15.71 ug/ml
RT: 11.199 min Scan# 1481
Delta R.T. 0.001 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:149 Resp: 160715

Ion	Ratio	Lower	Upper
149	100		
150	9.7	0.0	39.8
279	8.9	0.0	38.7

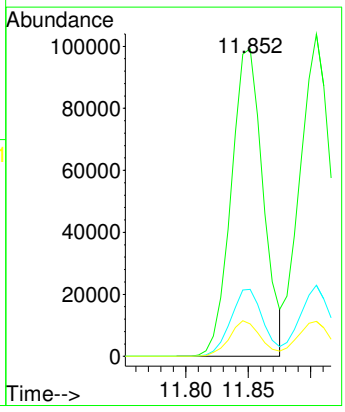


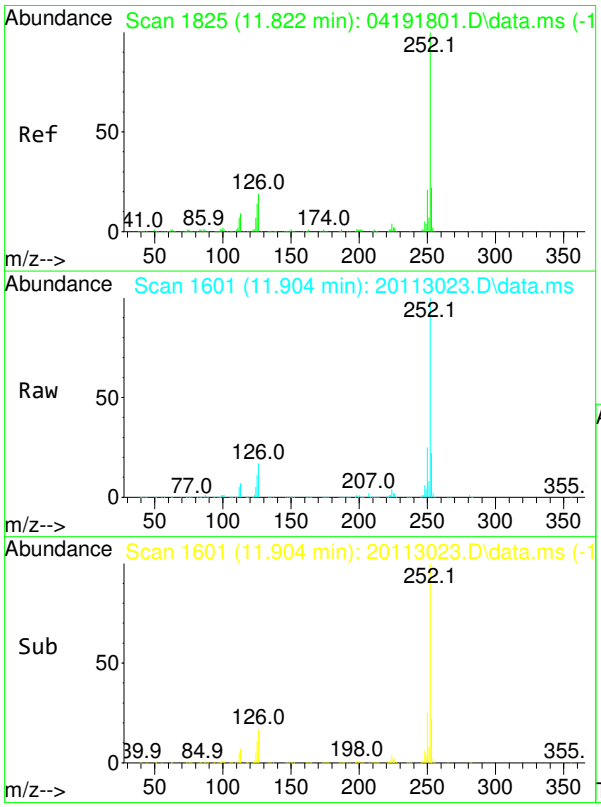


#97
Benzo(b)fluoranthene
Concen: 15.69 ug/ml
RT: 11.852 min Scan# 1592
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:252 Resp: 176634

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.9
125	11.4	0.0	41.3

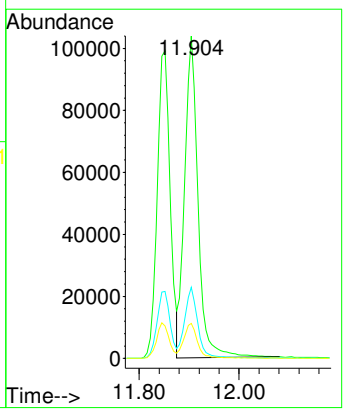


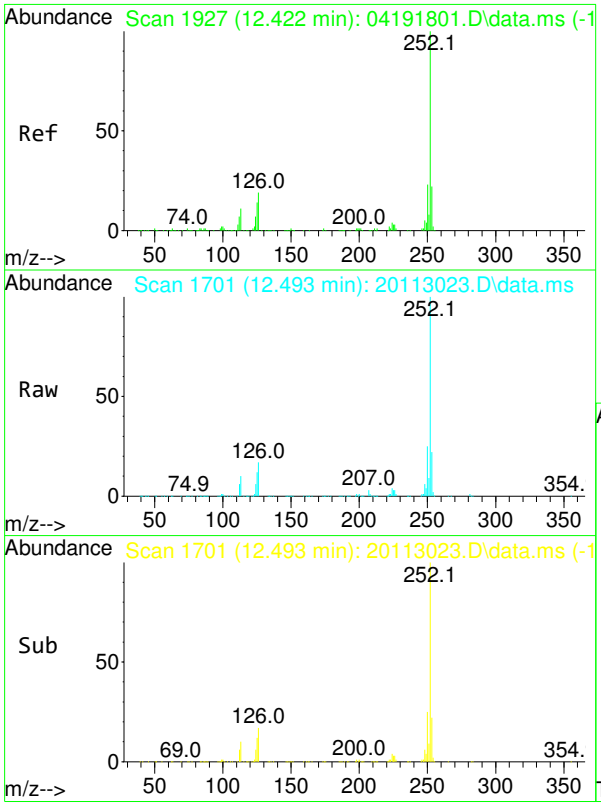


#98
Benzo(k)fluoranthene
Concen: 16.27 ug/ml
RT: 11.904 min Scan# 1601
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:252 Resp: 192883

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.8
125	11.1	0.0	40.8

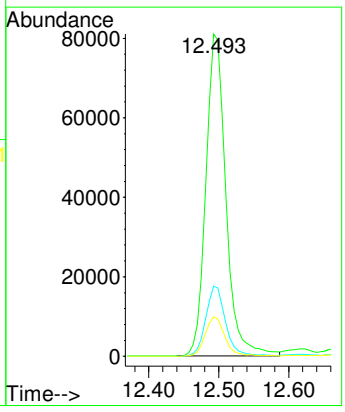


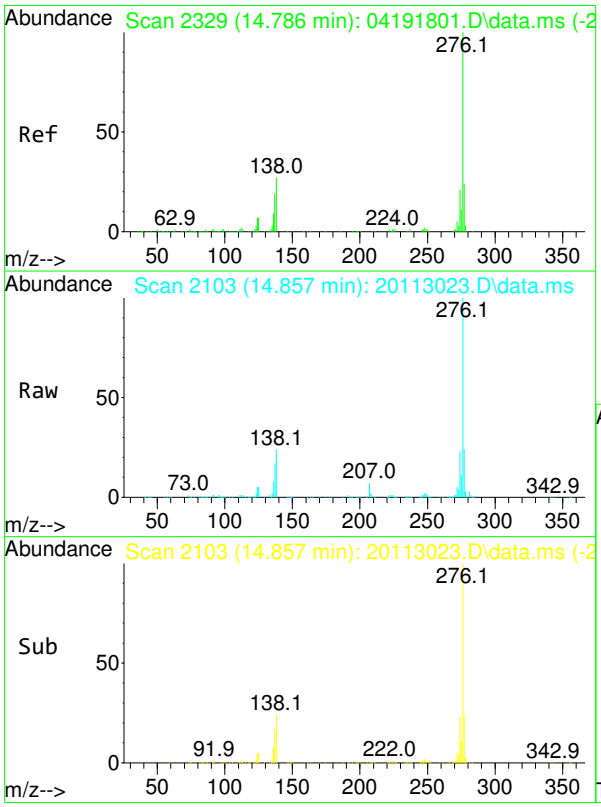


#99
Benzo(a)pyrene
Concen: 15.73 ug/ml
RT: 12.493 min Scan# 1701
Delta R.T. -0.005 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:252 Resp: 160823

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	51.9
125	12.3	0.0	42.8

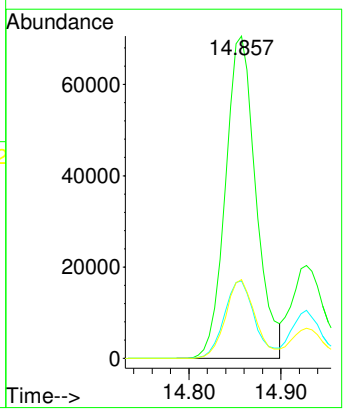


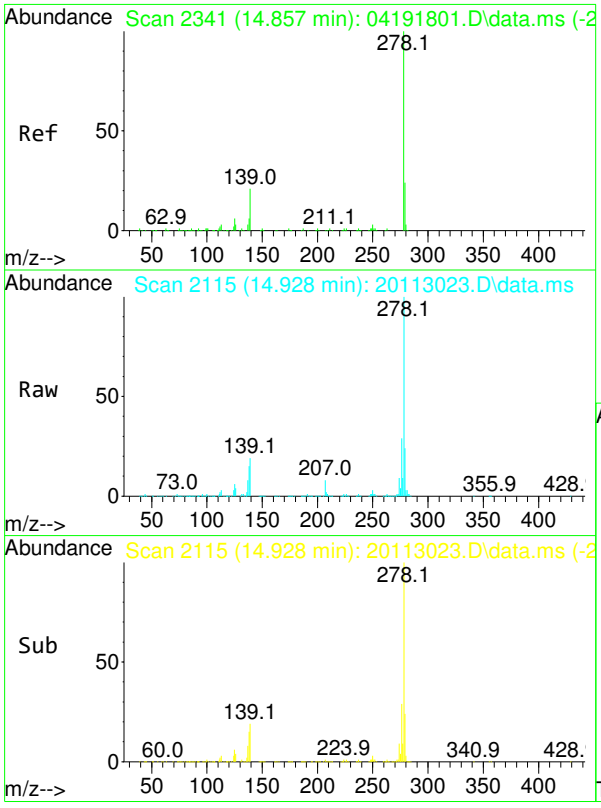


#100
Indeno(1,2,3-cd)pyrene
Concen: 15.53 ug/ml
RT: 14.857 min Scan# 2103
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:276 Resp: 162286

Ion	Ratio	Lower	Upper
276	100		
138	24.4	0.0	53.4
277	23.6	0.0	54.0

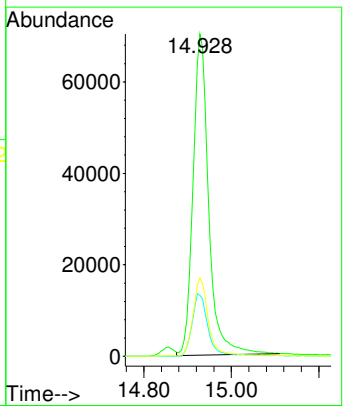


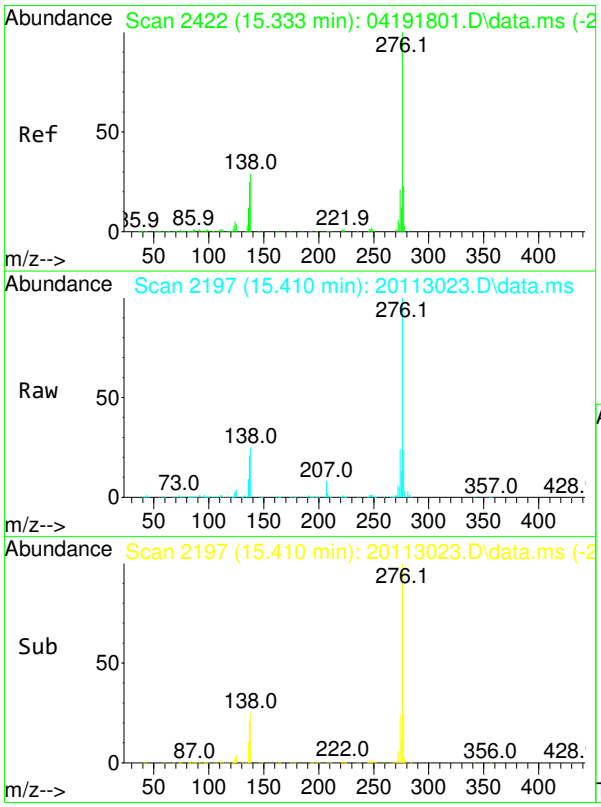


#101
Dibenz(a,h)anthracene
Concen: 15.70 ug/ml
RT: 14.928 min Scan# 2115
Delta R.T. -0.005 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:278 Resp: 173236

Ion	Ratio	Lower	Upper
278	100		
139	19.8	0.0	50.6
279	23.6	0.0	54.0

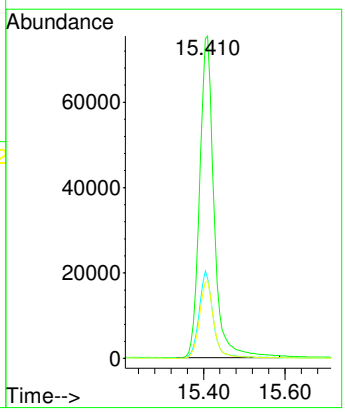




#102
Benzo(g,h,i)perylene
Concen: 15.72 ug/ml
RT: 15.410 min Scan# 2197
Delta R.T. 0.000 min
Lab File: 20113023.D
Acq: 30 Nov 2020 06:54 pm

Tgt Ion:276 Resp: 187139

Ion	Ratio	Lower	Upper
276	100		
138	26.1	0.0	55.8
277	23.9	0.0	54.0



Response Factor Report SVMS9

Method Path : D:\msdchem\1\methods\
Method File : SVMS9-201130-BNA.M
Title : 8270/625/1311 Calibration
Last Update : Tue Dec 01 10:20:30 2020
Response Via : Initial Calibration

Calibration Files
0.1 =20113010.D 0.5 =20113011.D 1 =20113012.D 5 =20113013.D 10 =20113014.D 20 =20113015.D 40 =20113016.D 50 =20113017.D
60 =20113018.D

		Compound	0.1	0.5	1	5	10	20	40	50	60	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------	ISTD	----------								
2)		1,4-Dioxane		0.356	0.350	0.333	0.343	0.332	0.317	0.297	0.294	0.328	7.06
3)		Pyridine		0.649	0.725	0.689	0.709	0.706	0.688	0.628	0.619	0.677	5.83
4)		N-Nitrosodimet...			0.168	0.142	0.147	0.140	0.138	0.131	0.130	0.142	8.82
5)	S	2-Fluorophenol	0.945	0.778	0.745	0.704	0.756	0.712	0.721	0.675	0.670	0.745	11.15
6)	P	Benzaldehyde		0.511	0.498	0.475	0.490	0.473	0.445	0.419	0.406	0.465	8.13
7)	S	Phenol-d6	0.924	0.872	0.831	0.771	0.867	0.830	0.825	0.782	0.763	0.829	6.36
8)	CP	Phenol		0.677	0.837	0.885	0.946	0.938	0.908	0.868	0.841	0.862	9.86
9)		Aniline		0.881	0.984	1.070	1.121	1.093	1.063	1.007	0.985	1.025	7.53
10)	P	Bis(2-chloroet...		0.632	0.686	0.671	0.708	0.669	0.647	0.622	0.608	0.655#	5.20
11)	P	2-Chlorophenol		0.654	0.739	0.795	0.856	0.830	0.803	0.766	0.752	0.774	8.06
12)		1,3-Dichlorobe...		0.873	1.016	0.975	1.028	0.960	0.912	0.852	0.831	0.931	8.05
13)	C	1,4-Dichlorobe...		0.914	1.043	1.000	1.040	0.980	0.922	0.856	0.841	0.950	8.23
14)		Benzyl alcohol		0.309	0.373	0.449	0.499	0.491	0.487	0.472	0.459	0.442	15.11
15)		1,2-Dichlorobe...		0.853	0.975	0.949	0.983	0.925	0.874	0.817	0.797	0.897	7.96
16)	P	2-Methylphenol		0.499	0.607	0.661	0.701	0.678	0.662	0.623	0.601	0.629#	10.04
17)	P	2,2`-Oxybis(1-...		0.559	0.507	0.492	0.502	0.465	0.446	0.428	0.411	0.476	10.14
18)		Bis(2-chlorois...		0.559	0.507	0.492	0.502	0.465	0.446	0.428	0.411	0.476	10.14
19)	P	3-Methylphenol		0.651	0.714	0.722	0.777	0.734	0.698	0.648	0.629	0.697	7.25
20)	P	4-Methylphenol		0.651	0.714	0.722	0.777	0.734	0.698	0.648	0.629	0.697	7.25
21)	P	3&4-Methylphenol		0.651	0.714	0.737	0.785	0.739	0.701	0.650	0.630	0.701	7.63
22)	P	Acetophenone		0.772	0.926	0.954	0.989	0.915	0.869	0.811	0.783	0.878	9.31
23)	P	N-Nitrosodi-n-...		0.337	0.379	0.389	0.410	0.370	0.353	0.328	0.311	0.360#	9.26
24)	P	Hexachloroethane		0.266	0.314	0.312	0.312	0.294	0.279	0.264	0.257	0.287#	8.24
25)	I	Naphthalene-d8	----------	ISTD	----------								
26)	S	Nitrobenzene-d5	0.381	0.284	0.258	0.240	0.265	0.254	0.262	0.241	0.245	0.270	16.19
27)	P	Nitrobenzene		0.220	0.225	0.232	0.251	0.250	0.251	0.238	0.239	0.238	5.02
28)	P	Isophorone		0.441	0.492	0.495	0.530	0.505	0.510	0.497	0.491	0.495	5.11
29)	CP	2-Nitrophenol		0.124	0.151	0.183	0.201	0.208	0.213	0.205	0.207	0.187	17.21
30)	P	2,4-Dimethylph...		0.251	0.275	0.310	0.334	0.319	0.319	0.308	0.305	0.303	8.81
31)	P	Bis(2-chloroet...		0.260	0.314	0.339	0.365	0.346	0.345	0.329	0.327	0.328	9.62
32)		Benzoic acid				0.119	0.152	0.167	0.193	0.205	0.209	0.174	20.19
33)	CP	2,4-Dichloroph...		0.214	0.285	0.308	0.331	0.327	0.333	0.319	0.314	0.304	12.99
34)		1,2,4-Trichlor...		0.298	0.356	0.361	0.375	0.363	0.356	0.336	0.332	0.347	6.97
35)		4-Chlorophenol										0.000	-1.00

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1st /S/ EE 12/01/20

Method Path : D:\msdchem\1\methods\
Method File : SVMS9-201130-BNA.M
Title : 8270/625/1311 Calibration

36)	P	Naphthalene	1.013	0.995	1.073	1.083	1.118	1.077	1.070	0.993	0.987	1.045	4.63
37)	P	4-Chloroaniline		0.383	0.392	0.427	0.461	0.446	0.453	0.435	0.430	0.418	12.21
38)		2,6-Dichloroph...		0.228	0.295	0.324	0.344	0.333	0.330	0.315	0.310	0.310	11.66
39)	CP	Hexachlorobuta...		0.159	0.184	0.184	0.189	0.184	0.179	0.169	0.166	0.177	6.03
40)	P	Caprolactam		0.079	0.093	0.087	0.094	0.084	0.089	0.089	0.090	0.088	5.55
41)	CP	4-Chloro-3-met...		0.244	0.256	0.282	0.289	0.284	0.290	0.281	0.275	0.276	6.53
42)	P	2-Methylnaphth...	0.522	0.622	0.716	0.749	0.796	0.750	0.749	0.710	0.698	0.701	11.78
43)		1-Methylnaphth...	0.565	0.614	0.696	0.719	0.751	0.693	0.692	0.659	0.648	0.671	8.40
44)	P	1,2,4,5-Tetrac...		0.316	0.351	0.376	0.392	0.371	0.362	0.341	0.338	0.356	6.86
45)	P	1,1-Biphenyl		0.759	0.860	0.948	0.992	0.919	0.912	0.867	0.848	0.888	8.01
46)		2,3,5,6-Tetrac...		0.110	0.128	0.172	0.204	0.199	0.211	0.212	0.211	0.181	22.56
47)	P	2,3,4,6-Tetrac...		0.154	0.180	0.216	0.233	0.214	0.226	0.224	0.222	0.209	13.03
48)		1,4-Dinitroben...		0.076	0.084	0.106	0.123	0.122	0.133	0.138	0.136	0.115	20.73
49)		1,3-Dinitroben...		0.090	0.097	0.133	0.154	0.148	0.159	0.162	0.157	0.138	20.82
50)		1,2-Dinitroben...		0.067	0.075	0.094	0.110	0.105	0.110	0.109	0.107	0.097	17.42
51)	I	Acenaphthene-d10	----------ISTD----------										
52)	P	Hexachlorocycl...		0.100	0.140	0.233	0.280	0.303	0.315	0.308	0.306	0.248	33.84
53)	CP	2,4,6-Trichlor...		0.299	0.356	0.374	0.400	0.408	0.418	0.402	0.402	0.382	10.26
54)	P	2,4,5-Trichlor...		0.378	0.433	0.420	0.454	0.452	0.453	0.438	0.438	0.433	5.84
55)	S	2-Fluorobiphenyl	2.446	1.856	1.656	1.401	1.519	1.412	1.418	1.282	1.295	1.587	23.27
56)	P	2-Chloronaphth...	0.976	0.984	1.226	1.235	1.295	1.271	1.234	1.153	1.151	1.169	10.04
57)	P	2-Nitroaniline		0.151	0.167	0.193	0.212	0.210	0.216	0.209	0.209	0.196	12.27
58)	P	Dimethylphthalate		1.259	1.380	1.349	1.448	1.358	1.352	1.291	1.282	1.340	4.55
59)	P	Acenaphthylene	1.857	1.731	1.983	1.952	2.083	2.038	1.981	1.866	1.862	1.928	5.64
60)	P	2,6-Dinitrotol...		0.257	0.263	0.306	0.348	0.341	0.341	0.335	0.335	0.316	11.56
61)	P	3-Nitroaniline		0.238	0.275	0.351	0.383	0.376	0.390	0.379	0.382	0.347	16.63
62)	CP	Acenaphthene	1.215	1.139	1.438	1.307	1.360	1.317	1.270	1.205	1.198	1.272	7.33
63)	P	2,4-Dinitrophenol				0.073	0.117	0.142	0.176	0.191	0.194	0.149	32.16
64)	P	Dibenzofuran		1.626	1.812	1.819	1.903	1.821	1.760	1.660	1.651	1.757	5.68
65)	P	4-Nitrophenol			0.085	0.110	0.131	0.136	0.149	0.149	0.153	0.130	19.12
66)	P	2,4-Dinitrotol...		0.307	0.334	0.404	0.458	0.450	0.466	0.456	0.457	0.417	14.99
67)	P	Diethylphthalate		1.117	1.179	1.230	1.291	1.238	1.223	1.179	1.163	1.202	4.47
68)	P	Fluorene	1.190	1.296	1.384	1.444	1.527	1.461	1.415	1.333	1.316	1.374	7.39
69)	P	4-Chlorophenyl...		0.584	0.646	0.711	0.740	0.716	0.692	0.658	0.652	0.675	7.40
70)	P	4-Nitroaniline		0.215	0.273	0.350	0.407	0.398	0.405	0.395	0.397	0.355	20.41
71)	P	Atrazine		0.325	0.360	0.386	0.419	0.402	0.403	0.391	0.389	0.384	7.67
72)	I	Phenanthrene-d10	----------ISTD----------										
73)	P	4,6-Dinitro-2-...		0.025	0.043	0.088	0.112	0.122	0.136	0.140	0.138	0.101	44.55
74)	CP	N-Nitrosodiphe...		0.575	0.618	0.669	0.708	0.691	0.675	0.648	0.637	0.653	6.56
75)		1,2-Diphenylhy...		0.391	0.452	0.439	0.474	0.468	0.462	0.449	0.440	0.447	5.82
76)	S	2,4,6-Tribromo...	0.238	0.167	0.146	0.136	0.153	0.143	0.152	0.149	0.148	0.159	19.34
77)	P	4-Bromophenyl ...		0.205	0.222	0.229	0.245	0.235	0.230	0.225	0.219	0.226	5.31
78)	P	Hexachlorobenzene		0.261	0.288	0.287	0.294	0.278	0.273	0.262	0.257	0.275	5.07
79)	CP	Pentachlorophenol		0.041	0.056	0.094	0.124	0.131	0.151	0.159	0.161	0.115	40.55#

1424 of 2553

1st /S/ EE 12/01/20

Method Path : D:\msdchem\1\methods\
Method File : SVMS9-201130-BNA.M
Title : 8270/625/1311 Calibration

80)	P	Phenanthrene	1.535	1.137	1.236	1.180	1.221	1.174	1.138	1.074	1.061	1.195	11.75
81)	P	Anthracene	1.095	1.041	1.149	1.160	1.223	1.167	1.160	1.108	1.096	1.132	4.73
82)	P	Carbazole		0.927	1.028	1.084	1.153	1.110	1.111	1.048	1.047	1.063	6.48
83)	P	Di-n-butylphth...		1.030	1.048	1.081	1.155	1.106	1.121	1.095	1.073	1.089	3.67
84)	CP	Fluoranthene	1.647	1.149	1.220	1.214	1.277	1.250	1.250	1.192	1.196	1.266	11.66
85)	I	Chrysene-d12					ISTD						
86)		3,3'-Dimethylb...		0.435	0.603	0.745	0.918	0.817	0.835	0.804	0.797	0.732	19.29
87)		Benzidine		0.476	0.518	0.701	0.802	0.811	0.854	0.842	0.827	0.729	20.68
88)		Pyrene	1.859	1.204	1.254	1.225	1.287	1.257	1.244	1.202	1.184	1.302	16.24
89)	S	4-Terphenyl-d14	1.708	1.296	1.139	0.950	1.018	0.950	0.984	0.932	0.917	1.099	23.55
90)	P	Butylbenzylpht...		0.434	0.452	0.470	0.493	0.473	0.484	0.470	0.467	0.468	3.92
91)	P	Benzo[a]anthra...	2.788	1.322	1.269	1.148	1.185	1.167	1.187	1.146	1.153	1.374	38.84
92)	P	3,3'-Dichlorob...		0.379	0.448	0.470	0.505	0.502	0.519	0.506	0.504	0.479	9.71
93)	P	Chrysene	1.868	1.217	1.308	1.232	1.285	1.228	1.225	1.153	1.145	1.296	17.05
94)	P	Bis(2-ethylhex...		0.820	0.717	0.632	0.652	0.627	0.627	0.612	0.606	0.662	11.03
95)	I	Perylene-d12					ISTD						
96)	CP	Di-n-octylphth...		0.820	0.840	0.937	1.025	1.025	1.093	1.093	1.098	0.991	11.41
97)	P	Benzo(b)fluora...	1.328	0.986	1.071	1.091	1.139	1.114	1.185	1.114	1.143	1.130	8.21
98)	P	Benzo(k)fluora...	1.300	1.067	1.072	1.081	1.186	1.203	1.239	1.176	1.187	1.168	6.88
99)	CP	Benzo(a)pyrene	1.175	0.893	0.970	0.968	1.027	1.023	1.073	1.023	1.037	1.021	7.62
100)	P	Indeno(1,2,3-c...	1.143	0.888	0.974	0.994	1.049	1.036	1.102	1.048	1.051	1.032	7.15
101)	P	Dibenz(a,h)ant...	1.031	0.925	1.032	1.054	1.104	1.096	1.159	1.099	1.110	1.068	6.32
102)	P	Benzo(g,h,i)pe...	1.314	1.052	1.144	1.141	1.192	1.184	1.243	1.172	1.182	1.180	6.09

(#) = Out of Range

1st /S/ EE 12/01/20

Partial Calibration Report SVMS9

Method Path : D:\nsdchem\1\methods\
Method File : SVMS9-201130-BNA.M
Title : 8270/625/1311 Calibration
Last Update : Tue Dec 01 10:20:30 2020
Response Via : Initial Calibration

Calibration Files
0.1 =20113010 0.5 =20113011 1 =20113012 5 =20113013 10 =20113014 20 =20113015 40 =20113016
50 =20113017 60 =20113018

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	1,4-Dichlorobenz...		----------ISTD----------			
2)		1,4-Dioxane	Quad	-0.0000	0.3504	-0.0384	0.9998
3)		Pyridine	Quad	-0.0013	0.7487	-0.0847	0.9994
5)	S	2-Fluorophenol	Quad	0.0007	0.7476	-0.0508	0.9995
6)	P	Benzaldehyde	Quad	-0.0001	0.5051	-0.0658	0.9999
7)	S	Phenol-d6	Quad	-0.0001	0.8644	-0.0626	0.9994
8)	CP	Phenol	Quad	-0.0042	0.9886	-0.0927	0.9998
10)	P	Bis(2-chloroethy. .	Quad	-0.0010	0.7117	-0.0689	0.9999
12)		1,3-Dichlorobenzene	Quad	-0.0018	1.0460	-0.1445	0.9998
13)	C	1,4-Dichlorobenzene	Quad	-0.0015	1.0639	-0.1520	0.9998
14)		Benzyl alcohol	Quad	-0.0031	0.5140	-0.0325	0.9997
15)		1,2-Dichlorobenzene	Quad	-0.0016	1.0061	-0.1410	0.9998
16)	P	2-Methylphenol	Quad	-0.0032	0.7309	-0.0822	0.9997
17)	P	2,2`-Oxybis(1-ch...	Quad	0.0005	0.5029	-0.0608	0.9999
18)		Bis(2-chloroisop...	Quad	0.0005	0.5029	-0.0608	0.9999
19)	P	3-Methylphenol	Quad	-0.0021	0.7984	-0.1119	0.9997
20)	P	4-Methylphenol	Quad	-0.0021	0.7984	-0.1119	0.9997
21)	P	3&4-Methylphenol	Quad	-0.0022	0.8075	-0.1175	0.9997
22)	P	Acetophenone	Quad	-0.0028	1.0145	-0.1542	0.9998
23)	P	N-Nitrosodi-n-pr...	Quad	-0.0010	0.4174	-0.0696	0.9996
24)	P	Hexachloroethane	Quad	-0.0005	0.3200	-0.0423	0.9999
25)	I	Naphthalene-d8		----------ISTD----------			
26)	S	Nitrobenzene-d5	Quad	0.0005	0.2602	-0.0101	0.9989
29)	CP	2-Nitrophenol	Quad	-0.0013	0.2083	0.0002	0.9996
30)	P	2,4-Dimethylphenol	Quad	-0.0013	0.3355	-0.0198	0.9998
31)	P	Bis(2-chloroetho...	Quad	-0.0014	0.3673	-0.0263	0.9998
32)		Benzoic acid	Quad	-0.0065	0.1676	0.0321	0.9998
33)	CP	2,4-Dichlorophenol	Quad	-0.0017	0.3411	-0.0154	0.9997
36)	P	Naphthalene	Quad	-0.0007	1.1371	-0.0996	0.9996
37)	P	4-Chloroaniline	Quad	-0.0021	0.4684	-0.0232	0.9998
38)		2,6-Dichlorophenol	Quad	-0.0016	0.3526	-0.0270	0.9998
42)	P	2-Methylnaphthalene	Quad	-0.0010	0.7953	-0.0626	0.9996
43)		1-Methylnaphthalene	Quad	-0.0007	0.7436	-0.0633	0.9997
44)	P	1,2,4,5-Tetrachl...	Quad	-0.0011	0.3984	-0.0408	0.9998
45)	P	1,1-Biphenyl	Quad	-0.0031	0.9993	-0.0990	0.9997
46)		2,3,5,6-Tetrachl...	Quad	-0.0014	0.1994	0.0100	0.9995
47)	P	2,3,4,6-Tetrachl...	Quad	-0.0009	0.2256	-0.0013	0.9996
48)		1,4-Dinitrobenzene	Quad	-0.0007	0.1191	0.0132	0.9995
49)		1,3-Dinitrobenzene	Quad	-0.0010	0.1511	0.0066	0.9993
50)		1,2-Dinitrobenzene	Quad	-0.0007	0.1084	0.0002	0.9995
51)	I	Acenaphthene-d10		----------ISTD----------			
52)	P	Hexachlorocyclop...	Quad	-0.0032	0.2967	0.0113	0.9989
53)	CP	2,4,6-Trichlorop...	Quad	-0.0016	0.4123	-0.0043	0.9996
55)	S	2-Fluorobiphenyl	Quad	0.0051	1.4885	-0.1345	0.9990
56)	P	2-Chloronaphthalene	Quad	-0.0016	1.3219	-0.1152	0.9996
57)	P	2-Nitroaniline	Quad	-0.0010	0.2142	-0.0023	0.9997
60)	P	2,6-Dinitrotoluene	Quad	-0.0016	0.3458	-0.0065	0.9997
61)	P	3-Nitroaniline	Quad	-0.0022	0.3854	-0.0009	0.9997
63)	P	2,4-Dinitrophenol	Quad	-0.0102	0.1479	0.0374	0.9996
65)	P	4-Nitrophenol	Quad	-0.0014	0.1312	0.0156	0.9995
66)	P	2,4-Dinitrotoluene	Quad	-0.0024	0.4564	0.0030	0.9997

Partial Calibration Report SVMS9

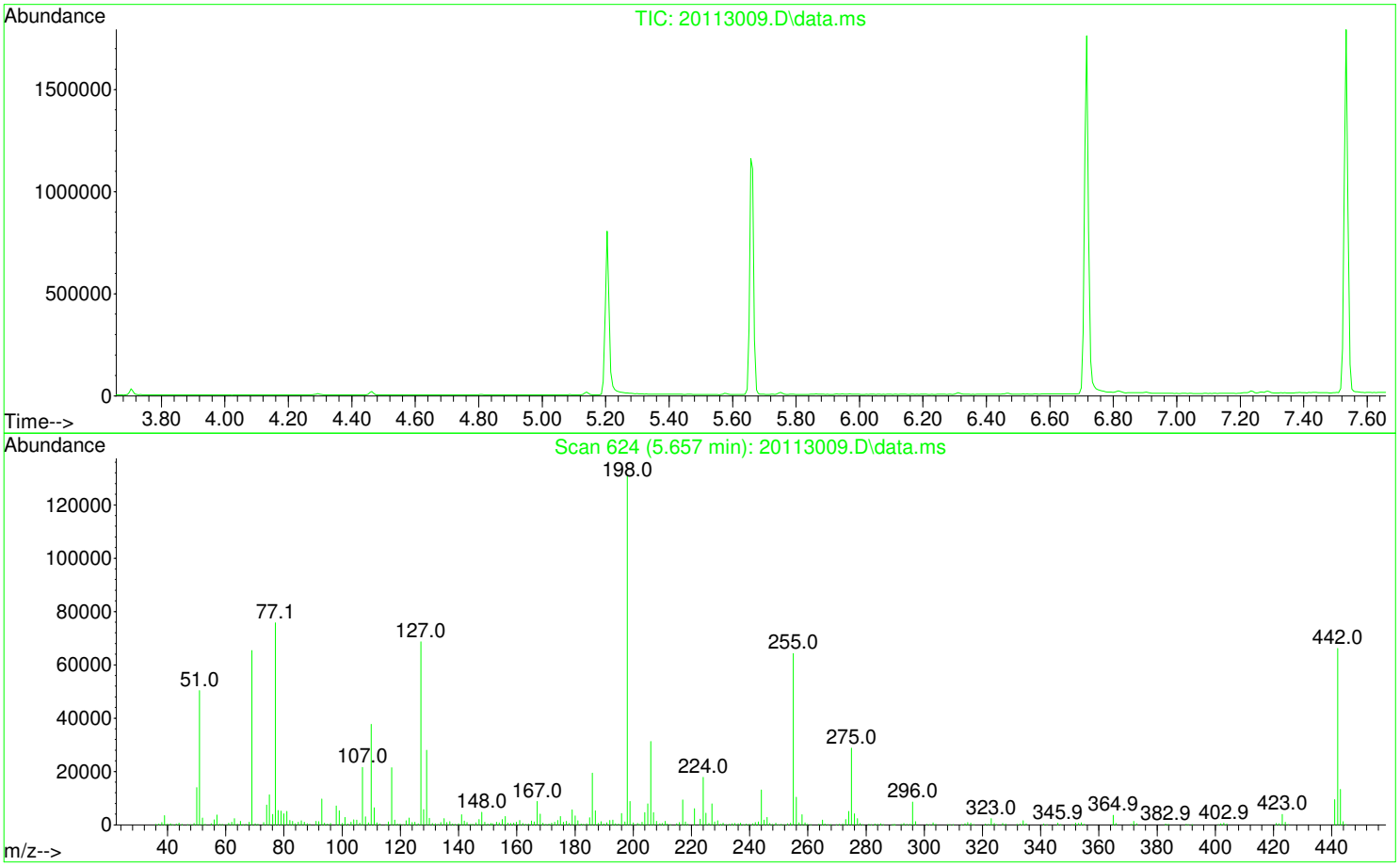
Method Path : D:\nsdchem\1\methods\
Method File : SVMS9-201130-BNA.M
Title : 8270/625/1311 Calibration

67)	P	Diethylphthalate	Quad	-0.0027	1.3010	-0.0904	0.9999
68)	P	Fluorene	Quad	-0.0015	1.5400	-0.1496	0.9997
70)	P	4-Nitroaniline	Quad	-0.0029	0.4072	-0.0051	0.9996
72)	I	Phenanthrene-d10		----------ISTD----------			
73)	P	4,6-Dinitro-2-me...	Quad	-0.0015	0.1144	0.0191	0.9987
76)	S	2,4,6-Tribromoph...	Quad	0.0004	0.1433	0.0041	0.9993
79)	CP	Pentachlorophenol	Quad	-0.0013	0.1187	0.0308	0.9991
80)	P	Phenanthrene	Quad	0.0004	1.2335	-0.1157	0.9998
81)	P	Anthracene	Quad	-0.0008	1.2202	-0.0812	0.9998
84)	CP	Fluoranthene	Quad	0.0003	1.2737	-0.0516	0.9997
85)	I	Chrysene-d12		----------ISTD----------			
86)		3,3'-Dimethylben...	Quad	-0.0058	0.8454	-0.0259	0.9997
87)		Benzidine	Quad	-0.0058	0.8182	0.0175	0.9994
88)		Pyrene	Quad	0.0008	1.2856	-0.0637	0.9998
89)	S	4-Terphenyl-d14	Quad	0.0041	0.9881	-0.0431	0.9994
91)	P	Benzo[a]anthracene	Quad	0.0036	1.1651	-0.0079	0.9998
92)	P	3,3'-Dichlorober...	Quad	-0.0018	0.5102	-0.0009	0.9998
93)	P	Chrysene	Quad	0.0010	1.2848	-0.0929	0.9996
94)	P	Bis(2-ethylhexyl...	Quad	0.0020	0.6402	-0.0227	0.9999
95)	I	Perylene-d12		----------ISTD----------			
96)	CP	Di-n-octylphthalate	Quad	-0.0033	1.0088	0.0674	0.9998
97)	P	Benzo(b)fluorant...	Quad	-0.0000	1.1254	0.0121	0.9993
98)	P	Benzo(k)fluorant...	Quad	-0.0004	1.1893	0.0043	0.9993
99)	CP	Benzo(a)pyrene	Quad	-0.0001	1.0212	0.0138	0.9995
100)	P	Indeno(1,2,3-cd)...	Quad	-0.0003	1.0463	0.0103	0.9994
101)	P	Dibenz(a,h)anthr...	Quad	-0.0007	1.1064	0.0076	0.9994
102)	P	Benzo(g,h,i)pery...	Quad	-0.0003	1.1983	-0.0057	0.9994

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113009.D
Acq On : 30 Nov 2020 01:44 pm
Operator : EE/EEW
Sample : DFTPP_TUNE2-201130
Misc : 300-0567, 50µg/ml DFTPP
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Title : 8270/625/1311 Calibration
Last Update : Tue Dec 01 09:55:10 2020



Spectrum Information: Scan 624

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.5	50368	PASS
68	69	0.00	2	1.5	1008	PASS
70	69	0.00	2	0.7	428	PASS
127	198	40	60	52.4	68616	PASS
197	198	0.00	1	0.8	1033	PASS
198	198	100	100	100.0	130864	PASS
199	198	5	9	6.7	8777	PASS
275	198	10	30	22.0	28728	PASS
365	198	1	100	2.7	3548	PASS
441	443	0.01	100	71.4	9487	PASS
442	198	40	100	50.6	66168	PASS
443	442	17	23	20.1	13294	PASS

Scan 624 (5.657 min): 20113009.D\data.ms
DFTPP_TUNE2-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	124	47.90	70	60.10	92	71.00	149
37.00	264	49.10	547	61.00	665	73.00	853
38.00	837	50.00	14005	62.00	992	74.00	7436
39.00	3511	51.00	50368	63.00	2267	75.00	11241
40.00	276	52.00	2598	64.00	328	76.10	3872
41.00	369	52.90	175	65.00	1254	77.10	75776
41.90	91	55.00	444	66.00	116	78.00	5341
43.00	242	56.00	1827	66.90	135	79.00	5125
43.90	671	57.00	3626	68.00	1008	80.00	4157
45.00	190	58.00	224	69.00	65392	81.00	5037
46.90	117	58.80	207	70.10	428	82.00	1691

Scan 624 (5.657 min): 20113009.D\data.ms
DFTPP_TUNE2-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.00	1309	95.00	322	107.00	21512	119.00	242
83.90	419	96.00	456	108.00	3027	119.90	267
84.90	995	98.00	7052	109.00	783	121.00	119
86.00	1565	99.00	5293	110.00	37704	122.00	1489
87.00	927	100.00	493	111.00	6347	123.00	2580
88.00	402	101.00	2764	111.90	693	124.00	889
88.90	184	102.00	269	113.00	333	125.00	916
91.00	1323	103.00	968	115.00	93	126.10	436
92.00	1153	104.00	1861	115.90	1133	127.00	68616
93.00	9617	105.00	1711	117.00	21416	128.00	5710
93.90	655	106.00	658	118.00	1734	129.00	27944

Scan 624 (5.657 min): 20113009.D\data.ms
DFTPP_TUNE2-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	2444	141.00	3745	151.70	425	163.10	162
131.00	549	142.00	1372	153.00	927	164.00	335
132.00	358	142.90	826	154.00	795	165.00	1366
133.00	185	144.10	212	155.00	1974	166.00	1077
133.90	839	144.90	227	156.00	3080	167.00	8791
135.00	2368	146.00	743	157.00	668	168.00	4045
136.00	852	147.00	1946	157.90	552	169.00	629
137.00	1208	148.00	4748	158.90	624	170.00	143
137.90	329	149.00	920	159.90	993	171.00	322
138.90	120	150.00	259	161.00	1668	172.00	637
140.00	393	151.10	461	162.00	506	173.00	941

Scan 624 (5.657 min): 20113009.D\data.ms
DFTPP_TUNE2-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.00	1662	185.00	2627	196.00	4287	207.00	4564
175.00	3104	186.00	19432	197.10	1033	208.00	1353
176.00	942	187.00	5228	198.00	130864	209.10	414
177.00	1307	188.00	510	198.90	8777	210.00	558
178.00	463	189.00	1145	200.00	771	211.00	1330
179.00	5637	189.90	233	201.50	518	211.70	331
180.00	3395	190.90	716	202.10	162	212.80	85
181.00	1588	192.00	1693	203.00	995	214.90	451
182.10	309	193.00	1717	204.00	4557	215.90	870
182.90	167	193.90	440	205.00	7830	217.00	9366
184.00	398	195.00	267	206.00	31280	217.90	1133

Scan 624 (5.657 min): 20113009.D\data.ms
DFTPP_TUNE2-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.80	127	232.00	103	243.00	1039	254.10	643
221.00	6019	233.00	164	244.00	13070	255.00	64272
223.00	2087	234.00	414	245.00	1771	256.00	10315
224.00	17832	234.90	458	246.00	2790	257.00	792
225.00	4316	236.00	347	246.90	561	258.00	3842
226.00	525	236.90	612	247.90	153	259.00	721
227.00	7919	237.90	90	249.00	613	259.90	143

228.00	1115	238.80	268	249.90	84	261.00	81
229.00	1532	239.90	229	250.90	154	263.80	153
230.00	230	241.00	409	251.90	69	265.00	1722
230.90	656	242.00	845	253.00	401	265.90	289

Scan 624 (5.657 min): 20113009.D\data.ms
DFTPP_TUNE2-201130

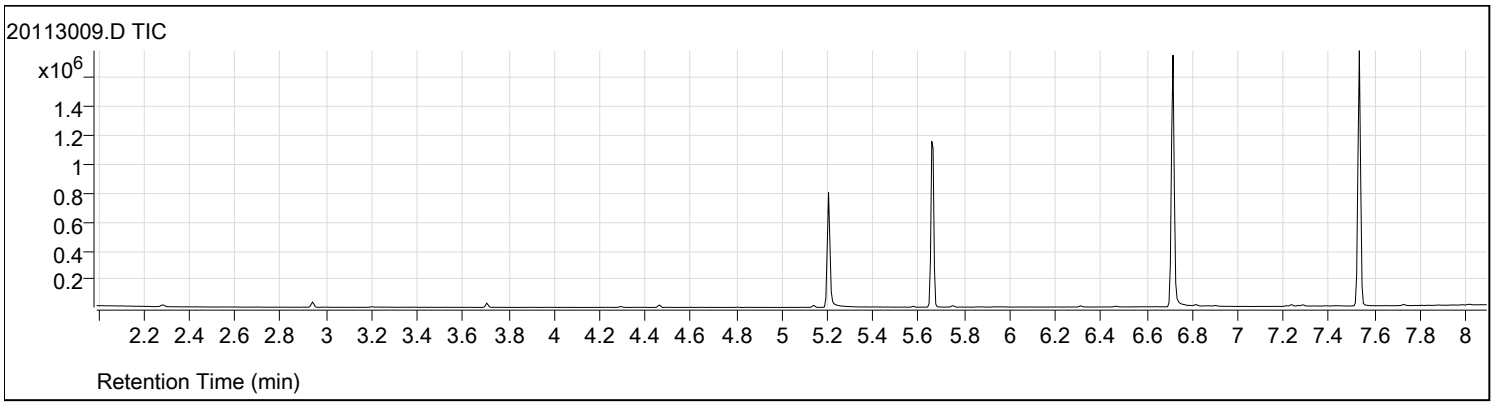
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
266.90	75	278.90	106	293.00	521	310.00	103
267.90	96	281.00	182	294.00	172	312.90	112
269.80	114	281.80	83	295.00	229	314.00	353
270.80	199	283.00	298	296.00	8548	314.90	843
272.00	238	284.00	188	297.00	1214	316.00	587
273.00	2036	285.00	395	300.90	134	317.00	101
274.00	5053	285.90	92	301.90	101	321.00	315
275.00	28728	289.00	90	303.00	765	322.10	227
276.00	4094	289.60	53	304.00	206	323.00	2356
277.00	2380	290.00	51	308.10	90	324.00	484
278.00	502	292.00	126	308.80	64	324.90	60

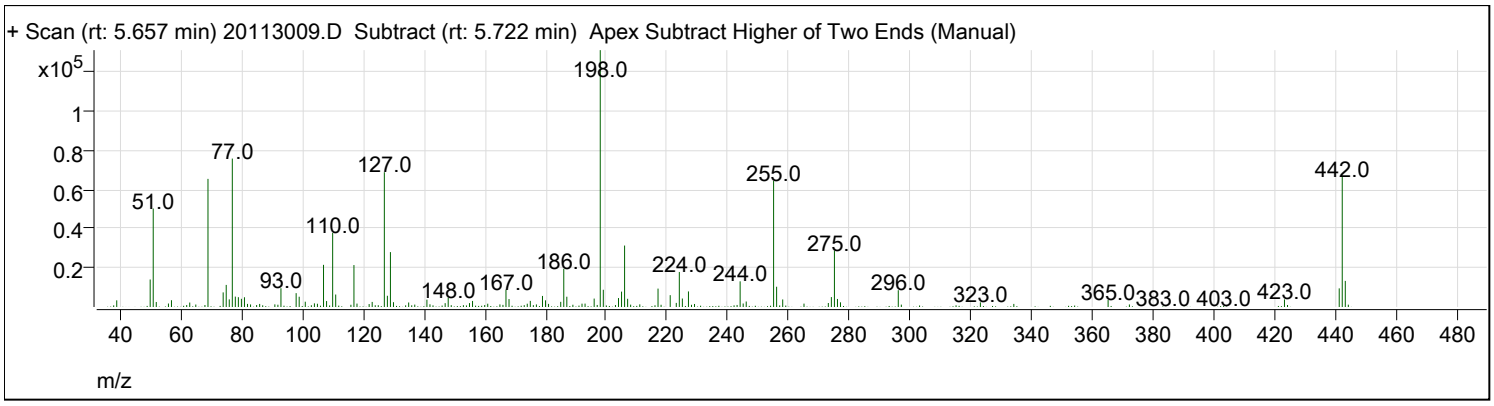
Scan 624 (5.657 min): 20113009.D\data.ms
DFTPP_TUNE2-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
326.90	519	352.00	603	390.00	162	425.10	75
328.00	300	353.00	458	390.70	80	441.00	9487
331.90	217	354.00	742	392.00	73	442.00	66168
332.90	326	355.00	215	401.10	108	443.00	13294
334.00	1571	364.90	3548	401.90	447	443.90	1183
335.00	412	365.90	518	402.90	646	444.80	67
341.00	315	371.00	201	403.90	240		
342.10	52	372.00	1284	420.90	516		
345.90	585	373.00	349	421.90	428		
346.90	73	382.90	318	423.00	3872		
350.80	63	383.90	130	424.00	1018		

Tune Evaluation Report

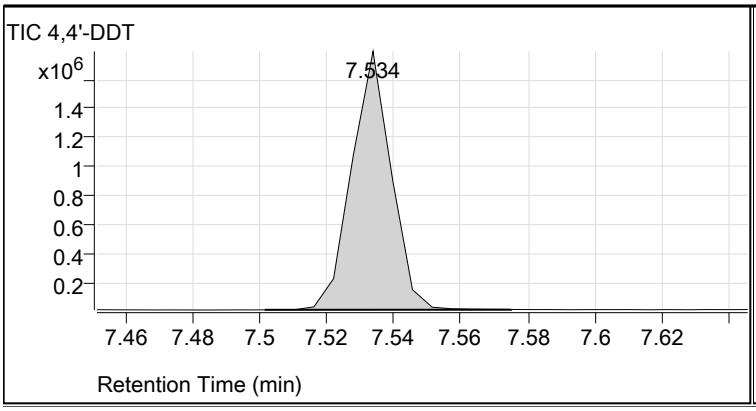
Data Path:	D:\msdchem\1\data\SVMS9-201130\20113009.D
Acq on:	11/30/2020 1:44:16 PM
Operator:	EE/EEW
Sample:	DFTPP_TUNE2-201130
Inst Name:	SVMS9
ALS Vial:	3
Method:	D:\MassHunter\Methods\Quant\DFTPP DRW.m

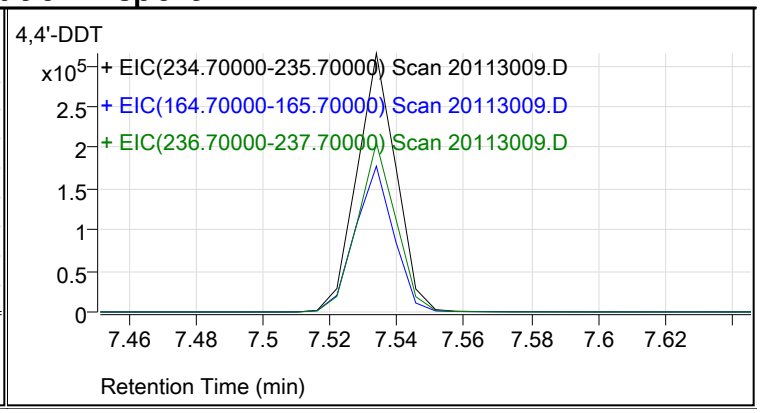


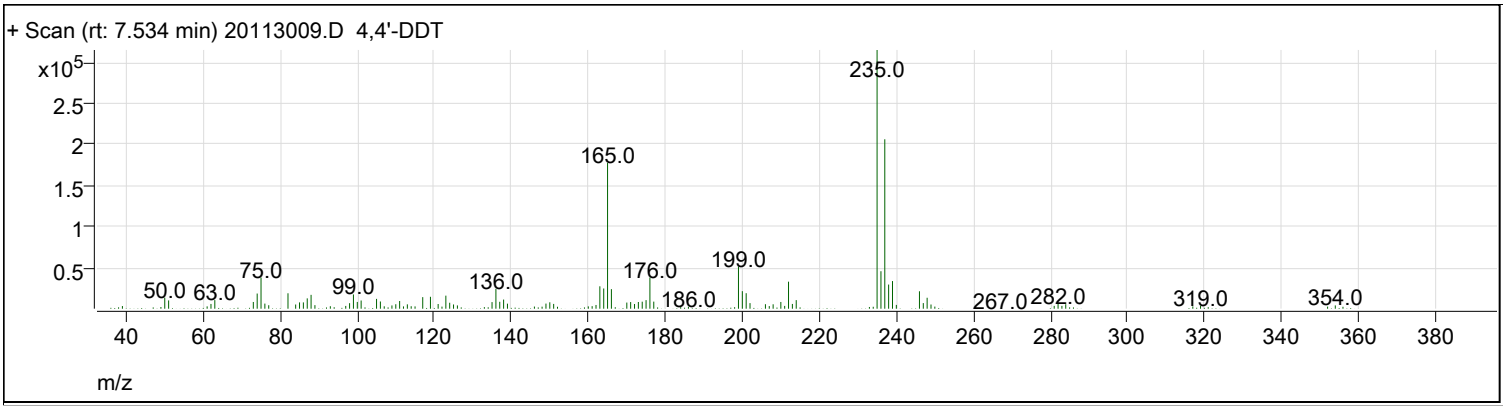


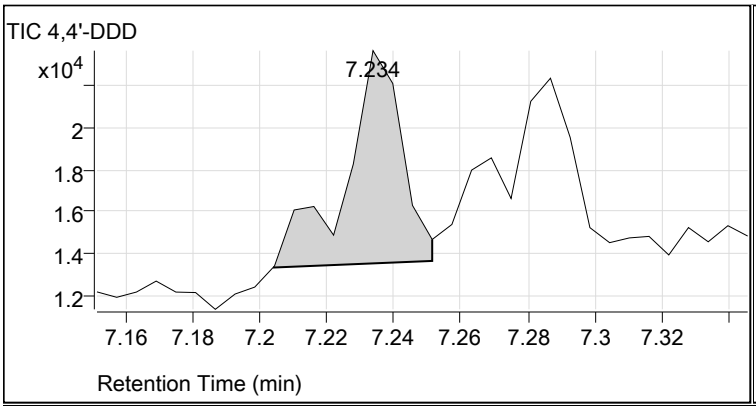
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
51	198	30	60	38.3	50147	Pass
68	69	0	2	1.5	1008	Pass
70	69	0	2	0.5	314	Pass
127	198	40	60	52.5	68621	Pass
197	198	0	1	0.8	1033	Pass
198	198	100	100	100.0	130789	Pass
199	198	5	9	6.7	8777	Pass
275	198	10	30	22.0	28735	Pass
365	198	1	100	2.7	3548	Pass
441	443	1E-10	100	71.4	9487	Pass
442	198	50	100	50.6	66171	Pass
443	442	17	23	20.1	13294	Pass

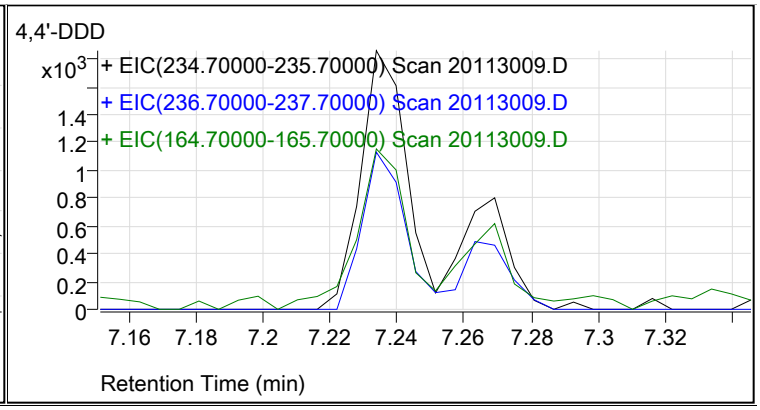
Tune Evaluation Report

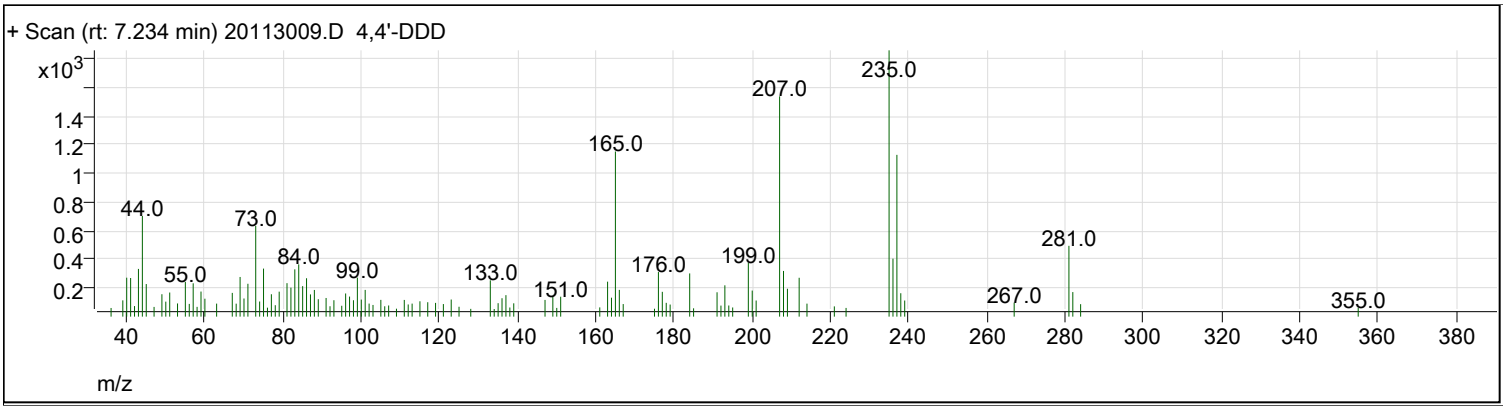


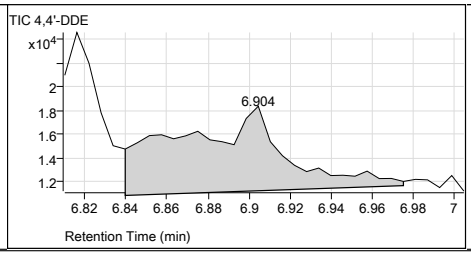


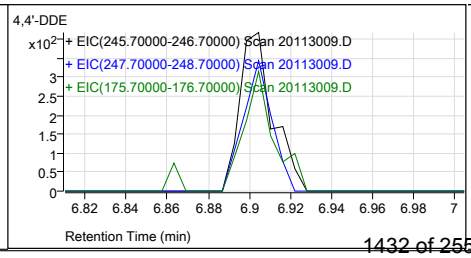




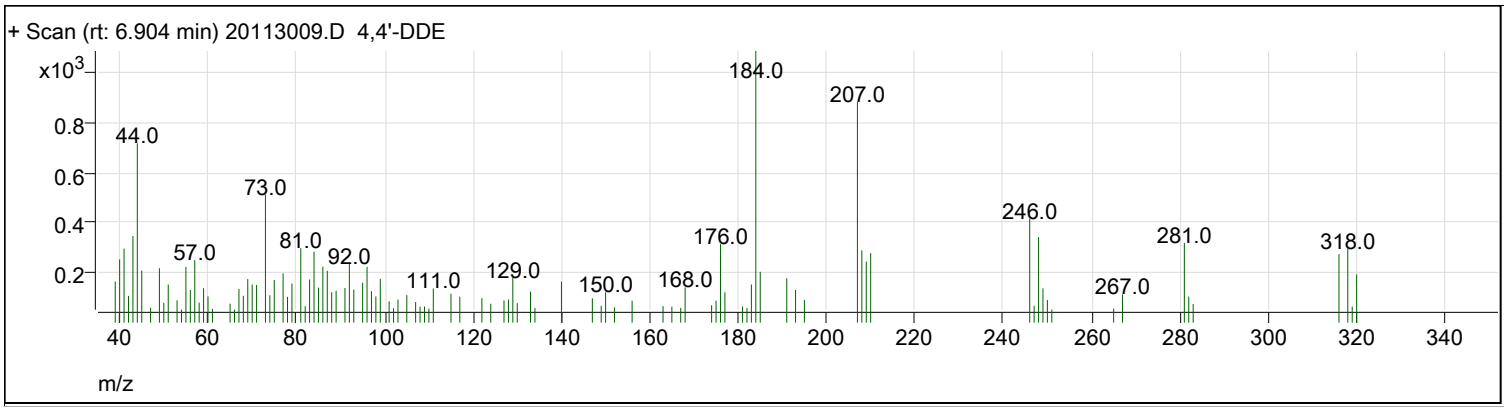






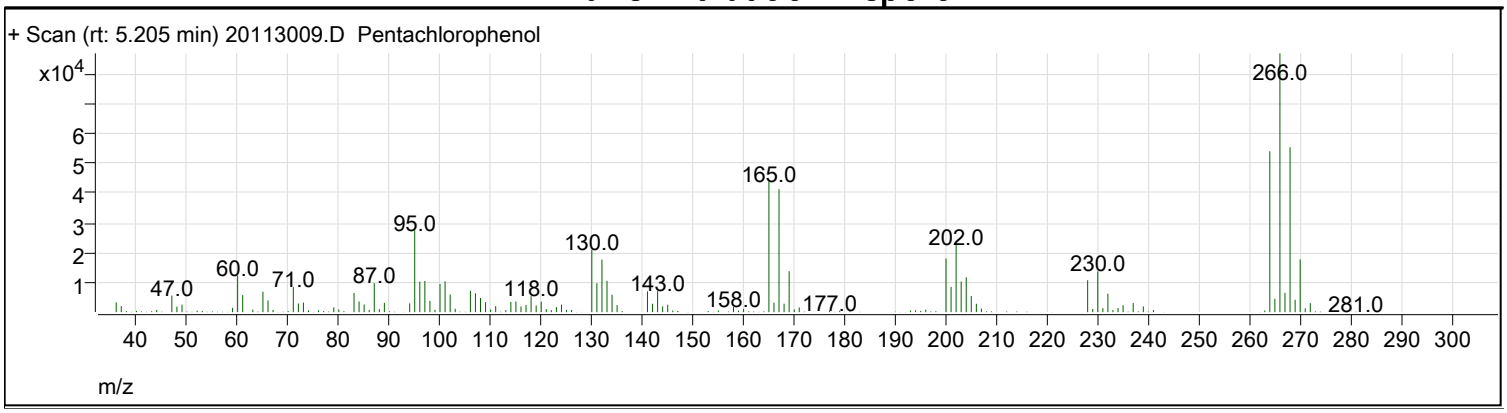


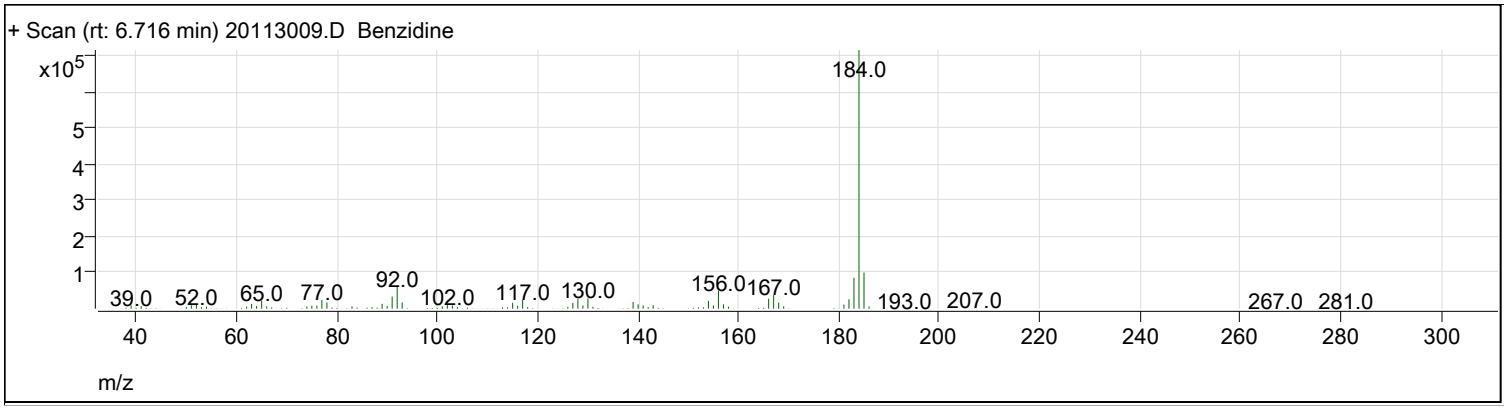
Tune Evaluation Report



Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	7.550	7.534	1459160	2.6	Pass
4,4'-DDD	7.250	7.234	11759		
4,4'-DDE	6.910	6.904	26479		

Tune Evaluation Report





Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	5.210	5.205	1.3	5.0	Pass
Benzidine	6.720	6.716	0.8	4.8	Pass

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113010.D
Acq On : 30 Nov 2020 01:58 pm
Operator : EE/EEW
Sample : 0.1 ug/mL BNA
Misc : 300-0580A
ALS Vial : 41 Sample Multiplier: 1

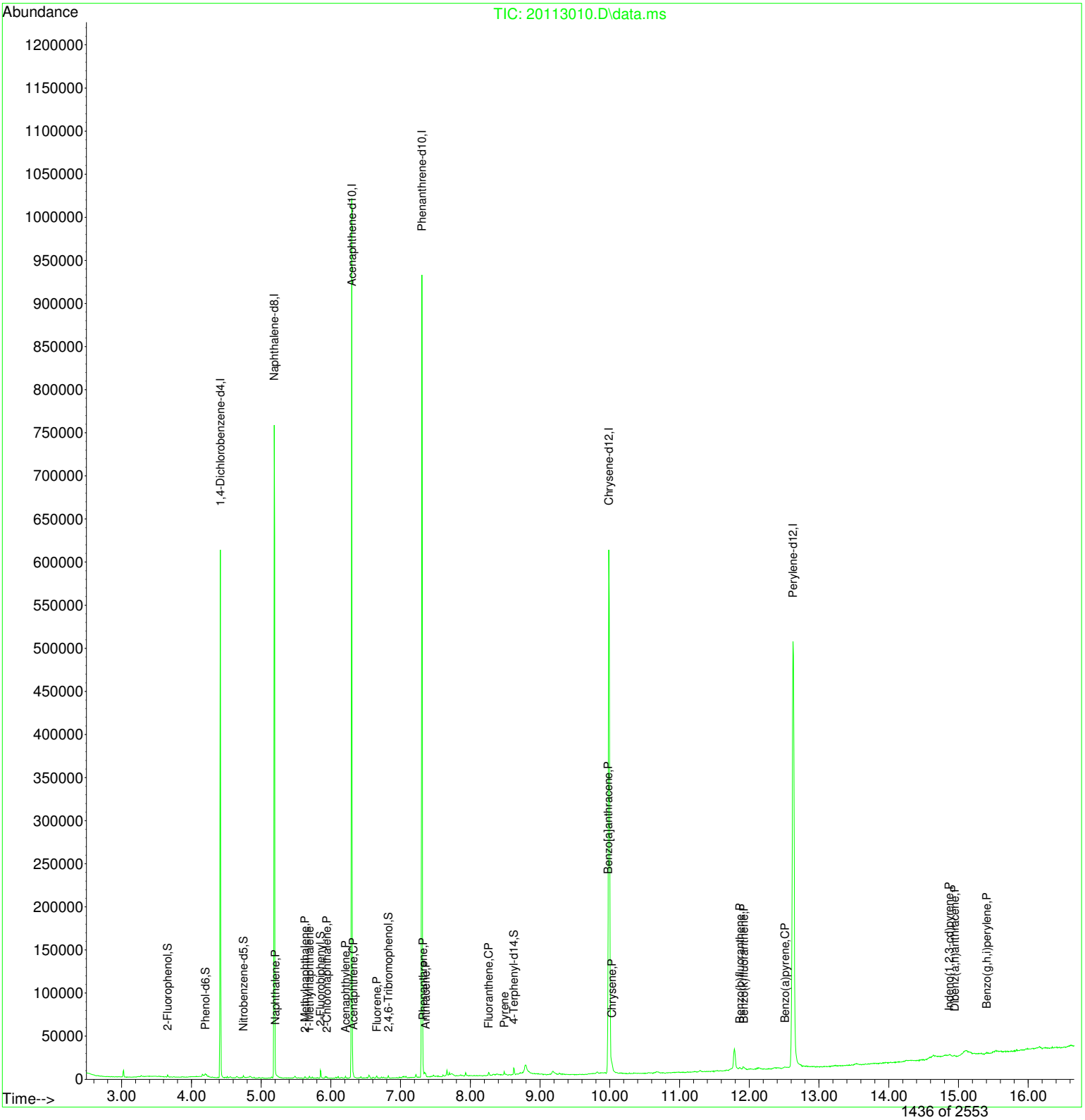
Quant Time: Dec 01 09:55:32 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	150682	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	338380	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.299	164	182452	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.305	188	318661	40.00	ug/ml	0.01
85) Chrysene-d12	9.987	240	312246	40.00	ug/ml	0.01
95) Perylene-d12	12.628	264	357100	40.00	ug/ml	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	890	0.28	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery =	0.56%#		
7) Phenol-d6	4.199	99	870	0.24	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery =	0.48%#		
26) Nitrobenzene-d5	4.746	82	805	0.32	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery =	0.64%#		
55) 2-Fluorobiphenyl	5.852	172	2789	0.35	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery =	0.70%#		
76) 2,4,6-Tribromophenol	6.822	330	474	0.36	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery =	0.72%#		
89) 4-Terphenyl-d14	8.622	244	3333	0.34	ug/ml	0.02
Spiked Amount 50.000	Range 23 - 112		Recovery =	0.68%#		
Target Compounds						Qvalue
36) Naphthalene	5.205	128	857	0.06	ug/ml#	5
42) 2-Methylnaphthalene	5.628	142	442	0.05	ug/ml#	82
43) 1-Methylnaphthalene	5.693	142	478	0.06	ug/ml	89
56) 2-Chloronaphthalene	5.940	162	445	0.05	ug/ml	96
59) Acenaphthylene	6.210	152	847	0.09	ug/ml	98
62) Acenaphthene	6.322	154	554	0.09	ug/ml	86
68) Fluorene	6.658	166	543	0.07	ug/ml	88
80) Phenanthrene	7.322	178	1223	0.06	ug/ml	80
81) Anthracene	7.357	178	872	0.07	ug/ml	95
84) Fluoranthene	8.263	202	1312	0.12	ug/ml	95
88) Pyrene	8.487	202	1451	0.09	ug/ml	96
91) Benzo[a]anthracene	9.975	228	2176	0.11	ug/ml	85
93) Chrysene	10.028	228	1458	0.09	ug/ml	98
97) Benzo(b)fluoranthene	11.863	252	1186	0.08	ug/ml	96
98) Benzo(k)fluoranthene	11.922	252	1161	0.11	ug/ml	77
99) Benzo(a)pyrene	12.510	252	1049	0.08	ug/ml	76
100) Indeno(1,2,3-cd)pyrene	14.863	276	1020	0.05	ug/ml	77
101) Dibenz(a,h)anthracene	14.945	278	920	0.05	ug/ml	96
102) Benzo(g,h,i)perylene	15.404	276	1173	0.06	ug/ml	74

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113010.D
Acq On : 30 Nov 2020 01:58 pm
Operator : EE/EEW
Sample : 0.1 ug/mL BNA
Misc : 300-0580A
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Dec 01 09:55:32 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113011.D
Acq On : 30 Nov 2020 02:21 pm
Operator : EE/EEW
Sample : 0.5 ug/mL BNA
Misc : 300-0580B
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Dec 01 09:55:37 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	153901	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	353551	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	199321	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	365682	40.00	ug/ml	0.00
85) Chrysene-d12	9.969	240	376109	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	419421	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.657	112	1497	0.47	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 0.94%#			
7) Phenol-d6	4.199	99	1678	0.46	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 0.92%#			
26) Nitrobenzene-d5	4.746	82	1255m	0.49	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 0.98%#			
55) 2-Fluorobiphenyl	5.851	172	4625	0.56	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 1.12%#			
76) 2,4,6-Tribromophenol	6.816	330	765	0.51	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 1.02%#			
89) 4-Terphenyl-d14	8.604	244	6094	0.57	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 1.14%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.658	88	684	0.44	ug/ml	92
3) Pyridine	2.910	79	1249	0.48	ug/ml	92
6) Benzaldehyde	4.157	77	983	0.46	ug/ml	81
8) Phenol	4.204	94	1303	0.39	ug/ml#	58
9) Aniline	4.222	93	1694	0.41	ug/ml	89
10) Bis(2-chloroethyl)ether	4.246	93	1216	0.40	ug/ml	98
11) 2-Chlorophenol	4.299	128	1259	0.39	ug/ml	94
12) 1,3-Dichlorobenzene	4.381	146	1679	0.42	ug/ml	96
13) 1,4-Dichlorobenzene	4.422	146	1759m	0.43	ug/ml	
14) Benzyl alcohol	4.493	108	595	0.31	ug/ml	76
15) 1,2-Dichlorobenzene	4.516	146	1641	0.40	ug/ml	96
16) 2-Methylphenol	4.557	108	959	0.37	ug/ml	95
17) 2,2`-Oxybis(1-chloropr...	4.563	45	1075	0.60	ug/ml	80
18) Bis(2-chloroisopropyl)...	4.563	45	1075	0.60	ug/ml	83
19) 3-Methylphenol	4.652	107	1252	0.43	ug/ml	89
20) 4-Methylphenol	4.652	107	1252	0.43	ug/ml	89
21) 3&4-Methylphenol	4.652	107	1252	0.43	ug/ml	89
22) Acetophenone	4.652	105	1485	0.38	ug/ml#	88
23) N-Nitrosodi-n-propylamine	4.640	70	649	0.42	ug/ml	86
24) Hexachloroethane	4.722	117	511	0.45	ug/ml	99
27) Nitrobenzene	4.757	77	971	0.43	ug/ml	82
28) Isophorone	4.899	82	1948	0.44	ug/ml	98
29) 2-Nitrophenol	4.952	139	550	0.31	ug/ml	92
30) 2,4-Dimethylphenol	4.969	107	1111	0.39	ug/ml	85
31) Bis(2-chloroethoxy)met	5.016	93	1149	0.37	ug/ml	97
33) 2,4-Dichlorophenol	5.110	162	946	0.34	ug/ml	99
34) 1,2,4-Trichlorobenzene	5.151	180	1319	0.41	ug/ml	96
36) Naphthalene	5.204	128	4397	0.42	ug/ml	80
37) 4-Chloroaniline	5.234	127	1339	0.35	ug/ml	93
38) 2,6-Dichlorophenol	5.240	162	1009	0.36	ug/ml	95

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113011.D
Acq On : 30 Nov 2020 02:21 pm
Operator : EE/EEW
Sample : 0.5 ug/mL BNA
Misc : 300-0580B
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Dec 01 09:55:37 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) Hexachlorobutadiene	5.269	225	704	0.42	ug/ml	93
40) Caprolactam	5.463	55	348	0.47	ug/ml#	87
41) 4-Chloro-3-methylphenol	5.534	107	1078	0.45	ug/ml	92
42) 2-Methylnaphthalene	5.628	142	2747	0.39	ug/ml	99
43) 1-Methylnaphthalene	5.693	142	2713	0.42	ug/ml	98
44) 1,2,4,5-Tetrachloroben...	5.734	216	1395	0.40	ug/ml	99
45) 1,1-Biphenyl	5.916	154	3353	0.43	ug/ml	96
46) 2,3,5,6-Tetrachlorophenol	6.481	232	484	0.40	ug/ml	98
47) 2,3,4,6-Tetrachlorophenol	6.510	232	682	0.51	ug/ml	91
48) 1,4-Dinitrobenzene	6.081	168	338	0.54	ug/ml	80
49) 1,3-Dinitrobenzene	6.128	168	399	0.56	ug/ml#	85
50) 1,2-Dinitrobenzene	6.187	168	297	0.56	ug/ml#	86
52) Hexachlorocyclopentadiene	5.722	237	250	0.25	ug/ml	91
53) 2,4,6-Trichlorophenol	5.810	196	745	0.37	ug/ml	99
54) 2,4,5-Trichlorophenol	5.846	196	942	0.44	ug/ml	91
56) 2-Chloronaphthalene	5.940	162	2452	0.35	ug/ml	95
57) 2-Nitroaniline	5.998	65	376	0.37	ug/ml	96
58) Dimethylphthalate	6.098	163	3138	0.48	ug/ml#	83
59) Acenaphthylene	6.204	152	4313	0.43	ug/ml	99
60) 2,6-Dinitrotoluene	6.146	165	640m	0.44	ug/ml	
61) 3-Nitroaniline	6.263	138	594	0.34	ug/ml	94
62) Acenaphthene	6.316	154	2838m	0.43	ug/ml	
64) Dibenzofuran	6.428	168	4052	0.46	ug/ml	98
66) 2,4-Dinitrotoluene	6.404	165	766m	0.67	ug/ml	
67) Diethylphthalate	6.551	149	2783	0.52	ug/ml	98
68) Fluorene	6.651	166	3230	0.44	ug/ml	98
69) 4-Chlorophenyl phenyl	6.640	204	1455	0.43	ug/ml	99
70) 4-Nitroaniline	6.663	138	536	0.43	ug/ml	87
71) Atrazine	7.063	200	810	0.45	ug/ml	98
73) 4,6-Dinitro-2-methylph	6.681	198	113	0.42	ug/ml#	81
74) N-Nitrosodiphenylamine	6.716	169	2630	0.43	ug/ml	97
75) 1,2-Diphenylhydrazine	6.746	77	1785	0.42	ug/ml	95
77) 4-Bromophenyl phenyl e	6.969	248	935	0.44	ug/ml	97
78) Hexachlorobenzene	7.022	284	1194	0.46	ug/ml	99
79) Pentachlorophenol	7.163	266	187	0.38	ug/ml	76
80) Phenanthrene	7.310	178	5195	0.41	ug/ml	94
81) Anthracene	7.345	178	4757	0.42	ug/ml	98
82) Carbazole	7.457	167	4238	0.45	ug/ml	99
83) Di-n-butylphthalate	7.681	149	4708	0.49	ug/ml	99
84) Fluoranthene	8.245	202	5254	0.46	ug/ml	98
86) 3,3'-Dimethylbenzidine	9.157	212	2047	0.39	ug/ml	98
87) Benzidine	8.363	184	2239	0.31	ug/ml	96
88) Pyrene	8.469	202	5661	0.43	ug/ml	97
90) Butylbenzylphthalate	9.163	149	2039	0.47	ug/ml	90
91) Benzo[a]anthracene	9.951	228	6216	0.45	ug/ml	98
92) 3,3'-Dichlorobenzidine	9.922	252	1783	0.40	ug/ml	98
93) Chrysene	10.010	228	5720	0.43	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.010	149	3857	0.72	ug/ml	95
96) Di-n-octylphthalate	11.198	149	4301	0.56	ug/ml	96
97) Benzo(b)fluoranthene	11.845	252	5170	0.42	ug/ml	97
98) Benzo(k)fluoranthene	11.898	252	5595	0.46	ug/ml	95
99) Benzo(a)pyrene	12.492	252	4684	0.42	ug/ml	96
100) Indeno(1,2,3-cd)pyrene	14.857	276	4654	0.37	ug/ml	95

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113011.D
Acq On : 30 Nov 2020 02:21 pm
Operator : EE/EEW
Sample : 0.5 ug/mL BNA
Misc : 300-0580B
ALS Vial : 42 Sample Multiplier: 1

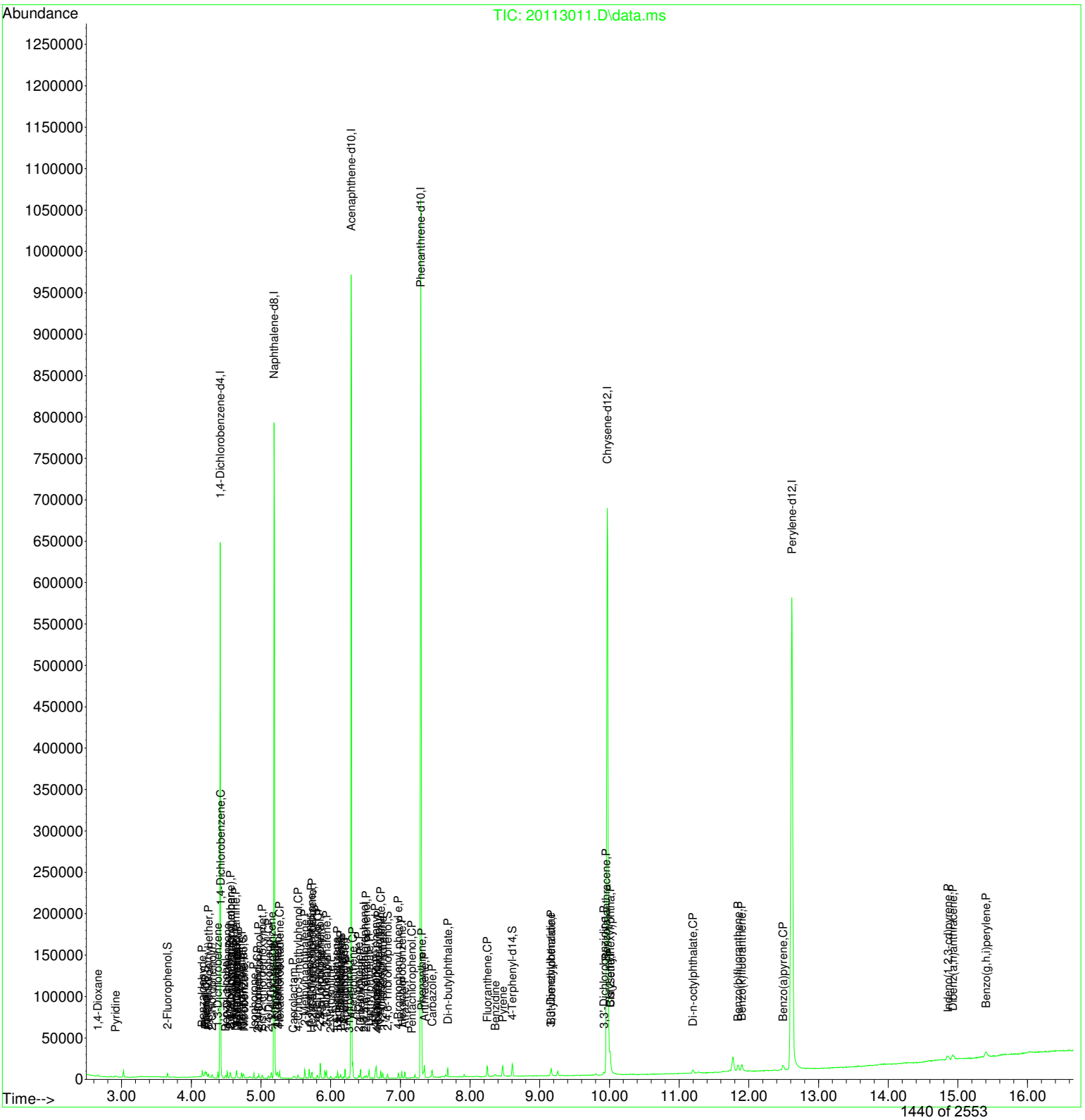
Quant Time: Dec 01 09:55:37 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
101) Dibenz(a,h)anthracene	14.927	278	4851	0.39	ug/ml	95
102) Benzo(g,h,i)perylene	15.404	276	5513	0.40	ug/ml	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113011.D
Acq On : 30 Nov 2020 02:21 pm
Operator : EE/EEW
Sample : 0.5 ug/mL BNA
Misc : 300-0580B
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Dec 01 09:55:37 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113012.D
Acq On : 30 Nov 2020 02:45 pm
Operator : EE/EEW
Sample : 1.0 ug/mL BNA
Misc : 300-0580C
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Dec 01 09:55:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	135616	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	309226	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	169594	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	308379	40.00	ug/ml	0.00
85) Chrysene-d12	9.969	240	315344	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	351556	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	2526	0.92	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 1.84%#			
7) Phenol-d6	4.193	99	2817	0.89	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 1.78%#			
26) Nitrobenzene-d5	4.746	82	1997m	0.91	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 1.82%#			
55) 2-Fluorobiphenyl	5.852	172	7023	1.03	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 2.06%#			
76) 2,4,6-Tribromophenol	6.816	330	1126	0.88	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 1.76%#			
89) 4-Terphenyl-d14	8.604	244	8981	1.07	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 2.14%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	1188	0.94	ug/ml#	89
3) Pyridine	2.905	79	2459	1.02	ug/ml	94
4) N-Nitrosodimethylamine	2.852	42	568	1.21	ug/ml#	59
6) Benzaldehyde	4.158	77	1688	0.93	ug/ml	91
8) Phenol	4.205	94	2837	0.95	ug/ml#	68
9) Aniline	4.216	93	3335	0.91	ug/ml	91
10) Bis(2-chloroethyl)ether	4.246	93	2325	0.92	ug/ml	97
11) 2-Chlorophenol	4.299	128	2504	0.89	ug/ml	98
12) 1,3-Dichlorobenzene	4.381	146	3445	0.98	ug/ml	98
13) 1,4-Dichlorobenzene	4.422	146	3536	0.99	ug/ml	86
14) Benzyl alcohol	4.493	108	1264	0.75	ug/ml	86
15) 1,2-Dichlorobenzene	4.516	146	3304	0.97	ug/ml	98
16) 2-Methylphenol	4.558	108	2059	0.89	ug/ml	91
17) 2,2`-Oxybis(1-chloropr...	4.564	45	1718	1.09	ug/ml	97
18) Bis(2-chloroisopropyl)...	4.564	45	1718	1.09	ug/ml#	85
19) 3-Methylphenol	4.646	107	2422	0.95	ug/ml	97
20) 4-Methylphenol	4.646	107	2422	0.95	ug/ml	97
21) 3&4-Methylphenol	4.646	107	2422m	0.95	ug/ml	
22) Acetophenone	4.652	105	3140	0.93	ug/ml	96
23) N-Nitrosodi-n-propylamine	4.640	70	1284	0.95	ug/ml	93
24) Hexachloroethane	4.722	117	1064	1.06	ug/ml	97
27) Nitrobenzene	4.758	77	1742	0.89	ug/ml	90
28) Isophorone	4.899	82	3800	0.98	ug/ml	99
29) 2-Nitrophenol	4.952	139	1170	0.76	ug/ml	94
30) 2,4-Dimethylphenol	4.969	107	2128	0.84	ug/ml	96
31) Bis(2-chloroethoxy)met	5.016	93	2424	0.90	ug/ml	96
33) 2,4-Dichlorophenol	5.105	162	2202	0.91	ug/ml	92
34) 1,2,4-Trichlorobenzene	5.146	180	2751	0.98	ug/ml	99
36) Naphthalene	5.205	128	8292	0.93	ug/ml	92
37) 4-Chloroaniline	5.234	127	3032	0.90	ug/ml	95

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113012.D
Acq On : 30 Nov 2020 02:45 pm
Operator : EE/EEW
Sample : 1.0 ug/mL BNA
Misc : 300-0580C
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Dec 01 09:55:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2,6-Dichlorophenol	5.240	162	2284	0.92	ug/ml	94
39) Hexachlorobutadiene	5.269	225	1420	0.98	ug/ml	96
40) Caprolactam	5.463	55	718	1.11	ug/ml	84
41) 4-Chloro-3-methylphenol	5.528	107	1982	0.94	ug/ml	99
42) 2-Methylnaphthalene	5.628	142	5535	0.94	ug/ml	98
43) 1-Methylnaphthalene	5.693	142	5383	0.97	ug/ml	98
44) 1,2,4,5-Tetrachloroben...	5.734	216	2716	0.92	ug/ml	99
45) 1,1-Biphenyl	5.916	154	6646	0.95	ug/ml	97
46) 2,3,5,6-Tetrachlorophenol	6.481	232	990	0.78	ug/ml	93
47) 2,3,4,6-Tetrachlorophenol	6.511	232	1391	1.02	ug/ml	95
48) 1,4-Dinitrobenzene	6.081	168	646	0.98	ug/ml	90
49) 1,3-Dinitrobenzene	6.128	168	748	0.95	ug/ml#	86
50) 1,2-Dinitrobenzene	6.187	168	582	1.01	ug/ml#	66
52) Hexachlorocyclopentadiene	5.722	237	592	0.49	ug/ml	93
53) 2,4,6-Trichlorophenol	5.805	196	1508	0.87	ug/ml	96
54) 2,4,5-Trichlorophenol	5.846	196	1836	1.00	ug/ml	97
56) 2-Chloronaphthalene	5.940	162	5197	0.92	ug/ml	99
57) 2-Nitroaniline	5.999	65	710	0.83	ug/ml	97
58) Dimethylphthalate	6.099	163	5849	1.05	ug/ml#	83
59) Acenaphthylene	6.205	152	8408	0.97	ug/ml	98
60) 2,6-Dinitrotoluene	6.146	165	1116	0.87	ug/ml	90
61) 3-Nitroaniline	6.263	138	1165	0.79	ug/ml	92
62) Acenaphthene	6.316	154	6096	1.08	ug/ml	96
64) Dibenzofuran	6.428	168	7683	1.02	ug/ml	98
65) 4-Nitrophenol	6.387	65	360	0.77	ug/ml#	73
66) 2,4-Dinitrotoluene	6.405	165	1418	1.09	ug/ml	91
67) Diethylphthalate	6.552	149	4999	1.04	ug/ml	99
68) Fluorene	6.652	166	5869	0.95	ug/ml	99
69) 4-Chlorophenyl phenyl	6.640	204	2741	0.95	ug/ml	95
70) 4-Nitroaniline	6.663	138	1159	0.88	ug/ml	98
71) Atrazine	7.063	200	1525	1.00	ug/ml	99
73) 4,6-Dinitro-2-methylph	6.675	198	334	0.69	ug/ml	69
74) N-Nitrosodiphenylamine	6.716	169	4761	0.92	ug/ml	99
75) 1,2-Diphenylhydrazine	6.746	77	3485	0.96	ug/ml	94
77) 4-Bromophenyl phenyl e	6.969	248	1709	0.96	ug/ml	96
78) Hexachlorobenzene	7.022	284	2220	1.01	ug/ml	99
79) Pentachlorophenol	7.163	266	429	0.60	ug/ml	86
80) Phenanthrene	7.310	178	9530	0.97	ug/ml	97
81) Anthracene	7.346	178	8858	0.95	ug/ml	99
82) Carbazole	7.457	167	7923	0.99	ug/ml	99
83) Di-n-butylphthalate	7.681	149	8079	1.00	ug/ml	99
84) Fluoranthene	8.246	202	9406	1.00	ug/ml	99
86) 3,3'-Dimethylbenzidine	9.157	212	4751	0.89	ug/ml	98
87) Benzidine	8.363	184	4086	0.67	ug/ml	98
88) Pyrene	8.469	202	9883	0.95	ug/ml	99
90) Butylbenzylphthalate	9.169	149	3562	0.97	ug/ml	97
91) Benzo[a]anthracene	9.951	228	10005	0.98	ug/ml	98
92) 3,3'-Dichlorobenzidine	9.916	252	3535	0.94	ug/ml	96
93) Chrysene	10.010	228	10309	0.99	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.010	149	5656	1.19	ug/ml	98
96) Di-n-octylphthalate	11.198	149	7379	1.00	ug/ml	99
97) Benzo(b)fluoranthene	11.846	252	9410	0.96	ug/ml	96
98) Benzo(k)fluoranthene	11.904	252	9421	0.94	ug/ml	96

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113012.D
Acq On : 30 Nov 2020 02:45 pm
Operator : EE/EEW
Sample : 1.0 ug/mL BNA
Misc : 300-0580C
ALS Vial : 43 Sample Multiplier: 1

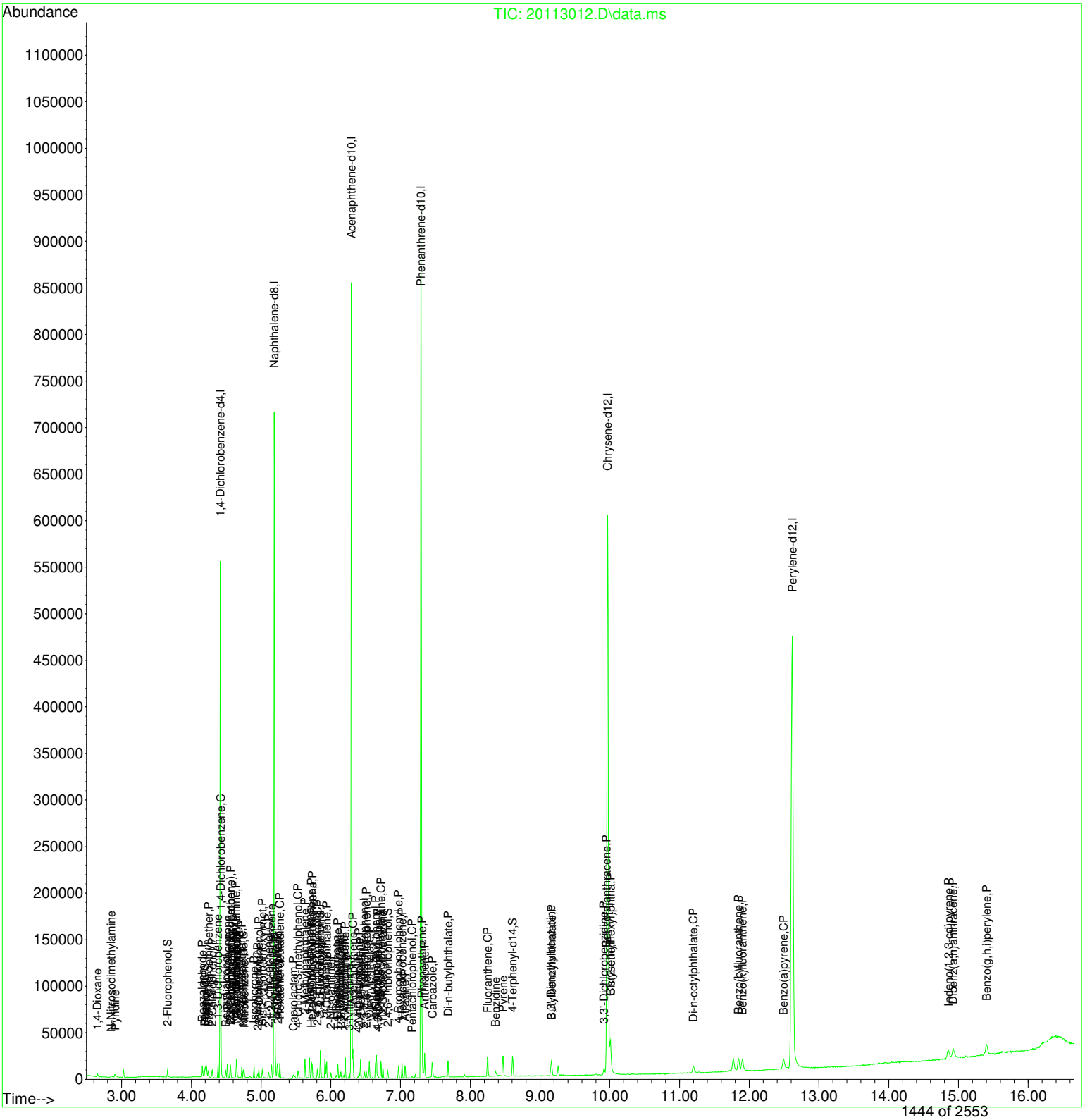
Quant Time: Dec 01 09:55:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
99) Benzo(a)pyrene	12.493	252	8526	0.95	ug/ml	95
100) Indeno(1,2,3-cd)pyrene	14.857	276	8564	0.90	ug/ml	98
101) Dibenz(a,h)anthracene	14.922	278	9074	0.91	ug/ml	100
102) Benzo(g,h,i)perylene	15.404	276	10056	0.92	ug/ml	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113012.D
Acq On : 30 Nov 2020 02:45 pm
Operator : EE/EEW
Sample : 1.0 ug/mL BNA
Misc : 300-0580C
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Dec 01 09:55:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113013.D
Acq On : 30 Nov 2020 03:09 pm
Operator : EE/EEW
Sample : 5.0 ug/mL BNA
Misc : 300-0580D
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Dec 01 09:55:53 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	141562	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	321465	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	188465	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	348702	40.00	ug/ml	0.00
85) Chrysene-d12	9.969	240	362717	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	392412	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	12451	4.43	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery =	8.86%#		
7) Phenol-d6	4.193	99	13640	4.21	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery =	8.42%#		
26) Nitrobenzene-d5	4.746	82	9644m	4.30	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery =	8.60%#		
55) 2-Fluorobiphenyl	5.852	172	33014	4.55	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery =	9.10%#		
76) 2,4,6-Tribromophenol	6.816	330	5931	4.11	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery =	8.22%#		
89) 4-Terphenyl-d14	8.605	244	43093	4.80	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery =	9.60%#		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	5898	4.82	ug/ml	97
3) Pyridine	2.887	79	12195	4.79	ug/ml	98
4) N-Nitrosodimethylamine	2.846	42	2513	5.12	ug/ml	94
6) Benzaldehyde	4.158	77	8410	4.62	ug/ml	98
8) Phenol	4.205	94	15664	5.03	ug/ml#	99
9) Aniline	4.217	93	18932	4.96	ug/ml	97
10) Bis(2-chloroethyl)ether	4.246	93	11871	4.71	ug/ml	99
11) 2-Chlorophenol	4.299	128	14073	4.79	ug/ml	99
12) 1,3-Dichlorobenzene	4.381	146	17250	4.80	ug/ml	99
13) 1,4-Dichlorobenzene	4.422	146	17687	4.87	ug/ml	96
14) Benzyl alcohol	4.493	108	7954	4.54	ug/ml	96
15) 1,2-Dichlorobenzene	4.516	146	16800	4.90	ug/ml	99
16) 2-Methylphenol	4.558	108	11703	4.85	ug/ml	98
17) 2,2`-Oxybis(1-chloropr...	4.564	45	8713	5.30	ug/ml	98
18) Bis(2-chloroisopropyl)...	4.564	45	8713	5.30	ug/ml	99
19) 3-Methylphenol	4.646	107	12782	4.81	ug/ml	96
20) 4-Methylphenol	4.646	107	12782	4.81	ug/ml	96
21) 3&4-Methylphenol	4.646	107	13049	4.90	ug/ml	98
22) Acetophenone	4.652	105	16883	4.83	ug/ml	99
23) N-Nitrosodi-n-propylamine	4.640	70	6878	4.96	ug/ml	98
24) Hexachloroethane	4.722	117	5515	5.26	ug/ml	98
27) Nitrobenzene	4.758	77	9338	4.58	ug/ml	99
28) Isophorone	4.899	82	19906	4.96	ug/ml	100
29) 2-Nitrophenol	4.952	139	7369	4.61	ug/ml	98
30) 2,4-Dimethylphenol	4.964	107	12460	4.75	ug/ml	97
31) Bis(2-chloroethoxy)met	5.016	93	13616	4.86	ug/ml	99
32) Benzoic acid	5.005	122	4772m	3.79	ug/ml	
33) 2,4-Dichlorophenol	5.105	162	12369	4.90	ug/ml	100
34) 1,2,4-Trichlorobenzene	5.152	180	14503	4.98	ug/ml	99
36) Naphthalene	5.205	128	43510	4.85	ug/ml	98

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113013.D
Acq On : 30 Nov 2020 03:09 pm
Operator : EE/EEW
Sample : 5.0 ug/mL BNA
Misc : 300-0580D
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Dec 01 09:55:53 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	17178	4.88	ug/ml	97
38) 2,6-Dichlorophenol	5.234	162	13004	5.04	ug/ml	98
39) Hexachlorobutadiene	5.269	225	7405	4.90	ug/ml	98
40) Caprolactam	5.452	55	3514	5.24	ug/ml	93
41) 4-Chloro-3-methylphenol	5.528	107	11326	5.18	ug/ml	99
42) 2-Methylnaphthalene	5.628	142	30111	5.00	ug/ml	99
43) 1-Methylnaphthalene	5.693	142	28881	5.13	ug/ml	97
44) 1,2,4,5-Tetrachloroben...	5.734	216	15111	5.06	ug/ml	98
45) 1,1-Biphenyl	5.916	154	38076	5.19	ug/ml	99
46) 2,3,5,6-Tetrachlorophenol	6.481	232	6903	4.52	ug/ml	97
47) 2,3,4,6-Tetrachlorophenol	6.505	232	8681	5.42	ug/ml	95
48) 1,4-Dinitrobenzene	6.081	168	4240	5.12	ug/ml	94
49) 1,3-Dinitrobenzene	6.128	168	5360	5.16	ug/ml	99
50) 1,2-Dinitrobenzene	6.187	168	3790	5.25	ug/ml#	85
52) Hexachlorocyclopentadiene	5.722	237	5488	3.25	ug/ml	98
53) 2,4,6-Trichlorophenol	5.805	196	8800	4.57	ug/ml	99
54) 2,4,5-Trichlorophenol	5.840	196	9884	4.83	ug/ml	98
56) 2-Chloronaphthalene	5.940	162	29091	4.76	ug/ml	100
57) 2-Nitroaniline	5.999	65	4547	4.79	ug/ml	96
58) Dimethylphthalate	6.099	163	31776	5.14	ug/ml#	84
59) Acenaphthylene	6.205	152	45992	4.80	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	7207	4.86	ug/ml	96
61) 3-Nitroaniline	6.263	138	8280	5.05	ug/ml	95
62) Acenaphthene	6.316	154	30797	4.91	ug/ml	99
63) 2,4-Dinitrophenol	6.328	184	1711	2.72	ug/ml	88
64) Dibenzofuran	6.428	168	42844	5.11	ug/ml	100
65) 4-Nitrophenol	6.381	65	2580	3.90	ug/ml	96
66) 2,4-Dinitrotoluene	6.405	165	9509	5.02	ug/ml	95
67) Diethylphthalate	6.552	149	28972	5.17	ug/ml	100
68) Fluorene	6.652	166	34023	5.03	ug/ml	100
69) 4-Chlorophenyl phenyl	6.640	204	16751	5.21	ug/ml	100
70) 4-Nitroaniline	6.658	138	8243	4.86	ug/ml	95
71) Atrazine	7.063	200	9101	5.36	ug/ml	98
73) 4,6-Dinitro-2-methylph	6.675	198	3820	4.05	ug/ml	97
74) N-Nitrosodiphenylamine	6.716	169	29158	5.00	ug/ml	99
75) 1,2-Diphenylhydrazine	6.746	77	19153	4.69	ug/ml	98
77) 4-Bromophenyl phenyl e	6.969	248	9962	4.96	ug/ml	97
78) Hexachlorobenzene	7.022	284	12525	5.05	ug/ml	100
79) Pentachlorophenol	7.158	266	4107	3.16	ug/ml	98
80) Phenanthrene	7.310	178	51424	4.92	ug/ml	100
81) Anthracene	7.346	178	50542	4.91	ug/ml	99
82) Carbazole	7.452	167	47250	5.21	ug/ml	99
83) Di-n-butylphthalate	7.681	149	47110	5.17	ug/ml	100
84) Fluoranthene	8.246	202	52929	5.05	ug/ml	99
86) 3,3'-Dimethylbenzidine	9.157	212	33796	4.95	ug/ml	99
87) Benzidine	8.357	184	31770	4.54	ug/ml	99
88) Pyrene	8.469	202	55533	4.89	ug/ml	99
90) Butylbenzylphthalate	9.163	149	21324	5.05	ug/ml	98
91) Benzo[a]anthracene	9.951	228	52039	4.90	ug/ml	99
92) 3,3'-Dichlorobenzidine	9.916	252	21308	4.94	ug/ml	99
93) Chrysene	10.010	228	55871	4.88	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.010	149	28638	4.94	ug/ml	98
96) Di-n-octylphthalate	11.198	149	45953	4.97	ug/ml	100

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113013.D
Acq On : 30 Nov 2020 03:09 pm
Operator : EE/EEW
Sample : 5.0 ug/mL BNA
Misc : 300-0580D
ALS Vial : 44 Sample Multiplier: 1

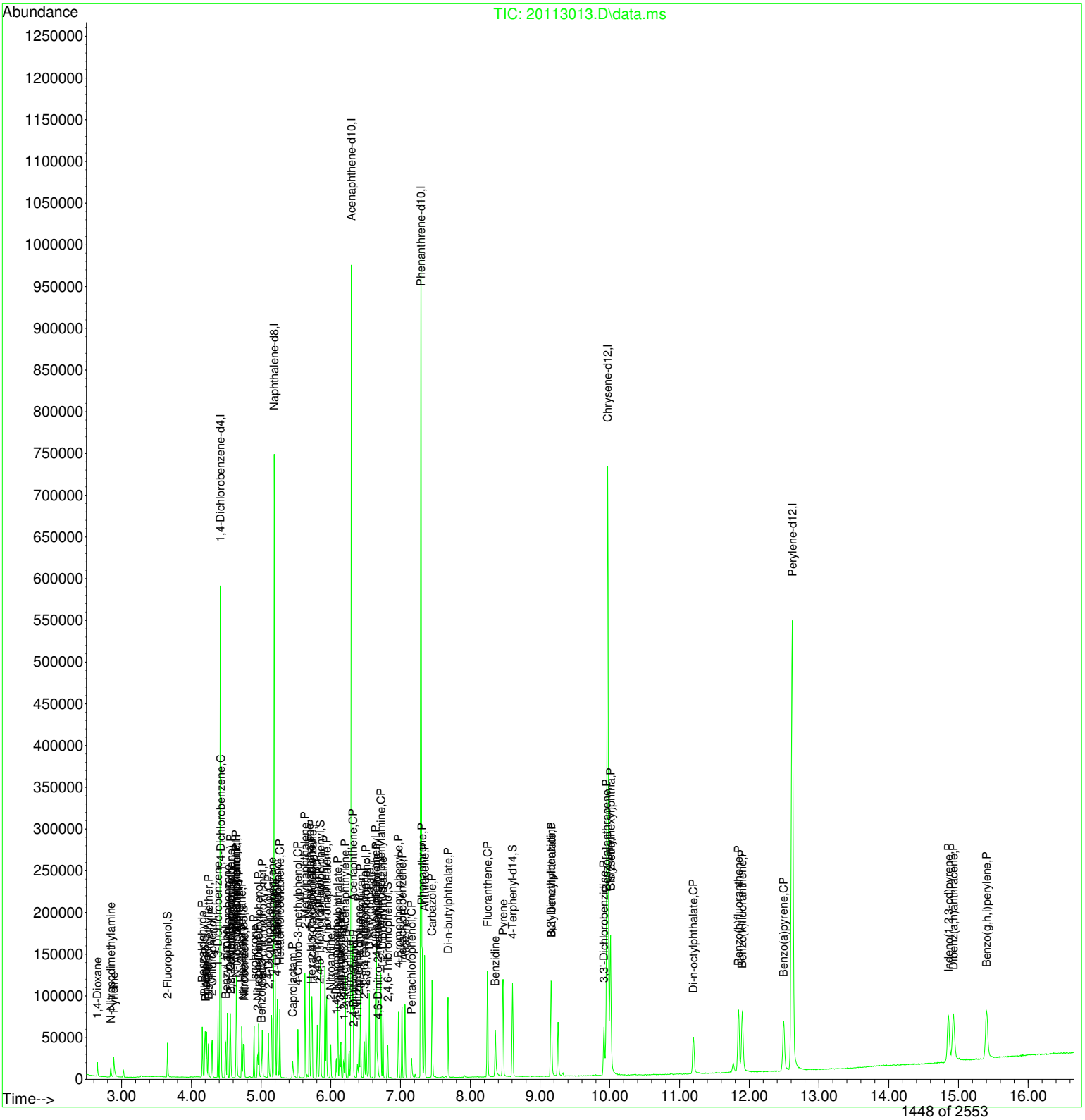
Quant Time: Dec 01 09:55:53 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97)	Benzo(b)fluoranthene	11.846	252	53529	5.03	ug/ml	100
98)	Benzo(k)fluoranthene	11.898	252	53026	4.77	ug/ml	98
99)	Benzo(a)pyrene	12.493	252	47484	4.88	ug/ml	100
100)	Indeno(1,2,3-cd)pyrene	14.857	276	48769	4.82	ug/ml	99
101)	Dibenz(a,h)anthracene	14.928	278	51683	4.83	ug/ml	99
102)	Benzo(g,h,i)perylene	15.404	276	55976	4.82	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113013.D
Acq On : 30 Nov 2020 03:09 pm
Operator : EE/EEW
Sample : 5.0 ug/mL BNA
Misc : 300-0580D
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Dec 01 09:55:53 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113014.D
Acq On : 30 Nov 2020 03:33 pm
Operator : EE/EEW
Sample : 10 ug/mL BNA
Misc : 300-0580E
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Dec 01 09:56:03 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	145889	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	331003	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	194980	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	365039	40.00	ug/ml	0.00
85) Chrysene-d12	9.969	240	384300	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	410972	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	27564	9.65	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 19.30%#			
7) Phenol-d6	4.193	99	31620	9.61	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 19.22%			
26) Nitrobenzene-d5	4.746	82	21892m	9.52	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 19.04%#			
55) 2-Fluorobiphenyl	5.852	172	74023	10.05	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 20.10%#			
76) 2,4,6-Tribromophenol	6.816	330	13943	9.24	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 18.48%#			
89) 4-Terphenyl-d14	8.605	244	97808	10.40	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 20.80%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	12492	10.17	ug/ml	99
3) Pyridine	2.881	79	25859	9.98	ug/ml	99
4) N-Nitrosodimethylamine	2.840	42	5344	10.57	ug/ml	94
6) Benzaldehyde	4.158	77	17881	9.71	ug/ml	99
8) Phenol	4.199	94	34509	10.76	ug/ml#	99
9) Aniline	4.217	93	40888	10.40	ug/ml	97
10) Bis(2-chloroethyl)ether	4.246	93	25831	10.12	ug/ml	100
11) 2-Chlorophenol	4.299	128	31210	10.31	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	37489	10.32	ug/ml	99
13) 1,4-Dichlorobenzene	4.423	146	37934	10.35	ug/ml	99
14) Benzyl alcohol	4.493	108	18200	10.15	ug/ml	98
15) 1,2-Dichlorobenzene	4.517	146	35839	10.36	ug/ml	99
16) 2-Methylphenol	4.558	108	25551	10.27	ug/ml	99
17) 2,2`-Oxybis(1-chloropr...	4.564	45	18311	10.81	ug/ml	99
18) Bis(2-chloroisopropyl)...	4.564	45	18311	10.81	ug/ml	99
19) 3-Methylphenol	4.646	107	28351	10.34	ug/ml	99
20) 4-Methylphenol	4.646	107	28351	10.34	ug/ml	99
21) 3&4-Methylphenol	4.646	107	28619	10.43	ug/ml	98
22) Acetophenone	4.646	105	36081	10.19	ug/ml	100
23) N-Nitrosodi-n-propylamine	4.640	70	14969	10.64	ug/ml	98
24) Hexachloroethane	4.722	117	11381	10.54	ug/ml	99
27) Nitrobenzene	4.758	77	20749	9.89	ug/ml	98
28) Isophorone	4.899	82	43824	10.60	ug/ml	99
29) 2-Nitrophenol	4.952	139	16623	10.11	ug/ml	99
30) 2,4-Dimethylphenol	4.964	107	27625	10.30	ug/ml	96
31) Bis(2-chloroethoxy)met	5.017	93	30244	10.49	ug/ml	99
32) Benzoic acid	5.011	122	12586	8.74	ug/ml	96
33) 2,4-Dichlorophenol	5.105	162	27356	10.52	ug/ml	100
34) 1,2,4-Trichlorobenzene	5.146	180	31001	10.33	ug/ml	99
36) Naphthalene	5.205	128	92511	10.14	ug/ml	100

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113014.D
Acq On : 30 Nov 2020 03:33 pm
Operator : EE/EEW
Sample : 10 ug/mL BNA
Misc : 300-0580E
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Dec 01 09:56:03 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	38136	10.53	ug/ml	99
38) 2,6-Dichlorophenol	5.234	162	28445	10.71	ug/ml	99
39) Hexachlorobutadiene	5.270	225	15681	10.07	ug/ml	98
40) Caprolactam	5.452	55	7783	11.26	ug/ml	95
41) 4-Chloro-3-methylphenol	5.528	107	24761	11.00	ug/ml	99
42) 2-Methylnaphthalene	5.628	142	65873	10.71	ug/ml	99
43) 1-Methylnaphthalene	5.693	142	62134	10.80	ug/ml	97
44) 1,2,4,5-Tetrachloroben...	5.734	216	32473	10.67	ug/ml	100
45) 1,1-Biphenyl	5.917	154	82104	10.93	ug/ml	99
46) 2,3,5,6-Tetrachlorophenol	6.475	232	16905	10.40	ug/ml	99
47) 2,3,4,6-Tetrachlorophenol	6.505	232	19309	11.40	ug/ml	97
48) 1,4-Dinitrobenzene	6.081	168	10187	11.28	ug/ml	97
49) 1,3-Dinitrobenzene	6.128	168	12771	11.38	ug/ml	99
50) 1,2-Dinitrobenzene	6.187	168	9102	11.74	ug/ml#	86
52) Hexachlorocyclopentadiene	5.722	237	13654	7.69	ug/ml	98
53) 2,4,6-Trichlorophenol	5.805	196	19494	9.78	ug/ml	100
54) 2,4,5-Trichlorophenol	5.840	196	22149	10.46	ug/ml	99
56) 2-Chloronaphthalene	5.940	162	63117	10.13	ug/ml	100
57) 2-Nitroaniline	5.999	65	10341	10.52	ug/ml	99
58) Dimethylphthalate	6.099	163	70576	11.03	ug/ml#	84
59) Acenaphthylene	6.205	152	101548	10.24	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	16942	10.91	ug/ml	99
61) 3-Nitroaniline	6.264	138	18661	11.00	ug/ml	96
62) Acenaphthene	6.317	154	66302	10.21	ug/ml	100
63) 2,4-Dinitrophenol	6.328	184	5703	7.65	ug/ml	97
64) Dibenzofuran	6.428	168	92745	10.70	ug/ml	100
65) 4-Nitrophenol	6.375	65	6368	9.01	ug/ml	100
66) 2,4-Dinitrotoluene	6.405	165	22321	10.92	ug/ml	98
67) Diethylphthalate	6.552	149	62927	10.82	ug/ml	100
68) Fluorene	6.652	166	74430	10.77	ug/ml	98
69) 4-Chlorophenyl phenyl	6.640	204	36085	10.84	ug/ml	98
70) 4-Nitroaniline	6.658	138	19859	11.11	ug/ml	99
71) Atrazine	7.064	200	20447	11.63	ug/ml	99
73) 4,6-Dinitro-2-methylph	6.675	198	10235	9.63	ug/ml	100
74) N-Nitrosodiphenylamine	6.716	169	64652	10.58	ug/ml	100
75) 1,2-Diphenylhydrazine	6.746	77	43290	10.12	ug/ml	99
77) 4-Bromophenyl phenyl e	6.969	248	22389	10.65	ug/ml	99
78) Hexachlorobenzene	7.022	284	26835	10.33	ug/ml	99
79) Pentachlorophenol	7.158	266	11356	7.86	ug/ml	98
80) Phenanthrene	7.311	178	111461	10.37	ug/ml	100
81) Anthracene	7.346	178	111601	10.45	ug/ml	99
82) Carbazole	7.452	167	105230	11.08	ug/ml	99
83) Di-n-butylphthalate	7.681	149	105362	11.05	ug/ml	100
84) Fluoranthene	8.246	202	116577	10.67	ug/ml	100
86) 3,3'-Dimethylbenzidine	9.158	212	78595	10.69	ug/ml	99
87) Benzidine	8.358	184	77089	10.40	ug/ml	100
88) Pyrene	8.463	202	123635	10.40	ug/ml	100
90) Butylbenzylphthalate	9.163	149	47392	10.59	ug/ml	99
91) Benzo[a]anthracene	9.952	228	113812	10.28	ug/ml	99
92) 3,3'-Dichlorobenzidine	9.916	252	48561	10.62	ug/ml	99
93) Chrysene	10.010	228	123445	10.33	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.010	149	62652	10.17	ug/ml	100
96) Di-n-octylphthalate	11.199	149	105293	10.60	ug/ml	100

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113014.D
Acq On : 30 Nov 2020 03:33 pm
Operator : EE/EEW
Sample : 10 ug/mL BNA
Misc : 300-0580E
ALS Vial : 45 Sample Multiplier: 1

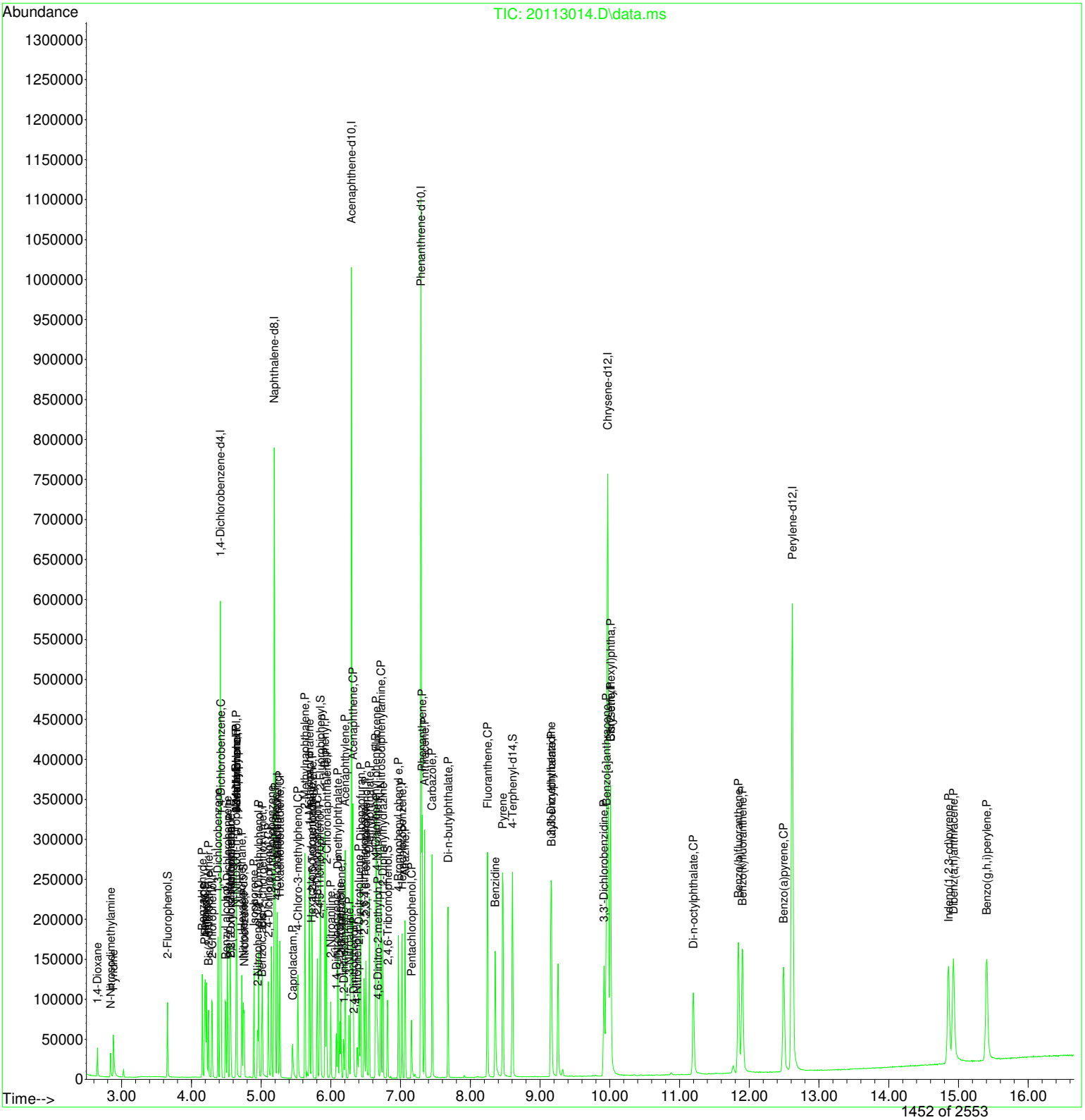
Quant Time: Dec 01 09:56:03 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97) Benzo(b)fluoranthene	11.846	252	116995	10.51	ug/ml	99
98) Benzo(k)fluoranthene	11.904	252	121836	10.42	ug/ml	98
99) Benzo(a)pyrene	12.493	252	105528	10.37	ug/ml	100
100) Indeno(1,2,3-cd)pyrene	14.857	276	107787	10.23	ug/ml	100
101) Dibenz(a,h)anthracene	14.928	278	113464	10.17	ug/ml	99
102) Benzo(g,h,i)perylene	15.404	276	122455	10.12	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113014.D
Acq On : 30 Nov 2020 03:33 pm
Operator : EE/EEW
Sample : 10 ug/mL BNA
Misc : 300-0580E
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Dec 01 09:56:03 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113015.D
Acq On : 30 Nov 2020 03:56 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA
Misc : 300-0580F
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Dec 01 09:56:13 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	137641	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	296384	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	166037	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	306506	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	322232	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	339428	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	48993	18.60	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 37.20%			
7) Phenol-d6	4.193	99	57108	18.84	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 37.68%#			
26) Nitrobenzene-d5	4.746	82	37606m	18.36	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 36.72%			
55) 2-Fluorobiphenyl	5.852	172	117190	19.18	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 38.36%			
76) 2,4,6-Tribromophenol	6.816	330	21850	17.24	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 34.48%			
89) 4-Terphenyl-d14	8.604	244	153087	19.54	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 39.08%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	22841	20.51	ug/ml	100
3) Pyridine	2.881	79	48595	20.48	ug/ml	100
4) N-Nitrosodimethylamine	2.840	42	9636	20.20	ug/ml	100
6) Benzaldehyde	4.158	77	32579	19.39	ug/ml	100
8) Phenol	4.199	94	64522	21.33	ug/ml#	100
9) Aniline	4.216	93	75201	20.28	ug/ml	100
10) Bis(2-chloroethyl)ether	4.246	93	46030	19.58	ug/ml	100
11) 2-Chlorophenol	4.299	128	57122	20.00	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	66072	19.95	ug/ml	100
13) 1,4-Dichlorobenzene	4.422	146	67459	20.20	ug/ml	100
14) Benzyl alcohol	4.487	108	33766	20.19	ug/ml	100
15) 1,2-Dichlorobenzene	4.516	146	63652	20.20	ug/ml	100
16) 2-Methylphenol	4.558	108	46644	19.87	ug/ml	100
17) 2,2`-Oxybis(1-chloropr...	4.563	45	32013	20.02	ug/ml	100
18) Bis(2-chloroisopropyl)...	4.563	45	32013	20.02	ug/ml	100
19) 3-Methylphenol	4.646	107	50540	19.55	ug/ml	100
20) 4-Methylphenol	4.646	107	50540	19.55	ug/ml	100
21) 3&4-Methylphenol	4.646	107	50868	19.65	ug/ml	100
22) Acetophenone	4.652	105	62999	19.39	ug/ml	100
23) N-Nitrosodi-n-propylamine	4.640	70	25462	19.67	ug/ml	100
24) Hexachloroethane	4.722	117	20220	19.85	ug/ml	100
27) Nitrobenzene	4.758	77	37015	19.70	ug/ml	100
28) Isophorone	4.899	82	74781	20.20	ug/ml	100
29) 2-Nitrophenol	4.952	139	30833	20.94	ug/ml	100
30) 2,4-Dimethylphenol	4.963	107	47276	19.94	ug/ml	100
31) Bis(2-chloroethoxy)met	5.016	93	51287	19.86	ug/ml	100
32) Benzoic acid	5.010	122	24735	17.73	ug/ml	100
33) 2,4-Dichlorophenol	5.105	162	48453	20.81	ug/ml	100
34) 1,2,4-Trichlorobenzene	5.152	180	53799	20.02	ug/ml	100
36) Naphthalene	5.205	128	159596	19.91	ug/ml	100

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113015.D
Acq On : 30 Nov 2020 03:56 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA
Misc : 300-0580F
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Dec 01 09:56:13 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	66117	20.38	ug/ml	100
38) 2,6-Dichlorophenol	5.234	162	49330	20.75	ug/ml	100
39) Hexachlorobutadiene	5.269	225	27205	19.52	ug/ml	100
40) Caprolactam	5.452	55	12466	20.14	ug/ml	100
41) 4-Chloro-3-methylphenol	5.528	107	42128	20.91	ug/ml	100
42) 2-Methylnaphthalene	5.628	142	111214	20.39	ug/ml	100
43) 1-Methylnaphthalene	5.693	142	102651	20.14	ug/ml	100
44) 1,2,4,5-Tetrachloroben...	5.734	216	54921	20.43	ug/ml	100
45) 1,1-Biphenyl	5.916	154	136166	20.47	ug/ml	100
46) 2,3,5,6-Tetrachlorophenol	6.475	232	29452	19.56	ug/ml	100
47) 2,3,4,6-Tetrachlorophenol	6.504	232	31691	20.33	ug/ml	100
48) 1,4-Dinitrobenzene	6.081	168	18127	21.02	ug/ml	100
49) 1,3-Dinitrobenzene	6.128	168	21961	20.90	ug/ml	100
50) 1,2-Dinitrobenzene	6.187	168	15554	21.59	ug/ml	100
52) Hexachlorocyclopentadiene	5.722	237	25132	16.67	ug/ml	100
53) 2,4,6-Trichlorophenol	5.805	196	33888	19.96	ug/ml	100
54) 2,4,5-Trichlorophenol	5.840	196	37544	20.82	ug/ml	100
56) 2-Chloronaphthalene	5.940	162	105504	20.35	ug/ml	100
57) 2-Nitroaniline	5.999	65	17409	20.80	ug/ml	100
58) Dimethylphthalate	6.099	163	112718	20.69	ug/ml	100
59) Acenaphthylene	6.205	152	169152	20.02	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	28310	21.13	ug/ml	100
61) 3-Nitroaniline	6.263	138	31242	21.63	ug/ml	100
62) Acenaphthene	6.316	154	109376	19.78	ug/ml	100
63) 2,4-Dinitrophenol	6.328	184	11758	17.01	ug/ml	99
64) Dibenzofuran	6.428	168	151158	20.48	ug/ml	100
65) 4-Nitrophenol	6.375	65	11252	18.37	ug/ml	100
66) 2,4-Dinitrotoluene	6.404	165	37393	20.88	ug/ml	100
67) Diethylphthalate	6.552	149	102802	20.79	ug/ml	100
68) Fluorene	6.652	166	121267	21.06	ug/ml	100
69) 4-Chlorophenyl phenyl	6.640	204	59464	20.98	ug/ml	100
70) 4-Nitroaniline	6.663	138	33074	21.51	ug/ml	100
71) Atrazine	7.069	200	33358	22.28	ug/ml	100
73) 4,6-Dinitro-2-methylph	6.675	198	18643	19.63	ug/ml	100
74) N-Nitrosodiphenylamine	6.716	169	105960	20.65	ug/ml	100
75) 1,2-Diphenylhydrazine	6.746	77	71701	19.96	ug/ml	100
77) 4-Bromophenyl phenyl e	6.975	248	36074	20.44	ug/ml	100
78) Hexachlorobenzene	7.022	284	42576	19.52	ug/ml	100
79) Pentachlorophenol	7.157	266	20086	15.95	ug/ml	100
80) Phenanthrene	7.310	178	179960	20.46	ug/ml	100
81) Anthracene	7.346	178	178905	20.22	ug/ml	100
82) Carbazole	7.457	167	170106	21.34	ug/ml	100
83) Di-n-butylphthalate	7.681	149	169463	21.17	ug/ml	100
84) Fluoranthene	8.246	202	191636	20.98	ug/ml	100
86) 3,3'-Dimethylbenzidine	9.157	212	131569	21.04	ug/ml	100
87) Benzidine	8.363	184	130674	21.02	ug/ml	100
88) Pyrene	8.469	202	202471	20.55	ug/ml	100
90) Butylbenzylphthalate	9.169	149	76138	20.28	ug/ml	100
91) Benzo[a]anthracene	9.951	228	188074	20.45	ug/ml	100
92) 3,3'-Dichlorobenzidine	9.922	252	80879	21.09	ug/ml	100
93) Chrysene	10.010	228	197880	20.12	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.016	149	101094	19.72	ug/ml	100
96) Di-n-octylphthalate	11.198	149	173874	20.65	ug/ml	100

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113015.D
Acq On : 30 Nov 2020 03:56 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA
Misc : 300-0580F
ALS Vial : 46 Sample Multiplier: 1

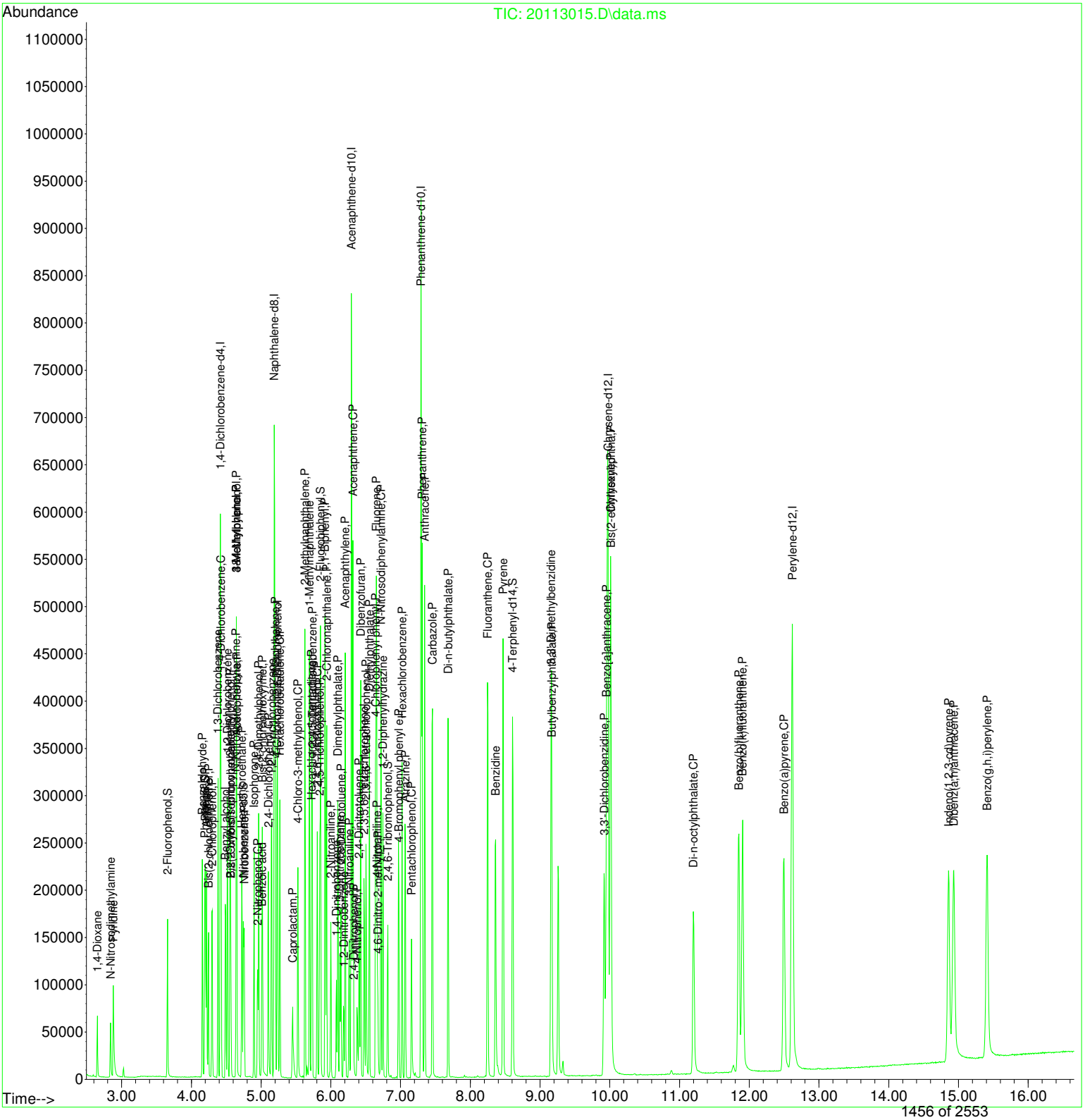
Quant Time: Dec 01 09:56:13 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97) Benzo(b)fluoranthene	11.851	252	189023	20.49	ug/ml	100
98) Benzo(k)fluoranthene	11.904	252	204167	20.94	ug/ml	100
99) Benzo(a)pyrene	12.498	252	173552	20.58	ug/ml	100
100) Indeno(1,2,3-cd)pyrene	14.857	276	175779	20.22	ug/ml	100
101) Dibenz(a,h)anthracene	14.933	278	186070	20.23	ug/ml	100
102) Benzo(g,h,i)perylene	15.410	276	200866	20.17	ug/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113015.D
Acq On : 30 Nov 2020 03:56 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA
Misc : 300-0580F
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Dec 01 09:56:13 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113016.D
Acq On : 30 Nov 2020 04:20 pm
Operator : EE/EEW
Sample : 40 ug/mL BNA
Misc : 300-0580G
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Dec 01 09:56:23 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	126522	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	261917	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	150996	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	280393	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	296281	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	311475	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	91221	39.78	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 79.56%#			
7) Phenol-d6	4.193	99	104412	39.57	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 79.14%#			
26) Nitrobenzene-d5	4.746	82	68714m	38.31	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 76.62%			
55) 2-Fluorobiphenyl	5.852	172	214149	40.89	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 81.78%			
76) 2,4,6-Tribromophenol	6.816	330	42498	36.66	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 73.32%			
89) 4-Terphenyl-d14	8.604	244	291588	40.72	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 81.44%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	40166	42.71	ug/ml	99
3) Pyridine	2.875	79	87001	42.75	ug/ml	99
4) N-Nitrosodimethylamine	2.840	42	17441	39.78	ug/ml	98
6) Benzaldehyde	4.158	77	56321	39.08	ug/ml	99
8) Phenol	4.199	94	114870	41.30	ug/ml	99
9) Aniline	4.216	93	134500	39.46	ug/ml	76
10) Bis(2-chloroethyl)ether	4.246	93	81812	39.80	ug/ml	100
11) 2-Chlorophenol	4.299	128	101656	38.73	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	115395	41.04	ug/ml	100
13) 1,4-Dichlorobenzene	4.422	146	116610	41.09	ug/ml	99
14) Benzyl alcohol	4.493	108	61620	41.13	ug/ml	99
15) 1,2-Dichlorobenzene	4.516	146	110591	41.18	ug/ml	100
16) 2-Methylphenol	4.558	108	83708	38.79	ug/ml	99
17) 2,2`-Oxybis(1-chloropr...	4.564	45	56371	38.36	ug/ml	99
18) Bis(2-chloroisopropyl)...	4.564	45	56371	38.36	ug/ml	99
19) 3-Methylphenol	4.646	107	88315	37.16	ug/ml	99
20) 4-Methylphenol	4.646	107	88315	37.16	ug/ml	99
21) 3&4-Methylphenol	4.646	107	88640	37.26	ug/ml	100
22) Acetophenone	4.652	105	110003	39.26	ug/ml	99
23) N-Nitrosodi-n-propylamine	4.640	70	44680	39.79	ug/ml	99
24) Hexachloroethane	4.722	117	35344	37.74	ug/ml	99
27) Nitrobenzene	4.758	77	65785	39.61	ug/ml	99
28) Isophorone	4.899	82	133520	40.81	ug/ml	98
29) 2-Nitrophenol	4.952	139	55682	42.78	ug/ml	100
30) 2,4-Dimethylphenol	4.964	107	83607	41.13	ug/ml	99
31) Bis(2-chloroethoxy)met	5.016	93	90436	39.63	ug/ml	99
32) Benzoic acid	5.022	122	50624	36.60	ug/ml	98
33) 2,4-Dichlorophenol	5.105	162	87322	42.43	ug/ml	99
34) 1,2,4-Trichlorobenzene	5.152	180	93330	39.30	ug/ml	100
36) Naphthalene	5.205	128	280176	41.18	ug/ml	99

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113016.D
Acq On : 30 Nov 2020 04:20 pm
Operator : EE/EEW
Sample : 40 ug/mL BNA
Misc : 300-0580G
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Dec 01 09:56:23 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	118657	41.39	ug/ml	99
38) 2,6-Dichlorophenol	5.234	162	86340	41.09	ug/ml	100
39) Hexachlorobutadiene	5.269	225	46784	37.98	ug/ml	99
40) Caprolactam	5.452	55	23439	42.86	ug/ml	99
41) 4-Chloro-3-methylphenol	5.528	107	76043	42.71	ug/ml	98
42) 2-Methylnaphthalene	5.628	142	196285	41.60	ug/ml	99
43) 1-Methylnaphthalene	5.693	142	181305	41.18	ug/ml	99
44) 1,2,4,5-Tetrachloroben...	5.734	216	94879	41.03	ug/ml	100
45) 1,1-Biphenyl	5.916	154	238858	41.75	ug/ml	100
46) 2,3,5,6-Tetrachlorophenol	6.481	232	55271	39.10	ug/ml	98
47) 2,3,4,6-Tetrachlorophenol	6.505	232	59077	40.75	ug/ml	99
48) 1,4-Dinitrobenzene	6.081	168	34843	40.91	ug/ml	98
49) 1,3-Dinitrobenzene	6.128	168	41659	41.49	ug/ml	97
50) 1,2-Dinitrobenzene	6.187	168	28799	42.41	ug/ml	90
52) Hexachlorocyclopentadiene	5.722	237	47605	35.39	ug/ml	99
53) 2,4,6-Trichlorophenol	5.805	196	63115	40.88	ug/ml	98
54) 2,4,5-Trichlorophenol	5.840	196	68411	41.72	ug/ml	100
56) 2-Chloronaphthalene	5.940	162	186363	41.44	ug/ml	99
57) 2-Nitroaniline	5.999	65	32638	42.89	ug/ml	99
58) Dimethylphthalate	6.105	163	204125	41.21	ug/ml	100
59) Acenaphthylene	6.205	152	299188	38.94	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	51438	41.23	ug/ml	99
61) 3-Nitroaniline	6.263	138	58951	44.87	ug/ml	98
62) Acenaphthene	6.316	154	191830	38.14	ug/ml	100
63) 2,4-Dinitrophenol	6.328	184	26618	37.43	ug/ml	99
64) Dibenzofuran	6.428	168	265813	39.60	ug/ml	99
65) 4-Nitrophenol	6.375	65	22527m	39.61	ug/ml	
66) 2,4-Dinitrotoluene	6.405	165	70306	41.58	ug/ml	97
67) Diethylphthalate	6.552	149	184610	41.36	ug/ml	100
68) Fluorene	6.652	166	213706	42.72	ug/ml	100
69) 4-Chlorophenyl phenyl	6.640	204	104442	40.51	ug/ml	99
70) 4-Nitroaniline	6.663	138	61175	43.24	ug/ml	98
71) Atrazine	7.069	200	60921	44.75	ug/ml	99
73) 4,6-Dinitro-2-methylph	6.675	198	38230	40.03	ug/ml	98
74) N-Nitrosodiphenylamine	6.722	169	189144	40.30	ug/ml	100
75) 1,2-Diphenylhydrazine	6.746	77	129533	39.41	ug/ml	100
77) 4-Bromophenyl phenyl e	6.969	248	64572	40.00	ug/ml	99
78) Hexachlorobenzene	7.022	284	76616	38.39	ug/ml	99
79) Pentachlorophenol	7.158	266	42253	34.74	ug/ml	98
80) Phenanthrene	7.310	178	319220	41.72	ug/ml	100
81) Anthracene	7.346	178	325346	41.38	ug/ml	100
82) Carbazole	7.457	167	311500	42.71	ug/ml	99
83) Di-n-butylphthalate	7.681	149	314446	42.94	ug/ml	100
84) Fluoranthene	8.246	202	350433	42.27	ug/ml	100
86) 3,3'-Dimethylbenzidine	9.157	212	247535	42.17	ug/ml	100
87) Benzidine	8.363	184	252949	44.24	ug/ml	99
88) Pyrene	8.469	202	368686	41.52	ug/ml	100
90) Butylbenzylphthalate	9.169	149	143321	41.52	ug/ml	99
91) Benzo[a]anthracene	9.957	228	351565	42.03	ug/ml	100
92) 3,3'-Dichlorobenzidine	9.922	252	153754	43.60	ug/ml	100
93) Chrysene	10.016	228	363007	41.68	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.010	149	185805	40.37	ug/ml	100
96) Di-n-octylphthalate	11.204	149	340390	42.12	ug/ml	100

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113016.D
Acq On : 30 Nov 2020 04:20 pm
Operator : EE/EEW
Sample : 40 ug/mL BNA
Misc : 300-0580G
ALS Vial : 47 Sample Multiplier: 1

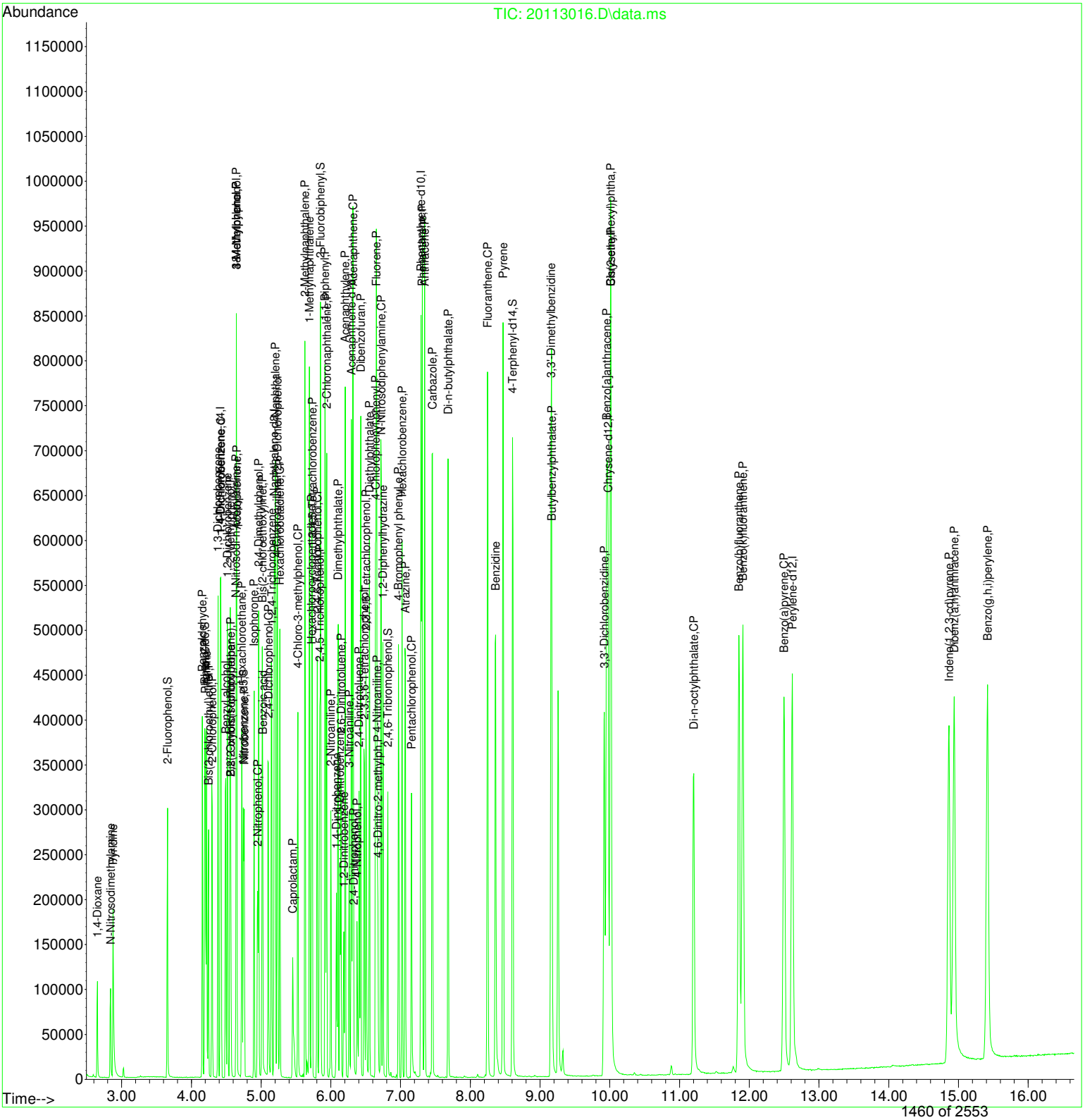
Quant Time: Dec 01 09:56:23 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97)	Benzo(b)fluoranthene	11.851	252	369056	43.13	ug/ml	100
98)	Benzo(k)fluoranthene	11.910	252	386050	42.32	ug/ml	99
99)	Benzo(a)pyrene	12.498	252	334229	42.75	ug/ml	99
100)	Indeno(1,2,3-cd)pyrene	14.863	276	343182	42.94	ug/ml	100
101)	Dibenz(a,h)anthracene	14.939	278	361072	42.75	ug/ml	100
102)	Benzo(g,h,i)perylene	15.416	276	387111	42.49	ug/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113016.D
Acq On : 30 Nov 2020 04:20 pm
Operator : EE/EEW
Sample : 40 ug/mL BNA
Misc : 300-0580G
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Dec 01 09:56:23 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113017.D
Acq On : 30 Nov 2020 04:44 pm
Operator : EE/EEW
Sample : 50 ug/mL BNA
Misc : 300-0580H
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Dec 01 09:56:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	156550	40.00	ug/ml	0.00
25) Naphthalene-d8	5.193	136	326524	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.299	164	193185	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.299	188	357458	40.00	ug/ml	0.00
85) Chrysene-d12	9.981	240	370234	40.00	ug/ml	0.00
95) Perylene-d12	12.622	264	395042	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	132009	47.48	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 94.96%#			
7) Phenol-d6	4.193	99	153013	47.94	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 95.88%#			
26) Nitrobenzene-d5	4.746	82	98515m	44.17	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 88.34%			
55) 2-Fluorobiphenyl	5.852	172	309557	46.99	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 93.98%			
76) 2,4,6-Tribromophenol	6.816	330	66797	45.19	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 90.38%			
89) 4-Terphenyl-d14	8.610	244	431286	48.28	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 96.56%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	58052	51.72	ug/ml	99
3) Pyridine	2.875	79	122986	50.02	ug/ml	100
4) N-Nitrosodimethylamine	2.840	42	25679	47.33	ug/ml	96
6) Benzaldehyde	4.158	77	82003	47.40	ug/ml	98
8) Phenol	4.199	94	169759	49.33	ug/ml	99
9) Aniline	4.216	93	197151	46.74	ug/ml	71
10) Bis(2-chloroethyl)ether	4.246	93	121696	48.98	ug/ml	100
11) 2-Chlorophenol	4.299	128	149877	46.15	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	166796	49.61	ug/ml	100
13) 1,4-Dichlorobenzene	4.428	146	167591	49.31	ug/ml	100
14) Benzyl alcohol	4.493	108	92422	50.43	ug/ml	99
15) 1,2-Dichlorobenzene	4.516	146	159886	49.69	ug/ml	100
16) 2-Methylphenol	4.558	108	121901	45.66	ug/ml	99
17) 2,2`-Oxybis(1-chloropr...	4.564	45	83836	46.10	ug/ml	99
18) Bis(2-chloroisopropyl)...	4.564	45	83836	46.10	ug/ml	99
19) 3-Methylphenol	4.646	107	126884	43.14	ug/ml	99
20) 4-Methylphenol	4.646	107	126884	43.14	ug/ml	99
21) 3&4-Methylphenol	4.646	107	127283	43.24	ug/ml	99
22) Acetophenone	4.652	105	158687	46.96	ug/ml	99
23) N-Nitrosodi-n-propylamine	4.646	70	64148	47.21	ug/ml	100
24) Hexachloroethane	4.722	117	51693	44.61	ug/ml	99
27) Nitrobenzene	4.758	77	97226	46.96	ug/ml	99
28) Isophorone	4.899	82	202929	49.75	ug/ml	99
29) 2-Nitrophenol	4.952	139	83863	51.69	ug/ml	99
30) 2,4-Dimethylphenol	4.963	107	125639	50.24	ug/ml	100
31) Bis(2-chloroethoxy)met	5.016	93	134423	47.24	ug/ml	99
32) Benzoic acid	5.028	122	83826	46.22	ug/ml	94
33) 2,4-Dichlorophenol	5.105	162	130334	50.80	ug/ml	100
34) 1,2,4-Trichlorobenzene	5.152	180	137026	46.29	ug/ml	99
36) Naphthalene	5.205	128	405276	48.45	ug/ml	99

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113017.D
Acq On : 30 Nov 2020 04:44 pm
Operator : EE/EEW
Sample : 50 ug/mL BNA
Misc : 300-0580H
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Dec 01 09:56:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	177567	49.69	ug/ml	99
38) 2,6-Dichlorophenol	5.240	162	128670	49.12	ug/ml	100
39) Hexachlorobutadiene	5.269	225	69086	44.99	ug/ml	98
40) Caprolactam	5.458	55	36468	53.49	ug/ml	99
41) 4-Chloro-3-methylphenol	5.528	107	114492	51.58	ug/ml	98
42) 2-Methylnaphthalene	5.628	142	289825	49.67	ug/ml	100
43) 1-Methylnaphthalene	5.693	142	268776	49.40	ug/ml	98
44) 1,2,4,5-Tetrachloroben...	5.734	216	139384	48.86	ug/ml	100
45) 1,1-Biphenyl	5.922	154	354004	50.18	ug/ml	100
46) 2,3,5,6-Tetrachlorophenol	6.481	232	86618	47.91	ug/ml	97
47) 2,3,4,6-Tetrachlorophenol	6.510	232	91495	49.58	ug/ml	99
48) 1,4-Dinitrobenzene	6.081	168	56124	50.39	ug/ml	96
49) 1,3-Dinitrobenzene	6.134	168	66034	51.04	ug/ml	97
50) 1,2-Dinitrobenzene	6.187	168	44472	51.23	ug/ml	91
52) Hexachlorocyclopentadiene	5.722	237	74434	43.66	ug/ml	99
53) 2,4,6-Trichlorophenol	5.805	196	97049	49.13	ug/ml	98
54) 2,4,5-Trichlorophenol	5.840	196	105850	50.45	ug/ml	100
56) 2-Chloronaphthalene	5.940	162	278327	49.26	ug/ml	99
57) 2-Nitroaniline	5.999	65	50390	51.76	ug/ml	99
58) Dimethylphthalate	6.105	163	311816	49.20	ug/ml	100
59) Acenaphthylene	6.210	152	450588	45.84	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	80861	50.15	ug/ml	99
61) 3-Nitroaniline	6.263	138	91592	54.50	ug/ml	99
62) Acenaphthene	6.316	154	291040	45.23	ug/ml	98
63) 2,4-Dinitrophenol	6.328	184	46012	47.90	ug/ml	98
64) Dibenzofuran	6.428	168	400969	46.68	ug/ml	99
65) 4-Nitrophenol	6.375	65	35935m	49.01	ug/ml	
66) 2,4-Dinitrotoluene	6.410	165	110226	50.26	ug/ml	97
67) Diethylphthalate	6.558	149	284752	50.03	ug/ml	99
68) Fluorene	6.658	166	321847	51.22	ug/ml	99
69) 4-Chlorophenyl phenyl	6.646	204	158885	48.17	ug/ml	99
70) 4-Nitroaniline	6.669	138	95469	52.53	ug/ml	99
71) Atrazine	7.069	200	94448	54.22	ug/ml	100
73) 4,6-Dinitro-2-methylph	6.675	198	62590	49.45	ug/ml	97
74) N-Nitrosodiphenylamine	6.722	169	289438	48.37	ug/ml	99
75) 1,2-Diphenylhydrazine	6.752	77	200567	47.87	ug/ml	99
77) 4-Bromophenyl phenyl e	6.975	248	100622	48.89	ug/ml	99
78) Hexachlorobenzene	7.028	284	117126	46.04	ug/ml	98
79) Pentachlorophenol	7.163	266	71260	44.81	ug/ml	98
80) Phenanthrene	7.316	178	480061	50.23	ug/ml	100
81) Anthracene	7.352	178	494872	49.96	ug/ml	100
82) Carbazole	7.457	167	468148	50.35	ug/ml	100
83) Di-n-butylphthalate	7.687	149	489198	52.40	ug/ml	100
84) Fluoranthene	8.252	202	532471	50.53	ug/ml	99
86) 3,3'-Dimethylbenzidine	9.163	212	372274	50.37	ug/ml	100
87) Benzidine	8.369	184	389494	54.52	ug/ml	99
88) Pyrene	8.475	202	556480	50.58	ug/ml	100
90) Butylbenzylphthalate	9.175	149	217589	50.45	ug/ml	99
91) Benzo[a]anthracene	9.963	228	530181	50.91	ug/ml	100
92) 3,3'-Dichlorobenzidine	9.928	252	234290	53.17	ug/ml	99
93) Chrysene	10.022	228	533521	49.72	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.016	149	283200	49.82	ug/ml	99
96) Di-n-octylphthalate	11.204	149	539923	51.71	ug/ml	100

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113017.D
Acq On : 30 Nov 2020 04:44 pm
Operator : EE/EEW
Sample : 50 ug/mL BNA
Misc : 300-0580H
ALS Vial : 48 Sample Multiplier: 1

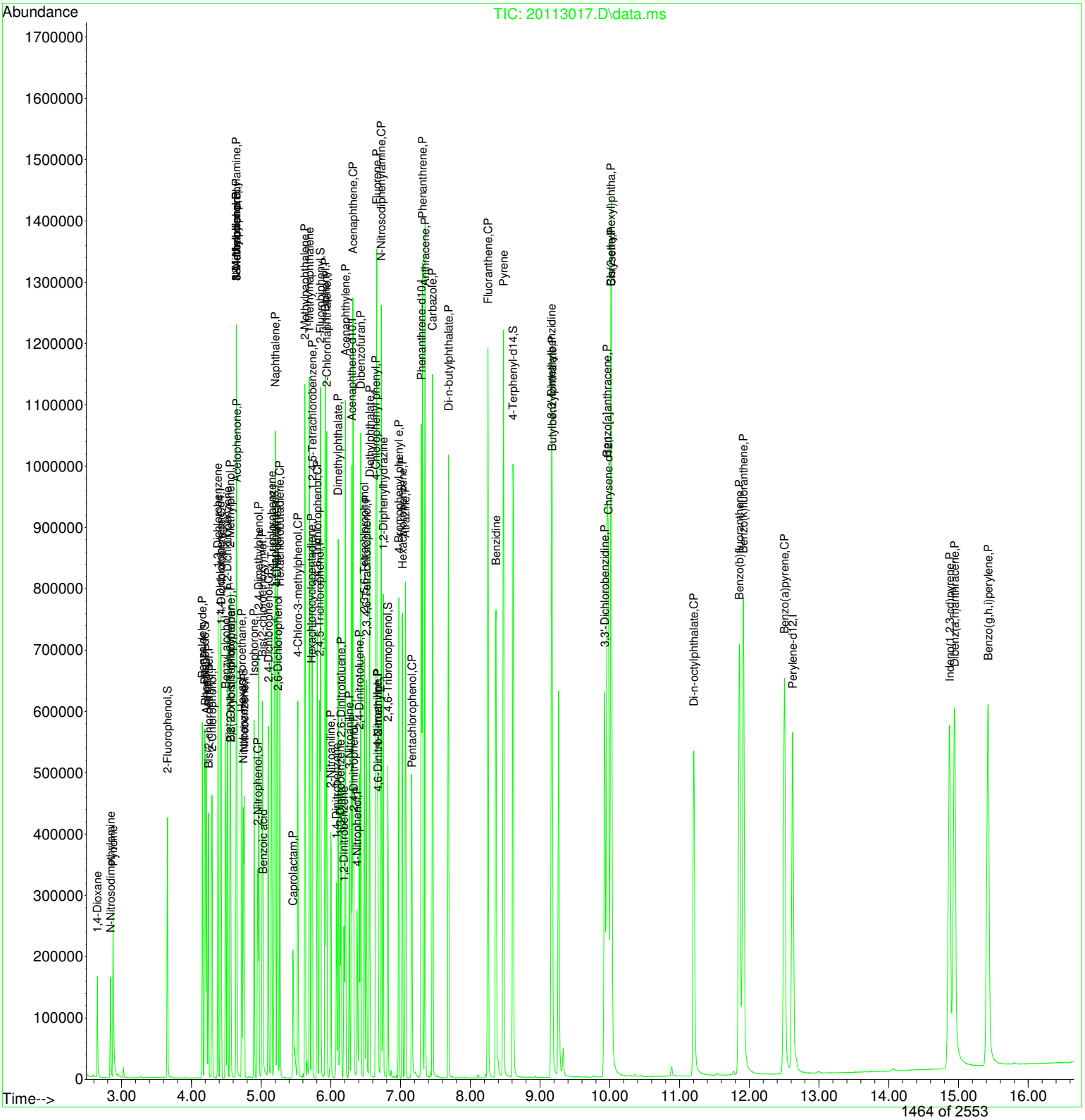
Quant Time: Dec 01 09:56:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97)	Benzo(b)fluoranthene	11.857	252	550050	50.50	ug/ml	100
98)	Benzo(k)fluoranthene	11.916	252	580504	49.84	ug/ml	100
99)	Benzo(a)pyrene	12.504	252	504993	50.74	ug/ml	99
100)	Indeno(1,2,3-cd)pyrene	14.875	276	517726	51.02	ug/ml	100
101)	Dibenz(a,h)anthracene	14.945	278	542835	50.66	ug/ml	99
102)	Benzo(g,h,i)perylene	15.428	276	578866	50.13	ug/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113017.D
Acq On : 30 Nov 2020 04:44 pm
Operator : EE/EEW
Sample : 50 ug/mL BNA
Misc : 300-0580H
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Dec 01 09:56:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113018.D
Acq On : 30 Nov 2020 05:08 pm
Operator : EE/EEW
Sample : 60 ug/mL BNA
Misc : 300-0580I
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Dec 01 09:56:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.416	150	143789	40.00	ug/ml	0.00
25) Naphthalene-d8	5.193	136	293192	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.299	164	170251	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.299	188	316758	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	334061	40.00	ug/ml	0.00
95) Perylene-d12	12.622	264	350494	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	144435	58.24	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 116.48%#			
7) Phenol-d6	4.193	99	164598	57.69	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 115.38%#			
26) Nitrobenzene-d5	4.746	82	107625m	53.97	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 107.94%#			
55) 2-Fluorobiphenyl	5.852	172	330800	58.97	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 117.94%#			
76) 2,4,6-Tribromophenol	6.816	330	70339	53.70	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 107.40%			
89) 4-Terphenyl-d14	8.610	244	459504	57.11	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 114.22%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	63455	65.08	ug/ml	98
3) Pyridine	2.875	79	133609	61.53	ug/ml	99
4) N-Nitrosodimethylamine	2.840	42	28129	56.45	ug/ml	98
6) Benzaldehyde	4.158	77	87560	57.18	ug/ml	99
8) Phenol	4.199	94	181345	57.37	ug/ml	99
9) Aniline	4.216	93	212391	54.83	ug/ml	71
10) Bis(2-chloroethyl)ether	4.246	93	131125	58.97	ug/ml	99
11) 2-Chlorophenol	4.299	128	162156	54.36	ug/ml	99
12) 1,3-Dichlorobenzene	4.381	146	179275	60.83	ug/ml	100
13) 1,4-Dichlorobenzene	4.428	146	181426	60.97	ug/ml	99
14) Benzyl alcohol	4.493	108	98918	59.43	ug/ml	99
15) 1,2-Dichlorobenzene	4.516	146	171983	60.78	ug/ml	100
16) 2-Methylphenol	4.558	108	129638	52.87	ug/ml	100
17) 2,2`-Oxybis(1-chloropr...	4.563	45	88560	53.02	ug/ml	100
18) Bis(2-chloroisopropyl)...	4.563	45	88560	53.02	ug/ml	99
19) 3-Methylphenol	4.646	107	135707	50.24	ug/ml	99
20) 4-Methylphenol	4.646	107	135707	50.24	ug/ml	99
21) 3&4-Methylphenol	4.646	107	135953	50.28	ug/ml	99
22) Acetophenone	4.652	105	168922	56.18	ug/ml	99
23) N-Nitrosodi-n-propylamine	4.646	70	67170	55.15	ug/ml	99
24) Hexachloroethane	4.722	117	55501	52.15	ug/ml	98
27) Nitrobenzene	4.758	77	105307	56.65	ug/ml	98
28) Isophorone	4.899	82	215905	58.95	ug/ml	99
29) 2-Nitrophenol	4.952	139	90937	62.42	ug/ml	99
30) 2,4-Dimethylphenol	4.963	107	133941	60.57	ug/ml	100
31) Bis(2-chloroethoxy)met	5.016	93	143991	56.36	ug/ml	98
32) Benzoic acid	5.028	122	92119	54.33	ug/ml	93
33) 2,4-Dichlorophenol	5.105	162	138189	59.99	ug/ml	99
34) 1,2,4-Trichlorobenzene	5.152	180	145898	54.89	ug/ml	99
36) Naphthalene	5.205	128	434009	58.98	ug/ml	100

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113018.D
Acq On : 30 Nov 2020 05:08 pm
Operator : EE/EEW
Sample : 60 ug/mL BNA
Misc : 300-0580I
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Dec 01 09:56:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	189162	58.95	ug/ml	99
38) 2,6-Dichlorophenol	5.240	162	136480	58.03	ug/ml	100
39) Hexachlorobutadiene	5.269	225	72951	52.91	ug/ml	99
40) Caprolactam	5.458	55	39419	64.39	ug/ml	99
41) 4-Chloro-3-methylphenol	5.528	107	120748	60.58	ug/ml	98
42) 2-Methylnaphthalene	5.628	142	306963	59.16	ug/ml	100
43) 1-Methylnaphthalene	5.693	142	284845	58.92	ug/ml	99
44) 1,2,4,5-Tetrachloroben...	5.734	216	148534	58.75	ug/ml	100
45) 1,1-Biphenyl	5.922	154	373013	59.62	ug/ml	100
46) 2,3,5,6-Tetrachlorophenol	6.481	232	92955	55.98	ug/ml	99
47) 2,3,4,6-Tetrachlorophenol	6.510	232	97643	57.83	ug/ml	98
48) 1,4-Dinitrobenzene	6.081	168	59884	57.77	ug/ml	96
49) 1,3-Dinitrobenzene	6.134	168	69165	58.14	ug/ml	97
50) 1,2-Dinitrobenzene	6.187	168	47004	59.02	ug/ml	91
52) Hexachlorocyclopentadiene	5.722	237	78268	52.66	ug/ml	99
53) 2,4,6-Trichlorophenol	5.805	196	102738	59.02	ug/ml	98
54) 2,4,5-Trichlorophenol	5.840	196	111922	60.53	ug/ml	99
56) 2-Chloronaphthalene	5.940	162	293921	60.62	ug/ml	99
57) 2-Nitroaniline	5.999	65	53421	62.26	ug/ml	98
58) Dimethylphthalate	6.105	163	327271	58.60	ug/ml	100
59) Acenaphthylene	6.210	152	475632	54.91	ug/ml	99
60) 2,6-Dinitrotoluene	6.146	165	85464	59.51	ug/ml	99
61) 3-Nitroaniline	6.263	138	97482	65.81	ug/ml	98
62) Acenaphthene	6.316	154	305901	53.94	ug/ml	99
63) 2,4-Dinitrophenol	6.328	184	49655	56.29	ug/ml	97
64) Dibenzofuran	6.428	168	421743	55.72	ug/ml	99
65) 4-Nitrophenol	6.375	65	38962m	59.79	ug/ml	
66) 2,4-Dinitrotoluene	6.410	165	116637	59.51	ug/ml	97
67) Diethylphthalate	6.558	149	296932	59.42	ug/ml	99
68) Fluorene	6.657	166	336027	62.17	ug/ml	100
69) 4-Chlorophenyl phenyl	6.646	204	166523	57.29	ug/ml	99
70) 4-Nitroaniline	6.669	138	101413	63.04	ug/ml	99
71) Atrazine	7.069	200	99242	64.65	ug/ml	100
73) 4,6-Dinitro-2-methylph	6.675	198	65723	56.90	ug/ml	98
74) N-Nitrosodiphenylamine	6.722	169	302633	57.08	ug/ml	100
75) 1,2-Diphenylhydrazine	6.752	77	208833	56.25	ug/ml	99
77) 4-Bromophenyl phenyl e	6.975	248	104152	57.11	ug/ml	98
78) Hexachlorobenzene	7.022	284	122278	54.24	ug/ml	99
79) Pentachlorophenol	7.157	266	76316	53.09	ug/ml	97
80) Phenanthrene	7.316	178	504319	61.17	ug/ml	100
81) Anthracene	7.352	178	520775	60.18	ug/ml	100
82) Carbazole	7.457	167	497275	60.36	ug/ml	100
83) Di-n-butylphthalate	7.687	149	510017	61.65	ug/ml	100
84) Fluoranthene	8.252	202	568500	61.11	ug/ml	99
86) 3,3'-Dimethylbenzidine	9.163	212	399197	59.39	ug/ml	100
87) Benzidine	8.363	184	414237	64.26	ug/ml	99
88) Pyrene	8.475	202	593309	60.31	ug/ml	100
90) Butylbenzylphthalate	9.175	149	233831	60.08	ug/ml	99
91) Benzo[a]anthracene	9.957	228	577757	61.75	ug/ml	100
92) 3,3'-Dichlorobenzidine	9.922	252	252709	63.56	ug/ml	100
93) Chrysene	10.022	228	573508	60.36	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.016	149	303436	59.94	ug/ml	100
96) Di-n-octylphthalate	11.204	149	577232	61.20	ug/ml	100

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113018.D
Acq On : 30 Nov 2020 05:08 pm
Operator : EE/EEW
Sample : 60 ug/mL BNA
Misc : 300-0580I
ALS Vial : 49 Sample Multiplier: 1

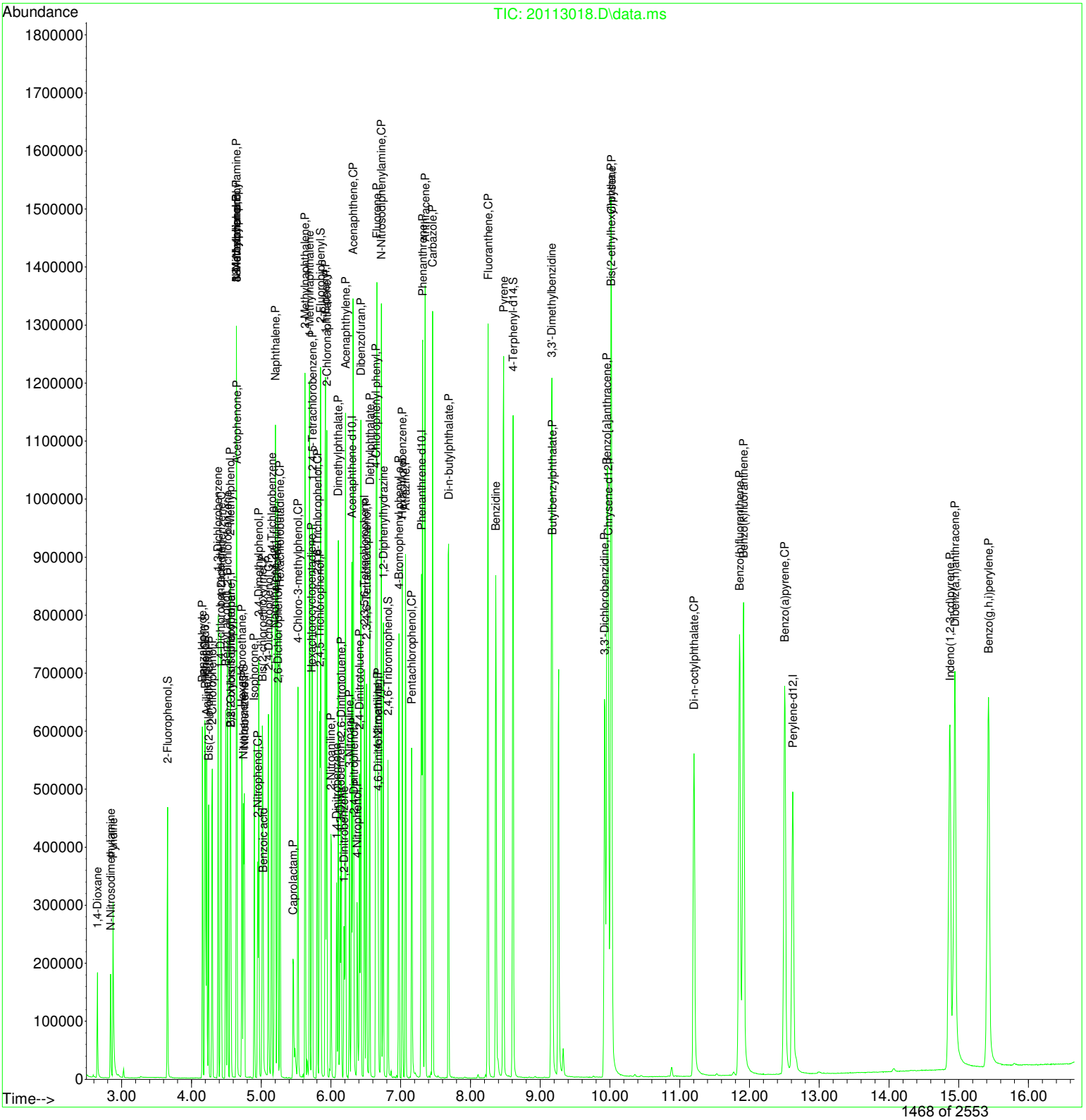
Quant Time: Dec 01 09:56:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97) Benzo(b)fluoranthene	11.857	252	600823	61.82	ug/ml	100
98) Benzo(k)fluoranthene	11.916	252	624217	59.86	ug/ml	99
99) Benzo(a)pyrene	12.504	252	545082	61.40	ug/ml	99
100) Indeno(1,2,3-cd)pyrene	14.875	276	552293	61.25	ug/ml	99
101) Dibenz(a,h)anthracene	14.945	278	583435	61.34	ug/ml	99
102) Benzo(g,h,i)perylene	15.428	276	621305	60.70	ug/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113018.D
Acq On : 30 Nov 2020 05:08 pm
Operator : EE/EEW
Sample : 60 ug/mL BNA
Misc : 300-0580I
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Dec 01 09:56:43 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 09:55:10 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	122437	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	269230	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.293	164	155850	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.293	188	289642	40.00	ug/ml	0.00
85) Chrysene-d12	9.975	240	305634	40.00	ug/ml	0.00
95) Perylene-d12	12.616	264	323767	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	44307	20.00	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 40.00%			
7) Phenol-d6	4.193	99	51466	20.19	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 40.38%#			
26) Nitrobenzene-d5	4.746	82	34700m	20.14	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 40.28%			
55) 2-Fluorobiphenyl	5.852	172	109862	19.68	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 39.36%			
76) 2,4,6-Tribromophenol	6.816	330	20556	19.42	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 38.84%			
89) 4-Terphenyl-d14	8.605	244	146196	19.62	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 112		Recovery = 39.24%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	19264	18.95	ug/ml	99
3) Pyridine	2.881	79	42093	19.51	ug/ml	99
4) N-Nitrosodimethylamine	2.840	42	8291	19.04	ug/ml	96
6) Benzaldehyde	4.158	77	27035	18.63	ug/ml	98
8) Phenol	4.199	94	54075	18.88	ug/ml	99
9) Aniline	4.217	93	64089	20.42	ug/ml	75
10) Bis(2-chloroethyl)ether	4.246	93	38554	18.59	ug/ml	98
11) 2-Chlorophenol	4.293	128	48765	20.57	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	56005	18.78	ug/ml	100
13) 1,4-Dichlorobenzene	4.423	146	56319	18.59	ug/ml	100
14) Benzyl alcohol	4.487	108	28595	18.98	ug/ml	99
15) 1,2-Dichlorobenzene	4.517	146	53516	18.66	ug/ml	100
16) 2-Methylphenol	4.552	108	39892	19.02	ug/ml	99
17) 2,2`-Oxybis(1-chloropr...	4.564	45	27520	18.92	ug/ml	100
18) Bis(2-chloroisopropyl)...	4.564	45	27520	18.92	ug/ml	99
19) 3-Methylphenol	4.646	107	43053	18.99	ug/ml	99
20) 4-Methylphenol	4.646	107	43053	18.99	ug/ml	99
21) 3&4-Methylphenol	4.646	107	43433	19.00	ug/ml	99
22) Acetophenone	4.646	105	54488	19.03	ug/ml	100
23) N-Nitrosodi-n-propylamine	4.640	70	22184	18.96	ug/ml	99
24) Hexachloroethane	4.722	117	17391	19.01	ug/ml	98
27) Nitrobenzene	4.758	77	31611	19.70	ug/ml	100
28) Isophorone	4.899	82	64186	19.27	ug/ml	99
29) 2-Nitrophenol	4.952	139	26211	18.93	ug/ml	100
30) 2,4-Dimethylphenol	4.964	107	41348	18.99	ug/ml	98
31) Bis(2-chloroethoxy)met	5.017	93	45391	19.17	ug/ml	99
32) Benzoic acid	5.011	122	21958	19.26	ug/ml	96
33) 2,4-Dichlorophenol	5.105	162	41755	18.78	ug/ml	99
34) 1,2,4-Trichlorobenzene	5.152	180	45546	19.50	ug/ml	99
36) Naphthalene	5.205	128	137830	18.81	ug/ml	100

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	57989	19.02	ug/ml	100
38) 2,6-Dichlorophenol	5.234	162	42442	18.74	ug/ml	99
39) Hexachlorobutadiene	5.270	225	23029	19.36	ug/ml	99
40) Caprolactam	5.452	55	10949	18.44	ug/ml	100
41) 4-Chloro-3-methylphenol	5.528	107	36425	19.58	ug/ml	99
42) 2-Methylnaphthalene	5.628	142	96515	18.78	ug/ml	99
43) 1-Methylnaphthalene	5.693	142	90984	18.98	ug/ml	98
44) 1,2,4,5-Tetrachloroben...	5.734	216	46718	18.40	ug/ml	100
45) 1,1-Biphenyl	5.917	154	117433	18.43	ug/ml	100
46) 2,3,5,6-Tetrachlorophenol	6.475	232	25378	18.75	ug/ml	98
47) 2,3,4,6-Tetrachlorophenol	6.505	232	27553	18.36	ug/ml	99
48) 1,4-Dinitrobenzene	6.081	168	15904	19.07	ug/ml	99
49) 1,3-Dinitrobenzene	6.128	168	19283	18.84	ug/ml	99
50) 1,2-Dinitrobenzene	6.187	168	13363	18.55	ug/ml	89
52) Hexachlorocyclopentadiene	5.722	237	21227	18.47	ug/ml	98
53) 2,4,6-Trichlorophenol	5.805	196	29814	18.81	ug/ml	98
54) 2,4,5-Trichlorophenol	5.840	196	32322	19.14	ug/ml	100
56) 2-Chloronaphthalene	5.940	162	91990	18.67	ug/ml	100
57) 2-Nitroaniline	5.999	65	15703	19.10	ug/ml	97
58) Dimethylphthalate	6.099	163	98784	18.92	ug/ml	100
59) Acenaphthylene	6.205	152	147482	19.63	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	24608	18.60	ug/ml	99
61) 3-Nitroaniline	6.264	138	27579	18.62	ug/ml	99
62) Acenaphthene	6.317	154	95265	19.22	ug/ml	99
63) 2,4-Dinitrophenol	6.328	184	10712	19.05	ug/ml	97
64) Dibenzofuran	6.428	168	131884	19.27	ug/ml	100
65) 4-Nitrophenol	6.375	65	10778	20.30	ug/ml	93
66) 2,4-Dinitrotoluene	6.405	165	33430	18.96	ug/ml	99
67) Diethylphthalate	6.552	149	89922	18.41	ug/ml	99
68) Fluorene	6.652	166	106450	18.62	ug/ml	100
69) 4-Chlorophenyl phenyl	6.640	204	51427	19.55	ug/ml	99
70) 4-Nitroaniline	6.664	138	29481	18.98	ug/ml	99
71) Atrazine	7.069	200	29599	19.76	ug/ml	98
73) 4,6-Dinitro-2-methylph	6.675	198	16611	19.04	ug/ml	99
74) N-Nitrosodiphenylamine	6.716	169	92635	19.60	ug/ml	100
75) 1,2-Diphenylhydrazine	6.746	77	63259	19.55	ug/ml	99
77) 4-Bromophenyl phenyl e	6.969	248	31089	18.97	ug/ml	99
78) Hexachlorobenzene	7.022	284	37011	18.58	ug/ml	99
79) Pentachlorophenol	7.158	266	18623	19.61	ug/ml	98
80) Phenanthrene	7.311	178	157898	18.47	ug/ml	100
81) Anthracene	7.346	178	161161	18.86	ug/ml	100
82) Carbazole	7.458	167	151265	19.64	ug/ml	100
83) Di-n-butylphthalate	7.681	149	151017	19.16	ug/ml	100
84) Fluoranthene	8.246	202	170081	18.79	ug/ml	100
86) 3,3'-Dimethylbenzidine	9.158	212	119749	19.09	ug/ml	100
87) Benzidine	8.363	184	120451	19.35	ug/ml	99
88) Pyrene	8.469	202	180889	18.83	ug/ml	100
90) Butylbenzylphthalate	9.169	149	68202	19.08	ug/ml	99
91) Benzo[a]anthracene	9.957	228	172960	19.37	ug/ml	100
92) 3,3'-Dichlorobenzidine	9.916	252	72110	18.65	ug/ml	99
93) Chrysene	10.010	228	179843	18.94	ug/ml	99
94) Bis(2-ethylhexyl)phtha	10.010	149	89199	18.41	ug/ml	99
96) Di-n-octylphthalate	11.199	149	152430	18.24	ug/ml	99

1st /S/ EE 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

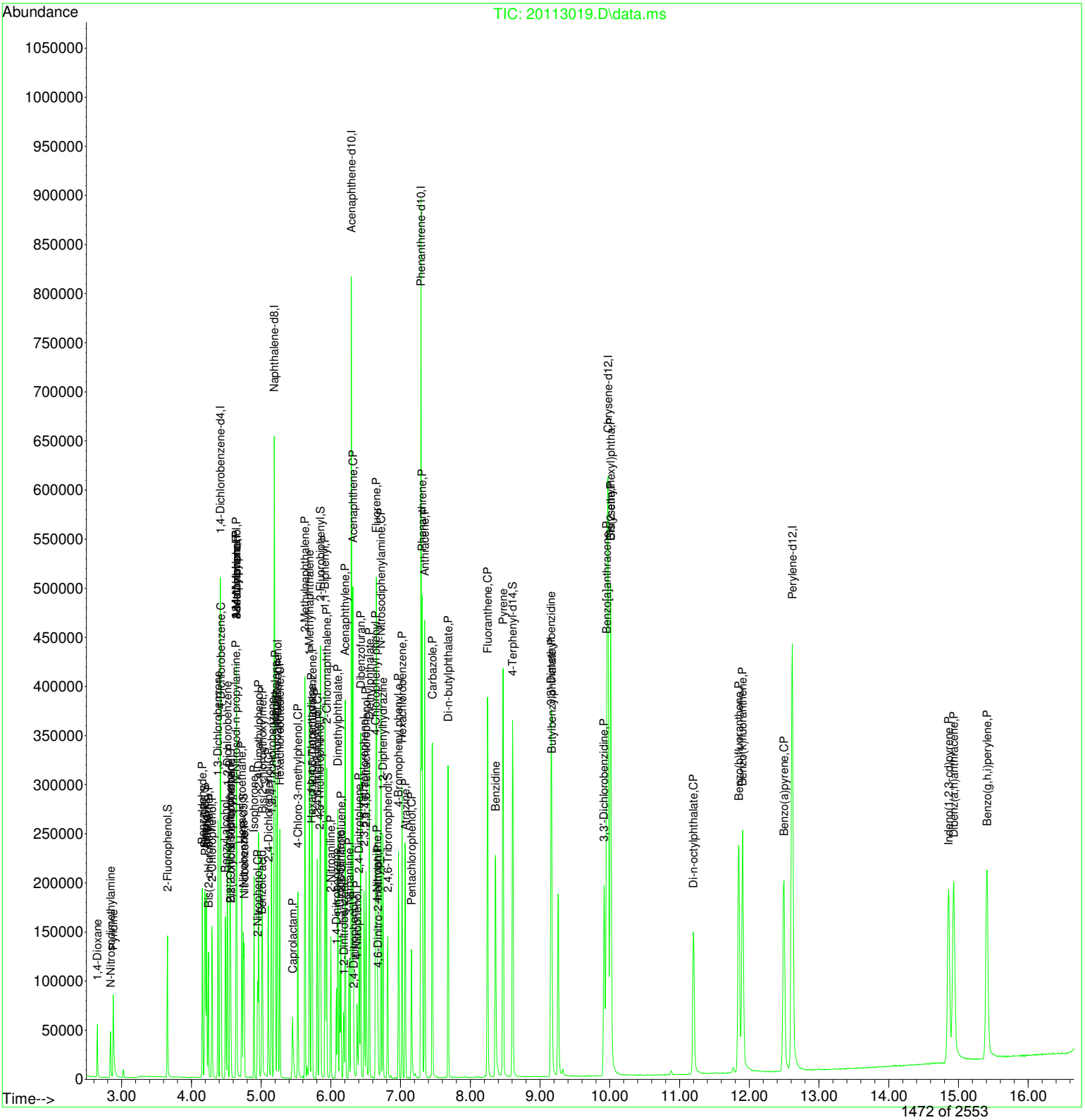
Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97)	Benzo(b)fluoranthene	11.852	252	170503	18.63	ug/ml	100
98)	Benzo(k)fluoranthene	11.904	252	184178	19.11	ug/ml	99
99)	Benzo(a)pyrene	12.499	252	155963	18.75	ug/ml	100
100)	Indeno(1,2,3-cd)pyrene	14.857	276	158905	18.69	ug/ml	99
101)	Dibenz(a,h)anthracene	14.934	278	167111	18.63	ug/ml	99
102)	Benzo(g,h,i)perylene	15.410	276	181763	18.79	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration



Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	89	0.00
2		1,4-Dioxane	20.000	18.947	5.3	84	0.00
3		Pyridine	20.000	19.514	2.4	87	0.00
4		N-Nitrosodimethylamine	20.000	19.045	4.8	86	0.00
5	S	2-Fluorophenol	20.000	20.003	-0.0	90	0.00
6	P	Benzaldehyde	20.000	18.627	6.9	83	0.00
7	S	Phenol-d6	20.000	20.194	-1.0	90	0.00
8	CP	Phenol	20.000	18.877	5.6	84	0.00
9		Aniline	20.000	20.419	-2.1	85	0.00
10	P	Bis(2-chloroethyl)ether	20.000	18.588	7.1	84	0.00
11	P	2-Chlorophenol	20.000	20.573	-2.9	85	0.00
12		1,3-Dichlorobenzene	20.000	18.779	6.1	85	0.00
13	C	1,4-Dichlorobenzene	20.000	18.586	7.1	83	0.00
14		Benzyl alcohol	20.000	18.985	5.1	85	0.00
15		1,2-Dichlorobenzene	20.000	18.661	6.7	84	0.00
16	P	2-Methylphenol	20.000	19.021	4.9	86	0.00
17	P	2,2`-Oxybis(1-chloropropane	20.000	18.919	5.4	86	0.00
18		Bis(2-chloroisopropyl)ether	20.000	18.919	5.4	86	0.00
19	P	3-Methylphenol	20.000	18.988	5.1	85	0.00
20	P	4-Methylphenol	20.000	18.988	5.1	85	0.00
21	P	3&4-Methylphenol	20.000	18.996	5.0	85	0.00
22	P	Acetophenone	20.000	19.032	4.8	86	0.00
23	P	N-Nitrosodi-n-propylamine	20.000	18.961	5.2	87	0.00
24	P	Hexachloroethane	20.000	19.009	5.0	86	0.00
25	I	Naphthalene-d8	40.000	40.000	0.0	91	0.00
26	S	Nitrobenzene-d5	20.000	20.142	-0.7	92	0.00
27	P	Nitrobenzene	20.000	19.704	1.5	85	0.00
28	P	Isophorone	20.000	19.266	3.7	86	0.00
29	CP	2-Nitrophenol	20.000	18.932	5.3	85	0.00
30	P	2,4-Dimethylphenol	20.000	18.990	5.1	87	0.00
31	P	Bis(2-chloroethoxy)met	20.000	19.171	4.1	89	0.00
32		Benzoic acid	20.000	19.258	3.7	89	0.00
33	CP	2,4-Dichlorophenol	20.000	18.776	6.1	86	0.00
34		1,2,4-Trichlorobenzene	20.000	19.496	2.5	85	0.00
35		4-Chlorophenol	20.000	0.000	100.0#	0	-5.16#
36	P	Naphthalene	20.000	18.807	6.0	86	0.00
37	P	4-Chloroaniline	20.000	19.025	4.9	88	0.00
38		2,6-Dichlorophenol	20.000	18.736	6.3	86	0.00
39	CP	Hexachlorobutadiene	20.000	19.356	3.2	85	0.00
40	P	Caprolactam	20.000	18.440	7.8	88	0.00
41	CP	4-Chloro-3-methylphenol	20.000	19.580	2.1	86	0.00
42	P	2-Methylnaphthalene	20.000	18.776	6.1	87	0.00
43		1-Methylnaphthalene	20.000	18.982	5.1	89	0.00
44	P	1,2,4,5-Tetrachlorobenzene	20.000	18.401	8.0	85	0.00
45	P	1,1-Biphenyl	20.000	18.425	7.9	86	0.00
46		2,3,5,6-Tetrachlorophenol	20.000	18.753	6.2	86	0.00
47	P	2,3,4,6-Tetrachlorophenol	20.000	18.361	8.2	87	0.00
48		1,4-Dinitrobenzene	20.000	19.074	4.6	88	0.00

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49		1,3-Dinitrobenzene	20.000	18.844	5.8	88	0.00
50		1,2-Dinitrobenzene	20.000	18.550	7.2	86	0.00
51	I	Acenaphthene-d10	40.000	40.000	0.0	94	0.00
52	P	Hexachlorocyclopentadiene	20.000	18.473	7.6	84	0.00
53	CP	2,4,6-Trichlorophenol	20.000	18.808	6.0	88	0.00
54	P	2,4,5-Trichlorophenol	20.000	19.142	4.3	86	0.00
55	S	2-Fluorobiphenyl	20.000	19.680	1.6	94	0.00
56	P	2-Chloronaphthalene	20.000	18.667	6.7	87	0.00
57	P	2-Nitroaniline	20.000	19.102	4.5	90	0.00
58	P	Dimethylphthalate	20.000	18.924	5.4	88	0.00
59	P	Acenaphthylene	20.000	19.631	1.8	87	0.00
60	P	2,6-Dinitrotoluene	20.000	18.605	7.0	87	0.00
61	P	3-Nitroaniline	20.000	18.616	6.9	88	0.00
62	CP	Acenaphthene	20.000	19.219	3.9	87	0.00
63	P	2,4-Dinitrophenol	20.000	19.052	4.7	91	0.00
64	P	Dibenzofuran	20.000	19.270	3.7	87	0.00
65	P	4-Nitrophenol	20.000	20.295	-1.5	96	0.00
66	P	2,4-Dinitrotoluene	20.000	18.955	5.2	89	0.00
67	P	Diethylphthalate	20.000	18.411	7.9	87	0.00
68	P	Fluorene	20.000	18.622	6.9	88	0.00
69	P	4-Chlorophenyl phenyl	20.000	19.555	2.2	86	0.00
70	P	4-Nitroaniline	20.000	18.977	5.1	89	0.00
71	P	Atrazine	20.000	19.760	1.2	89	0.00
72	I	Phenanthrene-d10	40.000	40.000	0.0	94	0.00
73	P	4,6-Dinitro-2-methylph	20.000	19.044	4.8	89	0.00
74	CP	N-Nitrosodiphenylamine	20.000	19.602	2.0	87	0.00
75		1,2-Diphenylhydrazine	20.000	19.552	2.2	88	0.00
76	S	2,4,6-Tribromophenol	20.000	19.418	2.9	94	0.00
77	P	4-Bromophenyl phenyl e	20.000	18.975	5.1	86	0.00
78	P	Hexachlorobenzene	20.000	18.577	7.1	87	0.00
79	CP	Pentachlorophenol	20.000	19.609	2.0	93	0.00
80	P	Phenanthrene	20.000	18.466	7.7	88	0.00
81	P	Anthracene	20.000	18.857	5.7	90	0.00
82	P	Carbazole	20.000	19.645	1.8	89	0.00
83	P	Di-n-butylphthalate	20.000	19.158	4.2	89	0.00
84	CP	Fluoranthene	20.000	18.788	6.1	89	0.00
85	I	Chrysene-d12	40.000	40.000	0.0	95	0.00
86		3,3'-Dimethylbenzidine	20.000	19.090	4.6	91	0.00
87		Benzidine	20.000	19.351	3.2	92	0.00
88		Pyrene	20.000	18.827	5.9	89	0.00
89	S	4-Terphenyl-d14	20.000	19.618	1.9	95	0.00
90	P	Butylbenzylphthalate	20.000	19.082	4.6	90	0.00
91	P	Benzo[a]anthracene	20.000	19.370	3.1	92	0.00
92	P	3,3'-Dichlorobenzidine	20.000	18.650	6.8	89	0.00
93	P	Chrysene	20.000	18.937	5.3	91	0.00
94	P	Bis(2-ethylhexyl)phtha	20.000	18.409	8.0	88	0.00

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
95	I	Perylene-d12	40.000	40.000	0.0	95	0.00
96	CP	Di-n-octylphthalate	20.000	18.244	8.8	88	0.00
97	P	Benzo(b)fluoranthene	20.000	18.625	6.9	90	0.00
98	P	Benzo(k)fluoranthene	20.000	19.114	4.4	90	0.00
99	CP	Benzo(a)pyrene	20.000	18.754	6.2	90	0.00
100	P	Indeno(1,2,3-cd)pyrene	20.000	18.690	6.5	90	0.00
101	P	Dibenz(a,h)anthracene	20.000	18.627	6.9	90	0.00
102	P	Benzo(g,h,i)perylene	20.000	18.791	6.0	90	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
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Quant Title : 8270/625/1311 Calibration
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Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	89	0.00
2		1,4-Dioxane	0.328	0.315	4.0	84	0.00
3		Pyridine	0.677	0.688	-1.6	87	0.00
4		N-Nitrosodimethylamine	0.142	0.135	4.9	86	0.00
5	S	2-Fluorophenol	0.745	0.724	2.8	90	0.00
6	P	Benzaldehyde	0.465	0.442	4.9	83	0.00
7	S	Phenol-d6	0.829	0.841	-1.4	90	0.00
8	CP	Phenol	0.862	0.883	-2.4	84	0.00
9		Aniline	1.025	1.047	-2.1	85	0.00
10	P	Bis(2-chloroethyl)ether	0.655	0.630#	3.8	84	0.00
11	P	2-Chlorophenol	0.774	0.797	-3.0	85	0.00
12		1,3-Dichlorobenzene	0.931	0.915	1.7	85	0.00
13	C	1,4-Dichlorobenzene	0.950	0.920	3.2	83	0.00
14		Benzyl alcohol	0.442	0.467	-5.7	85	0.00
15		1,2-Dichlorobenzene	0.897	0.874	2.6	84	0.00
16	P	2-Methylphenol	0.629	0.652	-3.7	86	0.00
17	P	2,2`-Oxybis(1-chloropropane	0.476	0.450	5.5	86	0.00
18		Bis(2-chloroisopropyl)ether	0.476	0.450	5.5	86	0.00
19	P	3-Methylphenol	0.697	0.703	-0.9	85	0.00
20	P	4-Methylphenol	0.697	0.703	-0.9	85	0.00
21	P	3&4-Methylphenol	0.701	0.709	-1.1	85	0.00
22	P	Acetophenone	0.878	0.890	-1.4	86	0.00
23	P	N-Nitrosodi-n-propylamine	0.360	0.362#	-0.6	87	0.00
24	P	Hexachloroethane	0.287	0.284#	1.0	86	0.00
25	I	Naphthalene-d8	1.000	1.000	0.0	91	0.00
26	S	Nitrobenzene-d5	0.270	0.258	4.4	92	0.00
27	P	Nitrobenzene	0.238	0.235	1.3	85	0.00
28	P	Isophorone	0.495	0.477	3.6	86	0.00
29	CP	2-Nitrophenol	0.187	0.195	-4.3	85	0.00
30	P	2,4-Dimethylphenol	0.303	0.307	-1.3	87	0.00
31	P	Bis(2-chloroethoxy)met	0.328	0.337	-2.7	89	0.00
32		Benzoic acid	0.174	0.163	6.3	89	0.00
33	CP	2,4-Dichlorophenol	0.304	0.310	-2.0	86	0.00
34		1,2,4-Trichlorobenzene	0.347	0.338	2.6	85	0.00
35		4-Chlorophenol	0.000	0.000	0.0	0#	-5.16#
36	P	Naphthalene	1.045	1.024	2.0	86	0.00
37	P	4-Chloroaniline	0.418	0.431	-3.1	88	0.00
38		2,6-Dichlorophenol	0.310	0.315	-1.6	86	0.00
39	CP	Hexachlorobutadiene	0.177	0.171	3.4	85	0.00
40	P	Caprolactam	0.088	0.081	8.0	88	0.00
41	CP	4-Chloro-3-methylphenol	0.276	0.271	1.8	86	0.00
42	P	2-Methylnaphthalene	0.701	0.717	-2.3	87	0.00
43		1-Methylnaphthalene	0.671	0.676	-0.7	89	0.00
44	P	1,2,4,5-Tetrachlorobenzene	0.356	0.347	2.5	85	0.00
45	P	1,1-Biphenyl	0.888	0.872	1.8	86	0.00
46		2,3,5,6-Tetrachlorophenol	0.181	0.189	-4.4	86	0.00
47	P	2,3,4,6-Tetrachlorophenol	0.209	0.205	1.9	87	0.00
48		1,4-Dinitrobenzene	0.115	0.118	-2.6	88	0.00

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
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Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49		1,3-Dinitrobenzene	0.138	0.143	-3.6	88	0.00
50		1,2-Dinitrobenzene	0.097	0.099	-2.1	86	0.00
51	I	Acenaphthene-d10	1.000	1.000	0.0	94	0.00
52	P	Hexachlorocyclopentadiene	0.248	0.272	-9.7	84	0.00
53	CP	2,4,6-Trichlorophenol	0.382	0.383	-0.3	88	0.00
54	P	2,4,5-Trichlorophenol	0.433	0.415	4.2	86	0.00
55	S	2-Fluorobiphenyl	1.587	1.410	11.2	94	0.00
56	P	2-Chloronaphthalene	1.169	1.180	-0.9	87	0.00
57	P	2-Nitroaniline	0.196	0.202	-3.1	90	0.00
58	P	Dimethylphthalate	1.340	1.268	5.4	88	0.00
59	P	Acenaphthylene	1.928	1.893	1.8	87	0.00
60	P	2,6-Dinitrotoluene	0.316	0.316	0.0	87	0.00
61	P	3-Nitroaniline	0.347	0.354	-2.0	88	0.00
62	CP	Acenaphthene	1.272	1.223	3.9	87	0.00
63	P	2,4-Dinitrophenol	0.149	0.137	8.1	91	0.00
64	P	Dibenzofuran	1.757	1.692	3.7	87	0.00
65	P	4-Nitrophenol	0.130	0.138	-6.2	96	0.00
66	P	2,4-Dinitrotoluene	0.417	0.429	-2.9	89	0.00
67	P	Diethylphthalate	1.202	1.154	4.0	87	0.00
68	P	Fluorene	1.374	1.366	0.6	88	0.00
69	P	4-Chlorophenyl phenyl	0.675	0.660	2.2	86	0.00
70	P	4-Nitroaniline	0.355	0.378	-6.5	89	0.00
71	P	Atrazine	0.384	0.380	1.0	89	0.00
72	I	Phenanthrene-d10	1.000	1.000	0.0	94	0.00
73	P	4,6-Dinitro-2-methylph	0.101	0.115	-13.9	89	0.00
74	CP	N-Nitrosodiphenylamine	0.653	0.640	2.0	87	0.00
75		1,2-Diphenylhydrazine	0.447	0.437	2.2	88	0.00
76	S	2,4,6-Tribromophenol	0.159	0.142	10.7	94	0.00
77	P	4-Bromophenyl phenyl e	0.226	0.215	4.9	86	0.00
78	P	Hexachlorobenzene	0.275	0.256	6.9	87	0.00
79	CP	Pentachlorophenol	0.115	0.129	-12.2	93	0.00
80	P	Phenanthrene	1.195	1.090	8.8	88	0.00
81	P	Anthracene	1.133	1.113	1.8	90	0.00
82	P	Carbazole	1.063	1.044	1.8	89	0.00
83	P	Di-n-butylphthalate	1.089	1.043	4.2	89	0.00
84	CP	Fluoranthene	1.266	1.174	7.3	89	0.00
85	I	Chrysene-d12	1.000	1.000	0.0	95	0.00
86		3,3'-Dimethylbenzidine	0.732	0.784	-7.1	91	0.00
87		Benzidine	0.729	0.788	-8.1	92	0.00
88		Pyrene	1.302	1.184	9.1	89	0.00
89	S	4-Terphenyl-d14	1.099	0.957	12.9	95	0.00
90	P	Butylbenzylphthalate	0.468	0.446	4.7	90	0.00
91	P	Benzo[a]anthracene	1.374	1.132	17.6	92	0.00
92	P	3,3'-Dichlorobenzidine	0.479	0.472	1.5	89	0.00
93	P	Chrysene	1.296	1.177	9.2	91	0.00
94	P	Bis(2-ethylhexyl)phtha	0.662	0.584	11.8	88	0.00

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113019.D
Acq On : 30 Nov 2020 05:32 pm
Operator : EE/EEW
Sample : 20 ug/mL BNA ICV
Misc : 300-0580J
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Dec 01 10:22:35 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
95	I	Perylene-d12	1.000	1.000	0.0	95	0.00
96	CP	Di-n-octylphthalate	0.991	0.942	4.9	88	0.00
97	P	Benzo(b)fluoranthene	1.130	1.053	6.8	90	0.00
98	P	Benzo(k)fluoranthene	1.168	1.138	2.6	90	0.00
99	CP	Benzo(a)pyrene	1.021	0.963	5.7	90	0.00
100	P	Indeno(1,2,3-cd)pyrene	1.032	0.982	4.8	90	0.00
101	P	Dibenz(a,h)anthracene	1.068	1.032	3.4	90	0.00
102	P	Benzo(g,h,i)perylene	1.180	1.123	4.8	90	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

2020 Nov 30 0943 Sequence Log .LOG

Starting sequence Mon Nov 30 09:43:51 2020

Instrument Name: SVMS9
Sequence File: D:\msdchem\1\sequences\SVMS9-201130.sequence.xml
Comment: Semivolatiles by 8270/625
Operator: EE/EEW
Data Path: D:\msdchem\1\data\SVMS9-201130\

Line	Type	Vials	DataFile	Sample Name
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
2)	Sample	1	20113002	CONDITION
3)	Sample	1	20113003	CONDITION
4)	Sample	2	20113004	RINSE
Comment: RINSE				
5)	Sample	2	20113005	RINSE
Comment: RINSE				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: DFTPP.M				
6)	Sample	3	20113006	DFTPP_TUNE1-201130
Comment: 300-0567, 50µg/ml DFTPP				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
7)	Sample	4	20113007	CCV1-201130-BNA
Comment: 300-0544F				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
8)	Sample	2	20113008	RINSE
Comment: RINSE				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: DFTPP.M				
9)	Sample	3	20113009	DFTPP_TUNE2-201130
Comment: 300-0567, 50µg/ml DFTPP				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
10)	Sample	41	20113010	0.1 ug/mL BNA
Comment: 300-0580A				
11)	Sample	42	20113011	0.5 ug/mL BNA
Comment: 300-0580B				
12)	Sample	43	20113012	1.0 ug/mL BNA
Comment: 300-0580C				
13)	Sample	44	20113013	5.0 ug/mL BNA
Comment: 300-0580D				

2020 Nov 30 0943 Sequence Log .LOG

14) Sample 45 20113014 10 ug/mL BNA
Comment: 300-0580E
15) Sample 46 20113015 20 ug/mL BNA
Comment: 300-0580F
16) Sample 47 20113016 40 ug/mL BNA
Comment: 300-0580G
17) Sample 48 20113017 50 ug/mL BNA
Comment: 300-0580H
18) Sample 49 20113018 60 ug/mL BNA
Comment: 300-0580I
19) Sample 50 20113019 20 ug/mL BNA ICV
Comment: 300-0580J

Acquisition Method Path: D:\msdchem\1\run methods\
Acquisition Method File: DFTPP.M
20) Sample 3 20113020 DFTPP_TUNE1-201130
Comment: 300-0567, 50µg/ml DFTPP

Acquisition Method Path: D:\msdchem\1\run methods\
Acquisition Method File: 8270.M
21) Sample 4 20113021 CCV2-201130-BNA
Comment: 300-0580F
22) Sample 5 20113022 SBLKW1-168341
Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
23) Sample 6 20113023 SLCSW1-168341
Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
24) Sample 7 20113024 SBLKW1-168276
Comment: 1X 20BAW-168276/7/8/94; IS:300-0576; WATER
25) Sample 8 20113025 SLCSW1-168276
Comment: 1X 20BAW-168276/7/8/94; IS:300-0576; WATER
26) Sample 9 20113026 SLCSDW1-168276
Comment: 1X 20BAW-168276/7/8/94; IS:300-0576; WATER
27) Sample 10 20113027 SBLKW1-168337
Comment: 1X 20BAW-168337; IS:300-0576; WATER
28) Sample 11 20113028 SLCSW1-168337
Comment: 1X 20BAW-168337; IS:300-0576; WATER
29) Sample 12 20113029 SLCSDW1-168337
Comment: 1X 20BAW-168337; IS:300-0576; WATER
30) Sample 13 20113030 20111987-09G
Comment: 1X 20BAW-168337; IS:300-0576; WATER
31) Sample 14 20113031 20111250-01B
Comment: 1X 20BAS-168230; IS:300-0576; SOIL
32) Sample 15 20113032 20111727-01B
Comment: 1X 20BAW-168277; IS:300-0576; WATER
33) Sample 16 20113033 20111831-01E
Comment: 1X 20BAW-168277; IS:300-0576; WATER
34) Sample 17 20113034 20111958-01B
Comment: 1X 20BAW-168277; IS:300-0576; WATER

2020 Nov 30 0943 Sequence Log .LOG

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 35) Sample          18      20113035               20111833-01A
     Comment: 1X 20BAW-168278; IS:300-0576; WATER
 36) Sample          19      20113036               20111733-02A MS
     Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
 37) Sample          20      20113037               20111733-02A MSD
     Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
 38) Sample          21      20113038               20111733-02A
     Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
 39) Sample          22      20113039               20111764-02A
     Comment: 1X 20BAW-168343; IS:300-0576; WATER
 40) Sample          23      20113040               20111764-04A
     Comment: 1X 20BAW-168343; IS:300-0576; WATER
 41) Sample          24      20113041               20111764-06A
     Comment: 1X 20BAW-168343; IS:300-0576; WATER
 42) Sample          25      20113042               20111878-04C
     Comment: 1X 20BAW-168342; IS:300-0576; WATER
 43) Sample          26      20113043               20111878-09C
     Comment: 1X 20BAW-168342; IS:300-0576; WATER
 44) Sample          27      20113044               20112006-04C
     Comment: 1X 20BAW-168342; IS:300-0576; WATER
 45) Sample          28      20113045               20112006-09C
     Comment: 1X 20BAW-168342; IS:300-0576; WATER
 46) Sample          29      20113046               20112007-04C
     Comment: 1X 20BAW-168342; IS:300-0576; WATER
 47) Sample          30      20113047               20112007-09C
     Comment: 1X 20BAW-168342; IS:300-0576; WATER
 48) Sample          31      20113048               20111895-01A
     Comment: 1X 20BAW-168341; IS:300-0576; WATER
 49) Sample          32      20113049               20112051-26A
     Comment: 1X 20BAW-168341; IS:300-0576; WATER
 50) Sample          33      20113050               20111872-01D
     Comment: 1X 20BAW-168345; IS:300-0576; WATER

Sequence completed Tue Dec 01 05:57:21 2020

  D:\msdchem\1\data\SVMS9-201130\2020 Nov 30 1310 Quality Log.LOG
  D:\msdchem\1\data\SVMS9-201130\2020 Nov 30 1310 Sequence Log .LOG
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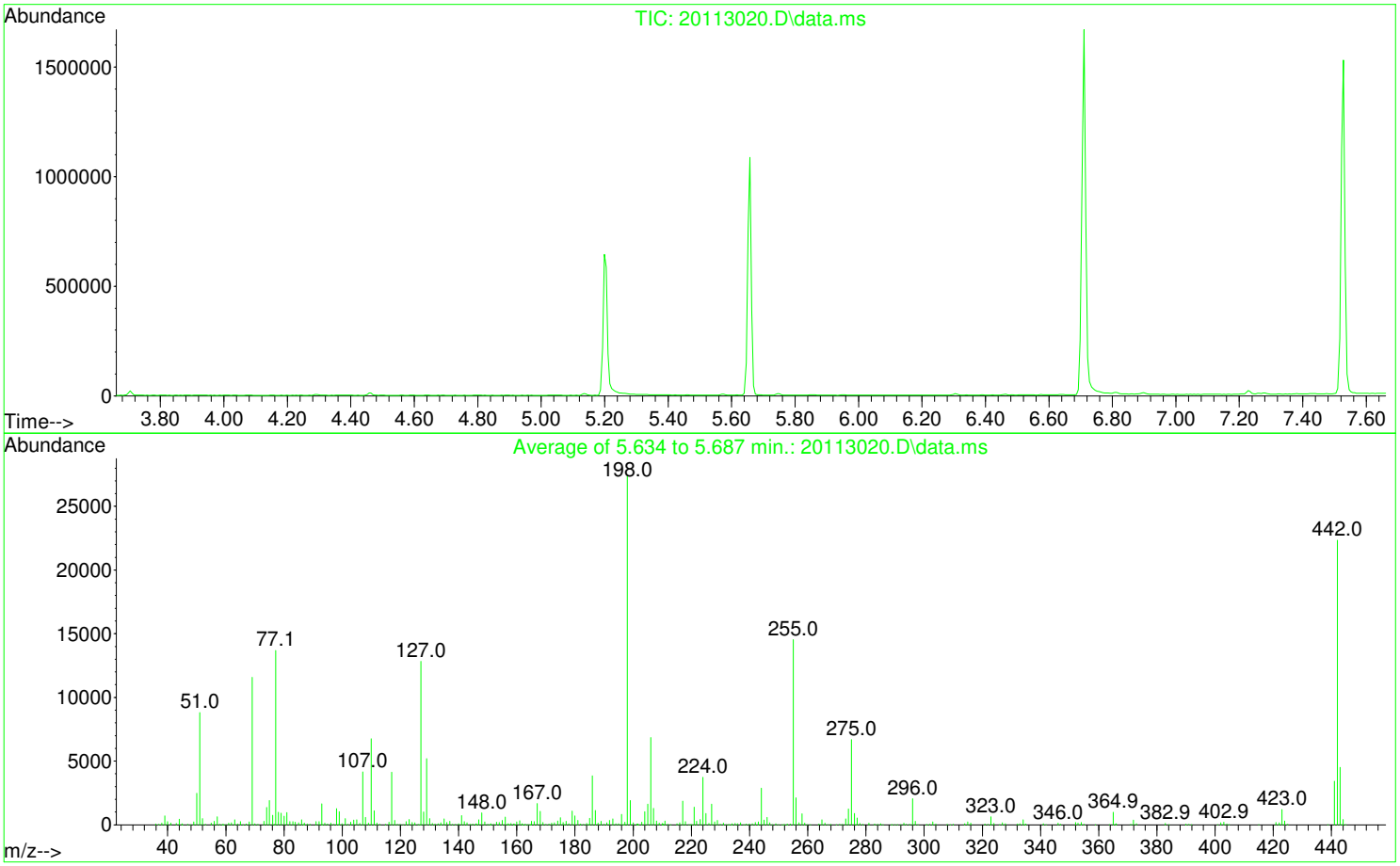
1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113020.D
Acq On : 30 Nov 2020 05:51 pm
Operator : EE/EEW
Sample : DFTPP_TUNE1-201130
Misc : 300-0567, 50µg/ml DFTPP
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Title : 8270/625/1311 Calibration
Last Update : Tue Dec 01 10:20:30 2020



Spectrum Information: Average of 5.634 to 5.687 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.2	8815	PASS
68	69	0.00	2	1.9	224	PASS
70	69	0.00	2	0.8	89	PASS
127	198	40	60	46.9	12832	PASS
197	198	0.00	1	0.7	200	PASS
198	198	100	100	100.0	27388	PASS
199	198	5	9	6.9	1893	PASS
275	198	10	30	24.4	6688	PASS
365	198	1	100	3.6	978	PASS
441	443	0.01	100	76.1	3420	PASS
442	198	40	100	81.6	22343	PASS
443	442	17	23	20.1	4496	PASS

Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	68.5	47.80	5.3	59.05	26.8	69.00	11574.1
36.95	38.3	49.00	230.7	59.30	5.3	70.00	89.4
38.00	136.8	50.00	2478.9	60.00	13.9	71.05	29.3
39.00	696.7	51.00	8814.8	61.00	130.5	73.05	281.5
39.95	256.2	52.00	475.9	61.95	162.5	74.00	1362
41.05	136.3	52.95	29.3	63.00	392.9	75.00	1895.9
42.95	101.1	54.95	133.1	64.05	65.2	76.05	747.5
43.95	435.2	56.00	265.4	65.00	255.8	76.85	43.4
44.90	79.7	57.00	618.8	65.90	7.7	77.10	13692.8
45.10	5.4	57.95	47.1	66.95	67.6	78.05	992.8
46.85	30.4	58.80	6.9	68.00	224.3	79.00	903.9

Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
80.00	675.7	90.95	255	99.95	93.4	111.00	1099
81.00	959	92.00	257.2	101.00	495.5	111.95	133
81.95	239.1	93.00	1651.5	101.95	38.3	112.95	38.6
83.00	239.1	93.20	5.7	102.95	202.4	114.90	26.1
83.90	210.7	94.00	138.6	103.95	360.1	116.05	204
84.95	153.2	94.90	61.5	105.00	379.8	117.00	4117.3
86.00	389.3	96.05	135.5	106.00	112.2	118.00	332.8
86.80	5.1	97.05	43.7	107.00	4150.2	119.00	35.7
86.95	137.1	98.00	1270	108.00	589.3	119.90	43.4
87.95	56.7	98.80	15.5	109.00	126	120.95	22.6
88.90	34.7	99.00	1037.2	110.00	6742.6	122.00	252.7

Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
123.00	415.4	132.90	90	142.90	159.4	152.00	36.2
124.00	182.8	133.90	154.5	144.00	40.8	153.00	189.8
125.00	145.1	134.10	8.2	144.85	50	154.00	180.7
126.10	41.5	135.00	456.7	145.90	50	155.00	348.8
126.70	12.3	135.95	186.9	146.05	88.8	156.00	595.7
127.00	12832.3	137.00	269.6	146.95	396.9	156.75	19.2
128.00	1002.7	137.90	45.9	148.00	936.2	157.05	95
129.00	5182.5	138.95	32.6	149.00	228.3	157.40	9.1
130.00	482.1	140.00	80.7	150.00	45.2	157.95	111.1
130.95	103.5	141.00	719.3	150.80	13.1	158.90	65.7
131.90	61.6	141.95	244.8	151.10	86.3	159.10	30.2

Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
159.95	227.5	167.00	1667.9	176.95	284.4	187.00	1121.7
161.00	325.7	168.00	1050.1	177.90	87.7	187.95	128.9
161.80	90.9	168.95	170.9	179.00	1072.1	188.95	267.9
162.10	15	170.00	46.6	180.00	692.8	190.00	37.8
162.90	29.7	171.05	66.2	181.00	342.8	190.95	150.2
163.10	5.3	171.95	138.8	181.90	64.4	191.90	332.1
163.80	17.1	172.95	159.7	182.95	34.4	193.00	450.5
164.20	6.3	174.00	306.6	183.95	102.5	194.00	87.2
164.70	11.9	175.00	555	184.60	5.6	195.00	72.8
165.00	277.1	175.95	168.6	185.00	518.9	196.00	817
165.95	249.9	176.30	8.1	186.00	3839.6	196.70	6.9

Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
197.10	199.9	207.00	1296.5	217.00	1849.1	227.00	1614.4
198.00	27387.6	208.00	289.9	217.95	241.9	228.00	218.2
199.00	1893.1	208.15	28.2	219.20	11	228.95	335.4
200.00	152.6	208.95	138.8	219.80	6.8	230.00	39.5
201.25	55.8	209.95	112.6	220.10	5.8	231.00	139.3
201.60	63	210.30	63.2	221.00	1375.3	232.00	20.6
202.00	21.3	210.95	301.8	221.80	280.9	232.80	12.1

202.95	211.6	211.90	37.7	223.00	403.7	233.10	11.8
204.00	1027.3	212.85	15.9	224.00	3737.1	233.80	8.9
205.00	1625.4	215.05	86.9	225.00	896.7	234.00	94.9
206.00	6838.3	216.00	162.8	226.05	115.6	235.00	103.6

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
235.90	83.2	246.00	581	255.00	14536.1	267.85	34.7
236.95	153.9	246.90	143.9	256.00	2124.1	269.85	22
238.05	22	247.90	21.2	256.95	163.5	271.00	33.8
238.90	64	249.00	86.7	258.00	864.6	271.95	40.6
239.95	65.8	249.95	19.7	258.95	131.2	273.00	471.7
240.90	95.1	251.20	7.6	259.90	24.4	274.00	1250.2
242.00	181.4	251.75	13.3	260.90	17.7	275.00	6687.5
242.90	9	252.00	13.9	263.80	57	276.00	883.7
243.05	224.2	252.90	44.1	264.90	398	276.80	19.7
244.05	2881.5	253.00	30.6	265.85	120.9	277.00	538.8
245.00	366.7	254.00	67.9	266.90	11	277.90	105.4

Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

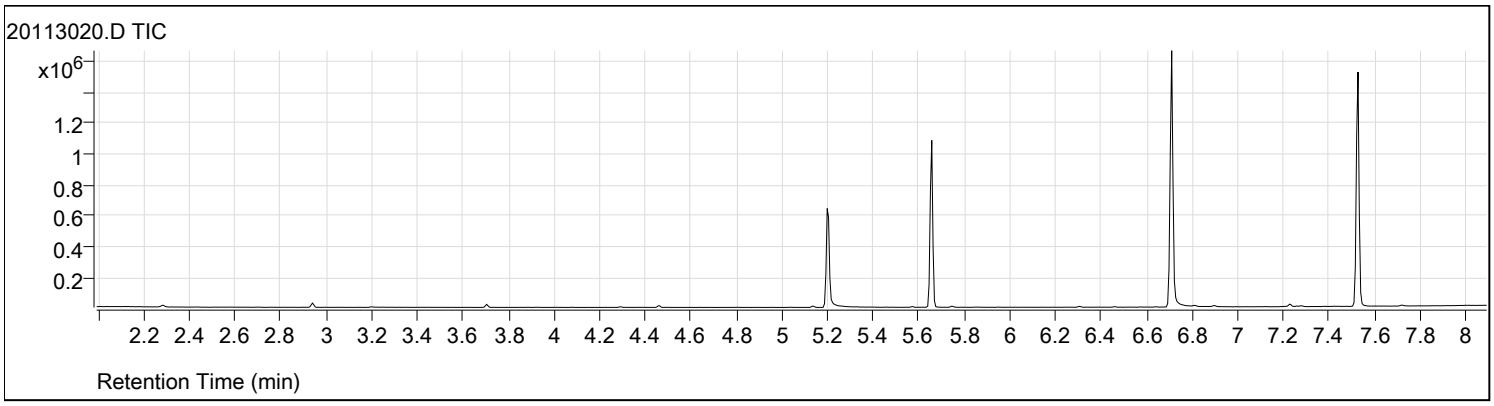
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
278.90	30.8	293.00	121.4	307.95	29	326.90	145.8
281.00	120	293.90	44.7	309.00	12	327.90	71.8
282.95	67.1	294.95	45.9	310.05	27.2	332.05	52.6
284.00	45.8	296.00	2038.7	313.95	80.9	332.90	74.4
285.00	90.1	296.95	276.4	314.95	224.3	334.00	392.1
285.90	6.8	297.90	19.6	316.00	131.5	334.80	7.2
288.80	5.6	300.80	7.6	320.90	56.9	335.00	68.2
289.10	6.6	300.95	21.8	321.95	38.3	340.95	73.4
290.05	15.5	301.90	30	323.00	639.1	341.90	18.5
290.85	14.1	303.00	233.9	323.95	99.3	346.00	138.6
292.00	19.5	303.95	51.7	325.95	14.8	346.85	29.6

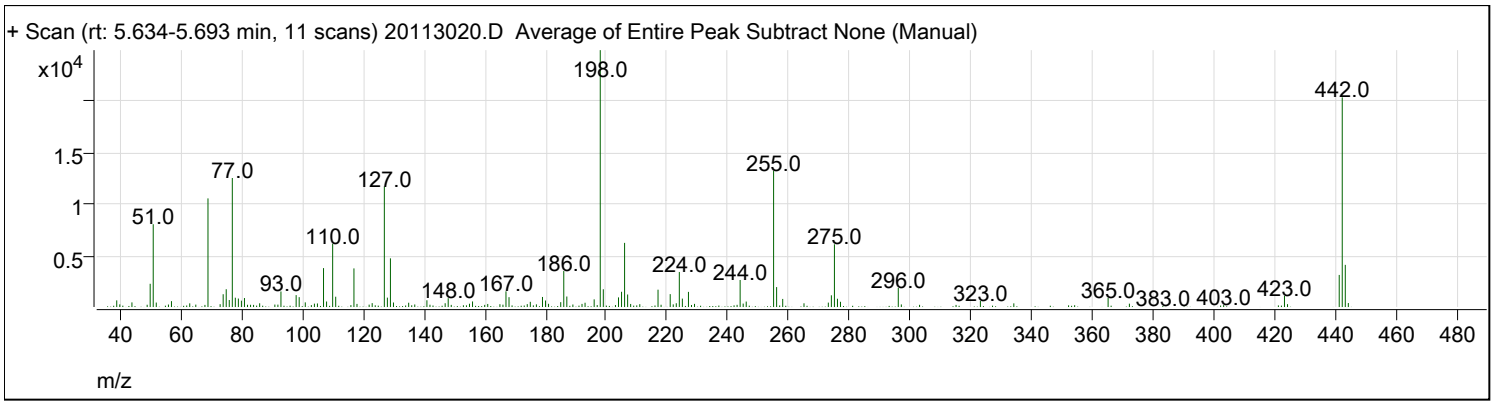
Average of 5.634 to 5.687 min.: 20113020.D\data.ms
DFTPP_TUNE1-201130

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
352.00	180.7	371.95	359.3	404.00	66	442.00	22342.5
352.90	130.8	372.95	85.9	404.90	5.4	443.00	4496
353.90	6.4	382.95	110.6	415.00	5.2	443.80	8.2
354.05	188.5	384.10	17	420.95	174.1	443.95	417.6
354.95	44.2	389.90	36.3	421.80	7.7	444.90	15.2
358.90	15.5	390.10	15.7	422.05	144.2		
363.70	10.9	390.95	26.7	423.00	1191.3		
364.95	977.5	391.95	21.6	423.95	304.3		
365.80	52.2	400.95	12.7	424.95	28.5		
366.00	92.3	401.95	159	438.80	7.4		
370.95	48.2	402.95	205	441.00	3419.9		

Tune Evaluation Report

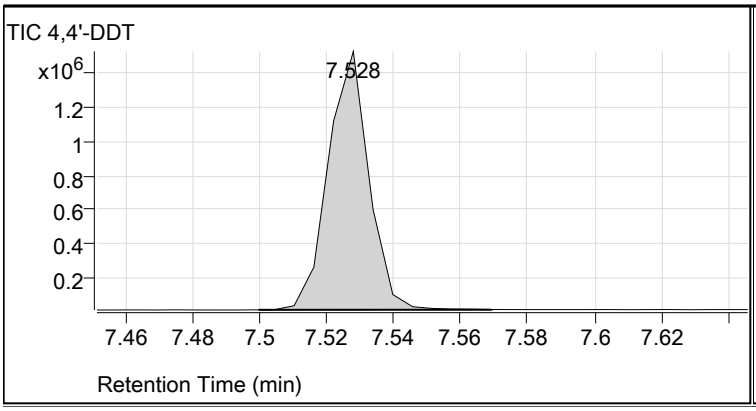
Data Path: D:\msdchem\1\data\SVMS9-201130\20113020.D
Acq on: 11/30/2020 5:51:23 PM
Operator: EE/EEW
Sample: DFTPP_TUNE1-201130
Inst Name: SVMS9
ALS Vial: 3
Method: D:\MassHunter\Methods\Quant\DFTPP DRW.m

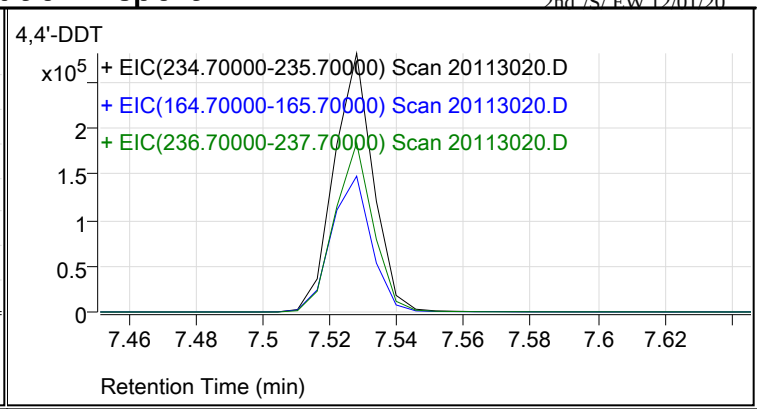


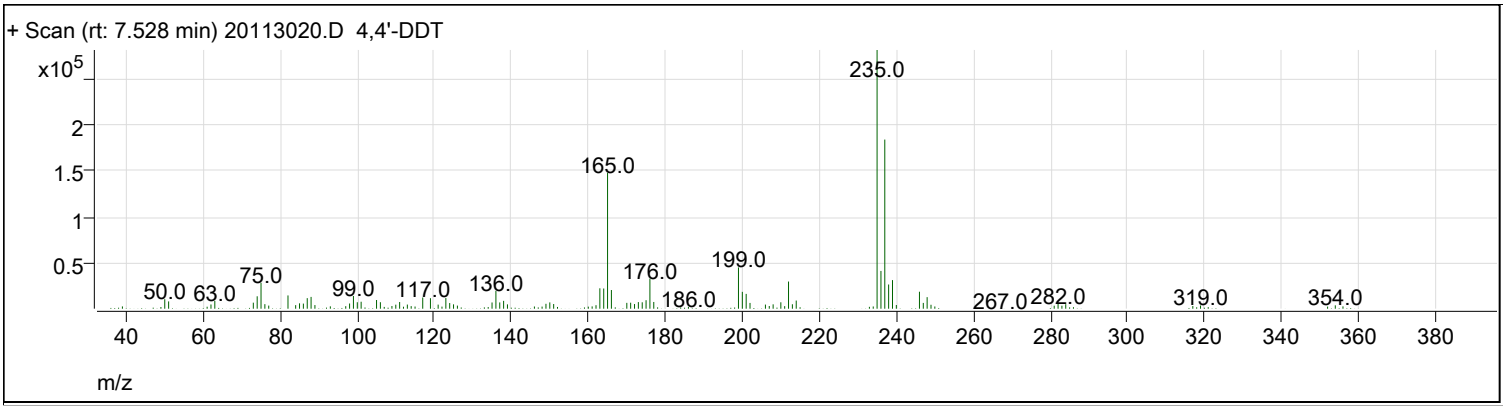


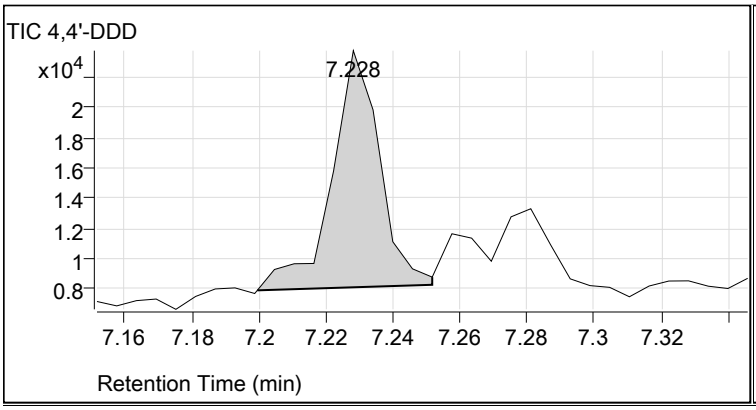
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
51	198	30	60	32.2	8025	Pass
68	69	0	2	1.9	204	Pass
70	69	0	2	0.8	81	Pass
127	198	40	60	46.9	11678	Pass
197	198	0	1	0.8	193	Pass
198	198	100	100	100.0	24899	Pass
199	198	5	9	6.9	1721	Pass
275	198	10	30	24.4	6080	Pass
365	198	1	100	3.6	889	Pass
441	443	1E-10	100	76.1	3109	Pass
442	198	50	100	81.6	20320	Pass
443	442	17	23	20.1	4088	Pass

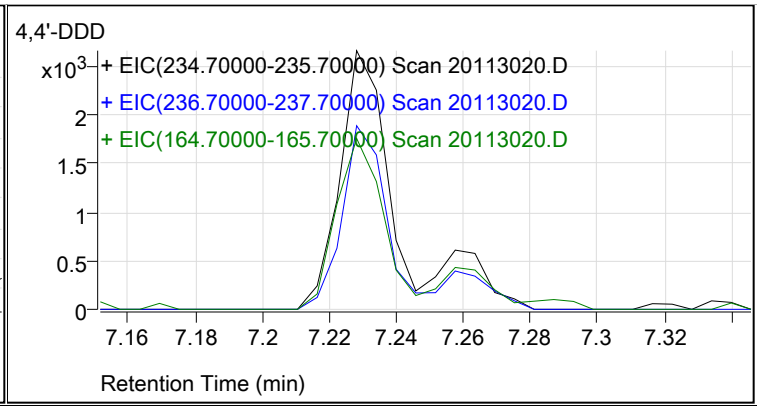
Tune Evaluation Report

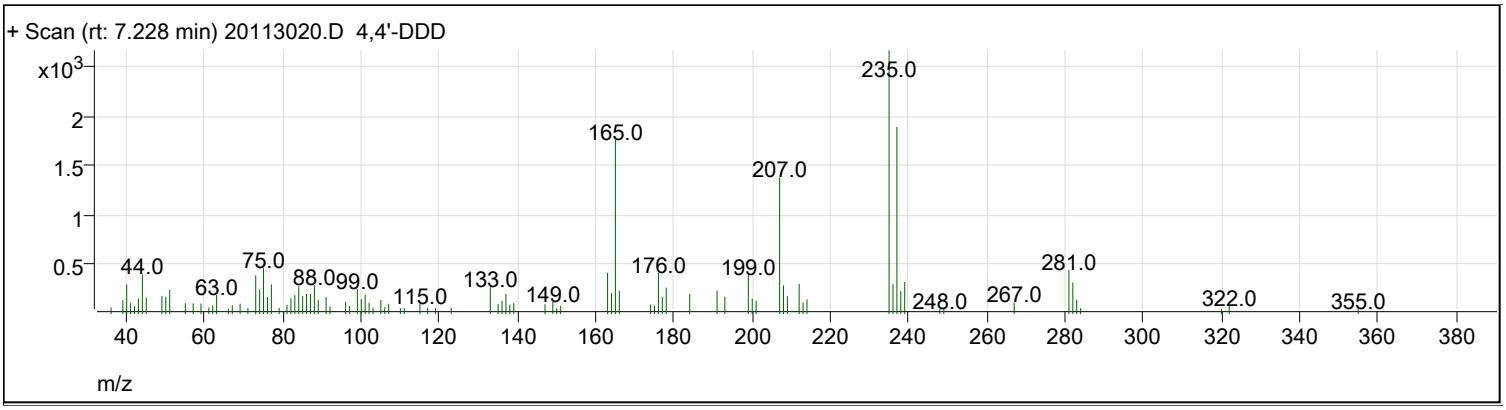


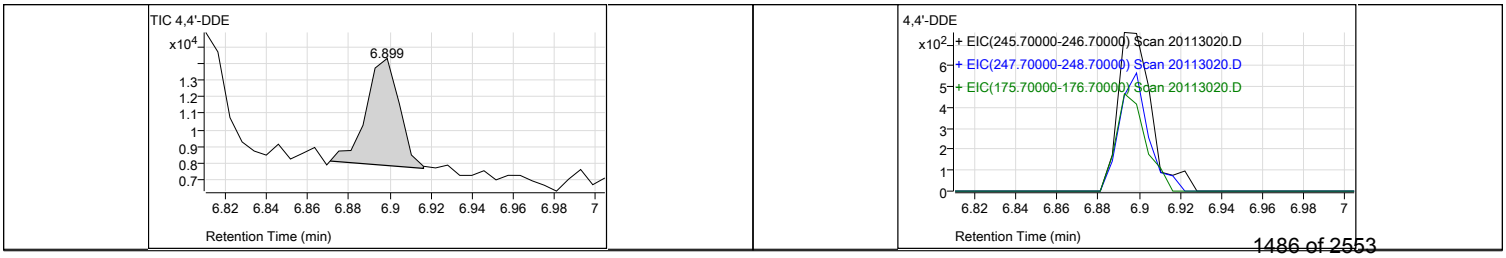




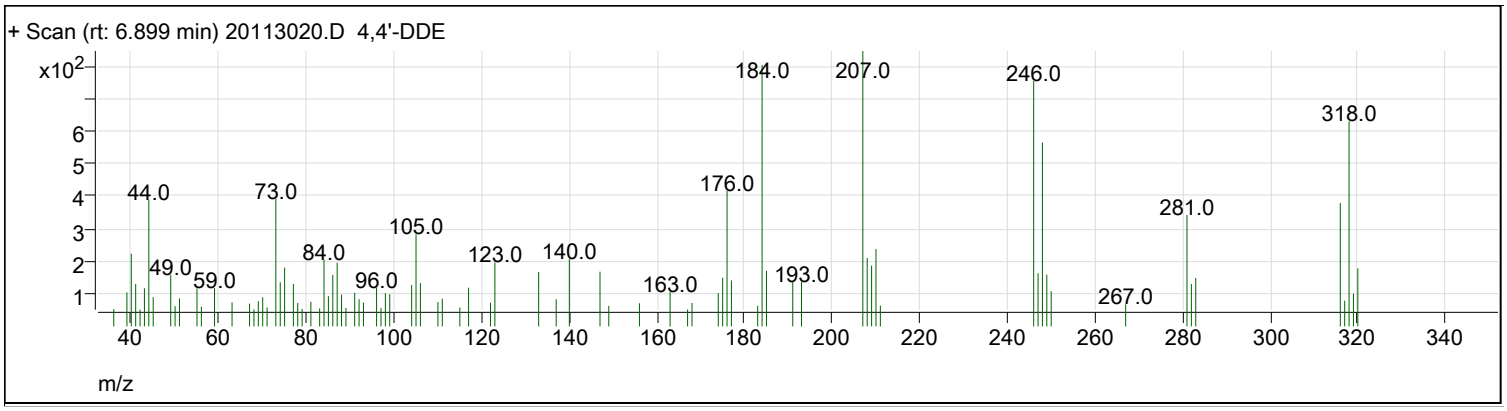






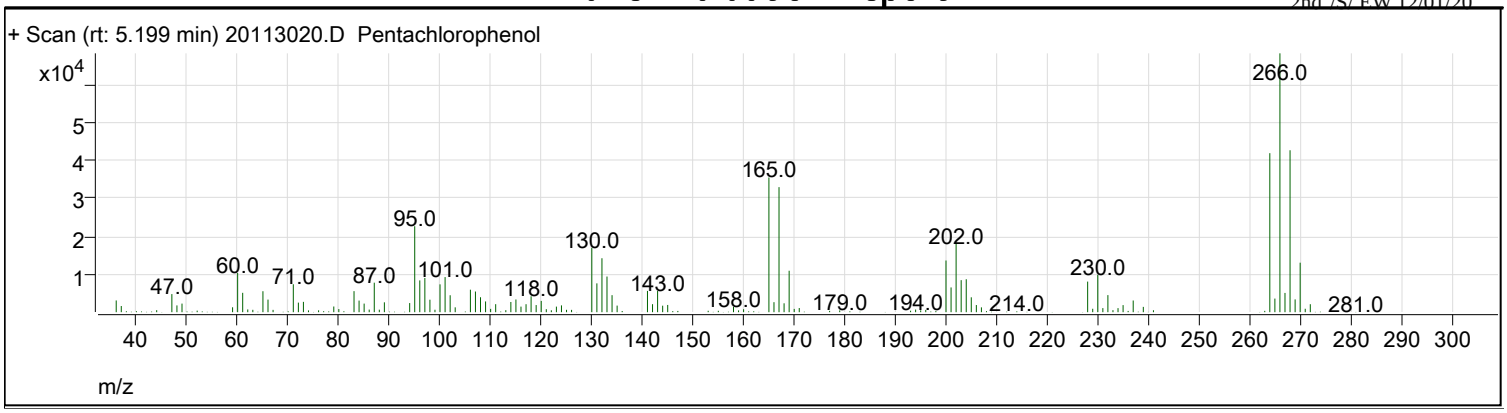


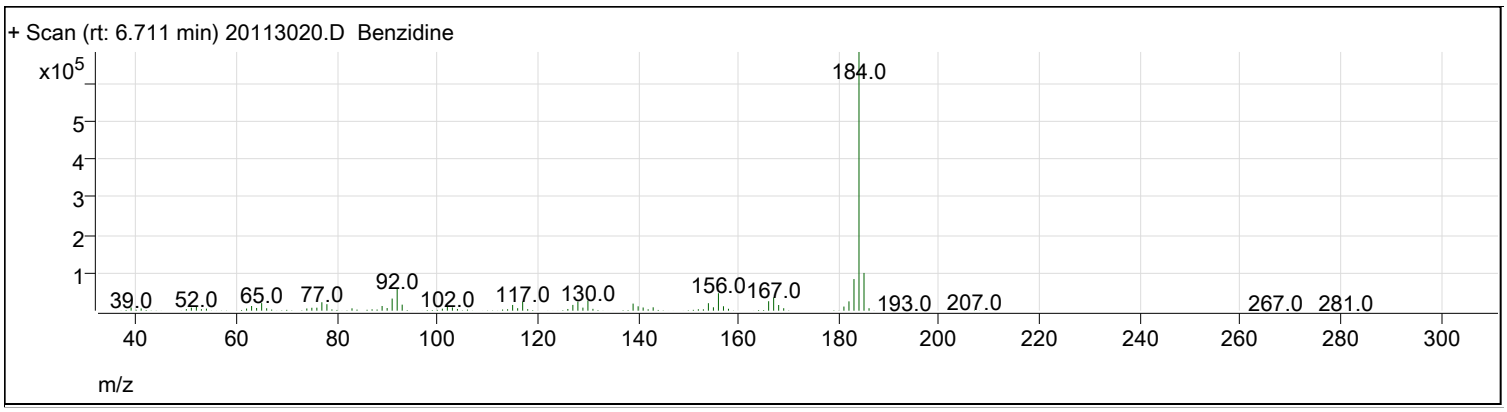
Tune Evaluation Report



Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	7.550	7.528	1280243	1.7	Pass
4,4'-DDD	7.250	7.228	15308		
4,4'-DDE	6.910	6.899	7197		

Tune Evaluation Report





Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	5.210	5.199	1.6	3.8	Pass
Benzidine	6.720	6.711	0.9	4.1	Pass

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	117	0.00
2		1,4-Dioxane	20.000	22.641	-13.2	131	0.00
3		Pyridine	20.000	21.203	-6.0	123	0.00
4		N-Nitrosodimethylamine	20.000	19.912	0.4	118	0.00
5	S	2-Fluorophenol	20.000	21.147	-5.7	125	0.00
6	P	Benzaldehyde	20.000	19.032	4.8	111	0.00
7	S	Phenol-d6	20.000	21.087	-5.4	123	0.00
8	CP	Phenol	20.000	19.772	1.1	115	0.00
9		Aniline	20.000	20.910	-4.6	114	0.00
10	P	Bis(2-chloroethyl)ether	20.000	19.302	3.5	114	0.00
11	P	2-Chlorophenol	20.000	21.032	-5.2	114	0.00
12		1,3-Dichlorobenzene	20.000	19.386	3.1	114	0.00
13	C	1,4-Dichlorobenzene	20.000	19.262	3.7	113	0.00
14		Benzyl alcohol	20.000	19.537	2.3	114	0.00
15		1,2-Dichlorobenzene	20.000	19.384	3.1	114	0.00
16	P	2-Methylphenol	20.000	19.177	4.1	113	0.00
17	P	2,2`-Oxybis(1-chloropropane	20.000	19.807	1.0	118	0.00
18		Bis(2-chloroisopropyl)ether	20.000	19.807	1.0	118	0.00
19	P	3-Methylphenol	20.000	19.433	2.8	114	0.00
20	P	4-Methylphenol	20.000	19.433	2.8	114	0.00
21	P	3&4-Methylphenol	20.000	19.457	2.7	114	0.00
22	P	Acetophenone	20.000	19.304	3.5	115	0.00
23	P	N-Nitrosodi-n-propylamine	20.000	18.694	6.5	113	0.00
24	P	Hexachloroethane	20.000	19.236	3.8	114	0.00
25	I	Naphthalene-d8	40.000	40.000	0.0	116	0.00
26	S	Nitrobenzene-d5	20.000	20.861	-4.3	122	0.00
27	P	Nitrobenzene	20.000	20.327	-1.6	112	0.00
28	P	Isophorone	20.000	19.897	0.5	113	0.00
29	CP	2-Nitrophenol	20.000	19.354	3.2	111	0.00
30	P	2,4-Dimethylphenol	20.000	18.817	5.9	110	0.00
31	P	Bis(2-chloroethoxy)met	20.000	19.782	1.1	116	0.00
32		Benzoic acid	20.000	19.443	2.8	114	0.00
33	CP	2,4-Dichlorophenol	20.000	19.348	3.3	113	0.00
34		1,2,4-Trichlorobenzene	20.000	20.363	-1.8	113	0.00
35		4-Chlorophenol	20.000	0.000	100.0#	0	0.05
36	P	Naphthalene	20.000	19.361	3.2	113	0.00
37	P	4-Chloroaniline	20.000	19.462	2.7	114	0.00
38		2,6-Dichlorophenol	20.000	19.027	4.9	111	0.00
39	CP	Hexachlorobutadiene	20.000	20.180	-0.9	112	0.00
40	P	Caprolactam	20.000	18.882	5.6	115	0.00
41	CP	4-Chloro-3-methylphenol	20.000	19.852	0.7	112	0.00
42	P	2-Methylnaphthalene	20.000	19.080	4.6	112	0.00
43		1-Methylnaphthalene	20.000	18.782	6.1	112	0.00
44	P	1,2,4,5-Tetrachlorobenzene	20.000	18.877	5.6	111	0.00
45	P	1,1-Biphenyl	20.000	18.773	6.1	112	0.00
46		2,3,5,6-Tetrachlorophenol	20.000	18.711	6.4	109	0.00
47	P	2,3,4,6-Tetrachlorophenol	20.000	18.469	7.7	111	0.00
48		1,4-Dinitrobenzene	20.000	18.745	6.3	110	0.00

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49		1,3-Dinitrobenzene	20.000	18.924	5.4	112	0.00
50		1,2-Dinitrobenzene	20.000	18.344	8.3	108	0.00
51	I	Acenaphthene-d10	40.000	40.000	0.0	116	0.00
52	P	Hexachlorocyclopentadiene	20.000	19.444	2.8	110	0.00
53	CP	2,4,6-Trichlorophenol	20.000	19.757	1.2	114	0.00
54	P	2,4,5-Trichlorophenol	20.000	20.357	-1.8	113	0.00
55	S	2-Fluorobiphenyl	20.000	20.640	-3.2	121	0.00
56	P	2-Chloronaphthalene	20.000	19.250	3.8	111	0.00
57	P	2-Nitroaniline	20.000	19.293	3.5	113	0.00
58	P	Dimethylphthalate	20.000	19.346	3.3	111	0.00
59	P	Acenaphthylene	20.000	20.400	-2.0	112	0.00
60	P	2,6-Dinitrotoluene	20.000	19.454	2.7	112	0.00
61	P	3-Nitroaniline	20.000	19.242	3.8	113	0.00
62	CP	Acenaphthene	20.000	19.741	1.3	111	0.00
63	P	2,4-Dinitrophenol	20.000	19.618	1.9	117	0.00
64	P	Dibenzofuran	20.000	19.673	1.6	110	0.00
65	P	4-Nitrophenol	20.000	19.920	0.4	116	0.00
66	P	2,4-Dinitrotoluene	20.000	19.321	3.4	113	0.00
67	P	Diethylphthalate	20.000	18.743	6.3	110	0.00
68	P	Fluorene	20.000	18.841	5.8	110	0.00
69	P	4-Chlorophenyl phenyl	20.000	20.134	-0.7	110	0.00
70	P	4-Nitroaniline	20.000	19.081	4.6	111	0.00
71	P	Atrazine	20.000	19.598	2.0	109	0.00
72	I	Phenanthrene-d10	40.000	40.000	0.0	114	0.00
73	P	4,6-Dinitro-2-methylph	20.000	20.042	-0.2	113	0.00
74	CP	N-Nitrosodiphenylamine	20.000	20.537	-2.7	110	0.00
75		1,2-Diphenylhydrazine	20.000	20.437	-2.2	111	0.00
76	S	2,4,6-Tribromophenol	20.000	21.224	-6.1	124	0.00
77	P	4-Bromophenyl phenyl e	20.000	20.026	-0.1	109	0.00
78	P	Hexachlorobenzene	20.000	19.836	0.8	112	0.00
79	CP	Pentachlorophenol	20.000	20.472	-2.4	117	0.00
80	P	Phenanthrene	20.000	19.184	4.1	109	0.00
81	P	Anthracene	20.000	19.201	4.0	110	0.00
82	P	Carbazole	20.000	20.432	-2.2	111	0.00
83	P	Di-n-butylphthalate	20.000	19.646	1.8	110	0.00
84	CP	Fluoranthene	20.000	19.361	3.2	110	0.01
85	I	Chrysene-d12	40.000	40.000	0.0	115	0.00
86		3,3'-Dimethylbenzidine	20.000	19.511	2.4	113	0.01
87		Benzidine	20.000	19.577	2.1	113	0.00
88		Pyrene	20.000	19.337	3.3	111	0.00
89	S	4-Terphenyl-d14	20.000	20.493	-2.5	121	0.01
90	P	Butylbenzylphthalate	20.000	19.809	1.0	113	0.00
91	P	Benzo[a]anthracene	20.000	19.959	0.2	115	0.01
92	P	3,3'-Dichlorobenzidine	20.000	19.618	1.9	114	0.00
93	P	Chrysene	20.000	19.645	1.8	114	0.01
94	P	Bis(2-ethylhexyl)phtha	20.000	18.984	5.1	110	0.00

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
95	I	Perylene-d12	40.000	40.000	0.0	118	0.00
96	CP	Di-n-octylphthalate	20.000	18.271	8.6	109	0.00
97	P	Benzo(b)fluoranthene	20.000	19.013	4.9	114	0.00
98	P	Benzo(k)fluoranthene	20.000	19.588	2.1	114	0.00
99	CP	Benzo(a)pyrene	20.000	19.247	3.8	114	0.00
100	P	Indeno(1,2,3-cd)pyrene	20.000	19.068	4.7	114	0.00
101	P	Dibenz(a,h)anthracene	20.000	19.083	4.6	114	0.00
102	P	Benzo(g,h,i)perylene	20.000	19.046	4.8	113	0.00

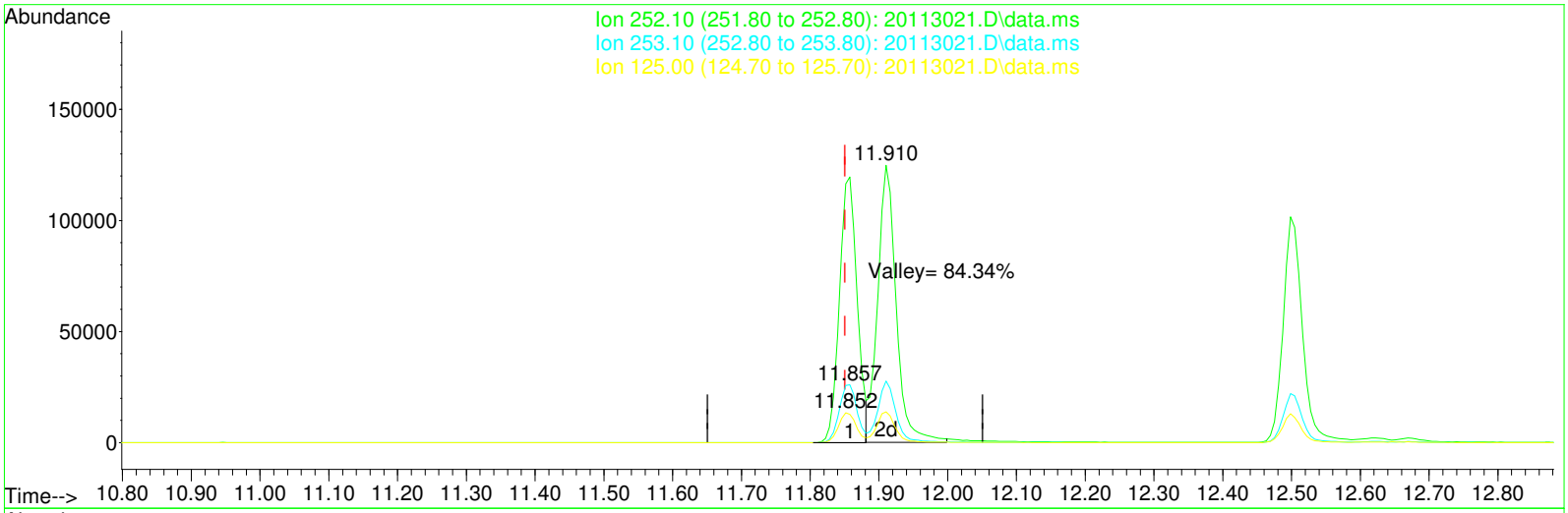
(#) = Out of Range SPCC's out = 0 CCC's out = 0

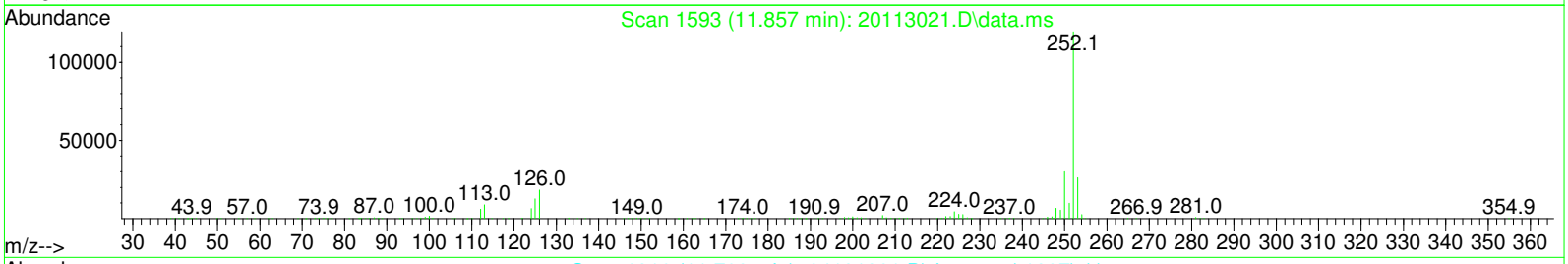
1st /S/ EE 12/01/20

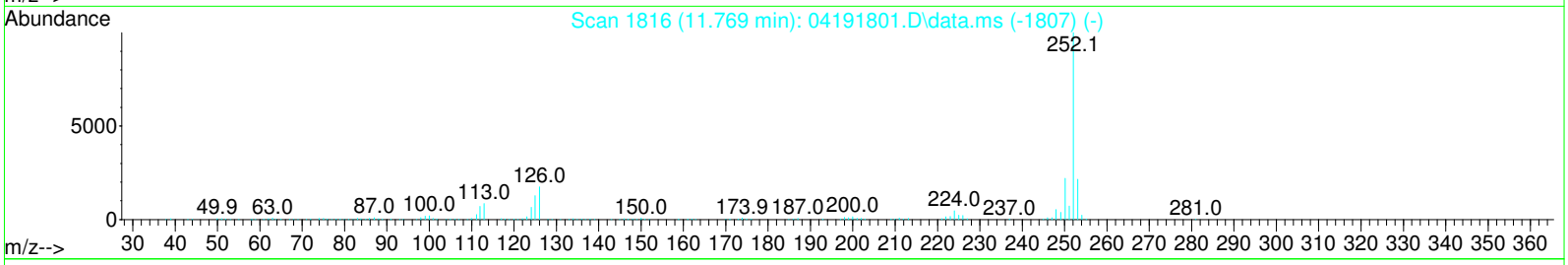
2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration







TIC: 20113021.D\data.ms

(97) Benzo(b)fluoranthene (P)

11.857min (+ 0.006) 19.01 ug/ml

response 215308

Ion	Exp%	Act%
252.10	100.00	100.00
253.10	21.90	22.16
125.00	11.30	11.34
0.00	0.00	0.00

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	117	0.00
2		1,4-Dioxane	0.328	0.372	-13.4	131	0.00
3		Pyridine	0.677	0.744	-9.9	123	0.00
4		N-Nitrosodimethylamine	0.142	0.142	0.0	118	0.00
5	S	2-Fluorophenol	0.745	0.764	-2.6	125	0.00
6	P	Benzaldehyde	0.465	0.451	3.0	111	0.00
7	S	Phenol-d6	0.829	0.876	-5.7	123	0.00
8	CP	Phenol	0.862	0.924	-7.2	115	0.00
9		Aniline	1.025	1.072	-4.6	114	0.00
10	P	Bis(2-chloroethyl)ether	0.655	0.653#	0.3	114	0.00
11	P	2-Chlorophenol	0.774	0.814	-5.2	114	0.00
12		1,3-Dichlorobenzene	0.931	0.942	-1.2	114	0.00
13	C	1,4-Dichlorobenzene	0.950	0.951	-0.1	113	0.00
14		Benzyl alcohol	0.442	0.480	-8.6	114	0.00
15		1,2-Dichlorobenzene	0.897	0.906	-1.0	114	0.00
16	P	2-Methylphenol	0.629	0.657	-4.5	113	0.00
17	P	2,2`-Oxybis(1-chloropropane	0.476	0.469	1.5	118	0.00
18		Bis(2-chloroisopropyl)ether	0.476	0.469	1.5	118	0.00
19	P	3-Methylphenol	0.697	0.719	-3.2	114	0.00
20	P	4-Methylphenol	0.697	0.719	-3.2	114	0.00
21	P	3&4-Methylphenol	0.701	0.726	-3.6	114	0.00
22	P	Acetophenone	0.878	0.902	-2.7	115	0.00
23	P	N-Nitrosodi-n-propylamine	0.360	0.358#	0.6	113	0.00
24	P	Hexachloroethane	0.287	0.287#	0.0	114	0.00
25	I	Naphthalene-d8	1.000	1.000	0.0	116	0.00
26	S	Nitrobenzene-d5	0.270	0.267	1.1	122	0.00
27	P	Nitrobenzene	0.238	0.242	-1.7	112	0.00
28	P	Isophorone	0.495	0.492	0.6	113	0.00
29	CP	2-Nitrophenol	0.187	0.199	-6.4	111	0.00
30	P	2,4-Dimethylphenol	0.303	0.304	-0.3	110	0.00
31	P	Bis(2-chloroethoxy)met	0.328	0.348	-6.1	116	0.00
32		Benzoic acid	0.174	0.165	5.2	114	0.00
33	CP	2,4-Dichlorophenol	0.304	0.320	-5.3	113	0.00
34		1,2,4-Trichlorobenzene	0.347	0.353	-1.7	113	0.00
35		4-Chlorophenol	0.000	1.053	0.0	0#	0.05
36	P	Naphthalene	1.045	1.053	-0.8	113	0.00
37	P	4-Chloroaniline	0.418	0.441	-5.5	114	0.00
38		2,6-Dichlorophenol	0.310	0.320	-3.2	111	0.00
39	CP	Hexachlorobutadiene	0.177	0.178	-0.6	112	0.00
40	P	Caprolactam	0.088	0.083	5.7	115	0.00
41	CP	4-Chloro-3-methylphenol	0.276	0.274	0.7	112	0.00
42	P	2-Methylnaphthalene	0.701	0.728	-3.9	112	0.00
43		1-Methylnaphthalene	0.671	0.669	0.3	112	0.00
44	P	1,2,4,5-Tetrachlorobenzene	0.356	0.356	0.0	111	0.00
45	P	1,1-Biphenyl	0.888	0.888	0.0	112	0.00
46		2,3,5,6-Tetrachlorophenol	0.181	0.188	-3.9	109	0.00
47	P	2,3,4,6-Tetrachlorophenol	0.209	0.206	1.4	111	0.00
48		1,4-Dinitrobenzene	0.115	0.116	-0.9	110	0.00

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
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Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49		1,3-Dinitrobenzene	0.138	0.144	-4.3	112	0.00
50		1,2-Dinitrobenzene	0.097	0.098	-1.0	108	0.00
51	I	Acenaphthene-d10	1.000	1.000	0.0	116	0.00
52	P	Hexachlorocyclopentadiene	0.248	0.287	-15.7	110	0.00
53	CP	2,4,6-Trichlorophenol	0.382	0.402	-5.2	114	0.00
54	P	2,4,5-Trichlorophenol	0.433	0.441	-1.8	113	0.00
55	S	2-Fluorobiphenyl	1.587	1.475	7.1	121	0.00
56	P	2-Chloronaphthalene	1.169	1.216	-4.0	111	0.00
57	P	2-Nitroaniline	0.196	0.204	-4.1	113	0.00
58	P	Dimethylphthalate	1.340	1.296	3.3	111	0.00
59	P	Acenaphthylene	1.928	1.967	-2.0	112	0.00
60	P	2,6-Dinitrotoluene	0.316	0.330	-4.4	112	0.00
61	P	3-Nitroaniline	0.347	0.366	-5.5	113	0.00
62	CP	Acenaphthene	1.272	1.256	1.3	111	0.00
63	P	2,4-Dinitrophenol	0.149	0.143	4.0	117	0.00
64	P	Dibenzofuran	1.757	1.728	1.7	110	0.00
65	P	4-Nitrophenol	0.130	0.136	-4.6	116	0.00
66	P	2,4-Dinitrotoluene	0.417	0.437	-4.8	113	0.00
67	P	Diethylphthalate	1.202	1.174	2.3	110	0.00
68	P	Fluorene	1.374	1.381	-0.5	110	0.00
69	P	4-Chlorophenyl phenyl	0.675	0.680	-0.7	110	0.00
70	P	4-Nitroaniline	0.355	0.380	-7.0	111	0.00
71	P	Atrazine	0.384	0.377	1.8	109	0.00
72	I	Phenanthrene-d10	1.000	1.000	0.0	114	0.00
73	P	4,6-Dinitro-2-methylph	0.101	0.121	-19.8	113	0.00
74	CP	N-Nitrosodiphenylamine	0.653	0.670	-2.6	110	0.00
75		1,2-Diphenylhydrazine	0.447	0.457	-2.2	111	0.00
76	S	2,4,6-Tribromophenol	0.159	0.155	2.5	124	0.00
77	P	4-Bromophenyl phenyl e	0.226	0.227	-0.4	109	0.00
78	P	Hexachlorobenzene	0.275	0.273	0.7	112	0.00
79	CP	Pentachlorophenol	0.115	0.135	-17.4	117	0.00
80	P	Phenanthrene	1.195	1.131	5.4	109	0.00
81	P	Anthracene	1.133	1.132	0.1	110	0.00
82	P	Carbazole	1.063	1.086	-2.2	111	0.00
83	P	Di-n-butylphthalate	1.089	1.069	1.8	110	0.00
84	CP	Fluoranthene	1.266	1.209	4.5	110	0.01
85	I	Chrysene-d12	1.000	1.000	0.0	115	0.00
86		3,3'-Dimethylbenzidine	0.732	0.801	-9.4	113	0.01
87		Benzidine	0.729	0.798	-9.5	113	0.00
88		Pyrene	1.302	1.215	6.7	111	0.00
89	S	4-Terphenyl-d14	1.099	0.998	9.2	121	0.01
90	P	Butylbenzylphthalate	0.468	0.463	1.1	113	0.00
91	P	Benzo[a]anthracene	1.374	1.166	15.1	115	0.01
92	P	3,3'-Dichlorobenzidine	0.479	0.497	-3.8	114	0.00
93	P	Chrysene	1.296	1.219	5.9	114	0.01
94	P	Bis(2-ethylhexyl)phtha	0.662	0.602	9.1	110	0.00

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
95	I	Perylene-d12	1.000	1.000	0.0	118	0.00
96	CP	Di-n-octylphthalate	0.991	0.943	4.8	109	0.00
97	P	Benzo(b)fluoranthene	1.130	1.075	4.9	114	0.00
98	P	Benzo(k)fluoranthene	1.168	1.166	0.2	114	0.00
99	CP	Benzo(a)pyrene	1.021	0.989	3.1	114	0.00
100	P	Indeno(1,2,3-cd)pyrene	1.032	1.002	2.9	114	0.00
101	P	Dibenz(a,h)anthracene	1.068	1.058	0.9	114	0.00
102	P	Benzo(g,h,i)perylene	1.180	1.138	3.6	113	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.417	150	160435	40.00	ug/ml	0.00
25) Naphthalene-d8	5.187	136	342885	40.00	ug/ml	0.00
51) Acenaphthene-d10	6.299	164	192779	40.00	ug/ml	0.00
72) Phenanthrene-d10	7.299	188	348028	40.00	ug/ml	0.00
85) Chrysene-d12	9.981	240	370074	40.00	ug/ml	0.00
95) Perylene-d12	12.622	264	400479	40.00	ug/ml	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.658	112	61250	21.15	ug/ml	0.00
Spiked Amount 50.000	Range 22 - 59		Recovery = 42.30%			
7) Phenol-d6	4.193	99	70303	21.09	ug/ml	0.00
Spiked Amount 50.000	Range 13 - 36		Recovery = 42.18%#			
26) Nitrobenzene-d5	4.746	82	45732m	20.86	ug/ml	0.00
Spiked Amount 50.000	Range 31 - 93		Recovery = 41.72%			
55) 2-Fluorobiphenyl	5.852	172	142152	20.64	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 100		Recovery = 41.28%			
76) 2,4,6-Tribromophenol	6.817	330	27019	21.22	ug/ml	0.00
Spiked Amount 50.000	Range 32 - 115		Recovery = 42.44%			
89) 4-Terphenyl-d14	8.616	244	184665	20.49	ug/ml	0.01
Spiked Amount 50.000	Range 23 - 112		Recovery = 40.98%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.652	88	29842	22.64	ug/ml	98
3) Pyridine	2.881	79	59647	21.20	ug/ml	97
4) N-Nitrosodimethylamine	2.840	42	11359	19.91	ug/ml	97
6) Benzaldehyde	4.158	77	36145	19.03	ug/ml	98
8) Phenol	4.199	94	74087	19.77	ug/ml	100
9) Aniline	4.217	93	85997	20.91	ug/ml	75
10) Bis(2-chloroethyl)ether	4.246	93	52368	19.30	ug/ml	98
11) 2-Chlorophenol	4.293	128	65326	21.03	ug/ml	100
12) 1,3-Dichlorobenzene	4.381	146	75597	19.39	ug/ml	100
13) 1,4-Dichlorobenzene	4.423	146	76294	19.26	ug/ml	99
14) Benzyl alcohol	4.487	108	38539	19.54	ug/ml	99
15) 1,2-Dichlorobenzene	4.517	146	72650	19.38	ug/ml	100
16) 2-Methylphenol	4.552	108	52681	19.18	ug/ml	99
17) 2,2`-Oxybis(1-chloropr...	4.564	45	37643	19.81	ug/ml	99
18) Bis(2-chloroisopropyl)...	4.564	45	37643	19.81	ug/ml	98
19) 3-Methylphenol	4.646	107	57650	19.43	ug/ml	99
20) 4-Methylphenol	4.646	107	57650	19.43	ug/ml	99
21) 3&4-Methylphenol	4.646	107	58199	19.46	ug/ml	99
22) Acetophenone	4.646	105	72343	19.30	ug/ml	100
23) N-Nitrosodi-n-propylamine	4.640	70	28692	18.69	ug/ml	100
24) Hexachloroethane	4.723	117	23042	19.24	ug/ml	99
27) Nitrobenzene	4.758	77	41531	20.33	ug/ml	99
28) Isophorone	4.899	82	84422	19.90	ug/ml	99
29) 2-Nitrophenol	4.952	139	34135	19.35	ug/ml	99
30) 2,4-Dimethylphenol	4.964	107	52191	18.82	ug/ml	99
31) Bis(2-chloroethoxy)met	5.017	93	59596	19.78	ug/ml	99
32) Benzoic acid	5.011	122	28281	19.44	ug/ml	98
33) 2,4-Dichlorophenol	5.105	162	54778	19.35	ug/ml	99
34) 1,2,4-Trichlorobenzene	5.146	180	60585	20.36	ug/ml	98
36) Naphthalene	5.205	128	180485	19.36	ug/ml	100

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 4-Chloroaniline	5.228	127	75526	19.46	ug/ml	99
38) 2,6-Dichlorophenol	5.234	162	54869	19.03	ug/ml	100
39) Hexachlorobutadiene	5.270	225	30578	20.18	ug/ml	99
40) Caprolactam	5.452	55	14278	18.88	ug/ml	99
41) 4-Chloro-3-methylphenol	5.528	107	47033	19.85	ug/ml	99
42) 2-Methylnaphthalene	5.628	142	124836	19.08	ug/ml	99
43) 1-Methylnaphthalene	5.693	142	114699	18.78	ug/ml	100
44) 1,2,4,5-Tetrachloroben...	5.734	216	60969	18.88	ug/ml	99
45) 1,1-Biphenyl	5.917	154	152267	18.77	ug/ml	100
46) 2,3,5,6-Tetrachlorophenol	6.481	232	32246	18.71	ug/ml	98
47) 2,3,4,6-Tetrachlorophenol	6.505	232	35298	18.47	ug/ml	100
48) 1,4-Dinitrobenzene	6.081	168	19884	18.74	ug/ml	98
49) 1,3-Dinitrobenzene	6.128	168	24666	18.92	ug/ml	98
50) 1,2-Dinitrobenzene	6.187	168	16827	18.34	ug/ml	89
52) Hexachlorocyclopentadiene	5.722	237	27696	19.44	ug/ml	99
53) 2,4,6-Trichlorophenol	5.805	196	38744	19.76	ug/ml	98
54) 2,4,5-Trichlorophenol	5.840	196	42519	20.36	ug/ml	99
56) 2-Chloronaphthalene	5.940	162	117195	19.25	ug/ml	99
57) 2-Nitroaniline	5.999	65	19619	19.29	ug/ml	99
58) Dimethylphthalate	6.105	163	124918	19.35	ug/ml	100
59) Acenaphthylene	6.205	152	189576	20.40	ug/ml	100
60) 2,6-Dinitrotoluene	6.146	165	31829	19.45	ug/ml	98
61) 3-Nitroaniline	6.264	138	35274	19.24	ug/ml	98
62) Acenaphthene	6.317	154	121038	19.74	ug/ml	100
63) 2,4-Dinitrophenol	6.328	184	13753	19.62	ug/ml	97
64) Dibenzofuran	6.428	168	166548	19.67	ug/ml	100
65) 4-Nitrophenol	6.375	65	13066	19.92	ug/ml	98
66) 2,4-Dinitrotoluene	6.405	165	42161	19.32	ug/ml	92
67) Diethylphthalate	6.552	149	113177	18.74	ug/ml	99
68) Fluorene	6.658	166	133152	18.84	ug/ml	100
69) 4-Chlorophenyl phenyl	6.646	204	65497	20.13	ug/ml	100
70) 4-Nitroaniline	6.664	138	36667	19.08	ug/ml	98
71) Atrazine	7.069	200	36311	19.60	ug/ml	99
73) 4,6-Dinitro-2-methylph	6.675	198	21115	20.04	ug/ml	98
74) N-Nitrosodiphenylamine	6.722	169	116615	20.54	ug/ml	99
75) 1,2-Diphenylhydrazine	6.752	77	79450	20.44	ug/ml	100
77) 4-Bromophenyl phenyl e	6.975	248	39425	20.03	ug/ml	99
78) Hexachlorobenzene	7.028	284	47485	19.84	ug/ml	99
79) Pentachlorophenol	7.164	266	23500	20.47	ug/ml	98
80) Phenanthrene	7.317	178	196749	19.18	ug/ml	100
81) Anthracene	7.352	178	197070	19.20	ug/ml	100
82) Carbazole	7.464	167	189039	20.43	ug/ml	99
83) Di-n-butylphthalate	7.687	149	186073	19.65	ug/ml	99
84) Fluoranthene	8.258	202	210466	19.36	ug/ml	99
86) 3,3'-Dimethylbenzidine	9.169	212	148189	19.51	ug/ml	99
87) Benzidine	8.369	184	147591	19.58	ug/ml	100
88) Pyrene	8.475	202	224805	19.34	ug/ml	100
90) Butylbenzylphthalate	9.175	149	85729	19.81	ug/ml	99
91) Benzo[a]anthracene	9.963	228	215733	19.96	ug/ml	99
92) 3,3'-Dichlorobenzidine	9.928	252	91874	19.62	ug/ml	100
93) Chrysene	10.022	228	225591	19.65	ug/ml	100
94) Bis(2-ethylhexyl)phtha	10.022	149	111300	18.98	ug/ml	99
96) Di-n-octylphthalate	11.205	149	188829	18.27	ug/ml	100

Quantitation Report (QT Reviewed)

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
97)	Benzo(b)fluoranthene	11.857	252	215308	19.01	ug/ml	100
98)	Benzo(k)fluoranthene	11.910	252	233484	19.59	ug/ml	99
99)	Benzo(a)pyrene	12.499	252	198027	19.25	ug/ml	100
100)	Indeno(1,2,3-cd)pyrene	14.863	276	200548	19.07	ug/ml	99
101)	Dibenz(a,h)anthracene	14.934	278	211785	19.08	ug/ml	99
102)	Benzo(g,h,i)perylene	15.410	276	227875	19.05	ug/ml	100

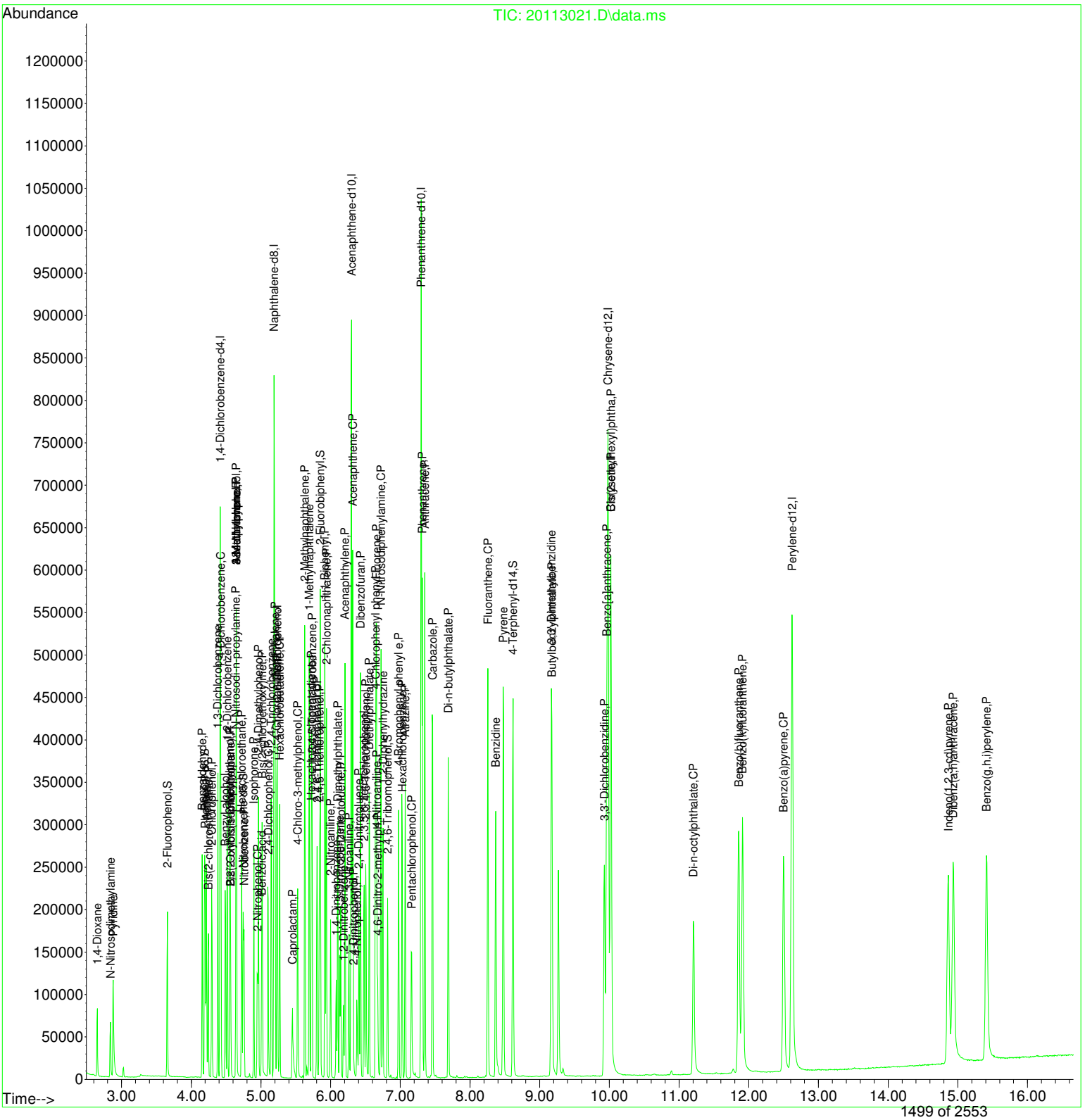
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1st /S/ EE 12/01/20

2nd /S/ EW 12/01/20

Data Path : D:\msdchem\1\data\SVMS9-201130\
Data File : 20113021.D
Acq On : 30 Nov 2020 06:06 pm
Operator : EE/EEW
Sample : CCV2-201130-BNA
Misc : 300-0580F
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 10:27:33 2020
Quant Method : D:\msdchem\1\methods\SVMS9-201130-BNA.M
Quant Title : 8270/625/1311 Calibration
QLast Update : Tue Dec 01 10:20:30 2020
Response via : Initial Calibration



2020 Nov 30 0943 Sequence Log .LOG

Starting sequence Mon Nov 30 09:43:51 2020

Instrument Name: SVMS9
Sequence File: D:\msdchem\1\sequences\SVMS9-201130.sequence.xml
Comment: Semivolatiles by 8270/625
Operator: EE/EEW
Data Path: D:\msdchem\1\data\SVMS9-201130\

Line	Type	Vials	DataFile	Sample Name
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
2)	Sample	1	20113002	CONDITION
3)	Sample	1	20113003	CONDITION
4)	Sample	2	20113004	RINSE
Comment: RINSE				
5)	Sample	2	20113005	RINSE
Comment: RINSE				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: DFTPP.M				
6)	Sample	3	20113006	DFTPP_TUNE1-201130
Comment: 300-0567, 50µg/ml DFTPP				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
7)	Sample	4	20113007	CCV1-201130-BNA
Comment: 300-0544F				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
8)	Sample	2	20113008	RINSE
Comment: RINSE				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: DFTPP.M				
9)	Sample	3	20113009	DFTPP_TUNE2-201130
Comment: 300-0567, 50µg/ml DFTPP				
Acquisition Method Path: D:\msdchem\1\run methods\				
Acquisition Method File: 8270.M				
10)	Sample	41	20113010	0.1 ug/mL BNA
Comment: 300-0580A				
11)	Sample	42	20113011	0.5 ug/mL BNA
Comment: 300-0580B				
12)	Sample	43	20113012	1.0 ug/mL BNA
Comment: 300-0580C				
13)	Sample	44	20113013	5.0 ug/mL BNA
Comment: 300-0580D				

2020 Nov 30 0943 Sequence Log .LOG

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 14) Sample          45      20113014               10 ug/mL BNA
     Comment: 300-0580E
 15) Sample          46      20113015               20 ug/mL BNA
     Comment: 300-0580F
 16) Sample          47      20113016               40 ug/mL BNA
     Comment: 300-0580G
 17) Sample          48      20113017               50 ug/mL BNA
     Comment: 300-0580H
 18) Sample          49      20113018               60 ug/mL BNA
     Comment: 300-0580I
 19) Sample          50      20113019               20 ug/mL BNA ICV
     Comment: 300-0580J

Acquisition Method Path: D:\msdchem\1\run methods\
Acquisition Method File: DFTPP.M
 20) Sample           3      20113020               DFTPP_TUNE1-201130
     Comment: 300-0567, 50µg/ml DFTPP

Acquisition Method Path: D:\msdchem\1\run methods\
Acquisition Method File: 8270.M
 21) Sample           4      20113021               CCV2-201130-BNA
     Comment: 300-0580F
 22) Sample           5      20113022               SBLKW1-168341
     Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
 23) Sample           6      20113023               SLCSW1-168341
     Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
 24) Sample           7      20113024               SBLKW1-168276
     Comment: 1X 20BAW-168276/7/8/94; IS:300-0576; WATER
 25) Sample           8      20113025               SLCSW1-168276
     Comment: 1X 20BAW-168276/7/8/94; IS:300-0576; WATER
 26) Sample           9      20113026               SLCSDW1-168276
     Comment: 1X 20BAW-168276/7/8/94; IS:300-0576; WATER
 27) Sample          10      20113027               SBLKW1-168337
     Comment: 1X 20BAW-168337; IS:300-0576; WATER
 28) Sample          11      20113028               SLCSW1-168337
     Comment: 1X 20BAW-168337; IS:300-0576; WATER
 29) Sample          12      20113029               SLCSDW1-168337
     Comment: 1X 20BAW-168337; IS:300-0576; WATER
 30) Sample          13      20113030               20111987-09G
     Comment: 1X 20BAW-168337; IS:300-0576; WATER
 31) Sample          14      20113031               20111250-01B
     Comment: 1X 20BAS-168230; IS:300-0576; SOIL
 32) Sample          15      20113032               20111727-01B
     Comment: 1X 20BAW-168277; IS:300-0576; WATER
 33) Sample          16      20113033               20111831-01E
     Comment: 1X 20BAW-168277; IS:300-0576; WATER
 34) Sample          17      20113034               20111958-01B
     Comment: 1X 20BAW-168277; IS:300-0576; WATER
```

2020 Nov 30 0943 Sequence Log .LOG

35) Sample 18 20113035 20111833-01A
Comment: 1X 20BAW-168278; IS:300-0576; WATER
36) Sample 19 20113036 20111733-02A MS
Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
37) Sample 20 20113037 20111733-02A MSD
Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
38) Sample 21 20113038 20111733-02A
Comment: 1X 20BAW-168341/2/3/4/5/44; IS:300-0576; WATER
39) Sample 22 20113039 20111764-02A
Comment: 1X 20BAW-168343; IS:300-0576; WATER
40) Sample 23 20113040 20111764-04A
Comment: 1X 20BAW-168343; IS:300-0576; WATER
41) Sample 24 20113041 20111764-06A
Comment: 1X 20BAW-168343; IS:300-0576; WATER
42) Sample 25 20113042 20111878-04C
Comment: 1X 20BAW-168342; IS:300-0576; WATER
43) Sample 26 20113043 20111878-09C
Comment: 1X 20BAW-168342; IS:300-0576; WATER
44) Sample 27 20113044 20112006-04C
Comment: 1X 20BAW-168342; IS:300-0576; WATER
45) Sample 28 20113045 20112006-09C
Comment: 1X 20BAW-168342; IS:300-0576; WATER
46) Sample 29 20113046 20112007-04C
Comment: 1X 20BAW-168342; IS:300-0576; WATER
47) Sample 30 20113047 20112007-09C
Comment: 1X 20BAW-168342; IS:300-0576; WATER
48) Sample 31 20113048 20111895-01A
Comment: 1X 20BAW-168341; IS:300-0576; WATER
49) Sample 32 20113049 20112051-26A
Comment: 1X 20BAW-168341; IS:300-0576; WATER
50) Sample 33 20113050 20111872-01D
Comment: 1X 20BAW-168345; IS:300-0576; WATER

Sequence completed Tue Dec 01 05:57:21 2020

D:\msdchem\1\data\SVMS9-201130\2020 Nov 30 1310 Quality Log.LOG
D:\msdchem\1\data\SVMS9-201130\2020 Nov 30 1310 Sequence Log .LOG

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001

Analysis Run Log
Semivolatile Organic Compounds by GCMS

Analysis Lot:SVMS9_201130A
Analysis Method: SW8270D **Instrument ID:**SVMS9

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
20113021.D	CCV2-201130-BNA	CCV2-201130-BNA	11/30/2020	18:06	
20113022.D	SBLKW1-168343	SBLKW1-168343	11/30/2020	18:30	
20113023.D	SLCSW1-168343	SLCSW1-168343	11/30/2020	18:54	
20113036.D	20111733-02A MS	20111733-02A MS	12/01/2020	00:08	
20113037.D	20111733-02A MSD	20111733-02A MSD	12/01/2020	00:32	
20113039.D	IDA001:E2-3:S00010	20111764-02	12/01/2020	01:20	
20113040.D	IDA001:C5-3:S00010	20111764-04	12/01/2020	01:43	
20113041.D	IDA001:B8-3:S00010	20111764-06	12/01/2020	02:07	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111764
Project: IDA001/IDA001
Sample Matrix: Water

Semivolatile Organic Compounds by GCMS

Prep Method: SW3510 **Extraction Lot:** 168343
Analytical Method: SW8270D **Extraction Date:** 11/27/20 12:49

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	20111733-02A MS	NA	NA	50 mL	1 mL	0
Duplicate Matrix Spike	20111733-02A MSD	NA	NA	50 mL	1 mL	0
IDA001:E2-3:S00010	20111764-02A	11/17/20	11/19/20	50 mL	1 mL	0
IDA001:C5-3:S00010	20111764-04A	11/17/20	11/19/20	50 mL	1 mL	0
IDA001:B8-3:S00010	20111764-06A	11/17/20	11/19/20	50 mL	1 mL	0
SBLKW1-168343	SBLKW1-168343	NA	NA	1000 mL	1 mL	0
SLCSW1-168343	SLCSW1-168343	NA	NA	1000 mL	1 mL	0

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168343** Prep Code: **BA_3510_W**

Start Date: **11/27/2020 9:52:18 AM** End Date: **11/27/2020 12:49:55 PM**

Technician: **Dylan Slagh**

InitSamp Wt/Vol: 1000 mL
FinSampVol: 1 mL
OriginalFac: 0.001
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111733-02A	Tclp Extract			50	0	1	0.02
20111764-02A	Tclp Extract			50	0	1	0.02
20111764-04A	Tclp Extract			50	0	1	0.02
20111764-06A	Tclp Extract			50	0	1	0.02
SBLKW1-168343				1000	0	1	0.001
SLCSW1-168343				1000	0	1	0.001

Notes: *500 uL BNA Surrogate (3214-18-1) added to all samples. 500 uL of Megamix (400-0362) added to all QC. Sulfuric Acid (3081-128-4). NaOH (3081-137-12). DCM (3214-15-11). Sodium Sulfate S112420. All samples are B1/E1 unless otherwise noted.*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168343** Prep Code: **BA_3510_W**

Start Date: **11/27/2020 9:52:18 AM** End Date: **11/27/2020 12:49:55 PM**

Technician: **Dylan Slagh**

InitSamp Wt/Vol:	1000 mL
FinSampVol:	1 mL
OriginalFac:	0.001
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *500 uL BNA Surrogate (3214-18-1) added to all samples. 500 uL of Megamix (400-0362) added to all QC. Sulfuric Acid (3081-128-4). NaOH (3081-137-12). DCM (3214-15-11). Sodium Sulfate S112420. All samples are B1/E1 unless otherwise noted.*

Metals

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
Phone (616) 399-6070 Fax (616) 399-6185
www.alsglobal.com

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S00010	**Basis:**	Wet
Lab Code:	20111764-02		

Metals

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050	U	mg/L	0.050	1	12/01/20 02:25	11/29/20 15:04	
Barium	SW6010D	**0.65**		mg/L	0.050	1	12/01/20 02:25	11/29/20 15:04	
Cadmium	SW6010D	**0.10**		mg/L	0.10	1	12/01/20 02:25	11/29/20 15:04	
Chromium	SW6010D	0.10	U	mg/L	0.10	1	12/01/20 02:25	11/29/20 15:04	
Lead	SW6010D	**29**	*	mg/L	0.50	10	12/01/20 15:19	11/29/20 15:04	
Mercury	SW7470A	0.0020	U	mg/L	0.0020	1	11/30/20 16:57	11/30/20 13:10	
Selenium	SW6010D	0.10	U	mg/L	0.10	1	12/01/20 02:25	11/29/20 15:04	
Silver	SW6010D	0.050	U	mg/L	0.050	1	12/01/20 02:25	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Basis:**	Wet
Lab Code:	20111764-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	
Barium	SW6010D	**1.4**	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	
Cadmium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:30	11/29/20 15:04	
Chromium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:30	11/29/20 15:04	
Lead	SW6010D	**0.098**	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	
Mercury	SW7470A	0.0020 U	mg/L	0.0020	1	11/30/20 16:59	11/30/20 13:10	
Selenium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:30	11/29/20 15:04	
Silver	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:30	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Basis:**	Wet
Lab Code:	20111764-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	
Barium	SW6010D	**1.4**	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	
Cadmium	SW6010D	**0.013 J**	mg/L	0.10	1	12/01/20 02:36	11/29/20 15:04	
Chromium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:36	11/29/20 15:04	
Lead	SW6010D	**0.12**	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	
Mercury	SW7470A	0.0020 U	mg/L	0.0020	1	11/30/20 17:00	11/30/20 13:10	
Selenium	SW6010D	0.10 U	mg/L	0.10	1	12/01/20 02:36	11/29/20 15:04	
Silver	SW6010D	0.050 U	mg/L	0.050	1	12/01/20 02:36	11/29/20 15:04	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 11:41
Sample Matrix:	Water	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:DECONWATER:W111720	**Basis:**	Wet
Lab Code:	20111764-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6020B	**0.17**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	
Barium	SW6020B	**0.23**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	
Cadmium	SW6020B	**0.020**	mg/L	0.0020	1	11/30/20 23:55	11/30/20 13:11	
Chromium	SW6020B	**0.17**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	
Lead	SW6020B	**7.4**	mg/L	0.050	10	12/01/20 16:11	11/30/20 13:11	
Mercury	SW7470A	**0.00089**	mg/L	0.00020	1	11/30/20 17:02	11/30/20 13:10	
Selenium	SW6020B	**0.0048**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	**J**
Silver	SW6020B	**0.016**	mg/L	0.0050	1	11/30/20 23:55	11/30/20 13:11	

Calibration Summary

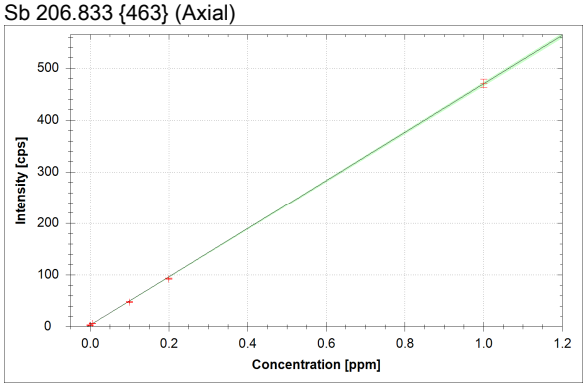
12/1/2020 8:29:17 AM

QTEGRA

LabBook: ICP2_201130B.imexp

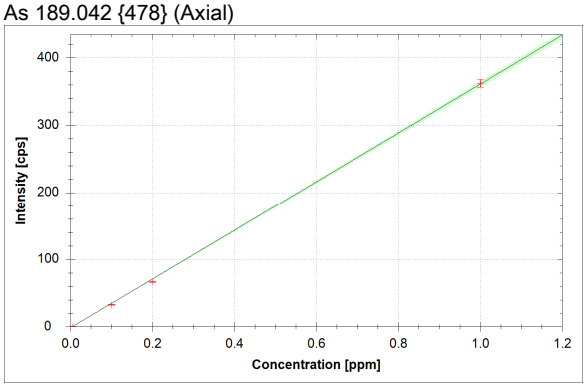
Calibration Graphs

Sb 206.833 {463} (Axial)



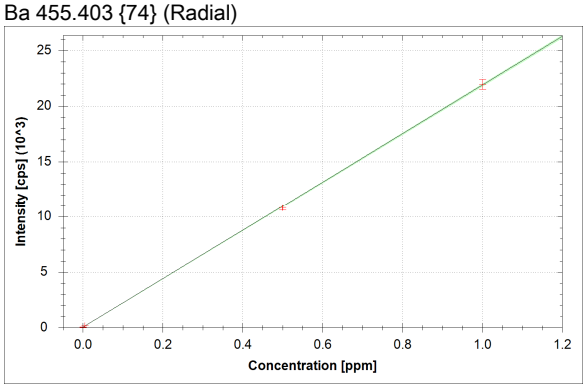
f(x) = 466.8351*x + 2.9259
R² = 0.9998
BEC = 0.006 ppm
LoD = 0.0034 ppm

As 189.042 {478} (Axial)



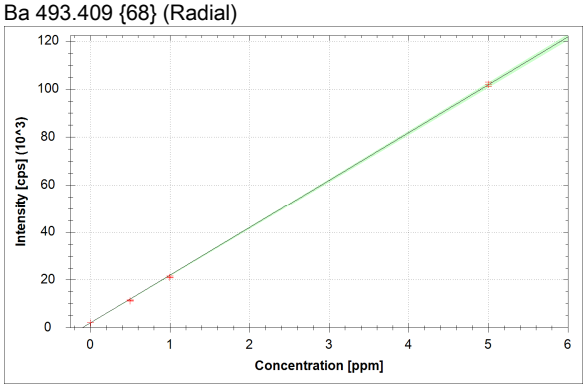
f(x) = 362.6423*x + -1.6820
R² = 0.9997
BEC = -0.005 ppm
LoD = 0.0034 ppm

Ba 455.403 {74} (Radial)



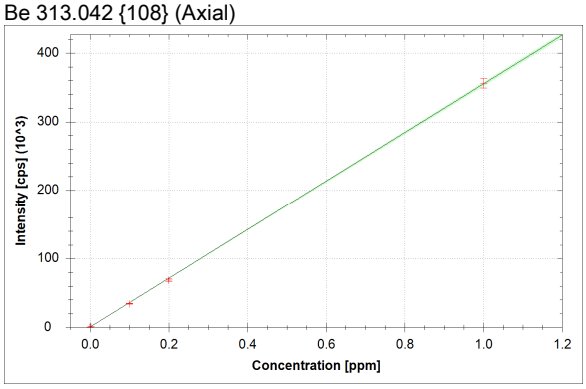
f(x) = 21857.4958*x + 50.1134
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0022 ppm

Ba 493.409 {68} (Radial)



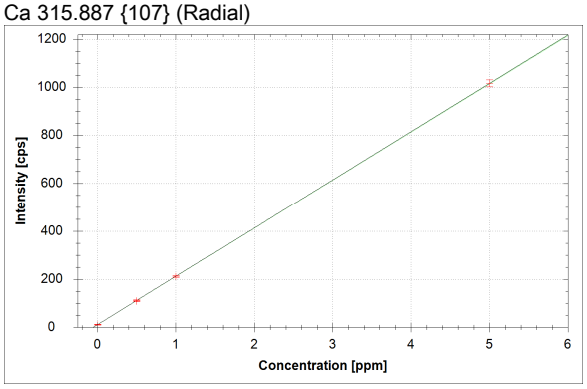
f(x) = 19952.1562*x + 2001.4971
R² = 0.9998
BEC = 0.100 ppm
LoD = 0.0018 ppm

Be 313.042 {108} (Axial)



f(x) = 354660.3706*x + 535.4197
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0001 ppm

Ca 315.887 {107} (Radial)



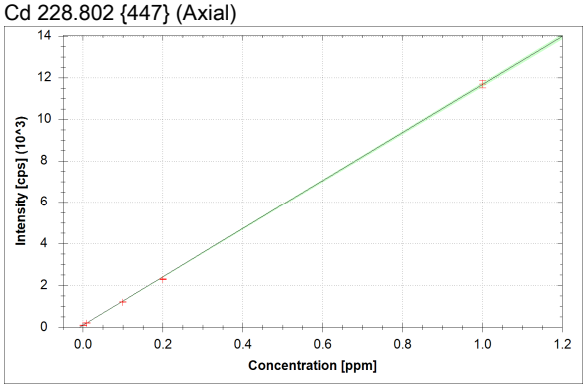
f(x) = 201.1067*x + 11.2014
R² = 1.0000
BEC = 0.056 ppm
LoD = 0.0259 ppm

Calibration Summary

12/1/2020 8:29:17 AM

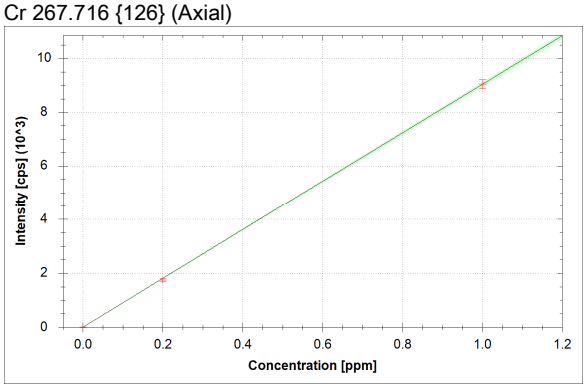
QTEGRA

Cd 228.802 {447} (Axial)



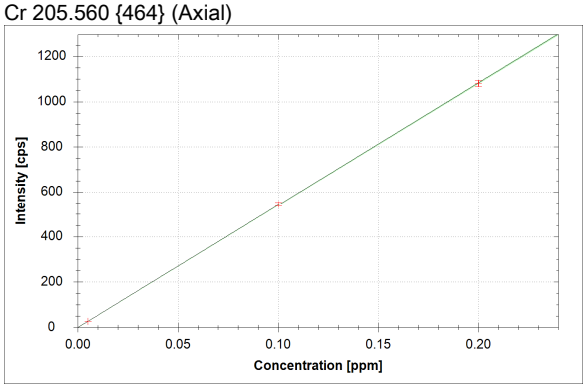
f(x) = 11571.7495*x + 97.2234
R² = 0.9998
BEC = 0.008 ppm
LoD = 0.0003 ppm

Cr 267.716 {126} (Axial)



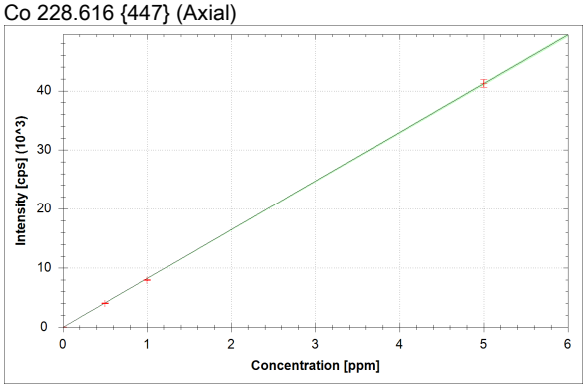
f(x) = 9030.2807*x + 4.8394
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0009 ppm

Cr 205.560 {464} (Axial)



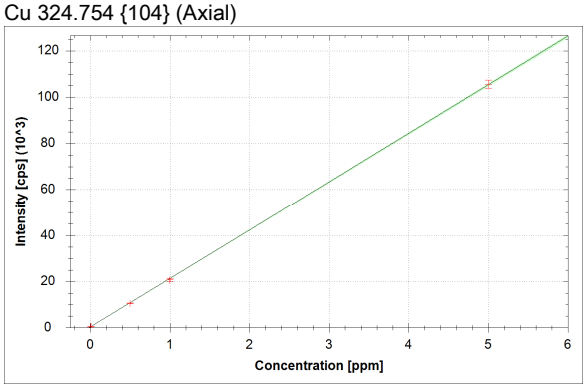
f(x) = 5416.7939*x + -0.4553
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0002 ppm

Co 228.616 {447} (Axial)



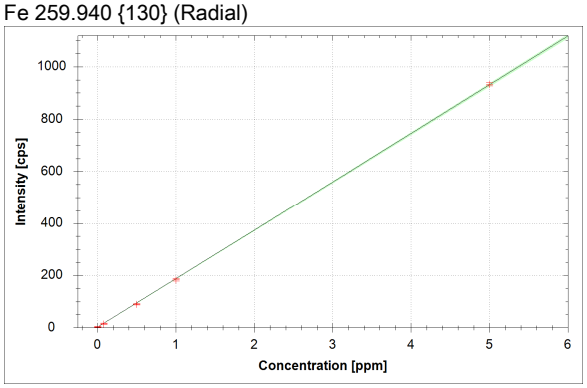
f(x) = 8239.4362*x + -3.4163
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Cu 324.754 {104} (Axial)



f(x) = 21000.2176*x + 350.3762
R² = 0.9999
BEC = 0.017 ppm
LoD = 0.0002 ppm

Fe 259.940 {130} (Radial)



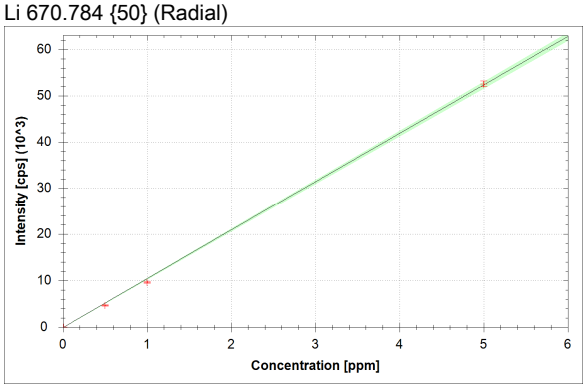
f(x) = 185.7784*x + 2.1365
R² = 0.9999
BEC = 0.012 ppm
LoD = 0.0193 ppm

Calibration Summary

12/1/2020 8:29:17 AM

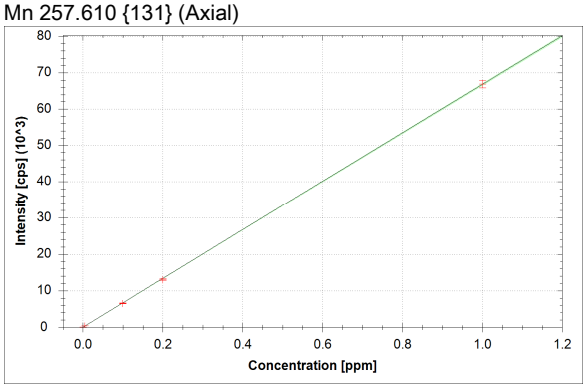
QTEGRA

Li 670.784 {50} (Radial)



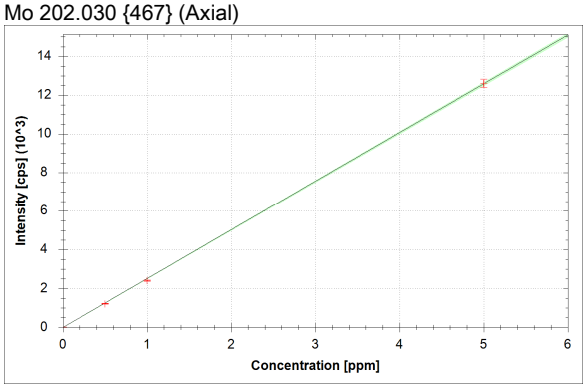
f(x) = 10478.8650*x + -36.7025
R² = 0.9995
BEC = -0.004 ppm
LoD = 0.0055 ppm

Mn 257.610 {131} (Axial)



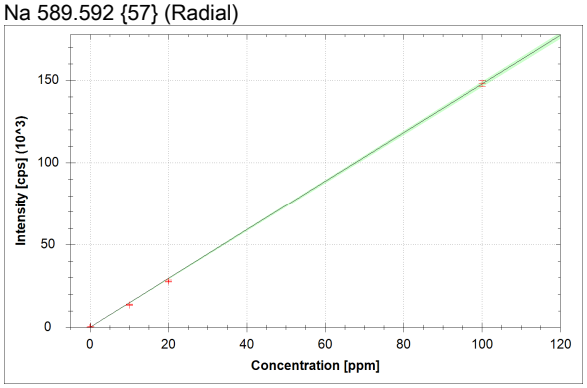
f(x) = 66765.3419*x + 29.0052
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0003 ppm

Mo 202.030 {467} (Axial)



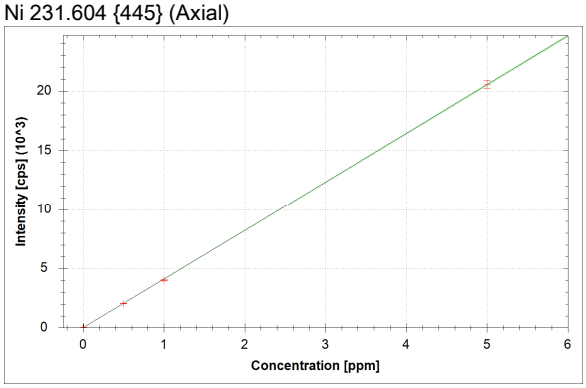
f(x) = 2516.1758*x + -1.2298
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0005 ppm

Na 589.592 {57} (Radial)



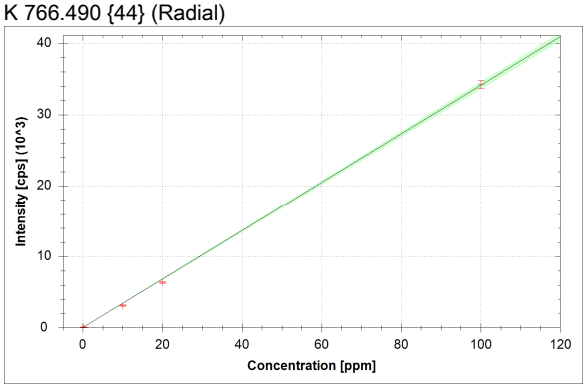
f(x) = 1476.9546*x + 46.1881
R² = 0.9997
BEC = 0.031 ppm
LoD = 0.0330 ppm

Ni 231.604 {445} (Axial)



f(x) = 4108.4666*x + 1.7819
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0002 ppm

K 766.490 {44} (Radial)



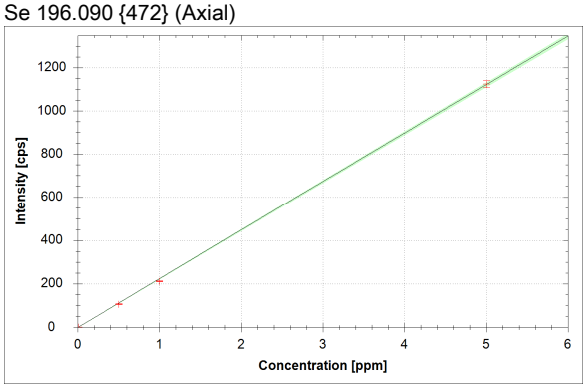
f(x) = 340.9180*x + 26.7023
R² = 0.9995
BEC = 0.078 ppm
LoD = 0.1089 ppm

Calibration Summary

12/1/2020 8:29:17 AM

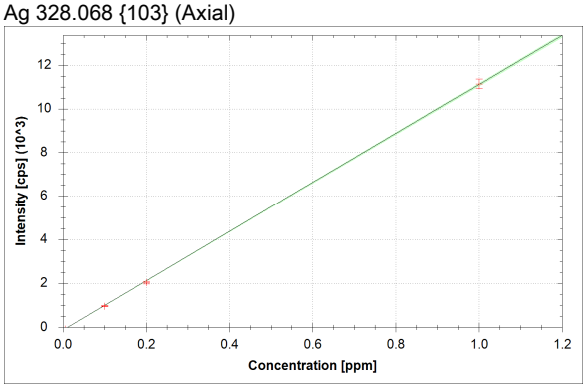
QTEGRA

Se 196.090 {472} (Axial)



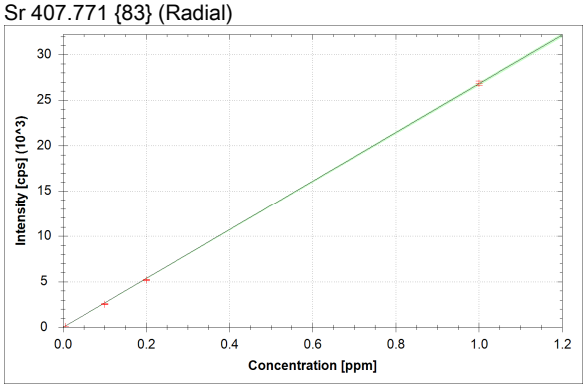
f(x) = 224.3617*x + -0.4619
R² = 0.9998
BEC = -0.002 ppm
LoD = 0.0066 ppm

Ag 328.068 {103} (Axial)



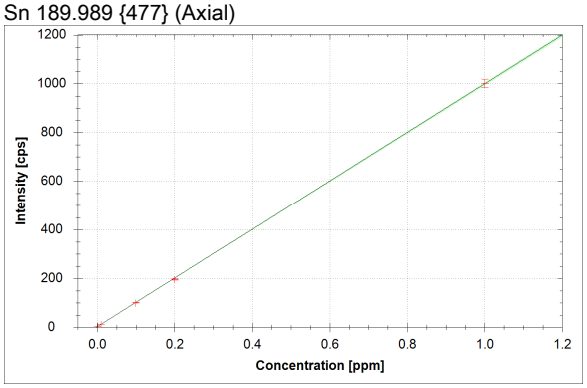
f(x) = 11251.4976*x + -127.9537
R² = 0.9999
BEC = -0.011 ppm
LoD = 0.0006 ppm

Sr 407.771 {83} (Radial)



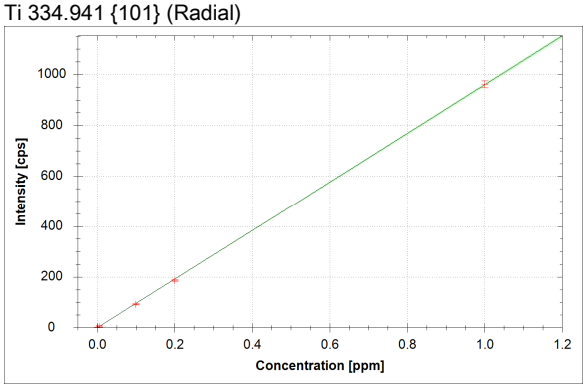
f(x) = 26818.8118*x + -8.4806
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Sn 189.989 {477} (Axial)



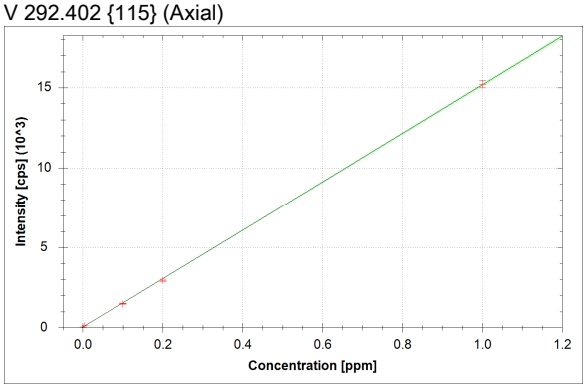
f(x) = 997.3521*x + 2.9014
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0017 ppm

Ti 334.941 {101} (Radial)



f(x) = 959.3957*x + 0.2025
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0049 ppm

V 292.402 {115} (Axial)



f(x) = 15139.5075*x + 41.0036
R² = 0.9999
BEC = 0.003 ppm
LoD = 0.0006 ppm

Calibration Summary

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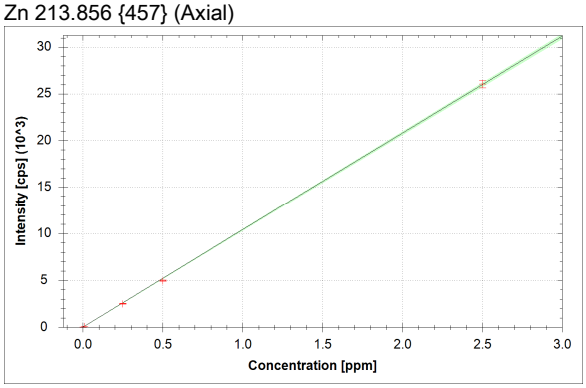
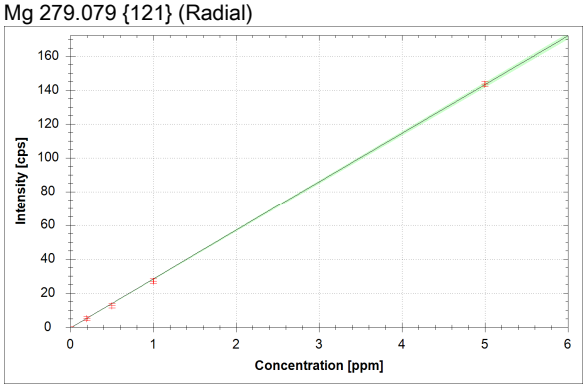
QTEGRA

Zn 213.856 {457} (Axial)



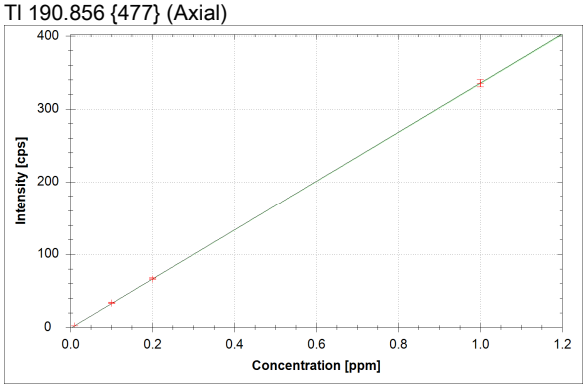
f(x) = 10389.8082*x + 22.8537
R² = 0.9998
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



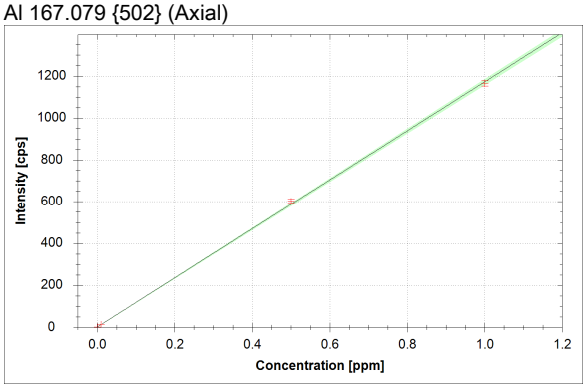
f(x) = 28.7287*x + -0.3816
R² = 0.9998
BEC = -0.013 ppm
LoD = 0.0828 ppm

Tl 190.856 {477} (Axial)



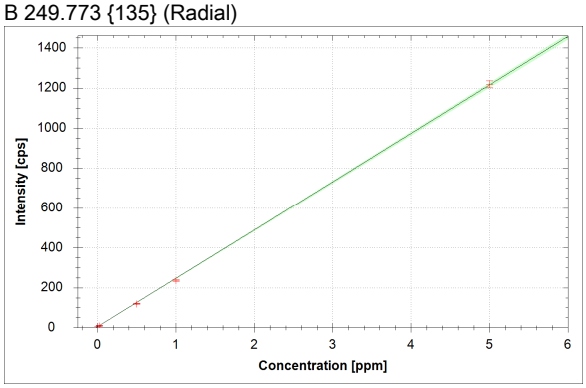
f(x) = 336.7253*x + -1.3294
R² = 1.0000
BEC = -0.004 ppm
LoD = 0.0040 ppm

Al 167.079 {502} (Axial)



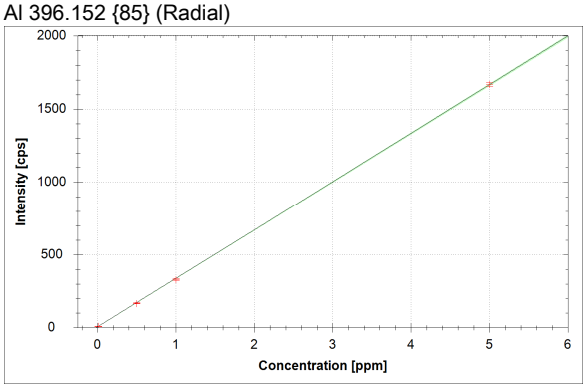
f(x) = 1170.5511*x + 1.9127
R² = 0.9997
BEC = 0.002 ppm
LoD = 0.0002 ppm

B 249.773 {135} (Radial)



f(x) = 241.9859*x + 5.2548
R² = 0.9998
BEC = 0.022 ppm
LoD = 0.0083 ppm

Al 396.152 {85} (Radial)



f(x) = 332.1216*x + 6.5431
R² = 0.9999
BEC = 0.020 ppm
LoD = 0.0014 ppm

Calibration Summary

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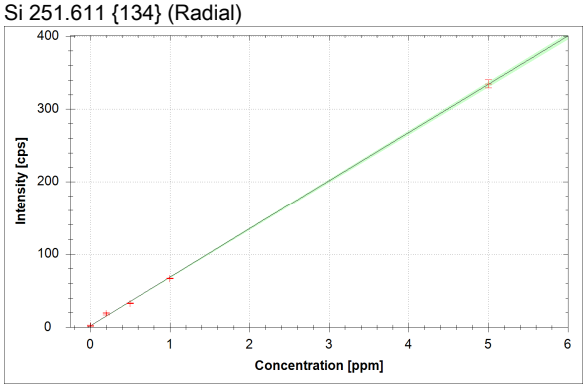
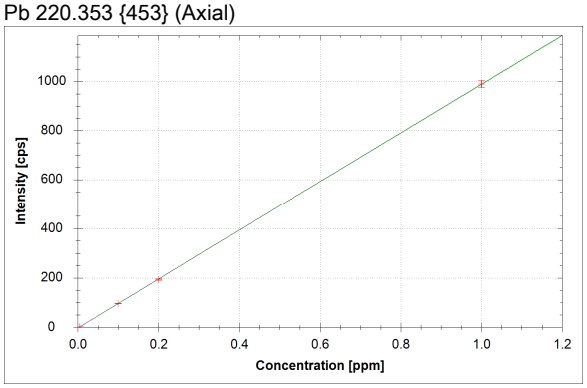
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 66.3807*x + 2.0934
R² = 0.9997
BEC = 0.032 ppm
LoD = 0.0347 ppm

Pb 220.353 {453} (Axial)



f(x) = 991.6667*x + -2.6978
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0008 ppm

Calibration Summary

12/1/2020 8:29:17 AM

QTEGRA

Standards

Standard: ICAL2
Analysis started at: 11/30/2020 2:30:20 PM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0071 ppm	6.5 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0038 ppm	44.8 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0050 ppm	3.2 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	3.1 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.4982 ppm	2.5 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0095 ppm	1.5 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0050 ppm	1.1 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0049 ppm	2.1 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0097 ppm	2.4 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0691 ppm	13.9 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0081 ppm	24.0 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0050 ppm	2.0 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0052 ppm	5.0 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.1993 ppm	2.0 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0049 ppm	3.3 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1315 ppm	53.5 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0098 ppm	12.7 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0049 ppm	3.8 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0048 ppm	1.6 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0094 ppm	3.6 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0040 ppm	75.1 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0047 ppm	4.2 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0094 ppm	2.0 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.7922 %	0.7 %	
Sc 188.060 {479} (Axial)	99.9674 %	0.1 %	
Mg 279.079 {121} (Radial)	0.1930 ppm	20.4 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0098 ppm	2.8 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0107 ppm	3.8 %	0.0100 ppm
Sc 227.318 {448} (Axial)	100.0626 %	0.2 %	
B 249.773 {135} (Radial)	0.0150 ppm	38.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0078 ppm	51.9 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2500 ppm	9.8 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0054 ppm	12.3 %	0.0050 ppm
Y 224.306 {450} (Axial)	100.5115 %	0.2 %	
Sc 361.384 {93} (Radial)	99.5288 %	0.3 %	

Calibration Summary

12/1/2020 8:29:17 AM

QTEGRA

Standards

Standard: ICAL3
Analysis started at: 11/30/2020 2:35:29 PM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0953 ppm	3.6 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0937 ppm	2.3 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.4944 ppm	2.3 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4673 ppm	2.5 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0948 ppm	1.3 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.4835 ppm	1.7 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0959 ppm	1.4 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.1007 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4900 ppm	1.4 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4856 ppm	1.4 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.4717 ppm	3.6 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4509 ppm	2.5 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0978 ppm	1.2 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4828 ppm	1.4 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.2235 ppm	2.4 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4925 ppm	1.3 %	0.5000 ppm
K 766.490 {44} (Radial)	8.9926 ppm	2.6 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4735 ppm	1.7 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0976 ppm	1.3 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0956 ppm	2.4 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0975 ppm	1.0 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0956 ppm	3.0 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0955 ppm	1.2 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2385 ppm	1.3 %	0.2500 ppm
Sc 357.253 {94} (Axial)	100.6656 %	0.2 %	
Sc 188.060 {479} (Axial)	98.4206 %	0.4 %	
Mg 279.079 {121} (Radial)	0.4549 ppm	9.6 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1034 ppm	2.5 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5123 ppm	1.5 %	0.5000 ppm
Sc 227.318 {448} (Axial)	99.9481 %	0.2 %	
B 249.773 {135} (Radial)	0.4685 ppm	2.3 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4824 ppm	2.2 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4633 ppm	1.4 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.0997 ppm	1.1 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.9076 %	0.3 %	
Sc 361.384 {93} (Radial)	101.5209 %	0.3 %	

Calibration Summary

12/1/2020 8:29:17 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 11/30/2020 2:40:29 PM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1912 ppm	1.5 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1876 ppm	1.8 %	0.2000 ppm
Ba 455.403 {74} (Radial)	1.0028 ppm	2.1 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9589 ppm	2.1 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1917 ppm	2.8 %	0.2000 ppm
Ca 315.887 {107} (Radial)	0.9984 ppm	2.0 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1905 ppm	1.1 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1930 ppm	3.3 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.1996 ppm	1.2 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9665 ppm	1.1 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9665 ppm	3.2 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9702 ppm	2.5 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9264 ppm	2.1 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1945 ppm	2.8 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9570 ppm	1.2 %	1.0000 ppm
Na 589.592 {57} (Radial)	18.9220 ppm	2.2 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9711 ppm	1.1 %	1.0000 ppm
K 766.490 {44} (Radial)	18.5037 ppm	2.5 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9473 ppm	1.0 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1926 ppm	2.8 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1935 ppm	2.0 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1932 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1937 ppm	2.1 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1926 ppm	2.7 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4749 ppm	1.2 %	0.5000 ppm
Sc 357.253 {94} (Axial)	99.7288 %	3.8 %	
Sc 188.060 {479} (Axial)	96.3975 %	0.1 %	
Mg 279.079 {121} (Radial)	0.9567 ppm	5.0 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2014 ppm	1.9 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9939 ppm	1.1 %	1.0000 ppm
Sc 227.318 {448} (Axial)	99.2633 %	0.3 %	
B 249.773 {135} (Radial)	0.9481 ppm	2.4 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9758 ppm	1.9 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9712 ppm	0.9 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.1962 ppm	1.6 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.3230 %	0.2 %	
Sc 361.384 {93} (Radial)	99.4583 %	0.4 %	

Calibration Summary

12/1/2020 8:29:17 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 11/30/2020 2:45:26 PM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0022 ppm	1.7 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0031 ppm	1.6 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0115 ppm	1.0 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0022 ppm	2.0 %	1.0000 ppm
Ca 315.887 {107} (Radial)	5.0022 ppm	1.4 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0023 ppm	1.6 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0014 ppm	1.8 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0077 ppm	1.6 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0081 ppm	1.7 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0090 ppm	0.7 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0196 ppm	1.2 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0013 ppm	1.6 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0103 ppm	1.7 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2933 ppm	1.3 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0065 ppm	1.6 %	5.0000 ppm
K 766.490 {44} (Radial)	100.4001 ppm	1.6 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0132 ppm	1.5 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0017 ppm	2.0 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0018 ppm	1.0 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0016 ppm	1.7 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0017 ppm	1.5 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0019 ppm	1.5 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5062 ppm	1.6 %	2.5000 ppm
Sc 357.253 {94} (Axial)	95.9590 %	0.5 %	
Sc 188.060 {479} (Axial)	89.3408 %	0.6 %	
Mg 279.079 {121} (Radial)	5.0134 ppm	1.0 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9994 ppm	1.5 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	104.0371 %	0.4 %	
B 249.773 {135} (Radial)	5.0135 ppm	1.4 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0066 ppm	0.8 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0074 ppm	1.7 %	5.0000 ppm
Pb 220.353 {453} (Axial)	1.0008 ppm	1.5 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.0845 %	0.5 %	
Sc 361.384 {93} (Radial)	100.5053 %	0.2 %	

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LabBook: ICP2_201130B.imexp

ICAL1

Sample type: BLK Analysis started at: 11/30/2020 2:25:09 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	7.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/30/2020 2:30:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0071 ppm	6.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0038 ppm	44.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	110 cps	0.0050 ppm	3.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	685 cps	0.0019 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4982 ppm	2.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	110 cps	0.0095 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	27 cps	0.0050 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0049 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	203 cps	0.0097 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	13 cps	0.0691 ppm	13.9 %	0.0 ppm
Li 670.784 {50} (Radial)	85 cps	0.0081 ppm	24.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	336 cps	0.0050 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0052 ppm	5.0 %	0.0 ppm
Na 589.592 {57} (Radial)	294 cps	0.1993 ppm	2.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0049 ppm	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	45 cps	0.1315 ppm	53.5 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0098 ppm	12.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	56 cps	0.0049 ppm	3.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	129 cps	0.0048 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	9 cps	0.0094 ppm	3.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0040 ppm	75.1 %	0.0 ppm
V 292.402 {115} (Axial)	72 cps	0.0047 ppm	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	98 cps	0.0094 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7922 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		99.9674 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	6 cps	0.1930 ppm	20.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0098 ppm	2.8 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0107 ppm	3.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0626 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0150 ppm	38.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0078 ppm	51.9 %	0.0 ppm
Si 251.611 {134} (Radial)	17 cps	0.2500 ppm	9.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0054 ppm	12.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5115 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.5288 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/30/2020 2:35:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0953 ppm	3.6 %	0.0 ppm
As 189.042 {478} (Axial)	34 cps	0.0937 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	10,806 cps	0.4944 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	9,323 cps	0.4673 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	33,638 cps	0.0948 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	97 cps	0.4835 ppm	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,110 cps	0.0959 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	545 cps	0.1007 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4,038 cps	0.4900 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,198 cps	0.4856 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	88 cps	0.4717 ppm	3.6 %	0.0 ppm
Li 670.784 {50} (Radial)	4,725 cps	0.4509 ppm	2.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,530 cps	0.0978 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,215 cps	0.4828 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	13,623 cps	9.2235 ppm	2.4 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,023 cps	0.4925 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	3,066 cps	8.9926 ppm	2.6 %	0.2 ppm
Se 196.090 {472} (Axial)	106 cps	0.4735 ppm	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,098 cps	0.0976 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,563 cps	0.0956 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	97 cps	0.0975 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	92 cps	0.0956 ppm	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,446 cps	0.0955 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,478 cps	0.2385 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6656 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.4206 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	13 cps	0.4549 ppm	9.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	35 cps	0.1034 ppm	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	600 cps	0.5123 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9481 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	113 cps	0.4685 ppm	2.3 %	0.0 ppm
Al 396.152 {85} (Radial)	160 cps	0.4824 ppm	2.2 %	0.0 ppm
Si 251.611 {134} (Radial)	31 cps	0.4633 ppm	1.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	99 cps	0.0997 ppm	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.9076 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.5209 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/30/2020 2:40:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	89 cps	0.1912 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	68 cps	0.1876 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	21,919 cps	1.0028 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	19,132 cps	0.9589 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	67,977 cps	0.1917 ppm	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	201 cps	0.9984 ppm	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,204 cps	0.1905 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,743 cps	0.1930 ppm	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,081 cps	0.1996 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	7,963 cps	0.9665 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,297 cps	0.9665 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	180 cps	0.9702 ppm	2.5 %	0.0 ppm
Li 670.784 {50} (Radial)	9,707 cps	0.9264 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,989 cps	0.1945 ppm	2.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,408 cps	0.9570 ppm	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	27,947 cps	18.9220 ppm	2.2 %	0.4 ppm
Ni 231.604 {445} (Axial)	3,990 cps	0.9711 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	6,308 cps	18.5037 ppm	2.5 %	0.5 ppm
Se 196.090 {472} (Axial)	213 cps	0.9473 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,167 cps	0.1926 ppm	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,189 cps	0.1935 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	193 cps	0.1932 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	186 cps	0.1937 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	2,917 cps	0.1926 ppm	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,934 cps	0.4749 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7288 %	3.8 %	3.8 %
Sc 188.060 {479} (Axial)		96.3975 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	0.9567 ppm	5.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	68 cps	0.2014 ppm	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	1,163 cps	0.9939 ppm	1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2633 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	229 cps	0.9481 ppm	2.4 %	0.0 ppm
Al 396.152 {85} (Radial)	324 cps	0.9758 ppm	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	64 cps	0.9712 ppm	0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	195 cps	0.1962 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		98.3230 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		99.4583 %	0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/30/2020 2:45:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	468 cps	1.0022 ppm	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	364 cps	1.0031 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	99,990 cps	5.0115 ppm	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	355,434 cps	1.0022 ppm	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,006 cps	5.0022 ppm	1.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,599 cps	1.0023 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,043 cps	1.0014 ppm	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	41,261 cps	5.0077 ppm	1.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	105,172 cps	5.0081 ppm	1.7 %	0.1 ppm
Fe 259.940 {130} (Radial)	931 cps	5.0090 ppm	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	52,600 cps	5.0196 ppm	1.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	66,853 cps	1.0013 ppm	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	12,607 cps	5.0103 ppm	1.7 %	0.1 ppm
Na 589.592 {57} (Radial)	148,129 cps	100.2933 ppm	1.3 %	1.3 ppm
Ni 231.604 {445} (Axial)	20,569 cps	5.0065 ppm	1.6 %	0.1 ppm
K 766.490 {44} (Radial)	34,228 cps	100.4001 ppm	1.6 %	1.6 ppm
Se 196.090 {472} (Axial)	1,125 cps	5.0132 ppm	1.5 %	0.1 ppm
Ag 328.068 {103} (Axial)	11,271 cps	1.0017 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,866 cps	1.0018 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	999 cps	1.0016 ppm	1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	961 cps	1.0017 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	15,169 cps	1.0019 ppm	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,039 cps	2.5062 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.9590 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		89.3408 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	144 cps	5.0134 ppm	1.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	337 cps	0.9994 ppm	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		104.0371 %	0.4 %	0.5 %
B 249.773 {135} (Radial)	1,213 cps	5.0135 ppm	1.4 %	0.1 ppm
Al 396.152 {85} (Radial)	1,663 cps	5.0066 ppm	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	332 cps	5.0074 ppm	1.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	992 cps	1.0008 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.0845 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.5053 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:15:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-28 cps	-0.0599 ppm	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	-15 cps	-0.0408 ppm	5.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	487,514 cps	22.3042 ppm	2.0 %	0.4 ppm
Ba 493.409 {68} (Radial)	427,408 cps	21.4217 ppm	2.5 %	0.5 ppm
Be 313.042 {108} (Axial)	774,313 cps	2.1833 ppm	3.5 %	0.1 ppm
Ca 315.887 {107} (Radial)	41,531 cps	206.5126 ppm	1.4 %	2.8 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	49.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	94,719 cps	10.4890 ppm	1.8 %	0.2 ppm
Cr 205.560 {464} (Axial)	58,408 cps	10.7828 ppm	1.3 %	0.1 ppm
Co 228.616 {447} (Axial)	97 cps	0.0118 ppm	2.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	447,461 cps	21.3074 ppm	4.2 %	0.9 ppm
Fe 259.940 {130} (Radial)	38,209 cps	205.6702 ppm	1.0 %	2.1 ppm
Li 670.784 {50} (Radial)	112,820 cps	10.7665 ppm	2.0 %	0.2 ppm
Mn 257.610 {131} (Axial)	673,793 cps	10.0920 ppm	2.5 %	0.3 ppm
Mo 202.030 {467} (Axial)	-3 cps	-0.0011 ppm	50.3 %	0.0 ppm
Na 589.592 {57} (Radial)	-40 cps	-0.0272 ppm	71.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	-119 cps	-0.0290 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	-63 cps	-0.1853 ppm	16.6 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0129 ppm	40.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	26,825 cps	2.3841 ppm	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	279,755 cps	10.4313 ppm	1.5 %	0.2 ppm
Sn 189.989 {477} (Axial)	-32 cps	-0.0319 ppm	3.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	9,928 cps	10.3480 ppm	1.3 %	0.1 ppm
V 292.402 {115} (Axial)	161,778 cps	10.6858 ppm	2.0 %	0.2 ppm
Zn 213.856 {457} (Axial)	-822 cps	-0.0791 ppm	4.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.9274 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		79.4810 %	0.6 %	0.4 %
Mg 279.079 {121} (Radial)	6,266 cps	218.0994 ppm	1.2 %	2.6 ppm
Tl 190.856 {477} (Axial)	-22 cps	-0.0653 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	25,293 cps	21.6076 ppm	0.3 %	0.1 ppm
Sc 227.318 {448} (Axial)		82.3373 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	5,269 cps	21.7735 ppm	1.7 %	0.4 ppm
Al 396.152 {85} (Radial)	70,836 cps	213.2847 ppm	1.3 %	2.7 ppm
Si 251.611 {134} (Radial)	1,395 cps	21.0156 ppm	1.4 %	0.3 ppm
Pb 220.353 {453} (Axial)	-4 cps	-0.0038 ppm	54.4 %	0.0 ppm
Y 224.306 {450} (Axial)		87.8947 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.2477 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:21:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,500 cps	5.3549 ppm	2.8 %	0.2 ppm
As 189.042 {478} (Axial)	1,852 cps	5.1058 ppm	2.7 %	0.1 ppm
Ba 455.403 {74} (Radial)	176 cps	0.0080 ppm	27.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	166 cps	0.0083 ppm	28.2 %	0.0 ppm
Be 313.042 {108} (Axial)	-46 cps	-0.0001 ppm	48.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	19 cps	0.0955 ppm	14.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	270 cps	0.0233 ppm	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	11 cps	0.0012 ppm	25.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0066 ppm	3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	90,106 cps	10.9360 ppm	2.7 %	0.3 ppm
Cu 324.754 {104} (Axial)	186 cps	0.0088 ppm	6.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	22 cps	0.1158 ppm	19.7 %	0.0 ppm
Li 670.784 {50} (Radial)	85 cps	0.0081 ppm	24.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-176 cps	-0.0026 ppm	19.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	27,114 cps	10.7757 ppm	2.9 %	0.3 ppm
Na 589.592 {57} (Radial)	0 cps	0.0002 ppm	2,702.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	44,674 cps	10.8738 ppm	2.7 %	0.3 ppm
K 766.490 {44} (Radial)	-4 cps	-0.0130 ppm	223.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1,151 cps	5.1297 ppm	2.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0002 ppm	126.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	101 cps	0.0038 ppm	26.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,307 cps	5.3215 ppm	2.8 %	0.2 ppm
Ti 334.941 {101} (Radial)	13 cps	0.0131 ppm	14.6 %	0.0 ppm
V 292.402 {115} (Axial)	11 cps	0.0007 ppm	36.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	53,720 cps	5.1705 ppm	2.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.5932 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		97.4264 %	1.4 %	1.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0754 ppm	44.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,953 cps	5.8011 ppm	2.2 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0185 ppm	32.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1981 %	1.2 %	1.2 %
B 249.773 {135} (Radial)	13 cps	0.0547 ppm	13.3 %	0.0 ppm
Al 396.152 {85} (Radial)	169 cps	0.5093 ppm	4.3 %	0.0 ppm
Si 251.611 {134} (Radial)	7 cps	0.0996 ppm	11.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,530 cps	5.5764 ppm	2.6 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5673 %	1.2 %	1.2 %
Sc 361.384 {93} (Radial)		99.7957 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/30/2020 2:50:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	462 cps	0.9894 ppm	98.941 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	351 cps	0.9666 ppm	96.657 %	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,198 cps	1.0156 ppm		2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	19,410 cps	0.9728 ppm	97.282 %	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	343,074 cps	0.9673 ppm	96.733 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,211 cps	6.0225 ppm	100.374 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,375 cps	0.9830 ppm	98.303 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	8,923 cps	0.9881 ppm	98.811 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,551 cps	1.0248 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	8,204 cps	0.9957 ppm	99.566 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,810 cps	0.9910 ppm	99.095 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	182 cps	0.9812 ppm	98.122 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	9,970 cps	0.9515 ppm	95.145 %	2.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	66,873 cps	1.0016 ppm	100.161 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,546 cps	1.0120 ppm	101.203 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	29,457 cps	19.9441 ppm	94.972 %	2.6 %	0.5 ppm
Ni 231.604 {445} (Axial)	4,113 cps	1.0010 ppm	100.099 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	6,797 cps	19.9365 ppm	94.936 %	2.8 %	0.6 ppm
Se 196.090 {472} (Axial)	219 cps	0.9752 ppm	97.519 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11,684 cps	1.0385 ppm	103.845 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,087 cps	0.9727 ppm	97.269 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	989 cps	0.9912 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	927 cps	0.9665 ppm	96.647 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	15,038 cps	0.9933 ppm	99.331 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,137 cps	0.9757 ppm	97.571 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.9448 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.4885 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	0.9369 ppm	93.694 %	3.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	350 cps	1.0384 ppm	103.844 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1,203 cps	1.0280 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.1732 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	240 cps	0.9912 ppm	99.123 %	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	328 cps	0.9886 ppm	98.865 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	67 cps	1.0089 ppm		3.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,011 cps	1.0192 ppm	101.917 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.5577 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.9516 %		0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 11/30/2020 2:55:23 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	79.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	148.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	13 cps	0.0006 ppm	46.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	101 cps	0.0051 ppm	9.0 %	0.0 ppm
Be 313.042 {108} (Axial)	111 cps	0.0003 ppm	16.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0237 ppm	30.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	92.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	88.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	6.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	107.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	7 cps	0.0004 ppm	55.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0035 ppm	60.2 %	0.0 ppm
Li 670.784 {50} (Radial)	11 cps	0.0010 ppm	136.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	21 cps	0.0003 ppm	27.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	27.0 %	0.0 ppm
Na 589.592 {57} (Radial)	58 cps	0.0390 ppm	10.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1,855.1 %	0.0 ppm
K 766.490 {44} (Radial)	-7 cps	-0.0210 ppm	222.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0008 ppm	121.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0007 ppm	20.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0006 ppm	26.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0005 ppm	49.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0045 ppm	28.4 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	431.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	45.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8855 %	0.2 %	0.1 %
Sc 188.060 {479} (Axial)		98.9241 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	0.0066 ppm	181.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	37.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	41.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8486 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	0 cps	-0.0009 ppm	159.5 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0184 ppm	46.6 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0058 ppm	274.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	75.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.3863 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.2813 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/30/2020 3:00:35 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0049 ppm	97.760 %	20.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0037 ppm	73.287 %	35.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	113 cps	0.0052 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	143 cps	0.0072 ppm		15.0 %	0.0 ppm
Be 313.042 {108} (Axial)	704 cps	0.0020 ppm	99.309 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	101 cps	0.5038 ppm	100.757 %	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0098 ppm	97.972 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	44 cps	0.0049 ppm	97.597 %	6.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0052 ppm	103.874 %	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0050 ppm	99.895 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	210 cps	0.0100 ppm	99.781 %	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0817 ppm	102.123 %	13.9 %	0.0 ppm
Li 670.784 {50} (Radial)	95 cps	0.0090 ppm	90.226 %	18.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	346 cps	0.0052 ppm	103.643 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0053 ppm	105.725 %	4.2 %	0.0 ppm
Na 589.592 {57} (Radial)	300 cps	0.2029 ppm	101.427 %	5.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	20 cps	0.0050 ppm	99.021 %	2.5 %	0.0 ppm
K 766.490 {44} (Radial)	49 cps	0.1444 ppm	72.213 %	30.9 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0129 ppm	128.639 %	28.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	64 cps	0.0057 ppm	113.902 %	6.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	135 cps	0.0050 ppm	100.966 %	0.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0104 ppm		5.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0051 ppm	102.874 %	42.2 %	0.0 ppm
V 292.402 {115} (Axial)	72 cps	0.0047 ppm	94.946 %	9.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	101 cps	0.0097 ppm	97.111 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6650 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		98.6937 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	6 cps	0.2038 ppm	101.879 %	5.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0106 ppm	106.176 %	16.9 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0112 ppm		3.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.5853 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0123 ppm	61.353 %	11.4 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0144 ppm		111.4 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2422 ppm		5.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0058 ppm	115.709 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0433 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.3638 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/30/2020 3:05:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0055 ppm	109.561 %	13.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0041 ppm	82.272 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	115 cps	0.0053 ppm		6.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	130 cps	0.0065 ppm		25.9 %	0.0 ppm
Be 313.042 {108} (Axial)	686 cps	0.0019 ppm	96.768 %	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4988 ppm	99.760 %	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0097 ppm	97.242 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	46 cps	0.0051 ppm	102.040 %	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	27 cps	0.0050 ppm	100.027 %	4.4 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0050 ppm	100.748 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	209 cps	0.0100 ppm	99.665 %	5.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0785 ppm	98.120 %	6.3 %	0.0 ppm
Li 670.784 {50} (Radial)	98 cps	0.0094 ppm	93.996 %	12.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	338 cps	0.0051 ppm	101.107 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0051 ppm	102.874 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	274 cps	0.1858 ppm	92.904 %	1.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	19 cps	0.0047 ppm	93.699 %	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	44 cps	0.1304 ppm	65.202 %	21.2 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0113 ppm	113.018 %	3.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	62 cps	0.0055 ppm	109.494 %	12.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	130 cps	0.0048 ppm	96.641 %	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0096 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0050 ppm	100.098 %	17.1 %	0.0 ppm
V 292.402 {115} (Axial)	70 cps	0.0046 ppm	92.997 %	4.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	99 cps	0.0095 ppm	95.381 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.1606 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		99.6488 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	6 cps	0.1970 ppm	98.492 %	6.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0102 ppm	101.688 %	10.1 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0110 ppm		3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.6855 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0118 ppm	58.850 %	49.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0017 ppm		190.4 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2444 ppm		7.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0046 ppm	92.613 %	19.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.6336 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.2785 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/30/2020 3:10:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-6 cps	-0.0125 ppm		9.0 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0215 ppm	0.000 %	4.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0006 ppm	0.000 %	57.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	77 cps	0.0039 ppm	0.000 %	33.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-925 cps	-0.0026 ppm	0.000 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,547 cps	92.2233 ppm	92.223 %	0.8 %	0.7 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	0.000 %	71.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	19 cps	0.0021 ppm	0.000 %	10.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0007 ppm	0.000 %	18.7 %	0.0 ppm
Co 228.616 {447} (Axial)	28 cps	0.0034 ppm	0.000 %	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	60 cps	0.0029 ppm	0.000 %	26.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,295 cps	93.0928 ppm	93.093 %	0.7 %	0.7 ppm
Li 670.784 {50} (Radial)	16 cps	0.0015 ppm		24.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-388 cps	-0.0058 ppm	0.000 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4,831 cps	1.9200 ppm	95.998 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	139,481 cps	94.4384 ppm	94.438 %	1.5 %	1.4 ppm
Ni 231.604 {445} (Axial)	-60 cps	-0.0147 ppm	0.000 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	32,868 cps	96.4105 ppm	96.411 %	2.0 %	1.9 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	0.000 %	465.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-8 cps	-0.0007 ppm	0.000 %	73.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	-66 cps	-0.0025 ppm		2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0112 ppm		7.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,819 cps	1.8955 ppm		0.6 %	0.0 ppm
V 292.402 {115} (Axial)	37 cps	0.0024 ppm	0.000 %	8.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-47 cps	-0.0045 ppm	0.000 %	3.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.5605 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		82.7742 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	2,740 cps	95.3892 ppm	95.389 %	0.9 %	0.8 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0083 ppm	0.000 %	7.7 %	0.0 ppm
Al 167.079 {502} (Axial)	22,395 cps	19.1324 ppm		0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		83.7823 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	16 cps	0.0643 ppm		15.1 %	0.0 ppm
Al 396.152 {85} (Radial)	30,598 cps	92.1279 ppm	92.128 %	0.7 %	0.6 ppm
Si 251.611 {134} (Radial)	7 cps	0.1008 ppm	0.000 %	9.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-4 cps	-0.0036 ppm	0.000 %	4.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0948 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.0759 %		0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 11:52:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5207 ppm	104.131 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5242 ppm	104.843 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,792 cps	2.7813 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	53,148 cps	2.6638 ppm	106.551 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	190,956 cps	0.5384 ppm	107.684 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	529 cps	2.6318 ppm	105.274 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,106 cps	0.5277 ppm	105.531 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,802 cps	0.5318 ppm	106.355 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,958 cps	0.5461 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,833 cps	2.6498 ppm	105.992 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,364 cps	2.6840 ppm	107.359 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	490 cps	2.6375 ppm	105.501 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	27,699 cps	2.6433 ppm	105.731 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,578 cps	0.5329 ppm	106.576 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6617 ppm	106.467 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	77,578 cps	52.5258 ppm	105.052 %	2.4 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,890 cps	2.6505 ppm	106.022 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	18,356 cps	53.8427 ppm	107.685 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	584 cps	2.6011 ppm	104.044 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,044 cps	0.5372 ppm	107.433 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,322 cps	0.5340 ppm	106.808 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	541 cps	0.5422 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	491 cps	0.5121 ppm	102.430 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,128 cps	0.5369 ppm	107.378 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,619 cps	1.3108 ppm	104.861 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6087 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		89.5617 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	77 cps	2.6663 ppm	106.651 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5437 ppm	108.738 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,071 cps	2.6238 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2318 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	624 cps	2.5790 ppm	103.159 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	883 cps	2.6573 ppm	106.290 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	174 cps	2.6211 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	531 cps	0.5355 ppm	107.096 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		93.0516 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.7441 %		0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 12:53:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5216 ppm	104.316 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5274 ppm	105.471 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,834 cps	2.6917 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	51,468 cps	2.5796 ppm	103.184 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	188,309 cps	0.5310 ppm	106.191 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	511 cps	2.5431 ppm	101.724 %	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,114 cps	0.5284 ppm	105.672 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,743 cps	0.5252 ppm	105.049 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,957 cps	0.5460 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,842 cps	2.6509 ppm	106.036 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,569 cps	2.6461 ppm	105.844 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	474 cps	2.5514 ppm	102.056 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	26,809 cps	2.5584 ppm	102.336 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,093 cps	0.5256 ppm	105.122 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,705 cps	2.6646 ppm	106.585 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	75,098 cps	50.8463 ppm	101.693 %	3.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,899 cps	2.6529 ppm	106.117 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,862 cps	52.3929 ppm	104.786 %	3.9 %	2.0 ppm
Se 196.090 {472} (Axial)	586 cps	2.6124 ppm	104.498 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,970 cps	0.5306 ppm	106.124 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,856 cps	0.5166 ppm	103.330 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	542 cps	0.5438 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	472 cps	0.4915 ppm	98.293 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	8,009 cps	0.5290 ppm	105.807 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,646 cps	1.3134 ppm	105.072 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.3537 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		89.2784 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	72 cps	2.4983 ppm	99.930 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5434 ppm	108.679 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,075 cps	2.6267 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7797 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	601 cps	2.4832 ppm	99.330 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	851 cps	2.5620 ppm	102.480 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	169 cps	2.5524 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	533 cps	0.5373 ppm	107.458 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6598 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.9246 %		0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:55:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5211 ppm	104.219 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5270 ppm	105.398 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,536 cps	2.7696 ppm		2.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	52,956 cps	2.6542 ppm	106.167 %	2.9 %	0.1 ppm
Be 313.042 {108} (Axial)	181,485 cps	0.5117 ppm	102.343 %	7.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	521 cps	2.5887 ppm	103.550 %	2.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,112 cps	0.5282 ppm	105.641 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,557 cps	0.5047 ppm	100.933 %	7.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,958 cps	0.5461 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	21,829 cps	2.6494 ppm	105.974 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,873 cps	2.5654 ppm	102.614 %	7.2 %	0.2 ppm
Fe 259.940 {130} (Radial)	490 cps	2.6349 ppm	105.396 %	2.6 %	0.1 ppm
Li 670.784 {50} (Radial)	27,561 cps	2.6301 ppm	105.205 %	3.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,880 cps	0.5074 ppm	101.489 %	7.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,699 cps	2.6624 ppm	106.495 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	77,037 cps	52.1593 ppm	104.319 %	3.1 %	1.6 ppm
Ni 231.604 {445} (Axial)	10,891 cps	2.6509 ppm	106.037 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	18,324 cps	53.7492 ppm	107.498 %	3.4 %	1.8 ppm
Se 196.090 {472} (Axial)	584 cps	2.6013 ppm	104.050 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,759 cps	0.5118 ppm	102.360 %	7.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,253 cps	0.5314 ppm	106.289 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	541 cps	0.5422 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	487 cps	0.5074 ppm	101.488 %	3.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,768 cps	0.5131 ppm	102.620 %	7.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,626 cps	1.3114 ppm	104.916 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9360 %		8.1 %	7.9 %
Sc 188.060 {479} (Axial)		89.8628 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	74 cps	2.5771 ppm	103.085 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5441 ppm	108.822 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,076 cps	2.6279 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.4852 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	618 cps	2.5520 ppm	102.080 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	872 cps	2.6243 ppm	104.973 %	2.4 %	0.1 ppm
Si 251.611 {134} (Radial)	174 cps	2.6194 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	531 cps	0.5356 ppm	107.111 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.9661 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.2964 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 2:57:08 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	242 cps	0.5184 ppm	103.679 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5202 ppm	104.041 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,677 cps	2.4558 ppm		3.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	47,138 cps	2.3625 ppm	94.501 %	3.8 %	0.1 ppm
Be 313.042 {108} (Axial)	178,565 cps	0.5035 ppm	100.696 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	465 cps	2.3143 ppm	92.571 %	4.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,070 cps	0.5246 ppm	104.917 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,582 cps	0.5074 ppm	101.475 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,941 cps	0.5429 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,552 cps	2.6157 ppm	104.627 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,515 cps	2.5483 ppm	101.932 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	432 cps	2.3234 ppm	92.936 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	24,497 cps	2.3377 ppm	93.509 %	4.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,356 cps	0.4996 ppm	99.920 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,621 cps	2.6312 ppm	105.247 %	2.0 %	0.1 ppm
Na 589.592 {57} (Radial)	67,972 cps	46.0216 ppm	92.043 %	3.9 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,746 cps	2.6156 ppm	104.625 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	16,050 cps	47.0786 ppm	94.157 %	4.3 %	2.0 ppm
Se 196.090 {472} (Axial)	580 cps	2.5847 ppm	103.387 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,711 cps	0.5076 ppm	101.511 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,651 cps	0.4717 ppm	94.347 %	3.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	534 cps	0.5354 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	436 cps	0.4545 ppm	90.904 %	4.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,633 cps	0.5042 ppm	100.830 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,497 cps	1.2990 ppm	103.922 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.8057 %		1.8 %	1.7 %
Sc 188.060 {479} (Axial)		89.3585 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	65 cps	2.2501 ppm	90.005 %	5.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5382 ppm	107.644 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,039 cps	2.5961 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.7523 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	545 cps	2.2522 ppm	90.088 %	3.5 %	0.1 ppm
Al 396.152 {85} (Radial)	778 cps	2.3421 ppm	93.684 %	3.0 %	0.1 ppm
Si 251.611 {134} (Radial)	152 cps	2.2879 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	526 cps	0.5301 ppm	106.022 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6300 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.3677 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 3:12:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5209 ppm	104.181 %	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5235 ppm	104.698 %	3.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,526 cps	2.5403 ppm		4.3 %	0.1 ppm
Ba 493.409 {68} (Radial)	48,722 cps	2.4419 ppm	97.677 %	4.1 %	0.1 ppm
Be 313.042 {108} (Axial)	177,779 cps	0.5013 ppm	100.253 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	488 cps	2.4288 ppm	97.151 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,095 cps	0.5267 ppm	105.346 %	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,460 cps	0.4939 ppm	98.782 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,933 cps	0.5414 ppm		3.1 %	0.0 ppm
Co 228.616 {447} (Axial)	21,708 cps	2.6347 ppm	105.386 %	3.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	53,406 cps	2.5431 ppm	101.724 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	444 cps	2.3887 ppm	95.549 %	4.2 %	0.1 ppm
Li 670.784 {50} (Radial)	25,327 cps	2.4170 ppm	96.680 %	4.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,255 cps	0.4981 ppm	99.617 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,666 cps	2.6492 ppm	105.969 %	3.0 %	0.1 ppm
Na 589.592 {57} (Radial)	70,334 cps	47.6213 ppm	95.243 %	4.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	10,822 cps	2.6340 ppm	105.359 %	3.0 %	0.1 ppm
K 766.490 {44} (Radial)	16,653 cps	48.8487 ppm	97.697 %	5.2 %	2.5 ppm
Se 196.090 {472} (Axial)	585 cps	2.6066 ppm	104.263 %	3.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,666 cps	0.5036 ppm	100.714 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,111 cps	0.4889 ppm	97.775 %	4.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	537 cps	0.5388 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	445 cps	0.4642 ppm	92.835 %	4.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,649 cps	0.5053 ppm	101.051 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,576 cps	1.3067 ppm	104.535 %	3.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.5695 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		88.6038 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	65 cps	2.2783 ppm	91.131 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5389 ppm	107.789 %	3.4 %	0.0 ppm
Al 167.079 {502} (Axial)	3,051 cps	2.6065 ppm		2.7 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.1666 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	563 cps	2.3265 ppm	93.060 %	4.8 %	0.1 ppm
Al 396.152 {85} (Radial)	798 cps	2.4018 ppm	96.071 %	3.9 %	0.1 ppm
Si 251.611 {134} (Radial)	157 cps	2.3709 ppm		5.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	528 cps	0.5323 ppm	106.464 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		92.2956 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.9706 %		0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 3:37:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.5000 ppm	100.002 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4986 ppm	99.722 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,009 cps	2.6082 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	49,635 cps	2.4877 ppm	99.508 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	181,199 cps	0.5109 ppm	102.182 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	499 cps	2.4815 ppm	99.258 %	3.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,814 cps	0.5025 ppm	100.491 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,565 cps	0.5056 ppm	101.111 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,833 cps	0.5230 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,856 cps	2.5313 ppm	101.252 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,085 cps	2.5278 ppm	101.113 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	470 cps	2.5286 ppm	101.143 %	3.3 %	0.1 ppm
Li 670.784 {50} (Radial)	25,814 cps	2.4635 ppm	98.538 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,785 cps	0.5060 ppm	101.204 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,355 cps	2.5256 ppm	101.023 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	73,291 cps	49.6228 ppm	99.246 %	3.2 %	1.6 ppm
Ni 231.604 {445} (Axial)	10,408 cps	2.5332 ppm	101.330 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	17,027 cps	49.9442 ppm	99.888 %	3.2 %	1.6 ppm
Se 196.090 {472} (Axial)	558 cps	2.4862 ppm	99.450 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,717 cps	0.5081 ppm	101.620 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,438 cps	0.5010 ppm	100.210 %	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	513 cps	0.5144 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	472 cps	0.4923 ppm	98.465 %	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,687 cps	0.5078 ppm	101.552 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,002 cps	1.2515 ppm	100.117 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.0649 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		91.2911 %		0.0 %	0.0 %
Mg 279.079 {121} (Radial)	71 cps	2.4806 ppm	99.225 %	4.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5169 ppm	103.387 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,901 cps	2.4786 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0493 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	603 cps	2.4926 ppm	99.705 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	830 cps	2.4982 ppm	99.927 %	2.9 %	0.1 ppm
Si 251.611 {134} (Radial)	166 cps	2.5071 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	506 cps	0.5104 ppm	102.089 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0051 %		0.2 %	0.1 %
Sc 361.384 {93} (Radial)		97.1607 %		0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 4:39:27 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.4994 ppm	99.884 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.5038 ppm	100.751 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	56,114 cps	2.5672 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	49,284 cps	2.4701 ppm	98.804 %	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	180,622 cps	0.5093 ppm	101.857 %	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	492 cps	2.4471 ppm	97.886 %	0.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,868 cps	0.5071 ppm	101.419 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,544 cps	0.5032 ppm	100.636 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,841 cps	0.5244 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,998 cps	2.5485 ppm	101.939 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	53,069 cps	2.5271 ppm	101.083 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	463 cps	2.4939 ppm	99.755 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	25,429 cps	2.4267 ppm	97.067 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,675 cps	0.5044 ppm	100.875 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,415 cps	2.5495 ppm	101.981 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	71,741 cps	48.5738 ppm	97.148 %	1.9 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,470 cps	2.5484 ppm	101.936 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	17,015 cps	49.9102 ppm	99.820 %	1.9 %	1.0 ppm
Se 196.090 {472} (Axial)	560 cps	2.4946 ppm	99.783 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,721 cps	0.5085 ppm	101.699 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,233 cps	0.4934 ppm	98.688 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	519 cps	0.5208 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	459 cps	0.4780 ppm	95.591 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,655 cps	0.5056 ppm	101.129 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,105 cps	1.2613 ppm	100.904 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3173 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		90.4134 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	70 cps	2.4499 ppm	97.995 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5200 ppm	104.002 %	2.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,937 cps	2.5092 ppm		2.1 %	0.1 ppm
Sc 227.318 {448} (Axial)		98.1373 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	587 cps	2.4257 ppm	97.029 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	817 cps	2.4607 ppm	98.429 %	1.2 %	0.0 ppm
Si 251.611 {134} (Radial)	164 cps	2.4711 ppm		1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5162 ppm	103.247 %	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.3215 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		96.8765 %		0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 5:40:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	231 cps	0.4955 ppm	99.104 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	181 cps	0.4992 ppm	99.832 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,457 cps	2.6287 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	50,358 cps	2.5239 ppm	100.958 %	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	179,338 cps	0.5057 ppm	101.132 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	504 cps	2.5043 ppm	100.173 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,816 cps	0.5026 ppm	100.521 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,516 cps	0.5001 ppm	100.013 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,804 cps	0.5176 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.5222 ppm	100.888 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,661 cps	2.5076 ppm	100.305 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	473 cps	2.5441 ppm	101.762 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	25,887 cps	2.4704 ppm	98.818 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,476 cps	0.5014 ppm	100.280 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,359 cps	2.5273 ppm	101.093 %	2.0 %	0.1 ppm
Na 589.592 {57} (Radial)	72,986 cps	49.4168 ppm	98.834 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,378 cps	2.5259 ppm	101.037 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	17,223 cps	50.5192 ppm	101.038 %	2.2 %	1.1 ppm
Se 196.090 {472} (Axial)	556 cps	2.4767 ppm	99.069 %	1.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,663 cps	0.5033 ppm	100.664 %	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,533 cps	0.5046 ppm	100.923 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	514 cps	0.5158 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	469 cps	0.4886 ppm	97.716 %	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,639 cps	0.5046 ppm	100.916 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,977 cps	1.2490 ppm	99.922 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.4840 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		90.4593 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	71 cps	2.4568 ppm	98.272 %	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5172 ppm	103.441 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,913 cps	2.4883 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.8540 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	591 cps	2.4412 ppm	97.650 %	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	838 cps	2.5224 ppm	100.897 %	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	166 cps	2.4974 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	509 cps	0.5136 ppm	102.711 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2998 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		95.8560 %		0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 6:41:08 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.5129 ppm	102.581 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5168 ppm	103.357 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,960 cps	2.6975 ppm		1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	51,902 cps	2.6013 ppm	104.054 %	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	181,336 cps	0.5113 ppm	102.259 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	500 cps	2.4880 ppm	99.519 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,047 cps	0.5225 ppm	104.507 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,544 cps	0.5031 ppm	100.628 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,890 cps	0.5335 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,461 cps	2.6047 ppm	104.189 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,208 cps	2.5813 ppm	103.251 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	476 cps	2.5629 ppm	102.517 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	26,818 cps	2.5593 ppm	102.371 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,848 cps	0.5070 ppm	101.393 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,612 cps	2.6276 ppm	105.105 %	1.9 %	0.1 ppm
Na 589.592 {57} (Radial)	74,557 cps	50.4804 ppm	100.961 %	1.5 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,701 cps	2.6047 ppm	104.189 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	18,025 cps	52.8728 ppm	105.746 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	571 cps	2.5449 ppm	101.797 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,795 cps	0.5150 ppm	103.005 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,844 cps	0.5162 ppm	103.241 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	533 cps	0.5343 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	467 cps	0.4869 ppm	97.374 %	0.4 %	0.0 ppm
V 292.402 {115} (Axial)	7,782 cps	0.5140 ppm	102.802 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,426 cps	1.2922 ppm	103.380 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.3786 %		0.5 %	0.4 %
Sc 188.060 {479} (Axial)		88.1774 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	69 cps	2.4184 ppm	96.736 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5378 ppm	107.552 %	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,991 cps	2.5549 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.8315 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	600 cps	2.4804 ppm	99.217 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	844 cps	2.5424 ppm	101.696 %	0.3 %	0.0 ppm
Si 251.611 {134} (Radial)	166 cps	2.5026 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	536 cps	0.5408 ppm	108.162 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0401 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.7641 %		0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 7:42:47 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	244 cps	0.5223 ppm	104.453 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5260 ppm	105.210 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,892 cps	2.7401 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	52,625 cps	2.6376 ppm	105.503 %	3.0 %	0.1 ppm
Be 313.042 {108} (Axial)	188,220 cps	0.5307 ppm	106.141 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	510 cps	2.5370 ppm	101.481 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,135 cps	0.5302 ppm	106.034 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,730 cps	0.5238 ppm	104.752 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,936 cps	0.5420 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	21,810 cps	2.6470 ppm	105.881 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,053 cps	2.6692 ppm	106.767 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	480 cps	2.5824 ppm	103.295 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	27,432 cps	2.6178 ppm	104.713 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,083 cps	0.5255 ppm	105.095 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,727 cps	2.6736 ppm	106.945 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	76,022 cps	51.4719 ppm	102.944 %	3.2 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,874 cps	2.6468 ppm	105.870 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	18,621 cps	54.6199 ppm	109.240 %	3.2 %	1.7 ppm
Se 196.090 {472} (Axial)	576 cps	2.5679 ppm	102.716 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,985 cps	0.5319 ppm	106.384 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,028 cps	0.5231 ppm	104.617 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	542 cps	0.5436 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	470 cps	0.4897 ppm	97.941 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,067 cps	0.5328 ppm	106.570 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,631 cps	1.3120 ppm	104.959 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3852 %		1.2 %	1.1 %
Sc 188.060 {479} (Axial)		88.0705 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	71 cps	2.4763 ppm	99.052 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5448 ppm	108.967 %	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,043 cps	2.5995 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.0323 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	611 cps	2.5266 ppm	101.064 %	3.3 %	0.1 ppm
Al 396.152 {85} (Radial)	862 cps	2.5963 ppm	103.852 %	3.5 %	0.1 ppm
Si 251.611 {134} (Radial)	170 cps	2.5552 ppm		3.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	532 cps	0.5362 ppm	107.235 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6806 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.6003 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 8:44:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5205 ppm	104.105 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5247 ppm	104.943 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,860 cps	2.6471 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	50,873 cps	2.5497 ppm	101.989 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	183,750 cps	0.5181 ppm	103.620 %	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	508 cps	2.5275 ppm	101.101 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,113 cps	0.5282 ppm	105.648 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,610 cps	0.5105 ppm	102.101 %	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,929 cps	0.5407 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	21,743 cps	2.6389 ppm	105.556 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,707 cps	2.6051 ppm	104.203 %	3.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	464 cps	2.4995 ppm	99.978 %	0.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26,433 cps	2.5225 ppm	100.900 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,268 cps	0.5133 ppm	102.653 %	3.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6616 ppm	106.463 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73,751 cps	49.9348 ppm	99.870 %	2.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	10,835 cps	2.6371 ppm	105.485 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,899 cps	52.5031 ppm	105.006 %	2.3 %	1.2 ppm
Se 196.090 {472} (Axial)	579 cps	2.5785 ppm	103.138 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,868 cps	0.5215 ppm	104.299 %	3.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,596 cps	0.5070 ppm	101.391 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	539 cps	0.5402 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	457 cps	0.4760 ppm	95.198 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,852 cps	0.5187 ppm	103.731 %	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,598 cps	1.3088 ppm	104.701 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3493 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		89.0648 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	69 cps	2.4127 ppm	96.510 %	0.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5426 ppm	108.515 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,040 cps	2.5969 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.8495 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	593 cps	2.4500 ppm	98.001 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	838 cps	2.5233 ppm	100.931 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.4562 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	530 cps	0.5343 ppm	106.856 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		92.8151 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.8360 %		0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 9:45:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	169 cps	0.3617 ppm	72.343 %	35.3 %	0.1 ppm
As 189.042 {478} (Axial)	160 cps	0.4399 ppm	87.979 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	-10 cps	-0.0005 ppm		21.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,196 cps	-0.0600 ppm	-2.398 %	11.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-360 cps	-0.0010 ppm	-0.203 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0155 ppm	-0.621 %	73.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,129 cps	0.4433 ppm	88.655 %	2.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	-0.056 %	33.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,498 cps	0.4611 ppm		2.8 %	0.0 ppm
Co 228.616 {447} (Axial)	18,428 cps	2.2366 ppm	89.462 %	2.5 %	0.1 ppm
Cu 324.754 {104} (Axial)	-93 cps	-0.0044 ppm	-0.176 %	32.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0066 ppm	0.263 %	142.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-5 cps	-0.0005 ppm	-0.021 %	218.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-12 cps	-0.0002 ppm	-0.036 %	22.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,648 cps	2.2446 ppm	89.784 %	2.5 %	0.1 ppm
Na 589.592 {57} (Radial)	-64 cps	-0.0436 ppm	-0.087 %	6.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	9,192 cps	2.2373 ppm	89.492 %	2.5 %	0.1 ppm
K 766.490 {44} (Radial)	-27 cps	-0.0780 ppm	-0.156 %	18.8 %	0.0 ppm
Se 196.090 {472} (Axial)	396 cps	1.7645 ppm	70.578 %	36.3 %	0.6 ppm
Ag 328.068 {103} (Axial)	-6 cps	-0.0005 ppm	-0.100 %	278.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	-1 cps	0.0000 ppm	-0.006 %	123.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	384 cps	0.3853 ppm		34.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	0.063 %	427.1 %	0.0 ppm
V 292.402 {115} (Axial)	-15 cps	-0.0010 ppm	-0.202 %	4.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,658 cps	1.1221 ppm	89.766 %	2.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		201.2136 %		4.2 %	8.5 %
Sc 188.060 {479} (Axial)		98.7768 %		11.7 %	11.5 %
Mg 279.079 {121} (Radial)	0 cps	0.0033 ppm	0.131 %	333.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	125 cps	0.3699 ppm	73.976 %	37.5 %	0.1 ppm
Al 167.079 {502} (Axial)	2,251 cps	1.9233 ppm		32.9 %	0.6 ppm
Sc 227.318 {448} (Axial)		104.4710 %		9.6 %	10.0 %
B 249.773 {135} (Radial)	-5 cps	-0.0206 ppm	-0.825 %	8.7 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0039 ppm	-0.156 %	81.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0012 ppm		2,906.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	460 cps	0.4637 ppm	92.743 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		101.7252 %		11.1 %	11.2 %
Sc 361.384 {93} (Radial)		165.7025 %		8.2 %	13.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 9:50:37 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	220 cps	0.4722 ppm	94.436 %	4.6 %	0.0 ppm
As 189.042 {478} (Axial)	170 cps	0.4698 ppm	93.967 %	5.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	-1 cps	-0.0001 ppm		81.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,074 cps	-0.0538 ppm	-2.153 %	3.4 %	0.0 ppm
Be 313.042 {108} (Axial)	158,648 cps	0.4473 ppm	89.465 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	120 cps	0.5990 ppm	23.960 %	177.5 %	1.1 ppm
Cd 228.802 {447} (Axial)	5,625 cps	0.4861 ppm	97.223 %	5.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,037 cps	0.4471 ppm	89.412 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,723 cps	0.5027 ppm		4.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,128 cps	2.4429 ppm	97.718 %	5.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	47,149 cps	2.2452 ppm	89.806 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0060 ppm	-0.239 %	135.8 %	0.0 ppm
Li 670.784 {50} (Radial)	6 cps	0.0006 ppm	0.024 %	50.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,659 cps	0.4442 ppm	88.847 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,179 cps	2.4556 ppm	98.226 %	5.0 %	0.1 ppm
Na 589.592 {57} (Radial)	-40 cps	-0.0268 ppm	-0.054 %	23.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	10,034 cps	2.4423 ppm	97.694 %	5.0 %	0.1 ppm
K 766.490 {44} (Radial)	-28 cps	-0.0824 ppm	-0.165 %	78.7 %	0.1 ppm
Se 196.090 {472} (Axial)	530 cps	2.3643 ppm	94.572 %	6.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,970 cps	0.4418 ppm	88.350 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	2 cps	0.0001 ppm	0.012 %	506.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	499 cps	0.5005 ppm		5.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0018 ppm	0.353 %	8.8 %	0.0 ppm
V 292.402 {115} (Axial)	6,823 cps	0.4507 ppm	90.131 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,286 cps	1.1825 ppm	94.599 %	4.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		96.7005 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		89.7929 %		1.0 %	0.9 %
Mg 279.079 {121} (Radial)	0 cps	-0.0049 ppm	-0.194 %	83.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	167 cps	0.4957 ppm	99.144 %	5.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,851 cps	2.4358 ppm		4.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.9746 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	-3 cps	-0.0143 ppm	-0.572 %	32.8 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0010 ppm	0.041 %	218.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0079 ppm		20.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	489 cps	0.4927 ppm	98.540 %	5.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.1162 %		0.6 %	0.6 %
Sc 361.384 {93} (Radial)		139.7202 %		18.7 %	26.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 10:51:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	240 cps	0.5144 ppm	102.880 %	3.5 %	0.0 ppm
As 189.042 {478} (Axial)	188 cps	0.5174 ppm	103.480 %	3.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,560 cps	2.6792 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	51,393 cps	2.5758 ppm	103.032 %	2.0 %	0.1 ppm
Be 313.042 {108} (Axial)	175,222 cps	0.5001 ppm	100.027 %	0.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	504 cps	2.5070 ppm	100.278 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,034 cps	0.5215 ppm	104.297 %	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,409 cps	0.4936 ppm	98.725 %	0.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,900 cps	0.5353 ppm		3.7 %	0.0 ppm
Co 228.616 {447} (Axial)	21,486 cps	2.6077 ppm	104.308 %	3.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	51,935 cps	2.5074 ppm	100.297 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	478 cps	2.5739 ppm	102.955 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	26,681 cps	2.5461 ppm	101.846 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,724 cps	0.4963 ppm	99.265 %	0.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,598 cps	2.6224 ppm	104.896 %	3.7 %	0.1 ppm
Na 589.592 {57} (Radial)	74,404 cps	50.3768 ppm	100.754 %	2.6 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,710 cps	2.6067 ppm	104.269 %	3.6 %	0.1 ppm
K 766.490 {44} (Radial)	17,784 cps	52.1660 ppm	104.332 %	3.0 %	1.5 ppm
Se 196.090 {472} (Axial)	576 cps	2.5654 ppm	102.618 %	3.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	5,565 cps	0.5016 ppm	100.327 %	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,778 cps	0.5138 ppm	102.752 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	533 cps	0.5344 ppm		3.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	469 cps	0.4889 ppm	97.771 %	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	7,477 cps	0.5007 ppm	100.142 %	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,425 cps	1.2922 ppm	103.372 %	3.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.6996 %		2.5 %	2.4 %
Sc 188.060 {479} (Axial)		89.2564 %		1.1 %	1.0 %
Mg 279.079 {121} (Radial)	71 cps	2.4852 ppm	99.407 %	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	180 cps	0.5355 ppm	107.099 %	4.1 %	0.0 ppm
Al 167.079 {502} (Axial)	3,017 cps	2.5776 ppm		3.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.8871 %		0.8 %	0.8 %
B 249.773 {135} (Radial)	595 cps	2.4582 ppm	98.328 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	852 cps	2.5639 ppm	102.557 %	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	167 cps	2.5164 ppm		3.2 %	0.1 ppm
Pb 220.353 {453} (Axial)	524 cps	0.5288 ppm	105.760 %	3.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.7141 %		1.1 %	1.0 %
Sc 361.384 {93} (Radial)		95.9100 %		1.5 %	1.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:57:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0013 ppm	83.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0005 ppm	148.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	38 cps	0.0017 ppm	19.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0102 ppm	7.7 %	0.0 ppm
Be 313.042 {108} (Axial)	65 cps	0.0002 ppm	10.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0169 ppm	57.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	34.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	83.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	317.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	78.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	30 cps	0.0014 ppm	12.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0060 ppm	133.1 %	0.0 ppm
Li 670.784 {50} (Radial)	30 cps	0.0029 ppm	13.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0002 ppm	40.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	15.5 %	0.0 ppm
Na 589.592 {57} (Radial)	102 cps	0.0688 ppm	9.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0004 ppm	58.4 %	0.0 ppm
K 766.490 {44} (Radial)	20 cps	0.0601 ppm	70.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	136.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	22.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	10 cps	0.0004 ppm	6.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	507.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0002 ppm	1,572.9 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	43.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	52.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5244 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		95.6457 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	-2 cps	-0.0725 ppm	89.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0011 ppm	43.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	151.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.2865 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	-3 cps	-0.0112 ppm	63.8 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0074 ppm	106.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0224 ppm	64.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	318.2 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6715 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		95.4581 %	0.7 %	0.7 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:58:42 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0016 ppm	82.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	209.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	34 cps	0.0016 ppm	34.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	256 cps	0.0129 ppm	14.6 %	0.0 ppm
Be 313.042 {108} (Axial)	56 cps	0.0002 ppm	35.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0207 ppm	95.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	4.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	45.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	224.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	57.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	24 cps	0.0011 ppm	82.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0003 ppm	457.6 %	0.0 ppm
Li 670.784 {50} (Radial)	33 cps	0.0031 ppm	46.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	11.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	29.5 %	0.0 ppm
Na 589.592 {57} (Radial)	126 cps	0.0854 ppm	9.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	-1 cps	-0.0002 ppm	34.1 %	0.0 ppm
K 766.490 {44} (Radial)	12 cps	0.0356 ppm	98.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0001 ppm	828.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	13 cps	0.0011 ppm	72.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	10 cps	0.0004 ppm	55.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	77.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0007 ppm	126.6 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	220.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	82.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8648 %	4.6 %	4.6 %
Sc 188.060 {479} (Axial)		95.4626 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	0 cps	-0.0077 ppm	732.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	29.4 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	99.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1702 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	0 cps	0.0004 ppm	1,296.6 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0122 ppm	44.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0060 ppm	113.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	69.3 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9303 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.8498 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:00:14 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0027 ppm	53.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0001 ppm	231.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	31 cps	0.0014 ppm	35.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	240 cps	0.0121 ppm	10.9 %	0.0 ppm
Be 313.042 {108} (Axial)	70 cps	0.0002 ppm	5.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0056 ppm	223.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	22.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	94.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	24.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	82.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	32 cps	0.0015 ppm	29.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0012 ppm	692.7 %	0.0 ppm
Li 670.784 {50} (Radial)	24 cps	0.0023 ppm	60.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	38.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	23.1 %	0.0 ppm
Na 589.592 {57} (Radial)	91 cps	0.0613 ppm	23.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	89.2 %	0.0 ppm
K 766.490 {44} (Radial)	7 cps	0.0217 ppm	122.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0011 ppm	77.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0006 ppm	45.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2 cps	0.0001 ppm	56.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	325.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0027 ppm	18.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	306.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	273.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.2189 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		95.5666 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0318 ppm	146.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0007 ppm	14.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0002 ppm	125.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.3659 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-2 cps	-0.0066 ppm	63.9 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0007 ppm	1,795.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0085 ppm	166.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	1,213.6 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9809 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.5971 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:02:03 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	48.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	186.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	49 cps	0.0022 ppm	31.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	214 cps	0.0107 ppm	17.4 %	0.0 ppm
Be 313.042 {108} (Axial)	110 cps	0.0003 ppm	7.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0178 ppm	37.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	2.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	23 cps	0.0025 ppm	13.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	10 cps	0.0019 ppm	5.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0005 ppm	56.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	44 cps	0.0021 ppm	10.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0002 ppm	1,559.0 %	0.0 ppm
Li 670.784 {50} (Radial)	42 cps	0.0040 ppm	33.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	16 cps	0.0002 ppm	13.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	36.6 %	0.0 ppm
Na 589.592 {57} (Radial)	481 cps	0.3259 ppm	6.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0006 ppm	65.4 %	0.0 ppm
K 766.490 {44} (Radial)	18 cps	0.0515 ppm	57.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0002 ppm	533.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0008 ppm	44.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	15 cps	0.0005 ppm	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	158.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0009 ppm	135.6 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	33.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	111.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.1188 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		95.9602 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	-0.0090 ppm	36.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	38.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	31.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.7157 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-1 cps	-0.0028 ppm	142.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0028 ppm	462.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0065 ppm	196.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	466.5 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2284 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		96.5225 %	0.7 %	0.7 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:17:21 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0008 ppm	237.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	170.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	43 cps	0.0020 ppm	35.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	271 cps	0.0136 ppm	14.4 %	0.0 ppm
Be 313.042 {108} (Axial)	106 cps	0.0003 ppm	9.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	7 cps	0.0336 ppm	15.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	4 cps	0.0004 ppm	22.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	17.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	14.0 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0004 ppm	68.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	43 cps	0.0021 ppm	3.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0020 ppm	410.4 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0035 ppm	15.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	16 cps	0.0002 ppm	29.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0014 ppm	32.6 %	0.0 ppm
Na 589.592 {57} (Radial)	262 cps	0.1772 ppm	3.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	258.1 %	0.0 ppm
K 766.490 {44} (Radial)	21 cps	0.0615 ppm	11.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	26.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0005 ppm	91.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	21 cps	0.0008 ppm	7.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	186.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	406.1 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	583.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	879.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9201 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.1725 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0145 ppm	173.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0016 ppm	107.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	51.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.7488 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	-3 cps	-0.0106 ppm	23.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0032 ppm	682.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0070 ppm	51.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	58.3 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4190 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		96.8498 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:41:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0020 ppm	50.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0007 ppm	175.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	44.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	135 cps	0.0068 ppm	7.6 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	20.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4 cps	0.0206 ppm	43.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	8.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0003 ppm	89.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	261.4 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	67.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	27 cps	0.0013 ppm	20.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	-1 cps	-0.0027 ppm	224.2 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	17.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	12 cps	0.0002 ppm	29.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	23.9 %	0.0 ppm
Na 589.592 {57} (Radial)	59 cps	0.0402 ppm	31.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	190.5 %	0.0 ppm
K 766.490 {44} (Radial)	7 cps	0.0219 ppm	287.9 %	0.1 ppm
Se 196.090 {472} (Axial)	1 cps	0.0026 ppm	97.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0005 ppm	118.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0003 ppm	23.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	78.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0021 ppm	126.8 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0002 ppm	130.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	202.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0807 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		98.0867 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0349 ppm	51.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0008 ppm	71.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	26.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.1161 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	2 cps	0.0072 ppm	93.2 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0005 ppm	268.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0050 ppm	119.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	98.9 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4223 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		97.8888 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 4:44:22 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	171.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	155.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	32.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	49 cps	0.0024 ppm	54.7 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	12.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0093 ppm	100.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	63.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	251.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	110.5 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	50.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	21 cps	0.0010 ppm	18.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0023 ppm	151.9 %	0.0 ppm
Li 670.784 {50} (Radial)	29 cps	0.0028 ppm	33.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7 cps	0.0001 ppm	42.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	39.5 %	0.0 ppm
Na 589.592 {57} (Radial)	63 cps	0.0430 ppm	19.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	370.5 %	0.0 ppm
K 766.490 {44} (Radial)	-6 cps	-0.0188 ppm	291.2 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0007 ppm	50.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0005 ppm	26.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0002 ppm	61.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	594.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0016 ppm	19.5 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	223.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	157.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4287 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		98.3495 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1 cps	0.0213 ppm	291.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0010 ppm	142.9 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	82.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3699 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	-2 cps	-0.0069 ppm	82.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0051 ppm	254.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0140 ppm	80.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0004 ppm	209.3 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4730 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.2198 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 5:44:59 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0011 ppm	94.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	209.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	28 cps	0.0013 ppm	18.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	146 cps	0.0073 ppm	13.5 %	0.0 ppm
Be 313.042 {108} (Axial)	46 cps	0.0001 ppm	36.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0128 ppm	112.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	29.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	421.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	10.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	25.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	25 cps	0.0012 ppm	14.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0098 ppm	60.1 %	0.0 ppm
Li 670.784 {50} (Radial)	25 cps	0.0024 ppm	85.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	60.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0008 ppm	17.2 %	0.0 ppm
Na 589.592 {57} (Radial)	54 cps	0.0368 ppm	35.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	225.3 %	0.0 ppm
K 766.490 {44} (Radial)	-4 cps	-0.0122 ppm	53.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0001 ppm	2,711.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	77.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	47.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0003 ppm	80.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	120.4 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	52.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	57.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.3880 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.3524 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0159 ppm	266.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	229.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	65.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2292 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-1 cps	-0.0028 ppm	150.4 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0068 ppm	364.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0053 ppm	85.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0007 ppm	16.0 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7902 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.3841 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 6:46:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	196.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0011 ppm	49.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	29 cps	0.0013 ppm	25.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	222 cps	0.0111 ppm	8.8 %	0.0 ppm
Be 313.042 {108} (Axial)	58 cps	0.0002 ppm	25.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0119 ppm	25.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0006 ppm	25.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	3 cps	0.0003 ppm	102.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	-0.0001 ppm	85.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	105.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	36 cps	0.0017 ppm	12.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0022 ppm	92.6 %	0.0 ppm
Li 670.784 {50} (Radial)	41 cps	0.0039 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	55.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	46.7 %	0.0 ppm
Na 589.592 {57} (Radial)	113 cps	0.0763 ppm	23.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0001 ppm	98.8 %	0.0 ppm
K 766.490 {44} (Radial)	20 cps	0.0574 ppm	74.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	84.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	46.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	6 cps	0.0002 ppm	41.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	337.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0020 ppm	70.9 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0003 ppm	73.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	56.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.7657 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		94.8371 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0216 ppm	286.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	70.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	6.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.8329 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-2 cps	-0.0086 ppm	46.3 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0030 ppm	208.0 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0048 ppm	99.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	2 cps	0.0019 ppm	44.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0723 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.6113 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 7:47:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	235.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0014 ppm	57.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	32 cps	0.0015 ppm	70.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	173 cps	0.0087 ppm	18.7 %	0.0 ppm
Be 313.042 {108} (Axial)	74 cps	0.0002 ppm	10.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5 cps	0.0262 ppm	20.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	11.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	59.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	315.9 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	44.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	34 cps	0.0016 ppm	9.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0090 ppm	45.0 %	0.0 ppm
Li 670.784 {50} (Radial)	69 cps	0.0066 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	39.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	22.6 %	0.0 ppm
Na 589.592 {57} (Radial)	62 cps	0.0420 ppm	39.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	2,082.8 %	0.0 ppm
K 766.490 {44} (Radial)	34 cps	0.1009 ppm	25.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	1,129.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	46.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	42.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0002 ppm	375.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0005 ppm	202.9 %	0.0 ppm
V 292.402 {115} (Axial)	-3 cps	-0.0002 ppm	184.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	100.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.8045 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.1046 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0196 ppm	138.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0023 ppm	26.2 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	52.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.0053 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-1 cps	-0.0031 ppm	197.9 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0128 ppm	63.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0112 ppm	139.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0001 ppm	653.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5530 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.0514 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 8:49:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0022 ppm	59.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	480.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	21 cps	0.0010 ppm	83.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	249 cps	0.0125 ppm	10.5 %	0.0 ppm
Be 313.042 {108} (Axial)	60 cps	0.0002 ppm	19.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0129 ppm	16.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	35.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	143.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	201.2 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	88.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	36 cps	0.0017 ppm	25.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0006 ppm	743.7 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	21.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	13 cps	0.0002 ppm	12.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	15.8 %	0.0 ppm
Na 589.592 {57} (Radial)	61 cps	0.0410 ppm	12.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	258.7 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0552 ppm	70.8 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	135.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	44.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0003 ppm	16.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	97.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	181.8 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	43.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.0299 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		95.3701 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0104 ppm	565.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0013 ppm	76.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0004 ppm	92.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.1283 %	1.1 %	1.0 %
B 249.773 {135} (Radial)	-3 cps	-0.0140 ppm	15.8 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0144 ppm	107.8 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0116 ppm	64.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	85.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3095 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		96.9997 %	0.2 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 9:55:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0015 ppm	68.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	202.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	9 cps	0.0004 ppm	48.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	-1,131 cps	-0.0567 ppm	14.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-198 cps	-0.0006 ppm	115.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	-4 cps	-0.0201 ppm	62.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0008 ppm	13.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	105.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0006 ppm	31.6 %	0.0 ppm
Co 228.616 {447} (Axial)	24 cps	0.0029 ppm	20.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	-32 cps	-0.0015 ppm	277.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0027 ppm	239.1 %	0.0 ppm
Li 670.784 {50} (Radial)	5 cps	0.0005 ppm	192.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	208.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	10 cps	0.0042 ppm	20.1 %	0.0 ppm
Na 589.592 {57} (Radial)	-27 cps	-0.0184 ppm	56.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	11 cps	0.0028 ppm	19.7 %	0.0 ppm
K 766.490 {44} (Radial)	-23 cps	-0.0685 ppm	30.5 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0046 ppm	61.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	-15 cps	-0.0014 ppm	111.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1 cps	0.0000 ppm	134.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	14.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0008 ppm	42.9 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0006 ppm	95.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12 cps	0.0012 ppm	23.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		166.6489 %	30.3 %	50.6 %
Sc 188.060 {479} (Axial)		95.9125 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	0.0124 ppm	305.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	326.0 %	0.0 ppm
Al 167.079 {502} (Axial)	4 cps	0.0035 ppm	18.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.6869 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	-3 cps	-0.0115 ppm	7.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0054 ppm	30.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0157 ppm	135.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0001 ppm	481.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2029 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		161.4753 %	5.6 %	9.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:56:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0024 ppm	21.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	80.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	24 cps	0.0011 ppm	28.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0102 ppm	4.0 %	0.0 ppm
Be 313.042 {108} (Axial)	61 cps	0.0002 ppm	14.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0045 ppm	220.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	47.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	1,981.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	-1 cps	-0.0001 ppm	59.7 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	97.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	26 cps	0.0012 ppm	37.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0026 ppm	97.4 %	0.0 ppm
Li 670.784 {50} (Radial)	28 cps	0.0027 ppm	48.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	32.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	39.2 %	0.0 ppm
Na 589.592 {57} (Radial)	32 cps	0.0217 ppm	60.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	86.1 %	0.0 ppm
K 766.490 {44} (Radial)	18 cps	0.0521 ppm	22.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0006 ppm	472.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0012 ppm	13.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	26.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	89.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0025 ppm	100.3 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	16.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	521.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9624 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.0514 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0054 ppm	345.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0009 ppm	54.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	68.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.8671 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	-2 cps	-0.0089 ppm	26.7 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0117 ppm	71.5 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0125 ppm	14.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0008 ppm	46.4 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8155 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.5867 %	0.6 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

MBLK-168379

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:45:04 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	129.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0006 ppm	81.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	724.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	150 cps	0.0075 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	27 cps	0.0001 ppm	17.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0032 ppm	261.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0003 ppm	11.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	635.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	1,396.1 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0001 ppm	89.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	8 cps	0.0004 ppm	76.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0034 ppm	120.3 %	0.0 ppm
Li 670.784 {50} (Radial)	11 cps	0.0011 ppm	54.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	13.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	310.8 %	0.0 ppm
Na 589.592 {57} (Radial)	163 cps	0.1106 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	11,526.1 %	0.0 ppm
K 766.490 {44} (Radial)	5 cps	0.0137 ppm	266.1 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0031 ppm	55.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	27.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	-1 cps	0.0000 ppm	288.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	250.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0003 ppm	869.9 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	0.0000 ppm	1,126.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	-3 cps	-0.0003 ppm	25.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.4446 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.8558 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0241 ppm	90.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0017 ppm	58.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0019 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.5852 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	-4 cps	-0.0158 ppm	25.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0094 ppm	135.5 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0087 ppm	154.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	118.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.5165 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		96.7389 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LCS-168379

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:50:18 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	43 cps	0.0930 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.0881 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,114 cps	0.0967 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,018 cps	0.1012 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,833 cps	0.0898 ppm	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,811 cps	9.0039 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,058 cps	0.0915 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	823 cps	0.0911 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	520 cps	0.0960 ppm	2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	766 cps	0.0930 ppm	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,975 cps	0.0941 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,701 cps	9.1583 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	934 cps	0.0891 ppm	0.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,185 cps	0.0926 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	238 cps	0.0948 ppm	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	13,116 cps	8.8807 ppm	1.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	379 cps	0.0922 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	3,143 cps	9.2192 ppm	1.2 %	0.1 ppm
Se 196.090 {472} (Axial)	19 cps	0.0866 ppm	4.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,030 cps	0.0915 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,471 cps	0.0921 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	93 cps	0.0936 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	89 cps	0.0932 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,406 cps	0.0928 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	921 cps	0.0886 ppm	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9441 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		91.3046 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	258 cps	8.9950 ppm	2.2 %	0.2 ppm
Tl 190.856 {477} (Axial)	32 cps	0.0947 ppm	2.1 %	0.0 ppm
Al 167.079 {502} (Axial)	145 cps	0.1240 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.1809 %	1.0 %	0.9 %
B 249.773 {135} (Radial)	108 cps	0.4468 ppm	3.3 %	0.0 ppm
Al 396.152 {85} (Radial)	38 cps	0.1153 ppm	13.6 %	0.0 ppm
Si 251.611 {134} (Radial)	571 cps	8.6045 ppm	2.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	97 cps	0.0981 ppm	2.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.7287 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		95.6570 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-22AMS

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:10:37 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	46 cps	0.0984 ppm	3.2 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0921 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,975 cps	0.1361 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,747 cps	0.1377 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	33,061 cps	0.0932 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,738 cps	18.5874 ppm	1.5 %	0.3 ppm
Cd 228.802 {447} (Axial)	1,093 cps	0.0944 ppm	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	836 cps	0.0925 ppm	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	520 cps	0.0960 ppm	2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	759 cps	0.0921 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,042 cps	0.0973 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,708 cps	9.1934 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	1,001 cps	0.0956 ppm	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,843 cps	0.1474 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	241 cps	0.0958 ppm	2.4 %	0.0 ppm
Na 589.592 {57} (Radial)	209,862 cps	142.0908 ppm	2.0 %	2.9 ppm
Ni 231.604 {445} (Axial)	381 cps	0.0926 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	3,441 cps	10.0938 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0906 ppm	8.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,048 cps	0.0932 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,869 cps	0.1442 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.0942 ppm	2.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	91 cps	0.0944 ppm	2.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,425 cps	0.0941 ppm	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,753 cps	0.8425 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.3678 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		85.5507 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	347 cps	12.0957 ppm	2.2 %	0.3 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0895 ppm	2.7 %	0.0 ppm
Al 167.079 {502} (Axial)	170 cps	0.1451 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.5772 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	112 cps	0.4622 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	44 cps	0.1310 ppm	5.3 %	0.0 ppm
Si 251.611 {134} (Radial)	619 cps	9.3264 ppm	2.6 %	0.2 ppm
Pb 220.353 {453} (Axial)	132 cps	0.1334 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6821 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		93.8539 %	0.0 %	0.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

20111754-22AMSD

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:15:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.0961 ppm	4.0 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0900 ppm	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,797 cps	0.1280 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,544 cps	0.1275 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,240 cps	0.0881 ppm	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,527 cps	17.5369 ppm	1.4 %	0.2 ppm
Cd 228.802 {447} (Axial)	1,060 cps	0.0916 ppm	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	794 cps	0.0879 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	502 cps	0.0927 ppm	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	736 cps	0.0893 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,941 cps	0.0924 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,618 cps	8.7103 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	940 cps	0.0897 ppm	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,304 cps	0.1394 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	233 cps	0.0925 ppm	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	196,259 cps	132.8809 ppm	1.9 %	2.6 ppm
Ni 231.604 {445} (Axial)	369 cps	0.0897 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	3,253 cps	9.5412 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0880 ppm	5.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	998 cps	0.0887 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,648 cps	0.1360 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	91 cps	0.0916 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	86 cps	0.0897 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,356 cps	0.0895 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,876 cps	0.8543 ppm	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.7726 %	0.4 %	0.3 %
Sc 188.060 {479} (Axial)		85.8362 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	328 cps	11.4302 ppm	1.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	29 cps	0.0875 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	182 cps	0.1559 ppm	2.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.0298 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	104 cps	0.4278 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	42 cps	0.1268 ppm	4.7 %	0.0 ppm
Si 251.611 {134} (Radial)	587 cps	8.8439 ppm	2.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	134 cps	0.1352 ppm	2.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6764 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		95.8130 %	0.7 %	0.6 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111764-02A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:25:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	5 cps	0.0104 ppm	11.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	60.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,298 cps	0.0594 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,225 cps	0.0614 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	142 cps	0.0004 ppm	7.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,291 cps	21.3366 ppm	1.2 %	0.3 ppm
Cd 228.802 {447} (Axial)	109 cps	0.0094 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0006 ppm	35.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	31.7 %	0.0 ppm
Co 228.616 {447} (Axial)	9 cps	0.0011 ppm	6.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,148 cps	0.0547 ppm	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	7 cps	0.0403 ppm	15.6 %	0.0 ppm
Li 670.784 {50} (Radial)	18 cps	0.0018 ppm	54.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,564 cps	0.0684 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	651.1 %	0.0 ppm
Na 589.592 {57} (Radial)	194,112 cps	131.4272 ppm	1.6 %	2.1 ppm
Ni 231.604 {445} (Axial)	60 cps	0.0146 ppm	2.4 %	0.0 ppm
K 766.490 {44} (Radial)	13 cps	0.0387 ppm	95.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0005 ppm	471.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	36.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	693 cps	0.0258 ppm	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0011 ppm	51.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0024 ppm	60.2 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	503.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	198,767 cps	19.1310 ppm	1.5 %	0.3 ppm
Sc 357.253 {94} (Axial)		93.9255 %	0.3 %	0.2 %
Sc 188.060 {479} (Axial)		85.3885 %	1.0 %	0.8 %
Mg 279.079 {121} (Radial)	22 cps	0.7763 ppm	9.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0014 ppm	67.1 %	0.0 ppm
Al 167.079 {502} (Axial)	15 cps	0.0126 ppm	1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.3303 %	0.9 %	0.7 %
B 249.773 {135} (Radial)	6 cps	0.0268 ppm	15.2 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0004 ppm	3,036.1 %	0.0 ppm
Si 251.611 {134} (Radial)	42 cps	0.6377 ppm	5.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,815 cps	2.8385 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.1470 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		96.5883 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111764-04A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:30:54 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0071 ppm	30.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0013 ppm	104.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,696 cps	0.1234 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,548 cps	0.1277 ppm	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	54 cps	0.0002 ppm	12.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	31,946 cps	158.8531 ppm	1.3 %	2.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0006 ppm	7.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0007 ppm	63.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0003 ppm	55.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	4,843.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	46 cps	0.0022 ppm	12.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0084 ppm	98.6 %	0.0 ppm
Li 670.784 {50} (Radial)	31 cps	0.0030 ppm	23.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	16,626 cps	0.2490 ppm	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0003 ppm	41.5 %	0.0 ppm
Na 589.592 {57} (Radial)	2,329 cps	1.5768 ppm	0.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	5 cps	0.0013 ppm	7.1 %	0.0 ppm
K 766.490 {44} (Radial)	49 cps	0.1439 ppm	4.2 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0029 ppm	62.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0004 ppm	61.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,236 cps	0.1207 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	233.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0074 ppm	25.4 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	0.0000 ppm	447.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,134 cps	0.5904 ppm	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.8048 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		85.6254 %	0.8 %	0.6 %
Mg 279.079 {121} (Radial)	100 cps	3.4980 ppm	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0013 ppm	93.7 %	0.0 ppm
Al 167.079 {502} (Axial)	8 cps	0.0071 ppm	4.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.5610 %	0.8 %	0.6 %
B 249.773 {135} (Radial)	7 cps	0.0287 ppm	21.1 %	0.0 ppm
Al 396.152 {85} (Radial)	8 cps	0.0251 ppm	46.7 %	0.0 ppm
Si 251.611 {134} (Radial)	19 cps	0.2899 ppm	3.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	9 cps	0.0089 ppm	2.8 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3238 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		94.5086 %	0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111764-06A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:36:04 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0088 ppm	18.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0005 ppm	126.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,881 cps	0.1318 ppm	0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,711 cps	0.1359 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	47 cps	0.0001 ppm	11.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	33,088 cps	164.5313 ppm	1.2 %	2.0 ppm
Cd 228.802 {447} (Axial)	14 cps	0.0012 ppm	3.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0010 ppm	69.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	24.0 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	6.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	38 cps	0.0018 ppm	17.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0049 ppm	63.8 %	0.0 ppm
Li 670.784 {50} (Radial)	15 cps	0.0015 ppm	83.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,253 cps	0.1236 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0004 ppm	66.0 %	0.0 ppm
Na 589.592 {57} (Radial)	2,014 cps	1.3639 ppm	0.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	6 cps	0.0014 ppm	9.2 %	0.0 ppm
K 766.490 {44} (Radial)	37 cps	0.1081 ppm	35.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0007 ppm	594.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0010 ppm	41.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,498 cps	0.1304 ppm	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0006 ppm	68.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0051 ppm	9.8 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0000 ppm	1,242.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	795 cps	0.0765 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.8613 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		85.7298 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	107 cps	3.7273 ppm	1.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	203.9 %	0.0 ppm
Al 167.079 {502} (Axial)	7 cps	0.0061 ppm	2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.5990 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0185 ppm	45.9 %	0.0 ppm
Al 396.152 {85} (Radial)	14 cps	0.0431 ppm	20.6 %	0.0 ppm
Si 251.611 {134} (Radial)	22 cps	0.3256 ppm	7.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	10 cps	0.0105 ppm	6.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2838 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.5297 %	0.4 %	0.4 %

Calibration Summary

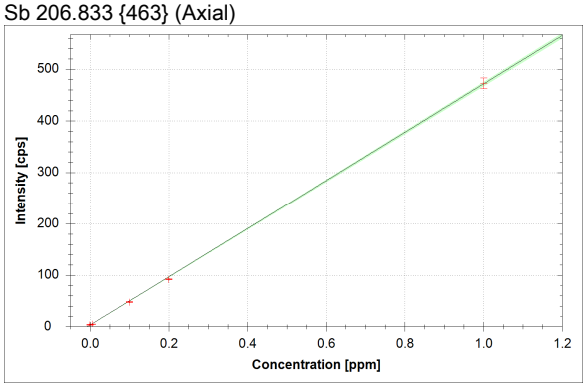
12/2/2020 8:16:42 AM

QTEGRA

LabBook: ICP2_201201C.imexp

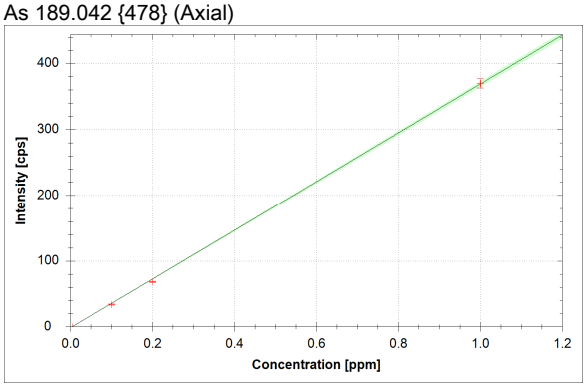
Calibration Graphs

Sb 206.833 {463} (Axial)



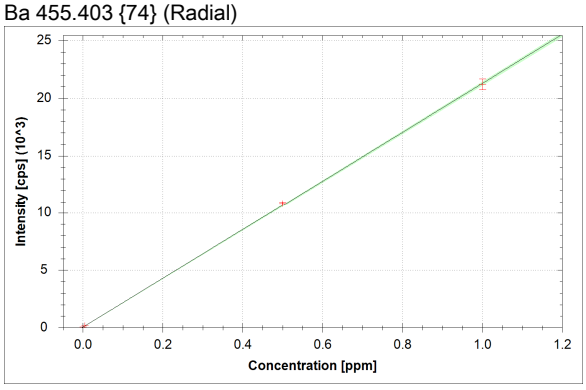
f(x) = 468.3114*x + 3.1847
R² = 0.9998
BEC = 0.007 ppm
LoD = 0.0052 ppm

As 189.042 {478} (Axial)



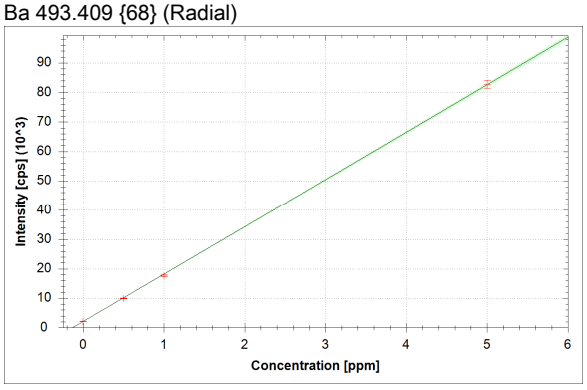
f(x) = 370.3503*x + -1.6228
R² = 0.9997
BEC = -0.004 ppm
LoD = 0.0023 ppm

Ba 455.403 {74} (Radial)



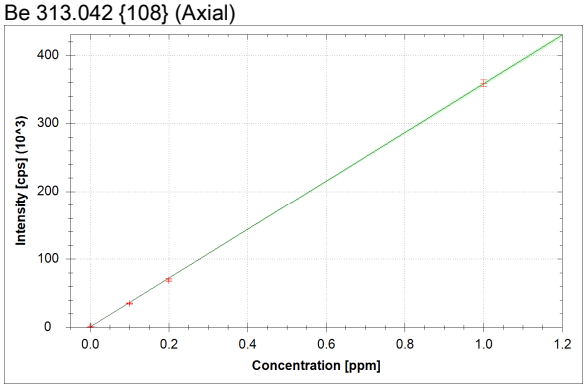
f(x) = 21233.8595*x + 50.8413
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



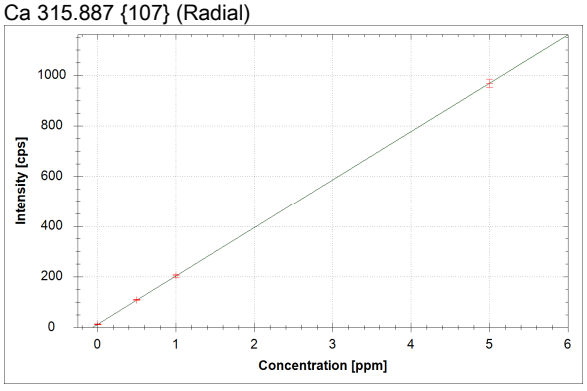
f(x) = 16090.9736*x + 2122.6339
R² = 0.9999
BEC = 0.132 ppm
LoD = 0.0013 ppm

Be 313.042 {108} (Axial)



f(x) = 357641.4770*x + 541.7958
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



f(x) = 191.3679*x + 11.4745
R² = 1.0000
BEC = 0.060 ppm
LoD = 0.0207 ppm

Calibration Summary

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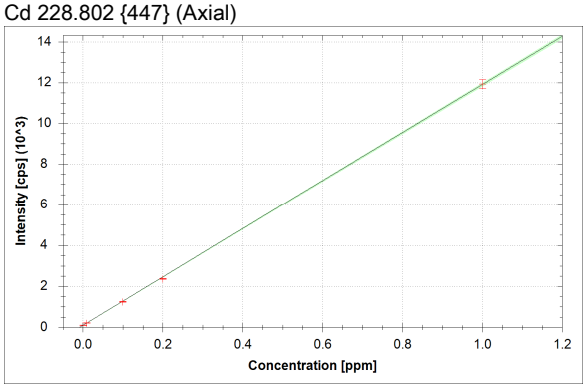
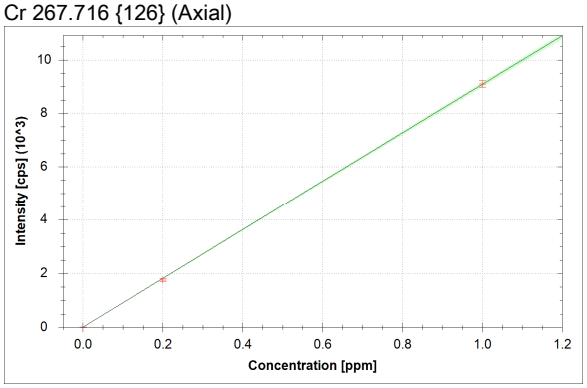
QTEGRA

Cd 228.802 {447} (Axial)



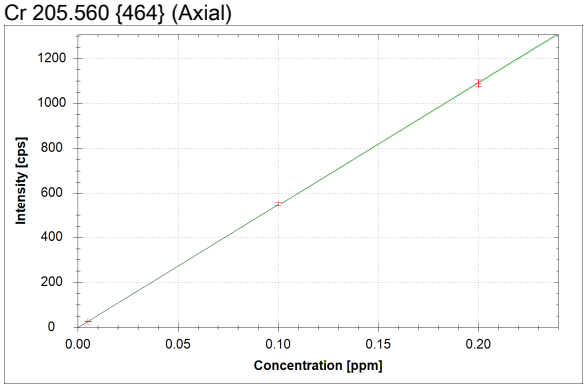
f(x) = 11814.1230*x + 97.9012
R² = 0.9999
BEC = 0.008 ppm
LoD = 0.0005 ppm

Cr 267.716 {126} (Axial)



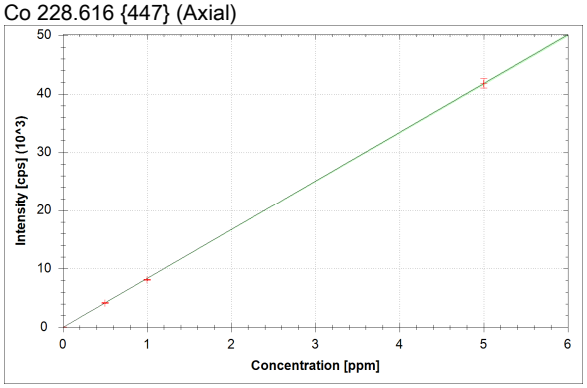
f(x) = 9085.6753*x + 4.6714
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0011 ppm

Cr 205.560 {464} (Axial)



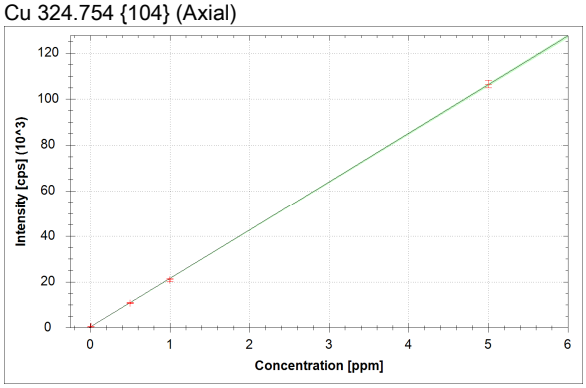
f(x) = 5465.3718*x + -1.2163
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Co 228.616 {447} (Axial)



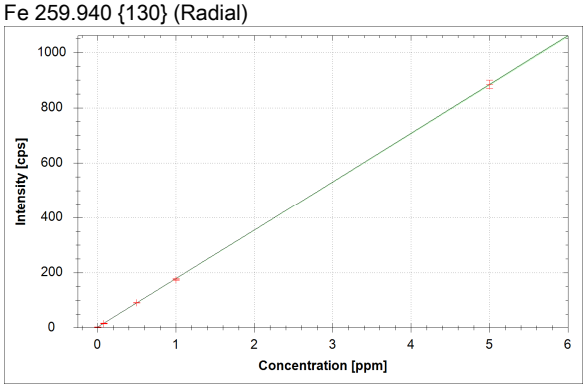
f(x) = 8354.0153*x + -3.0038
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0005 ppm

Cu 324.754 {104} (Axial)



f(x) = 21180.8634*x + 351.4723
R² = 0.9999
BEC = 0.017 ppm
LoD = 0.0009 ppm

Fe 259.940 {130} (Radial)



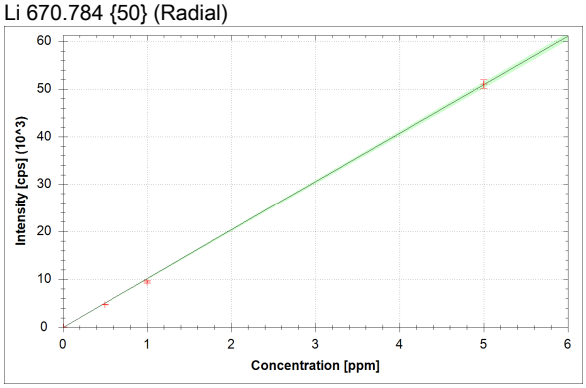
f(x) = 176.4469*x + 1.8118
R² = 1.0000
BEC = 0.010 ppm
LoD = 0.0193 ppm

Calibration Summary

12/2/2020 8:16:42 AM

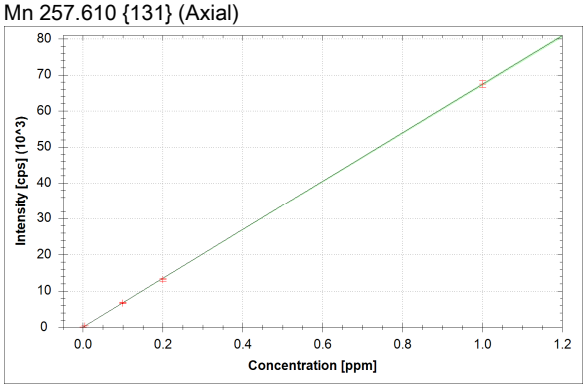
QTEGRA

Li 670.784 {50} (Radial)



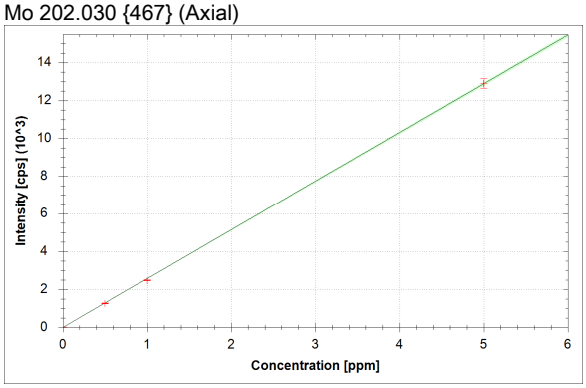
f(x) = 10188.2136*x + -44.0733
R² = 0.9997
BEC = -0.004 ppm
LoD = 0.0019 ppm

Mn 257.610 {131} (Axial)



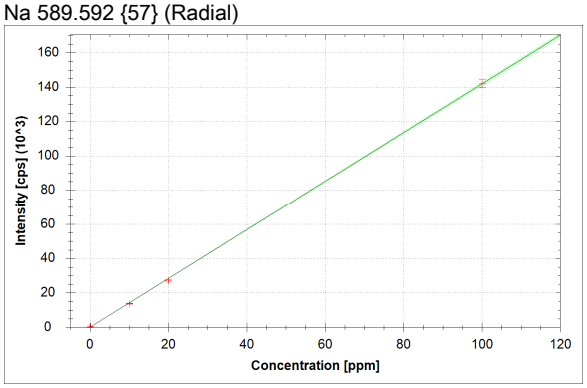
f(x) = 67343.0590*x + 31.1313
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0001 ppm

Mo 202.030 {467} (Axial)



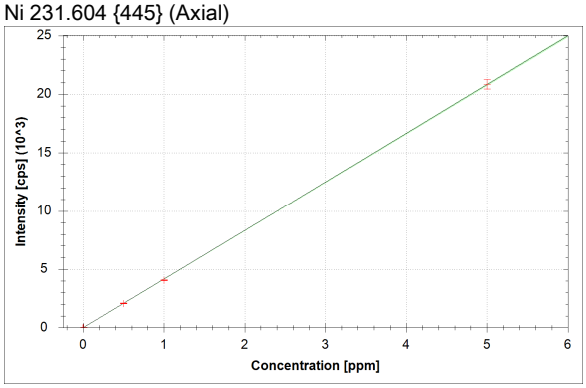
f(x) = 2576.9820*x + -0.8325
R² = 0.9999
BEC = 0.000 ppm
LoD = 0.0006 ppm

Na 589.592 {57} (Radial)



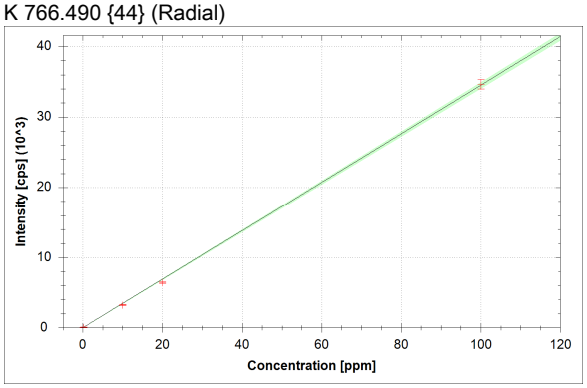
f(x) = 1418.1426*x + 54.2050
R² = 0.9998
BEC = 0.038 ppm
LoD = 0.0066 ppm

Ni 231.604 {445} (Axial)



f(x) = 4164.2212*x + 0.9704
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

K 766.490 {44} (Radial)



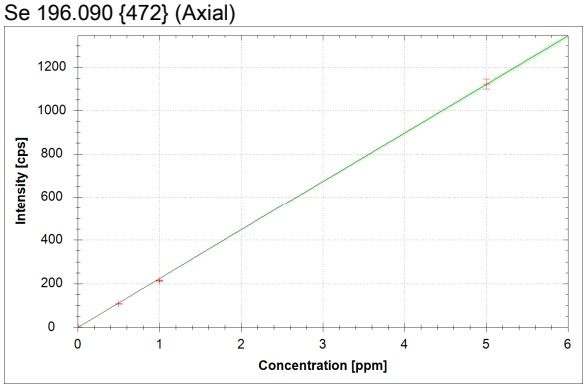
f(x) = 345.0272*x + 10.7215
R² = 0.9996
BEC = 0.031 ppm
LoD = 0.0468 ppm

Calibration Summary

12/2/2020 8:16:42 AM

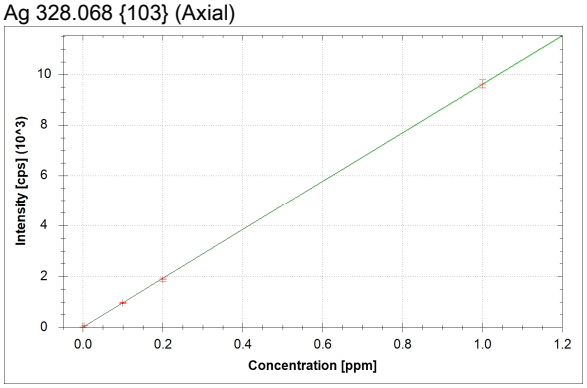
QTEGRA

Se 196.090 {472} (Axial)



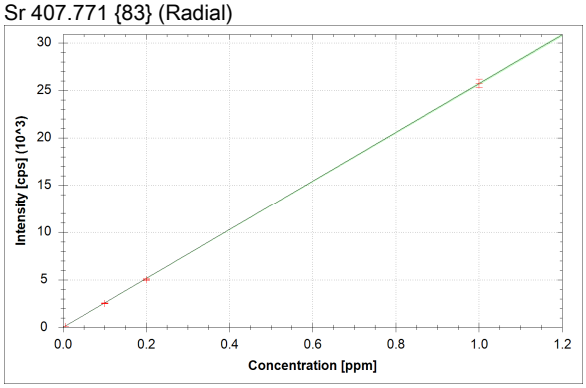
f(x) = 224.0616*x + -0.3683
R² = 0.9999
BEC = -0.002 ppm
LoD = 0.0054 ppm

Ag 328.068 {103} (Axial)



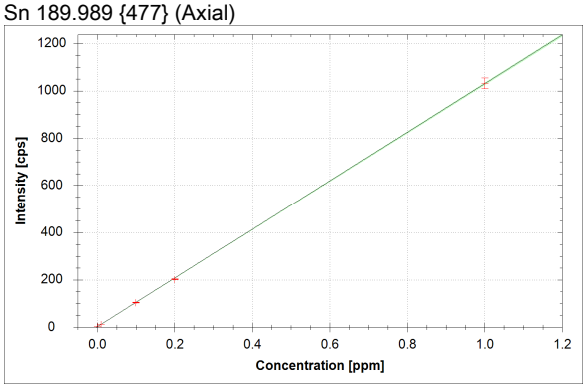
f(x) = 9607.9426*x + 4.1270
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0007 ppm

Sr 407.771 {83} (Radial)



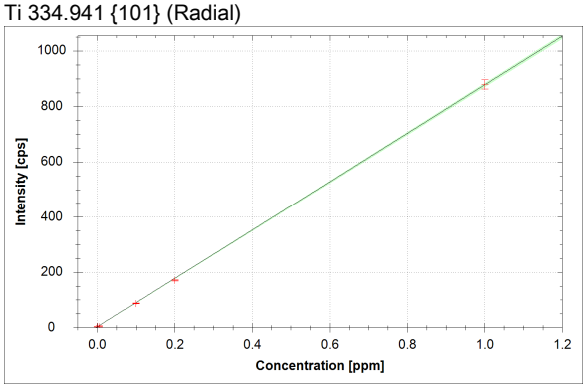
f(x) = 25708.7320*x + -9.5305
R² = 1.0000
BEC = 0.000 ppm
LoD = 0.0004 ppm

Sn 189.989 {477} (Axial)



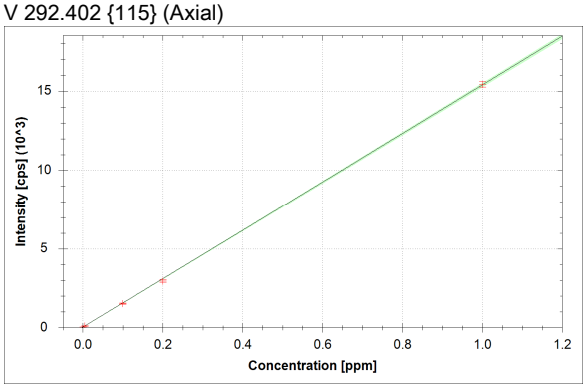
f(x) = 1027.8064*x + 2.6799
R² = 1.0000
BEC = 0.003 ppm
LoD = 0.0009 ppm

Ti 334.941 {101} (Radial)



f(x) = 874.5663*x + 3.3455
R² = 0.9999
BEC = 0.004 ppm
LoD = 0.0034 ppm

V 292.402 {115} (Axial)



f(x) = 15362.0382*x + 36.8129
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0013 ppm

Calibration Summary

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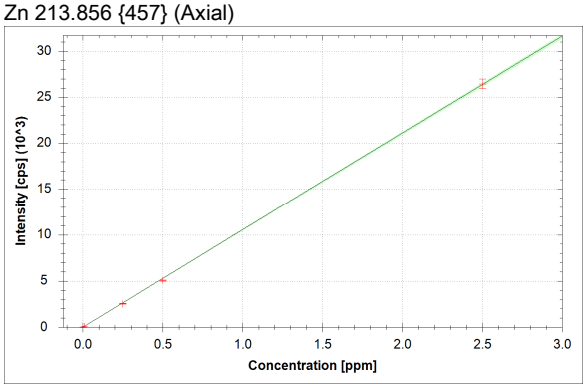
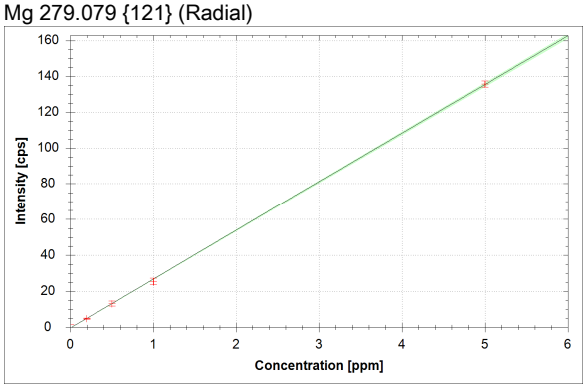
QTEGRA

Zn 213.856 {457} (Axial)



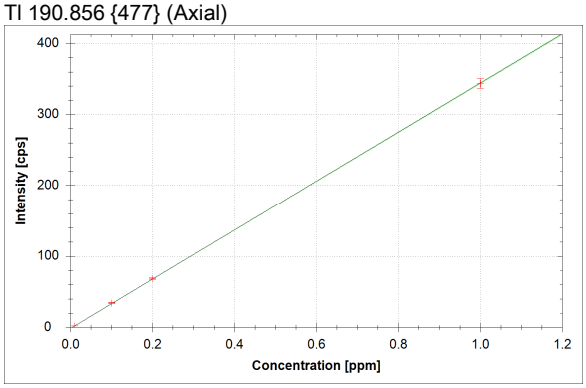
f(x) = 10545.5149*x + 18.1216
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0002 ppm

Mg 279.079 {121} (Radial)



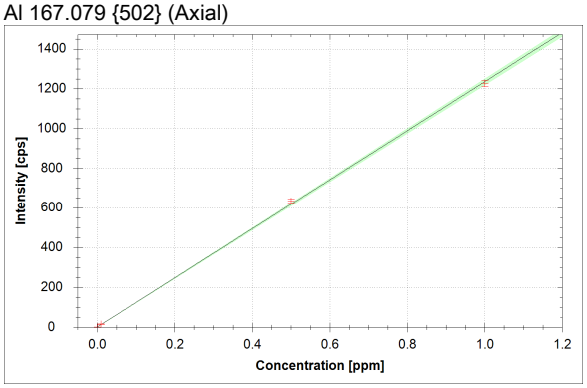
f(x) = 27.1751*x + -0.3929
R² = 0.9998
BEC = -0.014 ppm
LoD = 0.1980 ppm

Tl 190.856 {477} (Axial)



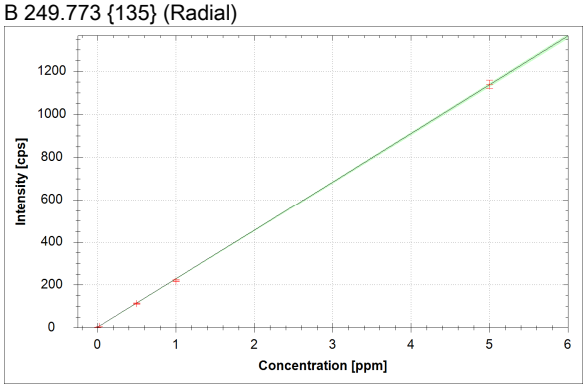
f(x) = 345.6315*x + -1.5056
R² = 1.0000
BEC = -0.004 ppm
LoD = 0.0008 ppm

Al 167.079 {502} (Axial)



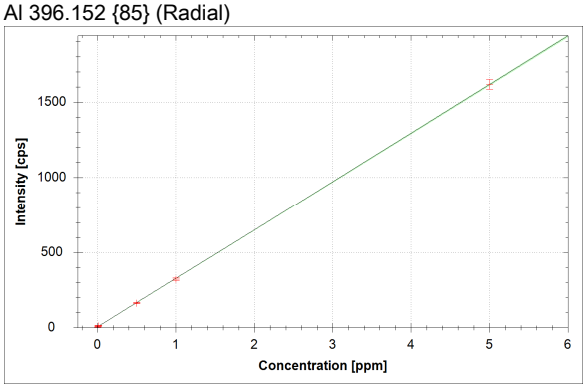
f(x) = 1233.9246*x + 1.7741
R² = 0.9997
BEC = 0.001 ppm
LoD = 0.0002 ppm

B 249.773 {135} (Radial)



f(x) = 226.9921*x + 1.9947
R² = 0.9999
BEC = 0.009 ppm
LoD = 0.0007 ppm

Al 396.152 {85} (Radial)



f(x) = 322.0300*x + 5.7665
R² = 1.0000
BEC = 0.018 ppm
LoD = 0.0473 ppm

Calibration Summary

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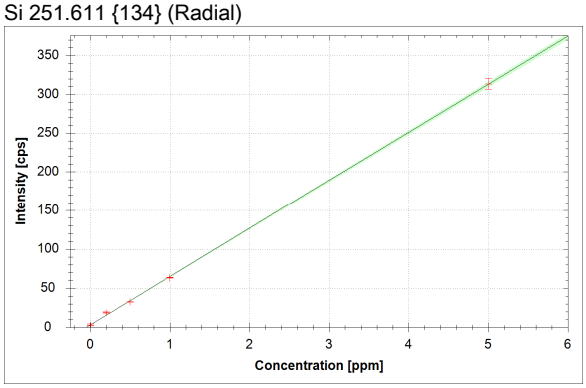
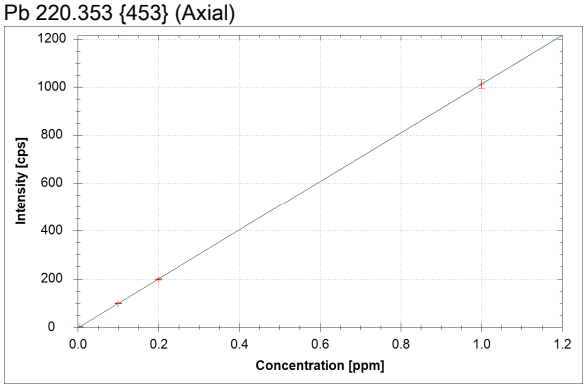
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 61.9682*x + 3.0697
R² = 0.9997
BEC = 0.050 ppm
LoD = 0.0650 ppm

Pb 220.353 {453} (Axial)



f(x) = 1014.9581*x + -2.6530
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0020 ppm

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL2
Analysis started at: 12/1/2020 11:29:13 AM
Standard (Stock): ICAL2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0033 ppm	14.7 %	0.0050 ppm
As 189.042 {478} (Axial)	0.0040 ppm	16.8 %	0.0050 ppm
Ba 455.403 {74} (Radial)	0.0048 ppm	3.0 %	0.0050 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A
Be 313.042 {108} (Axial)	0.0019 ppm	2.6 %	0.0020 ppm
Ca 315.887 {107} (Radial)	0.5050 ppm	2.3 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0096 ppm	1.3 %	0.0100 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.0051 ppm	3.3 %	0.0050 ppm
Co 228.616 {447} (Axial)	0.0048 ppm	2.2 %	0.0050 ppm
Cu 324.754 {104} (Axial)	0.0104 ppm	6.0 %	0.0100 ppm
Fe 259.940 {130} (Radial)	0.0719 ppm	10.5 %	0.0800 ppm
Li 670.784 {50} (Radial)	0.0096 ppm	3.8 %	0.0100 ppm
Mn 257.610 {131} (Axial)	0.0051 ppm	2.9 %	0.0050 ppm
Mo 202.030 {467} (Axial)	0.0046 ppm	2.9 %	0.0050 ppm
Na 589.592 {57} (Radial)	0.2113 ppm	3.7 %	0.2000 ppm
Ni 231.604 {445} (Axial)	0.0054 ppm	5.4 %	0.0050 ppm
K 766.490 {44} (Radial)	0.1485 ppm	35.3 %	0.2000 ppm
Se 196.090 {472} (Axial)	0.0084 ppm	31.8 %	0.0100 ppm
Ag 328.068 {103} (Axial)	0.0053 ppm	3.4 %	0.0050 ppm
Sr 407.771 {83} (Radial)	0.0050 ppm	4.5 %	0.0050 ppm
Sn 189.989 {477} (Axial)	0.0100 ppm	3.8 %	0.0100 ppm
Ti 334.941 {101} (Radial)	0.0010 ppm	187.5 %	0.0050 ppm
V 292.402 {115} (Axial)	0.0049 ppm	12.3 %	0.0050 ppm
Zn 213.856 {457} (Axial)	0.0103 ppm	1.9 %	0.0100 ppm
Sc 357.253 {94} (Axial)	99.8243 %	0.7 %	
Sc 188.060 {479} (Axial)	98.7786 %	0.6 %	
Mg 279.079 {121} (Radial)	0.1932 ppm	6.7 %	0.2000 ppm
Tl 190.856 {477} (Axial)	0.0102 ppm	0.9 %	0.0100 ppm
Al 167.079 {502} (Axial)	0.0117 ppm	7.6 %	0.0100 ppm
Sc 227.318 {448} (Axial)	98.8280 %	0.5 %	
B 249.773 {135} (Radial)	0.0199 ppm	1.9 %	0.0200 ppm
Al 396.152 {85} (Radial)	0.0213 ppm	31.2 %	0.0100 ppm
Si 251.611 {134} (Radial)	0.2558 ppm	5.3 %	0.2000 ppm
Pb 220.353 {453} (Axial)	0.0049 ppm	22.4 %	0.0050 ppm
Y 224.306 {450} (Axial)	99.4292 %	0.4 %	
Sc 361.384 {93} (Radial)	99.9853 %	0.3 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL3
Analysis started at: 12/1/2020 11:34:20 AM
Standard (Stock): ICAL3
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.0957 ppm	2.5 %	0.1000 ppm
As 189.042 {478} (Axial)	0.0950 ppm	2.0 %	0.1000 ppm
Ba 455.403 {74} (Radial)	0.5078 ppm	1.5 %	0.5000 ppm
Ba 493.409 {68} (Radial)	0.4860 ppm	1.4 %	0.5000 ppm
Be 313.042 {108} (Axial)	0.0961 ppm	2.9 %	0.1000 ppm
Ca 315.887 {107} (Radial)	0.5038 ppm	2.3 %	0.5000 ppm
Cd 228.802 {447} (Axial)	0.0970 ppm	1.4 %	0.1000 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	0.1009 ppm	1.5 %	0.1000 ppm
Co 228.616 {447} (Axial)	0.4943 ppm	1.6 %	0.5000 ppm
Cu 324.754 {104} (Axial)	0.4920 ppm	2.5 %	0.5000 ppm
Fe 259.940 {130} (Radial)	0.5018 ppm	1.1 %	0.5000 ppm
Li 670.784 {50} (Radial)	0.4683 ppm	1.3 %	0.5000 ppm
Mn 257.610 {131} (Axial)	0.0989 ppm	2.7 %	0.1000 ppm
Mo 202.030 {467} (Axial)	0.4869 ppm	1.6 %	0.5000 ppm
Na 589.592 {57} (Radial)	9.5541 ppm	1.7 %	10.0000 ppm
Ni 231.604 {445} (Axial)	0.4970 ppm	1.6 %	0.5000 ppm
K 766.490 {44} (Radial)	9.2386 ppm	1.9 %	10.0000 ppm
Se 196.090 {472} (Axial)	0.4805 ppm	1.2 %	0.5000 ppm
Ag 328.068 {103} (Axial)	0.0989 ppm	2.8 %	0.1000 ppm
Sr 407.771 {83} (Radial)	0.0990 ppm	1.6 %	0.1000 ppm
Sn 189.989 {477} (Axial)	0.0982 ppm	1.9 %	0.1000 ppm
Ti 334.941 {101} (Radial)	0.0961 ppm	2.0 %	0.1000 ppm
V 292.402 {115} (Axial)	0.0969 ppm	2.6 %	0.1000 ppm
Zn 213.856 {457} (Axial)	0.2407 ppm	1.5 %	0.2500 ppm
Sc 357.253 {94} (Axial)	99.5242 %	1.2 %	
Sc 188.060 {479} (Axial)	97.2677 %	0.2 %	
Mg 279.079 {121} (Radial)	0.4962 ppm	10.3 %	0.5000 ppm
Tl 190.856 {477} (Axial)	0.1038 ppm	1.7 %	0.1000 ppm
Al 167.079 {502} (Axial)	0.5132 ppm	1.7 %	0.5000 ppm
Sc 227.318 {448} (Axial)	98.8219 %	0.2 %	
B 249.773 {135} (Radial)	0.4870 ppm	2.9 %	0.5000 ppm
Al 396.152 {85} (Radial)	0.4869 ppm	2.9 %	0.5000 ppm
Si 251.611 {134} (Radial)	0.4764 ppm	0.8 %	0.5000 ppm
Pb 220.353 {453} (Axial)	0.1005 ppm	1.7 %	0.1000 ppm
Y 224.306 {450} (Axial)	98.2272 %	0.1 %	
Sc 361.384 {93} (Radial)	100.8179 %	0.2 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL4
Analysis started at: 12/1/2020 11:39:20 AM
Standard (Stock): ICAL4
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	0.1902 ppm	1.5 %	0.2000 ppm
As 189.042 {478} (Axial)	0.1874 ppm	1.4 %	0.2000 ppm
Ba 455.403 {74} (Radial)	0.9961 ppm	2.2 %	1.0000 ppm
Ba 493.409 {68} (Radial)	0.9615 ppm	2.2 %	1.0000 ppm
Be 313.042 {108} (Axial)	0.1918 ppm	3.1 %	0.2000 ppm
Ca 315.887 {107} (Radial)	1.0039 ppm	3.4 %	1.0000 ppm
Cd 228.802 {447} (Axial)	0.1915 ppm	1.2 %	0.2000 ppm
Cr 267.716 {126} (Axial)	0.1935 ppm	3.0 %	0.2000 ppm
Cr 205.560 {464} (Axial)	0.1995 ppm	1.4 %	0.2000 ppm
Co 228.616 {447} (Axial)	0.9702 ppm	1.3 %	1.0000 ppm
Cu 324.754 {104} (Axial)	0.9650 ppm	3.2 %	1.0000 ppm
Fe 259.940 {130} (Radial)	0.9797 ppm	1.5 %	1.0000 ppm
Li 670.784 {50} (Radial)	0.9320 ppm	2.2 %	1.0000 ppm
Mn 257.610 {131} (Axial)	0.1937 ppm	3.0 %	0.2000 ppm
Mo 202.030 {467} (Axial)	0.9603 ppm	1.4 %	1.0000 ppm
Na 589.592 {57} (Radial)	18.9710 ppm	2.5 %	20.0000 ppm
Ni 231.604 {445} (Axial)	0.9748 ppm	1.4 %	1.0000 ppm
K 766.490 {44} (Radial)	18.5585 ppm	2.6 %	20.0000 ppm
Se 196.090 {472} (Axial)	0.9542 ppm	1.3 %	1.0000 ppm
Ag 328.068 {103} (Axial)	0.1944 ppm	3.1 %	0.2000 ppm
Sr 407.771 {83} (Radial)	0.1943 ppm	2.0 %	0.2000 ppm
Sn 189.989 {477} (Axial)	0.1945 ppm	1.2 %	0.2000 ppm
Ti 334.941 {101} (Radial)	0.1921 ppm	1.7 %	0.2000 ppm
V 292.402 {115} (Axial)	0.1904 ppm	3.0 %	0.2000 ppm
Zn 213.856 {457} (Axial)	0.4775 ppm	1.3 %	0.5000 ppm
Sc 357.253 {94} (Axial)	99.7305 %	1.4 %	
Sc 188.060 {479} (Axial)	96.9326 %	0.1 %	
Mg 279.079 {121} (Radial)	0.9499 ppm	7.3 %	1.0000 ppm
Tl 190.856 {477} (Axial)	0.2030 ppm	1.4 %	0.2000 ppm
Al 167.079 {502} (Axial)	0.9934 ppm	1.3 %	1.0000 ppm
Sc 227.318 {448} (Axial)	100.0794 %	0.2 %	
B 249.773 {135} (Radial)	0.9554 ppm	2.0 %	1.0000 ppm
Al 396.152 {85} (Radial)	0.9814 ppm	2.8 %	1.0000 ppm
Si 251.611 {134} (Radial)	0.9707 ppm	0.9 %	1.0000 ppm
Pb 220.353 {453} (Axial)	0.1973 ppm	1.4 %	0.2000 ppm
Y 224.306 {450} (Axial)	98.2275 %	0.2 %	
Sc 361.384 {93} (Radial)	101.8464 %	0.3 %	

Calibration Summary

12/2/2020 8:16:42 AM

QTEGRA

Standards

Standard: ICAL5
Analysis started at: 12/1/2020 11:44:17 AM
Standard (Stock): ICAL5
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
Sb 206.833 {463} (Axial)	1.0024 ppm	2.2 %	1.0000 ppm
As 189.042 {478} (Axial)	1.0030 ppm	1.8 %	1.0000 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	5.0091 ppm	1.6 %	5.0000 ppm
Be 313.042 {108} (Axial)	1.0020 ppm	1.3 %	1.0000 ppm
Ca 315.887 {107} (Radial)	4.9983 ppm	1.7 %	5.0000 ppm
Cd 228.802 {447} (Axial)	1.0020 ppm	2.0 %	1.0000 ppm
Cr 267.716 {126} (Axial)	1.0013 ppm	1.3 %	1.0000 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A
Co 228.616 {447} (Axial)	5.0065 ppm	2.0 %	5.0000 ppm
Cu 324.754 {104} (Axial)	5.0078 ppm	1.5 %	5.0000 ppm
Fe 259.940 {130} (Radial)	5.0040 ppm	1.8 %	5.0000 ppm
Li 670.784 {50} (Radial)	5.0168 ppm	1.7 %	5.0000 ppm
Mn 257.610 {131} (Axial)	1.0014 ppm	1.4 %	1.0000 ppm
Mo 202.030 {467} (Axial)	5.0092 ppm	2.1 %	5.0000 ppm
Na 589.592 {57} (Radial)	100.2504 ppm	1.8 %	100.0000 ppm
Ni 231.604 {445} (Axial)	5.0053 ppm	2.0 %	5.0000 ppm
K 766.490 {44} (Radial)	100.3646 ppm	2.0 %	100.0000 ppm
Se 196.090 {472} (Axial)	5.0111 ppm	2.0 %	5.0000 ppm
Ag 328.068 {103} (Axial)	1.0012 ppm	1.7 %	1.0000 ppm
Sr 407.771 {83} (Radial)	1.0012 ppm	1.7 %	1.0000 ppm
Sn 189.989 {477} (Axial)	1.0013 ppm	2.2 %	1.0000 ppm
Ti 334.941 {101} (Radial)	1.0020 ppm	1.9 %	1.0000 ppm
V 292.402 {115} (Axial)	1.0022 ppm	1.2 %	1.0000 ppm
Zn 213.856 {457} (Axial)	2.5054 ppm	2.0 %	2.5000 ppm
Sc 357.253 {94} (Axial)	95.7274 %	0.5 %	
Sc 188.060 {479} (Axial)	89.3180 %	0.7 %	
Mg 279.079 {121} (Radial)	5.0107 ppm	1.3 %	5.0000 ppm
Tl 190.856 {477} (Axial)	0.9990 ppm	2.0 %	1.0000 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A
Sc 227.318 {448} (Axial)	105.1002 %	0.5 %	
B 249.773 {135} (Radial)	5.0102 ppm	1.7 %	5.0000 ppm
Al 396.152 {85} (Radial)	5.0050 ppm	2.0 %	5.0000 ppm
Si 251.611 {134} (Radial)	5.0060 ppm	2.3 %	5.0000 ppm
Pb 220.353 {453} (Axial)	1.0005 ppm	1.8 %	1.0000 ppm
Y 224.306 {450} (Axial)	94.2035 %	0.8 %	
Sc 361.384 {93} (Radial)	99.7689 %	0.5 %	

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LabBook: ICP2_201201C.imexp

ICAL1

Sample type: BLK Analysis started at: 12/1/2020 11:24:02 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-4.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

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Simple Sample Report

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QTEGRA

ICAL2

Sample type: STD Analysis started at: 12/1/2020 11:29:13 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0033 ppm	14.7 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0040 ppm	16.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	101 cps	0.0048 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	683 cps	0.0019 ppm	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	97 cps	0.5050 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0096 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	28 cps	0.0051 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0048 ppm	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	220 cps	0.0104 ppm	6.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	13 cps	0.0719 ppm	10.5 %	0.0 ppm
Li 670.784 {50} (Radial)	98 cps	0.0096 ppm	3.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	344 cps	0.0051 ppm	2.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0046 ppm	2.9 %	0.0 ppm
Na 589.592 {57} (Radial)	300 cps	0.2113 ppm	3.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	23 cps	0.0054 ppm	5.4 %	0.0 ppm
K 766.490 {44} (Radial)	51 cps	0.1485 ppm	35.3 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0084 ppm	31.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	51 cps	0.0053 ppm	3.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	129 cps	0.0050 ppm	4.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0100 ppm	3.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0010 ppm	187.5 %	0.0 ppm
V 292.402 {115} (Axial)	75 cps	0.0049 ppm	12.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	109 cps	0.0103 ppm	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.8243 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		98.7786 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	5 cps	0.1932 ppm	6.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0102 ppm	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	14 cps	0.0117 ppm	7.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8280 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	5 cps	0.0199 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	7 cps	0.0213 ppm	31.2 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2558 ppm	5.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0049 ppm	22.4 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4292 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.9853 %	0.3 %	0.3 %

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QTEGRA

ICAL3

Sample type: STD Analysis started at: 12/1/2020 11:34:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.0957 ppm	2.5 %	0.0 ppm
As 189.042 {478} (Axial)	35 cps	0.0950 ppm	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	10,782 cps	0.5078 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,820 cps	0.4860 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	34,352 cps	0.0961 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	96 cps	0.5038 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,146 cps	0.0970 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	552 cps	0.1009 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	4,129 cps	0.4943 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	10,422 cps	0.4920 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	89 cps	0.5018 ppm	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	4,771 cps	0.4683 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,660 cps	0.0989 ppm	2.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,255 cps	0.4869 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	13,549 cps	9.5541 ppm	1.7 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,069 cps	0.4970 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	3,188 cps	9.2386 ppm	1.9 %	0.2 ppm
Se 196.090 {472} (Axial)	108 cps	0.4805 ppm	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	950 cps	0.0989 ppm	2.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,546 cps	0.0990 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	101 cps	0.0982 ppm	1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	84 cps	0.0961 ppm	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,489 cps	0.0969 ppm	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,539 cps	0.2407 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5242 %	1.2 %	1.2 %
Sc 188.060 {479} (Axial)		97.2677 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	13 cps	0.4962 ppm	10.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	36 cps	0.1038 ppm	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	633 cps	0.5132 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8219 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	111 cps	0.4870 ppm	2.9 %	0.0 ppm
Al 396.152 {85} (Radial)	157 cps	0.4869 ppm	2.9 %	0.0 ppm
Si 251.611 {134} (Radial)	30 cps	0.4764 ppm	0.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	102 cps	0.1005 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		98.2272 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.8179 %	0.2 %	0.2 %

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QTEGRA

ICAL4

Sample type: STD Analysis started at: 12/1/2020 11:39:20 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	89 cps	0.1902 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	69 cps	0.1874 ppm	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	21,151 cps	0.9961 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	15,472 cps	0.9615 ppm	2.2 %	0.0 ppm
Be 313.042 {108} (Axial)	68,602 cps	0.1918 ppm	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	192 cps	1.0039 ppm	3.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,262 cps	0.1915 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,758 cps	0.1935 ppm	3.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,091 cps	0.1995 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	8,105 cps	0.9702 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,439 cps	0.9650 ppm	3.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	173 cps	0.9797 ppm	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	9,496 cps	0.9320 ppm	2.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,047 cps	0.1937 ppm	3.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,475 cps	0.9603 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	26,904 cps	18.9710 ppm	2.5 %	0.5 ppm
Ni 231.604 {445} (Axial)	4,059 cps	0.9748 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	6,403 cps	18.5585 ppm	2.6 %	0.5 ppm
Se 196.090 {472} (Axial)	214 cps	0.9542 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,868 cps	0.1944 ppm	3.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,995 cps	0.1943 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	200 cps	0.1945 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	0.1921 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	2,925 cps	0.1904 ppm	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,035 cps	0.4775 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7305 %	1.4 %	1.4 %
Sc 188.060 {479} (Axial)		96.9326 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	26 cps	0.9499 ppm	7.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	70 cps	0.2030 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1,226 cps	0.9934 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0794 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	217 cps	0.9554 ppm	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	316 cps	0.9814 ppm	2.8 %	0.0 ppm
Si 251.611 {134} (Radial)	60 cps	0.9707 ppm	0.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	200 cps	0.1973 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		98.2275 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.8464 %	0.3 %	0.3 %

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QTEGRA

ICAL5

Sample type: STD Analysis started at: 12/1/2020 11:44:17 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	469 cps	1.0024 ppm	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	371 cps	1.0030 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	80,601 cps	5.0091 ppm	1.6 %	0.1 ppm
Be 313.042 {108} (Axial)	358,368 cps	1.0020 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	957 cps	4.9983 ppm	1.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,838 cps	1.0020 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,098 cps	1.0013 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	41,825 cps	5.0065 ppm	2.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	106,069 cps	5.0078 ppm	1.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	883 cps	5.0040 ppm	1.8 %	0.1 ppm
Li 670.784 {50} (Radial)	51,112 cps	5.0168 ppm	1.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	67,435 cps	1.0014 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	12,909 cps	5.0092 ppm	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	142,169 cps	100.2504 ppm	1.8 %	1.8 ppm
Ni 231.604 {445} (Axial)	20,843 cps	5.0053 ppm	2.0 %	0.1 ppm
K 766.490 {44} (Radial)	34,628 cps	100.3646 ppm	2.0 %	2.0 ppm
Se 196.090 {472} (Axial)	1,123 cps	5.0111 ppm	2.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	9,620 cps	1.0012 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	25,741 cps	1.0012 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,029 cps	1.0013 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	876 cps	1.0020 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	15,396 cps	1.0022 ppm	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,421 cps	2.5054 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.7274 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		89.3180 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	136 cps	5.0107 ppm	1.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	345 cps	0.9990 ppm	2.0 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		105.1002 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1,137 cps	5.0102 ppm	1.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,612 cps	5.0050 ppm	2.0 %	0.1 ppm
Si 251.611 {134} (Radial)	310 cps	5.0060 ppm	2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,015 cps	1.0005 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.2035 %	0.8 %	0.7 %
Sc 361.384 {93} (Radial)		99.7689 %	0.5 %	0.5 %

Simple Sample Report

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QTEGRA

LDR1

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:14:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-21 cps	-0.0452 ppm	2.4 %	0.0 ppm
As 189.042 {478} (Axial)	-13 cps	-0.0354 ppm	3.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	445,391 cps	20.9755 ppm	2.3 %	0.5 ppm
Ba 493.409 {68} (Radial)	328,931 cps	20.4420 ppm	2.3 %	0.5 ppm
Be 313.042 {108} (Axial)	715,546 cps	2.0007 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	38,103 cps	199.1110 ppm	1.7 %	3.3 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	42.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	89,337 cps	9.8327 ppm	1.1 %	0.1 ppm
Cr 205.560 {464} (Axial)	53,637 cps	9.8140 ppm	1.8 %	0.2 ppm
Co 228.616 {447} (Axial)	94 cps	0.0112 ppm	3.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	431,714 cps	20.3823 ppm	1.3 %	0.3 ppm
Fe 259.940 {130} (Radial)	34,741 cps	196.8946 ppm	1.5 %	3.0 ppm
Li 670.784 {50} (Radial)	105,789 cps	10.3834 ppm	1.7 %	0.2 ppm
Mn 257.610 {131} (Axial)	645,355 cps	9.5831 ppm	1.2 %	0.1 ppm
Mo 202.030 {467} (Axial)	-4 cps	-0.0016 ppm	26.7 %	0.0 ppm
Na 589.592 {57} (Radial)	-51 cps	-0.0358 ppm	37.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	-117 cps	-0.0282 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	-67 cps	-0.1953 ppm	16.1 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0146 ppm	28.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	21,017 cps	2.1875 ppm	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	264,707 cps	10.2964 ppm	1.6 %	0.2 ppm
Sn 189.989 {477} (Axial)	-29 cps	-0.0279 ppm	2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	8,753 cps	10.0081 ppm	1.6 %	0.2 ppm
V 292.402 {115} (Axial)	154,175 cps	10.0361 ppm	1.2 %	0.1 ppm
Zn 213.856 {457} (Axial)	-761 cps	-0.0721 ppm	2.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0229 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		80.0778 %	0.7 %	0.6 %
Mg 279.079 {121} (Radial)	5,610 cps	206.4334 ppm	1.7 %	3.5 ppm
Tl 190.856 {477} (Axial)	-17 cps	-0.0498 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	25,620 cps	20.7632 ppm	0.7 %	0.1 ppm
Sc 227.318 {448} (Axial)		83.1861 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	4,769 cps	21.0098 ppm	1.7 %	0.4 ppm
Al 396.152 {85} (Radial)	64,961 cps	201.7249 ppm	1.5 %	3.0 ppm
Si 251.611 {134} (Radial)	1,263 cps	20.3745 ppm	1.9 %	0.4 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0012 ppm	50.7 %	0.0 ppm
Y 224.306 {450} (Axial)		88.8128 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		97.6051 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:19:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,256 cps	4.8171 ppm	1.7 %	0.1 ppm
As 189.042 {478} (Axial)	1,703 cps	4.5990 ppm	1.5 %	0.1 ppm
Ba 455.403 {74} (Radial)	158 cps	0.0075 ppm	17.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	131 cps	0.0082 ppm	29.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-29 cps	-0.0001 ppm	83.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	18 cps	0.0940 ppm	16.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	263 cps	0.0223 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	45.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	35 cps	0.0064 ppm	4.5 %	0.0 ppm
Co 228.616 {447} (Axial)	81,535 cps	9.7600 ppm	1.6 %	0.2 ppm
Cu 324.754 {104} (Axial)	199 cps	0.0094 ppm	9.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0869 ppm	21.4 %	0.0 ppm
Li 670.784 {50} (Radial)	80 cps	0.0078 ppm	13.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	-153 cps	-0.0023 ppm	13.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	24,929 cps	9.6737 ppm	1.7 %	0.2 ppm
Na 589.592 {57} (Radial)	-7 cps	-0.0050 ppm	87.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	40,682 cps	9.7694 ppm	1.7 %	0.2 ppm
K 766.490 {44} (Radial)	-3 cps	-0.0077 ppm	288.9 %	0.0 ppm
Se 196.090 {472} (Axial)	1,036 cps	4.6234 ppm	1.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0029 ppm	18.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	86 cps	0.0034 ppm	23.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	4,916 cps	4.7828 ppm	1.6 %	0.1 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0064 ppm	28.9 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0011 ppm	22.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	48,493 cps	4.5984 ppm	1.6 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.4019 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		99.8376 %	1.6 %	1.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0300 ppm	136.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,810 cps	5.2376 ppm	1.1 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0176 ppm	41.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.5577 %	1.5 %	1.5 %
B 249.773 {135} (Radial)	15 cps	0.0667 ppm	9.1 %	0.0 ppm
Al 396.152 {85} (Radial)	154 cps	0.4796 ppm	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	4 cps	0.0635 ppm	8.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,091 cps	5.0156 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		99.9713 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		100.3664 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 12/1/2020 11:49:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	466 cps	0.9945 ppm	99.445 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	359 cps	0.9691 ppm	96.913 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,669 cps	1.0676 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	16,487 cps	1.0246 ppm	102.461 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	356,424 cps	0.9966 ppm	99.660 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,216 cps	6.3553 ppm	105.922 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	11,662 cps	0.9871 ppm	98.710 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,231 cps	1.0160 ppm	101.600 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,586 cps	1.0220 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	8,343 cps	0.9987 ppm	99.866 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	21,703 cps	1.0247 ppm	102.466 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	185 cps	1.0488 ppm	104.883 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	10,278 cps	1.0088 ppm	100.878 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	69,352 cps	1.0298 ppm	102.983 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,617 cps	1.0154 ppm	101.539 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	29,848 cps	21.0473 ppm	100.225 %	1.5 %	0.3 ppm
Ni 231.604 {445} (Axial)	4,177 cps	1.0030 ppm	100.299 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	7,237 cps	20.9765 ppm	99.888 %	1.4 %	0.3 ppm
Se 196.090 {472} (Axial)	219 cps	0.9781 ppm	97.807 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,068 cps	1.0479 ppm	104.789 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,515 cps	1.0313 ppm	103.134 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,021 cps	0.9932 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	896 cps	1.0246 ppm	102.463 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	15,733 cps	1.0241 ppm	102.413 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,327 cps	0.9793 ppm	97.932 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7252 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.8434 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	1.0043 ppm	100.432 %	7.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	359 cps	1.0394 ppm	103.943 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1,262 cps	1.0231 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.5065 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	238 cps	1.0506 ppm	105.063 %	0.9 %	0.0 ppm
Al 396.152 {85} (Radial)	339 cps	1.0530 ppm	105.299 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	66 cps	1.0610 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,035 cps	1.0196 ppm	101.957 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8822 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.0633 %		0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICB

Sample type: UNKNOWN Analysis started at: 12/1/2020 11:54:14 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0012 ppm	129.0 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0007 ppm	108.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	52.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	8 cps	0.0005 ppm	525.3 %	0.0 ppm
Be 313.042 {108} (Axial)	90 cps	0.0003 ppm	15.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2 cps	0.0128 ppm	70.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0002 ppm	13.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	591.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	29.2 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	62.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	10 cps	0.0005 ppm	65.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0029 ppm	110.1 %	0.0 ppm
Li 670.784 {50} (Radial)	37 cps	0.0036 ppm	23.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	11 cps	0.0002 ppm	41.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0007 ppm	21.8 %	0.0 ppm
Na 589.592 {57} (Radial)	27 cps	0.0188 ppm	48.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	323.2 %	0.0 ppm
K 766.490 {44} (Radial)	19 cps	0.0548 ppm	59.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0001 ppm	576.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	9,570.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	17 cps	0.0007 ppm	46.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	87.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0007 ppm	108.8 %	0.0 ppm
V 292.402 {115} (Axial)	9 cps	0.0006 ppm	55.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	165.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.4239 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		100.4139 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	0 cps	-0.0151 ppm	218.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0006 ppm	141.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	523.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.3799 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	2 cps	0.0096 ppm	84.5 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	259.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0029 ppm	203.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	202.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.6108 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		99.8994 %	0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 12/1/2020 12:03:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0044 ppm	88.531 %	42.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0047 ppm	93.467 %	9.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	97 cps	0.0046 ppm		4.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	92 cps	0.0057 ppm		15.8 %	0.0 ppm
Be 313.042 {108} (Axial)	718 cps	0.0020 ppm	100.314 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	101 cps	0.5288 ppm	105.760 %	2.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	116 cps	0.0098 ppm	98.206 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0052 ppm	103.223 %	4.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0051 ppm	102.576 %	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0048 ppm	96.301 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	215 cps	0.0102 ppm	101.663 %	3.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0802 ppm	100.307 %	6.4 %	0.0 ppm
Li 670.784 {50} (Radial)	108 cps	0.0106 ppm	106.471 %	8.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	350 cps	0.0052 ppm	103.932 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0050 ppm	100.715 %	3.7 %	0.0 ppm
Na 589.592 {57} (Radial)	273 cps	0.1926 ppm	96.303 %	6.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	22 cps	0.0053 ppm	106.695 %	2.7 %	0.0 ppm
K 766.490 {44} (Radial)	67 cps	0.1937 ppm	96.863 %	11.8 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0088 ppm	87.531 %	29.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	52 cps	0.0054 ppm	108.520 %	8.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	133 cps	0.0052 ppm	103.842 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0098 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0032 ppm	64.936 %	83.8 %	0.0 ppm
V 292.402 {115} (Axial)	78 cps	0.0051 ppm	101.769 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	104 cps	0.0098 ppm	98.207 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7136 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		101.0121 %		1.4 %	1.4 %
Mg 279.079 {121} (Radial)	6 cps	0.2306 ppm	115.305 %	15.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0107 ppm	107.051 %	8.6 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0108 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0619 %		1.5 %	1.5 %
B 249.773 {135} (Radial)	5 cps	0.0214 ppm	106.973 %	16.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0078 ppm		129.1 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2503 ppm		13.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0053 ppm	106.906 %	4.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1436 %		0.8 %	0.8 %
Sc 361.384 {93} (Radial)		99.7226 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 12/1/2020 12:09:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-7 cps	-0.0156 ppm		18.4 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0214 ppm	0.000 %	6.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	0.000 %	998.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	75 cps	0.0046 ppm	0.000 %	49.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-954 cps	-0.0027 ppm	0.000 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,427 cps	96.2919 ppm	96.292 %	1.9 %	1.9 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	0.000 %	20.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	16 cps	0.0017 ppm	0.000 %	18.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0008 ppm	0.000 %	19.1 %	0.0 ppm
Co 228.616 {447} (Axial)	30 cps	0.0036 ppm	0.000 %	3.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	63 cps	0.0030 ppm	0.000 %	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,138 cps	97.1286 ppm	97.129 %	2.2 %	2.1 ppm
Li 670.784 {50} (Radial)	21 cps	0.0021 ppm		55.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-403 cps	-0.0060 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,000 cps	1.9401 ppm	97.005 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	140,038 cps	98.7473 ppm	98.747 %	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	-63 cps	-0.0151 ppm	0.000 %	2.3 %	0.0 ppm
K 766.490 {44} (Radial)	34,726 cps	100.6461 ppm	100.646 %	2.6 %	2.6 ppm
Se 196.090 {472} (Axial)	1 cps	0.0027 ppm	0.000 %	142.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	0.000 %	26.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	-61 cps	-0.0024 ppm		8.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0107 ppm		3.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,724 cps	1.9716 ppm		1.9 %	0.0 ppm
V 292.402 {115} (Axial)	34 cps	0.0022 ppm	0.000 %	24.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-42 cps	-0.0040 ppm	0.000 %	4.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.2637 %		0.7 %	0.6 %
Sc 188.060 {479} (Axial)		82.7250 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	2,686 cps	98.8441 ppm	98.844 %	2.2 %	2.2 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0076 ppm	0.000 %	3.3 %	0.0 ppm
Al 167.079 {502} (Axial)	23,054 cps	18.6839 ppm		0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.9277 %		0.3 %	0.2 %
B 249.773 {135} (Radial)	21 cps	0.0927 ppm		4.7 %	0.0 ppm
Al 396.152 {85} (Radial)	30,653 cps	95.1867 ppm	95.187 %	2.0 %	1.9 ppm
Si 251.611 {134} (Radial)	6 cps	0.0945 ppm	0.000 %	38.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0031 ppm	0.000 %	32.3 %	0.0 ppm
Y 224.306 {450} (Axial)		92.2943 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.2398 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 8:25:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5085 ppm	101.704 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	188 cps	0.5073 ppm	101.466 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,444 cps	2.7524 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,067 cps	2.6143 ppm	104.573 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	174,163 cps	0.4870 ppm	97.395 %	8.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	588 cps	3.0748 ppm	122.992 %	7.0 %	0.2 ppm
Cd 228.802 {447} (Axial)	6,012 cps	0.5089 ppm	101.781 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,352 cps	0.4790 ppm	95.808 %	8.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,738 cps	0.5010 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,741 cps	2.4828 ppm	99.312 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,619 cps	2.7203 ppm	108.813 %	8.5 %	0.2 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5544 ppm	102.176 %	0.2 %	0.0 ppm
Li 670.784 {50} (Radial)	27,447 cps	2.6940 ppm	107.761 %	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,878 cps	0.4882 ppm	97.643 %	8.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,618 cps	2.5680 ppm	102.720 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	71,905 cps	50.7036 ppm	101.407 %	1.7 %	0.9 ppm
Ni 231.604 {445} (Axial)	10,296 cps	2.4725 ppm	98.898 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	18,800 cps	54.4876 ppm	108.975 %	2.0 %	1.1 ppm
Se 196.090 {472} (Axial)	553 cps	2.4673 ppm	98.692 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,673 cps	0.4863 ppm	97.267 %	8.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,603 cps	0.5291 ppm	105.824 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	512 cps	0.4981 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	415 cps	0.4749 ppm	94.980 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,784 cps	0.5067 ppm	101.344 %	8.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,104 cps	1.2426 ppm	99.410 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.1340 %		9.6 %	9.7 %
Sc 188.060 {479} (Axial)		88.1232 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	67 cps	2.4781 ppm	99.123 %	3.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5231 ppm	104.623 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,797 cps	2.2666 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.8618 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	560 cps	2.4686 ppm	98.745 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	829 cps	2.5743 ppm	102.970 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	174 cps	2.8132 ppm		1.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	504 cps	0.4963 ppm	99.266 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		95.6324 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		114.9287 %		0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 8:30:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	244 cps	0.5218 ppm	104.369 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5154 ppm	103.089 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,878 cps	2.8199 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,030 cps	2.6742 ppm	106.967 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	169,697 cps	0.4745 ppm	94.898 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	452 cps	2.3618 ppm	94.474 %	1.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,133 cps	0.5192 ppm	103.832 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,222 cps	0.4647 ppm	92.935 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,798 cps	0.5119 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	21,164 cps	2.5334 ppm	101.337 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,644 cps	2.6743 ppm	106.973 %	2.1 %	0.1 ppm
Fe 259.940 {130} (Radial)	448 cps	2.5370 ppm	101.480 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	28,266 cps	2.7744 ppm	110.977 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	31,880 cps	0.4734 ppm	94.678 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,771 cps	2.6273 ppm	105.093 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73,593 cps	51.8937 ppm	103.787 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,508 cps	2.5235 ppm	100.939 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	19,359 cps	56.1087 ppm	112.217 %	2.5 %	1.4 ppm
Se 196.090 {472} (Axial)	563 cps	2.5149 ppm	100.597 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,548 cps	0.4734 ppm	94.679 %	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,923 cps	0.5416 ppm	108.316 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5092 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	417 cps	0.4765 ppm	95.302 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,628 cps	0.4966 ppm	99.312 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,372 cps	1.2680 ppm	101.443 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.9083 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		86.7321 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	60 cps	2.2074 ppm	88.297 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	184 cps	0.5327 ppm	106.542 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,835 cps	2.2976 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.5967 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	574 cps	2.5265 ppm	101.062 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	827 cps	2.5667 ppm	102.667 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	158 cps	2.5417 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	511 cps	0.5038 ppm	100.755 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6752 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		115.1854 %		0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 9:31:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5346 ppm	106.914 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5217 ppm	104.348 %	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,893 cps	2.8678 ppm		2.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,950 cps	2.7314 ppm	109.254 %	2.8 %	0.1 ppm
Be 313.042 {108} (Axial)	163,034 cps	0.4559 ppm	91.172 %	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	415 cps	2.1705 ppm	86.818 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,108 cps	0.5170 ppm	103.397 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,037 cps	0.4443 ppm	88.859 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,776 cps	0.5079 ppm		2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	20,992 cps	2.5128 ppm	100.514 %	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	57,973 cps	2.7371 ppm	109.483 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	454 cps	2.5754 ppm	103.017 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	29,407 cps	2.8864 ppm	115.454 %	3.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	30,746 cps	0.4566 ppm	91.312 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,797 cps	2.6376 ppm	105.505 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	74,879 cps	52.8009 ppm	105.602 %	3.2 %	1.7 ppm
Ni 231.604 {445} (Axial)	10,394 cps	2.4960 ppm	99.840 %	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	19,580 cps	56.7491 ppm	113.498 %	3.4 %	1.9 ppm
Se 196.090 {472} (Axial)	574 cps	2.5628 ppm	102.511 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,491 cps	0.4674 ppm	93.487 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,073 cps	0.5474 ppm	109.478 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4973 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	412 cps	0.4710 ppm	94.202 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,435 cps	0.4840 ppm	96.800 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,256 cps	1.2570 ppm	100.559 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.5788 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		83.2928 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	54 cps	1.9996 ppm	79.984 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5293 ppm	105.869 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,687 cps	2.1779 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.0149 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	562 cps	2.4746 ppm	98.984 %	3.2 %	0.1 ppm
Al 396.152 {85} (Radial)	841 cps	2.6100 ppm	104.400 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	151 cps	2.4327 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	499 cps	0.4918 ppm	98.353 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		92.6026 %		0.8 %	0.7 %
Sc 361.384 {93} (Radial)		125.8367 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 9:36:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5331 ppm	106.624 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.5185 ppm	103.709 %	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,642 cps	2.7617 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,493 cps	2.6408 ppm	105.633 %	2.4 %	0.1 ppm
Be 313.042 {108} (Axial)	156,775 cps	0.4384 ppm	87.671 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	397 cps	2.0732 ppm	82.927 %	2.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,066 cps	0.5135 ppm	102.691 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,894 cps	0.4285 ppm	85.707 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,746 cps	0.5025 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,815 cps	2.4917 ppm	99.667 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,783 cps	2.6337 ppm	105.346 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	411 cps	2.3308 ppm	93.231 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	28,340 cps	2.7816 ppm	111.265 %	2.6 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,524 cps	0.4384 ppm	87.681 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,744 cps	2.6170 ppm	104.679 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	71,901 cps	50.7006 ppm	101.401 %	2.8 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,295 cps	2.4723 ppm	98.890 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	18,870 cps	54.6906 ppm	109.381 %	3.4 %	1.8 ppm
Se 196.090 {472} (Axial)	571 cps	2.5464 ppm	101.857 %	2.3 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,331 cps	0.4508 ppm	90.155 %	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,565 cps	0.5276 ppm	105.526 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	505 cps	0.4917 ppm		2.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	397 cps	0.4538 ppm	90.760 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,127 cps	0.4639 ppm	92.787 %	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,157 cps	1.2476 ppm	99.809 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.7189 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		82.3021 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	51 cps	1.8920 ppm	75.678 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5267 ppm	105.338 %	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	2,653 cps	2.1498 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.0436 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	541 cps	2.3820 ppm	95.278 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	792 cps	2.4587 ppm	98.349 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	142 cps	2.2939 ppm		2.9 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4899 ppm	97.978 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.8250 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		125.5937 %		0.8 %	1.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 10:38:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	252 cps	0.5382 ppm	107.630 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5209 ppm	104.171 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,961 cps	2.7767 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,551 cps	2.6444 ppm	105.777 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	151,919 cps	0.4248 ppm	84.956 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	386 cps	2.0187 ppm	80.749 %	2.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,105 cps	0.5168 ppm	103.355 %	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,759 cps	0.4137 ppm	82.748 %	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,757 cps	0.5044 ppm		2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,846 cps	2.4953 ppm	99.812 %	2.4 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,453 cps	2.6181 ppm	104.724 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	405 cps	2.2927 ppm	91.707 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	28,859 cps	2.8326 ppm	113.303 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	28,613 cps	0.4249 ppm	84.976 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,774 cps	2.6287 ppm	105.149 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	72,350 cps	51.0177 ppm	102.035 %	2.3 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,310 cps	2.4759 ppm	99.034 %	2.4 %	0.1 ppm
K 766.490 {44} (Radial)	19,041 cps	55.1866 ppm	110.373 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	579 cps	2.5846 ppm	103.383 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,224 cps	0.4396 ppm	87.920 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,595 cps	0.5288 ppm	105.765 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	507 cps	0.4931 ppm		2.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	390 cps	0.4455 ppm	89.103 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	6,996 cps	0.4554 ppm	91.088 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,210 cps	1.2527 ppm	100.217 %	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		110.7610 %		3.7 %	4.1 %
Sc 188.060 {479} (Axial)		82.4071 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	50 cps	1.8479 ppm	73.917 %	4.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5298 ppm	105.963 %	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,667 cps	2.1616 ppm		2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.7470 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	537 cps	2.3672 ppm	94.686 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	791 cps	2.4574 ppm	98.298 %	1.8 %	0.0 ppm
Si 251.611 {134} (Radial)	142 cps	2.2955 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4901 ppm	98.030 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0806 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		126.1009 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 10:42:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	252 cps	0.5390 ppm	107.806 %	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	195 cps	0.5253 ppm	105.061 %	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,657 cps	2.8095 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,143 cps	2.6812 ppm	107.248 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	154,959 cps	0.4333 ppm	86.656 %	4.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	398 cps	2.0778 ppm	83.113 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,142 cps	0.5199 ppm	103.978 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,841 cps	0.4227 ppm	84.543 %	4.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,774 cps	0.5075 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,982 cps	2.5116 ppm	100.465 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,739 cps	2.6316 ppm	105.262 %	4.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3400 ppm	93.601 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	29,036 cps	2.8500 ppm	114.000 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,163 cps	0.4330 ppm	86.609 %	4.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,827 cps	2.6491 ppm	105.964 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	73,189 cps	51.6088 ppm	103.218 %	2.0 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,383 cps	2.4934 ppm	99.734 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	19,242 cps	55.7690 ppm	111.538 %	2.3 %	1.3 ppm
Se 196.090 {472} (Axial)	577 cps	2.5759 ppm	103.035 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,288 cps	0.4463 ppm	89.268 %	4.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,767 cps	0.5355 ppm	107.102 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4970 ppm		2.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	398 cps	0.4556 ppm	91.129 %	0.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,093 cps	0.4617 ppm	92.347 %	4.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,284 cps	1.2597 ppm	100.776 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		110.2972 %		2.3 %	2.6 %
Sc 188.060 {479} (Axial)		82.0639 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	52 cps	1.9022 ppm	76.087 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	184 cps	0.5313 ppm	106.262 %	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,686 cps	2.1766 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.6294 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	548 cps	2.4163 ppm	96.650 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	806 cps	2.5028 ppm	100.113 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	145 cps	2.3355 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	501 cps	0.4940 ppm	98.794 %	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		90.9839 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		125.6427 %		1.0 %	1.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 12:35:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	233 cps	0.4978 ppm	99.559 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4958 ppm	99.158 %	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,688 cps	2.6226 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	40,752 cps	2.5326 ppm	101.303 %	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	181,796 cps	0.5083 ppm	101.664 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	487 cps	2.5451 ppm	101.805 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,901 cps	0.4995 ppm	99.890 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,583 cps	0.5045 ppm	100.893 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,833 cps	0.5183 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,008 cps	2.5147 ppm	100.588 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,409 cps	2.5216 ppm	100.863 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5535 ppm	102.139 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	25,442 cps	2.4972 ppm	99.889 %	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,957 cps	0.5042 ppm	100.848 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,454 cps	2.5044 ppm	100.177 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	71,503 cps	50.4205 ppm	100.841 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,478 cps	2.5163 ppm	100.650 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	17,222 cps	49.9159 ppm	99.832 %	1.7 %	0.9 ppm
Se 196.090 {472} (Axial)	557 cps	2.4867 ppm	99.468 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,826 cps	0.5023 ppm	100.460 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,088 cps	0.5091 ppm	101.818 %	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5092 ppm		1.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	444 cps	0.5080 ppm	101.592 %	0.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,734 cps	0.5034 ppm	100.689 %	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,119 cps	1.2440 ppm	99.521 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7487 %		0.8 %	0.7 %
Sc 188.060 {479} (Axial)		91.9789 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	69 cps	2.5346 ppm	101.385 %	2.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5171 ppm	103.415 %	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,002 cps	2.4326 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1570 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	577 cps	2.5404 ppm	101.616 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	809 cps	2.5126 ppm	100.502 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	156 cps	2.5158 ppm		1.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	513 cps	0.5054 ppm	101.077 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.8548 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.3188 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 11:45:25 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	249 cps	0.5318 ppm	106.357 %	2.8 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5126 ppm	102.512 %	3.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,725 cps	2.7185 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	41,822 cps	2.5991 ppm	103.963 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	153,976 cps	0.4305 ppm	86.106 %	5.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	379 cps	1.9824 ppm	79.295 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,041 cps	0.5113 ppm	102.262 %	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,843 cps	0.4230 ppm	84.592 %	5.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,702 cps	0.4944 ppm		2.9 %	0.0 ppm
Co 228.616 {447} (Axial)	20,520 cps	2.4563 ppm	98.251 %	2.9 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,884 cps	2.6856 ppm	107.425 %	5.8 %	0.2 ppm
Fe 259.940 {130} (Radial)	398 cps	2.2531 ppm	90.125 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	28,199 cps	2.7678 ppm	110.713 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,155 cps	0.4329 ppm	86.588 %	5.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,643 cps	2.5777 ppm	103.106 %	3.0 %	0.1 ppm
Na 589.592 {57} (Radial)	70,621 cps	49.7979 ppm	99.596 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,137 cps	2.4344 ppm	97.376 %	2.9 %	0.1 ppm
K 766.490 {44} (Radial)	18,297 cps	53.0298 ppm	106.060 %	2.6 %	1.4 ppm
Se 196.090 {472} (Axial)	568 cps	2.5372 ppm	101.487 %	2.8 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,345 cps	0.4522 ppm	90.445 %	6.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,305 cps	0.5175 ppm	103.503 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	497 cps	0.4840 ppm		2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	387 cps	0.4429 ppm	88.585 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,109 cps	0.4627 ppm	92.549 %	5.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,020 cps	1.2346 ppm	98.770 %	3.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.8307 %		4.7 %	5.0 %
Sc 188.060 {479} (Axial)		82.2687 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	50 cps	1.8354 ppm	73.414 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	158 cps	0.4572 ppm	91.441 %	4.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,617 cps	2.1206 ppm		2.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		90.7874 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	525 cps	2.3146 ppm	92.584 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	782 cps	2.4294 ppm	97.177 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	137 cps	2.2098 ppm		1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	493 cps	0.4854 ppm	97.088 %	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.6687 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		125.4704 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 11:50:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	253 cps	0.5411 ppm	108.230 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	192 cps	0.5192 ppm	103.843 %	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,270 cps	2.8384 ppm		1.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,688 cps	2.7151 ppm	108.602 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	155,341 cps	0.4343 ppm	86.870 %	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	399 cps	2.0854 ppm	83.416 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,121 cps	0.5181 ppm	103.626 %	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,873 cps	0.4263 ppm	85.263 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,742 cps	0.5016 ppm		2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	20,801 cps	2.4900 ppm	99.600 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,971 cps	2.6897 ppm	107.590 %	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	416 cps	2.3584 ppm	94.335 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	29,469 cps	2.8925 ppm	115.698 %	1.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,357 cps	0.4359 ppm	87.187 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,749 cps	2.6188 ppm	104.751 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	74,040 cps	52.2092 ppm	104.418 %	2.2 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,270 cps	2.4663 ppm	98.654 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	19,191 cps	55.6214 ppm	111.243 %	2.6 %	1.5 ppm
Se 196.090 {472} (Axial)	575 cps	2.5659 ppm	102.635 %	2.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,369 cps	0.4547 ppm	90.945 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,888 cps	0.5402 ppm	108.045 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	506 cps	0.4919 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	406 cps	0.4645 ppm	92.904 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,149 cps	0.4653 ppm	93.069 %	0.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,190 cps	1.2508 ppm	100.063 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.3088 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		82.6387 %		0.2 %	0.1 %
Mg 279.079 {121} (Radial)	52 cps	1.9278 ppm	77.112 %	0.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	164 cps	0.4746 ppm	94.916 %	3.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,652 cps	2.1491 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.2645 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	553 cps	2.4344 ppm	97.376 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	817 cps	2.5359 ppm	101.435 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	143 cps	2.3023 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.4908 ppm	98.153 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		91.0380 %		0.3 %	0.2 %
Sc 361.384 {93} (Radial)		125.9780 %		0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 12:41:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	250 cps	0.5337 ppm	106.741 %	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	191 cps	0.5169 ppm	103.385 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,151 cps	2.8328 ppm		0.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,602 cps	2.7097 ppm	108.388 %	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	154,060 cps	0.4308 ppm	86.153 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	396 cps	2.0676 ppm	82.704 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,069 cps	0.5137 ppm	102.741 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,827 cps	0.4212 ppm	84.246 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,732 cps	0.4999 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,703 cps	2.4782 ppm	99.126 %	2.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,156 cps	2.6512 ppm	106.050 %	2.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3414 ppm	93.656 %	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	29,339 cps	2.8797 ppm	115.189 %	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,074 cps	0.4317 ppm	86.347 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,716 cps	2.6060 ppm	104.242 %	2.2 %	0.1 ppm
Na 589.592 {57} (Radial)	73,824 cps	52.0568 ppm	104.114 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,236 cps	2.4580 ppm	98.322 %	2.2 %	0.1 ppm
K 766.490 {44} (Radial)	19,099 cps	55.3554 ppm	110.711 %	1.9 %	1.0 ppm
Se 196.090 {472} (Axial)	571 cps	2.5472 ppm	101.890 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,318 cps	0.4495 ppm	89.893 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,862 cps	0.5392 ppm	107.842 %	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4880 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	401 cps	0.4581 ppm	91.620 %	0.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,066 cps	0.4600 ppm	91.996 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,110 cps	1.2432 ppm	99.454 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.5290 %		1.5 %	1.7 %
Sc 188.060 {479} (Axial)		82.4790 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	51 cps	1.8857 ppm	75.428 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.5023 ppm	100.455 %	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	2,634 cps	2.1351 ppm		2.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.0787 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	547 cps	2.4082 ppm	96.326 %	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	814 cps	2.5279 ppm	101.114 %	0.5 %	0.0 ppm
Si 251.611 {134} (Radial)	142 cps	2.2859 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	494 cps	0.4866 ppm	97.319 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3500 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		126.7401 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/2/2020 12:46:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	254 cps	0.5434 ppm	108.679 %	2.7 %	0.0 ppm
As 189.042 {478} (Axial)	193 cps	0.5215 ppm	104.303 %	2.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,776 cps	2.8151 ppm		2.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	43,161 cps	2.6823 ppm	107.292 %	2.7 %	0.1 ppm
Be 313.042 {108} (Axial)	156,923 cps	0.4388 ppm	87.754 %	2.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	395 cps	2.0661 ppm	82.644 %	2.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,136 cps	0.5194 ppm	103.872 %	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	3,894 cps	0.4286 ppm	85.722 %	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,759 cps	0.5048 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,926 cps	2.5050 ppm	100.198 %	2.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	56,954 cps	2.6889 ppm	107.558 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	413 cps	2.3382 ppm	93.529 %	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	29,066 cps	2.8529 ppm	114.116 %	3.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,600 cps	0.4395 ppm	87.908 %	2.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,790 cps	2.6348 ppm	105.390 %	2.3 %	0.1 ppm
Na 589.592 {57} (Radial)	73,237 cps	51.6431 ppm	103.286 %	3.5 %	1.8 ppm
Ni 231.604 {445} (Axial)	10,345 cps	2.4842 ppm	99.366 %	2.1 %	0.1 ppm
K 766.490 {44} (Radial)	19,018 cps	55.1192 ppm	110.238 %	4.0 %	2.2 ppm
Se 196.090 {472} (Axial)	578 cps	2.5784 ppm	103.136 %	2.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,367 cps	0.4545 ppm	90.895 %	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,769 cps	0.5356 ppm	107.119 %	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	508 cps	0.4941 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	398 cps	0.4549 ppm	90.990 %	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	7,200 cps	0.4687 ppm	93.737 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,254 cps	1.2568 ppm	100.544 %	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.8947 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		82.0419 %		0.7 %	0.6 %
Mg 279.079 {121} (Radial)	52 cps	1.8999 ppm	75.995 %	3.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	175 cps	0.5067 ppm	101.338 %	3.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,659 cps	2.1553 ppm		1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.6597 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	545 cps	2.3988 ppm	95.952 %	3.1 %	0.1 ppm
Al 396.152 {85} (Radial)	807 cps	2.5060 ppm	100.239 %	2.4 %	0.1 ppm
Si 251.611 {134} (Radial)	142 cps	2.2935 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	500 cps	0.4923 ppm	98.460 %	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.8574 %		0.6 %	0.5 %
Sc 361.384 {93} (Radial)		126.5799 %		0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:36:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	230 cps	0.4921 ppm	98.422 %	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	182 cps	0.4921 ppm	98.424 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	52,304 cps	2.4632 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	38,471 cps	2.3908 ppm	95.633 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	178,486 cps	0.4991 ppm	99.813 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	732 cps	3.8262 ppm	153.050 %	11.6 %	0.4 ppm
Cd 228.802 {447} (Axial)	5,832 cps	0.4936 ppm	98.724 %	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,510 cps	0.4964 ppm	99.270 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,803 cps	0.5129 ppm		2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.4876 ppm	99.505 %	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,168 cps	2.4630 ppm	98.519 %	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	425 cps	2.4112 ppm	96.446 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	23,862 cps	2.3421 ppm	93.684 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,276 cps	0.4941 ppm	98.826 %	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,376 cps	2.4741 ppm	98.965 %	2.1 %	0.1 ppm
Na 589.592 {57} (Radial)	67,418 cps	47.5398 ppm	95.080 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,361 cps	2.4882 ppm	99.528 %	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	16,173 cps	46.8758 ppm	93.752 %	2.1 %	1.0 ppm
Se 196.090 {472} (Axial)	554 cps	2.4718 ppm	98.871 %	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,765 cps	0.4960 ppm	99.192 %	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,301 cps	0.4785 ppm	95.693 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	518 cps	0.5039 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	423 cps	0.4838 ppm	96.758 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,544 cps	0.4911 ppm	98.218 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,995 cps	1.2323 ppm	98.585 %	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.7200 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.9881 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	76 cps	2.7999 ppm	111.998 %	5.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5113 ppm	102.266 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,979 cps	2.4139 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0417 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	542 cps	2.3864 ppm	95.454 %	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	769 cps	2.3866 ppm	95.463 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.6270 ppm		1.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	509 cps	0.5013 ppm	100.255 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6413 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.0278 %		0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 1:41:38 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	231 cps	0.4931 ppm	98.625 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	183 cps	0.4938 ppm	98.769 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,052 cps	2.4985 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	38,997 cps	2.4236 ppm	96.942 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	179,063 cps	0.5007 ppm	100.135 %	2.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	480 cps	2.5071 ppm	100.283 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,859 cps	0.4960 ppm	99.191 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,527 cps	0.4982 ppm	99.647 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,815 cps	0.5150 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,867 cps	2.4978 ppm	99.912 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	52,470 cps	2.4772 ppm	99.090 %	2.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	430 cps	2.4377 ppm	97.509 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	24,205 cps	2.3758 ppm	95.030 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,378 cps	0.4956 ppm	99.128 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,407 cps	2.4863 ppm	99.452 %	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	68,095 cps	48.0172 ppm	96.034 %	2.3 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,401 cps	2.4976 ppm	99.904 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	16,291 cps	47.2170 ppm	94.434 %	2.4 %	1.1 ppm
Se 196.090 {472} (Axial)	555 cps	2.4787 ppm	99.146 %	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,783 cps	0.4979 ppm	99.570 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,485 cps	0.4856 ppm	97.128 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	520 cps	0.5057 ppm		1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	429 cps	0.4910 ppm	98.194 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,570 cps	0.4928 ppm	98.559 %	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,039 cps	1.2364 ppm	98.916 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5770 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		93.1865 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	67 cps	2.4577 ppm	98.307 %	0.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	178 cps	0.5138 ppm	102.764 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,989 cps	2.4227 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2333 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	549 cps	2.4187 ppm	96.748 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	774 cps	2.4050 ppm	96.200 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	155 cps	2.4957 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	510 cps	0.5025 ppm	100.496 %	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2497 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.0405 %		0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 2:53:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5089 ppm	101.784 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4974 ppm	99.472 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,444 cps	2.7053 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,455 cps	2.6384 ppm	105.538 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	174,328 cps	0.4874 ppm	97.488 %	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.4147 ppm	96.590 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,862 cps	0.4962 ppm	99.236 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,378 cps	0.4819 ppm	96.370 %	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,801 cps	0.5124 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,687 cps	2.4763 ppm	99.052 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,968 cps	2.5952 ppm	103.808 %	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	444 cps	2.5171 ppm	100.685 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	26,605 cps	2.6114 ppm	104.454 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,697 cps	0.4855 ppm	97.105 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,447 cps	2.5019 ppm	100.075 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	72,446 cps	51.0851 ppm	102.170 %	2.1 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,262 cps	2.4644 ppm	98.575 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,394 cps	50.4135 ppm	100.827 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	565 cps	2.5202 ppm	100.809 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,791 cps	0.4987 ppm	99.732 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,427 cps	0.5223 ppm	104.457 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	507 cps	0.4933 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5114 ppm	102.273 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,540 cps	0.4908 ppm	98.168 %	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,964 cps	1.2293 ppm	98.345 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.2385 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.0107 %		1.3 %	1.2 %
Mg 279.079 {121} (Radial)	64 cps	2.3410 ppm	93.639 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5107 ppm	102.135 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,782 cps	2.2546 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4838 %		1.2 %	1.2 %
B 249.773 {135} (Radial)	569 cps	2.5086 ppm	100.346 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	817 cps	2.5375 ppm	101.501 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	154 cps	2.4856 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.4904 ppm	98.071 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4741 %		1.2 %	1.2 %
Sc 361.384 {93} (Radial)		115.7543 %		0.2 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 3:55:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5092 ppm	101.843 %	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4964 ppm	99.290 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	55,571 cps	2.6171 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	40,932 cps	2.5438 ppm	101.751 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	169,294 cps	0.4734 ppm	94.672 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	440 cps	2.3016 ppm	92.064 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,823 cps	0.4929 ppm	98.577 %	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,242 cps	0.4669 ppm	93.376 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,780 cps	0.5087 ppm		1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	20,569 cps	2.4622 ppm	98.487 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	53,573 cps	2.5293 ppm	101.173 %	2.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	428 cps	2.4266 ppm	97.064 %	0.6 %	0.0 ppm
Li 670.784 {50} (Radial)	25,670 cps	2.5196 ppm	100.785 %	1.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	31,699 cps	0.4707 ppm	94.142 %	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,416 cps	2.4897 ppm	99.589 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	69,748 cps	49.1825 ppm	98.365 %	1.5 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,204 cps	2.4505 ppm	98.021 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	16,759 cps	48.5735 ppm	97.147 %	1.9 %	0.9 ppm
Se 196.090 {472} (Axial)	561 cps	2.5026 ppm	100.105 %	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,624 cps	0.4813 ppm	96.255 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,995 cps	0.5055 ppm	101.098 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4887 ppm		1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	431 cps	0.4933 ppm	98.660 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,357 cps	0.4789 ppm	95.785 %	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,906 cps	1.2238 ppm	97.905 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.9055 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		91.2906 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	60 cps	2.2261 ppm	89.045 %	4.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	176 cps	0.5083 ppm	101.660 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,786 cps	2.2581 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2854 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	546 cps	2.4054 ppm	96.216 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	784 cps	2.4354 ppm	97.415 %	0.6 %	0.0 ppm
Si 251.611 {134} (Radial)	148 cps	2.3889 ppm		2.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	494 cps	0.4871 ppm	97.415 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.3794 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		116.9395 %		0.0 %	0.0 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 4:00:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	242 cps	0.5172 ppm	103.431 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5044 ppm	100.884 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,202 cps	2.7410 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,762 cps	2.6575 ppm	106.299 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	177,187 cps	0.4954 ppm	99.087 %	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	458 cps	2.3908 ppm	95.631 %	2.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,910 cps	0.5003 ppm	100.052 %	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,441 cps	0.4888 ppm	97.763 %	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,828 cps	0.5175 ppm		0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,894 cps	2.5011 ppm	100.042 %	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,184 cps	2.6526 ppm	106.104 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	442 cps	2.5023 ppm	100.090 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	26,996 cps	2.6498 ppm	105.991 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,204 cps	0.4931 ppm	98.613 %	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,529 cps	2.5336 ppm	101.344 %	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	73,306 cps	51.6913 ppm	103.383 %	2.6 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,371 cps	2.4906 ppm	99.625 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	17,692 cps	51.2767 ppm	102.553 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	569 cps	2.5401 ppm	101.605 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,846 cps	0.5044 ppm	100.870 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,577 cps	0.5281 ppm	105.623 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	511 cps	0.4970 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5116 ppm	102.325 %	2.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,725 cps	0.5029 ppm	100.577 %	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,099 cps	1.2421 ppm	99.370 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.7285 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.7916 %		1.1 %	1.0 %
Mg 279.079 {121} (Radial)	63 cps	2.3072 ppm	92.288 %	3.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5166 ppm	103.318 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,824 cps	2.2883 ppm		0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.1435 %		0.9 %	0.9 %
B 249.773 {135} (Radial)	574 cps	2.5284 ppm	101.134 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	815 cps	2.5303 ppm	101.213 %	2.2 %	0.1 ppm
Si 251.611 {134} (Radial)	154 cps	2.4791 ppm		3.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	502 cps	0.4943 ppm	98.863 %	0.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.5446 %		0.9 %	0.9 %
Sc 361.384 {93} (Radial)		115.9002 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 5:02:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	237 cps	0.5068 ppm	101.354 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.5001 ppm	100.017 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	56,401 cps	2.6562 ppm		1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	41,092 cps	2.5537 ppm	102.149 %	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	171,384 cps	0.4792 ppm	95.841 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	454 cps	2.3732 ppm	94.929 %	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,932 cps	0.5021 ppm	100.415 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,285 cps	0.4716 ppm	94.320 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,782 cps	0.5090 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,782 cps	2.4877 ppm	99.507 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,419 cps	2.5692 ppm	102.770 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	437 cps	2.4754 ppm	99.016 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26,198 cps	2.5714 ppm	102.854 %	2.0 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,172 cps	0.4777 ppm	95.546 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,522 cps	2.5310 ppm	101.240 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	70,370 cps	49.6213 ppm	99.243 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,323 cps	2.4790 ppm	99.160 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	17,477 cps	50.6553 ppm	101.311 %	2.7 %	1.4 ppm
Se 196.090 {472} (Axial)	561 cps	2.5035 ppm	100.139 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,629 cps	0.4818 ppm	96.363 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,177 cps	0.5125 ppm	102.509 %	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	513 cps	0.4987 ppm		1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	422 cps	0.4823 ppm	96.466 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,509 cps	0.4888 ppm	97.765 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,068 cps	1.2392 ppm	99.134 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.8734 %		0.2 %	0.3 %
Sc 188.060 {479} (Axial)		90.9500 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	60 cps	2.2105 ppm	88.419 %	2.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5165 ppm	103.309 %	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,831 cps	2.2944 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.2449 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	554 cps	2.4416 ppm	97.664 %	2.3 %	0.1 ppm
Al 396.152 {85} (Radial)	795 cps	2.4684 ppm	98.736 %	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	151 cps	2.4337 ppm		2.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	503 cps	0.4953 ppm	99.065 %	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.2266 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		114.1500 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 5:07:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	236 cps	0.5041 ppm	100.830 %	3.8 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4961 ppm	99.218 %	3.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,894 cps	2.7736 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,934 cps	2.6682 ppm	106.729 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	174,795 cps	0.4887 ppm	97.749 %	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	469 cps	2.4522 ppm	98.088 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,879 cps	0.4976 ppm	99.517 %	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,373 cps	0.4813 ppm	96.261 %	0.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,744 cps	0.5021 ppm		3.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,530 cps	2.4575 ppm	98.300 %	3.6 %	0.1 ppm
Cu 324.754 {104} (Axial)	55,532 cps	2.6218 ppm	104.872 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	451 cps	2.5570 ppm	102.278 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	27,310 cps	2.6805 ppm	107.222 %	2.2 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,741 cps	0.4862 ppm	97.237 %	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,459 cps	2.5065 ppm	100.258 %	3.6 %	0.1 ppm
Na 589.592 {57} (Radial)	73,249 cps	51.6517 ppm	103.303 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,201 cps	2.4498 ppm	97.990 %	3.5 %	0.1 ppm
K 766.490 {44} (Radial)	18,352 cps	53.1890 ppm	106.378 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	553 cps	2.4672 ppm	98.690 %	3.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,709 cps	0.4901 ppm	98.016 %	0.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,750 cps	0.5349 ppm	106.971 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	506 cps	0.4928 ppm		3.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	438 cps	0.5011 ppm	100.210 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,658 cps	0.4985 ppm	99.697 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,915 cps	1.2247 ppm	97.972 %	3.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.8181 %		0.7 %	0.8 %
Sc 188.060 {479} (Axial)		91.7097 %		0.9 %	0.8 %
Mg 279.079 {121} (Radial)	63 cps	2.3124 ppm	92.496 %	3.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5125 ppm	102.500 %	3.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,798 cps	2.2674 ppm		3.6 %	0.1 ppm
Sc 227.318 {448} (Axial)		100.2793 %		0.6 %	0.6 %
B 249.773 {135} (Radial)	578 cps	2.5449 ppm	101.796 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	832 cps	2.5821 ppm	103.284 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5097 ppm		3.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	497 cps	0.4893 ppm	97.866 %	3.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7609 %		1.4 %	1.4 %
Sc 361.384 {93} (Radial)		112.8619 %		1.2 %	1.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 6:10:18 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.5109 ppm	102.187 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5098 ppm	101.955 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	58,617 cps	2.7605 ppm		1.9 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,341 cps	2.6314 ppm	105.255 %	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	173,238 cps	0.4844 ppm	96.878 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	485 cps	2.5348 ppm	101.390 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,057 cps	0.5127 ppm	102.542 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,333 cps	0.4769 ppm	95.384 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,812 cps	0.5145 ppm		1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	21,116 cps	2.5277 ppm	101.108 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,158 cps	2.6041 ppm	104.165 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	452 cps	2.5599 ppm	102.395 %	1.3 %	0.0 ppm
Li 670.784 {50} (Radial)	27,202 cps	2.6699 ppm	106.798 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,512 cps	0.4828 ppm	96.556 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,667 cps	2.5870 ppm	103.480 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	72,611 cps	51.2012 ppm	102.402 %	2.3 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,497 cps	2.5209 ppm	100.835 %	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	18,533 cps	53.7144 ppm	107.429 %	2.5 %	1.4 ppm
Se 196.090 {472} (Axial)	564 cps	2.5176 ppm	100.706 %	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,626 cps	0.4814 ppm	96.289 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,642 cps	0.5306 ppm	106.128 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	523 cps	0.5093 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	427 cps	0.4880 ppm	97.604 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	7,629 cps	0.4966 ppm	99.322 %	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,300 cps	1.2612 ppm	100.899 %	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.8170 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		90.2467 %		0.6 %	0.5 %
Mg 279.079 {121} (Radial)	63 cps	2.3220 ppm	92.880 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	182 cps	0.5255 ppm	105.101 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,892 cps	2.3436 ppm		1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.9172 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	570 cps	2.5108 ppm	100.430 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	818 cps	2.5401 ppm	101.606 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5202 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5041 ppm	100.821 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.3637 %		0.5 %	0.4 %
Sc 361.384 {93} (Radial)		112.5664 %		0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 7:12:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5076 ppm	101.523 %	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	187 cps	0.5056 ppm	101.127 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,610 cps	2.8073 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,707 cps	2.6541 ppm	106.164 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	173,186 cps	0.4842 ppm	96.849 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	466 cps	2.4338 ppm	97.354 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,039 cps	0.5111 ppm	102.228 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,332 cps	0.4768 ppm	95.359 %	1.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,785 cps	0.5095 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	20,995 cps	2.5131 ppm	100.525 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	55,435 cps	2.6172 ppm	104.688 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	456 cps	2.5850 ppm	103.399 %	2.0 %	0.1 ppm
Li 670.784 {50} (Radial)	27,652 cps	2.7141 ppm	108.564 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,431 cps	0.4816 ppm	96.316 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,657 cps	2.5832 ppm	103.327 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	73,173 cps	51.5981 ppm	103.196 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,454 cps	2.5104 ppm	100.417 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	19,127 cps	55.4360 ppm	110.872 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	554 cps	2.4748 ppm	98.991 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,582 cps	0.4769 ppm	95.372 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,862 cps	0.5392 ppm	107.838 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	522 cps	0.5076 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	422 cps	0.4825 ppm	96.500 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	7,671 cps	0.4994 ppm	99.872 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,220 cps	1.2536 ppm	100.291 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.7581 %		0.9 %	1.0 %
Sc 188.060 {479} (Axial)		90.0961 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	62 cps	2.2970 ppm	91.878 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	181 cps	0.5251 ppm	105.020 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	2,884 cps	2.3373 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8785 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	577 cps	2.5441 ppm	101.763 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	826 cps	2.5660 ppm	102.640 %	2.5 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5244 ppm		2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	511 cps	0.5032 ppm	100.638 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4890 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		111.2390 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 7:17:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	240 cps	0.5124 ppm	102.485 %	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.5105 ppm	102.096 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	59,367 cps	2.7958 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,799 cps	2.6598 ppm	106.393 %	2.3 %	0.1 ppm
Be 313.042 {108} (Axial)	176,814 cps	0.4944 ppm	98.878 %	0.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.4147 ppm	96.588 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,072 cps	0.5140 ppm	102.798 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,426 cps	0.4871 ppm	97.426 %	0.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,794 cps	0.5112 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,076 cps	2.5229 ppm	100.915 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,731 cps	2.6784 ppm	107.136 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	453 cps	2.5665 ppm	102.658 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	27,577 cps	2.7067 ppm	108.269 %	2.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,103 cps	0.4916 ppm	98.312 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,683 cps	2.5935 ppm	103.740 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	72,925 cps	51.4231 ppm	102.846 %	2.7 %	1.4 ppm
Ni 231.604 {445} (Axial)	10,472 cps	2.5148 ppm	100.593 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	19,042 cps	55.1893 ppm	110.379 %	2.7 %	1.5 ppm
Se 196.090 {472} (Axial)	557 cps	2.4877 ppm	99.509 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,709 cps	0.4901 ppm	98.020 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,813 cps	0.5373 ppm	107.457 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	525 cps	0.5105 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	426 cps	0.4873 ppm	97.454 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,799 cps	0.5077 ppm	101.535 %	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,286 cps	1.2599 ppm	100.793 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.8453 %		2.0 %	2.0 %
Sc 188.060 {479} (Axial)		89.5272 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	63 cps	2.3325 ppm	93.299 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5295 ppm	105.897 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,894 cps	2.3455 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4513 %		0.0 %	0.0 %
B 249.773 {135} (Radial)	578 cps	2.5458 ppm	101.832 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	836 cps	2.5963 ppm	103.851 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	156 cps	2.5185 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	512 cps	0.5040 ppm	100.801 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.1571 %		0.2 %	0.1 %
Sc 361.384 {93} (Radial)		111.9724 %		0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 8:35:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0014 ppm	78.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	137.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	6 cps	0.0003 ppm	108.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	170 cps	0.0106 ppm	9.9 %	0.0 ppm
Be 313.042 {108} (Axial)	43 cps	0.0001 ppm	17.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0143 ppm	6.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0009 ppm	7.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	837.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	132.2 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	80.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	31 cps	0.0015 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0048 ppm	184.8 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0037 ppm	18.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	8 cps	0.0001 ppm	21.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	36.5 %	0.0 ppm
Na 589.592 {57} (Radial)	59 cps	0.0420 ppm	12.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	72.1 %	0.0 ppm
K 766.490 {44} (Radial)	32 cps	0.0931 ppm	16.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	242.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0012 ppm	22.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	8 cps	0.0003 ppm	70.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	1,049.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0031 ppm	19.8 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0004 ppm	50.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-1 cps	-0.0001 ppm	97.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		109.9106 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		95.2028 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	0 cps	-0.0037 ppm	601.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0001 ppm	899.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0014 ppm	29.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.9795 %	1.0 %	1.0 %
B 249.773 {135} (Radial)	1 cps	0.0062 ppm	57.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0036 ppm	267.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0118 ppm	42.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	288.2 %	0.0 ppm
Y 224.306 {450} (Axial)		98.7263 %	1.0 %	0.9 %
Sc 361.384 {93} (Radial)		115.2465 %	0.5 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 9:41:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0023 ppm	36.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0004 ppm	161.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	8 cps	0.0004 ppm	155.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0068 ppm	29.7 %	0.0 ppm
Be 313.042 {108} (Axial)	50 cps	0.0001 ppm	17.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0093 ppm	2.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	12 cps	0.0010 ppm	7.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	213.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	33.7 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	41.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	31 cps	0.0014 ppm	15.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0084 ppm	39.1 %	0.0 ppm
Li 670.784 {50} (Radial)	66 cps	0.0065 ppm	22.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	2 cps	0.0000 ppm	330.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0012 ppm	35.5 %	0.0 ppm
Na 589.592 {57} (Radial)	54 cps	0.0381 ppm	14.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	57.9 %	0.0 ppm
K 766.490 {44} (Radial)	44 cps	0.1262 ppm	20.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0027 ppm	29.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	70.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	20.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	863.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0018 ppm	94.6 %	0.0 ppm
V 292.402 {115} (Axial)	-14 cps	-0.0009 ppm	19.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	671.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		113.7508 %	0.3 %	0.4 %
Sc 188.060 {479} (Axial)		91.4330 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	0.0120 ppm	40.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	9,178.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2 cps	0.0014 ppm	24.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.3533 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	0 cps	0.0018 ppm	272.8 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0035 ppm	362.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0069 ppm	97.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0003 ppm	180.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.6161 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		126.1074 %	0.9 %	1.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 10:47:49 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0007 ppm	111.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0001 ppm	378.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	30 cps	0.0014 ppm	13.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	100 cps	0.0062 ppm	22.7 %	0.0 ppm
Be 313.042 {108} (Axial)	95 cps	0.0003 ppm	11.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0163 ppm	43.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	15 cps	0.0013 ppm	10.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	117.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	37.8 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0005 ppm	59.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	53 cps	0.0025 ppm	8.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0007 ppm	140.3 %	0.0 ppm
Li 670.784 {50} (Radial)	84 cps	0.0082 ppm	8.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	41.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0016 ppm	42.5 %	0.0 ppm
Na 589.592 {57} (Radial)	157 cps	0.1108 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	63.2 %	0.0 ppm
K 766.490 {44} (Radial)	263 cps	0.7633 ppm	4.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	416.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0010 ppm	31.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	14 cps	0.0005 ppm	13.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	459.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0031 ppm	27.5 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0006 ppm	19.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	102.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		114.4716 %	0.8 %	0.9 %
Sc 188.060 {479} (Axial)		91.0722 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	0 cps	-0.0015 ppm	3,430.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	176.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0007 ppm	52.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.9630 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0050 ppm	50.3 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	-0.0012 ppm	798.4 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0058 ppm	142.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	191.4 %	0.0 ppm
Y 224.306 {450} (Axial)		96.0559 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		126.8467 %	0.4 %	0.5 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 11:55:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0011 ppm	49.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0008 ppm	203.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	22.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	74 cps	0.0046 ppm	21.1 %	0.0 ppm
Be 313.042 {108} (Axial)	103 cps	0.0003 ppm	7.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0130 ppm	47.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0014 ppm	5.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	28.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	30.4 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	52.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	51 cps	0.0024 ppm	10.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0024 ppm	74.0 %	0.0 ppm
Li 670.784 {50} (Radial)	71 cps	0.0070 ppm	18.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	1 cps	0.0000 ppm	113.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0018 ppm	31.3 %	0.0 ppm
Na 589.592 {57} (Radial)	142 cps	0.1000 ppm	8.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	73.3 %	0.0 ppm
K 766.490 {44} (Radial)	87 cps	0.2528 ppm	11.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0017 ppm	117.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0008 ppm	8.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	12 cps	0.0005 ppm	6.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	190.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0023 ppm	33.6 %	0.0 ppm
V 292.402 {115} (Axial)	-11 cps	-0.0007 ppm	9.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	118.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		113.2963 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		90.3240 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	0 cps	-0.0137 ppm	160.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	1 cps	0.0020 ppm	68.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	26.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.4238 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1 cps	0.0034 ppm	61.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0066 ppm	120.2 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0247 ppm	31.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	-1 cps	-0.0006 ppm	100.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9248 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		127.1687 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:40:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0010 ppm	122.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	109.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	20 cps	0.0010 ppm	65.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	35 cps	0.0022 ppm	38.1 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	11.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0149 ppm	24.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0000 ppm	94.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0005 ppm	70.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	246.0 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	65.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	18 cps	0.0008 ppm	25.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0014 ppm	391.4 %	0.0 ppm
Li 670.784 {50} (Radial)	30 cps	0.0029 ppm	24.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	32.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	49.3 %	0.0 ppm
Na 589.592 {57} (Radial)	31 cps	0.0222 ppm	29.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	9.9 %	0.0 ppm
K 766.490 {44} (Radial)	15 cps	0.0424 ppm	105.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0009 ppm	292.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	295.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	7 cps	0.0003 ppm	8.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	1,209.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0028 ppm	44.4 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	409.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	99.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.1081 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		99.0099 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0499 ppm	31.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	210.7 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0003 ppm	11.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0509 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0166 ppm	57.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0023 ppm	205.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0056 ppm	85.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0004 ppm	180.9 %	0.0 ppm
Y 224.306 {450} (Axial)		99.4255 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.4205 %	0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/2/2020 12:51:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0016 ppm	38.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0002 ppm	619.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0007 ppm	59.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	82 cps	0.0051 ppm	8.2 %	0.0 ppm
Be 313.042 {108} (Axial)	78 cps	0.0002 ppm	19.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	-3 cps	-0.0131 ppm	53.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	16 cps	0.0014 ppm	4.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1 cps	0.0001 ppm	151.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	63.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0003 ppm	89.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	40 cps	0.0019 ppm	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0017 ppm	290.7 %	0.0 ppm
Li 670.784 {50} (Radial)	56 cps	0.0055 ppm	13.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-1 cps	0.0000 ppm	408.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0015 ppm	27.1 %	0.0 ppm
Na 589.592 {57} (Radial)	101 cps	0.0714 ppm	7.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0005 ppm	65.6 %	0.0 ppm
K 766.490 {44} (Radial)	65 cps	0.1890 ppm	8.5 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0005 ppm	570.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	8 cps	0.0008 ppm	26.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	931.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0018 ppm	69.0 %	0.0 ppm
V 292.402 {115} (Axial)	-12 cps	-0.0008 ppm	21.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	107.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		114.1869 %	0.7 %	0.8 %
Sc 188.060 {479} (Axial)		89.7618 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0214 ppm	85.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0003 ppm	564.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0005 ppm	26.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.7632 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1 cps	0.0028 ppm	110.6 %	0.0 ppm
Al 396.152 {85} (Radial)	-2 cps	-0.0070 ppm	115.5 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0184 ppm	24.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	2,643.7 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8825 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		127.3580 %	0.1 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:46:32 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0007 ppm	183.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0002 ppm	393.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	19 cps	0.0009 ppm	52.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	40 cps	0.0025 ppm	14.7 %	0.0 ppm
Be 313.042 {108} (Axial)	42 cps	0.0001 ppm	28.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	6 cps	0.0313 ppm	10.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	19.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	109.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	41.6 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	74.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	14 cps	0.0007 ppm	6.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0017 ppm	106.8 %	0.0 ppm
Li 670.784 {50} (Radial)	18 cps	0.0018 ppm	61.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	14.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0010 ppm	26.4 %	0.0 ppm
Na 589.592 {57} (Radial)	43 cps	0.0300 ppm	24.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0002 ppm	107.7 %	0.0 ppm
K 766.490 {44} (Radial)	4 cps	0.0125 ppm	343.6 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0024 ppm	55.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	2,763.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	38.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0004 ppm	144.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-1 cps	-0.0011 ppm	143.5 %	0.0 ppm
V 292.402 {115} (Axial)	-4 cps	-0.0002 ppm	48.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	38.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2287 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		100.0211 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	-1 cps	-0.0193 ppm	232.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	4,922.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	64.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9128 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0136 ppm	37.3 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0160 ppm	36.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1 cps	0.0191 ppm	3.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0002 ppm	331.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1849 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5408 %	0.4 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:58:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0004 ppm	89.2 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	75.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	26 cps	0.0012 ppm	38.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	21 cps	0.0013 ppm	107.4 %	0.0 ppm
Be 313.042 {108} (Axial)	42 cps	0.0001 ppm	29.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	3 cps	0.0166 ppm	34.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	2 cps	0.0001 ppm	57.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	5,037.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	112.8 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	33.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	14 cps	0.0007 ppm	33.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0016 ppm	251.0 %	0.0 ppm
Li 670.784 {50} (Radial)	35 cps	0.0035 ppm	4.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	6 cps	0.0001 ppm	82.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	27.9 %	0.0 ppm
Na 589.592 {57} (Radial)	69 cps	0.0484 ppm	12.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	63.0 %	0.0 ppm
K 766.490 {44} (Radial)	13 cps	0.0382 ppm	13.7 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0015 ppm	63.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0003 ppm	122.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	11 cps	0.0004 ppm	12.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0003 ppm	30.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0024 ppm	52.5 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0004 ppm	73.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	31.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		107.9666 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		99.5087 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	0 cps	0.0016 ppm	791.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0005 ppm	296.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	31.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.8315 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	1 cps	0.0038 ppm	109.6 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	191.8 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0093 ppm	60.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0005 ppm	81.9 %	0.0 ppm
Y 224.306 {450} (Axial)		101.9284 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		116.0994 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 4:04:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0003 ppm	661.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0003 ppm	171.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	343.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	62 cps	0.0038 ppm	105.2 %	0.0 ppm
Be 313.042 {108} (Axial)	23 cps	0.0001 ppm	13.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	-2 cps	-0.0118 ppm	10.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0002 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	68.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	114.3 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	62.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	5 cps	0.0002 ppm	82.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0019 ppm	447.2 %	0.0 ppm
Li 670.784 {50} (Radial)	36 cps	0.0035 ppm	24.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-2 cps	0.0000 ppm	122.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	16.0 %	0.0 ppm
Na 589.592 {57} (Radial)	39 cps	0.0277 ppm	20.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	81.9 %	0.0 ppm
K 766.490 {44} (Radial)	14 cps	0.0419 ppm	23.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0006 ppm	45.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	754.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	5 cps	0.0002 ppm	31.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0001 ppm	406.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0025 ppm	136.8 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0005 ppm	35.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	39.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.9120 %	0.4 %	0.5 %
Sc 188.060 {479} (Axial)		97.6081 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	1 cps	0.0234 ppm	94.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,027.9 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0004 ppm	18.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9100 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0023 ppm	51.9 %	0.0 ppm
Al 396.152 {85} (Radial)	2 cps	0.0052 ppm	158.0 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0239 ppm	21.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	78.0 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5030 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		117.1824 %	2.3 %	2.7 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 5:12:14 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0002 ppm	695.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0010 ppm	15.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0007 ppm	60.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	82 cps	0.0051 ppm	18.1 %	0.0 ppm
Be 313.042 {108} (Axial)	41 cps	0.0001 ppm	32.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	1 cps	0.0033 ppm	174.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	16.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0001 ppm	112.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0001 ppm	48.2 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	40.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	19 cps	0.0009 ppm	18.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	-0.0018 ppm	297.4 %	0.0 ppm
Li 670.784 {50} (Radial)	48 cps	0.0047 ppm	22.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	9 cps	0.0001 ppm	27.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0009 ppm	40.6 %	0.0 ppm
Na 589.592 {57} (Radial)	134 cps	0.0948 ppm	9.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	1 cps	0.0003 ppm	69.3 %	0.0 ppm
K 766.490 {44} (Radial)	28 cps	0.0818 ppm	35.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0018 ppm	72.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	105.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0003 ppm	44.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0001 ppm	847.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0029 ppm	14.5 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0005 ppm	52.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1 cps	0.0001 ppm	58.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		107.9284 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		98.7035 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	0 cps	-0.0112 ppm	617.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	1,488.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	39.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.0748 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	1 cps	0.0053 ppm	51.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0041 ppm	175.5 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	-0.0069 ppm	59.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1 cps	0.0006 ppm	10.8 %	0.0 ppm
Y 224.306 {450} (Axial)		101.1591 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		113.7029 %	0.5 %	0.6 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 6:15:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0006 ppm	53.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0005 ppm	66.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	10 cps	0.0005 ppm	72.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0068 ppm	9.7 %	0.0 ppm
Be 313.042 {108} (Axial)	40 cps	0.0001 ppm	21.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	-0.0020 ppm	66.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	6 cps	0.0005 ppm	17.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0001 ppm	455.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	67.9 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	12.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	23 cps	0.0011 ppm	39.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0015 ppm	89.2 %	0.0 ppm
Li 670.784 {50} (Radial)	42 cps	0.0041 ppm	15.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	10 cps	0.0001 ppm	22.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0011 ppm	43.7 %	0.0 ppm
Na 589.592 {57} (Radial)	124 cps	0.0875 ppm	11.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0004 ppm	28.3 %	0.0 ppm
K 766.490 {44} (Radial)	10 cps	0.0285 ppm	61.9 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0006 ppm	243.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6 cps	0.0006 ppm	22.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	21.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0002 ppm	42.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	-3 cps	-0.0030 ppm	62.0 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0004 ppm	64.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	3 cps	0.0002 ppm	51.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		108.2386 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		97.4489 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	0 cps	0.0066 ppm	592.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0002 ppm	306.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0006 ppm	31.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9783 %	0.9 %	0.9 %
B 249.773 {135} (Radial)	0 cps	0.0014 ppm	471.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0104 ppm	37.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-1 cps	-0.0184 ppm	106.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	674.6 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0759 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		113.6259 %	0.3 %	0.4 %

Simple Sample Report

12/2/2020 8:17:12 AM

CCB

Sample type: UNKNOWN Analysis started at: 12/1/2020 7:22:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	-0.0005 ppm	73.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0006 ppm	32.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	15 cps	0.0007 ppm	68.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	131 cps	0.0082 ppm	10.3 %	0.0 ppm
Be 313.042 {108} (Axial)	63 cps	0.0002 ppm	61.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	-1 cps	-0.0053 ppm	226.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0007 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	2,102.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	56.8 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	35.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	41 cps	0.0019 ppm	58.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0005 ppm	869.8 %	0.0 ppm
Li 670.784 {50} (Radial)	58 cps	0.0057 ppm	4.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	4 cps	0.0001 ppm	126.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3 cps	0.0010 ppm	10.1 %	0.0 ppm
Na 589.592 {57} (Radial)	133 cps	0.0937 ppm	4.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	4 cps	0.0010 ppm	13.0 %	0.0 ppm
K 766.490 {44} (Radial)	71 cps	0.2058 ppm	9.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	66.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	23.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	9 cps	0.0004 ppm	32.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0004 ppm	34.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0027 ppm	26.3 %	0.0 ppm
V 292.402 {115} (Axial)	-8 cps	-0.0005 ppm	18.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	2 cps	0.0002 ppm	96.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.8888 %	5.9 %	6.2 %
Sc 188.060 {479} (Axial)		97.7107 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1 cps	0.0270 ppm	136.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0002 ppm	451.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0004 ppm	29.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.3277 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	2 cps	0.0078 ppm	60.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0037 ppm	68.1 %	0.0 ppm
Si 251.611 {134} (Radial)	-2 cps	-0.0269 ppm	32.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	18,776.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0898 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		112.5119 %	0.1 %	0.1 %

Simple Sample Report

12/2/2020 8:17:12 AM

20111764-02A

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:19:21 PM

Standard DF: 10

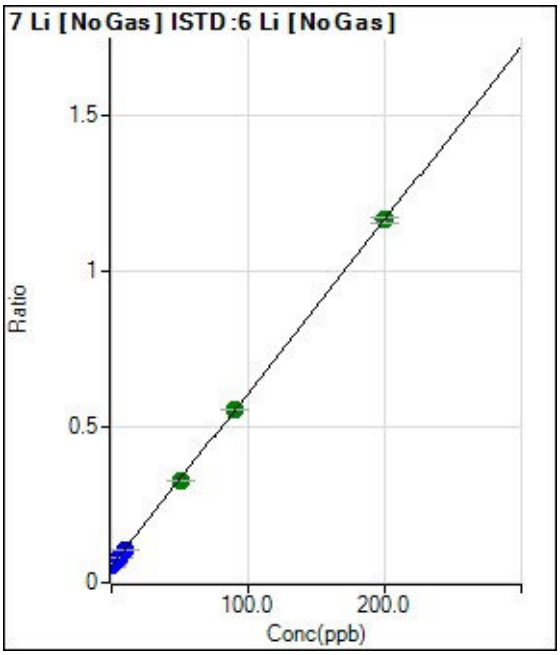
	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-1 cps	-0.0125 ppm	40.9 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0023 ppm	234.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	134 cps	0.0631 ppm	4.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	50 cps	0.0310 ppm	66.7 %	0.0 ppm
Be 313.042 {108} (Axial)	15 cps	0.0004 ppm	22.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	459 cps	23.9932 ppm	0.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0088 ppm	6.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	-0.0002 ppm	175.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0017 ppm	12.1 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0005 ppm	182.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	145 cps	0.0683 ppm	2.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0793 ppm	21.5 %	0.0 ppm
Li 670.784 {50} (Radial)	14 cps	0.0133 ppm	22.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	482 cps	0.0716 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0011 ppm	49.7 %	0.0 ppm
Na 589.592 {57} (Radial)	21,920 cps	154.5683 ppm	0.4 %	0.6 ppm
Ni 231.604 {445} (Axial)	6 cps	0.0136 ppm	16.2 %	0.0 ppm
K 766.490 {44} (Radial)	2 cps	0.0563 ppm	344.4 %	0.2 ppm
Se 196.090 {472} (Axial)	0 cps	0.0050 ppm	137.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0012 ppm	216.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	83 cps	0.0323 ppm	4.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0006 ppm	850.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	-2 cps	-0.0232 ppm	49.1 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0049 ppm	64.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	20,073 cps	19.0348 ppm	5.7 %	1.1 ppm
Sc 357.253 {94} (Axial)		107.9125 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.7536 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	3 cps	0.9680 ppm	15.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0005 ppm	943.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1 cps	0.0103 ppm	4.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.0646 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	-1 cps	-0.0281 ppm	327.8 %	0.1 ppm
Al 396.152 {85} (Radial)	3 cps	0.0810 ppm	52.3 %	0.0 ppm
Si 251.611 {134} (Radial)	5 cps	0.7700 ppm	17.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	269 cps	2.6523 ppm	5.8 %	0.2 ppm
Y 224.306 {450} (Axial)		100.6068 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		117.7697 %	0.3 %	0.3 %

Calibration for 044_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b\
Analysis File: ICPMS3_201130.batch.bin
DA Date-Time: 2020-12-01 10:23:21
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	035CALB.d	std 1	2020-11-30 15:14:18
2	036CALS.d	std 2	2020-11-30 15:17:02
3	037CALS.d	std 3	2020-11-30 15:18:55
4	038CALS.d	std 4	2020-11-30 15:20:48
5	039CALS.d	std 5	2020-11-30 15:22:42
6	040CALS.d	std 6	2020-11-30 15:24:34
7	041CALS.d	std 7	2020-11-30 15:26:31
8	042CALS.d	std 8	2020-11-30 15:28:24

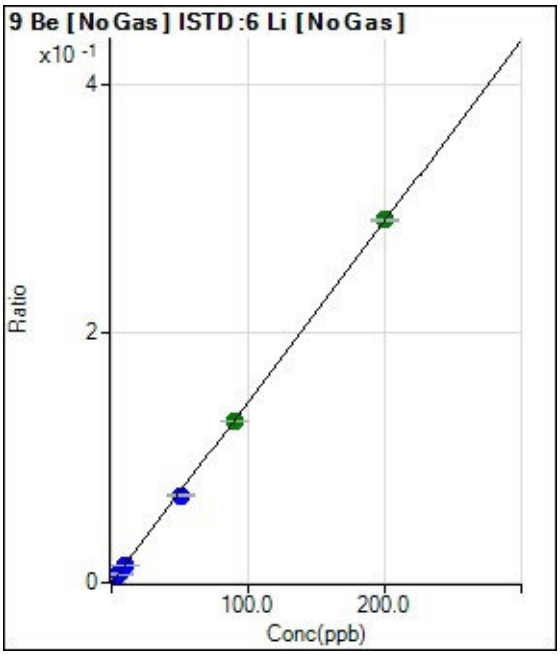
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	318305.07	0.0524	P	0.9
2	☐	0.200	0.232	322178.93	0.0537	P	1.1
3	☐	2.000	1.984	379348.97	0.0635	P	0.5
4	☐	5.000	5.065	467762.27	0.0806	P	1.2
5	☐	10.000	9.728	623377.99	0.1065	P	0.2
6	☐	50.000	49.577	1897451.89	0.3278	A	0.4
7	☐	90.000	90.409	3142794.99	0.5547	A	0.7
8	☐	200.000	199.934	6442960.68	1.1631	A	1.4

y = 0.0056 * x + 0.0524
R = 1.0000
DL = 0.2591
BEC = 9.439

Weight: <None>
Min Conc: <None>

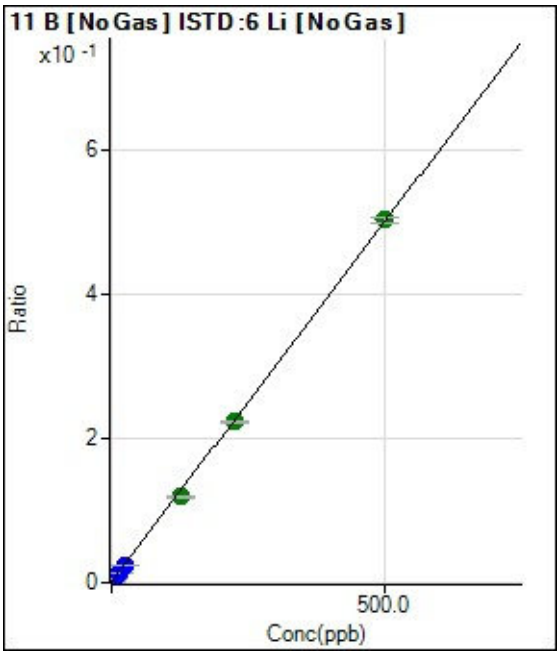


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.05	0.0000	P	32.5
2	☐	0.200	0.182	1631.75	0.0003	P	6.0
3	☐	2.000	1.859	16172.32	0.0027	P	2.6
4	☐	5.000	4.802	40492.10	0.0070	P	3.9
5	☐	10.000	9.505	80814.78	0.0138	P	1.0
6	☐	50.000	48.377	406400.17	0.0702	P	0.5
7	☐	90.000	89.337	734665.16	0.1297	A	0.9
8	☐	200.000	200.735	1613693.18	0.2913	A	0.4

y = 0.0015 * x + 8.2121E-006
R = 1.0000
DL = 0.005522
BEC = 0.005658

Weight: <None>
Min Conc: <None>

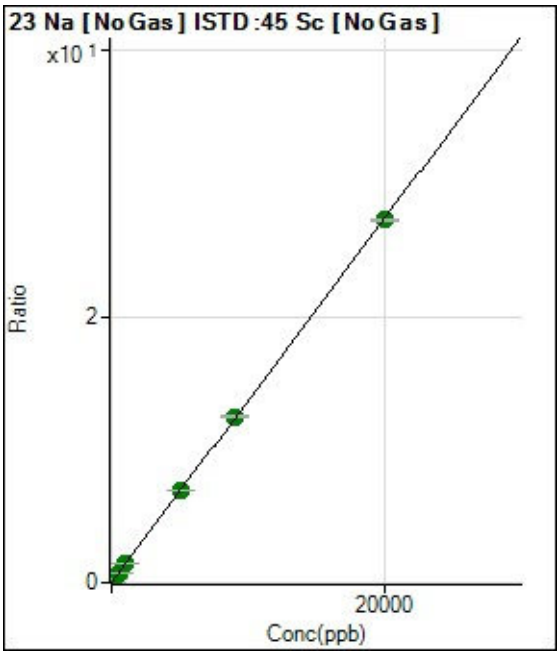
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8033.78	0.0013	P	3.3
2	☐	0.500	0.384	10240.80	0.0017	P	2.7
3	☐	5.000	4.476	34657.55	0.0058	P	1.9
4	☐	12.500	11.761	75929.70	0.0131	P	1.7
5	☐	25.000	23.143	143187.40	0.0245	P	1.1
6	☐	125.000	118.010	690360.21	0.1193	A	0.7
7	☐	225.000	222.593	1268047.01	0.2238	A	1.5
8	☐	500.000	502.947	2791530.18	0.5041	A	1.6

y = 9.9959E-004 * x + 0.0013
R = 0.9999
DL = 0.1311
BEC = 1.324

Weight: <None>
Min Conc: <None>

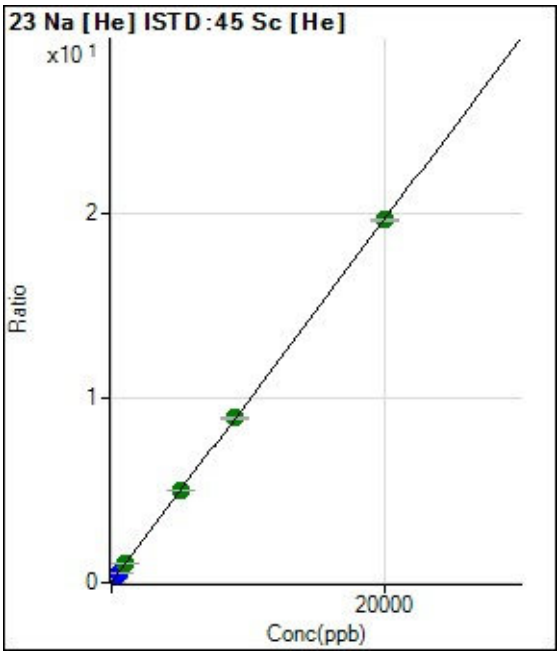


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	371228.04	0.0138	P	2.6
2	☐	20.000	19.845	1089252.76	0.0410	A	1.4
3	☐	200.000	201.479	7673206.42	0.2893	A	0.6
4	☐	500.000	524.788	18447911.87	0.7314	A	4.7
5	☐	1000.000	1024.302	36762535.20	1.4145	A	1.3
6	☐	5000.000	5070.873	182302666.58	6.9478	A	0.7
7	☐	9000.000	9112.926	335827424.17	12.4750	A	0.7
8	☐	20000.000	19929.616	730127332.99	27.2660	A	0.6

y = 0.0014 * x + 0.0138
R = 1.0000
DL = 0.7767
BEC = 10.11

Weight: <None>
Min Conc: <None>

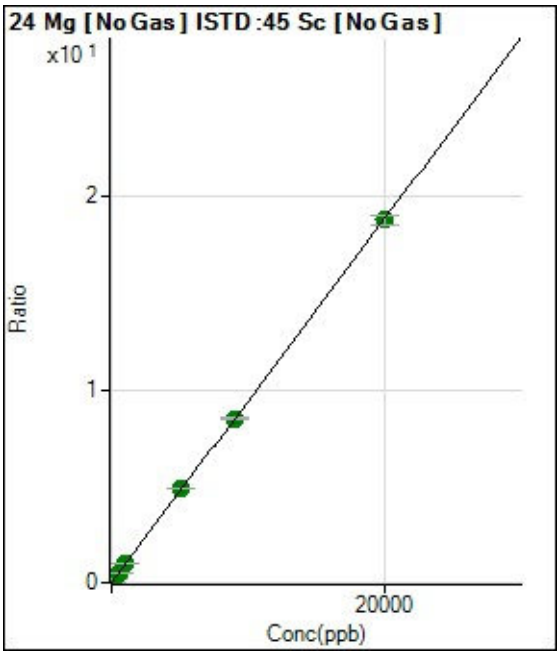
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16838.20	0.0155	P	6.2
2	☐	20.000	19.817	37759.66	0.0349	P	0.9
3	☐	200.000	203.453	230131.57	0.2152	P	1.4
4	☐	500.000	512.305	544348.07	0.5183	P	1.8
5	☐	1000.000	999.039	1043605.12	0.9960	A	1.1
6	☐	5000.000	5048.245	5324737.63	4.9701	A	0.9
7	☐	9000.000	9044.072	9564731.94	8.8917	A	0.3
8	☐	20000.000	19967.812	21549315.51	19.6128	A	0.8

y = 9.8144E-004 * x + 0.0155
R = 1.0000
DL = 2.915
BEC = 15.79

Weight: <None>
Min Conc: <None>

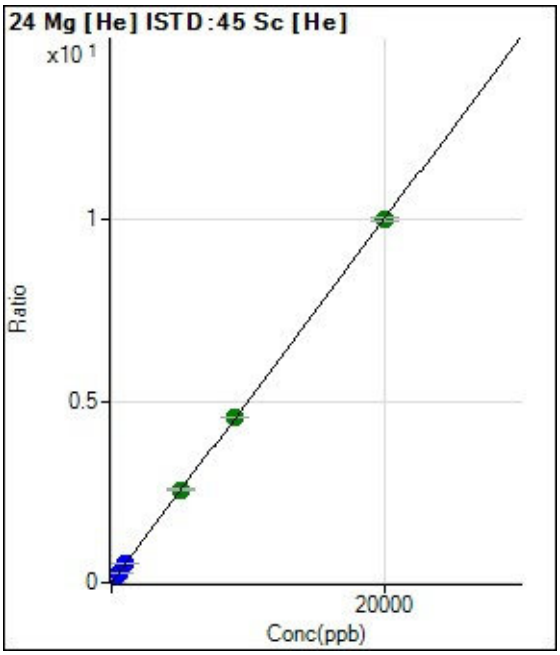


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10618.23	0.0004	P	6.2
2	☐	20.000	20.202	516819.50	0.0194	P	0.9
3	☐	200.000	204.633	5124903.99	0.1932	A	1.3
4	☐	500.000	535.591	12738656.06	0.5052	A	5.3
5	☐	1000.000	1035.151	25366525.46	0.9760	A	0.9
6	☐	5000.000	5142.619	127179661.44	4.8470	A	0.0
7	☐	9000.000	9024.486	228951129.92	8.5054	A	1.5
8	☐	20000.000	19950.633	503415405.83	18.8027	A	2.9

y = 9.4244E-004 * x + 3.9540E-004
R = 1.0000
DL = 0.07769
BEC = 0.4196

Weight: <None>
Min Conc: <None>

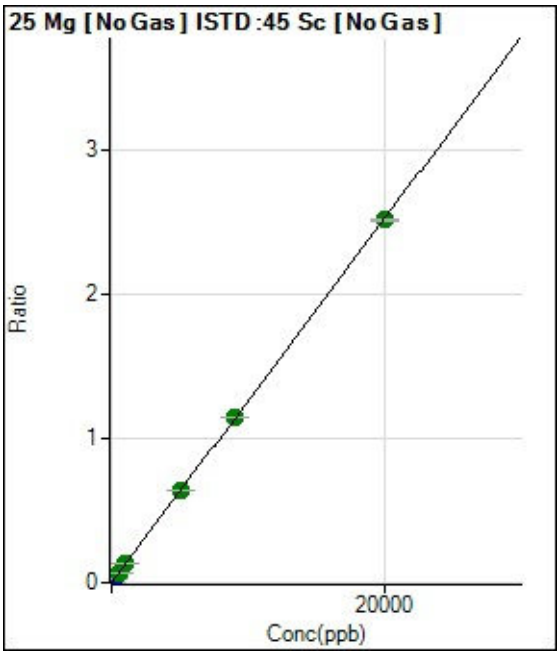
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.35	0.0002	P	23.6
2	☐	20.000	21.119	11685.88	0.0108	P	1.5
3	☐	200.000	207.386	111381.53	0.1041	P	3.4
4	☐	500.000	517.970	272820.67	0.2598	P	1.7
5	☐	1000.000	1020.455	535947.72	0.5115	P	1.9
6	☐	5000.000	5120.299	2748863.08	2.5658	A	0.7
7	☐	9000.000	9076.224	4892135.55	4.5479	A	0.1
8	☐	20000.000	19934.078	10974699.00	9.9882	A	1.0

y = 5.0105E-004 * x + 2.3299E-004
R = 1.0000
DL = 0.3299
BEC = 0.465

Weight: <None>
Min Conc: <None>

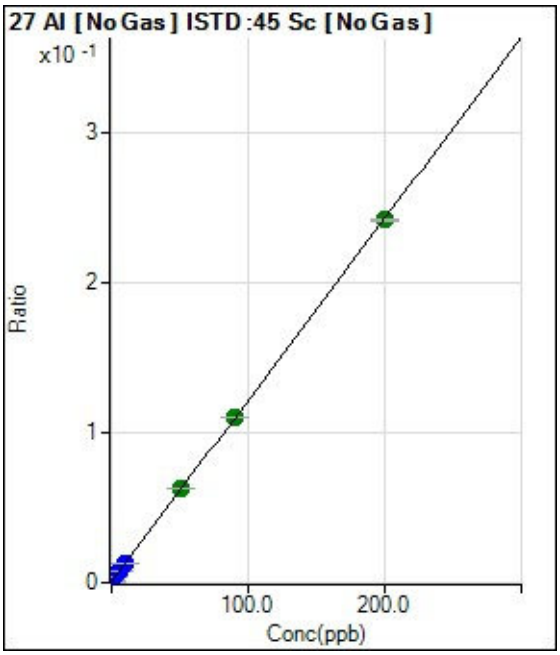


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1400.45	0.0001	P	34.7
2	☐	20.000	19.866	68036.37	0.0026	P	2.7
3	☐	200.000	201.225	674677.23	0.0254	P	1.2
4	☐	500.000	536.106	1707317.32	0.0677	A	5.0
5	☐	1000.000	1036.214	3399192.24	0.1308	A	0.8
6	☐	5000.000	5101.719	16889912.25	0.6437	A	0.8
7	☐	9000.000	9087.395	30866410.37	1.1466	A	1.0
8	☐	20000.000	19932.517	67339183.99	2.5148	A	0.3

y = 1.2616E-004 * x + 5.2099E-005
R = 1.0000
DL = 0.4293
BEC = 0.4129

Weight: <None>
Min Conc: <None>

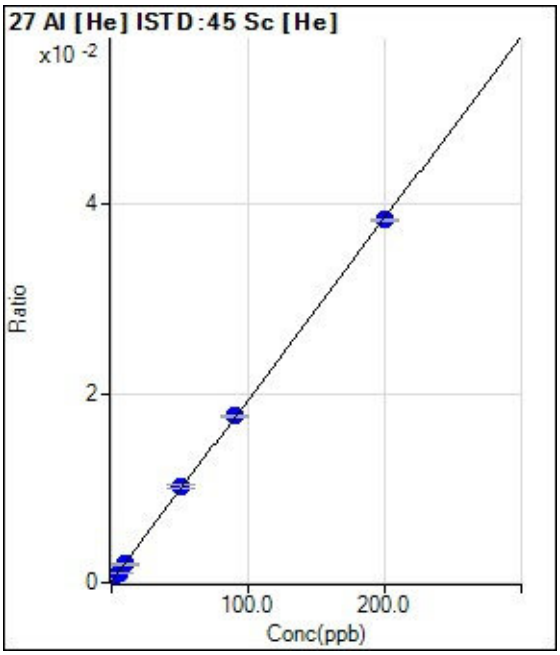
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17359.04	0.0006	P	5.2
2	☐			30528.97	0.0011	P	3.6
3	☐	2.000	2.196	87706.54	0.0033	P	0.2
4	☐	5.000	5.463	183364.11	0.0073	P	3.6
5	☐	10.000	10.263	340075.21	0.0131	P	3.2
6	☐	50.000	51.142	1643186.90	0.0626	A	0.9
7	☐	90.000	90.607	2973371.00	0.1105	A	0.4
8	☐	200.000	199.415	6488196.15	0.2423	A	0.5

y = 0.0012 * x + 6.4636E-004
R = 1.0000
DL = 0.08299
BEC = 0.5333

Weight: <None>
Min Conc: <None>

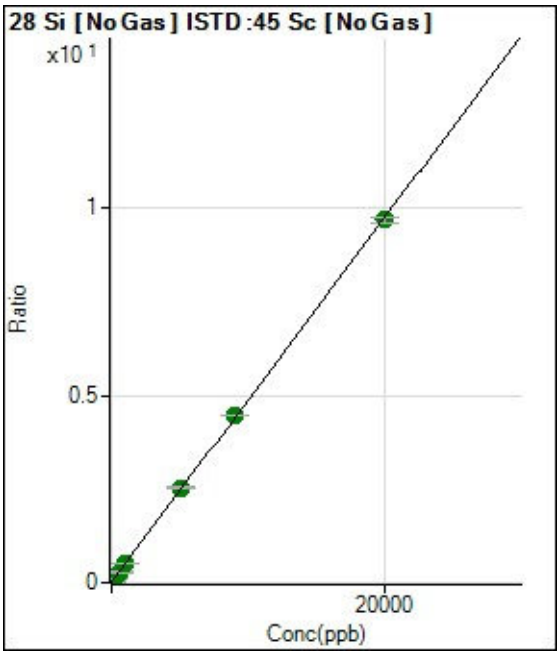


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0001	P	27.0
2	☐			253.34	0.0002	P	29.7
3	☐	2.000	1.909	546.69	0.0005	P	1.1
4	☐	5.000	4.453	1050.05	0.0010	P	9.0
5	☐	10.000	9.645	2093.54	0.0020	P	10.8
6	☐	50.000	51.974	10854.41	0.0101	P	3.7
7	☐	90.000	90.945	18953.20	0.0176	P	1.8
8	☐	200.000	199.114	42197.56	0.0384	P	0.5

y = 1.9216E-004 * x + 1.4431E-004
R = 0.9999
DL = 0.6087
BEC = 0.751

Weight: <None>
Min Conc: <None>

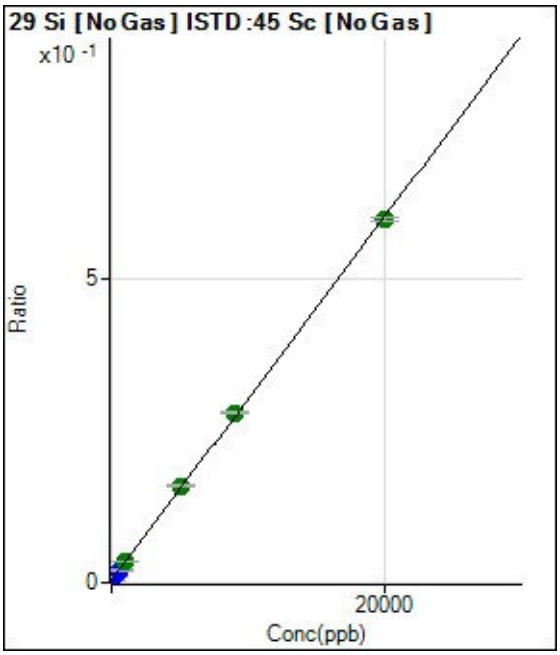
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	498588.99	0.0186	P	1.1
2	☐	20.000	22.005	778116.90	0.0293	A	0.3
3	☐	200.000	207.408	3165606.13	0.1194	A	0.4
4	☐	500.000	541.244	7101812.87	0.2816	A	5.1
5	☐	1000.000	1035.088	13557251.03	0.5216	A	0.7
6	☐	5000.000	5185.262	66609466.27	2.5386	A	1.0
7	☐	9000.000	9145.068	120142609.52	4.4631	A	0.8
8	☐	20000.000	19885.542	259268015.21	9.6830	A	1.8

y = 4.8600E-004 * x + 0.0186
R = 0.9999
DL = 1.284
BEC = 38.2

Weight: <None>
Min Conc: <None>

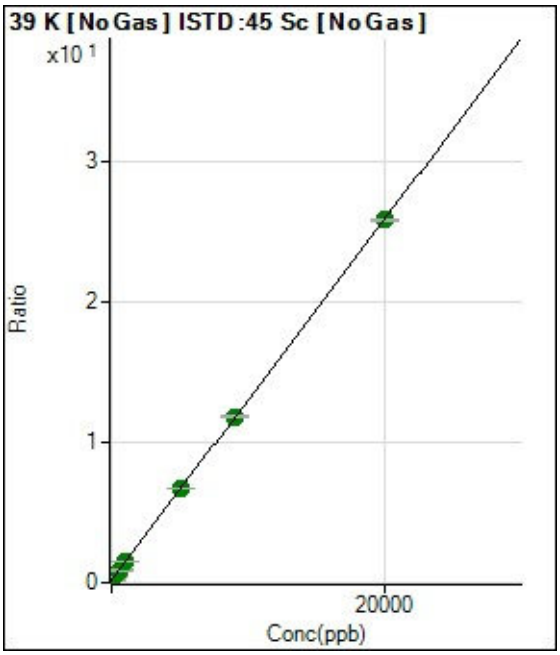


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96159.91	0.0036	P	0.4
2	☐	20.000	17.859	109450.09	0.0041	P	0.8
3	☐	200.000	206.493	259025.55	0.0098	P	0.2
4	☐	500.000	553.101	508257.00	0.0202	P	4.6
5	☐	1000.000	1046.614	908024.33	0.0349	A	0.1
6	☐	5000.000	5206.337	4186570.85	0.1596	A	0.7
7	☐	9000.000	9227.570	7538542.72	0.2800	A	1.1
8	☐	20000.000	19842.288	16013232.01	0.5980	A	1.0

y = 2.9959E-005 * x + 0.0036
R = 0.9999
DL = 1.433
BEC = 119.5

Weight: <None>
Min Conc: <None>

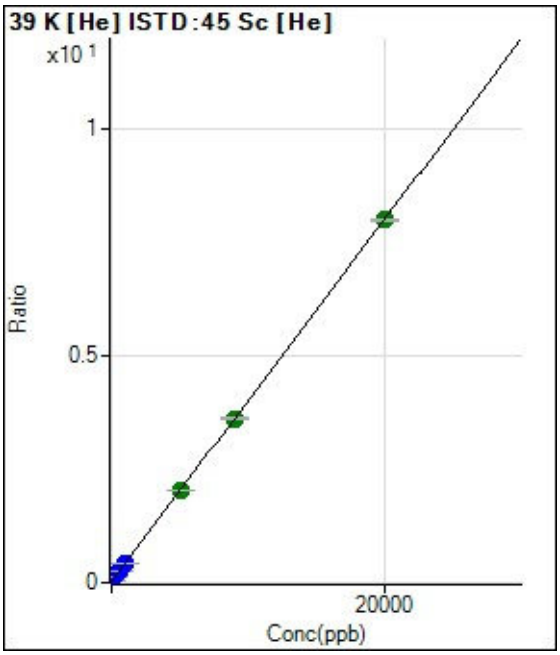
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4975262.95	0.1853	A	0.6
2	☐	20.000	20.473	5626120.75	0.2116	A	0.7
3	☐	200.000	200.663	11750109.41	0.4431	A	0.4
4	☐	500.000	530.626	21862394.67	0.8670	A	5.4
5	☐	1000.000	1012.317	38617929.42	1.4858	A	0.4
6	☐	5000.000	5056.073	175301244.05	6.6811	A	0.8
7	☐	9000.000	9052.075	318050828.59	11.8149	A	0.5
8	☐	20000.000	19961.160	691677136.36	25.8304	A	0.8

y = 0.0013 * x + 0.1853
R = 1.0000
DL = 2.492
BEC = 144.2

Weight: <None>
Min Conc: <None>

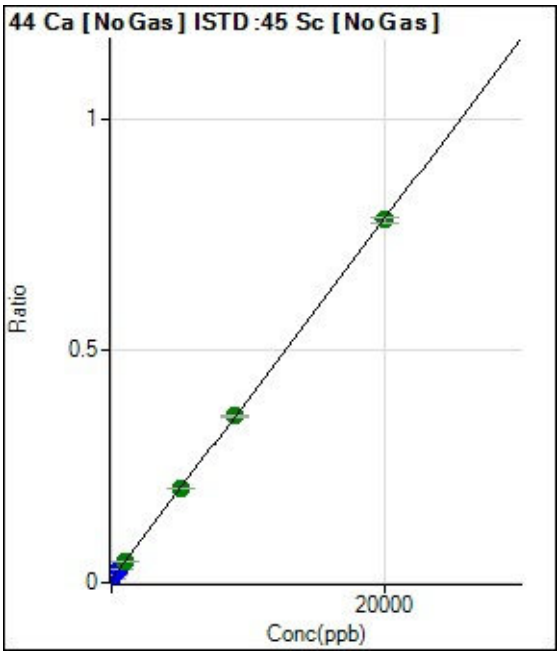


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29273.23	0.0269	P	3.2
2	☐	20.000	18.949	37278.82	0.0345	P	3.6
3	☐	200.000	206.978	117127.67	0.1095	P	1.2
4	☐	500.000	521.307	246724.70	0.2349	P	1.0
5	☐	1000.000	1043.866	464588.66	0.4434	P	0.2
6	☐	5000.000	5025.697	2176765.70	2.0318	A	0.6
7	☐	9000.000	9010.650	3895562.34	3.6214	A	0.5
8	☐	20000.000	19985.989	8789193.62	7.9997	A	0.3

y = 3.9892E-004 * x + 0.0269
R = 1.0000
DL = 6.543
BEC = 67.54

Weight: <None>
Min Conc: <None>

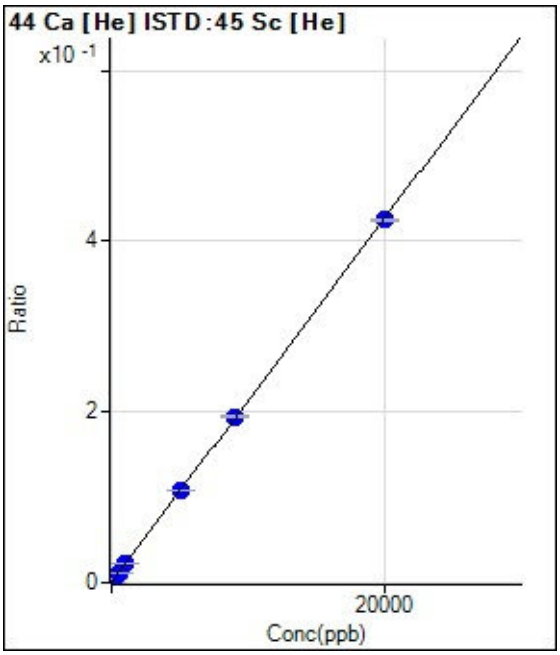
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	177950.54	0.0066	P	2.2
2	☐	20.000	20.794	197709.22	0.0074	P	1.5
3	☐	200.000	206.903	389119.85	0.0147	P	0.2
4	☐	500.000	557.328	713586.26	0.0283	P	5.7
5	☐	1000.000	1033.134	1216500.61	0.0468	A	0.8
6	☐	5000.000	5063.183	5340569.92	0.2035	A	0.6
7	☐	9000.000	9071.620	9675595.27	0.3594	A	0.8
8	☐	20000.000	19948.816	20951035.52	0.7825	A	1.8

y = 3.8891E-005 * x + 0.0066
R = 1.0000
DL = 11.13
BEC = 170.4

Weight: <None>
Min Conc: <None>

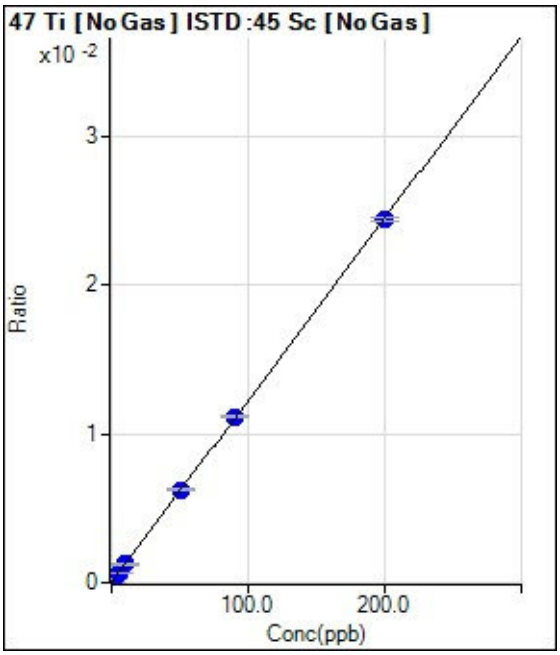


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	293.36	0.0003	P	51.3
2	☐	20.000	16.347	666.74	0.0006	P	27.6
3	☐	200.000	207.411	5014.60	0.0047	P	5.0
4	☐	500.000	493.903	11338.89	0.0108	P	8.3
5	☐	1000.000	997.541	22553.73	0.0215	P	0.8
6	☐	5000.000	5062.864	115863.91	0.1081	P	0.4
7	☐	9000.000	9125.069	209439.96	0.1947	P	0.2
8	☐	20000.000	19928.208	466826.87	0.4249	P	0.4

y = 2.1308E-005 * x + 2.6940E-004
R = 1.0000
DL = 19.45
BEC = 12.64

Weight: <None>
Min Conc: <None>

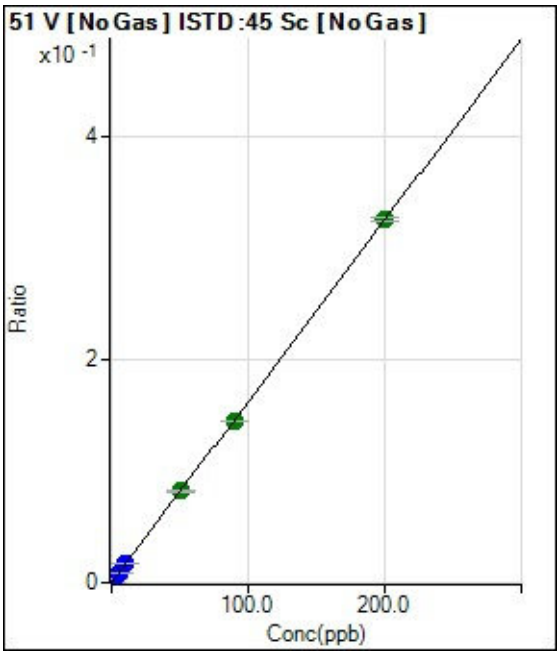
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.86	0.0000	P	4.6
2	☐	0.200	0.191	1117.85	0.0000	P	8.7
3	☐	2.000	1.976	6895.41	0.0003	P	1.7
4	☐	5.000	5.304	16810.70	0.0007	P	4.6
5	☐	10.000	9.934	32012.97	0.0012	P	1.9
6	☐	50.000	51.051	164041.74	0.0063	P	0.3
7	☐	90.000	91.012	299647.14	0.0111	P	1.0
8	☐	200.000	199.278	652012.46	0.0244	P	0.9

y = 1.2210E-004 * x + 1.8760E-005
R = 1.0000
DL = 0.02143
BEC = 0.1537

Weight: <None>
Min Conc: <None>

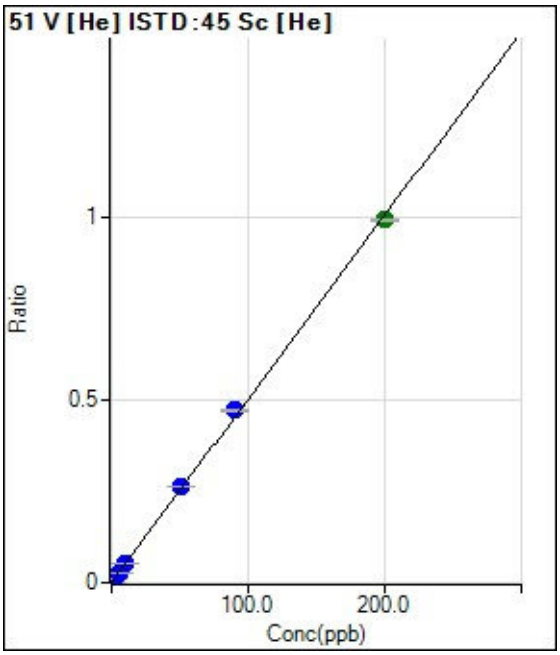


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-3651.57	-0.0001	P	-9.1
2	☐	0.200	0.234	6495.81	0.0002	P	48.2
3	☐	2.000	2.038	84286.56	0.0032	P	1.8
4	☐	5.000	5.425	219229.05	0.0087	P	3.1
5	☐	10.000	10.303	431845.58	0.0166	P	0.4
6	☐	50.000	50.444	2148376.90	0.0819	A	1.2
7	☐	90.000	89.050	3893794.65	0.1446	A	0.9
8	☐	200.000	200.290	8715589.82	0.3255	A	0.9

y = 0.0016 * x - 1.3600E-004
R = 1.0000
DL = 0.02293
BEC = -0.08365

Weight: <None>
Min Conc: <None>

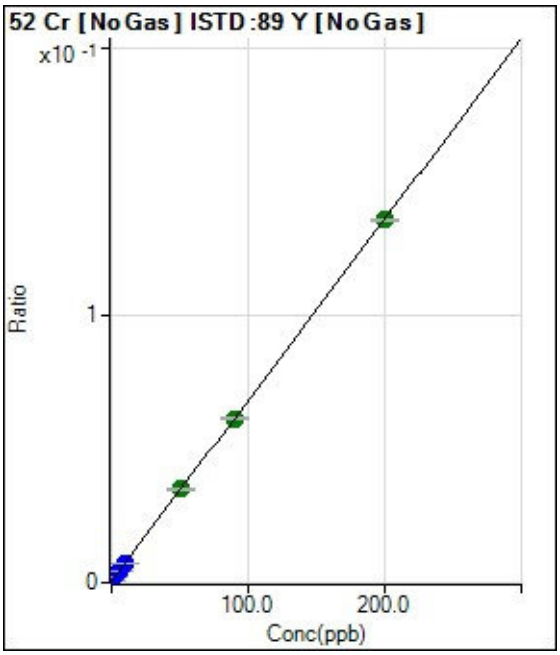
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	463.82	0.0004	P	10.4
2	☐	0.200	0.219	1648.45	0.0015	P	7.5
3	☐	2.000	2.070	11556.60	0.0108	P	4.6
4	☐	5.000	5.266	28190.86	0.0268	P	2.3
5	☐	10.000	10.336	54770.61	0.0523	P	0.8
6	☐	50.000	52.707	283655.41	0.2648	P	0.4
7	☐	90.000	93.737	506145.00	0.4705	P	0.7
8	☐	200.000	197.617	1089406.39	0.9915	A	0.3

y = 0.0050 * x + 4.2693E-004
R = 0.9997
DL = 0.02646
BEC = 0.08513

Weight: <None>
Min Conc: <None>

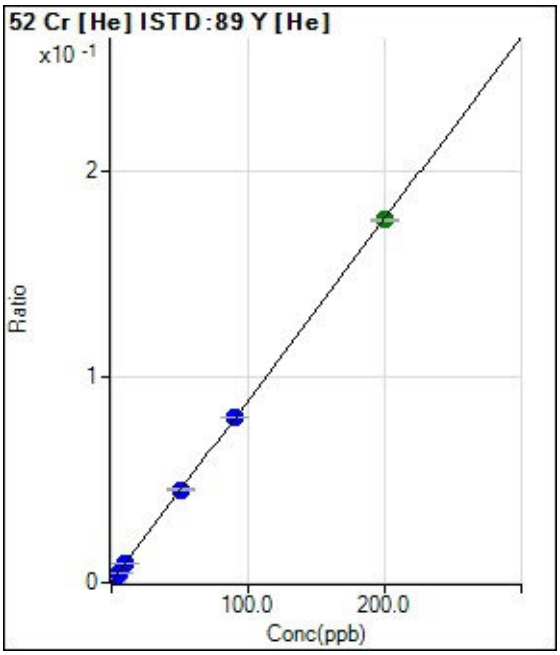


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34330.86	0.0006	P	0.6
2	☐	0.200	0.187	41484.44	0.0007	P	0.7
3	☐	2.000	1.984	113523.17	0.0019	P	1.9
4	☐	5.000	5.142	234350.61	0.0040	P	3.3
5	☐	10.000	10.113	433434.93	0.0074	P	0.6
6	☐	50.000	50.760	2039405.14	0.0349	A	0.7
7	☐	90.000	90.067	3666253.76	0.0615	A	0.8
8	☐	200.000	199.771	8136212.89	0.1357	A	0.5

y = 6.7629E-004 * x + 5.6652E-004
R = 1.0000
DL = 0.01581
BEC = 0.8377

Weight: <None>
Min Conc: <None>

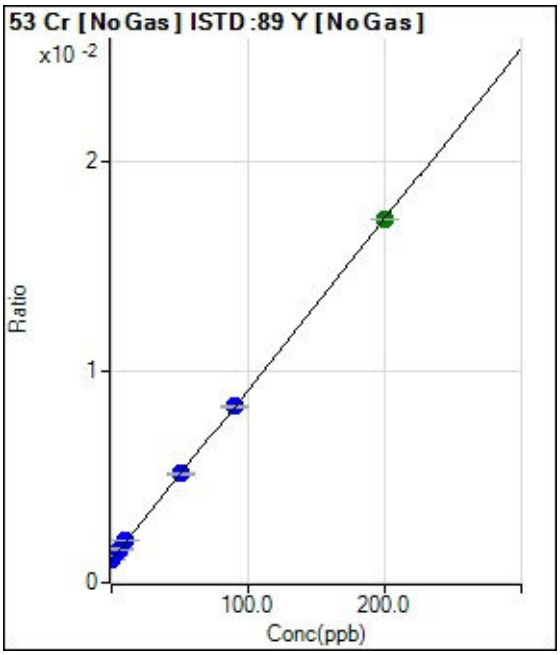
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3010.06	0.0004	P	3.6
2	☐	0.200	0.164	4161.53	0.0005	P	5.7
3	☐	2.000	1.935	16693.75	0.0021	P	1.6
4	☐	5.000	5.003	37823.54	0.0048	P	0.9
5	☐	10.000	9.987	72621.19	0.0092	P	1.4
6	☐	50.000	50.651	362559.71	0.0451	P	1.4
7	☐	90.000	91.042	644058.14	0.0809	P	0.2
8	☐	200.000	199.369	1422485.56	0.1766	A	0.4

y = 8.8408E-004 * x + 3.6821E-004
R = 1.0000
DL = 0.04531
BEC = 0.4165

Weight: <None>
Min Conc: <None>

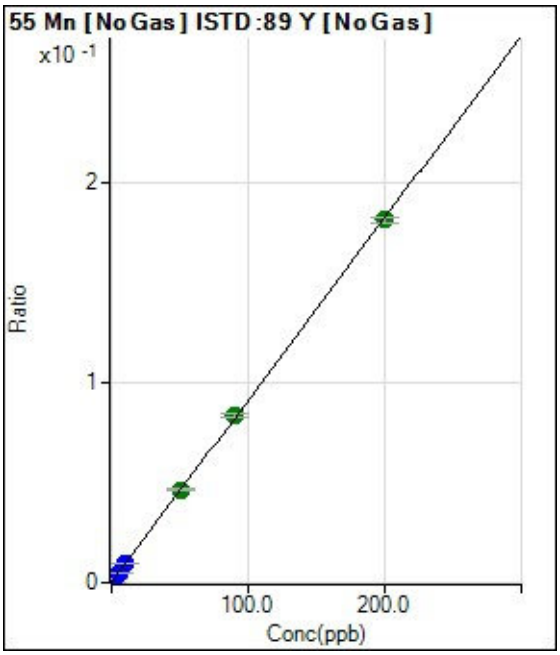


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64442.42	0.0011	P	0.2
2	☐	0.200	0.705	67097.55	0.0011	P	0.6
3	☐	2.000	2.713	76351.55	0.0013	P	0.9
4	☐	5.000	6.395	91586.70	0.0016	P	5.9
5	☐	10.000	11.948	118867.30	0.0020	P	0.5
6	☐	50.000	50.911	303095.03	0.0052	P	1.2
7	☐	90.000	90.319	499580.64	0.0084	P	1.4
8	☐	200.000	199.489	1032681.54	0.0172	A	0.2

y = 8.0982E-005 * x + 0.0011
R = 1.0000
DL = 0.09599
BEC = 13.13

Weight: <None>
Min Conc: <None>

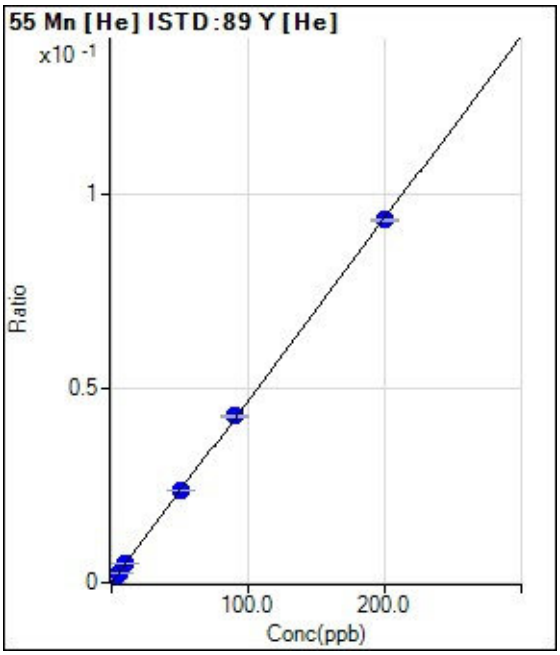
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11706.90	0.0002	P	4.0
2	☐	0.200	0.180	21358.29	0.0004	P	0.9
3	☐	2.000	1.974	118457.38	0.0020	P	0.6
4	☐	5.000	5.168	283987.35	0.0049	P	2.6
5	☐	10.000	10.042	546544.11	0.0093	P	0.5
6	☐	50.000	50.948	2722968.08	0.0466	A	1.4
7	☐	90.000	91.642	4987489.58	0.0837	A	2.6
8	☐	200.000	199.018	10878569.01	0.1814	A	1.8

y = 9.1073E-004 * x + 1.9315E-004
R = 0.9999
DL = 0.02535
BEC = 0.2121

Weight: <None>
Min Conc: <None>

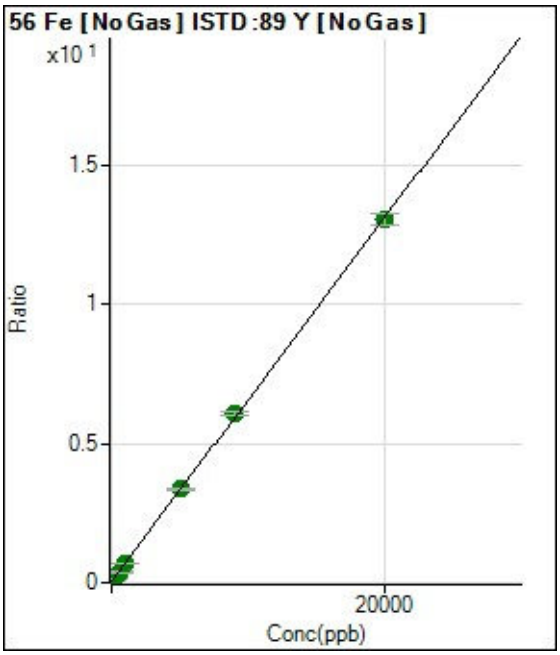


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	176.85	0.0000	P	54.5
2	☐	0.200	0.187	884.26	0.0001	P	4.6
3	☐	2.000	2.056	7903.62	0.0010	P	0.3
4	☐	5.000	5.084	18959.03	0.0024	P	3.7
5	☐	10.000	10.165	37753.55	0.0048	P	0.8
6	☐	50.000	50.748	190984.62	0.0238	P	1.4
7	☐	90.000	91.462	341300.32	0.0428	P	1.1
8	☐	200.000	199.144	751060.98	0.0933	P	0.5

y = 4.6822E-004 * x + 2.1596E-005
R = 1.0000
DL = 0.07537
BEC = 0.04612

Weight: <None>
Min Conc: <None>

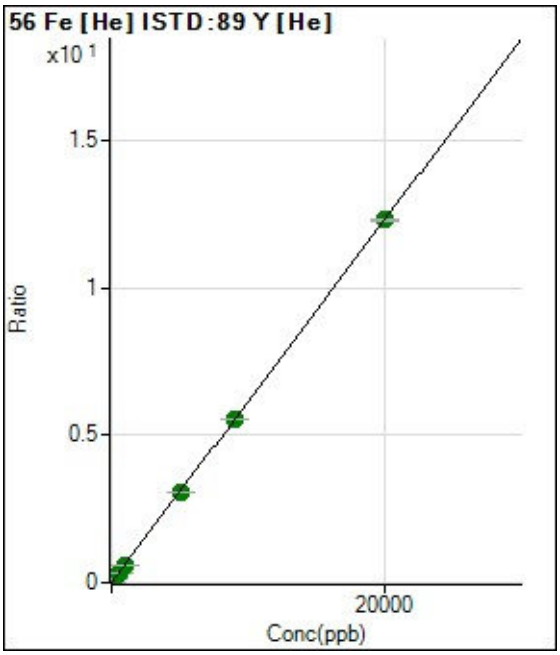
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2508596.48	0.0414	A	0.5
2	☐	20.000	16.728	3133026.96	0.0523	A	1.8
3	☐	200.000	195.371	10055549.18	0.1690	A	1.4
4	☐	500.000	517.358	21981312.99	0.3793	A	2.9
5	☐	1000.000	992.141	40347714.44	0.6894	A	0.1
6	☐	5000.000	5084.940	196509671.06	3.3625	A	1.1
7	☐	9000.000	9205.874	360951733.07	6.0540	A	2.5
8	☐	20000.000	19886.130	780954084.12	13.0295	A	3.3

y = 6.5313E-004 * x + 0.0414
R = 0.9999
DL = 1.045
BEC = 63.39

Weight: <None>
Min Conc: <None>

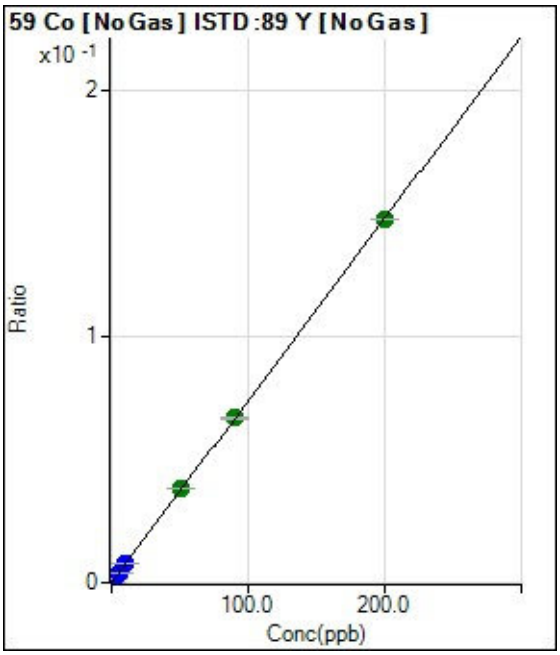


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53749.13	0.0066	P	3.5
2	☐	20.000	20.467	155528.65	0.0192	P	1.8
3	☐	200.000	191.141	997431.29	0.1242	A	1.5
4	☐	500.000	493.154	2447670.33	0.3101	A	0.6
5	☐	1000.000	978.915	4808764.51	0.6090	A	0.8
6	☐	5000.000	4970.854	24619737.13	3.0658	A	1.0
7	☐	9000.000	9001.458	44179477.68	5.5463	A	0.7
8	☐	20000.000	20007.944	99212528.52	12.3200	A	0.6

y = 6.1542E-004 * x + 0.0066
R = 1.0000
DL = 1.111
BEC = 10.68

Weight: <None>
Min Conc: <None>

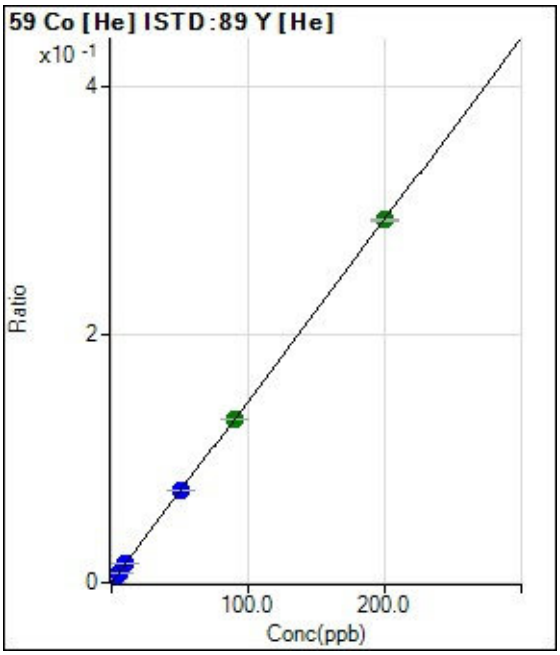
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1401.50	0.0000	P	4.2
2	☐	0.200	0.198	10147.43	0.0002	P	1.5
3	☐	2.000	2.045	91341.91	0.0015	P	0.4
4	☐	5.000	5.228	225330.78	0.0039	P	3.8
5	☐	10.000	10.246	444765.63	0.0076	P	0.4
6	☐	50.000	51.281	2217481.65	0.0379	A	0.2
7	☐	90.000	90.657	3998607.37	0.0671	A	1.5
8	☐	200.000	199.366	8843157.14	0.1474	A	0.1

y = 7.3943E-004 * x + 2.3135E-005
R = 1.0000
DL = 0.003925
BEC = 0.03129

Weight: <None>
Min Conc: <None>

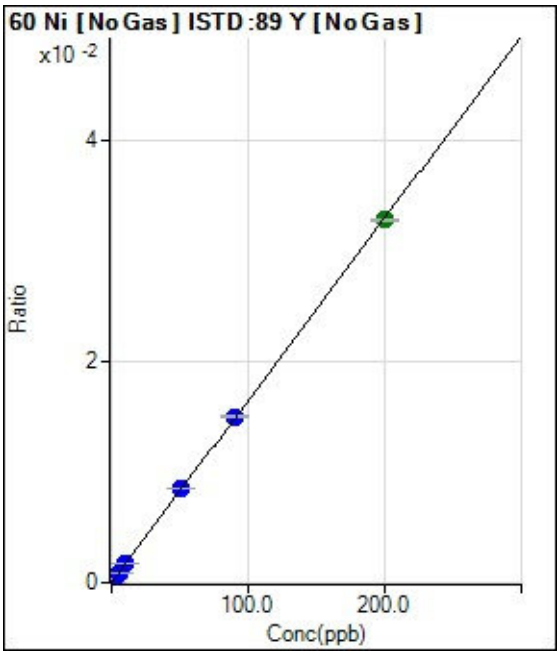


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	320.33	0.0000	P	11.1
2	☐	0.200	0.185	2516.13	0.0003	P	2.0
3	☐	2.000	1.996	23818.20	0.0030	P	3.3
4	☐	5.000	5.118	59539.02	0.0075	P	2.0
5	☐	10.000	10.207	118461.99	0.0150	P	1.7
6	☐	50.000	50.578	595796.54	0.0742	P	1.1
7	☐	90.000	90.043	1051862.41	0.1321	A	0.4
8	☐	200.000	199.823	2359535.11	0.2930	A	0.7

y = 0.0015 * x + 3.9193E-005
R = 1.0000
DL = 0.008879
BEC = 0.02673

Weight: <None>
Min Conc: <None>

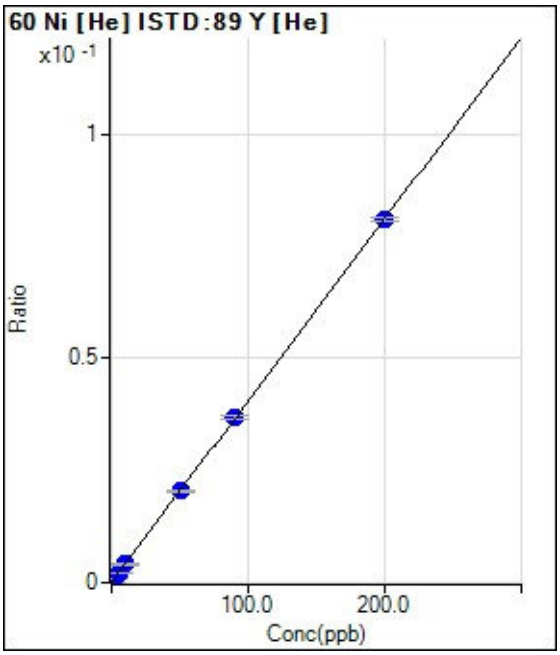
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1214.62	0.0000	P	4.5
2	☐	0.200	0.219	3360.50	0.0001	P	3.1
3	☐	2.000	2.036	21167.82	0.0004	P	1.3
4	☐	5.000	5.249	51324.65	0.0009	P	2.7
5	☐	10.000	10.443	101957.37	0.0017	P	1.2
6	☐	50.000	51.596	498427.70	0.0085	P	0.7
7	☐	90.000	90.853	894599.81	0.0150	P	1.3
8	☐	200.000	199.188	1971214.29	0.0329	A	0.2

y = 1.6490E-004 * x + 2.0051E-005
R = 1.0000
DL = 0.01653
BEC = 0.1216

Weight: <None>
Min Conc: <None>

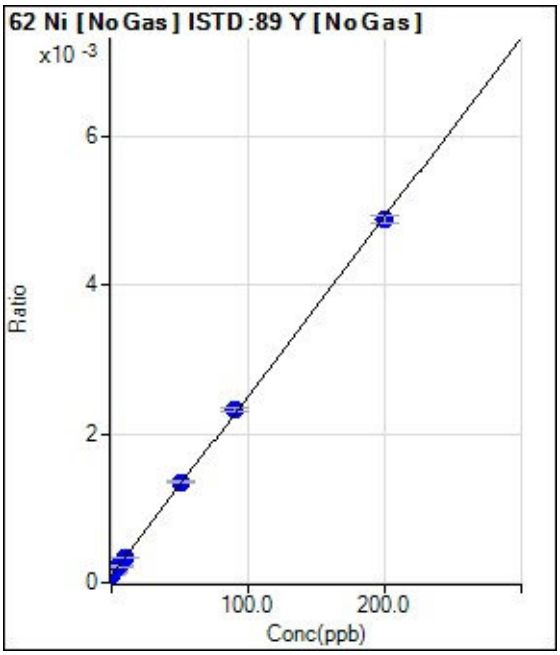


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	877.59	0.0001	P	16.2
2	☐	0.200	0.057	1057.79	0.0001	P	8.3
3	☐	2.000	1.812	6748.52	0.0008	P	3.8
4	☐	5.000	4.822	16246.08	0.0021	P	4.9
5	☐	10.000	9.812	32187.02	0.0041	P	1.4
6	☐	50.000	50.361	164458.70	0.0205	P	1.3
7	☐	90.000	90.746	293269.24	0.0368	P	1.4
8	☐	200.000	199.590	651007.25	0.0808	P	1.1

y = 4.0452E-004 * x + 1.0745E-004
R = 1.0000
DL = 0.1291
BEC = 0.2656

Weight: <None>
Min Conc: <None>

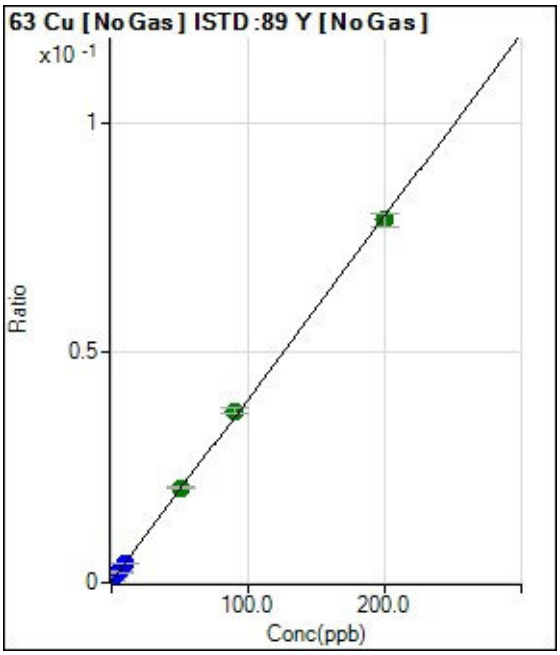
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6114.29	0.0001	P	1.3
2	☐	0.200	0.079	6154.33	0.0001	P	8.9
3	☐	2.000	1.724	8477.95	0.0001	P	3.8
4	☐	5.000	4.955	12768.95	0.0002	P	2.9
5	☐	10.000	10.188	20272.28	0.0003	P	1.6
6	☐	50.000	52.055	79191.76	0.0014	P	1.3
7	☐	90.000	92.417	138782.33	0.0023	P	1.8
8	☐	200.000	198.393	292606.42	0.0049	P	2.2

y = 2.4093E-005 * x + 1.0090E-004
R = 0.9998
DL = 0.1586
BEC = 4.188

Weight: <None>
Min Conc: <None>

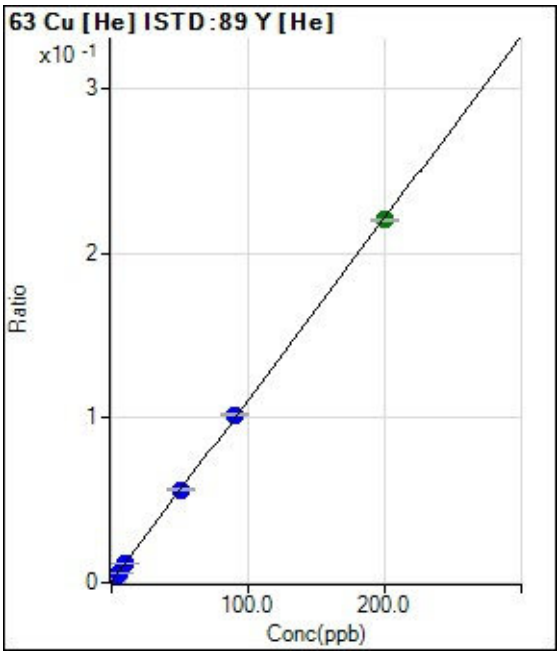


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16172.66	0.0003	P	3.6
2	☐	0.200	0.207	20890.54	0.0003	P	3.5
3	☐	2.000	2.062	64516.83	0.0011	P	2.1
4	☐	5.000	5.220	135324.92	0.0023	P	5.1
5	☐	10.000	10.122	250463.85	0.0043	P	0.8
6	☐	50.000	51.460	1207861.85	0.0207	A	0.3
7	☐	90.000	93.358	2222186.57	0.0373	A	3.4
8	☐	200.000	198.112	4723337.72	0.0788	A	3.4

y = 3.9643E-004 * x + 2.6687E-004
R = 0.9998
DL = 0.07302
BEC = 0.6732

Weight: <None>
Min Conc: <None>

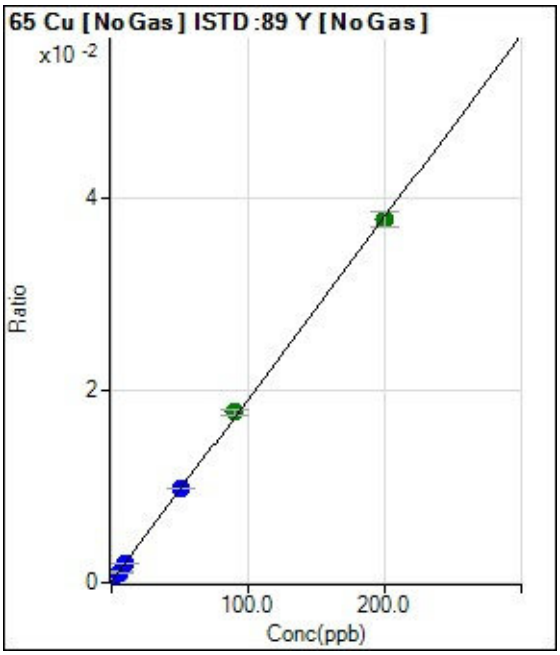
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4505.35	0.0006	P	0.8
2	☐	0.200	0.183	6110.92	0.0008	P	2.5
3	☐	2.000	2.004	22207.23	0.0028	P	0.8
4	☐	5.000	5.021	48153.44	0.0061	P	1.8
5	☐	10.000	10.060	92128.73	0.0117	P	2.1
6	☐	50.000	50.747	454782.97	0.0566	P	0.6
7	☐	90.000	91.812	812581.44	0.1020	P	0.5
8	☐	200.000	198.994	1775453.27	0.2205	A	0.2

y = 0.0011 * x + 5.5114E-004
R = 0.9999
DL = 0.01179
BEC = 0.4987

Weight: <None>
Min Conc: <None>

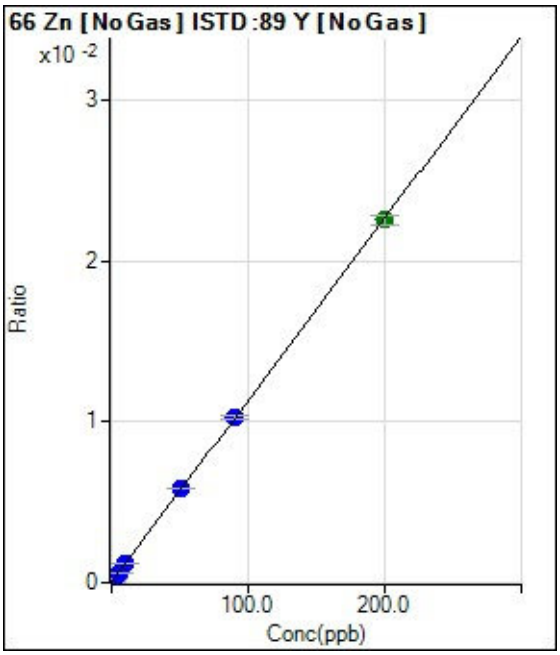


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7880.26	0.0001	P	2.8
2	☐	0.200	0.207	10137.40	0.0002	P	1.7
3	☐	2.000	1.956	29826.08	0.0005	P	1.4
4	☐	5.000	5.119	63806.35	0.0011	P	4.7
5	☐	10.000	10.122	120028.95	0.0021	P	1.7
6	☐	50.000	51.184	575262.96	0.0098	P	0.3
7	☐	90.000	92.747	1056986.21	0.0177	A	3.3
8	☐	200.000	198.459	2264731.56	0.0378	A	4.1

y = 1.8976E-004 * x + 1.3006E-004
R = 0.9999
DL = 0.0578
BEC = 0.6854

Weight: <None>
Min Conc: <None>

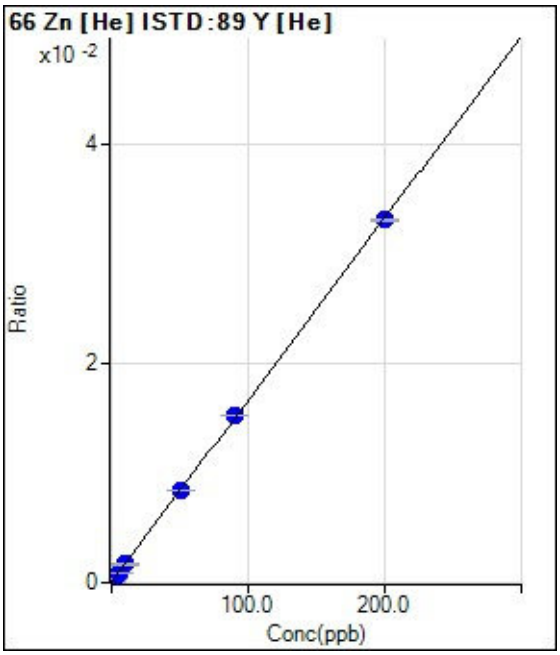
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2362.62	0.0000	P	6.0
2	☐	0.200	0.224	3847.80	0.0001	P	10.0
3	☐	2.000	2.005	15795.22	0.0003	P	3.2
4	☐	5.000	5.238	36532.64	0.0006	P	5.7
5	☐	10.000	10.127	69245.04	0.0012	P	1.7
6	☐	50.000	51.325	341158.22	0.0058	P	1.0
7	☐	90.000	90.929	614804.44	0.0103	P	2.5
8	☐	200.000	199.238	1351651.60	0.0225	A	2.9

y = 1.1298E-004 * x + 3.8974E-005
R = 1.0000
DL = 0.06209
BEC = 0.345

Weight: <None>
Min Conc: <None>

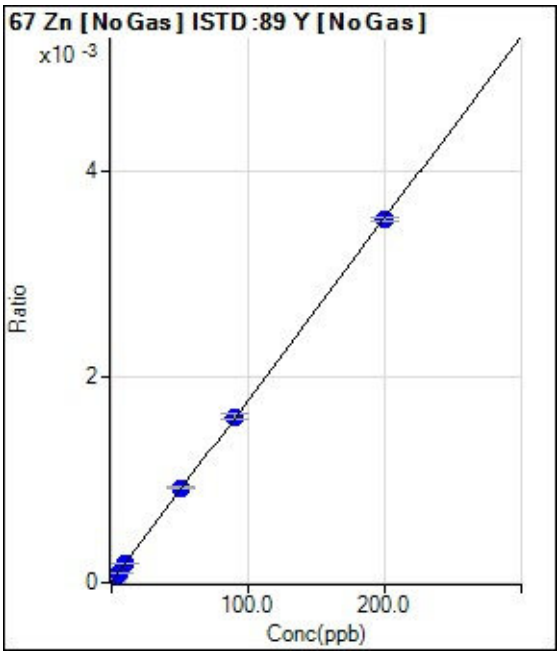


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	467.15	0.0001	P	15.5
2	☐	0.200	0.183	710.74	0.0001	P	6.6
3	☐	2.000	1.898	2993.38	0.0004	P	0.2
4	☐	5.000	4.824	6781.93	0.0009	P	2.5
5	☐	10.000	9.737	13233.17	0.0017	P	2.8
6	☐	50.000	50.582	67994.31	0.0085	P	1.2
7	☐	90.000	91.617	121779.33	0.0153	P	0.6
8	☐	200.000	199.145	267084.77	0.0332	P	0.4

y = 1.6625E-004 * x + 5.7159E-005
R = 0.9999
DL = 0.1595
BEC = 0.3438

Weight: <None>
Min Conc: <None>

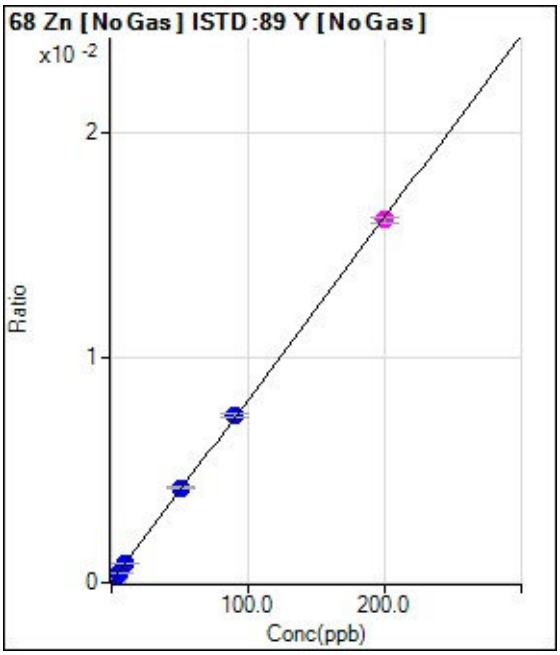
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	437.12	0.0000	P	31.3
2	☐	0.200	0.146	587.28	0.0000	P	18.0
3	☐	2.000	2.008	2542.83	0.0000	P	8.3
4	☐	5.000	5.239	5790.46	0.0001	P	4.0
5	☐	10.000	10.270	11045.70	0.0002	P	5.6
6	☐	50.000	51.718	53840.65	0.0009	P	1.4
7	☐	90.000	91.033	96332.41	0.0016	P	3.4
8	☐	200.000	199.086	211409.16	0.0035	P	0.9

y = 1.7672E-005 * x + 7.2303E-006
R = 0.9999
DL = 0.3847
BEC = 0.4091

Weight: <None>
Min Conc: <None>

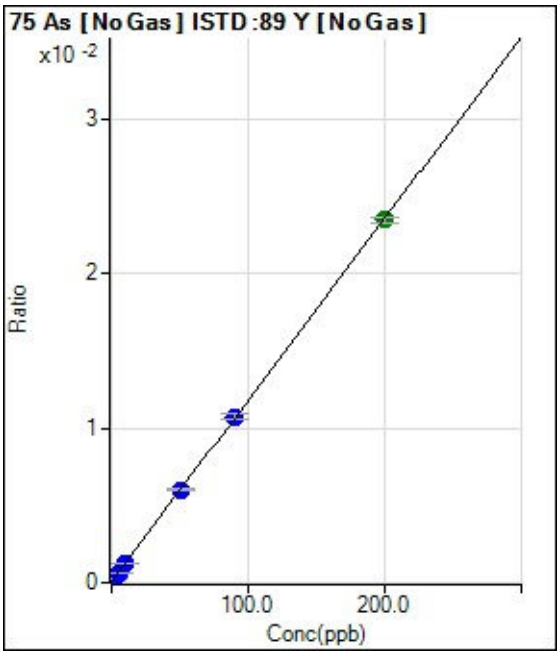


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1698.51	0.0000	P	4.4
2	☐	0.200	0.233	2806.48	0.0000	P	3.4
3	☐	2.000	2.161	12060.94	0.0002	P	5.2
4	☐	5.000	5.202	25997.86	0.0004	P	3.7
5	☐	10.000	10.234	50072.63	0.0009	P	1.1
6	☐	50.000	51.812	246481.15	0.0042	P	0.7
7	☐	90.000	91.922	444822.09	0.0075	P	2.3
8	☐	200.000	198.664	964935.20	0.0161	M	1.7

y = 8.0858E-005 * x + 2.8037E-005
R = 0.9999
DL = 0.04561
BEC = 0.3467

Weight: <None>
Min Conc: <None>

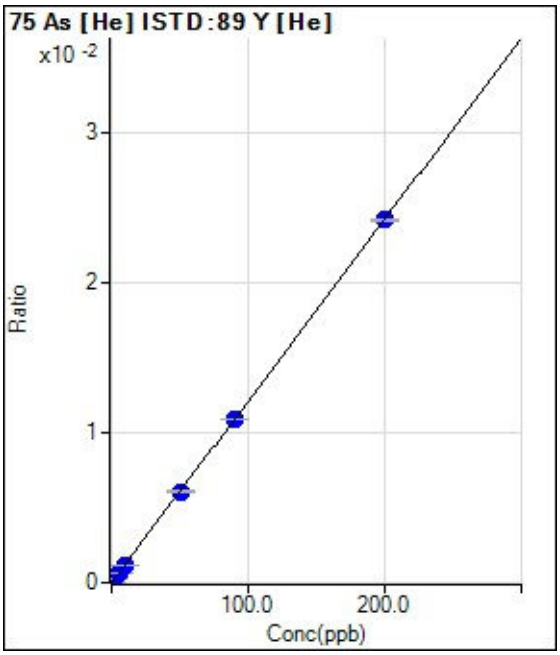
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4593.86	0.0001	P	23.1
2	☐	0.200	0.110	5309.75	0.0001	P	16.1
3	☐	2.000	1.858	17458.93	0.0003	P	4.9
4	☐	5.000	5.050	38682.27	0.0007	P	4.3
5	☐	10.000	9.847	71990.74	0.0012	P	1.1
6	☐	50.000	50.723	351922.08	0.0060	P	1.2
7	☐	90.000	91.040	640810.44	0.0107	P	2.4
8	☐	200.000	199.359	1405812.95	0.0234	A	1.3

y = 1.1723E-004 * x + 7.5720E-005
R = 1.0000
DL = 0.4484
BEC = 0.6459

Weight: <None>
Min Conc: <None>

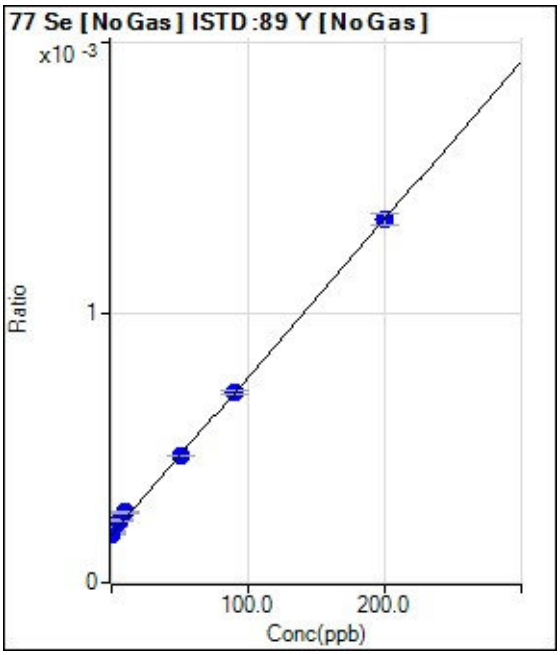


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.11	0.0000	P	32.5
2	☐	0.200	0.180	217.78	0.0000	P	4.5
3	☐	2.000	2.049	2035.72	0.0003	P	2.5
4	☐	5.000	4.978	4804.22	0.0006	P	1.3
5	☐	10.000	9.822	9444.44	0.0012	P	1.6
6	☐	50.000	50.090	48810.00	0.0061	P	1.9
7	☐	90.000	90.236	87185.63	0.0109	P	0.1
8	☐	200.000	199.880	195201.35	0.0242	P	0.4

y = 1.2124E-004 * x + 5.0243E-006
R = 1.0000
DL = 0.04046
BEC = 0.04144

Weight: <None>
Min Conc: <None>

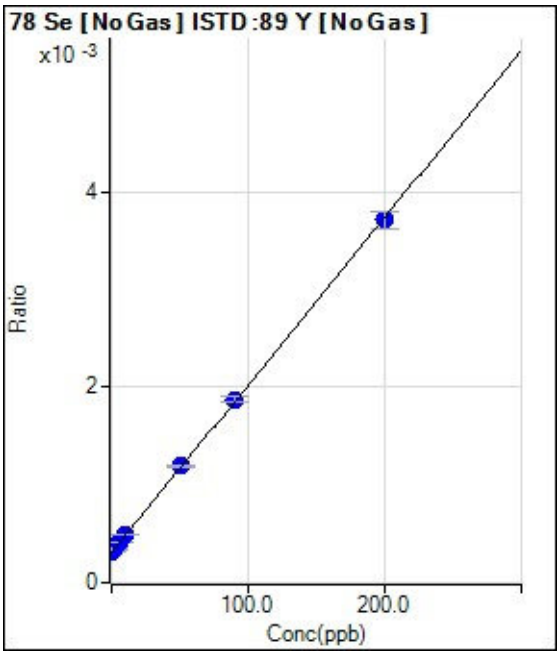
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10741.86	0.0002	P	2.3
2	☐	0.200	2.321	11426.46	0.0002	P	4.1
3	☐	2.000	4.808	12221.32	0.0002	P	1.7
4	☐	5.000	9.079	13350.19	0.0002	P	2.5
5	☐	10.000	14.166	15220.69	0.0003	P	2.3
6	☐	50.000	50.433	27586.02	0.0005	P	0.6
7	☐	90.000	89.873	41887.11	0.0007	P	2.0
8	☐	200.000	199.609	80553.49	0.0013	P	3.2

y = 5.8440E-006 * x + 1.7728E-004
R = 0.9998
DL = 2.059
BEC = 30.33

Weight: <None>
Min Conc: <None>

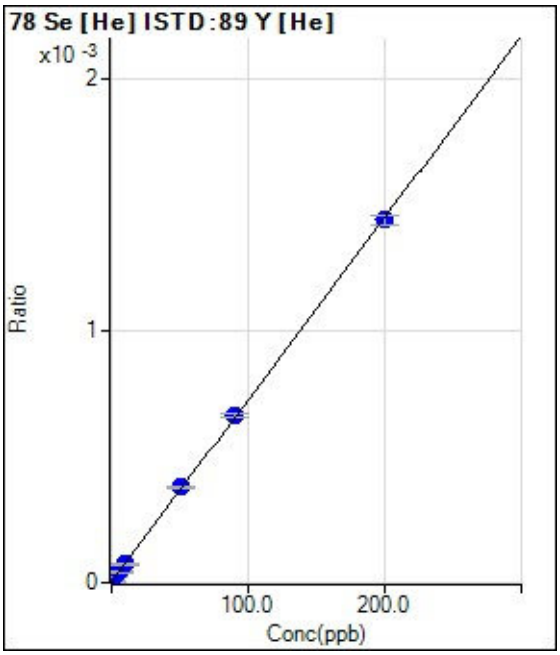


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18705.28	0.0003	P	2.2
2	☐	0.200	0.102	18588.28	0.0003	P	2.7
3	☐	2.000	2.045	20449.54	0.0003	P	3.3
4	☐	5.000	6.177	24025.76	0.0004	P	2.5
5	☐	10.000	10.476	28572.34	0.0005	P	1.7
6	☐	50.000	51.958	70071.92	0.0012	P	1.5
7	☐	90.000	91.630	112003.52	0.0019	P	3.4
8	☐	200.000	198.723	222545.61	0.0037	P	4.9

y = 1.7136E-005 * x + 3.0869E-004
R = 0.9999
DL = 1.215
BEC = 18.01

Weight: <None>
Min Conc: <None>

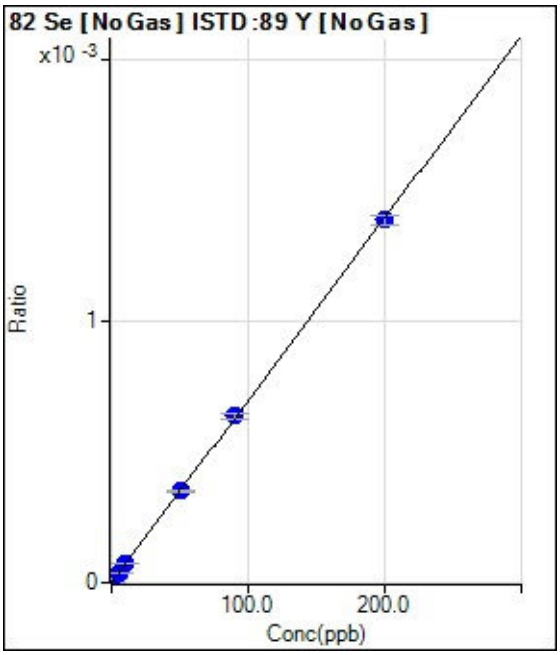
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	34.2
2	☐	0.200	-0.017	28.89	0.0000	P	40.3
3	☐	2.000	2.324	164.45	0.0000	P	4.4
4	☐	5.000	5.371	335.56	0.0000	P	4.7
5	☐	10.000	9.931	595.57	0.0001	P	10.9
6	☐	50.000	52.185	3059.25	0.0004	P	2.4
7	☐	90.000	91.196	5279.95	0.0007	P	2.8
8	☐	200.000	198.907	11606.16	0.0014	P	2.5

y = 7.2288E-006 * x + 3.6781E-006
R = 0.9999
DL = 0.5221
BEC = 0.5088

Weight: <None>
Min Conc: <None>

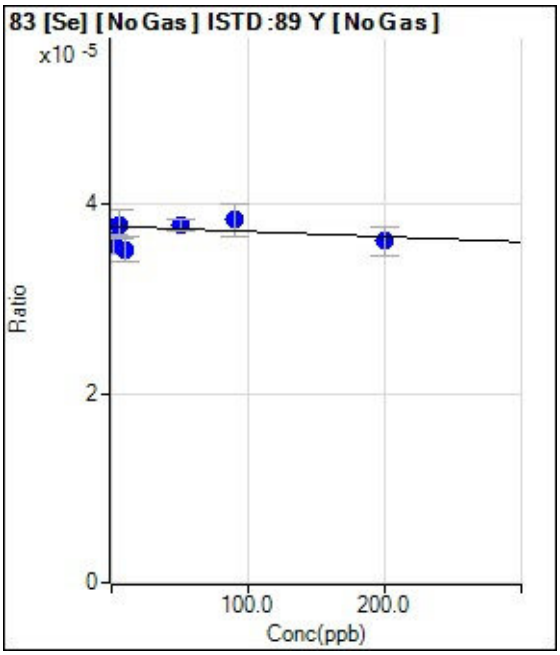


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-103.98	0.0000	P	-134.4
2	☐	0.200	0.282	14.10	0.0000	P	1145.8
3	☐	2.000	2.740	1035.49	0.0000	P	14.0
4	☐	5.000	5.453	2106.28	0.0000	P	9.8
5	☐	10.000	10.430	4156.97	0.0001	P	3.1
6	☐	50.000	50.261	20386.18	0.0003	P	1.4
7	☐	90.000	91.707	38027.94	0.0006	P	3.4
8	☐	200.000	199.126	83152.51	0.0014	P	2.5

y = 6.9746E-006 * x - 1.7211E-006
R = 1.0000
DL = 0.9948
BEC = -0.2468

Weight: <None>
Min Conc: <None>

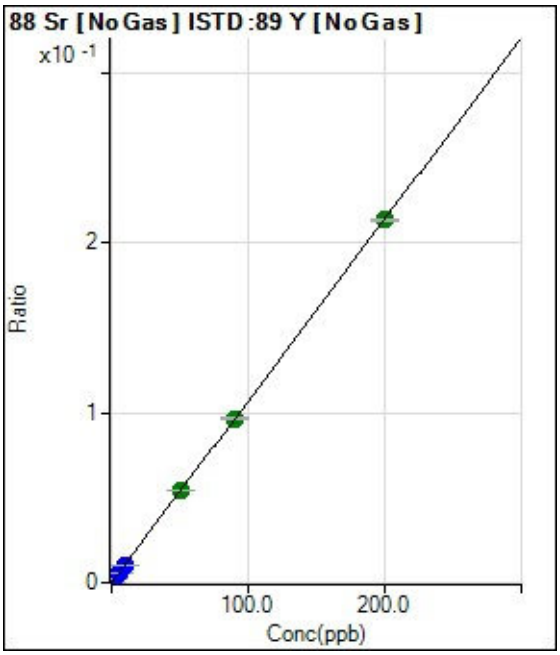
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2282.53	0.0000	P	2.4
2	☐	0.200	343.448	2142.35	0.0000	P	2.8
3	☐	2.000	350.866	2125.67	0.0000	P	5.7
4	☐	5.000	-37.232	2192.40	0.0000	P	8.4
5	☐	10.000	440.251	2062.26	0.0000	P	7.1
6	☐	50.000	-22.958	2209.10	0.0000	P	3.4
7	☐	90.000	-120.677	2285.86	0.0000	P	9.2
8	☐	200.000	288.755	2162.38	0.0000	P	8.5

y = -5.5168E-009 * x + 3.7670E-005
R = 0.0435
DL = -489.8
BEC = -6828

Weight: <None>
Min Conc: <None>

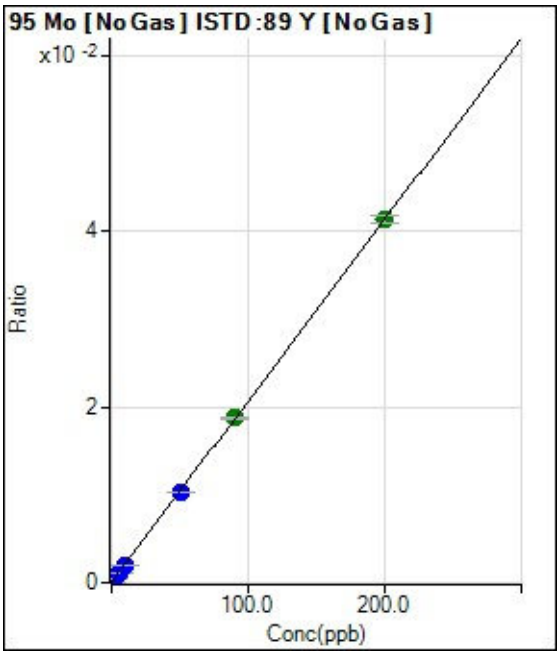


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	550.57	0.0000	P	11.6
2	☐	0.200	0.190	12692.20	0.0002	P	2.3
3	☐	2.000	1.983	126825.55	0.0021	P	1.0
4	☐	5.000	5.099	316662.70	0.0055	P	3.3
5	☐	10.000	9.903	620674.28	0.0106	P	0.2
6	☐	50.000	50.659	3168299.87	0.0542	A	0.5
7	☐	90.000	90.138	5751848.32	0.0965	A	0.9
8	☐	200.000	199.776	12821093.62	0.2138	A	0.3

y = 0.0011 * x + 9.0835E-006
R = 1.0000
DL = 0.00295
BEC = 0.00849

Weight: <None>
Min Conc: <None>

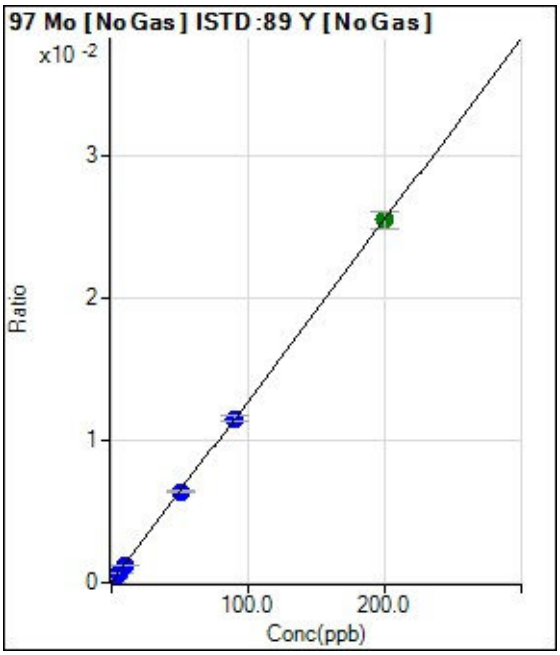
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2976.70	0.0000	P	12.6
2	☐	0.200	0.078	3904.57	0.0001	P	13.6
3	☐	2.000	1.780	24754.82	0.0004	P	0.6
4	☐	5.000	4.798	60151.95	0.0010	P	4.0
5	☐	10.000	9.624	118992.54	0.0020	P	0.9
6	☐	50.000	49.322	597099.74	0.0102	P	0.1
7	☐	90.000	90.579	1116409.33	0.0187	A	1.2
8	☐	200.000	199.935	2473893.95	0.0413	A	2.0

y = 2.0614E-004 * x + 4.9163E-005
R = 1.0000
DL = 0.0901
BEC = 0.2385

Weight: <None>
Min Conc: <None>

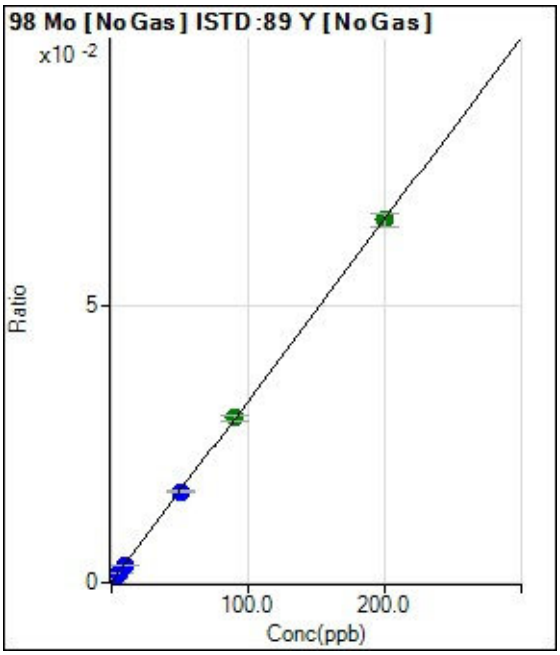


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1848.68	0.0000	P	8.2
2	☐	0.200	0.065	2322.58	0.0000	P	4.6
3	☐	2.000	1.804	15514.74	0.0003	P	2.4
4	☐	5.000	4.725	36717.52	0.0006	P	2.5
5	☐	10.000	9.758	74673.06	0.0013	P	0.9
6	☐	50.000	49.911	374063.47	0.0064	P	1.0
7	☐	90.000	90.379	689443.35	0.0116	P	3.5
8	☐	200.000	199.873	1530404.52	0.0255	A	4.4

y = 1.2762E-004 * x + 3.0524E-005
R = 1.0000
DL = 0.05902
BEC = 0.2392

Weight: <None>
Min Conc: <None>

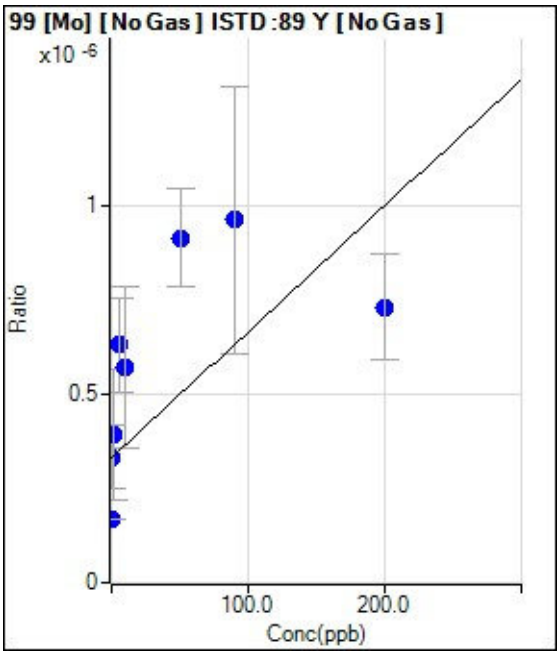
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4686.03	0.0001	P	10.5
2	☐	0.200	0.091	6423.33	0.0001	P	12.2
3	☐	2.000	1.847	40632.98	0.0007	P	3.0
4	☐	5.000	4.835	96341.23	0.0017	P	3.9
5	☐	10.000	9.597	188715.95	0.0032	P	0.5
6	☐	50.000	50.053	963714.76	0.0165	P	0.9
7	☐	90.000	90.761	1778762.74	0.0298	A	3.5
8	☐	200.000	199.670	3928359.12	0.0656	A	4.1

y = 3.2791E-004 * x + 7.7379E-005
R = 1.0000
DL = 0.07458
BEC = 0.236

Weight: <None>
Min Conc: <None>

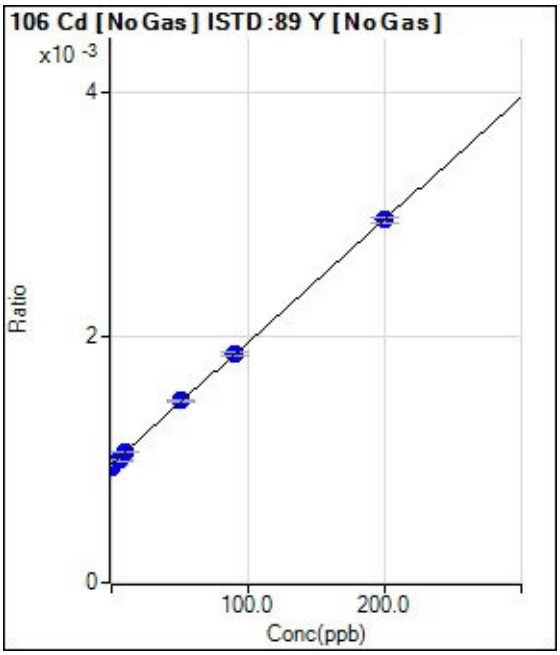


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.02	0.0000	P	50.8
2	☐	0.200	-49.105	10.01	0.0000	P	0.6
3	☐	2.000	17.791	23.36	0.0000	P	89.1
4	☐	5.000	89.212	36.70	0.0000	P	40.1
5	☐	10.000	71.456	33.37	0.0000	P	75.4
6	☐	50.000	174.484	53.39	0.0000	P	28.4
7	☐	90.000	188.631	56.72	0.0000	P	73.9
8	☐	200.000	119.208	43.38	0.0000	P	38.4

y = 3.3370E-009 * x + 3.3104E-007
R = 0.5658
DL = 151.1
BEC = 99.2

Weight: <None>
Min Conc: <None>

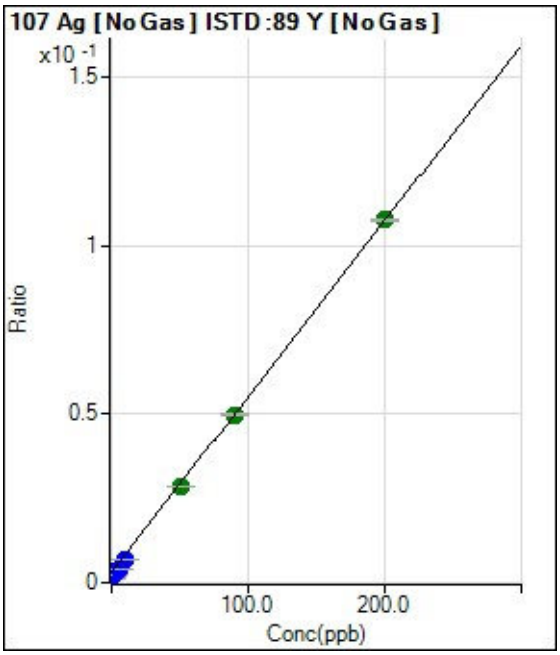
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58541.20	0.0010	P	1.5
2	☐	0.200	-1.866	56738.51	0.0009	P	0.9
3	☐	2.000	0.256	57636.28	0.0010	P	1.8
4	☐	5.000	3.349	57944.83	0.0010	P	1.3
5	☐	10.000	9.744	62231.71	0.0011	P	0.4
6	☐	50.000	51.798	86655.18	0.0015	P	0.5
7	☐	90.000	89.945	111096.38	0.0019	P	1.8
8	☐	200.000	199.649	177305.24	0.0030	P	1.6

y = 9.9730E-006 * x + 9.6612E-004
R = 0.9999
DL = 4.243
BEC = 96.87

Weight: <None>
Min Conc: <None>

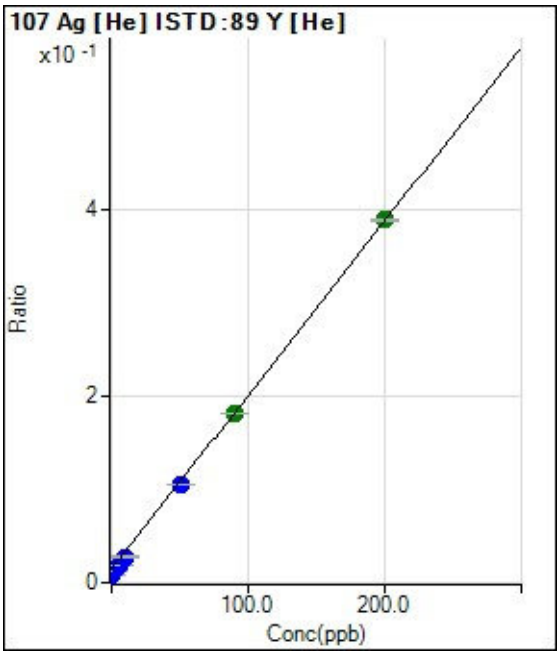


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190538.44	0.0031	P	14.1
2	☐	0.200	-3.219	88058.19	0.0015	P	23.1
3	☐	2.000	-1.507	140538.31	0.0024	P	13.3
4	☐	5.000	1.783	236573.52	0.0041	P	4.4
5	☐	10.000	6.872	393649.72	0.0067	P	4.2
6	☐	50.000	48.912	1672334.03	0.0286	A	1.2
7	☐	90.000	89.775	2975314.81	0.0499	A	0.9
8	☐	200.000	200.649	6454058.35	0.1076	A	0.2

y = 5.2064E-004 * x + 0.0031
R = 0.9999
DL = 2.556
BEC = 6.046

Weight: <None>
Min Conc: <None>

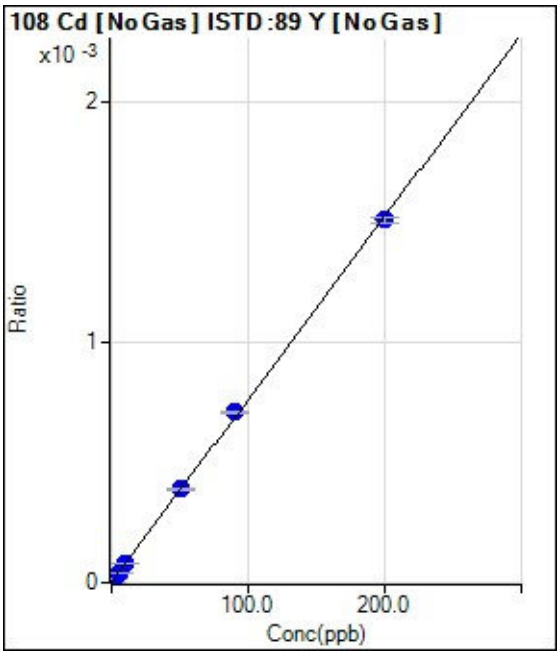
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	117225.75	0.0143	P	2.2
2	☐	0.200	-2.924	72192.73	0.0089	P	6.8
3	☐	2.000	-1.393	94345.01	0.0117	P	3.4
4	☐	5.000	1.885	140913.73	0.0179	P	2.2
5	☐	10.000	7.089	217423.49	0.0275	P	2.7
6	☐	50.000	48.720	843486.69	0.1050	P	0.8
7	☐	90.000	89.503	1441323.10	0.1809	A	0.3
8	☐	200.000	200.804	3125560.25	0.3881	A	0.7

y = 0.0019 * x + 0.0143
R = 0.9999
DL = 0.518
BEC = 7.705

Weight: <None>
Min Conc: <None>

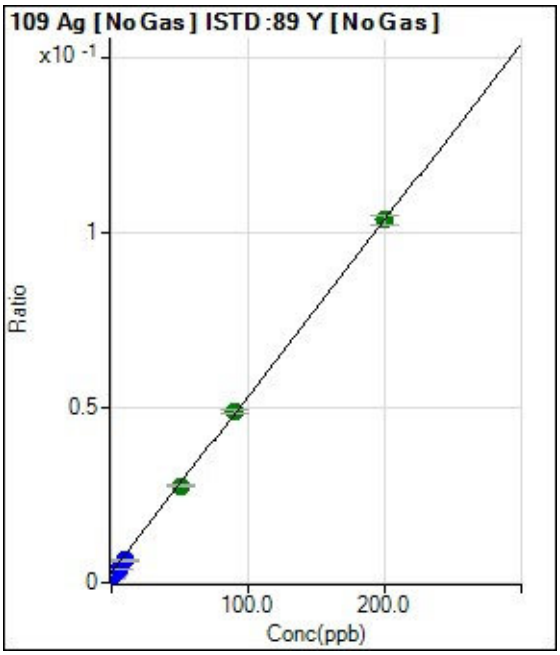


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.48	0.0000	P	30.4
2	☐	0.200	0.151	210.22	0.0000	P	22.0
3	☐	2.000	1.916	1007.73	0.0000	P	11.0
4	☐	5.000	5.257	2452.72	0.0000	P	6.3
5	☐	10.000	10.208	4678.90	0.0001	P	3.6
6	☐	50.000	51.118	22842.89	0.0004	P	2.4
7	☐	90.000	93.012	42296.78	0.0007	P	1.6
8	☐	200.000	198.349	90538.54	0.0015	P	1.5

y = 7.6004E-006 * x + 2.3625E-006
R = 0.9998
DL = 0.2834
BEC = 0.3108

Weight: <None>
Min Conc: <None>

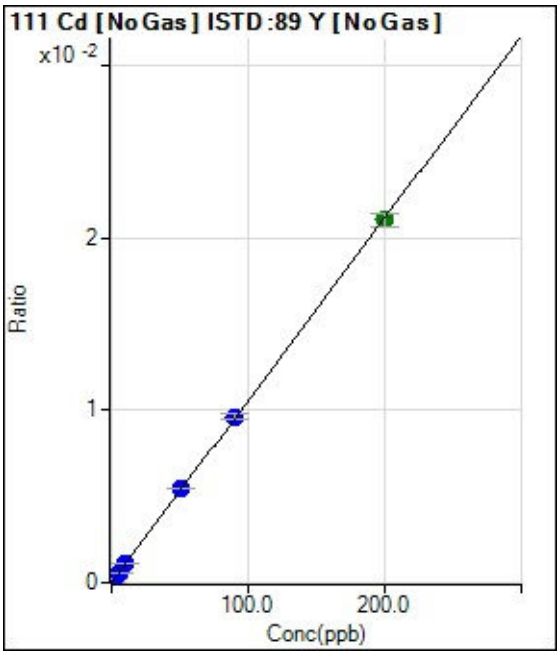
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	181226.09	0.0030	P	14.8
2	☐	0.200	-3.139	84724.58	0.0014	P	22.5
3	☐	2.000	-1.429	135329.89	0.0023	P	13.0
4	☐	5.000	1.818	226763.96	0.0039	P	3.6
5	☐	10.000	6.832	376239.25	0.0064	P	4.0
6	☐	50.000	49.153	1619103.43	0.0277	A	1.7
7	☐	90.000	90.852	2901539.67	0.0487	A	2.0
8	☐	200.000	200.104	6209215.48	0.1036	A	2.9

y = 5.0266E-004 * x + 0.0030
R = 0.9998
DL = 2.654
BEC = 5.956

Weight: <None>
Min Conc: <None>

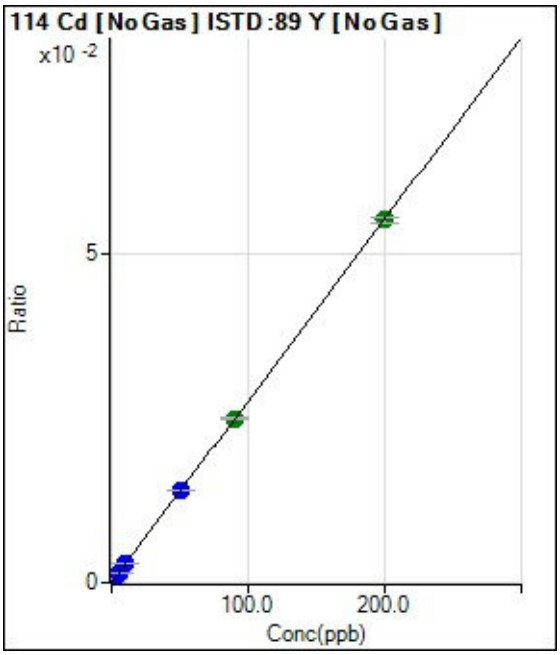


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-143.95	0.0000	P	-32.6
2	☐	0.200	0.210	1185.63	0.0000	P	6.8
3	☐	2.000	2.048	12725.98	0.0002	P	0.7
4	☐	5.000	5.102	31076.74	0.0005	P	3.7
5	☐	10.000	10.077	62139.25	0.0011	P	0.5
6	☐	50.000	51.285	316353.73	0.0054	P	0.3
7	☐	90.000	91.123	573490.81	0.0096	P	2.9
8	☐	200.000	199.167	1260236.43	0.0210	A	3.9

y = 1.0559E-004 * x - 2.3699E-006
R = 1.0000
DL = 0.02194
BEC = -0.02244

Weight: <None>
Min Conc: <None>

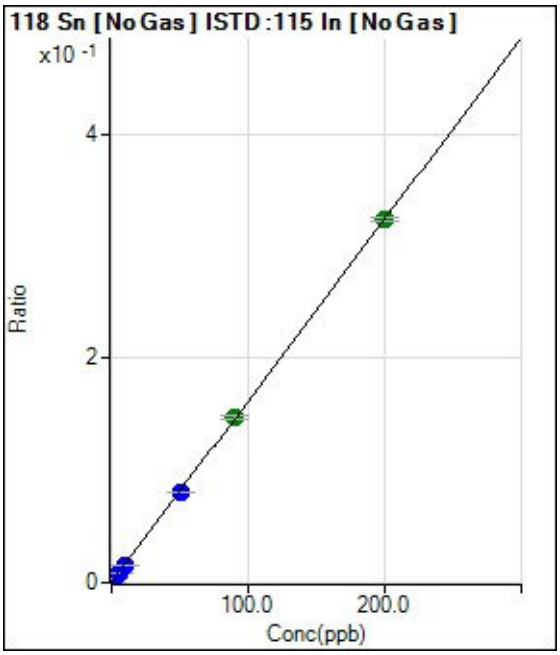
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.14	0.0000	P	26.3
2	☐	0.200	0.201	3457.32	0.0001	P	5.5
3	☐	2.000	1.988	32730.20	0.0006	P	2.8
4	☐	5.000	5.202	83174.22	0.0014	P	3.6
5	☐	10.000	10.172	164144.61	0.0028	P	0.5
6	☐	50.000	50.846	818796.04	0.0140	P	0.7
7	☐	90.000	90.252	1482828.82	0.0249	A	1.3
8	☐	200.000	199.661	3298136.89	0.0550	A	1.6

y = 2.7550E-004 * x + 2.3160E-006
R = 1.0000
DL = 0.006642
BEC = 0.008407

Weight: <None>
Min Conc: <None>

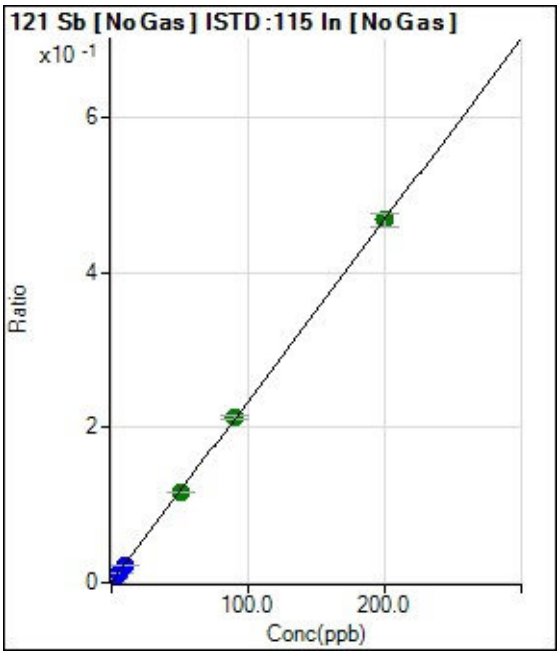


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4361.86	0.0003	P	2.9
2	☐	0.200	0.157	7615.58	0.0006	P	2.8
3	☐	2.000	1.872	43215.21	0.0034	P	0.3
4	☐	5.000	4.928	103552.06	0.0083	P	3.0
5	☐	10.000	9.543	201560.72	0.0158	P	0.3
6	☐	50.000	49.642	1016442.98	0.0806	P	0.8
7	☐	90.000	90.844	1858340.83	0.1473	A	1.5
8	☐	200.000	199.736	4085547.20	0.3235	A	1.0

y = 0.0016 * x + 3.3538E-004
R = 1.0000
DL = 0.01795
BEC = 0.2073

Weight: <None>
Min Conc: <None>

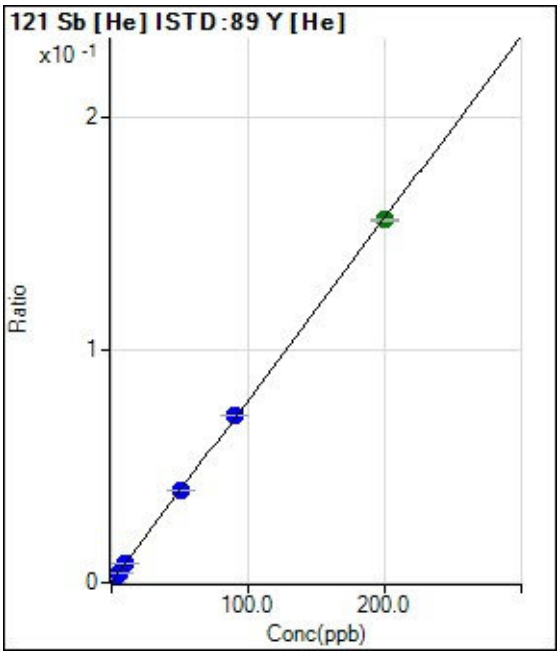
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6571.69	0.0005	P	11.6
2	☐	0.200	0.079	8899.73	0.0007	P	3.6
3	☐	2.000	1.800	60544.45	0.0047	P	0.9
4	☐	5.000	4.823	146806.73	0.0118	P	3.5
5	☐	10.000	9.481	289685.37	0.0227	P	0.6
6	☐	50.000	49.407	1462115.77	0.1160	A	0.5
7	☐	90.000	90.539	2676202.81	0.2122	A	2.4
8	☐	200.000	199.938	5907112.27	0.4679	A	3.5

y = 0.0023 * x + 5.0551E-004
R = 1.0000
DL = 0.07519
BEC = 0.2162

Weight: <None>
Min Conc: <None>

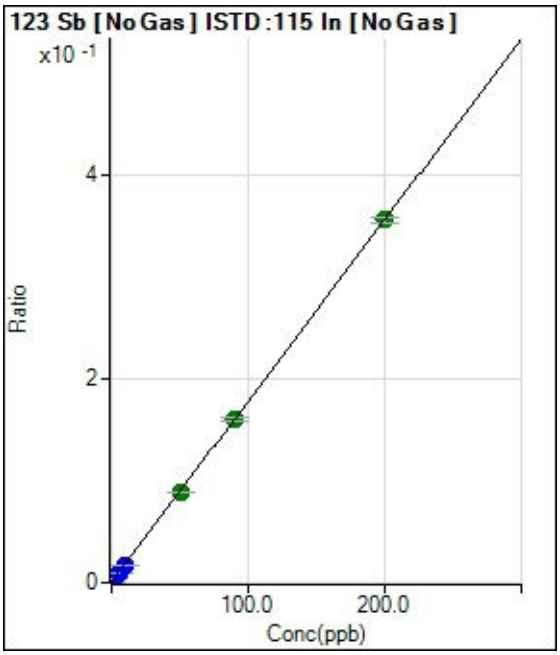


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1790.16	0.0002	P	9.6
2	☐	0.200	0.071	2230.23	0.0003	P	7.4
3	☐	2.000	1.867	13477.09	0.0017	P	3.2
4	☐	5.000	5.055	32914.92	0.0042	P	1.9
5	☐	10.000	10.018	63550.42	0.0080	P	1.2
6	☐	50.000	50.476	318547.79	0.0397	P	1.0
7	☐	90.000	91.808	573243.26	0.0720	P	0.6
8	☐	200.000	199.067	1254662.38	0.1558	A	0.3

y = 7.8151E-004 * x + 2.1911E-004
R = 0.9999
DL = 0.08114
BEC = 0.2804

Weight: <None>
Min Conc: <None>

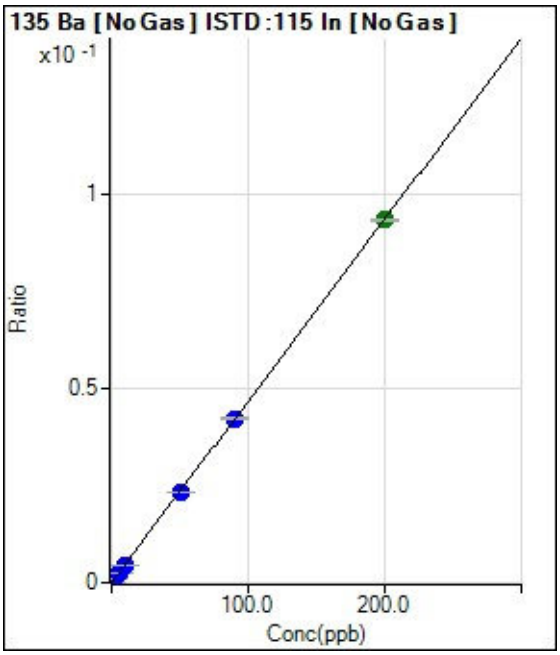
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4949.30	0.0004	P	7.2
2	☐	0.200	0.076	6658.50	0.0005	P	4.1
3	☐	2.000	1.826	46532.80	0.0036	P	1.8
4	☐	5.000	4.905	113336.44	0.0091	P	1.5
5	☐	10.000	9.629	223382.32	0.0175	P	1.2
6	☐	50.000	49.620	1115409.84	0.0885	A	0.8
7	☐	90.000	90.059	2022404.81	0.1603	A	1.4
8	☐	200.000	200.091	4492142.99	0.3557	A	1.7

y = 0.0018 * x + 3.8062E-004
R = 1.0000
DL = 0.046
BEC = 0.2143

Weight: <None>
Min Conc: <None>

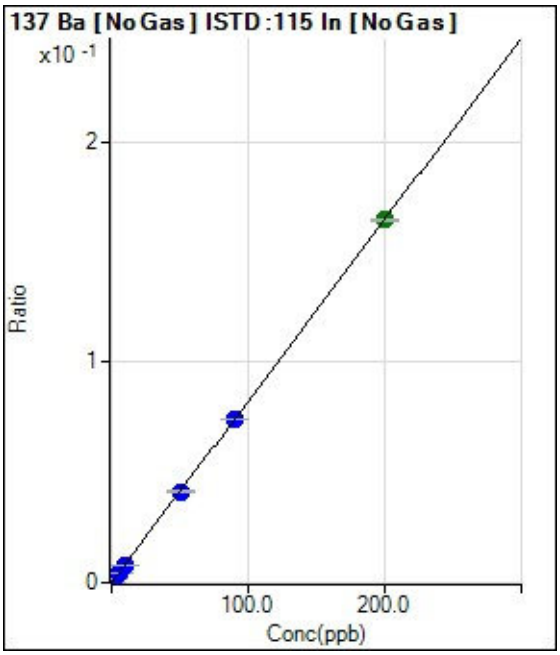


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.42	0.0000	P	6.9
2	☐	0.200	0.199	1278.03	0.0001	P	3.5
3	☐	2.000	1.975	11907.57	0.0009	P	1.5
4	☐	5.000	4.937	28767.60	0.0023	P	2.1
5	☐	10.000	9.864	58834.98	0.0046	P	0.5
6	☐	50.000	50.134	294630.62	0.0234	P	0.5
7	☐	90.000	90.240	530739.77	0.0421	P	1.5
8	☐	200.000	199.867	1176954.40	0.0932	A	0.6

y = 4.6615E-004 * x + 6.4129E-006
R = 1.0000
DL = 0.002831
BEC = 0.01376

Weight: <None>
Min Conc: <None>

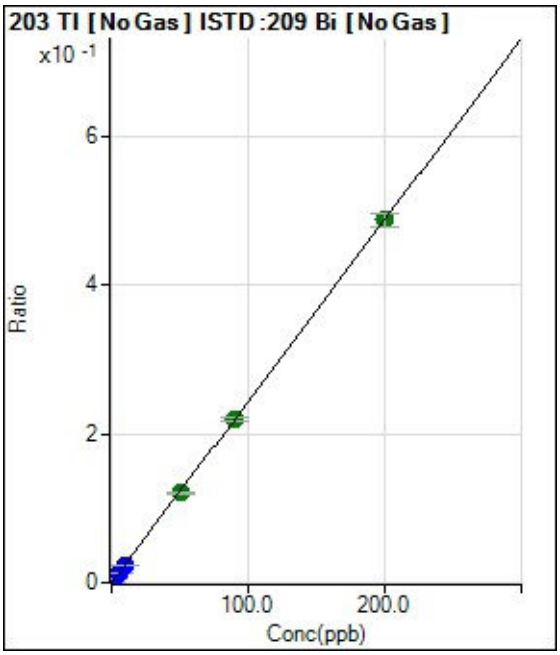
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.52	0.0000	P	26.8
2	☐	0.200	0.192	2225.80	0.0002	P	7.1
3	☐	2.000	1.951	20794.34	0.0016	P	2.3
4	☐	5.000	4.973	51151.80	0.0041	P	3.3
5	☐	10.000	9.760	102745.85	0.0080	P	1.3
6	☐	50.000	50.071	519206.09	0.0412	P	1.4
7	☐	90.000	90.138	935531.99	0.0741	P	1.0
8	☐	200.000	199.933	2077449.12	0.1645	A	0.5

y = 8.2247E-004 * x + 1.4090E-005
R = 1.0000
DL = 0.01377
BEC = 0.01713

Weight: <None>
Min Conc: <None>

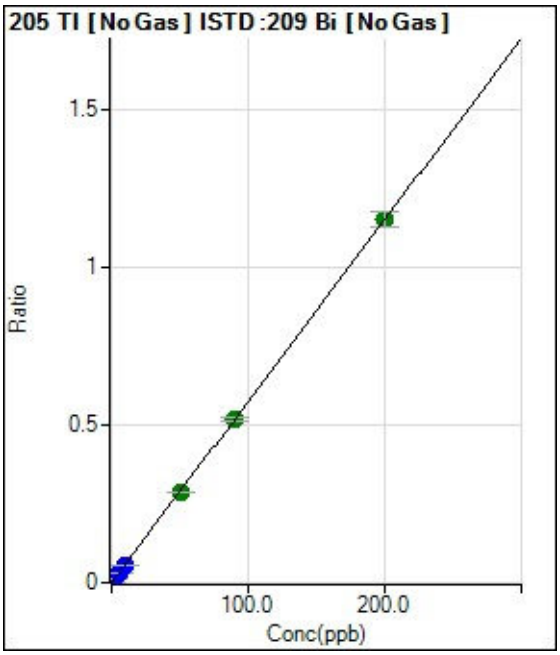


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.37	0.0000	P	23.8
2	☐	0.200	0.182	5069.52	0.0005	P	3.0
3	☐	2.000	1.919	49611.33	0.0047	P	2.3
4	☐	5.000	4.886	122976.86	0.0119	P	3.2
5	☐	10.000	9.596	244078.56	0.0234	P	1.2
6	☐	50.000	49.360	1241168.10	0.1202	A	0.5
7	☐	90.000	90.227	2254176.11	0.2196	A	2.1
8	☐	200.000	200.082	4910811.45	0.4870	A	4.0

y = 0.0024 * x + 3.3814E-005
R = 1.0000
DL = 0.009908
BEC = 0.01389

Weight: <None>
Min Conc: <None>

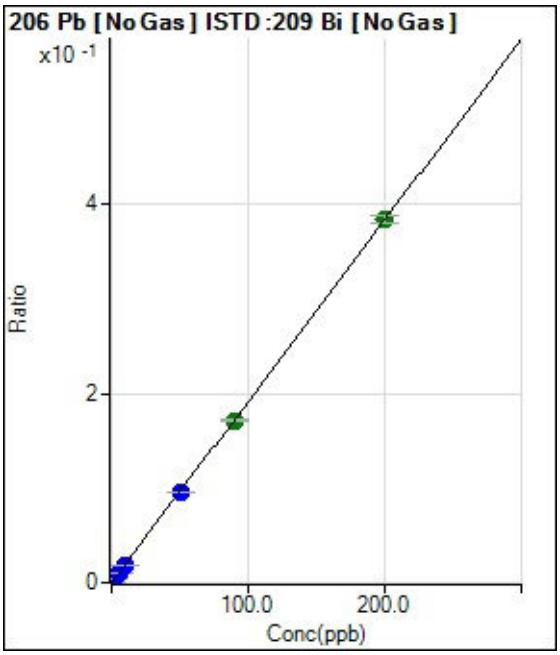
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	870.92	0.0001	P	9.4
2	☐	0.200	0.186	12235.06	0.0012	P	4.0
3	☐	2.000	1.956	119656.02	0.0113	P	1.0
4	☐	5.000	4.952	294936.98	0.0286	P	2.7
5	☐	10.000	9.626	579371.96	0.0555	P	0.6
6	☐	50.000	49.669	2955066.22	0.2861	A	1.4
7	☐	90.000	90.147	5328452.42	0.5192	A	2.5
8	☐	200.000	200.037	11616260.87	1.1519	A	4.1

y = 0.0058 * x + 8.1716E-005
R = 1.0000
DL = 0.003997
BEC = 0.01419

Weight: <None>
Min Conc: <None>

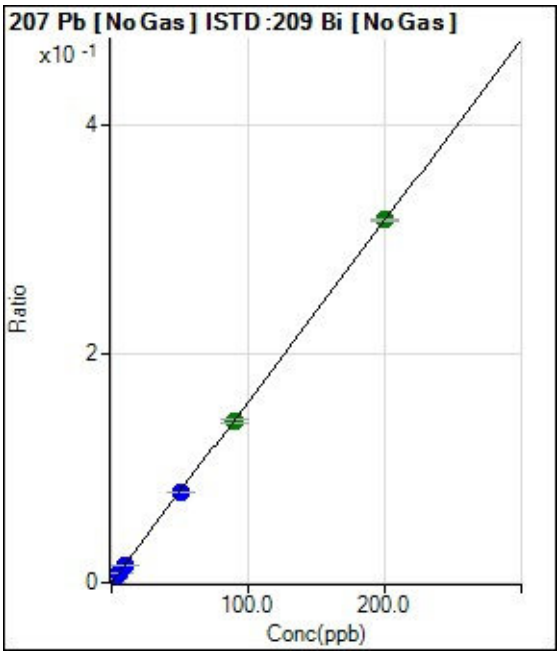


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1675.15	0.0002	P	14.2
2	☐	0.200	0.186	5440.06	0.0005	P	2.7
3	☐	2.000	1.927	40549.95	0.0038	P	1.5
4	☐	5.000	4.900	98330.82	0.0095	P	2.5
5	☐	10.000	9.735	196044.12	0.0188	P	0.6
6	☐	50.000	49.933	988510.78	0.0957	P	0.6
7	☐	90.000	89.477	1758998.79	0.1714	A	1.7
8	☐	200.000	200.268	3866899.82	0.3834	A	2.2

y = 0.0019 * x + 1.5715E-004
R = 1.0000
DL = 0.03497
BEC = 0.08213

Weight: <None>
Min Conc: <None>

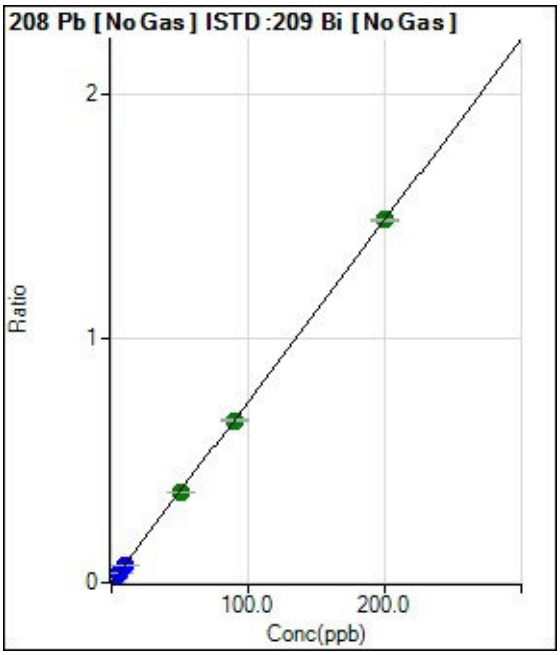
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1361.47	0.0001	P	15.5
2	☐	0.200	0.189	4525.43	0.0004	P	3.2
3	☐	2.000	1.956	33950.53	0.0032	P	1.5
4	☐	5.000	4.992	82648.81	0.0080	P	3.7
5	☐	10.000	9.782	162628.11	0.0156	P	0.4
6	☐	50.000	49.848	814779.73	0.0789	P	0.5
7	☐	90.000	89.183	1447666.32	0.1410	A	1.5
8	☐	200.000	200.417	3195808.63	0.3168	A	0.8

y = 0.0016 * x + 1.2775E-004
R = 1.0000
DL = 0.03749
BEC = 0.08086

Weight: <None>
Min Conc: <None>

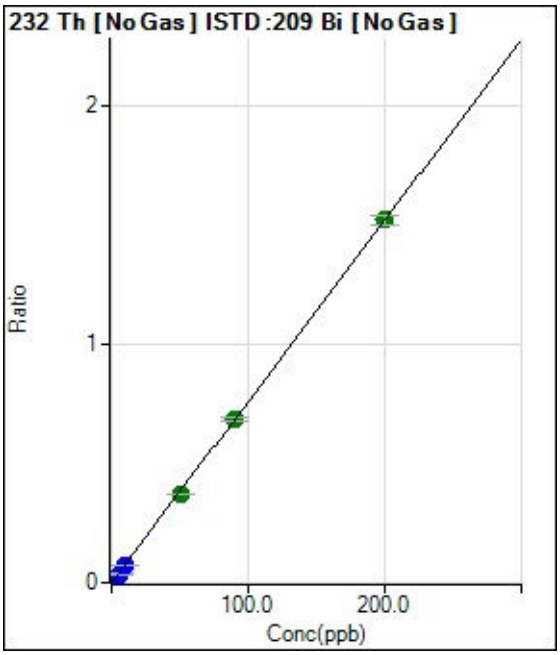


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6350.44	0.0006	P	6.3
2	☐	0.200	0.186	20934.79	0.0020	P	1.2
3	☐	2.000	1.935	157515.57	0.0149	P	0.3
4	☐	5.000	5.000	388187.08	0.0376	P	2.7
5	☐	10.000	9.849	767888.48	0.0736	P	0.1
6	☐	50.000	49.976	3831070.22	0.3709	A	0.2
7	☐	90.000	89.475	6811930.80	0.6636	A	1.1
8	☐	200.000	200.250	14976698.50	1.4843	A	0.5

y = 0.0074 * x + 5.9581E-004
R = 1.0000
DL = 0.01532
BEC = 0.08041

Weight: <None>
Min Conc: <None>

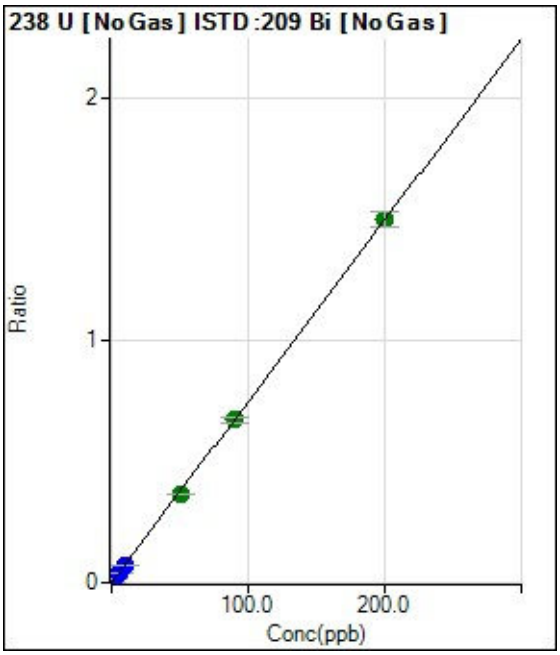
Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3961.34	0.0004	P	9.9
2	☐	0.200	0.161	16972.32	0.0016	P	3.3
3	☐	2.000	1.755	144650.74	0.0137	P	1.7
4	☐	5.000	4.708	372904.32	0.0362	P	3.4
5	☐	10.000	9.354	746035.44	0.0715	P	1.0
6	☐	50.000	48.573	3818084.14	0.3696	A	0.6
7	☐	90.000	90.049	7029852.78	0.6849	A	2.6
8	☐	200.000	200.377	15367707.32	1.5237	A	3.0

y = 0.0076 * x + 3.7169E-004
R = 1.0000
DL = 0.01449
BEC = 0.04889

Weight: <None>
Min Conc: <None>

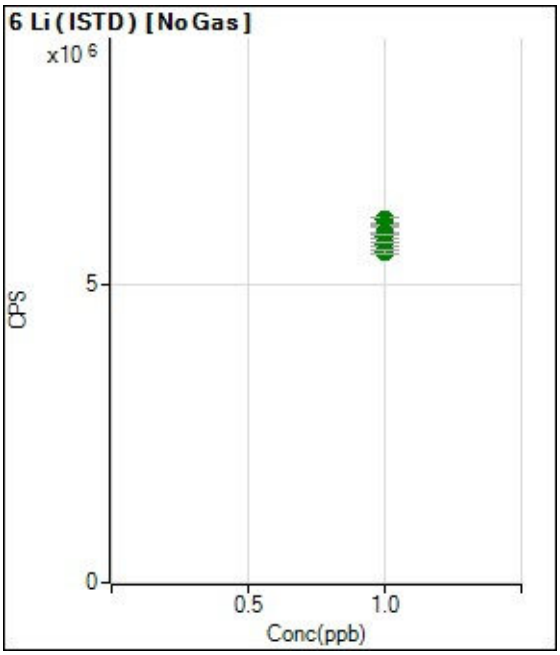


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	720.76	0.0001	P	19.6
2	☐	0.200	0.191	15852.94	0.0015	P	1.7
3	☐	2.000	1.883	149239.20	0.0141	P	1.2
4	☐	5.000	4.872	376280.40	0.0365	P	3.2
5	☐	10.000	9.573	747654.82	0.0716	P	0.7
6	☐	50.000	49.100	3792177.71	0.3671	A	0.8
7	☐	90.000	89.982	6903763.36	0.6728	A	3.7
8	☐	200.000	200.259	15097579.69	1.4972	A	4.2

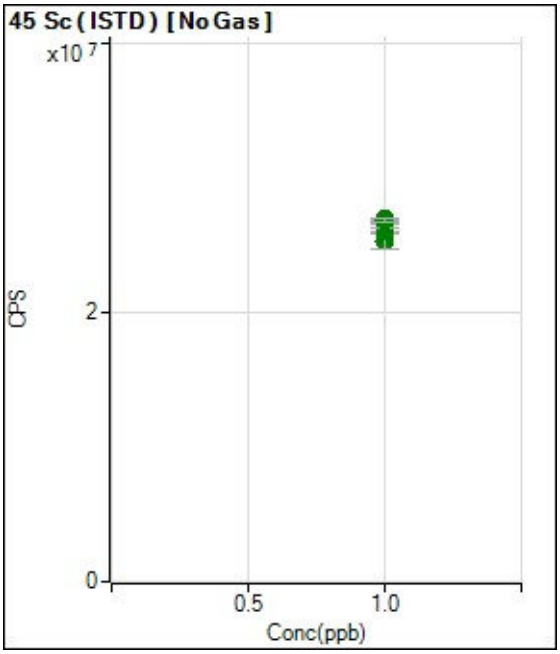
y = 0.0075 * x + 6.7639E-005
R = 1.0000
DL = 0.005313
BEC = 0.009048

Weight: <None>
Min Conc: <None>

Calibration for 044_ICV.d

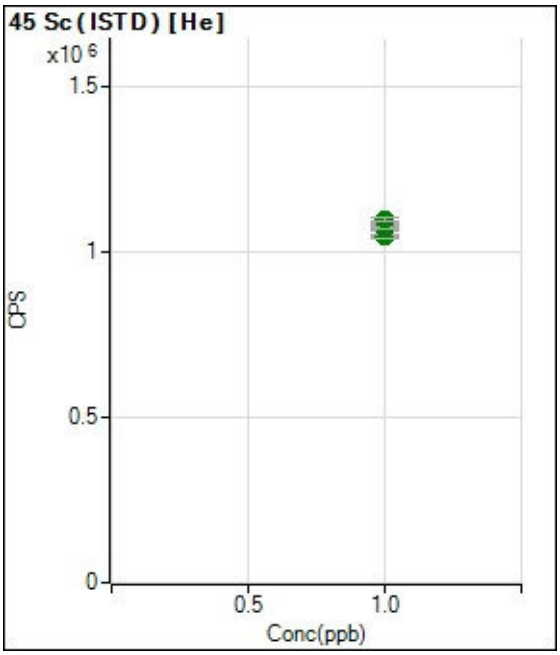


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6069758.49		A	1.9
2	☐	1.000		5996672.23		A	0.5
3	☐	1.000		5978011.96		A	0.7
4	☐	1.000		5806194.96		A	1.9
5	☐	1.000		5854574.85		A	0.3
6	☐	1.000		5787616.55		A	0.7
7	☐	1.000		5666105.93		A	1.4
8	☐	1.000		5538602.23		A	1.4

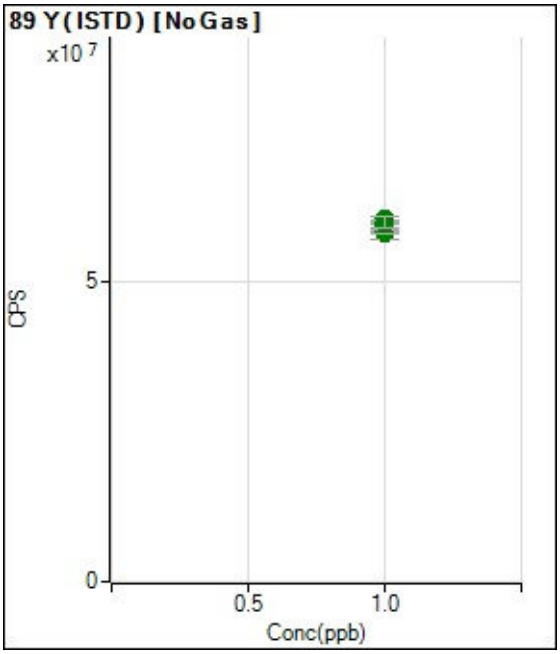


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		26854717.27		A	0.5
2	☐	1.000		26593161.55		A	0.3
3	☐	1.000		26520285.34		A	0.3
4	☐	1.000		25258184.90		A	4.6
5	☐	1.000		25990890.11		A	0.3
6	☐	1.000		26238784.67		A	0.2
7	☐	1.000		26919889.95		A	0.7
8	☐	1.000		26776660.05		A	1.2

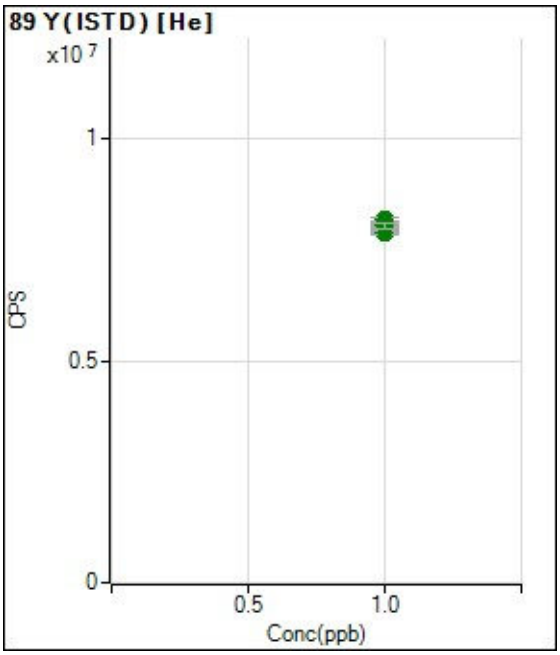
Calibration for 044_ICV.d



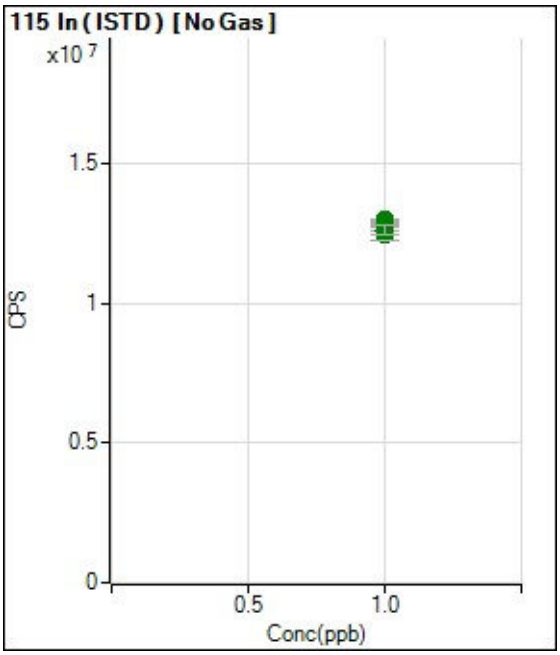
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1086551.24		A	0.6
2	☐	1.000		1080502.98		A	0.6
3	☐	1.000		1069546.21		A	0.4
4	☐	1.000		1050317.25		A	0.4
5	☐	1.000		1047876.87		A	1.5
6	☐	1.000		1071361.80		A	0.0
7	☐	1.000		1075693.74		A	0.3
8	☐	1.000		1098709.99		A	0.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		60596358.15		A	1.1
2	☐	1.000		59879517.97		A	0.6
3	☐	1.000		59504701.49		A	0.9
4	☐	1.000		57987722.84		A	3.2
5	☐	1.000		58526411.53		A	0.3
6	☐	1.000		58444726.51		A	0.8
7	☐	1.000		59642404.19		A	2.2
8	☐	1.000		59976523.31		A	3.0

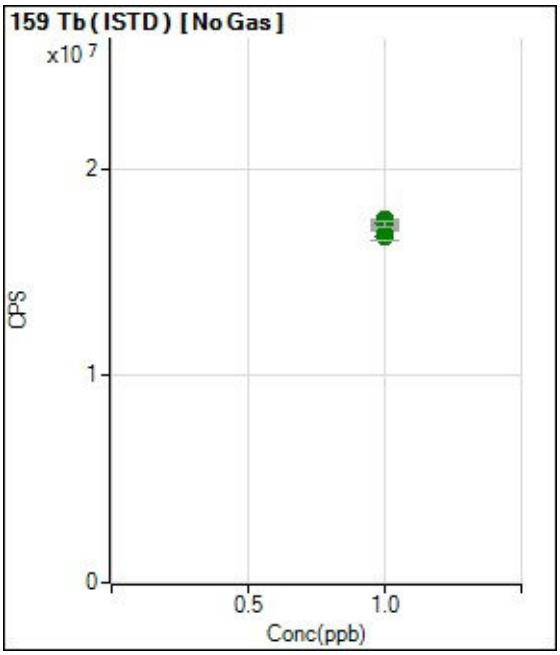


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8174748.93		A	1.0
2	☐	1.000		8113337.73		A	0.5
3	☐	1.000		8030342.23		A	0.4
4	☐	1.000		7893912.06		A	0.3
5	☐	1.000		7896270.25		A	1.0
6	☐	1.000		8030770.37		A	0.4
7	☐	1.000		7965444.63		A	0.6
8	☐	1.000		8053385.28		A	1.6

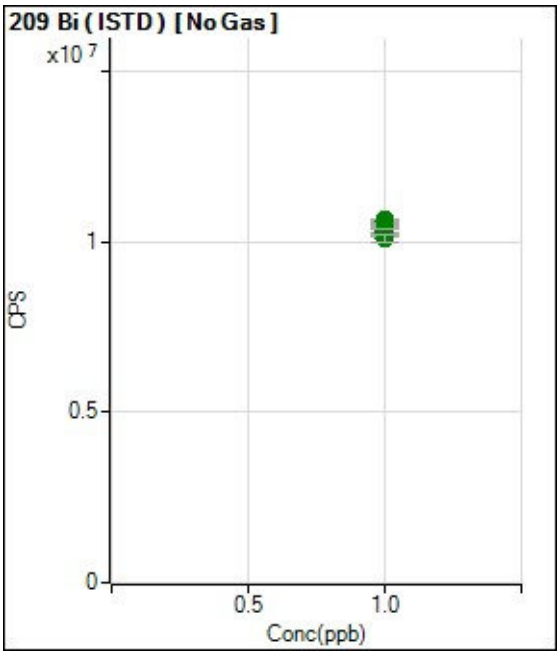


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13007558.49		A	0.7
2	☐	1.000		12915775.36		A	0.2
3	☐	1.000		12843927.77		A	0.2
4	☐	1.000		12470524.58		A	2.7
5	☐	1.000		12778154.18		A	0.6
6	☐	1.000		12603546.63		A	0.2
7	☐	1.000		12617088.86		A	1.7
8	☐	1.000		12632305.64		A	2.9

Calibration for 044_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		17536754.71		A	0.8
2	☐	1.000		17387887.09		A	0.6
3	☐	1.000		17314666.37		A	0.5
4	☐	1.000		16775763.30		A	2.3
5	☐	1.000		17050604.80		A	0.4
6	☐	1.000		17120502.20		A	0.4
7	☐	1.000		17412355.72		A	1.1
8	☐	1.000		17358982.35		A	1.4



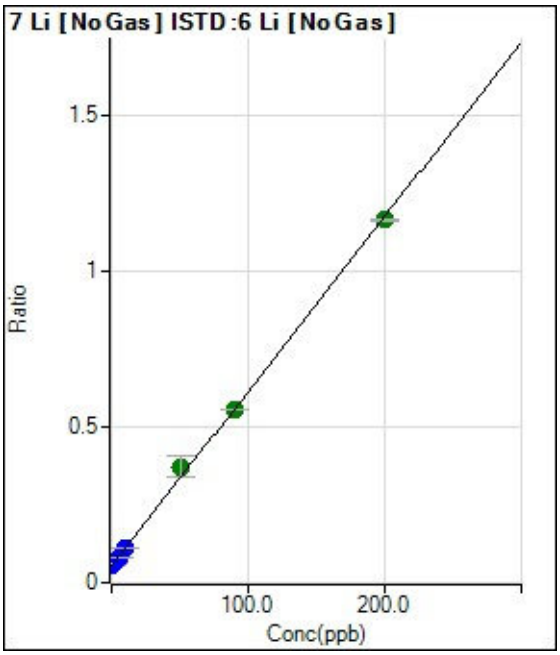
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10657708.47		A	0.2
2	☐	1.000		10620035.14		A	0.8
3	☐	1.000		10549021.80		A	0.4
4	☐	1.000		10318092.09		A	2.6
5	☐	1.000		10437075.98		A	0.5
6	☐	1.000		10329479.31		A	0.8
7	☐	1.000		10266961.54		A	2.0
8	☐	1.000		10090276.82		A	2.2

Calibration for 157_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b\
Analysis File: ICPMS3_201130.batch.bin
DA Date-Time: 2020-12-01 10:23:23
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	148CALB.d	std 1	2020-11-30 18:41:09
2	149CALS.d	std 2	2020-11-30 18:43:53
3	150CALS.d	std 3	2020-11-30 18:45:47
4	151CALS.d	std 4	2020-11-30 18:47:40
5	152CALS.d	std 5	2020-11-30 18:49:32
6	153CALS.d	std 6	2020-11-30 18:51:25
7	154CALS.d	std 7	2020-11-30 18:53:21
8	155CALS.d	std 8	2020-11-30 18:55:16

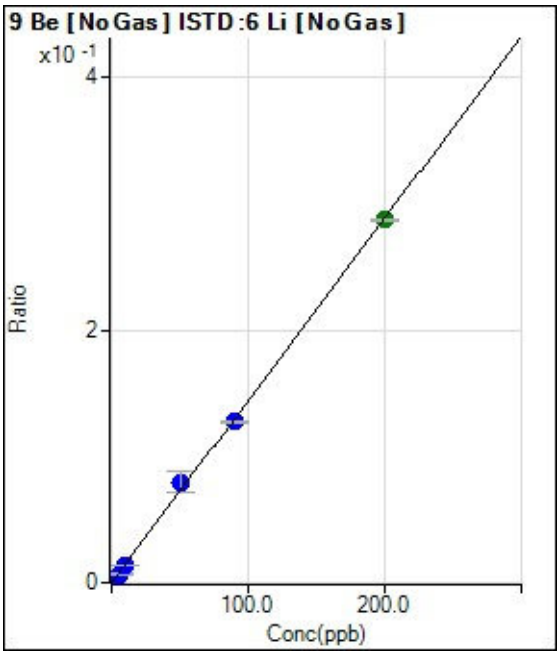
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	288364.22	0.0533	P	1.0
2	☐	0.200	0.164	292281.66	0.0542	P	1.2
3	☐	2.000	1.847	341827.64	0.0637	P	0.7
4	☐	5.000	4.829	429033.27	0.0804	P	0.8
5	☐	10.000	9.851	572990.64	0.1085	P	0.2
6	☐	50.000	56.911	1707640.61	0.3719	A	17.2
7	☐	90.000	89.984	2830088.85	0.5570	A	0.1
8	☐	200.000	198.293	5777257.69	1.1632	A	0.6

y = 0.0056 * x + 0.0533
R = 0.9993
DL = 0.2911
BEC = 9.528

Weight: <None>
Min Conc: <None>

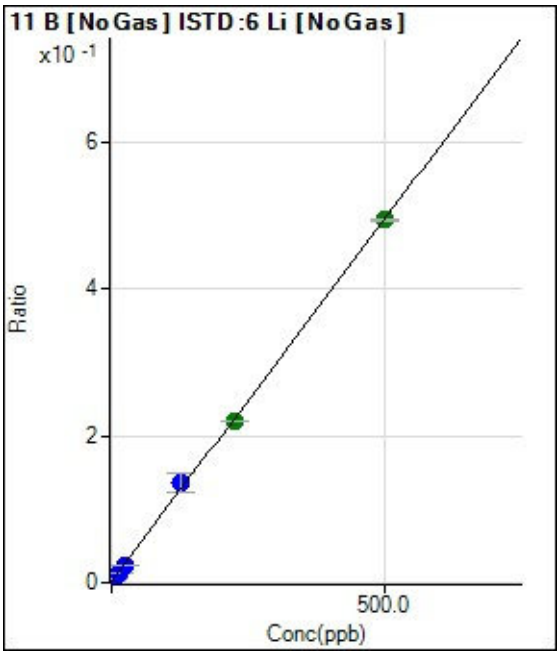


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.43	0.0000	P	36.5
2	☐	0.200	0.175	1454.89	0.0003	P	4.7
3	☐	2.000	1.869	14552.36	0.0027	P	3.7
4	☐	5.000	4.706	36303.13	0.0068	P	2.2
5	☐	10.000	9.542	72733.12	0.0138	P	1.0
6	☐	50.000	55.434	365048.50	0.0799	P	21.6
7	☐	90.000	88.625	649048.12	0.1277	P	1.1
8	☐	200.000	199.292	1426596.50	0.2872	A	0.7

y = 0.0014 * x + 1.7234E-005
R = 0.9995
DL = 0.0131
BEC = 0.01196

Weight: <None>
Min Conc: <None>

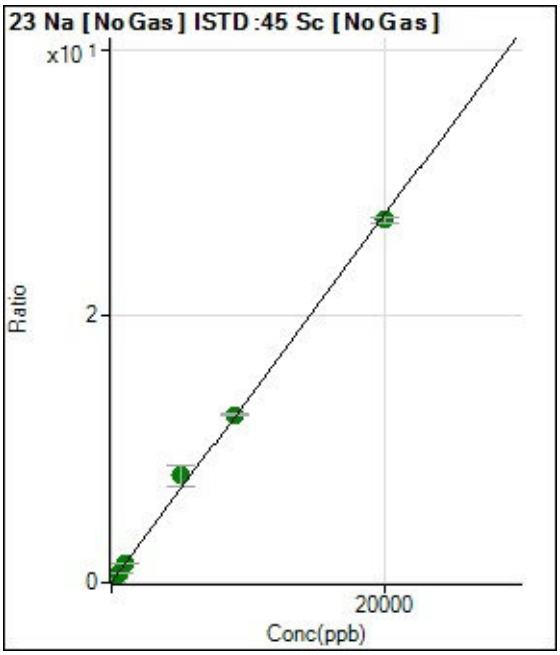
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10080.50	0.0019	P	3.2
2	☐	0.500	0.255	11396.17	0.0021	P	4.5
3	☐	5.000	4.335	32958.43	0.0061	P	2.6
4	☐	12.500	11.182	68823.17	0.0129	P	1.7
5	☐	25.000	22.982	129560.32	0.0245	P	1.4
6	☐	125.000	136.785	626218.12	0.1368	P	19.6
7	☐	225.000	220.641	1115055.92	0.2195	A	0.0
8	☐	500.000	499.156	2454086.65	0.4941	A	0.9

y = 9.8620E-004 * x + 0.0019
R = 0.9996
DL = 0.183
BEC = 1.89

Weight: <None>
Min Conc: <None>

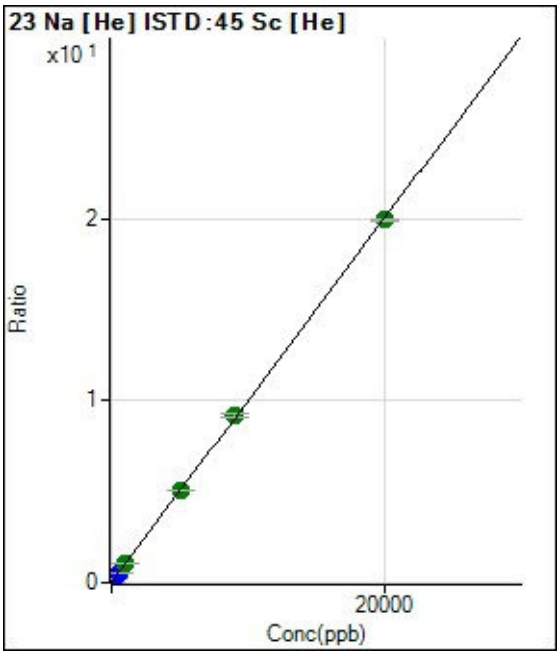


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	448343.58	0.0184	P	0.6
2	☐	20.000	20.052	1109806.60	0.0461	A	1.1
3	☐	200.000	204.325	7206272.03	0.3000	A	0.8
4	☐	500.000	513.241	17360089.97	0.7257	A	0.8
5	☐	1000.000	1015.356	33565027.83	1.4177	A	1.6
6	☐	5000.000	5837.065	167845795.42	8.0625	A	20.0
7	☐	9000.000	9133.227	298651098.34	12.6050	A	0.5
8	☐	20000.000	19729.640	655314947.98	27.2079	A	1.5

y = 0.0014 * x + 0.0184
R = 0.9990
DL = 0.2516
BEC = 13.37

Weight: <None>
Min Conc: <None>

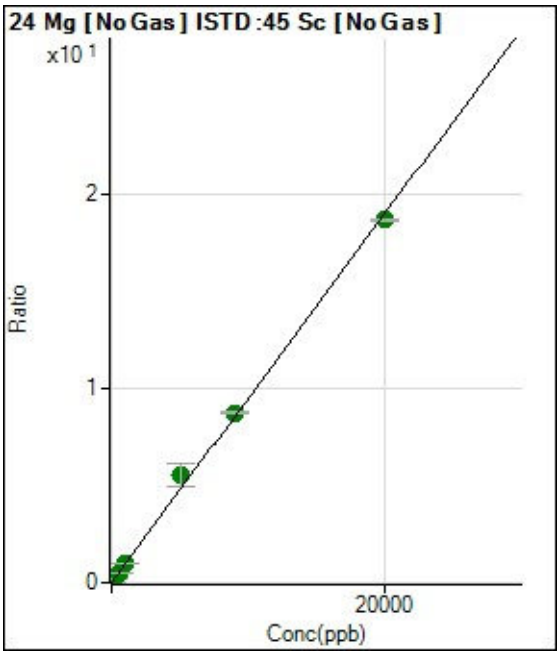
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19361.32	0.0199	P	0.4
2	☐	20.000	21.268	39659.00	0.0412	P	0.8
3	☐	200.000	202.818	214740.25	0.2227	P	1.9
4	☐	500.000	506.411	503829.55	0.5262	P	0.7
5	☐	1000.000	1002.462	983529.46	1.0220	A	0.8
6	☐	5000.000	5075.366	4865730.97	5.0934	A	0.8
7	☐	9000.000	9161.789	8877633.20	9.1783	A	1.8
8	☐	20000.000	19908.041	19344669.71	19.9206	A	0.6

y = 9.9963E-004 * x + 0.0199
R = 0.9999
DL = 0.2466
BEC = 19.95

Weight: <None>
Min Conc: <None>

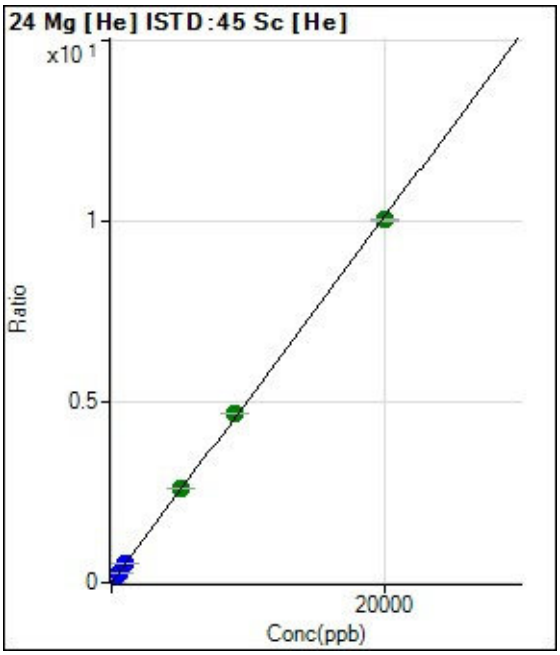


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8856.86	0.0004	P	4.9
2	☐	20.000	20.125	468056.01	0.0194	P	2.6
3	☐	200.000	204.175	4654268.58	0.1938	A	0.9
4	☐	500.000	514.035	11657022.33	0.4873	A	0.2
5	☐	1000.000	1022.537	22942296.33	0.9690	A	1.0
6	☐	5000.000	5869.904	115686041.61	5.5608	A	20.5
7	☐	9000.000	9218.869	206899256.92	8.7333	A	1.5
8	☐	20000.000	19682.513	449122699.97	18.6454	A	0.3

y = 9.4729E-004 * x + 3.6405E-004
R = 0.9988
DL = 0.05688
BEC = 0.3843

Weight: <None>
Min Conc: <None>

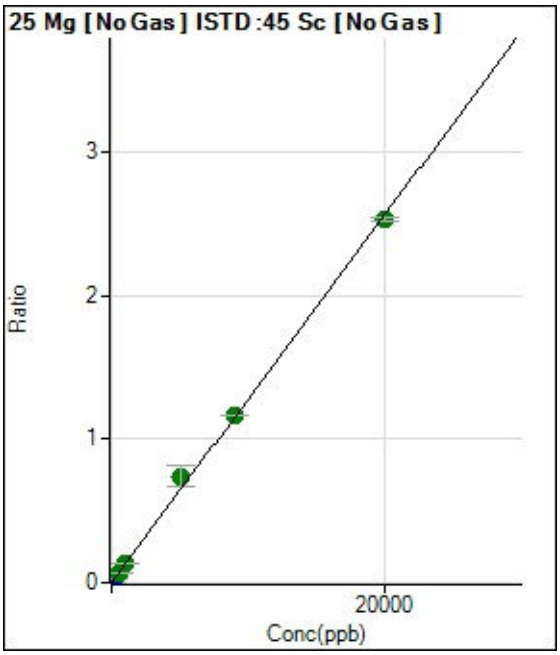
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.68	0.0002	P	37.2
2	☐	20.000	18.923	9444.02	0.0098	P	9.7
3	☐	200.000	204.381	100001.75	0.1037	P	0.5
4	☐	500.000	519.496	252065.47	0.2632	P	2.1
5	☐	1000.000	1018.655	496495.32	0.5159	P	0.7
6	☐	5000.000	5168.254	2499718.24	2.6167	A	0.8
7	☐	9000.000	9269.161	4539461.50	4.6928	A	0.4
8	☐	20000.000	19835.351	9751832.36	10.0420	A	0.5

y = 5.0626E-004 * x + 2.3377E-004
R = 0.9998
DL = 0.5155
BEC = 0.4618

Weight: <None>
Min Conc: <None>

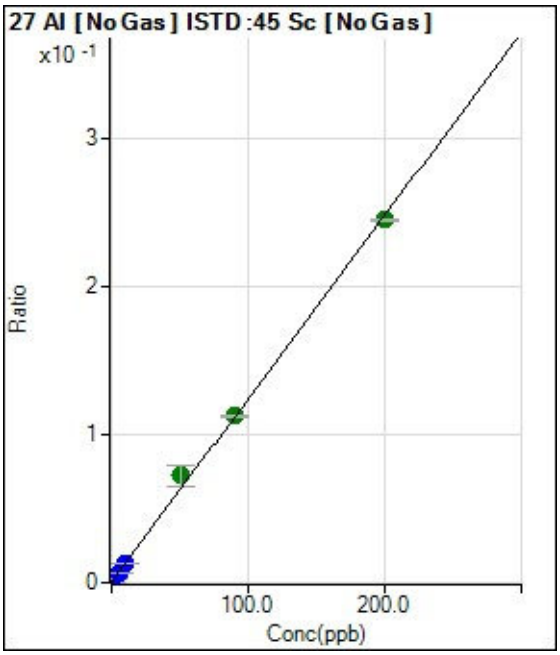


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1253.49	0.0001	P	14.4
2	☐	20.000	19.892	62690.88	0.0026	P	2.1
3	☐	200.000	201.393	621470.11	0.0259	P	0.7
4	☐	500.000	504.742	1549331.75	0.0648	A	1.6
5	☐	1000.000	1009.201	3064954.75	0.1295	A	0.8
6	☐	5000.000	5801.751	15481015.19	0.7440	A	20.3
7	☐	9000.000	9109.076	27673247.92	1.1680	A	0.7
8	☐	20000.000	19749.886	60994582.43	2.5324	A	1.0

y = 1.2822E-004 * x + 5.1530E-005
R = 0.9991
DL = 0.1736
BEC = 0.4019

Weight: <None>
Min Conc: <None>

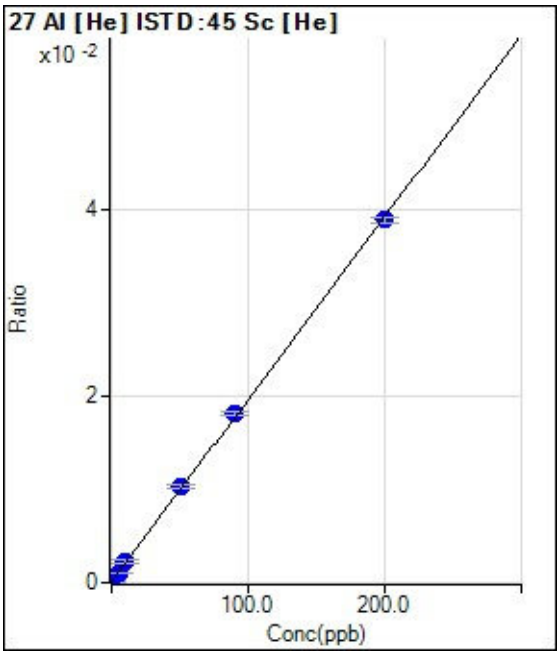
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12286.31	0.0005	P	6.3
2	☐			26681.05	0.0011	P	8.7
3	☐	2.000	2.223	78279.72	0.0033	P	0.9
4	☐	5.000	5.280	168567.24	0.0070	P	2.0
5	☐	10.000	10.339	315215.45	0.0133	P	2.4
6	☐	50.000	57.998	1505171.54	0.0724	A	20.6
7	☐	90.000	90.507	2668611.42	0.1126	A	1.2
8	☐	200.000	197.746	5913558.04	0.2455	A	0.4

y = 0.0012 * x + 5.0500E-004
R = 0.9991
DL = 0.07758
BEC = 0.4076

Weight: <None>
Min Conc: <None>

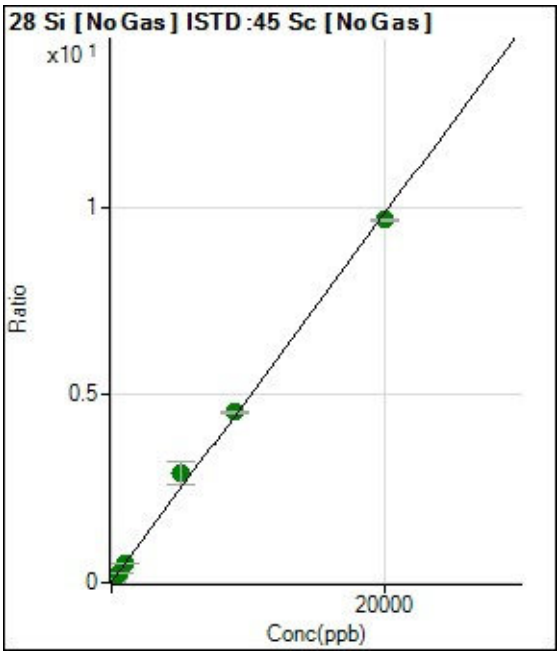


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	56.9
2	☐			173.33	0.0002	P	11.8
3	☐	2.000	2.232	516.69	0.0005	P	4.2
4	☐	5.000	4.566	950.05	0.0010	P	12.0
5	☐	10.000	11.064	2176.88	0.0023	P	10.0
6	☐	50.000	51.948	9793.66	0.0103	P	4.7
7	☐	90.000	92.100	17514.61	0.0181	P	2.0
8	☐	200.000	198.523	37781.57	0.0389	P	1.3

y = 1.9547E-004 * x + 9.9579E-005
R = 0.9999
DL = 0.8702
BEC = 0.5094

Weight: <None>
Min Conc: <None>

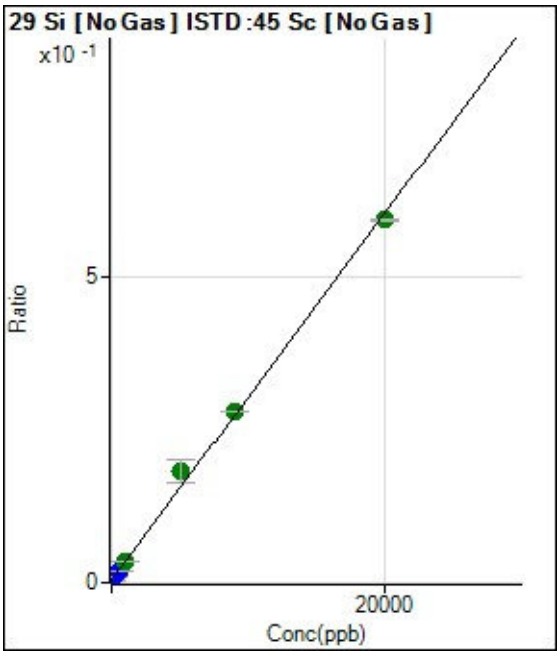
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	401105.83	0.0165	P	1.0
2	☐	20.000	21.759	654272.83	0.0272	P	0.9
3	☐	200.000	205.776	2819160.52	0.1174	A	0.5
4	☐	500.000	515.268	6437290.22	0.2691	A	0.2
5	☐	1000.000	1027.738	12320073.85	0.5203	A	0.6
6	☐	5000.000	5929.381	60785455.58	2.9234	A	20.9
7	☐	9000.000	9225.632	107546546.77	4.5394	A	0.8
8	☐	20000.000	19664.292	232610470.94	9.6570	A	0.5

y = 4.9026E-004 * x + 0.0165
R = 0.9987
DL = 1.043
BEC = 33.63

Weight: <None>
Min Conc: <None>

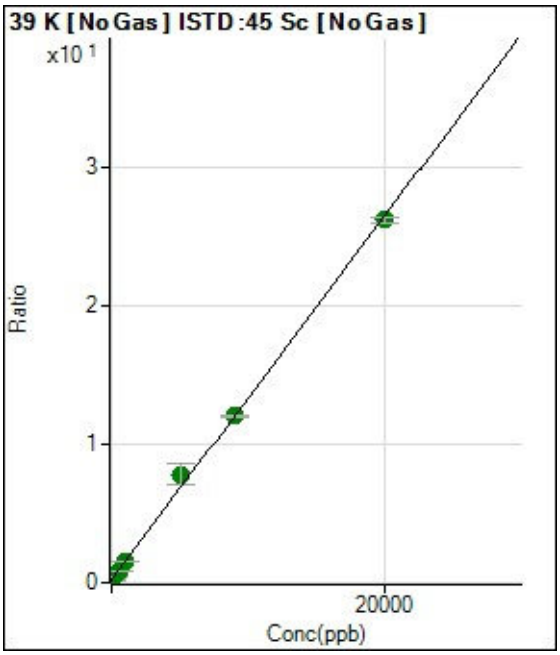


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	89049.00	0.0037	P	1.6
2	☐	20.000	16.881	100406.86	0.0042	P	1.4
3	☐	200.000	204.811	235661.09	0.0098	P	0.9
4	☐	500.000	524.567	464418.71	0.0194	P	0.3
5	☐	1000.000	1048.531	832255.46	0.0352	A	0.6
6	☐	5000.000	5970.181	3805613.75	0.1830	A	20.6
7	☐	9000.000	9203.823	6635560.57	0.2801	A	0.5
8	☐	20000.000	19662.649	14311877.32	0.5942	A	0.6

y = 3.0032E-005 * x + 0.0037
R = 0.9986
DL = 5.745
BEC = 121.9

Weight: <None>
Min Conc: <None>

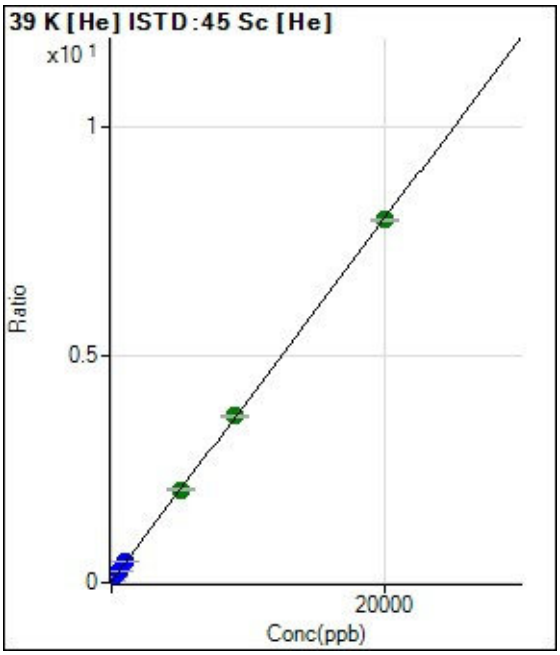
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5040228.16	0.2072	A	1.0
2	☐	20.000	19.578	5611793.46	0.2329	A	1.1
3	☐	200.000	199.399	11271225.66	0.4693	A	0.3
4	☐	500.000	499.109	20647901.77	0.8632	A	0.4
5	☐	1000.000	999.797	36016921.13	1.5212	A	0.6
6	☐	5000.000	5809.062	163103237.57	7.8419	A	20.7
7	☐	9000.000	9012.427	285536495.75	12.0520	A	0.8
8	☐	20000.000	19792.181	631495603.92	26.2196	A	1.5

y = 0.0013 * x + 0.2072
R = 0.9991
DL = 4.789
BEC = 157.6

Weight: <None>
Min Conc: <None>

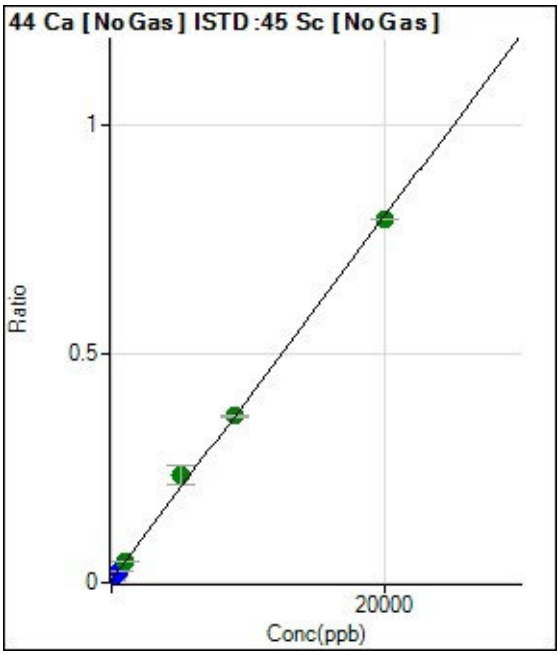


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28979.28	0.0299	P	2.6
2	☐	20.000	20.828	36717.90	0.0381	P	1.2
3	☐	200.000	203.397	106911.44	0.1109	P	0.6
4	☐	500.000	518.513	226341.37	0.2364	P	1.7
5	☐	1000.000	1055.302	433247.04	0.4502	P	0.9
6	☐	5000.000	5064.562	1955708.46	2.0472	A	0.9
7	☐	9000.000	9131.817	3547476.41	3.6672	A	1.0
8	☐	20000.000	19921.279	7734626.55	7.9648	A	0.4

y = 3.9832E-004 * x + 0.0299
R = 1.0000
DL = 5.926
BEC = 74.95

Weight: <None>
Min Conc: <None>

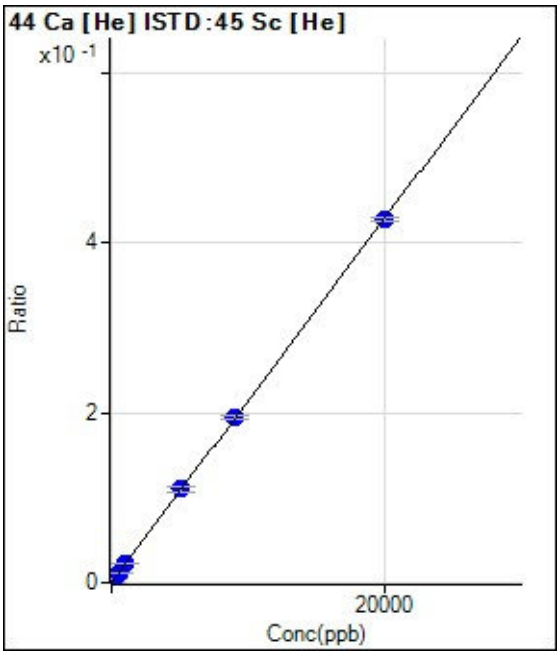
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136089.57	0.0056	P	0.5
2	☐	20.000	20.634	154565.54	0.0064	P	2.8
3	☐	200.000	207.705	332992.51	0.0139	P	1.3
4	☐	500.000	520.616	629614.34	0.0263	P	0.8
5	☐	1000.000	1019.973	1093845.79	0.0462	A	0.9
6	☐	5000.000	5774.250	4904711.59	0.2355	A	19.5
7	☐	9000.000	9006.881	8627775.08	0.3642	A	0.4
8	☐	20000.000	19801.749	19123487.63	0.7939	A	0.1

y = 3.9809E-005 * x + 0.0056
R = 0.9992
DL = 1.922
BEC = 140.5

Weight: <None>
Min Conc: <None>

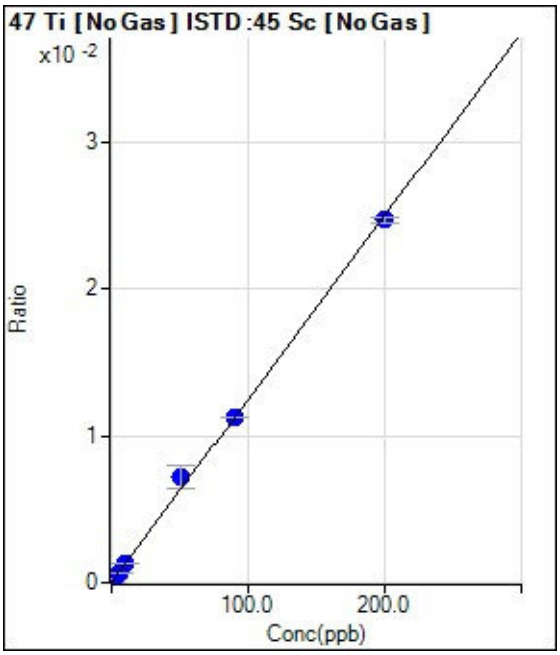


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.35	0.0002	P	71.0
2	☐	20.000	20.756	640.07	0.0007	P	12.6
3	☐	200.000	206.542	4481.07	0.0046	P	12.7
4	☐	500.000	507.657	10631.67	0.0111	P	3.5
5	☐	1000.000	1031.953	21498.39	0.0223	P	2.7
6	☐	5000.000	5117.893	105033.09	0.1099	P	4.7
7	☐	9000.000	9091.586	188705.67	0.1951	P	3.0
8	☐	20000.000	19927.458	415030.80	0.4274	P	1.0

y = 2.1436E-005 * x + 2.2014E-004
R = 1.0000
DL = 21.89
BEC = 10.27

Weight: <None>
Min Conc: <None>

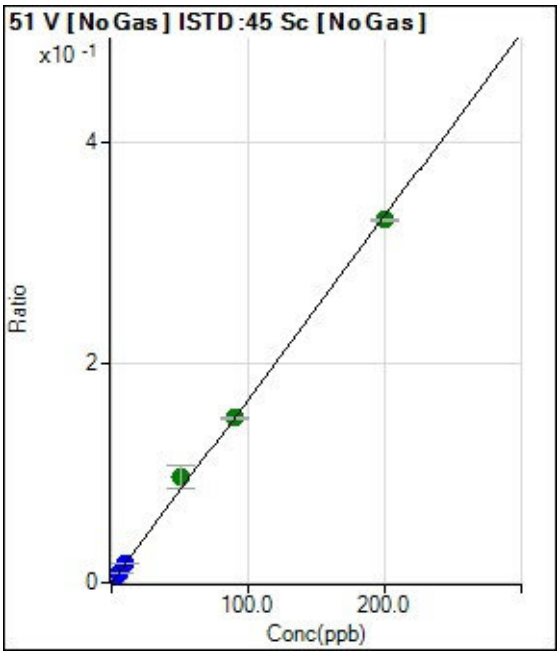
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.96	0.0000	P	15.9
2	☐	0.200	0.172	800.84	0.0000	P	18.8
3	☐	2.000	1.999	6267.81	0.0003	P	4.2
4	☐	5.000	4.930	14979.98	0.0006	P	0.3
5	☐	10.000	9.989	29752.17	0.0013	P	1.8
6	☐	50.000	57.685	149707.02	0.0072	P	21.0
7	☐	90.000	90.422	267256.99	0.0113	P	0.4
8	☐	200.000	197.891	594278.29	0.0247	P	1.4

y = 1.2462E-004 * x + 1.1794E-005
R = 0.9992
DL = 0.04513
BEC = 0.09464

Weight: <None>
Min Conc: <None>

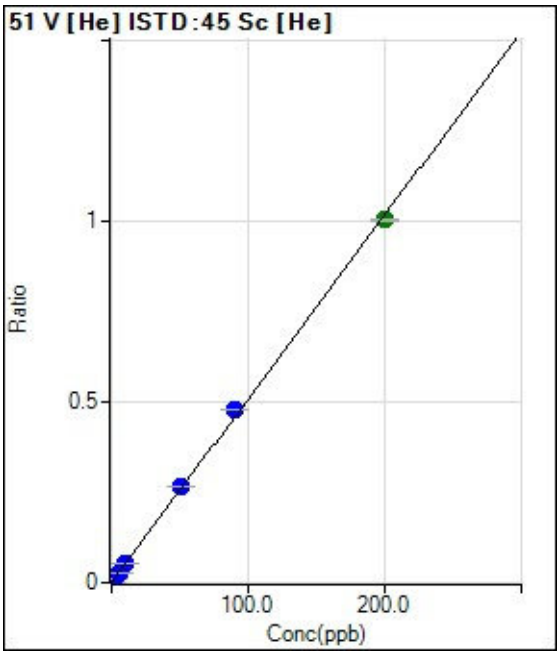


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-5019.60	-0.0002	P	-36.3
2	☐	0.200	0.187	2562.00	0.0001	P	173.3
3	☐	2.000	1.986	74564.00	0.0031	P	4.0
4	☐	5.000	5.137	199858.95	0.0084	P	0.5
5	☐	10.000	10.314	402085.67	0.0170	P	1.9
6	☐	50.000	57.479	1986236.75	0.0956	A	21.5
7	☐	90.000	90.146	3554585.50	0.1500	A	1.2
8	☐	200.000	198.046	7945545.98	0.3299	A	0.7

y = 0.0017 * x - 2.0647E-004
R = 0.9992
DL = 0.1348
BEC = -0.1239

Weight: <None>
Min Conc: <None>

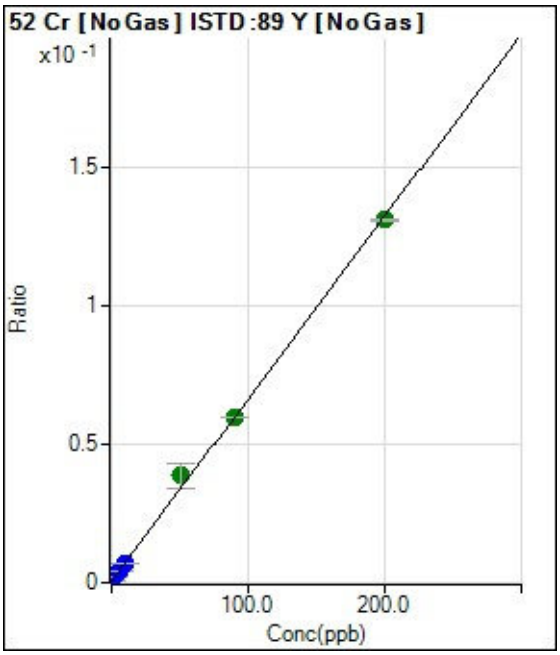
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	527.22	0.0005	P	14.0
2	☐	0.200	0.175	1378.14	0.0014	P	6.7
3	☐	2.000	2.033	10491.32	0.0109	P	4.1
4	☐	5.000	5.136	25519.54	0.0267	P	1.0
5	☐	10.000	10.130	50078.17	0.0520	P	1.5
6	☐	50.000	52.486	255402.74	0.2674	P	0.7
7	☐	90.000	94.116	463324.88	0.4790	P	0.9
8	☐	200.000	197.516	975615.85	1.0046	A	0.4

y = 0.0051 * x + 5.4299E-004
R = 0.9996
DL = 0.04498
BEC = 0.1068

Weight: <None>
Min Conc: <None>

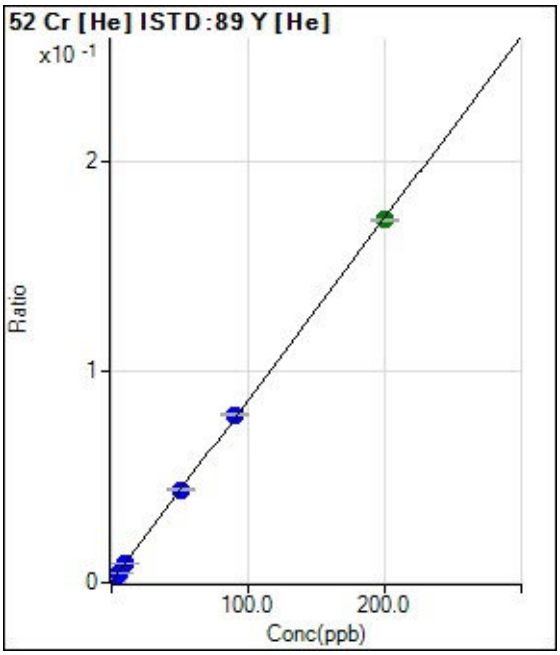


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30227.21	0.0005	P	2.0
2	☐	0.200	0.183	36786.56	0.0007	P	1.1
3	☐	2.000	1.937	101128.13	0.0018	P	0.3
4	☐	5.000	5.052	214896.56	0.0039	P	0.7
5	☐	10.000	10.042	395884.35	0.0071	P	0.9
6	☐	50.000	57.792	1865746.37	0.0386	A	22.2
7	☐	90.000	89.764	3296512.25	0.0596	A	0.5
8	☐	200.000	198.155	7240011.28	0.1310	A	0.5

y = 6.5855E-004 * x + 5.3347E-004
R = 0.9992
DL = 0.04959
BEC = 0.8101

Weight: <None>
Min Conc: <None>

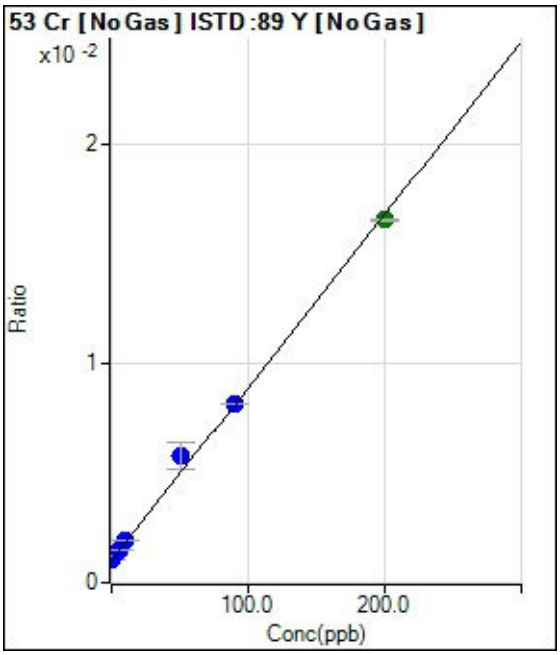
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2803.15	0.0004	P	1.8
2	☐	0.200	0.143	3704.27	0.0005	P	2.9
3	☐	2.000	1.968	15360.89	0.0021	P	5.6
4	☐	5.000	4.945	34234.01	0.0046	P	1.3
5	☐	10.000	10.128	67261.96	0.0091	P	2.2
6	☐	50.000	50.777	325230.26	0.0442	P	0.4
7	☐	90.000	91.609	587919.06	0.0794	P	1.2
8	☐	200.000	199.077	1264552.66	0.1722	A	0.7

y = 8.6309E-004 * x + 3.7547E-004
R = 0.9999
DL = 0.02349
BEC = 0.435

Weight: <None>
Min Conc: <None>

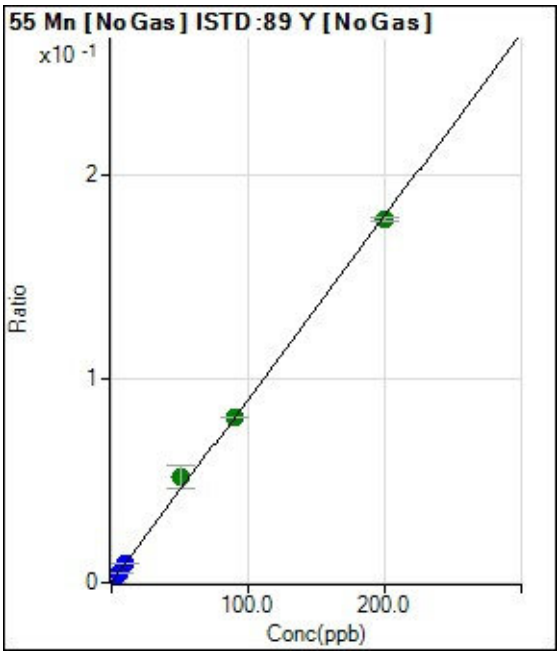


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57668.95	0.0010	P	0.6
2	☐	0.200	0.642	60105.04	0.0011	P	1.8
3	☐	2.000	2.424	67583.88	0.0012	P	1.5
4	☐	5.000	6.198	83882.98	0.0015	P	0.4
5	☐	10.000	11.792	107936.68	0.0019	P	1.2
6	☐	50.000	60.483	280166.16	0.0058	P	21.7
7	☐	90.000	90.512	451066.20	0.0082	P	0.8
8	☐	200.000	197.025	915518.25	0.0166	A	0.4

y = 7.8928E-005 * x + 0.0010
R = 0.9985
DL = 0.2357
BEC = 12.89

Weight: <None>
Min Conc: <None>

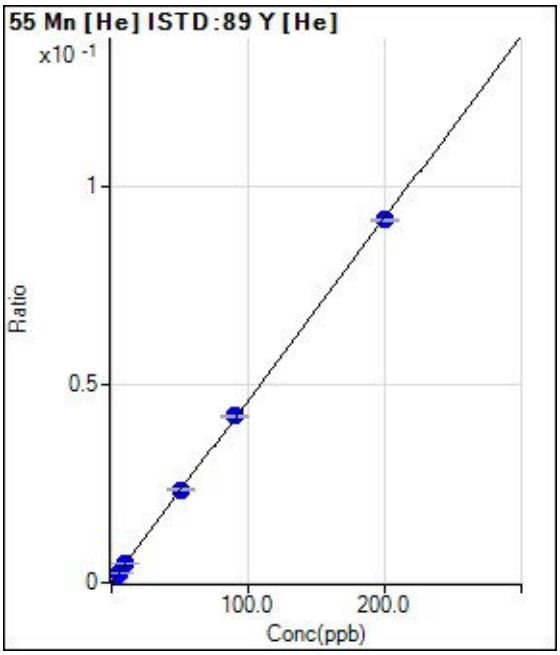
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10354.49	0.0002	P	4.0
2	☐	0.200	0.177	19243.03	0.0003	P	2.8
3	☐	2.000	1.980	109579.21	0.0020	P	1.5
4	☐	5.000	5.007	260479.10	0.0047	P	0.9
5	☐	10.000	9.978	506479.68	0.0091	P	0.8
6	☐	50.000	57.884	2522054.20	0.0522	A	22.1
7	☐	90.000	90.136	4483590.06	0.0811	A	0.5
8	☐	200.000	197.969	9833426.15	0.1780	A	1.1

y = 8.9799E-004 * x + 1.8274E-004
R = 0.9991
DL = 0.02444
BEC = 0.2035

Weight: <None>
Min Conc: <None>

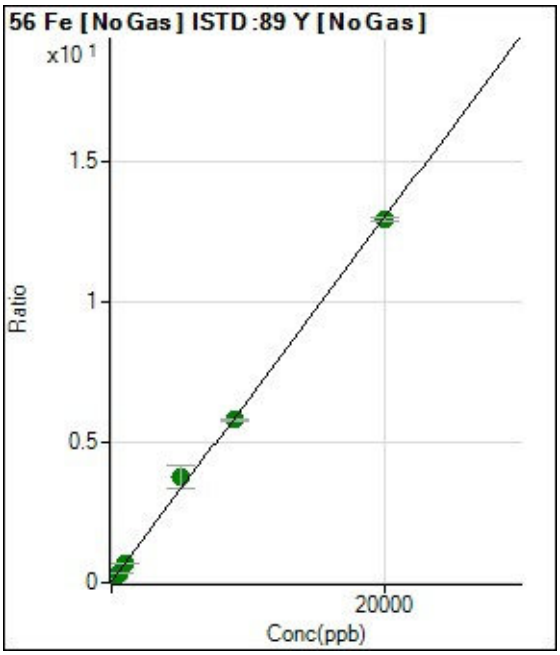


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	210.22	0.0000	P	21.8
2	☐	0.200	0.171	794.17	0.0001	P	1.5
3	☐	2.000	1.946	6841.99	0.0009	P	3.3
4	☐	5.000	4.996	17158.17	0.0023	P	1.1
5	☐	10.000	10.046	34317.40	0.0047	P	1.3
6	☐	50.000	51.014	172960.78	0.0235	P	1.5
7	☐	90.000	91.638	312332.88	0.0422	P	1.0
8	☐	200.000	199.008	672803.95	0.0916	P	0.8

y = 4.6024E-004 * x + 2.8159E-005
R = 0.9999
DL = 0.04002
BEC = 0.06118

Weight: <None>
Min Conc: <None>

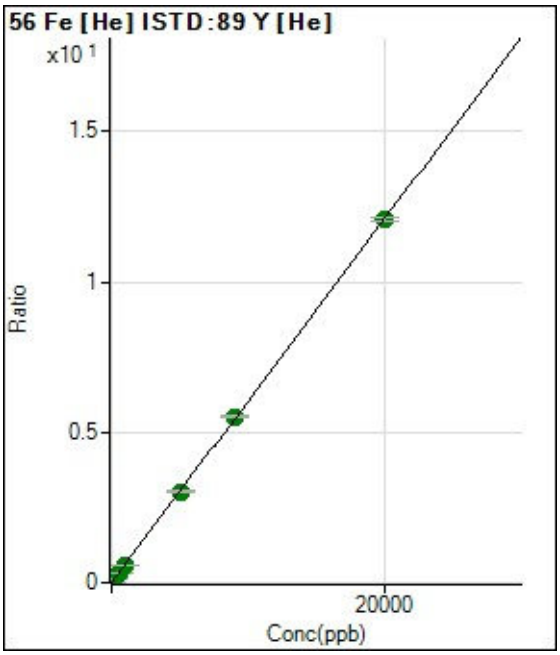
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2120150.37	0.0374	A	0.5
2	☐	20.000	18.123	2765640.95	0.0492	A	0.9
3	☐	200.000	197.920	9262842.39	0.1657	A	0.5
4	☐	500.000	497.565	20036496.80	0.3600	A	1.1
5	☐	1000.000	989.710	37613830.01	0.6790	A	1.4
6	☐	5000.000	5742.718	181899604.07	3.7601	A	21.7
7	☐	9000.000	8884.012	320358440.49	5.7965	A	0.7
8	☐	20000.000	19867.113	713775882.62	12.9162	A	1.1

y = 6.4825E-004 * x + 0.0374
R = 0.9992
DL = 0.8309
BEC = 57.72

Weight: <None>
Min Conc: <None>

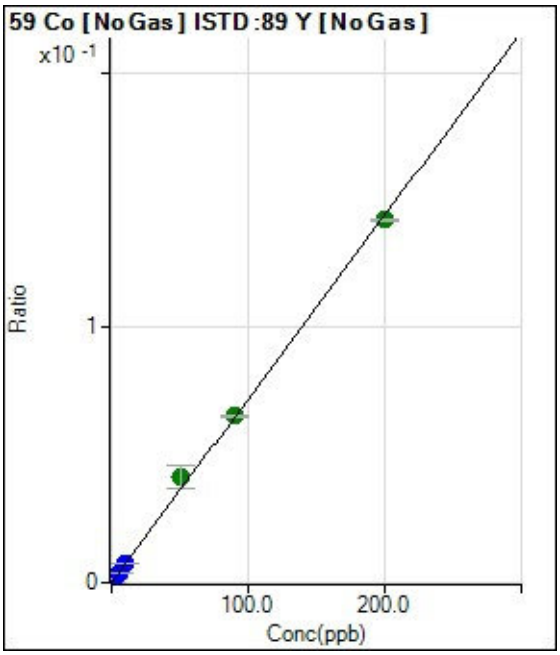


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30342.33	0.0041	P	8.9
2	☐	20.000	23.547	135730.17	0.0183	P	0.8
3	☐	200.000	197.131	912013.94	0.1231	A	1.0
4	☐	500.000	494.781	2233402.52	0.3029	A	0.6
5	☐	1000.000	984.659	4418174.00	0.5989	A	1.6
6	☐	5000.000	5015.963	22324024.67	3.0340	A	0.5
7	☐	9000.000	9100.217	40712341.06	5.5011	A	1.0
8	☐	20000.000	19951.834	88538392.01	12.0561	A	1.1

y = 6.0405E-004 * x + 0.0041
R = 1.0000
DL = 1.804
BEC = 6.728

Weight: <None>
Min Conc: <None>

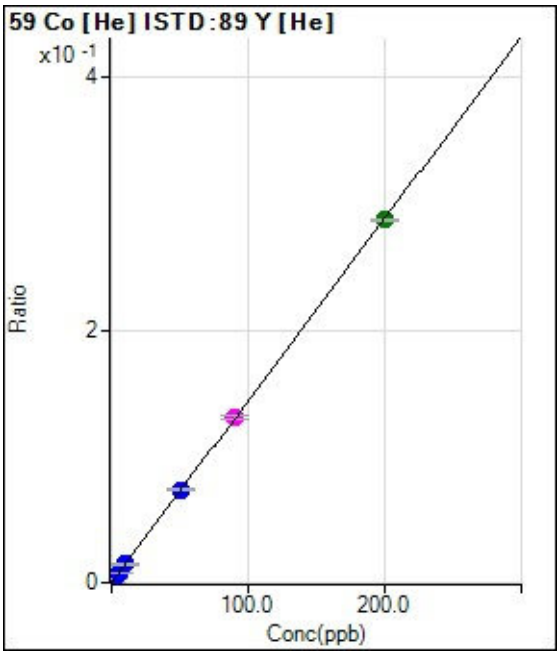
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1494.94	0.0000	P	7.9
2	☐	0.200	0.191	9212.48	0.0002	P	3.2
3	☐	2.000	2.029	83031.29	0.0015	P	0.2
4	☐	5.000	5.080	204827.71	0.0037	P	0.3
5	☐	10.000	10.104	403926.28	0.0073	P	1.9
6	☐	50.000	57.806	2010581.89	0.0416	A	22.3
7	☐	90.000	90.855	3612216.28	0.0654	A	1.0
8	☐	200.000	197.656	7855644.20	0.1422	A	0.3

y = 7.1910E-004 * x + 2.6384E-005
R = 0.9991
DL = 0.008681
BEC = 0.03669

Weight: <None>
Min Conc: <None>

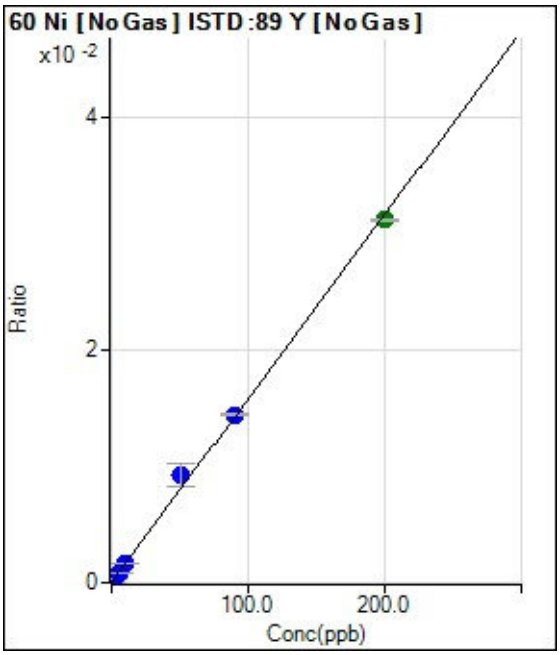


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.28	0.0000	P	9.6
2	☐	0.200	0.206	2466.06	0.0003	P	6.6
3	☐	2.000	2.045	22080.30	0.0030	P	3.5
4	☐	5.000	5.121	54647.31	0.0074	P	0.7
5	☐	10.000	10.027	106831.79	0.0145	P	2.0
6	☐	50.000	51.188	542800.51	0.0738	P	0.5
7	☐	90.000	90.771	967911.17	0.1308	M	1.5
8	☐	200.000	199.351	2108955.99	0.2872	A	0.2

y = 0.0014 * x + 3.6200E-005
R = 1.0000
DL = 0.007263
BEC = 0.02513

Weight: <None>
Min Conc: <None>

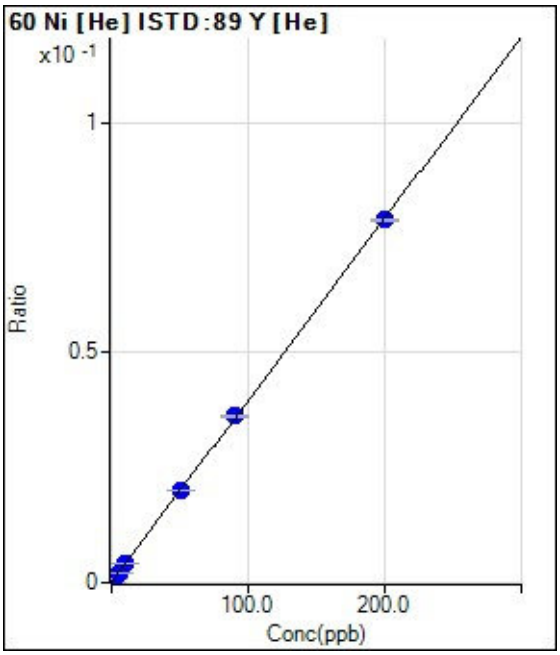
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1187.93	0.0000	P	4.9
2	☐	0.200	0.186	2833.17	0.0001	P	6.3
3	☐	2.000	1.996	18812.02	0.0003	P	1.5
4	☐	5.000	5.105	46090.86	0.0008	P	1.5
5	☐	10.000	10.460	92776.86	0.0017	P	1.3
6	☐	50.000	58.434	447316.10	0.0093	P	22.7
7	☐	90.000	91.250	798495.03	0.0144	P	1.1
8	☐	200.000	197.303	1725055.68	0.0312	A	0.7

y = 1.5811E-004 * x + 2.0964E-005
R = 0.9990
DL = 0.0193
BEC = 0.1326

Weight: <None>
Min Conc: <None>

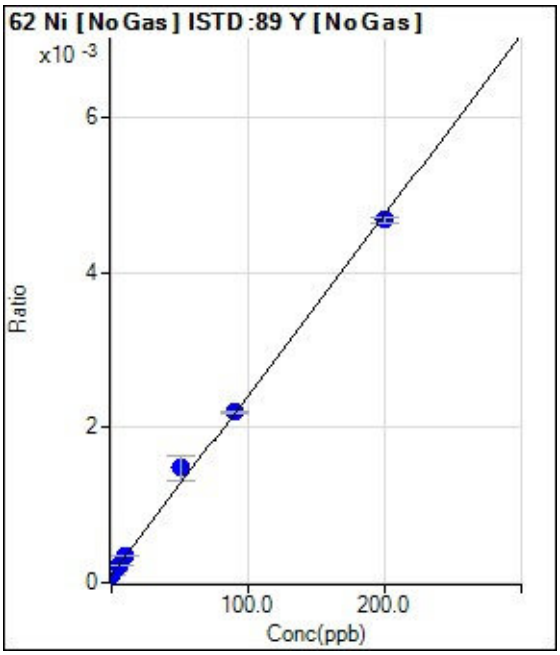


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	854.23	0.0001	P	22.0
2	☐	0.200	0.017	897.61	0.0001	P	16.8
3	☐	2.000	1.865	6304.55	0.0009	P	6.7
4	☐	5.000	4.887	15080.30	0.0020	P	2.3
5	☐	10.000	10.057	30163.83	0.0041	P	2.0
6	☐	50.000	50.498	147656.79	0.0201	P	0.8
7	☐	90.000	91.230	267644.68	0.0362	P	0.6
8	☐	200.000	199.324	579213.92	0.0789	P	0.8

y = 3.9515E-004 * x + 1.1439E-004
R = 1.0000
DL = 0.1907
BEC = 0.2895

Weight: <None>
Min Conc: <None>

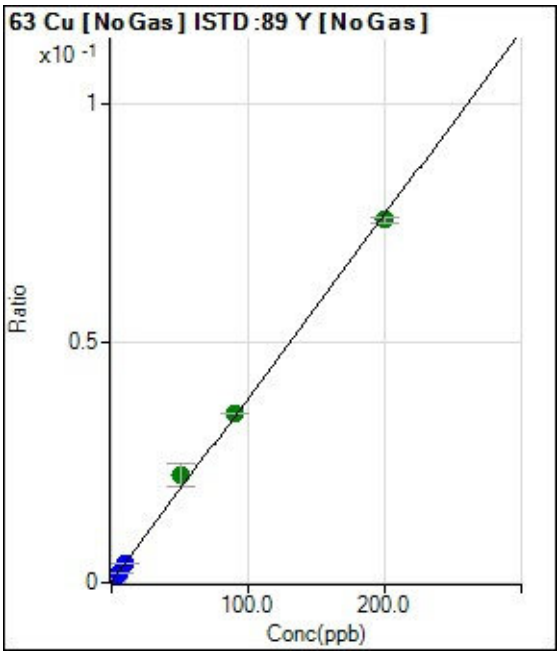
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5543.45	0.0001	P	10.4
2	☐	0.200	0.392	6014.11	0.0001	P	3.8
3	☐	2.000	2.247	8387.80	0.0002	P	7.0
4	☐	5.000	5.186	12154.51	0.0002	P	5.7
5	☐	10.000	10.704	19206.35	0.0003	P	1.6
6	☐	50.000	59.461	71646.15	0.0015	P	21.3
7	☐	90.000	90.671	121906.73	0.0022	P	0.9
8	☐	200.000	197.290	258854.11	0.0047	P	1.8

y = 2.3248E-005 * x + 9.7816E-005
R = 0.9988
DL = 1.307
BEC = 4.207

Weight: <None>
Min Conc: <None>

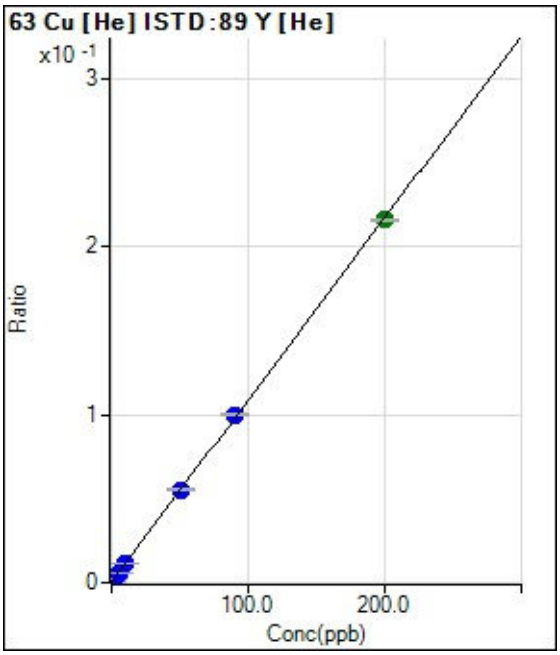


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10147.43	0.0002	P	0.4
2	☐	0.200	0.211	14629.39	0.0003	P	1.4
3	☐	2.000	1.997	52768.31	0.0009	P	1.7
4	☐	5.000	5.105	118843.27	0.0021	P	0.5
5	☐	10.000	10.158	225493.75	0.0041	P	2.4
6	☐	50.000	58.278	1087954.46	0.0225	A	22.3
7	☐	90.000	91.738	1952435.56	0.0353	A	0.3
8	☐	200.000	197.138	4182811.99	0.0757	A	1.8

y = 3.8314E-004 * x + 1.7908E-004
R = 0.9990
DL = 0.005048
BEC = 0.4674

Weight: <None>
Min Conc: <None>

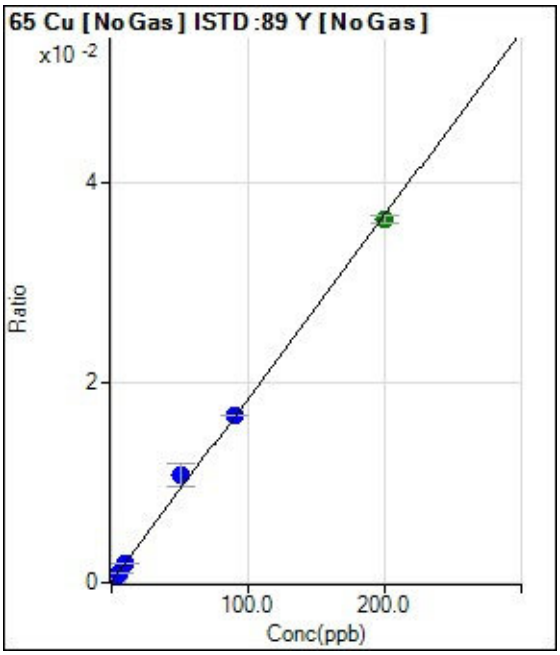
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3033.44	0.0004	P	4.8
2	☐	0.200	0.226	4835.77	0.0007	P	5.3
3	☐	2.000	2.027	19266.44	0.0026	P	1.6
4	☐	5.000	5.044	43265.65	0.0059	P	3.4
5	☐	10.000	10.081	83545.58	0.0113	P	2.5
6	☐	50.000	50.605	406189.41	0.0552	P	1.2
7	☐	90.000	91.782	738572.04	0.0998	P	1.1
8	☐	200.000	199.041	1585795.80	0.2160	A	0.6

y = 0.0011 * x + 4.0632E-004
R = 0.9999
DL = 0.05363
BEC = 0.3752

Weight: <None>
Min Conc: <None>

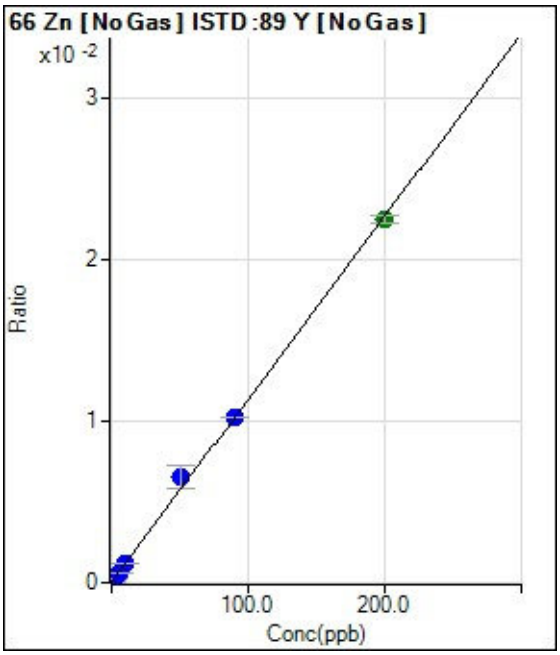


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4912.57	0.0001	P	5.7
2	☐	0.200	0.211	7048.99	0.0001	P	2.8
3	☐	2.000	2.045	25793.87	0.0005	P	1.5
4	☐	5.000	5.089	56748.42	0.0010	P	0.2
5	☐	10.000	10.155	107912.69	0.0019	P	0.4
6	☐	50.000	58.475	522423.14	0.0108	P	22.1
7	☐	90.000	90.966	926259.39	0.0168	P	0.8
8	☐	200.000	197.436	2003999.11	0.0363	A	2.1

y = 1.8329E-004 * x + 8.6687E-005
R = 0.9990
DL = 0.08031
BEC = 0.4729

Weight: <None>
Min Conc: <None>

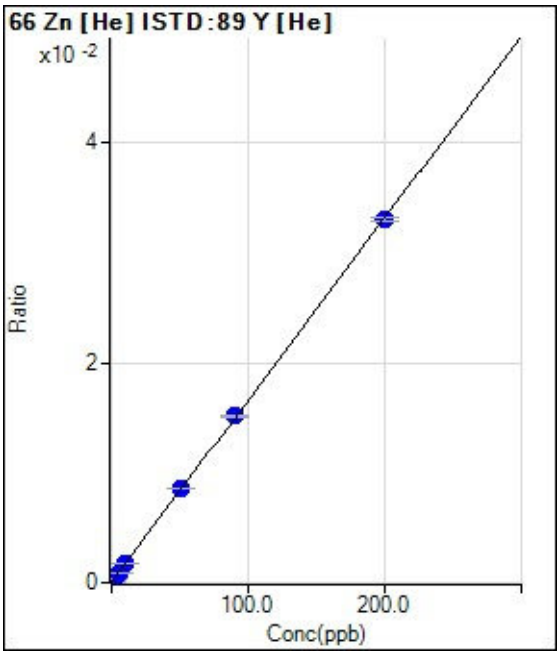
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1855.35	0.0000	P	12.2
2	☐	0.200	0.253	3457.29	0.0001	P	3.6
3	☐	2.000	2.058	14876.57	0.0003	P	5.2
4	☐	5.000	4.944	33026.71	0.0006	P	1.6
5	☐	10.000	9.974	64460.28	0.0012	P	2.1
6	☐	50.000	57.715	317749.25	0.0066	P	22.7
7	☐	90.000	89.820	564724.30	0.0102	P	0.1
8	☐	200.000	198.154	1243167.26	0.0225	A	2.1

y = 1.1340E-004 * x + 3.2753E-005
R = 0.9992
DL = 0.1058
BEC = 0.2888

Weight: <None>
Min Conc: <None>

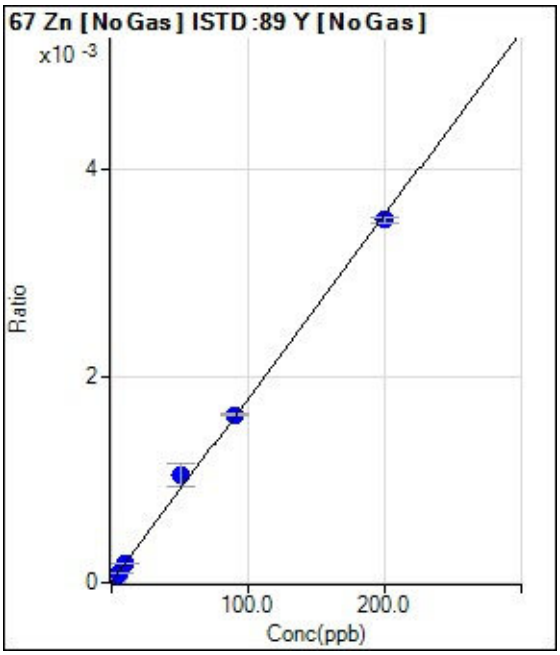


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	377.06	0.0001	P	8.0
2	☐	0.200	0.279	717.42	0.0001	P	9.4
3	☐	2.000	2.083	2926.64	0.0004	P	3.2
4	☐	5.000	5.145	6648.41	0.0009	P	5.7
5	☐	10.000	9.971	12541.85	0.0017	P	3.9
6	☐	50.000	51.098	62573.14	0.0085	P	0.5
7	☐	90.000	91.388	112265.80	0.0152	P	0.7
8	☐	200.000	199.098	242250.81	0.0330	P	1.1

y = 1.6544E-004 * x + 5.0503E-005
R = 1.0000
DL = 0.07327
BEC = 0.3053

Weight: <None>
Min Conc: <None>

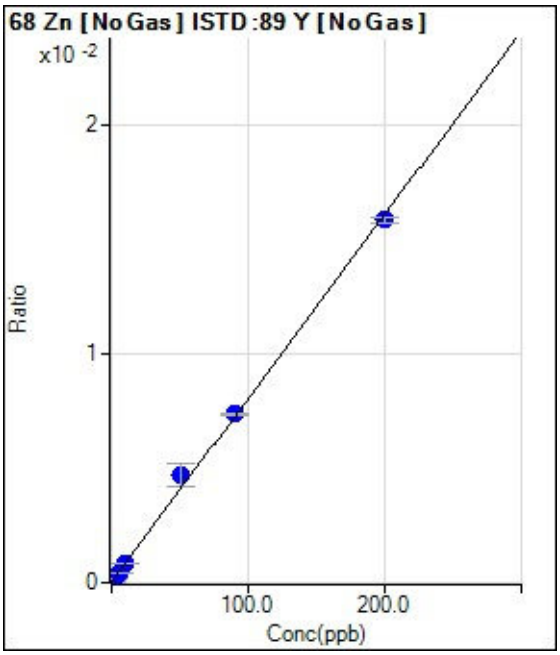
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.42	0.0000	P	15.5
2	☐	0.200	0.310	707.41	0.0000	P	10.1
3	☐	2.000	1.931	2312.56	0.0000	P	6.1
4	☐	5.000	4.975	5313.10	0.0001	P	5.9
5	☐	10.000	9.978	10210.87	0.0002	P	2.7
6	☐	50.000	58.006	50219.63	0.0010	P	21.5
7	☐	90.000	91.303	90040.74	0.0016	P	0.5
8	☐	200.000	197.414	194154.86	0.0035	P	1.9

y = 1.7766E-005 * x + 7.0658E-006
R = 0.9991
DL = 0.1852
BEC = 0.3977

Weight: <None>
Min Conc: <None>

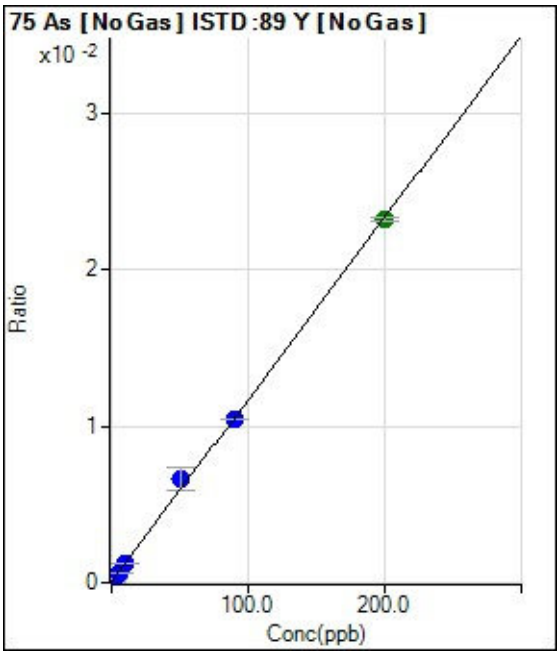


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1491.60	0.0000	P	5.6
2	☐	0.200	0.222	2482.76	0.0000	P	1.9
3	☐	2.000	1.981	10367.84	0.0002	P	1.3
4	☐	5.000	5.029	23958.71	0.0004	P	2.1
5	☐	10.000	10.226	46975.07	0.0008	P	0.3
6	☐	50.000	58.037	226734.37	0.0047	P	22.1
7	☐	90.000	91.406	407326.68	0.0074	P	1.0
8	☐	200.000	197.346	877456.08	0.0159	P	1.5

y = 8.0345E-005 * x + 2.6321E-005
R = 0.9991
DL = 0.05488
BEC = 0.3276

Weight: <None>
Min Conc: <None>

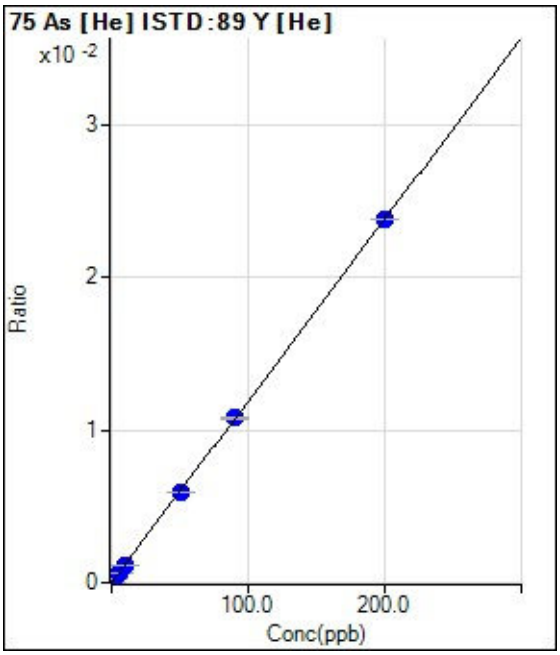
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3818.85	0.0001	P	19.4
2	☐	0.200	0.436	6638.45	0.0001	P	16.0
3	☐	2.000	1.828	15644.03	0.0003	P	11.7
4	☐	5.000	4.965	35875.62	0.0006	P	1.2
5	☐	10.000	9.929	67678.05	0.0012	P	1.1
6	☐	50.000	56.779	322127.16	0.0067	P	22.7
7	☐	90.000	88.926	575026.04	0.0104	P	0.4
8	☐	200.000	198.794	1280541.32	0.0232	A	1.0

y = 1.1625E-004 * x + 6.7375E-005
R = 0.9993
DL = 0.3365
BEC = 0.5796

Weight: <None>
Min Conc: <None>

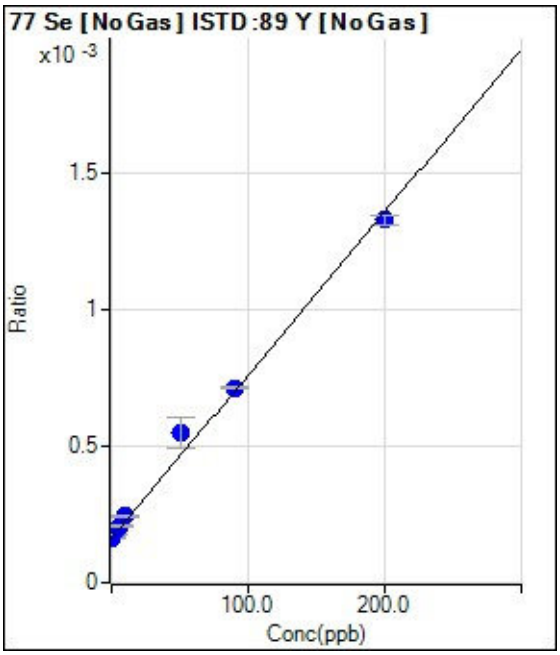


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24.44	0.0000	P	34.2
2	☐	0.200	0.201	202.23	0.0000	P	12.3
3	☐	2.000	1.896	1696.78	0.0002	P	5.0
4	☐	5.000	4.941	4362.95	0.0006	P	3.9
5	☐	10.000	9.790	8628.36	0.0012	P	2.4
6	☐	50.000	49.861	43723.72	0.0059	P	1.6
7	☐	90.000	90.544	79841.98	0.0108	P	1.4
8	☐	200.000	199.803	174802.21	0.0238	P	0.1

y = 1.1912E-004 * x + 3.2732E-006
R = 1.0000
DL = 0.0282
BEC = 0.02748

Weight: <None>
Min Conc: <None>

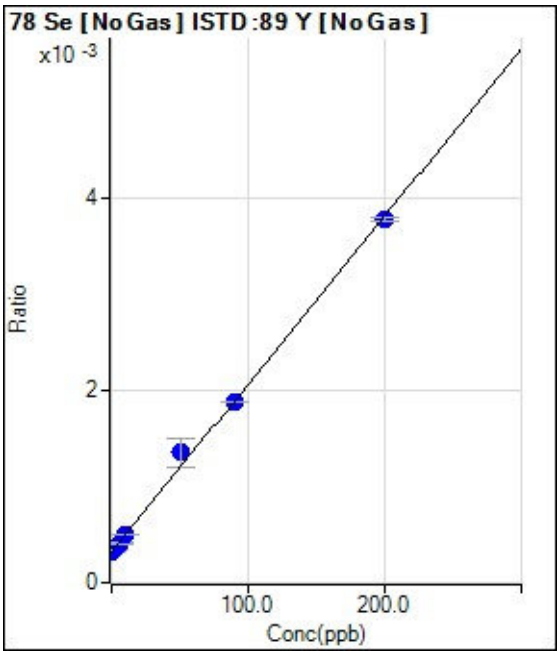
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9252.57	0.0002	P	3.2
2	☐	0.200	0.186	9249.25	0.0002	P	3.4
3	☐	2.000	3.558	10314.45	0.0002	P	6.0
4	☐	5.000	7.425	11556.70	0.0002	P	2.0
5	☐	10.000	13.614	13547.21	0.0002	P	1.8
6	☐	50.000	64.241	26476.04	0.0005	P	21.0
7	☐	90.000	92.144	39423.82	0.0007	P	0.6
8	☐	200.000	195.218	73402.58	0.0013	P	2.5

y = 5.9692E-006 * x + 1.6330E-004
R = 0.9972
DL = 2.643
BEC = 27.36

Weight: <None>
Min Conc: <None>

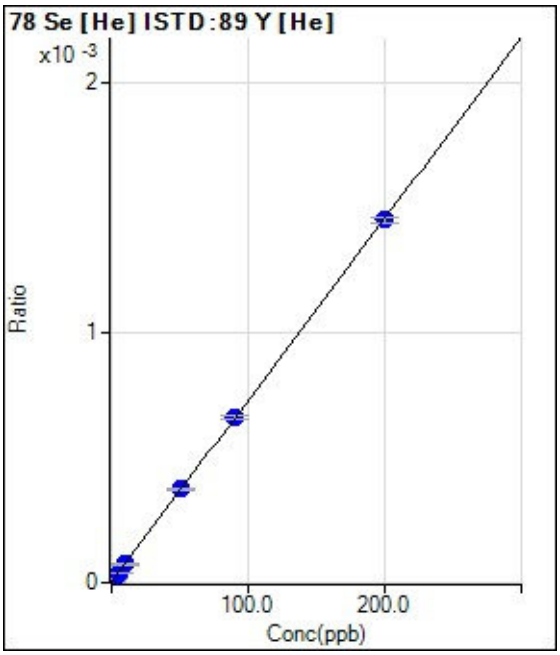


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18200.77	0.0003	P	3.6
2	☐	0.200	0.114	18180.68	0.0003	P	1.7
3	☐	2.000	1.626	19540.61	0.0003	P	0.9
4	☐	5.000	4.905	22641.93	0.0004	P	3.1
5	☐	10.000	9.899	27358.87	0.0005	P	1.3
6	☐	50.000	59.162	65383.29	0.0014	P	22.4
7	☐	90.000	89.500	103995.90	0.0019	P	0.3
8	☐	200.000	197.946	208435.70	0.0038	P	1.1

y = 1.7435E-005 * x + 3.2124E-004
R = 0.9988
DL = 2.012
BEC = 18.42

Weight: <None>
Min Conc: <None>

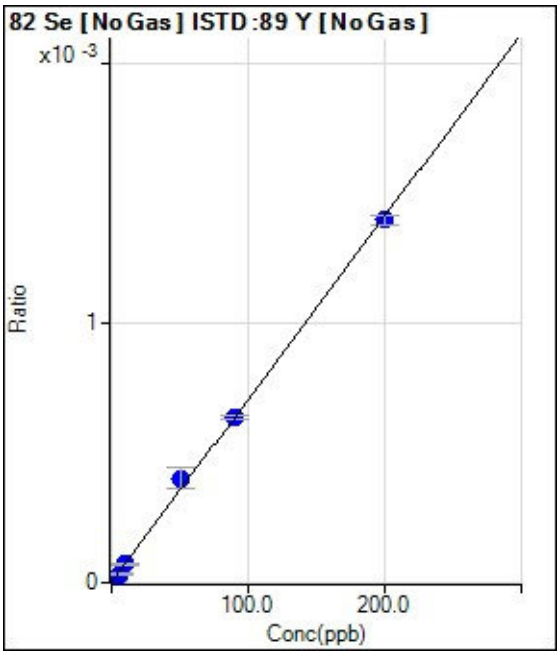
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.55	0.0000	P	27.0
2	☐	0.200	0.147	33.34	0.0000	P	34.5
3	☐	2.000	1.991	132.22	0.0000	P	16.3
4	☐	5.000	5.016	293.34	0.0000	P	5.3
5	☐	10.000	9.667	542.24	0.0001	P	7.8
6	☐	50.000	50.967	2743.63	0.0004	P	1.9
7	☐	90.000	90.755	4893.14	0.0007	P	3.0
8	☐	200.000	199.435	10640.92	0.0014	P	1.3

y = 7.2485E-006 * x + 3.4219E-006
R = 1.0000
DL = 0.3822
BEC = 0.4721

Weight: <None>
Min Conc: <None>

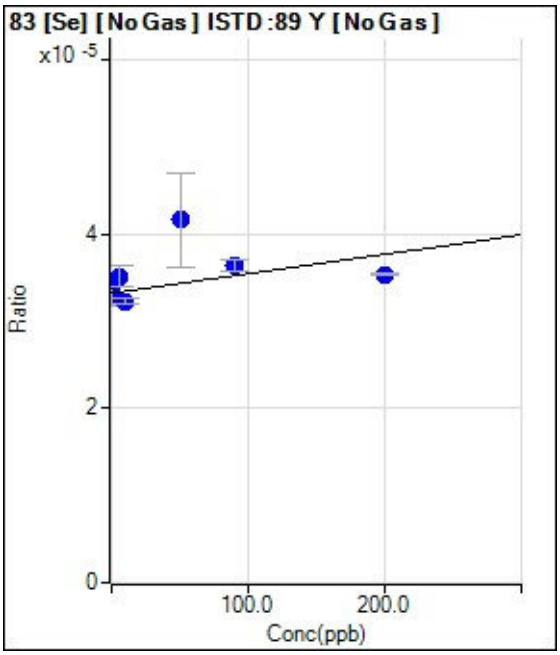


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.53	0.0000	P	101.5
2	☐	0.200	0.001	96.69	0.0000	P	171.9
3	☐	2.000	1.344	623.34	0.0000	P	42.6
4	☐	5.000	4.471	1844.70	0.0000	P	17.6
5	☐	10.000	9.989	3985.77	0.0001	P	10.7
6	☐	50.000	56.853	19475.37	0.0004	P	19.6
7	☐	90.000	90.318	35195.30	0.0006	P	2.0
8	☐	200.000	198.164	77067.34	0.0014	P	2.7

y = 7.0317E-006 * x + 1.6993E-006
R = 0.9993
DL = 0.7359
BEC = 0.2417

Weight: <None>
Min Conc: <None>

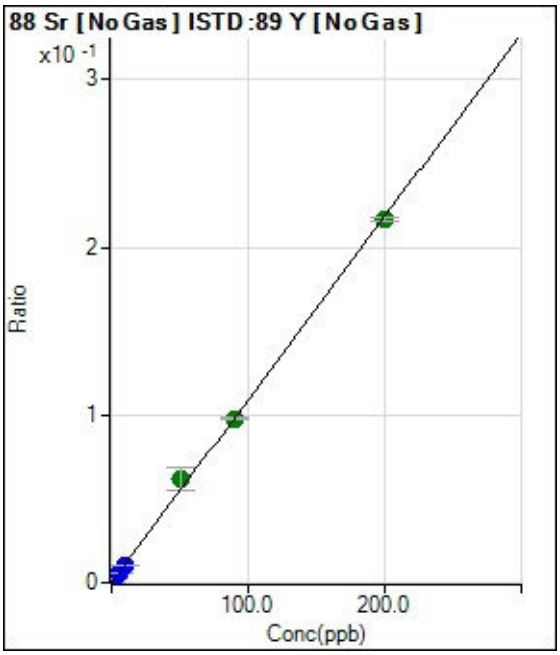
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1882.05	0.0000	P	7.4
2	☐	0.200	-2.188	1865.36	0.0000	P	8.6
3	☐	2.000	62.994	1935.45	0.0000	P	0.5
4	☐	5.000	85.773	1955.47	0.0000	P	6.8
5	☐	10.000	-42.033	1788.60	0.0000	P	2.3
6	☐	50.000	376.358	2002.19	0.0000	P	26.0
7	☐	90.000	143.062	2012.20	0.0000	P	3.9
8	☐	200.000	94.507	1952.13	0.0000	P	0.8

y = 2.2312E-008 * x + 3.3221E-005
R = 0.2891
DL = 330.4
BEC = 1489

Weight: <None>
Min Conc: <None>

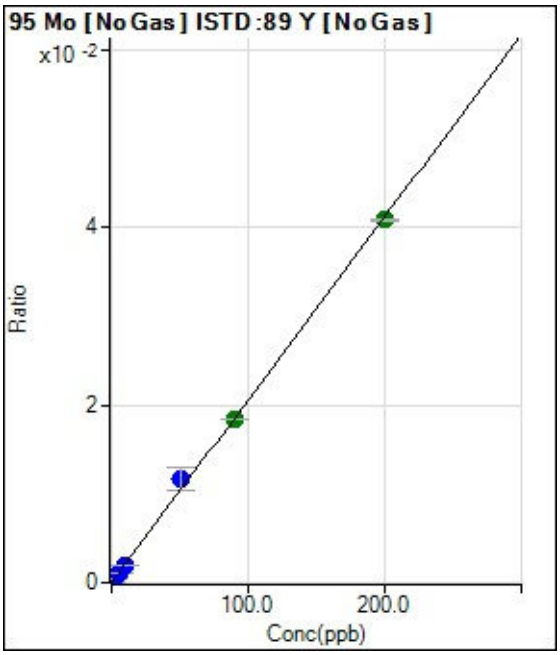


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	507.19	0.0000	P	13.0
2	☐	0.200	0.191	12191.32	0.0002	P	0.4
3	☐	2.000	1.951	119427.48	0.0021	P	1.2
4	☐	5.000	4.894	297638.92	0.0053	P	1.0
5	☐	10.000	9.921	599955.41	0.0108	P	0.2
6	☐	50.000	57.169	3014415.46	0.0624	A	22.3
7	☐	90.000	89.773	5411884.19	0.0979	A	0.5
8	☐	200.000	198.317	11952127.57	0.2163	A	1.2

y = 0.0011 * x + 8.9500E-006
R = 0.9993
DL = 0.003205
BEC = 0.008206

Weight: <None>
Min Conc: <None>

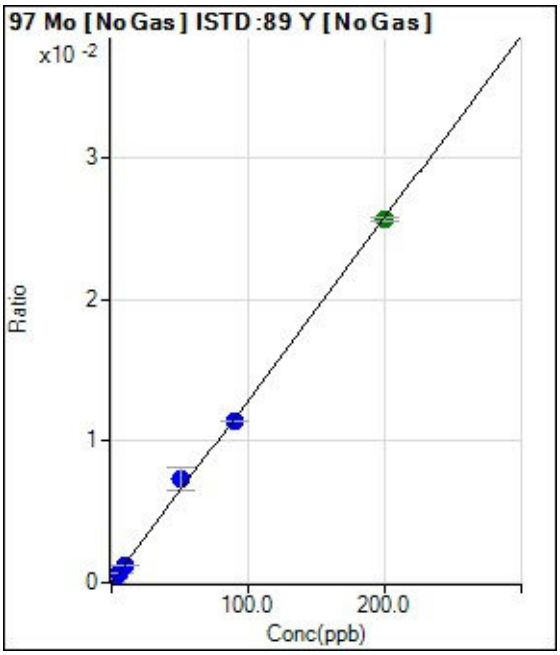
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.72	0.0000	P	3.6
2	☐	0.200	0.185	2829.85	0.0001	P	7.3
3	☐	2.000	1.917	22725.65	0.0004	P	1.7
4	☐	5.000	4.810	55758.75	0.0010	P	0.4
5	☐	10.000	9.835	112765.68	0.0020	P	0.4
6	☐	50.000	56.631	563560.49	0.0117	P	22.6
7	☐	90.000	89.517	1018529.55	0.0184	A	0.5
8	☐	200.000	198.573	2258054.36	0.0409	A	0.6

y = 2.0573E-004 * x + 1.2189E-005
R = 0.9994
DL = 0.006355
BEC = 0.05925

Weight: <None>
Min Conc: <None>

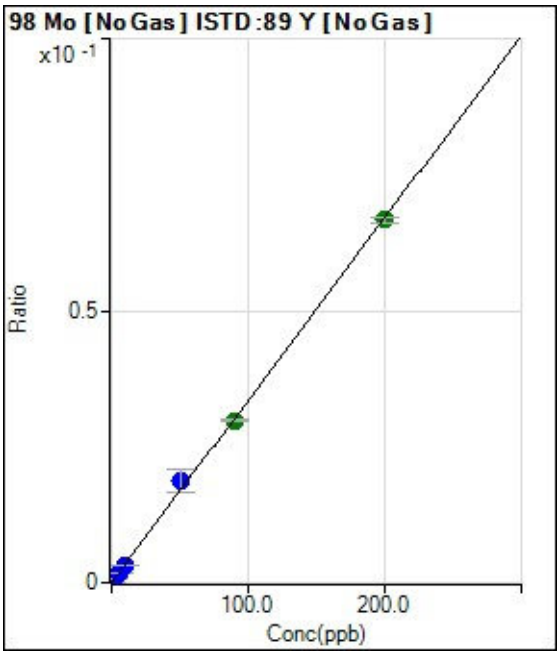


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	477.16	0.0000	P	8.3
2	☐	0.200	0.173	1721.87	0.0000	P	6.4
3	☐	2.000	1.921	14282.12	0.0003	P	0.4
4	☐	5.000	4.737	34392.25	0.0006	P	1.2
5	☐	10.000	9.873	70828.72	0.0013	P	0.9
6	☐	50.000	56.659	352829.71	0.0073	P	22.1
7	☐	90.000	88.754	631538.06	0.0114	P	0.4
8	☐	200.000	198.910	1414458.68	0.0256	A	1.1

y = 1.2865E-004 * x + 8.4204E-006
R = 0.9994
DL = 0.01634
BEC = 0.06545

Weight: <None>
Min Conc: <None>

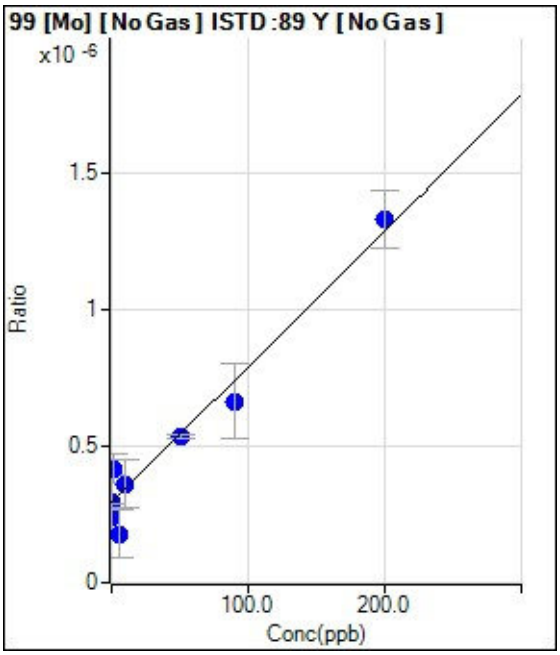
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1332.32	0.0000	P	7.8
2	☐	0.200	0.175	4626.89	0.0001	P	3.2
3	☐	2.000	1.868	36285.96	0.0006	P	2.1
4	☐	5.000	4.741	89685.23	0.0016	P	0.6
5	☐	10.000	9.611	179582.53	0.0032	P	1.7
6	☐	50.000	55.961	907570.43	0.0188	P	21.8
7	☐	90.000	88.896	1646526.38	0.0298	A	0.5
8	☐	200.000	199.034	3683932.40	0.0667	A	1.3

y = 3.3488E-004 * x + 2.3517E-005
R = 0.9995
DL = 0.01637
BEC = 0.07023

Weight: <None>
Min Conc: <None>

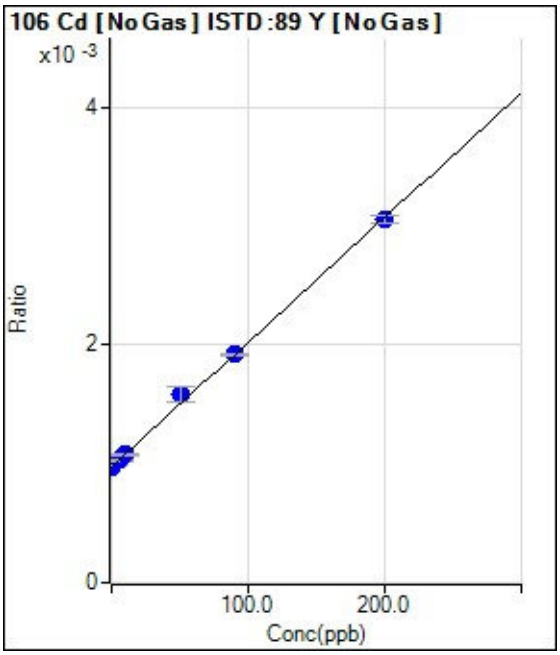


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.68	0.0000	P	69.5
2	☐	0.200	-11.451	13.35	0.0000	P	44.1
3	☐	2.000	24.777	23.36	0.0000	P	24.9
4	☐	5.000	-23.179	10.01	0.0000	P	100.0
5	☐	10.000	13.496	20.02	0.0000	P	50.1
6	☐	50.000	48.223	26.69	0.0000	P	2.8
7	☐	90.000	74.105	36.70	0.0000	P	41.3
8	☐	200.000	207.911	73.41	0.0000	P	15.8

y = 4.9729E-009 * x + 2.9473E-007
R = 0.9780
DL = 123.6
BEC = 59.27

Weight: <None>
Min Conc: <None>

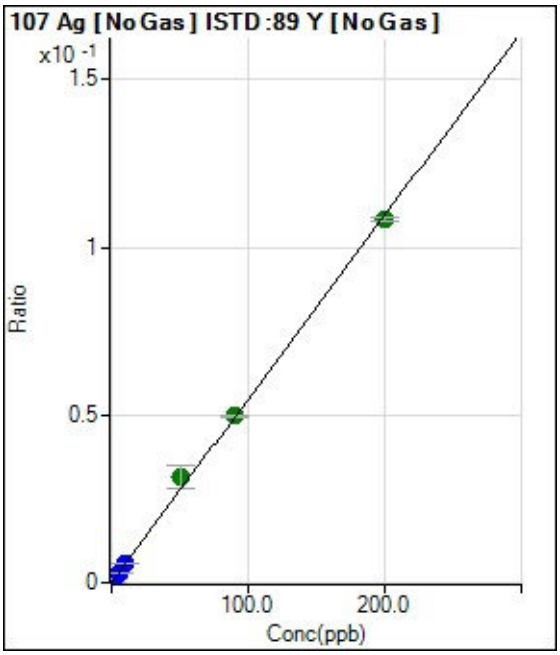
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55270.81	0.0010	P	1.9
2	☐	0.200	-0.196	54751.33	0.0010	P	0.2
3	☐	2.000	1.948	55662.89	0.0010	P	1.4
4	☐	5.000	5.403	57448.64	0.0010	P	1.8
5	☐	10.000	9.586	59610.51	0.0011	P	1.6
6	☐	50.000	58.263	78108.29	0.0016	P	8.3
7	☐	90.000	89.903	106024.06	0.0019	P	0.2
8	☐	200.000	197.990	168609.79	0.0031	P	2.3

y = 1.0489E-005 * x + 9.7540E-004
R = 0.9990
DL = 5.43
BEC = 92.99

Weight: <None>
Min Conc: <None>

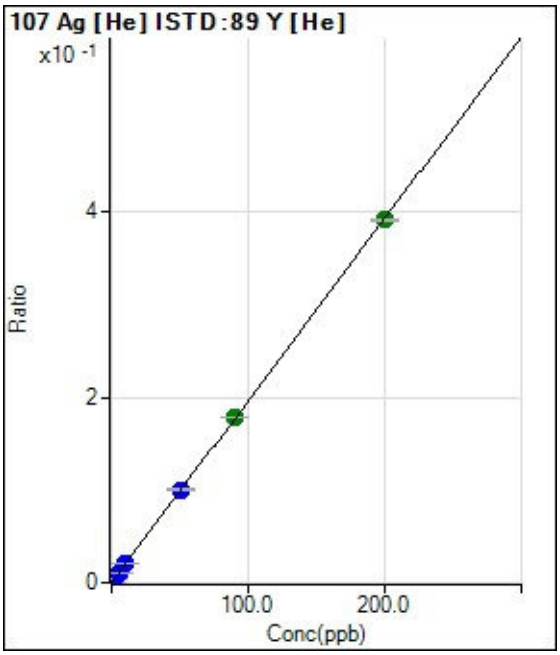


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1454.53	0.0000	P	4.5
2	☐	0.200	0.213	7991.33	0.0001	P	0.8
3	☐	2.000	2.036	63668.94	0.0011	P	0.6
4	☐	5.000	5.107	156927.19	0.0028	P	0.1
5	☐	10.000	10.126	308218.53	0.0056	P	1.0
6	☐	50.000	57.932	1532738.90	0.0317	A	22.3
7	☐	90.000	90.659	2741901.77	0.0496	A	0.7
8	☐	200.000	197.711	5976339.48	0.1082	A	1.1

y = 5.4695E-004 * x + 2.5671E-005
R = 0.9991
DL = 0.006269
BEC = 0.04693

Weight: <None>
Min Conc: <None>

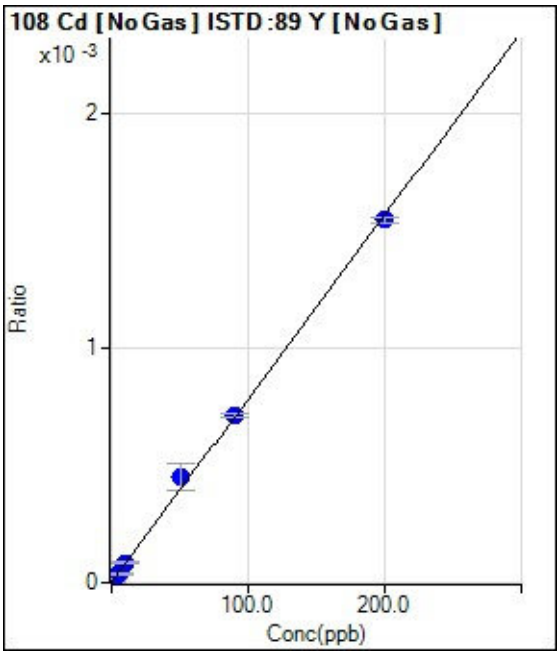
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	754.12	0.0001	P	1.9
2	☐	0.200	0.220	3957.95	0.0005	P	5.6
3	☐	2.000	2.049	30566.11	0.0041	P	1.5
4	☐	5.000	5.089	74442.98	0.0101	P	1.2
5	☐	10.000	10.170	148138.54	0.0201	P	0.4
6	☐	50.000	51.144	739963.38	0.1006	P	0.8
7	☐	90.000	90.632	1318419.02	0.1781	A	0.6
8	☐	200.000	199.418	2877480.09	0.3918	A	0.4

y = 0.0020 * x + 1.0101E-004
R = 1.0000
DL = 0.00287
BEC = 0.05142

Weight: <None>
Min Conc: <None>

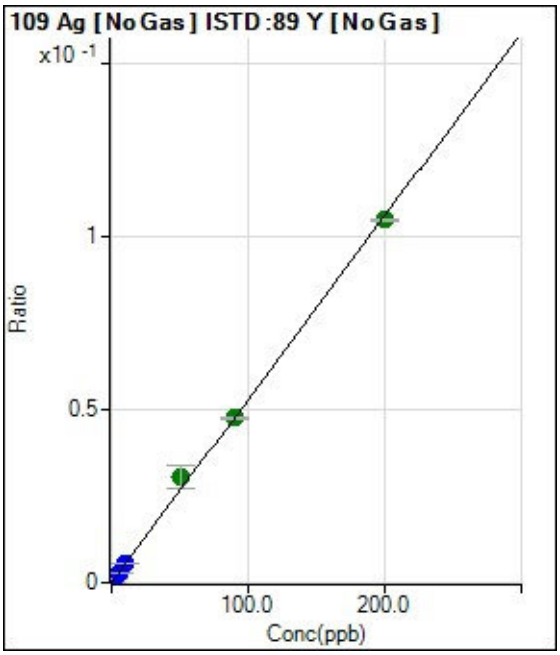


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.08	0.0000	P	43.5
2	☐	0.200	0.305	213.55	0.0000	P	20.9
3	☐	2.000	2.197	1037.76	0.0000	P	7.4
4	☐	5.000	4.627	2088.96	0.0000	P	8.1
5	☐	10.000	10.672	4692.28	0.0001	P	6.0
6	☐	50.000	57.702	21756.59	0.0005	P	25.3
7	☐	90.000	91.057	39368.05	0.0007	P	1.9
8	☐	200.000	197.572	85302.00	0.0015	P	1.3

y = 7.8069E-006 * x + 1.4149E-006
R = 0.9991
DL = 0.2367
BEC = 0.1812

Weight: <None>
Min Conc: <None>

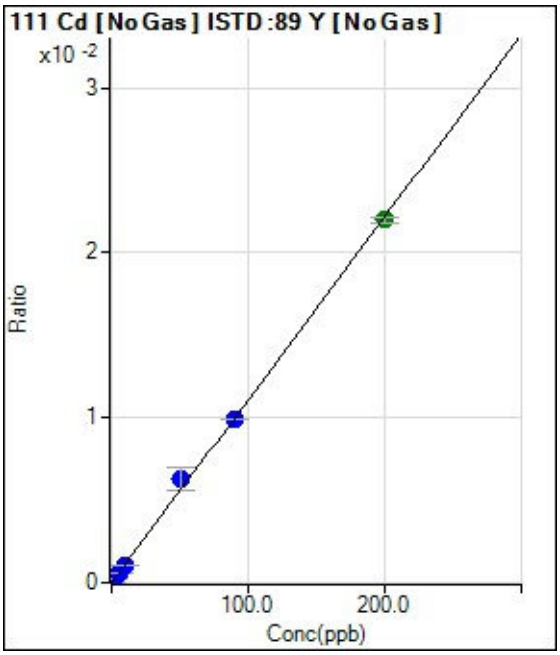
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	997.72	0.0000	P	18.0
2	☐	0.200	0.207	7152.56	0.0001	P	3.7
3	☐	2.000	2.027	60854.49	0.0011	P	0.4
4	☐	5.000	5.061	149856.76	0.0027	P	1.3
5	☐	10.000	10.078	296011.66	0.0053	P	1.6
6	☐	50.000	57.934	1481011.28	0.0306	A	22.2
7	☐	90.000	90.038	2630983.07	0.0476	A	0.9
8	☐	200.000	197.993	5783239.29	0.1047	A	0.3

y = 5.2851E-004 * x + 1.7612E-005
R = 0.9991
DL = 0.01804
BEC = 0.03332

Weight: <None>
Min Conc: <None>

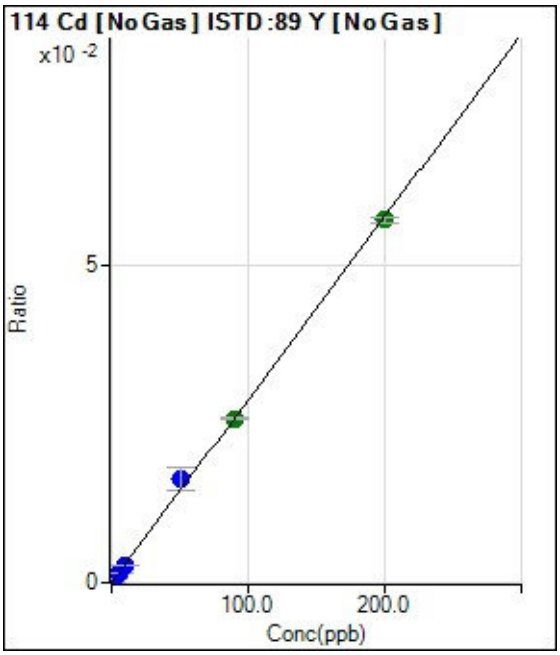


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-75.93	0.0000	P	-41.9
2	☐	0.200	0.185	1075.38	0.0000	P	3.5
3	☐	2.000	1.965	12094.22	0.0002	P	1.6
4	☐	5.000	4.939	30385.46	0.0005	P	0.6
5	☐	10.000	9.724	59603.42	0.0011	P	1.0
6	☐	50.000	57.104	306167.62	0.0063	P	21.3
7	☐	90.000	89.279	546587.75	0.0099	P	0.6
8	☐	200.000	198.564	1215311.60	0.0220	A	1.8

y = 1.1079E-004 * x - 1.3414E-006
R = 0.9993
DL = 0.01521
BEC = -0.01211

Weight: <None>
Min Conc: <None>

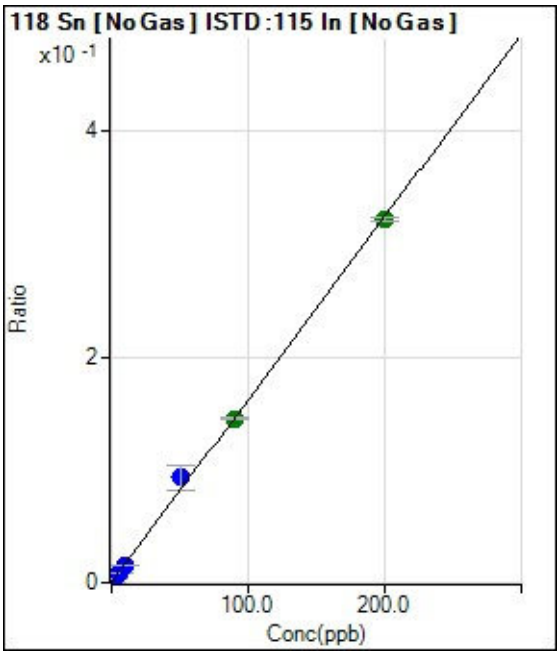
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.74	0.0000	P	40.1
2	☐	0.200	0.186	3096.85	0.0001	P	3.3
3	☐	2.000	1.963	31773.90	0.0006	P	1.1
4	☐	5.000	4.862	78270.22	0.0014	P	1.1
5	☐	10.000	9.858	157863.58	0.0028	P	0.2
6	☐	50.000	57.197	799520.75	0.0165	P	21.7
7	☐	90.000	89.549	1429986.08	0.0259	A	1.1
8	☐	200.000	198.415	3167239.22	0.0573	A	1.8

y = 2.8893E-004 * x + 1.3555E-006
R = 0.9993
DL = 0.005646
BEC = 0.004692

Weight: <None>
Min Conc: <None>

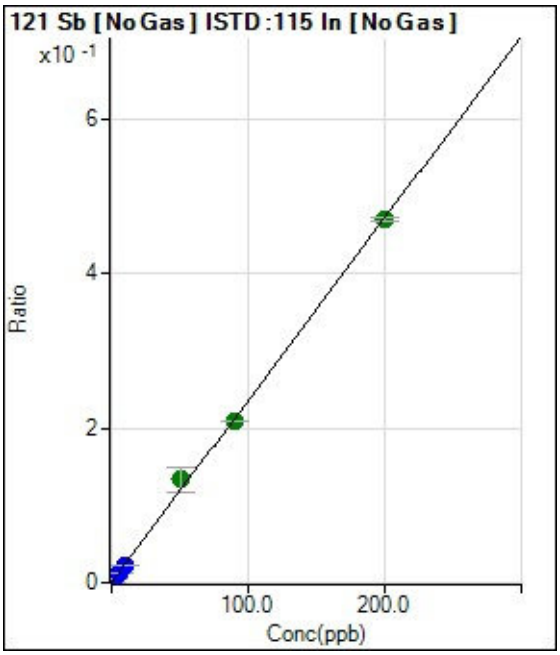


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3363.79	0.0003	P	1.3
2	☐	0.200	0.171	6777.34	0.0005	P	1.4
3	☐	2.000	1.903	41275.70	0.0034	P	1.1
4	☐	5.000	4.866	100229.99	0.0081	P	1.2
5	☐	10.000	9.788	196689.68	0.0161	P	0.5
6	☐	50.000	57.275	986080.72	0.0930	P	23.5
7	☐	90.000	89.541	1765345.34	0.1452	A	0.9
8	☐	200.000	198.403	3868625.40	0.3215	A	1.0

y = 0.0016 * x + 2.7174E-004
R = 0.9992
DL = 0.006306
BEC = 0.1679

Weight: <None>
Min Conc: <None>

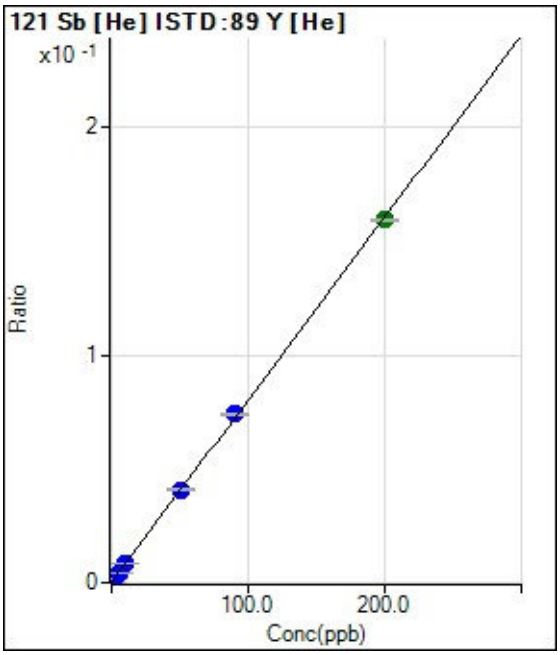
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3281.54	0.0003	P	8.6
2	☐	0.200	0.147	7562.21	0.0006	P	3.7
3	☐	2.000	1.875	57691.61	0.0047	P	0.2
4	☐	5.000	4.781	141856.03	0.0115	P	0.8
5	☐	10.000	9.702	282302.54	0.0231	P	1.0
6	☐	50.000	56.411	1412306.78	0.1332	A	23.7
7	☐	90.000	88.414	2536361.08	0.2087	A	0.8
8	☐	200.000	199.133	5651280.05	0.4696	A	1.0

y = 0.0024 * x + 2.6514E-004
R = 0.9994
DL = 0.02916
BEC = 0.1125

Weight: <None>
Min Conc: <None>

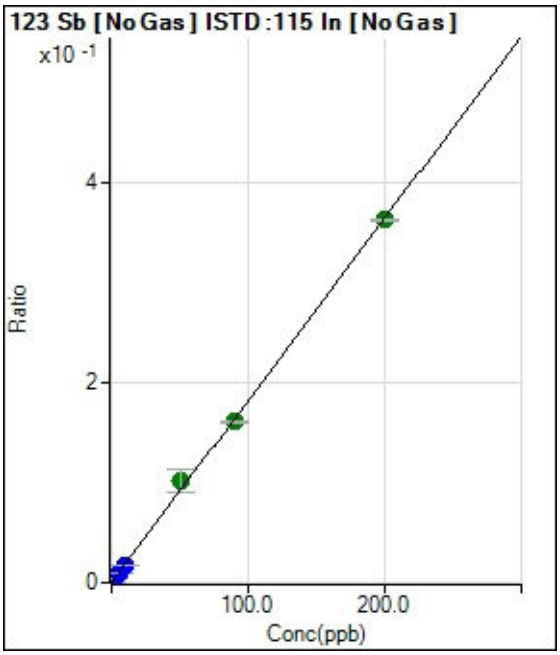


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	863.37	0.0001	P	10.8
2	☐	0.200	0.157	1793.49	0.0002	P	8.5
3	☐	2.000	1.973	12559.55	0.0017	P	1.1
4	☐	5.000	4.938	30011.29	0.0041	P	1.0
5	☐	10.000	10.009	59997.05	0.0081	P	1.4
6	☐	50.000	50.906	300838.19	0.0409	P	0.7
7	☐	90.000	92.281	547872.96	0.0740	P	1.5
8	☐	200.000	198.748	1169812.35	0.1593	A	0.4

y = 8.0093E-004 * x + 1.1564E-004
R = 0.9999
DL = 0.04696
BEC = 0.1444

Weight: <None>
Min Conc: <None>

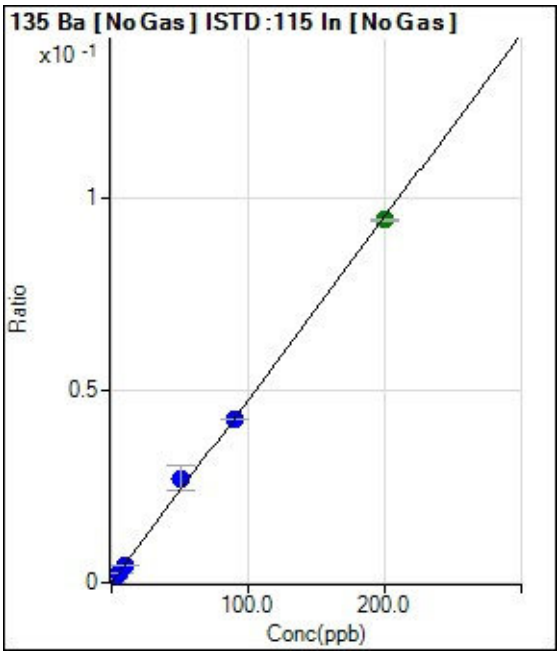
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2683.01	0.0002	P	9.3
2	☐	0.200	0.146	5957.42	0.0005	P	3.9
3	☐	2.000	1.857	44235.74	0.0036	P	0.6
4	☐	5.000	4.749	108833.98	0.0088	P	1.4
5	☐	10.000	9.580	215156.30	0.0176	P	1.3
6	☐	50.000	56.155	1085130.68	0.1023	A	23.2
7	☐	90.000	88.217	1951769.43	0.1606	A	0.8
8	☐	200.000	199.292	4361994.30	0.3625	A	0.4

y = 0.0018 * x + 2.1677E-004
R = 0.9994
DL = 0.03338
BEC = 0.1193

Weight: <None>
Min Conc: <None>

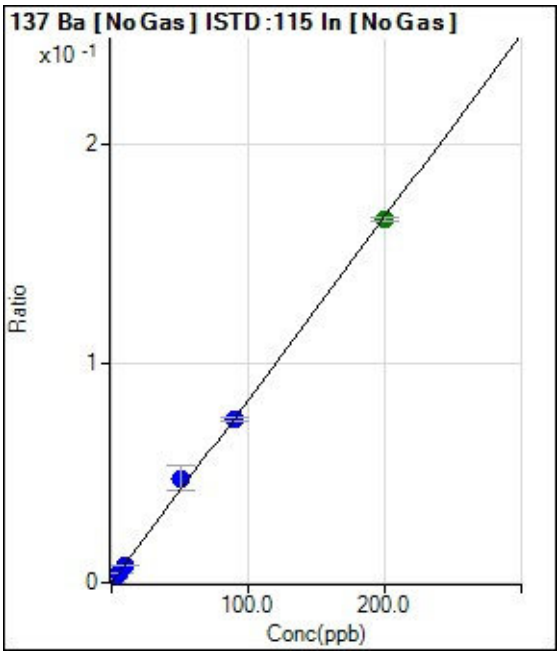


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.41	0.0000	P	28.3
2	☐	0.200	0.192	1201.28	0.0001	P	5.9
3	☐	2.000	1.912	11249.62	0.0009	P	0.3
4	☐	5.000	4.892	28643.70	0.0023	P	1.2
5	☐	10.000	9.873	57282.99	0.0047	P	0.7
6	☐	50.000	57.181	288003.16	0.0272	P	23.4
7	☐	90.000	89.498	516646.75	0.0425	P	0.5
8	☐	200.000	198.441	1134066.54	0.0942	A	0.7

y = 4.7484E-004 * x + 5.9299E-006
R = 0.9993
DL = 0.01061
BEC = 0.01249

Weight: <None>
Min Conc: <None>

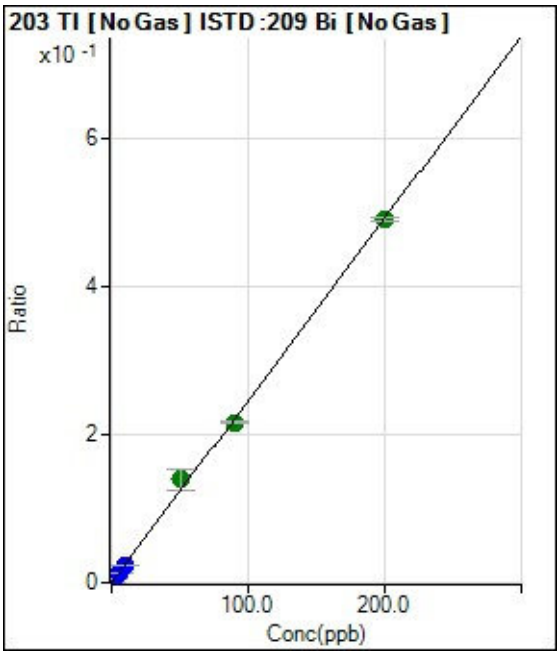
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.83	0.0000	P	4.0
2	☐	0.200	0.200	2219.12	0.0002	P	12.9
3	☐	2.000	1.950	20149.43	0.0016	P	0.4
4	☐	5.000	4.951	50843.78	0.0041	P	1.4
5	☐	10.000	9.682	98492.38	0.0081	P	1.5
6	☐	50.000	57.293	505228.37	0.0477	P	24.2
7	☐	90.000	89.236	902817.09	0.0743	P	1.7
8	☐	200.000	198.538	1988567.63	0.1652	A	1.1

y = 8.3222E-004 * x + 1.3479E-005
R = 0.9992
DL = 0.001965
BEC = 0.0162

Weight: <None>
Min Conc: <None>

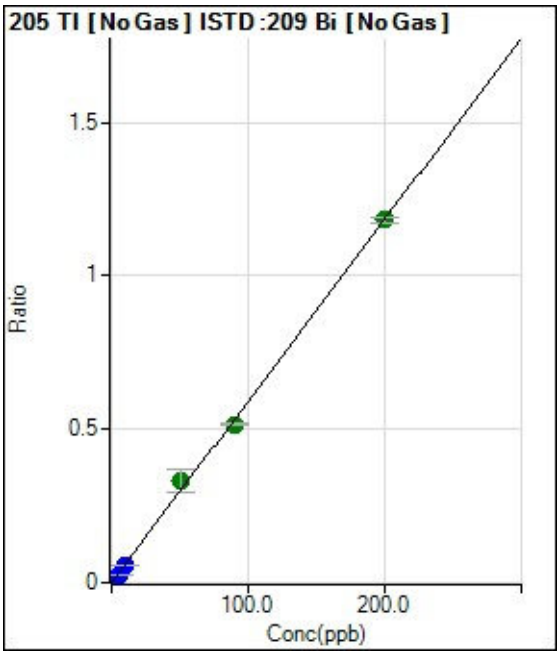


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	390.40	0.0000	P	8.6
2	☐	0.200	0.188	5306.55	0.0005	P	9.2
3	☐	2.000	1.865	48700.38	0.0046	P	2.0
4	☐	5.000	4.777	124864.04	0.0118	P	1.4
5	☐	10.000	9.627	248501.92	0.0237	P	0.5
6	☐	50.000	56.532	1252707.61	0.1391	A	21.6
7	☐	90.000	88.078	2220241.34	0.2168	A	0.4
8	☐	200.000	199.258	4863225.84	0.4903	A	1.0

y = 0.0025 * x + 3.7022E-005
R = 0.9993
DL = 0.003886
BEC = 0.01505

Weight: <None>
Min Conc: <None>

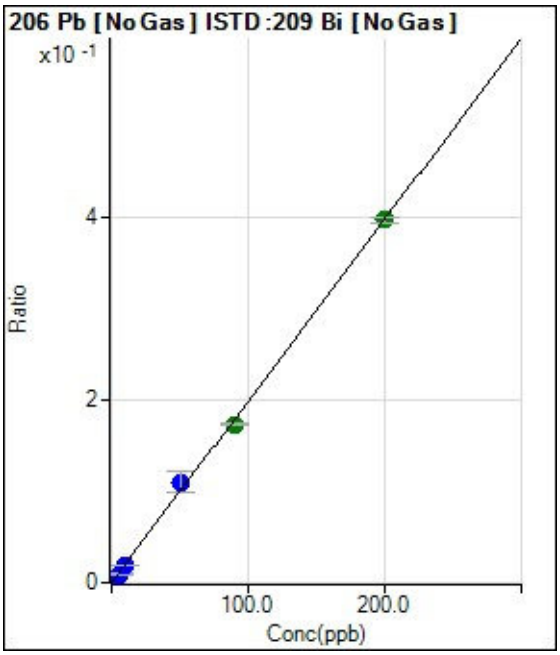
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	951.01	0.0001	P	4.3
2	☐	0.200	0.177	12074.77	0.0011	P	2.9
3	☐	2.000	1.882	118115.76	0.0112	P	0.9
4	☐	5.000	4.692	294790.00	0.0278	P	0.7
5	☐	10.000	9.462	587044.29	0.0560	P	0.6
6	☐	50.000	56.026	2984069.70	0.3314	A	21.6
7	☐	90.000	86.944	5267723.36	0.5143	A	1.1
8	☐	200.000	199.905	11726310.50	1.1824	A	1.7

y = 0.0059 * x + 9.0232E-005
R = 0.9993
DL = 0.001948
BEC = 0.01526

Weight: <None>
Min Conc: <None>

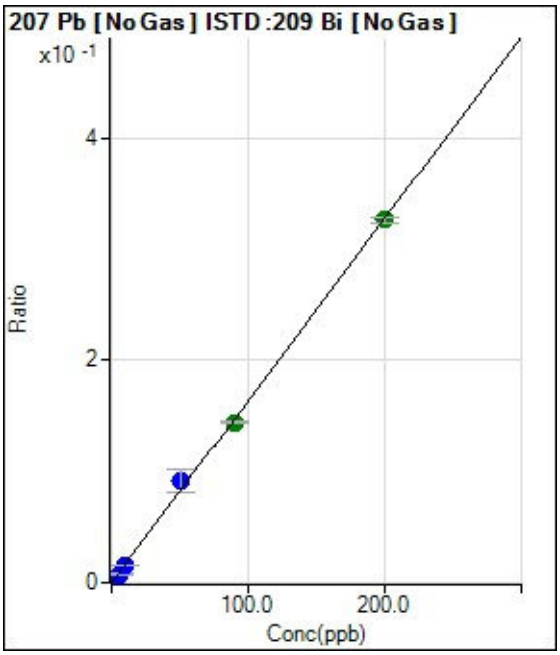


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1381.49	0.0001	P	19.8
2	☐	0.200	0.173	5042.81	0.0005	P	1.8
3	☐	2.000	1.884	40694.09	0.0039	P	0.7
4	☐	5.000	4.689	99793.08	0.0094	P	1.3
5	☐	10.000	9.517	198925.42	0.0190	P	0.9
6	☐	50.000	55.466	991139.30	0.1101	P	21.4
7	☐	90.000	87.237	1772120.30	0.1730	A	2.1
8	☐	200.000	199.910	3930558.48	0.3963	A	1.7

y = 0.0020 * x + 1.3095E-004
R = 0.9995
DL = 0.03915
BEC = 0.06607

Weight: <None>
Min Conc: <None>

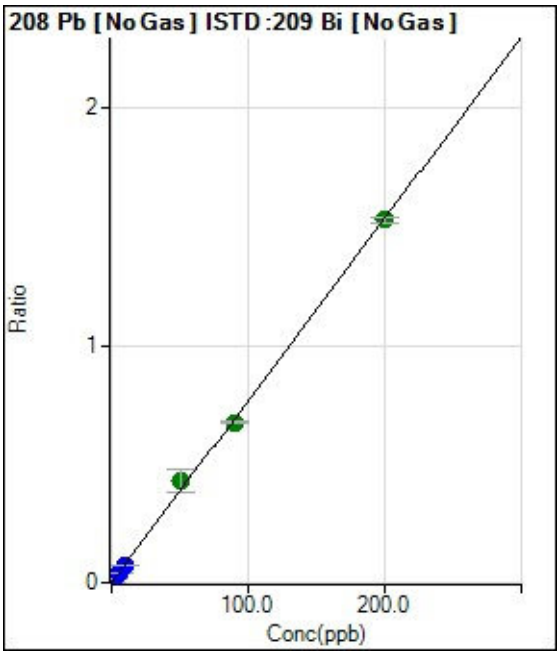
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1147.90	0.0001	P	5.2
2	☐	0.200	0.180	4295.12	0.0004	P	3.9
3	☐	2.000	1.912	34047.40	0.0032	P	1.1
4	☐	5.000	4.655	81728.78	0.0077	P	1.6
5	☐	10.000	9.493	163665.73	0.0156	P	0.5
6	☐	50.000	55.796	820992.53	0.0913	P	22.6
7	☐	90.000	88.038	1475073.62	0.1440	A	1.4
8	☐	200.000	199.469	3234840.37	0.3262	A	1.3

y = 0.0016 * x + 1.0888E-004
R = 0.9995
DL = 0.01037
BEC = 0.06661

Weight: <None>
Min Conc: <None>

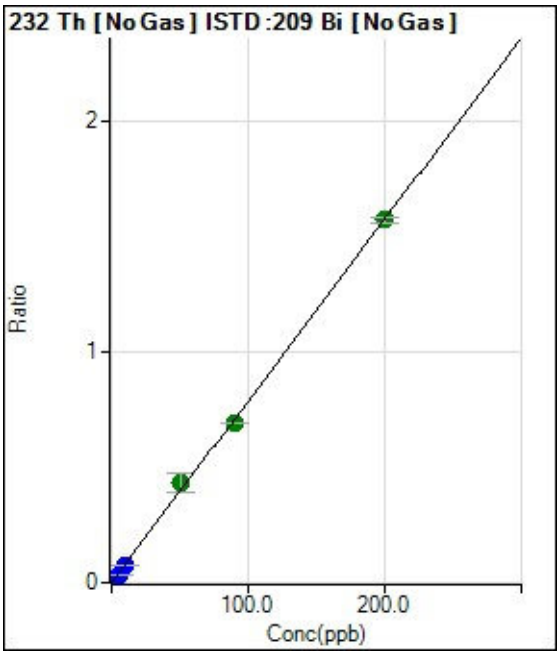


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5355.93	0.0005	P	9.4
2	☐	0.200	0.177	19796.26	0.0019	P	1.0
3	☐	2.000	1.915	159765.10	0.0152	P	0.1
4	☐	5.000	4.734	389345.78	0.0368	P	1.1
5	☐	10.000	9.550	771412.48	0.0737	P	0.2
6	☐	50.000	55.912	3856715.16	0.4287	A	22.2
7	☐	90.000	88.118	6917635.41	0.6754	A	1.3
8	☐	200.000	199.399	15151307.69	1.5277	A	1.3

y = 0.0077 * x + 5.0788E-004
R = 0.9995
DL = 0.01875
BEC = 0.06631

Weight: <None>
Min Conc: <None>

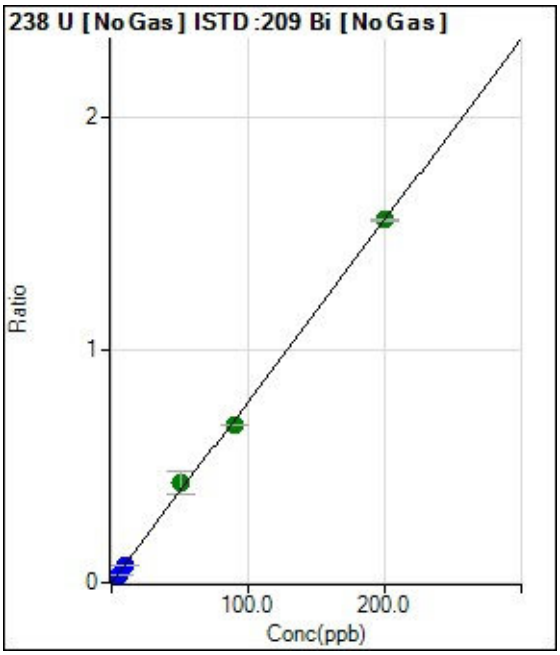
Calibration for 157_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7122.64	0.0007	P	8.3
2	☐	0.200	0.131	18145.22	0.0017	P	1.2
3	☐	2.000	1.670	145225.23	0.0138	P	0.6
4	☐	5.000	4.424	375170.30	0.0354	P	1.3
5	☐	10.000	9.136	758864.05	0.0725	P	0.4
6	☐	50.000	54.988	3898720.60	0.4327	A	21.0
7	☐	90.000	87.766	7069834.22	0.6902	A	0.8
8	☐	200.000	199.819	15578005.95	1.5706	A	1.6

y = 0.0079 * x + 6.7545E-004
R = 0.9996
DL = 0.02146
BEC = 0.08597

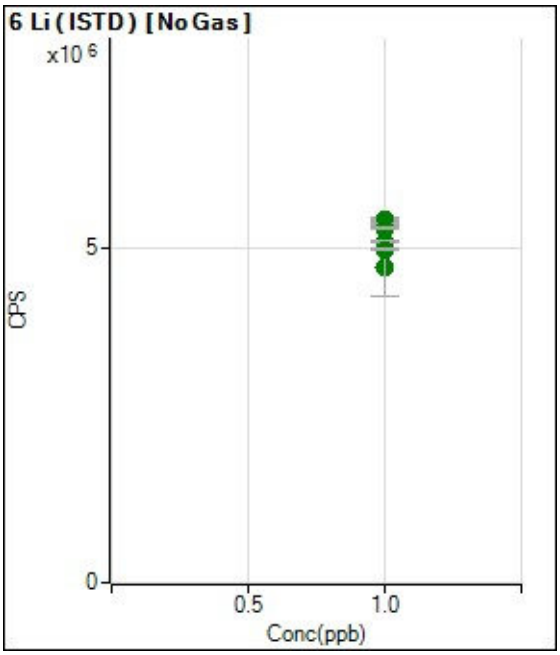
Weight: <None>
Min Conc: <None>



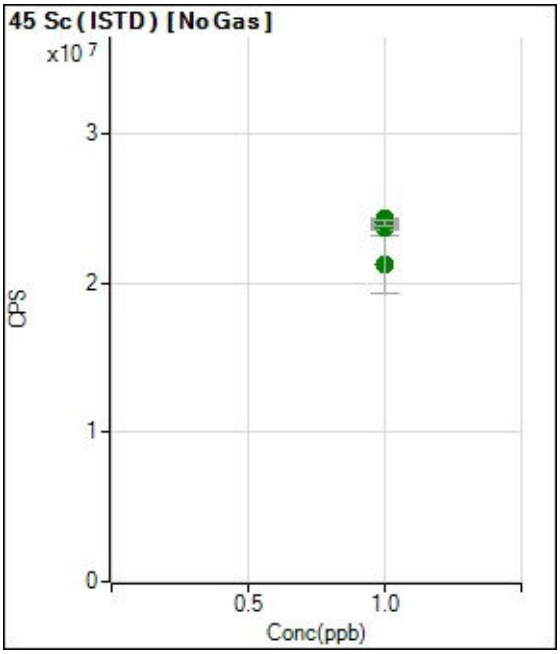
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	764.14	0.0001	P	6.1
2	☐	0.200	0.180	15696.07	0.0015	P	0.9
3	☐	2.000	1.860	153624.18	0.0146	P	0.9
4	☐	5.000	4.640	384234.00	0.0363	P	1.9
5	☐	10.000	9.319	762617.20	0.0728	P	1.1
6	☐	50.000	55.242	3882746.40	0.4312	A	21.6
7	☐	90.000	86.943	6951430.40	0.6787	A	0.4
8	☐	200.000	200.110	15491987.02	1.5619	A	0.8

y = 0.0078 * x + 7.2472E-005
R = 0.9995
DL = 0.001707
BEC = 0.009285

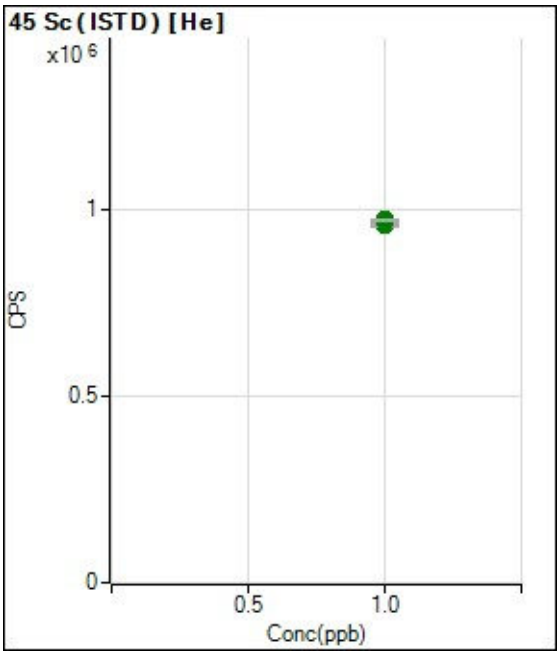
Weight: <None>
Min Conc: <None>



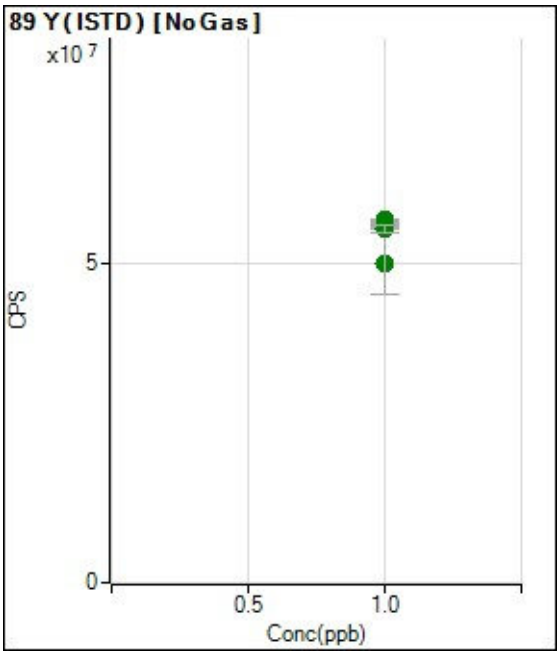
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5406885.91		A	1.1
2	☐	1.000		5387915.44		A	1.0
3	☐	1.000		5368572.24		A	0.3
4	☐	1.000		5338894.63		A	0.5
5	☐	1.000		5282328.95		A	0.7
6	☐	1.000		4686129.10		A	17.5
7	☐	1.000		5080914.79		A	0.6
8	☐	1.000		4966395.88		A	0.7



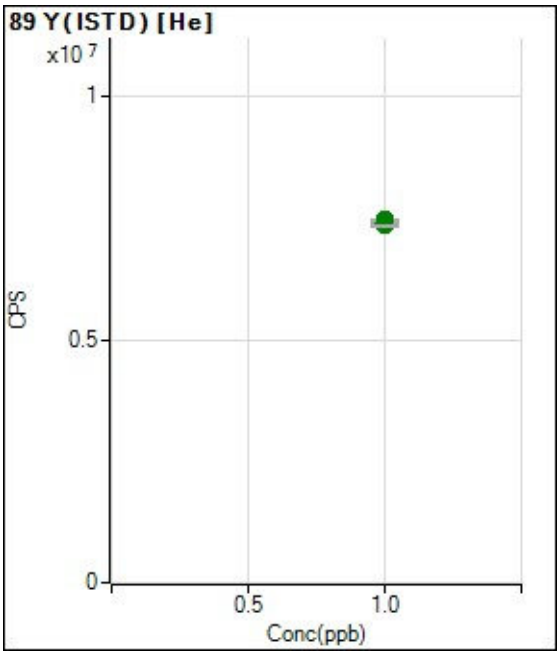
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		24326295.51		A	0.3
2	☐	1.000		24093214.10		A	0.4
3	☐	1.000		24019436.98		A	0.5
4	☐	1.000		23921401.45		A	0.4
5	☐	1.000		23677202.25		A	0.6
6	☐	1.000		21333024.32		A	18.1
7	☐	1.000		23692863.75		A	0.9
8	☐	1.000		24088253.30		A	1.5



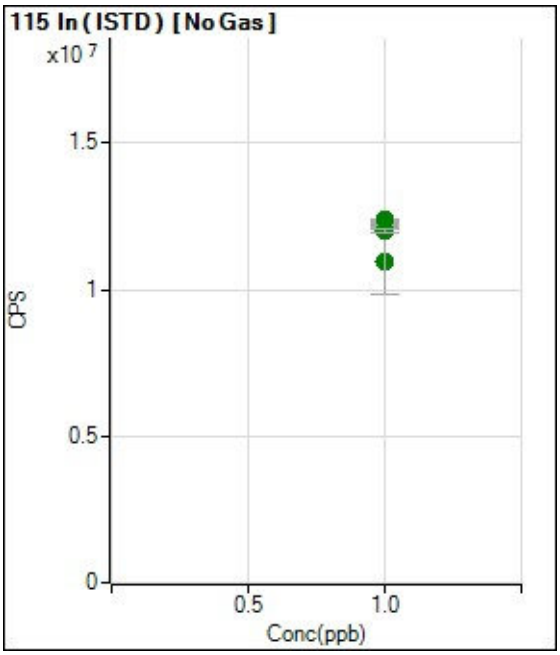
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		970797.15		A	0.5
2	☐	1.000		962494.20		A	0.3
3	☐	1.000		964303.78		A	0.2
4	☐	1.000		957541.59		A	0.3
5	☐	1.000		962329.06		A	0.5
6	☐	1.000		955295.66		A	0.7
7	☐	1.000		967352.63		A	1.4
8	☐	1.000		971099.82		A	0.3



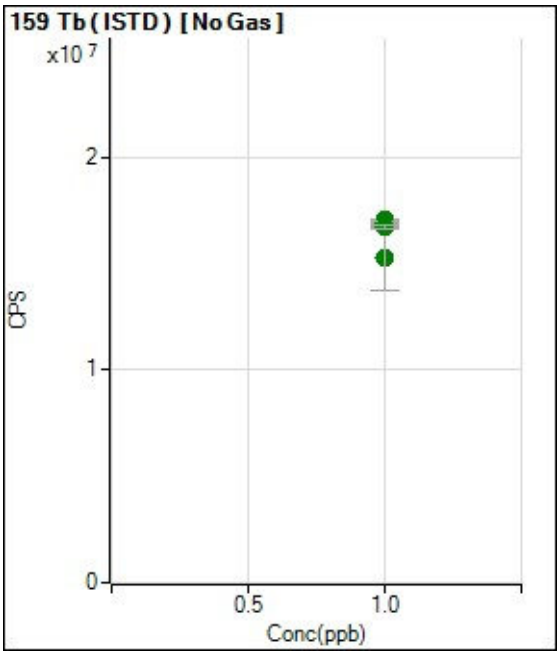
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		56662702.82		A	0.4
2	☐	1.000		56250288.74		A	0.7
3	☐	1.000		55894869.98		A	0.2
4	☐	1.000		55664301.08		A	0.4
5	☐	1.000		55397637.75		A	0.9
6	☐	1.000		49760964.40		A	19.3
7	☐	1.000		55267157.27		A	0.5
8	☐	1.000		55258875.66		A	1.9



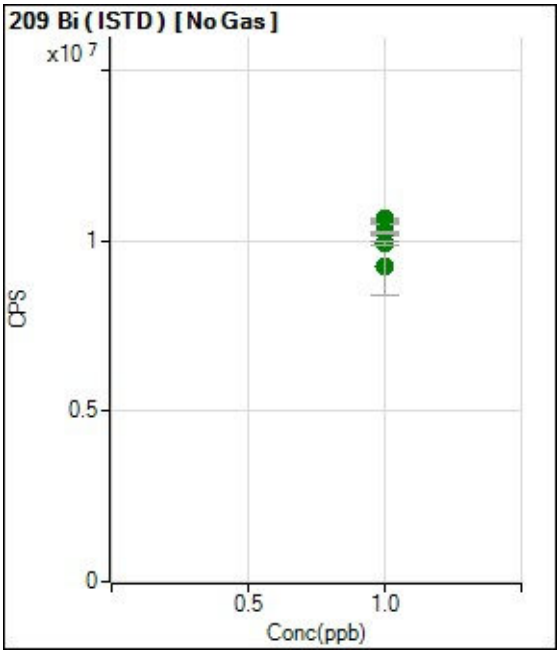
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7465540.55		A	0.2
2	☐	1.000		7421834.35		A	0.1
3	☐	1.000		7406275.66		A	0.2
4	☐	1.000		7372660.38		A	0.7
5	☐	1.000		7377997.80		A	0.4
6	☐	1.000		7358016.99		A	1.0
7	☐	1.000		7401251.68		A	1.2
8	☐	1.000		7343496.64		A	0.7



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12379434.81		A	0.8
2	☐	1.000		12347000.31		A	0.6
3	☐	1.000		12312818.87		A	0.5
4	☐	1.000		12299534.30		A	0.8
5	☐	1.000		12203258.04		A	0.4
6	☐	1.000		10954167.53		A	20.4
7	☐	1.000		12155795.14		A	0.8
8	☐	1.000		12034138.87		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		17053216.17		A	0.4
2	☐	1.000		17027938.39		A	1.2
3	☐	1.000		16935959.74		A	0.1
4	☐	1.000		17061007.71		A	0.3
5	☐	1.000		16905661.11		A	1.2
6	☐	1.000		15248800.50		A	19.4
7	☐	1.000		16912261.88		A	0.9
8	☐	1.000		16750573.94		A	1.0



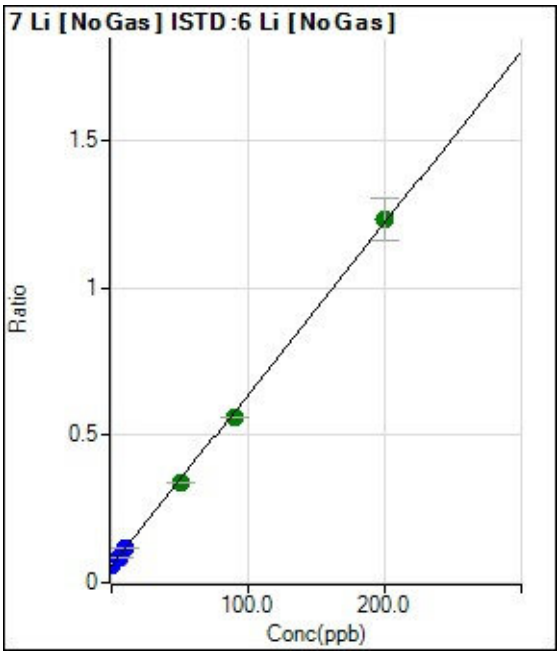
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10541485.14		A	0.6
2	☐	1.000		10634691.80		A	0.2
3	☐	1.000		10528250.42		A	0.3
4	☐	1.000		10589336.52		A	0.5
5	☐	1.000		10473919.31		A	0.1
6	☐	1.000		9257809.36		A	19.1
7	☐	1.000		10242877.65		A	0.7
8	☐	1.000		9918903.49		A	1.4

Calibration for 391_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b\
Analysis File: ICPMS3_201130.batch.bin
DA Date-Time: 2020-12-01 10:23:25
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	382CALB.d	std 1	2020-12-01 01:25:59
2	383CALS.d	std 2	2020-12-01 01:27:38
3	384CALS.d	std 3	2020-12-01 01:29:16
4	385CALS.d	std 4	2020-12-01 01:30:54
5	386CALS.d	std 5	2020-12-01 01:32:33
6	387CALS.d	std 6	2020-12-01 01:34:12
7	388CALS.d	std 7	2020-12-01 01:35:58
8	389CALS.d	std 8	2020-12-01 01:37:47

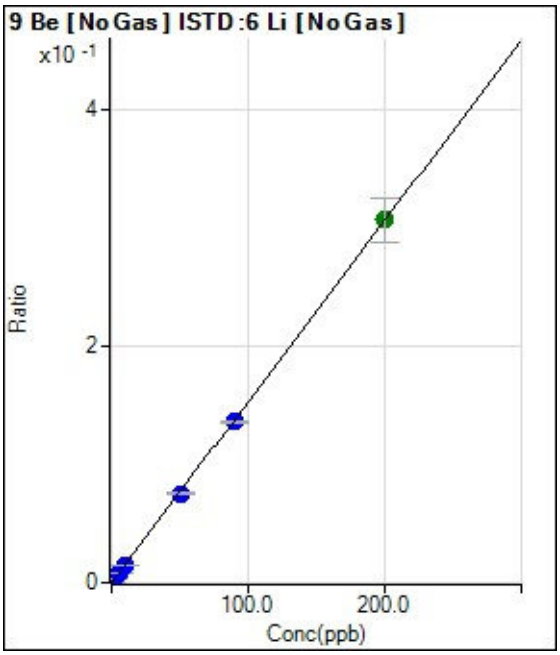
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	202455.30	0.0571	P	0.3
2	☐	0.200	0.244	208416.88	0.0585	P	0.5
3	☐	2.000	2.003	244225.24	0.0687	P	0.8
4	☐	5.000	5.061	304897.24	0.0865	P	0.3
5	☐	10.000	9.934	401903.77	0.1149	P	0.2
6	☐	50.000	48.391	1167902.17	0.3386	A	0.5
7	☐	90.000	86.745	1928141.43	0.5617	A	0.6
8	☐	200.000	201.869	3989844.02	1.2314	A	11.6

y = 0.0058 * x + 0.0571
R = 0.9998
DL = 0.08369
BEC = 9.813

Weight: <None>
Min Conc: <None>

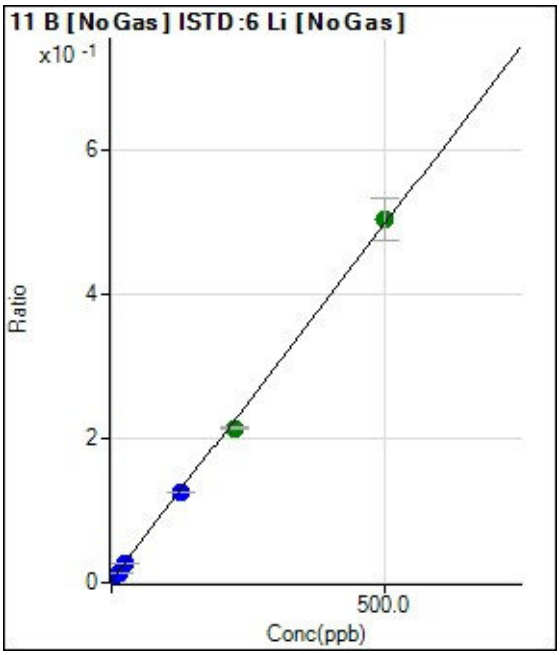


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.45	0.0000	P	4.9
2	☐	0.200	0.194	1167.90	0.0003	P	9.2
3	☐	2.000	1.915	10497.87	0.0030	P	0.9
4	☐	5.000	4.836	26120.60	0.0074	P	0.6
5	☐	10.000	9.624	51498.72	0.0147	P	0.1
6	☐	50.000	49.306	259670.16	0.0753	P	0.5
7	☐	90.000	89.075	466774.20	0.1360	P	0.7
8	☐	200.000	200.613	991468.53	0.3062	A	12.5

y = 0.0015 * x + 3.1987E-005
R = 1.0000
DL = 0.003108
BEC = 0.02096

Weight: <None>
Min Conc: <None>

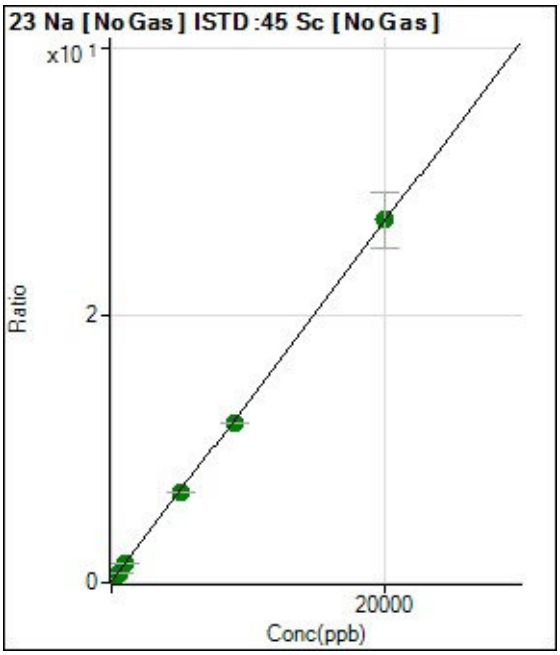
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12107.48	0.0034	P	1.5
2	☐	0.500	-0.043	12010.66	0.0034	P	1.3
3	☐	5.000	4.110	26565.16	0.0075	P	1.8
4	☐	12.500	11.025	50430.64	0.0143	P	1.6
5	☐	25.000	23.245	92329.98	0.0264	P	0.8
6	☐	125.000	122.924	430890.89	0.1249	P	0.5
7	☐	225.000	213.294	735463.56	0.2142	A	0.7
8	☐	500.000	505.921	1631344.52	0.5035	A	11.7

y = 9.8847E-004 * x + 0.0034
R = 0.9997
DL = 0.1588
BEC = 3.454

Weight: <None>
Min Conc: <None>

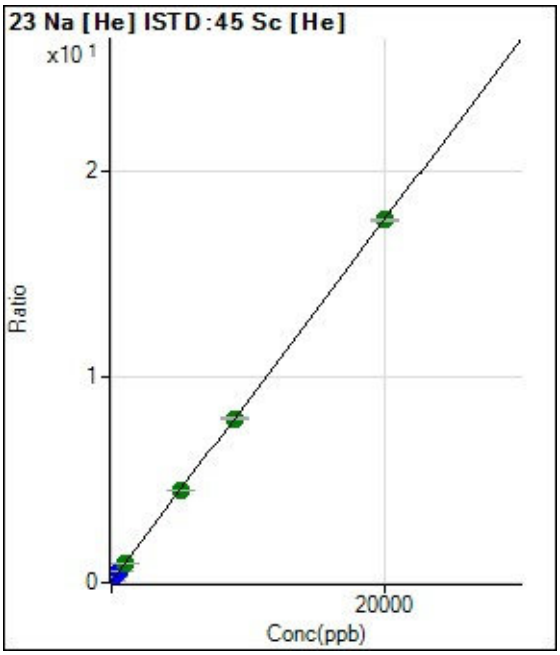


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1617078.52	0.0895	A	0.5
2	☐	20.000	18.640	2076612.29	0.1146	A	0.8
3	☐	200.000	194.869	6363342.33	0.3517	A	0.3
4	☐	500.000	494.653	13562384.68	0.7550	A	1.4
5	☐	1000.000	976.456	25191750.04	1.4033	A	0.8
6	☐	5000.000	4956.459	121663073.55	6.7582	A	0.9
7	☐	9000.000	8811.219	215602179.82	11.9447	A	0.7
8	☐	20000.000	20097.200	466833810.43	27.1295	A	15.3

y = 0.0013 * x + 0.0895
R = 0.9999
DL = 1.065
BEC = 66.52

Weight: <None>
Min Conc: <None>

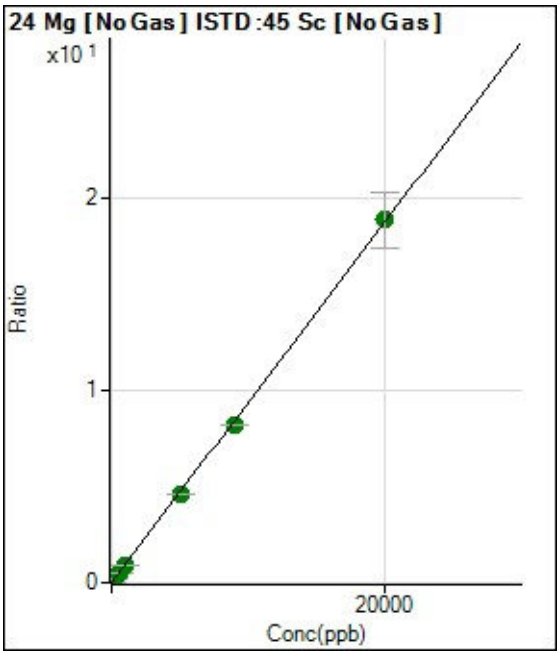
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	52943.29	0.0677	P	1.5
2	☐	20.000	17.237	65141.64	0.0828	P	1.2
3	☐	200.000	201.863	193469.06	0.2447	P	0.7
4	☐	500.000	515.110	409387.96	0.5195	P	0.6
5	☐	1000.000	985.616	735103.89	0.9322	A	0.2
6	☐	5000.000	5027.823	3525550.26	4.4778	A	1.4
7	☐	9000.000	9008.861	6268471.99	7.9697	A	0.8
8	☐	20000.000	19989.382	13828263.96	17.6012	A	0.3

y = 8.7714E-004 * x + 0.0677
R = 1.0000
DL = 3.463
BEC = 77.13

Weight: <None>
Min Conc: <None>

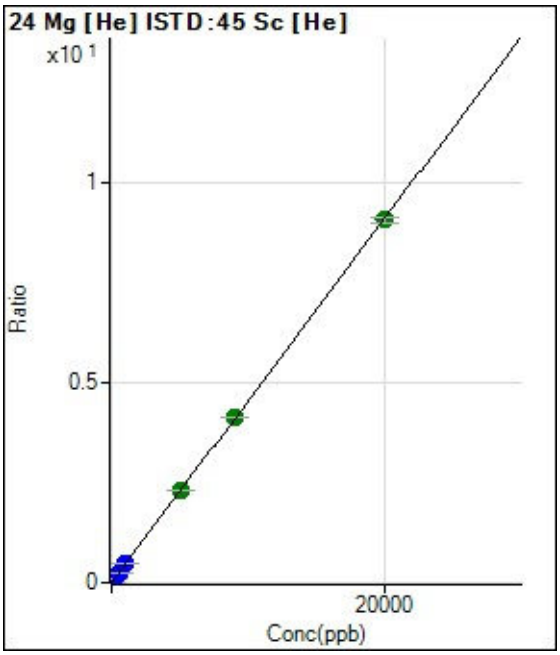


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40461.63	0.0022	P	4.2
2	☐	20.000	19.925	378569.94	0.0209	P	1.0
3	☐	200.000	195.011	3342819.74	0.1847	A	0.5
4	☐	500.000	492.163	8313998.21	0.4628	A	0.2
5	☐	1000.000	975.124	16423396.01	0.9148	A	0.4
6	☐	5000.000	4887.169	82375795.44	4.5761	A	0.9
7	☐	9000.000	8738.880	147663381.13	8.1808	A	0.8
8	☐	20000.000	20147.201	324390208.50	18.8577	A	15.6

y = 9.3588E-004 * x + 0.0022
R = 0.9999
DL = 0.3038
BEC = 2.393

Weight: <None>
Min Conc: <None>

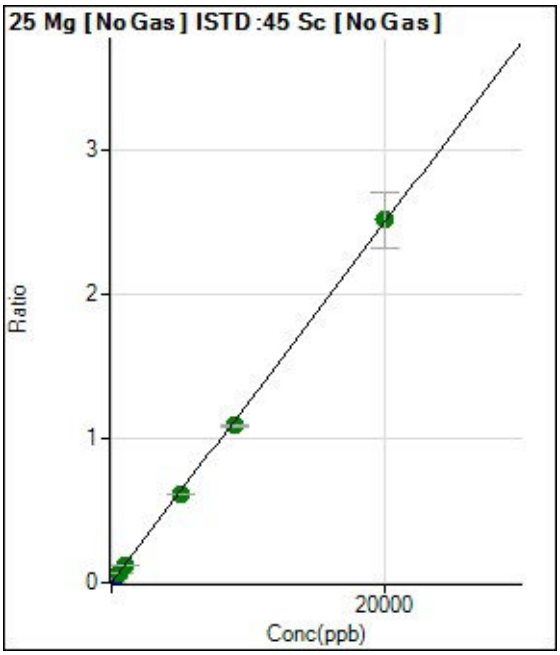
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	666.73	0.0009	P	10.2
2	☐	20.000	19.657	7696.02	0.0098	P	13.3
3	☐	200.000	211.444	76575.05	0.0969	P	2.0
4	☐	500.000	531.649	190904.11	0.2422	P	0.9
5	☐	1000.000	1059.960	380133.25	0.4821	P	2.4
6	☐	5000.000	5090.147	1820444.19	2.3120	A	0.7
7	☐	9000.000	9080.633	3243502.24	4.1238	A	0.5
8	☐	20000.000	19937.275	7112924.69	9.0532	A	1.5

y = 4.5404E-004 * x + 8.5252E-004
R = 1.0000
DL = 0.572
BEC = 1.878

Weight: <None>
Min Conc: <None>

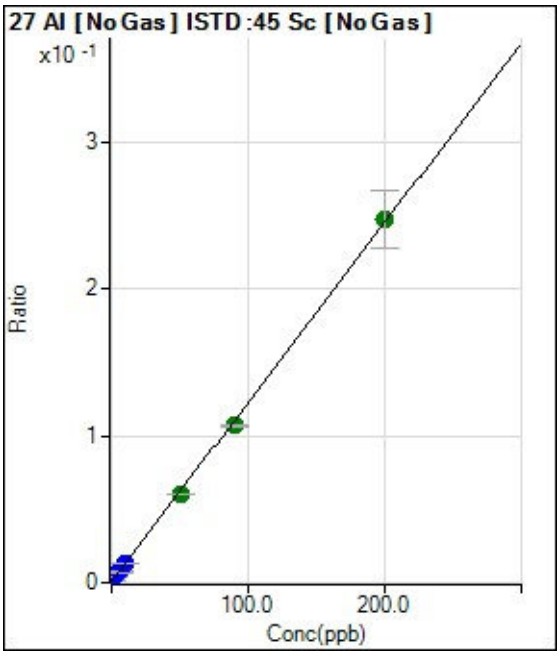


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5254.68	0.0003	P	4.8
2	☐	20.000	19.616	49651.76	0.0027	P	1.8
3	☐	200.000	201.156	459640.58	0.0254	P	1.0
4	☐	500.000	493.101	1110943.26	0.0618	A	1.4
5	☐	1000.000	969.673	2178361.17	0.1213	A	0.3
6	☐	5000.000	4880.289	10972242.34	0.6095	A	0.6
7	☐	9000.000	8727.189	19670225.13	1.0898	A	0.8
8	☐	20000.000	20154.370	43294599.36	2.5163	A	15.5

y = 1.2484E-004 * x + 2.9080E-004
R = 0.9999
DL = 0.3342
BEC = 2.329

Weight: <None>
Min Conc: <None>

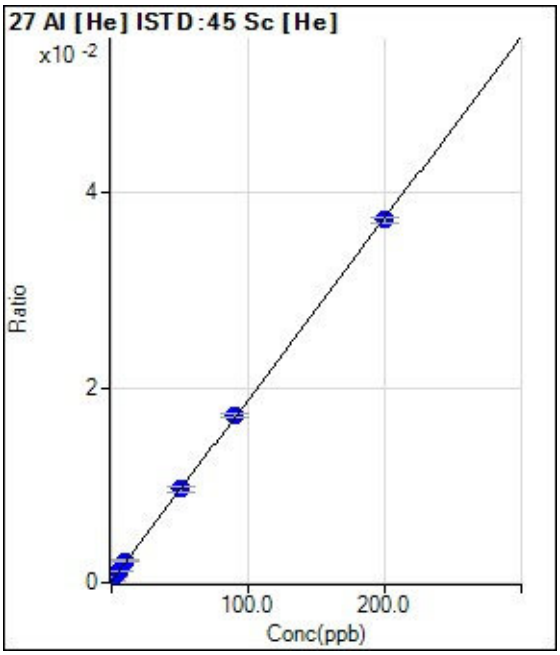
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12273.05	0.0007	P	6.0
2	☐			23541.24	0.0013	P	4.7
3	☐	2.000	2.299	63106.45	0.0035	P	0.5
4	☐	5.000	5.349	129553.88	0.0072	P	1.9
5	☐	10.000	10.067	232922.09	0.0130	P	1.9
6	☐	50.000	48.846	1086249.38	0.0603	A	0.8
7	☐	90.000	86.979	1929861.79	0.1069	A	1.4
8	☐	200.000	201.633	4247590.87	0.2470	A	15.9

y = 0.0012 * x + 6.7925E-004
R = 0.9998
DL = 0.09975
BEC = 0.5561

Weight: <None>
Min Conc: <None>

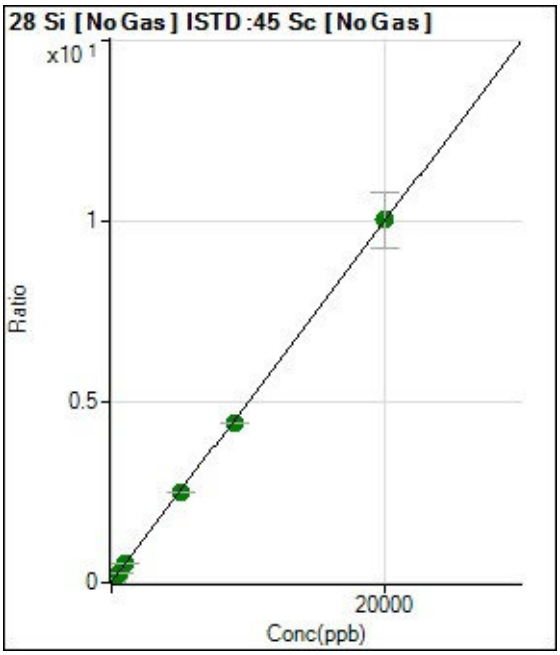


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	44.7
2	☐			166.67	0.0002	P	35.5
3	☐	2.000	2.571	493.35	0.0006	P	3.3
4	☐	5.000	5.582	933.38	0.0012	P	6.7
5	☐	10.000	11.319	1776.81	0.0023	P	3.3
6	☐	50.000	50.856	7565.50	0.0096	P	7.2
7	☐	90.000	91.249	13476.72	0.0171	P	1.5
8	☐	200.000	199.138	29244.34	0.0372	P	1.5

y = 1.8619E-004 * x + 1.4527E-004
R = 1.0000
DL = 1.047
BEC = 0.7802

Weight: <None>
Min Conc: <None>

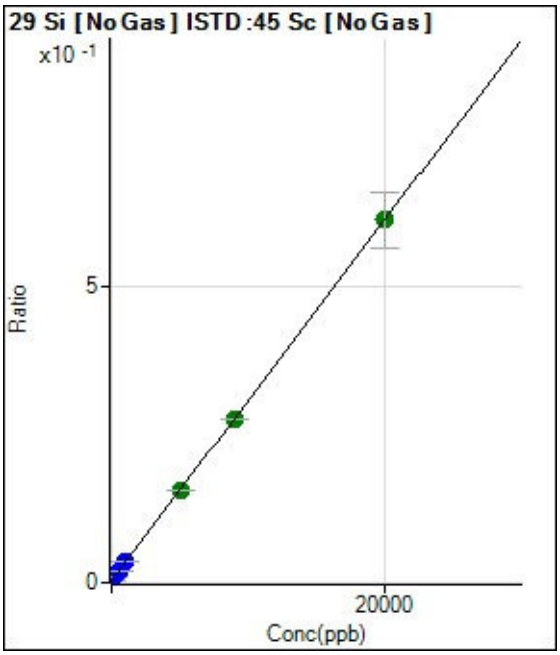
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340881.93	0.0189	P	0.7
2	☐	20.000	21.585	537076.27	0.0296	P	0.3
3	☐	200.000	194.611	2097769.02	0.1159	A	0.4
4	☐	500.000	495.112	4774983.33	0.2658	A	0.4
5	☐	1000.000	984.370	9153336.90	0.5099	A	0.1
6	☐	5000.000	4945.754	44748199.96	2.4858	A	0.2
7	☐	9000.000	8843.504	79961371.53	4.4300	A	0.5
8	☐	20000.000	20084.941	172692612.96	10.0372	A	15.5

y = 4.9880E-004 * x + 0.0189
R = 1.0000
DL = 0.8028
BEC = 37.82

Weight: <None>
Min Conc: <None>

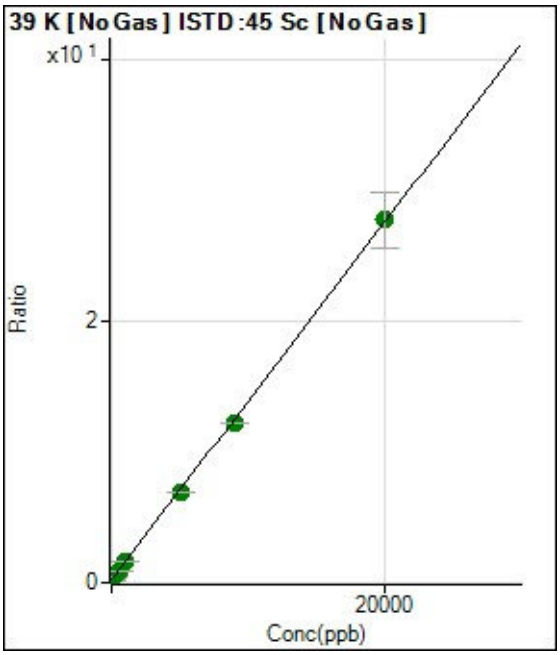


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60397.90	0.0033	P	0.7
2	☐	20.000	19.153	71122.26	0.0039	P	0.6
3	☐	200.000	207.495	174448.99	0.0096	P	1.8
4	☐	500.000	526.504	347142.38	0.0193	P	1.0
5	☐	1000.000	1053.750	634266.26	0.0353	P	0.2
6	☐	5000.000	5020.869	2803818.41	0.1558	A	0.6
7	☐	9000.000	8925.474	4950879.85	0.2743	A	0.3
8	☐	20000.000	20024.895	10518264.33	0.6112	A	15.3

y = 3.0356E-005 * x + 0.0033
R = 1.0000
DL = 2.239
BEC = 110.1

Weight: <None>
Min Conc: <None>

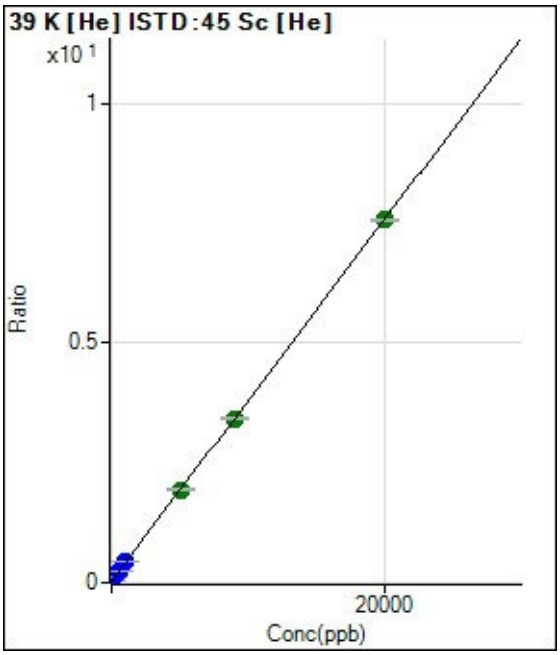
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4010612.44	0.2220	A	1.2
2	☐	20.000	20.484	4531173.06	0.2500	A	0.9
3	☐	200.000	194.516	8834443.20	0.4883	A	0.4
4	☐	500.000	490.358	16045351.01	0.8933	A	0.4
5	☐	1000.000	974.523	27934602.08	1.5561	A	0.7
6	☐	5000.000	4891.406	124538741.48	6.9182	A	0.8
7	☐	9000.000	8756.468	220378250.05	12.2094	A	0.2
8	☐	20000.000	20138.307	478274912.87	27.7909	A	15.3

y = 0.0014 * x + 0.2220
R = 0.9999
DL = 5.727
BEC = 162.1

Weight: <None>
Min Conc: <None>

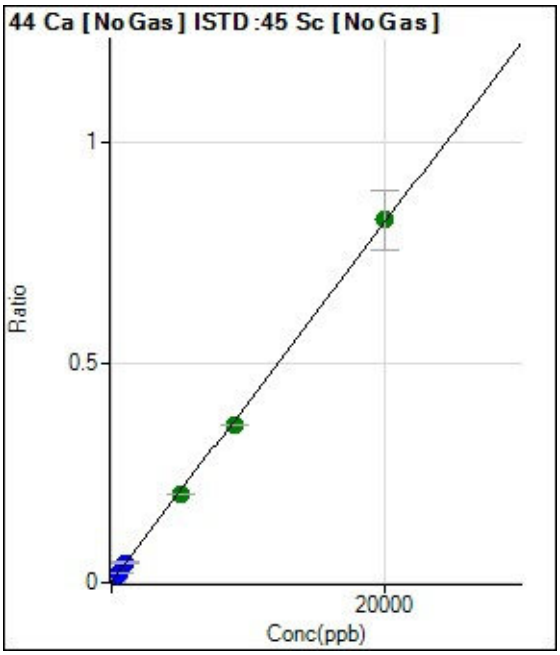


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24262.78	0.0310	P	1.7
2	☐	20.000	25.398	31932.14	0.0406	P	3.0
3	☐	200.000	213.429	88123.70	0.1115	P	3.0
4	☐	500.000	542.314	185552.39	0.2355	P	0.2
5	☐	1000.000	1093.249	349463.62	0.4432	P	1.5
6	☐	5000.000	5069.332	1529252.79	1.9422	A	0.6
7	☐	9000.000	8989.113	2689826.73	3.4199	A	1.6
8	☐	20000.000	19981.706	5942927.62	7.5642	A	0.5

y = 3.7700E-004 * x + 0.0310
R = 1.0000
DL = 4.245
BEC = 82.23

Weight: <None>
Min Conc: <None>

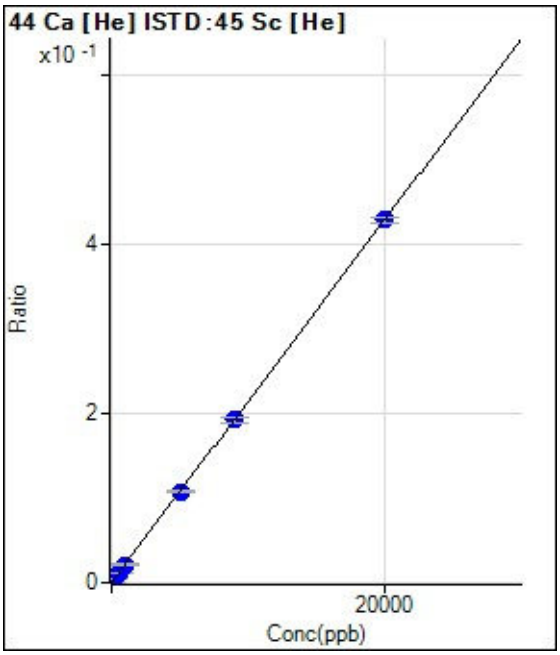
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37961.43	0.0021	P	2.6
2	☐	20.000	23.008	55113.75	0.0030	P	2.2
3	☐	200.000	213.458	195812.45	0.0108	P	0.4
4	☐	500.000	524.761	422857.34	0.0235	P	1.2
5	☐	1000.000	1069.590	822207.17	0.0458	P	0.9
6	☐	5000.000	4886.870	3632026.82	0.2018	A	0.3
7	☐	9000.000	8716.485	6465912.19	0.3582	A	0.3
8	☐	20000.000	20151.628	14190808.54	0.8254	A	16.4

y = 4.0856E-005 * x + 0.0021
R = 0.9998
DL = 4.075
BEC = 51.42

Weight: <None>
Min Conc: <None>

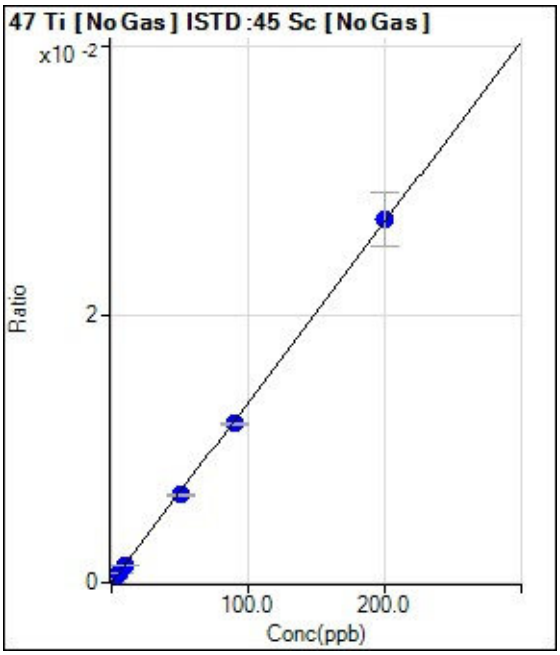


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.35	0.0003	P	65.2
2	☐	20.000	21.288	573.40	0.0007	P	48.9
3	☐	200.000	199.736	3600.75	0.0046	P	19.1
4	☐	500.000	521.720	9030.32	0.0115	P	4.8
5	☐	1000.000	979.122	16771.35	0.0213	P	7.5
6	☐	5000.000	5023.341	85000.31	0.1080	P	3.1
7	☐	9000.000	8971.187	151516.69	0.1926	P	2.9
8	☐	20000.000	20007.633	337239.56	0.4293	P	1.8

y = 2.1441E-005 * x + 2.7141E-004
R = 1.0000
DL = 24.75
BEC = 12.66

Weight: <None>
Min Conc: <None>

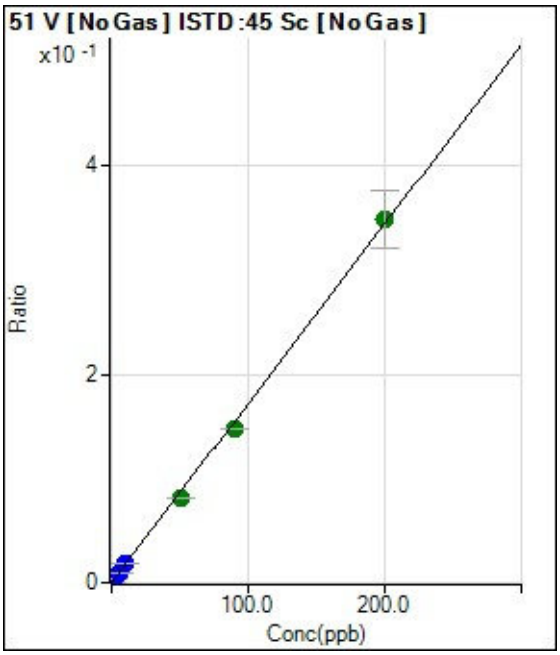
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.52	0.0000	P	13.8
2	☐	0.200	0.251	797.50	0.0000	P	9.9
3	☐	2.000	1.949	4932.57	0.0003	P	6.3
4	☐	5.000	4.941	12134.33	0.0007	P	1.6
5	☐	10.000	9.546	23259.97	0.0013	P	1.1
6	☐	50.000	48.580	117949.59	0.0066	P	1.4
7	☐	90.000	88.287	214771.90	0.0119	P	0.8
8	☐	200.000	201.150	466491.06	0.0271	P	14.9

y = 1.3466E-004 * x + 1.0158E-005
R = 0.9999
DL = 0.03132
BEC = 0.07543

Weight: <None>
Min Conc: <None>

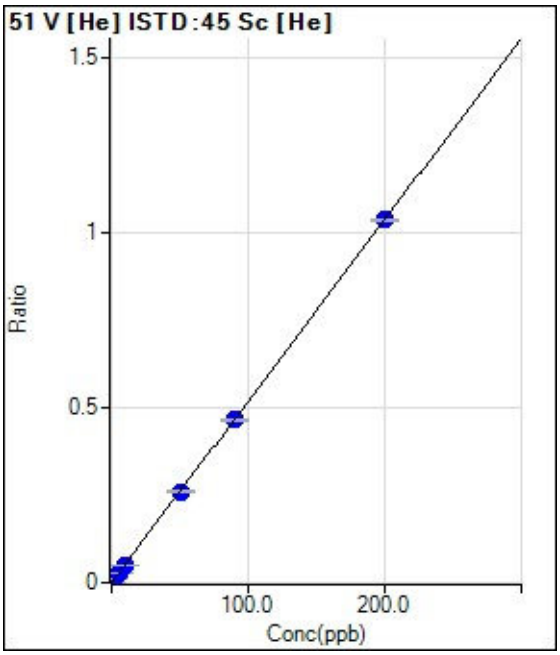


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-3167.99	-0.0002	P	-75.0
2	☐	0.200	0.216	3567.70	0.0002	P	83.8
3	☐	2.000	2.126	63037.74	0.0035	P	3.5
4	☐	5.000	5.136	155643.88	0.0087	P	2.4
5	☐	10.000	10.317	315622.84	0.0176	P	1.1
6	☐	50.000	47.582	1471030.03	0.0817	A	0.5
7	☐	90.000	85.871	2664464.89	0.1476	A	0.6
8	☐	200.000	202.442	5989984.11	0.3482	A	15.9

y = 0.0017 * x - 1.7528E-004
R = 0.9996
DL = 0.229
BEC = -0.1018

Weight: <None>
Min Conc: <None>

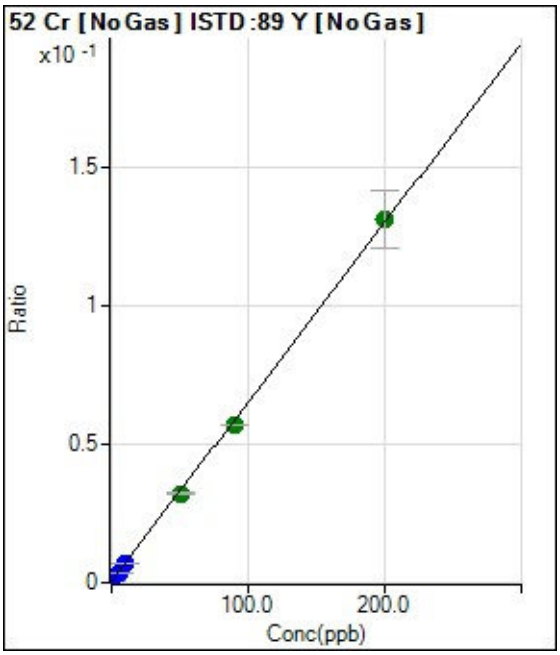
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.97	0.0004	P	13.7
2	☐	0.200	0.217	1181.25	0.0015	P	8.3
3	☐	2.000	1.906	8093.94	0.0102	P	1.7
4	☐	5.000	4.972	20562.80	0.0261	P	0.8
5	☐	10.000	9.850	40466.94	0.0513	P	1.8
6	☐	50.000	50.154	204546.32	0.2598	P	0.6
7	☐	90.000	89.876	365891.03	0.4652	P	0.8
8	☐	200.000	200.027	813071.46	1.0349	P	0.5

y = 0.0052 * x + 3.7953E-004
R = 1.0000
DL = 0.0301
BEC = 0.07338

Weight: <None>
Min Conc: <None>

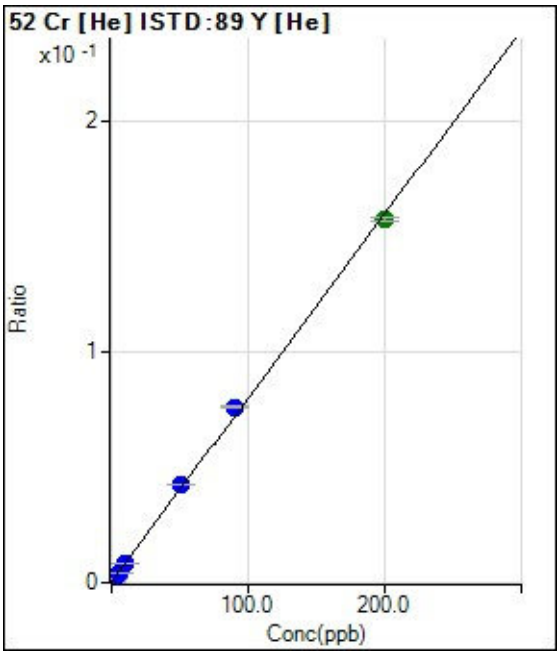


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24981.40	0.0006	P	3.7
2	☐	0.200	0.184	30390.89	0.0007	P	0.4
3	☐	2.000	1.983	82304.76	0.0018	P	1.6
4	☐	5.000	5.019	168907.62	0.0038	P	0.4
5	☐	10.000	10.031	313570.02	0.0071	P	0.2
6	☐	50.000	48.709	1415547.42	0.0321	A	1.4
7	☐	90.000	87.154	2521909.26	0.0571	A	0.3
8	☐	200.000	201.602	5606239.79	0.1313	A	15.8

y = 6.4841E-004 * x + 5.6010E-004
R = 0.9998
DL = 0.09708
BEC = 0.8638

Weight: <None>
Min Conc: <None>

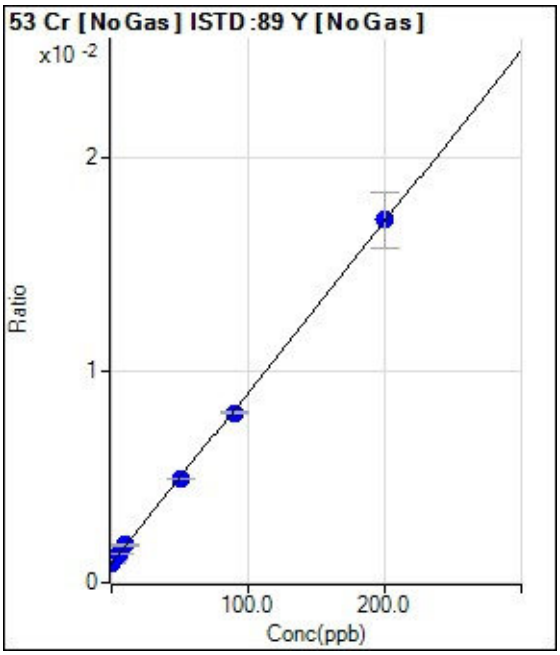
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1978.82	0.0003	P	6.3
2	☐	0.200	0.198	2943.31	0.0005	P	0.3
3	☐	2.000	2.111	12237.95	0.0020	P	4.2
4	☐	5.000	5.131	26753.09	0.0044	P	2.8
5	☐	10.000	10.442	51829.75	0.0086	P	1.2
6	☐	50.000	52.970	257106.94	0.0425	P	0.4
7	☐	90.000	95.070	457812.10	0.0760	P	1.1
8	☐	200.000	196.950	947162.58	0.1571	A	1.1

y = 7.9578E-004 * x + 3.2409E-004
R = 0.9994
DL = 0.07736
BEC = 0.4073

Weight: <None>
Min Conc: <None>

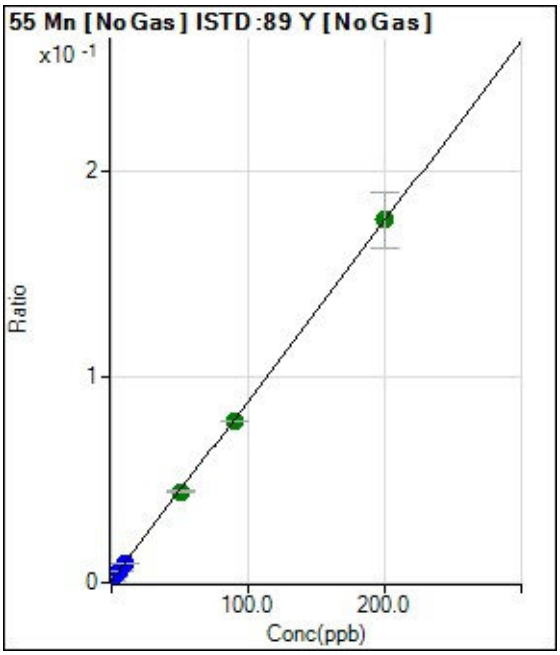


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40386.81	0.0009	P	1.4
2	☐	0.200	0.460	42153.95	0.0009	P	2.6
3	☐	2.000	1.872	47098.05	0.0011	P	0.6
4	☐	5.000	5.470	59609.03	0.0013	P	1.9
5	☐	10.000	10.692	78438.48	0.0018	P	0.8
6	☐	50.000	49.354	215016.74	0.0049	P	1.1
7	☐	90.000	88.211	354104.30	0.0080	P	1.0
8	☐	200.000	200.921	730215.45	0.0171	P	15.5

y = 8.0583E-005 * x + 9.0542E-004
R = 0.9999
DL = 0.4843
BEC = 11.24

Weight: <None>
Min Conc: <None>

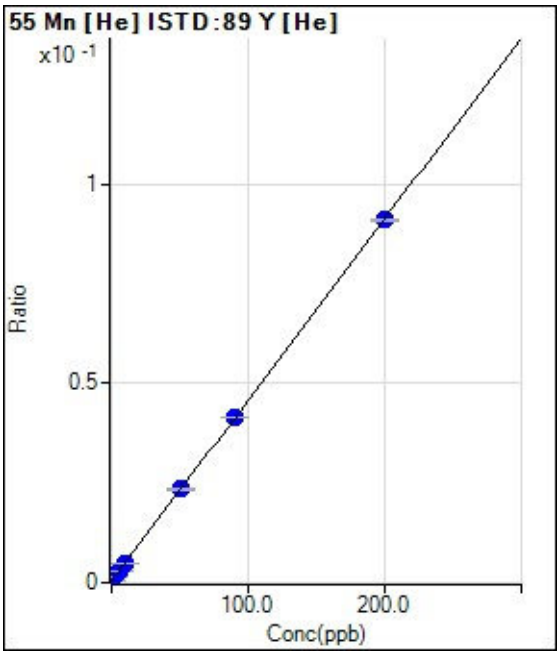
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38737.39	0.0009	P	1.6
2	☐	0.200	0.108	43081.00	0.0010	P	1.3
3	☐	2.000	1.951	114909.74	0.0026	P	0.7
4	☐	5.000	5.074	235249.50	0.0053	P	1.1
5	☐	10.000	10.119	431948.33	0.0097	P	0.6
6	☐	50.000	49.610	1951799.20	0.0443	A	1.0
7	☐	90.000	88.884	3478398.41	0.0787	A	0.3
8	☐	200.000	200.593	7543072.05	0.1766	A	15.2

y = 8.7584E-004 * x + 8.6848E-004
R = 1.0000
DL = 0.04659
BEC = 0.9916

Weight: <None>
Min Conc: <None>

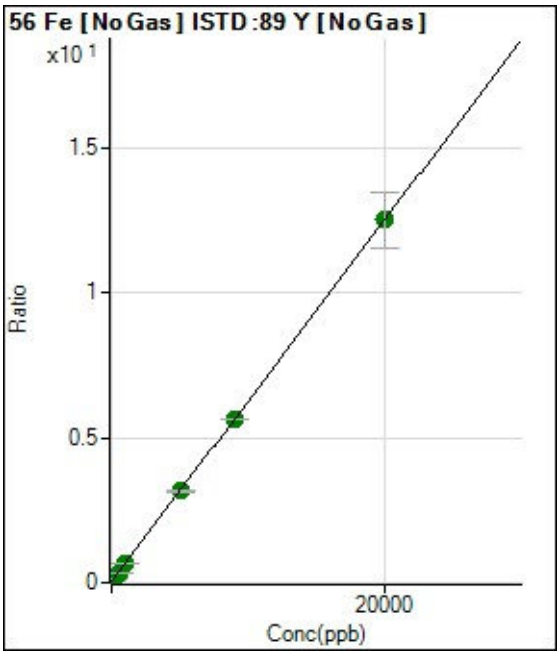


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2556.19	0.0004	P	12.9
2	☐	0.200	0.100	2833.17	0.0005	P	5.7
3	☐	2.000	1.867	7733.39	0.0013	P	1.6
4	☐	5.000	5.031	16406.45	0.0027	P	2.3
5	☐	10.000	10.025	29829.42	0.0050	P	1.6
6	☐	50.000	50.768	142015.92	0.0235	P	0.9
7	☐	90.000	90.461	249959.17	0.0415	P	0.9
8	☐	200.000	199.600	548937.19	0.0910	P	0.8

y = 4.5391E-004 * x + 4.1857E-004
R = 1.0000
DL = 0.3566
BEC = 0.9221

Weight: <None>
Min Conc: <None>

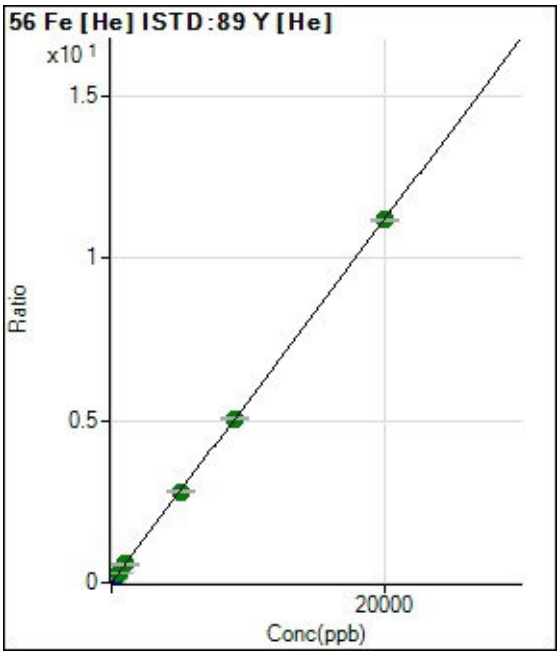
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1961146.66	0.0440	A	1.2
2	☐	20.000	18.312	2477154.74	0.0554	A	0.6
3	☐	200.000	195.634	7401538.71	0.1660	A	1.0
4	☐	500.000	497.162	15678774.83	0.3541	A	0.5
5	☐	1000.000	982.558	29155651.69	0.6568	A	0.5
6	☐	5000.000	4990.310	139020415.61	3.1567	A	0.7
7	☐	9000.000	8966.853	249089380.57	5.6370	A	0.6
8	☐	20000.000	20018.327	535306861.96	12.5303	A	15.4

y = 6.2375E-004 * x + 0.0440
R = 1.0000
DL = 2.59
BEC = 70.49

Weight: <None>
Min Conc: <None>

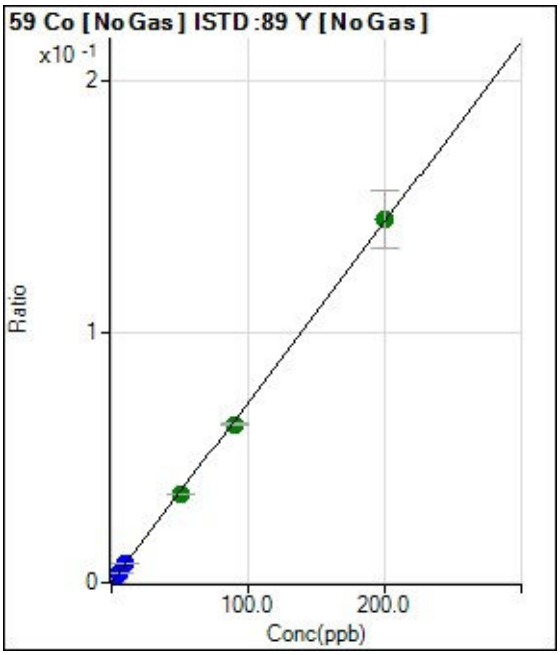


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25492.41	0.0042	P	5.3
2	☐	20.000	24.235	108259.73	0.0177	P	1.3
3	☐	200.000	246.642	867495.43	0.1420	P	1.0
4	☐	500.000	500.340	1723234.61	0.2838	A	0.3
5	☐	1000.000	999.795	3379933.28	0.5630	A	0.7
6	☐	5000.000	5015.901	16993682.25	2.8077	A	1.3
7	☐	9000.000	9040.251	30473675.38	5.0571	A	0.4
8	☐	20000.000	19977.443	67367522.33	11.1703	A	0.8

y = 5.5893E-004 * x + 0.0042
R = 1.0000
DL = 1.196
BEC = 7.473

Weight: <None>
Min Conc: <None>

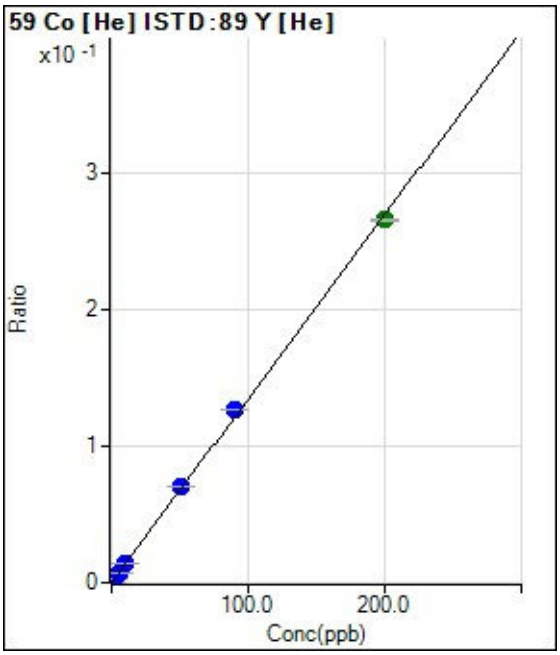
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1454.90	0.0000	P	10.1
2	☐	0.200	0.196	7753.39	0.0002	P	1.8
3	☐	2.000	1.999	65559.47	0.0015	P	1.2
4	☐	5.000	5.037	161844.58	0.0037	P	1.1
5	☐	10.000	10.148	325380.62	0.0073	P	0.6
6	☐	50.000	48.922	1550744.50	0.0352	A	0.7
7	☐	90.000	87.938	2795783.92	0.0633	A	0.3
8	☐	200.000	201.189	6179314.95	0.1447	A	15.8

y = 7.1910E-004 * x + 3.2625E-005
R = 0.9999
DL = 0.01368
BEC = 0.04537

Weight: <None>
Min Conc: <None>

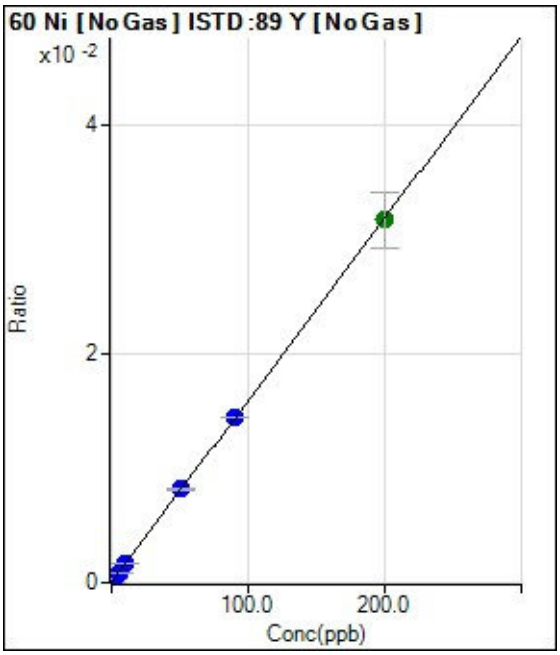


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	263.61	0.0000	P	19.1
2	☐	0.200	0.204	1945.46	0.0003	P	9.4
3	☐	2.000	2.051	17151.50	0.0028	P	2.0
4	☐	5.000	5.271	43409.26	0.0072	P	1.5
5	☐	10.000	10.590	85985.33	0.0143	P	0.8
6	☐	50.000	52.337	427389.04	0.0706	P	1.2
7	☐	90.000	94.334	766720.29	0.1272	P	0.2
8	☐	200.000	197.429	1605774.69	0.2662	A	0.5

y = 0.0013 * x + 4.3184E-005
R = 0.9996
DL = 0.01838
BEC = 0.03203

Weight: <None>
Min Conc: <None>

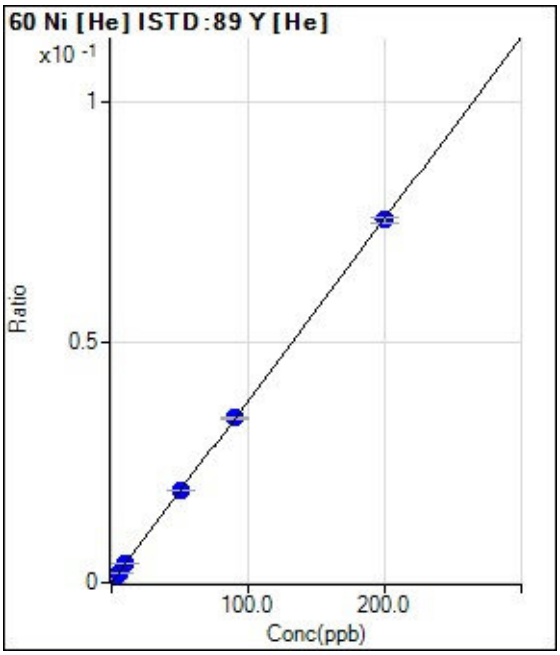
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1091.16	0.0000	P	5.5
2	☐	0.200	0.195	2482.77	0.0001	P	4.3
3	☐	2.000	2.035	15524.64	0.0003	P	2.5
4	☐	5.000	5.111	37084.44	0.0008	P	1.4
5	☐	10.000	10.217	73222.48	0.0016	P	2.0
6	☐	50.000	51.407	361159.64	0.0082	P	1.4
7	☐	90.000	90.830	639498.01	0.0145	P	0.2
8	☐	200.000	199.261	1354854.02	0.0317	A	15.5

y = 1.5906E-004 * x + 2.4463E-005
R = 1.0000
DL = 0.02555
BEC = 0.1538

Weight: <None>
Min Conc: <None>

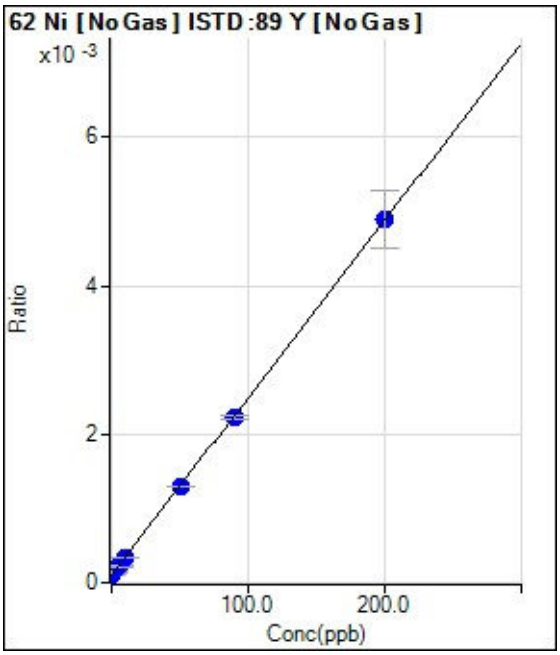


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.62	0.0000	P	7.9
2	☐	0.200	0.180	690.72	0.0001	P	14.7
3	☐	2.000	1.965	4819.08	0.0008	P	2.0
4	☐	5.000	5.019	11810.42	0.0019	P	1.2
5	☐	10.000	10.353	23808.20	0.0040	P	1.0
6	☐	50.000	50.980	117125.81	0.0194	P	0.6
7	☐	90.000	90.600	207022.23	0.0344	P	1.4
8	☐	200.000	199.467	455802.07	0.0756	P	1.3

y = 3.7868E-004 * x + 4.4824E-005
R = 1.0000
DL = 0.02814
BEC = 0.1184

Weight: <None>
Min Conc: <None>

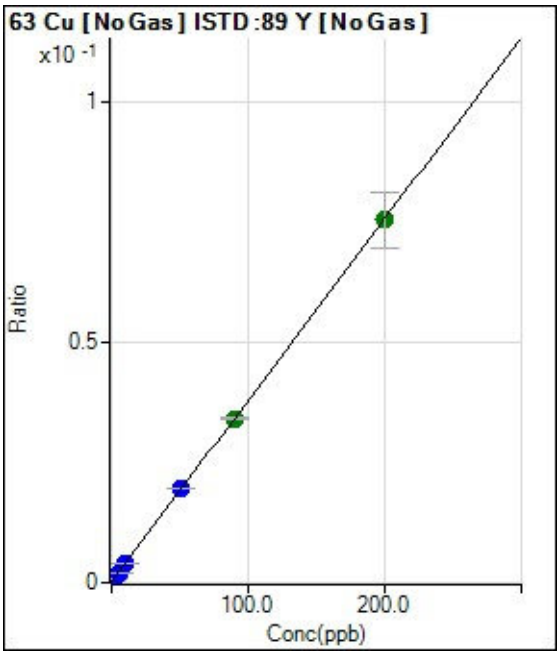
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4632.16	0.0001	P	5.3
2	☐	0.200	0.060	4708.94	0.0001	P	6.3
3	☐	2.000	1.639	6374.64	0.0001	P	0.8
4	☐	5.000	4.995	9876.97	0.0002	P	2.7
5	☐	10.000	9.808	14996.80	0.0003	P	1.5
6	☐	50.000	50.170	57294.20	0.0013	P	0.3
7	☐	90.000	89.014	98445.79	0.0022	P	1.8
8	☐	200.000	200.415	208597.95	0.0049	P	16.0

y = 2.3860E-005 * x + 1.0385E-004
R = 1.0000
DL = 0.6859
BEC = 4.352

Weight: <None>
Min Conc: <None>

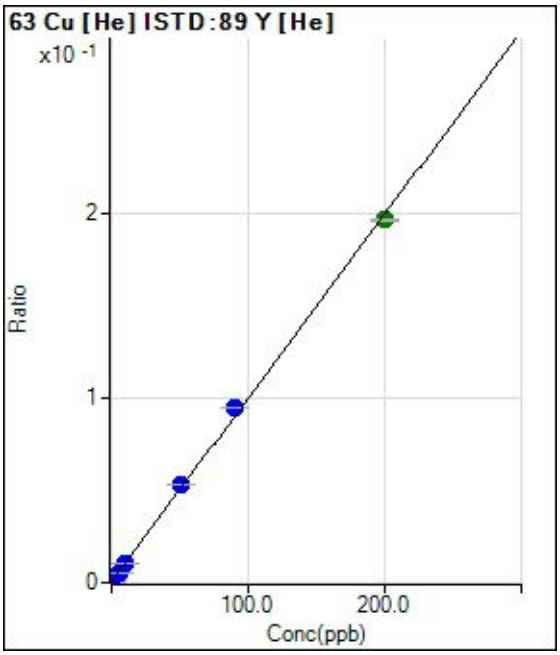


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9285.95	0.0002	P	3.9
2	☐	0.200	0.187	12475.02	0.0003	P	1.8
3	☐	2.000	2.071	44142.42	0.0010	P	2.5
4	☐	5.000	5.119	94789.26	0.0021	P	1.7
5	☐	10.000	10.173	179715.21	0.0040	P	0.4
6	☐	50.000	51.357	863043.54	0.0196	P	0.3
7	☐	90.000	90.138	1512864.74	0.0342	A	0.1
8	☐	200.000	199.586	3227296.58	0.0756	A	15.6

y = 3.7751E-004 * x + 2.0817E-004
R = 1.0000
DL = 0.06408
BEC = 0.5514

Weight: <None>
Min Conc: <None>

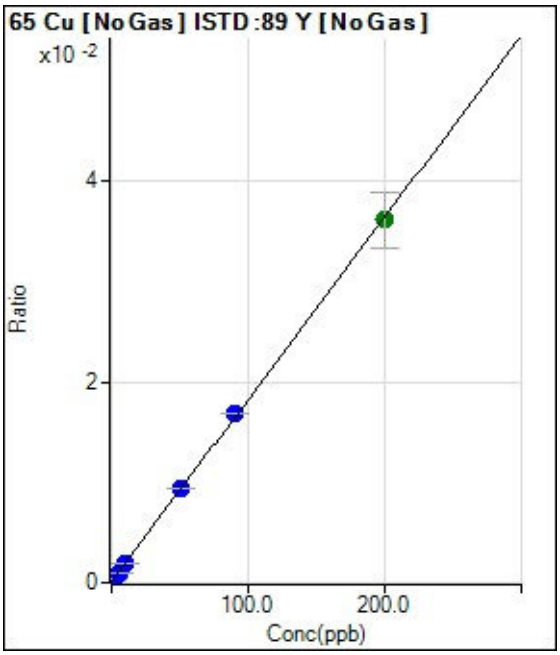
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3146.88	0.0005	P	3.6
2	☐	0.200	0.209	4418.54	0.0007	P	2.1
3	☐	2.000	2.113	15978.95	0.0026	P	0.8
4	☐	5.000	5.167	34314.61	0.0057	P	2.1
5	☐	10.000	10.391	65113.58	0.0108	P	1.0
6	☐	50.000	52.782	320737.17	0.0530	P	0.2
7	☐	90.000	94.788	570941.72	0.0947	P	0.7
8	☐	200.000	197.125	1185010.22	0.1965	A	0.8

y = 9.9415E-004 * x + 5.1531E-004
R = 0.9995
DL = 0.05622
BEC = 0.5183

Weight: <None>
Min Conc: <None>

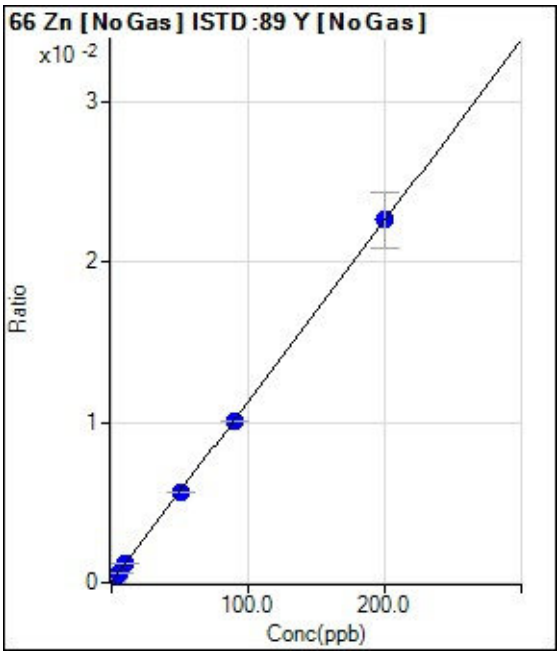


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4832.44	0.0001	P	6.0
2	☐	0.200	0.201	6478.13	0.0001	P	4.4
3	☐	2.000	2.020	21154.58	0.0005	P	2.1
4	☐	5.000	5.106	45783.01	0.0010	P	1.7
5	☐	10.000	10.014	85378.27	0.0019	P	1.2
6	☐	50.000	51.360	414755.65	0.0094	P	1.1
7	☐	90.000	92.227	743496.02	0.0168	P	0.3
8	☐	200.000	198.654	1543250.91	0.0361	A	15.3

y = 1.8126E-004 * x + 1.0835E-004
R = 0.9999
DL = 0.1085
BEC = 0.5977

Weight: <None>
Min Conc: <None>

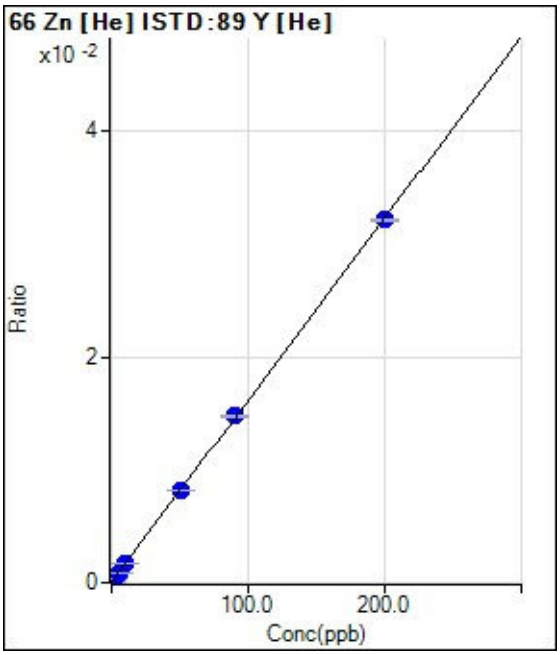
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1731.88	0.0000	P	6.4
2	☐	0.200	0.193	2709.70	0.0001	P	1.7
3	☐	2.000	1.928	11436.41	0.0003	P	2.6
4	☐	5.000	4.875	26088.03	0.0006	P	2.6
5	☐	10.000	9.878	51217.77	0.0012	P	2.0
6	☐	50.000	49.790	249226.96	0.0057	P	1.2
7	☐	90.000	89.224	446797.56	0.0101	P	0.6
8	☐	200.000	200.411	968431.32	0.0227	P	15.1

y = 1.1288E-004 * x + 3.8829E-005
R = 1.0000
DL = 0.06565
BEC = 0.344

Weight: <None>
Min Conc: <None>

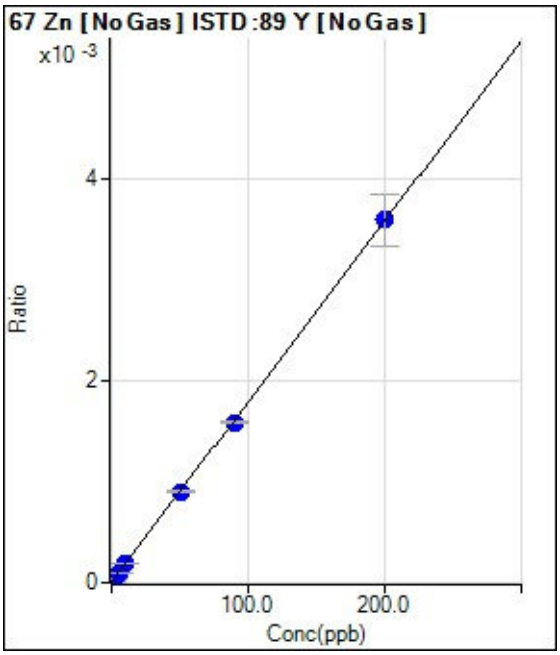


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	377.06	0.0001	P	15.9
2	☐	0.200	0.145	520.54	0.0001	P	7.8
3	☐	2.000	2.101	2446.05	0.0004	P	8.0
4	☐	5.000	5.036	5303.09	0.0009	P	5.9
5	☐	10.000	10.028	10074.00	0.0017	P	2.6
6	☐	50.000	50.693	49827.84	0.0082	P	0.6
7	☐	90.000	91.300	89042.66	0.0148	P	0.8
8	☐	200.000	199.239	194037.85	0.0322	P	0.4

y = 1.6117E-004 * x + 6.1756E-005
R = 1.0000
DL = 0.1823
BEC = 0.3832

Weight: <None>
Min Conc: <None>

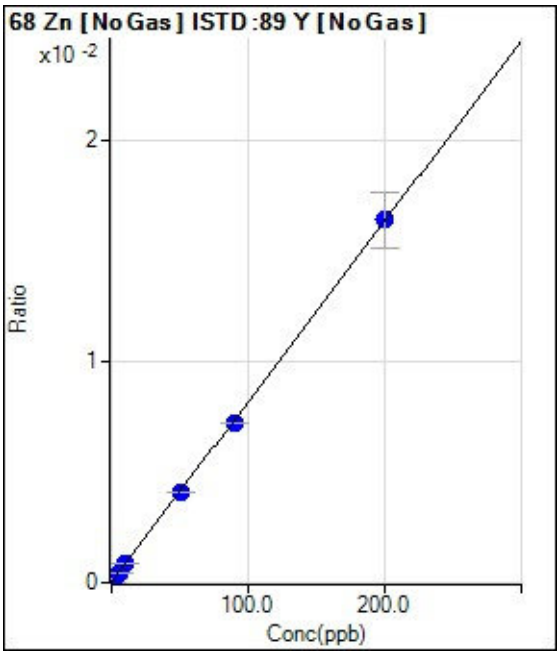
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	337.01	0.0000	P	24.8
2	☐	0.200	0.250	537.23	0.0000	P	6.6
3	☐	2.000	1.929	1872.03	0.0000	P	10.3
4	☐	5.000	5.173	4421.89	0.0001	P	3.4
5	☐	10.000	10.053	8297.64	0.0002	P	2.6
6	☐	50.000	50.107	39711.42	0.0009	P	2.3
7	☐	90.000	88.268	69939.39	0.0016	P	1.0
8	☐	200.000	200.747	153485.29	0.0036	P	14.4

y = 1.7845E-005 * x + 7.5534E-006
R = 0.9999
DL = 0.3144
BEC = 0.4233

Weight: <None>
Min Conc: <None>

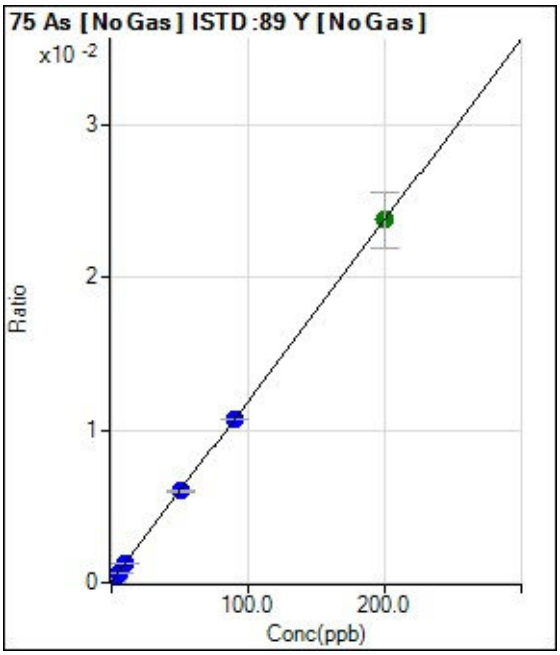


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1268.02	0.0000	P	3.5
2	☐	0.200	0.158	1848.69	0.0000	P	6.0
3	☐	2.000	1.880	8100.64	0.0002	P	1.7
4	☐	5.000	5.056	19507.19	0.0004	P	3.8
5	☐	10.000	9.890	37041.16	0.0008	P	0.4
6	☐	50.000	49.998	180702.49	0.0041	P	0.7
7	☐	90.000	88.148	318704.22	0.0072	P	0.2
8	☐	200.000	200.839	700446.33	0.0164	P	15.4

y = 8.1498E-005 * x + 2.8428E-005
R = 0.9999
DL = 0.03715
BEC = 0.3488

Weight: <None>
Min Conc: <None>

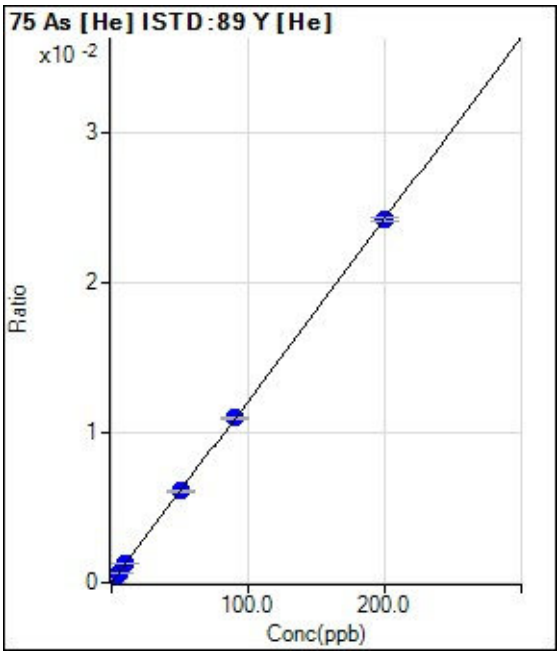
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3414.30	0.0001	P	59.4
2	☐	0.200	0.144	4185.38	0.0001	P	21.0
3	☐	2.000	1.826	13048.86	0.0003	P	1.9
4	☐	5.000	4.744	28242.20	0.0006	P	8.2
5	☐	10.000	9.620	53920.04	0.0012	P	2.4
6	☐	50.000	49.908	263451.71	0.0060	P	0.5
7	☐	90.000	89.953	473719.19	0.0107	P	0.5
8	☐	200.000	200.071	1014670.79	0.0238	A	15.3

y = 1.1833E-004 * x + 7.6555E-005
R = 1.0000
DL = 1.154
BEC = 0.647

Weight: <None>
Min Conc: <None>

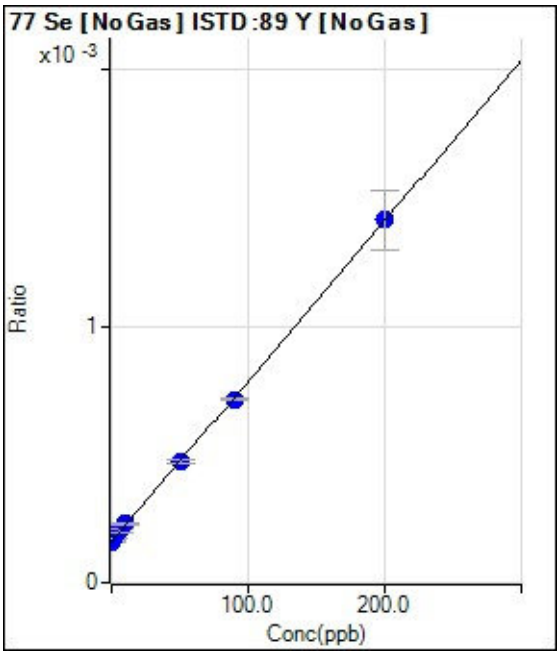


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.56	0.0000	P	37.1
2	☐	0.200	0.203	175.56	0.0000	P	20.8
3	☐	2.000	1.969	1481.20	0.0002	P	9.0
4	☐	5.000	4.869	3603.84	0.0006	P	2.6
5	☐	10.000	10.094	7362.05	0.0012	P	1.4
6	☐	50.000	50.488	37026.15	0.0061	P	1.7
7	☐	90.000	90.651	66151.98	0.0110	P	0.9
8	☐	200.000	199.584	145745.75	0.0242	P	1.1

y = 1.2106E-004 * x + 4.1808E-006
R = 1.0000
DL = 0.03843
BEC = 0.03454

Weight: <None>
Min Conc: <None>

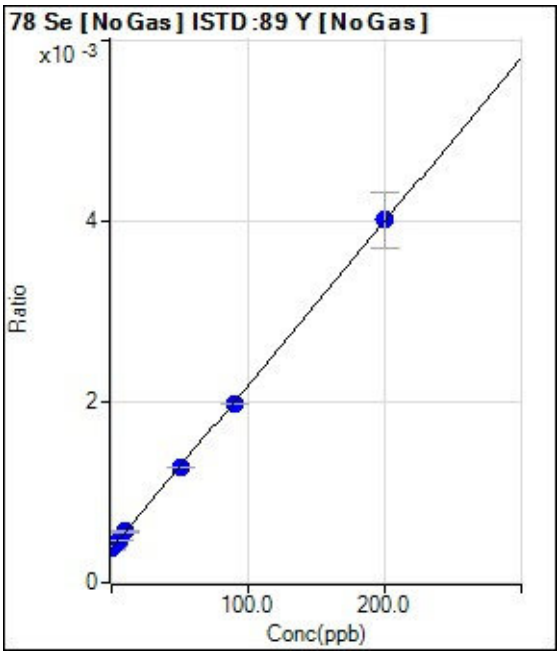
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7112.46	0.0002	P	6.6
2	☐	0.200	1.019	7416.24	0.0002	P	3.6
3	☐	2.000	1.924	7646.61	0.0002	P	2.4
4	☐	5.000	6.802	8945.38	0.0002	P	6.8
5	☐	10.000	11.374	10237.64	0.0002	P	3.2
6	☐	50.000	49.462	20646.75	0.0005	P	3.3
7	☐	90.000	88.816	31598.65	0.0007	P	1.2
8	☐	200.000	200.553	60388.96	0.0014	P	16.2

y = 6.2563E-006 * x + 1.5945E-004
R = 0.9999
DL = 5.028
BEC = 25.49

Weight: <None>
Min Conc: <None>

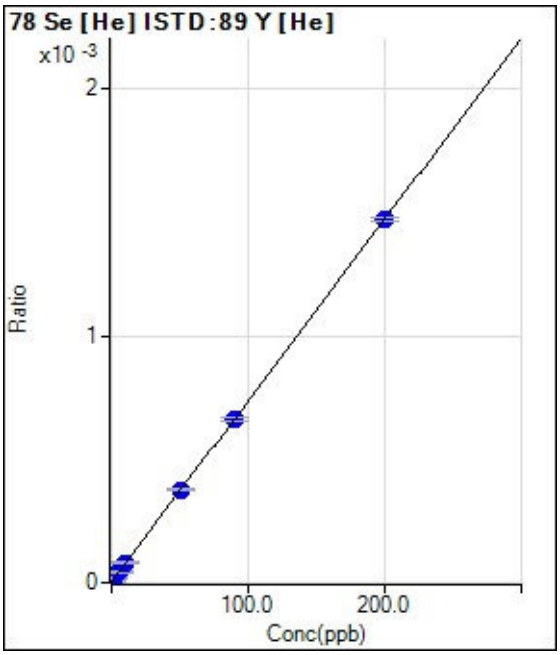


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16834.34	0.0004	P	6.3
2	☐	0.200	0.218	17051.45	0.0004	P	4.6
3	☐	2.000	1.711	18207.42	0.0004	P	2.5
4	☐	5.000	5.032	20743.64	0.0005	P	3.1
5	☐	10.000	10.389	25102.08	0.0006	P	1.8
6	☐	50.000	49.729	56286.88	0.0013	P	0.6
7	☐	90.000	87.998	87106.32	0.0020	P	0.1
8	☐	200.000	200.951	171614.56	0.0040	P	15.4

y = 1.8112E-005 * x + 3.7736E-004
R = 0.9999
DL = 3.94
BEC = 20.83

Weight: <None>
Min Conc: <None>

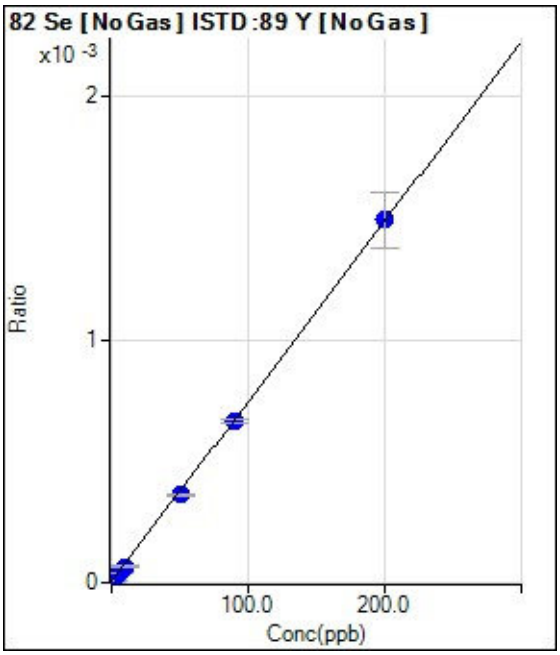
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	60.8
2	☐	0.200	0.271	28.89	0.0000	P	75.5
3	☐	2.000	2.279	118.89	0.0000	P	11.6
4	☐	5.000	5.883	278.89	0.0000	P	19.1
5	☐	10.000	10.623	484.46	0.0001	P	7.9
6	☐	50.000	50.954	2280.20	0.0004	P	1.6
7	☐	90.000	89.856	3990.61	0.0007	P	2.5
8	☐	200.000	199.770	8858.50	0.0015	P	1.0

y = 7.3390E-006 * x + 2.7400E-006
R = 1.0000
DL = 0.6812
BEC = 0.3733

Weight: <None>
Min Conc: <None>

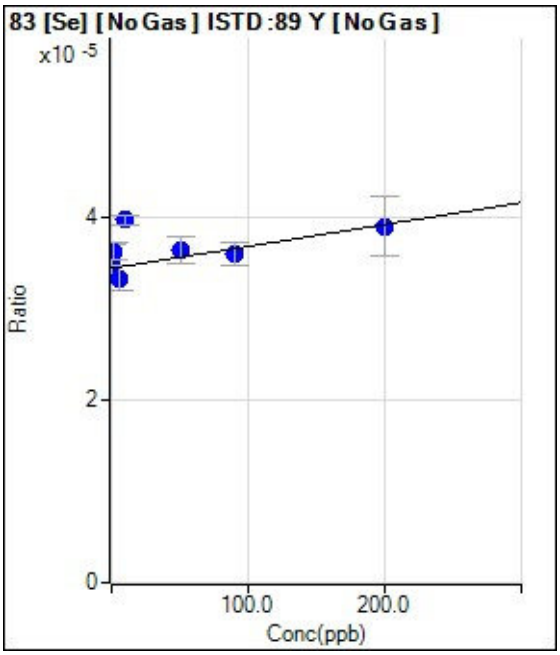


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	209.76	0.0000	P	79.6
2	☐	0.200	0.050	226.22	0.0000	P	130.0
3	☐	2.000	0.777	466.03	0.0000	P	25.4
4	☐	5.000	4.587	1712.11	0.0000	P	8.0
5	☐	10.000	8.093	2867.77	0.0001	P	10.8
6	☐	50.000	48.035	15869.63	0.0004	P	1.2
7	☐	90.000	89.227	29401.01	0.0007	P	1.5
8	☐	200.000	200.957	63771.11	0.0015	P	15.4

y = 7.4037E-006 * x + 4.7053E-006
R = 0.9999
DL = 1.518
BEC = 0.6355

Weight: <None>
Min Conc: <None>

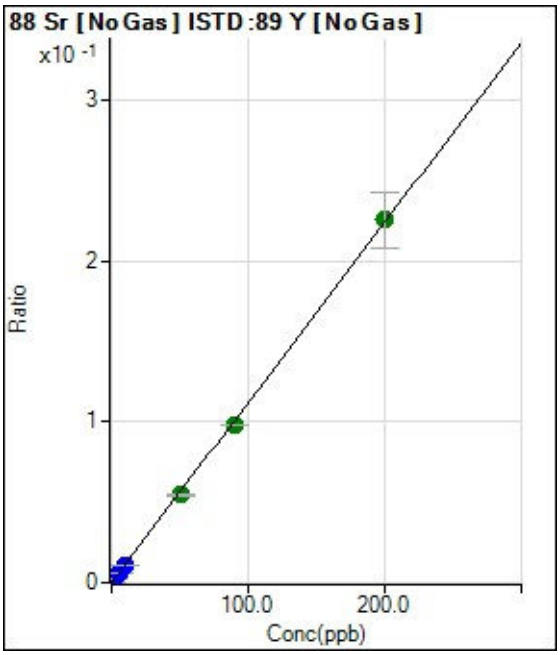
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1534.98	0.0000	P	5.3
2	☐	0.200	20.969	1561.68	0.0000	P	11.8
3	☐	2.000	75.367	1615.07	0.0000	P	5.2
4	☐	5.000	-45.640	1474.92	0.0000	P	8.3
5	☐	10.000	220.617	1761.91	0.0000	P	2.4
6	☐	50.000	85.920	1605.06	0.0000	P	8.1
7	☐	90.000	64.570	1588.38	0.0000	P	7.3
8	☐	200.000	192.444	1665.13	0.0000	P	17.0

y = 2.3947E-008 * x + 3.4409E-005
R = 0.5175
DL = 226.6
BEC = 1437

Weight: <None>
Min Conc: <None>

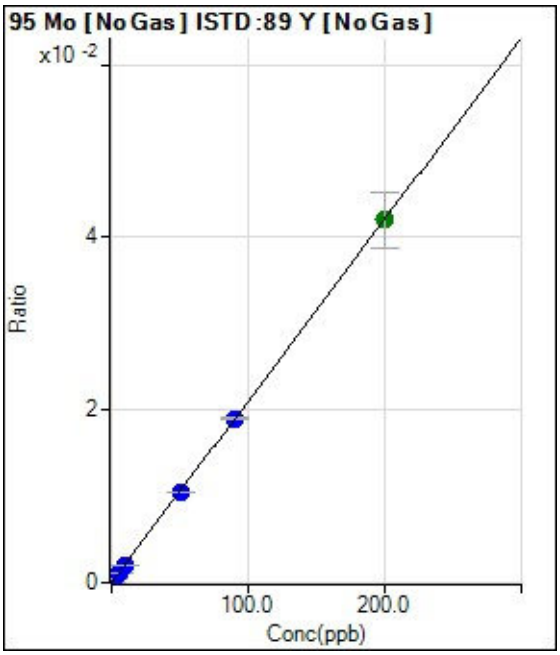


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2519.48	0.0001	P	7.9
2	☐	0.200	0.201	12622.15	0.0003	P	3.1
3	☐	2.000	1.984	101617.66	0.0023	P	1.1
4	☐	5.000	4.998	250461.75	0.0057	P	0.5
5	☐	10.000	9.986	499128.66	0.0112	P	0.9
6	☐	50.000	48.604	2400802.32	0.0545	A	0.2
7	☐	90.000	87.287	4323899.64	0.0979	A	0.3
8	☐	200.000	201.571	9652271.67	0.2259	A	15.1

y = 0.0011 * x + 5.6475E-005
R = 0.9998
DL = 0.01198
BEC = 0.05041

Weight: <None>
Min Conc: <None>

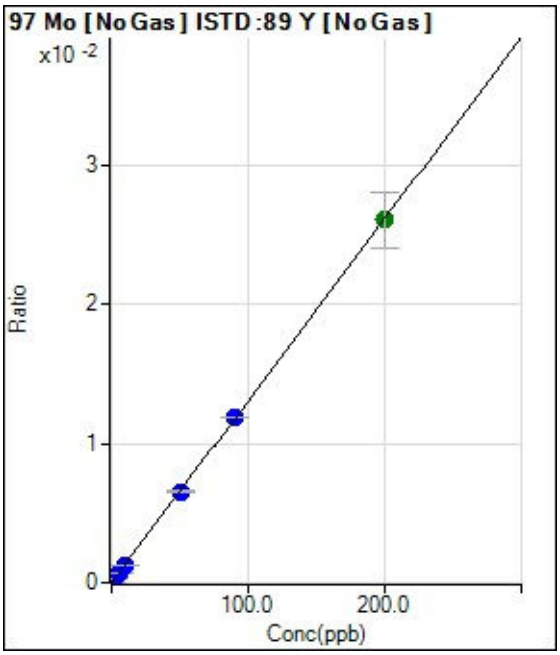
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	577.27	0.0000	P	8.4
2	☐	0.200	0.189	2352.59	0.0001	P	3.8
3	☐	2.000	1.976	19109.75	0.0004	P	1.7
4	☐	5.000	4.889	46095.97	0.0010	P	1.8
5	☐	10.000	9.735	91442.56	0.0021	P	0.4
6	☐	50.000	50.142	464942.35	0.0106	P	0.2
7	☐	90.000	90.334	839928.37	0.0190	P	1.2
8	☐	200.000	199.830	1795343.73	0.0420	A	15.6

y = 2.1028E-004 * x + 1.2940E-005
R = 1.0000
DL = 0.01552
BEC = 0.06153

Weight: <None>
Min Conc: <None>

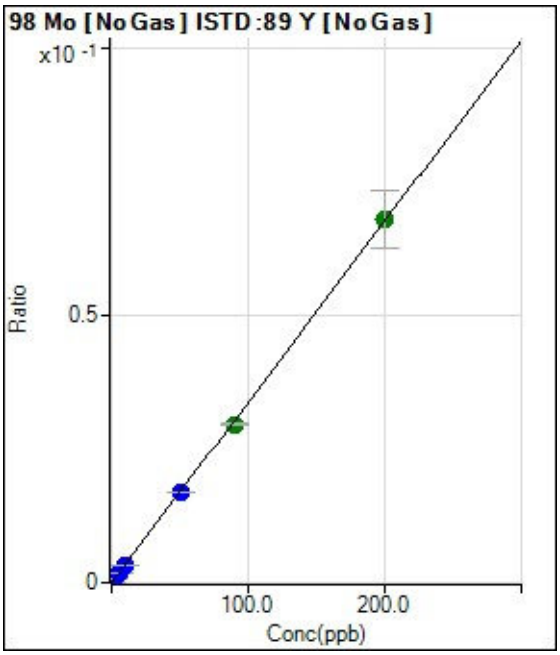


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	437.12	0.0000	P	7.7
2	☐	0.200	0.165	1404.85	0.0000	P	8.8
3	☐	2.000	1.925	11660.29	0.0003	P	3.8
4	☐	5.000	4.822	28352.06	0.0006	P	1.6
5	☐	10.000	9.791	57263.60	0.0013	P	0.7
6	☐	50.000	49.990	288286.38	0.0065	P	1.9
7	☐	90.000	91.056	526570.57	0.0119	P	0.7
8	☐	200.000	199.543	1115210.34	0.0261	A	15.4

y = 1.3076E-004 * x + 9.8015E-006
R = 1.0000
DL = 0.01727
BEC = 0.07496

Weight: <None>
Min Conc: <None>

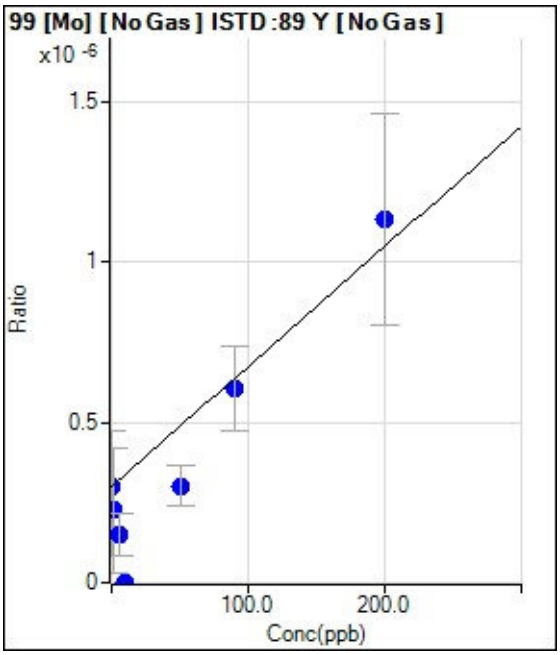
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	985.77	0.0000	P	25.2
2	☐	0.200	0.200	3997.02	0.0001	P	6.7
3	☐	2.000	1.930	30002.59	0.0007	P	1.4
4	☐	5.000	4.977	75286.56	0.0017	P	1.2
5	☐	10.000	9.814	147843.44	0.0033	P	0.1
6	☐	50.000	50.294	747681.91	0.0170	P	0.9
7	☐	90.000	87.732	1307919.53	0.0296	A	0.5
8	☐	200.000	200.958	2894625.11	0.0678	A	15.8

y = 3.3713E-004 * x + 2.2089E-005
R = 0.9999
DL = 0.04946
BEC = 0.06552

Weight: <None>
Min Conc: <None>

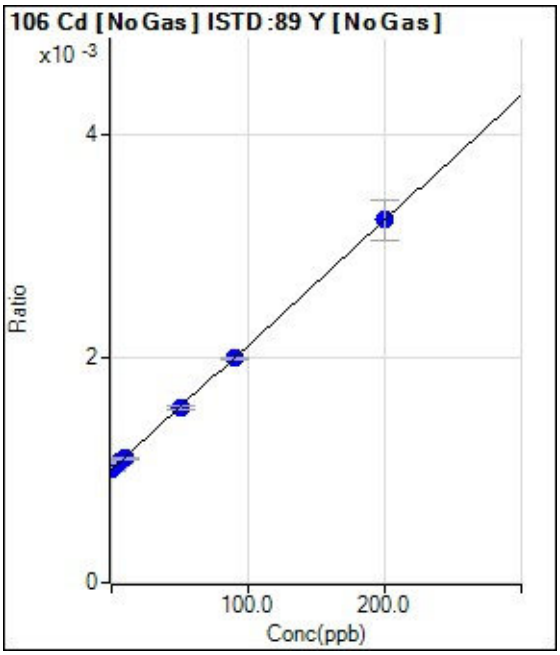


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.35	0.0000	P	114.6
2	☐	0.200	-40.364	6.67	0.0000	P	86.6
3	☐	2.000	-19.843	10.01	0.0000	P	173.2
4	☐	5.000	-39.764	6.67	0.0000	P	86.6
5	☐	10.000	-80.154	0.00	0.0000	P	
6	☐	50.000	0.599	13.35	0.0000	P	41.9
7	☐	90.000	81.669	26.69	0.0000	P	44.0
8	☐	200.000	221.985	46.71	0.0000	P	58.3

y = 3.7401E-009 * x + 2.9978E-007
R = 0.9574
DL = 275.5
BEC = 80.15

Weight: <None>
Min Conc: <None>

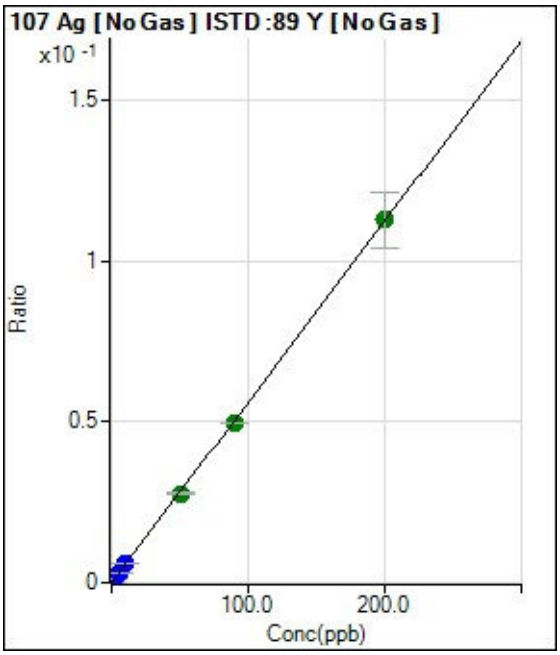
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44941.65	0.0010	P	2.1
2	☐	0.200	1.602	45862.09	0.0010	P	1.1
3	☐	2.000	2.568	46203.59	0.0010	P	0.2
4	☐	5.000	5.870	47512.96	0.0011	P	2.0
5	☐	10.000	9.354	49344.75	0.0011	P	1.4
6	☐	50.000	50.274	69005.11	0.0016	P	2.4
7	☐	90.000	89.453	88512.71	0.0020	P	0.8
8	☐	200.000	200.181	138781.12	0.0032	P	10.9

y = 1.1129E-005 * x + 0.0010
R = 1.0000
DL = 5.747
BEC = 90.53

Weight: <None>
Min Conc: <None>

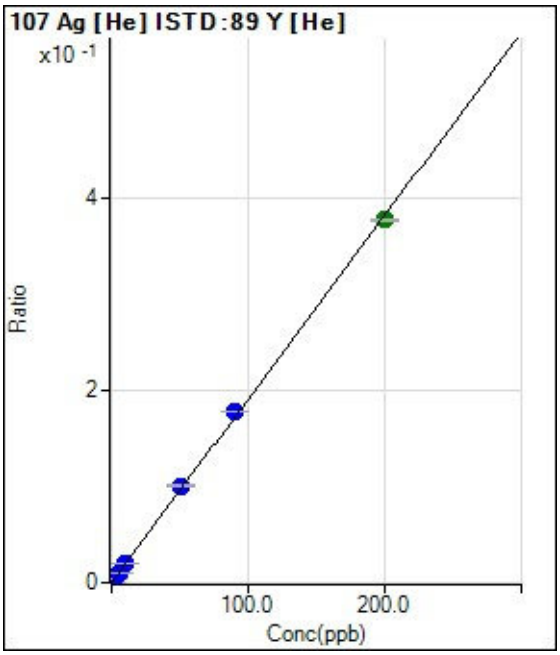


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	532.24	0.0000	P	11.8
2	☐	0.200	0.231	6333.77	0.0001	P	1.8
3	☐	2.000	2.039	51565.50	0.0012	P	1.7
4	☐	5.000	5.118	127743.25	0.0029	P	0.4
5	☐	10.000	10.195	254572.83	0.0057	P	0.3
6	☐	50.000	49.370	1221126.79	0.0277	A	0.7
7	☐	90.000	88.314	2191272.41	0.0496	A	0.4
8	☐	200.000	200.903	4819817.31	0.1128	A	15.1

y = 5.6138E-004 * x + 1.1931E-005
R = 0.9999
DL = 0.007499
BEC = 0.02125

Weight: <None>
Min Conc: <None>

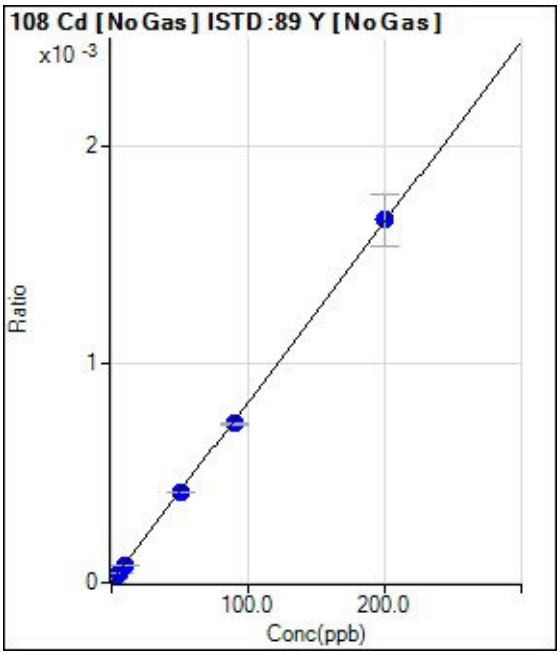
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.14	0.0000	P	38.9
2	☐	0.200	0.219	2689.67	0.0004	P	2.8
3	☐	2.000	2.062	24159.87	0.0040	P	1.1
4	☐	5.000	5.202	60364.08	0.0099	P	0.9
5	☐	10.000	10.509	120443.34	0.0201	P	1.1
6	☐	50.000	52.818	609793.98	0.1007	P	0.4
7	☐	90.000	93.331	1072523.64	0.1780	P	0.9
8	☐	200.000	197.765	2274579.17	0.3771	A	0.6

y = 0.0019 * x + 2.3011E-005
R = 0.9997
DL = 0.01408
BEC = 0.01207

Weight: <None>
Min Conc: <None>

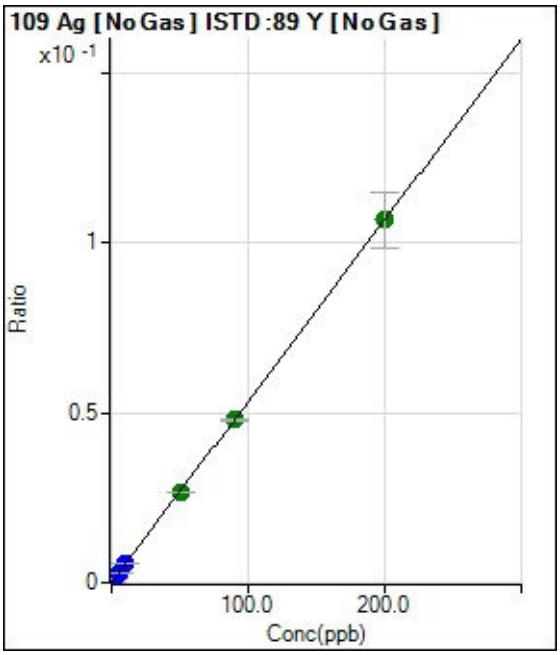


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.43	0.0000	P	32.7
2	☐	0.200	0.217	173.51	0.0000	P	12.4
3	☐	2.000	2.170	890.94	0.0000	P	9.7
4	☐	5.000	5.050	1935.45	0.0000	P	8.7
5	☐	10.000	9.443	3547.42	0.0001	P	3.3
6	☐	50.000	49.684	18127.44	0.0004	P	1.2
7	☐	90.000	87.832	32077.84	0.0007	P	1.0
8	☐	200.000	201.080	70943.73	0.0017	P	14.4

y = 8.2414E-006 * x + 2.0942E-006
R = 0.9999
DL = 0.2495
BEC = 0.2541

Weight: <None>
Min Conc: <None>

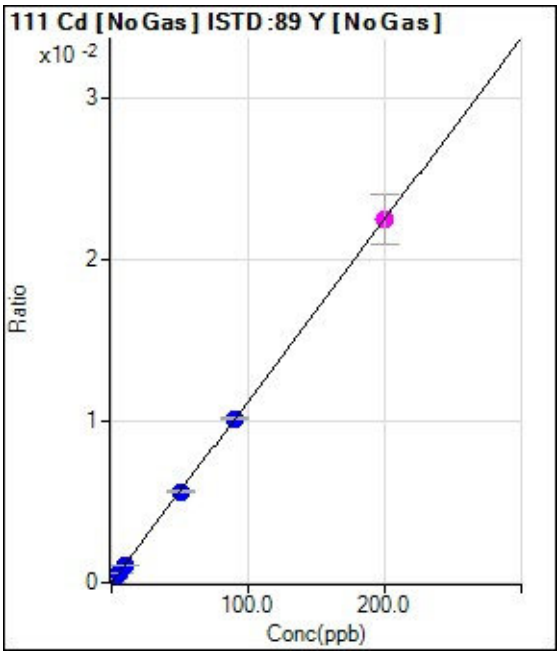
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	206.88	0.0000	P	23.0
2	☐	0.200	0.239	5917.35	0.0001	P	3.3
3	☐	2.000	2.077	49602.62	0.0011	P	0.6
4	☐	5.000	5.179	122535.33	0.0028	P	0.7
5	☐	10.000	10.272	243400.55	0.0055	P	1.4
6	☐	50.000	49.914	1172638.53	0.0266	A	1.0
7	☐	90.000	89.737	2115207.24	0.0479	A	0.3
8	☐	200.000	200.121	4561352.30	0.1067	A	15.0

y = 5.3337E-004 * x + 4.6389E-006
R = 1.0000
DL = 0.006005
BEC = 0.008697

Weight: <None>
Min Conc: <None>

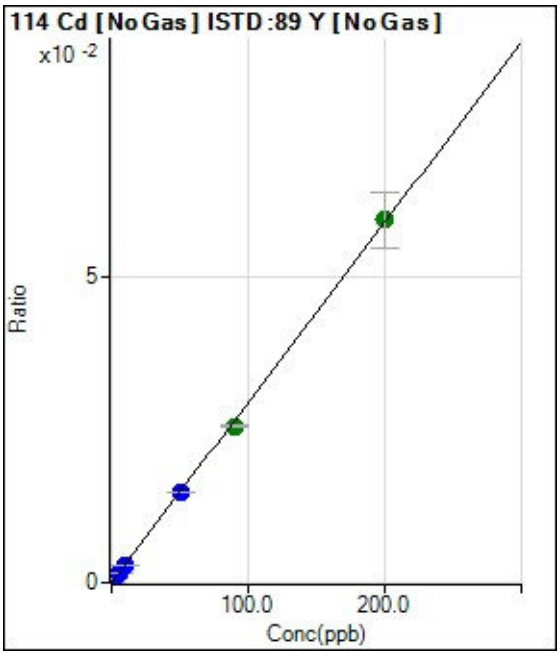


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-76.92	0.0000	P	-47.0
2	☐	0.200	0.198	914.99	0.0000	P	9.9
3	☐	2.000	1.931	9594.95	0.0002	P	0.1
4	☐	5.000	4.986	24717.04	0.0006	P	0.8
5	☐	10.000	9.965	49596.56	0.0011	P	1.8
6	☐	50.000	49.978	247111.82	0.0056	P	1.5
7	☐	90.000	90.415	448637.68	0.0102	P	0.3
8	☐	200.000	199.822	960055.15	0.0224	M	13.9

y = 1.1231E-004 * x - 1.7240E-006
R = 1.0000
DL = 0.02162
BEC = -0.01535

Weight: <None>
Min Conc: <None>

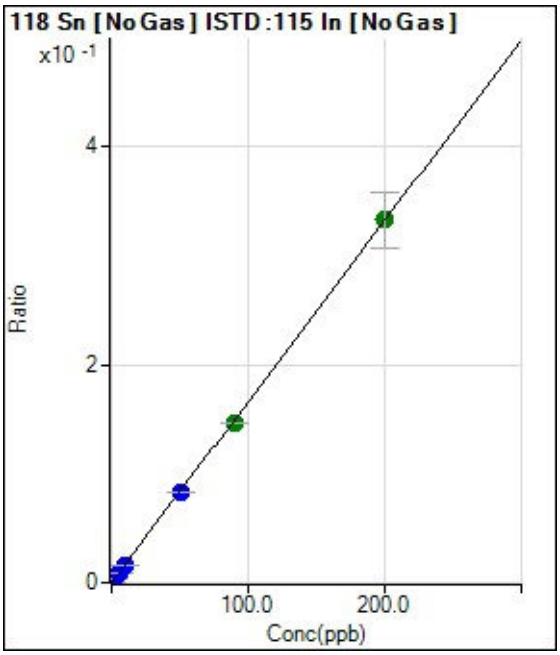
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.43	0.0000	P	34.7
2	☐	0.200	0.202	2749.76	0.0001	P	7.6
3	☐	2.000	1.935	25497.20	0.0006	P	4.5
4	☐	5.000	4.947	64592.55	0.0015	P	2.5
5	☐	10.000	9.964	130308.06	0.0029	P	0.5
6	☐	50.000	50.142	650238.64	0.0148	P	0.6
7	☐	90.000	86.751	1128657.18	0.0255	A	1.0
8	☐	200.000	201.430	2534147.44	0.0593	A	15.3

y = 2.9441E-004 * x + 2.0956E-006
R = 0.9998
DL = 0.007401
BEC = 0.007118

Weight: <None>
Min Conc: <None>

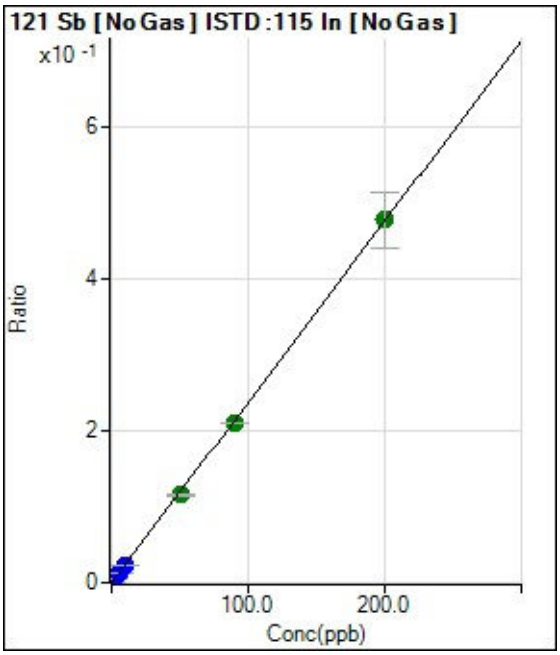


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2021.28	0.0002	P	3.1
2	☐	0.200	0.192	5165.48	0.0005	P	2.1
3	☐	2.000	1.931	33849.01	0.0034	P	0.2
4	☐	5.000	4.947	82955.20	0.0084	P	1.0
5	☐	10.000	9.743	161306.43	0.0163	P	0.7
6	☐	50.000	50.372	818183.14	0.0837	P	0.1
7	☐	90.000	88.445	1429287.58	0.1467	A	0.5
8	☐	200.000	200.622	3135870.50	0.3326	A	15.4

y = 0.0017 * x + 2.0368E-004
R = 1.0000
DL = 0.01144
BEC = 0.123

Weight: <None>
Min Conc: <None>

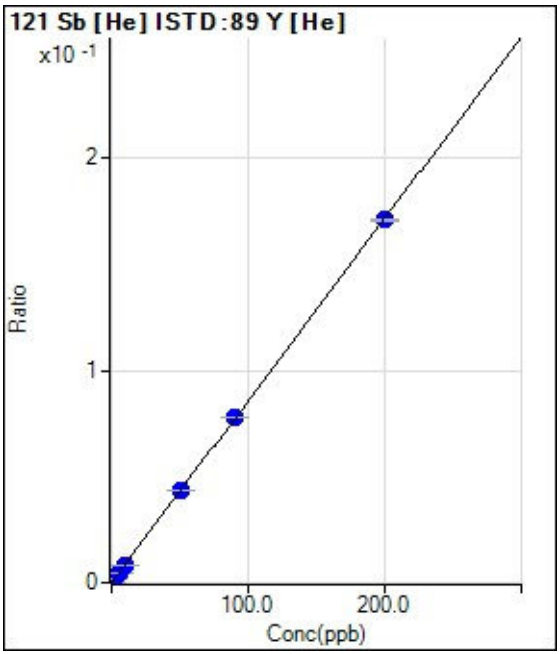
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	754.47	0.0001	P	7.1
2	☐	0.200	0.189	5201.05	0.0005	P	3.3
3	☐	2.000	1.949	46828.80	0.0047	P	0.6
4	☐	5.000	4.937	116596.00	0.0118	P	0.8
5	☐	10.000	9.894	232731.57	0.0236	P	0.8
6	☐	50.000	48.627	1130541.41	0.1156	A	1.3
7	☐	90.000	88.595	2051004.99	0.2105	A	0.2
8	☐	200.000	200.983	4504726.90	0.4775	A	15.2

y = 0.0024 * x + 7.6030E-005
R = 0.9999
DL = 0.00679
BEC = 0.032

Weight: <None>
Min Conc: <None>

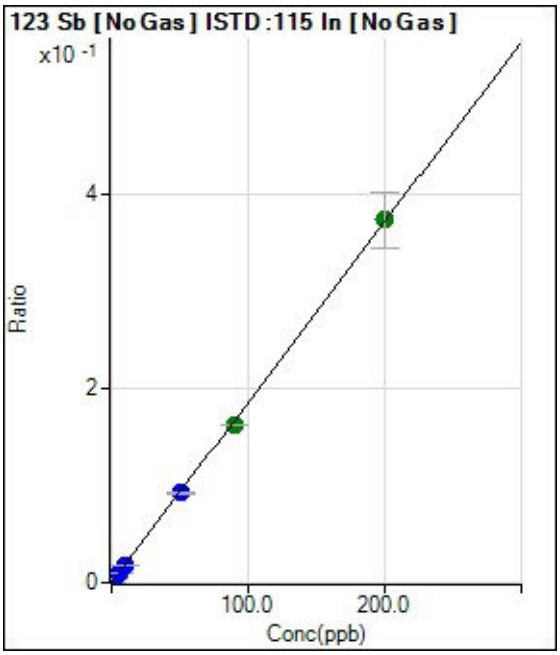


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0000	P	6.0
2	☐	0.200	0.191	1213.42	0.0002	P	8.5
3	☐	2.000	1.950	10417.63	0.0017	P	3.4
4	☐	5.000	4.951	25969.31	0.0043	P	1.3
5	☐	10.000	9.841	50832.01	0.0085	P	1.6
6	☐	50.000	50.562	262455.44	0.0434	P	0.8
7	☐	90.000	90.975	469900.25	0.0780	P	0.8
8	☐	200.000	199.430	1030800.20	0.1709	P	0.3

y = 8.5682E-004 * x + 3.4952E-005
R = 1.0000
DL = 0.007303
BEC = 0.04079

Weight: <None>
Min Conc: <None>

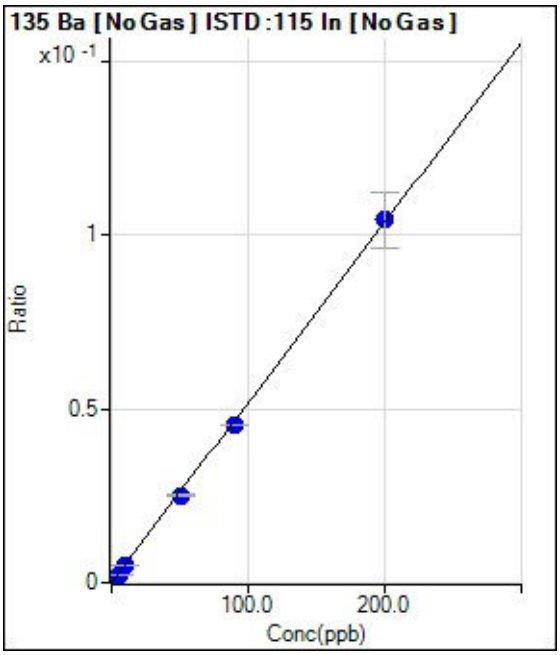
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1134.54	0.0001	P	11.4
2	☐	0.200	0.189	4608.83	0.0005	P	7.5
3	☐	2.000	1.920	36531.12	0.0037	P	3.1
4	☐	5.000	4.848	89808.37	0.0091	P	1.9
5	☐	10.000	9.709	178617.64	0.0181	P	1.1
6	☐	50.000	49.636	900327.91	0.0921	P	0.8
7	☐	90.000	87.355	1577334.47	0.1619	A	0.0
8	☐	200.000	201.301	3517964.53	0.3730	A	15.3

y = 0.0019 * x + 1.1431E-004
R = 0.9999
DL = 0.02112
BEC = 0.06171

Weight: <None>
Min Conc: <None>

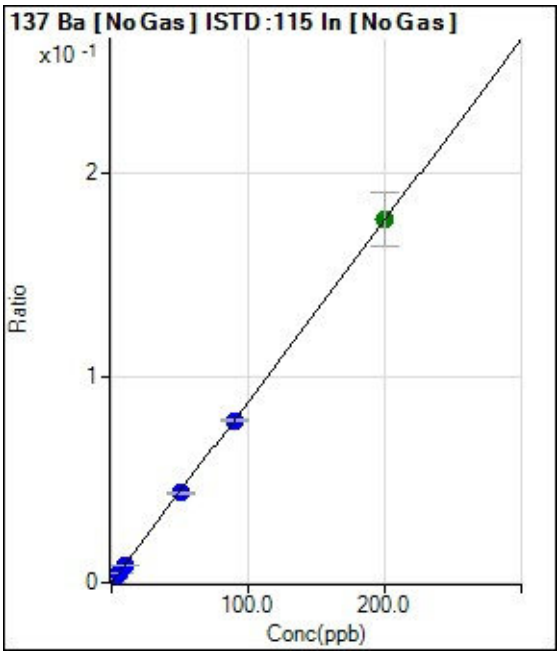


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.10	0.0000	P	26.2
2	☐	0.200	0.187	1061.12	0.0001	P	6.8
3	☐	2.000	1.934	10067.47	0.0010	P	3.8
4	☐	5.000	4.755	24427.58	0.0025	P	0.7
5	☐	10.000	9.634	49356.38	0.0050	P	1.9
6	☐	50.000	48.493	245780.41	0.0251	P	1.2
7	☐	90.000	87.436	441307.43	0.0453	P	0.6
8	☐	200.000	201.556	984457.40	0.1044	P	15.6

y = 5.1800E-004 * x + 1.0081E-005
R = 0.9999
DL = 0.0153
BEC = 0.01946

Weight: <None>
Min Conc: <None>

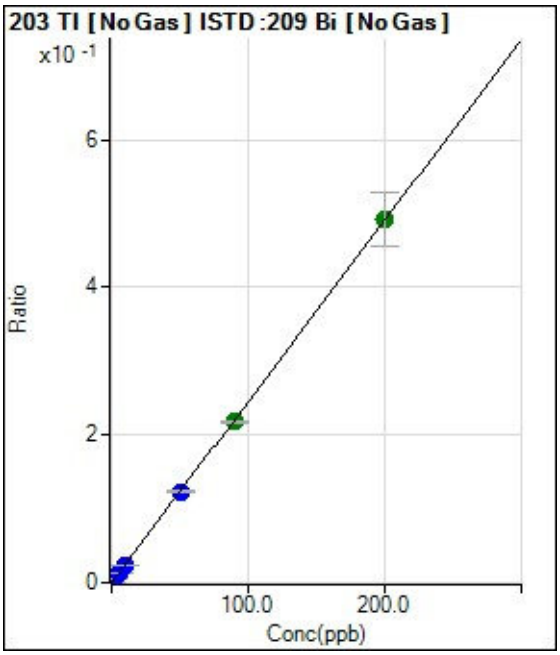
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.15	0.0000	P	23.2
2	☐	0.200	0.205	1948.79	0.0002	P	3.4
3	☐	2.000	1.925	17078.51	0.0017	P	2.9
4	☐	5.000	4.841	42411.58	0.0043	P	1.7
5	☐	10.000	9.852	86106.59	0.0087	P	0.9
6	☐	50.000	49.582	428846.06	0.0438	P	1.4
7	☐	90.000	89.546	771272.55	0.0792	P	0.5
8	☐	200.000	200.321	1670848.98	0.1771	A	14.8

y = 8.8400E-004 * x + 1.5132E-005
R = 1.0000
DL = 0.01192
BEC = 0.01712

Weight: <None>
Min Conc: <None>

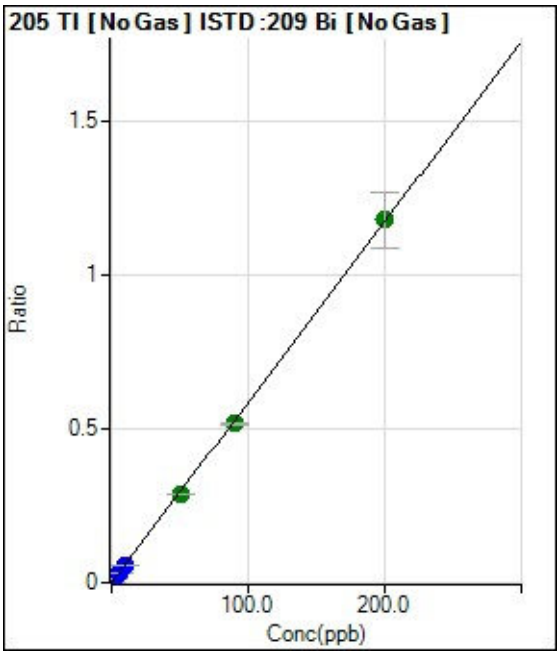


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	373.72	0.0000	P	20.6
2	☐	0.200	0.191	4375.22	0.0005	P	7.1
3	☐	2.000	1.925	40526.62	0.0048	P	0.6
4	☐	5.000	4.925	103233.46	0.0121	P	1.6
5	☐	10.000	9.864	205657.19	0.0242	P	1.2
6	☐	50.000	50.224	1030619.21	0.1232	P	1.0
7	☐	90.000	89.017	1817282.81	0.2183	A	0.8
8	☐	200.000	200.396	3904881.24	0.4913	A	14.8

y = 0.0025 * x + 4.3923E-005
R = 1.0000
DL = 0.0111
BEC = 0.01792

Weight: <None>
Min Conc: <None>

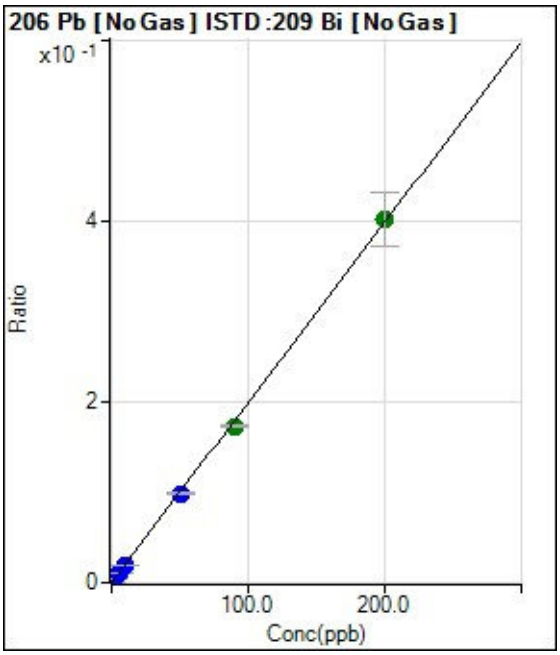
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	897.62	0.0001	P	14.2
2	☐	0.200	0.188	10338.08	0.0012	P	2.3
3	☐	2.000	1.943	97882.11	0.0115	P	0.8
4	☐	5.000	4.872	244368.17	0.0287	P	0.6
5	☐	10.000	9.784	488132.18	0.0575	P	0.6
6	☐	50.000	48.813	2396850.61	0.2864	A	0.6
7	☐	90.000	88.199	4308555.54	0.5175	A	1.1
8	☐	200.000	201.121	9376229.17	1.1799	A	15.1

y = 0.0059 * x + 1.0553E-004
R = 0.9999
DL = 0.007647
BEC = 0.01799

Weight: <None>
Min Conc: <None>

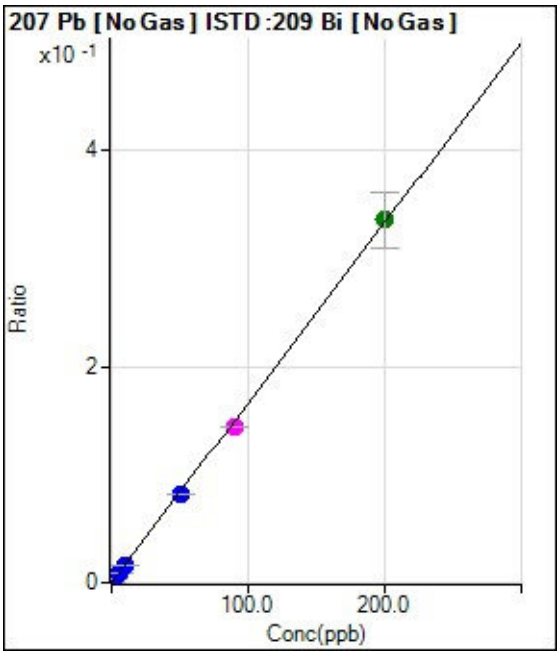


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	667.37	0.0001	P	13.8
2	☐	0.200	0.201	4091.51	0.0005	P	5.2
3	☐	2.000	1.921	33234.37	0.0039	P	0.3
4	☐	5.000	4.861	83195.90	0.0098	P	0.4
5	☐	10.000	9.692	164618.02	0.0194	P	0.8
6	☐	50.000	49.544	826729.67	0.0988	P	0.7
7	☐	90.000	86.981	1443727.48	0.1734	A	1.2
8	☐	200.000	201.492	3192124.74	0.4016	A	14.8

y = 0.0020 * x + 7.8466E-005
R = 0.9998
DL = 0.01629
BEC = 0.03938

Weight: <None>
Min Conc: <None>

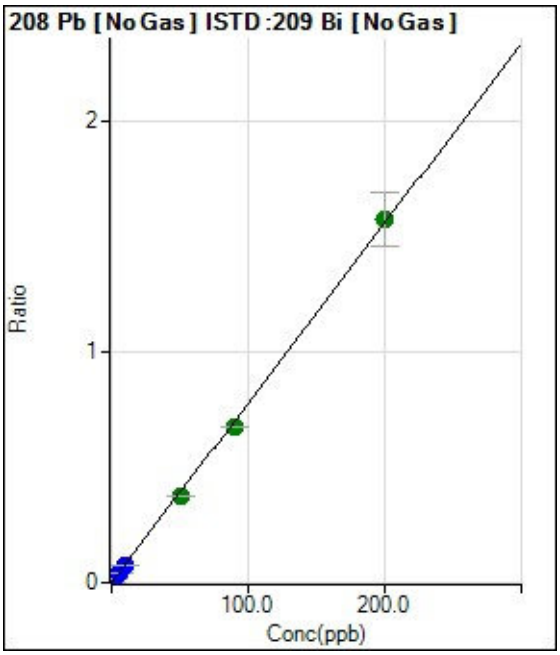
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	677.38	0.0001	P	7.3
2	☐	0.200	0.188	3350.54	0.0004	P	4.7
3	☐	2.000	1.915	27775.50	0.0033	P	1.4
4	☐	5.000	4.821	68979.17	0.0081	P	1.6
5	☐	10.000	9.526	135160.36	0.0159	P	1.2
6	☐	50.000	49.251	685948.63	0.0820	P	1.1
7	☐	90.000	86.729	1201389.83	0.1443	M	0.6
8	☐	200.000	201.688	2665452.12	0.3355	A	15.1

y = 0.0017 * x + 7.9623E-005
R = 0.9998
DL = 0.01043
BEC = 0.04788

Weight: <None>
Min Conc: <None>

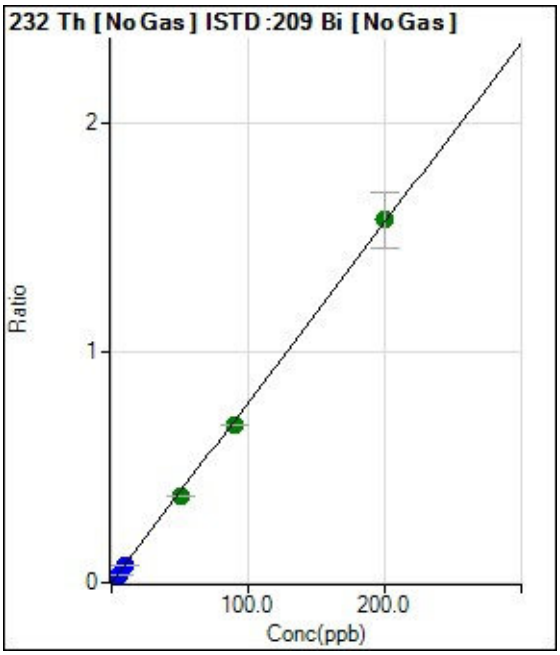


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2813.00	0.0003	P	3.9
2	☐	0.200	0.198	16007.02	0.0019	P	3.9
3	☐	2.000	1.916	129821.32	0.0153	P	1.2
4	☐	5.000	4.817	322506.03	0.0379	P	0.6
5	☐	10.000	9.619	638999.92	0.0753	P	0.5
6	☐	50.000	48.385	3156887.31	0.3773	A	0.5
7	☐	90.000	86.581	5618667.53	0.6748	A	0.8
8	☐	200.000	201.967	12507139.56	1.5737	A	14.8

y = 0.0078 * x + 3.3069E-004
R = 0.9998
DL = 0.005003
BEC = 0.04245

Weight: <None>
Min Conc: <None>

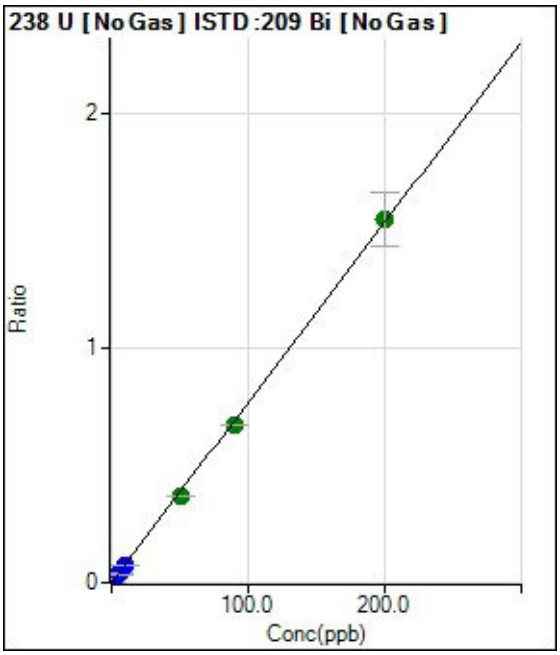
Calibration for 391_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8635.19	0.0010	P	9.7
2	☐	0.200	0.130	17386.60	0.0020	P	3.0
3	☐	2.000	1.717	122912.82	0.0144	P	0.9
4	☐	5.000	4.588	314386.08	0.0369	P	0.6
5	☐	10.000	9.452	636252.24	0.0749	P	0.3
6	☐	50.000	48.285	3168592.45	0.3787	A	0.7
7	☐	90.000	87.567	5710835.64	0.6859	A	0.8
8	☐	200.000	201.564	12534097.04	1.5776	A	15.2

y = 0.0078 * x + 0.0010
R = 0.9999
DL = 0.03772
BEC = 0.1298

Weight: <None>
Min Conc: <None>

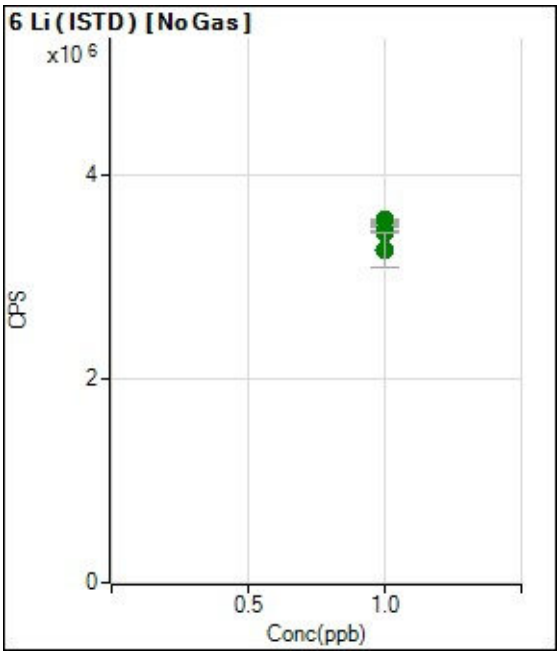


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	994.39	0.0001	P	16.5
2	☐	0.200	0.187	13310.80	0.0016	P	2.5
3	☐	2.000	1.902	125405.44	0.0147	P	2.0
4	☐	5.000	4.799	315303.96	0.0370	P	0.6
5	☐	10.000	9.650	630758.95	0.0743	P	1.0
6	☐	50.000	48.091	3094434.75	0.3698	A	1.2
7	☐	90.000	87.879	5625628.56	0.6757	A	0.2
8	☐	200.000	201.455	12311896.51	1.5488	A	14.9

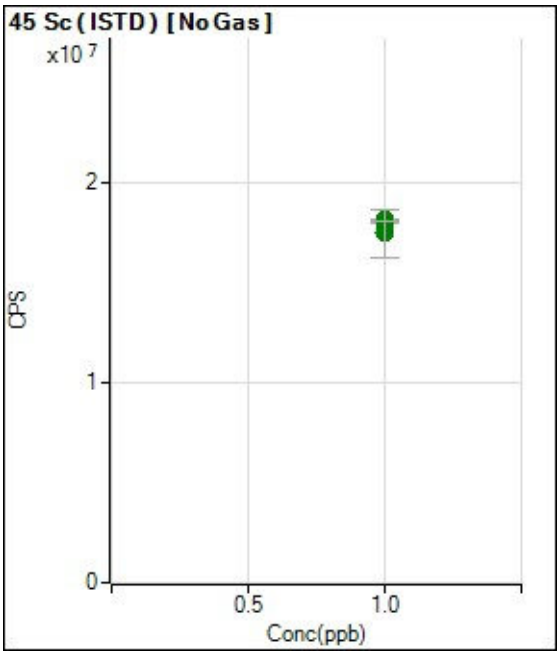
y = 0.0077 * x + 1.1692E-004
R = 0.9999
DL = 0.007539
BEC = 0.01521

Weight: <None>
Min Conc: <None>

Calibration for 391_ICV.d

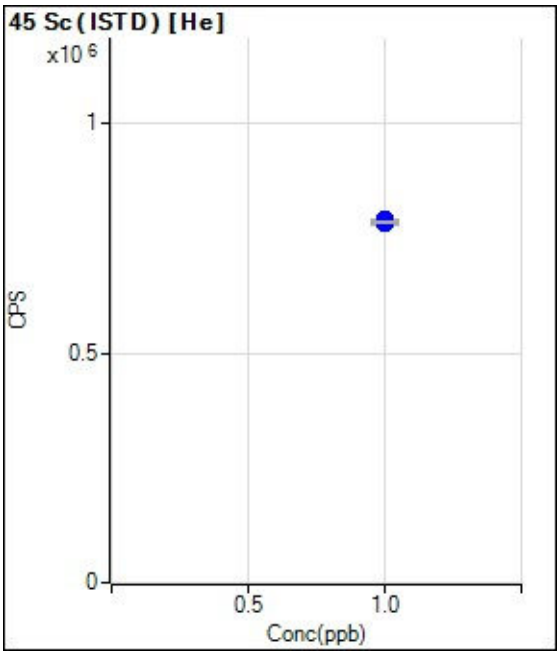


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3546479.06		A	0.3
2	☐	1.000		3562380.45		A	0.4
3	☐	1.000		3553077.85		A	0.1
4	☐	1.000		3523648.42		A	0.6
5	☐	1.000		3498644.05		A	0.5
6	☐	1.000		3449263.04		A	0.4
7	☐	1.000		3432713.25		A	0.3
8	☐	1.000		3266742.54		A	10.7

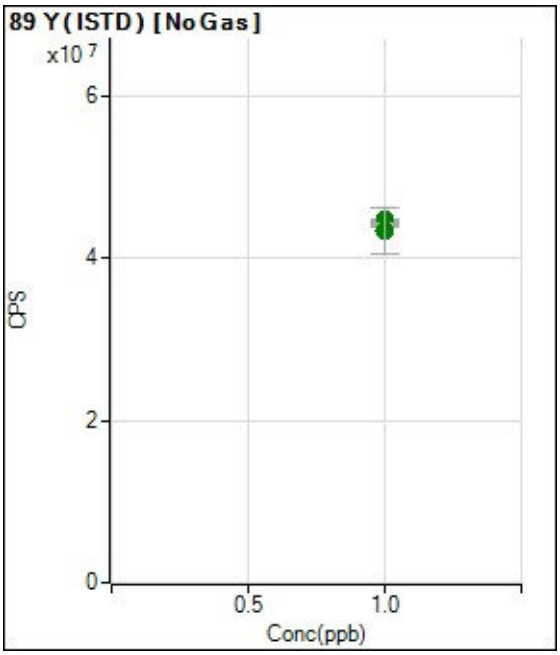


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		18068973.18		A	0.3
2	☐	1.000		18124716.42		A	0.4
3	☐	1.000		18093986.10		A	0.3
4	☐	1.000		17962777.81		A	0.2
5	☐	1.000		17952316.52		A	0.3
6	☐	1.000		18001569.94		A	0.7
7	☐	1.000		18049968.34		A	0.3
8	☐	1.000		17447293.16		A	13.5

Calibration for 391_ICV.d

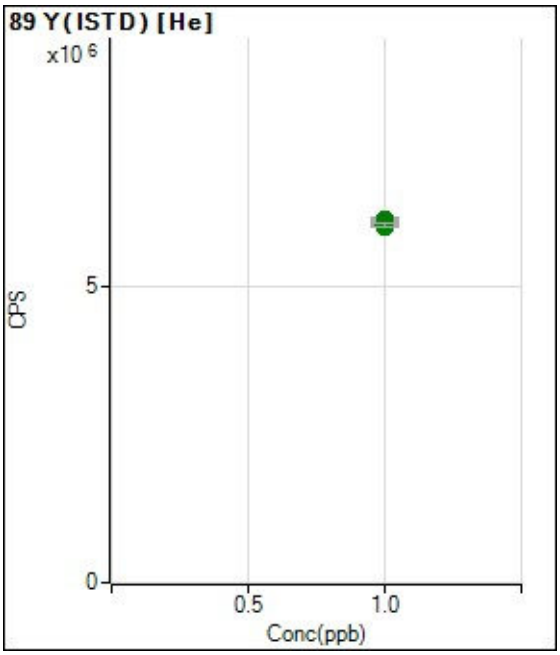


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		782598.87		P	1.1
2	☐	1.000		786966.62		P	0.7
3	☐	1.000		790590.70		P	0.2
4	☐	1.000		788067.57		P	0.4
5	☐	1.000		788582.64		P	1.0
6	☐	1.000		787449.26		P	1.4
7	☐	1.000		786523.68		P	0.7
8	☐	1.000		785652.54		P	0.7

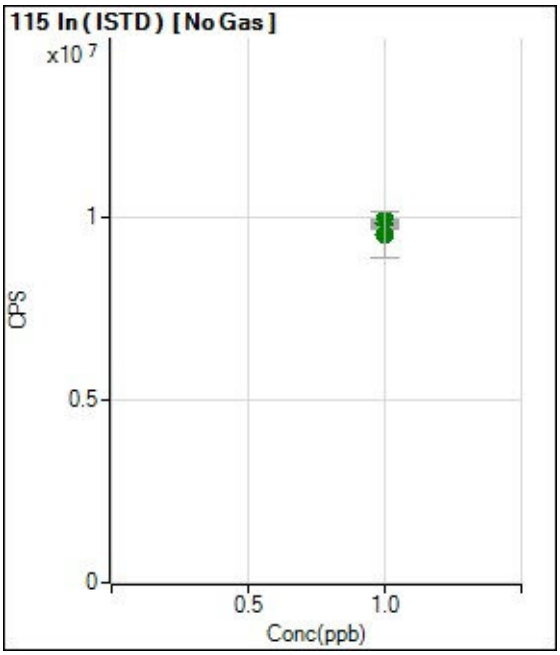


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		44605013.43		A	0.3
2	☐	1.000		44724369.46		A	0.5
3	☐	1.000		44591318.08		A	0.6
4	☐	1.000		44281821.91		A	0.5
5	☐	1.000		44388757.18		A	0.5
6	☐	1.000		44042315.74		A	1.2
7	☐	1.000		44189109.20		A	0.7
8	☐	1.000		43301192.95		A	13.2

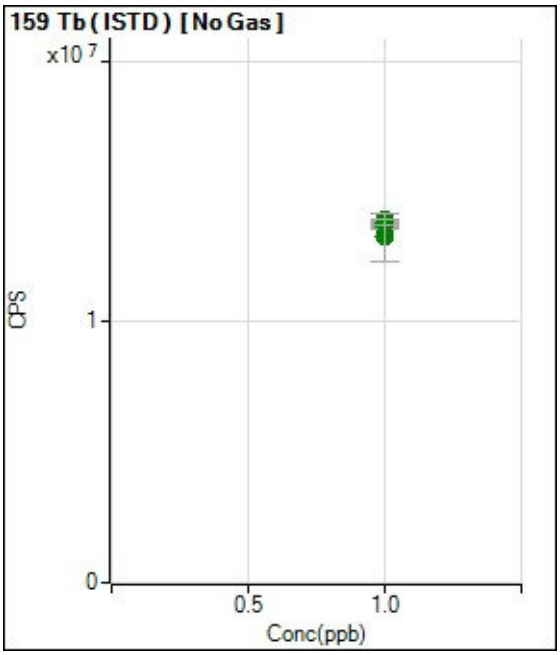
Calibration for 391_ICV.d



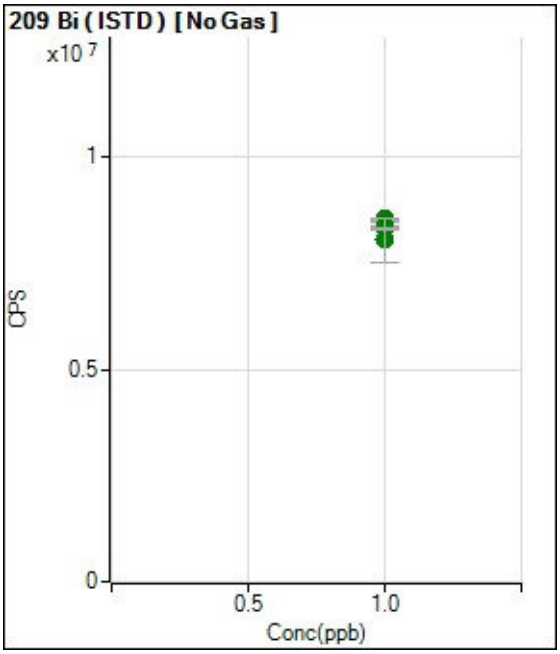
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6105468.19		A	1.0
2	☐	1.000		6109042.80		A	1.1
3	☐	1.000		6107850.78		A	0.5
4	☐	1.000		6071292.55		A	0.6
5	☐	1.000		6003657.63		A	0.7
6	☐	1.000		6052964.23		A	1.1
7	☐	1.000		6025831.89		A	0.8
8	☐	1.000		6031288.80		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9924340.73		A	0.4
2	☐	1.000		9904786.46		A	0.2
3	☐	1.000		9949969.27		A	0.2
4	☐	1.000		9876746.97		A	0.7
5	☐	1.000		9869806.48		A	0.7
6	☐	1.000		9780826.48		A	0.9
7	☐	1.000		9741334.60		A	0.3
8	☐	1.000		9559798.52		A	13.3



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13751488.60		A	1.0
2	☐	1.000		13900667.78		A	0.3
3	☐	1.000		13696293.82		A	0.5
4	☐	1.000		13787467.08		A	0.3
5	☐	1.000		13759832.78		A	0.4
6	☐	1.000		13609200.90		A	1.3
7	☐	1.000		13811471.08		A	1.2
8	☐	1.000		13239570.01		A	13.8



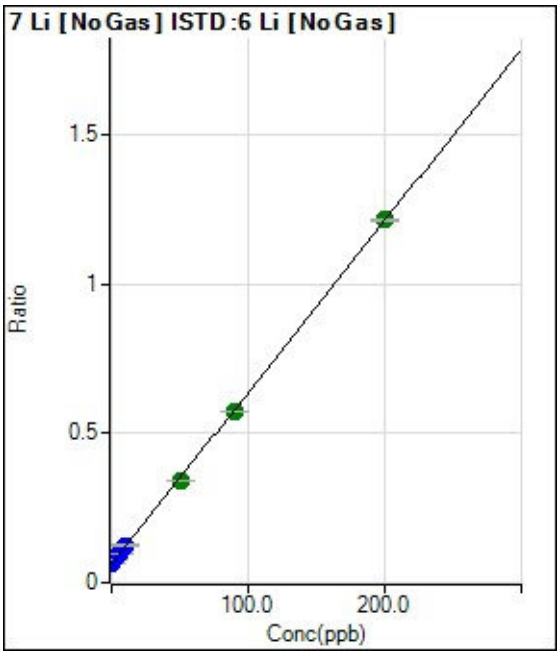
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8506561.89		A	0.2
2	☐	1.000		8546390.22		A	0.4
3	☐	1.000		8509649.11		A	0.3
4	☐	1.000		8519661.33		A	0.4
5	☐	1.000		8489533.00		A	0.3
6	☐	1.000		8367572.44		A	0.2
7	☐	1.000		8325930.78		A	0.4
8	☐	1.000		8048666.62		A	12.8

Calibration for 482_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b\
Analysis File: ICPMS3_201130.batch.bin
DA Date-Time: 2020-12-01 10:23:26
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	473CALB.d	std 1	2020-12-01 04:12:27
2	474CALS.d	std 2	2020-12-01 04:14:09
3	475CALS.d	std 3	2020-12-01 04:15:52
4	476CALS.d	std 4	2020-12-01 04:17:34
5	477CALS.d	std 5	2020-12-01 04:19:19
6	478CALS.d	std 6	2020-12-01 04:21:02
7	479CALS.d	std 7	2020-12-01 04:22:47
8	480CALS.d	std 8	2020-12-01 04:24:38

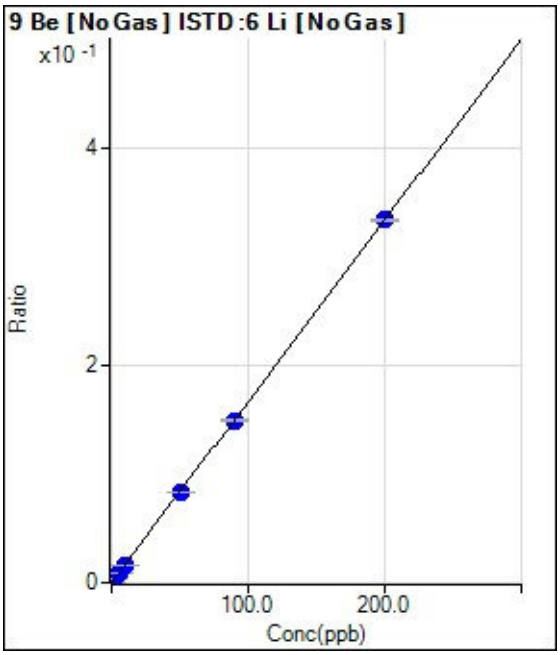
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	132309.55	0.0620	P	1.2
2	☐	0.200	0.370	137238.48	0.0641	P	0.3
3	☐	2.000	2.164	157453.03	0.0744	P	0.3
4	☐	5.000	5.542	197436.58	0.0938	P	0.7
5	☐	10.000	11.011	261451.22	0.1252	P	0.6
6	☐	50.000	48.732	704088.10	0.3418	A	0.2
7	☐	90.000	89.248	1160461.82	0.5745	A	0.2
8	☐	200.000	200.590	2392732.63	1.2139	A	0.4

y = 0.0057 * x + 0.0620
R = 0.9999
DL = 0.3982
BEC = 10.79

Weight: <None>
Min Conc: <None>

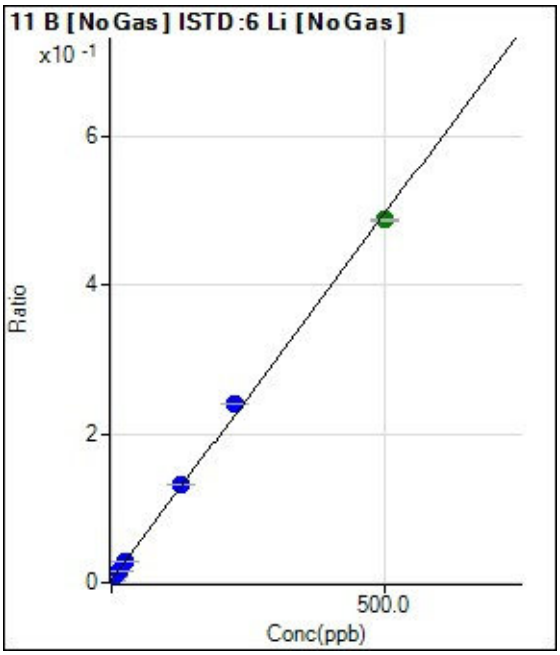


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.53	0.0001	P	23.5
2	☐	0.200	0.173	810.85	0.0004	P	5.0
3	☐	2.000	1.890	6858.65	0.0032	P	2.8
4	☐	5.000	4.910	17421.79	0.0083	P	2.4
5	☐	10.000	9.752	34139.26	0.0164	P	0.9
6	☐	50.000	49.415	169892.00	0.0825	P	0.3
7	☐	90.000	89.659	302150.54	0.1496	P	0.4
8	☐	200.000	200.315	658523.13	0.3341	P	0.2

y = 0.0017 * x + 9.0680E-005
R = 1.0000
DL = 0.03838
BEC = 0.05439

Weight: <None>
Min Conc: <None>

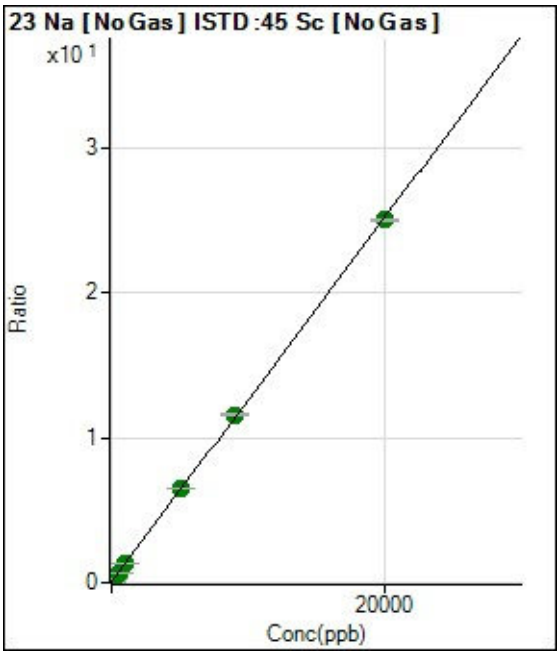
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7122.37	0.0033	P	4.5
2	☐	0.500	0.063	7275.94	0.0034	P	3.3
3	☐	5.000	4.487	16399.47	0.0078	P	1.1
4	☐	12.500	11.926	31714.38	0.0151	P	1.8
5	☐	25.000	25.055	58429.43	0.0280	P	2.5
6	☐	125.000	131.095	272502.06	0.1323	P	0.5
7	☐	225.000	240.323	484286.55	0.2397	P	0.3
8	☐	500.000	491.598	959821.26	0.4869	A	0.2

y = 9.8372E-004 * x + 0.0033
R = 0.9993
DL = 0.4529
BEC = 3.392

Weight: <None>
Min Conc: <None>

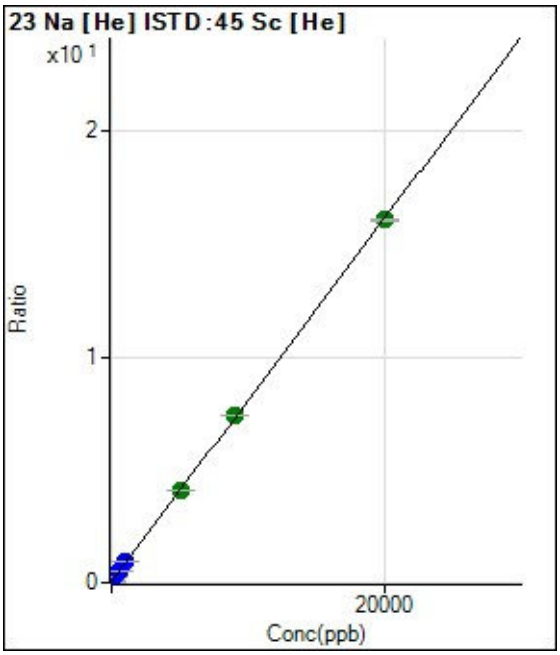


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	725429.61	0.0586	A	1.0
2	☐	20.000	20.043	1032060.86	0.0838	A	0.6
3	☐	200.000	202.192	3803440.97	0.3125	A	1.5
4	☐	500.000	504.805	8443986.38	0.6925	A	0.4
5	☐	1000.000	1012.667	16188006.09	1.3303	A	0.4
6	☐	5000.000	5110.761	78327833.00	6.4765	A	0.7
7	☐	9000.000	9195.244	139686203.12	11.6056	A	0.8
8	☐	20000.000	19883.675	300853390.06	25.0277	A	0.4

y = 0.0013 * x + 0.0586
R = 0.9999
DL = 1.416
BEC = 46.69

Weight: <None>
Min Conc: <None>

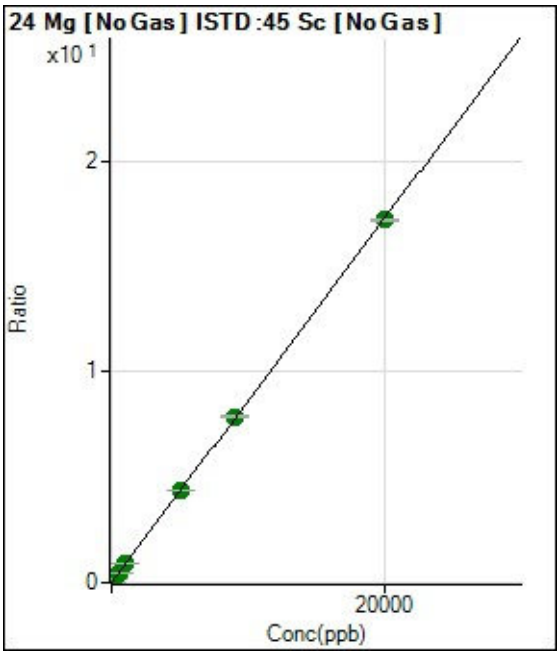
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24383.08	0.0431	P	3.1
2	☐	20.000	21.345	34203.98	0.0603	P	2.9
3	☐	200.000	222.814	123670.09	0.2224	P	1.8
4	☐	500.000	551.186	272232.89	0.4866	P	1.6
5	☐	1000.000	1105.665	528379.24	0.9327	P	2.0
6	☐	5000.000	5054.149	2321655.54	4.1093	A	0.2
7	☐	9000.000	9134.214	4109946.81	7.3917	A	0.4
8	☐	20000.000	19919.274	8917539.66	16.0684	A	0.6

y = 8.0451E-004 * x + 0.0431
R = 1.0000
DL = 4.953
BEC = 53.62

Weight: <None>
Min Conc: <None>

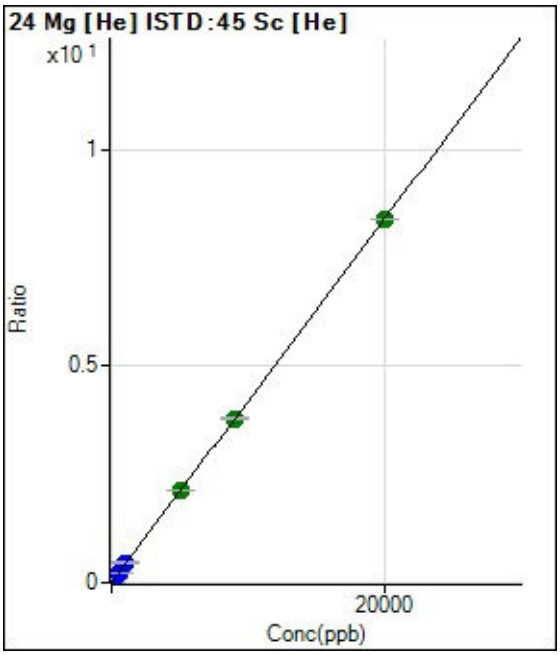


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12179.45	0.0010	P	4.4
2	☐	20.000	21.709	243118.61	0.0197	P	1.2
3	☐	200.000	204.930	2166592.57	0.1780	A	0.5
4	☐	500.000	509.641	5380731.59	0.4413	A	1.0
5	☐	1000.000	1014.167	10674245.26	0.8772	A	0.7
6	☐	5000.000	5099.463	53297235.87	4.4069	A	0.7
7	☐	9000.000	9118.516	94835991.92	7.8793	A	0.5
8	☐	20000.000	19920.802	206909456.92	17.2123	A	0.3

y = 8.6399E-004 * x + 9.8443E-004
R = 1.0000
DL = 0.1505
BEC = 1.139

Weight: <None>
Min Conc: <None>

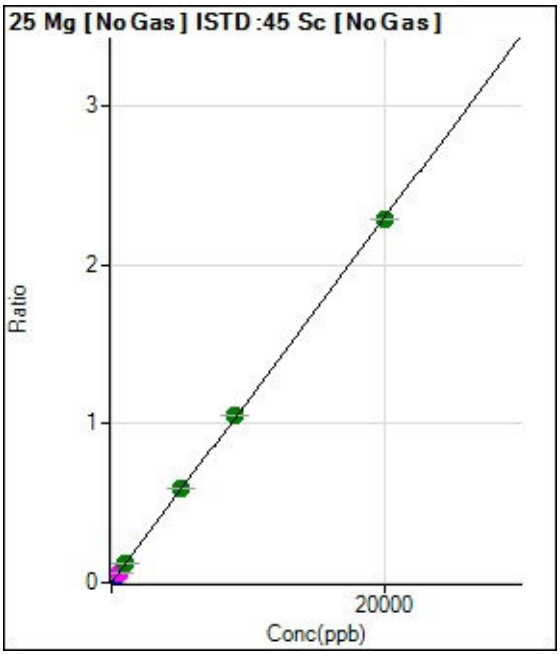
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	280.03	0.0005	P	28.0
2	☐	20.000	23.143	5788.34	0.0102	P	5.1
3	☐	200.000	220.352	51699.14	0.0930	P	2.2
4	☐	500.000	556.301	130856.31	0.2340	P	3.6
5	☐	1000.000	1108.460	263821.55	0.4657	P	0.5
6	☐	5000.000	5060.723	1200204.75	2.1243	A	0.5
7	☐	9000.000	9043.164	2110418.04	3.7956	A	1.1
8	☐	20000.000	19958.358	4648699.31	8.3764	A	0.1

y = 4.1967E-004 * x + 4.9497E-004
R = 1.0000
DL = 0.9916
BEC = 1.179

Weight: <None>
Min Conc: <None>

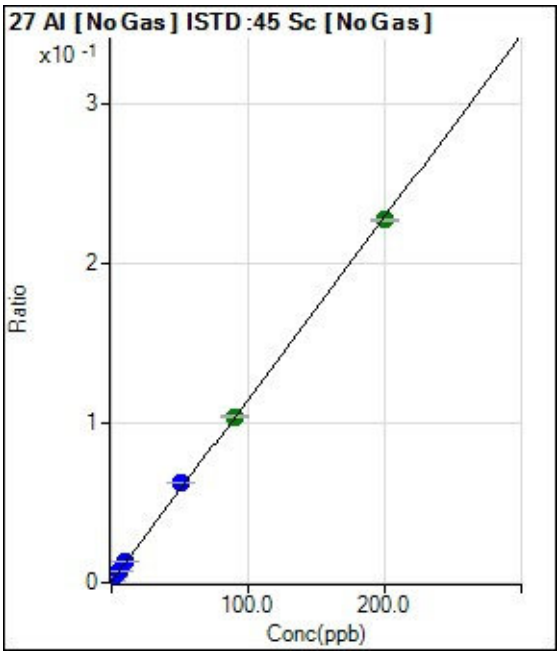


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1573.54	0.0001	P	37.4
2	☐	20.000	21.129	31450.48	0.0026	P	4.1
3	☐	200.000	216.203	303676.22	0.0250	P	1.9
4	☐	500.000	536.025	752060.80	0.0617	M	3.6
5	☐	1000.000	1022.665	1430586.54	0.1176	A	0.3
6	☐	5000.000	5136.468	7135029.48	0.5900	A	0.6
7	☐	9000.000	9169.762	12675302.31	1.0531	A	0.7
8	☐	20000.000	19887.293	27453387.92	2.2838	A	0.1

y = 1.1483E-004 * x + 1.2726E-004
R = 0.9999
DL = 1.244
BEC = 1.108

Weight: <None>
Min Conc: <None>

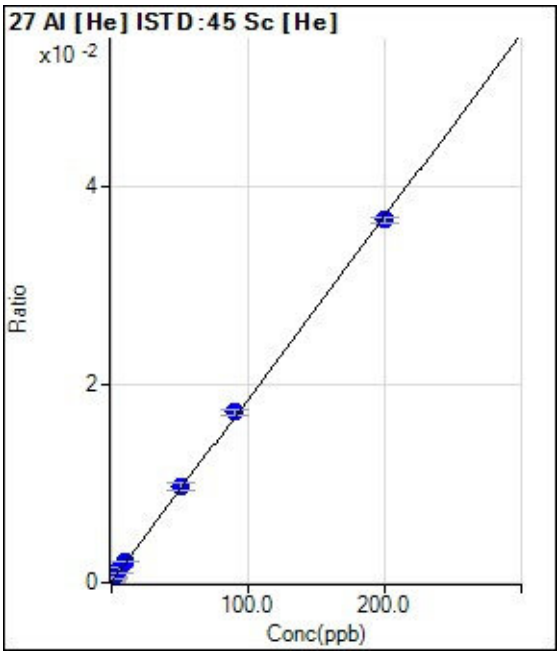
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7869.43	0.0006	P	9.3
2	☐			14822.41	0.0012	P	4.9
3	☐	2.000	2.448	41705.95	0.0034	P	5.1
4	☐	5.000	5.585	85384.73	0.0070	P	0.9
5	☐	10.000	10.975	159987.11	0.0131	P	1.6
6	☐	50.000	54.497	758998.74	0.0628	P	0.2
7	☐	90.000	90.681	1251811.62	0.1040	A	0.7
8	☐	200.000	198.502	2727605.58	0.2269	A	0.5

y = 0.0011 * x + 6.3619E-004
R = 0.9997
DL = 0.1553
BEC = 0.5581

Weight: <None>
Min Conc: <None>

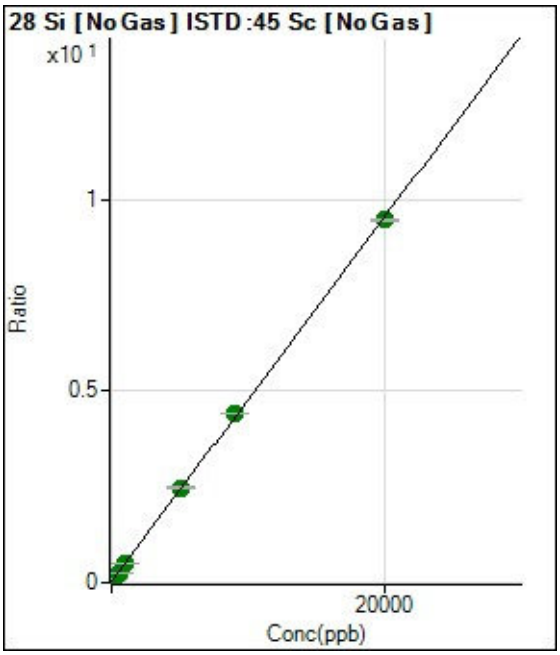


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0001	P	22.2
2	☐			80.00	0.0001	P	12.7
3	☐	2.000	2.416	300.01	0.0005	P	26.6
4	☐	5.000	6.524	726.79	0.0013	P	36.6
5	☐	10.000	10.750	1176.74	0.0021	P	2.5
6	☐	50.000	51.799	5451.16	0.0096	P	7.5
7	☐	90.000	92.962	9586.77	0.0172	P	3.7
8	☐	200.000	198.138	20335.12	0.0366	P	1.2

y = 1.8445E-004 * x + 9.4449E-005
R = 0.9998
DL = 0.3405
BEC = 0.512

Weight: <None>
Min Conc: <None>

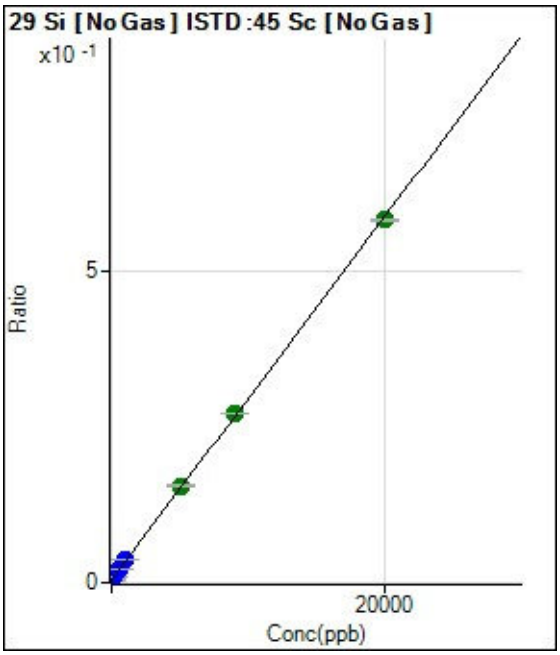
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	365911.82	0.0296	P	5.1
2	☐	20.000	21.539	490305.02	0.0398	P	2.0
3	☐	200.000	197.037	1499640.48	0.1232	A	0.8
4	☐	500.000	503.244	3277219.31	0.2688	A	0.4
5	☐	1000.000	1015.764	6235237.33	0.5124	A	0.5
6	☐	5000.000	5157.585	30007711.94	2.4812	A	0.4
7	☐	9000.000	9226.487	53142647.76	4.4153	A	0.5
8	☐	20000.000	19857.843	113824471.37	9.4687	A	0.5

y = 4.7534E-004 * x + 0.0296
R = 0.9999
DL = 9.49
BEC = 62.22

Weight: <None>
Min Conc: <None>

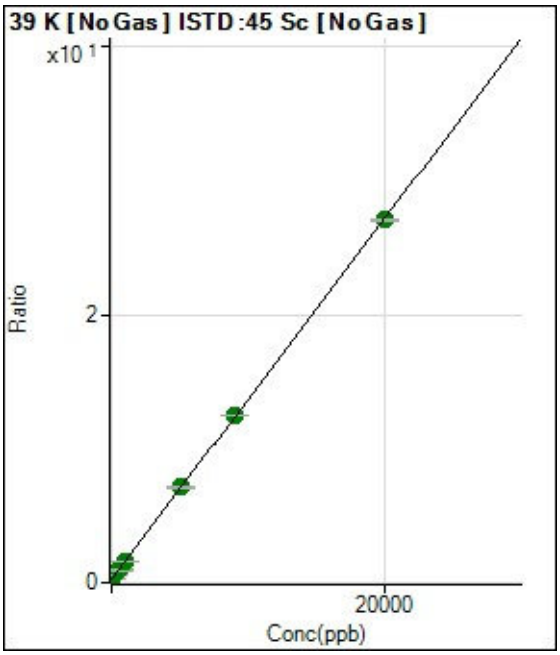


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	52749.29	0.0043	P	3.1
2	☐	20.000	18.280	59057.44	0.0048	P	1.4
3	☐	200.000	218.751	129315.00	0.0106	P	1.8
4	☐	500.000	560.101	250630.25	0.0206	P	0.6
5	☐	1000.000	1137.782	454608.80	0.0374	P	0.4
6	☐	5000.000	5199.202	1880611.81	0.1555	A	0.5
7	☐	9000.000	9217.385	3278386.42	0.2724	A	0.1
8	☐	20000.000	19843.799	6990015.24	0.5815	A	0.7

y = 2.9088E-005 * x + 0.0043
R = 0.9999
DL = 13.56
BEC = 146.6

Weight: <None>
Min Conc: <None>

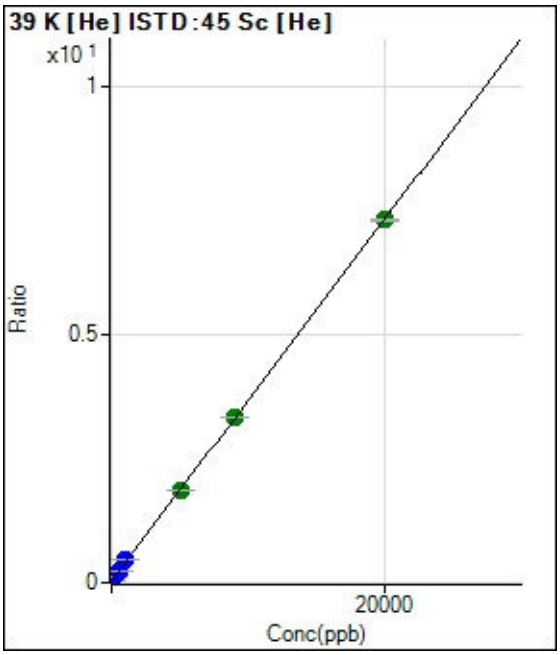
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3223937.76	0.2606	A	1.0
2	☐	20.000	18.746	3519343.07	0.2858	A	0.6
3	☐	200.000	198.970	6424080.94	0.5279	A	0.8
4	☐	500.000	500.795	11380876.50	0.9334	A	0.4
5	☐	1000.000	1002.882	19567240.13	1.6080	A	0.3
6	☐	5000.000	5096.768	85969312.05	7.1083	A	0.5
7	☐	9000.000	9080.256	149974954.43	12.4602	A	0.6
8	☐	20000.000	19939.540	325174721.82	27.0500	A	0.7

y = 0.0013 * x + 0.2606
R = 1.0000
DL = 6.051
BEC = 194

Weight: <None>
Min Conc: <None>

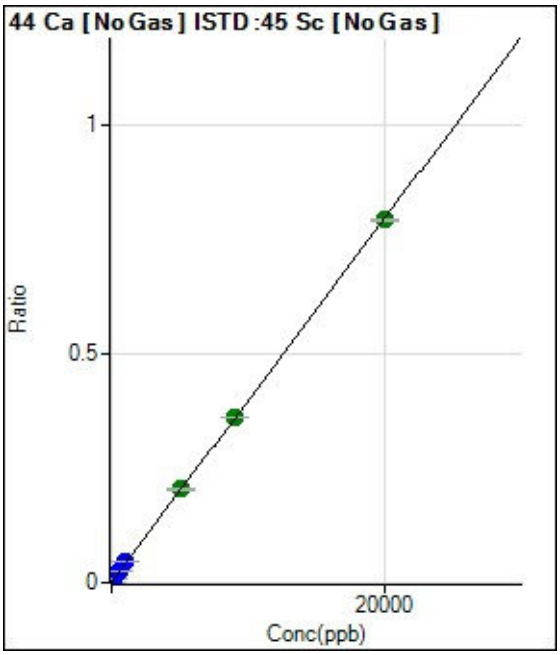


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20723.81	0.0367	P	4.3
2	☐	20.000	30.115	27028.59	0.0477	P	4.1
3	☐	200.000	223.146	65680.00	0.1181	P	0.6
4	☐	500.000	569.917	136920.86	0.2447	P	1.3
5	☐	1000.000	1136.200	255751.46	0.4514	P	0.6
6	☐	5000.000	5014.208	1054893.68	1.8671	A	0.6
7	☐	9000.000	9042.236	1855803.88	3.3376	A	0.2
8	☐	20000.000	19968.643	4065909.73	7.3263	A	0.7

y = 3.6505E-004 * x + 0.0367
R = 1.0000
DL = 12.96
BEC = 100.4

Weight: <None>
Min Conc: <None>

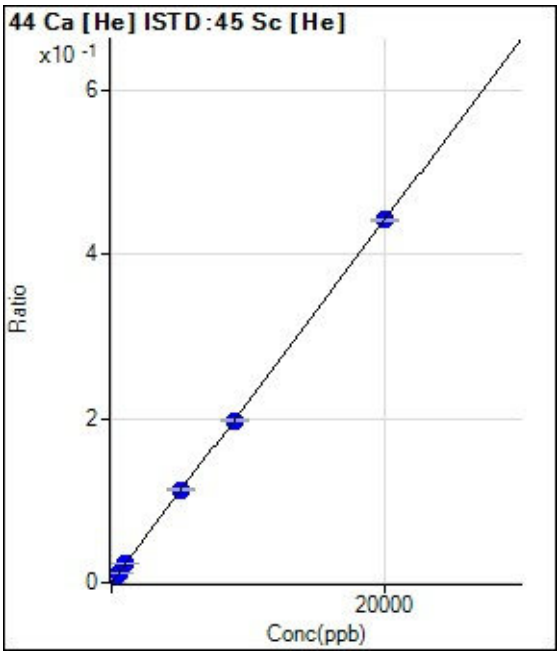
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12366.42	0.0010	P	7.9
2	☐	20.000	22.133	23154.46	0.0019	P	5.5
3	☐	200.000	233.697	125268.14	0.0103	P	4.1
4	☐	500.000	575.700	291370.46	0.0239	P	1.6
5	☐	1000.000	1156.021	571674.14	0.0470	P	0.6
6	☐	5000.000	5113.658	2471869.34	0.2044	A	0.4
7	☐	9000.000	9066.531	4352325.15	0.3616	A	0.6
8	☐	20000.000	19931.614	9541754.86	0.7937	A	0.9

y = 3.9773E-005 * x + 9.9968E-004
R = 1.0000
DL = 5.935
BEC = 25.13

Weight: <None>
Min Conc: <None>

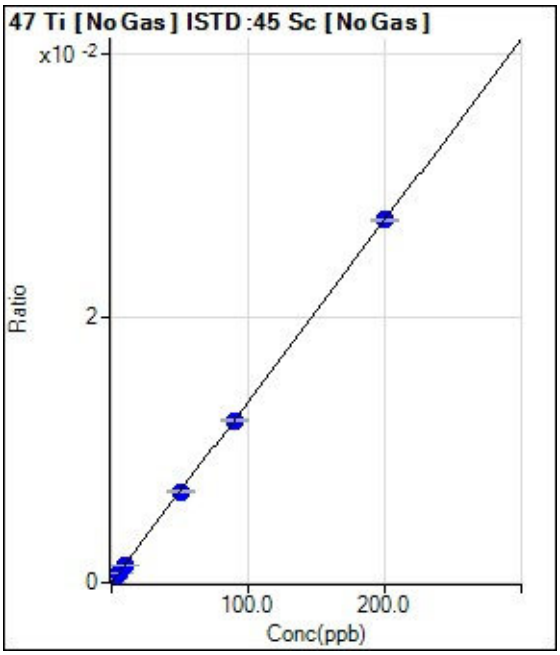


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	68.6
2	☐	20.000	22.354	346.69	0.0006	P	27.0
3	☐	200.000	196.421	2480.41	0.0045	P	8.0
4	☐	500.000	507.602	6348.70	0.0113	P	2.4
5	☐	1000.000	1036.128	13047.27	0.0230	P	6.3
6	☐	5000.000	5096.932	63737.87	0.1128	P	2.0
7	☐	9000.000	8917.696	109708.02	0.1973	P	1.0
8	☐	20000.000	20010.841	245615.72	0.4426	P	0.8

y = 2.2111E-005 * x + 1.1763E-004
R = 1.0000
DL = 10.95
BEC = 5.32

Weight: <None>
Min Conc: <None>

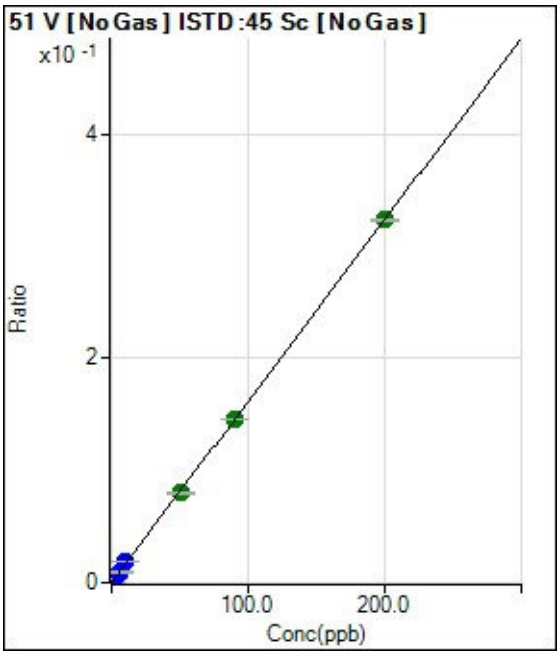
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.81	0.0000	P	10.5
2	☐	0.200	0.169	430.45	0.0000	P	10.3
3	☐	2.000	2.001	3480.65	0.0003	P	6.3
4	☐	5.000	4.866	8270.88	0.0007	P	1.4
5	☐	10.000	9.871	16596.84	0.0014	P	2.4
6	☐	50.000	50.332	83522.73	0.0069	P	1.3
7	☐	90.000	89.417	147557.32	0.0123	P	1.7
8	☐	200.000	200.189	329774.64	0.0274	P	0.8

y = 1.3698E-004 * x + 1.1867E-005
R = 1.0000
DL = 0.02716
BEC = 0.08663

Weight: <None>
Min Conc: <None>

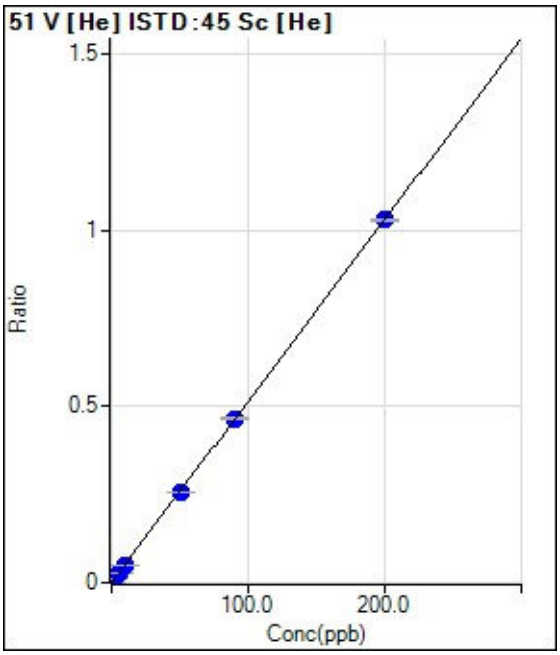


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-697.06	-0.0001	P	-98.2
2	☐	0.200	0.153	2350.53	0.0002	P	125.8
3	☐	2.000	2.241	43443.40	0.0036	P	2.4
4	☐	5.000	5.822	114193.99	0.0094	P	2.0
5	☐	10.000	11.272	221255.62	0.0182	P	1.8
6	☐	50.000	49.598	969993.63	0.0802	A	1.2
7	☐	90.000	89.945	1751188.23	0.1455	A	0.6
8	☐	200.000	200.039	3890676.58	0.3237	A	0.7

y = 0.0016 * x - 5.6231E-005
R = 1.0000
DL = 0.1024
BEC = -0.03475

Weight: <None>
Min Conc: <None>

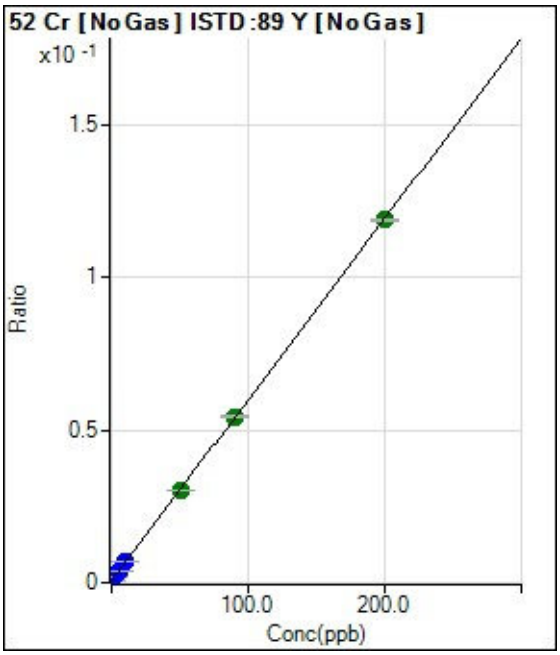
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.25	0.0004	P	4.7
2	☐	0.200	0.235	927.65	0.0016	P	17.1
3	☐	2.000	2.086	6207.71	0.0112	P	2.4
4	☐	5.000	4.975	14575.88	0.0260	P	1.5
5	☐	10.000	9.620	28297.62	0.0500	P	2.5
6	☐	50.000	49.524	144301.78	0.2554	P	0.3
7	☐	90.000	90.231	258542.47	0.4650	P	1.0
8	☐	200.000	200.034	571813.92	1.0303	P	0.5

y = 0.0051 * x + 4.2515E-004
R = 1.0000
DL = 0.01165
BEC = 0.08257

Weight: <None>
Min Conc: <None>

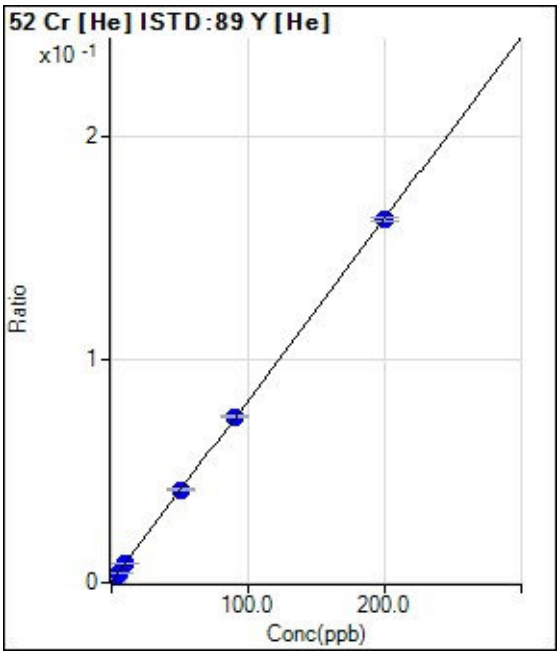


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20222.03	0.0006	P	2.9
2	☐	0.200	0.196	23814.64	0.0007	P	2.4
3	☐	2.000	2.118	59598.68	0.0019	P	0.5
4	☐	5.000	5.474	121727.31	0.0039	P	0.6
5	☐	10.000	10.871	222587.44	0.0071	P	0.6
6	☐	50.000	50.186	947999.80	0.0304	A	0.5
7	☐	90.000	90.779	1687790.09	0.0544	A	0.5
8	☐	200.000	199.546	3688058.38	0.1188	A	0.5

y = 5.9241E-004 * x + 6.3338E-004
R = 1.0000
DL = 0.09401
BEC = 1.069

Weight: <None>
Min Conc: <None>

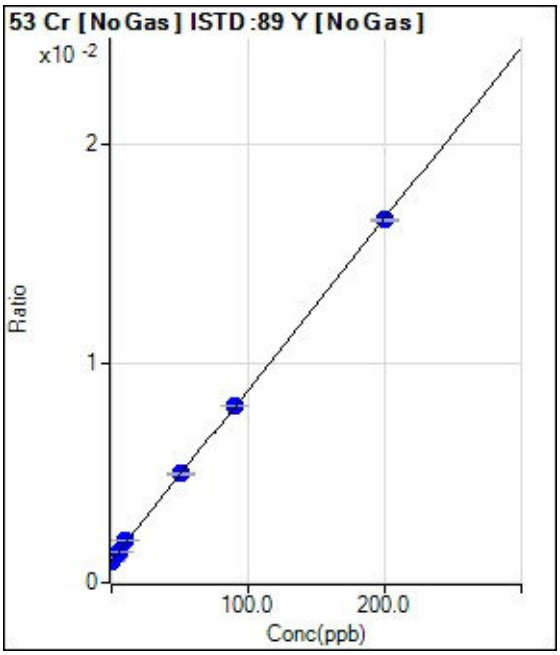
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1514.96	0.0003	P	5.8
2	☐	0.200	0.156	2065.59	0.0005	P	4.0
3	☐	2.000	2.043	8684.92	0.0020	P	0.9
4	☐	5.000	4.985	19129.43	0.0044	P	3.2
5	☐	10.000	10.046	36950.17	0.0085	P	2.0
6	☐	50.000	50.906	181890.41	0.0417	P	1.1
7	☐	90.000	90.930	319140.57	0.0742	P	0.9
8	☐	200.000	199.352	699565.84	0.1623	P	0.9

y = 8.1257E-004 * x + 3.4130E-004
R = 1.0000
DL = 0.073
BEC = 0.42

Weight: <None>
Min Conc: <None>

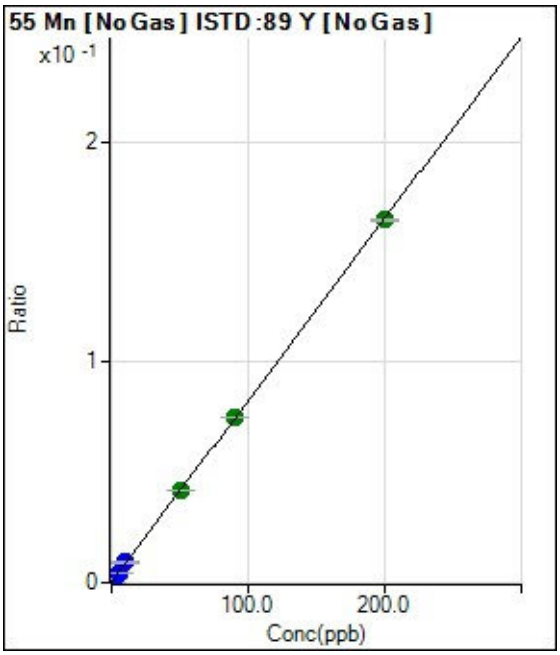


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31818.93	0.0010	P	0.2
2	☐	0.200	0.760	33568.34	0.0011	P	2.0
3	☐	2.000	2.198	36886.78	0.0012	P	0.8
4	☐	5.000	5.658	45190.00	0.0014	P	1.0
5	☐	10.000	11.918	60685.02	0.0019	P	1.0
6	☐	50.000	50.887	155316.47	0.0050	P	1.3
7	☐	90.000	90.880	251309.53	0.0081	P	0.1
8	☐	200.000	199.267	514376.14	0.0166	P	0.6

y = 7.8183E-005 * x + 9.9658E-004
R = 1.0000
DL = 0.09237
BEC = 12.75

Weight: <None>
Min Conc: <None>

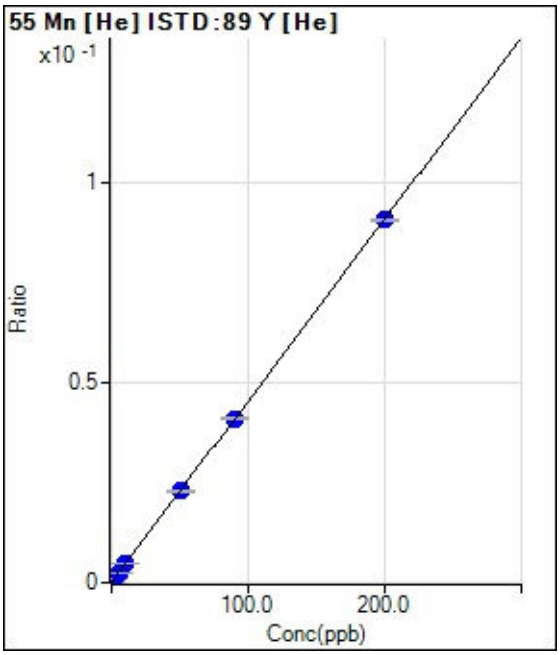
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6614.95	0.0002	P	2.4
2	☐	0.200	0.207	12014.11	0.0004	P	2.6
3	☐	2.000	2.140	62179.71	0.0020	P	1.7
4	☐	5.000	5.455	147578.82	0.0047	P	0.6
5	☐	10.000	10.880	288468.36	0.0092	P	0.5
6	☐	50.000	50.347	1300828.54	0.0417	A	0.5
7	☐	90.000	90.989	2330559.47	0.0751	A	0.3
8	☐	200.000	199.411	5102095.23	0.1644	A	0.5

y = 8.2347E-004 * x + 2.0718E-004
R = 1.0000
DL = 0.01784
BEC = 0.2516

Weight: <None>
Min Conc: <None>

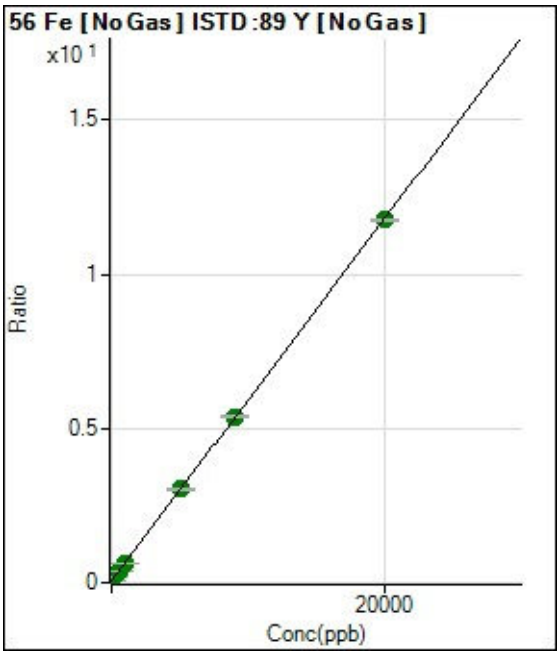


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.32	0.0001	P	17.4
2	☐	0.200	0.155	620.65	0.0001	P	14.8
3	☐	2.000	1.969	4188.23	0.0010	P	3.0
4	☐	5.000	5.271	10745.12	0.0025	P	2.8
5	☐	10.000	10.123	20295.68	0.0047	P	2.0
6	☐	50.000	50.438	100295.03	0.0230	P	1.6
7	☐	90.000	90.264	176701.04	0.0411	P	1.1
8	☐	200.000	199.759	391598.14	0.0909	P	0.7

y = 4.5453E-004 * x + 6.9892E-005
R = 1.0000
DL = 0.08029
BEC = 0.1538

Weight: <None>
Min Conc: <None>

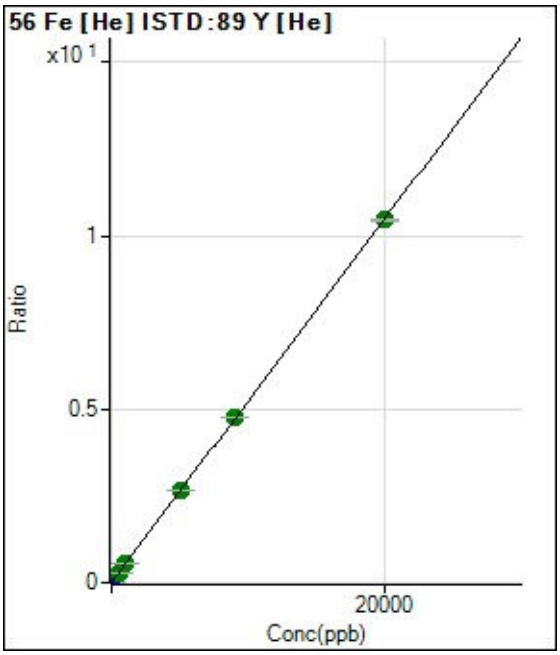
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1760610.26	0.0551	A	1.2
2	☐	20.000	17.686	2082846.53	0.0655	A	1.6
3	☐	200.000	197.721	5406611.58	0.1713	A	0.3
4	☐	500.000	500.779	10968154.67	0.3492	A	1.1
5	☐	1000.000	1007.362	20352037.44	0.6467	A	0.8
6	☐	5000.000	5062.955	94547625.03	3.0285	A	1.1
7	☐	9000.000	9092.155	167337441.24	5.3947	A	0.3
8	☐	20000.000	19942.429	365132816.50	11.7668	A	0.6

y = 5.8727E-004 * x + 0.0551
R = 1.0000
DL = 3.431
BEC = 93.9

Weight: <None>
Min Conc: <None>

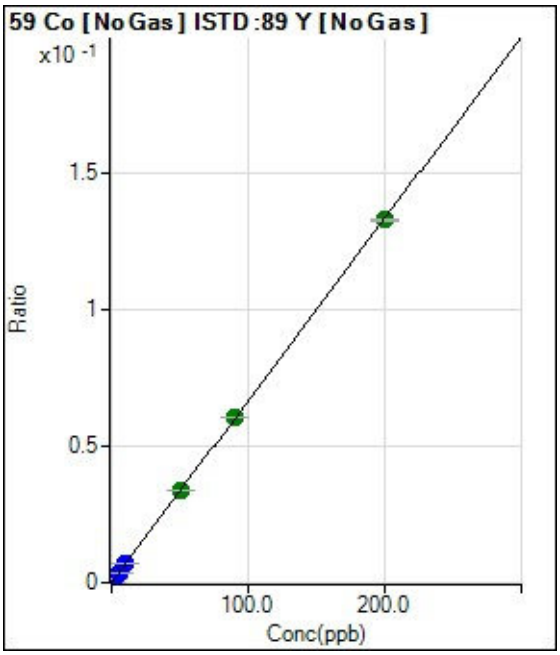


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27202.37	0.0061	P	7.5
2	☐	20.000	24.509	83793.91	0.0190	P	1.2
3	☐	200.000	259.298	616068.00	0.1420	P	1.5
4	☐	500.000	501.004	1170083.58	0.2686	A	0.4
5	☐	1000.000	1008.929	2322793.04	0.5346	A	0.1
6	☐	5000.000	5054.283	11573102.33	2.6536	A	0.6
7	☐	9000.000	9056.492	20422969.70	4.7499	A	0.1
8	☐	20000.000	19959.939	45083120.99	10.4611	A	0.8

y = 5.2380E-004 * x + 0.0061
R = 1.0000
DL = 2.625
BEC = 11.71

Weight: <None>
Min Conc: <None>

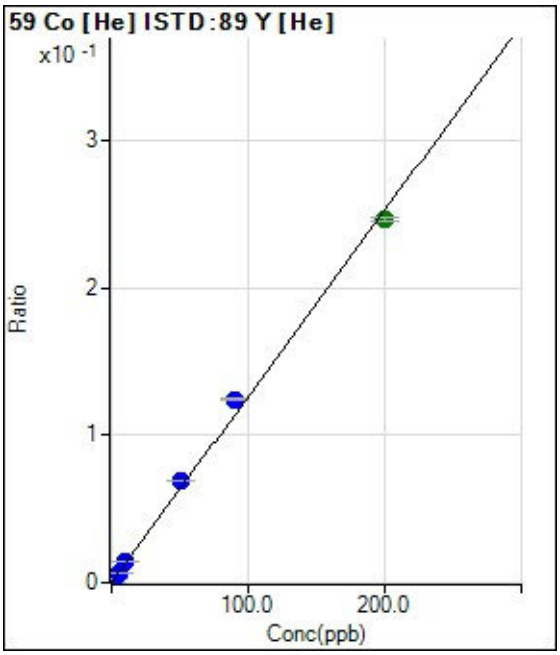
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1097.83	0.0000	P	6.3
2	☐	0.200	0.214	5616.86	0.0002	P	1.3
3	☐	2.000	2.157	46402.06	0.0015	P	2.0
4	☐	5.000	5.533	116748.47	0.0037	P	1.0
5	☐	10.000	10.976	230979.82	0.0073	P	0.6
6	☐	50.000	50.641	1053403.17	0.0337	A	0.1
7	☐	90.000	90.852	1876770.37	0.0605	A	0.5
8	☐	200.000	199.393	4119461.87	0.1327	A	0.6

y = 6.6559E-004 * x + 3.4382E-005
R = 1.0000
DL = 0.009754
BEC = 0.05166

Weight: <None>
Min Conc: <None>

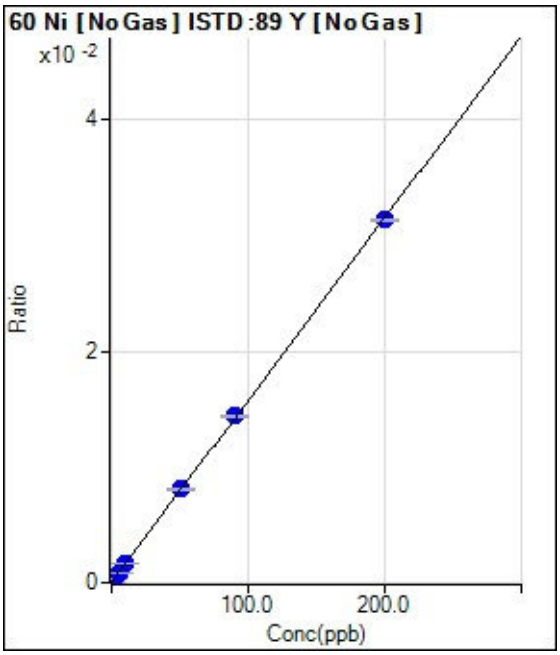


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.21	0.0000	P	23.4
2	☐	0.200	0.224	1448.22	0.0003	P	8.4
3	☐	2.000	2.133	11880.58	0.0027	P	1.6
4	☐	5.000	5.426	30036.66	0.0069	P	3.3
5	☐	10.000	10.983	60417.28	0.0139	P	0.4
6	☐	50.000	54.676	301124.14	0.0690	P	0.6
7	☐	90.000	98.393	534039.68	0.1242	P	0.9
8	☐	200.000	194.993	1060640.04	0.2461	A	1.2

y = 0.0013 * x + 4.5157E-005
R = 0.9985
DL = 0.0251
BEC = 0.03578

Weight: <None>
Min Conc: <None>

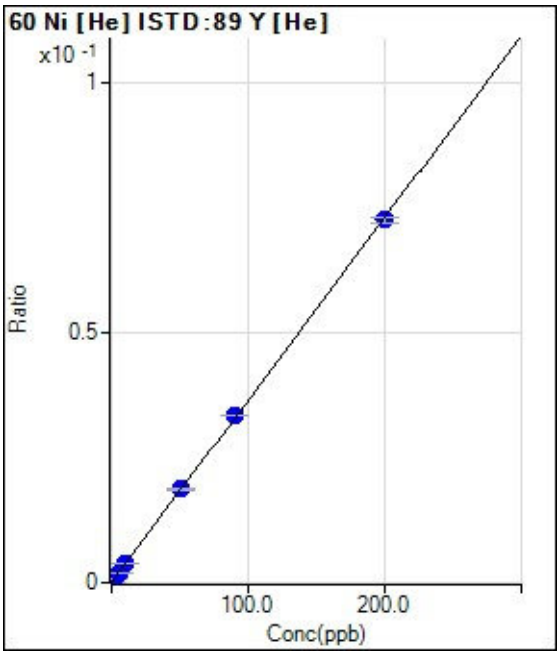
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	637.33	0.0000	P	11.3
2	☐	0.200	0.192	1595.06	0.0001	P	11.5
3	☐	2.000	1.984	10491.37	0.0003	P	1.1
4	☐	5.000	5.113	25907.49	0.0008	P	2.1
5	☐	10.000	10.214	51230.77	0.0016	P	1.5
6	☐	50.000	51.139	251961.15	0.0081	P	0.6
7	☐	90.000	91.300	446449.03	0.0144	P	0.9
8	☐	200.000	199.117	973348.35	0.0314	P	0.4

y = 1.5743E-004 * x + 1.9957E-005
R = 1.0000
DL = 0.04285
BEC = 0.1268

Weight: <None>
Min Conc: <None>

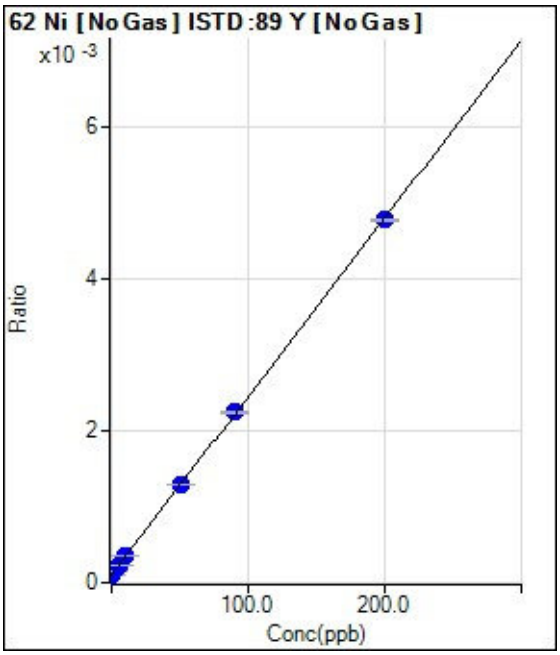


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.54	0.0000	P	11.7
2	☐	0.200	0.177	487.17	0.0001	P	3.6
3	☐	2.000	1.994	3350.50	0.0008	P	4.7
4	☐	5.000	4.813	7836.86	0.0018	P	0.2
5	☐	10.000	10.101	16179.32	0.0037	P	2.2
6	☐	50.000	51.216	81540.55	0.0187	P	0.7
7	☐	90.000	91.676	143734.61	0.0334	P	0.3
8	☐	200.000	198.942	312391.52	0.0725	P	1.5

y = 3.6415E-004 * x + 4.5881E-005
R = 0.9999
DL = 0.04407
BEC = 0.126

Weight: <None>
Min Conc: <None>

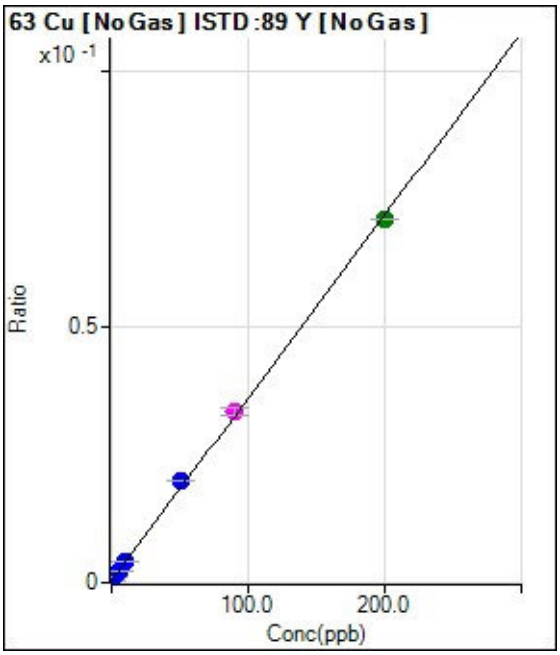
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3300.42	0.0001	P	4.6
2	☐	0.200	0.170	3410.56	0.0001	P	7.1
3	☐	2.000	2.016	4755.68	0.0002	P	2.0
4	☐	5.000	5.217	7089.04	0.0002	P	5.6
5	☐	10.000	10.602	11079.08	0.0004	P	3.3
6	☐	50.000	50.815	40437.43	0.0013	P	0.7
7	☐	90.000	91.161	69526.44	0.0022	P	1.6
8	☐	200.000	199.238	148220.20	0.0048	P	0.5

y = 2.3454E-005 * x + 1.0336E-004
R = 1.0000
DL = 0.6144
BEC = 4.407

Weight: <None>
Min Conc: <None>

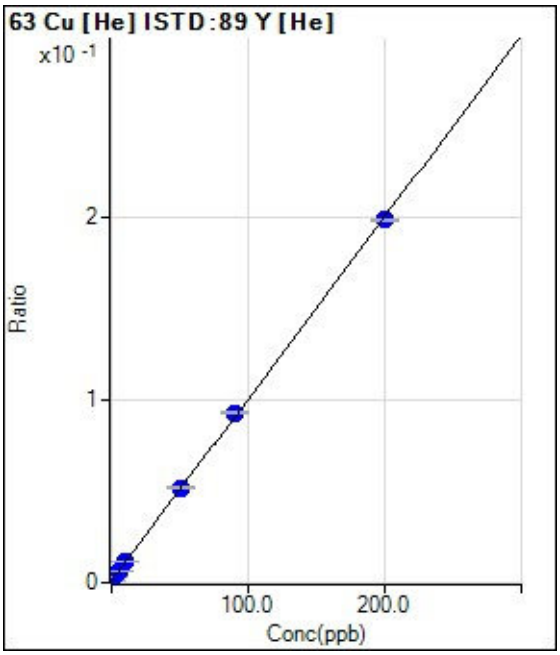


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12177.79	0.0004	P	1.5
2	☐	0.200	0.199	14378.83	0.0005	P	3.4
3	☐	2.000	2.110	35833.33	0.0011	P	0.4
4	☐	5.000	5.244	70807.66	0.0023	P	0.7
5	☐	10.000	10.701	132302.82	0.0042	P	2.5
6	☐	50.000	54.565	620394.10	0.0199	P	0.6
7	☐	90.000	92.877	1040879.74	0.0336	M	4.0
8	☐	200.000	197.522	2201239.47	0.0709	A	0.1

y = 3.5720E-004 * x + 3.8141E-004
R = 0.9996
DL = 0.04676
BEC = 1.068

Weight: <None>
Min Conc: <None>

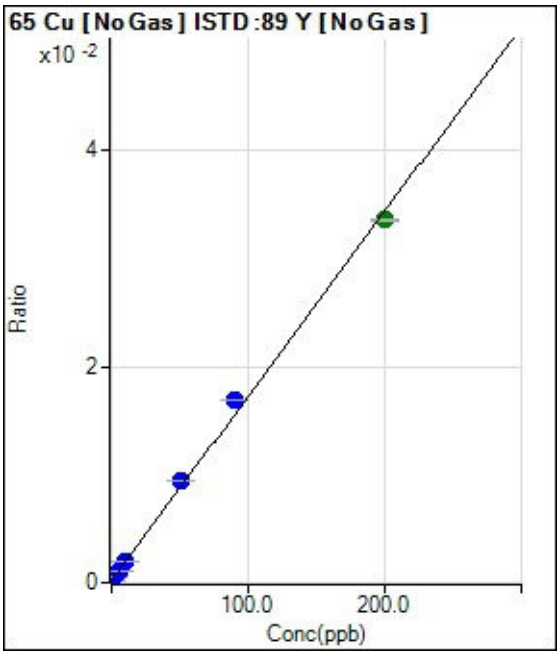
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4238.30	0.0010	P	3.8
2	☐	0.200	0.166	4949.26	0.0011	P	5.9
3	☐	2.000	2.094	13186.45	0.0030	P	3.4
4	☐	5.000	5.050	26061.24	0.0060	P	1.7
5	☐	10.000	10.199	48243.86	0.0111	P	0.9
6	☐	50.000	51.326	226917.35	0.0520	P	0.5
7	☐	90.000	92.515	399918.04	0.0930	P	1.0
8	☐	200.000	198.525	855488.25	0.1985	P	0.6

y = 9.9510E-004 * x + 9.5501E-004
R = 0.9999
DL = 0.1094
BEC = 0.9597

Weight: <None>
Min Conc: <None>

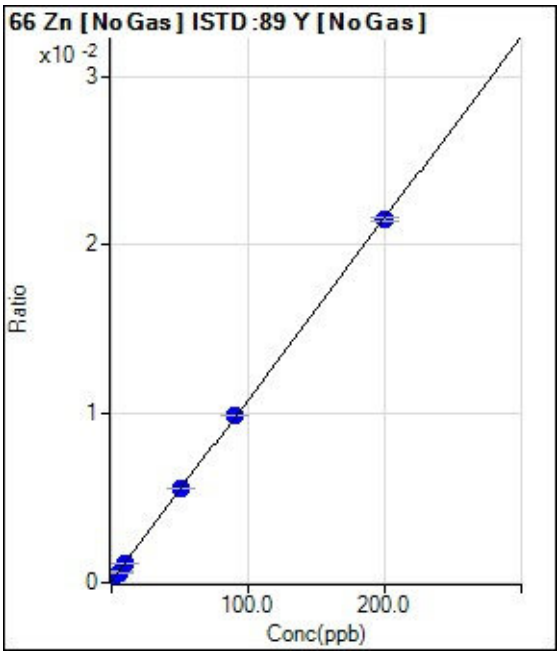


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5586.84	0.0002	P	2.0
2	☐	0.200	0.206	6681.79	0.0002	P	0.8
3	☐	2.000	2.062	16630.31	0.0005	P	2.5
4	☐	5.000	5.419	34535.46	0.0011	P	0.6
5	☐	10.000	10.860	63823.52	0.0020	P	0.8
6	☐	50.000	54.048	293395.39	0.0094	P	0.8
7	☐	90.000	97.541	521704.61	0.0168	P	0.1
8	☐	200.000	195.540	1040820.64	0.0335	A	0.5

y = 1.7064E-004 * x + 1.7499E-004
R = 0.9988
DL = 0.06096
BEC = 1.026

Weight: <None>
Min Conc: <None>

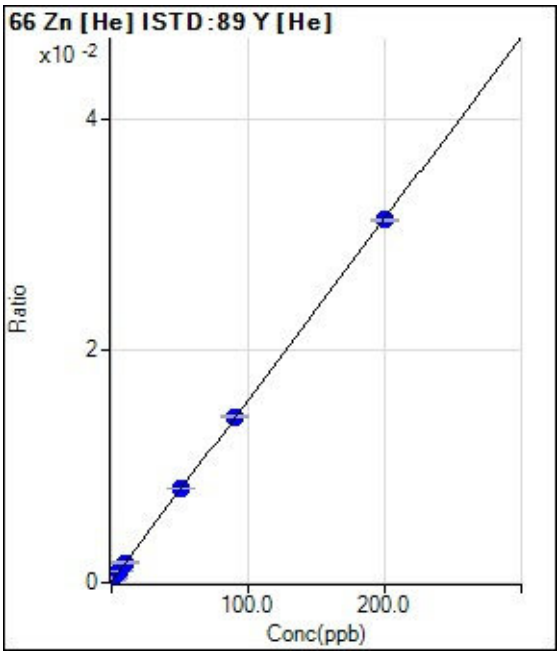
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3050.12	0.0001	P	3.6
2	☐	0.200	0.120	3447.28	0.0001	P	6.0
3	☐	2.000	1.991	9773.44	0.0003	P	2.6
4	☐	5.000	4.926	19630.73	0.0006	P	3.5
5	☐	10.000	10.045	36987.72	0.0012	P	1.5
6	☐	50.000	50.958	174008.15	0.0056	P	0.4
7	☐	90.000	91.565	308291.35	0.0099	P	0.2
8	☐	200.000	199.056	667013.55	0.0215	P	1.0

y = 1.0750E-004 * x + 9.5531E-005
R = 0.9999
DL = 0.09617
BEC = 0.8886

Weight: <None>
Min Conc: <None>

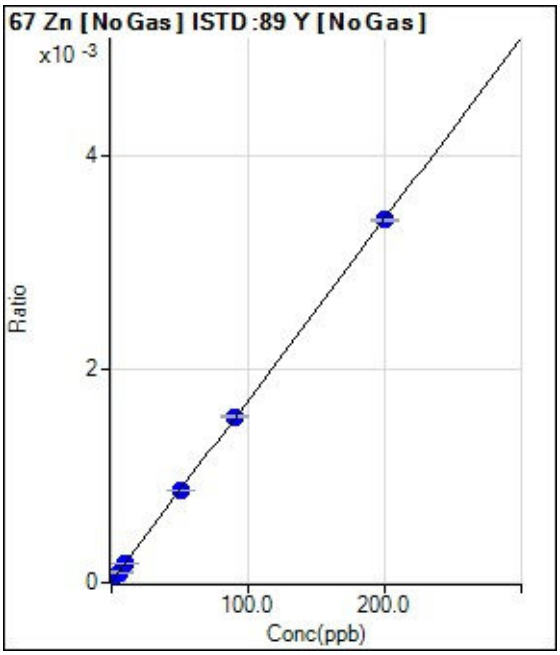


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	497.18	0.0001	P	20.7
2	☐	0.200	0.485	830.87	0.0002	P	7.8
3	☐	2.000	1.938	1801.95	0.0004	P	8.6
4	☐	5.000	5.268	4074.77	0.0009	P	3.4
5	☐	10.000	10.329	7503.03	0.0017	P	2.8
6	☐	50.000	51.187	35388.42	0.0081	P	0.9
7	☐	90.000	90.879	61563.96	0.0143	P	0.9
8	☐	200.000	199.285	134746.13	0.0313	P	0.2

y = 1.5633E-004 * x + 1.1214E-004
R = 1.0000
DL = 0.4457
BEC = 0.7173

Weight: <None>
Min Conc: <None>

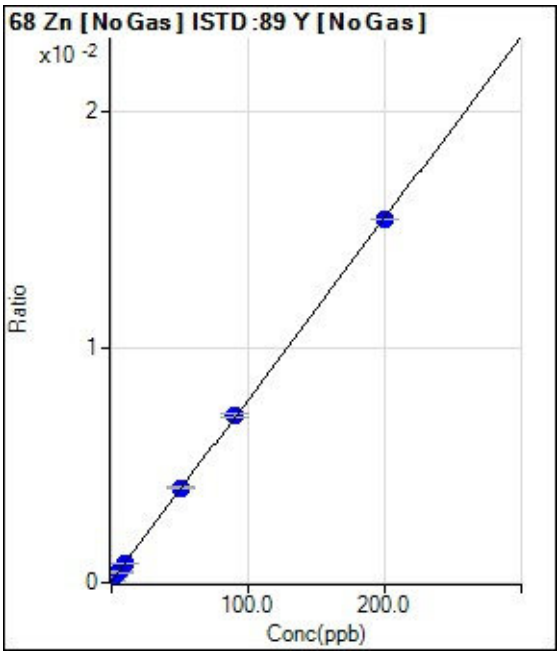
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.37	0.0000	P	15.2
2	☐	0.200	0.454	603.96	0.0000	P	13.3
3	☐	2.000	2.389	1638.44	0.0001	P	7.1
4	☐	5.000	5.036	3043.45	0.0001	P	6.5
5	☐	10.000	9.890	5646.92	0.0002	P	4.3
6	☐	50.000	50.155	26974.05	0.0009	P	1.2
7	☐	90.000	90.989	48334.31	0.0016	P	1.5
8	☐	200.000	199.517	105613.05	0.0034	P	0.2

y = 1.7002E-005 * x + 1.1285E-005
R = 1.0000
DL = 0.3035
BEC = 0.6637

Weight: <None>
Min Conc: <None>

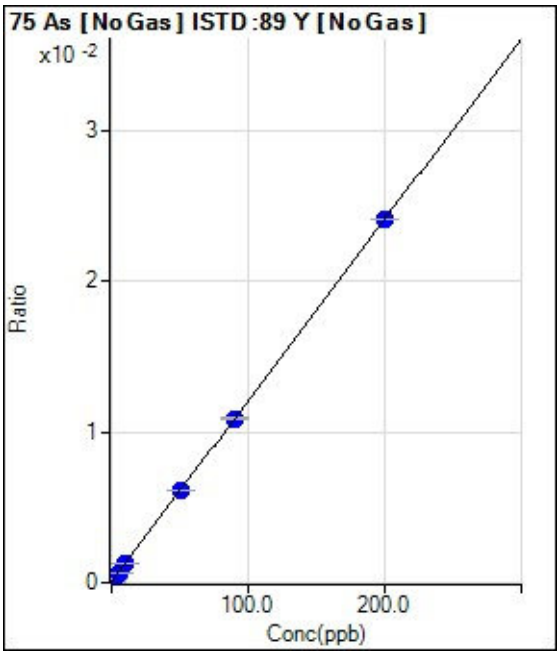


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1975.49	0.0001	P	5.7
2	☐	0.200	0.281	2656.32	0.0001	P	2.3
3	☐	2.000	2.189	7286.05	0.0002	P	3.6
4	☐	5.000	5.089	14275.33	0.0005	P	3.6
5	☐	10.000	10.104	26479.25	0.0008	P	0.6
6	☐	50.000	51.481	125941.80	0.0040	P	0.5
7	☐	90.000	91.476	220848.50	0.0071	P	1.6
8	☐	200.000	198.956	478286.69	0.0154	P	0.1

y = 7.7158E-005 * x + 6.1867E-005
R = 0.9999
DL = 0.1378
BEC = 0.8018

Weight: <None>
Min Conc: <None>

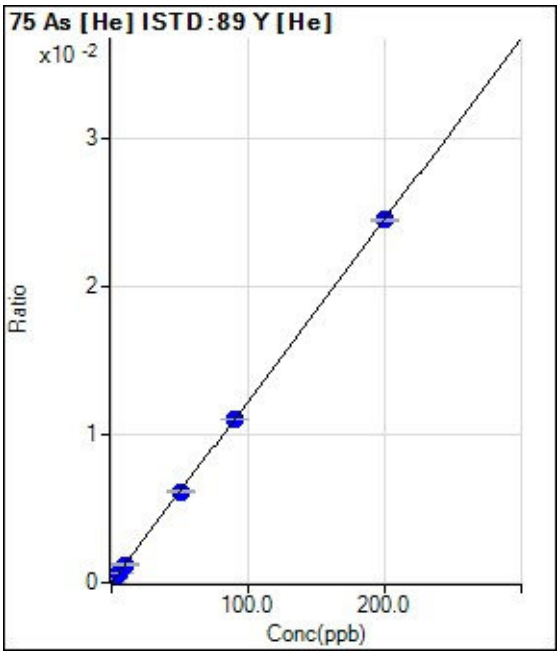
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2420.27	0.0001	P	34.8
2	☐	0.200	0.274	3451.94	0.0001	P	10.7
3	☐	2.000	1.761	9059.41	0.0003	P	8.4
4	☐	5.000	4.912	20887.66	0.0007	P	6.3
5	☐	10.000	9.858	39597.92	0.0013	P	1.9
6	☐	50.000	50.284	190699.82	0.0061	P	0.5
7	☐	90.000	90.062	337494.80	0.0109	P	0.6
8	☐	200.000	199.913	746584.57	0.0241	P	0.2

y = 1.1997E-004 * x + 7.5750E-005
R = 1.0000
DL = 0.6593
BEC = 0.6314

Weight: <None>
Min Conc: <None>

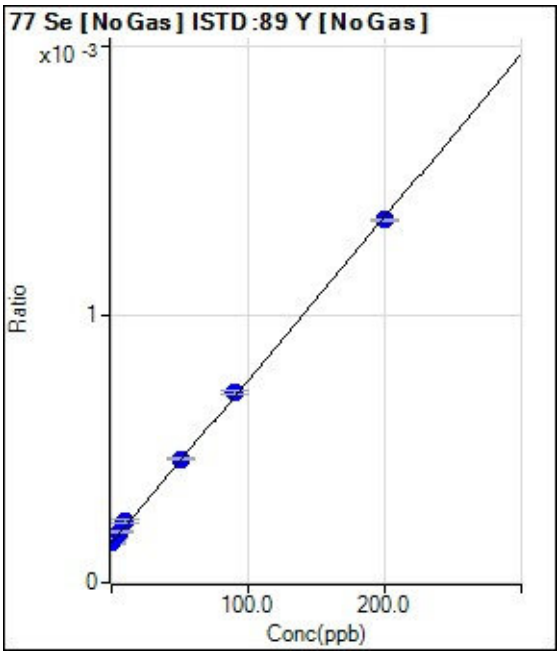


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	72.9
2	☐	0.200	0.218	137.78	0.0000	P	13.1
3	☐	2.000	2.001	1082.27	0.0002	P	4.2
4	☐	5.000	5.174	2775.86	0.0006	P	5.5
5	☐	10.000	9.977	5322.18	0.0012	P	1.1
6	☐	50.000	50.261	26835.49	0.0062	P	1.5
7	☐	90.000	90.073	47396.02	0.0110	P	1.0
8	☐	200.000	199.898	105405.26	0.0245	P	0.8

y = 1.2233E-004 * x + 4.5151E-006
R = 1.0000
DL = 0.08074
BEC = 0.03691

Weight: <None>
Min Conc: <None>

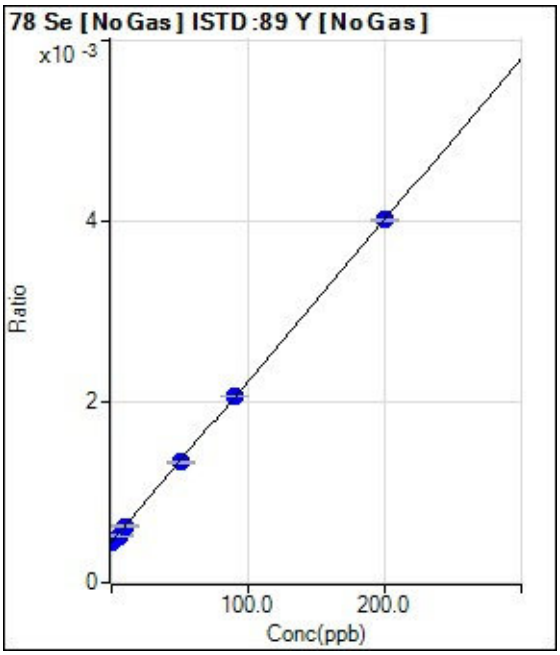
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4708.96	0.0001	P	6.2
2	☐	0.200	1.015	4885.86	0.0002	P	2.7
3	☐	2.000	3.051	5243.01	0.0002	P	2.5
4	☐	5.000	6.916	5954.04	0.0002	P	6.1
5	☐	10.000	13.420	7212.59	0.0002	P	3.7
6	☐	50.000	51.817	14449.08	0.0005	P	2.8
7	☐	90.000	92.331	22003.43	0.0007	P	1.5
8	☐	200.000	198.267	42017.57	0.0014	P	0.8

y = 6.0853E-006 * x + 1.4751E-004
R = 0.9998
DL = 4.505
BEC = 24.24

Weight: <None>
Min Conc: <None>

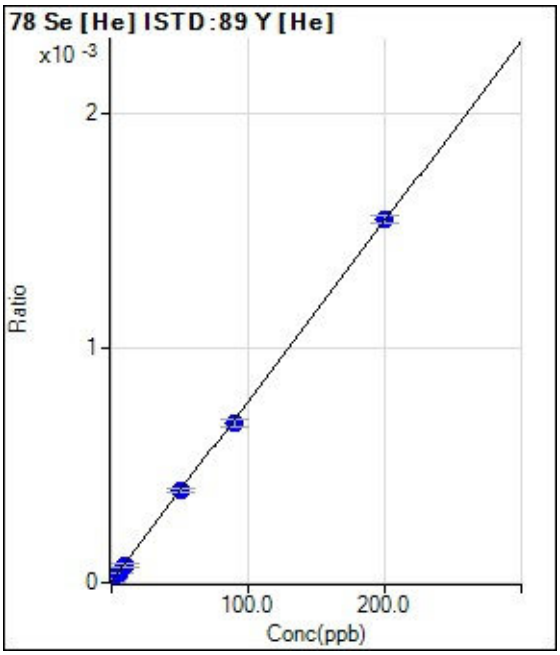


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14328.89	0.0004	P	5.5
2	☐	0.200	0.388	14482.47	0.0005	P	2.8
3	☐	2.000	1.263	14876.65	0.0005	P	3.6
4	☐	5.000	3.968	16313.00	0.0005	P	1.1
5	☐	10.000	9.644	19527.20	0.0006	P	2.1
6	☐	50.000	49.781	41682.77	0.0013	P	1.4
7	☐	90.000	90.456	63878.49	0.0021	P	0.8
8	☐	200.000	199.900	124373.14	0.0040	P	0.4

y = 1.7805E-005 * x + 4.4878E-004
R = 1.0000
DL = 4.158
BEC = 25.21

Weight: <None>
Min Conc: <None>

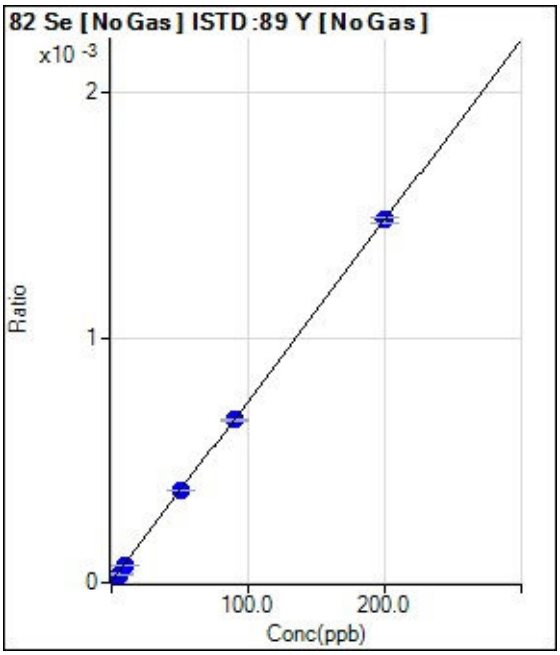
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21.11	0.0000	P	59.6
2	☐	0.200	0.265	30.00	0.0000	P	21.6
3	☐	2.000	2.246	95.56	0.0000	P	18.8
4	☐	5.000	4.790	181.11	0.0000	P	9.5
5	☐	10.000	9.042	322.23	0.0001	P	18.4
6	☐	50.000	50.958	1727.90	0.0004	P	4.3
7	☐	90.000	88.135	2931.45	0.0007	P	4.1
8	☐	200.000	200.650	6662.78	0.0015	P	2.1

y = 7.6819E-006 * x + 4.7486E-006
R = 0.9999
DL = 1.106
BEC = 0.6182

Weight: <None>
Min Conc: <None>

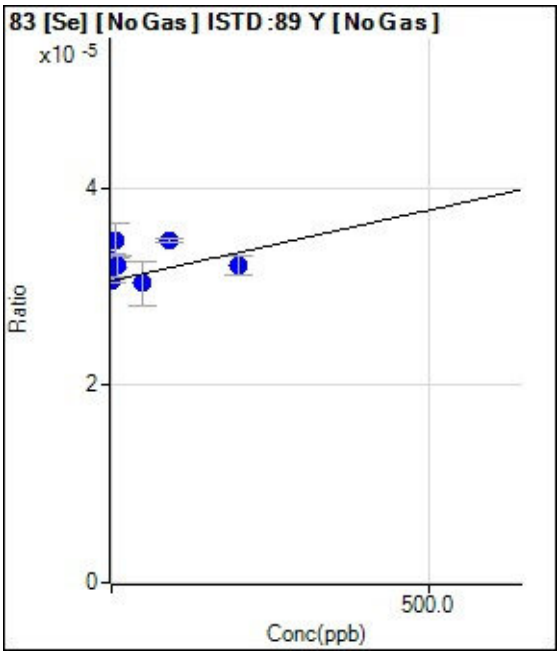


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	151.38	0.0000	P	26.1
2	☐	0.200	-0.098	127.45	0.0000	P	91.5
3	☐	2.000	0.378	237.75	0.0000	P	20.7
4	☐	5.000	3.979	1071.43	0.0000	P	13.7
5	☐	10.000	9.260	2300.28	0.0001	P	2.8
6	☐	50.000	50.827	11862.90	0.0004	P	0.4
7	☐	90.000	89.325	20601.91	0.0007	P	1.6
8	☐	200.000	200.176	46005.95	0.0015	P	1.4

y = 7.3825E-006 * x + 4.7386E-006
R = 1.0000
DL = 0.5025
BEC = 0.6419

Weight: <None>
Min Conc: <None>

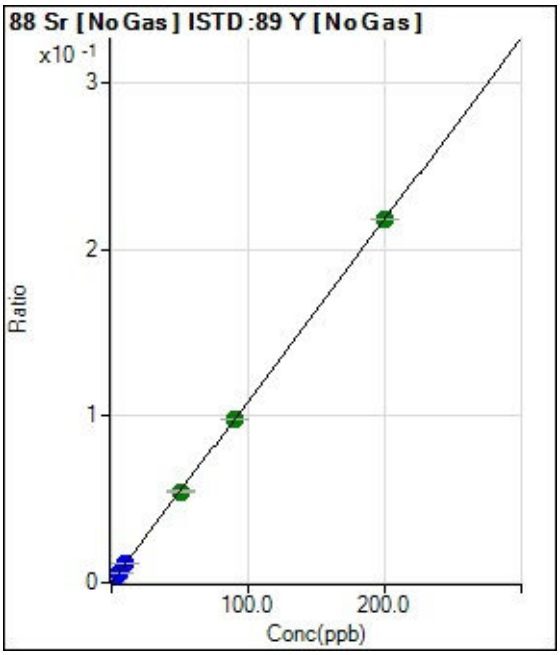
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	977.70	0.0000	P	1.4
2	☐	0.200	148.401	1041.10	0.0000	P	3.3
3	☐	2.000	120.371	1021.08	0.0000	P	1.9
4	☐	5.000	280.684	1087.82	0.0000	P	10.2
5	☐	10.000	105.028	1011.07	0.0000	P	6.6
6	☐	50.000	-17.826	947.67	0.0000	P	14.4
7	☐	90.000	288.135	1077.81	0.0000	P	1.3
8	☐	200.000	114.821	1001.05	0.0000	P	6.0

y = 1.4316E-008 * x + 3.0622E-005
R = 0.0780
DL = 89.21
BEC = 2139

Weight: <None>
Min Conc: <None>

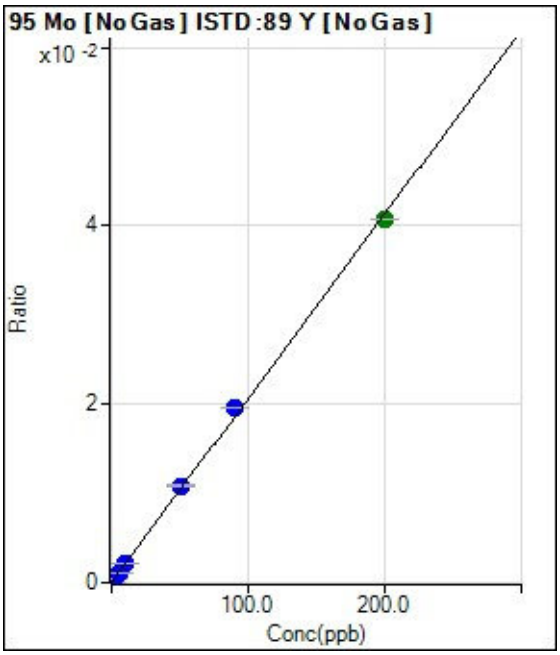


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590.62	0.0000	P	18.2
2	☐	0.200	0.211	7913.72	0.0002	P	4.5
3	☐	2.000	2.101	72957.71	0.0023	P	1.9
4	☐	5.000	5.348	183845.88	0.0059	P	0.7
5	☐	10.000	10.651	366328.63	0.0116	P	0.1
6	☐	50.000	50.201	1710841.94	0.0548	A	0.5
7	☐	90.000	90.183	3053119.27	0.0984	A	0.2
8	☐	200.000	199.825	6767046.64	0.2181	A	0.1

y = 0.0011 * x + 1.8505E-005
R = 1.0000
DL = 0.009282
BEC = 0.01696

Weight: <None>
Min Conc: <None>

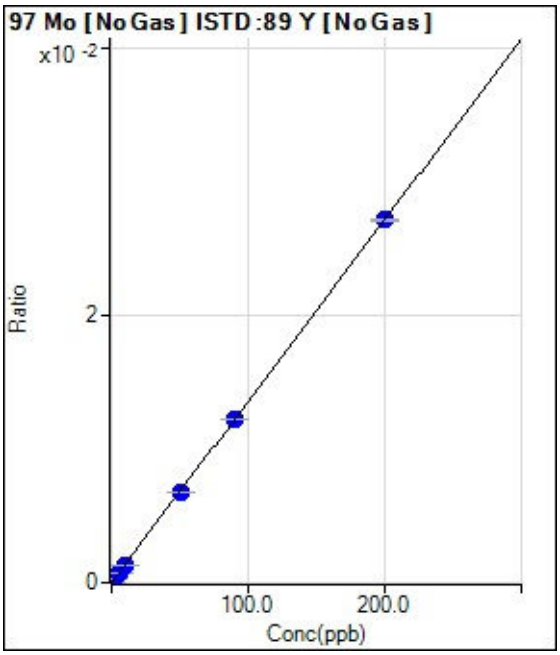
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.84	0.0000	P	10.2
2	☐	0.200	0.187	1708.51	0.0001	P	4.3
3	☐	2.000	2.013	13594.05	0.0004	P	4.1
4	☐	5.000	5.166	33960.81	0.0011	P	1.9
5	☐	10.000	10.306	67417.30	0.0021	P	0.9
6	☐	50.000	52.677	339912.23	0.0109	P	1.1
7	☐	90.000	95.076	609179.32	0.0196	P	0.1
8	☐	200.000	197.027	1262419.48	0.0407	A	0.1

y = 2.0640E-004 * x + 1.5155E-005
R = 0.9995
DL = 0.02257
BEC = 0.07342

Weight: <None>
Min Conc: <None>

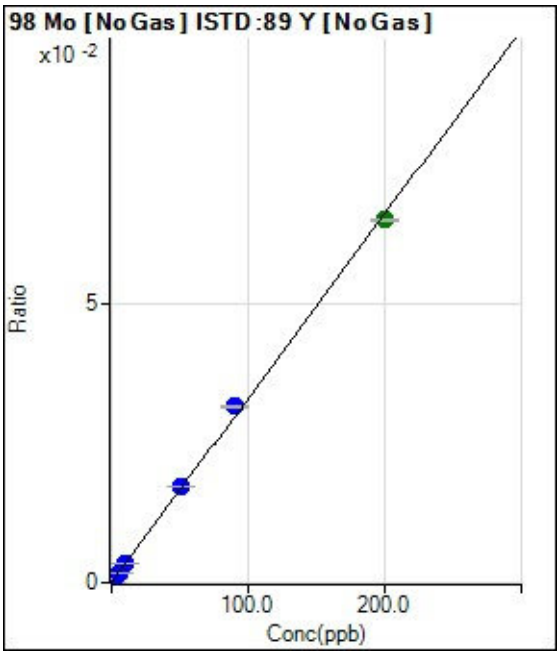


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	337.01	0.0000	P	6.4
2	☐	0.200	0.199	1194.61	0.0000	P	11.0
3	☐	2.000	1.955	8715.05	0.0003	P	4.4
4	☐	5.000	4.896	21211.64	0.0007	P	2.6
5	☐	10.000	9.806	42236.21	0.0013	P	2.0
6	☐	50.000	50.110	212771.69	0.0068	P	0.5
7	☐	90.000	89.740	378319.60	0.0122	P	0.2
8	☐	200.000	200.102	843498.94	0.0272	P	0.6

y = 1.3579E-004 * x + 1.0556E-005
R = 1.0000
DL = 0.01497
BEC = 0.07774

Weight: <None>
Min Conc: <None>

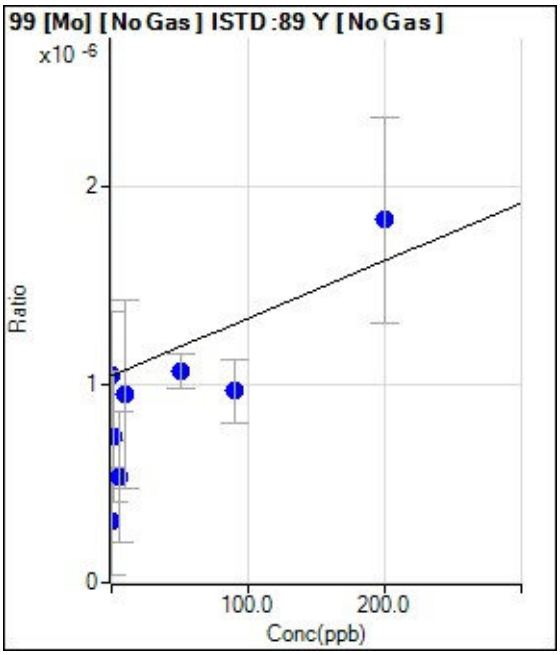
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	876.05	0.0000	P	11.8
2	☐	0.200	0.183	2798.35	0.0001	P	3.9
3	☐	2.000	1.999	21773.11	0.0007	P	2.0
4	☐	5.000	5.141	54346.12	0.0017	P	2.1
5	☐	10.000	10.357	108822.97	0.0035	P	1.2
6	☐	50.000	52.468	543455.73	0.0174	P	0.5
7	☐	90.000	95.506	982144.77	0.0317	P	0.6
8	☐	200.000	196.884	2024628.76	0.0652	A	0.3

y = 3.3124E-004 * x + 2.7440E-005
R = 0.9994
DL = 0.02923
BEC = 0.08284

Weight: <None>
Min Conc: <None>

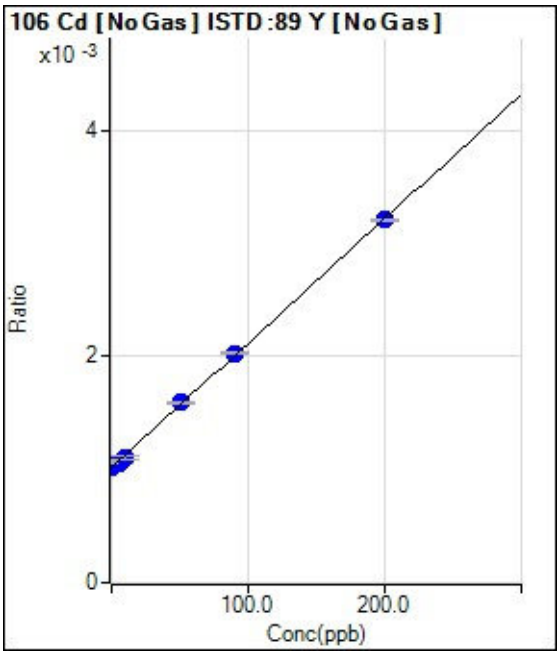


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.37	0.0000	P	62.4
2	☐	0.200	-252.266	10.01	0.0000	P	173.2
3	☐	2.000	-104.812	23.36	0.0000	P	89.3
4	☐	5.000	-176.829	16.68	0.0000	P	124.8
5	☐	10.000	-31.904	30.03	0.0000	P	100.0
6	☐	50.000	8.290	33.37	0.0000	P	16.8
7	☐	90.000	-26.256	30.03	0.0000	P	33.3
8	☐	200.000	270.704	56.72	0.0000	P	56.8

y = 2.9030E-009 * x + 1.0441E-006
R = 0.8448
DL = 673.3
BEC = 359.7

Weight: <None>
Min Conc: <None>

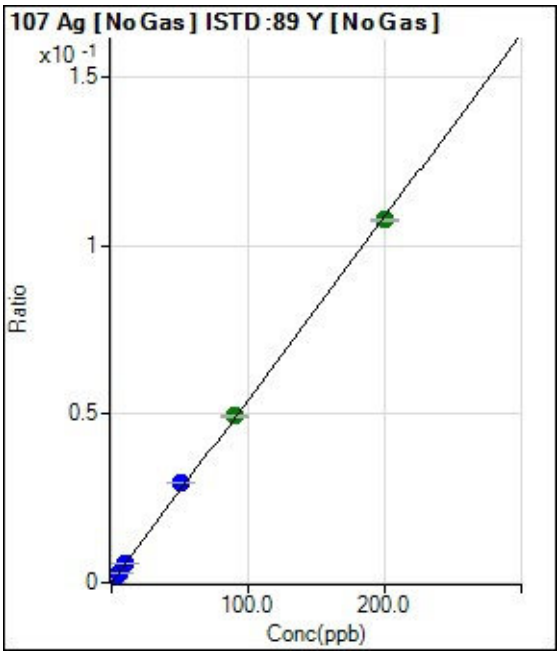
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32546.23	0.0010	P	0.7
2	☐	0.200	0.475	32566.27	0.0010	P	1.7
3	☐	2.000	1.761	32793.66	0.0010	P	1.2
4	☐	5.000	3.357	33174.97	0.0011	P	1.3
5	☐	10.000	7.889	34814.24	0.0011	P	2.4
6	☐	50.000	51.913	49669.55	0.0016	P	0.5
7	☐	90.000	91.828	62979.03	0.0020	P	0.6
8	☐	200.000	198.848	99564.17	0.0032	P	0.6

y = 1.1009E-005 * x + 0.0010
R = 0.9998
DL = 1.879
BEC = 92.59

Weight: <None>
Min Conc: <None>

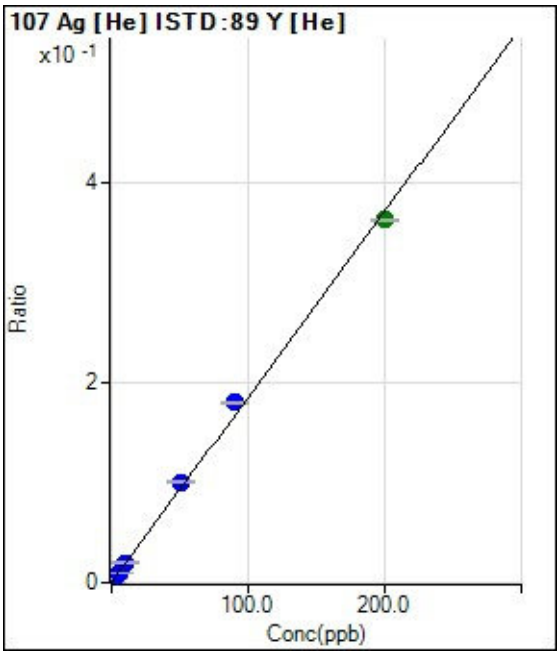


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	457.79	0.0000	P	9.6
2	☐	0.200	0.232	4466.33	0.0001	P	3.9
3	☐	2.000	2.182	37840.55	0.0012	P	0.6
4	☐	5.000	5.404	92544.17	0.0029	P	0.2
5	☐	10.000	10.846	185669.82	0.0059	P	0.4
6	☐	50.000	54.367	921537.78	0.0295	P	0.3
7	☐	90.000	91.026	1532669.98	0.0494	A	0.5
8	☐	200.000	198.392	3341313.76	0.1077	A	0.3

y = 5.4267E-004 * x + 1.4335E-005
R = 0.9997
DL = 0.007627
BEC = 0.02642

Weight: <None>
Min Conc: <None>

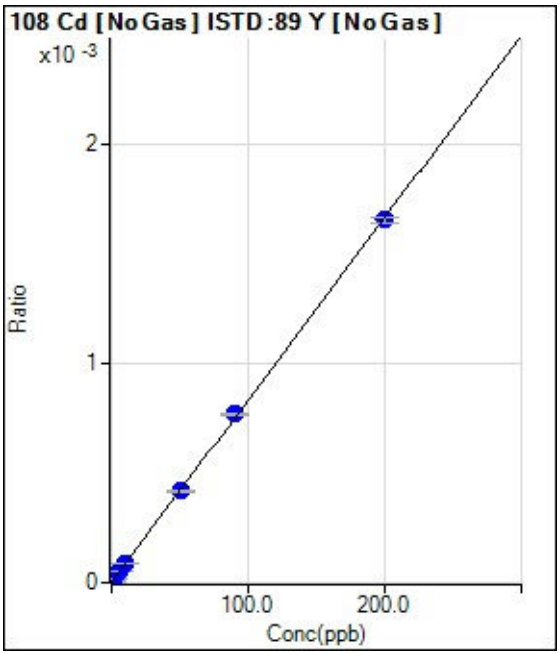
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.49	0.0000	P	26.3
2	☐	0.200	0.261	2295.87	0.0005	P	9.4
3	☐	2.000	2.220	18060.57	0.0042	P	2.2
4	☐	5.000	5.475	44475.95	0.0102	P	2.4
5	☐	10.000	10.839	87675.92	0.0202	P	0.8
6	☐	50.000	54.282	440185.53	0.1009	P	0.5
7	☐	90.000	97.206	776936.36	0.1807	P	1.2
8	☐	200.000	195.631	1567179.21	0.3637	A	0.8

y = 0.0019 * x + 3.4544E-005
R = 0.9989
DL = 0.01465
BEC = 0.01858

Weight: <None>
Min Conc: <None>

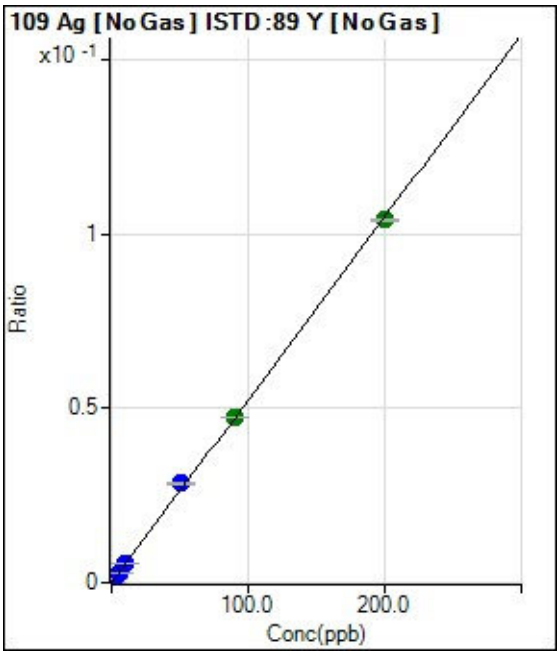


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.06	0.0000	P	28.9
2	☐	0.200	0.417	170.18	0.0000	P	15.0
3	☐	2.000	2.037	593.95	0.0000	P	10.2
4	☐	5.000	5.741	1558.34	0.0000	P	2.7
5	☐	10.000	10.183	2723.05	0.0001	P	6.2
6	☐	50.000	50.285	13113.16	0.0004	P	1.9
7	☐	90.000	92.241	23848.90	0.0008	P	1.8
8	☐	200.000	198.892	51377.61	0.0017	P	1.3

y = 8.3149E-006 * x + 1.8812E-006
R = 0.9999
DL = 0.196
BEC = 0.2262

Weight: <None>
Min Conc: <None>

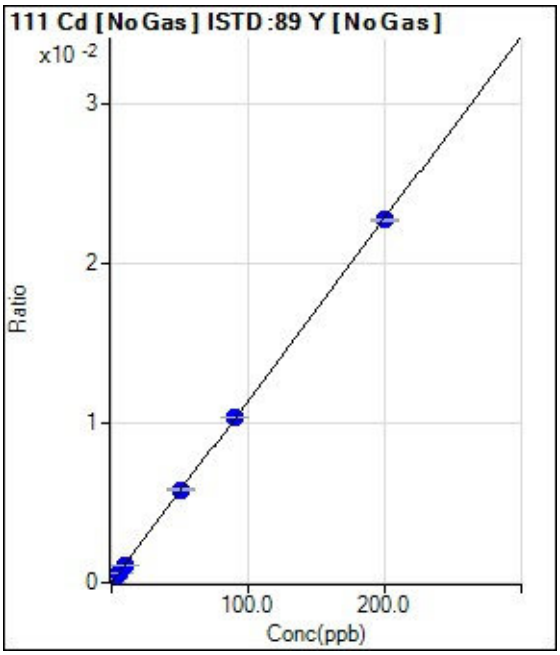
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.53	0.0000	P	13.2
2	☐	0.200	0.233	4064.76	0.0001	P	3.1
3	☐	2.000	2.173	36102.27	0.0011	P	1.0
4	☐	5.000	5.386	88751.30	0.0028	P	0.9
5	☐	10.000	10.727	176928.89	0.0056	P	0.4
6	☐	50.000	54.299	887724.76	0.0284	P	0.6
7	☐	90.000	90.644	1472246.94	0.0475	A	0.8
8	☐	200.000	198.588	3226534.77	0.1040	A	0.4

y = 5.2355E-004 * x + 6.0625E-006
R = 0.9997
DL = 0.004593
BEC = 0.01158

Weight: <None>
Min Conc: <None>

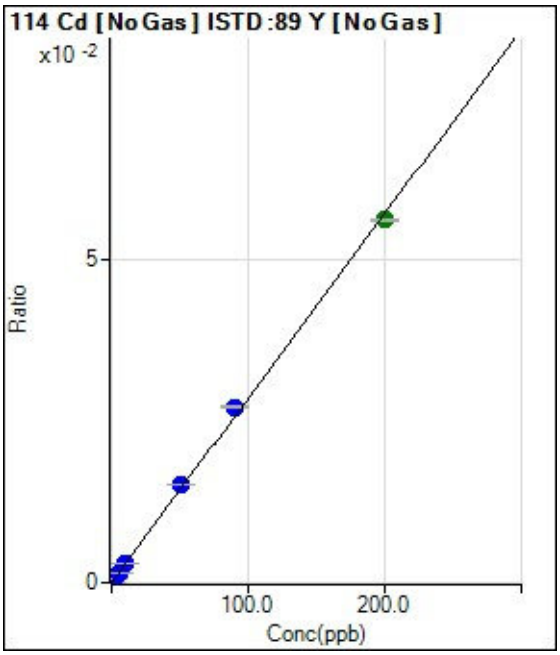


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-53.33	0.0000	P	-33.6
2	☐	0.200	0.184	614.10	0.0000	P	14.0
3	☐	2.000	1.991	7116.10	0.0002	P	2.0
4	☐	5.000	4.954	17688.77	0.0006	P	2.1
5	☐	10.000	9.828	35218.56	0.0011	P	1.9
6	☐	50.000	51.061	181735.15	0.0058	P	1.0
7	☐	90.000	91.156	322396.59	0.0104	P	0.3
8	☐	200.000	199.225	704953.72	0.0227	P	0.8

y = 1.1404E-004 * x - 1.6700E-006
R = 1.0000
DL = 0.01478
BEC = -0.01464

Weight: <None>
Min Conc: <None>

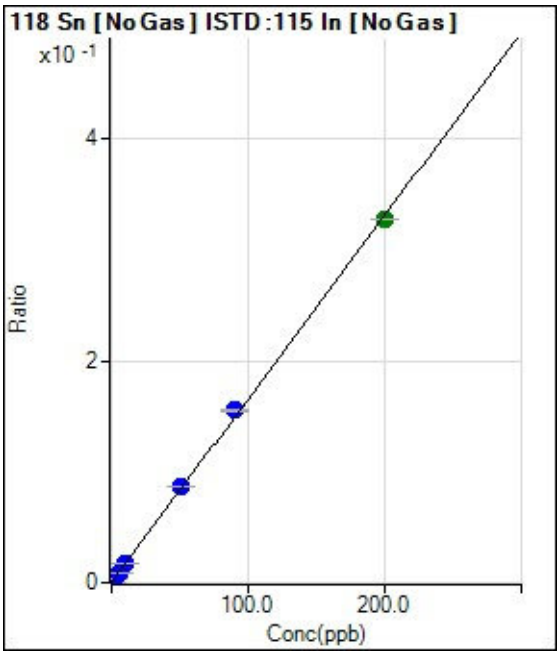
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.06	0.0000	P	44.1
2	☐	0.200	0.215	2002.19	0.0001	P	11.5
3	☐	2.000	2.084	18812.58	0.0006	P	2.8
4	☐	5.000	5.274	47265.28	0.0015	P	1.0
5	☐	10.000	10.543	94618.89	0.0030	P	1.6
6	☐	50.000	53.133	472826.29	0.0151	P	0.7
7	☐	90.000	95.343	842922.25	0.0272	P	0.9
8	☐	200.000	196.777	1740367.82	0.0561	A	0.3

y = 2.8500E-004 * x + 1.8815E-006
R = 0.9994
DL = 0.00874
BEC = 0.006602

Weight: <None>
Min Conc: <None>

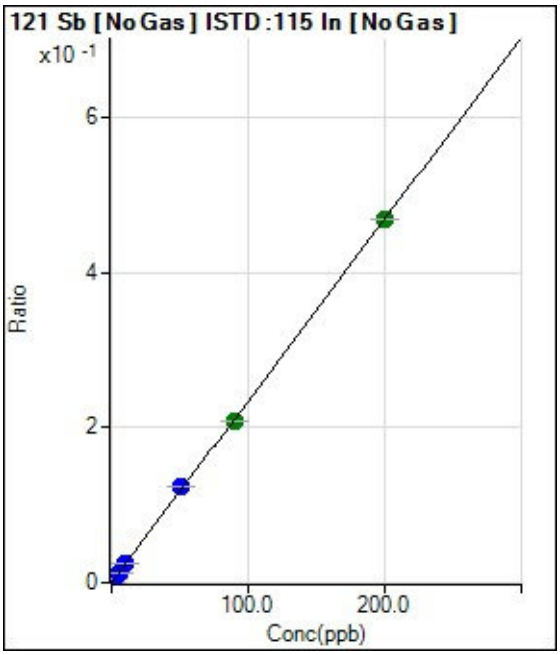


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2284.66	0.0003	P	4.1
2	☐	0.200	0.197	4599.72	0.0006	P	4.4
3	☐	2.000	1.999	25658.34	0.0036	P	1.6
4	☐	5.000	5.055	61634.57	0.0087	P	0.4
5	☐	10.000	10.123	120990.91	0.0170	P	0.8
6	☐	50.000	51.920	604326.85	0.0861	P	0.2
7	☐	90.000	93.937	1076857.81	0.1555	P	0.9
8	☐	200.000	197.741	2237990.54	0.3271	A	0.1

y = 0.0017 * x + 3.2118E-004
R = 0.9997
DL = 0.02408
BEC = 0.1944

Weight: <None>
Min Conc: <None>

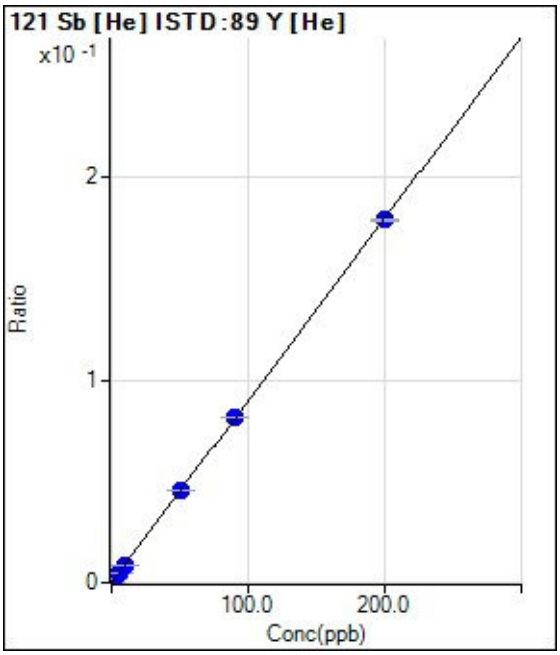
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	796.70	0.0001	P	5.5
2	☐	0.200	0.197	4088.44	0.0006	P	2.1
3	☐	2.000	2.036	34527.44	0.0049	P	0.9
4	☐	5.000	5.075	85206.48	0.0120	P	0.6
5	☐	10.000	10.313	172124.50	0.0243	P	0.4
6	☐	50.000	52.877	869386.13	0.1239	P	0.5
7	☐	90.000	88.937	1442081.47	0.2083	A	0.8
8	☐	200.000	199.741	3200009.11	0.4676	A	0.1

y = 0.0023 * x + 1.1198E-004
R = 0.9999
DL = 0.007855
BEC = 0.04784

Weight: <None>
Min Conc: <None>

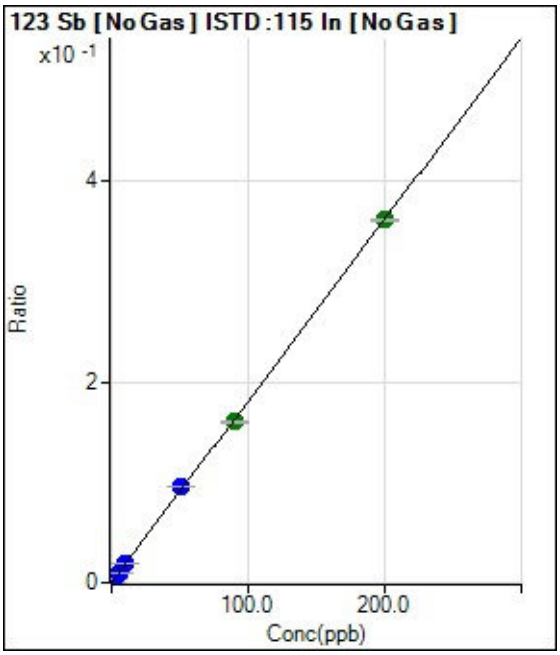


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0001	P	6.0
2	☐	0.200	0.161	886.72	0.0002	P	4.3
3	☐	2.000	1.944	7815.78	0.0018	P	2.1
4	☐	5.000	4.926	19498.05	0.0045	P	1.0
5	☐	10.000	9.831	38563.69	0.0089	P	0.9
6	☐	50.000	50.626	198341.02	0.0455	P	0.9
7	☐	90.000	90.974	351178.54	0.0817	P	0.5
8	☐	200.000	199.416	771289.62	0.1790	P	0.8

y = 8.9720E-004 * x + 5.6323E-005
R = 1.0000
DL = 0.01137
BEC = 0.06278

Weight: <None>
Min Conc: <None>

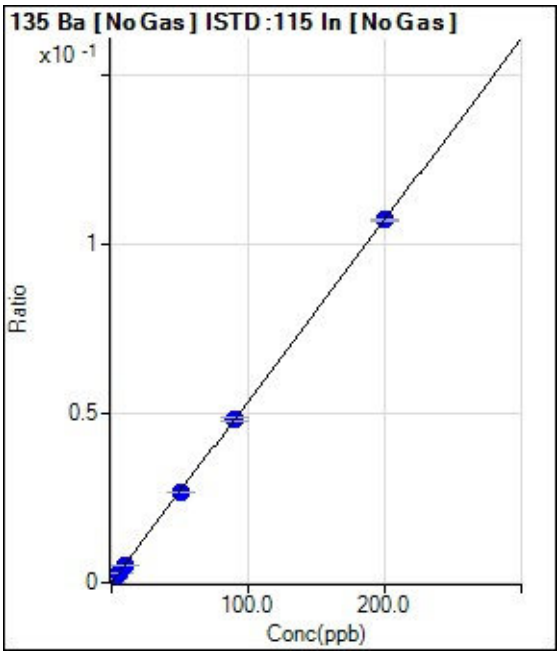
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730.77	0.0001	P	13.3
2	☐	0.200	0.215	3494.03	0.0005	P	5.7
3	☐	2.000	2.033	26744.22	0.0038	P	1.3
4	☐	5.000	5.061	65733.33	0.0093	P	0.5
5	☐	10.000	10.339	133362.67	0.0188	P	1.3
6	☐	50.000	52.608	668048.88	0.0952	P	0.2
7	☐	90.000	88.893	1113125.84	0.1608	A	1.1
8	☐	200.000	199.827	2472254.29	0.3613	A	0.6

y = 0.0018 * x + 1.0269E-004
R = 0.9999
DL = 0.02272
BEC = 0.05682

Weight: <None>
Min Conc: <None>

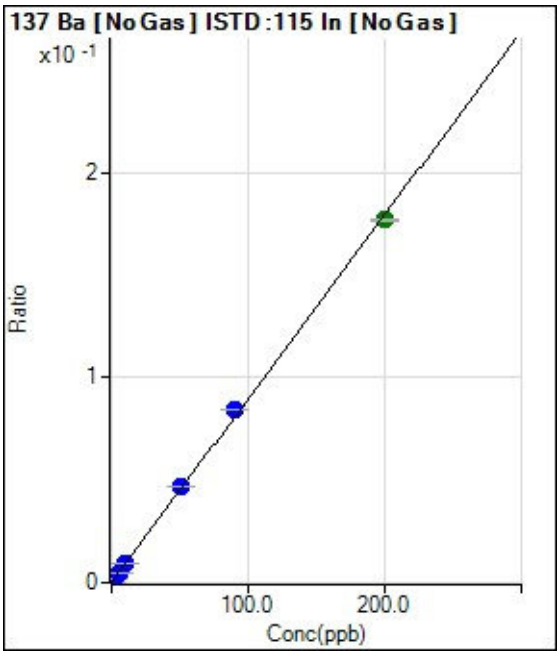


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.28	0.0000	P	20.8
2	☐	0.200	0.217	1097.83	0.0002	P	12.1
3	☐	2.000	1.966	7736.84	0.0011	P	2.0
4	☐	5.000	4.929	19056.64	0.0027	P	1.8
5	☐	10.000	9.783	37511.82	0.0053	P	3.5
6	☐	50.000	50.125	188964.52	0.0269	P	0.6
7	☐	90.000	89.899	334115.69	0.0483	P	1.9
8	☐	200.000	200.027	734468.43	0.1073	P	0.2

y = 5.3640E-004 * x + 3.8007E-005
R = 1.0000
DL = 0.04415
BEC = 0.07085

Weight: <None>
Min Conc: <None>

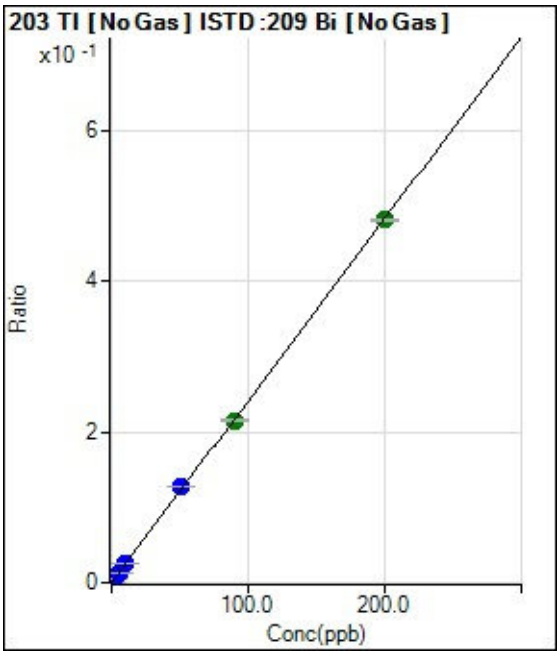
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.85	0.0001	P	15.3
2	☐	0.200	0.203	1788.62	0.0003	P	5.6
3	☐	2.000	1.985	13093.21	0.0018	P	2.5
4	☐	5.000	5.055	32700.74	0.0046	P	1.2
5	☐	10.000	10.207	65446.42	0.0092	P	1.4
6	☐	50.000	52.203	328980.32	0.0469	P	0.3
7	☐	90.000	94.514	587230.47	0.0848	P	0.2
8	☐	200.000	197.406	1211666.59	0.1771	A	0.3

y = 8.9662E-004 * x + 6.9390E-005
R = 0.9996
DL = 0.03544
BEC = 0.07739

Weight: <None>
Min Conc: <None>

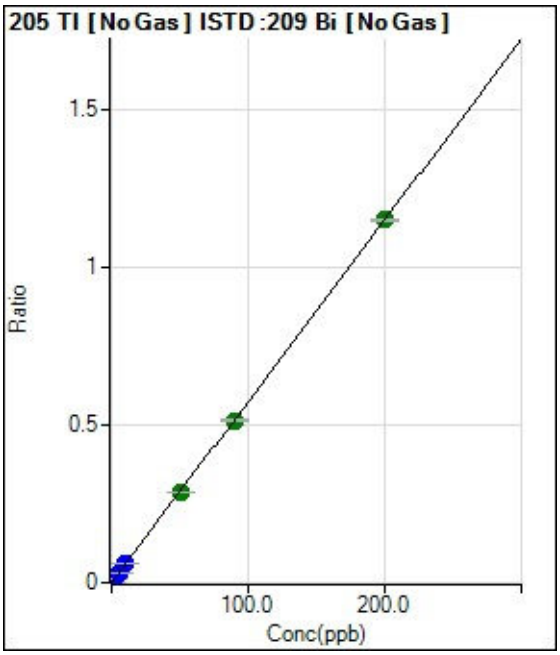


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.83	0.0001	P	4.0
2	☐	0.200	0.190	3273.77	0.0005	P	3.8
3	☐	2.000	1.985	29497.94	0.0049	P	3.4
4	☐	5.000	5.178	76247.82	0.0126	P	1.1
5	☐	10.000	10.245	152070.11	0.0248	P	1.7
6	☐	50.000	52.969	768732.59	0.1279	P	1.2
7	☐	90.000	89.306	1292455.32	0.2155	A	0.5
8	☐	200.000	199.553	2838333.24	0.4815	A	0.8

y = 0.0024 * x + 7.7719E-005
R = 0.9999
DL = 0.003865
BEC = 0.03222

Weight: <None>
Min Conc: <None>

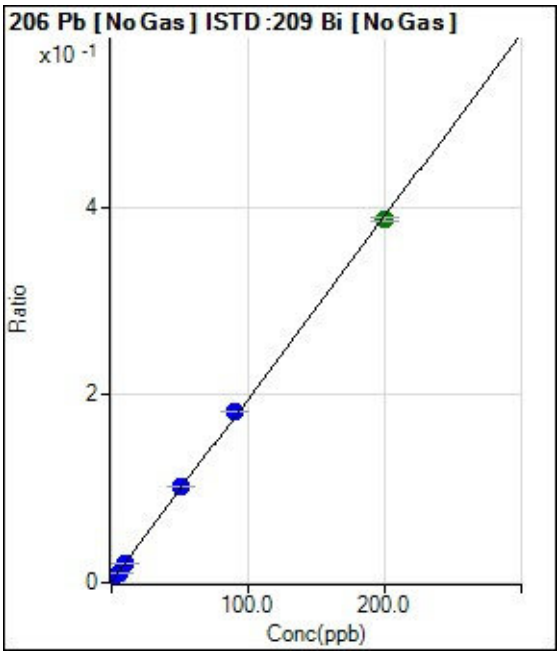
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1004.40	0.0002	P	14.3
2	☐	0.200	0.191	7703.58	0.0013	P	5.0
3	☐	2.000	2.035	71787.58	0.0118	P	1.5
4	☐	5.000	5.151	180328.16	0.0297	P	0.6
5	☐	10.000	10.214	360561.85	0.0588	P	0.5
6	☐	50.000	49.787	1718842.49	0.2859	A	0.9
7	☐	90.000	89.518	3081762.60	0.5139	A	0.4
8	☐	200.000	200.255	6775672.98	1.1494	A	0.8

y = 0.0057 * x + 1.6474E-004
R = 1.0000
DL = 0.01232
BEC = 0.02871

Weight: <None>
Min Conc: <None>

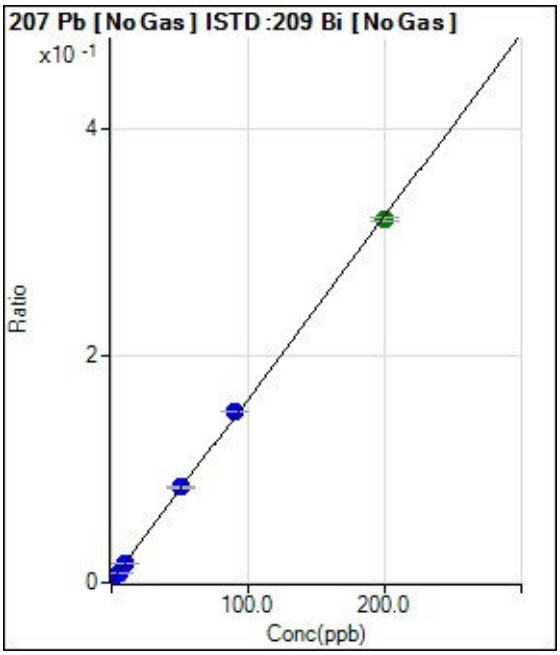


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8090.84	0.0013	P	1.7
2	☐	0.200	0.160	10024.24	0.0016	P	2.2
3	☐	2.000	1.985	31461.37	0.0052	P	0.7
4	☐	5.000	5.065	67861.74	0.0112	P	0.2
5	☐	10.000	10.078	128471.74	0.0209	P	1.7
6	☐	50.000	52.086	617559.89	0.1027	P	0.8
7	☐	90.000	93.087	1094579.63	0.1825	P	0.3
8	☐	200.000	198.084	2280823.02	0.3869	A	1.2

y = 0.0019 * x + 0.0013
R = 0.9998
DL = 0.03412
BEC = 0.6819

Weight: <None>
Min Conc: <None>

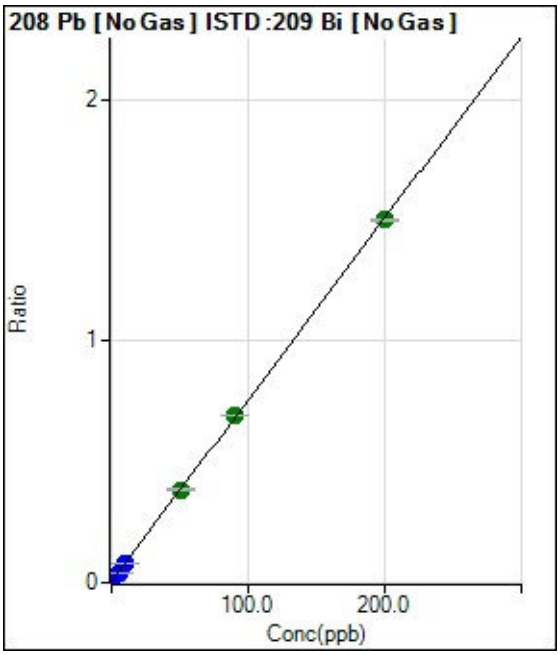
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6601.81	0.0011	P	3.6
2	☐	0.200	0.204	8628.46	0.0014	P	3.8
3	☐	2.000	2.009	26113.80	0.0043	P	0.8
4	☐	5.000	5.054	55797.09	0.0092	P	1.3
5	☐	10.000	10.085	105962.30	0.0173	P	1.0
6	☐	50.000	51.642	505047.29	0.0840	P	0.8
7	☐	90.000	93.253	904428.28	0.1508	P	0.4
8	☐	200.000	198.120	1881620.43	0.3192	A	1.0

y = 0.0016 * x + 0.0011
R = 0.9998
DL = 0.07325
BEC = 0.6745

Weight: <None>
Min Conc: <None>

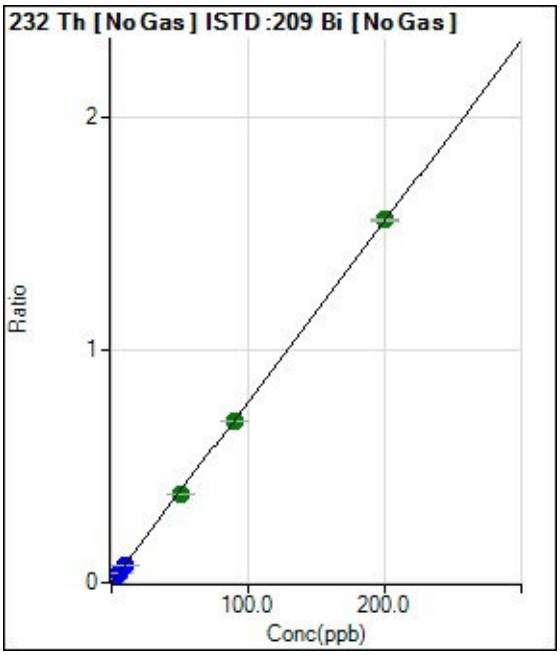


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31404.15	0.0052	P	3.0
2	☐	0.200	0.177	39658.27	0.0065	P	1.6
3	☐	2.000	2.003	122421.81	0.0202	P	0.9
4	☐	5.000	5.046	261123.24	0.0430	P	0.1
5	☐	10.000	10.137	498533.97	0.0813	P	0.5
6	☐	50.000	50.609	2316088.50	0.3852	A	0.7
7	☐	90.000	91.451	4149471.67	0.6919	A	0.1
8	☐	200.000	199.187	8848485.64	1.5010	A	0.7

y = 0.0075 * x + 0.0052
R = 1.0000
DL = 0.06224
BEC = 0.6861

Weight: <None>
Min Conc: <None>

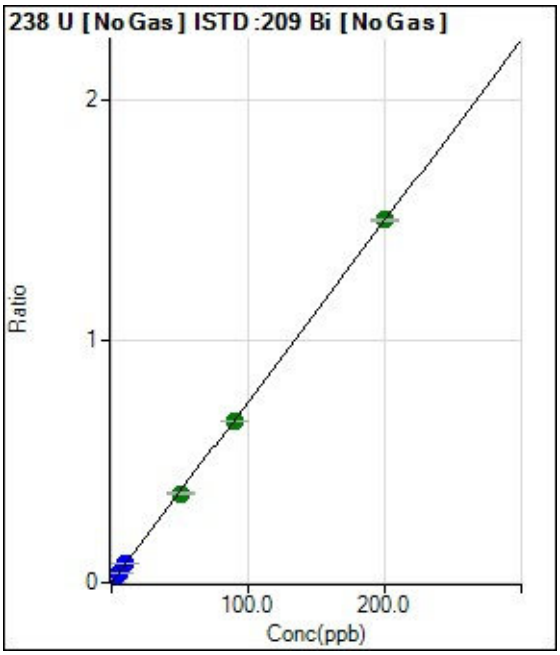
Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5500.20	0.0009	P	17.0
2	☐	0.200	0.144	12358.81	0.0020	P	4.6
3	☐	2.000	1.834	91658.31	0.0151	P	0.3
4	☐	5.000	4.849	233507.71	0.0385	P	1.1
5	☐	10.000	9.842	473539.39	0.0772	P	0.4
6	☐	50.000	48.896	2284521.51	0.3800	A	0.6
7	☐	90.000	88.972	4141755.62	0.6906	A	0.4
8	☐	200.000	200.752	9179707.02	1.5572	A	0.4

y = 0.0078 * x + 9.0208E-004
R = 1.0000
DL = 0.05942
BEC = 0.1164

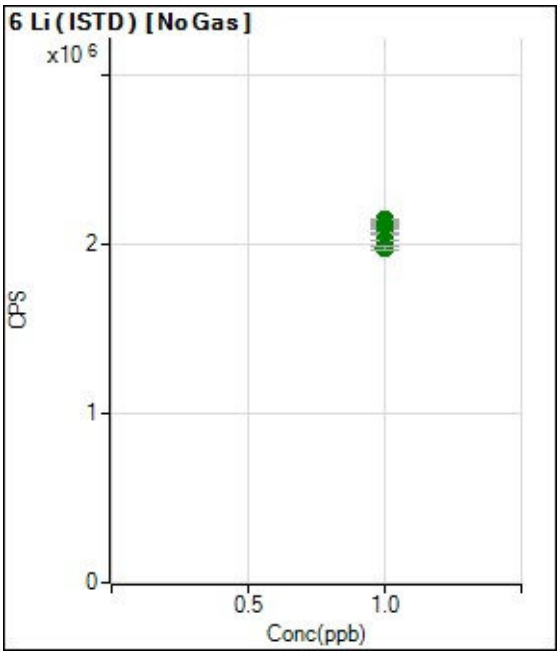
Weight: <None>
Min Conc: <None>



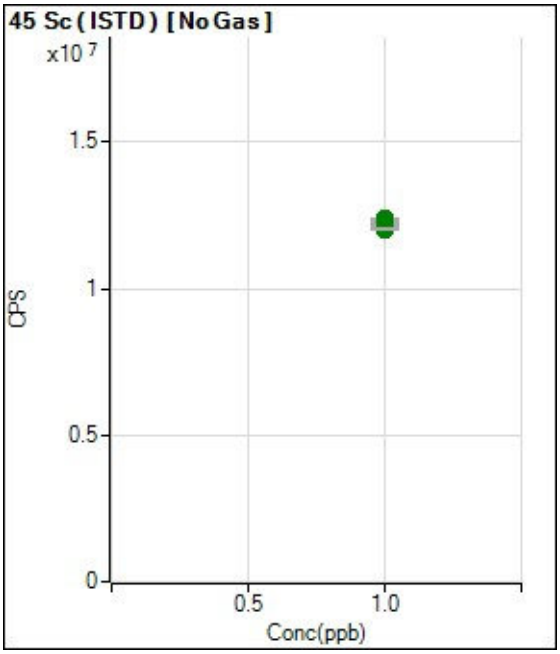
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	800.84	0.0001	P	8.6
2	☐	0.200	0.198	9887.39	0.0016	P	3.8
3	☐	2.000	2.019	92492.49	0.0153	P	2.3
4	☐	5.000	5.094	232377.50	0.0383	P	0.2
5	☐	10.000	10.188	469163.42	0.0765	P	0.6
6	☐	50.000	49.321	2223237.98	0.3698	A	0.9
7	☐	90.000	89.114	4006000.59	0.6680	A	0.6
8	☐	200.000	200.556	8861241.47	1.5032	A	0.6

y = 0.0075 * x + 1.3136E-004
R = 1.0000
DL = 0.004512
BEC = 0.01753

Weight: <None>
Min Conc: <None>

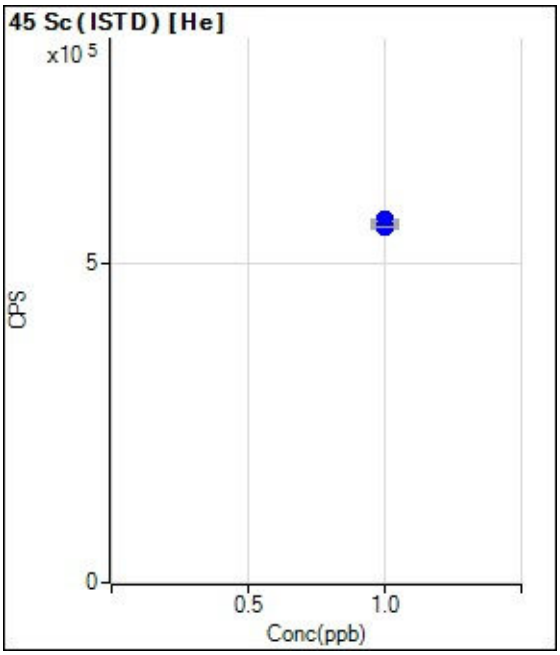


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2134590.20		A	0.8
2	☐	1.000		2140632.69		A	0.7
3	☐	1.000		2115872.90		A	0.4
4	☐	1.000		2104557.46		A	0.3
5	☐	1.000		2087958.55		A	0.2
6	☐	1.000		2059763.71		A	0.5
7	☐	1.000		2019985.04		A	0.2
8	☐	1.000		1971181.45		A	1.0

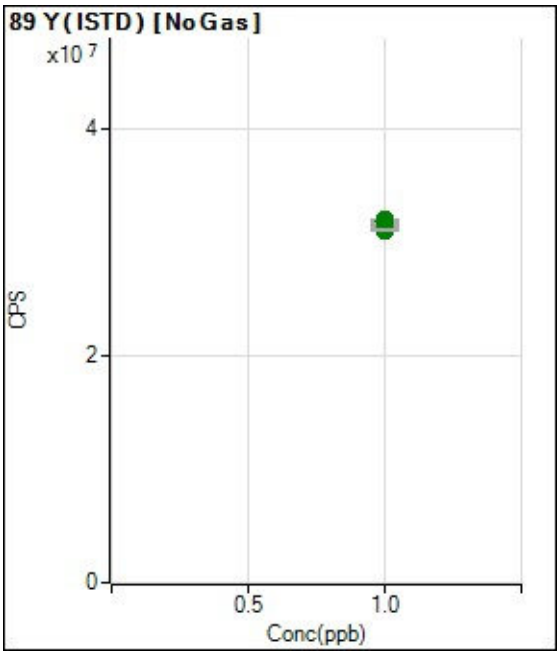


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12372233.93		A	0.4
2	☐	1.000		12315495.52		A	0.5
3	☐	1.000		12169143.33		A	0.4
4	☐	1.000		12192665.19		A	0.1
5	☐	1.000		12168849.29		A	0.8
6	☐	1.000		12094303.08		A	0.3
7	☐	1.000		12036231.26		A	0.3
8	☐	1.000		12020866.31		A	0.6

Calibration for 482_ICV.d

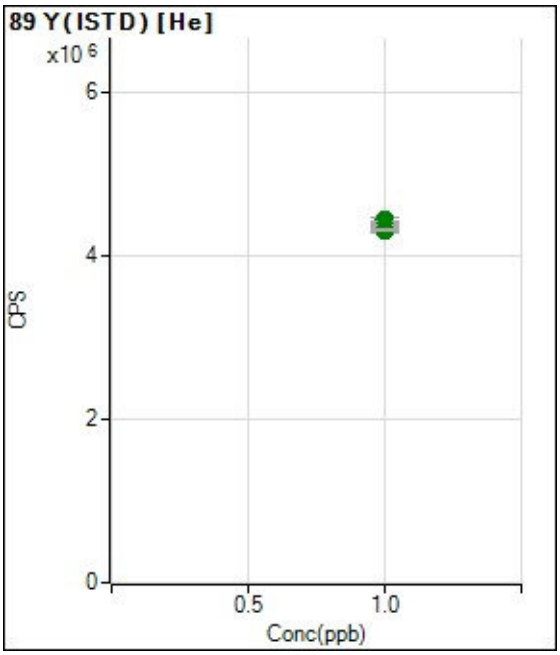


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		565187.75		P	0.6
2	☐	1.000		567097.44		P	0.5
3	☐	1.000		556050.22		P	0.5
4	☐	1.000		559626.91		P	2.4
5	☐	1.000		566519.74		P	0.6
6	☐	1.000		564982.55		P	0.1
7	☐	1.000		556032.01		P	0.8
8	☐	1.000		554974.19		P	0.1

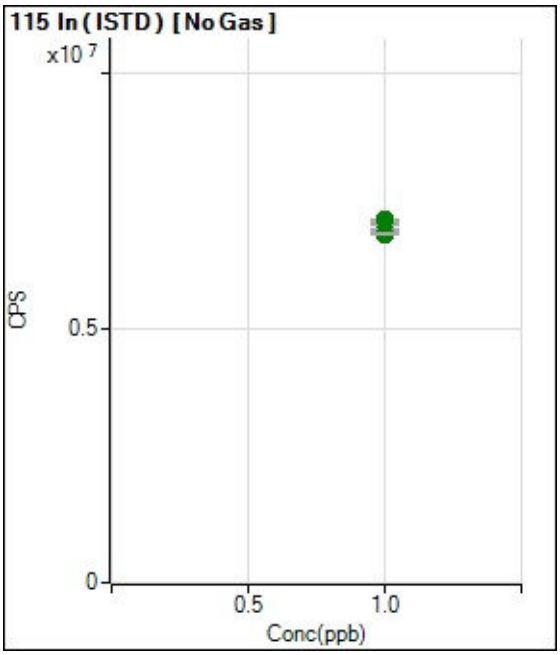


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		31927835.40		A	0.3
2	☐	1.000		31786946.17		A	0.9
3	☐	1.000		31569535.43		A	0.3
4	☐	1.000		31405738.30		A	0.1
5	☐	1.000		31469024.09		A	0.5
6	☐	1.000		31220440.51		A	0.5
7	☐	1.000		31018770.50		A	0.2
8	☐	1.000		31031348.08		A	0.5

Calibration for 482_ICV.d

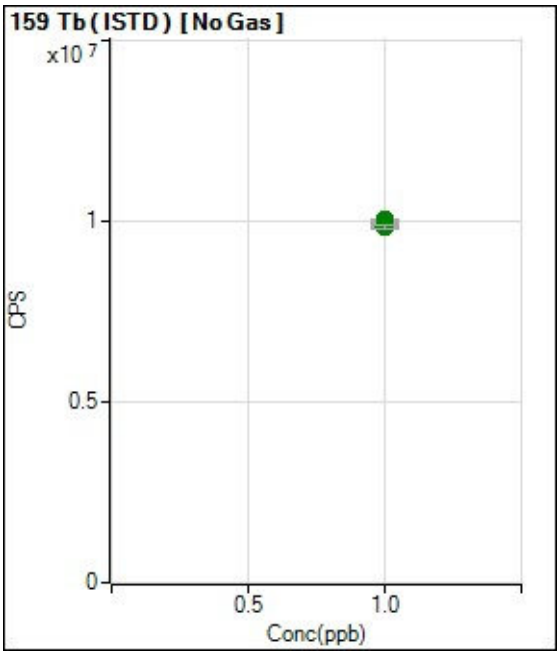


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4437352.88		A	0.9
2	☐	1.000		4417220.67		A	0.6
3	☐	1.000		4340262.88		A	0.7
4	☐	1.000		4357039.86		A	1.9
5	☐	1.000		4344816.70		A	0.9
6	☐	1.000		4361418.41		A	0.5
7	☐	1.000		4299652.16		A	0.9
8	☐	1.000		4309676.14		A	0.6

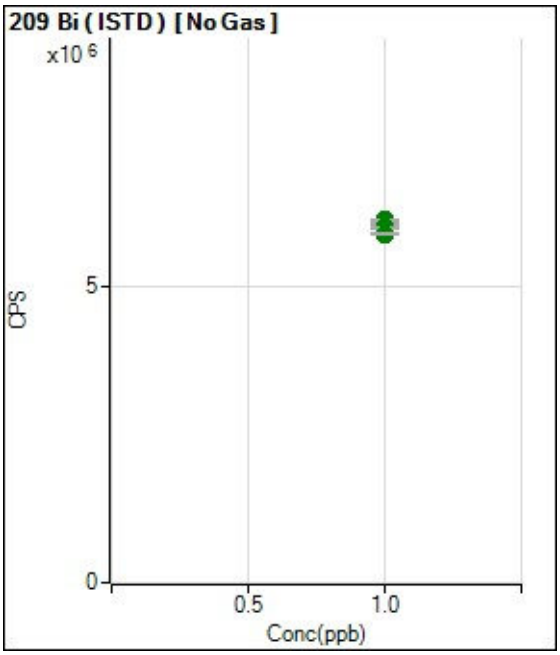


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7113548.93		A	0.6
2	☐	1.000		7120721.85		A	0.1
3	☐	1.000		7079959.30		A	0.6
4	☐	1.000		7106390.22		A	0.8
5	☐	1.000		7097265.69		A	0.4
6	☐	1.000		7018089.10		A	0.3
7	☐	1.000		6923925.64		A	0.8
8	☐	1.000		6842916.68		A	0.5

Calibration for 482_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10007593.45		A	0.7
2	☐	1.000		10040002.31		A	0.3
3	☐	1.000		9956505.90		A	1.1
4	☐	1.000		9904907.85		A	0.2
5	☐	1.000		9968790.06		A	0.4
6	☐	1.000		9908620.52		A	0.5
7	☐	1.000		9846511.95		A	0.3
8	☐	1.000		9835026.09		A	0.8

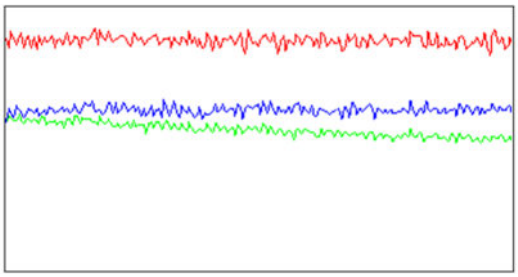


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6095972.26		A	0.4
2	☐	1.000		6115882.95		A	0.4
3	☐	1.000		6061310.04		A	1.1
4	☐	1.000		6066266.70		A	0.4
5	☐	1.000		6134069.76		A	0.7
6	☐	1.000		6012683.23		A	0.5
7	☐	1.000		5997054.35		A	0.2
8	☐	1.000		5895033.10		A	0.6

Performance Report

Operator Name	ALSHN ICPMS
Acq. Date-Time	2020-11-30 12:15:10
Instrument Name	G8421A JP17200678
Sample Introduction	ISIS
Nebulizer Type	MicroMist
Ion Lens Model	x-Lens
Tune Parameters	Standard Tune

Sensitivity



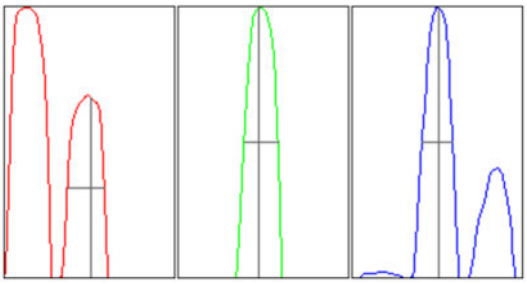
Mass	Range	Count	RSD%	Background
7	5000	4375	2.288	0.450
89	100000	53591	4.855	0.150
205	10000	6109	2.709	67.350

Sampling Period [sec]	0.311
Integration Time [sec]	0.1

Oxide/Doubly Charged Ratio

Oxide	156 / 140 1.222 %
Doubly Charged	70 / 140 2.696 %

Resolution/Axis



Mass	Peak Height	Axis	W-50%	W-10%
7	4264.54	7.05	0.66	0.77
89	47768.50	88.95	0.61	0.76
205	6041.74	205.05	0.56	0.74

Integration Time [sec]	0.1
Acquisition Time [sec]	22.74

Tune Parameters

Plasma Parameters

RF Power	1550 W	Option Gas	---	Makeup Gas	0.00 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Auxiliary Gas	0.90 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C	Plasma Gas	15.0 L/min
Nebulizer Gas	1.01 L/min				

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	12.6 V
Extract 2	-150.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-80 V	Cell Exit	-50 V		

Performance Report

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

QP Bias	-3.0 V

Hardware Settings

Torch

Torch H	0.1 mm	Torch H (Hot)	---	Torch H (Cool)	---
Torch V	-0.7 mm	Torch V (Hot)	---	Torch V (Cool)	---

Plasma Correction

Nebulizer Gas Offset	-0.04 L/min	Makeup Gas (Hot)	---	Makeup Gas (Cool)	---
		Sample Depth (Hot)	---		

Resolution/Axis

Mass Gain	128	Axis Gain	0.9997		
Mass Offset	125	Axis Offset	0.03		

EM

Discriminator	4.3 mV	Analog HV	2187 V	Pulse HV	908 V

Performance Report

Meter

Name	Value	Unit
Nebulizer Gas	1.01	L/min
MU./Dil. Gas	0.00	L/min
Plasma Gas	15.02	L/min
Aux Gas	0.90	L/min
Ar Gas Tank Press	7.49E+2	kPa
+5V (Press Gage)	5.0	V
Ar AMFC Temp	24.5	°C
Nebulizer Gas(DP)	5.43E+0	kPa
MU./Dil. Gas(DP)	-3.09E-2	kPa
Aux Gas(DP)	1.30E+1	kPa
Plasma Gas(DP)	1.20E+1	kPa
Nebulizer Gas(BP)	3.30E+2	kPa
MU./Dil. Gas(BP)	-3.70E+0	kPa
Aux Gas(BP)	4.32E+1	kPa
Plasma Gas(BP)	3.39E+1	kPa
S/C Temp (H)	20.3	°C
S/C Temp (L)	2.0	°C
Peltier Voltage	3.5	V
IF/BK Press	2.82E+2	Pa
Analyzer Press	5.91E-5	Pa
IG HV	176	V
IG Emission	4.97	µA
TMP Revolution	100.0	%
TMP Rev (RAW)	100.9	%
TMP Current	3.07	A
PWR AMP Drain I	0.2	A
PWR AMP Bias	4.10	V
OctP RF (Avg)	203.7	V
OctP RF Set	4.0	V
OctP FET Bias Set	3.97	V
OctP RF(+)	190.2	V
OctP RF(-)	217.5	V
OctP Bias	-7.9	V
Cell Temp.	65.0	°C
Cell Heater Volt.	3.9	V
+U Voltage	478.7	V

Name	Value	Unit
-U Voltage	-486.5	V
V Voltage	2148.0	V
QPRF Fader	1.5	V
Pickup Temp	55.0	°C
PWR Amp Temp	0.1	V
+600V	613.3	V
-120V	-133.4	V
-720V	-735.7	V
Prefilter Bias	-4.96	V
Pickup Heater I	0.08	A
QP PS +48V	47.5	V
QP PS +48V I	0.00	A
Analog HV	-2205	V
Pulse HV	915	V
EM Gate	99.5	V
Pulse Gate	1.1	V
EM Entrance	0.0	V
EM HV Gain	-812.5	V
Inner Pole	-300.1	V
Outer Pole	20.0	V
Analog -5V	-5.1	V
Analog +15V	14.6	V
Analog -15V	-14.4	V
Analog +5V	5.2	V
Shunt C Pos	1.6	V
Drain Volt.(max)	65.9	V
RF PS +48V	47.1	V
Forward Power	1550	W
Reflected Power	1	W
Plasma Freq.	27.09	MHz
Drain I 1	11.27	A
Drain I 2	10.20	A
Drain I 3	10.29	A
Drain I 4	10.43	A
Temp Sensor	2.9	V
Driver I	5.01	A

Name	Value	Unit
Igniter	0.1	V
Driver Voltage Set	6.6	V
Unbalance Current	0.13	A
PWM Threshold Set	0.1	V
Driver Voltage	5.3	V
PWM Threshold	0.1	V
Phase Detector	0.0	mV
He Gas	0.04	mL/min
He Gas Press	3.50E-1	kPa
ORS AMFC Temp	26.2	°C
Atmospheric Press	9.73E+1	kPa
Extract 1	0.0	V
Extract 2	-150.2	V
Omega Bias	-80.1	V
Omega Lens	7.9	V
Cell Entrance	-29.9	V
Cell Exit	-50.3	V
Deflect	12.6	V
Plate Bias	-35.0	V
HV+530V	521	V
HV+240V	237	V
HV-360V	-356	V
Inlet Temp	24.6	°C
Internal Temp	31.8	°C
+24V	23.4	V
Water Temp	21.1	°C
Water RF/WC/IF	1.58	L/min
ISIS 3 Pump Speed	0.0	%
Valve Position		
Tune/ISTD Valve		

Performance Report History

Sensitivity

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-30 12:15:10	4375	53591	6109
2020-11-25 13:43:34	4328	9823	5363
2020-11-25 12:08:17	3809	8645	6001
2020-11-24 12:09:17	4324	12347	7584
2020-11-23 11:50:06	3034	42138	8098
2020-11-23 11:38:36	3314	57723	8410
2020-11-20 11:49:48	5464	16984	7451
2020-11-19 22:38:32	5083	29635	7105
2020-11-19 22:12:06	5103	27003	6960
2020-11-19 20:45:43	4347	32149	5434
2020-11-19 20:03:01	3585	18619	5089
2020-11-19 19:23:01	3949	19717	5928
2020-11-19 18:43:36	3514	18121	6550
2020-11-19 17:33:58	3807	21854	7269
2020-11-19 15:22:58	3372	9203	6291
2020-11-19 15:10:53	3488	16204	6439
2020-11-19 14:53:10	3591	10734	6362
2020-11-18 11:54:13	1205	3826	2617
2020-11-17 11:15:31	1278	4273	2515
2020-11-16 13:44:07	1502	3059	2375
2020-11-16 13:09:13	1612	30454	2447
2020-11-13 11:20:44	1592	4157	2527
2020-11-12 14:37:14	1511	3607	2249
2020-11-12 13:53:08	1414	2984	1983
2020-11-12 12:32:41	931	2818	2004
2020-11-11 12:53:39	3414	5572	3330
2020-11-11 11:44:42	2763	5635	3242
2020-11-10 13:55:09	2971	9147	3735
2020-11-10 12:53:54	2632	5380	3447
2020-11-10 11:37:01	3049	7267	3473
2020-11-09 11:47:17	2520	4773	2882
2020-11-09 11:29:50	2615	11059	3065
2020-11-06 11:38:12	2354	4226	2795
2020-11-06 11:01:15	2571	5599	2896
2020-11-05 11:47:54	2413	5380	3110
2020-11-04 11:19:46	2310	5433	3223
2020-11-03 12:28:48	2819	5476	3321
2020-11-03 12:08:40	2411	8720	2893
2020-11-02 11:05:14	3543	37180	4248
2020-10-30 12:05:49	2406	6469	3233
2020-10-29 12:49:39	2719	6440	4108

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-29 11:48:38	2674	6232	3641
2020-10-28 15:02:21	3490	7322	4645
2020-10-28 14:05:42	3278	7160	3912
2020-10-27 12:05:48	727	1703	1914
2020-10-27 11:35:55	722	2099	2000
2020-10-26 12:04:37	1203	16839	2202
2020-10-23 12:12:34	1315	2468	2006
2020-10-23 11:37:57	1324	3647	2052
2020-10-22 12:16:30	959	2448	2163
2020-10-21 13:24:11	1073	2520	1884
2020-10-21 12:27:39	1122	2716	2011
2020-10-20 11:47:10	1637	3688	2449
2020-10-19 11:53:52	1128	2675	1888
2020-10-19 11:39:21	1179	4811	1928
2020-10-18 09:36:10	1665	20856	1974
2020-10-16 12:04:16	1928	4436	2616
2020-10-15 12:04:01	1667	4055	2820
2020-10-14 12:01:53	1989	4573	3176
2020-10-13 11:51:04	3074	6060	3832
2020-10-12 12:42:47	1484	3937	2762
2020-10-12 11:44:44	1746	4685	2448
2020-10-11 11:11:57	1796	4232	2388
2020-10-11 10:56:11	2094	4350	2402
2020-10-11 08:29:31	1939	4366	2390
2020-10-09 11:09:17	2309	4840	2851
2020-10-09 10:39:06	2498	5197	2889
2020-10-08 11:31:44	2281	6060	3333
2020-10-07 11:59:14	2012	4671	3330
2020-10-07 10:50:29	2119	5045	3372
2020-10-06 12:34:49	4071	7270	4025
2020-10-05 11:04:01	4647	9324	4922
2020-10-04 07:54:14	3927	67077	3990
2020-10-02 09:38:02	3301	7010	3890
2020-10-01 11:27:45	3428	7471	3998
2020-09-30 13:00:41	3691	8414	5069
2020-09-30 11:53:41	3488	7737	5379
2020-09-30 11:07:07	3555	8878	4820
2020-09-30 10:48:54	3682	11707	4994
2020-09-29 13:53:16	3262	8894	4481
2020-09-29 12:19:04	1966	6072	2077
2020-09-28 12:53:55	1731	2590	2754

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-28 11:59:28	1492	2271	2305
2020-09-25 16:18:31	2585	3865	3214
2020-09-25 16:06:07	2605	4109	3244
2020-09-25 14:56:33	2519	3579	3129
2020-09-25 12:48:13	2533	3206	2532
2020-09-24 10:55:05	2087	3690	2707
2020-09-23 12:36:58	2231	3540	3006
2020-09-23 11:38:39	2196	3459	2555
2020-09-23 10:51:49	2108	3110	2362
2020-09-22 11:10:32	3440	4661	2948
2020-09-22 10:54:35	3690	6894	3279
2020-09-21 13:13:36	2058	3480	2639
2020-09-21 12:44:05	2485	4086	2622
2020-09-21 11:41:44	2836	4407	2790
2020-09-21 11:23:15	2719	5102	2900
2020-09-20 08:10:06	3189	5254	3302
2020-09-20 07:22:36	3383	5278	3143
2020-09-20 06:54:39	2995	6878	3376
2020-09-18 11:40:25	3276	6815	3156
2020-09-18 11:29:16	3184	5773	2888
2020-09-18 11:06:40	3354	7920	3226
2020-09-17 15:29:32	3459	8016	3486
2020-09-16 20:54:26	3508	6510	3613
2020-09-16 19:16:27	3299	6829	3612
2020-09-16 17:59:29	3413	8566	3547
2020-09-16 11:19:13	2416	5647	3177
2020-09-15 16:24:15	3165	8407	4428
2020-09-15 16:09:17	3268	16881	4507
2020-09-15 14:28:15	3335	7860	4752
2020-09-15 13:19:00	2887	7602	5214
2020-09-15 11:28:27	3122	6972	4514
2020-09-15 09:52:18	2394	6064	4140
2020-09-14 12:35:34	2919	8029	4829
2020-09-14 10:47:40	2465	13982	4153
2020-09-14 10:18:12	2981	147428	4124
2020-09-11 10:57:10	4177	9295	5215
2020-09-10 11:27:38	4077	9423	4893
2020-09-09 11:12:49	4615	9919	5732
2020-09-09 10:40:25	4893	37172	5907
2020-09-04 11:48:35	3441	8270	4733
2020-09-03 16:21:25	4052	9316	5806

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-01 11:42:55	4000	12068	5666
2020-08-31 11:13:32	4245	87845	5643
2020-08-28 11:16:24	3088	10564	4710
2020-08-27 13:51:21	4108	11229	6176
2020-08-26 12:03:40	709	2074	2014
2020-08-25 12:03:05	1056	2659	2933
2020-08-25 11:32:14	1104	18306	2909
2020-08-21 13:01:12	544	2306	2585
2020-08-21 12:07:01	484	9012	2232
2020-08-20 11:15:30	579	1923	2458
2020-08-20 10:49:50	476	1836	2364
2020-08-20 10:10:21	583	2361	2456
2020-08-19 11:28:46	454	1880	1981
2020-08-18 11:07:27	515	1987	2499
2020-08-18 09:49:58	615	2314	2495
2020-08-17 12:34:56	637	2325	2666
2020-08-17 11:28:15	642	17377	2443
2020-08-14 07:34:28	660	2479	2687
2020-08-14 06:44:33	786	3289	2613
2020-08-13 09:37:45	558	2133	2410
2020-08-13 09:10:45	521	1962	2329
2020-08-13 08:48:39	496	1934	2288
2020-08-13 08:12:32	517	2418	2261
2020-08-13 07:26:07	652	2431	2391
2020-08-12 14:30:16	436	1985	2383
2020-08-12 13:28:46	430	1890	2337
2020-08-12 12:58:58	424	2141	2450
2020-08-12 12:32:10	423	1957	2334
2020-08-12 12:17:37	426	2078	2338
2020-08-12 11:28:35	396	1839	2187
2020-08-12 10:46:03	391	1783	2042
2020-08-12 10:01:12	402	1940	1946
2020-08-11 08:44:26	425	2072	2353
2020-08-11 07:53:34	450	2345	2270
2020-08-10 08:02:54	585	2329	2467
2020-08-10 07:18:05	680	19393	2348
2020-08-07 08:01:44	808	3281	3044
2020-08-06 15:31:02	706	2194	2639
2020-08-06 14:31:40	536	1812	1907
2020-08-05 11:00:59	818	2750	2903
2020-08-04 11:11:16	831	2836	2585

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-03 11:52:42	844	2601	2537
2020-07-31 14:27:24	741	2213	2630
2020-07-28 07:30:44	1155	3696	3239
2020-07-27 13:58:30	1574	3907	4099
2020-07-27 12:42:07	1014	3778	2005
2020-07-27 11:55:01	839	2602	2096
2020-07-27 11:13:19	908	15206	2137
2020-07-24 12:42:53	2542	6017	3827
2020-07-24 12:14:18	2635	6571	3838
2020-07-24 12:00:19	2346	5435	3627
2020-07-24 11:13:53	2629	37625	3757
2020-07-24 11:05:21	2180	5918	3134
2020-07-21 12:40:51	168	989	667
2020-07-21 11:57:51	516	1894	1030
2020-07-20 12:40:12	1371	4507	2970
2020-07-20 11:37:51	1446	38757	3136
2020-07-17 11:48:52	1876	5563	3247
2020-07-16 18:15:26	1515	5146	3133
2020-07-16 12:56:52	976	4431	2619
2020-07-16 12:30:29	1077	4360	2638
2020-07-15 12:44:11	1189	4329	3053
2020-07-15 12:10:56	1426	4997	3214
2020-07-14 11:48:58	1625	15999	3092
2020-07-14 11:11:56	1641	5261	3112
2020-07-13 12:32:05	2542	45774	3475
2020-07-10 12:07:31	2901	7213	4579
2020-07-09 11:10:24	8832	7204	3897
2020-07-08 12:38:35	3200	8957	4519
2020-07-07 11:49:59	3333	8506	4397
2020-07-06 13:18:03	3035	8959	5251
2020-07-06 11:44:36	672	12761	1235
2020-07-02 11:58:12	865	3063	2215
2020-07-02 11:17:30	1685	6809	2735
2020-07-01 13:38:18	2102	5052	3514
2020-07-01 12:51:19	2225	5177	3700
2020-07-01 12:27:56	2297	5659	3399
2020-07-01 11:46:22	2046	6438	3466
2020-06-30 13:54:10	2534	5477	3652
2020-06-30 13:18:33	3085	5788	3775
2020-06-30 12:13:58	2145	5434	3864
2020-06-29 12:28:14	2120	5553	4029

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-06-29 11:42:42	2695	58980	4207
2020-06-27 11:13:24	2630	6982	4598
2020-06-26 12:29:21	2315	7936	4455
2020-06-25 11:42:24	3056	7116	4865
2020-06-24 11:38:27	3958	9538	5780
2020-06-23 12:16:39	3639	8920	5072
2020-06-22 12:41:53	4068	9166	5330
2020-06-22 12:03:52	3706	11025	4681

Background

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-30 12:15:10	0.450	0.150	67.350
2020-11-25 13:43:34	0.600	0.000	14.750
2020-11-25 12:08:17	0.700	0.000	32.150
2020-11-24 12:09:17	0.950	0.250	39.850
2020-11-23 11:50:06	0.350	0.400	30.150
2020-11-23 11:38:36	0.400	0.300	25.050
2020-11-20 11:49:48	1.250	0.250	80.700
2020-11-19 22:38:32	1.050	0.450	56.700
2020-11-19 22:12:06	0.700	0.500	75.900
2020-11-19 20:45:43	1.050	0.450	68.650
2020-11-19 20:03:01	0.900	0.450	92.050
2020-11-19 19:23:01	1.000	0.400	58.600
2020-11-19 18:43:36	0.600	0.200	48.950
2020-11-19 17:33:58	1.000	0.500	67.550
2020-11-19 15:22:58	0.950	0.400	55.500
2020-11-19 15:10:53	0.600	0.700	46.050
2020-11-19 14:53:10	1.250	0.600	73.500
2020-11-18 11:54:13	0.050	0.350	15.650
2020-11-17 11:15:31	0.350	0.200	18.500
2020-11-16 13:44:07	0.100	0.300	2.100
2020-11-16 13:09:13	0.100	0.150	3.500
2020-11-13 11:20:44	0.200	0.150	9.500
2020-11-12 14:37:14	0.250	0.400	4.200
2020-11-12 13:53:08	0.200	0.100	6.400
2020-11-12 12:32:41	0.100	0.150	8.600
2020-11-11 12:53:39	0.550	0.400	5.150
2020-11-11 11:44:42	0.150	0.700	4.300

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-10 13:55:09	0.350	0.350	7.650
2020-11-10 12:53:54	0.250	0.200	20.900
2020-11-10 11:37:01	0.350	0.550	20.400
2020-11-09 11:47:17	0.150	0.500	4.900
2020-11-09 11:29:50	0.400	0.450	4.200
2020-11-06 11:38:12	0.450	0.300	9.000
2020-11-06 11:01:15	0.400	0.200	8.200
2020-11-05 11:47:54	0.200	0.200	4.350
2020-11-04 11:19:46	0.250	0.450	11.950
2020-11-03 12:28:48	0.400	0.250	5.200
2020-11-03 12:08:40	0.200	0.300	6.050
2020-11-02 11:05:14	0.000	0.300	4.550
2020-10-30 12:05:49	0.300	0.500	16.050
2020-10-29 12:49:39	0.250	0.250	13.050
2020-10-29 11:48:38	0.650	0.200	16.950
2020-10-28 15:02:21	0.300	0.300	3.050
2020-10-28 14:05:42	0.250	0.200	7.100
2020-10-27 12:05:48	0.100	0.050	11.750
2020-10-27 11:35:55	0.050	0.100	8.250
2020-10-26 12:04:37	0.050	0.150	5.750
2020-10-23 12:12:34	0.050	0.050	4.650
2020-10-23 11:37:57	0.300	0.200	3.050
2020-10-22 12:16:30	0.150	0.050	8.450
2020-10-21 13:24:11	0.050	0.250	8.300
2020-10-21 12:27:39	0.200	0.200	17.800
2020-10-20 11:47:10	0.050	0.150	3.950
2020-10-19 11:53:52	0.200	0.100	16.800
2020-10-19 11:39:21	0.000	0.150	7.500
2020-10-18 09:36:10	0.200	0.150	4.850
2020-10-16 12:04:16	0.350	0.300	9.700
2020-10-15 12:04:01	0.100	0.050	16.500
2020-10-14 12:01:53	0.250	0.050	9.350
2020-10-13 11:51:04	0.100	0.050	17.000
2020-10-12 12:42:47	0.250	0.200	6.400
2020-10-12 11:44:44	0.200	0.150	10.100
2020-10-11 11:11:57	0.200	0.350	13.250
2020-10-11 10:56:11	0.350	0.300	16.250
2020-10-11 08:29:31	0.300	0.200	38.550
2020-10-09 11:09:17	0.250	0.350	26.700
2020-10-09 10:39:06	0.250	0.100	23.800
2020-10-08 11:31:44	0.200	0.200	25.600

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-07 11:59:14	0.150	0.350	27.550
2020-10-07 10:50:29	0.350	0.250	27.950
2020-10-06 12:34:49	0.350	0.200	22.950
2020-10-05 11:04:01	0.250	0.250	58.600
2020-10-04 07:54:14	0.200	0.400	56.750
2020-10-02 09:38:02	0.150	0.650	93.650
2020-10-01 11:27:45	0.250	0.350	55.900
2020-09-30 13:00:41	0.400	0.350	55.200
2020-09-30 11:53:41	0.300	0.250	16.350
2020-09-30 11:07:07	0.250	0.350	60.700
2020-09-30 10:48:54	0.600	0.300	20.300
2020-09-29 13:53:16	0.100	0.400	20.250
2020-09-29 12:19:04	0.250	0.400	14.700
2020-09-28 12:53:55	0.100	0.300	17.550
2020-09-28 11:59:28	0.100	0.150	12.600
2020-09-25 16:18:31	0.050	0.050	10.200
2020-09-25 16:06:07	0.050	0.300	10.250
2020-09-25 14:56:33	0.100	0.250	11.500
2020-09-25 12:48:13	0.100	0.200	37.000
2020-09-24 10:55:05	0.250	0.150	11.000
2020-09-23 12:36:58	0.150	0.200	24.350
2020-09-23 11:38:39	0.050	0.150	11.400
2020-09-23 10:51:49	0.050	0.300	15.050
2020-09-22 11:10:32	0.000	0.100	29.150
2020-09-22 10:54:35	0.200	0.200	22.400
2020-09-21 13:13:36	0.200	0.400	14.200
2020-09-21 12:44:05	0.100	0.200	13.500
2020-09-21 11:41:44	0.200	0.100	20.400
2020-09-21 11:23:15	0.050	0.500	21.150
2020-09-20 08:10:06	0.250	0.450	13.400
2020-09-20 07:22:36	0.250	0.400	13.750
2020-09-20 06:54:39	0.150	0.100	6.250
2020-09-18 11:40:25	0.150	0.200	7.600
2020-09-18 11:29:16	0.450	0.150	8.550
2020-09-18 11:06:40	0.100	0.350	10.000
2020-09-17 15:29:32	0.350	0.300	9.300
2020-09-16 20:54:26	0.100	0.450	17.400
2020-09-16 19:16:27	0.100	0.200	7.050
2020-09-16 17:59:29	0.150	0.350	15.250
2020-09-16 11:19:13	0.250	0.550	10.850
2020-09-15 16:24:15	0.250	0.200	9.050

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-15 16:09:17	0.150	0.250	15.750
2020-09-15 14:28:15	0.150	0.150	14.300
2020-09-15 13:19:00	0.100	0.100	14.150
2020-09-15 11:28:27	0.100	0.300	12.500
2020-09-15 09:52:18	0.100	0.050	4.350
2020-09-14 12:35:34	0.250	0.300	18.000
2020-09-14 10:47:40	0.150	0.350	8.550
2020-09-14 10:18:12	0.100	0.250	8.250
2020-09-11 10:57:10	0.200	0.300	20.200
2020-09-10 11:27:38	0.300	0.400	18.050
2020-09-09 11:12:49	0.350	0.250	16.700
2020-09-09 10:40:25	0.500	0.350	11.550
2020-09-04 11:48:35	0.250	0.050	93.750
2020-09-03 16:21:25	0.350	0.300	43.700
2020-09-01 11:42:55	0.300	0.450	45.100
2020-08-31 11:13:32	0.400	0.150	26.850
2020-08-28 11:16:24	0.250	0.550	12.400
2020-08-27 13:51:21	0.200	0.250	18.250
2020-08-26 12:03:40	0.000	0.100	10.750
2020-08-25 12:03:05	0.100	0.100	10.100
2020-08-25 11:32:14	0.050	0.050	21.750
2020-08-21 13:01:12	0.050	0.050	14.900
2020-08-21 12:07:01	0.050	0.150	16.500
2020-08-20 11:15:30	0.000	0.000	28.100
2020-08-20 10:49:50	0.050	0.000	22.300
2020-08-20 10:10:21	0.050	0.150	10.800
2020-08-19 11:28:46	0.050	0.000	7.550
2020-08-18 11:07:27	0.100	0.100	9.200
2020-08-18 09:49:58	0.050	0.100	8.650
2020-08-17 12:34:56	0.050	0.100	20.400
2020-08-17 11:28:15	0.050	0.000	12.450
2020-08-14 07:34:28	0.050	0.050	8.400
2020-08-14 06:44:33	0.100	0.150	6.700
2020-08-13 09:37:45	0.100	0.100	8.150
2020-08-13 09:10:45	0.050	0.000	5.000
2020-08-13 08:48:39	0.100	0.150	6.150
2020-08-13 08:12:32	0.050	0.100	12.400
2020-08-13 07:26:07	0.050	0.050	12.700
2020-08-12 14:30:16	0.050	0.100	25.550
2020-08-12 13:28:46	0.050	0.050	4.550
2020-08-12 12:58:58	0.100	0.050	8.000

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-12 12:32:10	0.100	0.200	15.800
2020-08-12 12:17:37	0.050	0.100	16.950
2020-08-12 11:28:35	0.000	0.050	16.900
2020-08-12 10:46:03	0.050	0.000	3.100
2020-08-12 10:01:12	0.000	0.000	8.200
2020-08-11 08:44:26	0.050	0.000	3.450
2020-08-11 07:53:34	0.050	0.100	5.100
2020-08-10 08:02:54	0.000	0.050	13.600
2020-08-10 07:18:05	0.000	0.100	18.700
2020-08-07 08:01:44	0.050	0.150	9.000
2020-08-06 15:31:02	0.050	0.100	10.550
2020-08-06 14:31:40	0.000	0.150	12.500
2020-08-05 11:00:59	0.000	0.100	9.350
2020-08-04 11:11:16	0.000	0.100	6.500
2020-08-03 11:52:42	0.000	0.050	4.750
2020-07-31 14:27:24	0.050	0.200	3.050
2020-07-28 07:30:44	0.050	0.050	4.800
2020-07-27 13:58:30	0.050	0.000	4.500
2020-07-27 12:42:07	0.000	0.350	6.000
2020-07-27 11:55:01	0.250	0.100	3.500
2020-07-27 11:13:19	0.000	0.150	4.000
2020-07-24 12:42:53	0.150	0.350	12.150
2020-07-24 12:14:18	0.050	0.150	12.100
2020-07-24 12:00:19	0.150	0.250	7.700
2020-07-24 11:13:53	0.200	0.200	12.000
2020-07-24 11:05:21	0.150	0.400	7.450
2020-07-21 12:40:51	0.250	0.150	22.450
2020-07-21 11:57:51	0.350	0.350	31.100
2020-07-20 12:40:12	0.050	0.300	11.200
2020-07-20 11:37:51	0.050	0.300	14.750
2020-07-17 11:48:52	0.400	0.200	5.150
2020-07-16 18:15:26	0.100	0.250	11.250
2020-07-16 12:56:52	0.250	0.150	8.100
2020-07-16 12:30:29	0.050	0.200	7.650
2020-07-15 12:44:11	0.350	0.400	9.450
2020-07-15 12:10:56	0.500	0.050	10.400
2020-07-14 11:48:58	0.250	0.250	17.450
2020-07-14 11:11:56	0.100	0.400	17.000
2020-07-13 12:32:05	0.350	0.400	29.750
2020-07-10 12:07:31	0.150	0.150	11.350
2020-07-09 11:10:24	0.300	0.350	31.650

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-07-08 12:38:35	0.150	0.400	29.700
2020-07-07 11:49:59	0.100	0.550	8.550
2020-07-06 13:18:03	0.250	0.250	22.550
2020-07-06 11:44:36	0.150	0.050	18.500
2020-07-02 11:58:12	0.250	0.300	4.850
2020-07-02 11:17:30	0.100	0.150	3.850
2020-07-01 13:38:18	0.050	0.200	18.250
2020-07-01 12:51:19	0.150	0.300	12.650
2020-07-01 12:27:56	0.250	0.050	18.900
2020-07-01 11:46:22	0.200	0.050	7.500
2020-06-30 13:54:10	0.250	0.350	12.050
2020-06-30 13:18:33	0.350	0.250	9.600
2020-06-30 12:13:58	0.100	0.150	23.850
2020-06-29 12:28:14	0.200	0.100	39.500
2020-06-29 11:42:42	0.100	0.350	44.450
2020-06-27 11:13:24	0.100	0.100	30.600
2020-06-26 12:29:21	0.200	0.300	58.300
2020-06-25 11:42:24	0.150	0.250	21.450
2020-06-24 11:38:27	0.300	0.450	12.650
2020-06-23 12:16:39	0.550	0.400	37.200
2020-06-22 12:41:53	0.600	0.300	31.050
2020-06-22 12:03:52	0.400	0.300	32.100

Tune Parameters

Created Date	Extract 1	Extract 2	Omega Bias
2020-11-30 12:15:10	0.0 V	-150.0 V	-80 V
2020-11-25 13:43:34	0.0 V	-155.0 V	-80 V
2020-11-25 12:08:17	0.0 V	-155.0 V	-80 V
2020-11-24 12:09:17	0.0 V	-155.0 V	-80 V
2020-11-23 11:50:06	0.0 V	-160.0 V	-80 V
2020-11-23 11:38:36	0.0 V	-160.0 V	-80 V
2020-11-20 11:49:48	0.0 V	-180.0 V	-90 V
2020-11-19 22:38:32	0.0 V	-175.0 V	-80 V
2020-11-19 22:12:06	0.0 V	-175.0 V	-80 V
2020-11-19 20:45:43	0.0 V	-175.0 V	-90 V
2020-11-19 20:03:01	0.0 V	-170.0 V	-90 V
2020-11-19 19:23:01	0.0 V	-165.0 V	-80 V
2020-11-19 18:43:36	0.0 V	-170.0 V	-80 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-11-19 17:33:58	0.0 V	-170.0 V	-80 V
2020-11-19 15:22:58	0.0 V	-180.0 V	-90 V
2020-11-19 15:10:53	0.0 V	-180.0 V	-90 V
2020-11-19 14:53:10	0.0 V	-180.0 V	-90 V
2020-11-18 11:54:13	0.0 V	-160.0 V	-70 V
2020-11-17 11:15:31	0.0 V	-170.0 V	-80 V
2020-11-16 13:44:07	0.0 V	-145.0 V	-70 V
2020-11-16 13:09:13	0.0 V	-145.0 V	-70 V
2020-11-13 11:20:44	0.0 V	-155.0 V	-70 V
2020-11-12 14:37:14	0.0 V	-150.0 V	-70 V
2020-11-12 13:53:08	0.0 V	-145.0 V	-70 V
2020-11-12 12:32:41	0.0 V	-145.0 V	-70 V
2020-11-11 12:53:39	0.0 V	-170.0 V	-70 V
2020-11-11 11:44:42	0.0 V	-175.0 V	-70 V
2020-11-10 13:55:09	0.0 V	-200.0 V	-70 V
2020-11-10 12:53:54	0.0 V	-185.0 V	-70 V
2020-11-10 11:37:01	0.0 V	-180.0 V	-70 V
2020-11-09 11:47:17	0.0 V	-175.0 V	-70 V
2020-11-09 11:29:50	0.0 V	-175.0 V	-70 V
2020-11-06 11:38:12	0.0 V	-170.0 V	-70 V
2020-11-06 11:01:15	0.0 V	-170.0 V	-70 V
2020-11-05 11:47:54	0.0 V	-195.0 V	-70 V
2020-11-04 11:19:46	0.0 V	-190.0 V	-80 V
2020-11-03 12:28:48	0.0 V	-190.0 V	-80 V
2020-11-03 12:08:40	0.0 V	-190.0 V	-80 V
2020-11-02 11:05:14	0.0 V	-195.0 V	-80 V
2020-10-30 12:05:49	0.0 V	-195.0 V	-70 V
2020-10-29 12:49:39	0.0 V	-195.0 V	-70 V
2020-10-29 11:48:38	0.0 V	-180.0 V	-70 V
2020-10-28 15:02:21	0.0 V	-200.0 V	-70 V
2020-10-28 14:05:42	0.0 V	-180.0 V	-70 V
2020-10-27 12:05:48	0.0 V	-140.0 V	-70 V
2020-10-27 11:35:55	0.0 V	-140.0 V	-70 V
2020-10-26 12:04:37	0.0 V	-150.0 V	-70 V
2020-10-23 12:12:34	0.0 V	-145.0 V	-70 V
2020-10-23 11:37:57	0.0 V	-145.0 V	-70 V
2020-10-22 12:16:30	0.0 V	-140.0 V	-70 V
2020-10-21 13:24:11	0.0 V	-140.0 V	-70 V
2020-10-21 12:27:39	0.0 V	-140.0 V	-70 V
2020-10-20 11:47:10	0.0 V	-150.0 V	-70 V
2020-10-19 11:53:52	0.0 V	-145.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-10-19 11:39:21	0.0 V	-145.0 V	-70 V
2020-10-18 09:36:10	0.0 V	-150.0 V	-70 V
2020-10-16 12:04:16	0.0 V	-155.0 V	-70 V
2020-10-15 12:04:01	0.0 V	-155.0 V	-70 V
2020-10-14 12:01:53	0.0 V	-155.0 V	-70 V
2020-10-13 11:51:04	0.0 V	-180.0 V	-70 V
2020-10-12 12:42:47	0.0 V	-175.0 V	-70 V
2020-10-12 11:44:44	0.0 V	-170.0 V	-70 V
2020-10-11 11:11:57	0.0 V	-170.0 V	-70 V
2020-10-11 10:56:11	0.0 V	-170.0 V	-70 V
2020-10-11 08:29:31	0.0 V	-170.0 V	-70 V
2020-10-09 11:09:17	0.0 V	-170.0 V	-70 V
2020-10-09 10:39:06	0.0 V	-170.0 V	-70 V
2020-10-08 11:31:44	0.0 V	-175.0 V	-70 V
2020-10-07 11:59:14	0.0 V	-190.0 V	-80 V
2020-10-07 10:50:29	0.0 V	-190.0 V	-80 V
2020-10-06 12:34:49	0.0 V	-200.0 V	-80 V
2020-10-05 11:04:01	0.0 V	-200.0 V	-70 V
2020-10-04 07:54:14	0.0 V	-200.0 V	-70 V
2020-10-02 09:38:02	0.0 V	-200.0 V	-70 V
2020-10-01 11:27:45	0.0 V	-200.0 V	-80 V
2020-09-30 13:00:41	0.0 V	-200.0 V	-80 V
2020-09-30 11:53:41	0.0 V	-200.0 V	-70 V
2020-09-30 11:07:07	0.0 V	-190.0 V	-70 V
2020-09-30 10:48:54	0.0 V	-190.0 V	-70 V
2020-09-29 13:53:16	0.0 V	-195.0 V	-80 V
2020-09-29 12:19:04	0.0 V	-175.0 V	-80 V
2020-09-28 12:53:55	0.0 V	-140.0 V	-70 V
2020-09-28 11:59:28	0.0 V	-140.0 V	-70 V
2020-09-25 16:18:31	0.0 V	-160.0 V	-70 V
2020-09-25 16:06:07	0.0 V	-160.0 V	-70 V
2020-09-25 14:56:33	0.0 V	-160.0 V	-70 V
2020-09-25 12:48:13	0.0 V	-180.0 V	-80 V
2020-09-24 10:55:05	0.0 V	-190.0 V	-70 V
2020-09-23 12:36:58	0.0 V	-185.0 V	-70 V
2020-09-23 11:38:39	0.0 V	-185.0 V	-70 V
2020-09-23 10:51:49	0.0 V	-165.0 V	-70 V
2020-09-22 11:10:32	0.0 V	-150.0 V	-70 V
2020-09-22 10:54:35	0.0 V	-150.0 V	-70 V
2020-09-21 13:13:36	0.0 V	-200.0 V	-80 V
2020-09-21 12:44:05	0.0 V	-180.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-09-21 11:41:44	0.0 V	-170.0 V	-70 V
2020-09-21 11:23:15	0.0 V	-170.0 V	-70 V
2020-09-20 08:10:06	0.0 V	-160.0 V	-70 V
2020-09-20 07:22:36	0.0 V	-160.0 V	-70 V
2020-09-20 06:54:39	0.0 V	-160.0 V	-70 V
2020-09-18 11:40:25	0.0 V	-155.0 V	-70 V
2020-09-18 11:29:16	0.0 V	-155.0 V	-70 V
2020-09-18 11:06:40	0.0 V	-155.0 V	-70 V
2020-09-17 15:29:32	0.0 V	-185.0 V	-70 V
2020-09-16 20:54:26	0.0 V	-190.0 V	-70 V
2020-09-16 19:16:27	0.0 V	-195.0 V	-70 V
2020-09-16 17:59:29	0.0 V	-200.0 V	-70 V
2020-09-16 11:19:13	0.0 V	-165.0 V	-70 V
2020-09-15 16:24:15	0.0 V	-180.0 V	-70 V
2020-09-15 16:09:17	0.0 V	-180.0 V	-70 V
2020-09-15 14:28:15	0.0 V	-195.0 V	-70 V
2020-09-15 13:19:00	0.0 V	-195.0 V	-70 V
2020-09-15 11:28:27	0.0 V	-190.0 V	-70 V
2020-09-15 09:52:18	0.0 V	-175.0 V	-70 V
2020-09-14 12:35:34	0.0 V	-200.0 V	-70 V
2020-09-14 10:47:40	0.0 V	-175.0 V	-70 V
2020-09-14 10:18:12	0.0 V	-175.0 V	-70 V
2020-09-11 10:57:10	0.0 V	-200.0 V	-70 V
2020-09-10 11:27:38	0.0 V	-195.0 V	-70 V
2020-09-09 11:12:49	0.0 V	-195.0 V	-70 V
2020-09-09 10:40:25	0.0 V	-195.0 V	-70 V
2020-09-04 11:48:35	0.0 V	-190.0 V	-70 V
2020-09-03 16:21:25	0.0 V	-195.0 V	-70 V
2020-09-01 11:42:55	0.0 V	-185.0 V	-70 V
2020-08-31 11:13:32	0.0 V	-190.0 V	-70 V
2020-08-28 11:16:24	0.0 V	-190.0 V	-70 V
2020-08-27 13:51:21	0.0 V	-200.0 V	-70 V
2020-08-26 12:03:40	0.0 V	-140.0 V	-70 V
2020-08-25 12:03:05	0.0 V	-145.0 V	-70 V
2020-08-25 11:32:14	0.0 V	-145.0 V	-70 V
2020-08-21 13:01:12	0.0 V	-140.0 V	-70 V
2020-08-21 12:07:01	0.0 V	-145.0 V	-70 V
2020-08-20 11:15:30	0.0 V	-145.0 V	-70 V
2020-08-20 10:49:50	0.0 V	-145.0 V	-70 V
2020-08-20 10:10:21	0.0 V	-145.0 V	-70 V
2020-08-19 11:28:46	0.0 V	-140.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-08-18 11:07:27	0.0 V	-145.0 V	-70 V
2020-08-18 09:49:58	0.0 V	-145.0 V	-70 V
2020-08-17 12:34:56	0.0 V	-140.0 V	-70 V
2020-08-17 11:28:15	0.0 V	-140.0 V	-70 V
2020-08-14 07:34:28	0.0 V	-140.0 V	-70 V
2020-08-14 06:44:33	0.0 V	-140.0 V	-70 V
2020-08-13 09:37:45	0.0 V	-140.0 V	-70 V
2020-08-13 09:10:45	0.0 V	-140.0 V	-70 V
2020-08-13 08:48:39	0.0 V	-140.0 V	-70 V
2020-08-13 08:12:32	0.0 V	-140.0 V	-70 V
2020-08-13 07:26:07	0.0 V	-140.0 V	-70 V
2020-08-12 14:30:16	0.0 V	-140.0 V	-70 V
2020-08-12 13:28:46	0.0 V	-140.0 V	-70 V
2020-08-12 12:58:58	0.0 V	-140.0 V	-70 V
2020-08-12 12:32:10	0.0 V	-140.0 V	-70 V
2020-08-12 12:17:37	0.0 V	-140.0 V	-70 V
2020-08-12 11:28:35	0.0 V	-140.0 V	-70 V
2020-08-12 10:46:03	0.0 V	-140.0 V	-70 V
2020-08-12 10:01:12	0.0 V	-140.0 V	-70 V
2020-08-11 08:44:26	0.0 V	-140.0 V	-70 V
2020-08-11 07:53:34	0.0 V	-140.0 V	-70 V
2020-08-10 08:02:54	0.0 V	-140.0 V	-70 V
2020-08-10 07:18:05	0.0 V	-140.0 V	-70 V
2020-08-07 08:01:44	0.0 V	-150.0 V	-70 V
2020-08-06 15:31:02	0.0 V	-140.0 V	-70 V
2020-08-06 14:31:40	0.0 V	-140.0 V	-70 V
2020-08-05 11:00:59	0.0 V	-140.0 V	-70 V
2020-08-04 11:11:16	0.0 V	-140.0 V	-70 V
2020-08-03 11:52:42	0.0 V	-140.0 V	-70 V
2020-07-31 14:27:24	0.0 V	-140.0 V	-70 V
2020-07-28 07:30:44	0.0 V	-145.0 V	-70 V
2020-07-27 13:58:30	0.0 V	-160.0 V	-70 V
2020-07-27 12:42:07	0.0 V	-155.0 V	-70 V
2020-07-27 11:55:01	0.0 V	-150.0 V	-70 V
2020-07-27 11:13:19	0.0 V	-150.0 V	-70 V
2020-07-24 12:42:53	0.0 V	-160.0 V	-70 V
2020-07-24 12:14:18	0.0 V	-160.0 V	-70 V
2020-07-24 12:00:19	0.0 V	-165.0 V	-70 V
2020-07-24 11:13:53	0.0 V	-165.0 V	-70 V
2020-07-24 11:05:21	0.0 V	-165.0 V	-70 V
2020-07-21 12:40:51	0.0 V	-160.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-07-21 11:57:51	0.0 V	-155.0 V	-70 V
2020-07-20 12:40:12	0.0 V	-150.0 V	-70 V
2020-07-20 11:37:51	0.0 V	-155.0 V	-70 V
2020-07-17 11:48:52	0.0 V	-165.0 V	-70 V
2020-07-16 18:15:26	0.0 V	-160.0 V	-70 V
2020-07-16 12:56:52	0.0 V	-165.0 V	-70 V
2020-07-16 12:30:29	0.0 V	-165.0 V	-70 V
2020-07-15 12:44:11	0.0 V	-160.0 V	-70 V
2020-07-15 12:10:56	0.0 V	-160.0 V	-70 V
2020-07-14 11:48:58	0.0 V	-165.0 V	-70 V
2020-07-14 11:11:56	0.0 V	-165.0 V	-70 V
2020-07-13 12:32:05	0.0 V	-160.0 V	-70 V
2020-07-10 12:07:31	0.0 V	-180.0 V	-70 V
2020-07-09 11:10:24	0.0 V	-175.0 V	-70 V
2020-07-08 12:38:35	0.0 V	-200.0 V	-70 V
2020-07-07 11:49:59	0.0 V	-200.0 V	-70 V
2020-07-06 13:18:03	0.0 V	-200.0 V	-70 V
2020-07-06 11:44:36	0.0 V	-145.0 V	-70 V
2020-07-02 11:58:12	0.0 V	-155.0 V	-70 V
2020-07-02 11:17:30	0.0 V	-155.0 V	-70 V
2020-07-01 13:38:18	0.0 V	-160.0 V	-70 V
2020-07-01 12:51:19	0.0 V	-160.0 V	-70 V
2020-07-01 12:27:56	0.0 V	-165.0 V	-70 V
2020-07-01 11:46:22	0.0 V	-165.0 V	-70 V
2020-06-30 13:54:10	0.0 V	-175.0 V	-70 V
2020-06-30 13:18:33	0.0 V	-175.0 V	-70 V
2020-06-30 12:13:58	0.0 V	-175.0 V	-70 V
2020-06-29 12:28:14	0.0 V	-185.0 V	-70 V
2020-06-29 11:42:42	0.0 V	-185.0 V	-70 V
2020-06-27 11:13:24	0.0 V	-175.0 V	-70 V
2020-06-26 12:29:21	0.0 V	-160.0 V	-70 V
2020-06-25 11:42:24	0.0 V	-180.0 V	-70 V
2020-06-24 11:38:27	0.0 V	-195.0 V	-70 V
2020-06-23 12:16:39	0.0 V	-200.0 V	-70 V
2020-06-22 12:41:53	0.0 V	-195.0 V	-70 V
2020-06-22 12:03:52	0.0 V	-195.0 V	-70 V

US EPA Tune Check Report

Operator Name	ALSHN ICPMS
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq. Date-Time	2020-11-30 12:45:15
Report Comment	---
Instrument Name	G8421A JP17200678

[No Gas]

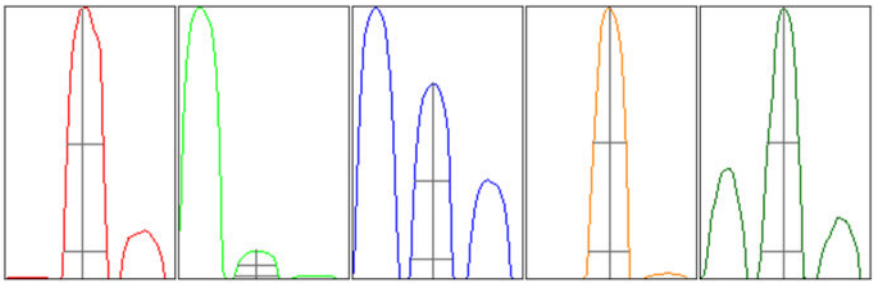
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
9	388	3875.83	1.414	5.000	
24	1511	15114.97	0.362	5.000	
59	2036	20355.90	0.327	5.000	
115	3411	34106.32	0.353	5.000	
208	1736	17363.56	0.691	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	391	378	388	388	392
24	1505	1518	1512	1507	1516
59	2045	2029	2032	2039	2032
115	3419	3407	3419	3417	3391
208	1749	1743	1742	1725	1722

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	629.35	8.90	8.90 - 9.10	
24	2369.84	23.90	23.90 - 24.10	
59	3397.01	58.95	58.90 - 59.10	
115	6147.40	115.00	114.90 - 115.10	
208	3304.07	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.64	0.768	0.900	
24	0.67	0.775	0.900	
59	0.63	0.730	0.900	
115	0.58	0.722	0.900	
208	0.55	0.733	0.900	

US EPA Tune Check Report

Integration Time [sec]	0.1
Acquisition Time [sec]	168.5
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.01 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	12.6 V
Extract 2	-150.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-70 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	128	Axis Gain	0.9997	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm

EM

Discriminator	4.3 mV	Analog HV	2187 V	Pulse HV	908 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	534	5344.36	1.268	5.000	
89	488	4877.04	1.235	5.000	
205	1073	10734.13	0.437	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	538	525	531	542	536
89	486	480	496	486	490
205	1072	1068	1078	1070	1078

Integration Time [sec]	0.1

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.01 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

US EPA Tune Check Report

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	1.2 V
Extract 2	-150.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-70 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	128	Axis Gain	0.9997	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm		

EM

Discriminator	4.3 mV	Analog HV	2187 V	Pulse HV	908 V

Calibration Blank Report

Sample Name std 1

File Name 007CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 12:58:04

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	318444.42	1.0
Be	9	6	No Gas	10.01	173.2
B	11	6	No Gas	6017.41	5.9
Na	23	45	No Gas	269035.47	1.7
Na	23	45	He	13207.14	6.7
Mg	24	45	No Gas	10778.28	10.2
Mg	24	45	He	306.69	15.1
Mg	25	45	No Gas	1480.18	2.7
Al	27	45	No Gas	17091.66	6.4
Al	27	45	He	166.67	40.0
Si	28	45	No Gas	577761.37	1.0
Si	29	45	No Gas	108895.19	1.5
K	39	45	No Gas	4644611.91	0.7
K	39	45	He	26427.51	1.9
Ca	44	45	No Gas	172388.22	1.2
Ca	44	45	He	173.35	26.6
Ti	47	45	No Gas	557.24	6.3
V	51	45	No Gas	-6499.03	-37.9
V	51	45	He	627.33	22.7
Cr	52	89	No Gas	44704.36	0.5
Cr	52	89	He	3327.13	8.5
Cr	53	89	No Gas	89983.65	0.7
Mn	55	89	No Gas	13259.91	3.8
Mn	55	89	He	283.63	17.8
Fe	56	89	No Gas	2596884.50	0.6
Fe	56	89	He	62347.42	8.3
Co	59	89	No Gas	1308.06	13.8
Co	59	89	He	263.61	5.8
Ni	60	89	No Gas	1531.64	3.6
Ni	60	89	He	403.75	5.7
Ni	62	89	No Gas	6247.78	5.4
Cu	63	89	No Gas	25038.30	1.2
Cu	63	89	He	5947.34	0.7
Cu	65	89	No Gas	11476.52	1.8
Zn	66	89	No Gas	2562.85	7.2

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	483.83	12.6
Zn	67	89	No Gas	417.10	8.4
Zn	68	89	No Gas	1858.69	10.1
As	75	89	No Gas	4051.75	47.8
As	75	89	He	28.89	40.5
Se	77	89	No Gas	14001.47	1.4
Se	78	89	No Gas	17435.56	0.7
Se	78	89	He	26.66	21.7
Se	82	89	No Gas	3.84	3220.2
[Se]	83	89	No Gas	2169.06	7.7
Sr	88	89	No Gas	764.13	1.5
Mo	95	89	No Gas	2939.99	3.5
Mo	97	89	No Gas	1701.84	13.0
Mo	98	89	No Gas	5038.44	2.6
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	66546.82	1.3
Ag	107	89	No Gas	541.13	14.2
Ag	107	89	He	143.48	14.5
Cd	108	89	No Gas	123.46	28.5
Ag	109	89	No Gas	176.85	28.5
Cd	111	89	No Gas	-121.36	-35.2
Cd	114	89	No Gas	166.83	18.3
Sn	118	115	No Gas	5447.82	5.6
Sb	121	115	No Gas	2695.86	6.5
Sb	121	89	He	946.72	17.6
Sb	123	115	No Gas	2058.93	10.2
Ba	135	115	No Gas	106.77	53.3
Ba	137	115	No Gas	133.47	15.6
Tl	203	209	No Gas	316.99	18.0
Tl	205	209	No Gas	837.55	6.8
Pb	206	209	No Gas	2522.83	8.3
Pb	207	209	No Gas	2275.86	3.2
Pb	208	209	No Gas	9975.04	3.6
Th	232	209	No Gas	4792.47	4.3
U	238	209	No Gas	660.69	9.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	6025446.82	0.8
Sc	45	No Gas	24486020.24	0.7
Sc	45	He	1021290.27	0.5
Y	89	No Gas	55574551.33	0.2
Y	89	He	7730545.15	0.7
In	115	No Gas	12046397.83	0.5
Tb	159	No Gas	16402024.97	0.3
Bi	209	No Gas	10051567.93	0.9

Calibration Standard Report

Sample Name std 2

File Name 008CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 13:00:45

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	324256.69	0.4
Be	9	6	No Gas	1852.01	7.3
B	11	6	No Gas	9122.18	0.7
Na	23	45	No Gas	1061228.51	1.2
Na	23	45	He	34417.93	3.6
Mg	24	45	No Gas	537926.95	0.6
Mg	24	45	He	11018.46	2.2
Mg	25	45	No Gas	71627.93	3.3
Al	27	45	No Gas	38028.09	2.4
Al	27	45	He	246.68	16.4
Si	28	45	No Gas	861787.86	0.6
Si	29	45	No Gas	123516.80	0.6
K	39	45	No Gas	5332177.84	0.4
K	39	45	He	34900.13	5.6
Ca	44	45	No Gas	190638.47	3.0
Ca	44	45	He	786.75	5.9
Ti	47	45	No Gas	1011.08	6.0
V	51	45	No Gas	7382.09	53.5
V	51	45	He	1848.67	4.3
Cr	52	89	No Gas	55852.78	1.7
Cr	52	89	He	4755.66	3.8
Cr	53	89	No Gas	99461.52	0.9
Mn	55	89	No Gas	24098.86	0.3
Mn	55	89	He	1057.78	7.4
Fe	56	89	No Gas	3306217.91	0.6
Fe	56	89	He	167210.69	1.9
Co	59	89	No Gas	10311.03	4.6
Co	59	89	He	2552.84	4.4
Ni	60	89	No Gas	3514.02	7.9
Ni	60	89	He	984.37	13.5
Ni	62	89	No Gas	6695.13	7.4
Cu	63	89	No Gas	30755.73	2.8
Cu	63	89	He	8023.84	4.1
Cu	65	89	No Gas	14469.05	3.1
Zn	66	89	No Gas	4188.24	5.3

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	880.93	17.2
Zn	67	89	No Gas	677.38	5.6
Zn	68	89	No Gas	3026.76	8.4
As	75	89	No Gas	5354.69	4.8
As	75	89	He	217.78	7.1
Se	77	89	No Gas	15361.04	1.8
Se	78	89	No Gas	17385.52	3.1
Se	78	89	He	38.89	35.7
Se	82	89	No Gas	-184.22	-105.0
[Se]	83	89	No Gas	2299.20	10.2
Sr	88	89	No Gas	13523.89	4.7
Mo	95	89	No Gas	4034.73	1.5
Mo	97	89	No Gas	2723.05	2.2
Mo	98	89	No Gas	6622.63	2.6
[Mo]	99	89	No Gas	16.68	69.3
Cd	106	89	No Gas	65192.07	0.9
Ag	107	89	No Gas	7189.78	1.4
Ag	107	89	He	3433.94	2.8
Cd	108	89	No Gas	263.61	19.5
Ag	109	89	No Gas	6578.33	1.9
Cd	111	89	No Gas	1131.68	13.1
Cd	114	89	No Gas	3460.65	4.5
Sn	118	115	No Gas	9356.70	3.7
Sb	121	115	No Gas	7569.99	1.0
Sb	121	89	He	1723.48	10.2
Sb	123	115	No Gas	5620.26	0.4
Ba	135	115	No Gas	1361.46	1.3
Ba	137	115	No Gas	2235.82	7.0
Tl	203	209	No Gas	5336.57	7.2
Tl	205	209	No Gas	12338.63	4.1
Pb	206	209	No Gas	6912.28	2.7
Pb	207	209	No Gas	5563.58	3.9
Pb	208	209	No Gas	26127.22	1.6
Th	232	209	No Gas	17984.67	2.2
U	238	209	No Gas	16227.26	2.1

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5978467.15	0.5	6025446.82	99.22	70	125	
Sc	45	No Gas	24516430.65	0.1	24486020.24	100.12	75	125	
Sc	45	He	1005324.86	1.5	1021290.27	98.44	75	125	
Y	89	No Gas	55445695.81	0.5	55574551.33	99.77	75	125	
Y	89	He	7625112.00	0.7	7730545.15	98.64	75	125	
In	115	No Gas	12042295.13	1.2	12046397.83	99.97	75	125	
Tb	159	No Gas	16434134.16	0.6	16402024.97	100.2	75	125	
Bi	209	No Gas	10117540.71	0.7	10051567.93	100.66	75	125	

Calibration Standard Report

Sample Name std 3

File Name 009CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 13:02:39

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	385498.06	0.4
Be	9	6	No Gas	17361.66	0.7
B	11	6	No Gas	33627.33	0.5
Na	23	45	No Gas	7825757.73	0.5
Na	23	45	He	224043.16	1.7
Mg	24	45	No Gas	5225816.59	0.7
Mg	24	45	He	111852.32	0.5
Mg	25	45	No Gas	693682.10	1.7
Al	27	45	No Gas	103629.90	2.3
Al	27	45	He	696.70	10.8
Si	28	45	No Gas	3307011.60	0.2
Si	29	45	No Gas	274501.92	0.6
K	39	45	No Gas	11478017.75	0.5
K	39	45	He	114372.34	1.5
Ca	44	45	No Gas	378357.35	1.2
Ca	44	45	He	4787.85	6.3
Ti	47	45	No Gas	6758.57	8.0
V	51	45	No Gas	84123.38	3.1
V	51	45	He	12024.17	2.8
Cr	52	89	No Gas	141128.25	0.2
Cr	52	89	He	19620.52	0.3
Cr	53	89	No Gas	110883.01	1.3
Mn	55	89	No Gas	123042.07	1.7
Mn	55	89	He	8113.98	10.3
Fe	56	89	No Gas	10430927.58	0.6
Fe	56	89	He	1033515.71	1.2
Co	59	89	No Gas	93206.06	0.6
Co	59	89	He	23848.27	2.1
Ni	60	89	No Gas	21786.22	2.6
Ni	60	89	He	6918.80	4.7
Ni	62	89	No Gas	9275.93	4.3
Cu	63	89	No Gas	74024.14	0.6
Cu	63	89	He	23982.05	1.9
Cu	65	89	No Gas	34264.29	0.8
Zn	66	89	No Gas	16733.96	1.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	3150.24	5.7
Zn	67	89	No Gas	2576.20	3.0
Zn	68	89	No Gas	11499.94	6.2
As	75	89	No Gas	16671.19	4.6
As	75	89	He	1947.93	1.4
Se	77	89	No Gas	16576.94	1.5
Se	78	89	No Gas	18441.29	2.4
Se	78	89	He	133.33	13.2
Se	82	89	No Gas	882.74	38.2
[Se]	83	89	No Gas	2038.90	6.6
Sr	88	89	No Gas	127303.56	0.7
Mo	95	89	No Gas	26021.68	2.6
Mo	97	89	No Gas	16179.58	2.3
Mo	98	89	No Gas	42265.08	0.9
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	65916.20	2.2
Ag	107	89	No Gas	67486.49	0.5
Ag	107	89	He	32636.46	2.3
Cd	108	89	No Gas	1074.47	9.4
Ag	109	89	No Gas	64592.17	0.6
Cd	111	89	No Gas	12772.24	2.0
Cd	114	89	No Gas	33713.75	0.9
Sn	118	115	No Gas	45148.28	0.5
Sb	121	115	No Gas	60272.02	0.9
Sb	121	89	He	13610.59	1.6
Sb	123	115	No Gas	46160.80	1.3
Ba	135	115	No Gas	12114.64	4.3
Ba	137	115	No Gas	20797.68	0.9
Tl	203	209	No Gas	50971.84	2.4
Tl	205	209	No Gas	120827.82	0.4
Pb	206	209	No Gas	42809.92	2.1
Pb	207	209	No Gas	35757.23	2.0
Pb	208	209	No Gas	166524.13	0.4
Th	232	209	No Gas	150467.53	1.6
U	238	209	No Gas	156607.25	0.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5947589.41	0.6	6025446.82	98.71	70	125	
Sc	45	No Gas	24424325.21	0.5	24486020.24	99.75	75	125	
Sc	45	He	995729.09	0.8	1021290.27	97.5	75	125	
Y	89	No Gas	55228607.05	0.6	55574551.33	99.38	75	125	
Y	89	He	7519946.84	1.3	7730545.15	97.28	75	125	
In	115	No Gas	12004512.92	0.5	12046397.83	99.65	75	125	
Tb	159	No Gas	16379446.98	0.3	16402024.97	99.86	75	125	
Bi	209	No Gas	10074239.04	1.2	10051567.93	100.23	75	125	

Calibration Standard Report

Sample Name	std 4
File Name	010CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 13:04:32
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	489780.09	1.0
Be	9	6	No Gas	42543.61	0.5
B	11	6	No Gas	76540.66	1.5
Na	23	45	No Gas	19191155.64	1.1
Na	23	45	He	551334.29	1.8
Mg	24	45	No Gas	13086840.22	1.1
Mg	24	45	He	277085.34	0.9
Mg	25	45	No Gas	1728224.92	1.1
Al	27	45	No Gas	189181.38	1.0
Al	27	45	He	1213.41	9.8
Si	28	45	No Gas	7354083.48	0.3
Si	29	45	No Gas	529505.83	0.3
K	39	45	No Gas	21770548.01	0.3
K	39	45	He	248919.73	1.7
Ca	44	45	No Gas	705468.92	0.6
Ca	44	45	He	12553.24	7.0
Ti	47	45	No Gas	16760.49	1.8
V	51	45	No Gas	217818.30	2.3
V	51	45	He	28632.02	1.7
Cr	52	89	No Gas	250752.82	0.3
Cr	52	89	He	38961.27	1.3
Cr	53	89	No Gas	126055.23	1.2
Mn	55	89	No Gas	284391.23	0.8
Mn	55	89	He	19747.61	2.9
Fe	56	89	No Gas	22010645.28	0.9
Fe	56	89	He	2526605.85	0.8
Co	59	89	No Gas	230635.66	0.7
Co	59	89	He	60162.51	1.2
Ni	60	89	No Gas	51806.80	1.9
Ni	60	89	He	16603.59	2.4
Ni	62	89	No Gas	13891.21	2.0
Cu	63	89	No Gas	146746.58	1.5
Cu	63	89	He	50504.38	1.4
Cu	65	89	No Gas	68762.22	0.8
Zn	66	89	No Gas	36361.94	2.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	7269.35	5.8
Zn	67	89	No Gas	5917.30	4.0
Zn	68	89	No Gas	26178.25	1.4
As	75	89	No Gas	38612.86	1.8
As	75	89	He	4844.23	2.3
Se	77	89	No Gas	17702.89	1.7
Se	78	89	No Gas	21472.18	2.9
Se	78	89	He	324.45	9.9
Se	82	89	No Gas	2117.08	16.0
[Se]	83	89	No Gas	2102.30	7.9
Sr	88	89	No Gas	318598.15	0.5
Mo	95	89	No Gas	60923.42	0.6
Mo	97	89	No Gas	38009.13	2.9
Mo	98	89	No Gas	97823.12	1.0
[Mo]	99	89	No Gas	36.70	87.7
Cd	106	89	No Gas	66563.43	0.8
Ag	107	89	No Gas	167155.57	1.3
Ag	107	89	He	80796.41	0.8
Cd	108	89	No Gas	2392.66	4.4
Ag	109	89	No Gas	160642.07	1.3
Cd	111	89	No Gas	31709.28	1.2
Cd	114	89	No Gas	83275.42	1.8
Sn	118	115	No Gas	107199.85	0.3
Sb	121	115	No Gas	148980.47	0.5
Sb	121	89	He	33503.07	2.9
Sb	123	115	No Gas	114917.45	0.7
Ba	135	115	No Gas	29794.16	1.9
Ba	137	115	No Gas	51952.45	2.6
Tl	203	209	No Gas	128048.26	0.6
Tl	205	209	No Gas	302235.60	1.3
Pb	206	209	No Gas	102860.50	0.9
Pb	207	209	No Gas	86642.81	2.0
Pb	208	209	No Gas	404666.90	0.8
Th	232	209	No Gas	387489.87	0.6
U	238	209	No Gas	399511.09	1.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5905701.83	1.1	6025446.82	98.01	70	125	
Sc	45	No Gas	24167006.22	0.6	24486020.24	98.7	75	125	
Sc	45	He	993269.75	0.3	1021290.27	97.26	75	125	
Y	89	No Gas	54880066.84	0.4	55574551.33	98.75	75	125	
Y	89	He	7506343.44	0.7	7730545.15	97.1	75	125	
In	115	No Gas	11916895.41	0.4	12046397.83	98.92	75	125	
Tb	159	No Gas	16325700.73	0.3	16402024.97	99.53	75	125	
Bi	209	No Gas	10035775.99	1.0	10051567.93	99.84	75	125	

Calibration Standard Report

Sample Name std 5

File Name 011CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 13:06:25

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	841141.64	16.8
Be	9	6	No Gas	43113.16	62.9
B	11	6	No Gas	74204.76	59.7
Na	23	45	No Gas	19624359.16	61.8
Na	23	45	He	855973.24	16.0
Mg	24	45	No Gas	13333972.51	62.7
Mg	24	45	He	448695.07	14.0
Mg	25	45	No Gas	1773148.66	63.4
Al	27	45	No Gas	1394195.84	63.3
Al	27	45	He	22051.82	35.9
Si	28	45	No Gas	17363531.80	75.3
Si	29	45	No Gas	1444182.61	75.5
K	39	45	No Gas	21086200.31	58.6
K	39	45	He	396199.26	16.6
Ca	44	45	No Gas	712946.16	47.8
Ca	44	45	He	19335.52	20.9
Ti	47	45	No Gas	34118.11	72.3
V	51	45	No Gas	230955.45	61.2
V	51	45	He	46918.56	13.5
Cr	52	89	No Gas	236711.94	61.2
Cr	52	89	He	60619.92	14.9
Cr	53	89	No Gas	73426.22	62.8
Mn	55	89	No Gas	291104.91	59.7
Mn	55	89	He	31889.97	16.1
Fe	56	89	No Gas	21654054.91	60.9
Fe	56	89	He	4204998.90	16.4
Co	59	89	No Gas	227920.51	61.9
Co	59	89	He	95403.17	15.8
Ni	60	89	No Gas	53179.08	61.5
Ni	60	89	He	27756.90	16.6
Ni	62	89	No Gas	16240.18	20.7
Cu	63	89	No Gas	147006.40	53.4
Cu	63	89	He	78598.27	15.1
Cu	65	89	No Gas	69294.08	52.3
Zn	66	89	No Gas	36882.92	58.3

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	11329.63	17.6
Zn	67	89	No Gas	5820.95	60.7
Zn	68	89	No Gas	26045.86	57.8
As	75	89	No Gas	40702.86	51.6
As	75	89	He	7691.16	14.6
Se	77	89	No Gas	10485.94	56.4
Se	78	89	No Gas	22658.80	8.4
Se	78	89	He	494.46	16.7
Se	82	89	No Gas	2310.38	55.6
[Se]	83	89	No Gas	2516.14	10.6
Sr	88	89	No Gas	319602.66	61.7
Mo	95	89	No Gas	62396.32	61.7
Mo	97	89	No Gas	38695.19	62.2
Mo	98	89	No Gas	99963.49	61.7
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	98831.13	15.8
Ag	107	89	No Gas	166123.84	62.8
Ag	107	89	He	129445.48	15.8
Cd	108	89	No Gas	2429.42	56.6
Ag	109	89	No Gas	158949.39	63.1
Cd	111	89	No Gas	31057.83	63.9
Cd	114	89	No Gas	82754.47	62.8
Sn	118	115	No Gas	122737.01	59.5
Sb	121	115	No Gas	171981.43	61.3
Sb	121	89	He	59064.76	8.5
Sb	123	115	No Gas	132858.69	60.7
Ba	135	115	No Gas	31785.84	61.6
Ba	137	115	No Gas	55921.38	60.8
Tl	203	209	No Gas	125206.41	62.1
Tl	205	209	No Gas	299299.72	62.0
Pb	206	209	No Gas	104849.03	60.4
Pb	207	209	No Gas	86989.92	61.7
Pb	208	209	No Gas	413623.39	60.9
Th	232	209	No Gas	390329.80	58.4
U	238	209	No Gas	399310.46	61.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	12310834.64	39.4	6025446.82	204.31	70	125	ISTD Failed
Sc	45	No Gas	46042962.22	33.3	24486020.24	188.04	75	125	ISTD Failed
Sc	45	He	1151995.27	20.0	1021290.27	112.8	75	125	
Y	89	No Gas	103571741.95	33.3	55574551.33	186.37	75	125	ISTD Failed
Y	89	He	8476409.34	19.7	7730545.15	109.65	75	125	
In	115	No Gas	22410050.23	32.7	12046397.83	186.03	75	125	ISTD Failed
Tb	159	No Gas	30707393.29	33.0	16402024.97	187.22	75	125	ISTD Failed
Bi	209	No Gas	18762990.92	31.4	10051567.93	186.67	75	125	ISTD Failed

Calibration Standard Report

Sample Name	std 6
File Name	012CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 13:08:18
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	2121896.90	0.9
Be	9	6	No Gas	444257.28	0.6
B	11	6	No Gas	728813.66	0.7
Na	23	45	No Gas	194189066.84	1.2
Na	23	45	He	5494358.25	1.0
Mg	24	45	No Gas	134846664.65	0.5
Mg	24	45	He	2845147.67	1.1
Mg	25	45	No Gas	17836918.90	0.1
Al	27	45	No Gas	964095.82	0.3
Al	27	45	He	10851.12	2.2
Si	28	45	No Gas	70998770.58	0.7
Si	29	45	No Gas	4504338.72	0.4
K	39	45	No Gas	182614557.28	0.5
K	39	45	He	2239862.21	0.3
Ca	44	45	No Gas	5528192.42	0.2
Ca	44	45	He	120827.53	1.3
Ti	47	45	No Gas	170191.70	0.7
V	51	45	No Gas	2332896.08	0.6
V	51	45	He	292623.46	0.6
Cr	52	89	No Gas	2151453.54	0.8
Cr	52	89	He	375228.56	0.3
Cr	53	89	No Gas	340257.81	0.3
Mn	55	89	No Gas	2815819.89	1.1
Mn	55	89	He	197297.41	1.2
Fe	56	89	No Gas	204858600.41	1.5
Fe	56	89	He	25609006.28	0.9
Co	59	89	No Gas	2321613.80	0.9
Co	59	89	He	616292.22	0.4
Ni	60	89	No Gas	515723.44	0.7
Ni	60	89	He	169129.90	0.9
Ni	62	89	No Gas	82618.74	1.4
Cu	63	89	No Gas	1277611.83	0.1
Cu	63	89	He	473426.88	1.1
Cu	65	89	No Gas	608366.86	0.8
Zn	66	89	No Gas	356203.25	0.8

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	71978.73	2.7
Zn	67	89	No Gas	56584.18	0.8
Zn	68	89	No Gas	256856.87	0.5
As	75	89	No Gas	365769.96	0.6
As	75	89	He	50469.42	1.7
Se	77	89	No Gas	32702.54	2.4
Se	78	89	No Gas	70473.85	0.9
Se	78	89	He	3168.17	2.5
Se	82	89	No Gas	21717.31	0.8
[Se]	83	89	No Gas	2102.31	3.1
Sr	88	89	No Gas	3282459.86	0.9
Mo	95	89	No Gas	623986.38	0.7
Mo	97	89	No Gas	387710.47	0.7
Mo	98	89	No Gas	996887.39	0.4
[Mo]	99	89	No Gas	36.70	68.6
Cd	106	89	No Gas	94254.54	1.3
Ag	107	89	No Gas	1711581.63	0.5
Ag	107	89	He	829449.27	0.1
Cd	108	89	No Gas	24286.87	1.2
Ag	109	89	No Gas	1639713.42	0.8
Cd	111	89	No Gas	330542.44	0.3
Cd	114	89	No Gas	865457.28	0.9
Sn	118	115	No Gas	1059700.51	0.5
Sb	121	115	No Gas	1518744.21	0.3
Sb	121	89	He	339846.40	1.0
Sb	123	115	No Gas	1170341.94	0.2
Ba	135	115	No Gas	309480.91	1.2
Ba	137	115	No Gas	543542.25	0.2
Tl	203	209	No Gas	1312146.08	0.6
Tl	205	209	No Gas	3119526.41	0.6
Pb	206	209	No Gas	1045928.48	0.7
Pb	207	209	No Gas	874235.83	0.6
Pb	208	209	No Gas	4101406.08	0.7
Th	232	209	No Gas	4158648.03	0.7
U	238	209	No Gas	4130227.42	0.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5828152.96	1.0	6025446.82	96.73	70	125	
Sc	45	No Gas	24439604.65	0.4	24486020.24	99.81	75	125	
Sc	45	He	996385.10	1.1	1021290.27	97.56	75	125	
Y	89	No Gas	55133899.01	0.9	55574551.33	99.21	75	125	
Y	89	He	7524478.03	0.6	7730545.15	97.33	75	125	
In	115	No Gas	11929854.88	0.6	12046397.83	99.03	75	125	
Tb	159	No Gas	16312657.69	0.4	16402024.97	99.46	75	125	
Bi	209	No Gas	9962189.05	0.7	10051567.93	99.11	75	125	

Calibration Standard Report

Sample Name std 7

File Name 013CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 13:10:16

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	3511357.62	1.2
Be	9	6	No Gas	792328.16	1.2
B	11	6	No Gas	1319067.20	1.4
Na	23	45	No Gas	353813449.57	0.6
Na	23	45	He	9868755.69	1.6
Mg	24	45	No Gas	241078709.74	1.0
Mg	24	45	He	5126409.09	1.2
Mg	25	45	No Gas	31995392.02	1.1
Al	27	45	No Gas	1714296.12	0.7
Al	27	45	He	19750.97	2.9
Si	28	45	No Gas	126229953.54	1.6
Si	29	45	No Gas	7937942.96	0.7
K	39	45	No Gas	323544721.84	0.8
K	39	45	He	4018370.36	2.0
Ca	44	45	No Gas	9748536.73	1.5
Ca	44	45	He	218854.42	3.4
Ti	47	45	No Gas	304279.97	1.1
V	51	45	No Gas	4216501.93	0.9
V	51	45	He	528537.58	1.4
Cr	52	89	No Gas	3858124.80	2.0
Cr	52	89	He	673051.47	1.7
Cr	53	89	No Gas	537730.17	0.7
Mn	55	89	No Gas	5106254.29	1.9
Mn	55	89	He	355843.37	2.2
Fe	56	89	No Gas	369087491.58	0.8
Fe	56	89	He	46746855.97	1.2
Co	59	89	No Gas	4189613.48	2.0
Co	59	89	He	1094702.52	1.3
Ni	60	89	No Gas	927656.98	2.0
Ni	60	89	He	305651.42	1.4
Ni	62	89	No Gas	143761.76	1.2
Cu	63	89	No Gas	2278494.65	0.6
Cu	63	89	He	838962.12	1.4
Cu	65	89	No Gas	1078027.06	0.4
Zn	66	89	No Gas	638617.20	0.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	128133.95	1.0
Zn	67	89	No Gas	101132.35	0.7
Zn	68	89	No Gas	459196.11	0.9
As	75	89	No Gas	654229.97	0.8
As	75	89	He	91717.80	1.8
Se	77	89	No Gas	48120.71	0.8
Se	78	89	No Gas	113272.01	0.7
Se	78	89	He	5675.66	0.4
Se	82	89	No Gas	38884.28	1.4
[Se]	83	89	No Gas	2389.32	4.5
Sr	88	89	No Gas	5913007.81	1.6
Mo	95	89	No Gas	1138835.40	1.1
Mo	97	89	No Gas	701483.88	0.4
Mo	98	89	No Gas	1817964.94	0.4
[Mo]	99	89	No Gas	30.03	57.7
Cd	106	89	No Gas	118016.09	0.6
Ag	107	89	No Gas	3057453.91	1.3
Ag	107	89	He	1473163.32	2.0
Cd	108	89	No Gas	44084.39	1.2
Ag	109	89	No Gas	2967266.65	0.9
Cd	111	89	No Gas	592896.60	0.2
Cd	114	89	No Gas	1565697.68	0.5
Sn	118	115	No Gas	1918606.24	1.5
Sb	121	115	No Gas	2774508.36	0.3
Sb	121	89	He	611349.91	1.5
Sb	123	115	No Gas	2144675.67	0.5
Ba	135	115	No Gas	559843.19	1.4
Ba	137	115	No Gas	977698.14	1.7
Tl	203	209	No Gas	2373751.83	0.5
Tl	205	209	No Gas	5616621.63	0.7
Pb	206	209	No Gas	1891526.48	0.3
Pb	207	209	No Gas	1597915.79	0.7
Pb	208	209	No Gas	7421144.50	0.4
Th	232	209	No Gas	7554144.78	0.9
U	238	209	No Gas	7539748.93	1.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5697799.29	0.9	6025446.82	94.56	70	125	
Sc	45	No Gas	24438480.20	1.0	24486020.24	99.81	75	125	
Sc	45	He	998993.85	1.9	1021290.27	97.82	75	125	
Y	89	No Gas	55131685.13	1.9	55574551.33	99.2	75	125	
Y	89	He	7544904.09	1.8	7730545.15	97.6	75	125	
In	115	No Gas	11863620.84	0.9	12046397.83	98.48	75	125	
Tb	159	No Gas	16421378.49	1.2	16402024.97	100.12	75	125	
Bi	209	No Gas	9897735.72	1.2	10051567.93	98.47	75	125	

Calibration Standard Report

Sample Name std 8

File Name 014CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 13:12:09

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	7206100.49	1.4
Be	9	6	No Gas	1751218.52	0.7
B	11	6	No Gas	2953382.34	1.3
Na	23	45	No Gas	768929333.85	1.3
Na	23	45	He	21970220.50	0.4
Mg	24	45	No Gas	521715752.23	1.4
Mg	24	45	He	11163021.08	0.8
Mg	25	45	No Gas	69811990.63	0.3
Al	27	45	No Gas	3709092.34	0.2
Al	27	45	He	43969.89	2.3
Si	28	45	No Gas	268734374.92	0.6
Si	29	45	No Gas	16881318.85	1.6
K	39	45	No Gas	702314496.20	1.8
K	39	45	He	8839543.41	0.9
Ca	44	45	No Gas	21385700.51	2.1
Ca	44	45	He	482627.48	1.0
Ti	47	45	No Gas	670575.42	0.8
V	51	45	No Gas	9244588.71	1.2
V	51	45	He	1142736.69	1.4
Cr	52	89	No Gas	8431436.87	2.4
Cr	52	89	He	1447972.30	0.9
Cr	53	89	No Gas	1078590.96	1.7
Mn	55	89	No Gas	11341540.73	1.4
Mn	55	89	He	771020.47	0.6
Fe	56	89	No Gas	809277034.76	1.1
Fe	56	89	He	101585971.82	0.1
Co	59	89	No Gas	9175294.06	1.8
Co	59	89	He	2394285.96	1.2
Ni	60	89	No Gas	2043722.21	1.1
Ni	60	89	He	659725.60	0.7
Ni	62	89	No Gas	304849.19	0.7
Cu	63	89	No Gas	4923587.97	1.2
Cu	63	89	He	1803241.37	0.4
Cu	65	89	No Gas	2332480.19	1.0
Zn	66	89	No Gas	1397671.63	1.6

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	272626.63	0.6
Zn	67	89	No Gas	215102.90	0.7
Zn	68	89	No Gas	992197.38	1.3
As	75	89	No Gas	1451893.70	1.1
As	75	89	He	200627.87	0.7
Se	77	89	No Gas	86089.07	1.3
Se	78	89	No Gas	228852.79	0.6
Se	78	89	He	12266.75	3.4
Se	82	89	No Gas	85781.83	0.6
[Se]	83	89	No Gas	2369.29	4.7
Sr	88	89	No Gas	13116866.48	1.2
Mo	95	89	No Gas	2570404.05	2.2
Mo	97	89	No Gas	1581162.73	2.5
Mo	98	89	No Gas	4067210.75	2.3
[Mo]	99	89	No Gas	80.08	12.5
Cd	106	89	No Gas	184921.23	2.3
Ag	107	89	No Gas	6748808.76	1.3
Ag	107	89	He	3255364.85	1.6
Cd	108	89	No Gas	96640.88	0.3
Ag	109	89	No Gas	6544529.96	2.1
Cd	111	89	No Gas	1310275.32	1.7
Cd	114	89	No Gas	3451939.55	2.0
Sn	118	115	No Gas	4297786.50	1.4
Sb	121	115	No Gas	6128971.42	1.1
Sb	121	89	He	1323433.83	0.7
Sb	123	115	No Gas	4696825.27	1.0
Ba	135	115	No Gas	1226825.55	0.8
Ba	137	115	No Gas	2177787.59	0.5
Tl	203	209	No Gas	5253436.36	1.2
Tl	205	209	No Gas	12243252.45	0.6
Pb	206	209	No Gas	4127343.92	1.2
Pb	207	209	No Gas	3458778.58	0.8
Pb	208	209	No Gas	16179846.03	1.1
Th	232	209	No Gas	17078364.23	2.4
U	238	209	No Gas	16716693.39	2.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5471133.74	0.7	6025446.82	90.8	70	125	
Sc	45	No Gas	24616567.45	1.1	24486020.24	100.53	75	125	
Sc	45	He	992334.19	1.3	1021290.27	97.16	75	125	
Y	89	No Gas	54821072.85	1.1	55574551.33	98.64	75	125	
Y	89	He	7430912.80	1.7	7730545.15	96.12	75	125	
In	115	No Gas	11721332.12	2.2	12046397.83	97.3	75	125	
Tb	159	No Gas	16674326.44	0.6	16402024.97	101.66	75	125	
Bi	209	No Gas	9821867.11	0.9	10051567.93	97.71	75	125	

Calibration Blank Report

Sample Name std 1

File Name 035CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:14:18

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	318305.07	2.6
Be	9	6	No Gas	50.05	34.6
B	11	6	No Gas	8033.78	2.5
Na	23	45	No Gas	371228.04	2.1
Na	23	45	He	16838.20	6.0
Mg	24	45	No Gas	10618.23	6.1
Mg	24	45	He	253.35	24.1
Mg	25	45	No Gas	1400.45	35.1
Al	27	45	No Gas	17359.04	5.4
Al	27	45	He	156.67	26.6
Si	28	45	No Gas	498588.99	1.6
Si	29	45	No Gas	96159.91	0.7
K	39	45	No Gas	4975262.95	1.0
K	39	45	He	29273.23	3.3
Ca	44	45	No Gas	177950.54	2.6
Ca	44	45	He	293.36	51.6
Ti	47	45	No Gas	503.86	5.0
V	51	45	No Gas	-3651.57	-8.8
V	51	45	He	463.82	10.2
Cr	52	89	No Gas	34330.86	1.7
Cr	52	89	He	3010.06	3.8
Cr	53	89	No Gas	64442.42	1.1
Mn	55	89	No Gas	11706.90	4.9
Mn	55	89	He	176.85	55.0
Fe	56	89	No Gas	2508596.48	0.6
Fe	56	89	He	53749.13	4.3
Co	59	89	No Gas	1401.50	3.1
Co	59	89	He	320.33	10.8
Ni	60	89	No Gas	1214.62	3.4
Ni	60	89	He	877.59	15.3
Ni	62	89	No Gas	6114.29	2.0
Cu	63	89	No Gas	16172.66	4.2
Cu	63	89	He	4505.35	0.9
Cu	65	89	No Gas	7880.26	2.4
Zn	66	89	No Gas	2362.62	7.1

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	467.15	15.2
Zn	67	89	No Gas	437.12	30.2
Zn	68	89	No Gas	1698.51	3.6
As	75	89	No Gas	4593.86	23.7
As	75	89	He	41.11	32.8
Se	77	89	No Gas	10741.86	2.2
Se	78	89	No Gas	18705.28	2.5
Se	78	89	He	30.00	33.3
Se	82	89	No Gas	-103.98	-134.0
[Se]	83	89	No Gas	2282.53	2.3
Sr	88	89	No Gas	550.57	11.9
Mo	95	89	No Gas	2976.70	11.6
Mo	97	89	No Gas	1848.68	7.3
Mo	98	89	No Gas	4686.03	9.6
[Mo]	99	89	No Gas	20.02	50.0
Cd	106	89	No Gas	58541.20	1.5
Ag	107	89	No Gas	190538.44	13.0
Ag	107	89	He	117225.75	1.3
Cd	108	89	No Gas	143.48	31.5
Ag	109	89	No Gas	181226.09	13.8
Cd	111	89	No Gas	-143.95	-33.6
Cd	114	89	No Gas	140.14	25.8
Sn	118	115	No Gas	4361.86	2.2
Sb	121	115	No Gas	6571.69	10.8
Sb	121	89	He	1790.16	8.8
Sb	123	115	No Gas	4949.30	6.4
Ba	135	115	No Gas	83.42	6.9
Ba	137	115	No Gas	183.52	27.5
Tl	203	209	No Gas	360.37	23.7
Tl	205	209	No Gas	870.92	9.4
Pb	206	209	No Gas	1675.15	14.4
Pb	207	209	No Gas	1361.47	15.4
Pb	208	209	No Gas	6350.44	6.5
Th	232	209	No Gas	3961.34	9.9
U	238	209	No Gas	720.76	19.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	6069758.49	1.9
Sc	45	No Gas	26854717.27	0.5
Sc	45	He	1086551.24	0.6
Y	89	No Gas	60596358.15	1.1
Y	89	He	8174748.93	1.0
In	115	No Gas	13007558.49	0.7
Tb	159	No Gas	17536754.71	0.8
Bi	209	No Gas	10657708.47	0.2

Calibration Standard Report

Sample Name std 2

File Name 036CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:17:02

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	322178.93	0.7
Be	9	6	No Gas	1631.75	6.5
B	11	6	No Gas	10240.80	3.3
Na	23	45	No Gas	1089252.76	1.2
Na	23	45	He	37759.66	0.8
Mg	24	45	No Gas	516819.50	0.8
Mg	24	45	He	11685.88	2.1
Mg	25	45	No Gas	68036.37	2.6
Al	27	45	No Gas	30528.97	3.7
Al	27	45	He	253.34	29.9
Si	28	45	No Gas	778116.90	0.4
Si	29	45	No Gas	109450.09	0.7
K	39	45	No Gas	5626120.75	0.4
K	39	45	He	37278.82	3.8
Ca	44	45	No Gas	197709.22	1.4
Ca	44	45	He	666.74	27.1
Ti	47	45	No Gas	1117.85	8.5
V	51	45	No Gas	6495.81	48.1
V	51	45	He	1648.45	8.0
Cr	52	89	No Gas	41484.44	0.5
Cr	52	89	He	4161.53	5.9
Cr	53	89	No Gas	67097.55	0.4
Mn	55	89	No Gas	21358.29	0.5
Mn	55	89	He	884.26	4.3
Fe	56	89	No Gas	3133026.96	1.2
Fe	56	89	He	155528.65	1.9
Co	59	89	No Gas	10147.43	1.2
Co	59	89	He	2516.13	2.0
Ni	60	89	No Gas	3360.50	3.5
Ni	60	89	He	1057.79	7.9
Ni	62	89	No Gas	6154.33	8.5
Cu	63	89	No Gas	20890.54	2.9
Cu	63	89	He	6110.92	2.5
Cu	65	89	No Gas	10137.40	1.5
Zn	66	89	No Gas	3847.80	9.9

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	710.74	6.1
Zn	67	89	No Gas	587.28	18.2
Zn	68	89	No Gas	2806.48	3.0
As	75	89	No Gas	5309.75	16.3
As	75	89	He	217.78	4.9
Se	77	89	No Gas	11426.46	3.7
Se	78	89	No Gas	18588.28	2.5
Se	78	89	He	28.89	40.5
Se	82	89	No Gas	14.10	1195.6
[Se]	83	89	No Gas	2142.35	3.3
Sr	88	89	No Gas	12692.20	1.8
Mo	95	89	No Gas	3904.57	13.1
Mo	97	89	No Gas	2322.58	4.5
Mo	98	89	No Gas	6423.33	11.6
[Mo]	99	89	No Gas	10.01	0.0
Cd	106	89	No Gas	56738.51	1.5
Ag	107	89	No Gas	88058.19	22.5
Ag	107	89	He	72192.73	6.8
Cd	108	89	No Gas	210.22	21.8
Ag	109	89	No Gas	84724.58	22.0
Cd	111	89	No Gas	1185.63	6.5
Cd	114	89	No Gas	3457.32	5.4
Sn	118	115	No Gas	7615.58	2.6
Sb	121	115	No Gas	8899.73	3.5
Sb	121	89	He	2230.23	7.3
Sb	123	115	No Gas	6658.50	4.0
Ba	135	115	No Gas	1278.03	3.6
Ba	137	115	No Gas	2225.80	7.1
Tl	203	209	No Gas	5069.52	3.0
Tl	205	209	No Gas	12235.06	3.7
Pb	206	209	No Gas	5440.06	3.4
Pb	207	209	No Gas	4525.43	3.1
Pb	208	209	No Gas	20934.79	1.9
Th	232	209	No Gas	16972.32	2.5
U	238	209	No Gas	15852.94	1.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5996672.23	0.5	6069758.49	98.8	70	125	
Sc	45	No Gas	26593161.55	0.3	26854717.27	99.03	75	125	
Sc	45	He	1080502.98	0.6	1086551.24	99.44	75	125	
Y	89	No Gas	59879517.97	0.6	60596358.15	98.82	75	125	
Y	89	He	8113337.73	0.5	8174748.93	99.25	75	125	
In	115	No Gas	12915775.36	0.2	13007558.49	99.29	75	125	
Tb	159	No Gas	17387887.09	0.6	17536754.71	99.15	75	125	
Bi	209	No Gas	10620035.14	0.8	10657708.47	99.65	75	125	

Calibration Standard Report

Sample Name std 3

File Name 037CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:18:55

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	379348.97	0.2
Be	9	6	No Gas	16172.32	2.0
B	11	6	No Gas	34657.55	1.3
Na	23	45	No Gas	7673206.42	0.8
Na	23	45	He	230131.57	1.1
Mg	24	45	No Gas	5124903.99	1.0
Mg	24	45	He	111381.53	3.2
Mg	25	45	No Gas	674677.23	1.5
Al	27	45	No Gas	87706.54	0.4
Al	27	45	He	546.69	1.1
Si	28	45	No Gas	3165606.13	0.1
Si	29	45	No Gas	259025.55	0.3
K	39	45	No Gas	11750109.41	0.2
K	39	45	He	117127.67	1.6
Ca	44	45	No Gas	389119.85	0.2
Ca	44	45	He	5014.60	4.8
Ti	47	45	No Gas	6895.41	1.3
V	51	45	No Gas	84286.56	1.6
V	51	45	He	11556.60	4.2
Cr	52	89	No Gas	113523.17	1.0
Cr	52	89	He	16693.75	1.2
Cr	53	89	No Gas	76351.55	0.6
Mn	55	89	No Gas	118457.38	0.7
Mn	55	89	He	7903.62	0.7
Fe	56	89	No Gas	10055549.18	0.5
Fe	56	89	He	997431.29	1.6
Co	59	89	No Gas	91341.91	1.0
Co	59	89	He	23818.20	3.4
Ni	60	89	No Gas	21167.82	0.4
Ni	60	89	He	6748.52	4.0
Ni	62	89	No Gas	8477.95	4.6
Cu	63	89	No Gas	64516.83	1.3
Cu	63	89	He	22207.23	0.9
Cu	65	89	No Gas	29826.08	0.8
Zn	66	89	No Gas	15795.22	2.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2993.38	0.6
Zn	67	89	No Gas	2542.83	9.1
Zn	68	89	No Gas	12060.94	4.4
As	75	89	No Gas	17458.93	4.1
As	75	89	He	2035.72	2.7
Se	77	89	No Gas	12221.32	2.1
Se	78	89	No Gas	20449.54	2.6
Se	78	89	He	164.45	4.2
Se	82	89	No Gas	1035.49	14.7
[Se]	83	89	No Gas	2125.67	4.9
Sr	88	89	No Gas	126825.55	1.8
Mo	95	89	No Gas	24754.82	1.2
Mo	97	89	No Gas	15514.74	2.7
Mo	98	89	No Gas	40632.98	2.2
[Mo]	99	89	No Gas	23.36	89.2
Cd	106	89	No Gas	57636.28	1.4
Ag	107	89	No Gas	140538.31	12.7
Ag	107	89	He	94345.01	3.1
Cd	108	89	No Gas	1007.73	11.8
Ag	109	89	No Gas	135329.89	12.3
Cd	111	89	No Gas	12725.98	0.3
Cd	114	89	No Gas	32730.20	2.9
Sn	118	115	No Gas	43215.21	0.5
Sb	121	115	No Gas	60544.45	0.8
Sb	121	89	He	13477.09	2.8
Sb	123	115	No Gas	46532.80	1.8
Ba	135	115	No Gas	11907.57	1.7
Ba	137	115	No Gas	20794.34	2.3
Tl	203	209	No Gas	49611.33	2.0
Tl	205	209	No Gas	119656.02	0.6
Pb	206	209	No Gas	40549.95	1.7
Pb	207	209	No Gas	33950.53	1.5
Pb	208	209	No Gas	157515.57	0.2
Th	232	209	No Gas	144650.74	1.6
U	238	209	No Gas	149239.20	1.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5978011.96	0.7	6069758.49	98.49	70	125	
Sc	45	No Gas	26520285.34	0.3	26854717.27	98.75	75	125	
Sc	45	He	1069546.21	0.4	1086551.24	98.43	75	125	
Y	89	No Gas	59504701.49	0.9	60596358.15	98.2	75	125	
Y	89	He	8030342.23	0.4	8174748.93	98.23	75	125	
In	115	No Gas	12843927.77	0.2	13007558.49	98.74	75	125	
Tb	159	No Gas	17314666.37	0.5	17536754.71	98.73	75	125	
Bi	209	No Gas	10549021.80	0.4	10657708.47	98.98	75	125	

Calibration Standard Report

Sample Name	std 4
File Name	038CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 15:20:48
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	467762.27	1.0
Be	9	6	No Gas	40492.10	2.0
B	11	6	No Gas	75929.70	0.7
Na	23	45	No Gas	18447911.87	0.3
Na	23	45	He	544348.07	1.4
Mg	24	45	No Gas	12738656.06	0.9
Mg	24	45	He	272820.67	1.3
Mg	25	45	No Gas	1707317.32	2.0
Al	27	45	No Gas	183364.11	2.2
Al	27	45	He	1050.05	8.7
Si	28	45	No Gas	7101812.87	0.5
Si	29	45	No Gas	508257.00	0.2
K	39	45	No Gas	21862394.67	0.8
K	39	45	He	246724.70	1.4
Ca	44	45	No Gas	713586.26	1.0
Ca	44	45	He	11338.89	8.7
Ti	47	45	No Gas	16810.70	2.0
V	51	45	No Gas	219229.05	3.7
V	51	45	He	28190.86	2.7
Cr	52	89	No Gas	234350.61	0.5
Cr	52	89	He	37823.54	0.7
Cr	53	89	No Gas	91586.70	2.9
Mn	55	89	No Gas	283987.35	0.7
Mn	55	89	He	18959.03	3.4
Fe	56	89	No Gas	21981312.99	0.6
Fe	56	89	He	2447670.33	0.5
Co	59	89	No Gas	225330.78	0.8
Co	59	89	He	59539.02	1.8
Ni	60	89	No Gas	51324.65	1.3
Ni	60	89	He	16246.08	4.8
Ni	62	89	No Gas	12768.95	2.8
Cu	63	89	No Gas	135324.92	1.9
Cu	63	89	He	48153.44	1.5
Cu	65	89	No Gas	63806.35	1.6
Zn	66	89	No Gas	36532.64	2.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	6781.93	2.5
Zn	67	89	No Gas	5790.46	6.3
Zn	68	89	No Gas	25997.86	1.3
As	75	89	No Gas	38682.27	1.1
As	75	89	He	4804.22	1.6
Se	77	89	No Gas	13350.19	1.4
Se	78	89	No Gas	24025.76	1.1
Se	78	89	He	335.56	5.0
Se	82	89	No Gas	2106.28	10.8
[Se]	83	89	No Gas	2192.40	5.2
Sr	88	89	No Gas	316662.70	0.2
Mo	95	89	No Gas	60151.95	1.2
Mo	97	89	No Gas	36717.52	0.7
Mo	98	89	No Gas	96341.23	0.8
[Mo]	99	89	No Gas	36.70	41.7
Cd	106	89	No Gas	57944.83	1.9
Ag	107	89	No Gas	236573.52	7.5
Ag	107	89	He	140913.73	2.3
Cd	108	89	No Gas	2452.72	6.0
Ag	109	89	No Gas	226763.96	6.6
Cd	111	89	No Gas	31076.74	1.0
Cd	114	89	No Gas	83174.22	0.4
Sn	118	115	No Gas	103552.06	0.3
Sb	121	115	No Gas	146806.73	0.8
Sb	121	89	He	32914.92	2.2
Sb	123	115	No Gas	113336.44	1.2
Ba	135	115	No Gas	28767.60	1.0
Ba	137	115	No Gas	51151.80	0.8
Tl	203	209	No Gas	122976.86	0.8
Tl	205	209	No Gas	294936.98	0.4
Pb	206	209	No Gas	98330.82	1.7
Pb	207	209	No Gas	82648.81	1.5
Pb	208	209	No Gas	388187.08	0.2
Th	232	209	No Gas	372904.32	0.9
U	238	209	No Gas	376280.40	0.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5806194.96	1.9	6069758.49	95.66	70	125	
Sc	45	No Gas	25258184.90	4.6	26854717.27	94.05	75	125	
Sc	45	He	1050317.25	0.4	1086551.24	96.67	75	125	
Y	89	No Gas	57987722.84	3.2	60596358.15	95.7	75	125	
Y	89	He	7893912.06	0.3	8174748.93	96.56	75	125	
In	115	No Gas	12470524.58	2.7	13007558.49	95.87	75	125	
Tb	159	No Gas	16775763.30	2.3	17536754.71	95.66	75	125	
Bi	209	No Gas	10318092.09	2.6	10657708.47	96.81	75	125	

Calibration Standard Report

Sample Name std 5

File Name 039CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:22:42

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	623377.99	0.4
Be	9	6	No Gas	80814.78	0.8
B	11	6	No Gas	143187.40	1.0
Na	23	45	No Gas	36762535.20	1.0
Na	23	45	He	1043605.12	1.0
Mg	24	45	No Gas	25366525.46	1.2
Mg	24	45	He	535947.72	1.2
Mg	25	45	No Gas	3399192.24	0.7
Al	27	45	No Gas	340075.21	3.2
Al	27	45	He	2093.54	11.0
Si	28	45	No Gas	13557251.03	0.6
Si	29	45	No Gas	908024.33	0.2
K	39	45	No Gas	38617929.42	0.1
K	39	45	He	464588.66	1.6
Ca	44	45	No Gas	1216500.61	0.6
Ca	44	45	He	22553.73	1.0
Ti	47	45	No Gas	32012.97	2.3
V	51	45	No Gas	431845.58	0.1
V	51	45	He	54770.61	2.0
Cr	52	89	No Gas	433434.93	0.5
Cr	52	89	He	72621.19	1.2
Cr	53	89	No Gas	118867.30	0.5
Mn	55	89	No Gas	546544.11	0.2
Mn	55	89	He	37753.55	1.5
Fe	56	89	No Gas	40347714.44	0.4
Fe	56	89	He	4808764.51	0.3
Co	59	89	No Gas	444765.63	0.5
Co	59	89	He	118461.99	0.8
Ni	60	89	No Gas	101957.37	0.9
Ni	60	89	He	32187.02	0.6
Ni	62	89	No Gas	20272.28	1.9
Cu	63	89	No Gas	250463.85	1.1
Cu	63	89	He	92128.73	1.7
Cu	65	89	No Gas	120028.95	1.9
Zn	66	89	No Gas	69245.04	2.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	13233.17	2.6
Zn	67	89	No Gas	11045.70	5.6
Zn	68	89	No Gas	50072.63	1.2
As	75	89	No Gas	71990.74	0.8
As	75	89	He	9444.44	2.6
Se	77	89	No Gas	15220.69	2.3
Se	78	89	No Gas	28572.34	1.7
Se	78	89	He	595.57	10.3
Se	82	89	No Gas	4156.97	3.1
[Se]	83	89	No Gas	2062.26	6.8
Sr	88	89	No Gas	620674.28	0.3
Mo	95	89	No Gas	118992.54	0.9
Mo	97	89	No Gas	74673.06	0.8
Mo	98	89	No Gas	188715.95	0.8
[Mo]	99	89	No Gas	33.37	75.5
Cd	106	89	No Gas	62231.71	0.7
Ag	107	89	No Gas	393649.72	4.4
Ag	107	89	He	217423.49	2.1
Cd	108	89	No Gas	4678.90	3.3
Ag	109	89	No Gas	376239.25	4.2
Cd	111	89	No Gas	62139.25	0.5
Cd	114	89	No Gas	164144.61	0.2
Sn	118	115	No Gas	201560.72	0.8
Sb	121	115	No Gas	289685.37	0.7
Sb	121	89	He	63550.42	1.8
Sb	123	115	No Gas	223382.32	1.7
Ba	135	115	No Gas	58834.98	0.2
Ba	137	115	No Gas	102745.85	0.9
Tl	203	209	No Gas	244078.56	0.7
Tl	205	209	No Gas	579371.96	0.6
Pb	206	209	No Gas	196044.12	0.1
Pb	207	209	No Gas	162628.11	0.5
Pb	208	209	No Gas	767888.48	0.4
Th	232	209	No Gas	746035.44	0.6
U	238	209	No Gas	747654.82	0.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5854574.85	0.3	6069758.49	96.45	70	125	
Sc	45	No Gas	25990890.11	0.3	26854717.27	96.78	75	125	
Sc	45	He	1047876.87	1.5	1086551.24	96.44	75	125	
Y	89	No Gas	58526411.53	0.3	60596358.15	96.58	75	125	
Y	89	He	7896270.25	1.0	8174748.93	96.59	75	125	
In	115	No Gas	12778154.18	0.6	13007558.49	98.24	75	125	
Tb	159	No Gas	17050604.80	0.4	17536754.71	97.23	75	125	
Bi	209	No Gas	10437075.98	0.5	10657708.47	97.93	75	125	

Calibration Standard Report

Sample Name std 6

File Name 040CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:24:34

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1897451.89	0.6
Be	9	6	No Gas	406400.17	0.4
B	11	6	No Gas	690360.21	0.5
Na	23	45	No Gas	182302666.58	0.7
Na	23	45	He	5324737.63	0.9
Mg	24	45	No Gas	127179661.44	0.2
Mg	24	45	He	2748863.08	0.8
Mg	25	45	No Gas	16889912.25	0.6
Al	27	45	No Gas	1643186.90	0.8
Al	27	45	He	10854.41	3.7
Si	28	45	No Gas	66609466.27	0.8
Si	29	45	No Gas	4186570.85	0.6
K	39	45	No Gas	175301244.05	0.6
K	39	45	He	2176765.70	0.6
Ca	44	45	No Gas	5340569.92	0.6
Ca	44	45	He	115863.91	0.4
Ti	47	45	No Gas	164041.74	0.2
V	51	45	No Gas	2148376.90	1.1
V	51	45	He	283655.41	0.4
Cr	52	89	No Gas	2039405.14	1.0
Cr	52	89	He	362559.71	1.0
Cr	53	89	No Gas	303095.03	0.5
Mn	55	89	No Gas	2722968.08	0.8
Mn	55	89	He	190984.62	0.9
Fe	56	89	No Gas	196509671.06	0.4
Fe	56	89	He	24619737.13	0.5
Co	59	89	No Gas	2217481.65	0.6
Co	59	89	He	595796.54	0.6
Ni	60	89	No Gas	498427.70	0.1
Ni	60	89	He	164458.70	0.9
Ni	62	89	No Gas	79191.76	0.9
Cu	63	89	No Gas	1207861.85	0.5
Cu	63	89	He	454782.97	0.2
Cu	65	89	No Gas	575262.96	0.7
Zn	66	89	No Gas	341158.22	0.7

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	67994.31	1.5
Zn	67	89	No Gas	53840.65	1.9
Zn	68	89	No Gas	246481.15	0.3
As	75	89	No Gas	351922.08	0.8
As	75	89	He	48810.00	1.5
Se	77	89	No Gas	27586.02	0.7
Se	78	89	No Gas	70071.92	0.9
Se	78	89	He	3059.25	2.8
Se	82	89	No Gas	20386.18	0.8
[Se]	83	89	No Gas	2209.10	3.7
Sr	88	89	No Gas	3168299.87	0.3
Mo	95	89	No Gas	597099.74	0.9
Mo	97	89	No Gas	374063.47	1.0
Mo	98	89	No Gas	963714.76	0.1
[Mo]	99	89	No Gas	53.39	28.6
Cd	106	89	No Gas	86655.18	0.6
Ag	107	89	No Gas	1672334.03	1.7
Ag	107	89	He	843486.69	0.6
Cd	108	89	No Gas	22842.89	2.0
Ag	109	89	No Gas	1619103.43	2.3
Cd	111	89	No Gas	316353.73	0.5
Cd	114	89	No Gas	818796.04	0.2
Sn	118	115	No Gas	1016442.98	0.6
Sb	121	115	No Gas	1462115.77	0.7
Sb	121	89	He	318547.79	0.6
Sb	123	115	No Gas	1115409.84	0.8
Ba	135	115	No Gas	294630.62	0.6
Ba	137	115	No Gas	519206.09	1.2
Tl	203	209	No Gas	1241168.10	0.5
Tl	205	209	No Gas	2955066.22	1.4
Pb	206	209	No Gas	988510.78	0.5
Pb	207	209	No Gas	814779.73	0.5
Pb	208	209	No Gas	3831070.22	0.7
Th	232	209	No Gas	3818084.14	0.5
U	238	209	No Gas	3792177.71	0.8

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5787616.55	0.7	6069758.49	95.35	70	125	
Sc	45	No Gas	26238784.67	0.2	26854717.27	97.71	75	125	
Sc	45	He	1071361.80	0.0	1086551.24	98.6	75	125	
Y	89	No Gas	58444726.51	0.8	60596358.15	96.45	75	125	
Y	89	He	8030770.37	0.4	8174748.93	98.24	75	125	
In	115	No Gas	12603546.63	0.2	13007558.49	96.89	75	125	
Tb	159	No Gas	17120502.20	0.4	17536754.71	97.63	75	125	
Bi	209	No Gas	10329479.31	0.8	10657708.47	96.92	75	125	

Calibration Standard Report

Sample Name std 7

File Name 041CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:26:31

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	3142794.99	1.1
Be	9	6	No Gas	734665.16	1.0
B	11	6	No Gas	1268047.01	0.1
Na	23	45	No Gas	335827424.17	1.0
Na	23	45	He	9564731.94	0.1
Mg	24	45	No Gas	228951129.92	0.9
Mg	24	45	He	4892135.55	0.4
Mg	25	45	No Gas	30866410.37	1.7
Al	27	45	No Gas	2973371.00	0.9
Al	27	45	He	18953.20	1.6
Si	28	45	No Gas	120142609.52	0.5
Si	29	45	No Gas	7538542.72	1.5
K	39	45	No Gas	318050828.59	0.4
K	39	45	He	3895562.34	0.7
Ca	44	45	No Gas	9675595.27	0.8
Ca	44	45	He	209439.96	0.5
Ti	47	45	No Gas	299647.14	1.2
V	51	45	No Gas	3893794.65	0.5
V	51	45	He	506145.00	0.4
Cr	52	89	No Gas	3666253.76	1.4
Cr	52	89	He	644058.14	0.7
Cr	53	89	No Gas	499580.64	1.2
Mn	55	89	No Gas	4987489.58	0.6
Mn	55	89	He	341300.32	1.7
Fe	56	89	No Gas	360951733.07	0.7
Fe	56	89	He	44179477.68	1.2
Co	59	89	No Gas	3998607.37	0.6
Co	59	89	He	1051862.41	1.0
Ni	60	89	No Gas	894599.81	0.9
Ni	60	89	He	293269.24	2.0
Ni	62	89	No Gas	138782.33	0.5
Cu	63	89	No Gas	2222186.57	1.3
Cu	63	89	He	812581.44	1.1
Cu	65	89	No Gas	1056986.21	1.2
Zn	66	89	No Gas	614804.44	0.8

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	121779.33	0.3
Zn	67	89	No Gas	96332.41	1.4
Zn	68	89	No Gas	444822.09	0.2
As	75	89	No Gas	640810.44	0.3
As	75	89	He	87185.63	0.5
Se	77	89	No Gas	41887.11	0.6
Se	78	89	No Gas	112003.52	1.3
Se	78	89	He	5279.95	2.4
Se	82	89	No Gas	38027.94	1.4
[Se]	83	89	No Gas	2285.86	8.9
Sr	88	89	No Gas	5751848.32	1.3
Mo	95	89	No Gas	1116409.33	1.2
Mo	97	89	No Gas	689443.35	1.5
Mo	98	89	No Gas	1778762.74	1.5
[Mo]	99	89	No Gas	56.72	73.5
Cd	106	89	No Gas	111096.38	0.9
Ag	107	89	No Gas	2975314.81	2.1
Ag	107	89	He	1441323.10	0.5
Cd	108	89	No Gas	42296.78	1.5
Ag	109	89	No Gas	2901539.67	0.8
Cd	111	89	No Gas	573490.81	0.8
Cd	114	89	No Gas	1482828.82	0.9
Sn	118	115	No Gas	1858340.83	1.0
Sb	121	115	No Gas	2676202.81	0.8
Sb	121	89	He	573243.26	0.1
Sb	123	115	No Gas	2022404.81	0.3
Ba	135	115	No Gas	530739.77	0.2
Ba	137	115	No Gas	935531.99	1.8
Tl	203	209	No Gas	2254176.11	0.2
Tl	205	209	No Gas	5328452.42	0.5
Pb	206	209	No Gas	1758998.79	0.4
Pb	207	209	No Gas	1447666.32	1.3
Pb	208	209	No Gas	6811930.80	1.5
Th	232	209	No Gas	7029852.78	0.7
U	238	209	No Gas	6903763.36	1.8

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5666105.93	1.4	6069758.49	93.35	70	125	
Sc	45	No Gas	26919889.95	0.7	26854717.27	100.24	75	125	
Sc	45	He	1075693.74	0.3	1086551.24	99	75	125	
Y	89	No Gas	59642404.19	2.2	60596358.15	98.43	75	125	
Y	89	He	7965444.63	0.6	8174748.93	97.44	75	125	
In	115	No Gas	12617088.86	1.7	13007558.49	97	75	125	
Tb	159	No Gas	17412355.72	1.1	17536754.71	99.29	75	125	
Bi	209	No Gas	10266961.54	2.0	10657708.47	96.33	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	042CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 15:28:24
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	6442960.68	2.9
Be	9	6	No Gas	1613693.18	1.7
B	11	6	No Gas	2791530.18	1.2
Na	23	45	No Gas	730127332.99	1.8
Na	23	45	He	21549315.51	1.5
Mg	24	45	No Gas	503415405.83	2.5
Mg	24	45	He	10974699.00	1.8
Mg	25	45	No Gas	67339183.99	1.3
Al	27	45	No Gas	6488196.15	0.9
Al	27	45	He	42197.56	1.5
Si	28	45	No Gas	259268015.21	1.9
Si	29	45	No Gas	16013232.01	1.4
K	39	45	No Gas	691677136.36	1.8
K	39	45	He	8789193.62	0.7
Ca	44	45	No Gas	20951035.52	2.0
Ca	44	45	He	466826.87	0.9
Ti	47	45	No Gas	652012.46	1.5
V	51	45	No Gas	8715589.82	0.7
V	51	45	He	1089406.39	1.3
Cr	52	89	No Gas	8136212.89	2.6
Cr	52	89	He	1422485.56	1.9
Cr	53	89	No Gas	1032681.54	2.9
Mn	55	89	No Gas	10878569.01	1.4
Mn	55	89	He	751060.98	1.2
Fe	56	89	No Gas	780954084.12	0.8
Fe	56	89	He	99212528.52	1.2
Co	59	89	No Gas	8843157.14	3.1
Co	59	89	He	2359535.11	1.4
Ni	60	89	No Gas	1971214.29	2.9
Ni	60	89	He	651007.25	0.6
Ni	62	89	No Gas	292606.42	1.0
Cu	63	89	No Gas	4723337.72	1.1
Cu	63	89	He	1775453.27	1.7
Cu	65	89	No Gas	2264731.56	1.5
Zn	66	89	No Gas	1351651.60	1.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	267084.77	1.2
Zn	67	89	No Gas	211409.16	2.2
Zn	68	89	No Gas	964935.20	2.5
As	75	89	No Gas	1405812.95	1.7
As	75	89	He	195201.35	1.3
Se	77	89	No Gas	80553.49	1.8
Se	78	89	No Gas	222545.61	2.4
Se	78	89	He	11606.16	1.1
Se	82	89	No Gas	83152.51	0.6
[Se]	83	89	No Gas	2162.38	8.0
Sr	88	89	No Gas	12821093.62	3.3
Mo	95	89	No Gas	2473893.95	1.2
Mo	97	89	No Gas	1530404.52	1.6
Mo	98	89	No Gas	3928359.12	1.3
[Mo]	99	89	No Gas	43.38	35.3
Cd	106	89	No Gas	177305.24	1.4
Ag	107	89	No Gas	6454058.35	2.9
Ag	107	89	He	3125560.25	1.1
Cd	108	89	No Gas	90538.54	2.3
Ag	109	89	No Gas	6209215.48	1.8
Cd	111	89	No Gas	1260236.43	1.3
Cd	114	89	No Gas	3298136.89	1.4
Sn	118	115	No Gas	4085547.20	2.0
Sb	121	115	No Gas	5907112.27	1.3
Sb	121	89	He	1254662.38	1.7
Sb	123	115	No Gas	4492142.99	1.3
Ba	135	115	No Gas	1176954.40	2.7
Ba	137	115	No Gas	2077449.12	3.0
Tl	203	209	No Gas	4910811.45	1.8
Tl	205	209	No Gas	11616260.87	1.9
Pb	206	209	No Gas	3866899.82	0.3
Pb	207	209	No Gas	3195808.63	1.4
Pb	208	209	No Gas	14976698.50	2.0
Th	232	209	No Gas	15367707.32	0.9
U	238	209	No Gas	15097579.69	2.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5538602.23	1.4	6069758.49	91.25	70	125	
Sc	45	No Gas	26776660.05	1.2	26854717.27	99.71	75	125	
Sc	45	He	1098709.99	0.9	1086551.24	101.12	75	125	
Y	89	No Gas	59976523.31	3.0	60596358.15	98.98	75	125	
Y	89	He	8053385.28	1.6	8174748.93	98.52	75	125	
In	115	No Gas	12632305.64	2.9	13007558.49	97.12	75	125	
Tb	159	No Gas	17358982.35	1.4	17536754.71	98.99	75	125	
Bi	209	No Gas	10090276.82	2.2	10657708.47	94.68	75	125	

Calibration Blank Report

Sample Name std 1

File Name 148CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:41:09

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	288364.22	1.5
Be	9	6	No Gas	93.43	37.6
B	11	6	No Gas	10080.50	3.9
Na	23	45	No Gas	448343.58	0.3
Na	23	45	He	19361.32	0.9
Mg	24	45	No Gas	8856.86	5.2
Mg	24	45	He	226.68	36.7
Mg	25	45	No Gas	1253.49	14.4
Al	27	45	No Gas	12286.31	6.6
Al	27	45	He	96.67	57.0
Si	28	45	No Gas	401105.83	1.0
Si	29	45	No Gas	89049.00	1.6
K	39	45	No Gas	5040228.16	1.1
K	39	45	He	28979.28	2.5
Ca	44	45	No Gas	136089.57	0.8
Ca	44	45	He	213.35	71.0
Ti	47	45	No Gas	286.96	16.1
V	51	45	No Gas	-5019.60	-36.1
V	51	45	He	527.22	14.3
Cr	52	89	No Gas	30227.21	1.9
Cr	52	89	He	2803.15	2.0
Cr	53	89	No Gas	57668.95	0.5
Mn	55	89	No Gas	10354.49	4.0
Mn	55	89	He	210.22	21.8
Fe	56	89	No Gas	2120150.37	0.7
Fe	56	89	He	30342.33	9.1
Co	59	89	No Gas	1494.94	7.8
Co	59	89	He	270.28	9.8
Ni	60	89	No Gas	1187.93	4.9
Ni	60	89	He	854.23	22.1
Ni	62	89	No Gas	5543.45	10.6
Cu	63	89	No Gas	10147.43	0.7
Cu	63	89	He	3033.44	4.8
Cu	65	89	No Gas	4912.57	6.0
Zn	66	89	No Gas	1855.35	11.9

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	377.06	8.1
Zn	67	89	No Gas	400.42	15.6
Zn	68	89	No Gas	1491.60	6.0
As	75	89	No Gas	3818.85	19.6
As	75	89	He	24.44	34.3
Se	77	89	No Gas	9252.57	2.9
Se	78	89	No Gas	18200.77	3.3
Se	78	89	He	25.55	27.1
Se	82	89	No Gas	96.53	101.8
[Se]	83	89	No Gas	1882.05	7.0
Sr	88	89	No Gas	507.19	13.1
Mo	95	89	No Gas	690.72	3.8
Mo	97	89	No Gas	477.16	8.5
Mo	98	89	No Gas	1332.32	7.4
[Mo]	99	89	No Gas	16.68	69.3
Cd	106	89	No Gas	55270.81	2.3
Ag	107	89	No Gas	1454.53	4.3
Ag	107	89	He	754.12	2.0
Cd	108	89	No Gas	80.08	43.3
Ag	109	89	No Gas	997.72	17.8
Cd	111	89	No Gas	-75.93	-41.6
Cd	114	89	No Gas	76.74	39.8
Sn	118	115	No Gas	3363.79	0.5
Sb	121	115	No Gas	3281.54	8.3
Sb	121	89	He	863.37	10.9
Sb	123	115	No Gas	2683.01	9.1
Ba	135	115	No Gas	73.41	28.4
Ba	137	115	No Gas	166.83	3.5
Tl	203	209	No Gas	390.40	9.2
Tl	205	209	No Gas	951.01	3.6
Pb	206	209	No Gas	1381.49	20.4
Pb	207	209	No Gas	1147.90	5.7
Pb	208	209	No Gas	5355.93	10.1
Th	232	209	No Gas	7122.64	8.9
U	238	209	No Gas	764.14	6.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	5406885.91	1.1
Sc	45	No Gas	24326295.51	0.3
Sc	45	He	970797.15	0.5
Y	89	No Gas	56662702.82	0.4
Y	89	He	7465540.55	0.2
In	115	No Gas	12379434.81	0.8
Tb	159	No Gas	17053216.17	0.4
Bi	209	No Gas	10541485.14	0.6

Calibration Standard Report

Sample Name std 2

File Name 149CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:43:53

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	292281.66	1.2
Be	9	6	No Gas	1454.89	4.6
B	11	6	No Gas	11396.17	3.9
Na	23	45	No Gas	1109806.60	0.7
Na	23	45	He	39659.00	1.0
Mg	24	45	No Gas	468056.01	2.3
Mg	24	45	He	9444.02	9.4
Mg	25	45	No Gas	62690.88	1.8
Al	27	45	No Gas	26681.05	8.5
Al	27	45	He	173.33	12.0
Si	28	45	No Gas	654272.83	0.8
Si	29	45	No Gas	100406.86	1.0
K	39	45	No Gas	5611793.46	0.9
K	39	45	He	36717.90	1.4
Ca	44	45	No Gas	154565.54	2.5
Ca	44	45	He	640.07	12.5
Ti	47	45	No Gas	800.84	18.9
V	51	45	No Gas	2562.00	172.7
V	51	45	He	1378.14	6.9
Cr	52	89	No Gas	36786.56	1.2
Cr	52	89	He	3704.27	3.0
Cr	53	89	No Gas	60105.04	2.3
Mn	55	89	No Gas	19243.03	3.3
Mn	55	89	He	794.17	1.5
Fe	56	89	No Gas	2765640.95	1.6
Fe	56	89	He	135730.17	0.9
Co	59	89	No Gas	9212.48	3.1
Co	59	89	He	2466.06	6.6
Ni	60	89	No Gas	2833.17	7.0
Ni	60	89	He	897.61	16.8
Ni	62	89	No Gas	6014.11	3.1
Cu	63	89	No Gas	14629.39	0.7
Cu	63	89	He	4835.77	5.4
Cu	65	89	No Gas	7048.99	2.4
Zn	66	89	No Gas	3457.29	4.1

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	717.42	9.3
Zn	67	89	No Gas	707.41	9.4
Zn	68	89	No Gas	2482.76	1.5
As	75	89	No Gas	6638.45	15.3
As	75	89	He	202.23	12.1
Se	77	89	No Gas	9249.25	4.0
Se	78	89	No Gas	18180.68	1.0
Se	78	89	He	33.34	34.6
Se	82	89	No Gas	96.69	171.6
[Se]	83	89	No Gas	1865.36	8.1
Sr	88	89	No Gas	12191.32	0.3
Mo	95	89	No Gas	2829.85	8.0
Mo	97	89	No Gas	1721.87	6.1
Mo	98	89	No Gas	4626.89	2.7
[Mo]	99	89	No Gas	13.35	43.3
Cd	106	89	No Gas	54751.33	0.9
Ag	107	89	No Gas	7991.33	0.9
Ag	107	89	He	3957.95	5.6
Cd	108	89	No Gas	213.55	21.1
Ag	109	89	No Gas	7152.56	4.3
Cd	111	89	No Gas	1075.38	4.2
Cd	114	89	No Gas	3096.85	4.0
Sn	118	115	No Gas	6777.34	1.7
Sb	121	115	No Gas	7562.21	4.3
Sb	121	89	He	1793.49	8.4
Sb	123	115	No Gas	5957.42	4.5
Ba	135	115	No Gas	1201.28	6.0
Ba	137	115	No Gas	2219.12	12.9
Tl	203	209	No Gas	5306.55	9.0
Tl	205	209	No Gas	12074.77	2.7
Pb	206	209	No Gas	5042.81	1.5
Pb	207	209	No Gas	4295.12	3.9
Pb	208	209	No Gas	19796.26	0.8
Th	232	209	No Gas	18145.22	1.3
U	238	209	No Gas	15696.07	1.1

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5387915.44	1.0	5406885.91	99.65	70	125	
Sc	45	No Gas	24093214.10	0.4	24326295.51	99.04	75	125	
Sc	45	He	962494.20	0.3	970797.15	99.14	75	125	
Y	89	No Gas	56250288.74	0.7	56662702.82	99.27	75	125	
Y	89	He	7421834.35	0.1	7465540.55	99.41	75	125	
In	115	No Gas	12347000.31	0.6	12379434.81	99.74	75	125	
Tb	159	No Gas	17027938.39	1.2	17053216.17	99.85	75	125	
Bi	209	No Gas	10634691.80	0.2	10541485.14	100.88	75	125	

Calibration Standard Report

Sample Name std 3

File Name 150CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:45:47

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	341827.64	0.7
Be	9	6	No Gas	14552.36	3.5
B	11	6	No Gas	32958.43	2.7
Na	23	45	No Gas	7206272.03	1.3
Na	23	45	He	214740.25	2.0
Mg	24	45	No Gas	4654268.58	0.4
Mg	24	45	He	100001.75	0.7
Mg	25	45	No Gas	621470.11	0.2
Al	27	45	No Gas	78279.72	1.1
Al	27	45	He	516.69	4.0
Si	28	45	No Gas	2819160.52	0.3
Si	29	45	No Gas	235661.09	0.5
K	39	45	No Gas	11271225.66	0.3
K	39	45	He	106911.44	0.8
Ca	44	45	No Gas	332992.51	1.8
Ca	44	45	He	4481.07	12.5
Ti	47	45	No Gas	6267.81	4.4
V	51	45	No Gas	74564.00	4.4
V	51	45	He	10491.32	3.9
Cr	52	89	No Gas	101128.13	0.5
Cr	52	89	He	15360.89	5.7
Cr	53	89	No Gas	67583.88	1.5
Mn	55	89	No Gas	109579.21	1.5
Mn	55	89	He	6841.99	3.4
Fe	56	89	No Gas	9262842.39	0.7
Fe	56	89	He	912013.94	0.8
Co	59	89	No Gas	83031.29	0.3
Co	59	89	He	22080.30	3.5
Ni	60	89	No Gas	18812.02	1.3
Ni	60	89	He	6304.55	6.8
Ni	62	89	No Gas	8387.80	7.0
Cu	63	89	No Gas	52768.31	1.8
Cu	63	89	He	19266.44	1.5
Cu	65	89	No Gas	25793.87	1.5
Zn	66	89	No Gas	14876.57	5.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2926.64	3.1
Zn	67	89	No Gas	2312.56	6.1
Zn	68	89	No Gas	10367.84	1.3
As	75	89	No Gas	15644.03	11.8
As	75	89	He	1696.78	5.1
Se	77	89	No Gas	10314.45	5.9
Se	78	89	No Gas	19540.61	0.8
Se	78	89	He	132.22	16.4
Se	82	89	No Gas	623.34	42.6
[Se]	83	89	No Gas	1935.45	0.6
Sr	88	89	No Gas	119427.48	1.3
Mo	95	89	No Gas	22725.65	1.6
Mo	97	89	No Gas	14282.12	0.5
Mo	98	89	No Gas	36285.96	2.2
[Mo]	99	89	No Gas	23.36	24.7
Cd	106	89	No Gas	55662.89	1.6
Ag	107	89	No Gas	63668.94	0.5
Ag	107	89	He	30566.11	1.7
Cd	108	89	No Gas	1037.76	7.5
Ag	109	89	No Gas	60854.49	0.3
Cd	111	89	No Gas	12094.22	1.6
Cd	114	89	No Gas	31773.90	1.2
Sn	118	115	No Gas	41275.70	1.3
Sb	121	115	No Gas	57691.61	0.5
Sb	121	89	He	12559.55	1.1
Sb	123	115	No Gas	44235.74	1.0
Ba	135	115	No Gas	11249.62	0.4
Ba	137	115	No Gas	20149.43	0.3
Tl	203	209	No Gas	48700.38	2.3
Tl	205	209	No Gas	118115.76	0.6
Pb	206	209	No Gas	40694.09	0.7
Pb	207	209	No Gas	34047.40	1.3
Pb	208	209	No Gas	159765.10	0.3
Th	232	209	No Gas	145225.23	0.4
U	238	209	No Gas	153624.18	0.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5368572.24	0.3	5406885.91	99.29	70	125	
Sc	45	No Gas	24019436.98	0.5	24326295.51	98.74	75	125	
Sc	45	He	964303.78	0.2	970797.15	99.33	75	125	
Y	89	No Gas	55894869.98	0.2	56662702.82	98.64	75	125	
Y	89	He	7406275.66	0.2	7465540.55	99.21	75	125	
In	115	No Gas	12312818.87	0.5	12379434.81	99.46	75	125	
Tb	159	No Gas	16935959.74	0.1	17053216.17	99.31	75	125	
Bi	209	No Gas	10528250.42	0.3	10541485.14	99.87	75	125	

Calibration Standard Report

Sample Name std 4

File Name 151CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:47:40

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	429033.27	0.8
Be	9	6	No Gas	36303.13	2.2
B	11	6	No Gas	68823.17	1.2
Na	23	45	No Gas	17360089.97	0.4
Na	23	45	He	503829.55	0.8
Mg	24	45	No Gas	11657022.33	0.6
Mg	24	45	He	252065.47	2.4
Mg	25	45	No Gas	1549331.75	1.3
Al	27	45	No Gas	168567.24	2.1
Al	27	45	He	950.05	12.1
Si	28	45	No Gas	6437290.22	0.5
Si	29	45	No Gas	464418.71	0.3
K	39	45	No Gas	20647901.77	0.5
K	39	45	He	226341.37	1.5
Ca	44	45	No Gas	629614.34	1.2
Ca	44	45	He	10631.67	3.8
Ti	47	45	No Gas	14979.98	0.7
V	51	45	No Gas	199858.95	0.4
V	51	45	He	25519.54	1.3
Cr	52	89	No Gas	214896.56	0.9
Cr	52	89	He	34234.01	0.8
Cr	53	89	No Gas	83882.98	0.8
Mn	55	89	No Gas	260479.10	1.2
Mn	55	89	He	17158.17	0.5
Fe	56	89	No Gas	20036496.80	0.7
Fe	56	89	He	2233402.52	0.1
Co	59	89	No Gas	204827.71	0.5
Co	59	89	He	54647.31	0.6
Ni	60	89	No Gas	46090.86	1.3
Ni	60	89	He	15080.30	2.0
Ni	62	89	No Gas	12154.51	5.5
Cu	63	89	No Gas	118843.27	0.7
Cu	63	89	He	43265.65	3.0
Cu	65	89	No Gas	56748.42	0.5
Zn	66	89	No Gas	33026.71	1.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	6648.41	6.0
Zn	67	89	No Gas	5313.10	5.9
Zn	68	89	No Gas	23958.71	2.2
As	75	89	No Gas	35875.62	1.6
As	75	89	He	4362.95	3.3
Se	77	89	No Gas	11556.70	1.6
Se	78	89	No Gas	22641.93	3.0
Se	78	89	He	293.34	6.0
Se	82	89	No Gas	1844.70	17.6
[Se]	83	89	No Gas	1955.47	6.5
Sr	88	89	No Gas	297638.92	1.2
Mo	95	89	No Gas	55758.75	0.7
Mo	97	89	No Gas	34392.25	1.0
Mo	98	89	No Gas	89685.23	1.0
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	57448.64	1.7
Ag	107	89	No Gas	156927.19	0.3
Ag	107	89	He	74442.98	1.2
Cd	108	89	No Gas	2088.96	7.7
Ag	109	89	No Gas	149856.76	1.3
Cd	111	89	No Gas	30385.46	1.0
Cd	114	89	No Gas	78270.22	0.7
Sn	118	115	No Gas	100229.99	0.4
Sb	121	115	No Gas	141856.03	0.4
Sb	121	89	He	30011.29	1.6
Sb	123	115	No Gas	108833.98	0.9
Ba	135	115	No Gas	28643.70	0.9
Ba	137	115	No Gas	50843.78	1.8
Tl	203	209	No Gas	124864.04	0.9
Tl	205	209	No Gas	294790.00	0.3
Pb	206	209	No Gas	99793.08	1.0
Pb	207	209	No Gas	81728.78	1.1
Pb	208	209	No Gas	389345.78	0.6
Th	232	209	No Gas	375170.30	0.9
U	238	209	No Gas	384234.00	1.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5338894.63	0.5	5406885.91	98.74	70	125	
Sc	45	No Gas	23921401.45	0.4	24326295.51	98.34	75	125	
Sc	45	He	957541.59	0.3	970797.15	98.63	75	125	
Y	89	No Gas	55664301.08	0.4	56662702.82	98.24	75	125	
Y	89	He	7372660.38	0.7	7465540.55	98.76	75	125	
In	115	No Gas	12299534.30	0.8	12379434.81	99.35	75	125	
Tb	159	No Gas	17061007.71	0.3	17053216.17	100.05	75	125	
Bi	209	No Gas	10589336.52	0.5	10541485.14	100.45	75	125	

Calibration Standard Report

Sample Name std 5

File Name 152CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:49:32

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	572990.64	0.5
Be	9	6	No Gas	72733.12	0.7
B	11	6	No Gas	129560.32	0.7
Na	23	45	No Gas	33565027.83	1.0
Na	23	45	He	983529.46	0.9
Mg	24	45	No Gas	22942296.33	0.4
Mg	24	45	He	496495.32	0.7
Mg	25	45	No Gas	3064954.75	0.3
Al	27	45	No Gas	315215.45	1.8
Al	27	45	He	2176.88	9.9
Si	28	45	No Gas	12320073.85	0.5
Si	29	45	No Gas	832255.46	0.8
K	39	45	No Gas	36016921.13	0.2
K	39	45	He	433247.04	1.3
Ca	44	45	No Gas	1093845.79	0.9
Ca	44	45	He	21498.39	2.4
Ti	47	45	No Gas	29752.17	1.4
V	51	45	No Gas	402085.67	1.3
V	51	45	He	50078.17	1.2
Cr	52	89	No Gas	395884.35	0.1
Cr	52	89	He	67261.96	1.9
Cr	53	89	No Gas	107936.68	0.5
Mn	55	89	No Gas	506479.68	0.2
Mn	55	89	He	34317.40	1.0
Fe	56	89	No Gas	37613830.01	1.5
Fe	56	89	He	4418174.00	1.2
Co	59	89	No Gas	403926.28	1.4
Co	59	89	He	106831.79	1.9
Ni	60	89	No Gas	92776.86	1.6
Ni	60	89	He	30163.83	2.1
Ni	62	89	No Gas	19206.35	2.5
Cu	63	89	No Gas	225493.75	1.6
Cu	63	89	He	83545.58	2.8
Cu	65	89	No Gas	107912.69	0.7
Zn	66	89	No Gas	64460.28	1.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	12541.85	3.5
Zn	67	89	No Gas	10210.87	2.2
Zn	68	89	No Gas	46975.07	1.2
As	75	89	No Gas	67678.05	1.8
As	75	89	He	8628.36	2.7
Se	77	89	No Gas	13547.21	1.2
Se	78	89	No Gas	27358.87	2.1
Se	78	89	He	542.24	7.8
Se	82	89	No Gas	3985.77	10.9
[Se]	83	89	No Gas	1788.60	3.1
Sr	88	89	No Gas	599955.41	0.7
Mo	95	89	No Gas	112765.68	1.2
Mo	97	89	No Gas	70828.72	1.0
Mo	98	89	No Gas	179582.53	0.8
[Mo]	99	89	No Gas	20.02	50.0
Cd	106	89	No Gas	59610.51	2.5
Ag	107	89	No Gas	308218.53	0.3
Ag	107	89	He	148138.54	0.6
Cd	108	89	No Gas	4692.28	5.1
Ag	109	89	No Gas	296011.66	0.7
Cd	111	89	No Gas	59603.42	0.2
Cd	114	89	No Gas	157863.58	0.7
Sn	118	115	No Gas	196689.68	0.9
Sb	121	115	No Gas	282302.54	0.8
Sb	121	89	He	59997.05	1.5
Sb	123	115	No Gas	215156.30	1.4
Ba	135	115	No Gas	57282.99	0.3
Ba	137	115	No Gas	98492.38	1.7
Tl	203	209	No Gas	248501.92	0.5
Tl	205	209	No Gas	587044.29	0.6
Pb	206	209	No Gas	198925.42	1.0
Pb	207	209	No Gas	163665.73	0.4
Pb	208	209	No Gas	771412.48	0.2
Th	232	209	No Gas	758864.05	0.4
U	238	209	No Gas	762617.20	1.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5282328.95	0.7	5406885.91	97.7	70	125	
Sc	45	No Gas	23677202.25	0.6	24326295.51	97.33	75	125	
Sc	45	He	962329.06	0.5	970797.15	99.13	75	125	
Y	89	No Gas	55397637.75	0.9	56662702.82	97.77	75	125	
Y	89	He	7377997.80	0.4	7465540.55	98.83	75	125	
In	115	No Gas	12203258.04	0.4	12379434.81	98.58	75	125	
Tb	159	No Gas	16905661.11	1.2	17053216.17	99.13	75	125	
Bi	209	No Gas	10473919.31	0.1	10541485.14	99.36	75	125	

Calibration Standard Report

Sample Name std 6

File Name 153CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:51:25

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1707640.61	2.1
Be	9	6	No Gas	365048.50	1.9
B	11	6	No Gas	626218.12	0.3
Na	23	45	No Gas	167845795.42	1.5
Na	23	45	He	4865730.97	1.1
Mg	24	45	No Gas	115686041.61	0.3
Mg	24	45	He	2499718.24	1.0
Mg	25	45	No Gas	15481015.19	0.3
Al	27	45	No Gas	1505171.54	0.4
Al	27	45	He	9793.66	4.1
Si	28	45	No Gas	60785455.58	0.6
Si	29	45	No Gas	3805613.75	0.4
K	39	45	No Gas	163103237.57	0.6
K	39	45	He	1955708.46	1.6
Ca	44	45	No Gas	4904711.59	0.8
Ca	44	45	He	105033.09	5.3
Ti	47	45	No Gas	149707.02	0.7
V	51	45	No Gas	1986236.75	1.3
V	51	45	He	255402.74	0.4
Cr	52	89	No Gas	1865746.37	0.5
Cr	52	89	He	325230.26	1.1
Cr	53	89	No Gas	280166.16	1.2
Mn	55	89	No Gas	2522054.20	0.4
Mn	55	89	He	172960.78	1.7
Fe	56	89	No Gas	181899604.07	0.2
Fe	56	89	He	22324024.67	1.0
Co	59	89	No Gas	2010581.89	0.6
Co	59	89	He	542800.51	1.1
Ni	60	89	No Gas	447316.10	1.1
Ni	60	89	He	147656.79	0.2
Ni	62	89	No Gas	71646.15	0.8
Cu	63	89	No Gas	1087954.46	1.0
Cu	63	89	He	406189.41	0.4
Cu	65	89	No Gas	522423.14	0.9
Zn	66	89	No Gas	317749.25	1.3

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	62573.14	1.3
Zn	67	89	No Gas	50219.63	3.2
Zn	68	89	No Gas	226734.37	0.6
As	75	89	No Gas	322127.16	1.2
As	75	89	He	43723.72	1.3
Se	77	89	No Gas	26476.04	1.8
Se	78	89	No Gas	65383.29	0.8
Se	78	89	He	2743.63	2.5
Se	82	89	No Gas	19475.37	2.0
[Se]	83	89	No Gas	2002.19	4.8
Sr	88	89	No Gas	3014415.46	0.8
Mo	95	89	No Gas	563560.49	1.1
Mo	97	89	No Gas	352829.71	0.6
Mo	98	89	No Gas	907570.43	0.4
[Mo]	99	89	No Gas	26.69	21.7
Cd	106	89	No Gas	78108.29	12.1
Ag	107	89	No Gas	1532738.90	0.6
Ag	107	89	He	739963.38	0.3
Cd	108	89	No Gas	21756.59	3.4
Ag	109	89	No Gas	1481011.28	0.6
Cd	111	89	No Gas	306167.62	0.5
Cd	114	89	No Gas	799520.75	0.6
Sn	118	115	No Gas	986080.72	0.5
Sb	121	115	No Gas	1412306.78	0.6
Sb	121	89	He	300838.19	0.4
Sb	123	115	No Gas	1085130.68	0.8
Ba	135	115	No Gas	288003.16	0.5
Ba	137	115	No Gas	505228.37	1.1
Tl	203	209	No Gas	1252707.61	0.6
Tl	205	209	No Gas	2984069.70	0.8
Pb	206	209	No Gas	991139.30	0.8
Pb	207	209	No Gas	820992.53	1.1
Pb	208	209	No Gas	3856715.16	0.9
Th	232	209	No Gas	3898720.60	1.1
U	238	209	No Gas	3882746.40	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4686129.10	17.5	5406885.91	86.67	70	125	
Sc	45	No Gas	21333024.32	18.1	24326295.51	87.7	75	125	
Sc	45	He	955295.66	0.7	970797.15	98.4	75	125	
Y	89	No Gas	49760964.40	19.3	56662702.82	87.82	75	125	
Y	89	He	7358016.99	1.0	7465540.55	98.56	75	125	
In	115	No Gas	10954167.53	20.4	12379434.81	88.49	75	125	
Tb	159	No Gas	15248800.50	19.4	17053216.17	89.42	75	125	
Bi	209	No Gas	9257809.36	19.1	10541485.14	87.82	75	125	

Calibration Standard Report

Sample Name std 7

File Name 154CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:53:21

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	2830088.85	0.5
Be	9	6	No Gas	649048.12	0.5
B	11	6	No Gas	1115055.92	0.5
Na	23	45	No Gas	298651098.34	1.2
Na	23	45	He	8877633.20	1.2
Mg	24	45	No Gas	206899256.92	0.7
Mg	24	45	He	4539461.50	1.0
Mg	25	45	No Gas	27673247.92	0.9
Al	27	45	No Gas	2668611.42	0.6
Al	27	45	He	17514.61	3.3
Si	28	45	No Gas	107546546.77	0.3
Si	29	45	No Gas	6635560.57	0.6
K	39	45	No Gas	285536495.75	0.6
K	39	45	He	3547476.41	1.7
Ca	44	45	No Gas	8627775.08	1.0
Ca	44	45	He	188705.67	2.3
Ti	47	45	No Gas	267256.99	1.1
V	51	45	No Gas	3554585.50	0.5
V	51	45	He	463324.88	0.6
Cr	52	89	No Gas	3296512.25	0.2
Cr	52	89	He	587919.06	0.3
Cr	53	89	No Gas	451066.20	0.5
Mn	55	89	No Gas	4483590.06	0.9
Mn	55	89	He	312332.88	0.5
Fe	56	89	No Gas	320358440.49	1.1
Fe	56	89	He	40712341.06	0.8
Co	59	89	No Gas	3612216.28	0.9
Co	59	89	He	967911.17	1.2
Ni	60	89	No Gas	798495.03	0.9
Ni	60	89	He	267644.68	0.6
Ni	62	89	No Gas	121906.73	1.1
Cu	63	89	No Gas	1952435.56	0.5
Cu	63	89	He	738572.04	0.2
Cu	65	89	No Gas	926259.39	0.3
Zn	66	89	No Gas	564724.30	0.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	112265.80	0.6
Zn	67	89	No Gas	90040.74	0.8
Zn	68	89	No Gas	407326.68	0.7
As	75	89	No Gas	575026.04	0.2
As	75	89	He	79841.98	0.3
Se	77	89	No Gas	39423.82	0.9
Se	78	89	No Gas	103995.90	0.4
Se	78	89	He	4893.14	2.2
Se	82	89	No Gas	35195.30	2.4
[Se]	83	89	No Gas	2012.20	3.4
Sr	88	89	No Gas	5411884.19	0.1
Mo	95	89	No Gas	1018529.55	0.9
Mo	97	89	No Gas	631538.06	0.6
Mo	98	89	No Gas	1646526.38	0.0
[Mo]	99	89	No Gas	36.70	41.7
Cd	106	89	No Gas	106024.06	0.3
Ag	107	89	No Gas	2741901.77	0.8
Ag	107	89	He	1318419.02	0.9
Cd	108	89	No Gas	39368.05	2.3
Ag	109	89	No Gas	2630983.07	1.4
Cd	111	89	No Gas	546587.75	0.3
Cd	114	89	No Gas	1429986.08	0.8
Sn	118	115	No Gas	1765345.34	0.7
Sb	121	115	No Gas	2536361.08	0.3
Sb	121	89	He	547872.96	1.7
Sb	123	115	No Gas	1951769.43	0.2
Ba	135	115	No Gas	516646.75	0.3
Ba	137	115	No Gas	902817.09	0.9
Tl	203	209	No Gas	2220241.34	0.9
Tl	205	209	No Gas	5267723.36	0.8
Pb	206	209	No Gas	1772120.30	1.4
Pb	207	209	No Gas	1475073.62	0.7
Pb	208	209	No Gas	6917635.41	0.6
Th	232	209	No Gas	7069834.22	1.2
U	238	209	No Gas	6951430.40	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5080914.79	0.6	5406885.91	93.97	70	125	
Sc	45	No Gas	23692863.75	0.9	24326295.51	97.4	75	125	
Sc	45	He	967352.63	1.4	970797.15	99.65	75	125	
Y	89	No Gas	55267157.27	0.5	56662702.82	97.54	75	125	
Y	89	He	7401251.68	1.2	7465540.55	99.14	75	125	
In	115	No Gas	12155795.14	0.8	12379434.81	98.19	75	125	
Tb	159	No Gas	16912261.88	0.9	17053216.17	99.17	75	125	
Bi	209	No Gas	10242877.65	0.7	10541485.14	97.17	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	155CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 18:55:16
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	5777257.69	1.2
Be	9	6	No Gas	1426596.50	1.3
B	11	6	No Gas	2454086.65	1.3
Na	23	45	No Gas	655314947.98	1.0
Na	23	45	He	19344669.71	0.3
Mg	24	45	No Gas	449122699.97	1.2
Mg	24	45	He	9751832.36	0.6
Mg	25	45	No Gas	60994582.43	0.5
Al	27	45	No Gas	5913558.04	1.1
Al	27	45	He	37781.57	1.4
Si	28	45	No Gas	232610470.94	1.1
Si	29	45	No Gas	14311877.32	1.0
K	39	45	No Gas	631495603.92	0.6
K	39	45	He	7734626.55	0.4
Ca	44	45	No Gas	19123487.63	1.6
Ca	44	45	He	415030.80	0.8
Ti	47	45	No Gas	594278.29	1.5
V	51	45	No Gas	7945545.98	0.9
V	51	45	He	975615.85	0.6
Cr	52	89	No Gas	7240011.28	1.4
Cr	52	89	He	1264552.66	1.2
Cr	53	89	No Gas	915518.25	1.5
Mn	55	89	No Gas	9833426.15	1.9
Mn	55	89	He	672803.95	1.1
Fe	56	89	No Gas	713775882.62	2.5
Fe	56	89	He	88538392.01	1.8
Co	59	89	No Gas	7855644.20	1.9
Co	59	89	He	2108955.99	0.5
Ni	60	89	No Gas	1725055.68	2.4
Ni	60	89	He	579213.92	0.3
Ni	62	89	No Gas	258854.11	2.4
Cu	63	89	No Gas	4182811.99	0.9
Cu	63	89	He	1585795.80	0.2
Cu	65	89	No Gas	2003999.11	0.3
Zn	66	89	No Gas	1243167.26	0.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	242250.81	1.2
Zn	67	89	No Gas	194154.86	0.2
Zn	68	89	No Gas	877456.08	0.4
As	75	89	No Gas	1280541.32	1.0
As	75	89	He	174802.21	0.8
Se	77	89	No Gas	73402.58	2.0
Se	78	89	No Gas	208435.70	0.8
Se	78	89	He	10640.92	1.5
Se	82	89	No Gas	77067.34	0.8
[Se]	83	89	No Gas	1952.13	1.4
Sr	88	89	No Gas	11952127.57	1.5
Mo	95	89	No Gas	2258054.36	1.5
Mo	97	89	No Gas	1414458.68	1.5
Mo	98	89	No Gas	3683932.40	1.2
[Mo]	99	89	No Gas	73.41	15.7
Cd	106	89	No Gas	168609.79	0.4
Ag	107	89	No Gas	5976339.48	1.1
Ag	107	89	He	2877480.09	0.7
Cd	108	89	No Gas	85302.00	1.4
Ag	109	89	No Gas	5783239.29	1.8
Cd	111	89	No Gas	1215311.60	0.2
Cd	114	89	No Gas	3167239.22	0.4
Sn	118	115	No Gas	3868625.40	1.4
Sb	121	115	No Gas	5651280.05	0.5
Sb	121	89	He	1169812.35	0.9
Sb	123	115	No Gas	4361994.30	1.0
Ba	135	115	No Gas	1134066.54	1.6
Ba	137	115	No Gas	1988567.63	1.7
Tl	203	209	No Gas	4863225.84	1.1
Tl	205	209	No Gas	11726310.50	0.7
Pb	206	209	No Gas	3930558.48	0.6
Pb	207	209	No Gas	3234840.37	0.1
Pb	208	209	No Gas	15151307.69	0.1
Th	232	209	No Gas	15578005.95	2.0
U	238	209	No Gas	15491987.02	1.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4966395.88	0.7	5406885.91	91.85	70	125	
Sc	45	No Gas	24088253.30	1.5	24326295.51	99.02	75	125	
Sc	45	He	971099.82	0.3	970797.15	100.03	75	125	
Y	89	No Gas	55258875.66	1.9	56662702.82	97.52	75	125	
Y	89	He	7343496.64	0.7	7465540.55	98.37	75	125	
In	115	No Gas	12034138.87	1.0	12379434.81	97.21	75	125	
Tb	159	No Gas	16750573.94	1.0	17053216.17	98.23	75	125	
Bi	209	No Gas	9918903.49	1.4	10541485.14	94.09	75	125	

Calibration Blank Report

Sample Name std 1

File Name 382CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:25:59

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	202455.30	0.5
Be	9	6	No Gas	113.45	5.1
B	11	6	No Gas	12107.48	1.7
Na	23	45	No Gas	1617078.52	0.5
Na	23	45	He	52943.29	1.3
Mg	24	45	No Gas	40461.63	4.0
Mg	24	45	He	666.73	9.2
Mg	25	45	No Gas	5254.68	5.0
Al	27	45	No Gas	12273.05	5.9
Al	27	45	He	113.33	43.5
Si	28	45	No Gas	340881.93	0.4
Si	29	45	No Gas	60397.90	0.6
K	39	45	No Gas	4010612.44	1.0
K	39	45	He	24262.78	2.7
Ca	44	45	No Gas	37961.43	2.5
Ca	44	45	He	213.35	65.8
Ti	47	45	No Gas	183.52	13.7
V	51	45	No Gas	-3167.99	-75.0
V	51	45	He	296.97	13.6
Cr	52	89	No Gas	24981.40	3.5
Cr	52	89	He	1978.82	6.5
Cr	53	89	No Gas	40386.81	1.6
Mn	55	89	No Gas	38737.39	1.3
Mn	55	89	He	2556.19	13.3
Fe	56	89	No Gas	1961146.66	1.5
Fe	56	89	He	25492.41	4.3
Co	59	89	No Gas	1454.90	9.7
Co	59	89	He	263.61	19.1
Ni	60	89	No Gas	1091.16	5.5
Ni	60	89	He	273.62	7.6
Ni	62	89	No Gas	4632.16	5.2
Cu	63	89	No Gas	9285.95	4.1
Cu	63	89	He	3146.88	4.5
Cu	65	89	No Gas	4832.44	5.8
Zn	66	89	No Gas	1731.88	6.3

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	377.06	16.0
Zn	67	89	No Gas	337.01	24.9
Zn	68	89	No Gas	1268.02	3.6
As	75	89	No Gas	3414.30	59.3
As	75	89	He	25.56	37.7
Se	77	89	No Gas	7112.46	6.6
Se	78	89	No Gas	16834.34	6.6
Se	78	89	He	16.67	60.0
Se	82	89	No Gas	209.76	79.4
[Se]	83	89	No Gas	1534.98	5.5
Sr	88	89	No Gas	2519.48	8.2
Mo	95	89	No Gas	577.27	8.7
Mo	97	89	No Gas	437.12	7.4
Mo	98	89	No Gas	985.77	25.5
[Mo]	99	89	No Gas	13.35	114.6
Cd	106	89	No Gas	44941.65	2.0
Ag	107	89	No Gas	532.24	11.9
Ag	107	89	He	140.14	37.8
Cd	108	89	No Gas	93.43	32.7
Ag	109	89	No Gas	206.88	22.9
Cd	111	89	No Gas	-76.92	-46.9
Cd	114	89	No Gas	93.43	34.4
Sn	118	115	No Gas	2021.28	2.8
Sb	121	115	No Gas	754.47	6.8
Sb	121	89	He	213.34	5.4
Sb	123	115	No Gas	1134.54	11.5
Ba	135	115	No Gas	100.10	26.5
Ba	137	115	No Gas	150.15	23.1
Tl	203	209	No Gas	373.72	20.8
Tl	205	209	No Gas	897.62	14.1
Pb	206	209	No Gas	667.37	13.6
Pb	207	209	No Gas	677.38	7.4
Pb	208	209	No Gas	2813.00	3.8
Th	232	209	No Gas	8635.19	9.6
U	238	209	No Gas	994.39	16.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	3546479.06	0.3
Sc	45	No Gas	18068973.18	0.3
Sc	45	He	782598.87	1.1
Y	89	No Gas	44605013.43	0.3
Y	89	He	6105468.19	1.0
In	115	No Gas	9924340.73	0.4
Tb	159	No Gas	13751488.60	1.0
Bi	209	No Gas	8506561.89	0.2

Calibration Standard Report

Sample Name std 2

File Name 383CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:27:38

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	208416.88	0.9
Be	9	6	No Gas	1167.90	9.2
B	11	6	No Gas	12010.66	1.6
Na	23	45	No Gas	2076612.29	0.6
Na	23	45	He	65141.64	1.5
Mg	24	45	No Gas	378569.94	0.9
Mg	24	45	He	7696.02	13.5
Mg	25	45	No Gas	49651.76	1.6
Al	27	45	No Gas	23541.24	4.8
Al	27	45	He	166.67	36.2
Si	28	45	No Gas	537076.27	0.2
Si	29	45	No Gas	71122.26	0.6
K	39	45	No Gas	4531173.06	0.4
K	39	45	He	31932.14	3.3
Ca	44	45	No Gas	55113.75	1.8
Ca	44	45	He	573.40	49.0
Ti	47	45	No Gas	797.50	9.4
V	51	45	No Gas	3567.70	84.2
V	51	45	He	1181.25	8.8
Cr	52	89	No Gas	30390.89	0.9
Cr	52	89	He	2943.31	0.9
Cr	53	89	No Gas	42153.95	2.9
Mn	55	89	No Gas	43081.00	1.6
Mn	55	89	He	2833.17	5.7
Fe	56	89	No Gas	2477154.74	0.5
Fe	56	89	He	108259.73	0.4
Co	59	89	No Gas	7753.39	1.6
Co	59	89	He	1945.46	9.5
Ni	60	89	No Gas	2482.77	4.7
Ni	60	89	He	690.72	13.8
Ni	62	89	No Gas	4708.94	6.6
Cu	63	89	No Gas	12475.02	1.3
Cu	63	89	He	4418.54	1.0
Cu	65	89	No Gas	6478.13	4.7
Zn	66	89	No Gas	2709.70	2.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	520.54	8.8
Zn	67	89	No Gas	537.23	7.1
Zn	68	89	No Gas	1848.69	6.5
As	75	89	No Gas	4185.38	20.9
As	75	89	He	175.56	20.3
Se	77	89	No Gas	7416.24	3.5
Se	78	89	No Gas	17051.45	4.1
Se	78	89	He	28.89	75.1
Se	82	89	No Gas	226.22	129.7
[Se]	83	89	No Gas	1561.68	12.0
Sr	88	89	No Gas	12622.15	3.6
Mo	95	89	No Gas	2352.59	3.6
Mo	97	89	No Gas	1404.85	8.3
Mo	98	89	No Gas	3997.02	6.4
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	45862.09	1.6
Ag	107	89	No Gas	6333.77	1.4
Ag	107	89	He	2689.67	3.1
Cd	108	89	No Gas	173.51	12.0
Ag	109	89	No Gas	5917.35	3.2
Cd	111	89	No Gas	914.99	9.9
Cd	114	89	No Gas	2749.76	8.1
Sn	118	115	No Gas	5165.48	2.0
Sb	121	115	No Gas	5201.05	3.2
Sb	121	89	He	1213.42	7.5
Sb	123	115	No Gas	4608.83	7.5
Ba	135	115	No Gas	1061.12	6.6
Ba	137	115	No Gas	1948.79	3.4
Tl	203	209	No Gas	4375.22	6.9
Tl	205	209	No Gas	10338.08	2.6
Pb	206	209	No Gas	4091.51	5.6
Pb	207	209	No Gas	3350.54	5.1
Pb	208	209	No Gas	16007.02	4.2
Th	232	209	No Gas	17386.60	2.8
U	238	209	No Gas	13310.80	2.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3562380.45	0.4	3546479.06	100.45	70	125	
Sc	45	No Gas	18124716.42	0.4	18068973.18	100.31	75	125	
Sc	45	He	786966.62	0.7	782598.87	100.56	75	125	
Y	89	No Gas	44724369.46	0.5	44605013.43	100.27	75	125	
Y	89	He	6109042.80	1.1	6105468.19	100.06	75	125	
In	115	No Gas	9904786.46	0.2	9924340.73	99.8	75	125	
Tb	159	No Gas	13900667.78	0.3	13751488.6	101.08	75	125	
Bi	209	No Gas	8546390.22	0.4	8506561.89	100.47	75	125	

Calibration Standard Report

Sample Name	std 3
File Name	384CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 01:29:16
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	382CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	244225.24	0.8
Be	9	6	No Gas	10497.87	1.1
B	11	6	No Gas	26565.16	1.7
Na	23	45	No Gas	6363342.33	0.1
Na	23	45	He	193469.06	0.6
Mg	24	45	No Gas	3342819.74	0.7
Mg	24	45	He	76575.05	2.1
Mg	25	45	No Gas	459640.58	1.3
Al	27	45	No Gas	63106.45	0.8
Al	27	45	He	493.35	3.1
Si	28	45	No Gas	2097769.02	0.4
Si	29	45	No Gas	174448.99	1.6
K	39	45	No Gas	8834443.20	0.5
K	39	45	He	88123.70	3.1
Ca	44	45	No Gas	195812.45	0.1
Ca	44	45	He	3600.75	19.2
Ti	47	45	No Gas	4932.57	6.5
V	51	45	No Gas	63037.74	3.8
V	51	45	He	8093.94	1.9
Cr	52	89	No Gas	82304.76	1.3
Cr	52	89	He	12237.95	3.7
Cr	53	89	No Gas	47098.05	0.2
Mn	55	89	No Gas	114909.74	0.3
Mn	55	89	He	7733.39	2.1
Fe	56	89	No Gas	7401538.71	0.4
Fe	56	89	He	867495.43	0.8
Co	59	89	No Gas	65559.47	1.8
Co	59	89	He	17151.50	2.0
Ni	60	89	No Gas	15524.64	2.9
Ni	60	89	He	4819.08	1.6
Ni	62	89	No Gas	6374.64	0.6
Cu	63	89	No Gas	44142.42	2.9
Cu	63	89	He	15978.95	0.9
Cu	65	89	No Gas	21154.58	1.9
Zn	66	89	No Gas	11436.41	2.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2446.05	8.4
Zn	67	89	No Gas	1872.03	10.5
Zn	68	89	No Gas	8100.64	2.0
As	75	89	No Gas	13048.86	2.2
As	75	89	He	1481.20	8.6
Se	77	89	No Gas	7646.61	2.2
Se	78	89	No Gas	18207.42	1.9
Se	78	89	He	118.89	11.7
Se	82	89	No Gas	466.03	24.9
[Se]	83	89	No Gas	1615.07	5.6
Sr	88	89	No Gas	101617.66	1.0
Mo	95	89	No Gas	19109.75	2.3
Mo	97	89	No Gas	11660.29	3.8
Mo	98	89	No Gas	30002.59	0.9
[Mo]	99	89	No Gas	10.01	173.2
Cd	106	89	No Gas	46203.59	0.8
Ag	107	89	No Gas	51565.50	1.7
Ag	107	89	He	24159.87	1.6
Cd	108	89	No Gas	890.94	10.0
Ag	109	89	No Gas	49602.62	0.2
Cd	111	89	No Gas	9594.95	0.6
Cd	114	89	No Gas	25497.20	3.9
Sn	118	115	No Gas	33849.01	0.2
Sb	121	115	No Gas	46828.80	0.4
Sb	121	89	He	10417.63	3.1
Sb	123	115	No Gas	36531.12	2.9
Ba	135	115	No Gas	10067.47	4.0
Ba	137	115	No Gas	17078.51	2.8
Tl	203	209	No Gas	40526.62	0.7
Tl	205	209	No Gas	97882.11	0.5
Pb	206	209	No Gas	33234.37	0.5
Pb	207	209	No Gas	27775.50	1.5
Pb	208	209	No Gas	129821.32	0.8
Th	232	209	No Gas	122912.82	0.9
U	238	209	No Gas	125405.44	1.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3553077.85	0.1	3546479.06	100.19	70	125	
Sc	45	No Gas	18093986.10	0.3	18068973.18	100.14	75	125	
Sc	45	He	790590.70	0.2	782598.87	101.02	75	125	
Y	89	No Gas	44591318.08	0.6	44605013.43	99.97	75	125	
Y	89	He	6107850.78	0.5	6105468.19	100.04	75	125	
In	115	No Gas	9949969.27	0.2	9924340.73	100.26	75	125	
Tb	159	No Gas	13696293.82	0.5	13751488.6	99.6	75	125	
Bi	209	No Gas	8509649.11	0.3	8506561.89	100.04	75	125	

Calibration Standard Report

Sample Name std 4

File Name 385CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:30:54

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	304897.24	0.2
Be	9	6	No Gas	26120.60	0.3
B	11	6	No Gas	50430.64	1.8
Na	23	45	No Gas	13562384.68	1.3
Na	23	45	He	409387.96	0.9
Mg	24	45	No Gas	8313998.21	0.3
Mg	24	45	He	190904.11	1.0
Mg	25	45	No Gas	1110943.26	1.2
Al	27	45	No Gas	129553.88	2.0
Al	27	45	He	933.38	6.5
Si	28	45	No Gas	4774983.33	0.2
Si	29	45	No Gas	347142.38	1.2
K	39	45	No Gas	16045351.01	0.5
K	39	45	He	185552.39	0.3
Ca	44	45	No Gas	422857.34	1.2
Ca	44	45	He	9030.32	5.2
Ti	47	45	No Gas	12134.33	1.4
V	51	45	No Gas	155643.88	2.6
V	51	45	He	20562.80	0.7
Cr	52	89	No Gas	168907.62	0.9
Cr	52	89	He	26753.09	2.3
Cr	53	89	No Gas	59609.03	1.5
Mn	55	89	No Gas	235249.50	1.4
Mn	55	89	He	16406.45	2.7
Fe	56	89	No Gas	15678774.83	0.6
Fe	56	89	He	1723234.61	0.6
Co	59	89	No Gas	161844.58	0.8
Co	59	89	He	43409.26	0.9
Ni	60	89	No Gas	37084.44	1.4
Ni	60	89	He	11810.42	1.2
Ni	62	89	No Gas	9876.97	3.1
Cu	63	89	No Gas	94789.26	1.4
Cu	63	89	He	34314.61	1.7
Cu	65	89	No Gas	45783.01	1.9
Zn	66	89	No Gas	26088.03	2.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	5303.09	6.2
Zn	67	89	No Gas	4421.89	3.0
Zn	68	89	No Gas	19507.19	4.2
As	75	89	No Gas	28242.20	8.0
As	75	89	He	3603.84	2.5
Se	77	89	No Gas	8945.38	6.9
Se	78	89	No Gas	20743.64	2.6
Se	78	89	He	278.89	19.4
Se	82	89	No Gas	1712.11	7.8
[Se]	83	89	No Gas	1474.92	7.8
Sr	88	89	No Gas	250461.75	0.5
Mo	95	89	No Gas	46095.97	1.4
Mo	97	89	No Gas	28352.06	1.2
Mo	98	89	No Gas	75286.56	1.7
[Mo]	99	89	No Gas	6.67	86.6
Cd	106	89	No Gas	47512.96	2.5
Ag	107	89	No Gas	127743.25	0.4
Ag	107	89	He	60364.08	0.4
Cd	108	89	No Gas	1935.45	8.5
Ag	109	89	No Gas	122535.33	1.2
Cd	111	89	No Gas	24717.04	0.4
Cd	114	89	No Gas	64592.55	2.8
Sn	118	115	No Gas	82955.20	0.6
Sb	121	115	No Gas	116596.00	0.5
Sb	121	89	He	25969.31	1.5
Sb	123	115	No Gas	89808.37	1.5
Ba	135	115	No Gas	24427.58	1.0
Ba	137	115	No Gas	42411.58	1.2
Tl	203	209	No Gas	103233.46	1.6
Tl	205	209	No Gas	244368.17	0.7
Pb	206	209	No Gas	83195.90	0.5
Pb	207	209	No Gas	68979.17	1.2
Pb	208	209	No Gas	322506.03	0.3
Th	232	209	No Gas	314386.08	0.9
U	238	209	No Gas	315303.96	0.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3523648.42	0.6	3546479.06	99.36	70	125	
Sc	45	No Gas	17962777.81	0.2	18068973.18	99.41	75	125	
Sc	45	He	788067.57	0.4	782598.87	100.7	75	125	
Y	89	No Gas	44281821.91	0.5	44605013.43	99.28	75	125	
Y	89	He	6071292.55	0.6	6105468.19	99.44	75	125	
In	115	No Gas	9876746.97	0.7	9924340.73	99.52	75	125	
Tb	159	No Gas	13787467.08	0.3	13751488.6	100.26	75	125	
Bi	209	No Gas	8519661.33	0.4	8506561.89	100.15	75	125	

Calibration Standard Report

Sample Name std 5

File Name 386CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:32:33

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	401903.77	0.3
Be	9	6	No Gas	51498.72	0.6
B	11	6	No Gas	92329.98	0.2
Na	23	45	No Gas	25191750.04	0.5
Na	23	45	He	735103.89	1.1
Mg	24	45	No Gas	16423396.01	0.1
Mg	24	45	He	380133.25	1.4
Mg	25	45	No Gas	2178361.17	0.3
Al	27	45	No Gas	232922.09	1.6
Al	27	45	He	1776.81	4.2
Si	28	45	No Gas	9153336.90	0.3
Si	29	45	No Gas	634266.26	0.2
K	39	45	No Gas	27934602.08	0.4
K	39	45	He	349463.62	1.7
Ca	44	45	No Gas	822207.17	0.5
Ca	44	45	He	16771.35	7.9
Ti	47	45	No Gas	23259.97	1.0
V	51	45	No Gas	315622.84	1.2
V	51	45	He	40466.94	1.1
Cr	52	89	No Gas	313570.02	0.4
Cr	52	89	He	51829.75	0.7
Cr	53	89	No Gas	78438.48	1.2
Mn	55	89	No Gas	431948.33	0.1
Mn	55	89	He	29829.42	1.2
Fe	56	89	No Gas	29155651.69	0.4
Fe	56	89	He	3379933.28	0.4
Co	59	89	No Gas	325380.62	0.4
Co	59	89	He	85985.33	0.9
Ni	60	89	No Gas	73222.48	1.9
Ni	60	89	He	23808.20	1.7
Ni	62	89	No Gas	14996.80	1.2
Cu	63	89	No Gas	179715.21	0.9
Cu	63	89	He	65113.58	1.2
Cu	65	89	No Gas	85378.27	0.7
Zn	66	89	No Gas	51217.77	1.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	10074.00	2.8
Zn	67	89	No Gas	8297.64	2.1
Zn	68	89	No Gas	37041.16	0.6
As	75	89	No Gas	53920.04	1.9
As	75	89	He	7362.05	2.1
Se	77	89	No Gas	10237.64	3.7
Se	78	89	No Gas	25102.08	1.5
Se	78	89	He	484.46	7.7
Se	82	89	No Gas	2867.77	10.4
[Se]	83	89	No Gas	1761.91	2.5
Sr	88	89	No Gas	499128.66	0.8
Mo	95	89	No Gas	91442.56	0.4
Mo	97	89	No Gas	57263.60	0.2
Mo	98	89	No Gas	147843.44	0.5
[Mo]	99	89	No Gas	0.00	N/A
Cd	106	89	No Gas	49344.75	1.2
Ag	107	89	No Gas	254572.83	0.2
Ag	107	89	He	120443.34	0.4
Cd	108	89	No Gas	3547.42	3.3
Ag	109	89	No Gas	243400.55	1.1
Cd	111	89	No Gas	49596.56	1.3
Cd	114	89	No Gas	130308.06	0.4
Sn	118	115	No Gas	161306.43	0.9
Sb	121	115	No Gas	232731.57	0.7
Sb	121	89	He	50832.01	1.5
Sb	123	115	No Gas	178617.64	0.5
Ba	135	115	No Gas	49356.38	2.1
Ba	137	115	No Gas	86106.59	0.5
Tl	203	209	No Gas	205657.19	0.9
Tl	205	209	No Gas	488132.18	0.6
Pb	206	209	No Gas	164618.02	1.0
Pb	207	209	No Gas	135160.36	1.4
Pb	208	209	No Gas	638999.92	0.7
Th	232	209	No Gas	636252.24	0.5
U	238	209	No Gas	630758.95	1.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3498644.05	0.5	3546479.06	98.65	70	125	
Sc	45	No Gas	17952316.52	0.3	18068973.18	99.35	75	125	
Sc	45	He	788582.64	1.0	782598.87	100.76	75	125	
Y	89	No Gas	44388757.18	0.5	44605013.43	99.52	75	125	
Y	89	He	6003657.63	0.7	6105468.19	98.33	75	125	
In	115	No Gas	9869806.48	0.7	9924340.73	99.45	75	125	
Tb	159	No Gas	13759832.78	0.4	13751488.6	100.06	75	125	
Bi	209	No Gas	8489533.00	0.3	8506561.89	99.8	75	125	

Calibration Standard Report

Sample Name std 6

File Name 387CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:34:12

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1167902.17	0.9
Be	9	6	No Gas	259670.16	0.1
B	11	6	No Gas	430890.89	0.9
Na	23	45	No Gas	121663073.55	1.6
Na	23	45	He	3525550.26	0.1
Mg	24	45	No Gas	82375795.44	1.0
Mg	24	45	He	1820444.19	0.7
Mg	25	45	No Gas	10972242.34	0.1
Al	27	45	No Gas	1086249.38	0.9
Al	27	45	He	7565.50	5.7
Si	28	45	No Gas	44748199.96	0.5
Si	29	45	No Gas	2803818.41	0.1
K	39	45	No Gas	124538741.48	1.1
K	39	45	He	1529252.79	0.8
Ca	44	45	No Gas	3632026.82	0.9
Ca	44	45	He	85000.31	1.6
Ti	47	45	No Gas	117949.59	1.8
V	51	45	No Gas	1471030.03	0.6
V	51	45	He	204546.32	0.8
Cr	52	89	No Gas	1415547.42	0.7
Cr	52	89	He	257106.94	1.1
Cr	53	89	No Gas	215016.74	0.2
Mn	55	89	No Gas	1951799.20	0.9
Mn	55	89	He	142015.92	1.1
Fe	56	89	No Gas	139020415.61	0.8
Fe	56	89	He	16993682.25	0.5
Co	59	89	No Gas	1550744.50	0.7
Co	59	89	He	427389.04	1.0
Ni	60	89	No Gas	361159.64	0.2
Ni	60	89	He	117125.81	1.3
Ni	62	89	No Gas	57294.20	1.1
Cu	63	89	No Gas	863043.54	1.0
Cu	63	89	He	320737.17	1.0
Cu	65	89	No Gas	414755.65	0.7
Zn	66	89	No Gas	249226.96	0.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	49827.84	1.5
Zn	67	89	No Gas	39711.42	2.4
Zn	68	89	No Gas	180702.49	0.5
As	75	89	No Gas	263451.71	1.0
As	75	89	He	37026.15	2.8
Se	77	89	No Gas	20646.75	2.5
Se	78	89	No Gas	56286.88	0.8
Se	78	89	He	2280.20	2.2
Se	82	89	No Gas	15869.63	1.3
[Se]	83	89	No Gas	1605.06	7.0
Sr	88	89	No Gas	2400802.32	1.2
Mo	95	89	No Gas	464942.35	1.0
Mo	97	89	No Gas	288286.38	0.7
Mo	98	89	No Gas	747681.91	0.3
[Mo]	99	89	No Gas	13.35	43.3
Cd	106	89	No Gas	69005.11	1.3
Ag	107	89	No Gas	1221126.79	0.9
Ag	107	89	He	609793.98	1.4
Cd	108	89	No Gas	18127.44	2.3
Ag	109	89	No Gas	1172638.53	0.6
Cd	111	89	No Gas	247111.82	1.3
Cd	114	89	No Gas	650238.64	1.0
Sn	118	115	No Gas	818183.14	1.0
Sb	121	115	No Gas	1130541.41	0.5
Sb	121	89	He	262455.44	1.8
Sb	123	115	No Gas	900327.91	0.1
Ba	135	115	No Gas	245780.41	1.1
Ba	137	115	No Gas	428846.06	1.6
Tl	203	209	No Gas	1030619.21	1.2
Tl	205	209	No Gas	2396850.61	0.7
Pb	206	209	No Gas	826729.67	0.8
Pb	207	209	No Gas	685948.63	1.2
Pb	208	209	No Gas	3156887.31	0.7
Th	232	209	No Gas	3168592.45	0.5
U	238	209	No Gas	3094434.75	1.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3449263.04	0.4	3546479.06	97.26	70	125	
Sc	45	No Gas	18001569.94	0.7	18068973.18	99.63	75	125	
Sc	45	He	787449.26	1.4	782598.87	100.62	75	125	
Y	89	No Gas	44042315.74	1.2	44605013.43	98.74	75	125	
Y	89	He	6052964.23	1.1	6105468.19	99.14	75	125	
In	115	No Gas	9780826.48	0.9	9924340.73	98.55	75	125	
Tb	159	No Gas	13609200.90	1.3	13751488.6	98.97	75	125	
Bi	209	No Gas	8367572.44	0.2	8506561.89	98.37	75	125	

Calibration Standard Report

Sample Name std 7

File Name 388CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:35:58

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1928141.43	0.4
Be	9	6	No Gas	466774.20	0.5
B	11	6	No Gas	735463.56	1.0
Na	23	45	No Gas	215602179.82	0.9
Na	23	45	He	6268471.99	1.3
Mg	24	45	No Gas	147663381.13	0.9
Mg	24	45	He	3243502.24	0.9
Mg	25	45	No Gas	19670225.13	0.8
Al	27	45	No Gas	1929861.79	1.2
Al	27	45	He	13476.72	1.4
Si	28	45	No Gas	79961371.53	0.6
Si	29	45	No Gas	4950879.85	0.3
K	39	45	No Gas	220378250.05	0.2
K	39	45	He	2689826.73	1.7
Ca	44	45	No Gas	6465912.19	0.4
Ca	44	45	He	151516.69	3.5
Ti	47	45	No Gas	214771.90	0.5
V	51	45	No Gas	2664464.89	0.5
V	51	45	He	365891.03	0.6
Cr	52	89	No Gas	2521909.26	0.5
Cr	52	89	He	457812.10	0.4
Cr	53	89	No Gas	354104.30	0.6
Mn	55	89	No Gas	3478398.41	0.6
Mn	55	89	He	249959.17	1.7
Fe	56	89	No Gas	249089380.57	0.4
Fe	56	89	He	30473675.38	1.1
Co	59	89	No Gas	2795783.92	0.7
Co	59	89	He	766720.29	0.7
Ni	60	89	No Gas	639498.01	0.7
Ni	60	89	He	207022.23	2.1
Ni	62	89	No Gas	98445.79	2.3
Cu	63	89	No Gas	1512864.74	0.8
Cu	63	89	He	570941.72	1.0
Cu	65	89	No Gas	743496.02	0.4
Zn	66	89	No Gas	446797.56	1.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	89042.66	1.5
Zn	67	89	No Gas	69939.39	1.6
Zn	68	89	No Gas	318704.22	0.5
As	75	89	No Gas	473719.19	0.9
As	75	89	He	66151.98	0.7
Se	77	89	No Gas	31598.65	0.7
Se	78	89	No Gas	87106.32	0.8
Se	78	89	He	3990.61	3.1
Se	82	89	No Gas	29401.01	2.0
[Se]	83	89	No Gas	1588.38	6.7
Sr	88	89	No Gas	4323899.64	0.7
Mo	95	89	No Gas	839928.37	0.7
Mo	97	89	No Gas	526570.57	0.4
Mo	98	89	No Gas	1307919.53	0.2
[Mo]	99	89	No Gas	26.69	43.3
Cd	106	89	No Gas	88512.71	0.1
Ag	107	89	No Gas	2191272.41	0.3
Ag	107	89	He	1072523.64	0.2
Cd	108	89	No Gas	32077.84	0.7
Ag	109	89	No Gas	2115207.24	0.6
Cd	111	89	No Gas	448637.68	0.9
Cd	114	89	No Gas	1128657.18	0.3
Sn	118	115	No Gas	1429287.58	0.7
Sb	121	115	No Gas	2051004.99	0.5
Sb	121	89	He	469900.25	0.2
Sb	123	115	No Gas	1577334.47	0.3
Ba	135	115	No Gas	441307.43	0.9
Ba	137	115	No Gas	771272.55	0.8
Tl	203	209	No Gas	1817282.81	1.1
Tl	205	209	No Gas	4308555.54	1.3
Pb	206	209	No Gas	1443727.48	1.3
Pb	207	209	No Gas	1201389.83	0.4
Pb	208	209	No Gas	5618667.53	0.9
Th	232	209	No Gas	5710835.64	0.5
U	238	209	No Gas	5625628.56	0.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3432713.25	0.3	3546479.06	96.79	70	125	
Sc	45	No Gas	18049968.34	0.3	18068973.18	99.89	75	125	
Sc	45	He	786523.68	0.7	782598.87	100.5	75	125	
Y	89	No Gas	44189109.20	0.7	44605013.43	99.07	75	125	
Y	89	He	6025831.89	0.8	6105468.19	98.7	75	125	
In	115	No Gas	9741334.60	0.3	9924340.73	98.16	75	125	
Tb	159	No Gas	13811471.08	1.2	13751488.6	100.44	75	125	
Bi	209	No Gas	8325930.78	0.4	8506561.89	97.88	75	125	

Calibration Standard Report

Sample Name std 8

File Name 389CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:37:47

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	3989844.02	0.9
Be	9	6	No Gas	991468.53	1.6
B	11	6	No Gas	1631344.52	1.3
Na	23	45	No Gas	466833810.43	1.3
Na	23	45	He	13828263.96	0.5
Mg	24	45	No Gas	324390208.50	1.6
Mg	24	45	He	7112924.69	1.9
Mg	25	45	No Gas	43294599.36	1.8
Al	27	45	No Gas	4247590.87	2.0
Al	27	45	He	29244.34	1.6
Si	28	45	No Gas	172692612.96	1.8
Si	29	45	No Gas	10518264.33	1.4
K	39	45	No Gas	478274912.87	1.6
K	39	45	He	5942927.62	1.2
Ca	44	45	No Gas	14190808.54	2.4
Ca	44	45	He	337239.56	1.9
Ti	47	45	No Gas	466491.06	1.6
V	51	45	No Gas	5989984.11	2.1
V	51	45	He	813071.46	0.6
Cr	52	89	No Gas	5606239.79	2.0
Cr	52	89	He	947162.58	0.1
Cr	53	89	No Gas	730215.45	1.8
Mn	55	89	No Gas	7543072.05	1.5
Mn	55	89	He	548937.19	0.7
Fe	56	89	No Gas	535306861.96	1.7
Fe	56	89	He	67367522.33	0.5
Co	59	89	No Gas	6179314.95	2.1
Co	59	89	He	1605774.69	0.6
Ni	60	89	No Gas	1354854.02	1.7
Ni	60	89	He	455802.07	0.3
Ni	62	89	No Gas	208597.95	2.3
Cu	63	89	No Gas	3227296.58	2.1
Cu	63	89	He	1185010.22	0.3
Cu	65	89	No Gas	1543250.91	2.1
Zn	66	89	No Gas	968431.32	1.8

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	194037.85	0.8
Zn	67	89	No Gas	153485.29	0.7
Zn	68	89	No Gas	700446.33	1.6
As	75	89	No Gas	1014670.79	1.5
As	75	89	He	145745.75	1.1
Se	77	89	No Gas	60388.96	3.5
Se	78	89	No Gas	171614.56	2.0
Se	78	89	He	8858.50	0.5
Se	82	89	No Gas	63771.11	2.3
[Se]	83	89	No Gas	1665.13	6.4
Sr	88	89	No Gas	9652271.67	1.3
Mo	95	89	No Gas	1795343.73	1.9
Mo	97	89	No Gas	1115210.34	1.9
Mo	98	89	No Gas	2894625.11	2.6
[Mo]	99	89	No Gas	46.71	44.6
Cd	106	89	No Gas	138781.12	3.2
Ag	107	89	No Gas	4819817.31	1.3
Ag	107	89	He	2274579.17	0.9
Cd	108	89	No Gas	70943.73	0.7
Ag	109	89	No Gas	4561352.30	1.3
Cd	111	89	No Gas	960055.15	1.7
Cd	114	89	No Gas	2534147.44	2.1
Sn	118	115	No Gas	3135870.50	1.7
Sb	121	115	No Gas	4504726.90	2.0
Sb	121	89	He	1030800.20	1.0
Sb	123	115	No Gas	3517964.53	2.1
Ba	135	115	No Gas	984457.40	1.8
Ba	137	115	No Gas	1670848.98	1.4
Tl	203	209	No Gas	3904881.24	1.6
Tl	205	209	No Gas	9376229.17	2.3
Pb	206	209	No Gas	3192124.74	2.4
Pb	207	209	No Gas	2665452.12	1.8
Pb	208	209	No Gas	12507139.56	1.4
Th	232	209	No Gas	12534097.04	1.8
U	238	209	No Gas	12311896.51	2.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3266742.54	10.7	3546479.06	92.11	70	125	
Sc	45	No Gas	17447293.16	13.5	18068973.18	96.56	75	125	
Sc	45	He	785652.54	0.7	782598.87	100.39	75	125	
Y	89	No Gas	43301192.95	13.2	44605013.43	97.08	75	125	
Y	89	He	6031288.80	1.0	6105468.19	98.79	75	125	
In	115	No Gas	9559798.52	13.3	9924340.73	96.33	75	125	
Tb	159	No Gas	13239570.01	13.8	13751488.6	96.28	75	125	
Bi	209	No Gas	8048666.62	12.8	8506561.89	94.62	75	125	

Calibration Blank Report

Sample Name std 1

File Name 473CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 04:12:27

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 473CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	132309.55	0.5
Be	9	6	No Gas	193.53	23.3
B	11	6	No Gas	7122.37	4.2
Na	23	45	No Gas	725429.61	0.8
Na	23	45	He	24383.08	3.6
Mg	24	45	No Gas	12179.45	4.4
Mg	24	45	He	280.03	28.6
Mg	25	45	No Gas	1573.54	37.2
Al	27	45	No Gas	7869.43	9.0
Al	27	45	He	53.33	21.7
Si	28	45	No Gas	365911.82	5.0
Si	29	45	No Gas	52749.29	2.9
K	39	45	No Gas	3223937.76	0.7
K	39	45	He	20723.81	4.9
Ca	44	45	No Gas	12366.42	7.6
Ca	44	45	He	66.67	69.3
Ti	47	45	No Gas	146.81	10.4
V	51	45	No Gas	-697.06	-98.2
V	51	45	He	240.25	4.2
Cr	52	89	No Gas	20222.03	2.8
Cr	52	89	He	1514.96	6.6
Cr	53	89	No Gas	31818.93	0.6
Mn	55	89	No Gas	6614.95	2.5
Mn	55	89	He	310.32	18.0
Fe	56	89	No Gas	1760610.26	0.9
Fe	56	89	He	27202.37	6.6
Co	59	89	No Gas	1097.83	6.5
Co	59	89	He	200.21	22.9
Ni	60	89	No Gas	637.33	11.6
Ni	60	89	He	203.54	11.4
Ni	62	89	No Gas	3300.42	4.9
Cu	63	89	No Gas	12177.79	1.6
Cu	63	89	He	4238.30	4.4
Cu	65	89	No Gas	5586.84	1.7
Zn	66	89	No Gas	3050.12	3.7

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	497.18	20.2
Zn	67	89	No Gas	360.37	15.5
Zn	68	89	No Gas	1975.49	6.0
As	75	89	No Gas	2420.27	35.1
As	75	89	He	20.00	72.7
Se	77	89	No Gas	4708.96	5.9
Se	78	89	No Gas	14328.89	5.5
Se	78	89	He	21.11	59.8
Se	82	89	No Gas	151.38	26.4
[Se]	83	89	No Gas	977.70	1.6
Sr	88	89	No Gas	590.62	17.9
Mo	95	89	No Gas	483.84	10.2
Mo	97	89	No Gas	337.01	6.2
Mo	98	89	No Gas	876.05	11.7
[Mo]	99	89	No Gas	33.37	62.4
Cd	106	89	No Gas	32546.23	0.6
Ag	107	89	No Gas	457.79	9.9
Ag	107	89	He	153.49	27.2
Cd	108	89	No Gas	60.06	28.9
Ag	109	89	No Gas	193.53	13.0
Cd	111	89	No Gas	-53.33	-33.7
Cd	114	89	No Gas	60.06	44.1
Sn	118	115	No Gas	2284.66	4.1
Sb	121	115	No Gas	796.70	5.9
Sb	121	89	He	250.01	6.9
Sb	123	115	No Gas	730.77	13.7
Ba	135	115	No Gas	270.28	20.6
Ba	137	115	No Gas	493.85	15.7
Tl	203	209	No Gas	473.83	4.4
Tl	205	209	No Gas	1004.40	14.5
Pb	206	209	No Gas	8090.84	1.3
Pb	207	209	No Gas	6601.81	3.6
Pb	208	209	No Gas	31404.15	2.6
Th	232	209	No Gas	5500.20	17.2
U	238	209	No Gas	800.84	8.8

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	2134590.20	0.8
Sc	45	No Gas	12372233.93	0.4
Sc	45	He	565187.75	0.6
Y	89	No Gas	31927835.40	0.3
Y	89	He	4437352.88	0.9
In	115	No Gas	7113548.93	0.6
Tb	159	No Gas	10007593.45	0.7
Bi	209	No Gas	6095972.26	0.4

Calibration Standard Report

Sample Name std 2

File Name 474CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 04:14:09

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 473CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	137238.48	1.0
Be	9	6	No Gas	810.85	5.7
B	11	6	No Gas	7275.94	4.0
Na	23	45	No Gas	1032060.86	0.2
Na	23	45	He	34203.98	3.3
Mg	24	45	No Gas	243118.61	1.2
Mg	24	45	He	5788.34	5.0
Mg	25	45	No Gas	31450.48	4.5
Al	27	45	No Gas	14822.41	4.5
Al	27	45	He	80.00	12.5
Si	28	45	No Gas	490305.02	1.6
Si	29	45	No Gas	59057.44	1.3
K	39	45	No Gas	3519343.07	0.2
K	39	45	He	27028.59	4.7
Ca	44	45	No Gas	23154.46	5.6
Ca	44	45	He	346.69	26.6
Ti	47	45	No Gas	430.45	10.1
V	51	45	No Gas	2350.53	125.4
V	51	45	He	927.65	17.4
Cr	52	89	No Gas	23814.64	1.8
Cr	52	89	He	2065.59	3.4
Cr	53	89	No Gas	33568.34	2.4
Mn	55	89	No Gas	12014.11	3.1
Mn	55	89	He	620.65	14.8
Fe	56	89	No Gas	2082846.53	0.8
Fe	56	89	He	83793.91	0.6
Co	59	89	No Gas	5616.86	1.2
Co	59	89	He	1448.22	8.2
Ni	60	89	No Gas	1595.06	12.2
Ni	60	89	He	487.17	4.3
Ni	62	89	No Gas	3410.56	6.3
Cu	63	89	No Gas	14378.83	3.4
Cu	63	89	He	4949.26	6.4
Cu	65	89	No Gas	6681.79	1.1
Zn	66	89	No Gas	3447.28	6.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	830.87	8.4
Zn	67	89	No Gas	603.96	13.3
Zn	68	89	No Gas	2656.32	2.9
As	75	89	No Gas	3451.94	9.9
As	75	89	He	137.78	13.3
Se	77	89	No Gas	4885.86	3.5
Se	78	89	No Gas	14482.47	1.9
Se	78	89	He	30.00	22.2
Se	82	89	No Gas	127.45	91.0
[Se]	83	89	No Gas	1041.10	4.2
Sr	88	89	No Gas	7913.72	3.8
Mo	95	89	No Gas	1708.51	4.1
Mo	97	89	No Gas	1194.61	10.2
Mo	98	89	No Gas	2798.35	3.3
[Mo]	99	89	No Gas	10.01	173.2
Cd	106	89	No Gas	32566.27	1.0
Ag	107	89	No Gas	4466.33	4.7
Ag	107	89	He	2295.87	8.9
Cd	108	89	No Gas	170.18	15.6
Ag	109	89	No Gas	4064.76	2.3
Cd	111	89	No Gas	614.10	13.6
Cd	114	89	No Gas	2002.19	10.8
Sn	118	115	No Gas	4599.72	4.3
Sb	121	115	No Gas	4088.44	2.1
Sb	121	89	He	886.72	3.6
Sb	123	115	No Gas	3494.03	5.6
Ba	135	115	No Gas	1097.83	12.0
Ba	137	115	No Gas	1788.62	5.6
Tl	203	209	No Gas	3273.77	4.1
Tl	205	209	No Gas	7703.58	4.6
Pb	206	209	No Gas	10024.24	2.5
Pb	207	209	No Gas	8628.46	3.7
Pb	208	209	No Gas	39658.27	1.9
Th	232	209	No Gas	12358.81	4.2
U	238	209	No Gas	9887.39	3.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2140632.69	0.7	2134590.2	100.28	70	125	
Sc	45	No Gas	12315495.52	0.5	12372233.93	99.54	75	125	
Sc	45	He	567097.44	0.5	565187.75	100.34	75	125	
Y	89	No Gas	31786946.17	0.9	31927835.4	99.56	75	125	
Y	89	He	4417220.67	0.6	4437352.88	99.55	75	125	
In	115	No Gas	7120721.85	0.1	7113548.93	100.1	75	125	
Tb	159	No Gas	10040002.31	0.3	10007593.45	100.32	75	125	
Bi	209	No Gas	6115882.95	0.4	6095972.26	100.33	75	125	

Calibration Standard Report

Sample Name	std 3
File Name	475CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 04:15:52
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	473CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	157453.03	0.7
Be	9	6	No Gas	6858.65	2.9
B	11	6	No Gas	16399.47	1.3
Na	23	45	No Gas	3803440.97	1.8
Na	23	45	He	123670.09	2.3
Mg	24	45	No Gas	2166592.57	0.1
Mg	24	45	He	51699.14	2.7
Mg	25	45	No Gas	303676.22	2.1
Al	27	45	No Gas	41705.95	5.3
Al	27	45	He	300.01	26.0
Si	28	45	No Gas	1499640.48	0.5
Si	29	45	No Gas	129315.00	1.6
K	39	45	No Gas	6424080.94	0.5
K	39	45	He	65680.00	0.2
Ca	44	45	No Gas	125268.14	3.9
Ca	44	45	He	2480.41	8.1
Ti	47	45	No Gas	3480.65	6.6
V	51	45	No Gas	43443.40	2.1
V	51	45	He	6207.71	1.9
Cr	52	89	No Gas	59598.68	0.2
Cr	52	89	He	8684.92	0.5
Cr	53	89	No Gas	36886.78	1.0
Mn	55	89	No Gas	62179.71	1.4
Mn	55	89	He	4188.23	2.4
Fe	56	89	No Gas	5406611.58	0.1
Fe	56	89	He	616068.00	0.8
Co	59	89	No Gas	46402.06	1.8
Co	59	89	He	11880.58	2.1
Ni	60	89	No Gas	10491.37	1.4
Ni	60	89	He	3350.50	4.1
Ni	62	89	No Gas	4755.68	2.2
Cu	63	89	No Gas	35833.33	0.7
Cu	63	89	He	13186.45	3.3
Cu	65	89	No Gas	16630.31	2.6
Zn	66	89	No Gas	9773.44	2.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	1801.95	9.1
Zn	67	89	No Gas	1638.44	6.9
Zn	68	89	No Gas	7286.05	3.9
As	75	89	No Gas	9059.41	8.2
As	75	89	He	1082.27	4.8
Se	77	89	No Gas	5243.01	2.8
Se	78	89	No Gas	14876.65	3.3
Se	78	89	He	95.56	19.2
Se	82	89	No Gas	237.75	20.8
[Se]	83	89	No Gas	1021.08	1.7
Sr	88	89	No Gas	72957.71	1.6
Mo	95	89	No Gas	13594.05	4.2
Mo	97	89	No Gas	8715.05	4.3
Mo	98	89	No Gas	21773.11	2.3
[Mo]	99	89	No Gas	23.36	89.2
Cd	106	89	No Gas	32793.66	1.4
Ag	107	89	No Gas	37840.55	0.9
Ag	107	89	He	18060.57	1.5
Cd	108	89	No Gas	593.95	10.2
Ag	109	89	No Gas	36102.27	1.1
Cd	111	89	No Gas	7116.10	2.2
Cd	114	89	No Gas	18812.58	3.0
Sn	118	115	No Gas	25658.34	2.0
Sb	121	115	No Gas	34527.44	1.3
Sb	121	89	He	7815.78	2.3
Sb	123	115	No Gas	26744.22	0.6
Ba	135	115	No Gas	7736.84	2.1
Ba	137	115	No Gas	13093.21	3.0
Tl	203	209	No Gas	29497.94	3.0
Tl	205	209	No Gas	71787.58	1.3
Pb	206	209	No Gas	31461.37	1.7
Pb	207	209	No Gas	26113.80	1.9
Pb	208	209	No Gas	122421.81	1.7
Th	232	209	No Gas	91658.31	0.9
U	238	209	No Gas	92492.49	2.1

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2115872.90	0.4	2134590.2	99.12	70	125	
Sc	45	No Gas	12169143.33	0.4	12372233.93	98.36	75	125	
Sc	45	He	556050.22	0.5	565187.75	98.38	75	125	
Y	89	No Gas	31569535.43	0.3	31927835.4	98.88	75	125	
Y	89	He	4340262.88	0.7	4437352.88	97.81	75	125	
In	115	No Gas	7079959.30	0.6	7113548.93	99.53	75	125	
Tb	159	No Gas	9956505.90	1.1	10007593.45	99.49	75	125	
Bi	209	No Gas	6061310.04	1.1	6095972.26	99.43	75	125	

Calibration Standard Report

Sample Name	std 4
File Name	476CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 04:17:34
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	473CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	197436.58	0.5
Be	9	6	No Gas	17421.79	2.5
B	11	6	No Gas	31714.38	1.9
Na	23	45	No Gas	8443986.38	0.4
Na	23	45	He	272232.89	1.0
Mg	24	45	No Gas	5380731.59	1.0
Mg	24	45	He	130856.31	1.4
Mg	25	45	No Gas	752060.80	3.8
Al	27	45	No Gas	85384.73	0.9
Al	27	45	He	726.79	36.7
Si	28	45	No Gas	3277219.31	0.3
Si	29	45	No Gas	250630.25	0.6
K	39	45	No Gas	11380876.50	0.4
K	39	45	He	136920.86	1.3
Ca	44	45	No Gas	291370.46	1.7
Ca	44	45	He	6348.70	4.6
Ti	47	45	No Gas	8270.88	1.6
V	51	45	No Gas	114193.99	2.1
V	51	45	He	14575.88	3.5
Cr	52	89	No Gas	121727.31	0.5
Cr	52	89	He	19129.43	1.6
Cr	53	89	No Gas	45190.00	1.0
Mn	55	89	No Gas	147578.82	0.6
Mn	55	89	He	10745.12	4.3
Fe	56	89	No Gas	10968154.67	1.2
Fe	56	89	He	1170083.58	1.7
Co	59	89	No Gas	116748.47	1.1
Co	59	89	He	30036.66	4.2
Ni	60	89	No Gas	25907.49	2.2
Ni	60	89	He	7836.86	1.8
Ni	62	89	No Gas	7089.04	5.6
Cu	63	89	No Gas	70807.66	0.8
Cu	63	89	He	26061.24	3.4
Cu	65	89	No Gas	34535.46	0.7
Zn	66	89	No Gas	19630.73	3.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	4074.77	1.5
Zn	67	89	No Gas	3043.45	6.5
Zn	68	89	No Gas	14275.33	3.6
As	75	89	No Gas	20887.66	6.3
As	75	89	He	2775.86	3.8
Se	77	89	No Gas	5954.04	6.0
Se	78	89	No Gas	16313.00	1.0
Se	78	89	He	181.11	10.5
Se	82	89	No Gas	1071.43	13.9
[Se]	83	89	No Gas	1087.82	10.1
Sr	88	89	No Gas	183845.88	0.6
Mo	95	89	No Gas	33960.81	1.9
Mo	97	89	No Gas	21211.64	2.6
Mo	98	89	No Gas	54346.12	2.2
[Mo]	99	89	No Gas	16.68	124.9
Cd	106	89	No Gas	33174.97	1.3
Ag	107	89	No Gas	92544.17	0.1
Ag	107	89	He	44475.95	0.9
Cd	108	89	No Gas	1558.34	2.6
Ag	109	89	No Gas	88751.30	0.9
Cd	111	89	No Gas	17688.77	2.0
Cd	114	89	No Gas	47265.28	1.0
Sn	118	115	No Gas	61634.57	1.2
Sb	121	115	No Gas	85206.48	0.5
Sb	121	89	He	19498.05	1.1
Sb	123	115	No Gas	65733.33	0.6
Ba	135	115	No Gas	19056.64	1.2
Ba	137	115	No Gas	32700.74	0.6
Tl	203	209	No Gas	76247.82	0.8
Tl	205	209	No Gas	180328.16	0.3
Pb	206	209	No Gas	67861.74	0.2
Pb	207	209	No Gas	55797.09	0.9
Pb	208	209	No Gas	261123.24	0.5
Th	232	209	No Gas	233507.71	0.8
U	238	209	No Gas	232377.50	0.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2104557.46	0.3	2134590.2	98.59	70	125	
Sc	45	No Gas	12192665.19	0.1	12372233.93	98.55	75	125	
Sc	45	He	559626.91	2.4	565187.75	99.02	75	125	
Y	89	No Gas	31405738.30	0.1	31927835.4	98.36	75	125	
Y	89	He	4357039.86	1.9	4437352.88	98.19	75	125	
In	115	No Gas	7106390.22	0.8	7113548.93	99.9	75	125	
Tb	159	No Gas	9904907.85	0.2	10007593.45	98.97	75	125	
Bi	209	No Gas	6066266.70	0.4	6095972.26	99.51	75	125	

Calibration Standard Report

Sample Name	std 5
File Name	477CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 04:19:19
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	473CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	261451.22	0.5
Be	9	6	No Gas	34139.26	1.1
B	11	6	No Gas	58429.43	2.5
Na	23	45	No Gas	16188006.09	0.7
Na	23	45	He	528379.24	2.2
Mg	24	45	No Gas	10674245.26	0.1
Mg	24	45	He	263821.55	1.0
Mg	25	45	No Gas	1430586.54	1.0
Al	27	45	No Gas	159987.11	2.4
Al	27	45	He	1176.74	2.0
Si	28	45	No Gas	6235237.33	0.4
Si	29	45	No Gas	454608.80	0.4
K	39	45	No Gas	19567240.13	0.8
K	39	45	He	255751.46	1.1
Ca	44	45	No Gas	571674.14	1.2
Ca	44	45	He	13047.27	6.7
Ti	47	45	No Gas	16596.84	2.1
V	51	45	No Gas	221255.62	1.0
V	51	45	He	28297.62	2.2
Cr	52	89	No Gas	222587.44	0.4
Cr	52	89	He	36950.17	2.1
Cr	53	89	No Gas	60685.02	1.4
Mn	55	89	No Gas	288468.36	0.5
Mn	55	89	He	20295.68	2.4
Fe	56	89	No Gas	20352037.44	0.6
Fe	56	89	He	2322793.04	1.0
Co	59	89	No Gas	230979.82	1.1
Co	59	89	He	60417.28	0.9
Ni	60	89	No Gas	51230.77	2.0
Ni	60	89	He	16179.32	1.7
Ni	62	89	No Gas	11079.08	3.8
Cu	63	89	No Gas	132302.82	3.0
Cu	63	89	He	48243.86	1.5
Cu	65	89	No Gas	63823.52	0.7
Zn	66	89	No Gas	36987.72	1.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	7503.03	3.1
Zn	67	89	No Gas	5646.92	4.5
Zn	68	89	No Gas	26479.25	0.7
As	75	89	No Gas	39597.92	1.8
As	75	89	He	5322.18	0.7
Se	77	89	No Gas	7212.59	4.2
Se	78	89	No Gas	19527.20	2.4
Se	78	89	He	322.23	17.8
Se	82	89	No Gas	2300.28	2.5
[Se]	83	89	No Gas	1011.07	6.9
Sr	88	89	No Gas	366328.63	0.5
Mo	95	89	No Gas	67417.30	1.3
Mo	97	89	No Gas	42236.21	2.3
Mo	98	89	No Gas	108822.97	0.9
[Mo]	99	89	No Gas	30.03	100.0
Cd	106	89	No Gas	34814.24	2.8
Ag	107	89	No Gas	185669.82	0.8
Ag	107	89	He	87675.92	0.8
Cd	108	89	No Gas	2723.05	5.7
Ag	109	89	No Gas	176928.89	0.2
Cd	111	89	No Gas	35218.56	2.4
Cd	114	89	No Gas	94618.89	2.0
Sn	118	115	No Gas	120990.91	1.2
Sb	121	115	No Gas	172124.50	0.6
Sb	121	89	He	38563.69	0.2
Sb	123	115	No Gas	133362.67	1.4
Ba	135	115	No Gas	37511.82	3.3
Ba	137	115	No Gas	65446.42	1.4
Tl	203	209	No Gas	152070.11	1.2
Tl	205	209	No Gas	360561.85	0.7
Pb	206	209	No Gas	128471.74	1.6
Pb	207	209	No Gas	105962.30	0.4
Pb	208	209	No Gas	498533.97	0.5
Th	232	209	No Gas	473539.39	0.4
U	238	209	No Gas	469163.42	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2087958.55	0.2	2134590.2	97.82	70	125	
Sc	45	No Gas	12168849.29	0.8	12372233.93	98.36	75	125	
Sc	45	He	566519.74	0.6	565187.75	100.24	75	125	
Y	89	No Gas	31469024.09	0.5	31927835.4	98.56	75	125	
Y	89	He	4344816.70	0.9	4437352.88	97.91	75	125	
In	115	No Gas	7097265.69	0.4	7113548.93	99.77	75	125	
Tb	159	No Gas	9968790.06	0.4	10007593.45	99.61	75	125	
Bi	209	No Gas	6134069.76	0.7	6095972.26	100.62	75	125	

Calibration Standard Report

Sample Name	std 6
File Name	478CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 04:21:02
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	473CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	704088.10	0.3
Be	9	6	No Gas	169892.00	0.5
B	11	6	No Gas	272502.06	0.6
Na	23	45	No Gas	78327833.00	0.3
Na	23	45	He	2321655.54	0.1
Mg	24	45	No Gas	53297235.87	0.3
Mg	24	45	He	1200204.75	0.4
Mg	25	45	No Gas	7135029.48	0.6
Al	27	45	No Gas	758998.74	0.4
Al	27	45	He	5451.16	7.4
Si	28	45	No Gas	30007711.94	0.1
Si	29	45	No Gas	1880611.81	0.2
K	39	45	No Gas	85969312.05	0.6
K	39	45	He	1054893.68	0.7
Ca	44	45	No Gas	2471869.34	0.1
Ca	44	45	He	63737.87	2.0
Ti	47	45	No Gas	83522.73	1.0
V	51	45	No Gas	969993.63	0.9
V	51	45	He	144301.78	0.2
Cr	52	89	No Gas	947999.80	0.8
Cr	52	89	He	181890.41	0.6
Cr	53	89	No Gas	155316.47	0.9
Mn	55	89	No Gas	1300828.54	0.2
Mn	55	89	He	100295.03	1.8
Fe	56	89	No Gas	94547625.03	0.7
Fe	56	89	He	11573102.33	0.3
Co	59	89	No Gas	1053403.17	0.6
Co	59	89	He	301124.14	0.2
Ni	60	89	No Gas	251961.15	0.2
Ni	60	89	He	81540.55	0.5
Ni	62	89	No Gas	40437.43	1.0
Cu	63	89	No Gas	620394.10	0.4
Cu	63	89	He	226917.35	0.3
Cu	65	89	No Gas	293395.39	1.0
Zn	66	89	No Gas	174008.15	0.6

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	35388.42	0.9
Zn	67	89	No Gas	26974.05	0.9
Zn	68	89	No Gas	125941.80	0.2
As	75	89	No Gas	190699.82	0.2
As	75	89	He	26835.49	1.4
Se	77	89	No Gas	14449.08	2.6
Se	78	89	No Gas	41682.77	1.2
Se	78	89	He	1727.90	4.1
Se	82	89	No Gas	11862.90	0.7
[Se]	83	89	No Gas	947.67	14.1
Sr	88	89	No Gas	1710841.94	0.8
Mo	95	89	No Gas	339912.23	0.6
Mo	97	89	No Gas	212771.69	0.9
Mo	98	89	No Gas	543455.73	0.5
[Mo]	99	89	No Gas	33.37	17.3
Cd	106	89	No Gas	49669.55	1.0
Ag	107	89	No Gas	921537.78	0.3
Ag	107	89	He	440185.53	0.2
Cd	108	89	No Gas	13113.16	2.3
Ag	109	89	No Gas	887724.76	0.4
Cd	111	89	No Gas	181735.15	0.5
Cd	114	89	No Gas	472826.29	0.6
Sn	118	115	No Gas	604326.85	0.2
Sb	121	115	No Gas	869386.13	0.2
Sb	121	89	He	198341.02	0.5
Sb	123	115	No Gas	668048.88	0.4
Ba	135	115	No Gas	188964.52	0.8
Ba	137	115	No Gas	328980.32	0.6
Tl	203	209	No Gas	768732.59	0.7
Tl	205	209	No Gas	1718842.49	0.4
Pb	206	209	No Gas	617559.89	0.4
Pb	207	209	No Gas	505047.29	0.3
Pb	208	209	No Gas	2316088.50	0.4
Th	232	209	No Gas	2284521.51	0.1
U	238	209	No Gas	2223237.98	0.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2059763.71	0.5	2134590.2	96.49	70	125	
Sc	45	No Gas	12094303.08	0.3	12372233.93	97.75	75	125	
Sc	45	He	564982.55	0.1	565187.75	99.96	75	125	
Y	89	No Gas	31220440.51	0.5	31927835.4	97.78	75	125	
Y	89	He	4361418.41	0.5	4437352.88	98.29	75	125	
In	115	No Gas	7018089.10	0.3	7113548.93	98.66	75	125	
Tb	159	No Gas	9908620.52	0.5	10007593.45	99.01	75	125	
Bi	209	No Gas	6012683.23	0.5	6095972.26	98.63	75	125	

Calibration Standard Report

Sample Name	std 7
File Name	479CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 04:22:47
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	473CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1160461.82	0.2
Be	9	6	No Gas	302150.54	0.3
B	11	6	No Gas	484286.55	0.2
Na	23	45	No Gas	139686203.12	0.6
Na	23	45	He	4109946.81	0.4
Mg	24	45	No Gas	94835991.92	0.2
Mg	24	45	He	2110418.04	0.7
Mg	25	45	No Gas	12675302.31	0.7
Al	27	45	No Gas	1251811.62	0.9
Al	27	45	He	9586.77	3.7
Si	28	45	No Gas	53142647.76	0.2
Si	29	45	No Gas	3278386.42	0.2
K	39	45	No Gas	149974954.43	0.8
K	39	45	He	1855803.88	0.9
Ca	44	45	No Gas	4352325.15	0.7
Ca	44	45	He	109708.02	1.8
Ti	47	45	No Gas	147557.32	1.4
V	51	45	No Gas	1751188.23	0.5
V	51	45	He	258542.47	0.3
Cr	52	89	No Gas	1687790.09	0.2
Cr	52	89	He	319140.57	0.3
Cr	53	89	No Gas	251309.53	0.3
Mn	55	89	No Gas	2330559.47	0.2
Mn	55	89	He	176701.04	1.1
Fe	56	89	No Gas	167337441.24	0.2
Fe	56	89	He	20422969.70	0.9
Co	59	89	No Gas	1876770.37	0.3
Co	59	89	He	534039.68	0.2
Ni	60	89	No Gas	446449.03	0.8
Ni	60	89	He	143734.61	1.0
Ni	62	89	No Gas	69526.44	1.4
Cu	63	89	No Gas	1040879.74	3.9
Cu	63	89	He	399918.04	0.6
Cu	65	89	No Gas	521704.61	0.2
Zn	66	89	No Gas	308291.35	0.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	61563.96	0.4
Zn	67	89	No Gas	48334.31	1.4
Zn	68	89	No Gas	220848.50	1.5
As	75	89	No Gas	337494.80	0.7
As	75	89	He	47396.02	1.2
Se	77	89	No Gas	22003.43	1.4
Se	78	89	No Gas	63878.49	0.6
Se	78	89	He	2931.45	4.2
Se	82	89	No Gas	20601.91	1.6
[Se]	83	89	No Gas	1077.81	1.4
Sr	88	89	No Gas	3053119.27	0.0
Mo	95	89	No Gas	609179.32	0.2
Mo	97	89	No Gas	378319.60	0.2
Mo	98	89	No Gas	982144.77	0.4
[Mo]	99	89	No Gas	30.03	33.3
Cd	106	89	No Gas	62979.03	0.7
Ag	107	89	No Gas	1532669.98	0.4
Ag	107	89	He	776936.36	0.3
Cd	108	89	No Gas	23848.90	1.7
Ag	109	89	No Gas	1472246.94	0.9
Cd	111	89	No Gas	322396.59	0.4
Cd	114	89	No Gas	842922.25	0.7
Sn	118	115	No Gas	1076857.81	0.1
Sb	121	115	No Gas	1442081.47	0.1
Sb	121	89	He	351178.54	0.6
Sb	123	115	No Gas	1113125.84	0.7
Ba	135	115	No Gas	334115.69	1.1
Ba	137	115	No Gas	587230.47	0.8
Tl	203	209	No Gas	1292455.32	0.6
Tl	205	209	No Gas	3081762.60	0.4
Pb	206	209	No Gas	1094579.63	0.1
Pb	207	209	No Gas	904428.28	0.6
Pb	208	209	No Gas	4149471.67	0.1
Th	232	209	No Gas	4141755.62	0.3
U	238	209	No Gas	4006000.59	0.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2019985.04	0.2	2134590.2	94.63	70	125	
Sc	45	No Gas	12036231.26	0.3	12372233.93	97.28	75	125	
Sc	45	He	556032.01	0.8	565187.75	98.38	75	125	
Y	89	No Gas	31018770.50	0.2	31927835.4	97.15	75	125	
Y	89	He	4299652.16	0.9	4437352.88	96.9	75	125	
In	115	No Gas	6923925.64	0.8	7113548.93	97.33	75	125	
Tb	159	No Gas	9846511.95	0.3	10007593.45	98.39	75	125	
Bi	209	No Gas	5997054.35	0.2	6095972.26	98.38	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	480CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 04:24:38
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	473CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	2392732.63	0.9
Be	9	6	No Gas	658523.13	0.8
B	11	6	No Gas	959821.26	0.9
Na	23	45	No Gas	300853390.06	0.7
Na	23	45	He	8917539.66	0.5
Mg	24	45	No Gas	206909456.92	0.9
Mg	24	45	He	4648699.31	0.1
Mg	25	45	No Gas	27453387.92	0.7
Al	27	45	No Gas	2727605.58	0.6
Al	27	45	He	20335.12	1.2
Si	28	45	No Gas	113824471.37	1.1
Si	29	45	No Gas	6990015.24	1.3
K	39	45	No Gas	325174721.82	1.4
K	39	45	He	4065909.73	0.6
Ca	44	45	No Gas	9541754.86	1.5
Ca	44	45	He	245615.72	0.7
Ti	47	45	No Gas	329774.64	1.3
V	51	45	No Gas	3890676.58	1.3
V	51	45	He	571813.92	0.6
Cr	52	89	No Gas	3688058.38	1.1
Cr	52	89	He	699565.84	0.6
Cr	53	89	No Gas	514376.14	1.0
Mn	55	89	No Gas	5102095.23	0.8
Mn	55	89	He	391598.14	0.3
Fe	56	89	No Gas	365132816.50	0.2
Fe	56	89	He	45083120.99	0.5
Co	59	89	No Gas	4119461.87	1.2
Co	59	89	He	1060640.04	0.6
Ni	60	89	No Gas	973348.35	0.8
Ni	60	89	He	312391.52	1.0
Ni	62	89	No Gas	148220.20	1.0
Cu	63	89	No Gas	2201239.47	0.6
Cu	63	89	He	855488.25	0.5
Cu	65	89	No Gas	1040820.64	0.6
Zn	66	89	No Gas	667013.55	1.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	134746.13	0.4
Zn	67	89	No Gas	105613.05	0.7
Zn	68	89	No Gas	478286.69	0.6
As	75	89	No Gas	746584.57	0.6
As	75	89	He	105405.26	0.2
Se	77	89	No Gas	42017.57	1.1
Se	78	89	No Gas	124373.14	0.3
Se	78	89	He	6662.78	1.5
Se	82	89	No Gas	46005.95	1.7
[Se]	83	89	No Gas	1001.05	5.6
Sr	88	89	No Gas	6767046.64	0.5
Mo	95	89	No Gas	1262419.48	0.6
Mo	97	89	No Gas	843498.94	0.1
Mo	98	89	No Gas	2024628.76	0.8
[Mo]	99	89	No Gas	56.72	56.7
Cd	106	89	No Gas	99564.17	0.3
Ag	107	89	No Gas	3341313.76	0.8
Ag	107	89	He	1567179.21	0.4
Cd	108	89	No Gas	51377.61	1.4
Ag	109	89	No Gas	3226534.77	0.4
Cd	111	89	No Gas	704953.72	0.9
Cd	114	89	No Gas	1740367.82	0.8
Sn	118	115	No Gas	2237990.54	0.5
Sb	121	115	No Gas	3200009.11	0.6
Sb	121	89	He	771289.62	0.4
Sb	123	115	No Gas	2472254.29	1.1
Ba	135	115	No Gas	734468.43	0.4
Ba	137	115	No Gas	1211666.59	0.8
Tl	203	209	No Gas	2838333.24	1.3
Tl	205	209	No Gas	6775672.98	1.2
Pb	206	209	No Gas	2280823.02	1.6
Pb	207	209	No Gas	1881620.43	1.2
Pb	208	209	No Gas	8848485.64	1.2
Th	232	209	No Gas	9179707.02	0.9
U	238	209	No Gas	8861241.47	0.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1971181.45	1.0	2134590.2	92.34	70	125	
Sc	45	No Gas	12020866.31	0.6	12372233.93	97.16	75	125	
Sc	45	He	554974.19	0.1	565187.75	98.19	75	125	
Y	89	No Gas	31031348.08	0.5	31927835.4	97.19	75	125	
Y	89	He	4309676.14	0.6	4437352.88	97.12	75	125	
In	115	No Gas	6842916.68	0.5	7113548.93	96.2	75	125	
Tb	159	No Gas	9835026.09	0.8	10007593.45	98.28	75	125	
Bi	209	No Gas	5895033.10	0.6	6095972.26	96.7	75	125	

Initial Calibration Verification (ICV) Report

Sample Name ICV

File Name 044_ICV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:31:52

Sample Type ICV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	77.711	ppb	0.9	2792527.85	80	97.14	90	110	
Be	9	6	No Gas	77.471	ppb	0.8	648580.14	80	96.84	90	110	
B	11	6	No Gas	183.764	ppb	1.7	1067030.84	200	91.88	90	110	
Na	23	45	No Gas	8165.144	ppb	1.2	297265256.65	8000	102.06	90	110	
Na	23	45	He	7980.770	ppb	0.4	8531113.41	8000	99.76	90	110	
Mg	24	45	No Gas	7934.073	ppb	2.3	198812410.37	8000	99.18	90	110	
Mg	24	45	He	7945.021	ppb	0.6	4327522.64	8000	99.31	90	110	
Mg	25	45	No Gas	8201.385	ppb	0.8	27515085.42	8000	102.52	90	110	
Al	27	45	No Gas	79.166	ppb	1.6	2568052.57	80	98.96	90	110	
Al	27	45	He	79.532	ppb	1.5	16770.40	80	99.42	90	110	
Si	28	45	No Gas	8415.457	ppb	2.6	109230797.69	8000	105.19	90	110	
Si	29	45	No Gas	8542.842	ppb	0.8	6900579.76	8000	106.79	90	110	
K	39	45	No Gas	8092.236	ppb	0.9	281363069.14	8000	101.15	90	110	
K	39	45	He	7963.360	ppb	0.2	3482442.03	8000	99.54	90	110	
Ca	44	45	No Gas	7962.653	ppb	0.8	8410264.04	8000	99.53	90	110	
Ca	44	45	He	8066.328	ppb	0.9	187124.35	8000	100.83	90	110	
Ti	47	45	No Gas	79.866	ppb	0.6	259807.93	80	99.83	90	110	
V	51	45	No Gas	80.262	ppb	1.5	3466036.45	80	100.33	90	110	
V	51	45	He	82.506	ppb	1.1	450227.39	80	103.13	90	110	
Cr	52	89	No Gas	80.995	ppb	0.7	3248871.17	80	101.24	90	110	
Cr	52	89	He	79.512	ppb	0.7	574003.37	80	99.39	90	110	
Cr	53	89	No Gas	79.676	ppb	0.1	441199.68	80	99.6	90	110	
Mn	55	89	No Gas	80.923	ppb	1.1	4337486.77	80	101.15	90	110	
Mn	55	89	He	79.448	ppb	0.5	302349.75	80	99.31	90	110	
Fe	56	89	No Gas	8269.273	ppb	2.2	319432032.14	8000	103.37	90	110	
Fe	56	89	He	7884.522	ppb	0.2	39470499.41	8000	98.56	90	110	
Co	59	89	No Gas	82.066	ppb	0.6	3563732.07	80	102.58	90	110	
Co	59	89	He	79.210	ppb	1.1	943635.36	80	99.01	90	110	
Ni	60	89	No Gas	80.993	ppb	0.7	785213.34	80	101.24	90	110	
Ni	60	89	He	78.362	ppb	0.6	258373.19	80	97.95	90	110	
Ni	62	89	No Gas	82.180	ppb	2.5	122138.73	80	102.72	90	110	
Cu	63	89	No Gas	83.648	ppb	2.3	1962019.84	80	104.56	90	110	
Cu	63	89	He	79.466	ppb	0.6	717831.87	80	99.33	90	110	
Cu	65	89	No Gas	82.314	ppb	2.3	924450.49	80	102.89	90	110	

Initial Calibration Verification (ICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	82.302	ppb	0.5	548102.53	80	102.88	90	110	
Zn	66	89	He	79.953	ppb	1.9	108434.96	80	99.94	90	110	
Zn	67	89	No Gas	82.101	ppb	0.4	85597.50	80	102.63	90	110	
Zn	68	89	No Gas	81.108	ppb	0.8	386648.52	80	101.39	90	110	
As	75	89	No Gas	81.025	ppb	0.6	562007.30	80	101.28	90	110	
As	75	89	He	78.653	ppb	0.5	77508.49	80	98.32	90	110	
Se	77	89	No Gas	81.359	ppb	3.0	38312.86	80	101.7	90	110	
Se	78	89	No Gas	82.571	ppb	2.7	101167.67	80	103.21	90	110	
Se	78	89	He	81.040	ppb	1.8	4788.66	80	101.3	90	110	
Se	82	89	No Gas	84.303	ppb	3.2	34408.32	80	105.38	90	110	
[Se]	83	89	No Gas	192.575	ppb	335.8	2149.03	80	240.72	90	110	Failed
Sr	88	89	No Gas	78.301	ppb	0.9	4918675.56	80	97.88	90	110	
Mo	95	89	No Gas	76.701	ppb	1.1	930994.43	80	95.88	90	110	
Mo	97	89	No Gas	78.058	ppb	2.8	586491.14	80	97.57	90	110	
Mo	98	89	No Gas	79.372	ppb	2.6	1532124.50	80	99.22	90	110	
[Mo]	99	89	No Gas	70.361	ppb	164.4	33.37	80	87.95	90	110	Failed
Cd	106	89	No Gas	79.695	ppb	2.5	103374.81	80	99.62	90	110	
Ag	107	89	No Gas	79.816	ppb	0.3	2624217.88	80	99.77	90	110	
Ag	107	89	He	77.345	ppb	1.3	1286009.45	80	96.68	90	110	
Cd	108	89	No Gas	82.799	ppb	0.7	37079.27	80	103.5	90	110	
Ag	109	89	No Gas	81.010	ppb	2.3	2565830.89	80	101.26	90	110	
Cd	111	89	No Gas	82.089	ppb	1.6	508648.06	80	102.61	90	110	
Cd	114	89	No Gas	81.680	ppb	0.6	1321086.71	80	102.1	90	110	
Sn	118	115	No Gas	78.053	ppb	1.3	1592769.70	80	97.57	90	110	
Sb	121	115	No Gas	81.155	ppb	1.7	2392910.32	80	101.44	90	110	
Sb	121	89	He	80.294	ppb	0.5	511517.91	80	100.37	90	110	
Sb	123	115	No Gas	80.751	ppb	0.3	1808888.58	80	100.94	90	110	
Ba	135	115	No Gas	80.093	ppb	0.5	469793.05	80	100.12	90	110	
Ba	137	115	No Gas	78.894	ppb	0.9	816467.85	80	98.62	90	110	
Tl	203	209	No Gas	80.232	ppb	2.0	1993831.34	80	100.29	90	110	
Tl	205	209	No Gas	81.562	ppb	1.6	4795748.05	80	101.95	90	110	
Pb	206	209	No Gas	81.264	ppb	1.4	1589128.35	80	101.58	90	110	
Pb	207	209	No Gas	80.678	ppb	0.7	1302684.48	80	100.85	90	110	
Pb	208	209	No Gas	80.350	ppb	0.5	6084599.90	80	100.44	90	110	
Th	232	209	No Gas	78.080	ppb	2.6	6063720.40	80	97.6	90	110	
U	238	209	No Gas	77.365	ppb	2.8	5905182.49	80	96.71	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5767992.52	1.0	6069758.49	95.03	70	125	
Sc	45	No Gas	26590938.49	1.0	26854717.27	99.02	75	125	
Sc	45	He	1087014.68	0.8	1086551.24	100.04	75	125	
Y	89	No Gas	58703226.68	1.0	60596358.15	96.88	75	125	
Y	89	He	8123383.82	0.8	8174748.93	99.37	75	125	
In	115	No Gas	12580707.61	1.1	13007558.49	96.72	75	125	
Tb	159	No Gas	17160149.35	0.3	17536754.71	97.85	75	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10210357.37	0.8	10657708.47	95.8	75	125	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	045_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 15:33:37
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.003	ppb	N/A	306319.48	100	
Be	9	6	No Gas	0.008	ppb	22.8	120.12	100	
B	11	6	No Gas	2.164	ppb	14.1	20362.05	100	
Na	23	45	No Gas	0.291	ppb	26.1	373358.32	500000	
Na	23	45	He	0.955	ppb	87.5	17532.39	500000	
Mg	24	45	No Gas	0.392	ppb	59.4	20070.09	500000	
Mg	24	45	He	0.458	ppb	40.5	493.39	500000	
Mg	25	45	No Gas	0.420	ppb	65.9	2760.50	500000	
Al	27	45	No Gas	-0.116	ppb	N/A	13287.34	500000	
Al	27	45	He	-0.474	ppb	N/A	56.67	500000	
Si	28	45	No Gas	13.598	ppb	22.0	660865.84	100	
Si	29	45	No Gas	12.715	ppb	4.8	103996.46	100	
K	39	45	No Gas	0.281	ppb	248.8	4872748.68	500000	
K	39	45	He	-2.543	ppb	N/A	27669.29	500000	
Ca	44	45	No Gas	-2.892	ppb	N/A	170981.64	500000	
Ca	44	45	He	0.236	ppb	3081.2	293.35	500000	
Ti	47	45	No Gas	-0.035	ppb	N/A	380.39	10000	
V	51	45	No Gas	0.032	ppb	377.7	-2201.73	100	
V	51	45	He	0.023	ppb	59.5	580.61	100	
Cr	52	89	No Gas	0.123	ppb	28.7	38663.45	100	
Cr	52	89	He	-0.004	ppb	N/A	2933.29	100	
Cr	53	89	No Gas	1.568	ppb	26.2	70863.33	100	
Mn	55	89	No Gas	-0.014	ppb	N/A	10748.41	100	
Mn	55	89	He	0.002	ppb	521.2	180.18	100	
Fe	56	89	No Gas	-3.703	ppb	N/A	2320883.32	500000	
Fe	56	89	He	2.759	ppb	45.3	66459.42	500000	
Co	59	89	No Gas	0.007	ppb	46.4	1695.17	100	
Co	59	89	He	0.004	ppb	42.6	363.71	100	
Ni	60	89	No Gas	-0.004	ppb	N/A	1154.56	100	
Ni	60	89	He	-0.149	ppb	N/A	380.39	100	
Ni	62	89	No Gas	-0.050	ppb	N/A	5933.99	100	
Cu	63	89	No Gas	-0.028	ppb	N/A	15227.25	100	
Cu	63	89	He	-0.019	ppb	N/A	4258.33	100	
Cu	65	89	No Gas	-0.064	ppb	N/A	7015.60	100	

Initial Calibration Blank (ICB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.012	ppb	N/A	2235.79	100	
Zn	66	89	He	-0.039	ppb	N/A	407.09	100	
Zn	67	89	No Gas	-0.035	ppb	N/A	393.74	100	
Zn	68	89	No Gas	0.009	ppb	426.8	1711.85	100	
As	75	89	No Gas	0.056	ppb	294.4	4902.04	100	
As	75	89	He	0.032	ppb	18.4	71.11	100	
Se	77	89	No Gas	3.404	ppb	37.4	11737.01	100	
Se	78	89	No Gas	0.271	ppb	206.0	18651.78	100	
Se	78	89	He	0.086	ppb	371.9	34.44	100	
Se	82	89	No Gas	-0.028	ppb	N/A	-114.70	100	
[Se]	83	89	No Gas	-364.288	ppb	N/A	2362.62	100	
Sr	88	89	No Gas	0.004	ppb	21.4	817.53	100	
Mo	95	89	No Gas	0.041	ppb	152.0	3433.97	10000	
Mo	97	89	No Gas	0.055	ppb	99.7	2235.80	10000	
Mo	98	89	No Gas	0.060	ppb	77.0	5792.39	10000	
[Mo]	99	89	No Gas	-48.990	ppb	N/A	10.01	10000	
Cd	106	89	No Gas	-0.923	ppb	N/A	56966.18	100	
Ag	107	89	No Gas	-4.957	ppb	N/A	33819.44	100	
Ag	107	89	He	-5.528	ppb	N/A	32553.02	100	
Cd	108	89	No Gas	0.006	ppb	517.3	143.48	100	
Ag	109	89	No Gas	-4.899	ppb	N/A	31700.56	100	
Cd	111	89	No Gas	0.006	ppb	32.7	-100.62	100	
Cd	114	89	No Gas	0.008	ppb	62.2	263.60	100	
Sn	118	115	No Gas	0.062	ppb	19.1	5600.12	100	
Sb	121	115	No Gas	-0.146	ppb	N/A	2104.63	100	
Sb	121	89	He	-0.181	ppb	N/A	623.36	100	
Sb	123	115	No Gas	-0.145	ppb	N/A	1588.39	100	
Ba	135	115	No Gas	0.011	ppb	71.8	146.82	100	
Ba	137	115	No Gas	0.012	ppb	75.7	306.98	100	
Tl	203	209	No Gas	0.041	ppb	9.0	1384.82	100	
Tl	205	209	No Gas	0.038	ppb	17.6	3130.25	100	
Pb	206	209	No Gas	0.046	ppb	17.6	2542.85	100	
Pb	207	209	No Gas	0.045	ppb	44.7	2055.60	100	
Pb	208	209	No Gas	0.045	ppb	20.8	9634.62	100	
Th	232	209	No Gas	0.209	ppb	21.6	20344.45	100	
U	238	209	No Gas	0.086	ppb	19.4	7346.45	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5843186.20	1.2	6069758.49	96.27	70	125	
Sc	45	No Gas	26250724.11	0.1	26854717.27	97.75	75	125	
Sc	45	He	1067038.46	0.9	1086551.24	98.2	75	125	
Y	89	No Gas	59534331.12	0.8	60596358.15	98.25	75	125	
Y	89	He	8037396.37	0.9	8174748.93	98.32	75	125	
In	115	No Gas	12844524.95	0.8	13007558.49	98.75	75	125	
Tb	159	No Gas	17166410.20	0.4	17536754.71	97.89	75	125	

Initial Calibration Blank (ICB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10363835.14	0.6	10657708.47	97.24	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICV

File Name 046LICV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:35:13

Sample Type LLICV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Li	7	6	No Gas	9.786	ppb	1.3	626344.34	10	97.86	80	120	
Be	9	6	No Gas	1.941	ppb	1.5	16566.50	2	97.05	80	120	
B	11	6	No Gas	19.290	ppb	0.8	120842.10	20	96.45	80	120	
Na	23	45	No Gas	208.191	ppb	0.8	7878500.70	200	104.1	80	120	
Na	23	45	He	212.034	ppb	2.0	238807.51	200	106.02	80	120	
Mg	24	45	No Gas	208.373	ppb	0.6	5193502.52	200	104.19	80	120	
Mg	24	45	He	206.627	ppb	1.0	110817.20	200	103.31	80	120	
Mg	25	45	No Gas	205.397	ppb	1.8	685323.40	200	102.7	80	120	
Al	27	45	No Gas	10.260	ppb	2.2	345214.16	10	102.6	80	120	
Al	27	45	He	10.264	ppb	3.2	2260.22	10	102.64	80	120	
Si	28	45	No Gas	1086.515	ppb	0.8	14426692.56	1000	108.65	80	120	
Si	29	45	No Gas	1106.461	ppb	0.6	969390.93	1000	110.65	80	120	
K	39	45	No Gas	202.678	ppb	0.9	11762335.66	200	101.34	80	120	
K	39	45	He	206.132	ppb	3.3	116614.82	200	103.07	80	120	
Ca	44	45	No Gas	537.976	ppb	0.9	727086.40	500	107.6	80	120	
Ca	44	45	He	526.055	ppb	6.3	12259.68	500	105.21	80	120	
Ti	47	45	No Gas	5.204	ppb	1.0	17264.99	5	104.08	80	120	
V	51	45	No Gas	5.114	ppb	0.5	215858.79	5	102.28	80	120	
V	51	45	He	5.242	ppb	1.0	28535.09	5	104.84	80	120	
Cr	52	89	No Gas	5.126	ppb	1.3	239403.73	5	102.52	80	120	
Cr	52	89	He	4.920	ppb	1.2	37924.18	5	98.4	80	120	
Cr	53	89	No Gas	7.330	ppb	4.2	98362.94	5	146.6	80	120	Failed
Mn	55	89	No Gas	5.029	ppb	0.9	283313.58	5	100.58	80	120	
Mn	55	89	He	4.874	ppb	2.3	18521.26	5	97.48	80	120	
Fe	56	89	No Gas	74.590	ppb	0.8	5349419.13	80	93.24	80	120	
Fe	56	89	He	92.421	ppb	2.1	510171.30	80	115.53	80	120	
Co	59	89	No Gas	5.141	ppb	0.2	227036.41	5	102.82	80	120	
Co	59	89	He	5.078	ppb	1.5	60169.16	5	101.56	80	120	
Ni	60	89	No Gas	5.099	ppb	1.7	51106.75	5	101.98	80	120	
Ni	60	89	He	4.836	ppb	0.6	16590.18	5	96.72	80	120	
Ni	62	89	No Gas	5.320	ppb	6.4	13597.27	5	106.4	80	120	
Cu	63	89	No Gas	5.205	ppb	2.5	138324.53	5	104.1	80	120	
Cu	63	89	He	5.104	ppb	2.9	49767.46	5	102.08	80	120	
Cu	65	89	No Gas	5.096	ppb	0.5	65130.71	5	101.92	80	120	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	10.201	ppb	0.6	70724.45	10	102.01	80	120	
Zn	66	89	He	10.501	ppb	2.8	14495.80	10	105.01	80	120	
Zn	67	89	No Gas	10.096	ppb	5.1	11018.97	10	100.96	80	120	
Zn	68	89	No Gas	10.428	ppb	1.8	51720.22	10	104.28	80	120	
As	75	89	No Gas	4.722	ppb	3.1	37353.93	5	94.44	80	120	
As	75	89	He	4.864	ppb	5.7	4779.76	5	97.28	80	120	
Se	77	89	No Gas	9.777	ppb	11.4	13914.67	5	195.54	80	120	Failed
Se	78	89	No Gas	4.892	ppb	2.2	23300.35	5	97.84	80	120	
Se	78	89	He	5.139	ppb	16.5	327.78	5	102.78	80	120	
Se	82	89	No Gas	4.627	ppb	18.6	1812.74	5	92.54	80	120	
[Se]	83	89	No Gas	193.909	ppb	299.6	2172.39	5	3878.18	80	120	Failed
Sr	88	89	No Gas	4.947	ppb	0.1	314717.30	5	98.94	80	120	
Mo	95	89	No Gas	4.711	ppb	1.0	60564.70	5	94.22	80	120	
Mo	97	89	No Gas	4.746	ppb	1.8	37761.47	5	94.92	80	120	
Mo	98	89	No Gas	4.793	ppb	0.7	97896.83	5	95.86	80	120	
[Mo]	99	89	No Gas	86.123	ppb	122.6	36.70	5	1722.46	80	120	Failed
Cd	106	89	No Gas	-0.378	ppb	N/A	57123.60	2	-18.9	80	120	Failed
Ag	107	89	No Gas	0.292	ppb	143.9	195847.90	5	5.84	80	120	Failed
Ag	107	89	He	-0.220	ppb	N/A	111982.14	5	-4.4	80	120	Failed
Cd	108	89	No Gas	2.100	ppb	6.9	1087.82	2	105	80	120	
Ag	109	89	No Gas	0.855	ppb	107.5	203328.09	5	17.1	80	120	Failed
Cd	111	89	No Gas	2.027	ppb	3.4	12564.39	2	101.35	80	120	
Cd	114	89	No Gas	2.038	ppb	2.0	33473.03	2	101.9	80	120	
Sn	118	115	No Gas	1.914	ppb	1.2	44376.86	2	95.7	80	120	
Sb	121	115	No Gas	4.417	ppb	0.8	140087.20	5	88.34	80	120	
Sb	121	89	He	4.745	ppb	2.4	31575.04	5	94.9	80	120	
Sb	123	115	No Gas	4.488	ppb	1.3	107993.01	5	89.76	80	120	
Ba	135	115	No Gas	4.922	ppb	1.2	29757.52	5	98.44	80	120	
Ba	137	115	No Gas	4.754	ppb	1.8	50746.56	5	95.08	80	120	
Tl	203	209	No Gas	4.509	ppb	1.9	116592.37	5	90.18	80	120	
Tl	205	209	No Gas	4.574	ppb	1.7	279875.76	5	91.48	80	120	
Pb	206	209	No Gas	4.716	ppb	0.6	97247.17	5	94.32	80	120	
Pb	207	209	No Gas	4.990	ppb	0.5	84858.93	5	99.8	80	120	
Pb	208	209	No Gas	4.882	ppb	0.4	389450.97	5	97.64	80	120	
Th	232	209	No Gas	4.977	ppb	0.2	404750.92	5	99.54	80	120	
U	238	209	No Gas	4.604	ppb	2.0	365256.04	5	92.08	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5864666.09	0.5	6069758.49	96.62	70	125	
Sc	45	No Gas	26393149.87	0.3	26854717.27	98.28	75	125	
Sc	45	He	1068033.50	0.9	1086551.24	98.3	75	125	
Y	89	No Gas	59362274.06	0.7	60596358.15	97.96	75	125	
Y	89	He	8039658.01	1.4	8174748.93	98.35	75	125	
In	115	No Gas	12933245.63	0.2	13007558.49	99.43	75	125	
Tb	159	No Gas	17210352.05	0.5	17536754.71	98.14	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10592536.80	0.2	10657708.47	99.39	75	125	

Interference Check Solution A (ICS-A) Report

Sample Name	ICSA
File Name	047ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 15:37:07
Sample Type	ICSA
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Li	7	6	No Gas	-0.145	ppb	N/A	294994.70			120	
Be	9	6	No Gas	0.043	ppb	31.7	400.41			120	
B	11	6	No Gas	2.236	ppb	8.7	20328.58			120	
Na	23	45	No Gas	47846.553	ppb	0.6	1809268507.11			120	
Na	23	45	He	47509.519	ppb	1.0	53430394.21			120	
Mg	24	45	No Gas	47811.705	ppb	1.0	1245399581.44			120	
Mg	24	45	He	46909.668	ppb	1.0	26925435.43			120	
Mg	25	45	No Gas	47443.469	ppb	0.3	165463827.54			120	
Al	27	45	No Gas	46100.275	ppb	1.3	1544059336.99			120	
Al	27	45	He	45010.403	ppb	0.8	9907949.65			120	
Si	28	45	No Gas	39.425	ppb	5.1	1043387.08			120	Failed
Si	29	45	No Gas	55.779	ppb	3.6	145209.29			120	Failed
K	39	45	No Gas	47868.839	ppb	1.1	1704884721.26			120	
K	39	45	He	47516.180	ppb	0.6	21745485.51			120	
Ca	44	45	No Gas	47822.685	ppb	0.4	51595254.23			120	
Ca	44	45	He	44009.015	ppb	0.8	1074548.42			120	
Ti	47	45	No Gas	1008.847	ppb	0.2	3405664.84			120	
V	51	45	No Gas	0.130	ppb	86.0	2099.51			120	
V	51	45	He	0.032	ppb	83.7	670.70			120	
Cr	52	89	No Gas	0.399	ppb	11.8	51321.41			120	
Cr	52	89	He	0.210	ppb	4.8	4668.89			120	
Cr	53	89	No Gas	0.217	ppb	213.1	66339.93			120	
Mn	55	89	No Gas	0.611	ppb	3.7	46006.80			120	
Mn	55	89	He	0.733	ppb	3.5	3073.48			120	
Fe	56	89	No Gas	48004.864	ppb	0.5	1927675709.75			120	
Fe	56	89	He	46891.855	ppb	0.1	243359923.04			120	
Co	59	89	No Gas	0.303	ppb	2.4	15160.43			120	
Co	59	89	He	0.216	ppb	4.3	3003.39			120	
Ni	60	89	No Gas	0.655	ppb	5.3	7866.96			120	
Ni	60	89	He	0.076	ppb	19.2	1164.57			120	
Ni	62	89	No Gas	2.002	ppb	10.3	9155.71			120	
Cu	63	89	No Gas	0.575	ppb	3.1	30384.62			120	
Cu	63	89	He	0.190	ppb	13.5	6418.05			120	
Cu	65	89	No Gas	0.856	ppb	3.9	17950.00			120	

Interference Check Solution A (ICS-A) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Zn	66	89	No Gas	1.070	ppb	4.8	9810.18			120	
Zn	66	89	He	0.512	ppb	22.2	1197.94			120	
Zn	67	89	No Gas	2.106	ppb	14.3	2726.39			120	
Zn	68	89	No Gas	0.574	ppb	14.4	4562.07			120	
As	75	89	No Gas	0.130	ppb	79.9	5571.55			120	
As	75	89	He	0.191	ppb	7.5	237.78			120	
Se	77	89	No Gas	16.106	ppb	5.9	16657.19			120	Failed
Se	78	89	No Gas	-0.093	ppb	N/A	18852.21			120	
Se	78	89	He	-0.235	ppb	N/A	16.66			120	
Se	82	89	No Gas	-0.146	ppb	N/A	-171.81			120	
[Se]	83	89	No Gas	-258.592	ppb	N/A	2402.67			120	
Sr	88	89	No Gas	0.926	ppb	1.0	61381.61			120	
Mo	95	89	No Gas	953.026	ppb	1.3	12061974.50			120	
Mo	97	89	No Gas	956.559	ppb	1.3	7495402.50			120	
Mo	98	89	No Gas	958.764	ppb	1.0	19303715.56			120	
[Mo]	99	89	No Gas	63.200	ppb	116.5	33.37			120	
Cd	106	89	No Gas	-1.471	ppb	N/A	58420.49			120	
Ag	107	89	No Gas	-4.396	ppb	N/A	53067.37			120	
Ag	107	89	He	-4.615	ppb	N/A	48464.37			120	
Cd	108	89	No Gas	16.495	ppb	3.9	7836.93			120	Failed
Ag	109	89	No Gas	-4.330	ppb	N/A	50520.89			120	
Cd	111	89	No Gas	-0.402	ppb	N/A	-2747.78			120	
Cd	114	89	No Gas	0.566	ppb	4.5	9703.45			120	
Sn	118	115	No Gas	0.153	ppb	4.9	7395.46			120	
Sb	121	115	No Gas	-0.072	ppb	N/A	4297.40			120	
Sb	121	89	He	-0.115	ppb	N/A	1086.73			120	
Sb	123	115	No Gas	-0.070	ppb	N/A	3260.39			120	
Ba	135	115	No Gas	0.239	ppb	12.1	1491.61			120	
Ba	137	115	No Gas	0.237	ppb	7.5	2656.31			120	
Tl	203	209	No Gas	0.011	ppb	44.1	607.30			120	
Tl	205	209	No Gas	0.012	ppb	42.3	1474.92			120	
Pb	206	209	No Gas	0.054	ppb	28.4	2586.24			120	
Pb	207	209	No Gas	0.055	ppb	15.1	2129.02			120	
Pb	208	209	No Gas	0.059	ppb	3.0	10248.80			120	
Th	232	209	No Gas	0.175	ppb	14.3	16898.99			120	
U	238	209	No Gas	0.016	ppb	17.3	1882.07			120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5713520.70	0.8	6069758.49	94.13	70	125	
Sc	45	No Gas	27644246.80	3.1	26854717.27	102.94	75	125	
Sc	45	He	1145609.16	1.3	1086551.24	105.44	75	125	
Y	89	No Gas	61396910.37	2.7	60596358.15	101.32	75	125	
Y	89	He	8431051.69	1.0	8174748.93	103.14	75	125	
In	115	No Gas	12692564.18	2.9	13007558.49	97.58	75	125	
Tb	159	No Gas	17493604.47	2.3	17536754.71	99.75	75	125	

Interference Check Solution A (ICS-A) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9901810.72	2.1	10657708.47	92.91	75	125	

Linear Range Sample (LRS) Report

Sample Name	LDR
File Name	048_LRS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 15:38:56
Sample Type	LRS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Be	9	6	No Gas	2094.084	ppb	2.9	15480428.38	2000	104.7	90	110	
B	11	6	No Gas	9681.888	ppb	2.7	49303158.26	10000	96.82	90	110	
Na	23	45	He	192093.356	ppb	1.2	198768290.37	200000	96.05	90	110	
Mg	24	45	He	190125.228	ppb	1.2	100430675.17	200000	95.06	90	110	
Al	27	45	No Gas	1891.274	ppb	0.8	58489394.13	2000	94.56	90	110	
Si	29	45	No Gas	10391.684	ppb	1.1	8033599.45	10000	103.92	90	110	
K	39	45	He	194334.909	ppb	0.7	81762837.12	200000	97.17	90	110	
Ca	44	45	No Gas	195727.271	ppb	1.2	194359603.77	200000	97.86	90	110	
Ti	47	45	No Gas	1979.062	ppb	0.5	6164993.55	2000	98.95	90	110	
V	51	45	He	1957.904	ppb	0.7	10352841.20	2000	97.9	90	110	
Cr	52	89	He	1940.069	ppb	1.2	13171198.31	2000	97	90	110	
Mn	55	89	No Gas	1934.520	ppb	0.8	99103924.13	2000	96.73	90	110	
Fe	56	89	He	192114.146	ppb	1.2	907793453.14	200000	96.06	90	110	
Co	59	89	He	1874.235	ppb	1.1	21096974.52	2000	93.71	90	110	
Ni	60	89	He	1833.795	ppb	0.9	5696258.35	2000	91.69	90	110	
Cu	63	89	He	1817.620	ppb	0.8	15426453.15	2000	90.88	90	110	
Zn	66	89	He	1862.893	ppb	1.4	2378195.33	2000	93.14	90	110	
As	75	89	He	1940.891	ppb	0.5	1806901.94	2000	97.04	90	110	
Se	78	89	He	1975.850	ppb	0.7	109701.21	2000	98.79	90	110	
Sr	88	89	No Gas	1948.541	ppb	0.0	117265225.46	2000	97.43	90	110	
Mo	98	89	No Gas	2017.014	ppb	1.0	37203610.15	2000	100.85	90	110	
Ag	107	89	He	1653.631	ppb	1.2	23749806.52	2000	82.68	90	110	LRS Main CR1 Failed
Cd	111	89	No Gas	1937.074	ppb	1.0	11504153.90	2000	96.85	90	110	
Sn	118	115	No Gas	2023.882	ppb	1.1	37494638.51	2000	101.19	90	110	
Sb	121	89	He	1831.692	ppb	1.0	10992305.67	2000	91.58	90	110	
Ba	137	115	No Gas	2012.885	ppb	0.6	18956711.33	2000	100.64	90	110	
Tl	203	209	No Gas	1893.318	ppb	0.1	41844980.90	2000	94.67	90	110	
Pb	206	209	No Gas	1958.184	ppb	0.7	34026844.41	2000	97.91	90	110	
Pb	207	209	No Gas	2082.696	ppb	0.1	29882071.30	2000	104.13	90	110	
Pb	208	209	No Gas	2019.371	ppb	0.3	135881863.80	2000	100.97	90	110	
Th	232	209	No Gas	2044.893	ppb	0.3	141180644.27	2000	102.24	90	110	
U	238	209	No Gas	2007.707	ppb	0.6	136306913.86	2000	100.39	90	110	

QC ISTD Table

Linear Range Sample (LRS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5096459.62	3.0	6069758.49	83.96	70	125	
Sc	45	No Gas	25511480.70	0.2	26854717.27	95	75	125	
Y	89	No Gas	56246902.02	0.7	60596358.15	92.82	75	125	
In	115	No Gas	11450934.09	1.2	13007558.49	88.03	75	125	
Tb	159	No Gas	16219170.04	0.6	17536754.71	92.49	75	125	
Bi	209	No Gas	9081332.97	0.5	10657708.47	85.21	75	125	
Sc	45	He	1054420.45	2.3	1086551.24	97.04	75	125	
Y	89	He	7678654.92	2.1	8174748.93	93.93	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 053_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:47:24

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.277	ppb	0.6	3474720.04	100	102.28	90	110	
Be	9	6	No Gas	100.594	ppb	0.9	817430.09	100	100.59	90	110	
B	11	6	No Gas	254.855	ppb	0.8	1433698.70	250	101.94	90	110	
Na	23	45	No Gas	10269.066	ppb	0.8	368044824.89	10000	102.69	90	110	
Na	23	45	He	10239.084	ppb	0.9	10656529.42	10000	102.39	90	110	
Mg	24	45	No Gas	10356.044	ppb	0.8	255563129.52	10000	103.56	90	110	
Mg	24	45	He	10353.375	ppb	0.3	5492940.96	10000	103.53	90	110	
Mg	25	45	No Gas	10377.585	ppb	0.4	34283807.82	10000	103.78	90	110	
Al	27	45	No Gas	103.740	ppb	0.5	3308818.91	100	103.74	90	110	
Al	27	45	He	100.319	ppb	2.0	20565.45	100	100.32	90	110	
Si	28	45	No Gas	10503.606	ppb	0.2	134150043.65	10000	105.04	90	110	
Si	29	45	No Gas	10480.506	ppb	0.2	8315158.30	10000	104.81	90	110	
K	39	45	No Gas	10317.072	ppb	0.7	351917514.76	10000	103.17	90	110	
K	39	45	He	10202.184	ppb	0.8	4337901.60	10000	102.02	90	110	
Ca	44	45	No Gas	10271.412	ppb	0.9	10632938.17	10000	102.71	90	110	
Ca	44	45	He	10336.457	ppb	1.6	233509.13	10000	103.36	90	110	
Ti	47	45	No Gas	103.020	ppb	0.9	329845.36	100	103.02	90	110	
V	51	45	No Gas	104.368	ppb	0.1	4439584.63	100	104.37	90	110	
V	51	45	He	107.151	ppb	0.3	569440.89	100	107.15	90	110	
Cr	52	89	No Gas	102.928	ppb	1.0	4169921.70	100	102.93	90	110	
Cr	52	89	He	102.892	ppb	0.2	722047.20	100	102.89	90	110	
Cr	53	89	No Gas	99.682	ppb	1.1	542864.64	100	99.68	90	110	
Mn	55	89	No Gas	102.824	ppb	0.6	5576214.56	100	102.82	90	110	
Mn	55	89	He	101.747	ppb	0.1	376793.45	100	101.75	90	110	
Fe	56	89	No Gas	10255.506	ppb	0.9	400478292.28	10000	102.56	90	110	
Fe	56	89	He	10133.666	ppb	0.4	49356547.60	10000	101.34	90	110	
Co	59	89	No Gas	102.718	ppb	0.7	4514702.32	100	102.72	90	110	
Co	59	89	He	101.775	ppb	0.1	1179926.57	100	101.78	90	110	
Ni	60	89	No Gas	101.870	ppb	1.0	999412.51	100	101.87	90	110	
Ni	60	89	He	101.621	ppb	1.2	325847.27	100	101.62	90	110	
Ni	62	89	No Gas	101.735	ppb	0.6	151651.93	100	101.74	90	110	
Cu	63	89	No Gas	102.830	ppb	0.3	2438216.87	100	102.83	90	110	
Cu	63	89	He	102.138	ppb	0.3	896689.61	100	102.14	90	110	
Cu	65	89	No Gas	102.193	ppb	0.6	1160095.10	100	102.19	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	101.843	ppb	0.4	686019.82	100	101.84	90	110	
Zn	66	89	He	103.567	ppb	1.8	136586.46	100	103.57	90	110	
Zn	67	89	No Gas	101.755	ppb	1.6	107277.95	100	101.76	90	110	
Zn	68	89	No Gas	102.229	ppb	0.2	492859.90	100	102.23	90	110	
As	75	89	No Gas	100.572	ppb	1.3	705050.03	100	100.57	90	110	
As	75	89	He	101.311	ppb	0.5	97148.62	100	101.31	90	110	
Se	77	89	No Gas	99.293	ppb	0.4	45016.74	100	99.29	90	110	
Se	78	89	No Gas	101.521	ppb	1.2	121716.52	100	101.52	90	110	
Se	78	89	He	104.362	ppb	2.6	5993.58	100	104.36	90	110	
Se	82	89	No Gas	102.902	ppb	2.0	42544.02	100	102.9	90	110	
[Se]	83	89	No Gas	242.796	ppb	70.6	2159.04	100	242.8	90	110	Failed
Sr	88	89	No Gas	102.122	ppb	0.6	6493259.73	100	102.12	90	110	
Mo	95	89	No Gas	101.160	ppb	0.3	1242092.22	100	101.16	90	110	
Mo	97	89	No Gas	99.800	ppb	0.9	758667.13	100	99.8	90	110	
Mo	98	89	No Gas	101.264	ppb	0.3	1977740.24	100	101.26	90	110	
[Mo]	99	89	No Gas	304.850	ppb	17.4	80.08	100	304.85	90	110	Failed
Cd	106	89	No Gas	104.545	ppb	2.0	119369.13	100	104.54	90	110	
Ag	107	89	No Gas	105.640	ppb	0.5	3455320.98	100	105.64	90	110	
Ag	107	89	He	105.569	ppb	0.6	1666978.23	100	105.57	90	110	
Cd	108	89	No Gas	103.509	ppb	2.4	46890.13	100	103.51	90	110	
Ag	109	89	No Gas	105.400	ppb	1.0	3326229.26	100	105.4	90	110	
Cd	111	89	No Gas	101.926	ppb	0.6	639398.79	100	101.93	90	110	
Cd	114	89	No Gas	103.410	ppb	0.7	1693002.90	100	103.41	90	110	
Sn	118	115	No Gas	101.898	ppb	0.7	2082723.11	100	101.9	90	110	
Sb	121	115	No Gas	104.708	ppb	0.6	3092638.42	100	104.71	90	110	
Sb	121	89	He	107.657	ppb	0.4	666870.02	100	107.66	90	110	
Sb	123	115	No Gas	105.184	ppb	0.3	2359973.78	100	105.18	90	110	
Ba	135	115	No Gas	102.087	ppb	1.4	600069.23	100	102.09	90	110	
Ba	137	115	No Gas	101.791	ppb	0.8	1055761.15	100	101.79	90	110	
Tl	203	209	No Gas	99.263	ppb	0.9	2495353.43	100	99.26	90	110	
Tl	205	209	No Gas	100.315	ppb	0.7	5966338.43	100	100.32	90	110	
Pb	206	209	No Gas	101.231	ppb	1.3	2001964.94	100	101.23	90	110	
Pb	207	209	No Gas	102.602	ppb	1.3	1675319.70	100	102.6	90	110	
Pb	208	209	No Gas	102.250	ppb	1.0	7830117.69	100	102.25	90	110	
Th	232	209	No Gas	99.883	ppb	0.6	7846018.12	100	99.88	90	110	
U	238	209	No Gas	100.390	ppb	0.6	7751528.42	100	100.39	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5598845.57	0.7	6069758.49	92.24	70	125	
Sc	45	No Gas	26184024.08	0.2	26854717.27	97.5	75	125	
Sc	45	He	1058828.40	0.9	1086551.24	97.45	75	125	
Y	89	No Gas	59423353.48	0.6	60596358.15	98.06	75	125	
Y	89	He	7905630.02	0.8	8174748.93	96.71	75	125	
In	115	No Gas	12608145.80	0.6	13007558.49	96.93	75	125	
Tb	159	No Gas	17239997.11	1.8	17536754.71	98.31	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10327659.03	0.6	10657708.47	96.9	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	054_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 15:49:09
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.056	ppb	96.7	307251.63	100	
Be	9	6	No Gas	0.028	ppb	28.8	286.96	100	
B	11	6	No Gas	10.927	ppb	6.0	71297.89	100	
Na	23	45	No Gas	1.868	ppb	36.7	439065.36	500000	
Na	23	45	He	2.894	ppb	21.3	19708.50	500000	
Mg	24	45	No Gas	0.648	ppb	46.2	26935.80	500000	
Mg	24	45	He	0.153	ppb	98.0	333.36	500000	
Mg	25	45	No Gas	0.744	ppb	55.4	3907.54	500000	
Al	27	45	No Gas	-0.117	ppb	N/A	13514.22	500000	
Al	27	45	He	-0.282	ppb	N/A	96.67	500000	
Si	28	45	No Gas	13.072	ppb	21.8	668062.18	100	
Si	29	45	No Gas	11.607	ppb	32.2	105324.42	100	
K	39	45	No Gas	3.388	ppb	14.2	5084278.26	500000	
K	39	45	He	2.035	ppb	112.1	29820.47	500000	
Ca	44	45	No Gas	2.798	ppb	148.3	180570.33	500000	
Ca	44	45	He	1.339	ppb	135.7	320.03	500000	
Ti	47	45	No Gas	-0.007	ppb	N/A	480.50	10000	
V	51	45	No Gas	0.052	ppb	55.1	-1370.18	100	
V	51	45	He	0.009	ppb	155.5	510.53	100	
Cr	52	89	No Gas	-0.012	ppb	N/A	33605.21	100	
Cr	52	89	He	-0.004	ppb	N/A	2936.64	100	
Cr	53	89	No Gas	-2.555	ppb	N/A	51572.17	100	
Mn	55	89	No Gas	-0.013	ppb	N/A	10938.79	100	
Mn	55	89	He	0.021	ppb	40.3	253.60	100	
Fe	56	89	No Gas	-1.984	ppb	N/A	2414423.95	500000	
Fe	56	89	He	4.765	ppb	16.8	76526.63	500000	
Co	59	89	No Gas	0.017	ppb	43.0	2139.02	100	
Co	59	89	He	0.008	ppb	46.3	410.42	100	
Ni	60	89	No Gas	0.007	ppb	178.4	1274.70	100	
Ni	60	89	He	-0.157	ppb	N/A	353.70	100	
Ni	62	89	No Gas	-0.106	ppb	N/A	5920.65	100	
Cu	63	89	No Gas	-0.011	ppb	N/A	15815.22	100	
Cu	63	89	He	0.001	ppb	1677.4	4445.25	100	
Cu	65	89	No Gas	-0.043	ppb	N/A	7332.78	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.029	ppb	73.8	2542.83	100	
Zn	66	89	He	-0.017	ppb	N/A	437.12	100	
Zn	67	89	No Gas	-0.061	ppb	N/A	370.38	100	
Zn	68	89	No Gas	0.074	ppb	42.1	2048.91	100	
As	75	89	No Gas	-0.078	ppb	N/A	4003.39	100	
As	75	89	He	0.044	ppb	47.4	83.33	100	
Se	77	89	No Gas	-5.056	ppb	N/A	8895.31	100	
Se	78	89	No Gas	0.748	ppb	64.4	19356.85	100	
Se	78	89	He	0.064	ppb	161.7	33.33	100	
Se	82	89	No Gas	-0.221	ppb	N/A	-196.09	100	
[Se]	83	89	No Gas	406.017	ppb	168.4	2132.36	100	Failed
Sr	88	89	No Gas	0.007	ppb	33.6	1014.41	100	
Mo	95	89	No Gas	0.117	ppb	61.3	4415.26	10000	
Mo	97	89	No Gas	0.106	ppb	53.7	2649.64	10000	
Mo	98	89	No Gas	0.126	ppb	44.8	7147.20	10000	
[Mo]	99	89	No Gas	83.808	ppb	124.8	36.70	10000	
Cd	106	89	No Gas	-2.817	ppb	N/A	56480.09	100	
Ag	107	89	No Gas	-3.225	ppb	N/A	88420.86	100	
Ag	107	89	He	-4.292	ppb	N/A	51143.24	100	
Cd	108	89	No Gas	-0.034	ppb	N/A	126.79	100	
Ag	109	89	No Gas	-3.223	ppb	N/A	82734.35	100	
Cd	111	89	No Gas	0.011	ppb	122.4	-70.50	100	
Cd	114	89	No Gas	0.014	ppb	48.1	367.05	100	
Sn	118	115	No Gas	0.126	ppb	21.2	7029.70	100	
Sb	121	115	No Gas	0.645	ppb	37.4	26227.73	100	
Sb	121	89	He	1.216	ppb	11.4	9413.58	100	
Sb	123	115	No Gas	0.697	ppb	35.4	21075.80	100	
Ba	135	115	No Gas	0.007	ppb	76.9	123.46	100	
Ba	137	115	No Gas	0.012	ppb	36.9	310.32	100	
Tl	203	209	No Gas	0.243	ppb	26.1	6608.53	100	
Tl	205	209	No Gas	0.243	ppb	21.7	15605.93	100	
Pb	206	209	No Gas	0.043	ppb	22.4	2526.17	100	
Pb	207	209	No Gas	0.054	ppb	28.5	2255.84	100	
Pb	208	209	No Gas	0.047	ppb	6.0	9998.40	100	
Th	232	209	No Gas	0.250	ppb	20.2	24004.83	100	
U	238	209	No Gas	0.092	ppb	20.6	7977.46	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5824560.41	1.2	6069758.49	95.96	70	125	
Sc	45	No Gas	26813855.58	0.7	26854717.27	99.85	75	125	
Sc	45	He	1074749.47	1.2	1086551.24	98.91	75	125	
Y	89	No Gas	60207197.32	0.7	60596358.15	99.36	75	125	
Y	89	He	8051893.16	0.9	8174748.93	98.5	75	125	
In	115	No Gas	13023213.60	0.3	13007558.49	100.12	75	125	
Tb	159	No Gas	17474812.35	0.1	17536754.71	99.65	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10552067.64	0.3	10657708.47	99.01	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 057_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 15:53:54

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.585	ppb	1.2	3452705.53	100	101.58	90	110	
Be	9	6	No Gas	100.584	ppb	0.5	817277.98	100	100.58	90	110	
B	11	6	No Gas	248.044	ppb	1.1	1395391.75	250	99.22	90	110	
Na	23	45	No Gas	10148.772	ppb	0.4	367061291.54	10000	101.49	90	110	
Na	23	45	He	10317.427	ppb	0.7	10666896.09	10000	103.17	90	110	
Mg	24	45	No Gas	10248.717	ppb	2.0	255204002.86	10000	102.49	90	110	
Mg	24	45	He	10355.228	ppb	0.4	5457793.25	10000	103.55	90	110	
Mg	25	45	No Gas	10338.663	ppb	1.5	34464690.32	10000	103.39	90	110	
Al	27	45	No Gas	102.852	ppb	2.0	3310304.12	100	102.85	90	110	
Al	27	45	He	101.084	ppb	2.6	20585.51	100	101.08	90	110	
Si	28	45	No Gas	10492.890	ppb	1.5	135228869.14	10000	104.93	90	110	
Si	29	45	No Gas	10488.869	ppb	0.4	8397871.85	10000	104.89	90	110	
K	39	45	No Gas	10258.804	ppb	0.2	353161968.07	10000	102.59	90	110	
K	39	45	He	10136.454	ppb	0.6	4281879.73	10000	101.36	90	110	
Ca	44	45	No Gas	10188.824	ppb	0.6	10645366.92	10000	101.89	90	110	
Ca	44	45	He	10370.692	ppb	0.2	232719.57	10000	103.71	90	110	
Ti	47	45	No Gas	102.671	ppb	0.6	331747.89	100	102.67	90	110	
V	51	45	No Gas	103.213	ppb	1.0	4430399.23	100	103.21	90	110	
V	51	45	He	107.266	ppb	0.3	566318.39	100	107.27	90	110	
Cr	52	89	No Gas	103.184	ppb	1.0	4144084.93	100	103.18	90	110	
Cr	52	89	He	102.898	ppb	0.9	718291.99	100	102.9	90	110	
Cr	53	89	No Gas	102.444	ppb	1.5	551350.97	100	102.44	90	110	
Mn	55	89	No Gas	103.663	ppb	0.8	5573046.39	100	103.66	90	110	
Mn	55	89	He	102.549	ppb	0.1	377738.41	100	102.55	90	110	
Fe	56	89	No Gas	10271.533	ppb	1.1	397651342.22	10000	102.72	90	110	
Fe	56	89	He	10141.248	ppb	0.8	49130294.27	10000	101.41	90	110	
Co	59	89	No Gas	103.545	ppb	0.5	4511722.46	100	103.54	90	110	
Co	59	89	He	102.536	ppb	0.5	1182352.85	100	102.54	90	110	
Ni	60	89	No Gas	102.815	ppb	0.7	999985.87	100	102.81	90	110	
Ni	60	89	He	102.729	ppb	1.2	327607.72	100	102.73	90	110	
Ni	62	89	No Gas	102.541	ppb	0.7	151478.47	100	102.54	90	110	
Cu	63	89	No Gas	103.670	ppb	0.6	2436767.03	100	103.67	90	110	
Cu	63	89	He	103.113	ppb	0.2	900357.47	100	103.11	90	110	
Cu	65	89	No Gas	103.950	ppb	0.3	1169703.87	100	103.95	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	103.179	ppb	0.7	688993.81	100	103.18	90	110	
Zn	66	89	He	102.949	ppb	0.6	135033.14	100	102.95	90	110	
Zn	67	89	No Gas	104.399	ppb	1.4	109107.48	100	104.4	90	110	
Zn	68	89	No Gas	103.807	ppb	0.1	496116.69	100	103.81	90	110	
As	75	89	No Gas	102.474	ppb	0.1	712113.52	100	102.47	90	110	
As	75	89	He	101.930	ppb	0.7	97218.10	100	101.93	90	110	
Se	77	89	No Gas	103.258	ppb	1.3	45991.06	100	103.26	90	110	
Se	78	89	No Gas	105.612	ppb	2.0	124793.95	100	105.61	90	110	
Se	78	89	He	105.063	ppb	4.4	6000.26	100	105.06	90	110	
Se	82	89	No Gas	105.540	ppb	1.9	43264.04	100	105.54	90	110	
[Se]	83	89	No Gas	195.659	ppb	183.8	2155.71	100	195.66	90	110	Failed
Sr	88	89	No Gas	102.512	ppb	0.3	6461892.74	100	102.51	90	110	
Mo	95	89	No Gas	101.687	ppb	0.5	1237752.28	100	101.69	90	110	
Mo	97	89	No Gas	101.694	ppb	0.9	766357.71	100	101.69	90	110	
Mo	98	89	No Gas	103.314	ppb	0.3	2000271.30	100	103.31	90	110	
[Mo]	99	89	No Gas	256.995	ppb	39.1	70.07	100	257	90	110	Failed
Cd	106	89	No Gas	104.759	ppb	0.4	118460.60	100	104.76	90	110	
Ag	107	89	No Gas	102.867	ppb	0.3	3340421.60	100	102.87	90	110	
Ag	107	89	He	102.231	ppb	1.0	1609027.78	100	102.23	90	110	
Cd	108	89	No Gas	104.985	ppb	0.5	47144.61	100	104.98	90	110	
Ag	109	89	No Gas	102.550	ppb	0.6	3213028.97	100	102.55	90	110	
Cd	111	89	No Gas	103.304	ppb	0.3	642450.96	100	103.3	90	110	
Cd	114	89	No Gas	104.315	ppb	0.7	1693122.76	100	104.32	90	110	
Sn	118	115	No Gas	100.582	ppb	1.1	2065149.64	100	100.58	90	110	
Sb	121	115	No Gas	102.717	ppb	1.3	3047542.52	100	102.72	90	110	
Sb	121	89	He	105.426	ppb	0.6	649599.74	100	105.43	90	110	
Sb	123	115	No Gas	103.356	ppb	0.8	2329452.21	100	103.36	90	110	
Ba	135	115	No Gas	101.981	ppb	0.9	602149.95	100	101.98	90	110	
Ba	137	115	No Gas	101.149	ppb	0.9	1053775.91	100	101.15	90	110	
Tl	203	209	No Gas	100.386	ppb	0.5	2498789.11	100	100.39	90	110	
Tl	205	209	No Gas	101.027	ppb	0.2	5949659.25	100	101.03	90	110	
Pb	206	209	No Gas	101.772	ppb	1.5	1992845.87	100	101.77	90	110	
Pb	207	209	No Gas	102.104	ppb	1.9	1650729.33	100	102.1	90	110	
Pb	208	209	No Gas	102.072	ppb	1.7	7739266.94	100	102.07	90	110	
Th	232	209	No Gas	101.139	ppb	1.3	7867066.67	100	101.14	90	110	
U	238	209	No Gas	101.737	ppb	0.5	7778423.02	100	101.74	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5598261.73	0.6	6069758.49	92.23	70	125	
Sc	45	No Gas	26424190.91	1.0	26854717.27	98.4	75	125	
Sc	45	He	1051894.16	1.8	1086551.24	96.81	75	125	
Y	89	No Gas	58909549.67	0.4	60596358.15	97.22	75	125	
Y	89	He	7863503.52	1.7	8174748.93	96.19	75	125	
In	115	No Gas	12665712.86	1.4	13007558.49	97.37	75	125	
Tb	159	No Gas	17163055.59	1.4	17536754.71	97.87	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10226168.76	0.9	10657708.47	95.95	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	058_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 15:55:39
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.058	ppb	161.7	306176.62	100	
Be	9	6	No Gas	0.015	ppb	72.2	173.51	100	
B	11	6	No Gas	6.584	ppb	5.7	45877.40	100	
Na	23	45	No Gas	0.588	ppb	63.8	394688.93	500000	
Na	23	45	He	1.561	ppb	26.5	18560.27	500000	
Mg	24	45	No Gas	0.483	ppb	54.8	22955.28	500000	
Mg	24	45	He	0.071	ppb	230.8	293.36	500000	
Mg	25	45	No Gas	0.461	ppb	84.5	2973.99	500000	
Al	27	45	No Gas	-0.124	ppb	N/A	13380.88	500000	
Al	27	45	He	-0.274	ppb	N/A	100.00	500000	
Si	28	45	No Gas	10.176	ppb	29.0	634332.33	100	
Si	29	45	No Gas	7.679	ppb	8.3	102816.86	100	
K	39	45	No Gas	1.493	ppb	44.3	5050242.84	500000	
K	39	45	He	1.609	ppb	47.0	30060.85	500000	
Ca	44	45	No Gas	-2.663	ppb	N/A	175977.59	500000	
Ca	44	45	He	1.698	ppb	147.8	333.37	500000	
Ti	47	45	No Gas	-0.020	ppb	N/A	440.45	10000	
V	51	45	No Gas	-0.010	ppb	N/A	-4099.44	100	
V	51	45	He	0.004	ppb	175.7	487.17	100	
Cr	52	89	No Gas	-0.020	ppb	N/A	33548.20	100	
Cr	52	89	He	0.011	ppb	268.6	3116.87	100	
Cr	53	89	No Gas	-2.035	ppb	N/A	54522.86	100	
Mn	55	89	No Gas	-0.018	ppb	N/A	10725.09	100	
Mn	55	89	He	0.000	ppb	N/A	176.85	100	
Fe	56	89	No Gas	-1.763	ppb	N/A	2441898.49	500000	
Fe	56	89	He	3.834	ppb	11.9	73629.27	500000	
Co	59	89	No Gas	0.010	ppb	17.4	1848.67	100	
Co	59	89	He	0.010	ppb	39.7	447.13	100	
Ni	60	89	No Gas	-0.002	ppb	N/A	1197.94	100	
Ni	60	89	He	-0.155	ppb	N/A	370.38	100	
Ni	62	89	No Gas	-0.193	ppb	N/A	5840.54	100	
Cu	63	89	No Gas	-0.053	ppb	N/A	14919.94	100	
Cu	63	89	He	-0.038	ppb	N/A	4204.94	100	
Cu	65	89	No Gas	-0.086	ppb	N/A	6905.44	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.029	ppb	N/A	2169.06	100	
Zn	66	89	He	0.002	ppb	2600.2	473.82	100	
Zn	67	89	No Gas	0.005	ppb	698.9	443.79	100	
Zn	68	89	No Gas	0.039	ppb	111.3	1892.06	100	
As	75	89	No Gas	0.030	ppb	916.5	4811.50	100	
As	75	89	He	0.022	ppb	89.4	63.34	100	
Se	77	89	No Gas	-4.267	ppb	N/A	9242.54	100	
Se	78	89	No Gas	0.511	ppb	106.3	19260.02	100	
Se	78	89	He	0.125	ppb	143.8	37.78	100	
Se	82	89	No Gas	0.205	ppb	214.5	-17.40	100	
[Se]	83	89	No Gas	-50.723	ppb	N/A	2302.56	100	
Sr	88	89	No Gas	0.007	ppb	13.4	974.36	100	
Mo	95	89	No Gas	0.067	ppb	108.0	3817.78	10000	
Mo	97	89	No Gas	0.066	ppb	98.5	2359.28	10000	
Mo	98	89	No Gas	0.063	ppb	106.2	5949.70	10000	
[Mo]	99	89	No Gas	49.119	ppb	0.8	30.03	10000	
Cd	106	89	No Gas	-2.530	ppb	N/A	57086.61	100	
Ag	107	89	No Gas	-5.172	ppb	N/A	27579.88	100	
Ag	107	89	He	-6.117	ppb	N/A	24340.33	100	
Cd	108	89	No Gas	-0.007	ppb	N/A	140.14	100	
Ag	109	89	No Gas	-5.129	ppb	N/A	25221.22	100	
Cd	111	89	No Gas	0.007	ppb	184.7	-101.49	100	
Cd	114	89	No Gas	0.009	ppb	51.8	296.97	100	
Sn	118	115	No Gas	0.091	ppb	29.7	6290.43	100	
Sb	121	115	No Gas	0.191	ppb	50.0	12440.62	100	
Sb	121	89	He	0.372	ppb	14.9	4197.40	100	
Sb	123	115	No Gas	0.193	ppb	59.0	9453.20	100	
Ba	135	115	No Gas	0.014	ppb	39.3	170.17	100	
Ba	137	115	No Gas	0.004	ppb	57.7	230.24	100	
Tl	203	209	No Gas	0.226	ppb	24.7	6144.51	100	
Tl	205	209	No Gas	0.228	ppb	20.6	14700.57	100	
Pb	206	209	No Gas	0.032	ppb	22.7	2299.22	100	
Pb	207	209	No Gas	0.040	ppb	36.7	2005.55	100	
Pb	208	209	No Gas	0.035	ppb	14.6	8983.76	100	
Th	232	209	No Gas	0.257	ppb	23.1	24536.66	100	
U	238	209	No Gas	0.084	ppb	16.5	7333.04	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5803562.98	0.0	6069758.49	95.61	70	125	
Sc	45	No Gas	26980560.62	0.1	26854717.27	100.47	75	125	
Sc	45	He	1089873.50	0.9	1086551.24	100.31	75	125	
Y	89	No Gas	60673079.87	0.2	60596358.15	100.13	75	125	
Y	89	He	8245725.53	2.3	8174748.93	100.87	75	125	
In	115	No Gas	13057358.76	0.4	13007558.49	100.38	75	125	
Tb	159	No Gas	17524531.65	1.1	17536754.71	99.93	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10532946.52	1.0	10657708.47	98.83	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 069_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 16:13:03

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	100.915	ppb	0.6	3492251.84	100	100.92	90	110	
Be	9	6	No Gas	98.562	ppb	0.5	814940.07	100	98.56	90	110	
B	11	6	No Gas	236.741	ppb	2.1	1355504.26	250	94.7	90	110	
Na	23	45	No Gas	10268.324	ppb	2.5	366398141.52	10000	102.68	90	110	
Na	23	45	He	10374.228	ppb	0.4	10527968.80	10000	103.74	90	110	
Mg	24	45	No Gas	10302.929	ppb	0.8	253077669.56	10000	103.03	90	110	
Mg	24	45	He	10383.554	ppb	0.6	5371810.96	10000	103.84	90	110	
Mg	25	45	No Gas	10342.279	ppb	1.3	34008180.33	10000	103.42	90	110	
Al	27	45	No Gas	103.167	ppb	1.2	3275359.64	100	103.17	90	110	
Al	27	45	He	103.795	ppb	2.4	20739.06	100	103.79	90	110	
Si	28	45	No Gas	10520.089	ppb	1.3	133734221.16	10000	105.2	90	110	
Si	29	45	No Gas	10456.575	ppb	0.7	8258096.87	10000	104.57	90	110	
K	39	45	No Gas	10229.676	ppb	0.9	347359701.49	10000	102.3	90	110	
K	39	45	He	10156.226	ppb	0.5	4210669.21	10000	101.56	90	110	
Ca	44	45	No Gas	10141.220	ppb	0.9	10452585.05	10000	101.41	90	110	
Ca	44	45	He	10351.354	ppb	1.1	227987.33	10000	103.51	90	110	
Ti	47	45	No Gas	101.906	ppb	0.9	324770.86	100	101.91	90	110	
V	51	45	No Gas	103.105	ppb	0.9	4365465.98	100	103.1	90	110	
V	51	45	He	107.370	ppb	0.6	556390.97	100	107.37	90	110	
Cr	52	89	No Gas	102.851	ppb	0.4	4094771.87	100	102.85	90	110	
Cr	52	89	He	103.102	ppb	0.7	708850.65	100	103.1	90	110	
Cr	53	89	No Gas	107.257	ppb	1.5	569287.79	100	107.26	90	110	
Mn	55	89	No Gas	102.321	ppb	0.4	5453007.81	100	102.32	90	110	
Mn	55	89	He	102.154	ppb	0.5	370643.27	100	102.15	90	110	
Fe	56	89	No Gas	10215.869	ppb	1.4	392039867.10	10000	102.16	90	110	
Fe	56	89	He	10113.287	ppb	0.6	48259014.28	10000	101.13	90	110	
Co	59	89	No Gas	103.081	ppb	0.6	4452160.61	100	103.08	90	110	
Co	59	89	He	102.023	ppb	0.2	1158897.73	100	102.02	90	110	
Ni	60	89	No Gas	102.259	ppb	1.0	985827.03	100	102.26	90	110	
Ni	60	89	He	102.429	ppb	0.2	321772.45	100	102.43	90	110	
Ni	62	89	No Gas	102.660	ppb	2.3	150321.88	100	102.66	90	110	
Cu	63	89	No Gas	102.825	ppb	1.4	2395816.39	100	102.83	90	110	
Cu	63	89	He	102.422	ppb	0.9	880925.38	100	102.42	90	110	
Cu	65	89	No Gas	102.690	ppb	1.3	1145476.47	100	102.69	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	102.457	ppb	1.0	678174.87	100	102.46	90	110	
Zn	66	89	He	102.611	ppb	1.1	132570.25	100	102.61	90	110	
Zn	67	89	No Gas	104.158	ppb	2.1	107897.07	100	104.16	90	110	
Zn	68	89	No Gas	103.817	ppb	1.3	491798.48	100	103.82	90	110	
As	75	89	No Gas	100.927	ppb	0.9	695287.50	100	100.93	90	110	
As	75	89	He	101.269	ppb	0.4	95146.79	100	101.27	90	110	
Se	77	89	No Gas	112.056	ppb	3.1	48589.58	100	112.06	90	110	Failed
Se	78	89	No Gas	103.422	ppb	1.6	121504.89	100	103.42	90	110	
Se	78	89	He	103.233	ppb	2.1	5809.06	100	103.23	90	110	
Se	82	89	No Gas	104.696	ppb	1.4	42538.23	100	104.7	90	110	
[Se]	83	89	No Gas	579.796	ppb	82.4	2012.20	100	579.8	90	110	Failed
Sr	88	89	No Gas	102.741	ppb	0.9	6419403.38	100	102.74	90	110	
Mo	95	89	No Gas	100.365	ppb	0.9	1211001.84	100	100.36	90	110	
Mo	97	89	No Gas	100.638	ppb	1.2	751786.71	100	100.64	90	110	
Mo	98	89	No Gas	101.667	ppb	1.6	1951108.73	100	101.67	90	110	
[Mo]	99	89	No Gas	139.940	ppb	147.0	46.71	100	139.94	90	110	Failed
Cd	106	89	No Gas	105.248	ppb	3.9	117707.01	100	105.25	90	110	
Ag	107	89	No Gas	101.943	ppb	0.4	3283061.40	100	101.94	90	110	
Ag	107	89	He	101.327	ppb	0.8	1572005.03	100	101.33	90	110	
Cd	108	89	No Gas	106.107	ppb	1.2	47228.29	100	106.11	90	110	
Ag	109	89	No Gas	100.915	ppb	1.2	3137022.34	100	100.92	90	110	
Cd	111	89	No Gas	103.218	ppb	1.3	636292.28	100	103.22	90	110	
Cd	114	89	No Gas	103.954	ppb	1.2	1672421.80	100	103.95	90	110	
Sn	118	115	No Gas	100.541	ppb	0.8	2035927.42	100	100.54	90	110	
Sb	121	115	No Gas	101.740	ppb	0.9	2977117.24	100	101.74	90	110	
Sb	121	89	He	103.879	ppb	0.5	630517.78	100	103.88	90	110	
Sb	123	115	No Gas	102.483	ppb	0.6	2278023.39	100	102.48	90	110	
Ba	135	115	No Gas	102.735	ppb	0.1	598264.07	100	102.74	90	110	
Ba	137	115	No Gas	101.729	ppb	0.7	1045241.73	100	101.73	90	110	
Tl	203	209	No Gas	99.779	ppb	1.4	2488366.44	100	99.78	90	110	
Tl	205	209	No Gas	100.824	ppb	1.3	5948722.69	100	100.82	90	110	
Pb	206	209	No Gas	102.134	ppb	1.6	2003698.86	100	102.13	90	110	
Pb	207	209	No Gas	102.869	ppb	1.1	1666283.84	100	102.87	90	110	
Pb	208	209	No Gas	102.798	ppb	1.2	7809235.08	100	102.8	90	110	
Th	232	209	No Gas	100.443	ppb	1.2	7827282.30	100	100.44	90	110	
U	238	209	No Gas	102.140	ppb	1.6	7823551.48	100	102.14	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5696596.50	0.6	6069758.49	93.85	70	125	
Sc	45	No Gas	26064332.72	1.1	26854717.27	97.06	75	125	
Sc	45	He	1032444.13	0.6	1086551.24	95.02	75	125	
Y	89	No Gas	58394885.00	0.8	60596358.15	96.37	75	125	
Y	89	He	7745826.88	1.3	8174748.93	94.75	75	125	
In	115	No Gas	12490725.77	0.3	13007558.49	96.03	75	125	
Tb	159	No Gas	17171067.35	1.6	17536754.71	97.91	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10245641.54	1.2	10657708.47	96.13	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	070_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 16:14:48
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.145	ppb	101.2	310976.58	100	
Be	9	6	No Gas	0.015	ppb	55.0	173.51	100	
B	11	6	No Gas	3.019	ppb	15.4	25328.43	100	
Na	23	45	No Gas	0.140	ppb	348.1	367036.00	500000	
Na	23	45	He	0.819	ppb	134.3	17305.09	500000	
Mg	24	45	No Gas	0.458	ppb	52.6	21632.54	500000	
Mg	24	45	He	-0.014	ppb	N/A	240.02	500000	
Mg	25	45	No Gas	0.326	ppb	83.1	2440.42	500000	
Al	27	45	No Gas	-0.130	ppb	N/A	12793.59	500000	
Al	27	45	He	-0.212	ppb	N/A	110.00	500000	
Si	28	45	No Gas	5.818	ppb	24.9	560221.34	100	
Si	29	45	No Gas	6.573	ppb	11.4	98935.14	100	
K	39	45	No Gas	3.742	ppb	59.7	4977955.24	500000	
K	39	45	He	-1.039	ppb	N/A	28164.30	500000	
Ca	44	45	No Gas	4.598	ppb	107.5	178225.92	500000	
Ca	44	45	He	2.678	ppb	100.2	346.69	500000	
Ti	47	45	No Gas	-0.020	ppb	N/A	427.11	10000	
V	51	45	No Gas	-0.019	ppb	N/A	-4372.37	100	
V	51	45	He	0.026	ppb	46.3	593.95	100	
Cr	52	89	No Gas	0.029	ppb	29.9	34946.40	100	
Cr	52	89	He	-0.010	ppb	N/A	2876.57	100	
Cr	53	89	No Gas	1.909	ppb	7.7	72657.95	100	
Mn	55	89	No Gas	-0.003	ppb	N/A	11349.60	100	
Mn	55	89	He	0.005	ppb	150.6	190.19	100	
Fe	56	89	No Gas	-0.797	ppb	N/A	2438969.78	500000	
Fe	56	89	He	3.608	ppb	25.2	70398.33	500000	
Co	59	89	No Gas	0.011	ppb	6.3	1875.38	100	
Co	59	89	He	0.002	ppb	256.3	333.68	100	
Ni	60	89	No Gas	-0.009	ppb	N/A	1107.84	100	
Ni	60	89	He	-0.166	ppb	N/A	323.67	100	
Ni	62	89	No Gas	-0.011	ppb	N/A	6000.77	100	
Cu	63	89	No Gas	-0.075	ppb	N/A	14155.04	100	
Cu	63	89	He	-0.021	ppb	N/A	4224.97	100	
Cu	65	89	No Gas	-0.107	ppb	N/A	6544.91	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.000	ppb	7467.9	2329.24	100	
Zn	66	89	He	0.032	ppb	178.6	500.52	100	
Zn	67	89	No Gas	-0.042	ppb	N/A	387.07	100	
Zn	68	89	No Gas	0.055	ppb	45.1	1935.44	100	
As	75	89	No Gas	-0.041	ppb	N/A	4240.32	100	
As	75	89	He	0.003	ppb	111.2	43.33	100	
Se	77	89	No Gas	3.155	ppb	58.8	11670.25	100	
Se	78	89	No Gas	0.673	ppb	85.2	19096.12	100	
Se	78	89	He	-0.009	ppb	N/A	28.89	100	
Se	82	89	No Gas	-0.029	ppb	N/A	-114.09	100	
[Se]	83	89	No Gas	-142.266	ppb	N/A	2292.54	100	
Sr	88	89	No Gas	0.005	ppb	13.3	864.25	100	
Mo	95	89	No Gas	0.032	ppb	179.8	3333.82	10000	
Mo	97	89	No Gas	0.021	ppb	167.8	1985.51	10000	
Mo	98	89	No Gas	0.051	ppb	79.6	5622.16	10000	
[Mo]	99	89	No Gas	-49.543	ppb	N/A	10.01	10000	
Cd	106	89	No Gas	-0.956	ppb	N/A	57056.75	100	
Ag	107	89	No Gas	-5.617	ppb	N/A	13367.66	100	
Ag	107	89	He	-6.808	ppb	N/A	13363.67	100	
Cd	108	89	No Gas	-0.068	ppb	N/A	110.11	100	
Ag	109	89	No Gas	-5.545	ppb	N/A	12358.91	100	
Cd	111	89	No Gas	0.012	ppb	43.2	-68.15	100	
Cd	114	89	No Gas	0.006	ppb	66.8	243.59	100	
Sn	118	115	No Gas	0.045	ppb	39.0	5255.53	100	
Sb	121	115	No Gas	-0.065	ppb	N/A	4563.07	100	
Sb	121	89	He	-0.049	ppb	N/A	1446.77	100	
Sb	123	115	No Gas	-0.069	ppb	N/A	3320.49	100	
Ba	135	115	No Gas	0.010	ppb	105.2	143.48	100	
Ba	137	115	No Gas	0.007	ppb	119.5	250.26	100	
Tl	203	209	No Gas	0.226	ppb	22.8	6141.16	100	
Tl	205	209	No Gas	0.225	ppb	20.9	14460.04	100	
Pb	206	209	No Gas	0.029	ppb	25.6	2232.49	100	
Pb	207	209	No Gas	0.034	ppb	6.5	1902.08	100	
Pb	208	209	No Gas	0.034	ppb	19.1	8940.39	100	
Th	232	209	No Gas	0.276	ppb	20.2	25957.77	100	
U	238	209	No Gas	0.090	ppb	15.4	7773.77	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5841573.01	1.8	6069758.49	96.24	70	125	
Sc	45	No Gas	26189316.87	0.4	26854717.27	97.52	75	125	
Sc	45	He	1061788.40	0.6	1086551.24	97.72	75	125	
Y	89	No Gas	59648757.21	1.1	60596358.15	98.44	75	125	
Y	89	He	8004024.67	0.4	8174748.93	97.91	75	125	
In	115	No Gas	12867838.80	1.2	13007558.49	98.93	75	125	
Tb	159	No Gas	17378224.51	1.5	17536754.71	99.1	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10499322.09	1.0	10657708.47	98.51	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 081_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 16:32:47

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.328	ppb	0.2	3398197.37	100	102.33	90	110	
Be	9	6	No Gas	100.162	ppb	0.7	795617.62	100	100.16	90	110	
B	11	6	No Gas	248.362	ppb	1.8	1365771.87	250	99.34	90	110	
Na	23	45	No Gas	10170.465	ppb	1.4	361652808.08	10000	101.7	90	110	
Na	23	45	He	10225.315	ppb	0.9	10300948.39	10000	102.25	90	110	
Mg	24	45	No Gas	10192.377	ppb	0.6	249567582.95	10000	101.92	90	110	
Mg	24	45	He	10218.252	ppb	0.3	5247435.55	10000	102.18	90	110	
Mg	25	45	No Gas	10194.699	ppb	0.8	33416868.67	10000	101.95	90	110	
Al	27	45	No Gas	101.544	ppb	0.4	3213943.49	100	101.54	90	110	
Al	27	45	He	100.909	ppb	3.2	20017.93	100	100.91	90	110	
Si	28	45	No Gas	10519.584	ppb	0.6	133305876.15	10000	105.2	90	110	
Si	29	45	No Gas	10440.605	ppb	0.8	8219168.14	10000	104.41	90	110	
K	39	45	No Gas	10198.875	ppb	1.4	345210514.86	10000	101.99	90	110	
K	39	45	He	10112.961	ppb	1.2	4161950.56	10000	101.13	90	110	
Ca	44	45	No Gas	10160.342	ppb	0.5	10438125.05	10000	101.6	90	110	
Ca	44	45	He	10428.770	ppb	1.1	228006.13	10000	104.29	90	110	
Ti	47	45	No Gas	102.482	ppb	0.3	325584.64	100	102.48	90	110	
V	51	45	No Gas	102.557	ppb	0.4	4328560.42	100	102.56	90	110	
V	51	45	He	107.243	ppb	0.5	551646.95	100	107.24	90	110	
Cr	52	89	No Gas	100.920	ppb	1.1	4055293.11	100	100.92	90	110	
Cr	52	89	He	102.104	ppb	1.1	703138.71	100	102.1	90	110	
Cr	53	89	No Gas	105.493	ppb	2.2	566061.51	100	105.49	90	110	
Mn	55	89	No Gas	102.114	ppb	1.8	5491268.15	100	102.11	90	110	
Mn	55	89	He	101.608	ppb	0.6	369253.11	100	101.61	90	110	
Fe	56	89	No Gas	10133.335	ppb	1.9	392425350.44	10000	101.33	90	110	
Fe	56	89	He	10102.491	ppb	1.0	48287239.28	10000	101.02	90	110	
Co	59	89	No Gas	101.712	ppb	1.0	4433322.08	100	101.71	90	110	
Co	59	89	He	100.879	ppb	0.4	1147723.61	100	100.88	90	110	
Ni	60	89	No Gas	100.776	ppb	1.1	980485.67	100	100.78	90	110	
Ni	60	89	He	101.662	ppb	0.7	319873.14	100	101.66	90	110	
Ni	62	89	No Gas	102.573	ppb	1.5	151573.66	100	102.57	90	110	
Cu	63	89	No Gas	101.681	ppb	1.1	2391059.19	100	101.68	90	110	
Cu	63	89	He	101.901	ppb	0.3	877913.41	100	101.9	90	110	
Cu	65	89	No Gas	101.133	ppb	1.3	1138549.96	100	101.13	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	101.173	ppb	1.6	675823.95	100	101.17	90	110	
Zn	66	89	He	102.321	ppb	0.4	132415.13	100	102.32	90	110	
Zn	67	89	No Gas	102.071	ppb	0.5	106730.12	100	102.07	90	110	
Zn	68	89	No Gas	101.143	ppb	0.6	483608.06	100	101.14	90	110	
As	75	89	No Gas	99.511	ppb	1.0	691872.41	100	99.51	90	110	
As	75	89	He	100.637	ppb	0.5	94697.98	100	100.64	90	110	
Se	77	89	No Gas	111.463	ppb	3.7	48827.16	100	111.46	90	110	Failed
Se	78	89	No Gas	101.206	ppb	3.1	120369.35	100	101.21	90	110	
Se	78	89	He	104.756	ppb	0.6	5903.53	100	104.76	90	110	
Se	82	89	No Gas	101.586	ppb	0.5	41653.56	100	101.59	90	110	
[Se]	83	89	No Gas	85.744	ppb	532.8	2192.41	100	85.74	90	110	Failed
Sr	88	89	No Gas	102.508	ppb	0.4	6464001.93	100	102.51	90	110	
Mo	95	89	No Gas	101.194	ppb	0.4	1232216.02	100	101.19	90	110	
Mo	97	89	No Gas	100.554	ppb	1.3	758016.14	100	100.55	90	110	
Mo	98	89	No Gas	102.312	ppb	1.7	1981419.85	100	102.31	90	110	
[Mo]	99	89	No Gas	204.410	ppb	111.7	60.06	100	204.41	90	110	Failed
Cd	106	89	No Gas	109.115	ppb	1.7	121069.83	100	109.11	90	110	
Ag	107	89	No Gas	102.226	ppb	0.8	3321868.89	100	102.23	90	110	
Ag	107	89	He	101.918	ppb	0.6	1583119.95	100	101.92	90	110	
Cd	108	89	No Gas	103.838	ppb	1.1	46645.68	100	103.84	90	110	
Ag	109	89	No Gas	101.030	ppb	1.8	3168848.23	100	101.03	90	110	
Cd	111	89	No Gas	103.116	ppb	1.2	641477.25	100	103.12	90	110	
Cd	114	89	No Gas	104.452	ppb	0.8	1695901.74	100	104.45	90	110	
Sn	118	115	No Gas	100.959	ppb	1.2	2087254.92	100	100.96	90	110	
Sb	121	115	No Gas	101.059	ppb	0.7	3019374.53	100	101.06	90	110	
Sb	121	89	He	104.103	ppb	1.0	632893.82	100	104.1	90	110	
Sb	123	115	No Gas	102.238	ppb	0.3	2320410.78	100	102.24	90	110	
Ba	135	115	No Gas	102.840	ppb	0.3	611469.10	100	102.84	90	110	
Ba	137	115	No Gas	101.089	ppb	0.7	1060500.40	100	101.09	90	110	
Tl	203	209	No Gas	100.787	ppb	0.9	2574769.62	100	100.79	90	110	
Tl	205	209	No Gas	101.694	ppb	0.5	6146850.82	100	101.69	90	110	
Pb	206	209	No Gas	102.715	ppb	0.1	2064476.04	100	102.72	90	110	
Pb	207	209	No Gas	103.417	ppb	0.4	1716207.88	100	103.42	90	110	
Pb	208	209	No Gas	103.051	ppb	0.2	8020259.55	100	103.05	90	110	
Th	232	209	No Gas	101.786	ppb	0.2	8125586.44	100	101.79	90	110	
U	238	209	No Gas	102.596	ppb	0.5	8051023.54	100	102.6	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5472986.25	1.2	6069758.49	90.17	70	125	
Sc	45	No Gas	25980824.21	1.0	26854717.27	96.75	75	125	
Sc	45	He	1024865.69	0.6	1086551.24	94.32	75	125	
Y	89	No Gas	58933513.63	1.3	60596358.15	97.26	75	125	
Y	89	He	7758073.09	0.7	8174748.93	94.9	75	125	
In	115	No Gas	12753504.12	0.8	13007558.49	98.05	75	125	
Tb	159	No Gas	17495722.43	0.2	17536754.71	99.77	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10495834.86	0.5	10657708.47	98.48	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	082_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 16:34:33
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.080	ppb	90.3	300629.36	100	
Be	9	6	No Gas	0.011	ppb	84.5	140.14	100	
B	11	6	No Gas	5.902	ppb	9.3	41061.18	100	
Na	23	45	No Gas	9.314	ppb	12.5	682477.86	500000	
Na	23	45	He	7.700	ppb	10.9	23915.32	500000	
Mg	24	45	No Gas	0.510	ppb	43.6	22487.37	500000	
Mg	24	45	He	0.330	ppb	47.0	413.37	500000	
Mg	25	45	No Gas	0.501	ppb	37.8	2960.59	500000	
Al	27	45	No Gas	-0.172	ppb	N/A	11245.27	500000	
Al	27	45	He	-0.383	ppb	N/A	73.33	500000	
Si	28	45	No Gas	22.634	ppb	23.0	759570.95	100	
Si	29	45	No Gas	20.186	ppb	32.3	107550.17	100	
K	39	45	No Gas	3.223	ppb	28.7	4867946.28	500000	
K	39	45	He	0.439	ppb	675.7	28124.22	500000	
Ca	44	45	No Gas	-19.120	ppb	N/A	151178.90	500000	
Ca	44	45	He	1.825	ppb	355.8	320.03	500000	
Ti	47	45	No Gas	-0.034	ppb	N/A	377.06	10000	
V	51	45	No Gas	-0.078	ppb	N/A	-6764.39	100	
V	51	45	He	0.034	ppb	61.8	620.65	100	
Cr	52	89	No Gas	0.097	ppb	28.3	37412.05	100	
Cr	52	89	He	0.008	ppb	224.9	2956.67	100	
Cr	53	89	No Gas	2.571	ppb	9.4	75291.46	100	
Mn	55	89	No Gas	0.009	ppb	76.3	11947.37	100	
Mn	55	89	He	0.030	ppb	89.8	280.29	100	
Fe	56	89	No Gas	-3.252	ppb	N/A	2325541.20	500000	
Fe	56	89	He	3.265	ppb	20.2	67571.60	500000	
Co	59	89	No Gas	0.006	ppb	76.2	1628.43	100	
Co	59	89	He	0.005	ppb	149.9	363.71	100	
Ni	60	89	No Gas	0.012	ppb	79.8	1308.06	100	
Ni	60	89	He	-0.184	ppb	N/A	260.27	100	
Ni	62	89	No Gas	-0.024	ppb	N/A	5940.69	100	
Cu	63	89	No Gas	-0.147	ppb	N/A	12344.80	100	
Cu	63	89	He	-0.083	ppb	N/A	3614.16	100	
Cu	65	89	No Gas	-0.150	ppb	N/A	6010.77	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.018	ppb	N/A	2189.08	100	
Zn	66	89	He	-0.043	ppb	N/A	393.74	100	
Zn	67	89	No Gas	0.012	ppb	442.7	440.46	100	
Zn	68	89	No Gas	0.015	ppb	212.1	1731.88	100	
As	75	89	No Gas	-0.261	ppb	N/A	2675.40	100	
As	75	89	He	0.014	ppb	112.5	53.33	100	
Se	77	89	No Gas	5.237	ppb	6.6	12308.13	100	
Se	78	89	No Gas	0.048	ppb	1656.8	18327.72	100	
Se	78	89	He	0.135	ppb	41.7	36.67	100	
Se	82	89	No Gas	0.014	ppb	1738.2	-96.02	100	
[Se]	83	89	No Gas	270.262	ppb	149.6	2142.35	100	Failed
Sr	88	89	No Gas	0.006	ppb	68.6	910.96	100	
Mo	95	89	No Gas	0.050	ppb	98.2	3524.06	10000	
Mo	97	89	No Gas	0.036	ppb	174.7	2078.96	10000	
Mo	98	89	No Gas	0.053	ppb	71.3	5617.36	10000	
[Mo]	99	89	No Gas	2.302	ppb	3818.3	20.02	10000	
Cd	106	89	No Gas	-0.593	ppb	N/A	56852.01	100	
Ag	107	89	No Gas	-5.854	ppb	N/A	5920.32	100	
Ag	107	89	He	-7.363	ppb	N/A	5009.38	100	
Cd	108	89	No Gas	-0.051	ppb	N/A	116.78	100	
Ag	109	89	No Gas	-5.775	ppb	N/A	5413.38	100	
Cd	111	89	No Gas	0.010	ppb	15.8	-77.53	100	
Cd	114	89	No Gas	0.006	ppb	34.4	240.25	100	
Sn	118	115	No Gas	0.025	ppb	70.0	4838.70	100	
Sb	121	115	No Gas	-0.131	ppb	N/A	2581.38	100	
Sb	121	89	He	-0.168	ppb	N/A	690.03	100	
Sb	123	115	No Gas	-0.123	ppb	N/A	2085.63	100	
Ba	135	115	No Gas	0.005	ppb	82.7	113.45	100	
Ba	137	115	No Gas	0.004	ppb	93.5	220.23	100	
Tl	203	209	No Gas	0.210	ppb	29.4	5810.68	100	
Tl	205	209	No Gas	0.218	ppb	22.2	14239.58	100	
Pb	206	209	No Gas	0.018	ppb	98.8	2035.58	100	
Pb	207	209	No Gas	0.022	ppb	39.4	1731.88	100	
Pb	208	209	No Gas	0.019	ppb	38.3	7845.63	100	
Th	232	209	No Gas	0.291	ppb	21.9	27519.43	100	
U	238	209	No Gas	0.091	ppb	24.0	7954.11	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5685105.89	0.7	6069758.49	93.66	70	125	
Sc	45	No Gas	25702298.18	0.8	26854717.27	95.71	75	125	
Sc	45	He	1037160.69	0.7	1086551.24	95.45	75	125	
Y	89	No Gas	59208533.65	0.4	60596358.15	97.71	75	125	
Y	89	He	7873395.08	0.5	8174748.93	96.31	75	125	
In	115	No Gas	12879505.85	0.3	13007558.49	99.02	75	125	
Tb	159	No Gas	17435382.92	0.4	17536754.71	99.42	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10647484.30	0.2	10657708.47	99.9	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	093_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 16:52:49
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.272	ppb	0.3	3312111.07	100	102.27	90	110	
Be	9	6	No Gas	99.080	ppb	0.7	767496.35	100	99.08	90	110	
B	11	6	No Gas	243.260	ppb	1.2	1304763.41	250	97.3	90	110	
Na	23	45	No Gas	10145.342	ppb	0.9	350219307.83	10000	101.45	90	110	
Na	23	45	He	10259.764	ppb	0.3	10158592.35	10000	102.6	90	110	
Mg	24	45	No Gas	10249.253	ppb	0.2	243612689.70	10000	102.49	90	110	
Mg	24	45	He	10273.249	ppb	0.3	5185445.65	10000	102.73	90	110	
Mg	25	45	No Gas	10273.721	ppb	0.3	32690273.68	10000	102.74	90	110	
Al	27	45	No Gas	102.483	ppb	0.6	3148500.89	100	102.48	90	110	
Al	27	45	He	104.376	ppb	0.1	20348.53	100	104.38	90	110	
Si	28	45	No Gas	10455.971	ppb	0.7	128622048.97	10000	104.56	90	110	
Si	29	45	No Gas	10326.550	ppb	0.4	7892589.48	10000	103.27	90	110	
K	39	45	No Gas	10225.553	ppb	1.3	335975808.33	10000	102.26	90	110	
K	39	45	He	10139.414	ppb	0.0	4101525.15	10000	101.39	90	110	
Ca	44	45	No Gas	10165.324	ppb	0.5	10137384.22	10000	101.65	90	110	
Ca	44	45	He	10313.992	ppb	0.7	221634.14	10000	103.14	90	110	
Ti	47	45	No Gas	101.906	ppb	1.3	314265.91	100	101.91	90	110	
V	51	45	No Gas	102.768	ppb	0.1	4210416.92	100	102.77	90	110	
V	51	45	He	107.869	ppb	0.8	545376.91	100	107.87	90	110	
Cr	52	89	No Gas	99.884	ppb	0.9	3951337.08	100	99.88	90	110	
Cr	52	89	He	101.772	ppb	0.4	690552.43	100	101.77	90	110	
Cr	53	89	No Gas	101.671	ppb	0.3	539308.40	100	101.67	90	110	
Mn	55	89	No Gas	100.643	ppb	0.7	5328197.16	100	100.64	90	110	
Mn	55	89	He	101.078	ppb	2.1	361967.96	100	101.08	90	110	
Fe	56	89	No Gas	9979.918	ppb	0.8	380513016.84	10000	99.8	90	110	
Fe	56	89	He	10009.587	ppb	0.3	47137724.30	10000	100.1	90	110	
Co	59	89	No Gas	101.243	ppb	0.4	4343983.78	100	101.24	90	110	
Co	59	89	He	101.254	ppb	0.5	1135049.53	100	101.25	90	110	
Ni	60	89	No Gas	100.368	ppb	0.3	961274.14	100	100.37	90	110	
Ni	60	89	He	101.908	ppb	0.8	315942.93	100	101.91	90	110	
Ni	62	89	No Gas	100.799	ppb	1.3	146729.32	100	100.8	90	110	
Cu	63	89	No Gas	100.050	ppb	0.4	2316267.68	100	100.05	90	110	
Cu	63	89	He	102.013	ppb	0.7	865905.02	100	102.01	90	110	
Cu	65	89	No Gas	99.704	ppb	0.5	1105084.38	100	99.7	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	100.651	ppb	0.4	661888.35	100	100.65	90	110	
Zn	66	89	He	102.591	ppb	0.5	130808.07	100	102.59	90	110	
Zn	67	89	No Gas	103.459	ppb	0.6	106477.85	100	103.46	90	110	
Zn	68	89	No Gas	101.780	ppb	0.3	479025.24	100	101.78	90	110	
As	75	89	No Gas	99.722	ppb	0.9	682506.80	100	99.72	90	110	
As	75	89	He	100.856	ppb	0.3	93510.84	100	100.86	90	110	
Se	77	89	No Gas	105.229	ppb	2.1	45957.71	100	105.23	90	110	
Se	78	89	No Gas	101.973	ppb	1.2	119269.15	100	101.97	90	110	
Se	78	89	He	101.321	ppb	1.9	5626.75	100	101.32	90	110	
Se	82	89	No Gas	103.318	ppb	2.7	41701.16	100	103.32	90	110	
[Se]	83	89	No Gas	415.941	ppb	164.2	2052.24	100	415.94	90	110	Failed
Sr	88	89	No Gas	102.517	ppb	0.4	6363388.82	100	102.52	90	110	
Mo	95	89	No Gas	100.914	ppb	0.2	1209574.63	100	100.91	90	110	
Mo	97	89	No Gas	99.818	ppb	1.3	740749.16	100	99.82	90	110	
Mo	98	89	No Gas	101.122	ppb	0.8	1927971.82	100	101.12	90	110	
[Mo]	99	89	No Gas	159.451	ppb	97.4	50.05	100	159.45	90	110	Failed
Cd	106	89	No Gas	103.892	ppb	5.6	116145.31	100	103.89	90	110	
Ag	107	89	No Gas	102.054	ppb	0.9	3264747.72	100	102.05	90	110	
Ag	107	89	He	102.048	ppb	0.4	1561678.50	100	102.05	90	110	
Cd	108	89	No Gas	103.955	ppb	0.8	45969.25	100	103.96	90	110	
Ag	109	89	No Gas	100.950	ppb	0.3	3117239.54	100	100.95	90	110	
Cd	111	89	No Gas	103.076	ppb	0.3	631233.99	100	103.08	90	110	
Cd	114	89	No Gas	104.048	ppb	0.5	1662947.43	100	104.05	90	110	
Sn	118	115	No Gas	100.878	ppb	0.4	2042011.79	100	100.88	90	110	
Sb	121	115	No Gas	101.176	ppb	0.2	2959640.65	100	101.18	90	110	
Sb	121	89	He	104.826	ppb	0.5	627885.89	100	104.83	90	110	
Sb	123	115	No Gas	101.747	ppb	0.4	2260933.13	100	101.75	90	110	
Ba	135	115	No Gas	103.455	ppb	0.9	602243.39	100	103.46	90	110	
Ba	137	115	No Gas	102.114	ppb	0.3	1048849.79	100	102.11	90	110	
Tl	203	209	No Gas	99.780	ppb	0.1	2535336.23	100	99.78	90	110	
Tl	205	209	No Gas	101.029	ppb	0.4	6073731.45	100	101.03	90	110	
Pb	206	209	No Gas	102.077	ppb	1.1	2040521.57	100	102.08	90	110	
Pb	207	209	No Gas	103.715	ppb	0.6	1711817.18	100	103.72	90	110	
Pb	208	209	No Gas	103.114	ppb	0.7	7981622.63	100	103.11	90	110	
Th	232	209	No Gas	100.739	ppb	0.6	7998749.18	100	100.74	90	110	
U	238	209	No Gas	102.054	ppb	0.5	7965158.71	100	102.05	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5337103.84	0.7	6069758.49	87.93	70	125	
Sc	45	No Gas	25219331.05	0.4	26854717.27	93.91	75	125	
Sc	45	He	1007319.68	1.2	1086551.24	92.71	75	125	
Y	89	No Gas	58008935.72	0.1	60596358.15	95.73	75	125	
Y	89	He	7643894.32	0.9	8174748.93	93.51	75	125	
In	115	No Gas	12486299.11	0.4	13007558.49	95.99	75	125	
Tb	159	No Gas	17254988.36	0.5	17536754.71	98.39	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10439075.97	0.5	10657708.47	97.95	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	094_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 16:54:34
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.052	ppb	161.0	292350.40	100	
Be	9	6	No Gas	0.010	ppb	31.5	126.79	100	
B	11	6	No Gas	3.770	ppb	7.9	28230.13	100	
Na	23	45	No Gas	7.366	ppb	4.8	610848.76	500000	
Na	23	45	He	8.731	ppb	4.4	25157.89	500000	
Mg	24	45	No Gas	0.322	ppb	37.5	17866.37	500000	
Mg	24	45	He	0.044	ppb	435.3	266.69	500000	
Mg	25	45	No Gas	0.241	ppb	39.3	2107.00	500000	
Al	27	45	No Gas	-0.155	ppb	N/A	11712.52	500000	
Al	27	45	He	-0.286	ppb	N/A	93.33	500000	
Si	28	45	No Gas	8.011	ppb	22.3	574064.76	100	
Si	29	45	No Gas	6.718	ppb	32.6	96677.01	100	
K	39	45	No Gas	7.082	ppb	10.5	4968617.53	500000	
K	39	45	He	2.691	ppb	148.7	29286.83	500000	
Ca	44	45	No Gas	-8.287	ppb	N/A	161158.24	500000	
Ca	44	45	He	-1.861	ppb	N/A	240.02	500000	
Ti	47	45	No Gas	-0.018	ppb	N/A	423.77	10000	
V	51	45	No Gas	-0.030	ppb	N/A	-4716.11	100	
V	51	45	He	0.022	ppb	55.9	563.92	100	
Cr	52	89	No Gas	-0.003	ppb	N/A	33424.34	100	
Cr	52	89	He	-0.019	ppb	N/A	2793.12	100	
Cr	53	89	No Gas	0.337	ppb	64.0	64593.32	100	
Mn	55	89	No Gas	-0.009	ppb	N/A	10938.81	100	
Mn	55	89	He	0.025	ppb	34.8	263.61	100	
Fe	56	89	No Gas	-3.699	ppb	N/A	2308419.32	500000	
Fe	56	89	He	3.603	ppb	24.2	69808.84	500000	
Co	59	89	No Gas	0.004	ppb	28.9	1528.31	100	
Co	59	89	He	0.005	ppb	91.0	367.05	100	
Ni	60	89	No Gas	-0.005	ppb	N/A	1137.87	100	
Ni	60	89	He	-0.173	ppb	N/A	296.98	100	
Ni	62	89	No Gas	-0.230	ppb	N/A	5646.93	100	
Cu	63	89	No Gas	-0.082	ppb	N/A	13881.15	100	
Cu	63	89	He	-0.024	ppb	N/A	4171.56	100	
Cu	65	89	No Gas	-0.085	ppb	N/A	6745.21	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.045	ppb	N/A	2008.86	100	
Zn	66	89	He	-0.066	ppb	N/A	367.04	100	
Zn	67	89	No Gas	-0.052	ppb	N/A	373.72	100	
Zn	68	89	No Gas	0.032	ppb	53.5	1815.31	100	
As	75	89	No Gas	0.038	ppb	152.5	4745.61	100	
As	75	89	He	0.016	ppb	104.9	55.56	100	
Se	77	89	No Gas	-0.222	ppb	N/A	10421.25	100	
Se	78	89	No Gas	0.541	ppb	54.6	18828.92	100	
Se	78	89	He	0.225	ppb	125.4	42.22	100	
Se	82	89	No Gas	0.591	ppb	97.8	142.33	100	
[Se]	83	89	No Gas	759.190	ppb	107.4	1982.17	100	Failed
Sr	88	89	No Gas	0.006	ppb	18.0	897.61	100	
Mo	95	89	No Gas	0.023	ppb	300.2	3193.66	10000	
Mo	97	89	No Gas	0.036	ppb	96.8	2075.61	10000	
Mo	98	89	No Gas	0.040	ppb	133.3	5358.84	10000	
[Mo]	99	89	No Gas	52.838	ppb	166.6	30.03	10000	
Cd	106	89	No Gas	-1.582	ppb	N/A	56279.08	100	
Ag	107	89	No Gas	-5.937	ppb	N/A	3361.56	100	
Ag	107	89	He	-7.565	ppb	N/A	2065.60	100	
Cd	108	89	No Gas	0.060	ppb	58.9	166.84	100	
Ag	109	89	No Gas	-5.865	ppb	N/A	2713.04	100	
Cd	111	89	No Gas	0.001	ppb	603.5	-135.69	100	
Cd	114	89	No Gas	0.006	ppb	34.7	226.90	100	
Sn	118	115	No Gas	0.036	ppb	86.6	5058.78	100	
Sb	121	115	No Gas	-0.141	ppb	N/A	2242.43	100	
Sb	121	89	He	-0.202	ppb	N/A	486.68	100	
Sb	123	115	No Gas	-0.140	ppb	N/A	1688.50	100	
Ba	135	115	No Gas	0.011	ppb	54.7	146.81	100	
Ba	137	115	No Gas	0.008	ppb	81.4	266.94	100	
Tl	203	209	No Gas	0.217	ppb	26.4	6044.36	100	
Tl	205	209	No Gas	0.213	ppb	24.9	14075.80	100	
Pb	206	209	No Gas	0.013	ppb	59.5	1968.85	100	
Pb	207	209	No Gas	0.025	ppb	39.6	1798.63	100	
Pb	208	209	No Gas	0.020	ppb	40.5	8009.18	100	
Th	232	209	No Gas	0.315	ppb	21.3	29787.09	100	
U	238	209	No Gas	0.091	ppb	27.0	8050.94	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5545105.17	0.6	6069758.49	91.36	70	125	
Sc	45	No Gas	25563535.25	0.5	26854717.27	95.19	75	125	
Sc	45	He	1045328.64	0.2	1086551.24	96.21	75	125	
Y	89	No Gas	59220006.79	0.4	60596358.15	97.73	75	125	
Y	89	He	7943882.23	1.0	8174748.93	97.18	75	125	
In	115	No Gas	12831003.65	0.2	13007558.49	98.64	75	125	
Tb	159	No Gas	17532477.93	0.4	17536754.71	99.98	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10775802.35	0.2	10657708.47	101.11	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 105_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 17:28:31

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 035CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.445	ppb	0.3	3441380.34	100	102.44	90	110	
Be	9	6	No Gas	99.838	ppb	1.1	802343.26	100	99.84	90	110	
B	11	6	No Gas	252.511	ppb	0.3	1404823.78	250	101	90	110	
Na	23	45	No Gas	10140.859	ppb	0.4	367201508.21	10000	101.41	90	110	
Na	23	45	He	10179.743	ppb	2.2	10625691.51	10000	101.8	90	110	
Mg	24	45	No Gas	10223.247	ppb	1.6	254880336.20	10000	102.23	90	110	
Mg	24	45	He	10296.303	ppb	0.9	5480046.79	10000	102.96	90	110	
Mg	25	45	No Gas	10318.028	ppb	0.9	34437478.66	10000	103.18	90	110	
Al	27	45	No Gas	102.478	ppb	1.5	3302326.30	100	102.48	90	110	
Al	27	45	He	101.341	ppb	2.2	20832.55	100	101.34	90	110	
Si	28	45	No Gas	10388.232	ppb	0.7	134047978.25	10000	103.88	90	110	
Si	29	45	No Gas	10401.616	ppb	0.6	8338431.78	10000	104.02	90	110	
K	39	45	No Gas	10267.063	ppb	0.6	353844888.06	10000	102.67	90	110	
K	39	45	He	10162.770	ppb	1.5	4334118.06	10000	101.63	90	110	
Ca	44	45	No Gas	10240.042	ppb	0.9	10710992.76	10000	102.4	90	110	
Ca	44	45	He	10254.962	ppb	1.5	232352.48	10000	102.55	90	110	
Ti	47	45	No Gas	101.433	ppb	0.6	328120.11	100	101.43	90	110	
V	51	45	No Gas	103.115	ppb	1.0	4431420.24	100	103.12	90	110	
V	51	45	He	106.476	ppb	0.8	567633.44	100	106.48	90	110	
Cr	52	89	No Gas	101.344	ppb	1.0	4153593.19	100	101.34	90	110	
Cr	52	89	He	100.598	ppb	1.2	714536.23	100	100.6	90	110	
Cr	53	89	No Gas	99.417	ppb	1.0	547831.81	100	99.42	90	110	
Mn	55	89	No Gas	101.686	ppb	0.9	5577905.42	100	101.69	90	110	
Mn	55	89	He	100.818	ppb	1.4	377859.64	100	100.82	90	110	
Fe	56	89	No Gas	10143.549	ppb	0.8	400692733.95	10000	101.44	90	110	
Fe	56	89	He	10073.490	ppb	1.4	49654519.26	10000	100.73	90	110	
Co	59	89	No Gas	101.686	ppb	0.5	4520975.78	100	101.69	90	110	
Co	59	89	He	101.834	ppb	1.5	1194809.81	100	101.83	90	110	
Ni	60	89	No Gas	101.310	ppb	0.4	1005411.17	100	101.31	90	110	
Ni	60	89	He	100.741	ppb	0.6	326950.83	100	100.74	90	110	
Ni	62	89	No Gas	100.906	ppb	1.6	152197.93	100	100.91	90	110	
Cu	63	89	No Gas	101.572	ppb	0.4	2436342.08	100	101.57	90	110	
Cu	63	89	He	100.753	ppb	1.5	895223.27	100	100.75	90	110	
Cu	65	89	No Gas	101.633	ppb	1.0	1167050.59	100	101.63	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	101.124	ppb	0.6	689035.05	100	101.12	90	110	
Zn	66	89	He	101.536	ppb	1.6	135511.55	100	101.54	90	110	
Zn	67	89	No Gas	101.774	ppb	0.5	108546.07	100	101.77	90	110	
Zn	68	89	No Gas	102.288	ppb	1.1	498805.66	100	102.29	90	110	
As	75	89	No Gas	99.266	ppb	0.2	704002.65	100	99.27	90	110	
As	75	89	He	100.325	ppb	1.4	97367.06	100	100.32	90	110	
Se	77	89	No Gas	104.123	ppb	0.7	47233.24	100	104.12	90	110	
Se	78	89	No Gas	103.078	ppb	3.4	124707.37	100	103.08	90	110	
Se	78	89	He	101.841	ppb	3.3	5917.99	100	101.84	90	110	
Se	82	89	No Gas	104.360	ppb	1.8	43649.23	100	104.36	90	110	
[Se]	83	89	No Gas	529.108	ppb	60.0	2088.96	100	529.11	90	110	Failed
Sr	88	89	No Gas	102.756	ppb	0.8	6608796.93	100	102.76	90	110	
Mo	95	89	No Gas	101.175	ppb	0.1	1256601.45	100	101.18	90	110	
Mo	97	89	No Gas	100.750	ppb	0.5	774723.60	100	100.75	90	110	
Mo	98	89	No Gas	102.548	ppb	0.9	2025779.56	100	102.55	90	110	
[Mo]	99	89	No Gas	267.110	ppb	29.4	73.41	100	267.11	90	110	Failed
Cd	106	89	No Gas	104.151	ppb	3.1	120497.71	100	104.15	90	110	
Ag	107	89	No Gas	101.326	ppb	1.2	3359976.46	100	101.33	90	110	
Ag	107	89	He	100.308	ppb	1.4	1608698.23	100	100.31	90	110	
Cd	108	89	No Gas	105.109	ppb	2.3	48159.49	100	105.11	90	110	
Ag	109	89	No Gas	101.781	ppb	0.7	3255087.07	100	101.78	90	110	
Cd	111	89	No Gas	102.893	ppb	1.2	652881.01	100	102.89	90	110	
Cd	114	89	No Gas	104.481	ppb	1.2	1730213.91	100	104.48	90	110	
Sn	118	115	No Gas	102.258	ppb	0.1	2135524.64	100	102.26	90	110	
Sb	121	115	No Gas	102.415	ppb	1.0	3090698.28	100	102.42	90	110	
Sb	121	89	He	104.509	ppb	0.9	655272.97	100	104.51	90	110	
Sb	123	115	No Gas	103.200	ppb	0.8	2365778.13	100	103.2	90	110	
Ba	135	115	No Gas	102.743	ppb	1.4	617036.65	100	102.74	90	110	
Ba	137	115	No Gas	103.142	ppb	0.4	1092968.28	100	103.14	90	110	
Tl	203	209	No Gas	100.492	ppb	0.6	2619177.78	100	100.49	90	110	
Tl	205	209	No Gas	101.547	ppb	0.5	6262066.46	100	101.55	90	110	
Pb	206	209	No Gas	102.801	ppb	1.0	2107940.24	100	102.8	90	110	
Pb	207	209	No Gas	103.548	ppb	1.0	1753088.51	100	103.55	90	110	
Pb	208	209	No Gas	103.329	ppb	0.6	8204321.32	100	103.33	90	110	
Th	232	209	No Gas	101.422	ppb	0.6	8260127.02	100	101.42	90	110	
U	238	209	No Gas	102.380	ppb	0.7	8196226.24	100	102.38	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5536747.11	0.6	6069758.49	91.22	70	125	
Sc	45	No Gas	26454689.74	0.9	26854717.27	98.51	75	125	
Sc	45	He	1062285.90	2.6	1086551.24	97.77	75	125	
Y	89	No Gas	60108855.64	0.8	60596358.15	99.2	75	125	
Y	89	He	8002630.77	2.4	8174748.93	97.89	75	125	
In	115	No Gas	12882116.31	0.4	13007558.49	99.04	75	125	
Tb	159	No Gas	17845065.93	0.5	17536754.71	101.76	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10707871.79	0.0	10657708.47	100.47	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	106_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 17:30:16
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.000	ppb	14620.4	303291.39	100	
Be	9	6	No Gas	0.015	ppb	25.9	176.85	100	
B	11	6	No Gas	6.771	ppb	9.7	46781.61	100	
Na	23	45	No Gas	6.770	ppb	12.6	616496.39	500000	
Na	23	45	He	8.432	ppb	8.0	25772.18	500000	
Mg	24	45	No Gas	1.177	ppb	23.5	40154.97	500000	
Mg	24	45	He	0.935	ppb	28.8	760.07	500000	
Mg	25	45	No Gas	1.334	ppb	26.0	5881.78	500000	
Al	27	45	No Gas	-0.137	ppb	N/A	12833.66	500000	
Al	27	45	He	-0.303	ppb	N/A	93.33	500000	
Si	28	45	No Gas	7.503	ppb	31.0	593216.80	100	
Si	29	45	No Gas	5.960	ppb	67.5	100410.29	100	
K	39	45	No Gas	7.425	ppb	11.6	5203987.63	500000	
K	39	45	He	3.961	ppb	38.4	30917.09	500000	
Ca	44	45	No Gas	-16.326	ppb	N/A	160037.33	500000	
Ca	44	45	He	5.816	ppb	123.2	426.72	500000	
Ti	47	45	No Gas	-0.030	ppb	N/A	403.75	10000	
V	51	45	No Gas	-0.011	ppb	N/A	-4106.00	100	
V	51	45	He	0.016	ppb	64.8	547.24	100	
Cr	52	89	No Gas	-0.033	ppb	N/A	33294.02	100	
Cr	52	89	He	-0.002	ppb	N/A	3003.39	100	
Cr	53	89	No Gas	-0.886	ppb	N/A	60685.13	100	
Mn	55	89	No Gas	-0.012	ppb	N/A	11135.83	100	
Mn	55	89	He	0.021	ppb	28.9	256.93	100	
Fe	56	89	No Gas	1.984	ppb	95.4	2612580.53	500000	
Fe	56	89	He	4.348	ppb	15.2	75882.57	500000	
Co	59	89	No Gas	0.012	ppb	43.4	1968.82	100	
Co	59	89	He	0.007	ppb	99.3	400.41	100	
Ni	60	89	No Gas	0.013	ppb	59.0	1354.78	100	
Ni	60	89	He	-0.172	ppb	N/A	310.32	100	
Ni	62	89	No Gas	-0.023	ppb	N/A	6140.95	100	
Cu	63	89	No Gas	-0.120	ppb	N/A	13406.87	100	
Cu	63	89	He	-0.053	ppb	N/A	4038.05	100	
Cu	65	89	No Gas	-0.168	ppb	N/A	6004.08	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.018	ppb	N/A	2259.16	100	
Zn	66	89	He	-0.055	ppb	N/A	393.74	100	
Zn	67	89	No Gas	-0.017	ppb	N/A	423.77	100	
Zn	68	89	No Gas	-0.026	ppb	N/A	1585.04	100	
As	75	89	No Gas	0.039	ppb	691.8	4912.58	100	
As	75	89	He	0.008	ppb	67.3	48.89	100	
Se	77	89	No Gas	-2.975	ppb	N/A	9783.53	100	
Se	78	89	No Gas	0.242	ppb	249.1	19142.93	100	
Se	78	89	He	0.297	ppb	95.8	47.78	100	
Se	82	89	No Gas	0.631	ppb	80.5	164.11	100	
[Se]	83	89	No Gas	431.951	ppb	153.8	2159.04	100	Failed
Sr	88	89	No Gas	0.010	ppb	12.9	1224.64	100	
Mo	95	89	No Gas	0.119	ppb	62.1	4515.39	10000	
Mo	97	89	No Gas	0.114	ppb	59.8	2759.77	10000	
Mo	98	89	No Gas	0.132	ppb	43.8	7373.80	10000	
[Mo]	99	89	No Gas	-17.549	ppb	N/A	16.68	10000	
Cd	106	89	No Gas	-0.665	ppb	N/A	58712.01	100	
Ag	107	89	No Gas	-5.936	ppb	N/A	3513.82	100	
Ag	107	89	He	-7.561	ppb	N/A	2192.42	100	
Cd	108	89	No Gas	-0.038	ppb	N/A	126.79	100	
Ag	109	89	No Gas	-5.860	ppb	N/A	2970.04	100	
Cd	111	89	No Gas	0.012	ppb	32.5	-67.16	100	
Cd	114	89	No Gas	0.012	ppb	57.4	340.35	100	
Sn	118	115	No Gas	0.117	ppb	23.0	6952.99	100	
Sb	121	115	No Gas	0.031	ppb	130.4	7667.88	100	
Sb	121	89	He	0.081	ppb	44.0	2313.58	100	
Sb	123	115	No Gas	0.043	ppb	116.7	6044.24	100	
Ba	135	115	No Gas	0.015	ppb	64.4	180.18	100	
Ba	137	115	No Gas	0.008	ppb	63.6	270.28	100	
Tl	203	209	No Gas	0.254	ppb	22.7	7105.97	100	
Tl	205	209	No Gas	0.246	ppb	18.0	16347.52	100	
Pb	206	209	No Gas	0.034	ppb	48.4	2422.71	100	
Pb	207	209	No Gas	0.040	ppb	30.6	2085.63	100	
Pb	208	209	No Gas	0.038	ppb	21.8	9554.50	100	
Th	232	209	No Gas	0.229	ppb	20.1	23085.74	100	
U	238	209	No Gas	0.084	ppb	15.0	7556.70	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5783882.84	1.0	6069758.49	95.29	70	125	
Sc	45	No Gas	26715105.16	0.9	26854717.27	99.48	75	125	
Sc	45	He	1084034.54	0.3	1086551.24	99.77	75	125	
Y	89	No Gas	61190462.26	0.1	60596358.15	100.98	75	125	
Y	89	He	8204312.66	0.5	8174748.93	100.36	75	125	
In	115	No Gas	13238474.18	0.9	13007558.49	101.78	75	125	
Tb	159	No Gas	17955789.16	0.7	17536754.71	102.39	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10918774.84	0.4	10657708.47	102.45	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	143_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 18:31:13
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.671	ppb	0.2	3172612.72	100	101.67	90	110	
Be	9	6	No Gas	98.435	ppb	0.3	734345.57	100	98.44	90	110	
B	11	6	No Gas	242.476	ppb	1.4	1252536.00	250	96.99	90	110	
Na	23	45	No Gas	10171.442	ppb	0.5	334901207.49	10000	101.71	90	110	
Na	23	45	He	10405.189	ppb	0.7	9801593.39	10000	104.05	90	110	
Mg	24	45	No Gas	10232.283	ppb	0.2	231976456.54	10000	102.32	90	110	
Mg	24	45	He	10474.410	ppb	0.6	5029838.78	10000	104.74	90	110	
Mg	25	45	No Gas	10282.239	ppb	1.3	31207173.70	10000	102.82	90	110	
Al	27	45	No Gas	102.409	ppb	1.3	3001014.12	100	102.41	90	110	
Al	27	45	He	100.551	ppb	2.3	18656.15	100	100.55	90	110	
Si	28	45	No Gas	10324.807	ppb	0.5	121150303.88	10000	103.25	90	110	
Si	29	45	No Gas	10267.217	ppb	0.7	7485176.03	10000	102.67	90	110	
K	39	45	No Gas	10237.939	ppb	0.7	320849301.88	10000	102.38	90	110	
K	39	45	He	10087.773	ppb	1.0	3882372.03	10000	100.88	90	110	
Ca	44	45	No Gas	10294.319	ppb	0.4	9789741.73	10000	102.94	90	110	
Ca	44	45	He	10319.756	ppb	1.8	210974.19	10000	103.2	90	110	
Ti	47	45	No Gas	100.935	ppb	0.8	296903.36	100	100.94	90	110	
V	51	45	No Gas	102.194	ppb	0.6	3993520.19	100	102.19	90	110	
V	51	45	He	107.179	ppb	0.6	515541.65	100	107.18	90	110	
Cr	52	89	No Gas	98.808	ppb	0.8	3754624.11	100	98.81	90	110	
Cr	52	89	He	100.702	ppb	0.3	655164.67	100	100.7	90	110	
Cr	53	89	No Gas	99.234	ppb	0.3	507005.55	100	99.23	90	110	
Mn	55	89	No Gas	100.172	ppb	0.4	5093850.95	100	100.17	90	110	
Mn	55	89	He	99.988	ppb	0.9	343257.94	100	99.99	90	110	
Fe	56	89	No Gas	9962.681	ppb	1.1	364844383.15	10000	99.63	90	110	
Fe	56	89	He	9913.252	ppb	0.7	44759926.00	10000	99.13	90	110	
Co	59	89	No Gas	98.860	ppb	0.6	4074089.20	100	98.86	90	110	
Co	59	89	He	99.497	ppb	0.3	1069337.18	100	99.5	90	110	
Ni	60	89	No Gas	97.155	ppb	0.6	893742.84	100	97.16	90	110	
Ni	60	89	He	99.975	ppb	0.2	297172.67	100	99.98	90	110	
Ni	62	89	No Gas	99.317	ppb	1.5	138934.91	100	99.32	90	110	
Cu	63	89	No Gas	98.950	ppb	0.5	2200394.62	100	98.95	90	110	
Cu	63	89	He	99.790	ppb	0.3	812220.74	100	99.79	90	110	
Cu	65	89	No Gas	98.718	ppb	0.5	1051014.04	100	98.72	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	100.240	ppb	0.4	633134.16	100	100.24	90	110	
Zn	66	89	He	102.653	ppb	0.3	125492.78	100	102.65	90	110	
Zn	67	89	No Gas	101.765	ppb	2.2	100594.48	100	101.76	90	110	
Zn	68	89	No Gas	100.671	ppb	0.6	455098.52	100	100.67	90	110	
As	75	89	No Gas	98.148	ppb	0.3	645256.49	100	98.15	90	110	
As	75	89	He	99.565	ppb	1.1	88505.49	100	99.56	90	110	
Se	77	89	No Gas	100.122	ppb	1.4	42479.55	100	100.12	90	110	
Se	78	89	No Gas	102.641	ppb	0.8	115193.51	100	102.64	90	110	
Se	78	89	He	101.540	ppb	4.0	5406.67	100	101.54	90	110	
Se	82	89	No Gas	101.334	ppb	1.3	39284.70	100	101.33	90	110	
[Se]	83	89	No Gas	291.256	ppb	125.5	2008.86	100	291.26	90	110	Failed
Sr	88	89	No Gas	102.390	ppb	0.2	6104259.48	100	102.39	90	110	
Mo	95	89	No Gas	100.869	ppb	0.6	1161233.50	100	100.87	90	110	
Mo	97	89	No Gas	99.941	ppb	0.5	712349.90	100	99.94	90	110	
Mo	98	89	No Gas	101.669	ppb	0.2	1861788.36	100	101.67	90	110	
[Mo]	99	89	No Gas	205.930	ppb	15.4	56.72	100	205.93	90	110	Failed
Cd	106	89	No Gas	108.598	ppb	1.4	114169.62	100	108.6	90	110	
Ag	107	89	No Gas	101.408	ppb	0.5	3116961.40	100	101.41	90	110	
Ag	107	89	He	101.467	ppb	0.6	1489314.84	100	101.47	90	110	
Cd	108	89	No Gas	103.733	ppb	2.1	44060.98	100	103.73	90	110	
Ag	109	89	No Gas	100.639	ppb	0.6	2985401.45	100	100.64	90	110	
Cd	111	89	No Gas	103.844	ppb	0.9	610789.04	100	103.84	90	110	
Cd	114	89	No Gas	105.574	ppb	0.8	1620649.19	100	105.57	90	110	
Sn	118	115	No Gas	101.073	ppb	0.8	1996664.02	100	101.07	90	110	
Sb	121	115	No Gas	102.053	ppb	0.3	2913416.62	100	102.05	90	110	
Sb	121	89	He	106.026	ppb	0.5	608867.15	100	106.03	90	110	
Sb	123	115	No Gas	102.674	ppb	0.6	2226507.29	100	102.67	90	110	
Ba	135	115	No Gas	102.693	ppb	0.8	583416.20	100	102.69	90	110	
Ba	137	115	No Gas	101.580	ppb	0.9	1018248.41	100	101.58	90	110	
Tl	203	209	No Gas	99.895	ppb	0.8	2507678.88	100	99.9	90	110	
Tl	205	209	No Gas	101.417	ppb	0.5	6023660.55	100	101.42	90	110	
Pb	206	209	No Gas	102.369	ppb	0.2	2021756.66	100	102.37	90	110	
Pb	207	209	No Gas	102.816	ppb	0.5	1676567.82	100	102.82	90	110	
Pb	208	209	No Gas	102.720	ppb	0.2	7855456.72	100	102.72	90	110	
Th	232	209	No Gas	101.783	ppb	1.3	7984380.02	100	101.78	90	110	
U	238	209	No Gas	103.217	ppb	1.4	7959005.89	100	103.22	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5139905.48	0.6	6069758.49	84.68	70	125	
Sc	45	No Gas	24054756.47	0.4	26854717.27	89.57	75	125	
Sc	45	He	958340.62	0.5	1086551.24	88.2	75	125	
Y	89	No Gas	55716565.01	0.6	60596358.15	91.95	75	125	
Y	89	He	7328682.03	0.3	8174748.93	89.65	75	125	
In	115	No Gas	12185738.97	0.8	13007558.49	93.68	75	125	
Tb	159	No Gas	16884656.77	0.7	17536754.71	96.28	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10313341.26	0.4	10657708.47	96.77	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	144_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 18:32:58
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	035CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.107	ppb	69.3	282485.02	100	
Be	9	6	No Gas	0.015	ppb	35.9	156.82	100	
B	11	6	No Gas	3.455	ppb	10.6	25448.71	100	
Na	23	45	No Gas	6.868	ppb	7.8	562675.62	500000	
Na	23	45	He	7.395	ppb	19.0	22246.22	500000	
Mg	24	45	No Gas	0.830	ppb	40.5	28553.08	500000	
Mg	24	45	He	0.459	ppb	78.9	453.38	500000	
Mg	25	45	No Gas	0.782	ppb	53.5	3654.14	500000	
Al	27	45	No Gas	-0.129	ppb	N/A	11885.90	500000	
Al	27	45	He	-0.396	ppb	N/A	66.67	500000	
Si	28	45	No Gas	2.015	ppb	72.2	473685.64	100	
Si	29	45	No Gas	7.095	ppb	1.7	91933.80	100	
K	39	45	No Gas	15.570	ppb	6.8	4974760.55	500000	
K	39	45	He	8.028	ppb	39.3	29460.11	500000	
Ca	44	45	No Gas	-18.628	ppb	N/A	143030.97	500000	
Ca	44	45	He	-1.113	ppb	N/A	240.02	500000	
Ti	47	45	No Gas	-0.045	ppb	N/A	320.33	10000	
V	51	45	No Gas	0.021	ppb	337.6	-2466.96	100	
V	51	45	He	0.019	ppb	40.1	510.53	100	
Cr	52	89	No Gas	-0.068	ppb	N/A	29648.67	100	
Cr	52	89	He	-0.023	ppb	N/A	2609.57	100	
Cr	53	89	No Gas	-0.947	ppb	N/A	56214.76	100	
Mn	55	89	No Gas	-0.015	ppb	N/A	10214.15	100	
Mn	55	89	He	0.002	ppb	128.9	170.17	100	
Fe	56	89	No Gas	-6.018	ppb	N/A	2134782.01	500000	
Fe	56	89	He	3.481	ppb	12.1	65306.14	500000	
Co	59	89	No Gas	0.008	ppb	21.6	1665.13	100	
Co	59	89	He	0.005	ppb	19.8	353.70	100	
Ni	60	89	No Gas	-0.005	ppb	N/A	1097.83	100	
Ni	60	89	He	-0.161	ppb	N/A	317.00	100	
Ni	62	89	No Gas	-0.185	ppb	N/A	5493.38	100	
Cu	63	89	No Gas	-0.183	ppb	N/A	11072.40	100	
Cu	63	89	He	-0.101	ppb	N/A	3293.75	100	
Cu	65	89	No Gas	-0.208	ppb	N/A	5159.56	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.018	ppb	N/A	2102.30	100	
Zn	66	89	He	-0.036	ppb	N/A	383.73	100	
Zn	67	89	No Gas	0.008	ppb	293.2	420.44	100	
Zn	68	89	No Gas	0.016	ppb	158.0	1668.46	100	
As	75	89	No Gas	-0.037	ppb	N/A	4065.73	100	
As	75	89	He	0.022	ppb	90.1	57.78	100	
Se	77	89	No Gas	-2.835	ppb	N/A	9155.76	100	
Se	78	89	No Gas	-0.338	ppb	N/A	17255.18	100	
Se	78	89	He	0.045	ppb	145.4	30.00	100	
Se	82	89	No Gas	0.024	ppb	2719.1	-88.45	100	
[Se]	83	89	No Gas	339.929	ppb	160.5	2038.90	100	Failed
Sr	88	89	No Gas	0.010	ppb	27.3	1147.89	100	
Mo	95	89	No Gas	0.034	ppb	162.1	3203.65	10000	
Mo	97	89	No Gas	0.030	ppb	97.0	1958.80	10000	
Mo	98	89	No Gas	0.053	ppb	96.6	5401.25	10000	
[Mo]	99	89	No Gas	94.256	ppb	141.1	36.70	10000	
Cd	106	89	No Gas	0.926	ppb	110.4	55562.19	100	
Ag	107	89	No Gas	-5.968	ppb	N/A	2311.33	100	
Ag	107	89	He	-7.632	ppb	N/A	1021.08	100	
Cd	108	89	No Gas	0.013	ppb	624.2	140.14	100	
Ag	109	89	No Gas	-5.890	ppb	N/A	1895.40	100	
Cd	111	89	No Gas	0.011	ppb	65.9	-68.15	100	
Cd	114	89	No Gas	0.008	ppb	44.9	256.93	100	
Sn	118	115	No Gas	0.059	ppb	30.5	5347.79	100	
Sb	121	115	No Gas	-0.070	ppb	N/A	4256.28	100	
Sb	121	89	He	-0.046	ppb	N/A	1373.44	100	
Sb	123	115	No Gas	-0.062	ppb	N/A	3363.87	100	
Ba	135	115	No Gas	0.011	ppb	60.0	143.48	100	
Ba	137	115	No Gas	0.011	ppb	36.9	290.30	100	
Tl	203	209	No Gas	0.187	ppb	18.0	5213.10	100	
Tl	205	209	No Gas	0.188	ppb	18.3	12435.61	100	
Pb	206	209	No Gas	0.020	ppb	76.4	2078.96	100	
Pb	207	209	No Gas	0.023	ppb	69.2	1748.57	100	
Pb	208	209	No Gas	0.022	ppb	32.1	8112.62	100	
Th	232	209	No Gas	0.252	ppb	25.1	24406.51	100	
U	238	209	No Gas	0.087	ppb	15.5	7653.56	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5326847.12	0.1	6069758.49	87.76	70	125	
Sc	45	No Gas	24235815.86	0.3	26854717.27	90.25	75	125	
Sc	45	He	977445.52	0.6	1086551.24	89.96	75	125	
Y	89	No Gas	56967095.55	0.5	60596358.15	94.01	75	125	
Y	89	He	7493507.69	0.8	8174748.93	91.67	75	125	
In	115	No Gas	12428870.12	0.4	13007558.49	95.55	75	125	
Tb	159	No Gas	17201692.56	0.9	17536754.71	98.09	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10679163.19	1.0	10657708.47	100.2	75	125	

Initial Calibration Verification (ICV) Report

Sample Name ICV

File Name 157_ICV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 18:58:43

Sample Type ICV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	77.971	ppb	0.7	2568060.77	80	97.46	90	110	
Be	9	6	No Gas	78.291	ppb	1.6	591706.26	80	97.86	90	110	
B	11	6	No Gas	188.996	ppb	0.9	987071.79	200	94.5	90	110	
Na	23	45	No Gas	8126.086	ppb	0.2	275870297.83	8000	101.58	90	110	
Na	23	45	He	8175.226	ppb	0.4	8032351.96	8000	102.19	90	110	
Mg	24	45	No Gas	7999.836	ppb	1.0	186387410.56	8000	100	90	110	
Mg	24	45	He	8110.133	ppb	0.1	4025931.40	8000	101.38	90	110	
Mg	25	45	No Gas	7978.007	ppb	0.7	25159153.79	8000	99.73	90	110	
Al	27	45	No Gas	77.367	ppb	1.4	2369810.28	80	96.71	90	110	
Al	27	45	He	77.276	ppb	2.0	14908.20	80	96.6	90	110	
Si	28	45	No Gas	8350.419	ppb	0.5	101088618.82	8000	104.38	90	110	
Si	29	45	No Gas	8404.950	ppb	0.8	6298001.14	8000	105.06	90	110	
K	39	45	No Gas	7923.811	ppb	0.9	261216182.77	8000	99.05	90	110	
K	39	45	He	8082.762	ppb	0.3	3185942.35	8000	101.03	90	110	
Ca	44	45	No Gas	7855.120	ppb	0.8	7828422.17	8000	98.19	90	110	
Ca	44	45	He	8030.371	ppb	0.4	168999.66	8000	100.38	90	110	
Ti	47	45	No Gas	78.128	ppb	2.2	239740.35	80	97.66	90	110	
V	51	45	No Gas	78.223	ppb	1.3	3201278.66	80	97.78	90	110	
V	51	45	He	82.150	ppb	0.4	410003.77	80	102.69	90	110	
Cr	52	89	No Gas	79.707	ppb	0.3	2999424.43	80	99.63	90	110	
Cr	52	89	He	80.471	ppb	0.7	526148.99	80	100.59	90	110	
Cr	53	89	No Gas	77.960	ppb	0.8	405649.49	80	97.45	90	110	
Mn	55	89	No Gas	79.771	ppb	1.4	4062239.85	80	99.71	90	110	
Mn	55	89	He	79.578	ppb	0.8	276185.60	80	99.47	90	110	
Fe	56	89	No Gas	7969.922	ppb	0.8	294362373.25	8000	99.62	90	110	
Fe	56	89	He	7994.843	ppb	0.3	36419158.62	8000	99.94	90	110	
Co	59	89	No Gas	80.979	ppb	0.9	3295344.83	80	101.22	90	110	
Co	59	89	He	81.376	ppb	0.7	883471.75	80	101.72	90	110	
Ni	60	89	No Gas	80.467	ppb	1.2	720814.12	80	100.58	90	110	
Ni	60	89	He	79.905	ppb	1.8	238755.34	80	99.88	90	110	
Ni	62	89	No Gas	79.385	ppb	1.7	109927.09	80	99.23	90	110	
Cu	63	89	No Gas	81.870	ppb	1.9	1784310.09	80	102.34	90	110	
Cu	63	89	He	80.964	ppb	1.3	663657.46	80	101.2	90	110	
Cu	65	89	No Gas	80.987	ppb	1.8	844525.07	80	101.23	90	110	

Initial Calibration Verification (ICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	80.140	ppb	1.9	515873.57	80	100.18	90	110	
Zn	66	89	He	81.783	ppb	0.9	102325.50	80	102.23	90	110	
Zn	67	89	No Gas	80.243	ppb	1.7	81034.73	80	100.3	90	110	
Zn	68	89	No Gas	81.219	ppb	1.4	370590.96	80	101.52	90	110	
As	75	89	No Gas	78.774	ppb	1.6	521755.86	80	98.47	90	110	
As	75	89	He	79.825	ppb	0.8	71669.76	80	99.78	90	110	
Se	77	89	No Gas	75.279	ppb	2.3	34655.97	80	94.1	90	110	
Se	78	89	No Gas	78.251	ppb	2.7	95336.65	80	97.81	90	110	
Se	78	89	He	80.245	ppb	0.3	4408.51	80	100.31	90	110	
Se	82	89	No Gas	79.263	ppb	3.1	31618.88	80	99.08	90	110	
[Se]	83	89	No Gas	134.364	ppb	12.3	2048.90	80	167.96	90	110	Failed
Sr	88	89	No Gas	76.579	ppb	0.4	4725230.35	80	95.72	90	110	
Mo	95	89	No Gas	76.282	ppb	0.2	888454.76	80	95.35	90	110	
Mo	97	89	No Gas	76.521	ppb	1.7	557314.23	80	95.65	90	110	
Mo	98	89	No Gas	76.561	ppb	1.3	1451518.94	80	95.7	90	110	
[Mo]	99	89	No Gas	95.215	ppb	44.5	43.38	80	119.02	90	110	Failed
Cd	106	89	No Gas	77.504	ppb	1.4	101162.03	80	96.88	90	110	
Ag	107	89	No Gas	80.680	ppb	0.9	2497563.44	80	100.85	90	110	
Ag	107	89	He	80.485	ppb	0.4	1192068.40	80	100.61	90	110	
Cd	108	89	No Gas	78.965	ppb	2.4	34948.06	80	98.71	90	110	
Ag	109	89	No Gas	81.154	ppb	1.2	2427040.95	80	101.44	90	110	
Cd	111	89	No Gas	78.673	ppb	1.5	492952.40	80	98.34	90	110	
Cd	114	89	No Gas	79.100	ppb	1.0	1292821.47	80	98.87	90	110	
Sn	118	115	No Gas	77.153	ppb	0.6	1553057.09	80	96.44	90	110	
Sb	121	115	No Gas	78.734	ppb	1.5	2305632.62	80	98.42	90	110	
Sb	121	89	He	79.986	ppb	0.7	483573.55	80	99.98	90	110	
Sb	123	115	No Gas	78.625	ppb	1.5	1775739.18	80	98.28	90	110	
Ba	135	115	No Gas	77.876	ppb	0.4	458867.48	80	97.34	90	110	
Ba	137	115	No Gas	77.075	ppb	0.8	796005.88	80	96.34	90	110	
Tl	203	209	No Gas	77.796	ppb	1.2	1987110.13	80	97.24	90	110	
Tl	205	209	No Gas	77.238	ppb	2.2	4741715.06	80	96.55	90	110	
Pb	206	209	No Gas	77.569	ppb	1.6	1596873.33	80	96.96	90	110	
Pb	207	209	No Gas	77.430	ppb	1.6	1314751.86	80	96.79	90	110	
Pb	208	209	No Gas	77.696	ppb	0.7	6181564.31	80	97.12	90	110	
Th	232	209	No Gas	76.170	ppb	1.8	6217840.56	80	95.21	90	110	
U	238	209	No Gas	73.636	ppb	2.5	5965295.52	80	92.04	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5243566.52	0.8	5406885.91	96.98	70	125	
Sc	45	No Gas	24594061.61	0.4	24326295.51	101.1	75	125	
Sc	45	He	980491.87	0.4	970797.15	101	75	125	
Y	89	No Gas	56568098.21	1.0	56662702.82	99.83	75	125	
Y	89	He	7535053.61	1.1	7465540.55	100.93	75	125	
In	115	No Gas	12407261.13	0.9	12379434.81	100.22	75	125	
Tb	159	No Gas	17037769.05	0.4	17053216.17	99.91	75	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10379518.48	0.9	10541485.14	98.46	75	125	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	158_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 19:00:28
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.082	ppb	N/A	282509.93	100	
Be	9	6	No Gas	0.008	ppb	109.2	150.15	100	
B	11	6	No Gas	2.267	ppb	17.3	21902.52	100	
Na	23	45	No Gas	1.886	ppb	23.6	521060.61	500000	
Na	23	45	He	2.261	ppb	36.2	21912.50	500000	
Mg	24	45	No Gas	0.401	ppb	45.2	18427.37	500000	
Mg	24	45	He	-0.007	ppb	N/A	226.68	500000	
Mg	25	45	No Gas	0.391	ppb	80.5	2520.45	500000	
Al	27	45	No Gas	0.001	ppb	4783.9	12540.10	500000	
Al	27	45	He	-0.061	ppb	N/A	86.67	500000	
Si	28	45	No Gas	13.834	ppb	19.9	576594.24	100	
Si	29	45	No Gas	11.208	ppb	29.7	99042.54	100	
K	39	45	No Gas	-2.323	ppb	N/A	5057848.88	500000	
K	39	45	He	-4.179	ppb	N/A	27829.76	500000	
Ca	44	45	No Gas	27.937	ppb	14.2	166153.34	500000	
Ca	44	45	He	-2.074	ppb	N/A	173.35	500000	
Ti	47	45	No Gas	0.029	ppb	99.9	380.39	10000	
V	51	45	No Gas	0.014	ppb	268.5	-4543.62	100	
V	51	45	He	-0.010	ppb	N/A	483.84	100	
Cr	52	89	No Gas	0.009	ppb	155.8	31160.23	100	
Cr	52	89	He	-0.037	ppb	N/A	2619.58	100	
Cr	53	89	No Gas	-0.223	ppb	N/A	57776.14	100	
Mn	55	89	No Gas	0.000	ppb	6569.0	10561.50	100	
Mn	55	89	He	0.022	ppb	56.2	293.64	100	
Fe	56	89	No Gas	0.035	ppb	4865.3	2162575.31	500000	
Fe	56	89	He	5.941	ppb	14.5	58342.72	500000	
Co	59	89	No Gas	0.006	ppb	44.1	1785.27	100	
Co	59	89	He	0.009	ppb	33.9	380.39	100	
Ni	60	89	No Gas	0.004	ppb	135.8	1248.00	100	
Ni	60	89	He	-0.169	ppb	N/A	363.71	100	
Ni	62	89	No Gas	-0.065	ppb	N/A	5563.51	100	
Cu	63	89	No Gas	0.056	ppb	28.4	11573.37	100	
Cu	63	89	He	0.017	ppb	31.9	3237.02	100	
Cu	65	89	No Gas	0.039	ppb	17.6	5419.93	100	

Initial Calibration Blank (ICB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.034	ppb	20.6	2115.65	100	
Zn	66	89	He	-0.022	ppb	N/A	357.03	100	
Zn	67	89	No Gas	-0.017	ppb	N/A	390.40	100	
Zn	68	89	No Gas	0.020	ppb	18.0	1615.08	100	
As	75	89	No Gas	-0.088	ppb	N/A	3300.26	100	
As	75	89	He	0.034	ppb	35.0	55.56	100	
Se	77	89	No Gas	0.938	ppb	43.2	9756.77	100	
Se	78	89	No Gas	0.376	ppb	102.8	18935.78	100	
Se	78	89	He	-0.090	ppb	N/A	21.11	100	
Se	82	89	No Gas	-0.451	ppb	N/A	-85.35	100	
[Se]	83	89	No Gas	116.304	ppb	20.5	2068.93	100	Failed
Sr	88	89	No Gas	0.005	ppb	16.6	850.90	100	
Mo	95	89	No Gas	0.207	ppb	12.5	3166.93	10000	
Mo	97	89	No Gas	0.200	ppb	35.7	1968.83	10000	
Mo	98	89	No Gas	0.195	ppb	24.5	5130.96	10000	
[Mo]	99	89	No Gas	-12.859	ppb	N/A	13.35	10000	
Cd	106	89	No Gas	-1.568	ppb	N/A	55394.53	100	
Ag	107	89	No Gas	0.032	ppb	4.8	2501.36	100	
Ag	107	89	He	0.021	ppb	15.7	1091.16	100	
Cd	108	89	No Gas	0.033	ppb	424.0	96.76	100	
Ag	109	89	No Gas	0.034	ppb	12.0	2045.57	100	
Cd	111	89	No Gas	0.003	ppb	249.5	-57.17	100	
Cd	114	89	No Gas	0.008	ppb	21.8	206.88	100	
Sn	118	115	No Gas	0.072	ppb	31.1	4885.38	100	
Sb	121	115	No Gas	-0.049	ppb	N/A	1871.26	100	
Sb	121	89	He	-0.067	ppb	N/A	470.02	100	
Sb	123	115	No Gas	-0.049	ppb	N/A	1608.40	100	
Ba	135	115	No Gas	0.005	ppb	105.1	103.44	100	
Ba	137	115	No Gas	0.009	ppb	17.5	263.61	100	
Tl	203	209	No Gas	0.041	ppb	26.8	1464.92	100	
Tl	205	209	No Gas	0.040	ppb	8.5	3497.40	100	
Pb	206	209	No Gas	0.029	ppb	37.0	1995.53	100	
Pb	207	209	No Gas	0.036	ppb	49.6	1775.27	100	
Pb	208	209	No Gas	0.030	ppb	48.9	7812.27	100	
Th	232	209	No Gas	0.179	ppb	24.2	22112.64	100	
U	238	209	No Gas	0.084	ppb	19.9	7700.27	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5343558.06	0.7	5406885.91	98.83	70	125	
Sc	45	No Gas	24776742.62	0.4	24326295.51	101.85	75	125	
Sc	45	He	987199.37	1.2	970797.15	101.69	75	125	
Y	89	No Gas	57765262.05	0.4	56662702.82	101.95	75	125	
Y	89	He	7627944.21	1.8	7465540.55	102.18	75	125	
In	115	No Gas	12592699.17	0.5	12379434.81	101.72	75	125	
Tb	159	No Gas	17257925.04	0.1	17053216.17	101.2	75	125	

Initial Calibration Blank (ICB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10609408.75	0.4	10541485.14	100.64	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICV

File Name 159LICV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 19:02:03

Sample Type LLICV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Li	7	6	No Gas	9.717	ppb	0.8	573991.78	10	97.17	80	120	
Be	9	6	No Gas	1.960	ppb	1.4	15146.85	2	98	80	120	
B	11	6	No Gas	19.606	ppb	1.0	112962.46	20	98.03	80	120	
Na	23	45	No Gas	211.250	ppb	0.5	7587154.60	200	105.62	80	120	
Na	23	45	He	216.371	ppb	2.2	231279.89	200	108.19	80	120	
Mg	24	45	No Gas	206.288	ppb	1.0	4798468.16	200	103.14	80	120	
Mg	24	45	He	206.802	ppb	0.8	102730.45	200	103.4	80	120	
Mg	25	45	No Gas	202.351	ppb	1.4	637193.52	200	101.18	80	120	
Al	27	45	No Gas	10.178	ppb	2.1	321462.89	10	101.78	80	120	
Al	27	45	He	10.237	ppb	4.9	2056.86	10	102.37	80	120	
Si	28	45	No Gas	1078.618	ppb	0.6	13364927.03	1000	107.86	80	120	
Si	29	45	No Gas	1098.518	ppb	0.2	898325.18	1000	109.85	80	120	
K	39	45	No Gas	198.845	ppb	1.3	11483568.16	200	99.42	80	120	
K	39	45	He	212.274	ppb	1.8	112003.77	200	106.14	80	120	
Ca	44	45	No Gas	552.531	ppb	0.7	676234.73	500	110.51	80	120	
Ca	44	45	He	518.757	ppb	8.7	11098.51	500	103.75	80	120	
Ti	47	45	No Gas	5.239	ppb	3.1	16289.49	5	104.78	80	120	
V	51	45	No Gas	4.957	ppb	0.8	197423.96	5	99.14	80	120	
V	51	45	He	5.171	ppb	1.4	26268.37	5	103.42	80	120	
Cr	52	89	No Gas	4.990	ppb	1.6	218185.85	5	99.8	80	120	
Cr	52	89	He	5.028	ppb	0.5	35468.40	5	100.56	80	120	
Cr	53	89	No Gas	5.573	ppb	6.8	83258.48	5	111.46	80	120	
Mn	55	89	No Gas	4.987	ppb	1.9	266214.70	5	99.74	80	120	
Mn	55	89	He	5.047	ppb	2.8	17689.38	5	100.94	80	120	
Fe	56	89	No Gas	75.513	ppb	3.5	4933241.91	80	94.39	80	120	
Fe	56	89	He	98.144	ppb	1.1	476523.26	80	122.68	80	120	Failed
Co	59	89	No Gas	5.058	ppb	1.0	209267.73	5	101.16	80	120	
Co	59	89	He	5.189	ppb	0.9	56499.94	5	103.78	80	120	
Ni	60	89	No Gas	5.107	ppb	0.8	47316.04	5	102.14	80	120	
Ni	60	89	He	4.921	ppb	0.5	15487.84	5	98.42	80	120	
Ni	62	89	No Gas	5.050	ppb	2.1	12294.69	5	101	80	120	
Cu	63	89	No Gas	5.250	ppb	0.4	125135.38	5	105	80	120	
Cu	63	89	He	5.178	ppb	1.7	45247.00	5	103.56	80	120	
Cu	65	89	No Gas	5.114	ppb	1.0	58494.19	5	102.28	80	120	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	10.216	ppb	1.0	68047.89	10	102.16	80	120	
Zn	66	89	He	10.557	ppb	2.5	13517.14	10	105.57	80	120	
Zn	67	89	No Gas	9.665	ppb	2.9	10210.88	10	96.65	80	120	
Zn	68	89	No Gas	10.165	ppb	1.7	48153.81	10	101.65	80	120	
As	75	89	No Gas	5.019	ppb	0.5	37174.53	5	100.38	80	120	
As	75	89	He	4.715	ppb	3.0	4249.58	5	94.3	80	120	
Se	77	89	No Gas	5.161	ppb	12.9	11089.16	5	103.22	80	120	
Se	78	89	No Gas	4.678	ppb	5.0	23009.51	5	93.56	80	120	
Se	78	89	He	5.193	ppb	4.4	308.90	5	103.86	80	120	
Se	82	89	No Gas	4.130	ppb	9.4	1756.67	5	82.6	80	120	
[Se]	83	89	No Gas	155.048	ppb	39.0	2095.63	5	3100.96	80	120	Failed
Sr	88	89	No Gas	4.881	ppb	0.3	304644.98	5	97.62	80	120	
Mo	95	89	No Gas	4.972	ppb	4.0	59116.79	5	99.44	80	120	
Mo	97	89	No Gas	4.887	ppb	0.3	36399.70	5	97.74	80	120	
Mo	98	89	No Gas	4.759	ppb	0.9	92385.62	5	95.18	80	120	
[Mo]	99	89	No Gas	81.760	ppb	74.9	40.04	5	1635.2	80	120	Failed
Cd	106	89	No Gas	-0.753	ppb	N/A	55267.41	2	-37.65	80	120	Failed
Ag	107	89	No Gas	5.099	ppb	0.5	160784.30	5	101.98	80	120	
Ag	107	89	He	5.167	ppb	1.0	77110.98	5	103.34	80	120	
Cd	108	89	No Gas	2.018	ppb	4.5	981.03	2	100.9	80	120	
Ag	109	89	No Gas	5.008	ppb	0.5	152195.50	5	100.16	80	120	
Cd	111	89	No Gas	1.966	ppb	2.8	12366.42	2	98.3	80	120	
Cd	114	89	No Gas	1.963	ppb	2.3	32476.12	2	98.15	80	120	
Sn	118	115	No Gas	1.956	ppb	0.8	43286.53	2	97.8	80	120	
Sb	121	115	No Gas	4.529	ppb	0.1	137723.87	5	90.58	80	120	
Sb	121	89	He	4.705	ppb	2.1	29212.81	5	94.1	80	120	
Sb	123	115	No Gas	4.504	ppb	2.3	105796.94	5	90.08	80	120	
Ba	135	115	No Gas	4.850	ppb	1.2	29065.15	5	97	80	120	
Ba	137	115	No Gas	4.712	ppb	1.1	49530.74	5	94.24	80	120	
Tl	203	209	No Gas	4.488	ppb	1.0	118367.21	5	89.76	80	120	
Tl	205	209	No Gas	4.505	ppb	1.8	285567.44	5	90.1	80	120	
Pb	206	209	No Gas	4.621	ppb	0.8	99241.42	5	92.42	80	120	
Pb	207	209	No Gas	4.837	ppb	1.1	85631.70	5	96.74	80	120	
Pb	208	209	No Gas	4.742	ppb	0.4	393423.54	5	94.84	80	120	
Th	232	209	No Gas	4.849	ppb	1.5	414154.30	5	96.98	80	120	
U	238	209	No Gas	4.432	ppb	1.3	370295.93	5	88.64	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5328415.60	1.0	5406885.91	98.55	70	125	
Sc	45	No Gas	24509909.96	0.1	24326295.51	100.75	75	125	
Sc	45	He	979024.13	0.6	970797.15	100.85	75	125	
Y	89	No Gas	57123091.54	0.7	56662702.82	100.81	75	125	
Y	89	He	7522829.51	1.2	7465540.55	100.77	75	125	
In	115	No Gas	12588721.92	0.3	12379434.81	101.69	75	125	
Tb	159	No Gas	17116311.76	0.7	17053216.17	100.37	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10682228.46	0.5	10541485.14	101.34	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 161_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 19:05:17

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.418	ppb	0.9	3120794.24	100	101.42	90	110	
Be	9	6	No Gas	101.230	ppb	1.4	733253.57	100	101.23	90	110	
B	11	6	No Gas	249.103	ppb	0.2	1243968.89	250	99.64	90	110	
Na	23	45	No Gas	10251.528	ppb	1.8	340398124.27	10000	102.52	90	110	
Na	23	45	He	10221.678	ppb	1.1	9909421.52	10000	102.22	90	110	
Mg	24	45	No Gas	10237.589	ppb	1.2	233372623.19	10000	102.38	90	110	
Mg	24	45	He	10292.052	ppb	1.0	5043573.16	10000	102.92	90	110	
Mg	25	45	No Gas	10074.016	ppb	0.4	31085146.20	10000	100.74	90	110	
Al	27	45	No Gas	100.527	ppb	0.4	3009371.00	100	100.53	90	110	
Al	27	45	He	100.148	ppb	1.6	19043.26	100	100.15	90	110	
Si	28	45	No Gas	10265.190	ppb	0.6	121499262.84	10000	102.65	90	110	
Si	29	45	No Gas	10308.256	ppb	0.1	7537868.92	10000	103.08	90	110	
K	39	45	No Gas	10032.012	ppb	0.4	322265481.86	10000	100.32	90	110	
K	39	45	He	10262.512	ppb	0.7	3985527.96	10000	102.63	90	110	
Ca	44	45	No Gas	10068.242	ppb	0.9	9779651.94	10000	100.68	90	110	
Ca	44	45	He	10279.652	ppb	1.4	213504.59	10000	102.8	90	110	
Ti	47	45	No Gas	100.616	ppb	0.3	302014.98	100	100.62	90	110	
V	51	45	No Gas	100.188	ppb	0.9	4013375.66	100	100.19	90	110	
V	51	45	He	105.748	ppb	0.7	520852.05	100	105.75	90	110	
Cr	52	89	No Gas	100.919	ppb	1.0	3717207.11	100	100.92	90	110	
Cr	52	89	He	102.608	ppb	0.8	656782.65	100	102.61	90	110	
Cr	53	89	No Gas	102.603	ppb	0.6	505816.98	100	102.6	90	110	
Mn	55	89	No Gas	101.846	ppb	0.3	5084767.70	100	101.85	90	110	
Mn	55	89	He	102.766	ppb	1.1	349494.21	100	102.77	90	110	
Fe	56	89	No Gas	10080.975	ppb	0.9	364677399.82	10000	100.81	90	110	
Fe	56	89	He	10157.705	ppb	1.5	45341785.99	10000	101.58	90	110	
Co	59	89	No Gas	101.784	ppb	0.3	4062652.24	100	101.78	90	110	
Co	59	89	He	101.634	ppb	0.6	1081427.45	100	101.63	90	110	
Ni	60	89	No Gas	102.174	ppb	0.3	897509.26	100	102.17	90	110	
Ni	60	89	He	102.423	ppb	0.6	299755.40	100	102.42	90	110	
Ni	62	89	No Gas	103.588	ppb	1.1	139052.33	100	103.59	90	110	
Cu	63	89	No Gas	102.234	ppb	0.2	2183303.15	100	102.23	90	110	
Cu	63	89	He	101.878	ppb	1.0	817822.87	100	101.88	90	110	
Cu	65	89	No Gas	101.499	ppb	1.1	1037079.11	100	101.5	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	101.075	ppb	1.3	637775.55	100	101.08	90	110	
Zn	66	89	He	103.336	ppb	0.4	126628.16	100	103.34	90	110	
Zn	67	89	No Gas	101.679	ppb	1.8	100625.11	100	101.68	90	110	
Zn	68	89	No Gas	102.015	ppb	1.1	456245.46	100	102.02	90	110	
As	75	89	No Gas	100.409	ppb	1.1	651374.79	100	100.41	90	110	
As	75	89	He	101.938	ppb	0.5	89699.86	100	101.94	90	110	
Se	77	89	No Gas	102.475	ppb	0.3	43001.52	100	102.48	90	110	
Se	78	89	No Gas	100.209	ppb	0.9	114769.09	100	100.21	90	110	
Se	78	89	He	99.342	ppb	0.9	5343.31	100	99.34	90	110	
Se	82	89	No Gas	101.846	ppb	3.1	39830.23	100	101.85	90	110	
[Se]	83	89	No Gas	131.042	ppb	31.4	2005.53	100	131.04	90	110	Failed
Sr	88	89	No Gas	100.174	ppb	0.4	6062853.70	100	100.17	90	110	
Mo	95	89	No Gas	100.898	ppb	0.8	1152466.09	100	100.9	90	110	
Mo	97	89	No Gas	100.127	ppb	1.6	715227.49	100	100.13	90	110	
Mo	98	89	No Gas	100.291	ppb	1.4	1864811.00	100	100.29	90	110	
[Mo]	99	89	No Gas	-10.886	ppb	N/A	13.35	100	-10.89	90	110	Failed
Cd	106	89	No Gas	99.920	ppb	3.3	112274.47	100	99.92	90	110	
Ag	107	89	No Gas	101.923	ppb	0.5	3094634.25	100	101.92	90	110	
Ag	107	89	He	102.352	ppb	0.3	1485663.17	100	102.35	90	110	
Cd	108	89	No Gas	103.351	ppb	1.2	44847.76	100	103.35	90	110	
Ag	109	89	No Gas	101.352	ppb	0.6	2973126.26	100	101.35	90	110	
Cd	111	89	No Gas	99.160	ppb	1.7	609503.94	100	99.16	90	110	
Cd	114	89	No Gas	99.797	ppb	1.5	1599967.78	100	99.8	90	110	
Sn	118	115	No Gas	100.636	ppb	1.2	1976157.28	100	100.64	90	110	
Sb	121	115	No Gas	100.491	ppb	0.9	2871605.79	100	100.49	90	110	
Sb	121	89	He	102.978	ppb	0.4	609975.80	100	102.98	90	110	
Sb	123	115	No Gas	100.254	ppb	0.4	2209557.69	100	100.25	90	110	
Ba	135	115	No Gas	100.509	ppb	1.1	578004.35	100	100.51	90	110	
Ba	137	115	No Gas	100.166	ppb	1.5	1009576.14	100	100.17	90	110	
Tl	203	209	No Gas	99.199	ppb	0.4	2491018.11	100	99.2	90	110	
Tl	205	209	No Gas	97.943	ppb	1.0	5911810.78	100	97.94	90	110	
Pb	206	209	No Gas	98.316	ppb	1.2	1989657.89	100	98.32	90	110	
Pb	207	209	No Gas	98.838	ppb	1.1	1649754.76	100	98.84	90	110	
Pb	208	209	No Gas	98.586	ppb	0.6	7710093.13	100	98.59	90	110	
Th	232	209	No Gas	98.582	ppb	0.7	7910136.40	100	98.58	90	110	
U	238	209	No Gas	97.968	ppb	2.7	7803606.96	100	97.97	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5025535.36	0.8	5406885.91	92.95	70	125	
Sc	45	No Gas	24064140.02	0.5	24326295.51	98.92	75	125	
Sc	45	He	967914.72	0.6	970797.15	99.7	75	125	
Y	89	No Gas	55486218.00	0.0	56662702.82	97.92	75	125	
Y	89	He	7385258.81	0.8	7465540.55	98.92	75	125	
In	115	No Gas	12110550.28	1.4	12379434.81	97.83	75	125	
Tb	159	No Gas	16808618.24	0.7	17053216.17	98.57	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10204122.37	0.6	10541485.14	96.8	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	162_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 19:07:02
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.005	ppb	N/A	278201.31	100	
Be	9	6	No Gas	0.011	ppb	86.6	170.18	100	
B	11	6	No Gas	1.910	ppb	14.5	19556.78	100	
Na	23	45	No Gas	1.020	ppb	24.0	476951.82	500000	
Na	23	45	He	1.208	ppb	121.8	20456.35	500000	
Mg	24	45	No Gas	0.494	ppb	39.6	20016.57	500000	
Mg	24	45	He	0.247	ppb	84.2	346.70	500000	
Mg	25	45	No Gas	0.437	ppb	8.2	2587.13	500000	
Al	27	45	No Gas	0.008	ppb	279.3	12393.18	500000	
Al	27	45	He	-0.245	ppb	N/A	50.00	500000	
Si	28	45	No Gas	11.563	ppb	16.1	532779.66	100	
Si	29	45	No Gas	10.795	ppb	13.1	95813.26	100	
K	39	45	No Gas	-2.781	ppb	N/A	4893790.55	500000	
K	39	45	He	0.367	ppb	176.0	29005.25	500000	
Ca	44	45	No Gas	1.474	ppb	158.5	135915.47	500000	
Ca	44	45	He	1.967	ppb	230.0	253.35	500000	
Ti	47	45	No Gas	0.058	ppb	77.3	457.14	10000	
V	51	45	No Gas	0.005	ppb	1215.7	-4766.68	100	
V	51	45	He	0.013	ppb	148.2	587.28	100	
Cr	52	89	No Gas	0.008	ppb	45.8	30431.11	100	
Cr	52	89	He	-0.021	ppb	N/A	2666.29	100	
Cr	53	89	No Gas	0.451	ppb	42.2	59508.57	100	
Mn	55	89	No Gas	-0.002	ppb	N/A	10237.56	100	
Mn	55	89	He	-0.012	ppb	N/A	166.84	100	
Fe	56	89	No Gas	0.566	ppb	537.4	2134415.28	500000	
Fe	56	89	He	7.350	ppb	7.0	63390.48	500000	
Co	59	89	No Gas	0.001	ppb	262.8	1534.98	100	
Co	59	89	He	0.012	ppb	54.6	397.08	100	
Ni	60	89	No Gas	0.000	ppb	N/A	1181.25	100	
Ni	60	89	He	-0.168	ppb	N/A	357.04	100	
Ni	62	89	No Gas	-0.086	ppb	N/A	5413.27	100	
Cu	63	89	No Gas	0.015	ppb	201.6	10451.31	100	
Cu	63	89	He	-0.007	ppb	N/A	2973.35	100	
Cu	65	89	No Gas	-0.011	ppb	N/A	4785.71	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.013	ppb	210.0	1932.11	100	
Zn	66	89	He	0.011	ppb	87.6	390.40	100	
Zn	67	89	No Gas	-0.062	ppb	N/A	337.02	100	
Zn	68	89	No Gas	0.022	ppb	26.8	1585.04	100	
As	75	89	No Gas	0.149	ppb	110.4	4784.82	100	
As	75	89	He	0.026	ppb	22.6	47.78	100	
Se	77	89	No Gas	0.990	ppb	81.1	9559.84	100	
Se	78	89	No Gas	0.058	ppb	1234.6	18204.04	100	
Se	78	89	He	0.104	ppb	183.1	31.11	100	
Se	82	89	No Gas	0.078	ppb	446.3	126.95	100	
[Se]	83	89	No Gas	-30.224	ppb	N/A	1838.67	100	
Sr	88	89	No Gas	0.006	ppb	47.6	857.57	100	
Mo	95	89	No Gas	0.199	ppb	26.5	3000.07	10000	
Mo	97	89	No Gas	0.196	ppb	31.3	1898.74	10000	
Mo	98	89	No Gas	0.190	ppb	27.0	4921.16	10000	
[Mo]	99	89	No Gas	-23.562	ppb	N/A	10.01	10000	
Cd	106	89	No Gas	-1.779	ppb	N/A	54048.00	100	
Ag	107	89	No Gas	0.028	ppb	8.9	2325.78	100	
Ag	107	89	He	0.013	ppb	55.9	944.33	100	
Cd	108	89	No Gas	0.136	ppb	86.2	140.14	100	
Ag	109	89	No Gas	0.024	ppb	21.5	1725.20	100	
Cd	111	89	No Gas	-0.005	ppb	N/A	-105.93	100	
Cd	114	89	No Gas	0.009	ppb	14.3	226.90	100	
Sn	118	115	No Gas	0.078	ppb	23.9	4903.17	100	
Sb	121	115	No Gas	-0.048	ppb	N/A	1871.26	100	
Sb	121	89	He	-0.065	ppb	N/A	473.35	100	
Sb	123	115	No Gas	-0.049	ppb	N/A	1565.02	100	
Ba	135	115	No Gas	0.017	ppb	74.8	170.18	100	
Ba	137	115	No Gas	0.005	ppb	121.6	220.23	100	
Tl	203	209	No Gas	0.180	ppb	23.3	5066.23	100	
Tl	205	209	No Gas	0.184	ppb	20.5	12392.23	100	
Pb	206	209	No Gas	0.038	ppb	13.4	2182.43	100	
Pb	207	209	No Gas	0.040	ppb	33.6	1842.01	100	
Pb	208	209	No Gas	0.033	ppb	25.4	7975.75	100	
Th	232	209	No Gas	0.225	ppb	29.1	25737.30	100	
U	238	209	No Gas	0.085	ppb	18.5	7753.73	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5219083.84	0.8	5406885.91	96.53	70	125	
Sc	45	No Gas	24043959.01	0.4	24326295.51	98.84	75	125	
Sc	45	He	966928.78	0.5	970797.15	99.6	75	125	
Y	89	No Gas	56493475.26	0.3	56662702.82	99.7	75	125	
Y	89	He	7455351.82	0.6	7465540.55	99.86	75	125	
In	115	No Gas	12330911.29	0.4	12379434.81	99.61	75	125	
Tb	159	No Gas	17009849.05	0.9	17053216.17	99.75	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10532992.08	0.7	10541485.14	99.92	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 173_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 19:25:42

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.379	ppb	0.4	3059118.81	100	101.38	90	110	
Be	9	6	No Gas	101.004	ppb	0.5	717444.77	100	101	90	110	
B	11	6	No Gas	246.772	ppb	1.2	1208439.88	250	98.71	90	110	
Na	23	45	No Gas	10155.753	ppb	0.4	326102998.95	10000	101.56	90	110	
Na	23	45	He	10240.251	ppb	0.2	9580307.15	10000	102.4	90	110	
Mg	24	45	No Gas	10278.279	ppb	0.7	226571123.29	10000	102.78	90	110	
Mg	24	45	He	10359.399	ppb	0.7	4899085.86	10000	103.59	90	110	
Mg	25	45	No Gas	10103.808	ppb	0.2	30147373.72	10000	101.04	90	110	
Al	27	45	No Gas	100.500	ppb	0.2	2909197.46	100	100.5	90	110	
Al	27	45	He	103.164	ppb	2.5	18926.44	100	103.16	90	110	
Si	28	45	No Gas	10236.598	ppb	0.4	117163393.63	10000	102.37	90	110	
Si	29	45	No Gas	10275.433	ppb	0.4	7266053.57	10000	102.75	90	110	
K	39	45	No Gas	10000.452	ppb	0.7	310665102.04	10000	100	90	110	
K	39	45	He	10268.879	ppb	0.7	3848532.23	10000	102.69	90	110	
Ca	44	45	No Gas	10008.599	ppb	0.5	9401688.61	10000	100.09	90	110	
Ca	44	45	He	10359.589	ppb	1.0	207656.60	10000	103.6	90	110	
Ti	47	45	No Gas	99.695	ppb	0.6	289371.06	100	99.7	90	110	
V	51	45	No Gas	100.444	ppb	0.8	3890795.08	100	100.44	90	110	
V	51	45	He	105.499	ppb	0.8	501464.93	100	105.5	90	110	
Cr	52	89	No Gas	100.111	ppb	0.9	3620970.35	100	100.11	90	110	
Cr	52	89	He	102.436	ppb	1.6	642567.71	100	102.44	90	110	
Cr	53	89	No Gas	100.842	ppb	0.3	489110.01	100	100.84	90	110	
Mn	55	89	No Gas	100.913	ppb	0.3	4947203.78	100	100.91	90	110	
Mn	55	89	He	101.646	ppb	2.1	338755.33	100	101.65	90	110	
Fe	56	89	No Gas	9958.427	ppb	0.6	353757182.91	10000	99.58	90	110	
Fe	56	89	He	10073.914	ppb	1.1	44073127.68	10000	100.74	90	110	
Co	59	89	No Gas	100.928	ppb	0.6	3955661.50	100	100.93	90	110	
Co	59	89	He	101.175	ppb	0.8	1055071.09	100	101.18	90	110	
Ni	60	89	No Gas	100.386	ppb	0.5	865886.28	100	100.39	90	110	
Ni	60	89	He	101.808	ppb	1.1	291992.73	100	101.81	90	110	
Ni	62	89	No Gas	101.241	ppb	0.6	133566.01	100	101.24	90	110	
Cu	63	89	No Gas	100.780	ppb	0.6	2113480.41	100	100.78	90	110	
Cu	63	89	He	102.028	ppb	0.7	802637.14	100	102.03	90	110	
Cu	65	89	No Gas	100.058	ppb	1.2	1003929.40	100	100.06	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.930	ppb	0.5	619179.85	100	99.93	90	110	
Zn	66	89	He	102.911	ppb	1.1	123587.68	100	102.91	90	110	
Zn	67	89	No Gas	100.933	ppb	1.0	98082.91	100	100.93	90	110	
Zn	68	89	No Gas	101.517	ppb	0.3	445822.30	100	101.52	90	110	
As	75	89	No Gas	98.488	ppb	0.7	627435.22	100	98.49	90	110	
As	75	89	He	100.285	ppb	0.9	86488.08	100	100.28	90	110	
Se	77	89	No Gas	99.652	ppb	1.9	41304.74	100	99.65	90	110	
Se	78	89	No Gas	97.798	ppb	1.2	110402.02	100	97.8	90	110	
Se	78	89	He	97.815	ppb	0.5	5156.57	100	97.82	90	110	
Se	82	89	No Gas	99.177	ppb	1.3	38087.13	100	99.18	90	110	
[Se]	83	89	No Gas	103.098	ppb	106.5	1935.45	100	103.1	90	110	
Sr	88	89	No Gas	99.935	ppb	0.4	5939051.98	100	99.94	90	110	
Mo	95	89	No Gas	100.403	ppb	0.4	1126105.62	100	100.4	90	110	
Mo	97	89	No Gas	99.456	ppb	0.5	697591.92	100	99.46	90	110	
Mo	98	89	No Gas	99.796	ppb	0.6	1822064.97	100	99.8	90	110	
[Mo]	99	89	No Gas	-9.880	ppb	N/A	13.35	100	-9.88	90	110	Failed
Cd	106	89	No Gas	100.461	ppb	2.1	110558.79	100	100.46	90	110	
Ag	107	89	No Gas	101.738	ppb	1.2	3033087.87	100	101.74	90	110	
Ag	107	89	He	102.429	ppb	0.5	1457156.85	100	102.43	90	110	
Cd	108	89	No Gas	101.320	ppb	2.5	43170.46	100	101.32	90	110	
Ag	109	89	No Gas	101.489	ppb	0.9	2923306.85	100	101.49	90	110	
Cd	111	89	No Gas	99.486	ppb	1.0	600447.19	100	99.49	90	110	
Cd	114	89	No Gas	100.519	ppb	0.8	1582408.61	100	100.52	90	110	
Sn	118	115	No Gas	100.605	ppb	0.4	1948857.15	100	100.61	90	110	
Sb	121	115	No Gas	100.323	ppb	0.2	2827969.26	100	100.32	90	110	
Sb	121	89	He	103.288	ppb	0.3	599623.34	100	103.29	90	110	
Sb	123	115	No Gas	99.879	ppb	0.7	2171316.17	100	99.88	90	110	
Ba	135	115	No Gas	99.948	ppb	0.8	567003.76	100	99.95	90	110	
Ba	137	115	No Gas	99.445	ppb	1.4	988750.76	100	99.44	90	110	
Tl	203	209	No Gas	99.084	ppb	0.2	2494802.10	100	99.08	90	110	
Tl	205	209	No Gas	97.482	ppb	0.8	5899655.71	100	97.48	90	110	
Pb	206	209	No Gas	97.998	ppb	1.1	1988465.29	100	98	90	110	
Pb	207	209	No Gas	98.312	ppb	0.4	1645329.81	100	98.31	90	110	
Pb	208	209	No Gas	98.708	ppb	0.3	7740080.05	100	98.71	90	110	
Th	232	209	No Gas	98.622	ppb	1.0	7934368.97	100	98.62	90	110	
U	238	209	No Gas	97.930	ppb	0.6	7821010.19	100	97.93	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4927843.95	0.3	5406885.91	91.14	70	125	
Sc	45	No Gas	23269766.48	0.3	24326295.51	95.66	75	125	
Sc	45	He	934093.44	1.2	970797.15	96.22	75	125	
Y	89	No Gas	54483762.21	0.5	56662702.82	96.15	75	125	
Y	89	He	7238334.39	1.5	7465540.55	96.96	75	125	
In	115	No Gas	11945821.91	0.5	12379434.81	96.5	75	125	
Tb	159	No Gas	16692183.05	0.9	17053216.17	97.88	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10231323.76	0.1	10541485.14	97.06	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	174_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 19:27:28
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.024	ppb	N/A	273590.48	100	
Be	9	6	No Gas	0.010	ppb	74.4	160.16	100	
B	11	6	No Gas	2.251	ppb	19.2	20990.25	100	
Na	23	45	No Gas	2.926	ppb	18.2	523790.49	500000	
Na	23	45	He	3.786	ppb	6.9	22406.01	500000	
Mg	24	45	No Gas	0.751	ppb	41.6	25052.33	500000	
Mg	24	45	He	0.347	ppb	15.0	386.70	500000	
Mg	25	45	No Gas	0.758	ppb	22.8	3467.37	500000	
Al	27	45	No Gas	-0.021	ppb	N/A	11165.11	500000	
Al	27	45	He	0.051	ppb	433.9	103.33	500000	
Si	28	45	No Gas	8.048	ppb	23.6	476476.62	100	
Si	29	45	No Gas	10.854	ppb	30.7	92961.28	100	
K	39	45	No Gas	-0.893	ppb	N/A	4804598.26	500000	
K	39	45	He	-0.663	ppb	N/A	27936.91	500000	
Ca	44	45	No Gas	-14.784	ppb	N/A	116751.62	500000	
Ca	44	45	He	3.501	ppb	404.4	280.02	500000	
Ti	47	45	No Gas	0.033	ppb	83.5	370.38	10000	
V	51	45	No Gas	0.045	ppb	62.2	-3052.76	100	
V	51	45	He	-0.006	ppb	N/A	483.84	100	
Cr	52	89	No Gas	-0.017	ppb	N/A	29160.59	100	
Cr	52	89	He	-0.045	ppb	N/A	2476.08	100	
Cr	53	89	No Gas	-0.463	ppb	N/A	54804.31	100	
Mn	55	89	No Gas	-0.006	ppb	N/A	9893.64	100	
Mn	55	89	He	-0.001	ppb	N/A	203.54	100	
Fe	56	89	No Gas	-0.578	ppb	N/A	2068703.63	500000	
Fe	56	89	He	7.007	ppb	8.9	60966.19	500000	
Co	59	89	No Gas	0.005	ppb	91.2	1678.48	100	
Co	59	89	He	0.007	ppb	119.7	340.35	100	
Ni	60	89	No Gas	-0.012	ppb	N/A	1064.46	100	
Ni	60	89	He	-0.179	ppb	N/A	320.33	100	
Ni	62	89	No Gas	-0.028	ppb	N/A	5426.59	100	
Cu	63	89	No Gas	-0.003	ppb	N/A	9933.69	100	
Cu	63	89	He	0.001	ppb	1210.4	2993.39	100	
Cu	65	89	No Gas	-0.027	ppb	N/A	4565.40	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.032	ppb	100.9	2035.57	100	
Zn	66	89	He	0.032	ppb	120.4	410.43	100	
Zn	67	89	No Gas	0.016	ppb	201.4	410.43	100	
Zn	68	89	No Gas	0.012	ppb	289.6	1524.98	100	
As	75	89	No Gas	0.143	ppb	124.3	4698.58	100	
As	75	89	He	0.031	ppb	15.1	51.11	100	
Se	77	89	No Gas	-1.083	ppb	N/A	8758.42	100	
Se	78	89	No Gas	-0.301	ppb	N/A	17652.82	100	
Se	78	89	He	0.029	ppb	9.7	26.67	100	
Se	82	89	No Gas	0.423	ppb	65.6	261.45	100	
[Se]	83	89	No Gas	-104.791	ppb	N/A	1725.21	100	
Sr	88	89	No Gas	0.007	ppb	44.4	920.98	100	
Mo	95	89	No Gas	0.183	ppb	29.6	2779.80	10000	
Mo	97	89	No Gas	0.195	ppb	17.4	1868.71	10000	
Mo	98	89	No Gas	0.191	ppb	21.1	4884.91	10000	
[Mo]	99	89	No Gas	-35.244	ppb	N/A	6.67	10000	
Cd	106	89	No Gas	0.258	ppb	374.7	54630.45	100	
Ag	107	89	No Gas	0.024	ppb	2.4	2171.30	100	
Ag	107	89	He	0.003	ppb	119.8	790.83	100	
Cd	108	89	No Gas	0.041	ppb	28.8	96.76	100	
Ag	109	89	No Gas	0.025	ppb	31.9	1715.19	100	
Cd	111	89	No Gas	0.005	ppb	48.6	-43.83	100	
Cd	114	89	No Gas	0.009	ppb	37.7	223.56	100	
Sn	118	115	No Gas	0.082	ppb	32.5	4954.30	100	
Sb	121	115	No Gas	-0.017	ppb	N/A	2764.75	100	
Sb	121	89	He	-0.010	ppb	N/A	793.37	100	
Sb	123	115	No Gas	-0.017	ppb	N/A	2282.53	100	
Ba	135	115	No Gas	0.007	ppb	148.0	113.45	100	
Ba	137	115	No Gas	0.004	ppb	120.3	203.54	100	
Tl	203	209	No Gas	0.175	ppb	23.6	4899.31	100	
Tl	205	209	No Gas	0.173	ppb	23.5	11707.60	100	
Pb	206	209	No Gas	0.024	ppb	21.1	1878.72	100	
Pb	207	209	No Gas	0.030	ppb	44.3	1651.79	100	
Pb	208	209	No Gas	0.026	ppb	27.8	7421.76	100	
Th	232	209	No Gas	0.203	ppb	27.8	23801.19	100	
U	238	209	No Gas	0.079	ppb	18.8	7246.22	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5142932.07	1.3	5406885.91	95.12	70	125	
Sc	45	No Gas	23321708.42	0.8	24326295.51	95.87	75	125	
Sc	45	He	944326.70	0.9	970797.15	97.27	75	125	
Y	89	No Gas	55856568.35	0.9	56662702.82	98.58	75	125	
Y	89	He	7349570.84	0.6	7465540.55	98.45	75	125	
In	115	No Gas	12258147.34	0.1	12379434.81	99.02	75	125	
Tb	159	No Gas	16911458.99	1.0	17053216.17	99.17	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10483164.86	0.6	10541485.14	99.45	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 185_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 19:45:20

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.722	ppb	0.3	3106341.98	100	101.72	90	110	
Be	9	6	No Gas	100.984	ppb	0.8	726146.44	100	100.98	90	110	
B	11	6	No Gas	243.493	ppb	0.7	1207186.09	250	97.4	90	110	
Na	23	45	No Gas	10110.737	ppb	0.9	328944765.69	10000	101.11	90	110	
Na	23	45	He	10335.920	ppb	1.8	9667700.90	10000	103.36	90	110	
Mg	24	45	No Gas	10179.726	ppb	1.0	227359549.95	10000	101.8	90	110	
Mg	24	45	He	10370.316	ppb	1.5	4903309.40	10000	103.7	90	110	
Mg	25	45	No Gas	9961.104	ppb	0.5	30113631.22	10000	99.61	90	110	
Al	27	45	No Gas	99.476	ppb	0.4	2917642.98	100	99.48	90	110	
Al	27	45	He	101.609	ppb	1.1	18642.72	100	101.61	90	110	
Si	28	45	No Gas	10203.166	ppb	0.3	118322359.27	10000	102.03	90	110	
Si	29	45	No Gas	10247.039	ppb	0.5	7341662.09	10000	102.47	90	110	
K	39	45	No Gas	9983.996	ppb	1.0	314242255.32	10000	99.84	90	110	
K	39	45	He	10142.348	ppb	0.4	3801060.15	10000	101.42	90	110	
Ca	44	45	No Gas	9986.841	ppb	0.9	9505096.32	10000	99.87	90	110	
Ca	44	45	He	10277.862	ppb	2.2	205959.90	10000	102.78	90	110	
Ti	47	45	No Gas	99.438	ppb	0.2	292433.21	100	99.44	90	110	
V	51	45	No Gas	99.250	ppb	0.3	3895073.29	100	99.25	90	110	
V	51	45	He	105.960	ppb	0.8	503601.52	100	105.96	90	110	
Cr	52	89	No Gas	100.036	ppb	0.4	3642989.35	100	100.04	90	110	
Cr	52	89	He	102.724	ppb	0.8	640463.11	100	102.72	90	110	
Cr	53	89	No Gas	101.790	ppb	0.7	496539.08	100	101.79	90	110	
Mn	55	89	No Gas	100.947	ppb	0.4	4982408.57	100	100.95	90	110	
Mn	55	89	He	101.581	ppb	0.5	336509.25	100	101.58	90	110	
Fe	56	89	No Gas	9995.835	ppb	0.5	357495374.66	10000	99.96	90	110	
Fe	56	89	He	10096.437	ppb	0.5	43900741.01	10000	100.96	90	110	
Co	59	89	No Gas	100.964	ppb	0.3	3983969.71	100	100.96	90	110	
Co	59	89	He	100.537	ppb	0.6	1041989.21	100	100.54	90	110	
Ni	60	89	No Gas	100.824	ppb	0.1	875564.00	100	100.82	90	110	
Ni	60	89	He	101.872	ppb	0.7	290392.18	100	101.87	90	110	
Ni	62	89	No Gas	101.495	ppb	1.0	134799.25	100	101.5	90	110	
Cu	63	89	No Gas	100.837	ppb	0.5	2128996.13	100	100.84	90	110	
Cu	63	89	He	101.805	ppb	0.6	795972.85	100	101.8	90	110	
Cu	65	89	No Gas	100.183	ppb	0.9	1012033.73	100	100.18	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.964	ppb	0.1	623590.36	100	99.96	90	110	
Zn	66	89	He	102.158	ppb	1.4	121931.68	100	102.16	90	110	
Zn	67	89	No Gas	99.896	ppb	1.1	97737.46	100	99.9	90	110	
Zn	68	89	No Gas	100.882	ppb	0.9	446034.06	100	100.88	90	110	
As	75	89	No Gas	98.565	ppb	0.7	632181.19	100	98.56	90	110	
As	75	89	He	100.225	ppb	0.5	85904.24	100	100.22	90	110	
Se	77	89	No Gas	101.984	ppb	2.1	42352.42	100	101.98	90	110	
Se	78	89	No Gas	98.152	ppb	1.0	111492.96	100	98.15	90	110	
Se	78	89	He	101.195	ppb	1.3	5301.07	100	101.2	90	110	
Se	82	89	No Gas	100.748	ppb	2.3	38953.72	100	100.75	90	110	
[Se]	83	89	No Gas	116.888	ppb	34.1	1965.48	100	116.89	90	110	Failed
Sr	88	89	No Gas	99.529	ppb	0.5	5955084.47	100	99.53	90	110	
Mo	95	89	No Gas	99.894	ppb	0.2	1127996.23	100	99.89	90	110	
Mo	97	89	No Gas	98.713	ppb	0.2	697087.25	100	98.71	90	110	
Mo	98	89	No Gas	98.842	ppb	1.6	1816885.34	100	98.84	90	110	
[Mo]	99	89	No Gas	75.252	ppb	156.5	36.70	100	75.25	90	110	Failed
Cd	106	89	No Gas	100.939	ppb	1.7	111578.01	100	100.94	90	110	
Ag	107	89	No Gas	101.196	ppb	0.2	3037519.12	100	101.2	90	110	
Ag	107	89	He	102.953	ppb	1.0	1455517.50	100	102.95	90	110	
Cd	108	89	No Gas	102.530	ppb	1.8	43987.34	100	102.53	90	110	
Ag	109	89	No Gas	101.656	ppb	0.8	2947957.54	100	101.66	90	110	
Cd	111	89	No Gas	99.390	ppb	0.2	603950.10	100	99.39	90	110	
Cd	114	89	No Gas	100.091	ppb	0.4	1586416.42	100	100.09	90	110	
Sn	118	115	No Gas	100.820	ppb	0.6	1959546.73	100	100.82	90	110	
Sb	121	115	No Gas	99.922	ppb	1.3	2825894.19	100	99.92	90	110	
Sb	121	89	He	103.027	ppb	1.3	594390.55	100	103.03	90	110	
Sb	123	115	No Gas	99.553	ppb	1.3	2171349.06	100	99.55	90	110	
Ba	135	115	No Gas	100.753	ppb	0.7	573472.22	100	100.75	90	110	
Ba	137	115	No Gas	100.026	ppb	0.7	997870.19	100	100.03	90	110	
Tl	203	209	No Gas	97.849	ppb	0.2	2469842.35	100	97.85	90	110	
Tl	205	209	No Gas	96.974	ppb	1.5	5883421.98	100	96.97	90	110	
Pb	206	209	No Gas	97.481	ppb	0.7	1982870.32	100	97.48	90	110	
Pb	207	209	No Gas	97.688	ppb	0.9	1638928.36	100	97.69	90	110	
Pb	208	209	No Gas	98.410	ppb	0.6	7735813.75	100	98.41	90	110	
Th	232	209	No Gas	98.130	ppb	0.8	7914338.10	100	98.13	90	110	
U	238	209	No Gas	97.341	ppb	1.8	7793022.00	100	97.34	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4988523.80	0.6	5406885.91	92.26	70	125	
Sc	45	No Gas	23576399.78	0.3	24326295.51	96.92	75	125	
Sc	45	He	934002.60	1.0	970797.15	96.21	75	125	
Y	89	No Gas	54853303.41	0.6	56662702.82	96.81	75	125	
Y	89	He	7193674.10	0.9	7465540.55	96.36	75	125	
In	115	No Gas	11985935.83	1.1	12379434.81	96.82	75	125	
Tb	159	No Gas	16720807.09	0.4	17053216.17	98.05	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10256820.98	0.6	10541485.14	97.3	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	186_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 19:47:06
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.000	ppb	N/A	273356.41	100	
Be	9	6	No Gas	0.002	ppb	205.0	106.77	100	
B	11	6	No Gas	1.368	ppb	13.6	16469.65	100	
Na	23	45	No Gas	2.476	ppb	12.2	513346.31	500000	
Na	23	45	He	2.401	ppb	41.4	21271.18	500000	
Mg	24	45	No Gas	0.665	ppb	43.4	23342.30	500000	
Mg	24	45	He	0.454	ppb	103.7	440.04	500000	
Mg	25	45	No Gas	0.603	ppb	60.8	3027.30	500000	
Al	27	45	No Gas	-0.043	ppb	N/A	10604.72	500000	
Al	27	45	He	-0.151	ppb	N/A	66.67	500000	
Si	28	45	No Gas	6.258	ppb	21.0	459609.74	100	
Si	29	45	No Gas	7.562	ppb	29.4	91369.66	100	
K	39	45	No Gas	-1.076	ppb	N/A	4836342.11	500000	
K	39	45	He	-2.338	ppb	N/A	27536.15	500000	
Ca	44	45	No Gas	-7.089	ppb	N/A	124849.96	500000	
Ca	44	45	He	-3.072	ppb	N/A	146.68	500000	
Ti	47	45	No Gas	0.038	ppb	42.8	387.07	10000	
V	51	45	No Gas	0.022	ppb	297.5	-3974.67	100	
V	51	45	He	-0.012	ppb	N/A	457.14	100	
Cr	52	89	No Gas	-0.031	ppb	N/A	28364.61	100	
Cr	52	89	He	-0.041	ppb	N/A	2486.09	100	
Cr	53	89	No Gas	-0.086	ppb	N/A	55879.95	100	
Mn	55	89	No Gas	-0.005	ppb	N/A	9850.21	100	
Mn	55	89	He	0.013	ppb	56.4	250.26	100	
Fe	56	89	No Gas	1.124	ppb	160.7	2108604.21	500000	
Fe	56	89	He	7.026	ppb	12.6	60738.71	500000	
Co	59	89	No Gas	0.007	ppb	15.0	1755.23	100	
Co	59	89	He	0.005	ppb	113.1	316.99	100	
Ni	60	89	No Gas	0.003	ppb	374.8	1181.26	100	
Ni	60	89	He	-0.189	ppb	N/A	290.30	100	
Ni	62	89	No Gas	0.134	ppb	233.7	5580.17	100	
Cu	63	89	No Gas	0.016	ppb	42.5	10230.89	100	
Cu	63	89	He	0.006	ppb	370.7	3016.74	100	
Cu	65	89	No Gas	-0.014	ppb	N/A	4645.52	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.026	ppb	44.0	1975.49	100	
Zn	66	89	He	0.004	ppb	672.6	373.72	100	
Zn	67	89	No Gas	0.024	ppb	143.1	413.76	100	
Zn	68	89	No Gas	-0.002	ppb	N/A	1448.21	100	
As	75	89	No Gas	-0.011	ppb	N/A	3653.38	100	
As	75	89	He	0.032	ppb	36.2	52.22	100	
Se	77	89	No Gas	0.645	ppb	10.2	9239.20	100	
Se	78	89	No Gas	-0.510	ppb	N/A	17265.24	100	
Se	78	89	He	-0.074	ppb	N/A	21.11	100	
Se	82	89	No Gas	-0.167	ppb	N/A	29.34	100	
[Se]	83	89	No Gas	78.054	ppb	162.9	1932.11	100	
Sr	88	89	No Gas	0.006	ppb	26.8	877.59	100	
Mo	95	89	No Gas	0.184	ppb	43.3	2766.46	10000	
Mo	97	89	No Gas	0.188	ppb	30.9	1805.30	10000	
Mo	98	89	No Gas	0.193	ppb	25.6	4867.26	10000	
[Mo]	99	89	No Gas	-10.794	ppb	N/A	13.35	10000	
Cd	106	89	No Gas	-0.473	ppb	N/A	53635.46	100	
Ag	107	89	No Gas	0.021	ppb	24.8	2051.28	100	
Ag	107	89	He	0.011	ppb	72.2	900.95	100	
Cd	108	89	No Gas	0.066	ppb	123.7	106.77	100	
Ag	109	89	No Gas	0.026	ppb	12.7	1725.20	100	
Cd	111	89	No Gas	0.003	ppb	155.3	-56.79	100	
Cd	114	89	No Gas	0.010	ppb	39.4	230.24	100	
Sn	118	115	No Gas	0.059	ppb	24.9	4475.24	100	
Sb	121	115	No Gas	-0.054	ppb	N/A	1689.01	100	
Sb	121	89	He	-0.073	ppb	N/A	416.68	100	
Sb	123	115	No Gas	-0.054	ppb	N/A	1451.56	100	
Ba	135	115	No Gas	0.011	ppb	60.4	136.81	100	
Ba	137	115	No Gas	0.006	ppb	84.4	220.23	100	
Tl	203	209	No Gas	0.181	ppb	22.9	5082.93	100	
Tl	205	209	No Gas	0.181	ppb	21.6	12251.98	100	
Pb	206	209	No Gas	0.031	ppb	37.3	2025.57	100	
Pb	207	209	No Gas	0.031	ppb	24.7	1675.15	100	
Pb	208	209	No Gas	0.029	ppb	26.4	7692.10	100	
Th	232	209	No Gas	0.234	ppb	22.7	26489.15	100	
U	238	209	No Gas	0.086	ppb	20.9	7837.24	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5125710.21	0.3	5406885.91	94.8	70	125	
Sc	45	No Gas	23502774.49	0.2	24326295.51	96.61	75	125	
Sc	45	He	952243.78	1.1	970797.15	98.09	75	125	
Y	89	No Gas	55274212.66	0.4	56662702.82	97.55	75	125	
Y	89	He	7312660.38	0.6	7465540.55	97.95	75	125	
In	115	No Gas	12169235.56	0.8	12379434.81	98.3	75	125	
Tb	159	No Gas	16813480.18	1.0	17053216.17	98.59	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10533670.69	0.5	10541485.14	99.93	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 197_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 20:05:22

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.702	ppb	0.3	2706766.36	100	99.7	90	110	
Be	9	6	No Gas	97.833	ppb	0.2	624307.72	100	97.83	90	110	
B	11	6	No Gas	281.918	ppb	1.3	1239119.10	250	112.77	90	110	Failed
Na	23	45	No Gas	9868.643	ppb	0.4	297439131.65	10000	98.69	90	110	
Na	23	45	He	10214.941	ppb	0.3	8906475.70	10000	102.15	90	110	
Mg	24	45	No Gas	9897.918	ppb	0.3	204792543.62	10000	98.98	90	110	
Mg	24	45	He	10183.259	ppb	0.4	4488106.29	10000	101.83	90	110	
Mg	25	45	No Gas	9675.118	ppb	0.2	27095853.77	10000	96.75	90	110	
Al	27	45	No Gas	97.454	ppb	0.6	2648131.42	100	97.45	90	110	
Al	27	45	He	101.160	ppb	3.5	17304.32	100	101.16	90	110	
Si	28	45	No Gas	12103.163	ppb	3.7	129954584.85	10000	121.03	90	110	Failed
Si	29	45	No Gas	12061.575	ppb	3.5	7991366.38	10000	120.62	90	110	Failed
K	39	45	No Gas	9908.017	ppb	0.4	288936169.03	10000	99.08	90	110	
K	39	45	He	10069.241	ppb	0.5	3517664.74	10000	100.69	90	110	
Ca	44	45	No Gas	10106.113	ppb	0.3	8909155.28	10000	101.06	90	110	
Ca	44	45	He	10037.729	ppb	1.1	187490.53	10000	100.38	90	110	
Ti	47	45	No Gas	99.923	ppb	0.6	272222.91	100	99.92	90	110	
V	51	45	No Gas	100.423	ppb	0.5	3651097.60	100	100.42	90	110	
V	51	45	He	106.594	ppb	0.5	472193.16	100	106.59	90	110	
Cr	52	89	No Gas	95.561	ppb	0.8	3417020.25	100	95.56	90	110	
Cr	52	89	He	100.080	ppb	1.1	600742.54	100	100.08	90	110	
Cr	53	89	No Gas	94.980	ppb	0.2	458425.60	100	94.98	90	110	
Mn	55	89	No Gas	96.684	ppb	0.4	4684411.40	100	96.68	90	110	
Mn	55	89	He	99.304	ppb	0.9	316686.87	100	99.3	90	110	
Fe	56	89	No Gas	9538.831	ppb	0.4	334939049.16	10000	95.39	90	110	
Fe	56	89	He	9963.313	ppb	1.7	41700500.22	10000	99.63	90	110	
Co	59	89	No Gas	96.965	ppb	0.3	3755566.30	100	96.96	90	110	
Co	59	89	He	100.288	ppb	1.4	1000543.59	100	100.29	90	110	
Ni	60	89	No Gas	96.800	ppb	0.4	825145.54	100	96.8	90	110	
Ni	60	89	He	100.222	ppb	1.9	275002.61	100	100.22	90	110	
Ni	62	89	No Gas	97.556	ppb	1.5	127374.06	100	97.56	90	110	
Cu	63	89	No Gas	97.307	ppb	0.4	2016925.99	100	97.31	90	110	
Cu	63	89	He	101.901	ppb	1.5	766913.66	100	101.9	90	110	
Cu	65	89	No Gas	97.745	ppb	0.1	969280.56	100	97.74	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	96.618	ppb	0.6	591642.93	100	96.62	90	110	
Zn	66	89	He	100.563	ppb	1.2	115560.30	100	100.56	90	110	
Zn	67	89	No Gas	97.655	ppb	2.1	93789.03	100	97.66	90	110	
Zn	68	89	No Gas	98.327	ppb	0.9	426760.28	100	98.33	90	110	
As	75	89	No Gas	96.645	ppb	0.6	608492.88	100	96.64	90	110	
As	75	89	He	99.896	ppb	1.0	82425.25	100	99.9	90	110	
Se	77	89	No Gas	94.328	ppb	1.6	39109.63	100	94.33	90	110	
Se	78	89	No Gas	95.683	ppb	0.1	107116.55	100	95.68	90	110	
Se	78	89	He	99.446	ppb	4.4	5014.30	100	99.45	90	110	
Se	82	89	No Gas	99.429	ppb	1.8	37732.08	100	99.43	90	110	
[Se]	83	89	No Gas	127.694	ppb	31.0	1942.12	100	127.69	90	110	Failed
Sr	88	89	No Gas	99.371	ppb	0.6	5835786.84	100	99.37	90	110	
Mo	95	89	No Gas	101.154	ppb	0.4	1121124.28	100	101.15	90	110	
Mo	97	89	No Gas	100.147	ppb	0.4	694150.38	100	100.15	90	110	
Mo	98	89	No Gas	99.645	ppb	0.9	1797833.94	100	99.64	90	110	
[Mo]	99	89	No Gas	588.876	ppb	40.8	173.51	100	588.88	90	110	Failed
Cd	106	89	No Gas	103.263	ppb	2.9	110827.36	100	103.26	90	110	
Ag	107	89	No Gas	102.658	ppb	0.5	3024477.87	100	102.66	90	110	
Ag	107	89	He	105.666	ppb	0.9	1438068.75	100	105.67	90	110	
Cd	108	89	No Gas	101.750	ppb	2.9	42842.49	100	101.75	90	110	
Ag	109	89	No Gas	102.150	ppb	0.2	2907646.50	100	102.15	90	110	
Cd	111	89	No Gas	100.714	ppb	0.7	600690.92	100	100.71	90	110	
Cd	114	89	No Gas	101.153	ppb	0.3	1573615.96	100	101.15	90	110	
Sn	118	115	No Gas	100.877	ppb	0.5	1954760.20	100	100.88	90	110	
Sb	121	115	No Gas	100.117	ppb	0.4	2822983.78	100	100.12	90	110	
Sb	121	89	He	105.009	ppb	1.1	583183.72	100	105.01	90	110	
Sb	123	115	No Gas	100.170	ppb	0.4	2178280.11	100	100.17	90	110	
Ba	135	115	No Gas	101.784	ppb	0.5	577590.50	100	101.78	90	110	
Ba	137	115	No Gas	101.949	ppb	0.4	1013982.99	100	101.95	90	110	
Tl	203	209	No Gas	98.751	ppb	0.6	2582574.46	100	98.75	90	110	
Tl	205	209	No Gas	97.743	ppb	0.3	6144171.48	100	97.74	90	110	
Pb	206	209	No Gas	98.069	ppb	0.1	2066876.88	100	98.07	90	110	
Pb	207	209	No Gas	98.702	ppb	0.5	1715698.67	100	98.7	90	110	
Pb	208	209	No Gas	98.712	ppb	0.3	8039616.56	100	98.71	90	110	
Th	232	209	No Gas	99.084	ppb	0.2	8279824.01	100	99.08	90	110	
U	238	209	No Gas	98.762	ppb	0.5	8192527.75	100	98.76	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4427162.85	0.2	5406885.91	81.88	70	125	
Sc	45	No Gas	21841009.39	0.2	24326295.51	89.78	75	125	
Sc	45	He	870553.14	1.4	970797.15	89.67	75	125	
Y	89	No Gas	53840870.98	0.5	56662702.82	95.02	75	125	
Y	89	He	6925387.90	1.8	7465540.55	92.76	75	125	
In	115	No Gas	11949334.22	0.4	12379434.81	96.53	75	125	
Tb	159	No Gas	17219053.67	0.2	17053216.17	100.97	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10626992.36	0.5	10541485.14	100.81	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	198_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 20:07:08
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.437	ppb	8.9	250633.34	100	
Be	9	6	No Gas	0.007	ppb	57.6	123.46	100	
B	11	6	No Gas	22.901	ppb	5.0	109832.24	100	
Na	23	45	No Gas	165.338	ppb	3.2	5400020.95	500000	
Na	23	45	He	164.195	ppb	1.6	160360.86	500000	
Mg	24	45	No Gas	1.169	ppb	31.5	32241.37	500000	
Mg	24	45	He	0.779	ppb	37.9	546.72	500000	
Mg	25	45	No Gas	0.998	ppb	35.0	3934.19	500000	
Al	27	45	No Gas	-0.038	ppb	N/A	10044.45	500000	
Al	27	45	He	-0.100	ppb	N/A	70.00	500000	
Si	28	45	No Gas	294.997	ppb	27.1	3530434.50	100	Failed
Si	29	45	No Gas	291.052	ppb	28.3	271785.97	100	Failed
K	39	45	No Gas	5.906	ppb	3.1	4713467.64	500000	
K	39	45	He	11.823	ppb	22.8	30101.60	500000	
Ca	44	45	No Gas	-16.372	ppb	N/A	108376.96	500000	
Ca	44	45	He	2.572	ppb	79.0	240.02	500000	
Ti	47	45	No Gas	0.086	ppb	22.9	493.85	10000	
V	51	45	No Gas	0.012	ppb	635.3	-4108.31	100	
V	51	45	He	-0.032	ppb	N/A	330.34	100	
Cr	52	89	No Gas	-0.075	ppb	N/A	26325.22	100	
Cr	52	89	He	-0.042	ppb	N/A	2395.99	100	
Cr	53	89	No Gas	-1.385	ppb	N/A	49381.82	100	
Mn	55	89	No Gas	0.004	ppb	204.4	10124.02	100	
Mn	55	89	He	0.017	ppb	71.9	253.60	100	
Fe	56	89	No Gas	-4.065	ppb	N/A	1890634.16	500000	
Fe	56	89	He	6.406	ppb	16.3	56078.35	500000	
Co	59	89	No Gas	0.004	ppb	98.9	1578.36	100	
Co	59	89	He	0.005	ppb	95.5	306.98	100	
Ni	60	89	No Gas	0.152	ppb	5.2	2449.38	100	
Ni	60	89	He	-0.184	ppb	N/A	293.64	100	
Ni	62	89	No Gas	-0.230	ppb	N/A	5026.05	100	
Cu	63	89	No Gas	0.063	ppb	15.5	11039.04	100	
Cu	63	89	He	0.040	ppb	25.5	3176.95	100	
Cu	65	89	No Gas	0.440	ppb	4.6	9098.97	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.298	ppb	12.1	3617.50	100	
Zn	66	89	He	0.032	ppb	192.0	393.74	100	
Zn	67	89	No Gas	0.172	ppb	10.2	550.57	100	
Zn	68	89	No Gas	0.076	ppb	19.8	1761.91	100	
As	75	89	No Gas	-0.196	ppb	N/A	2421.31	100	
As	75	89	He	0.029	ppb	49.3	47.78	100	
Se	77	89	No Gas	-0.880	ppb	N/A	8591.49	100	
Se	78	89	No Gas	-0.951	ppb	N/A	16560.31	100	
Se	78	89	He	-0.061	ppb	N/A	21.11	100	
Se	82	89	No Gas	-0.476	ppb	N/A	-89.73	100	
[Se]	83	89	No Gas	4.999	ppb	1710.2	1811.97	100	
Sr	88	89	No Gas	0.019	ppb	10.8	1625.09	100	
Mo	95	89	No Gas	0.252	ppb	16.4	3484.02	10000	
Mo	97	89	No Gas	0.254	ppb	34.3	2232.47	10000	
Mo	98	89	No Gas	0.245	ppb	26.3	5729.23	10000	
[Mo]	99	89	No Gas	224.675	ppb	9.8	76.74	10000	
Cd	106	89	No Gas	0.798	ppb	189.4	53474.79	100	
Ag	107	89	No Gas	0.014	ppb	45.4	1810.13	100	
Ag	107	89	He	0.003	ppb	161.9	757.46	100	
Cd	108	89	No Gas	0.110	ppb	68.5	123.46	100	
Ag	109	89	No Gas	0.024	ppb	9.7	1645.11	100	
Cd	111	89	No Gas	0.002	ppb	313.2	-60.25	100	
Cd	114	89	No Gas	0.011	ppb	54.9	250.26	100	
Sn	118	115	No Gas	0.066	ppb	14.5	4573.05	100	
Sb	121	115	No Gas	-0.047	ppb	N/A	1851.25	100	
Sb	121	89	He	-0.073	ppb	N/A	406.68	100	
Sb	123	115	No Gas	-0.058	ppb	N/A	1354.78	100	
Ba	135	115	No Gas	0.007	ppb	111.6	113.45	100	
Ba	137	115	No Gas	0.003	ppb	157.3	193.53	100	
Tl	203	209	No Gas	0.201	ppb	21.5	5757.23	100	
Tl	205	209	No Gas	0.197	ppb	26.6	13581.61	100	
Pb	206	209	No Gas	0.003	ppb	409.3	1491.61	100	
Pb	207	209	No Gas	0.015	ppb	22.2	1448.23	100	
Pb	208	209	No Gas	0.011	ppb	79.1	6387.20	100	
Th	232	209	No Gas	0.282	ppb	23.7	31292.48	100	
U	238	209	No Gas	0.091	ppb	16.8	8474.96	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4493341.09	1.1	5406885.91	83.1	70	125	
Sc	45	No Gas	21927752.80	0.5	24326295.51	90.14	75	125	
Sc	45	He	871095.14	1.1	970797.15	89.73	75	125	
Y	89	No Gas	54357741.19	0.3	56662702.82	95.93	75	125	
Y	89	He	7068811.53	1.3	7465540.55	94.69	75	125	
In	115	No Gas	12083088.37	1.1	12379434.81	97.61	75	125	
Tb	159	No Gas	17313436.80	0.4	17053216.17	101.53	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10813928.46	0.8	10541485.14	102.58	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 209_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 20:25:32

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.066	ppb	0.9	2819163.02	100	102.07	90	110	
Be	9	6	No Gas	101.198	ppb	0.4	658367.42	100	101.2	90	110	
B	11	6	No Gas	256.468	ppb	0.3	1149983.32	250	102.59	90	110	
Na	23	45	No Gas	9907.408	ppb	0.5	310925148.61	10000	99.07	90	110	
Na	23	45	He	10121.869	ppb	0.7	9141894.44	10000	101.22	90	110	
Mg	24	45	No Gas	9903.230	ppb	1.2	213348490.15	10000	99.03	90	110	
Mg	24	45	He	10205.253	ppb	0.3	4659125.87	10000	102.05	90	110	
Mg	25	45	No Gas	9776.084	ppb	1.3	28508174.58	10000	97.76	90	110	
Al	27	45	No Gas	97.715	ppb	0.3	2764732.67	100	97.72	90	110	
Al	27	45	He	100.615	ppb	0.7	17825.02	100	100.61	90	110	
Si	28	45	No Gas	10052.469	ppb	0.5	112452899.80	10000	100.52	90	110	
Si	29	45	No Gas	10021.879	ppb	0.7	6928151.71	10000	100.22	90	110	
K	39	45	No Gas	9943.765	ppb	1.7	301920935.50	10000	99.44	90	110	
K	39	45	He	10036.290	ppb	0.4	3631831.93	10000	100.36	90	110	
Ca	44	45	No Gas	9994.342	ppb	1.2	9175481.53	10000	99.94	90	110	
Ca	44	45	He	10113.331	ppb	1.8	195682.07	10000	101.13	90	110	
Ti	47	45	No Gas	98.783	ppb	1.0	280223.15	100	98.78	90	110	
V	51	45	No Gas	100.147	ppb	0.8	3791174.61	100	100.15	90	110	
V	51	45	He	105.573	ppb	0.6	484452.61	100	105.57	90	110	
Cr	52	89	No Gas	97.298	ppb	0.5	3554798.35	100	97.3	90	110	
Cr	52	89	He	100.587	ppb	0.7	620266.84	100	100.59	90	110	
Cr	53	89	No Gas	98.621	ppb	0.9	484262.82	100	98.62	90	110	
Mn	55	89	No Gas	98.441	ppb	0.6	4873777.96	100	98.44	90	110	
Mn	55	89	He	99.961	ppb	0.3	327486.04	100	99.96	90	110	
Fe	56	89	No Gas	9702.750	ppb	1.6	348099882.78	10000	97.03	90	110	
Fe	56	89	He	9929.154	ppb	0.5	42697186.03	10000	99.29	90	110	
Co	59	89	No Gas	98.755	ppb	0.5	3908882.95	100	98.76	90	110	
Co	59	89	He	99.892	ppb	0.6	1023874.13	100	99.89	90	110	
Ni	60	89	No Gas	97.602	ppb	0.5	850213.68	100	97.6	90	110	
Ni	60	89	He	101.431	ppb	0.6	285953.94	100	101.43	90	110	
Ni	62	89	No Gas	98.309	ppb	0.7	131133.26	100	98.31	90	110	
Cu	63	89	No Gas	97.887	ppb	1.3	2073225.10	100	97.89	90	110	
Cu	63	89	He	101.192	ppb	0.6	782470.78	100	101.19	90	110	
Cu	65	89	No Gas	96.917	ppb	1.6	982079.84	100	96.92	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.144	ppb	1.7	607846.12	100	97.14	90	110	
Zn	66	89	He	100.872	ppb	1.2	119076.76	100	100.87	90	110	
Zn	67	89	No Gas	98.471	ppb	1.0	96641.52	100	98.47	90	110	
Zn	68	89	No Gas	99.196	ppb	0.7	439946.52	100	99.2	90	110	
As	75	89	No Gas	96.775	ppb	1.3	622630.19	100	96.78	90	110	
As	75	89	He	99.541	ppb	0.7	84374.81	100	99.54	90	110	
Se	77	89	No Gas	99.368	ppb	1.4	41619.27	100	99.37	90	110	
Se	78	89	No Gas	95.963	ppb	1.8	109725.78	100	95.96	90	110	
Se	78	89	He	99.101	ppb	1.5	5134.34	100	99.1	90	110	
Se	82	89	No Gas	98.247	ppb	2.5	38103.81	100	98.25	90	110	
[Se]	83	89	No Gas	77.239	ppb	100.9	1922.10	100	77.24	90	110	Failed
Sr	88	89	No Gas	99.461	ppb	0.6	5969302.65	100	99.46	90	110	
Mo	95	89	No Gas	101.203	ppb	0.9	1146220.73	100	101.2	90	110	
Mo	97	89	No Gas	99.873	ppb	2.0	707347.63	100	99.87	90	110	
Mo	98	89	No Gas	99.849	ppb	2.6	1840737.18	100	99.85	90	110	
[Mo]	99	89	No Gas	232.608	ppb	45.8	80.08	100	232.61	90	110	Failed
Cd	106	89	No Gas	100.743	ppb	3.1	111797.41	100	100.74	90	110	
Ag	107	89	No Gas	102.676	ppb	0.6	3091250.09	100	102.68	90	110	
Ag	107	89	He	103.758	ppb	0.3	1450727.19	100	103.76	90	110	
Cd	108	89	No Gas	101.867	ppb	0.6	43833.21	100	101.87	90	110	
Ag	109	89	No Gas	102.458	ppb	1.6	2980060.90	100	102.46	90	110	
Cd	111	89	No Gas	99.848	ppb	1.6	608530.32	100	99.85	90	110	
Cd	114	89	No Gas	101.579	ppb	0.7	1614850.48	100	101.58	90	110	
Sn	118	115	No Gas	101.163	ppb	0.4	1994125.27	100	101.16	90	110	
Sb	121	115	No Gas	100.059	ppb	1.7	2869857.74	100	100.06	90	110	
Sb	121	89	He	103.494	ppb	0.4	590511.01	100	103.49	90	110	
Sb	123	115	No Gas	99.939	ppb	1.7	2210656.02	100	99.94	90	110	
Ba	135	115	No Gas	101.483	ppb	0.5	585837.60	100	101.48	90	110	
Ba	137	115	No Gas	101.050	ppb	0.3	1022420.94	100	101.05	90	110	
Tl	203	209	No Gas	98.358	ppb	1.6	2576286.08	100	98.36	90	110	
Tl	205	209	No Gas	97.279	ppb	1.9	6124445.91	100	97.28	90	110	
Pb	206	209	No Gas	98.176	ppb	1.4	2072348.60	100	98.18	90	110	
Pb	207	209	No Gas	98.638	ppb	0.6	1717343.86	100	98.64	90	110	
Pb	208	209	No Gas	98.906	ppb	0.5	8068353.01	100	98.91	90	110	
Th	232	209	No Gas	97.726	ppb	1.1	8179204.64	100	97.73	90	110	
U	238	209	No Gas	97.763	ppb	2.0	8122078.76	100	97.76	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4513418.84	0.3	5406885.91	83.48	70	125	
Sc	45	No Gas	22741966.18	0.4	24326295.51	93.49	75	125	
Sc	45	He	901758.16	0.4	970797.15	92.89	75	125	
Y	89	No Gas	55022192.30	1.1	56662702.82	97.1	75	125	
Y	89	He	7114022.79	0.5	7465540.55	95.29	75	125	
In	115	No Gas	12156082.10	1.0	12379434.81	98.2	75	125	
Tb	159	No Gas	17359612.15	0.2	17053216.17	101.8	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10644092.08	0.6	10541485.14	100.97	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	210_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 20:27:17
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.095	ppb	143.6	251378.78	100	
Be	9	6	No Gas	0.009	ppb	72.6	143.48	100	
B	11	6	No Gas	8.024	ppb	6.0	45623.02	100	
Na	23	45	No Gas	94.118	ppb	3.2	3389793.17	500000	
Na	23	45	He	96.114	ppb	3.9	105844.27	500000	
Mg	24	45	No Gas	1.183	ppb	31.1	33952.28	500000	
Mg	24	45	He	0.838	ppb	21.0	600.06	500000	
Mg	25	45	No Gas	1.026	ppb	35.7	4187.62	500000	
Al	27	45	No Gas	0.051	ppb	216.3	12999.90	500000	
Al	27	45	He	0.108	ppb	107.8	110.00	500000	
Si	28	45	No Gas	33.371	ppb	12.1	751637.13	100	
Si	29	45	No Gas	23.783	ppb	17.0	100111.25	100	
K	39	45	No Gas	6.568	ppb	6.7	4939176.59	500000	
K	39	45	He	10.487	ppb	48.7	31050.75	500000	
Ca	44	45	No Gas	-26.898	ppb	N/A	103527.61	500000	
Ca	44	45	He	-2.750	ppb	N/A	146.68	500000	
Ti	47	45	No Gas	0.052	ppb	43.4	417.10	10000	
V	51	45	No Gas	0.073	ppb	50.2	-1940.96	100	
V	51	45	He	0.008	ppb	149.7	530.55	100	
Cr	52	89	No Gas	-0.069	ppb	N/A	27264.63	100	
Cr	52	89	He	-0.038	ppb	N/A	2479.40	100	
Cr	53	89	No Gas	-1.036	ppb	N/A	52285.55	100	
Mn	55	89	No Gas	0.000	ppb	2719.3	10227.54	100	
Mn	55	89	He	0.014	ppb	121.4	250.26	100	
Fe	56	89	No Gas	-1.475	ppb	N/A	2036947.77	500000	
Fe	56	89	He	5.814	ppb	5.8	54847.18	500000	
Co	59	89	No Gas	0.007	ppb	81.9	1738.55	100	
Co	59	89	He	0.002	ppb	188.4	286.96	100	
Ni	60	89	No Gas	0.093	ppb	5.5	1995.51	100	
Ni	60	89	He	-0.164	ppb	N/A	360.37	100	
Ni	62	89	No Gas	-0.142	ppb	N/A	5279.75	100	
Cu	63	89	No Gas	0.012	ppb	171.3	10254.35	100	
Cu	63	89	He	-0.006	ppb	N/A	2893.25	100	
Cu	65	89	No Gas	0.059	ppb	31.8	5443.32	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.129	ppb	8.9	2649.63	100	
Zn	66	89	He	0.093	ppb	103.9	477.16	100	
Zn	67	89	No Gas	0.086	ppb	102.1	480.50	100	
Zn	68	89	No Gas	0.029	ppb	117.4	1601.74	100	
As	75	89	No Gas	-0.076	ppb	N/A	3280.12	100	
As	75	89	He	0.023	ppb	60.4	43.33	100	
Se	77	89	No Gas	-1.327	ppb	N/A	8678.27	100	
Se	78	89	No Gas	-1.129	ppb	N/A	16847.62	100	
Se	78	89	He	0.101	ppb	316.9	30.00	100	
Se	82	89	No Gas	-0.729	ppb	N/A	-190.47	100	
[Se]	83	89	No Gas	21.152	ppb	256.3	1882.05	100	
Sr	88	89	No Gas	0.010	ppb	17.7	1097.83	100	
Mo	95	89	No Gas	0.213	ppb	24.6	3133.57	10000	
Mo	97	89	No Gas	0.201	ppb	31.6	1918.77	10000	
Mo	98	89	No Gas	0.192	ppb	26.2	4911.40	10000	
[Mo]	99	89	No Gas	216.945	ppb	9.2	76.74	10000	
Cd	106	89	No Gas	-0.606	ppb	N/A	54131.55	100	
Ag	107	89	No Gas	0.015	ppb	6.2	1901.26	100	
Ag	107	89	He	0.005	ppb	46.4	807.51	100	
Cd	108	89	No Gas	-0.005	ppb	N/A	76.74	100	
Ag	109	89	No Gas	0.018	ppb	29.0	1508.29	100	
Cd	111	89	No Gas	0.008	ppb	109.9	-22.35	100	
Cd	114	89	No Gas	0.012	ppb	57.9	266.94	100	
Sn	118	115	No Gas	0.072	ppb	29.2	4815.62	100	
Sb	121	115	No Gas	-0.050	ppb	N/A	1812.36	100	
Sb	121	89	He	-0.065	ppb	N/A	460.02	100	
Sb	123	115	No Gas	-0.054	ppb	N/A	1468.25	100	
Ba	135	115	No Gas	0.009	ppb	39.5	126.79	100	
Ba	137	115	No Gas	0.007	ppb	54.3	240.25	100	
Tl	203	209	No Gas	0.191	ppb	23.1	5516.88	100	
Tl	205	209	No Gas	0.182	ppb	21.9	12716.22	100	
Pb	206	209	No Gas	0.014	ppb	99.3	1725.22	100	
Pb	207	209	No Gas	0.017	ppb	99.4	1498.28	100	
Pb	208	209	No Gas	0.015	ppb	92.1	6774.29	100	
Th	232	209	No Gas	0.305	ppb	23.9	33453.75	100	
U	238	209	No Gas	0.093	ppb	23.2	8678.67	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4666934.45	0.6	5406885.91	86.31	70	125	
Sc	45	No Gas	22884975.02	0.5	24326295.51	94.08	75	125	
Sc	45	He	912200.80	0.8	970797.15	93.96	75	125	
Y	89	No Gas	55863526.97	0.4	56662702.82	98.59	75	125	
Y	89	He	7240053.19	1.0	7465540.55	96.98	75	125	
In	115	No Gas	12400091.77	0.2	12379434.81	100.17	75	125	
Tb	159	No Gas	17513392.59	0.3	17053216.17	102.7	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10896930.68	0.4	10541485.14	103.37	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 221_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 20:45:50

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.792	ppb	0.3	2879352.27	100	101.79	90	110	
Be	9	6	No Gas	101.427	ppb	0.7	675563.56	100	101.43	90	110	
B	11	6	No Gas	261.035	ppb	1.0	1198170.07	250	104.41	90	110	
Na	23	45	No Gas	9930.457	ppb	0.9	316829315.41	10000	99.3	90	110	
Na	23	45	He	10112.285	ppb	0.2	9286939.03	10000	101.12	90	110	
Mg	24	45	No Gas	9976.032	ppb	0.9	218495356.74	10000	99.76	90	110	
Mg	24	45	He	10149.568	ppb	0.9	4711612.54	10000	101.5	90	110	
Mg	25	45	No Gas	9825.962	ppb	0.4	29130003.74	10000	98.26	90	110	
Al	27	45	No Gas	97.953	ppb	0.6	2817537.46	100	97.95	90	110	
Al	27	45	He	97.581	ppb	0.6	17581.37	100	97.58	90	110	
Si	28	45	No Gas	10080.140	ppb	0.5	114637150.72	10000	100.8	90	110	
Si	29	45	No Gas	10060.720	ppb	0.1	7070365.38	10000	100.61	90	110	
K	39	45	No Gas	9980.180	ppb	0.6	308049935.41	10000	99.8	90	110	
K	39	45	He	10015.189	ppb	0.7	3685200.36	10000	100.15	90	110	
Ca	44	45	No Gas	10034.810	ppb	0.5	9365607.99	10000	100.35	90	110	
Ca	44	45	He	10220.503	ppb	2.2	201092.56	10000	102.21	90	110	
Ti	47	45	No Gas	98.911	ppb	0.6	285264.61	100	98.91	90	110	
V	51	45	No Gas	100.264	ppb	0.5	3858768.79	100	100.26	90	110	
V	51	45	He	105.470	ppb	0.2	492126.84	100	105.47	90	110	
Cr	52	89	No Gas	97.326	ppb	0.5	3589812.95	100	97.33	90	110	
Cr	52	89	He	100.463	ppb	0.3	627622.43	100	100.46	90	110	
Cr	53	89	No Gas	97.913	ppb	0.7	485797.41	100	97.91	90	110	
Mn	55	89	No Gas	99.353	ppb	0.9	4965802.48	100	99.35	90	110	
Mn	55	89	He	99.865	ppb	1.1	331438.16	100	99.86	90	110	
Fe	56	89	No Gas	9770.217	ppb	1.3	353872824.58	10000	97.7	90	110	
Fe	56	89	He	9912.305	ppb	0.3	43181689.36	10000	99.12	90	110	
Co	59	89	No Gas	98.776	ppb	0.4	3946907.85	100	98.78	90	110	
Co	59	89	He	99.547	ppb	0.5	1033670.55	100	99.55	90	110	
Ni	60	89	No Gas	98.334	ppb	0.6	864753.43	100	98.33	90	110	
Ni	60	89	He	100.525	ppb	0.0	287107.63	100	100.52	90	110	
Ni	62	89	No Gas	99.708	ppb	2.1	134186.13	100	99.71	90	110	
Cu	63	89	No Gas	99.136	ppb	0.9	2119710.86	100	99.14	90	110	
Cu	63	89	He	100.138	ppb	0.4	784483.68	100	100.14	90	110	
Cu	65	89	No Gas	98.374	ppb	1.3	1006350.65	100	98.37	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.176	ppb	0.7	620209.09	100	98.18	90	110	
Zn	66	89	He	100.876	ppb	1.1	120645.61	100	100.88	90	110	
Zn	67	89	No Gas	99.646	ppb	2.4	98721.90	100	99.65	90	110	
Zn	68	89	No Gas	99.717	ppb	0.8	446481.42	100	99.72	90	110	
As	75	89	No Gas	97.716	ppb	0.3	634692.13	100	97.72	90	110	
As	75	89	He	100.762	ppb	0.3	86528.38	100	100.76	90	110	
Se	77	89	No Gas	100.058	ppb	2.1	42245.04	100	100.06	90	110	
Se	78	89	No Gas	96.703	ppb	0.7	111498.80	100	96.7	90	110	
Se	78	89	He	100.605	ppb	1.5	5279.95	100	100.61	90	110	
Se	82	89	No Gas	99.675	ppb	1.1	39027.11	100	99.68	90	110	
[Se]	83	89	No Gas	135.236	ppb	135.0	2012.20	100	135.24	90	110	Failed
Sr	88	89	No Gas	99.537	ppb	0.2	6030912.38	100	99.54	90	110	
Mo	95	89	No Gas	101.106	ppb	0.7	1156138.85	100	101.11	90	110	
Mo	97	89	No Gas	98.935	ppb	0.8	707503.15	100	98.94	90	110	
Mo	98	89	No Gas	99.561	ppb	1.2	1853218.90	100	99.56	90	110	
[Mo]	99	89	No Gas	49.611	ppb	194.3	30.03	100	49.61	90	110	Failed
Cd	106	89	No Gas	99.258	ppb	3.0	112015.97	100	99.26	90	110	
Ag	107	89	No Gas	101.990	ppb	0.4	3100039.88	100	101.99	90	110	
Ag	107	89	He	103.091	ppb	0.2	1460271.47	100	103.09	90	110	
Cd	108	89	No Gas	101.481	ppb	1.3	44084.29	100	101.48	90	110	
Ag	109	89	No Gas	102.501	ppb	0.9	3010027.53	100	102.5	90	110	
Cd	111	89	No Gas	99.615	ppb	0.8	612964.67	100	99.62	90	110	
Cd	114	89	No Gas	100.404	ppb	0.6	1611445.67	100	100.4	90	110	
Sn	118	115	No Gas	100.865	ppb	0.3	2004186.93	100	100.86	90	110	
Sb	121	115	No Gas	99.696	ppb	0.4	2882600.16	100	99.7	90	110	
Sb	121	89	He	103.381	ppb	1.1	597575.47	100	103.38	90	110	
Sb	123	115	No Gas	99.534	ppb	0.4	2219546.37	100	99.53	90	110	
Ba	135	115	No Gas	100.555	ppb	0.4	585136.62	100	100.56	90	110	
Ba	137	115	No Gas	100.694	ppb	1.1	1026988.24	100	100.69	90	110	
Tl	203	209	No Gas	99.177	ppb	0.5	2588019.95	100	99.18	90	110	
Tl	205	209	No Gas	97.410	ppb	0.7	6109756.85	100	97.41	90	110	
Pb	206	209	No Gas	97.125	ppb	0.8	2042460.38	100	97.12	90	110	
Pb	207	209	No Gas	97.908	ppb	1.2	1698149.19	100	97.91	90	110	
Pb	208	209	No Gas	97.929	ppb	1.1	7958274.95	100	97.93	90	110	
Th	232	209	No Gas	98.972	ppb	0.4	8252331.72	100	98.97	90	110	
U	238	209	No Gas	97.698	ppb	0.2	8086712.98	100	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4621054.34	0.8	5406885.91	85.47	70	125	
Sc	45	No Gas	23120484.70	0.5	24326295.51	95.04	75	125	
Sc	45	He	916918.47	0.4	970797.15	94.45	75	125	
Y	89	No Gas	55547027.14	0.5	56662702.82	98.03	75	125	
Y	89	He	7207062.91	0.7	7465540.55	96.54	75	125	
In	115	No Gas	12253176.93	0.3	12379434.81	98.98	75	125	
Tb	159	No Gas	17367419.12	0.6	17053216.17	101.84	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10603817.63	0.6	10541485.14	100.59	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	222_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 20:47:35
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.086	ppb	67.1	262383.66	100	
Be	9	6	No Gas	0.009	ppb	16.8	146.81	100	
B	11	6	No Gas	8.997	ppb	4.8	52359.65	100	
Na	23	45	No Gas	69.843	ppb	1.3	2677291.34	500000	
Na	23	45	He	69.805	ppb	2.6	84070.42	500000	
Mg	24	45	No Gas	1.042	ppb	41.6	31533.44	500000	
Mg	24	45	He	0.944	ppb	52.5	666.74	500000	
Mg	25	45	No Gas	1.015	ppb	31.5	4241.01	500000	
Al	27	45	No Gas	0.015	ppb	53.5	12219.54	500000	
Al	27	45	He	-0.145	ppb	N/A	66.67	500000	
Si	28	45	No Gas	20.401	ppb	15.8	618402.53	100	
Si	29	45	No Gas	10.598	ppb	26.1	92887.70	100	
K	39	45	No Gas	6.290	ppb	17.5	5029980.44	500000	
K	39	45	He	8.142	ppb	36.5	31010.67	500000	
Ca	44	45	No Gas	-33.164	ppb	N/A	99780.02	500000	
Ca	44	45	He	3.006	ppb	37.3	266.69	500000	
Ti	47	45	No Gas	0.034	ppb	21.5	373.72	10000	
V	51	45	No Gas	0.012	ppb	174.9	-4334.96	100	
V	51	45	He	-0.001	ppb	N/A	503.85	100	
Cr	52	89	No Gas	-0.027	ppb	N/A	29023.49	100	
Cr	52	89	He	-0.032	ppb	N/A	2569.53	100	
Cr	53	89	No Gas	-0.791	ppb	N/A	53769.52	100	
Mn	55	89	No Gas	0.044	ppb	19.2	12521.76	100	
Mn	55	89	He	0.059	ppb	39.9	407.09	100	
Fe	56	89	No Gas	0.293	ppb	457.6	2116798.61	500000	
Fe	56	89	He	6.860	ppb	19.6	60632.11	500000	
Co	59	89	No Gas	0.008	ppb	34.0	1801.95	100	
Co	59	89	He	0.002	ppb	126.6	293.64	100	
Ni	60	89	No Gas	0.069	ppb	7.1	1791.94	100	
Ni	60	89	He	-0.172	ppb	N/A	343.69	100	
Ni	62	89	No Gas	-0.038	ppb	N/A	5456.66	100	
Cu	63	89	No Gas	-0.020	ppb	N/A	9646.55	100	
Cu	63	89	He	-0.015	ppb	N/A	2886.58	100	
Cu	65	89	No Gas	-0.017	ppb	N/A	4702.26	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.031	ppb	58.9	2042.23	100	
Zn	66	89	He	-0.048	ppb	N/A	313.66	100	
Zn	67	89	No Gas	-0.054	ppb	N/A	343.69	100	
Zn	68	89	No Gas	0.005	ppb	374.4	1501.61	100	
As	75	89	No Gas	-0.101	ppb	N/A	3133.72	100	
As	75	89	He	0.027	ppb	80.3	47.78	100	
Se	77	89	No Gas	-0.025	ppb	N/A	9182.44	100	
Se	78	89	No Gas	-0.522	ppb	N/A	17569.24	100	
Se	78	89	He	0.047	ppb	83.0	27.78	100	
Se	82	89	No Gas	0.003	ppb	23678.4	96.17	100	
[Se]	83	89	No Gas	41.542	ppb	118.1	1922.09	100	
Sr	88	89	No Gas	0.013	ppb	22.6	1301.40	100	
Mo	95	89	No Gas	0.228	ppb	20.7	3327.13	10000	
Mo	97	89	No Gas	0.215	ppb	23.2	2028.88	10000	
Mo	98	89	No Gas	0.219	ppb	23.5	5456.21	10000	
[Mo]	99	89	No Gas	-47.292	ppb	N/A	3.34	10000	
Cd	106	89	No Gas	0.489	ppb	215.7	55186.93	100	
Ag	107	89	No Gas	0.015	ppb	29.2	1910.15	100	
Ag	107	89	He	-0.006	ppb	N/A	664.02	100	
Cd	108	89	No Gas	0.024	ppb	162.3	90.09	100	
Ag	109	89	No Gas	0.018	ppb	16.1	1528.32	100	
Cd	111	89	No Gas	0.006	ppb	96.3	-40.00	100	
Cd	114	89	No Gas	0.011	ppb	24.0	253.60	100	
Sn	118	115	No Gas	0.073	ppb	18.5	4866.49	100	
Sb	121	115	No Gas	-0.048	ppb	N/A	1890.15	100	
Sb	121	89	He	-0.075	ppb	N/A	413.35	100	
Sb	123	115	No Gas	-0.058	ppb	N/A	1381.48	100	
Ba	135	115	No Gas	0.015	ppb	20.5	160.16	100	
Ba	137	115	No Gas	0.012	ppb	35.5	296.97	100	
Tl	203	209	No Gas	0.223	ppb	18.2	6331.41	100	
Tl	205	209	No Gas	0.214	ppb	21.9	14673.78	100	
Pb	206	209	No Gas	0.007	ppb	147.3	1575.04	100	
Pb	207	209	No Gas	0.014	ppb	35.9	1434.88	100	
Pb	208	209	No Gas	0.012	ppb	41.9	6503.96	100	
Th	232	209	No Gas	0.290	ppb	19.3	32021.29	100	
U	238	209	No Gas	0.098	ppb	18.2	9069.32	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4875835.18	0.6	5406885.91	90.18	70	125	
Sc	45	No Gas	23345503.88	0.1	24326295.51	95.97	75	125	
Sc	45	He	937031.66	0.2	970797.15	96.52	75	125	
Y	89	No Gas	56284831.61	0.5	56662702.82	99.33	75	125	
Y	89	He	7391920.89	1.0	7465540.55	99.01	75	125	
In	115	No Gas	12487436.27	0.3	12379434.81	100.87	75	125	
Tb	159	No Gas	17462828.28	1.1	17053216.17	102.4	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10833024.85	0.5	10541485.14	102.77	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 233_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 21:06:18

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.234	ppb	0.9	2905496.34	100	102.23	90	110	
Be	9	6	No Gas	102.841	ppb	0.8	688474.23	100	102.84	90	110	
B	11	6	No Gas	257.678	ppb	1.1	1188920.22	250	103.07	90	110	
Na	23	45	No Gas	9844.631	ppb	0.5	323498165.56	10000	98.45	90	110	
Na	23	45	He	10176.248	ppb	1.4	9500279.23	10000	101.76	90	110	
Mg	24	45	No Gas	9829.898	ppb	0.7	221743376.70	10000	98.3	90	110	
Mg	24	45	He	10184.899	ppb	1.2	4806532.12	10000	101.85	90	110	
Mg	25	45	No Gas	9598.543	ppb	0.5	29307397.90	10000	95.99	90	110	
Al	27	45	No Gas	96.433	ppb	0.7	2857023.71	100	96.43	90	110	
Al	27	45	He	98.918	ppb	2.3	18115.33	100	98.92	90	110	
Si	28	45	No Gas	9975.720	ppb	0.3	116848982.55	10000	99.76	90	110	
Si	29	45	No Gas	10006.686	ppb	0.6	7243201.55	10000	100.07	90	110	
K	39	45	No Gas	9809.247	ppb	0.8	311921062.02	10000	98.09	90	110	
K	39	45	He	10171.956	ppb	1.4	3804285.05	10000	101.72	90	110	
Ca	44	45	No Gas	10045.909	ppb	0.5	9656099.65	10000	100.46	90	110	
Ca	44	45	He	10349.482	ppb	3.1	206992.05	10000	103.49	90	110	
Ti	47	45	No Gas	97.972	ppb	0.7	291000.84	100	97.97	90	110	
V	51	45	No Gas	97.120	ppb	0.5	3849474.48	100	97.12	90	110	
V	51	45	He	106.014	ppb	0.8	502875.44	100	106.01	90	110	
Cr	52	89	No Gas	96.168	ppb	0.9	3636816.30	100	96.17	90	110	
Cr	52	89	He	101.138	ppb	1.4	640874.74	100	101.14	90	110	
Cr	53	89	No Gas	97.082	ppb	1.9	494275.44	100	97.08	90	110	
Mn	55	89	No Gas	99.224	ppb	1.1	5084366.67	100	99.22	90	110	
Mn	55	89	He	99.760	ppb	1.0	335861.16	100	99.76	90	110	
Fe	56	89	No Gas	9842.462	ppb	1.0	365469858.17	10000	98.42	90	110	
Fe	56	89	He	9892.470	ppb	0.8	43715701.01	10000	98.92	90	110	
Co	59	89	No Gas	97.757	ppb	1.2	4004555.29	100	97.76	90	110	
Co	59	89	He	99.701	ppb	0.7	1050192.28	100	99.7	90	110	
Ni	60	89	No Gas	98.193	ppb	0.3	885310.10	100	98.19	90	110	
Ni	60	89	He	100.146	ppb	0.9	290138.62	100	100.15	90	110	
Ni	62	89	No Gas	100.622	ppb	1.7	138775.87	100	100.62	90	110	
Cu	63	89	No Gas	98.468	ppb	0.9	2158578.43	100	98.47	90	110	
Cu	63	89	He	100.619	ppb	0.4	799601.03	100	100.62	90	110	
Cu	65	89	No Gas	96.184	ppb	1.7	1008818.14	100	96.18	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	95.513	ppb	2.5	618574.90	100	95.51	90	110	
Zn	66	89	He	101.623	ppb	0.3	123287.33	100	101.62	90	110	
Zn	67	89	No Gas	97.224	ppb	0.3	98768.89	100	97.22	90	110	
Zn	68	89	No Gas	97.577	ppb	1.0	447943.81	100	97.58	90	110	
As	75	89	No Gas	96.565	ppb	0.6	643076.70	100	96.56	90	110	
As	75	89	He	99.129	ppb	0.9	86349.36	100	99.13	90	110	
Se	77	89	No Gas	97.290	ppb	3.2	42365.64	100	97.29	90	110	
Se	78	89	No Gas	96.008	ppb	0.8	113624.90	100	96.01	90	110	
Se	78	89	He	97.706	ppb	4.1	5203.25	100	97.71	90	110	
Se	82	89	No Gas	96.771	ppb	1.0	38846.27	100	96.77	90	110	
[Se]	83	89	No Gas	100.580	ppb	97.0	2018.88	100	100.58	90	110	
Sr	88	89	No Gas	98.065	ppb	0.6	6091476.70	100	98.06	90	110	
Mo	95	89	No Gas	100.698	ppb	0.6	1180461.82	100	100.7	90	110	
Mo	97	89	No Gas	98.856	ppb	1.1	724716.25	100	98.86	90	110	
Mo	98	89	No Gas	97.537	ppb	1.7	1861237.32	100	97.54	90	110	
[Mo]	99	89	No Gas	82.128	ppb	1.8	40.04	100	82.13	90	110	Failed
Cd	106	89	No Gas	96.084	ppb	2.2	112934.56	100	96.08	90	110	
Ag	107	89	No Gas	100.953	ppb	0.8	3145872.44	100	100.95	90	110	
Ag	107	89	He	102.712	ppb	0.5	1475868.73	100	102.71	90	110	
Cd	108	89	No Gas	101.919	ppb	1.1	45390.12	100	101.92	90	110	
Ag	109	89	No Gas	100.934	ppb	1.2	3038658.35	100	100.93	90	110	
Cd	111	89	No Gas	97.250	ppb	1.7	613450.90	100	97.25	90	110	
Cd	114	89	No Gas	98.127	ppb	0.7	1614613.78	100	98.13	90	110	
Sn	118	115	No Gas	102.580	ppb	0.9	2050320.96	100	102.58	90	110	
Sb	121	115	No Gas	99.735	ppb	1.6	2900729.26	100	99.74	90	110	
Sb	121	89	He	103.627	ppb	0.6	607654.79	100	103.63	90	110	
Sb	123	115	No Gas	99.113	ppb	1.9	2223076.10	100	99.11	90	110	
Ba	135	115	No Gas	100.905	ppb	1.7	590605.32	100	100.9	90	110	
Ba	137	115	No Gas	102.169	ppb	1.5	1048151.70	100	102.17	90	110	
Tl	203	209	No Gas	98.344	ppb	1.0	2589193.42	100	98.34	90	110	
Tl	205	209	No Gas	95.185	ppb	1.5	6023308.74	100	95.18	90	110	
Pb	206	209	No Gas	94.814	ppb	1.7	2011555.10	100	94.81	90	110	
Pb	207	209	No Gas	95.213	ppb	1.2	1666146.30	100	95.21	90	110	
Pb	208	209	No Gas	96.041	ppb	1.0	7874538.77	100	96.04	90	110	
Th	232	209	No Gas	97.997	ppb	2.1	8243779.84	100	98	90	110	
U	238	209	No Gas	95.612	ppb	2.0	7983669.93	100	95.61	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4644622.65	0.7	5406885.91	85.9	70	125	
Sc	45	No Gas	23812120.50	0.2	24326295.51	97.89	75	125	
Sc	45	He	932210.83	1.5	970797.15	96.03	75	125	
Y	89	No Gas	56948990.77	1.0	56662702.82	100.51	75	125	
Y	89	He	7311217.27	1.3	7465540.55	97.93	75	125	
In	115	No Gas	12327072.45	1.5	12379434.81	99.58	75	125	
Tb	159	No Gas	17715484.69	1.7	17053216.17	103.88	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10698723.74	1.1	10541485.14	101.49	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	234_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 21:08:03
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.096	ppb	64.2	264653.64	100	
Be	9	6	No Gas	0.012	ppb	66.2	166.84	100	
B	11	6	No Gas	6.052	ppb	3.9	38477.89	100	
Na	23	45	No Gas	62.815	ppb	0.6	2479928.25	500000	
Na	23	45	He	65.830	ppb	2.7	81225.73	500000	
Mg	24	45	No Gas	0.919	ppb	26.9	29139.68	500000	
Mg	24	45	He	0.429	ppb	41.6	426.70	500000	
Mg	25	45	No Gas	0.730	ppb	47.2	3427.38	500000	
Al	27	45	No Gas	0.021	ppb	92.8	12553.10	500000	
Al	27	45	He	0.102	ppb	159.4	113.33	500000	
Si	28	45	No Gas	16.637	ppb	17.4	582027.64	100	
Si	29	45	No Gas	6.734	ppb	53.2	91231.83	100	
K	39	45	No Gas	7.662	ppb	10.5	5131479.30	500000	
K	39	45	He	9.940	ppb	25.0	32026.71	500000	
Ca	44	45	No Gas	-24.959	ppb	N/A	108660.86	500000	
Ca	44	45	He	0.890	ppb	121.9	226.69	500000	
Ti	47	45	No Gas	0.077	ppb	32.2	503.86	10000	
V	51	45	No Gas	0.026	ppb	126.5	-3856.14	100	
V	51	45	He	-0.003	ppb	N/A	500.52	100	
Cr	52	89	No Gas	-0.055	ppb	N/A	28351.29	100	
Cr	52	89	He	-0.019	ppb	N/A	2676.32	100	
Cr	53	89	No Gas	-1.496	ppb	N/A	51314.16	100	
Mn	55	89	No Gas	0.037	ppb	8.7	12321.38	100	
Mn	55	89	He	0.035	ppb	65.0	330.34	100	
Fe	56	89	No Gas	0.490	ppb	283.0	2152188.26	500000	
Fe	56	89	He	6.471	ppb	5.9	59385.03	500000	
Co	59	89	No Gas	0.007	ppb	24.7	1771.91	100	
Co	59	89	He	0.013	ppb	7.4	407.08	100	
Ni	60	89	No Gas	0.075	ppb	3.4	1875.37	100	
Ni	60	89	He	-0.174	ppb	N/A	340.35	100	
Ni	62	89	No Gas	-0.007	ppb	N/A	5570.14	100	
Cu	63	89	No Gas	-0.038	ppb	N/A	9386.11	100	
Cu	63	89	He	0.008	ppb	44.1	3090.18	100	
Cu	65	89	No Gas	-0.038	ppb	N/A	4552.06	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.039	ppb	50.0	2122.33	100	
Zn	66	89	He	0.003	ppb	251.9	380.39	100	
Zn	67	89	No Gas	-0.032	ppb	N/A	370.38	100	
Zn	68	89	No Gas	-0.007	ppb	N/A	1468.24	100	
As	75	89	No Gas	-0.006	ppb	N/A	3803.85	100	
As	75	89	He	0.035	ppb	51.7	55.55	100	
Se	77	89	No Gas	-2.004	ppb	N/A	8631.52	100	
Se	78	89	No Gas	0.382	ppb	198.5	18701.95	100	
Se	78	89	He	0.063	ppb	150.9	28.89	100	
Se	82	89	No Gas	-0.730	ppb	N/A	-195.57	100	
[Se]	83	89	No Gas	144.805	ppb	50.2	2078.94	100	Failed
Sr	88	89	No Gas	0.014	ppb	39.5	1351.45	100	
Mo	95	89	No Gas	0.207	ppb	25.8	3126.90	10000	
Mo	97	89	No Gas	0.186	ppb	15.3	1845.35	10000	
Mo	98	89	No Gas	0.192	ppb	37.7	5010.80	10000	
[Mo]	99	89	No Gas	-12.136	ppb	N/A	13.35	10000	
Cd	106	89	No Gas	0.020	ppb	2241.8	55642.61	100	
Ag	107	89	No Gas	0.013	ppb	18.7	1860.14	100	
Ag	107	89	He	0.004	ppb	229.9	817.52	100	
Cd	108	89	No Gas	0.096	ppb	94.1	123.46	100	
Ag	109	89	No Gas	0.022	ppb	31.1	1658.46	100	
Cd	111	89	No Gas	-0.002	ppb	N/A	-86.92	100	
Cd	114	89	No Gas	0.013	ppb	56.0	283.62	100	
Sn	118	115	No Gas	0.065	ppb	30.6	4734.21	100	
Sb	121	115	No Gas	-0.056	ppb	N/A	1662.34	100	
Sb	121	89	He	-0.085	ppb	N/A	356.68	100	
Sb	123	115	No Gas	-0.058	ppb	N/A	1388.16	100	
Ba	135	115	No Gas	0.021	ppb	44.3	196.87	100	
Ba	137	115	No Gas	0.022	ppb	9.5	393.74	100	
Tl	203	209	No Gas	0.189	ppb	30.8	5390.06	100	
Tl	205	209	No Gas	0.179	ppb	21.6	12372.17	100	
Pb	206	209	No Gas	0.017	ppb	31.7	1761.91	100	
Pb	207	209	No Gas	0.011	ppb	104.3	1354.79	100	
Pb	208	209	No Gas	0.014	ppb	56.2	6587.38	100	
Th	232	209	No Gas	0.269	ppb	17.0	29960.62	100	
U	238	209	No Gas	0.089	ppb	14.4	8201.13	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4913078.99	0.6	5406885.91	90.87	70	125	
Sc	45	No Gas	23618883.10	0.3	24326295.51	97.09	75	125	
Sc	45	He	947300.14	0.5	970797.15	97.58	75	125	
Y	89	No Gas	57033848.96	0.2	56662702.82	100.66	75	125	
Y	89	He	7449278.25	0.6	7465540.55	99.78	75	125	
In	115	No Gas	12548731.62	0.8	12379434.81	101.37	75	125	
Tb	159	No Gas	17324692.64	1.0	17053216.17	101.59	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10746070.41	0.3	10541485.14	101.94	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 245_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 21:26:47

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.702	ppb	0.3	2991333.11	100	102.7	90	110	
Be	9	6	No Gas	99.605	ppb	1.7	683648.44	100	99.6	90	110	
B	11	6	No Gas	271.349	ppb	0.8	1283224.69	250	108.54	90	110	
Na	23	45	No Gas	9869.129	ppb	1.4	322681848.88	10000	98.69	90	110	
Na	23	45	He	10139.317	ppb	0.8	9473389.65	10000	101.39	90	110	
Mg	24	45	No Gas	9955.952	ppb	1.7	223464770.00	10000	99.56	90	110	
Mg	24	45	He	10233.877	ppb	1.6	4832415.87	10000	102.34	90	110	
Mg	25	45	No Gas	9688.603	ppb	1.0	29435412.89	10000	96.89	90	110	
Al	27	45	No Gas	97.027	ppb	0.9	2860288.92	100	97.03	90	110	
Al	27	45	He	98.691	ppb	4.5	18085.36	100	98.69	90	110	
Si	28	45	No Gas	10189.299	ppb	1.5	118749326.23	10000	101.89	90	110	
Si	29	45	No Gas	10174.231	ppb	0.6	7326523.41	10000	101.74	90	110	
K	39	45	No Gas	9947.895	ppb	0.4	314694148.64	10000	99.48	90	110	
K	39	45	He	10205.731	ppb	1.0	3820045.05	10000	102.06	90	110	
Ca	44	45	No Gas	10021.691	ppb	0.8	9585319.23	10000	100.22	90	110	
Ca	44	45	He	10425.631	ppb	1.0	208687.99	10000	104.26	90	110	
Ti	47	45	No Gas	97.752	ppb	0.9	288908.63	100	97.75	90	110	
V	51	45	No Gas	99.179	ppb	1.7	3911596.84	100	99.18	90	110	
V	51	45	He	105.061	ppb	0.6	498700.03	100	105.06	90	110	
Cr	52	89	No Gas	97.176	ppb	1.0	3689683.86	100	97.18	90	110	
Cr	52	89	He	99.371	ppb	0.9	633719.12	100	99.37	90	110	
Cr	53	89	No Gas	97.387	ppb	1.4	497710.25	100	97.39	90	110	
Mn	55	89	No Gas	98.762	ppb	0.8	5081387.54	100	98.76	90	110	
Mn	55	89	He	100.644	ppb	0.8	340972.42	100	100.64	90	110	
Fe	56	89	No Gas	9695.195	ppb	1.4	361490416.41	10000	96.95	90	110	
Fe	56	89	He	9896.165	ppb	0.9	44008934.34	10000	98.96	90	110	
Co	59	89	No Gas	98.356	ppb	0.8	4045646.07	100	98.36	90	110	
Co	59	89	He	98.626	ppb	0.8	1045414.61	100	98.63	90	110	
Ni	60	89	No Gas	97.305	ppb	0.7	880857.92	100	97.3	90	110	
Ni	60	89	He	99.266	ppb	0.9	289406.88	100	99.27	90	110	
Ni	62	89	No Gas	98.692	ppb	1.2	136783.17	100	98.69	90	110	
Cu	63	89	No Gas	98.131	ppb	1.2	2159962.15	100	98.13	90	110	
Cu	63	89	He	99.535	ppb	0.6	795973.81	100	99.54	90	110	
Cu	65	89	No Gas	96.545	ppb	0.4	1016772.92	100	96.54	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	94.536	ppb	0.7	614835.79	100	94.54	90	110	
Zn	66	89	He	99.591	ppb	0.3	121594.63	100	99.59	90	110	
Zn	67	89	No Gas	95.792	ppb	0.1	97713.82	100	95.79	90	110	
Zn	68	89	No Gas	97.719	ppb	0.4	450425.66	100	97.72	90	110	
As	75	89	No Gas	96.369	ppb	0.5	644380.03	100	96.37	90	110	
As	75	89	He	99.716	ppb	0.7	87410.63	100	99.72	90	110	
Se	77	89	No Gas	97.768	ppb	1.9	42707.17	100	97.77	90	110	
Se	78	89	No Gas	95.680	ppb	0.9	113752.93	100	95.68	90	110	
Se	78	89	He	98.988	ppb	1.2	5304.40	100	98.99	90	110	
Se	82	89	No Gas	100.599	ppb	0.8	40543.77	100	100.6	90	110	
[Se]	83	89	No Gas	1.906	ppb	2677.1	1902.07	100	1.91	90	110	Failed
Sr	88	89	No Gas	99.143	ppb	1.0	6183552.11	100	99.14	90	110	
Mo	95	89	No Gas	100.039	ppb	1.5	1177479.96	100	100.04	90	110	
Mo	97	89	No Gas	97.425	ppb	1.4	717140.66	100	97.42	90	110	
Mo	98	89	No Gas	97.829	ppb	1.1	1874496.43	100	97.83	90	110	
[Mo]	99	89	No Gas	105.057	ppb	19.7	46.71	100	105.06	90	110	
Cd	106	89	No Gas	100.436	ppb	2.7	116010.84	100	100.44	90	110	
Ag	107	89	No Gas	100.865	ppb	0.7	3155920.08	100	100.86	90	110	
Ag	107	89	He	102.015	ppb	0.3	1475184.04	100	102.02	90	110	
Cd	108	89	No Gas	100.868	ppb	1.7	45105.52	100	100.87	90	110	
Ag	109	89	No Gas	100.626	ppb	1.1	3041774.39	100	100.63	90	110	
Cd	111	89	No Gas	96.502	ppb	0.8	611245.60	100	96.5	90	110	
Cd	114	89	No Gas	98.436	ppb	1.0	1626314.86	100	98.44	90	110	
Sn	118	115	No Gas	101.134	ppb	1.5	2041423.04	100	101.13	90	110	
Sb	121	115	No Gas	99.149	ppb	2.1	2912180.23	100	99.15	90	110	
Sb	121	89	He	103.493	ppb	0.4	610691.48	100	103.49	90	110	
Sb	123	115	No Gas	98.918	ppb	0.9	2240950.17	100	98.92	90	110	
Ba	135	115	No Gas	101.170	ppb	0.1	598132.17	100	101.17	90	110	
Ba	137	115	No Gas	101.796	ppb	1.6	1054754.71	100	101.8	90	110	
Tl	203	209	No Gas	97.143	ppb	1.9	2553470.56	100	97.14	90	110	
Tl	205	209	No Gas	95.247	ppb	0.8	6017953.17	100	95.25	90	110	
Pb	206	209	No Gas	95.926	ppb	0.2	2032108.67	100	95.93	90	110	
Pb	207	209	No Gas	96.706	ppb	0.6	1689694.85	100	96.71	90	110	
Pb	208	209	No Gas	97.704	ppb	0.7	7998586.15	100	97.7	90	110	
Th	232	209	No Gas	96.647	ppb	1.7	8117558.83	100	96.65	90	110	
U	238	209	No Gas	95.071	ppb	1.0	7926667.94	100	95.07	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4761922.46	1.0	5406885.91	88.07	70	125	
Sc	45	No Gas	23694326.88	0.5	24326295.51	97.4	75	125	
Sc	45	He	932825.35	1.5	970797.15	96.09	75	125	
Y	89	No Gas	57178240.02	0.3	56662702.82	100.91	75	125	
Y	89	He	7357330.88	1.5	7465540.55	98.55	75	125	
In	115	No Gas	12449357.18	1.4	12379434.81	100.56	75	125	
Tb	159	No Gas	17621736.36	1.1	17053216.17	103.33	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10681494.02	0.3	10541485.14	101.33	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	246_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 21:28:32
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.060	ppb	N/A	260412.73	100	
Be	9	6	No Gas	0.003	ppb	363.4	103.44	100	
B	11	6	No Gas	13.233	ppb	6.9	73290.37	100	
Na	23	45	No Gas	115.375	ppb	1.4	4173919.36	500000	
Na	23	45	He	111.275	ppb	2.2	124492.36	500000	
Mg	24	45	No Gas	2.780	ppb	24.1	70548.52	500000	
Mg	24	45	He	1.592	ppb	26.2	986.77	500000	
Mg	25	45	No Gas	2.679	ppb	24.9	9297.18	500000	
Al	27	45	No Gas	0.019	ppb	86.0	12433.03	500000	
Al	27	45	He	-0.132	ppb	N/A	70.00	500000	
Si	28	45	No Gas	43.919	ppb	16.9	894654.79	100	
Si	29	45	No Gas	33.804	ppb	23.3	110008.93	100	
K	39	45	No Gas	21.631	ppb	1.4	5542573.04	500000	
K	39	45	He	19.822	ppb	18.1	35822.55	500000	
Ca	44	45	No Gas	-37.345	ppb	N/A	96624.55	500000	
Ca	44	45	He	2.841	ppb	80.5	266.69	500000	
Ti	47	45	No Gas	0.034	ppb	72.8	377.06	10000	
V	51	45	No Gas	0.024	ppb	398.3	-3936.01	100	
V	51	45	He	-0.008	ppb	N/A	477.16	100	
Cr	52	89	No Gas	-0.029	ppb	N/A	29210.77	100	
Cr	52	89	He	-0.039	ppb	N/A	2556.17	100	
Cr	53	89	No Gas	-1.253	ppb	N/A	52154.94	100	
Mn	55	89	No Gas	0.141	ppb	3.5	17549.05	100	
Mn	55	89	He	0.149	ppb	10.2	724.09	100	
Fe	56	89	No Gas	1.959	ppb	106.2	2195543.54	500000	
Fe	56	89	He	5.953	ppb	10.3	57284.20	500000	
Co	59	89	No Gas	0.005	ppb	47.9	1718.53	100	
Co	59	89	He	0.004	ppb	164.3	316.99	100	
Ni	60	89	No Gas	0.061	ppb	21.6	1735.21	100	
Ni	60	89	He	-0.172	ppb	N/A	347.02	100	
Ni	62	89	No Gas	0.343	ppb	34.5	6004.09	100	
Cu	63	89	No Gas	-0.012	ppb	N/A	9893.64	100	
Cu	63	89	He	-0.009	ppb	N/A	2966.69	100	
Cu	65	89	No Gas	0.023	ppb	97.5	5156.25	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.051	ppb	79.7	2185.74	100	
Zn	66	89	He	0.013	ppb	289.9	393.74	100	
Zn	67	89	No Gas	0.036	ppb	72.1	437.12	100	
Zn	68	89	No Gas	0.013	ppb	267.4	1555.02	100	
As	75	89	No Gas	-0.043	ppb	N/A	3547.15	100	
As	75	89	He	0.032	ppb	40.1	53.33	100	
Se	77	89	No Gas	-0.674	ppb	N/A	9038.89	100	
Se	78	89	No Gas	-0.335	ppb	N/A	17900.09	100	
Se	78	89	He	0.183	ppb	100.7	35.56	100	
Se	82	89	No Gas	0.308	ppb	120.1	219.77	100	
[Se]	83	89	No Gas	18.541	ppb	396.4	1908.75	100	
Sr	88	89	No Gas	0.025	ppb	26.5	2048.92	100	
Mo	95	89	No Gas	0.204	ppb	27.9	3066.83	10000	
Mo	97	89	No Gas	0.196	ppb	6.6	1905.42	10000	
Mo	98	89	No Gas	0.209	ppb	24.4	5301.61	10000	
[Mo]	99	89	No Gas	58.649	ppb	184.1	33.37	10000	
Cd	106	89	No Gas	0.964	ppb	25.3	55934.04	100	
Ag	107	89	No Gas	0.010	ppb	21.5	1752.35	100	
Ag	107	89	He	-0.006	ppb	N/A	660.69	100	
Cd	108	89	No Gas	0.090	ppb	88.3	120.12	100	
Ag	109	89	No Gas	0.011	ppb	8.9	1334.76	100	
Cd	111	89	No Gas	0.002	ppb	337.3	-64.45	100	
Cd	114	89	No Gas	0.011	ppb	31.8	250.26	100	
Sn	118	115	No Gas	0.063	ppb	39.7	4663.08	100	
Sb	121	115	No Gas	-0.054	ppb	N/A	1719.01	100	
Sb	121	89	He	-0.082	ppb	N/A	373.35	100	
Sb	123	115	No Gas	-0.054	ppb	N/A	1481.59	100	
Ba	135	115	No Gas	0.019	ppb	43.2	186.86	100	
Ba	137	115	No Gas	0.015	ppb	22.2	327.00	100	
Tl	203	209	No Gas	0.177	ppb	30.1	5096.30	100	
Tl	205	209	No Gas	0.180	ppb	22.8	12422.32	100	
Pb	206	209	No Gas	0.006	ppb	48.3	1548.34	100	
Pb	207	209	No Gas	0.005	ppb	311.5	1254.68	100	
Pb	208	209	No Gas	0.007	ppb	78.3	6013.37	100	
Th	232	209	No Gas	0.287	ppb	20.3	31603.26	100	
U	238	209	No Gas	0.091	ppb	15.7	8451.55	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4913770.07	0.2	5406885.91	90.88	70	125	
Sc	45	No Gas	23523358.41	0.5	24326295.51	96.7	75	125	
Sc	45	He	949035.59	0.1	970797.15	97.76	75	125	
Y	89	No Gas	56756853.64	0.4	56662702.82	100.17	75	125	
Y	89	He	7479782.92	0.5	7465540.55	100.19	75	125	
In	115	No Gas	12477852.64	0.4	12379434.81	100.8	75	125	
Tb	159	No Gas	17515753.71	0.5	17053216.17	102.71	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10780230.68	0.2	10541485.14	102.26	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 257_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 21:47:10

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.513	ppb	0.5	3063215.93	100	101.51	90	110	
Be	9	6	No Gas	101.366	ppb	0.8	720025.00	100	101.37	90	110	
B	11	6	No Gas	250.708	ppb	0.8	1227626.87	250	100.28	90	110	
Na	23	45	No Gas	9962.629	ppb	0.5	337090924.20	10000	99.63	90	110	
Na	23	45	He	10036.852	ppb	0.9	9834500.06	10000	100.37	90	110	
Mg	24	45	No Gas	10076.857	ppb	2.2	234043209.84	10000	100.77	90	110	
Mg	24	45	He	10090.012	ppb	0.7	4997404.09	10000	100.9	90	110	
Mg	25	45	No Gas	9888.108	ppb	0.9	31088060.37	10000	98.88	90	110	
Al	27	45	No Gas	100.054	ppb	1.4	3051761.31	100	100.05	90	110	
Al	27	45	He	97.937	ppb	2.5	18826.25	100	97.94	90	110	
Si	28	45	No Gas	10426.403	ppb	1.7	125731031.28	10000	104.26	90	110	
Si	29	45	No Gas	10347.633	ppb	0.2	7709658.01	10000	103.48	90	110	
K	39	45	No Gas	10214.600	ppb	1.3	334241968.35	10000	102.15	90	110	
K	39	45	He	10252.980	ppb	1.0	4024338.80	10000	102.53	90	110	
Ca	44	45	No Gas	10072.276	ppb	1.1	9968380.48	10000	100.72	90	110	
Ca	44	45	He	10160.411	ppb	0.9	213295.51	10000	101.6	90	110	
Ti	47	45	No Gas	99.621	ppb	0.7	304700.45	100	99.62	90	110	
V	51	45	No Gas	103.172	ppb	1.8	4210962.46	100	103.17	90	110	
V	51	45	He	105.581	ppb	0.3	525618.87	100	105.58	90	110	
Cr	52	89	No Gas	100.228	ppb	0.8	3916655.10	100	100.23	90	110	
Cr	52	89	He	100.330	ppb	0.4	666439.28	100	100.33	90	110	
Cr	53	89	No Gas	96.432	ppb	1.0	507892.76	100	96.43	90	110	
Mn	55	89	No Gas	98.948	ppb	0.6	5240751.28	100	98.95	90	110	
Mn	55	89	He	100.322	ppb	0.2	354021.73	100	100.32	90	110	
Fe	56	89	No Gas	9724.661	ppb	1.1	373249183.34	10000	97.25	90	110	
Fe	56	89	He	9987.764	ppb	0.2	46262707.64	10000	99.88	90	110	
Co	59	89	No Gas	101.377	ppb	0.4	4292683.11	100	101.38	90	110	
Co	59	89	He	99.323	ppb	0.4	1096606.71	100	99.32	90	110	
Ni	60	89	No Gas	99.730	ppb	0.5	929378.29	100	99.73	90	110	
Ni	60	89	He	99.480	ppb	0.7	302097.06	100	99.48	90	110	
Ni	62	89	No Gas	99.651	ppb	1.8	142106.55	100	99.65	90	110	
Cu	63	89	No Gas	99.669	ppb	1.5	2258028.61	100	99.67	90	110	
Cu	63	89	He	99.782	ppb	0.6	831125.29	100	99.78	90	110	
Cu	65	89	No Gas	99.667	ppb	2.0	1080260.16	100	99.67	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.425	ppb	1.4	652162.57	100	97.42	90	110	
Zn	66	89	He	99.266	ppb	1.5	126227.84	100	99.27	90	110	
Zn	67	89	No Gas	98.586	ppb	1.1	103505.28	100	98.59	90	110	
Zn	68	89	No Gas	99.055	ppb	0.3	470000.65	100	99.06	90	110	
As	75	89	No Gas	97.728	ppb	1.8	672581.59	100	97.73	90	110	
As	75	89	He	100.308	ppb	0.7	91583.61	100	100.31	90	110	
Se	77	89	No Gas	95.054	ppb	1.8	43011.73	100	95.05	90	110	
Se	78	89	No Gas	98.697	ppb	0.9	120194.26	100	98.7	90	110	
Se	78	89	He	99.291	ppb	2.1	5541.16	100	99.29	90	110	
Se	82	89	No Gas	99.760	ppb	1.9	41385.79	100	99.76	90	110	
[Se]	83	89	No Gas	164.002	ppb	93.9	2169.06	100	164	90	110	Failed
Sr	88	89	No Gas	101.086	ppb	0.4	6490627.93	100	101.09	90	110	
Mo	95	89	No Gas	99.599	ppb	1.3	1206745.29	100	99.6	90	110	
Mo	97	89	No Gas	97.189	ppb	1.9	736397.46	100	97.19	90	110	
Mo	98	89	No Gas	98.862	ppb	2.4	1949735.48	100	98.86	90	110	
[Mo]	99	89	No Gas	100.512	ppb	21.6	46.71	100	100.51	90	110	
Cd	106	89	No Gas	101.272	ppb	1.2	119948.15	100	101.27	90	110	
Ag	107	89	No Gas	102.150	ppb	0.2	3290357.58	100	102.15	90	110	
Ag	107	89	He	101.228	ppb	0.4	1524591.94	100	101.23	90	110	
Cd	108	89	No Gas	98.913	ppb	1.0	45534.03	100	98.91	90	110	
Ag	109	89	No Gas	99.893	ppb	1.7	3108245.86	100	99.89	90	110	
Cd	111	89	No Gas	96.979	ppb	1.6	632301.23	100	96.98	90	110	
Cd	114	89	No Gas	100.134	ppb	1.5	1702928.51	100	100.13	90	110	
Sn	118	115	No Gas	99.706	ppb	1.2	2081934.22	100	99.71	90	110	
Sb	121	115	No Gas	98.176	ppb	1.9	2982820.78	100	98.18	90	110	
Sb	121	89	He	102.403	ppb	0.8	629364.34	100	102.4	90	110	
Sb	123	115	No Gas	99.134	ppb	1.6	2322910.78	100	99.13	90	110	
Ba	135	115	No Gas	100.967	ppb	0.8	617446.23	100	100.97	90	110	
Ba	137	115	No Gas	100.637	ppb	0.8	1078611.74	100	100.64	90	110	
Tl	203	209	No Gas	97.054	ppb	2.0	2540689.97	100	97.05	90	110	
Tl	205	209	No Gas	96.581	ppb	1.3	6077240.59	100	96.58	90	110	
Pb	206	209	No Gas	97.760	ppb	0.6	2062506.84	100	97.76	90	110	
Pb	207	209	No Gas	99.611	ppb	0.9	1733370.51	100	99.61	90	110	
Pb	208	209	No Gas	99.932	ppb	1.1	8147790.52	100	99.93	90	110	
Th	232	209	No Gas	96.233	ppb	1.6	8049711.60	100	96.23	90	110	
U	238	209	No Gas	95.350	ppb	2.3	7917306.91	100	95.35	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4928325.00	1.2	5406885.91	91.15	70	125	
Sc	45	No Gas	24519931.65	0.8	24326295.51	100.8	75	125	
Sc	45	He	978316.80	1.0	970797.15	100.77	75	125	
Y	89	No Gas	58863361.82	1.4	56662702.82	103.88	75	125	
Y	89	He	7662871.43	0.6	7465540.55	102.64	75	125	
In	115	No Gas	12877724.20	1.6	12379434.81	104.03	75	125	
Tb	159	No Gas	17456334.71	0.6	17053216.17	102.36	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10638071.24	0.5	10541485.14	100.92	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	258_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 21:48:55
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.068	ppb	70.8	276318.17	100	
Be	9	6	No Gas	0.013	ppb	95.4	183.52	100	
B	11	6	No Gas	5.278	ppb	7.2	36370.31	100	
Na	23	45	No Gas	56.996	ppb	1.3	2423751.75	500000	
Na	23	45	He	56.694	ppb	3.2	75821.88	500000	
Mg	24	45	No Gas	1.920	ppb	24.7	54566.60	500000	
Mg	24	45	He	1.481	ppb	7.6	973.44	500000	
Mg	25	45	No Gas	1.983	ppb	28.6	7642.91	500000	
Al	27	45	No Gas	-0.016	ppb	N/A	12112.80	500000	
Al	27	45	He	-0.182	ppb	N/A	63.33	500000	
Si	28	45	No Gas	17.256	ppb	20.4	623608.80	100	
Si	29	45	No Gas	1.984	ppb	228.0	92978.44	100	
K	39	45	No Gas	3.561	ppb	40.8	5295108.05	500000	
K	39	45	He	4.531	ppb	20.6	31331.44	500000	
Ca	44	45	No Gas	-42.432	ppb	N/A	97603.45	500000	
Ca	44	45	He	5.442	ppb	19.4	333.36	500000	
Ti	47	45	No Gas	0.040	ppb	41.5	420.43	10000	
V	51	45	No Gas	0.033	ppb	120.4	-3789.80	100	
V	51	45	He	0.004	ppb	448.5	557.25	100	
Cr	52	89	No Gas	-0.047	ppb	N/A	29809.15	100	
Cr	52	89	He	-0.049	ppb	N/A	2596.22	100	
Cr	53	89	No Gas	-2.351	ppb	N/A	49344.86	100	
Mn	55	89	No Gas	0.055	ppb	19.9	13760.88	100	
Mn	55	89	He	0.109	ppb	22.6	610.64	100	
Fe	56	89	No Gas	10.565	ppb	12.7	2624806.76	500000	
Fe	56	89	He	10.898	ppb	11.6	82977.40	500000	
Co	59	89	No Gas	0.010	ppb	50.4	1992.18	100	
Co	59	89	He	0.009	ppb	34.6	387.07	100	
Ni	60	89	No Gas	0.030	ppb	54.4	1528.31	100	
Ni	60	89	He	-0.145	ppb	N/A	443.79	100	
Ni	62	89	No Gas	-0.073	ppb	N/A	5697.01	100	
Cu	63	89	No Gas	-0.013	ppb	N/A	10331.11	100	
Cu	63	89	He	-0.013	ppb	N/A	3060.13	100	
Cu	65	89	No Gas	0.030	ppb	74.6	5466.65	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.080	ppb	50.6	2476.08	100	
Zn	66	89	He	-0.098	ppb	N/A	266.94	100	
Zn	67	89	No Gas	0.055	ppb	139.7	477.16	100	
Zn	68	89	No Gas	0.032	ppb	23.8	1715.19	100	
As	75	89	No Gas	0.071	ppb	173.5	4482.48	100	
As	75	89	He	0.028	ppb	41.8	51.11	100	
Se	77	89	No Gas	-4.432	ppb	N/A	8114.02	100	
Se	78	89	No Gas	0.840	ppb	51.1	19918.26	100	
Se	78	89	He	0.057	ppb	345.4	30.00	100	
Se	82	89	No Gas	-0.523	ppb	N/A	-116.69	100	
[Se]	83	89	No Gas	183.711	ppb	79.0	2212.43	100	Failed
Sr	88	89	No Gas	0.017	ppb	32.1	1651.79	100	
Mo	95	89	No Gas	0.226	ppb	20.3	3484.00	10000	
Mo	97	89	No Gas	0.232	ppb	28.2	2272.51	10000	
Mo	98	89	No Gas	0.209	ppb	20.4	5545.85	10000	
[Mo]	99	89	No Gas	-36.691	ppb	N/A	6.67	10000	
Cd	106	89	No Gas	0.891	ppb	103.1	58393.98	100	
Ag	107	89	No Gas	0.010	ppb	45.3	1855.70	100	
Ag	107	89	He	-0.004	ppb	N/A	727.43	100	
Cd	108	89	No Gas	0.165	ppb	38.3	160.16	100	
Ag	109	89	No Gas	0.008	ppb	69.1	1308.07	100	
Cd	111	89	No Gas	-0.001	ppb	N/A	-85.19	100	
Cd	114	89	No Gas	0.011	ppb	33.8	276.95	100	
Sn	118	115	No Gas	0.078	ppb	33.4	5143.34	100	
Sb	121	115	No Gas	-0.056	ppb	N/A	1709.01	100	
Sb	121	89	He	-0.078	ppb	N/A	416.68	100	
Sb	123	115	No Gas	-0.060	ppb	N/A	1381.48	100	
Ba	135	115	No Gas	0.020	ppb	41.7	196.87	100	
Ba	137	115	No Gas	0.011	ppb	34.8	286.96	100	
Tl	203	209	No Gas	0.217	ppb	14.6	6151.12	100	
Tl	205	209	No Gas	0.211	ppb	25.2	14413.20	100	
Pb	206	209	No Gas	0.018	ppb	29.6	1791.96	100	
Pb	207	209	No Gas	0.015	ppb	119.1	1424.87	100	
Pb	208	209	No Gas	0.018	ppb	31.1	6901.13	100	
Th	232	209	No Gas	0.170	ppb	25.0	21644.66	100	
U	238	209	No Gas	0.084	ppb	16.4	7827.19	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5144316.82	0.3	5406885.91	95.14	70	125	
Sc	45	No Gas	24992652.71	0.4	24326295.51	102.74	75	125	
Sc	45	He	989748.23	0.9	970797.15	101.95	75	125	
Y	89	No Gas	59296755.21	0.5	56662702.82	104.65	75	125	
Y	89	He	7797734.83	1.1	7465540.55	104.45	75	125	
In	115	No Gas	12898466.94	0.8	12379434.81	104.19	75	125	
Tb	159	No Gas	17590151.44	0.4	17053216.17	103.15	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10751563.46	0.7	10541485.14	101.99	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 269_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 22:08:26

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.518	ppb	0.9	2805103.44	100	99.52	90	110	
Be	9	6	No Gas	100.089	ppb	0.2	663043.80	100	100.09	90	110	
B	11	6	No Gas	241.420	ppb	1.0	1102760.55	250	96.57	90	110	
Na	23	45	No Gas	9848.846	ppb	0.6	310432131.94	10000	98.49	90	110	
Na	23	45	He	9859.745	ppb	0.5	9007921.95	10000	98.6	90	110	
Mg	24	45	No Gas	9817.536	ppb	1.0	212430516.83	10000	98.18	90	110	
Mg	24	45	He	10046.592	ppb	0.4	4639292.64	10000	100.47	90	110	
Mg	25	45	No Gas	9718.435	ppb	1.2	28462328.74	10000	97.18	90	110	
Al	27	45	No Gas	98.035	ppb	0.3	2785783.60	100	98.04	90	110	
Al	27	45	He	100.530	ppb	3.5	18015.20	100	100.53	90	110	
Si	28	45	No Gas	10205.950	ppb	0.8	114658655.55	10000	102.06	90	110	
Si	29	45	No Gas	10209.667	ppb	0.8	7086855.41	10000	102.1	90	110	
K	39	45	No Gas	10081.245	ppb	1.1	307356222.09	10000	100.81	90	110	
K	39	45	He	10222.818	ppb	0.8	3741244.84	10000	102.23	90	110	
Ca	44	45	No Gas	10026.279	ppb	0.6	9244408.61	10000	100.26	90	110	
Ca	44	45	He	10293.355	ppb	0.0	201455.30	10000	102.93	90	110	
Ti	47	45	No Gas	101.098	ppb	1.8	288018.22	100	101.1	90	110	
V	51	45	No Gas	100.239	ppb	1.4	3811142.70	100	100.24	90	110	
V	51	45	He	106.743	ppb	0.2	495441.81	100	106.74	90	110	
Cr	52	89	No Gas	97.947	ppb	1.1	3558490.79	100	97.95	90	110	
Cr	52	89	He	99.784	ppb	0.8	626132.46	100	99.78	90	110	
Cr	53	89	No Gas	97.822	ppb	0.6	478170.93	100	97.82	90	110	
Mn	55	89	No Gas	98.845	ppb	0.7	4866781.79	100	98.84	90	110	
Mn	55	89	He	99.386	ppb	1.3	331299.92	100	99.39	90	110	
Fe	56	89	No Gas	9756.339	ppb	1.4	348078966.11	10000	97.56	90	110	
Fe	56	89	He	9712.005	ppb	0.8	42494164.37	10000	97.12	90	110	
Co	59	89	No Gas	99.715	ppb	1.0	3924796.58	100	99.72	90	110	
Co	59	89	He	98.428	ppb	1.2	1026528.30	100	98.43	90	110	
Ni	60	89	No Gas	100.600	ppb	1.2	871455.91	100	100.6	90	110	
Ni	60	89	He	99.282	ppb	0.8	284802.78	100	99.28	90	110	
Ni	62	89	No Gas	101.340	ppb	1.4	134263.70	100	101.34	90	110	
Cu	63	89	No Gas	100.049	ppb	1.2	2107091.94	100	100.05	90	110	
Cu	63	89	He	99.568	ppb	0.8	783414.82	100	99.57	90	110	
Cu	65	89	No Gas	99.959	ppb	2.4	1007050.73	100	99.96	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.298	ppb	2.5	611578.73	100	98.3	90	110	
Zn	66	89	He	99.313	ppb	1.0	119291.77	100	99.31	90	110	
Zn	67	89	No Gas	98.681	ppb	3.1	96288.70	100	98.68	90	110	
Zn	68	89	No Gas	100.494	ppb	1.5	443204.35	100	100.49	90	110	
As	75	89	No Gas	100.317	ppb	1.6	641693.79	100	100.32	90	110	
As	75	89	He	100.962	ppb	1.0	87079.58	100	100.96	90	110	
Se	77	89	No Gas	95.103	ppb	3.0	39989.44	100	95.1	90	110	
Se	78	89	No Gas	99.577	ppb	1.2	112571.65	100	99.58	90	110	
Se	78	89	He	101.323	ppb	3.5	5341.08	100	101.32	90	110	
Se	82	89	No Gas	100.958	ppb	4.1	38923.67	100	100.96	90	110	
[Se]	83	89	No Gas	106.722	ppb	39.5	1948.79	100	106.72	90	110	
Sr	88	89	No Gas	99.616	ppb	0.9	5945354.53	100	99.62	90	110	
Mo	95	89	No Gas	100.325	ppb	0.8	1130089.13	100	100.32	90	110	
Mo	97	89	No Gas	100.550	ppb	1.7	708204.33	100	100.55	90	110	
Mo	98	89	No Gas	99.491	ppb	2.7	1823856.58	100	99.49	90	110	
[Mo]	99	89	No Gas	76.072	ppb	76.2	36.70	100	76.07	90	110	Failed
Cd	106	89	No Gas	100.574	ppb	2.2	111090.29	100	100.57	90	110	
Ag	107	89	No Gas	101.445	ppb	0.7	3037597.80	100	101.44	90	110	
Ag	107	89	He	101.036	ppb	1.1	1437396.93	100	101.04	90	110	
Cd	108	89	No Gas	102.768	ppb	1.3	43973.80	100	102.77	90	110	
Ag	109	89	No Gas	101.201	ppb	0.7	2927489.58	100	101.2	90	110	
Cd	111	89	No Gas	98.620	ppb	3.0	597630.46	100	98.62	90	110	
Cd	114	89	No Gas	99.062	ppb	2.3	1565944.13	100	99.06	90	110	
Sn	118	115	No Gas	101.241	ppb	1.7	1957411.38	100	101.24	90	110	
Sb	121	115	No Gas	100.257	ppb	2.0	2820352.32	100	100.26	90	110	
Sb	121	89	He	103.924	ppb	1.1	603341.67	100	103.92	90	110	
Sb	123	115	No Gas	100.011	ppb	1.5	2169892.35	100	100.01	90	110	
Ba	135	115	No Gas	102.285	ppb	1.6	579163.62	100	102.28	90	110	
Ba	137	115	No Gas	102.211	ppb	1.7	1014440.35	100	102.21	90	110	
Tl	203	209	No Gas	99.235	ppb	2.2	2449465.25	100	99.24	90	110	
Tl	205	209	No Gas	97.870	ppb	3.6	5805294.68	100	97.87	90	110	
Pb	206	209	No Gas	97.604	ppb	4.2	1940869.31	100	97.6	90	110	
Pb	207	209	No Gas	98.023	ppb	3.2	1607964.53	100	98.02	90	110	
Pb	208	209	No Gas	98.010	ppb	2.6	7533636.67	100	98.01	90	110	
Th	232	209	No Gas	97.442	ppb	1.3	7686509.65	100	97.44	90	110	
U	238	209	No Gas	96.473	ppb	3.7	7551278.38	100	96.47	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4595831.17	0.5	5406885.91	85	70	125	
Sc	45	No Gas	22840597.31	0.3	24326295.51	93.89	75	125	
Sc	45	He	912096.28	0.2	970797.15	93.95	75	125	
Y	89	No Gas	54721074.52	1.8	56662702.82	96.57	75	125	
Y	89	He	7238560.45	0.5	7465540.55	96.96	75	125	
In	115	No Gas	11924035.30	1.7	12379434.81	96.32	75	125	
Tb	159	No Gas	16658363.40	2.1	17053216.17	97.68	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10033737.66	2.5	10541485.14	95.18	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	270_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 22:10:11
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.710	ppb	11.6	274065.96	100	
Be	9	6	No Gas	0.006	ppb	46.5	126.79	100	
B	11	6	No Gas	2.775	ppb	14.8	22002.84	100	
Na	23	45	No Gas	60.542	ppb	2.0	2376950.05	500000	
Na	23	45	He	59.676	ppb	3.1	73382.25	500000	
Mg	24	45	No Gas	0.864	ppb	35.4	27617.01	500000	
Mg	24	45	He	0.596	ppb	47.3	493.38	500000	
Mg	25	45	No Gas	0.899	ppb	19.8	3894.21	500000	
Al	27	45	No Gas	-0.001	ppb	N/A	11765.82	500000	
Al	27	45	He	-0.010	ppb	N/A	90.00	500000	
Si	28	45	No Gas	10.351	ppb	20.3	503212.55	100	
Si	29	45	No Gas	-7.194	ppb	N/A	80374.77	100	
K	39	45	No Gas	2.348	ppb	24.1	4906565.13	500000	
K	39	45	He	10.776	ppb	16.5	31477.83	500000	
Ca	44	45	No Gas	-60.240	ppb	N/A	74579.27	500000	
Ca	44	45	He	-2.852	ppb	N/A	146.68	500000	
Ti	47	45	No Gas	0.026	ppb	61.6	350.36	10000	
V	51	45	No Gas	0.103	ppb	26.1	-821.95	100	
V	51	45	He	-0.013	ppb	N/A	440.46	100	
Cr	52	89	No Gas	-0.038	ppb	N/A	28461.63	100	
Cr	52	89	He	-0.031	ppb	N/A	2562.85	100	
Cr	53	89	No Gas	-2.395	ppb	N/A	46401.76	100	
Mn	55	89	No Gas	-0.032	ppb	N/A	8634.83	100	
Mn	55	89	He	0.007	ppb	135.6	230.24	100	
Fe	56	89	No Gas	11.007	ppb	15.9	2494519.65	500000	
Fe	56	89	He	9.490	ppb	11.3	72032.91	500000	
Co	59	89	No Gas	0.006	ppb	168.4	1708.52	100	
Co	59	89	He	0.009	ppb	65.5	357.04	100	
Ni	60	89	No Gas	0.021	ppb	61.5	1361.46	100	
Ni	60	89	He	-0.186	ppb	N/A	300.31	100	
Ni	62	89	No Gas	0.292	ppb	37.0	5857.20	100	
Cu	63	89	No Gas	-0.044	ppb	N/A	9078.92	100	
Cu	63	89	He	0.012	ppb	111.1	3083.49	100	
Cu	65	89	No Gas	0.005	ppb	392.3	4905.87	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.032	ppb	72.6	2035.55	100	
Zn	66	89	He	0.024	ppb	380.8	400.41	100	
Zn	67	89	No Gas	-0.002	ppb	N/A	393.74	100	
Zn	68	89	No Gas	0.011	ppb	273.1	1524.97	100	
As	75	89	No Gas	-0.027	ppb	N/A	3601.16	100	
As	75	89	He	0.018	ppb	75.6	40.00	100	
Se	77	89	No Gas	-3.958	ppb	N/A	7820.21	100	
Se	78	89	No Gas	1.870	ppb	36.7	19811.18	100	
Se	78	89	He	0.112	ppb	89.1	31.11	100	
Se	82	89	No Gas	-0.414	ppb	N/A	-67.81	100	
[Se]	83	89	No Gas	89.718	ppb	23.6	1972.15	100	
Sr	88	89	No Gas	0.010	ppb	37.8	1117.86	100	
Mo	95	89	No Gas	0.208	ppb	24.9	3073.50	10000	
Mo	97	89	No Gas	0.196	ppb	29.8	1885.40	10000	
Mo	98	89	No Gas	0.186	ppb	26.5	4798.62	10000	
[Mo]	99	89	No Gas	-47.216	ppb	N/A	3.34	10000	
Cd	106	89	No Gas	-0.644	ppb	N/A	54238.46	100	
Ag	107	89	No Gas	0.011	ppb	12.4	1765.68	100	
Ag	107	89	He	-0.009	ppb	N/A	610.64	100	
Cd	108	89	No Gas	0.102	ppb	95.5	123.46	100	
Ag	109	89	No Gas	0.015	ppb	17.9	1428.21	100	
Cd	111	89	No Gas	-0.001	ppb	N/A	-83.58	100	
Cd	114	89	No Gas	0.010	ppb	23.5	243.59	100	
Sn	118	115	No Gas	0.052	ppb	32.8	4340.74	100	
Sb	121	115	No Gas	-0.063	ppb	N/A	1420.09	100	
Sb	121	89	He	-0.091	ppb	N/A	313.34	100	
Sb	123	115	No Gas	-0.067	ppb	N/A	1161.23	100	
Ba	135	115	No Gas	0.012	ppb	82.0	140.14	100	
Ba	137	115	No Gas	0.014	ppb	44.8	306.98	100	
Tl	203	209	No Gas	0.209	ppb	22.8	5657.11	100	
Tl	205	209	No Gas	0.192	ppb	19.1	12622.67	100	
Pb	206	209	No Gas	0.013	ppb	56.6	1615.09	100	
Pb	207	209	No Gas	0.014	ppb	107.8	1351.46	100	
Pb	208	209	No Gas	0.011	ppb	102.8	6113.49	100	
Th	232	209	No Gas	0.247	ppb	25.5	26847.30	100	
U	238	209	No Gas	0.084	ppb	19.3	7493.29	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4782480.08	0.2	5406885.91	88.45	70	125	
Sc	45	No Gas	23333825.54	0.4	24326295.51	95.92	75	125	
Sc	45	He	921974.86	0.5	970797.15	94.97	75	125	
Y	89	No Gas	55993113.23	0.5	56662702.82	98.82	75	125	
Y	89	He	7352412.64	0.7	7465540.55	98.48	75	125	
In	115	No Gas	12210544.29	0.2	12379434.81	98.64	75	125	
Tb	159	No Gas	16752143.84	0.4	17053216.17	98.23	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10276739.59	0.6	10541485.14	97.49	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 281_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 22:28:30

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.773	ppb	0.5	2777927.31	100	101.77	90	110	
Be	9	6	No Gas	102.257	ppb	0.9	657225.30	100	102.26	90	110	
B	11	6	No Gas	287.308	ppb	0.6	1271731.48	250	114.92	90	110	Failed
Na	23	45	No Gas	9809.671	ppb	0.6	307047390.20	10000	98.1	90	110	
Na	23	45	He	10036.075	ppb	1.1	8934881.74	10000	100.36	90	110	
Mg	24	45	No Gas	9816.167	ppb	0.7	210920110.19	10000	98.16	90	110	
Mg	24	45	He	10063.892	ppb	0.8	4529008.48	10000	100.64	90	110	
Mg	25	45	No Gas	9743.366	ppb	0.2	28338065.41	10000	97.43	90	110	
Al	27	45	No Gas	97.418	ppb	0.8	2749093.29	100	97.42	90	110	
Al	27	45	He	103.170	ppb	2.6	18011.93	100	103.17	90	110	
Si	28	45	No Gas	10181.869	ppb	0.4	113597828.06	10000	101.82	90	110	
Si	29	45	No Gas	10228.467	ppb	0.7	7050498.22	10000	102.28	90	110	
K	39	45	No Gas	10164.189	ppb	0.3	307699788.75	10000	101.64	90	110	
K	39	45	He	10298.890	ppb	0.6	3673299.84	10000	102.99	90	110	
Ca	44	45	No Gas	10015.071	ppb	0.9	9169861.74	10000	100.15	90	110	
Ca	44	45	He	10433.894	ppb	2.0	199022.80	10000	104.34	90	110	
Ti	47	45	No Gas	101.730	ppb	0.9	287815.41	100	101.73	90	110	
V	51	45	No Gas	100.172	ppb	0.4	3782217.69	100	100.17	90	110	
V	51	45	He	107.813	ppb	1.5	487620.41	100	107.81	90	110	
Cr	52	89	No Gas	98.380	ppb	0.8	3532258.93	100	98.38	90	110	
Cr	52	89	He	99.928	ppb	0.5	614971.91	100	99.93	90	110	
Cr	53	89	No Gas	98.570	ppb	1.1	475737.86	100	98.57	90	110	
Mn	55	89	No Gas	99.040	ppb	0.8	4819104.84	100	99.04	90	110	
Mn	55	89	He	100.447	ppb	0.9	328382.28	100	100.45	90	110	
Fe	56	89	No Gas	9872.032	ppb	1.5	348070316.11	10000	98.72	90	110	
Fe	56	89	He	9751.856	ppb	1.1	41845077.71	10000	97.52	90	110	
Co	59	89	No Gas	99.460	ppb	0.6	3868952.30	100	99.46	90	110	
Co	59	89	He	97.834	ppb	2.0	1000513.30	100	97.83	90	110	
Ni	60	89	No Gas	100.259	ppb	0.9	858308.73	100	100.26	90	110	
Ni	60	89	He	100.013	ppb	1.8	281327.51	100	100.01	90	110	
Ni	62	89	No Gas	100.739	ppb	0.9	131931.73	100	100.74	90	110	
Cu	63	89	No Gas	99.853	ppb	0.7	2078425.62	100	99.85	90	110	
Cu	63	89	He	99.237	ppb	1.7	765684.88	100	99.24	90	110	
Cu	65	89	No Gas	100.080	ppb	0.4	996629.78	100	100.08	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.409	ppb	0.0	605201.38	100	98.41	90	110	
Zn	66	89	He	99.616	ppb	2.1	117333.15	100	99.62	90	110	
Zn	67	89	No Gas	99.088	ppb	0.8	95576.27	100	99.09	90	110	
Zn	68	89	No Gas	99.950	ppb	0.7	435664.55	100	99.95	90	110	
As	75	89	No Gas	99.931	ppb	0.6	631800.58	100	99.93	90	110	
As	75	89	He	100.505	ppb	1.0	85010.92	100	100.5	90	110	
Se	77	89	No Gas	96.916	ppb	1.4	40113.36	100	96.92	90	110	
Se	78	89	No Gas	100.970	ppb	1.4	112565.20	100	100.97	90	110	
Se	78	89	He	98.669	ppb	1.5	5103.22	100	98.67	90	110	
Se	82	89	No Gas	103.023	ppb	0.5	39264.64	100	103.02	90	110	
[Se]	83	89	No Gas	153.761	ppb	119.6	1982.16	100	153.76	90	110	Failed
Sr	88	89	No Gas	100.103	ppb	0.4	5904360.00	100	100.1	90	110	
Mo	95	89	No Gas	100.612	ppb	0.5	1119961.63	100	100.61	90	110	
Mo	97	89	No Gas	100.148	ppb	0.7	697174.07	100	100.15	90	110	
Mo	98	89	No Gas	99.779	ppb	0.5	1808092.66	100	99.78	90	110	
[Mo]	99	89	No Gas	27.640	ppb	155.9	23.36	100	27.64	90	110	Failed
Cd	106	89	No Gas	101.939	ppb	1.3	110562.33	100	101.94	90	110	
Ag	107	89	No Gas	101.859	ppb	0.4	3014006.27	100	101.86	90	110	
Ag	107	89	He	101.489	ppb	1.3	1415979.05	100	101.49	90	110	
Cd	108	89	No Gas	103.193	ppb	2.2	43639.07	100	103.19	90	110	
Ag	109	89	No Gas	101.196	ppb	0.4	2893014.48	100	101.2	90	110	
Cd	111	89	No Gas	99.597	ppb	0.4	596617.18	100	99.6	90	110	
Cd	114	89	No Gas	99.680	ppb	0.9	1557431.03	100	99.68	90	110	
Sn	118	115	No Gas	100.724	ppb	0.5	1937850.96	100	100.72	90	110	
Sb	121	115	No Gas	99.583	ppb	0.7	2787933.92	100	99.58	90	110	
Sb	121	89	He	104.484	ppb	0.8	594899.85	100	104.48	90	110	
Sb	123	115	No Gas	99.714	ppb	0.5	2152981.69	100	99.71	90	110	
Ba	135	115	No Gas	102.169	ppb	0.5	575653.69	100	102.17	90	110	
Ba	137	115	No Gas	102.211	ppb	0.8	1009330.58	100	102.21	90	110	
Tl	203	209	No Gas	98.920	ppb	0.1	2423760.80	100	98.92	90	110	
Tl	205	209	No Gas	97.885	ppb	0.4	5764852.57	100	97.88	90	110	
Pb	206	209	No Gas	98.752	ppb	0.8	1949963.14	100	98.75	90	110	
Pb	207	209	No Gas	99.112	ppb	1.0	1614167.29	100	99.11	90	110	
Pb	208	209	No Gas	99.429	ppb	0.5	7587174.84	100	99.43	90	110	
Th	232	209	No Gas	97.658	ppb	0.6	7645905.92	100	97.66	90	110	
U	238	209	No Gas	96.927	ppb	0.8	7533113.76	100	96.93	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4459031.69	0.3	5406885.91	82.47	70	125	
Sc	45	No Gas	22682273.99	0.5	24326295.51	93.24	75	125	
Sc	45	He	888964.82	1.9	970797.15	91.57	75	125	
Y	89	No Gas	54074287.73	0.2	56662702.82	95.43	75	125	
Y	89	He	7099846.53	2.2	7465540.55	95.1	75	125	
In	115	No Gas	11864494.00	0.8	12379434.81	95.84	75	125	
Tb	159	No Gas	16512794.49	1.0	17053216.17	96.83	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9956399.05	0.4	10541485.14	94.45	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	282_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 22:30:16
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.190	ppb	29.8	246922.18	100	
Be	9	6	No Gas	0.012	ppb	105.5	160.16	100	
B	11	6	No Gas	35.229	ppb	3.6	166186.04	100	
Na	23	45	No Gas	61.736	ppb	2.8	2309315.94	500000	
Na	23	45	He	61.395	ppb	2.2	71976.31	500000	
Mg	24	45	No Gas	1.360	ppb	31.3	36866.78	500000	
Mg	24	45	He	0.821	ppb	30.0	573.39	500000	
Mg	25	45	No Gas	1.267	ppb	16.0	4774.58	500000	
Al	27	45	No Gas	0.012	ppb	81.5	11592.46	500000	
Al	27	45	He	-0.202	ppb	N/A	53.33	500000	
Si	28	45	No Gas	11.027	ppb	19.3	488476.65	100	
Si	29	45	No Gas	2.164	ppb	100.8	83120.16	100	
K	39	45	No Gas	7.411	ppb	9.8	4839850.97	500000	
K	39	45	He	7.084	ppb	25.9	28912.21	500000	
Ca	44	45	No Gas	-55.018	ppb	N/A	75946.89	500000	
Ca	44	45	He	-0.372	ppb	N/A	186.68	500000	
Ti	47	45	No Gas	0.046	ppb	40.8	390.40	10000	
V	51	45	No Gas	0.086	ppb	32.8	-1408.45	100	
V	51	45	He	-0.015	ppb	N/A	413.76	100	
Cr	52	89	No Gas	-0.022	ppb	N/A	28073.77	100	
Cr	52	89	He	-0.040	ppb	N/A	2405.99	100	
Cr	53	89	No Gas	-2.559	ppb	N/A	44145.39	100	
Mn	55	89	No Gas	0.261	ppb	3.7	22568.06	100	
Mn	55	89	He	0.339	ppb	17.9	1298.05	100	
Fe	56	89	No Gas	6.140	ppb	26.5	2240225.90	500000	
Fe	56	89	He	7.154	ppb	10.6	59158.84	500000	
Co	59	89	No Gas	0.009	ppb	13.8	1778.60	100	
Co	59	89	He	0.003	ppb	95.6	283.63	100	
Ni	60	89	No Gas	0.027	ppb	67.4	1364.79	100	
Ni	60	89	He	-0.178	ppb	N/A	310.32	100	
Ni	62	89	No Gas	-0.003	ppb	N/A	5289.76	100	
Cu	63	89	No Gas	-0.039	ppb	N/A	8881.90	100	
Cu	63	89	He	-0.014	ppb	N/A	2763.09	100	
Cu	65	89	No Gas	-0.038	ppb	N/A	4315.09	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.005	ppb	422.5	1801.96	100	
Zn	66	89	He	-0.016	ppb	N/A	337.02	100	
Zn	67	89	No Gas	0.019	ppb	292.8	400.41	100	
Zn	68	89	No Gas	0.011	ppb	264.7	1471.58	100	
As	75	89	No Gas	-0.007	ppb	N/A	3601.54	100	
As	75	89	He	0.032	ppb	38.5	50.00	100	
Se	77	89	No Gas	-3.996	ppb	N/A	7546.46	100	
Se	78	89	No Gas	0.603	ppb	22.2	17953.39	100	
Se	78	89	He	0.247	ppb	96.0	36.67	100	
Se	82	89	No Gas	-0.727	ppb	N/A	-184.65	100	
[Se]	83	89	No Gas	147.239	ppb	111.7	1975.50	100	Failed
Sr	88	89	No Gas	0.033	ppb	15.4	2402.67	100	
Mo	95	89	No Gas	0.238	ppb	20.3	3313.79	10000	
Mo	97	89	No Gas	0.251	ppb	17.6	2205.76	10000	
Mo	98	89	No Gas	0.237	ppb	17.8	5571.10	10000	
[Mo]	99	89	No Gas	2.729	ppb	787.2	16.68	10000	
Cd	106	89	No Gas	0.962	ppb	85.4	53330.63	100	
Ag	107	89	No Gas	0.007	ppb	8.5	1585.66	100	
Ag	107	89	He	-0.008	ppb	N/A	597.29	100	
Cd	108	89	No Gas	0.087	ppb	87.2	113.45	100	
Ag	109	89	No Gas	0.015	ppb	31.4	1371.48	100	
Cd	111	89	No Gas	-0.002	ppb	N/A	-85.07	100	
Cd	114	89	No Gas	0.011	ppb	46.6	246.92	100	
Sn	118	115	No Gas	0.051	ppb	20.0	4230.70	100	
Sb	121	115	No Gas	-0.061	ppb	N/A	1441.20	100	
Sb	121	89	He	-0.092	ppb	N/A	296.68	100	
Sb	123	115	No Gas	-0.044	ppb	N/A	1631.77	100	
Ba	135	115	No Gas	0.022	ppb	51.6	196.87	100	
Ba	137	115	No Gas	0.014	ppb	40.7	300.31	100	
Tl	203	209	No Gas	0.201	ppb	18.6	5406.70	100	
Tl	205	209	No Gas	0.180	ppb	23.5	11700.91	100	
Pb	206	209	No Gas	0.005	ppb	276.1	1434.89	100	
Pb	207	209	No Gas	0.010	ppb	97.3	1278.03	100	
Pb	208	209	No Gas	0.008	ppb	115.6	5783.09	100	
Th	232	209	No Gas	0.316	ppb	19.7	32058.12	100	
U	238	209	No Gas	0.093	ppb	20.9	8077.61	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4539549.97	0.6	5406885.91	83.96	70	125	
Sc	45	No Gas	22310508.06	0.1	24326295.51	91.71	75	125	
Sc	45	He	885000.21	1.8	970797.15	91.16	75	125	
Y	89	No Gas	54115917.69	0.1	56662702.82	95.51	75	125	
Y	89	He	7059309.53	1.8	7465540.55	94.56	75	125	
In	115	No Gas	11917859.91	0.4	12379434.81	96.27	75	125	
Tb	159	No Gas	16569348.55	0.2	17053216.17	97.16	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	10154306.54	0.7	10541485.14	96.33	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 293_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 22:49:30

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	100.222	ppb	0.8	2836782.62	100	100.22	90	110	
Be	9	6	No Gas	100.963	ppb	0.9	672008.44	100	100.96	90	110	
B	11	6	No Gas	252.194	ppb	0.8	1157123.11	250	100.88	90	110	
Na	23	45	No Gas	10053.672	ppb	0.3	323024140.55	10000	100.54	90	110	
Na	23	45	He	9920.036	ppb	0.9	9249606.32	10000	99.2	90	110	
Mg	24	45	No Gas	9752.327	ppb	0.4	215109950.13	10000	97.52	90	110	
Mg	24	45	He	9869.470	ppb	0.5	4651415.66	10000	98.69	90	110	
Mg	25	45	No Gas	9640.523	ppb	0.9	28781986.24	10000	96.41	90	110	
Al	27	45	No Gas	96.752	ppb	1.5	2802759.23	100	96.75	90	110	
Al	27	45	He	104.019	ppb	2.9	19019.85	100	104.02	90	110	
Si	28	45	No Gas	10133.733	ppb	0.8	116058295.20	10000	101.34	90	110	
Si	29	45	No Gas	10156.060	ppb	0.3	7186806.20	10000	101.56	90	110	
K	39	45	No Gas	10087.845	ppb	0.6	313514048.66	10000	100.88	90	110	
K	39	45	He	10225.054	ppb	1.0	3819126.61	10000	102.25	90	110	
Ca	44	45	No Gas	9897.352	ppb	0.4	9303980.70	10000	98.97	90	110	
Ca	44	45	He	10390.858	ppb	1.8	207549.74	10000	103.91	90	110	
Ti	47	45	No Gas	101.157	ppb	1.2	293785.43	100	101.16	90	110	
V	51	45	No Gas	99.325	ppb	0.9	3849709.26	100	99.32	90	110	
V	51	45	He	106.203	ppb	1.1	503088.52	100	106.2	90	110	
Cr	52	89	No Gas	99.404	ppb	0.1	3586805.46	100	99.4	90	110	
Cr	52	89	He	98.879	ppb	0.7	627873.58	100	98.88	90	110	
Cr	53	89	No Gas	98.416	ppb	1.4	477452.36	100	98.42	90	110	
Mn	55	89	No Gas	100.647	ppb	0.7	4921783.15	100	100.65	90	110	
Mn	55	89	He	100.775	ppb	0.6	339938.41	100	100.78	90	110	
Fe	56	89	No Gas	9993.245	ppb	1.3	354103616.25	10000	99.93	90	110	
Fe	56	89	He	9679.467	ppb	1.2	42857751.03	10000	96.79	90	110	
Co	59	89	No Gas	100.966	ppb	0.4	3947301.37	100	100.97	90	110	
Co	59	89	He	97.152	ppb	0.8	1025328.54	100	97.15	90	110	
Ni	60	89	No Gas	102.352	ppb	0.4	880625.00	100	102.35	90	110	
Ni	60	89	He	98.130	ppb	1.1	284868.83	100	98.13	90	110	
Ni	62	89	No Gas	104.360	ppb	1.5	137167.98	100	104.36	90	110	
Cu	63	89	No Gas	102.406	ppb	0.8	2142037.72	100	102.41	90	110	
Cu	63	89	He	99.347	ppb	0.1	791033.61	100	99.35	90	110	
Cu	65	89	No Gas	101.566	ppb	0.4	1016452.00	100	101.57	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.696	ppb	0.2	610042.15	100	98.7	90	110	
Zn	66	89	He	99.382	ppb	1.8	120800.18	100	99.38	90	110	
Zn	67	89	No Gas	98.543	ppb	0.5	95532.54	100	98.54	90	110	
Zn	68	89	No Gas	100.133	ppb	1.1	438657.86	100	100.13	90	110	
As	75	89	No Gas	100.939	ppb	0.0	641369.49	100	100.94	90	110	
As	75	89	He	101.320	ppb	0.8	88429.27	100	101.32	90	110	
Se	77	89	No Gas	100.195	ppb	2.7	41375.10	100	100.2	90	110	
Se	78	89	No Gas	101.174	ppb	1.5	113325.54	100	101.17	90	110	
Se	78	89	He	103.599	ppb	0.9	5525.60	100	103.6	90	110	
Se	82	89	No Gas	100.648	ppb	1.3	38558.46	100	100.65	90	110	
[Se]	83	89	No Gas	172.932	ppb	47.1	2015.53	100	172.93	90	110	Failed
Sr	88	89	No Gas	99.968	ppb	0.8	5926187.45	100	99.97	90	110	
Mo	95	89	No Gas	101.201	ppb	0.7	1132219.10	100	101.2	90	110	
Mo	97	89	No Gas	101.129	ppb	0.4	707558.78	100	101.13	90	110	
Mo	98	89	No Gas	99.368	ppb	0.5	1809744.97	100	99.37	90	110	
[Mo]	99	89	No Gas	39.340	ppb	106.9	26.69	100	39.34	90	110	Failed
Cd	106	89	No Gas	97.297	ppb	4.8	108462.63	100	97.3	90	110	
Ag	107	89	No Gas	101.056	ppb	0.3	3005355.02	100	101.06	90	110	
Ag	107	89	He	98.754	ppb	0.3	1421739.97	100	98.75	90	110	
Cd	108	89	No Gas	101.002	ppb	2.2	42925.99	100	101	90	110	
Ag	109	89	No Gas	101.040	ppb	0.1	2903200.50	100	101.04	90	110	
Cd	111	89	No Gas	98.289	ppb	0.7	591748.19	100	98.29	90	110	
Cd	114	89	No Gas	97.981	ppb	0.6	1538658.04	100	97.98	90	110	
Sn	118	115	No Gas	100.996	ppb	0.7	1921999.85	100	101	90	110	
Sb	121	115	No Gas	99.832	ppb	0.6	2764598.64	100	99.83	90	110	
Sb	121	89	He	104.028	ppb	0.7	611150.39	100	104.03	90	110	
Sb	123	115	No Gas	99.381	ppb	0.2	2122600.37	100	99.38	90	110	
Ba	135	115	No Gas	103.045	ppb	1.1	574324.68	100	103.05	90	110	
Ba	137	115	No Gas	102.751	ppb	1.0	1003716.79	100	102.75	90	110	
Tl	203	209	No Gas	98.417	ppb	0.9	2330666.24	100	98.42	90	110	
Tl	205	209	No Gas	96.490	ppb	0.8	5492228.07	100	96.49	90	110	
Pb	206	209	No Gas	97.519	ppb	0.9	1861043.75	100	97.52	90	110	
Pb	207	209	No Gas	97.667	ppb	0.8	1537423.78	100	97.67	90	110	
Pb	208	209	No Gas	98.258	ppb	0.6	7246791.91	100	98.26	90	110	
Th	232	209	No Gas	97.451	ppb	0.8	7374073.26	100	97.45	90	110	
U	238	209	No Gas	95.232	ppb	1.1	7153293.31	100	95.23	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4617879.66	0.7	5406885.91	85.41	70	125	
Sc	45	No Gas	23283350.06	0.7	24326295.51	95.71	75	125	
Sc	45	He	930899.37	0.2	970797.15	95.89	75	125	
Y	89	No Gas	54348648.76	0.9	56662702.82	95.92	75	125	
Y	89	He	7324970.61	0.2	7465540.55	98.12	75	125	
In	115	No Gas	11735909.69	0.9	12379434.81	94.8	75	125	
Tb	159	No Gas	16216755.12	1.5	17053216.17	95.09	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9623495.17	1.6	10541485.14	91.29	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	294_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 22:51:15
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.536	ppb	10.8	265984.12	100	
Be	9	6	No Gas	0.011	ppb	52.4	153.49	100	
B	11	6	No Gas	12.572	ppb	4.3	67338.08	100	
Na	23	45	No Gas	256.483	ppb	1.7	8590984.31	500000	
Na	23	45	He	250.327	ppb	1.2	252413.97	500000	
Mg	24	45	No Gas	0.819	ppb	33.1	26348.41	500000	
Mg	24	45	He	0.553	ppb	40.5	480.05	500000	
Mg	25	45	No Gas	0.723	ppb	42.6	3333.98	500000	
Al	27	45	No Gas	0.315	ppb	8.3	20696.90	500000	
Al	27	45	He	0.203	ppb	124.7	130.00	500000	
Si	28	45	No Gas	14.248	ppb	10.3	542290.13	100	
Si	29	45	No Gas	4.761	ppb	46.9	87867.14	100	
K	39	45	No Gas	18.849	ppb	1.4	5358466.80	500000	
K	39	45	He	23.688	ppb	13.3	36704.31	500000	
Ca	44	45	No Gas	-62.522	ppb	N/A	71737.11	500000	
Ca	44	45	He	-3.606	ppb	N/A	133.34	500000	
Ti	47	45	No Gas	0.073	ppb	36.0	483.84	10000	
V	51	45	No Gas	0.085	ppb	114.7	-1477.94	100	
V	51	45	He	-0.018	ppb	N/A	420.43	100	
Cr	52	89	No Gas	0.043	ppb	75.4	30802.29	100	
Cr	52	89	He	-0.036	ppb	N/A	2542.82	100	
Cr	53	89	No Gas	-2.433	ppb	N/A	45283.60	100	
Mn	55	89	No Gas	0.147	ppb	8.6	17251.69	100	
Mn	55	89	He	0.204	ppb	14.5	900.95	100	
Fe	56	89	No Gas	12.359	ppb	7.5	2491289.96	500000	
Fe	56	89	He	11.649	ppb	7.1	82011.81	500000	
Co	59	89	No Gas	0.011	ppb	33.1	1862.02	100	
Co	59	89	He	0.006	ppb	25.3	327.00	100	
Ni	60	89	No Gas	0.068	ppb	21.4	1735.21	100	
Ni	60	89	He	-0.187	ppb	N/A	300.31	100	
Ni	62	89	No Gas	-0.050	ppb	N/A	5299.73	100	
Cu	63	89	No Gas	0.306	ppb	4.3	16242.87	100	
Cu	63	89	He	0.263	ppb	5.0	5102.80	100	
Cu	65	89	No Gas	0.245	ppb	16.3	7219.25	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.005	ppb	509.0	1828.65	100	
Zn	66	89	He	0.020	ppb	62.6	397.08	100	
Zn	67	89	No Gas	0.013	ppb	613.2	400.42	100	
Zn	68	89	No Gas	0.012	ppb	407.0	1494.94	100	
As	75	89	No Gas	0.266	ppb	96.1	5388.44	100	
As	75	89	He	0.039	ppb	29.1	58.89	100	
Se	77	89	No Gas	-3.164	ppb	N/A	7920.42	100	
Se	78	89	No Gas	1.318	ppb	18.7	18875.70	100	
Se	78	89	He	0.295	ppb	79.5	41.11	100	
Se	82	89	No Gas	0.138	ppb	136.4	146.37	100	
[Se]	83	89	No Gas	68.209	ppb	91.0	1905.41	100	
Sr	88	89	No Gas	0.013	ppb	34.7	1268.02	100	
Mo	95	89	No Gas	0.224	ppb	28.7	3193.64	10000	
Mo	97	89	No Gas	0.214	ppb	12.0	1968.82	10000	
Mo	98	89	No Gas	0.179	ppb	32.3	4581.16	10000	
[Mo]	99	89	No Gas	-34.693	ppb	N/A	6.67	10000	
Cd	106	89	No Gas	-0.067	ppb	N/A	53447.82	100	
Ag	107	89	No Gas	0.013	ppb	9.5	1785.69	100	
Ag	107	89	He	-0.003	ppb	N/A	697.40	100	
Cd	108	89	No Gas	0.099	ppb	39.9	120.12	100	
Ag	109	89	No Gas	0.014	ppb	76.8	1371.47	100	
Cd	111	89	No Gas	0.000	ppb	2166.6	-72.22	100	
Cd	114	89	No Gas	0.012	ppb	24.0	260.27	100	
Sn	118	115	No Gas	0.051	ppb	15.9	4196.25	100	
Sb	121	115	No Gas	-0.063	ppb	N/A	1372.31	100	
Sb	121	89	He	-0.085	ppb	N/A	350.01	100	
Sb	123	115	No Gas	-0.067	ppb	N/A	1127.86	100	
Ba	135	115	No Gas	0.027	ppb	48.6	223.56	100	
Ba	137	115	No Gas	0.030	ppb	33.9	453.83	100	
Tl	203	209	No Gas	0.239	ppb	13.2	6084.39	100	
Tl	205	209	No Gas	0.231	ppb	18.4	14175.94	100	
Pb	206	209	No Gas	0.004	ppb	137.0	1344.77	100	
Pb	207	209	No Gas	0.006	ppb	82.6	1154.57	100	
Pb	208	209	No Gas	0.004	ppb	95.2	5232.42	100	
Th	232	209	No Gas	0.197	ppb	28.2	21628.23	100	
U	238	209	No Gas	0.083	ppb	22.6	7012.55	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4721415.73	0.1	5406885.91	87.32	70	125	
Sc	45	No Gas	23100409.62	0.3	24326295.51	94.96	75	125	
Sc	45	He	934259.89	0.4	970797.15	96.24	75	125	
Y	89	No Gas	54837360.80	0.4	56662702.82	96.78	75	125	
Y	89	He	7387955.26	0.1	7465540.55	98.96	75	125	
In	115	No Gas	11870134.36	0.5	12379434.81	95.89	75	125	
Tb	159	No Gas	16150508.04	0.5	17053216.17	94.71	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9721026.00	0.6	10541485.14	92.22	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 305_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 23:10:15

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.075	ppb	0.3	2720875.36	100	102.08	90	110	
Be	9	6	No Gas	102.279	ppb	1.5	642082.97	100	102.28	90	110	
B	11	6	No Gas	249.982	ppb	0.7	1081892.15	250	99.99	90	110	
Na	23	45	No Gas	9999.599	ppb	0.9	302629498.43	10000	100	90	110	
Na	23	45	He	10057.666	ppb	0.2	8773895.49	10000	100.58	90	110	
Mg	24	45	No Gas	9940.659	ppb	2.8	206467163.59	10000	99.41	90	110	
Mg	24	45	He	10051.093	ppb	1.1	4431796.70	10000	100.51	90	110	
Mg	25	45	No Gas	9754.316	ppb	1.9	27424969.59	10000	97.54	90	110	
Al	27	45	No Gas	97.065	ppb	2.7	2647815.07	100	97.06	90	110	
Al	27	45	He	102.757	ppb	2.2	17581.41	100	102.76	90	110	
Si	28	45	No Gas	10216.387	ppb	2.0	110183403.63	10000	102.16	90	110	
Si	29	45	No Gas	10137.913	ppb	0.5	6757098.99	10000	101.38	90	110	
K	39	45	No Gas	10099.962	ppb	1.5	295621895.59	10000	101	90	110	
K	39	45	He	10232.940	ppb	1.0	3576152.24	10000	102.33	90	110	
Ca	44	45	No Gas	10028.898	ppb	0.7	8877869.66	10000	100.29	90	110	
Ca	44	45	He	10453.620	ppb	0.4	195359.35	10000	104.54	90	110	
Ti	47	45	No Gas	101.625	ppb	0.2	277995.92	100	101.63	90	110	
V	51	45	No Gas	99.866	ppb	1.9	3645077.54	100	99.87	90	110	
V	51	45	He	107.471	ppb	0.8	476330.12	100	107.47	90	110	
Cr	52	89	No Gas	97.689	ppb	0.7	3429311.71	100	97.69	90	110	
Cr	52	89	He	100.565	ppb	0.7	603033.48	100	100.56	90	110	
Cr	53	89	No Gas	98.194	ppb	1.8	463513.25	100	98.19	90	110	
Mn	55	89	No Gas	98.340	ppb	2.2	4677575.29	100	98.34	90	110	
Mn	55	89	He	100.992	ppb	0.3	321734.35	100	100.99	90	110	
Fe	56	89	No Gas	9708.056	ppb	2.9	334602090.81	10000	97.08	90	110	
Fe	56	89	He	9764.475	ppb	0.3	40831987.72	10000	97.64	90	110	
Co	59	89	No Gas	99.319	ppb	0.4	3777426.81	100	99.32	90	110	
Co	59	89	He	97.576	ppb	0.7	972539.36	100	97.58	90	110	
Ni	60	89	No Gas	100.415	ppb	1.7	840351.00	100	100.42	90	110	
Ni	60	89	He	99.547	ppb	0.6	272906.84	100	99.55	90	110	
Ni	62	89	No Gas	101.626	ppb	2.7	130048.79	100	101.63	90	110	
Cu	63	89	No Gas	99.257	ppb	3.2	2019380.89	100	99.26	90	110	
Cu	63	89	He	100.143	ppb	0.6	753017.71	100	100.14	90	110	
Cu	65	89	No Gas	99.041	ppb	3.0	964051.11	100	99.04	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.553	ppb	2.2	586460.99	100	97.55	90	110	
Zn	66	89	He	100.914	ppb	0.7	115845.99	100	100.91	90	110	
Zn	67	89	No Gas	98.258	ppb	3.1	92637.00	100	98.26	90	110	
Zn	68	89	No Gas	99.961	ppb	1.3	425959.83	100	99.96	90	110	
As	75	89	No Gas	99.526	ppb	2.0	615118.87	100	99.53	90	110	
As	75	89	He	102.161	ppb	1.0	84214.89	100	102.16	90	110	
Se	77	89	No Gas	102.687	ppb	4.1	41026.86	100	102.69	90	110	
Se	78	89	No Gas	99.640	ppb	4.2	108791.86	100	99.64	90	110	
Se	78	89	He	99.311	ppb	2.5	5004.29	100	99.31	90	110	
Se	82	89	No Gas	101.814	ppb	2.9	37929.93	100	101.81	90	110	
[Se]	83	89	No Gas	125.285	ppb	70.3	1905.41	100	125.28	90	110	Failed
Sr	88	89	No Gas	99.485	ppb	0.8	5737649.12	100	99.48	90	110	
Mo	95	89	No Gas	99.881	ppb	1.8	1086875.65	100	99.88	90	110	
Mo	97	89	No Gas	99.426	ppb	3.6	676473.40	100	99.43	90	110	
Mo	98	89	No Gas	97.848	ppb	3.7	1732907.78	100	97.85	90	110	
[Mo]	99	89	No Gas	67.792	ppb	116.5	33.37	100	67.79	90	110	Failed
Cd	106	89	No Gas	99.632	ppb	3.3	106804.20	100	99.63	90	110	
Ag	107	89	No Gas	101.316	ppb	0.6	2931197.59	100	101.32	90	110	
Ag	107	89	He	100.495	ppb	0.7	1366365.12	100	100.5	90	110	
Cd	108	89	No Gas	101.800	ppb	3.1	42079.34	100	101.8	90	110	
Ag	109	89	No Gas	100.485	ppb	3.5	2807676.96	100	100.48	90	110	
Cd	111	89	No Gas	98.510	ppb	3.1	576764.35	100	98.51	90	110	
Cd	114	89	No Gas	98.766	ppb	1.7	1508639.11	100	98.77	90	110	
Sn	118	115	No Gas	100.575	ppb	1.5	1883287.91	100	100.57	90	110	
Sb	121	115	No Gas	98.944	ppb	3.2	2695442.53	100	98.94	90	110	
Sb	121	89	He	105.001	ppb	0.4	582603.28	100	105	90	110	
Sb	123	115	No Gas	99.137	ppb	1.9	2083245.54	100	99.14	90	110	
Ba	135	115	No Gas	103.155	ppb	0.7	565835.16	100	103.16	90	110	
Ba	137	115	No Gas	102.977	ppb	1.2	989897.84	100	102.98	90	110	
Tl	203	209	No Gas	97.342	ppb	3.8	2327200.28	100	97.34	90	110	
Tl	205	209	No Gas	96.204	ppb	3.8	5528215.73	100	96.2	90	110	
Pb	206	209	No Gas	96.788	ppb	2.9	1864899.17	100	96.79	90	110	
Pb	207	209	No Gas	97.317	ppb	2.2	1546826.42	100	97.32	90	110	
Pb	208	209	No Gas	98.199	ppb	1.8	7313473.80	100	98.2	90	110	
Th	232	209	No Gas	96.393	ppb	3.7	7364432.36	100	96.39	90	110	
U	238	209	No Gas	94.636	ppb	4.0	7176242.09	100	94.64	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4355677.75	0.9	5406885.91	80.56	70	125	
Sc	45	No Gas	21930775.82	1.5	24326295.51	90.15	75	125	
Sc	45	He	870948.28	0.9	970797.15	89.71	75	125	
Y	89	No Gas	52871576.68	1.8	56662702.82	93.31	75	125	
Y	89	He	6917925.02	1.1	7465540.55	92.66	75	125	
In	115	No Gas	11549414.43	2.0	12379434.81	93.3	75	125	
Tb	159	No Gas	16009090.79	1.0	17053216.17	93.88	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9718310.45	1.6	10541485.14	92.19	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	306_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 23:12:00
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.206	ppb	29.1	247067.08	100	
Be	9	6	No Gas	0.009	ppb	56.8	140.14	100	
B	11	6	No Gas	7.570	ppb	7.3	42296.15	100	
Na	23	45	No Gas	178.594	ppb	0.7	5871587.37	500000	
Na	23	45	He	178.553	ppb	1.2	174609.36	500000	
Mg	24	45	No Gas	1.354	ppb	18.0	36570.62	500000	
Mg	24	45	He	1.005	ppb	22.5	653.41	500000	
Mg	25	45	No Gas	1.227	ppb	26.8	4641.19	500000	
Al	27	45	No Gas	0.005	ppb	282.2	11352.32	500000	
Al	27	45	He	-0.257	ppb	N/A	43.33	500000	
Si	28	45	No Gas	10.249	ppb	19.0	477553.60	100	
Si	29	45	No Gas	-4.776	ppb	N/A	78059.25	100	
K	39	45	No Gas	19.174	ppb	10.6	5157333.15	500000	
K	39	45	He	22.201	ppb	27.1	34044.24	500000	
Ca	44	45	No Gas	-64.053	ppb	N/A	67555.76	500000	
Ca	44	45	He	2.430	ppb	227.8	240.02	500000	
Ti	47	45	No Gas	0.039	ppb	99.0	370.38	10000	
V	51	45	No Gas	0.049	ppb	61.5	-2754.08	100	
V	51	45	He	0.001	ppb	2068.2	480.50	100	
Cr	52	89	No Gas	0.001	ppb	1031.2	28474.92	100	
Cr	52	89	He	-0.022	ppb	N/A	2496.11	100	
Cr	53	89	No Gas	-2.219	ppb	N/A	44905.12	100	
Mn	55	89	No Gas	0.237	ppb	7.3	21060.86	100	
Mn	55	89	He	0.260	ppb	10.0	1034.43	100	
Fe	56	89	No Gas	6.736	ppb	23.0	2226544.32	500000	
Fe	56	89	He	8.269	ppb	7.3	63363.91	500000	
Co	59	89	No Gas	0.018	ppb	12.7	2085.62	100	
Co	59	89	He	0.021	ppb	14.8	460.48	100	
Ni	60	89	No Gas	0.045	ppb	37.7	1494.94	100	
Ni	60	89	He	-0.160	ppb	N/A	357.03	100	
Ni	62	89	No Gas	-0.026	ppb	N/A	5179.60	100	
Cu	63	89	No Gas	0.176	ppb	8.0	13133.02	100	
Cu	63	89	He	0.160	ppb	8.4	4058.07	100	
Cu	65	89	No Gas	0.137	ppb	16.7	5960.71	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.051	ppb	57.2	2052.25	100	
Zn	66	89	He	0.012	ppb	748.8	367.05	100	
Zn	67	89	No Gas	0.036	ppb	85.0	410.42	100	
Zn	68	89	No Gas	0.024	ppb	219.0	1504.95	100	
As	75	89	No Gas	-0.130	ppb	N/A	2783.43	100	
As	75	89	He	0.035	ppb	35.2	52.22	100	
Se	77	89	No Gas	-0.057	ppb	N/A	8684.96	100	
Se	78	89	No Gas	1.275	ppb	21.7	18304.31	100	
Se	78	89	He	0.118	ppb	249.4	30.00	100	
Se	82	89	No Gas	-0.563	ppb	N/A	-120.21	100	
[Se]	83	89	No Gas	77.393	ppb	233.2	1862.03	100	
Sr	88	89	No Gas	0.033	ppb	10.9	2389.30	100	
Mo	95	89	No Gas	0.222	ppb	21.1	3083.50	10000	
Mo	97	89	No Gas	0.213	ppb	23.0	1908.75	10000	
Mo	98	89	No Gas	0.196	ppb	25.1	4752.30	10000	
[Mo]	99	89	No Gas	28.775	ppb	302.4	23.36	10000	
Cd	106	89	No Gas	-0.171	ppb	N/A	51883.86	100	
Ag	107	89	No Gas	0.010	ppb	7.9	1645.67	100	
Ag	107	89	He	-0.009	ppb	N/A	580.61	100	
Cd	108	89	No Gas	0.059	ppb	145.5	100.10	100	
Ag	109	89	No Gas	0.016	ppb	18.0	1384.82	100	
Cd	111	89	No Gas	0.002	ppb	320.2	-60.75	100	
Cd	114	89	No Gas	0.013	ppb	11.5	276.95	100	
Sn	118	115	No Gas	0.054	ppb	31.9	4178.46	100	
Sb	121	115	No Gas	-0.064	ppb	N/A	1332.30	100	
Sb	121	89	He	-0.096	ppb	N/A	273.34	100	
Sb	123	115	No Gas	-0.050	ppb	N/A	1471.58	100	
Ba	135	115	No Gas	0.018	ppb	47.4	166.84	100	
Ba	137	115	No Gas	0.018	ppb	23.9	330.34	100	
Tl	203	209	No Gas	0.225	ppb	17.5	5827.30	100	
Tl	205	209	No Gas	0.219	ppb	20.7	13621.43	100	
Pb	206	209	No Gas	0.017	ppb	60.8	1611.75	100	
Pb	207	209	No Gas	0.009	ppb	46.1	1214.63	100	
Pb	208	209	No Gas	0.010	ppb	66.0	5789.76	100	
Th	232	209	No Gas	0.327	ppb	24.1	31938.06	100	
U	238	209	No Gas	0.098	ppb	19.3	8237.88	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4534586.77	1.0	5406885.91	83.87	70	125	
Sc	45	No Gas	22193740.45	0.8	24326295.51	91.23	75	125	
Sc	45	He	879975.14	0.8	970797.15	90.64	75	125	
Y	89	No Gas	53290762.54	0.4	56662702.82	94.05	75	125	
Y	89	He	6997166.56	1.3	7465540.55	93.73	75	125	
In	115	No Gas	11619730.47	0.7	12379434.81	93.86	75	125	
Tb	159	No Gas	16071456.91	0.4	17053216.17	94.24	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9853224.33	0.6	10541485.14	93.47	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 317_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 23:31:34

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.620	ppb	0.5	2720094.69	100	101.62	90	110	
Be	9	6	No Gas	104.366	ppb	0.9	657718.64	100	104.37	90	110	
B	11	6	No Gas	251.723	ppb	0.6	1093543.99	250	100.69	90	110	
Na	23	45	No Gas	9800.113	ppb	0.5	303778048.45	10000	98	90	110	
Na	23	45	He	9884.648	ppb	0.8	8995479.45	10000	98.85	90	110	
Mg	24	45	No Gas	9887.470	ppb	0.6	210391636.86	10000	98.87	90	110	
Mg	24	45	He	9925.502	ppb	0.6	4565556.60	10000	99.26	90	110	
Mg	25	45	No Gas	9719.102	ppb	1.8	27992675.42	10000	97.19	90	110	
Al	27	45	No Gas	97.789	ppb	1.0	2732751.83	100	97.79	90	110	
Al	27	45	He	98.937	ppb	3.4	17661.45	100	98.94	90	110	
Si	28	45	No Gas	10334.958	ppb	0.7	114177604.50	10000	103.35	90	110	
Si	29	45	No Gas	10271.795	ppb	1.1	7011439.99	10000	102.72	90	110	
K	39	45	No Gas	10316.792	ppb	1.5	309220375.39	10000	103.17	90	110	
K	39	45	He	10287.487	ppb	0.2	3750056.82	10000	102.87	90	110	
Ca	44	45	No Gas	9999.105	ppb	1.0	9067885.70	10000	99.99	90	110	
Ca	44	45	He	10691.709	ppb	1.7	208424.88	10000	106.92	90	110	
Ti	47	45	No Gas	103.389	ppb	1.2	289665.94	100	103.39	90	110	
V	51	45	No Gas	101.726	ppb	1.1	3803563.31	100	101.73	90	110	
V	51	45	He	108.792	ppb	0.5	502979.19	100	108.79	90	110	
Cr	52	89	No Gas	99.669	ppb	0.9	3547361.43	100	99.67	90	110	
Cr	52	89	He	101.160	ppb	0.7	629483.44	100	101.16	90	110	
Cr	53	89	No Gas	99.592	ppb	0.9	475973.63	100	99.59	90	110	
Mn	55	89	No Gas	98.552	ppb	1.8	4754302.96	100	98.55	90	110	
Mn	55	89	He	101.051	ppb	0.3	334077.54	100	101.05	90	110	
Fe	56	89	No Gas	9765.628	ppb	1.7	341378365.96	10000	97.66	90	110	
Fe	56	89	He	9772.301	ppb	0.2	42407034.37	10000	97.72	90	110	
Co	59	89	No Gas	101.334	ppb	0.4	3908167.66	100	101.33	90	110	
Co	59	89	He	97.795	ppb	0.1	1011548.14	100	97.8	90	110	
Ni	60	89	No Gas	102.846	ppb	0.9	872870.92	100	102.85	90	110	
Ni	60	89	He	100.302	ppb	0.7	285356.38	100	100.3	90	110	
Ni	62	89	No Gas	103.380	ppb	1.0	134092.16	100	103.38	90	110	
Cu	63	89	No Gas	101.196	ppb	2.5	2087843.16	100	101.2	90	110	
Cu	63	89	He	100.299	ppb	0.2	782666.84	100	100.3	90	110	
Cu	65	89	No Gas	101.679	ppb	2.9	1003567.76	100	101.68	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.588	ppb	2.1	607124.86	100	99.59	90	110	
Zn	66	89	He	101.374	ppb	0.8	120759.12	100	101.37	90	110	
Zn	67	89	No Gas	100.401	ppb	3.2	95983.18	100	100.4	90	110	
Zn	68	89	No Gas	102.364	ppb	2.0	442264.87	100	102.36	90	110	
As	75	89	No Gas	101.870	ppb	2.0	638371.57	100	101.87	90	110	
As	75	89	He	103.023	ppb	0.3	88125.23	100	103.02	90	110	
Se	77	89	No Gas	98.383	ppb	1.2	40243.71	100	98.38	90	110	
Se	78	89	No Gas	101.999	ppb	2.3	112548.04	100	102	90	110	
Se	78	89	He	103.112	ppb	1.0	5389.99	100	103.11	90	110	
Se	82	89	No Gas	102.238	ppb	2.3	38625.00	100	102.24	90	110	
[Se]	83	89	No Gas	223.418	ppb	30.9	2048.91	100	223.42	90	110	Failed
Sr	88	89	No Gas	100.935	ppb	1.1	5902121.51	100	100.94	90	110	
Mo	95	89	No Gas	99.639	ppb	0.7	1099660.19	100	99.64	90	110	
Mo	97	89	No Gas	100.056	ppb	2.4	690447.85	100	100.06	90	110	
Mo	98	89	No Gas	98.620	ppb	2.7	1771384.02	100	98.62	90	110	
[Mo]	99	89	No Gas	103.500	ppb	21.6	43.38	100	103.5	90	110	
Cd	106	89	No Gas	104.950	ppb	7.8	111264.56	100	104.95	90	110	
Ag	107	89	No Gas	102.121	ppb	0.5	2995896.89	100	102.12	90	110	
Ag	107	89	He	99.037	ppb	0.2	1397413.87	100	99.04	90	110	
Cd	108	89	No Gas	102.645	ppb	1.2	43043.20	100	102.64	90	110	
Ag	109	89	No Gas	100.148	ppb	1.6	2838365.87	100	100.15	90	110	
Cd	111	89	No Gas	98.964	ppb	3.5	587564.25	100	98.96	90	110	
Cd	114	89	No Gas	98.895	ppb	3.2	1531491.55	100	98.9	90	110	
Sn	118	115	No Gas	98.916	ppb	0.7	1882767.91	100	98.92	90	110	
Sb	121	115	No Gas	98.235	ppb	1.7	2720532.39	100	98.24	90	110	
Sb	121	89	He	104.766	ppb	0.6	603210.92	100	104.77	90	110	
Sb	123	115	No Gas	99.003	ppb	1.1	2114580.00	100	99	90	110	
Ba	135	115	No Gas	103.988	ppb	0.8	579599.85	100	103.99	90	110	
Ba	137	115	No Gas	102.023	ppb	0.9	996725.53	100	102.02	90	110	
Tl	203	209	No Gas	97.074	ppb	2.1	2291712.03	100	97.07	90	110	
Tl	205	209	No Gas	97.119	ppb	3.2	5510466.52	100	97.12	90	110	
Pb	206	209	No Gas	98.475	ppb	3.0	1873272.97	100	98.48	90	110	
Pb	207	209	No Gas	99.340	ppb	1.9	1558799.90	100	99.34	90	110	
Pb	208	209	No Gas	99.838	ppb	1.6	7340385.04	100	99.84	90	110	
Th	232	209	No Gas	96.365	ppb	1.6	7269635.07	100	96.36	90	110	
U	238	209	No Gas	95.013	ppb	3.0	7113986.08	100	95.01	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4372181.61	0.3	5406885.91	80.86	70	125	
Sc	45	No Gas	22462804.52	1.3	24326295.51	92.34	75	125	
Sc	45	He	908545.45	0.2	970797.15	93.59	75	125	
Y	89	No Gas	53615051.83	1.7	56662702.82	94.62	75	125	
Y	89	He	7178993.59	0.5	7465540.55	96.16	75	125	
In	115	No Gas	11736930.93	0.8	12379434.81	94.81	75	125	
Tb	159	No Gas	15796358.47	1.6	17053216.17	92.63	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9594511.01	1.3	10541485.14	91.02	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	318_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 23:33:20
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.314	ppb	5.5	249856.35	100	
Be	9	6	No Gas	0.019	ppb	27.5	203.54	100	
B	11	6	No Gas	7.128	ppb	4.9	40328.17	100	
Na	23	45	No Gas	100.010	ppb	1.7	3563734.71	500000	
Na	23	45	He	100.198	ppb	4.1	109634.04	500000	
Mg	24	45	No Gas	1.582	ppb	15.8	42454.75	500000	
Mg	24	45	He	1.473	ppb	24.1	893.43	500000	
Mg	25	45	No Gas	1.415	ppb	24.0	5308.08	500000	
Al	27	45	No Gas	0.047	ppb	105.5	12860.32	500000	
Al	27	45	He	-0.117	ppb	N/A	70.00	500000	
Si	28	45	No Gas	15.197	ppb	20.9	545870.51	100	
Si	29	45	No Gas	-6.418	ppb	N/A	79093.18	100	
K	39	45	No Gas	8.661	ppb	4.8	4985322.64	500000	
K	39	45	He	12.171	ppb	29.5	31665.49	500000	
Ca	44	45	No Gas	-59.851	ppb	N/A	73252.41	500000	
Ca	44	45	He	0.648	ppb	493.1	213.35	500000	
Ti	47	45	No Gas	0.017	ppb	90.3	316.99	10000	
V	51	45	No Gas	0.040	ppb	80.1	-3200.71	100	
V	51	45	He	-0.008	ppb	N/A	457.14	100	
Cr	52	89	No Gas	-0.021	ppb	N/A	28240.96	100	
Cr	52	89	He	-0.016	ppb	N/A	2619.58	100	
Cr	53	89	No Gas	-2.694	ppb	N/A	43733.92	100	
Mn	55	89	No Gas	0.128	ppb	5.8	16155.90	100	
Mn	55	89	He	0.212	ppb	13.8	910.96	100	
Fe	56	89	No Gas	12.957	ppb	11.1	2488746.67	500000	
Fe	56	89	He	9.264	ppb	4.8	69943.95	500000	
Co	59	89	No Gas	0.017	ppb	12.6	2108.98	100	
Co	59	89	He	0.015	ppb	48.8	420.43	100	
Ni	60	89	No Gas	0.087	ppb	18.3	1885.38	100	
Ni	60	89	He	-0.183	ppb	N/A	303.65	100	
Ni	62	89	No Gas	0.165	ppb	119.6	5520.07	100	
Cu	63	89	No Gas	0.131	ppb	20.5	12448.32	100	
Cu	63	89	He	0.129	ppb	19.5	3951.26	100	
Cu	65	89	No Gas	0.104	ppb	5.4	5743.71	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.048	ppb	51.7	2075.61	100	
Zn	66	89	He	0.009	ppb	987.5	377.06	100	
Zn	67	89	No Gas	-0.007	ppb	N/A	377.05	100	
Zn	68	89	No Gas	0.039	ppb	32.7	1601.73	100	
As	75	89	No Gas	0.095	ppb	83.7	4260.57	100	
As	75	89	He	0.045	ppb	39.6	62.22	100	
Se	77	89	No Gas	-3.258	ppb	N/A	7813.52	100	
Se	78	89	No Gas	2.244	ppb	13.1	19574.05	100	
Se	78	89	He	0.058	ppb	418.4	27.78	100	
Se	82	89	No Gas	-0.183	ppb	N/A	22.23	100	
[Se]	83	89	No Gas	143.581	ppb	83.3	1978.84	100	Failed
Sr	88	89	No Gas	0.022	ppb	12.9	1808.63	100	
Mo	95	89	No Gas	0.243	ppb	19.6	3383.88	10000	
Mo	97	89	No Gas	0.228	ppb	13.7	2052.26	10000	
Mo	98	89	No Gas	0.230	ppb	19.8	5467.62	10000	
[Mo]	99	89	No Gas	2.668	ppb	1623.4	16.68	10000	
Cd	106	89	No Gas	0.042	ppb	934.6	53005.89	100	
Ag	107	89	No Gas	0.012	ppb	25.0	1741.23	100	
Ag	107	89	He	-0.002	ppb	N/A	707.41	100	
Cd	108	89	No Gas	0.126	ppb	49.3	130.13	100	
Ag	109	89	No Gas	0.014	ppb	62.1	1361.45	100	
Cd	111	89	No Gas	0.004	ppb	205.1	-50.74	100	
Cd	114	89	No Gas	0.013	ppb	11.9	283.63	100	
Sn	118	115	No Gas	0.067	ppb	19.5	4516.36	100	
Sb	121	115	No Gas	-0.060	ppb	N/A	1467.87	100	
Sb	121	89	He	-0.090	ppb	N/A	316.68	100	
Sb	123	115	No Gas	-0.060	ppb	N/A	1281.37	100	
Ba	135	115	No Gas	0.021	ppb	41.6	190.20	100	
Ba	137	115	No Gas	0.015	ppb	64.5	306.98	100	
Tl	203	209	No Gas	0.235	ppb	18.7	5994.24	100	
Tl	205	209	No Gas	0.227	ppb	19.7	13945.45	100	
Pb	206	209	No Gas	0.018	ppb	78.1	1615.09	100	
Pb	207	209	No Gas	0.020	ppb	32.2	1378.15	100	
Pb	208	209	No Gas	0.017	ppb	38.8	6236.95	100	
Th	232	209	No Gas	0.267	ppb	25.0	27041.11	100	
U	238	209	No Gas	0.093	ppb	19.1	7740.38	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4535246.83	0.9	5406885.91	83.88	70	125	
Sc	45	No Gas	22808462.67	0.7	24326295.51	93.76	75	125	
Sc	45	He	912706.91	0.6	970797.15	94.02	75	125	
Y	89	No Gas	54318820.59	0.7	56662702.82	95.86	75	125	
Y	89	He	7241478.78	0.8	7465540.55	97	75	125	
In	115	No Gas	11863236.45	0.3	12379434.81	95.83	75	125	
Tb	159	No Gas	16171258.79	0.7	17053216.17	94.83	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9738200.17	0.2	10541485.14	92.38	75	125	

Sample Report

Sample Name MBLK-168407

File Name 327SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 23:48:20

Sample Type Sample

Total Dilution 1.0000

Comment 6020W B168407

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	0.240	ppb	25.7	265616.04	2000	
Be	9	6	No Gas	-0.004	ppb	N/A	56.72	2000	
B	11	6	No Gas	2.288	ppb	5.6	20014.45	10000	
Na	23	45	No Gas	237.792	ppb	1.5	7973490.80	200000	
Na	23	45	He	229.516	ppb	1.9	230343.68	200000	
Mg	24	45	No Gas	3.514	ppb	4.3	85049.97	200000	
Mg	24	45	He	2.819	ppb	10.3	1533.52	200000	
Mg	25	45	No Gas	3.230	ppb	6.2	10724.85	200000	
Al	27	45	No Gas	2.123	ppb	1.7	72217.74	2000	
Al	27	45	He	2.174	ppb	24.9	483.35	2000	
Si	28	45	No Gas	0.945	ppb	28.3	390490.83	20000	
Si	29	45	No Gas	-17.055	ppb	N/A	72524.35	20000	
K	39	45	No Gas	29.677	ppb	4.4	5671301.17	200000	
K	39	45	He	34.728	ppb	3.2	40341.31	200000	
Ca	44	45	No Gas	-41.320	ppb	N/A	90971.94	200000	
Ca	44	45	He	26.154	ppb	29.1	720.09	200000	
Ti	47	45	No Gas	0.049	ppb	40.8	413.76	2000	
V	51	45	No Gas	0.130	ppb	40.9	229.29	2000	
V	51	45	He	-0.064	ppb	N/A	200.21	2000	
Cr	52	89	No Gas	-0.329	ppb	N/A	17321.82	2000	
Cr	52	89	He	-0.259	ppb	N/A	1111.18	2000	
Cr	53	89	No Gas	-8.649	ppb	N/A	18307.40	2000	
Mn	55	89	No Gas	0.240	ppb	5.3	21749.22	2000	
Mn	55	89	He	0.307	ppb	9.6	1237.98	2000	
Fe	56	89	No Gas	1.967	ppb	44.6	2113839.63	200000	
Fe	56	89	He	0.069	ppb	286.7	30021.52	200000	
Co	59	89	No Gas	0.007	ppb	56.8	1721.86	2000	
Co	59	89	He	0.006	ppb	57.1	327.00	2000	
Ni	60	89	No Gas	0.213	ppb	20.5	2990.04	2000	
Ni	60	89	He	-0.022	ppb	N/A	774.14	2000	
Ni	62	89	No Gas	0.168	ppb	98.9	5556.79	2000	
Cu	63	89	No Gas	0.415	ppb	20.1	18461.27	2000	
Cu	63	89	He	0.522	ppb	0.6	7102.39	2000	
Cu	65	89	No Gas	0.348	ppb	26.3	8214.19	2000	
Zn	66	89	No Gas	0.387	ppb	3.3	4184.91	2000	

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	0.423	ppb	19.5	880.92	2000	
Zn	67	89	No Gas	0.334	ppb	10.0	710.74	2000	
Zn	68	89	No Gas	0.344	ppb	24.9	2946.65	2000	
As	75	89	No Gas	0.090	ppb	41.2	4253.36	2000	
As	75	89	He	0.007	ppb	308.2	30.00	2000	
Se	77	89	No Gas	-15.721	ppb	N/A	3794.41	2000	
Se	78	89	No Gas	2.146	ppb	21.1	19594.09	2000	
Se	78	89	He	0.157	ppb	144.9	33.33	2000	
Se	82	89	No Gas	-0.553	ppb	N/A	-121.01	2000	
[Se]	83	89	No Gas	112.086	ppb	95.8	1952.12	2000	
Sr	88	89	No Gas	0.044	ppb	2.5	3113.54	2000	
Mo	95	89	No Gas	-0.018	ppb	N/A	463.81	2000	
Mo	97	89	No Gas	-0.027	ppb	N/A	273.62	2000	
Mo	98	89	No Gas	-0.019	ppb	N/A	937.17	2000	
[Mo]	99	89	No Gas	-46.892	ppb	N/A	3.34	2000	
Cd	106	89	No Gas	-1.716	ppb	N/A	52308.93	2000	
Ag	107	89	No Gas	-0.027	ppb	N/A	604.46	200	
Ag	107	89	He	-0.039	ppb	N/A	180.19	200	
Cd	108	89	No Gas	0.148	ppb	70.9	140.14	2000	
Ag	109	89	No Gas	-0.024	ppb	N/A	263.61	200	
Cd	111	89	No Gas	-0.008	ppb	N/A	-120.37	2000	
Cd	114	89	No Gas	0.004	ppb	101.3	136.80	2000	
Sn	118	115	No Gas	-0.083	ppb	N/A	1647.89	2000	
Sb	121	115	No Gas	-0.092	ppb	N/A	587.80	2000	
Sb	121	89	He	-0.116	ppb	N/A	163.34	2000	
Sb	123	115	No Gas	-0.096	ppb	N/A	507.19	2000	
Ba	135	115	No Gas	0.060	ppb	11.7	413.76	2000	
Ba	137	115	No Gas	0.061	ppb	7.1	767.47	2000	
Tl	203	209	No Gas	0.059	ppb	71.4	1822.03	2000	
Tl	205	209	No Gas	0.060	ppb	62.3	4422.15	2000	
Pb	206	209	No Gas	0.066	ppb	21.5	2596.24	2000	
Pb	207	209	No Gas	0.062	ppb	12.0	2095.65	2000	
Pb	208	209	No Gas	0.064	ppb	8.9	9925.01	2000	
Th	232	209	No Gas	-0.053	ppb	N/A	2616.29	2000	
U	238	209	No Gas	0.001	ppb	95.2	824.20	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4857989.91	0.8	5406885.91	89.85	70	125	
Sc	45	No Gas	23035712.43	0.4	24326295.51	94.69	75	125	
Sc	45	He	923533.09	1.6	970797.15	95.13	75	125	
Y	89	No Gas	54635222.00	0.8	56662702.82	96.42	75	125	
Y	89	He	7311697.13	1.2	7465540.55	97.94	75	125	
In	115	No Gas	11993631.21	0.7	12379434.81	96.88	75	125	
Tb	159	No Gas	16238716.25	1.1	17053216.17	95.22	75	125	
Bi	209	No Gas	9949352.38	0.8	10541485.14	94.38	75	125	

Sample Report

Sample Name LCS-168407

File Name 328SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 23:49:58

Sample Type Sample

Total Dilution 1.0000

Comment 6020W B168407

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	101.827	ppb	0.3	2875916.03	2000	
Be	9	6	No Gas	104.332	ppb	0.5	693867.31	2000	
B	11	6	No Gas	462.647	ppb	1.0	2113887.33	10000	
Na	23	45	No Gas	10316.917	ppb	0.9	322709657.21	200000	
Na	23	45	He	9984.363	ppb	0.7	9123847.15	200000	
Mg	24	45	No Gas	10034.525	ppb	0.2	215481730.12	200000	
Mg	24	45	He	10041.798	ppb	1.1	4638111.28	200000	
Mg	25	45	No Gas	9997.567	ppb	0.5	29059227.07	200000	
Al	27	45	No Gas	96.732	ppb	0.4	2728161.10	2000	
Al	27	45	He	101.786	ppb	3.9	18248.93	2000	
Si	28	45	No Gas	10289.570	ppb	0.6	114723170.07	20000	
Si	29	45	No Gas	10440.905	ppb	3.0	7190472.16	20000	
K	39	45	No Gas	10316.369	ppb	1.0	312037902.01	200000	
K	39	45	He	10438.552	ppb	1.5	3820470.26	200000	
Ca	44	45	No Gas	10051.117	ppb	0.5	9197007.99	200000	
Ca	44	45	He	10753.883	ppb	2.2	210523.17	200000	
Ti	47	45	No Gas	110.306	ppb	1.3	311860.49	2000	
V	51	45	No Gas	99.661	ppb	1.1	3760483.58	2000	
V	51	45	He	108.253	ppb	0.9	502563.27	2000	
Cr	52	89	No Gas	99.534	ppb	0.8	3486130.72	2000	
Cr	52	89	He	99.344	ppb	1.2	621346.93	2000	
Cr	53	89	No Gas	92.132	ppb	1.5	437323.63	2000	
Mn	55	89	No Gas	100.103	ppb	0.1	4752173.54	2000	
Mn	55	89	He	100.445	ppb	1.7	333713.66	2000	
Fe	56	89	No Gas	10064.456	ppb	0.5	346185132.74	200000	
Fe	56	89	He	9671.463	ppb	0.8	42181680.21	200000	
Co	59	89	No Gas	101.543	ppb	0.8	3853571.18	2000	
Co	59	89	He	96.221	ppb	1.0	1000289.95	2000	
Ni	60	89	No Gas	104.334	ppb	0.9	871362.43	2000	
Ni	60	89	He	99.133	ppb	1.6	283435.77	2000	
Ni	62	89	No Gas	105.935	ppb	0.8	135092.31	2000	
Cu	63	89	No Gas	104.242	ppb	0.6	2116499.52	2000	
Cu	63	89	He	100.017	ppb	1.4	784360.14	2000	
Cu	65	89	No Gas	105.011	ppb	1.1	1019959.94	2000	
Zn	66	89	No Gas	105.580	ppb	1.6	633291.34	2000	

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	103.593	ppb	1.3	124011.90	2000	
Zn	67	89	No Gas	103.986	ppb	1.6	97828.03	2000	
Zn	68	89	No Gas	105.628	ppb	0.9	449096.70	2000	
As	75	89	No Gas	103.154	ppb	0.5	636167.32	2000	
As	75	89	He	102.357	ppb	0.7	87998.85	2000	
Se	77	89	No Gas	82.139	ppb	3.8	34475.46	2000	
Se	78	89	No Gas	105.726	ppb	1.3	114197.05	2000	
Se	78	89	He	103.120	ppb	2.4	5420.01	2000	
Se	82	89	No Gas	105.043	ppb	1.3	39054.11	2000	
[Se]	83	89	No Gas	189.725	ppb	38.1	1975.49	2000	
Sr	88	89	No Gas	100.151	ppb	0.4	5763329.80	2000	
Mo	95	89	No Gas	100.338	ppb	0.7	1089689.02	2000	
Mo	97	89	No Gas	102.205	ppb	0.7	694140.62	2000	
Mo	98	89	No Gas	99.601	ppb	1.6	1760712.17	2000	
[Mo]	99	89	No Gas	54.803	ppb	119.3	30.03	2000	
Cd	106	89	No Gas	104.275	ppb	1.8	109158.83	2000	
Ag	107	89	No Gas	96.885	ppb	0.5	2797024.26	200	
Ag	107	89	He	93.675	ppb	1.5	1328347.73	200	
Cd	108	89	No Gas	106.019	ppb	2.1	43736.29	2000	
Ag	109	89	No Gas	97.696	ppb	0.8	2725050.06	200	
Cd	111	89	No Gas	103.616	ppb	1.3	605522.59	2000	
Cd	114	89	No Gas	101.520	ppb	1.9	1547358.72	2000	
Sn	118	115	No Gas	101.432	ppb	1.7	1883338.05	2000	
Sb	121	115	No Gas	95.197	ppb	0.6	2572318.72	2000	
Sb	121	89	He	97.574	ppb	1.0	564709.04	2000	
Sb	123	115	No Gas	94.650	ppb	0.6	1972438.27	2000	
Ba	135	115	No Gas	104.457	ppb	0.9	568001.14	2000	
Ba	137	115	No Gas	103.477	ppb	1.3	986187.05	2000	
Tl	203	209	No Gas	95.761	ppb	0.9	2230674.95	2000	
Tl	205	209	No Gas	95.427	ppb	1.2	5342693.12	2000	
Pb	206	209	No Gas	97.725	ppb	1.5	1834359.10	2000	
Pb	207	209	No Gas	102.401	ppb	2.0	1585263.65	2000	
Pb	208	209	No Gas	99.724	ppb	1.2	7233887.03	2000	
Th	232	209	No Gas	94.467	ppb	0.5	7031443.12	2000	
U	238	209	No Gas	91.449	ppb	1.0	6756529.46	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4614037.76	0.6	5406885.91	85.34	70	125	
Sc	45	No Gas	22668101.48	0.3	24326295.51	93.18	75	125	
Sc	45	He	912372.53	1.1	970797.15	93.98	75	125	
Y	89	No Gas	52758416.86	1.3	56662702.82	93.11	75	125	
Y	89	He	7215981.00	2.0	7465540.55	96.66	75	125	
In	115	No Gas	11450258.69	0.3	12379434.81	92.49	75	125	
Tb	159	No Gas	15809520.39	2.1	17053216.17	92.71	75	125	
Bi	209	No Gas	9465557.40	0.9	10541485.14	89.79	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 329_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 23:51:43

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.742	ppb	0.2	2639709.14	100	102.74	90	110	
Be	9	6	No Gas	105.259	ppb	0.5	637298.13	100	105.26	90	110	
B	11	6	No Gas	255.201	ppb	0.8	1065040.30	250	102.08	90	110	
Na	23	45	No Gas	9827.846	ppb	0.8	298980056.68	10000	98.28	90	110	
Na	23	45	He	9864.328	ppb	0.6	8646030.71	10000	98.64	90	110	
Mg	24	45	No Gas	9689.130	ppb	1.2	202340523.65	10000	96.89	90	110	
Mg	24	45	He	9975.687	ppb	0.2	4419418.37	10000	99.76	90	110	
Mg	25	45	No Gas	9533.589	ppb	1.0	26947577.93	10000	95.34	90	110	
Al	27	45	No Gas	95.893	ppb	0.7	2630083.29	100	95.89	90	110	
Al	27	45	He	102.392	ppb	0.6	17601.35	100	102.39	90	110	
Si	28	45	No Gas	10019.120	ppb	0.6	108641201.42	10000	100.19	90	110	
Si	29	45	No Gas	10059.124	ppb	0.9	6739977.49	10000	100.59	90	110	
K	39	45	No Gas	9972.247	ppb	1.2	293474722.29	10000	99.72	90	110	
K	39	45	He	10239.491	ppb	0.6	3595095.99	10000	102.39	90	110	
Ca	44	45	No Gas	9997.996	ppb	1.0	8897240.28	10000	99.98	90	110	
Ca	44	45	He	10634.711	ppb	0.8	199675.30	10000	106.35	90	110	
Ti	47	45	No Gas	101.697	ppb	0.6	279636.84	100	101.7	90	110	
V	51	45	No Gas	96.583	ppb	1.2	3543795.83	100	96.58	90	110	
V	51	45	He	108.194	ppb	0.8	481765.79	100	108.19	90	110	
Cr	52	89	No Gas	97.584	ppb	1.4	3357927.62	100	97.58	90	110	
Cr	52	89	He	100.704	ppb	0.2	604660.36	100	100.7	90	110	
Cr	53	89	No Gas	99.196	ppb	0.6	458553.19	100	99.2	90	110	
Mn	55	89	No Gas	100.695	ppb	2.6	4694738.29	100	100.7	90	110	
Mn	55	89	He	101.775	ppb	0.3	324655.68	100	101.78	90	110	
Fe	56	89	No Gas	10043.146	ppb	2.7	339262749.25	10000	100.43	90	110	
Fe	56	89	He	9738.889	ppb	0.6	40777923.56	10000	97.39	90	110	
Co	59	89	No Gas	99.721	ppb	0.8	3717863.29	100	99.72	90	110	
Co	59	89	He	97.757	ppb	0.8	975636.03	100	97.76	90	110	
Ni	60	89	No Gas	103.075	ppb	1.1	845665.30	100	103.08	90	110	
Ni	60	89	He	100.725	ppb	1.1	276485.91	100	100.72	90	110	
Ni	62	89	No Gas	104.924	ppb	3.7	131446.69	100	104.92	90	110	
Cu	63	89	No Gas	101.263	ppb	2.7	2019467.08	100	101.26	90	110	
Cu	63	89	He	99.868	ppb	0.3	751953.83	100	99.87	90	110	
Cu	65	89	No Gas	100.867	ppb	4.0	962137.79	100	100.87	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.436	ppb	3.4	579939.35	100	98.44	90	110	
Zn	66	89	He	101.179	ppb	0.1	116296.25	100	101.18	90	110	
Zn	67	89	No Gas	98.876	ppb	1.8	91393.33	100	98.88	90	110	
Zn	68	89	No Gas	100.421	ppb	1.4	419481.97	100	100.42	90	110	
As	75	89	No Gas	102.035	ppb	2.6	618035.88	100	102.03	90	110	
As	75	89	He	102.472	ppb	1.1	84577.09	100	102.47	90	110	
Se	77	89	No Gas	98.565	ppb	0.8	38962.10	100	98.56	90	110	
Se	78	89	No Gas	102.243	ppb	2.8	109009.62	100	102.24	90	110	
Se	78	89	He	101.931	ppb	4.3	5142.13	100	101.93	90	110	
Se	82	89	No Gas	102.746	ppb	4.3	37508.53	100	102.75	90	110	
[Se]	83	89	No Gas	118.260	ppb	56.3	1858.69	100	118.26	90	110	Failed
Sr	88	89	No Gas	98.988	ppb	1.2	5595978.49	100	98.99	90	110	
Mo	95	89	No Gas	101.757	ppb	2.0	1085430.46	100	101.76	90	110	
Mo	97	89	No Gas	102.985	ppb	3.5	686803.55	100	102.98	90	110	
Mo	98	89	No Gas	98.986	ppb	3.8	1718335.51	100	98.99	90	110	
[Mo]	99	89	No Gas	107.719	ppb	78.6	43.38	100	107.72	90	110	
Cd	106	89	No Gas	98.030	ppb	6.0	103804.23	100	98.03	90	110	
Ag	107	89	No Gas	100.758	ppb	0.7	2857610.93	100	100.76	90	110	
Ag	107	89	He	99.339	ppb	0.4	1352427.38	100	99.34	90	110	
Cd	108	89	No Gas	103.130	ppb	3.0	41787.95	100	103.13	90	110	
Ag	109	89	No Gas	101.395	ppb	3.0	2777180.42	100	101.4	90	110	
Cd	111	89	No Gas	99.239	ppb	3.7	569464.80	100	99.24	90	110	
Cd	114	89	No Gas	96.648	ppb	1.8	1447112.58	100	96.65	90	110	
Sn	118	115	No Gas	103.130	ppb	1.2	1859401.66	100	103.13	90	110	
Sb	121	115	No Gas	102.762	ppb	3.0	2695197.11	100	102.76	90	110	
Sb	121	89	He	107.345	ppb	0.3	596343.24	100	107.34	90	110	
Sb	123	115	No Gas	101.134	ppb	1.8	2046043.86	100	101.13	90	110	
Ba	135	115	No Gas	105.058	ppb	1.3	554674.34	100	105.06	90	110	
Ba	137	115	No Gas	105.145	ppb	0.6	973117.86	100	105.14	90	110	
Tl	203	209	No Gas	99.280	ppb	2.7	2303134.02	100	99.28	90	110	
Tl	205	209	No Gas	96.798	ppb	3.4	5396759.27	100	96.8	90	110	
Pb	206	209	No Gas	95.527	ppb	3.0	1785780.11	100	95.53	90	110	
Pb	207	209	No Gas	95.228	ppb	2.4	1468418.32	100	95.23	90	110	
Pb	208	209	No Gas	95.961	ppb	1.8	6933793.75	100	95.96	90	110	
Th	232	209	No Gas	99.371	ppb	2.6	7366371.18	100	99.37	90	110	
U	238	209	No Gas	95.773	ppb	3.8	7046095.90	100	95.77	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4200577.36	0.8	5406885.91	77.69	70	125	
Sc	45	No Gas	22044276.82	0.7	24326295.51	90.62	75	125	
Sc	45	He	875049.41	0.3	970797.15	90.14	75	125	
Y	89	No Gas	51834858.30	2.7	56662702.82	91.48	75	125	
Y	89	He	6926876.48	0.5	7465540.55	92.78	75	125	
In	115	No Gas	11119716.94	2.2	12379434.81	89.82	75	125	
Tb	159	No Gas	15834951.65	1.7	17053216.17	92.86	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9430000.46	2.2	10541485.14	89.46	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	330_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-11-30 23:53:28
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.281	ppb	14.4	241306.85	100	
Be	9	6	No Gas	0.019	ppb	64.9	193.53	100	
B	11	6	No Gas	6.793	ppb	6.7	37631.57	100	
Na	23	45	No Gas	97.183	ppb	0.2	3345549.42	500000	
Na	23	45	He	97.487	ppb	3.4	103224.08	500000	
Mg	24	45	No Gas	2.442	ppb	11.7	58768.41	500000	
Mg	24	45	He	1.809	ppb	62.8	1013.44	500000	
Mg	25	45	No Gas	2.376	ppb	23.7	7816.31	500000	
Al	27	45	No Gas	0.163	ppb	24.5	15516.69	500000	
Al	27	45	He	0.015	ppb	1050.4	90.00	500000	
Si	28	45	No Gas	15.290	ppb	17.2	526567.32	100	
Si	29	45	No Gas	-0.127	ppb	N/A	80287.68	100	
K	39	45	No Gas	11.807	ppb	8.5	4890267.32	500000	
K	39	45	He	13.457	ppb	20.3	30956.82	500000	
Ca	44	45	No Gas	-55.583	ppb	N/A	74258.21	500000	
Ca	44	45	He	5.219	ppb	190.0	293.36	500000	
Ti	47	45	No Gas	0.054	ppb	29.2	407.09	10000	
V	51	45	No Gas	0.082	ppb	90.0	-1539.36	100	
V	51	45	He	-0.019	ppb	N/A	390.40	100	
Cr	52	89	No Gas	-0.023	ppb	N/A	27388.35	100	
Cr	52	89	He	-0.004	ppb	N/A	2616.25	100	
Cr	53	89	No Gas	-2.809	ppb	N/A	42057.12	100	
Mn	55	89	No Gas	0.181	ppb	3.7	18233.93	100	
Mn	55	89	He	0.233	ppb	5.9	951.00	100	
Fe	56	89	No Gas	10.678	ppb	17.0	2343512.10	500000	
Fe	56	89	He	9.678	ppb	8.8	69661.86	500000	
Co	59	89	No Gas	0.033	ppb	4.6	2636.28	100	
Co	59	89	He	0.025	ppb	23.5	510.53	100	
Ni	60	89	No Gas	0.061	ppb	14.0	1615.07	100	
Ni	60	89	He	-0.160	ppb	N/A	360.37	100	
Ni	62	89	No Gas	0.140	ppb	153.8	5339.82	100	
Cu	63	89	No Gas	-0.028	ppb	N/A	8888.60	100	
Cu	63	89	He	0.018	ppb	173.3	2990.04	100	
Cu	65	89	No Gas	-0.003	ppb	N/A	4548.74	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.053	ppb	18.3	2045.57	100	
Zn	66	89	He	-0.013	ppb	N/A	340.35	100	
Zn	67	89	No Gas	-0.007	ppb	N/A	367.05	100	
Zn	68	89	No Gas	0.017	ppb	86.9	1464.90	100	
As	75	89	No Gas	0.081	ppb	281.7	4069.77	100	
As	75	89	He	0.039	ppb	25.0	55.56	100	
Se	77	89	No Gas	-3.117	ppb	N/A	7643.29	100	
Se	78	89	No Gas	2.261	ppb	38.9	19059.43	100	
Se	78	89	He	0.269	ppb	61.0	37.78	100	
Se	82	89	No Gas	0.108	ppb	218.7	129.60	100	
[Se]	83	89	No Gas	134.882	ppb	77.9	1915.42	100	Failed
Sr	88	89	No Gas	0.032	ppb	9.8	2289.19	100	
Mo	95	89	No Gas	0.308	ppb	21.8	3994.67	10000	
Mo	97	89	No Gas	0.313	ppb	15.1	2572.88	10000	
Mo	98	89	No Gas	0.331	ppb	23.2	7107.74	10000	
[Mo]	99	89	No Gas	-21.056	ppb	N/A	10.01	10000	
Cd	106	89	No Gas	-0.274	ppb	N/A	51384.58	100	
Ag	107	89	No Gas	0.018	ppb	21.7	1871.25	100	
Ag	107	89	He	-0.003	ppb	N/A	674.04	100	
Cd	108	89	No Gas	0.125	ppb	130.0	126.79	100	
Ag	109	89	No Gas	0.016	ppb	19.6	1384.82	100	
Cd	111	89	No Gas	0.003	ppb	433.4	-53.83	100	
Cd	114	89	No Gas	0.017	ppb	12.9	327.00	100	
Sn	118	115	No Gas	0.101	ppb	24.7	5002.10	100	
Sb	121	115	No Gas	0.179	ppb	30.7	7895.81	100	
Sb	121	89	He	0.270	ppb	12.6	2333.60	100	
Sb	123	115	No Gas	0.177	ppb	29.8	6184.48	100	
Ba	135	115	No Gas	0.025	ppb	21.9	203.54	100	
Ba	137	115	No Gas	0.023	ppb	22.8	370.38	100	
Tl	203	209	No Gas	0.234	ppb	18.5	5887.42	100	
Tl	205	209	No Gas	0.221	ppb	23.4	13407.79	100	
Pb	206	209	No Gas	0.024	ppb	19.0	1705.18	100	
Pb	207	209	No Gas	0.031	ppb	11.3	1524.98	100	
Pb	208	209	No Gas	0.026	ppb	9.5	6797.65	100	
Th	232	209	No Gas	0.257	ppb	25.2	25910.76	100	
U	238	209	No Gas	0.110	ppb	18.3	8972.47	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4394815.26	0.1	5406885.91	81.28	70	125	
Sc	45	No Gas	21958404.28	0.5	24326295.51	90.27	75	125	
Sc	45	He	879347.38	1.2	970797.15	90.58	75	125	
Y	89	No Gas	52843905.68	1.1	56662702.82	93.26	75	125	
Y	89	He	7030023.37	0.5	7465540.55	94.17	75	125	
In	115	No Gas	11483914.48	0.5	12379434.81	92.77	75	125	
Tb	159	No Gas	15809685.13	0.3	17053216.17	92.71	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9598363.79	0.5	10541485.14	91.05	75	125	

Sample Report

Sample Name 20111764-07A

File Name 331SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-11-30 23:55:07

Sample Type Sample

Total Dilution 1.0000

Comment 6020W B168407

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	16.100	ppb	1.2	648914.85	2000	
Be	9	6	No Gas	1.504	ppb	3.3	9883.51	2000	
B	11	6	No Gas	61.011	ppb	1.2	280608.39	10000	
Na	23	45	No Gas	OR	ppb	OR	OR	200000	
Na	23	45	He	297652.032	ppb	0.4	268109529.34	200000	>LDR
Mg	24	45	No Gas	16431.810	ppb	2.0	347968781.48	200000	
Mg	24	45	He	16242.765	ppb	1.7	7408796.35	200000	
Mg	25	45	No Gas	16205.989	ppb	0.9	46456692.64	200000	
Al	27	45	No Gas	13031.965	ppb	1.6	360962647.96	2000	>LDR
Al	27	45	He	13484.588	ppb	0.6	2375081.89	2000	>LDR
Si	28	45	No Gas	24140.513	ppb	1.4	264947975.18	20000	>LDR
Si	29	45	No Gas	24112.042	ppb	0.6	16271362.23	20000	>LDR
K	39	45	No Gas	6528.756	ppb	1.8	196462063.74	200000	
K	39	45	He	6616.716	ppb	0.3	2401636.06	200000	
Ca	44	45	No Gas	56563.921	ppb	0.2	50471375.92	200000	
Ca	44	45	He	54095.818	ppb	0.7	1045078.19	200000	
Ti	47	45	No Gas	210.651	ppb	0.3	587170.02	2000	
V	51	45	No Gas	30.990	ppb	3.4	1149896.79	2000	
V	51	45	He	36.168	ppb	1.0	166151.77	2000	
Cr	52	89	No Gas	176.666	ppb	0.8	6190679.86	2000	
Cr	52	89	He	169.235	ppb	0.5	1040833.70	2000	
Cr	53	89	No Gas	168.121	ppb	0.5	756773.21	2000	
Mn	55	89	No Gas	1313.046	ppb	0.5	62464546.34	2000	
Mn	55	89	He	1291.527	ppb	0.6	4224957.26	2000	
Fe	56	89	No Gas	36263.094	ppb	1.1	1247123861.21	200000	
Fe	56	89	He	35428.566	ppb	0.4	152139511.07	200000	
Co	59	89	No Gas	15.659	ppb	0.3	597854.16	2000	
Co	59	89	He	15.142	ppb	0.9	155279.50	2000	
Ni	60	89	No Gas	150.159	ppb	0.8	1258622.74	2000	
Ni	60	89	He	142.241	ppb	0.5	400320.90	2000	
Ni	62	89	No Gas	150.585	ppb	1.2	190611.18	2000	
Cu	63	89	No Gas	386.966	ppb	0.5	7862509.40	2000	
Cu	63	89	He	362.067	ppb	1.0	2789586.05	2000	
Cu	65	89	No Gas	382.280	ppb	0.1	3716042.41	2000	
Zn	66	89	No Gas	9849.503	ppb	0.2	59162225.68	2000	>LDR

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	9776.284	ppb	0.8	11495514.70	2000	>LDR
Zn	67	89	No Gas	9379.266	ppb	0.4	8826649.79	2000	>LDR
Zn	68	89	No Gas	9870.326	ppb	0.2	42006625.88	2000	>LDR
As	75	89	No Gas	163.718	ppb	0.3	1011622.44	2000	
As	75	89	He	167.855	ppb	1.0	142132.08	2000	
Se	77	89	No Gas	23.276	ppb	11.6	16009.15	2000	
Se	78	89	No Gas	5.823	ppb	5.6	22394.49	2000	
Se	78	89	He	4.750	ppb	16.4	268.89	2000	
Se	82	89	No Gas	3.247	ppb	28.5	1299.66	2000	
[Se]	83	89	No Gas	261.618	ppb	62.3	2068.93	2000	
Sr	88	89	No Gas	96.897	ppb	1.0	5598316.04	2000	
Mo	95	89	No Gas	23.593	ppb	0.4	257748.99	2000	
Mo	97	89	No Gas	23.090	ppb	0.7	157794.99	2000	
Mo	98	89	No Gas	23.167	ppb	1.3	412176.33	2000	
[Mo]	99	89	No Gas	118.143	ppb	49.4	46.71	2000	
Cd	106	89	No Gas	20.260	ppb	11.4	62918.77	2000	
Ag	107	89	No Gas	16.628	ppb	0.0	483097.46	200	
Ag	107	89	He	16.206	ppb	0.8	226986.90	200	
Cd	108	89	No Gas	23.613	ppb	7.1	9840.36	2000	
Ag	109	89	No Gas	16.471	ppb	0.8	462012.13	200	
Cd	111	89	No Gas	19.944	ppb	1.7	116964.20	2000	
Cd	114	89	No Gas	21.621	ppb	1.0	330955.66	2000	
Sn	118	115	No Gas	68.956	ppb	0.4	1243254.92	2000	
Sb	121	115	No Gas	206.402	ppb	1.0	5407541.31	2000	
Sb	121	89	He	202.770	ppb	0.2	1155142.07	2000	
Sb	123	115	No Gas	205.130	ppb	1.2	4144581.78	2000	
Ba	135	115	No Gas	228.138	ppb	1.1	1203504.68	2000	
Ba	137	115	No Gas	229.505	ppb	0.1	2122044.39	2000	
Tl	203	209	No Gas	0.623	ppb	2.8	22600.05	2000	
Tl	205	209	No Gas	0.605	ppb	1.0	52801.19	2000	
Pb	206	209	No Gas	4741.672	ppb	0.9	135330430.71	2000	>LDR
Pb	207	209	No Gas	4814.334	ppb	1.0	113326623.52	2000	>LDR
Pb	208	209	No Gas	4792.467	ppb	0.7	528576414.15	2000	>LDR
Th	232	209	No Gas	0.525	ppb	1.8	69145.61	2000	
U	238	209	No Gas	1.222	ppb	0.8	138361.60	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4523914.17	1.1	5406885.91	83.67	70	125	
Sc	45	No Gas	22358223.27	1.3	24326295.51	91.91	75	125	
Sc	45	He	901031.59	0.7	970797.15	92.81	75	125	
Y	89	No Gas	52968251.69	0.4	56662702.82	93.48	75	125	
Y	89	He	7107792.39	1.1	7465540.55	95.21	75	125	
In	115	No Gas	11109582.80	0.7	12379434.81	89.74	75	125	
Tb	159	No Gas	15601692.14	0.4	17053216.17	91.49	75	125	
Bi	209	No Gas	14400543.32	0.7	10541485.14	136.61	75	125	ISTD Failed

Sample Report

Sample Name 20111837-02BMS

File Name 334SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 00:00:47

Sample Type Sample

Total Dilution 1.0000

Comment 6020W B168407

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	135.550	ppb	1.4	4179955.90	2000	
Be	9	6	No Gas	105.608	ppb	0.9	783371.13	2000	
B	11	6	No Gas	980.989	ppb	0.8	4988438.24	10000	
Na	23	45	No Gas	OR	ppb	OR	OR	200000	
Na	23	45	He	1430909.375	ppb	1.2	1584356296.39	200000	>LDR
Mg	24	45	No Gas	99264.473	ppb	1.0	2268421566.20	200000	
Mg	24	45	He	91423.102	ppb	1.0	51263069.24	200000	
Mg	25	45	No Gas	94972.736	ppb	0.7	293762022.29	200000	
Al	27	45	No Gas	8945.319	ppb	0.9	267370522.68	2000	>LDR
Al	27	45	He	9206.553	ppb	0.7	1993483.04	2000	>LDR
Si	28	45	No Gas	22582.137	ppb	0.9	267466740.62	20000	>LDR
Si	29	45	No Gas	22566.966	ppb	0.9	16437154.27	20000	>LDR
K	39	45	No Gas	OR	ppb	OR	OR	200000	
K	39	45	He	1055445.239	ppb	0.2	465699393.06	200000	>LDR
Ca	44	45	No Gas	208824.602	ppb	0.7	200657770.34	200000	>LDR
Ca	44	45	He	200132.940	ppb	0.4	4752484.51	200000	>LDR
Ti	47	45	No Gas	70.941	ppb	1.2	213545.73	2000	
V	51	45	No Gas	109.522	ppb	1.0	4398212.94	2000	
V	51	45	He	108.768	ppb	0.6	613045.41	2000	
Cr	52	89	No Gas	116.675	ppb	0.9	3909573.22	2000	
Cr	52	89	He	106.342	ppb	0.8	713763.82	2000	
Cr	53	89	No Gas	105.390	ppb	0.6	471741.91	2000	
Mn	55	89	No Gas	1989.865	ppb	0.9	90302195.71	2000	>LDR
Mn	55	89	He	1932.530	ppb	1.0	6888659.30	2000	>LDR
Fe	56	89	No Gas	12236.713	ppb	2.0	402750075.67	200000	
Fe	56	89	He	11479.813	ppb	1.4	53736057.53	200000	
Co	59	89	No Gas	110.327	ppb	1.9	4010535.54	2000	
Co	59	89	He	96.476	ppb	1.3	1076501.53	2000	
Ni	60	89	No Gas	129.549	ppb	1.3	1036089.84	2000	
Ni	60	89	He	108.862	ppb	1.6	334008.37	2000	
Ni	62	89	No Gas	138.371	ppb	1.3	167493.70	2000	
Cu	63	89	No Gas	140.798	ppb	1.6	2735052.04	2000	
Cu	63	89	He	108.255	ppb	1.1	911020.74	2000	
Cu	65	89	No Gas	124.389	ppb	1.1	1156474.73	2000	
Zn	66	89	No Gas	196.211	ppb	0.8	1125953.27	2000	

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	188.415	ppb	1.0	241798.43	2000	
Zn	67	89	No Gas	191.437	ppb	1.7	172215.46	2000	
Zn	68	89	No Gas	194.836	ppb	0.2	792312.97	2000	
As	75	89	No Gas	108.513	ppb	0.6	640795.27	2000	
As	75	89	He	107.515	ppb	0.5	99217.76	2000	
Se	77	89	No Gas	79.419	ppb	1.8	32204.13	2000	
Se	78	89	No Gas	37.904	ppb	0.5	49624.33	2000	
Se	78	89	He	25.694	ppb	2.9	1468.98	2000	
Se	82	89	No Gas	24.413	ppb	1.6	8759.01	2000	
[Se]	83	89	No Gas	932.372	ppb	6.6	2729.72	2000	
Sr	88	89	No Gas	341.559	ppb	0.4	18824420.71	2000	
Mo	95	89	No Gas	80.046	ppb	1.1	832667.83	2000	
Mo	97	89	No Gas	78.973	ppb	1.1	513777.42	2000	
Mo	98	89	No Gas	79.305	ppb	0.7	1343089.34	2000	
[Mo]	99	89	No Gas	1559.091	ppb	18.5	407.09	2000	
Cd	106	89	No Gas	89.922	ppb	2.0	96949.67	2000	
Ag	107	89	No Gas	1.639	ppb	21.1	46525.30	200	
Ag	107	89	He	0.917	ppb	18.7	14730.40	200	
Cd	108	89	No Gas	91.820	ppb	1.9	36293.26	2000	
Ag	109	89	No Gas	0.988	ppb	37.5	27309.70	200	
Cd	111	89	No Gas	88.887	ppb	0.4	497522.48	2000	
Cd	114	89	No Gas	87.848	ppb	0.3	1282572.05	2000	
Sn	118	115	No Gas	40.686	ppb	0.3	665208.78	2000	
Sb	121	115	No Gas	69.447	ppb	1.3	1648909.59	2000	
Sb	121	89	He	62.398	ppb	0.9	387959.26	2000	
Sb	123	115	No Gas	69.291	ppb	1.0	1268879.01	2000	
Ba	135	115	No Gas	121.891	ppb	0.3	582195.36	2000	
Ba	137	115	No Gas	121.227	ppb	0.6	1014834.26	2000	
Tl	203	209	No Gas	98.863	ppb	1.2	1747926.31	2000	
Tl	205	209	No Gas	97.541	ppb	0.9	4145178.73	2000	
Pb	206	209	No Gas	100.913	ppb	0.7	1437809.37	2000	
Pb	207	209	No Gas	105.820	ppb	0.3	1243540.50	2000	
Pb	208	209	No Gas	103.969	ppb	0.3	5724634.83	2000	
Th	232	209	No Gas	5.682	ppb	0.9	325554.41	2000	
U	238	209	No Gas	79.238	ppb	1.0	4443952.29	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5146835.64	3.1	5406885.91	95.19	70	125	
Sc	45	No Gas	24120597.31	2.4	24326295.51	99.15	75	125	
Sc	45	He	1107687.49	1.4	970797.15	114.1	75	125	
Y	89	No Gas	50528103.21	1.0	56662702.82	89.17	75	125	
Y	89	He	7745115.76	1.4	7465540.55	103.74	75	125	
In	115	No Gas	10057655.56	0.8	12379434.81	81.24	75	125	
Tb	159	No Gas	13652161.36	0.8	17053216.17	80.06	75	125	
Bi	209	No Gas	7184551.38	0.5	10541485.14	68.16	75	125	ISTD Failed

Sample Report

Sample Name 20111837-02BMSD

File Name 335SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 00:02:47

Sample Type Sample

Total Dilution 1.0000

Comment 6020W B168407

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	134.546	ppb	0.6	4342572.69	2000	
Be	9	6	No Gas	104.687	ppb	1.0	812396.02	2000	
B	11	6	No Gas	971.301	ppb	0.6	5167439.12	10000	
Na	23	45	No Gas	OR	ppb	OR	OR	200000	
Na	23	45	He	1413112.551	ppb	0.4	1609729362.68	200000	>LDR
Mg	24	45	No Gas	98545.442	ppb	0.7	2355412978.24	200000	
Mg	24	45	He	90724.107	ppb	0.8	52338622.55	200000	
Mg	25	45	No Gas	94298.418	ppb	0.9	305049495.46	200000	
Al	27	45	No Gas	8928.311	ppb	0.7	279123182.51	2000	>LDR
Al	27	45	He	9171.640	ppb	0.8	2043032.00	2000	>LDR
Si	28	45	No Gas	22433.955	ppb	0.6	277919633.53	20000	>LDR
Si	29	45	No Gas	22472.220	ppb	0.4	17120221.92	20000	>LDR
K	39	45	No Gas	OR	ppb	OR	OR	200000	
K	39	45	He	1054463.640	ppb	0.8	478631459.53	200000	>LDR
Ca	44	45	No Gas	205528.869	ppb	0.6	206568783.59	200000	>LDR
Ca	44	45	He	198996.220	ppb	0.3	4861245.24	200000	>LDR
Ti	47	45	No Gas	71.770	ppb	0.5	225942.34	2000	
V	51	45	No Gas	108.580	ppb	0.8	4560391.08	2000	
V	51	45	He	107.133	ppb	0.5	621243.59	2000	
Cr	52	89	No Gas	117.450	ppb	0.4	4045899.14	2000	
Cr	52	89	He	106.246	ppb	0.3	730608.11	2000	
Cr	53	89	No Gas	106.560	ppb	0.2	489812.12	2000	
Mn	55	89	No Gas	1990.228	ppb	0.5	92858051.57	2000	>LDR
Mn	55	89	He	1913.445	ppb	0.6	6987784.05	2000	>LDR
Fe	56	89	No Gas	12318.147	ppb	1.0	416806284.32	200000	
Fe	56	89	He	11383.324	ppb	0.2	54593610.85	200000	
Co	59	89	No Gas	111.008	ppb	0.9	4148258.79	2000	
Co	59	89	He	96.245	ppb	0.5	1100318.86	2000	
Ni	60	89	No Gas	130.511	ppb	0.1	1073089.00	2000	
Ni	60	89	He	107.141	ppb	0.1	336850.76	2000	
Ni	62	89	No Gas	140.118	ppb	0.8	174311.12	2000	
Cu	63	89	No Gas	144.790	ppb	0.5	2891338.84	2000	
Cu	63	89	He	109.205	ppb	0.5	941582.42	2000	
Cu	65	89	No Gas	127.621	ppb	0.9	1219772.33	2000	
Zn	66	89	No Gas	195.902	ppb	0.5	1155794.42	2000	

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	185.480	ppb	0.8	243873.47	2000	
Zn	67	89	No Gas	192.210	ppb	1.3	177764.77	2000	
Zn	68	89	No Gas	194.603	ppb	0.7	813624.07	2000	
As	75	89	No Gas	107.750	ppb	0.6	654189.39	2000	
As	75	89	He	106.033	ppb	0.2	100248.59	2000	
Se	77	89	No Gas	82.079	ppb	3.5	33933.49	2000	
Se	78	89	No Gas	37.775	ppb	3.4	50910.31	2000	
Se	78	89	He	23.853	ppb	5.7	1398.97	2000	
Se	82	89	No Gas	22.791	ppb	10.0	8409.92	2000	
[Se]	83	89	No Gas	703.770	ppb	32.3	2542.83	2000	
Sr	88	89	No Gas	338.673	ppb	0.2	19190502.62	2000	
Mo	95	89	No Gas	81.082	ppb	0.4	867235.52	2000	
Mo	97	89	No Gas	80.503	ppb	0.9	538476.94	2000	
Mo	98	89	No Gas	80.814	ppb	0.9	1407134.60	2000	
[Mo]	99	89	No Gas	2328.081	ppb	19.1	617.31	2000	>LDR
Cd	106	89	No Gas	88.975	ppb	1.4	99158.42	2000	
Ag	107	89	No Gas	1.771	ppb	8.3	51640.83	200	
Ag	107	89	He	2.337	ppb	64.1	37113.24	200	
Cd	108	89	No Gas	90.761	ppb	1.4	36881.85	2000	
Ag	109	89	No Gas	1.807	ppb	47.6	50571.02	200	
Cd	111	89	No Gas	87.257	ppb	0.7	502147.06	2000	
Cd	114	89	No Gas	86.395	ppb	0.1	1296885.75	2000	
Sn	118	115	No Gas	39.828	ppb	0.7	661707.23	2000	
Sb	121	115	No Gas	71.623	ppb	1.3	1727843.68	2000	
Sb	121	89	He	64.753	ppb	0.3	412443.60	2000	
Sb	123	115	No Gas	71.033	ppb	1.8	1321586.49	2000	
Ba	135	115	No Gas	120.964	ppb	0.8	587045.27	2000	
Ba	137	115	No Gas	120.054	ppb	0.9	1021140.85	2000	
Tl	203	209	No Gas	98.041	ppb	0.1	1729576.92	2000	
Tl	205	209	No Gas	96.352	ppb	0.1	4085661.71	2000	
Pb	206	209	No Gas	100.080	ppb	0.2	1422801.92	2000	
Pb	207	209	No Gas	105.156	ppb	0.3	1232990.73	2000	
Pb	208	209	No Gas	102.810	ppb	0.0	5648290.67	2000	
Th	232	209	No Gas	5.826	ppb	0.4	332952.37	2000	
U	238	209	No Gas	77.727	ppb	0.7	4349417.55	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	5384542.07	2.0	5406885.91	99.59	70	125	
Sc	45	No Gas	25230201.92	1.3	24326295.51	103.72	75	125	
Sc	45	He	1139534.47	0.8	970797.15	117.38	75	125	
Y	89	No Gas	51951349.79	0.8	56662702.82	91.69	75	125	
Y	89	He	7934961.44	1.0	7465540.55	106.29	75	125	
In	115	No Gas	10219876.36	1.3	12379434.81	82.56	75	125	
Tb	159	No Gas	13862566.34	0.1	17053216.17	81.29	75	125	
Bi	209	No Gas	7168539.99	0.3	10541485.14	68	75	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 341_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 00:13:38

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	103.009	ppb	0.1	2715509.79	100	103.01	90	110	
Be	9	6	No Gas	101.025	ppb	0.7	627720.40	100	101.02	90	110	
B	11	6	No Gas	240.076	ppb	0.8	1028641.98	250	96.03	90	110	
Na	23	45	No Gas	10362.957	ppb	1.3	303502931.79	10000	103.63	90	110	
Na	23	45	He	9790.476	ppb	0.4	8479668.00	10000	97.9	90	110	
Mg	24	45	No Gas	10000.248	ppb	1.0	201068757.00	10000	100	90	110	
Mg	24	45	He	9895.151	ppb	0.8	4331821.70	10000	98.95	90	110	
Mg	25	45	No Gas	9786.007	ppb	0.9	26633118.77	10000	97.86	90	110	
Al	27	45	No Gas	97.087	ppb	0.9	2563794.86	100	97.09	90	110	
Al	27	45	He	105.013	ppb	3.4	17835.06	100	105.01	90	110	
Si	28	45	No Gas	10258.147	ppb	1.1	107091958.85	10000	102.58	90	110	
Si	29	45	No Gas	10277.868	ppb	1.3	6629062.20	10000	102.78	90	110	
K	39	45	No Gas	10249.766	ppb	1.5	290315035.67	10000	102.5	90	110	
K	39	45	He	10294.372	ppb	0.2	3571312.45	10000	102.94	90	110	
Ca	44	45	No Gas	9989.094	ppb	0.4	8558793.00	10000	99.89	90	110	
Ca	44	45	He	10772.460	ppb	1.3	199858.52	10000	107.72	90	110	
Ti	47	45	No Gas	101.875	ppb	1.1	269707.86	100	101.88	90	110	
V	51	45	No Gas	99.200	ppb	0.9	3504771.21	100	99.2	90	110	
V	51	45	He	105.878	ppb	0.1	465874.06	100	105.88	90	110	
Cr	52	89	No Gas	100.238	ppb	1.5	3271239.47	100	100.24	90	110	
Cr	52	89	He	98.090	ppb	0.5	578349.52	100	98.09	90	110	
Cr	53	89	No Gas	100.706	ppb	1.1	440776.63	100	100.71	90	110	
Mn	55	89	No Gas	101.410	ppb	0.9	4485682.67	100	101.41	90	110	
Mn	55	89	He	102.652	ppb	0.2	321507.69	100	102.65	90	110	
Fe	56	89	No Gas	10080.250	ppb	1.2	323066298.89	10000	100.8	90	110	
Fe	56	89	He	9640.466	ppb	0.3	39633525.24	10000	96.4	90	110	
Co	59	89	No Gas	101.663	ppb	1.1	3595105.22	100	101.66	90	110	
Co	59	89	He	98.188	ppb	0.5	962145.46	100	98.19	90	110	
Ni	60	89	No Gas	103.517	ppb	1.4	805601.17	100	103.52	90	110	
Ni	60	89	He	97.306	ppb	0.3	262286.53	100	97.31	90	110	
Ni	62	89	No Gas	104.593	ppb	1.6	124343.93	100	104.59	90	110	
Cu	63	89	No Gas	102.975	ppb	1.3	1948289.80	100	102.98	90	110	
Cu	63	89	He	96.913	ppb	0.2	716535.75	100	96.91	90	110	
Cu	65	89	No Gas	102.658	ppb	0.8	929259.50	100	102.66	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.586	ppb	1.4	556743.11	100	99.59	90	110	
Zn	66	89	He	99.047	ppb	0.7	111788.34	100	99.05	90	110	
Zn	67	89	No Gas	100.727	ppb	0.8	88320.98	100	100.73	90	110	
Zn	68	89	No Gas	101.293	ppb	0.9	401366.16	100	101.29	90	110	
As	75	89	No Gas	101.917	ppb	0.8	585713.64	100	101.92	90	110	
As	75	89	He	101.205	ppb	0.4	82012.59	100	101.2	90	110	
Se	77	89	No Gas	106.298	ppb	1.4	39219.60	100	106.3	90	110	
Se	78	89	No Gas	104.297	ppb	3.2	105182.68	100	104.3	90	110	
Se	78	89	He	103.059	ppb	4.7	5103.21	100	103.06	90	110	
Se	82	89	No Gas	104.160	ppb	1.4	36090.00	100	104.16	90	110	
[Se]	83	89	No Gas	168.957	ppb	62.1	1818.64	100	168.96	90	110	Failed
Sr	88	89	No Gas	100.392	ppb	0.5	5383221.57	100	100.39	90	110	
Mo	95	89	No Gas	100.893	ppb	0.6	1021024.23	100	100.89	90	110	
Mo	97	89	No Gas	102.181	ppb	0.2	646669.05	100	102.18	90	110	
Mo	98	89	No Gas	100.644	ppb	0.7	1657967.47	100	100.64	90	110	
[Mo]	99	89	No Gas	322.895	ppb	14.6	93.43	100	322.9	90	110	Failed
Cd	106	89	No Gas	110.330	ppb	1.8	104841.21	100	110.33	90	110	Failed
Ag	107	89	No Gas	101.562	ppb	0.4	2732046.63	100	101.56	90	110	
Ag	107	89	He	96.434	ppb	0.4	1289085.28	100	96.43	90	110	
Cd	108	89	No Gas	101.815	ppb	2.7	39143.91	100	101.81	90	110	
Ag	109	89	No Gas	102.197	ppb	0.3	2656057.10	100	102.2	90	110	
Cd	111	89	No Gas	100.482	ppb	1.1	547201.93	100	100.48	90	110	
Cd	114	89	No Gas	99.268	ppb	0.7	1410018.51	100	99.27	90	110	
Sn	118	115	No Gas	101.053	ppb	0.6	1763487.57	100	101.05	90	110	
Sb	121	115	No Gas	101.665	ppb	0.4	2581673.65	100	101.66	90	110	
Sb	121	89	He	107.082	ppb	0.5	584095.51	100	107.08	90	110	
Sb	123	115	No Gas	100.827	ppb	0.8	1974641.21	100	100.83	90	110	
Ba	135	115	No Gas	103.850	ppb	0.6	530744.12	100	103.85	90	110	
Ba	137	115	No Gas	103.847	ppb	0.5	930196.94	100	103.85	90	110	
Tl	203	209	No Gas	99.847	ppb	0.9	2204116.83	100	99.85	90	110	
Tl	205	209	No Gas	98.164	ppb	0.9	5208552.32	100	98.16	90	110	
Pb	206	209	No Gas	97.902	ppb	0.4	1741681.84	100	97.9	90	110	
Pb	207	209	No Gas	98.198	ppb	0.4	1440872.96	100	98.2	90	110	
Pb	208	209	No Gas	98.536	ppb	0.3	6774254.53	100	98.54	90	110	
Th	232	209	No Gas	97.960	ppb	0.5	6909859.25	100	97.96	90	110	
U	238	209	No Gas	97.130	ppb	0.8	6801006.23	100	97.13	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4310997.81	1.8	5406885.91	79.73	70	125	
Sc	45	No Gas	21224235.11	0.4	24326295.51	87.25	75	125	
Sc	45	He	864669.69	0.3	970797.15	89.07	75	125	
Y	89	No Gas	49159708.14	0.3	56662702.82	86.76	75	125	
Y	89	He	6801135.52	0.4	7465540.55	91.1	75	125	
In	115	No Gas	10761826.74	0.5	12379434.81	86.93	75	125	
Tb	159	No Gas	14925569.35	0.2	17053216.17	87.52	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8970423.26	0.6	10541485.14	85.1	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	342_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 00:15:24
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.342	ppb	17.6	236977.75	100	
Be	9	6	No Gas	0.007	ppb	96.6	116.78	100	
B	11	6	No Gas	5.841	ppb	7.3	32704.30	100	
Na	23	45	No Gas	166.450	ppb	3.4	5182496.86	500000	
Na	23	45	He	156.959	ppb	1.3	151934.34	500000	
Mg	24	45	No Gas	1.159	ppb	37.9	30571.19	500000	
Mg	24	45	He	0.644	ppb	103.9	480.04	500000	
Mg	25	45	No Gas	1.100	ppb	20.5	4027.56	500000	
Al	27	45	No Gas	0.064	ppb	95.5	12220.83	500000	
Al	27	45	He	-0.093	ppb	N/A	70.00	500000	
Si	28	45	No Gas	18.954	ppb	19.4	539133.63	100	
Si	29	45	No Gas	10.218	ppb	49.5	82969.45	100	
K	39	45	No Gas	35.815	ppb	1.1	5317455.96	500000	
K	39	45	He	26.415	ppb	10.5	34685.43	500000	
Ca	44	45	No Gas	-52.634	ppb	N/A	73172.33	500000	
Ca	44	45	He	7.093	ppb	109.6	320.02	500000	
Ti	47	45	No Gas	0.028	ppb	105.3	320.33	10000	
V	51	45	No Gas	0.047	ppb	161.0	-2695.47	100	
V	51	45	He	-0.019	ppb	N/A	383.73	100	
Cr	52	89	No Gas	0.074	ppb	6.0	28979.87	100	
Cr	52	89	He	-0.037	ppb	N/A	2369.30	100	
Cr	53	89	No Gas	-2.140	ppb	N/A	42267.91	100	
Mn	55	89	No Gas	0.187	ppb	9.1	17462.16	100	
Mn	55	89	He	0.240	ppb	8.0	957.67	100	
Fe	56	89	No Gas	12.017	ppb	13.4	2250845.43	500000	
Fe	56	89	He	7.010	ppb	9.0	57310.88	500000	
Co	59	89	No Gas	0.020	ppb	19.5	2015.54	100	
Co	59	89	He	0.010	ppb	61.2	350.36	100	
Ni	60	89	No Gas	0.138	ppb	18.6	2128.99	100	
Ni	60	89	He	-0.179	ppb	N/A	300.31	100	
Ni	62	89	No Gas	0.645	ppb	7.1	5616.85	100	
Cu	63	89	No Gas	0.216	ppb	1.8	13042.83	100	
Cu	63	89	He	0.199	ppb	10.8	4295.06	100	
Cu	65	89	No Gas	0.203	ppb	7.1	6171.02	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.112	ppb	45.9	2262.50	100	
Zn	66	89	He	0.068	ppb	23.9	427.11	100	
Zn	67	89	No Gas	0.089	ppb	75.4	430.44	100	
Zn	68	89	No Gas	0.034	ppb	46.0	1444.88	100	
As	75	89	No Gas	0.057	ppb	153.8	3685.51	100	
As	75	89	He	0.032	ppb	37.2	48.89	100	
Se	77	89	No Gas	-0.407	ppb	N/A	8010.52	100	
Se	78	89	No Gas	2.721	ppb	4.7	18357.79	100	
Se	78	89	He	-0.072	ppb	N/A	20.00	100	
Se	82	89	No Gas	-0.489	ppb	N/A	-86.38	100	
[Se]	83	89	No Gas	142.170	ppb	65.9	1811.96	100	Failed
Sr	88	89	No Gas	0.074	ppb	14.8	4465.30	100	
Mo	95	89	No Gas	0.390	ppb	24.1	4602.16	10000	
Mo	97	89	No Gas	0.390	ppb	33.8	2916.64	10000	
Mo	98	89	No Gas	0.384	ppb	19.5	7572.19	10000	
[Mo]	99	89	No Gas	61.941	ppb	172.4	30.03	10000	
Cd	106	89	No Gas	7.078	ppb	27.4	52265.64	100	
Ag	107	89	No Gas	0.012	ppb	27.6	1598.99	100	
Ag	107	89	He	-0.006	ppb	N/A	610.64	100	
Cd	108	89	No Gas	0.016	ppb	663.6	76.74	100	
Ag	109	89	No Gas	0.008	ppb	54.0	1074.48	100	
Cd	111	89	No Gas	0.006	ppb	106.6	-34.57	100	
Cd	114	89	No Gas	0.011	ppb	28.0	220.23	100	
Sn	118	115	No Gas	0.088	ppb	7.7	4543.04	100	
Sb	121	115	No Gas	0.165	ppb	40.2	7179.85	100	
Sb	121	89	He	0.301	ppb	13.3	2463.61	100	
Sb	123	115	No Gas	0.188	ppb	32.3	6134.37	100	
Ba	135	115	No Gas	0.042	ppb	64.4	286.97	100	
Ba	137	115	No Gas	0.022	ppb	9.7	350.36	100	
Tl	203	209	No Gas	0.183	ppb	20.8	4495.42	100	
Tl	205	209	No Gas	0.182	ppb	23.3	10769.06	100	
Pb	206	209	No Gas	0.024	ppb	52.4	1641.78	100	
Pb	207	209	No Gas	0.023	ppb	94.7	1354.80	100	
Pb	208	209	No Gas	0.024	ppb	59.9	6350.46	100	
Th	232	209	No Gas	0.267	ppb	21.8	25576.35	100	
U	238	209	No Gas	0.106	ppb	16.3	8271.26	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4289300.10	0.4	5406885.91	79.33	70	125	
Sc	45	No Gas	20913245.37	0.2	24326295.51	85.97	75	125	
Sc	45	He	859106.89	0.5	970797.15	88.49	75	125	
Y	89	No Gas	49793194.96	0.4	56662702.82	87.88	75	125	
Y	89	He	6907053.74	0.5	7465540.55	92.52	75	125	
In	115	No Gas	10985605.50	0.5	12379434.81	88.74	75	125	
Tb	159	No Gas	15099930.79	0.5	17053216.17	88.55	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9215701.58	0.2	10541485.14	87.42	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 353_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 00:34:34

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.743	ppb	0.8	2511225.71	100	102.74	90	110	
Be	9	6	No Gas	104.376	ppb	1.1	601181.12	100	104.38	90	110	
B	11	6	No Gas	245.879	ppb	0.1	976432.55	250	98.35	90	110	
Na	23	45	No Gas	9832.253	ppb	0.4	278222031.22	10000	98.32	90	110	
Na	23	45	He	9829.680	ppb	0.6	8201152.17	10000	98.3	90	110	
Mg	24	45	No Gas	9776.738	ppb	1.9	189909370.50	10000	97.77	90	110	
Mg	24	45	He	9912.447	ppb	0.1	4180117.33	10000	99.12	90	110	
Mg	25	45	No Gas	9735.316	ppb	1.0	25596968.79	10000	97.35	90	110	
Al	27	45	No Gas	96.403	ppb	0.5	2459465.90	100	96.4	90	110	
Al	27	45	He	105.082	ppb	1.8	17190.81	100	105.08	90	110	
Si	28	45	No Gas	10202.014	ppb	1.0	102893563.77	10000	102.02	90	110	
Si	29	45	No Gas	10209.856	ppb	1.1	6362373.85	10000	102.1	90	110	
K	39	45	No Gas	10186.449	ppb	0.8	278767769.18	10000	101.86	90	110	
K	39	45	He	10305.141	ppb	0.4	3443847.14	10000	103.05	90	110	
Ca	44	45	No Gas	9969.872	ppb	0.6	8253021.96	10000	99.7	90	110	
Ca	44	45	He	10741.643	ppb	3.5	192004.46	10000	107.42	90	110	
Ti	47	45	No Gas	103.415	ppb	0.6	264507.84	100	103.42	90	110	
V	51	45	No Gas	98.574	ppb	0.8	3364519.27	100	98.57	90	110	
V	51	45	He	108.218	ppb	0.5	458683.76	100	108.22	90	110	
Cr	52	89	No Gas	98.053	ppb	0.9	3156456.25	100	98.05	90	110	
Cr	52	89	He	99.895	ppb	0.3	574584.10	100	99.9	90	110	
Cr	53	89	No Gas	99.810	ppb	0.9	431268.27	100	99.81	90	110	
Mn	55	89	No Gas	99.987	ppb	0.5	4361654.58	100	99.99	90	110	
Mn	55	89	He	101.657	ppb	0.2	310633.89	100	101.66	90	110	
Fe	56	89	No Gas	9938.112	ppb	1.5	314100998.69	10000	99.38	90	110	
Fe	56	89	He	9646.950	ppb	0.7	38692776.92	10000	96.47	90	110	
Co	59	89	No Gas	100.053	ppb	0.6	3489468.64	100	100.05	90	110	
Co	59	89	He	100.564	ppb	0.5	961408.23	100	100.56	90	110	
Ni	60	89	No Gas	102.607	ppb	0.2	787501.80	100	102.61	90	110	
Ni	60	89	He	98.537	ppb	0.5	259120.32	100	98.54	90	110	
Ni	62	89	No Gas	105.009	ppb	1.8	123094.07	100	105.01	90	110	
Cu	63	89	No Gas	101.069	ppb	2.7	1885574.01	100	101.07	90	110	
Cu	63	89	He	98.379	ppb	0.2	709620.25	100	98.38	90	110	
Cu	65	89	No Gas	102.477	ppb	2.9	914573.07	100	102.48	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	100.053	ppb	2.4	551504.29	100	100.05	90	110	
Zn	66	89	He	98.685	ppb	1.5	108663.40	100	98.68	90	110	
Zn	67	89	No Gas	101.263	ppb	2.4	87551.96	100	101.26	90	110	
Zn	68	89	No Gas	100.854	ppb	1.3	394098.83	100	100.85	90	110	
As	75	89	No Gas	102.904	ppb	0.9	583141.76	100	102.9	90	110	
As	75	89	He	102.991	ppb	0.2	81428.01	100	102.99	90	110	
Se	77	89	No Gas	100.445	ppb	3.2	36977.89	100	100.44	90	110	
Se	78	89	No Gas	104.439	ppb	1.5	103840.79	100	104.44	90	110	
Se	78	89	He	107.113	ppb	4.3	5175.46	100	107.11	90	110	
Se	82	89	No Gas	103.577	ppb	1.4	35386.75	100	103.58	90	110	
[Se]	83	89	No Gas	253.189	ppb	51.6	1885.38	100	253.19	90	110	Failed
Sr	88	89	No Gas	100.478	ppb	0.2	5313452.74	100	100.48	90	110	
Mo	95	89	No Gas	100.560	ppb	0.8	1003517.90	100	100.56	90	110	
Mo	97	89	No Gas	102.846	ppb	2.1	641755.04	100	102.85	90	110	
Mo	98	89	No Gas	100.395	ppb	2.8	1630591.26	100	100.4	90	110	
[Mo]	99	89	No Gas	147.712	ppb	47.2	50.05	100	147.71	90	110	Failed
Cd	106	89	No Gas	106.991	ppb	0.9	101692.76	100	106.99	90	110	
Ag	107	89	No Gas	101.607	ppb	0.5	2695680.31	100	101.61	90	110	
Ag	107	89	He	97.909	ppb	0.3	1276896.82	100	97.91	90	110	
Cd	108	89	No Gas	104.365	ppb	0.2	39568.99	100	104.36	90	110	
Ag	109	89	No Gas	101.420	ppb	1.6	2599052.76	100	101.42	90	110	
Cd	111	89	No Gas	101.676	ppb	2.9	545900.93	100	101.68	90	110	
Cd	114	89	No Gas	98.817	ppb	1.4	1384056.56	100	98.82	90	110	
Sn	118	115	No Gas	101.013	ppb	0.7	1731598.37	100	101.01	90	110	
Sb	121	115	No Gas	101.624	ppb	2.8	2534287.75	100	101.62	90	110	
Sb	121	89	He	106.832	ppb	0.5	568515.59	100	106.83	90	110	
Sb	123	115	No Gas	100.957	ppb	2.0	1941882.88	100	100.96	90	110	
Ba	135	115	No Gas	105.102	ppb	0.8	527619.94	100	105.1	90	110	
Ba	137	115	No Gas	104.871	ppb	0.7	922848.63	100	104.87	90	110	
Tl	203	209	No Gas	99.673	ppb	4.0	2192421.64	100	99.67	90	110	
Tl	205	209	No Gas	98.488	ppb	4.9	5206215.29	100	98.49	90	110	
Pb	206	209	No Gas	97.823	ppb	4.3	1733940.19	100	97.82	90	110	
Pb	207	209	No Gas	97.222	ppb	2.3	1421914.42	100	97.22	90	110	
Pb	208	209	No Gas	97.873	ppb	2.0	6707342.15	100	97.87	90	110	
Th	232	209	No Gas	98.490	ppb	3.9	6924040.93	100	98.49	90	110	
U	238	209	No Gas	97.753	ppb	5.8	6818380.06	100	97.75	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3996045.90	0.4	5406885.91	73.91	70	125	
Sc	45	No Gas	20505367.49	0.6	24326295.51	84.29	75	125	
Sc	45	He	832943.68	0.7	970797.15	85.8	75	125	
Y	89	No Gas	48481162.93	1.7	56662702.82	85.56	75	125	
Y	89	He	6635485.71	0.7	7465540.55	88.88	75	125	
In	115	No Gas	10571804.10	1.8	12379434.81	85.4	75	125	
Tb	159	No Gas	14887544.66	2.1	17053216.17	87.3	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8945255.76	3.0	10541485.14	84.86	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	354_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 00:36:20
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.486	ppb	10.5	232225.08	100	
Be	9	6	No Gas	0.017	ppb	76.7	170.17	100	
B	11	6	No Gas	5.326	ppb	10.8	29483.92	100	
Na	23	45	No Gas	154.741	ppb	0.2	4793058.83	500000	
Na	23	45	He	157.354	ppb	2.2	149200.79	500000	
Mg	24	45	No Gas	0.934	ppb	24.5	25812.62	500000	
Mg	24	45	He	0.321	ppb	62.0	333.36	500000	
Mg	25	45	No Gas	0.956	ppb	22.6	3600.66	500000	
Al	27	45	No Gas	0.024	ppb	135.2	11058.42	500000	
Al	27	45	He	-0.144	ppb	N/A	60.00	500000	
Si	28	45	No Gas	12.503	ppb	14.5	467877.91	100	
Si	29	45	No Gas	2.354	ppb	94.6	77190.73	100	
K	39	45	No Gas	29.938	ppb	1.9	5100427.21	500000	
K	39	45	He	30.242	ppb	8.7	35274.28	500000	
Ca	44	45	No Gas	-61.401	ppb	N/A	65158.31	500000	
Ca	44	45	He	3.061	ppb	333.6	240.02	500000	
Ti	47	45	No Gas	0.033	ppb	20.3	330.34	10000	
V	51	45	No Gas	0.091	ppb	35.4	-1117.69	100	
V	51	45	He	-0.020	ppb	N/A	370.38	100	
Cr	52	89	No Gas	0.021	ppb	36.8	27231.33	100	
Cr	52	89	He	-0.038	ppb	N/A	2322.57	100	
Cr	53	89	No Gas	-2.358	ppb	N/A	41400.80	100	
Mn	55	89	No Gas	0.219	ppb	4.9	18872.13	100	
Mn	55	89	He	0.241	ppb	26.2	944.33	100	
Fe	56	89	No Gas	10.908	ppb	6.8	2214910.47	500000	
Fe	56	89	He	6.424	ppb	15.9	53882.72	500000	
Co	59	89	No Gas	0.019	ppb	11.8	2005.52	100	
Co	59	89	He	0.012	ppb	60.0	360.37	100	
Ni	60	89	No Gas	0.062	ppb	15.4	1531.64	100	
Ni	60	89	He	-0.186	ppb	N/A	276.95	100	
Ni	62	89	No Gas	0.170	ppb	131.6	5066.09	100	
Cu	63	89	No Gas	0.064	ppb	36.5	10130.73	100	
Cu	63	89	He	0.076	ppb	42.4	3317.12	100	
Cu	65	89	No Gas	0.041	ppb	57.4	4692.26	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.065	ppb	60.3	1995.51	100	
Zn	66	89	He	0.000	ppb	16455.5	343.69	100	
Zn	67	89	No Gas	-0.047	ppb	N/A	310.32	100	
Zn	68	89	No Gas	0.037	ppb	49.2	1458.23	100	
As	75	89	No Gas	0.101	ppb	265.2	3935.62	100	
As	75	89	He	0.018	ppb	47.9	36.67	100	
Se	77	89	No Gas	-1.382	ppb	N/A	7720.07	100	
Se	78	89	No Gas	2.342	ppb	11.2	18026.97	100	
Se	78	89	He	0.229	ppb	147.0	34.44	100	
Se	82	89	No Gas	0.296	ppb	141.3	187.86	100	
[Se]	83	89	No Gas	82.127	ppb	120.7	1745.23	100	
Sr	88	89	No Gas	0.027	ppb	4.6	1892.06	100	
Mo	95	89	No Gas	0.314	ppb	23.7	3821.12	10000	
Mo	97	89	No Gas	0.283	ppb	26.9	2235.81	10000	
Mo	98	89	No Gas	0.281	ppb	23.1	5856.22	10000	
[Mo]	99	89	No Gas	61.832	ppb	172.5	30.03	10000	
Cd	106	89	No Gas	4.880	ppb	24.8	51109.98	100	
Ag	107	89	No Gas	0.011	ppb	4.3	1588.99	100	
Ag	107	89	He	-0.005	ppb	N/A	613.97	100	
Cd	108	89	No Gas	0.033	ppb	114.7	83.42	100	
Ag	109	89	No Gas	0.014	ppb	32.2	1251.34	100	
Cd	111	89	No Gas	0.007	ppb	61.4	-26.18	100	
Cd	114	89	No Gas	0.015	ppb	27.4	283.63	100	
Sn	118	115	No Gas	0.069	ppb	13.0	4196.24	100	
Sb	121	115	No Gas	-0.001	ppb	N/A	2872.57	100	
Sb	121	89	He	-0.011	ppb	N/A	723.37	100	
Sb	123	115	No Gas	0.001	ppb	4093.2	2385.99	100	
Ba	135	115	No Gas	0.012	ppb	73.5	126.80	100	
Ba	137	115	No Gas	0.016	ppb	17.3	296.97	100	
Tl	203	209	No Gas	0.187	ppb	26.4	4575.53	100	
Tl	205	209	No Gas	0.185	ppb	19.4	10922.70	100	
Pb	206	209	No Gas	0.023	ppb	56.7	1618.43	100	
Pb	207	209	No Gas	0.011	ppb	134.2	1171.25	100	
Pb	208	209	No Gas	0.017	ppb	55.0	5896.57	100	
Th	232	209	No Gas	0.255	ppb	25.9	24643.68	100	
U	238	209	No Gas	0.085	ppb	18.2	6792.14	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4143060.48	0.1	5406885.91	76.63	70	125	
Sc	45	No Gas	20688247.87	0.5	24326295.51	85.04	75	125	
Sc	45	He	841841.20	0.6	970797.15	86.72	75	125	
Y	89	No Gas	49784663.10	0.5	56662702.82	87.86	75	125	
Y	89	He	6785310.95	0.8	7465540.55	90.89	75	125	
In	115	No Gas	10947855.42	0.6	12379434.81	88.44	75	125	
Tb	159	No Gas	15058258.71	0.2	17053216.17	88.3	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9196168.52	0.6	10541485.14	87.24	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 365_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 00:56:09

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.548	ppb	0.4	2478007.86	100	102.55	90	110	
Be	9	6	No Gas	104.565	ppb	0.7	595344.56	100	104.56	90	110	
B	11	6	No Gas	249.627	ppb	0.2	979821.28	250	99.85	90	110	
Na	23	45	No Gas	9808.562	ppb	1.0	280032964.59	10000	98.09	90	110	
Na	23	45	He	9793.007	ppb	0.5	8234013.42	10000	97.93	90	110	
Mg	24	45	No Gas	9749.625	ppb	1.2	191081070.49	10000	97.5	90	110	
Mg	24	45	He	9923.331	ppb	0.5	4217328.79	10000	99.23	90	110	
Mg	25	45	No Gas	9636.319	ppb	0.6	25563910.45	10000	96.36	90	110	
Al	27	45	No Gas	98.907	ppb	0.4	2545703.50	100	98.91	90	110	
Al	27	45	He	103.774	ppb	0.8	17110.77	100	103.77	90	110	
Si	28	45	No Gas	10241.601	ppb	0.7	104221842.05	10000	102.42	90	110	
Si	29	45	No Gas	10290.172	ppb	0.9	6469451.55	10000	102.9	90	110	
K	39	45	No Gas	10189.568	ppb	2.0	281361355.81	10000	101.9	90	110	
K	39	45	He	10329.024	ppb	1.5	3478384.43	10000	103.29	90	110	
Ca	44	45	No Gas	9934.773	ppb	0.6	8297982.38	10000	99.35	90	110	
Ca	44	45	He	10601.242	ppb	1.3	190950.10	10000	106.01	90	110	
Ti	47	45	No Gas	103.796	ppb	1.5	267859.41	100	103.8	90	110	
V	51	45	No Gas	100.323	ppb	1.6	3455145.39	100	100.32	90	110	
V	51	45	He	108.740	ppb	0.5	464476.52	100	108.74	90	110	
Cr	52	89	No Gas	98.401	ppb	1.3	3229524.63	100	98.4	90	110	
Cr	52	89	He	99.400	ppb	1.7	579354.20	100	99.4	90	110	
Cr	53	89	No Gas	98.604	ppb	1.1	435019.30	100	98.6	90	110	
Mn	55	89	No Gas	99.224	ppb	0.9	4413638.13	100	99.22	90	110	
Mn	55	89	He	100.847	ppb	0.9	312277.59	100	100.85	90	110	
Fe	56	89	No Gas	9867.535	ppb	0.8	318047290.44	10000	98.68	90	110	
Fe	56	89	He	9662.599	ppb	0.6	39274745.25	10000	96.63	90	110	
Co	59	89	No Gas	100.056	ppb	1.6	3557686.03	100	100.06	90	110	
Co	59	89	He	100.024	ppb	1.1	969003.46	100	100.02	90	110	
Ni	60	89	No Gas	102.351	ppb	0.3	801007.62	100	102.35	90	110	
Ni	60	89	He	98.347	ppb	0.8	262101.47	100	98.35	90	110	
Ni	62	89	No Gas	103.153	ppb	1.5	123381.13	100	103.15	90	110	
Cu	63	89	No Gas	100.498	ppb	1.8	1912036.62	100	100.5	90	110	
Cu	63	89	He	98.962	ppb	0.5	723377.70	100	98.96	90	110	
Cu	65	89	No Gas	101.352	ppb	2.7	922446.82	100	101.35	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	100.031	ppb	2.6	562243.83	100	100.03	90	110	
Zn	66	89	He	100.403	ppb	1.4	112024.17	100	100.4	90	110	
Zn	67	89	No Gas	100.515	ppb	2.5	88609.42	100	100.52	90	110	
Zn	68	89	No Gas	101.215	ppb	2.1	403238.75	100	101.22	90	110	
As	75	89	No Gas	103.151	ppb	1.4	596029.81	100	103.15	90	110	
As	75	89	He	103.339	ppb	1.4	82788.44	100	103.34	90	110	
Se	77	89	No Gas	99.782	ppb	5.0	37503.26	100	99.78	90	110	
Se	78	89	No Gas	105.640	ppb	2.5	106914.36	100	105.64	90	110	
Se	78	89	He	105.076	ppb	5.3	5145.45	100	105.08	90	110	
Se	82	89	No Gas	103.647	ppb	2.5	36105.62	100	103.65	90	110	
[Se]	83	89	No Gas	326.913	ppb	51.7	2002.19	100	326.91	90	110	Failed
Sr	88	89	No Gas	100.678	ppb	1.1	5428500.18	100	100.68	90	110	
Mo	95	89	No Gas	100.389	ppb	0.4	1021592.17	100	100.39	90	110	
Mo	97	89	No Gas	102.585	ppb	2.2	652737.58	100	102.58	90	110	
Mo	98	89	No Gas	101.405	ppb	3.5	1679324.08	100	101.41	90	110	
[Mo]	99	89	No Gas	130.732	ppb	47.8	46.71	100	130.73	90	110	Failed
Cd	106	89	No Gas	101.213	ppb	5.5	100674.29	100	101.21	90	110	
Ag	107	89	No Gas	102.186	ppb	0.8	2764168.64	100	102.19	90	110	
Ag	107	89	He	98.570	ppb	1.3	1302639.12	100	98.57	90	110	
Cd	108	89	No Gas	103.465	ppb	1.4	40007.33	100	103.46	90	110	
Ag	109	89	No Gas	101.567	ppb	1.4	2654190.24	100	101.57	90	110	
Cd	111	89	No Gas	101.320	ppb	4.1	554651.76	100	101.32	90	110	
Cd	114	89	No Gas	99.792	ppb	3.3	1425004.80	100	99.79	90	110	
Sn	118	115	No Gas	100.698	ppb	0.8	1767558.68	100	100.7	90	110	
Sb	121	115	No Gas	101.047	ppb	2.0	2580744.41	100	101.05	90	110	
Sb	121	89	He	105.676	ppb	0.7	569893.74	100	105.68	90	110	
Sb	123	115	No Gas	100.955	ppb	1.9	1988576.34	100	100.96	90	110	
Ba	135	115	No Gas	104.853	ppb	1.1	538997.70	100	104.85	90	110	
Ba	137	115	No Gas	104.343	ppb	1.4	940096.53	100	104.34	90	110	
Tl	203	209	No Gas	99.600	ppb	2.8	2222829.19	100	99.6	90	110	
Tl	205	209	No Gas	99.299	ppb	5.1	5324638.71	100	99.3	90	110	
Pb	206	209	No Gas	99.638	ppb	4.9	1791387.59	100	99.64	90	110	
Pb	207	209	No Gas	99.281	ppb	4.0	1472450.47	100	99.28	90	110	
Pb	208	209	No Gas	99.452	ppb	3.3	6911663.08	100	99.45	90	110	
Th	232	209	No Gas	98.643	ppb	1.9	7035523.04	100	98.64	90	110	
U	238	209	No Gas	97.517	ppb	4.1	6901659.38	100	97.52	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3950139.47	0.7	5406885.91	73.06	70	125	
Sc	45	No Gas	20688872.66	0.3	24326295.51	85.05	75	125	
Sc	45	He	839427.48	0.8	970797.15	86.47	75	125	
Y	89	No Gas	49436299.73	1.5	56662702.82	87.25	75	125	
Y	89	He	6724359.79	1.0	7465540.55	90.07	75	125	
In	115	No Gas	10824105.92	0.5	12379434.81	87.44	75	125	
Tb	159	No Gas	15071631.24	2.1	17053216.17	88.38	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9072876.86	2.5	10541485.14	86.07	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	366_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 00:57:54
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.531	ppb	13.0	234175.06	100	
Be	9	6	No Gas	0.016	ppb	27.4	170.17	100	
B	11	6	No Gas	5.210	ppb	8.5	29126.13	100	
Na	23	45	No Gas	123.366	ppb	0.7	3958522.88	500000	
Na	23	45	He	123.507	ppb	1.7	122472.25	500000	
Mg	24	45	No Gas	1.137	ppb	35.5	30276.68	500000	
Mg	24	45	He	0.586	ppb	71.1	453.38	500000	
Mg	25	45	No Gas	1.173	ppb	38.4	4241.01	500000	
Al	27	45	No Gas	0.977	ppb	24.6	36050.42	500000	
Al	27	45	He	0.410	ppb	25.4	153.33	500000	
Si	28	45	No Gas	24.955	ppb	13.5	603397.90	100	
Si	29	45	No Gas	19.012	ppb	23.1	88891.21	100	
K	39	45	No Gas	14.468	ppb	6.7	4751783.57	500000	
K	39	45	He	16.838	ppb	3.5	31224.43	500000	
Ca	44	45	No Gas	-77.051	ppb	N/A	53078.48	500000	
Ca	44	45	He	-1.563	ppb	N/A	160.02	500000	
Ti	47	45	No Gas	0.114	ppb	16.2	547.24	10000	
V	51	45	No Gas	0.181	ppb	24.7	1984.76	100	
V	51	45	He	-0.008	ppb	N/A	430.45	100	
Cr	52	89	No Gas	0.083	ppb	14.7	29829.17	100	
Cr	52	89	He	-0.050	ppb	N/A	2289.20	100	
Cr	53	89	No Gas	-2.733	ppb	N/A	40687.94	100	
Mn	55	89	No Gas	0.071	ppb	18.6	12505.08	100	
Mn	55	89	He	0.114	ppb	1.6	557.24	100	
Fe	56	89	No Gas	17.988	ppb	14.3	2489436.84	500000	
Fe	56	89	He	16.401	ppb	10.9	96316.88	500000	
Co	59	89	No Gas	0.020	ppb	13.0	2058.92	100	
Co	59	89	He	0.013	ppb	25.6	377.06	100	
Ni	60	89	No Gas	0.055	ppb	21.5	1508.29	100	
Ni	60	89	He	-0.178	ppb	N/A	303.65	100	
Ni	62	89	No Gas	0.082	ppb	269.9	5059.45	100	
Cu	63	89	No Gas	0.005	ppb	234.8	9192.42	100	
Cu	63	89	He	0.052	ppb	54.7	3193.64	100	
Cu	65	89	No Gas	0.004	ppb	328.7	4438.57	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.006	ppb	41.6	1695.17	100	
Zn	66	89	He	0.028	ppb	69.5	380.39	100	
Zn	67	89	No Gas	0.009	ppb	519.4	367.05	100	
Zn	68	89	No Gas	0.031	ppb	131.1	1461.56	100	
As	75	89	No Gas	-0.138	ppb	N/A	2601.06	100	
As	75	89	He	0.053	ppb	56.3	65.55	100	
Se	77	89	No Gas	-1.603	ppb	N/A	7800.20	100	
Se	78	89	No Gas	2.672	ppb	28.0	18658.42	100	
Se	78	89	He	0.216	ppb	124.1	34.45	100	
Se	82	89	No Gas	-0.317	ppb	N/A	-26.79	100	
[Se]	83	89	No Gas	159.181	ppb	64.5	1865.35	100	Failed
Sr	88	89	No Gas	0.019	ppb	32.6	1484.93	100	
Mo	95	89	No Gas	0.239	ppb	25.4	3110.21	10000	
Mo	97	89	No Gas	0.245	ppb	11.3	2025.56	10000	
Mo	98	89	No Gas	0.225	ppb	35.3	5014.56	10000	
[Mo]	99	89	No Gas	72.584	ppb	136.1	33.37	10000	
Cd	106	89	No Gas	-1.378	ppb	N/A	48748.55	100	
Ag	107	89	No Gas	0.010	ppb	34.2	1585.66	100	
Ag	107	89	He	-0.004	ppb	N/A	637.33	100	
Cd	108	89	No Gas	0.046	ppb	251.3	90.09	100	
Ag	109	89	No Gas	0.012	ppb	63.8	1221.30	100	
Cd	111	89	No Gas	0.004	ppb	219.0	-44.44	100	
Cd	114	89	No Gas	0.014	ppb	45.6	273.61	100	
Sn	118	115	No Gas	0.073	ppb	13.1	4340.74	100	
Sb	121	115	No Gas	-0.047	ppb	N/A	1732.35	100	
Sb	121	89	He	-0.065	ppb	N/A	440.02	100	
Sb	123	115	No Gas	-0.045	ppb	N/A	1498.28	100	
Ba	135	115	No Gas	0.034	ppb	12.5	246.92	100	
Ba	137	115	No Gas	0.027	ppb	22.9	400.41	100	
Tl	203	209	No Gas	0.187	ppb	23.6	4612.26	100	
Tl	205	209	No Gas	0.186	ppb	22.7	11069.66	100	
Pb	206	209	No Gas	0.006	ppb	181.1	1331.43	100	
Pb	207	209	No Gas	0.006	ppb	54.4	1101.17	100	
Pb	208	209	No Gas	0.006	ppb	26.7	5155.68	100	
Th	232	209	No Gas	0.177	ppb	26.8	19168.01	100	
U	238	209	No Gas	0.081	ppb	16.7	6508.42	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4159116.08	0.5	5406885.91	76.92	70	125	
Sc	45	No Gas	21006589.13	0.3	24326295.51	86.35	75	125	
Sc	45	He	854144.31	1.4	970797.15	87.98	75	125	
Y	89	No Gas	50729653.09	0.7	56662702.82	89.53	75	125	
Y	89	He	6898902.67	1.5	7465540.55	92.41	75	125	
In	115	No Gas	11138515.17	0.9	12379434.81	89.98	75	125	
Tb	159	No Gas	15378450.15	0.2	17053216.17	90.18	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9278346.58	0.4	10541485.14	88.02	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 377_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:17:50

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 148CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	103.278	ppb	0.6	2124689.12	100	103.28	90	110	
Be	9	6	No Gas	104.175	ppb	0.2	505276.38	100	104.18	90	110	
B	11	6	No Gas	241.262	ppb	0.7	806905.40	250	96.5	90	110	
Na	23	45	No Gas	9585.933	ppb	0.7	238270646.99	10000	95.86	90	110	
Na	23	45	He	9099.969	ppb	0.4	7039772.19	10000	91	90	110	
Mg	24	45	No Gas	9598.261	ppb	0.2	163773830.89	10000	95.98	90	110	
Mg	24	45	He	9286.032	ppb	0.9	3630203.49	10000	92.86	90	110	
Mg	25	45	No Gas	9492.433	ppb	0.7	21922862.17	10000	94.92	90	110	
Al	27	45	No Gas	95.465	ppb	0.1	2139464.08	100	95.46	90	110	
Al	27	45	He	98.652	ppb	4.6	14964.93	100	98.65	90	110	
Si	28	45	No Gas	10039.992	ppb	0.3	88952759.61	10000	100.4	90	110	
Si	29	45	No Gas	10081.819	ppb	0.5	5519415.68	10000	100.82	90	110	
K	39	45	No Gas	10170.128	ppb	0.2	244482043.03	10000	101.7	90	110	
K	39	45	He	9766.796	ppb	0.2	3027122.04	10000	97.67	90	110	
Ca	44	45	No Gas	9950.342	ppb	0.7	7235504.89	10000	99.5	90	110	
Ca	44	45	He	10271.014	ppb	2.2	170172.42	10000	102.71	90	110	
Ti	47	45	No Gas	103.525	ppb	1.2	232587.76	100	103.52	90	110	
V	51	45	No Gas	100.469	ppb	0.4	3012307.62	100	100.47	90	110	
V	51	45	He	103.294	ppb	0.6	405915.81	100	103.29	90	110	
Cr	52	89	No Gas	95.776	ppb	1.0	2828263.37	100	95.78	90	110	
Cr	52	89	He	96.234	ppb	1.1	507272.08	100	96.23	90	110	
Cr	53	89	No Gas	99.059	ppb	0.3	392916.89	100	99.06	90	110	
Mn	55	89	No Gas	97.883	ppb	1.1	3916479.30	100	97.88	90	110	
Mn	55	89	He	100.618	ppb	1.0	281717.41	100	100.62	90	110	
Fe	56	89	No Gas	9583.491	ppb	0.7	277901389.54	10000	95.83	90	110	
Fe	56	89	He	9376.280	ppb	0.6	34459957.82	10000	93.76	90	110	
Co	59	89	No Gas	97.849	ppb	0.8	3129877.07	100	97.85	90	110	
Co	59	89	He	97.697	ppb	1.9	855728.25	100	97.7	90	110	
Ni	60	89	No Gas	100.045	ppb	1.6	704252.61	100	100.04	90	110	
Ni	60	89	He	96.040	ppb	2.0	231402.55	100	96.04	90	110	
Ni	62	89	No Gas	100.208	ppb	0.3	107942.12	100	100.21	90	110	
Cu	63	89	No Gas	98.368	ppb	0.9	1683776.39	100	98.37	90	110	
Cu	63	89	He	95.777	ppb	1.3	633033.41	100	95.78	90	110	
Cu	65	89	No Gas	99.179	ppb	0.7	812202.12	100	99.18	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	96.298	ppb	0.9	487010.27	100	96.3	90	110	
Zn	66	89	He	98.355	ppb	1.8	99226.02	100	98.36	90	110	
Zn	67	89	No Gas	98.726	ppb	0.9	78309.75	100	98.73	90	110	
Zn	68	89	No Gas	97.815	ppb	0.7	350623.62	100	97.82	90	110	
As	75	89	No Gas	99.964	ppb	0.4	519701.59	100	99.96	90	110	
As	75	89	He	100.488	ppb	0.8	72797.03	100	100.49	90	110	
Se	77	89	No Gas	109.175	ppb	2.9	36238.60	100	109.18	90	110	
Se	78	89	No Gas	101.645	ppb	1.0	93085.42	100	101.64	90	110	
Se	78	89	He	103.216	ppb	1.3	4569.68	100	103.22	90	110	
Se	82	89	No Gas	101.755	ppb	1.5	31893.29	100	101.76	90	110	
[Se]	83	89	No Gas	34.779	ppb	162.4	1511.63	100	34.78	90	110	Failed
Sr	88	89	No Gas	100.093	ppb	0.2	4854857.06	100	100.09	90	110	
Mo	95	89	No Gas	101.539	ppb	0.9	929414.13	100	101.54	90	110	
Mo	97	89	No Gas	101.922	ppb	1.1	583420.49	100	101.92	90	110	
Mo	98	89	No Gas	99.868	ppb	0.6	1488116.23	100	99.87	90	110	
[Mo]	99	89	No Gas	-44.171	ppb	N/A	3.34	100	-44.17	90	110	Failed
Cd	106	89	No Gas	103.354	ppb	3.6	91570.11	100	103.35	90	110	
Ag	107	89	No Gas	102.356	ppb	0.2	2490544.14	100	102.36	90	110	
Ag	107	89	He	98.713	ppb	0.5	1179608.62	100	98.71	90	110	
Cd	108	89	No Gas	104.084	ppb	1.5	36192.53	100	104.08	90	110	
Ag	109	89	No Gas	102.430	ppb	0.9	2407878.51	100	102.43	90	110	
Cd	111	89	No Gas	100.830	ppb	1.2	496662.73	100	100.83	90	110	
Cd	114	89	No Gas	100.101	ppb	0.7	1286081.37	100	100.1	90	110	
Sn	118	115	No Gas	101.213	ppb	0.2	1619037.16	100	101.21	90	110	
Sb	121	115	No Gas	100.024	ppb	0.3	2328294.98	100	100.02	90	110	
Sb	121	89	He	107.932	ppb	0.5	526287.62	100	107.93	90	110	
Sb	123	115	No Gas	99.937	ppb	0.2	1794076.68	100	99.94	90	110	
Ba	135	115	No Gas	105.692	ppb	0.6	495122.55	100	105.69	90	110	
Ba	137	115	No Gas	105.596	ppb	0.7	867017.15	100	105.6	90	110	
Tl	203	209	No Gas	98.643	ppb	0.2	2063287.88	100	98.64	90	110	
Tl	205	209	No Gas	97.456	ppb	0.6	4899676.66	100	97.46	90	110	
Pb	206	209	No Gas	97.586	ppb	1.3	1644965.65	100	97.59	90	110	
Pb	207	209	No Gas	98.223	ppb	0.8	1365590.65	100	98.22	90	110	
Pb	208	209	No Gas	98.890	ppb	0.3	6441765.85	100	98.89	90	110	
Th	232	209	No Gas	98.059	ppb	1.4	6553654.50	100	98.06	90	110	
U	238	209	No Gas	96.911	ppb	1.3	6429609.21	100	96.91	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3364976.96	0.6	5406885.91	62.24	70	125	ISTD Failed
Sc	45	No Gas	18011606.23	0.4	24326295.51	74.04	75	125	ISTD Failed
Sc	45	He	772191.11	0.6	970797.15	79.54	75	125	
Y	89	No Gas	44466598.36	0.8	56662702.82	78.48	75	125	
Y	89	He	6080185.41	1.3	7465540.55	81.44	75	125	
In	115	No Gas	9864484.98	0.3	12379434.81	79.68	75	125	
Tb	159	No Gas	14028785.48	0.3	17053216.17	82.26	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8499448.27	0.2	10541485.14	80.63	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	380_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 01:22:51
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	148CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.703	ppb	10.8	195948.62	100	
Be	9	6	No Gas	0.026	ppb	87.4	186.86	100	
B	11	6	No Gas	3.580	ppb	4.9	18464.18	100	
Na	23	45	No Gas	55.270	ppb	5.6	1655008.11	500000	
Na	23	45	He	47.694	ppb	3.5	53346.01	500000	
Mg	24	45	No Gas	3.175	ppb	12.8	59145.41	500000	
Mg	24	45	He	2.038	ppb	39.4	1000.11	500000	
Mg	25	45	No Gas	3.090	ppb	17.0	7856.17	500000	
Al	27	45	No Gas	0.341	ppb	68.0	16325.67	500000	
Al	27	45	He	0.139	ppb	214.4	100.00	500000	
Si	28	45	No Gas	15.166	ppb	3.5	419324.28	100	
Si	29	45	No Gas	1.486	ppb	266.2	64852.51	100	
K	39	45	No Gas	18.352	ppb	50.5	4045773.17	500000	
K	39	45	He	5.339	ppb	76.5	25224.88	500000	
Ca	44	45	No Gas	-83.694	ppb	N/A	39592.95	500000	
Ca	44	45	He	1.572	ppb	402.5	200.01	500000	
Ti	47	45	No Gas	0.043	ppb	21.7	300.31	10000	
V	51	45	No Gas	0.117	ppb	37.8	-245.97	100	
V	51	45	He	-0.012	ppb	N/A	380.39	100	
Cr	52	89	No Gas	0.075	ppb	69.2	25359.08	100	
Cr	52	89	He	-0.020	ppb	N/A	2205.75	100	
Cr	53	89	No Gas	-0.805	ppb	N/A	41521.23	100	
Mn	55	89	No Gas	0.990	ppb	5.4	46646.10	100	
Mn	55	89	He	1.050	ppb	7.3	3153.58	100	
Fe	56	89	No Gas	15.591	ppb	30.0	2066457.66	500000	
Fe	56	89	He	8.805	ppb	10.7	57806.05	500000	
Co	59	89	No Gas	0.027	ppb	18.2	1988.84	100	
Co	59	89	He	0.016	ppb	40.1	367.04	100	
Ni	60	89	No Gas	0.020	ppb	31.5	1047.77	100	
Ni	60	89	He	-0.191	ppb	N/A	240.25	100	
Ni	62	89	No Gas	0.318	ppb	30.0	4582.16	100	
Cu	63	89	No Gas	0.131	ppb	19.6	9973.81	100	
Cu	63	89	He	0.169	ppb	27.7	3637.53	100	
Cu	65	89	No Gas	0.205	ppb	8.8	5406.58	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.079	ppb	16.1	1815.30	100	
Zn	66	89	He	-0.001	ppb	N/A	310.32	100	
Zn	67	89	No Gas	0.006	ppb	899.8	313.66	100	
Zn	68	89	No Gas	0.013	ppb	342.6	1194.60	100	
As	75	89	No Gas	0.027	ppb	504.3	3058.08	100	
As	75	89	He	0.048	ppb	37.4	55.55	100	
Se	77	89	No Gas	1.843	ppb	40.1	7586.53	100	
Se	78	89	No Gas	3.753	ppb	32.0	16817.54	100	
Se	78	89	He	0.274	ppb	125.3	33.34	100	
Se	82	89	No Gas	-0.062	ppb	N/A	52.18	100	
[Se]	83	89	No Gas	178.449	ppb	43.7	1618.41	100	Failed
Sr	88	89	No Gas	0.063	ppb	7.6	3407.24	100	
Mo	95	89	No Gas	0.290	ppb	26.6	3113.54	10000	
Mo	97	89	No Gas	0.263	ppb	27.4	1832.00	10000	
Mo	98	89	No Gas	0.261	ppb	22.5	4804.31	10000	
[Mo]	99	89	No Gas	-13.290	ppb	N/A	10.01	10000	
Cd	106	89	No Gas	4.529	ppb	59.5	44530.81	100	
Ag	107	89	No Gas	0.011	ppb	11.7	1383.42	100	
Ag	107	89	He	-0.005	ppb	N/A	560.58	100	
Cd	108	89	No Gas	0.144	ppb	29.3	110.11	100	
Ag	109	89	No Gas	0.011	ppb	21.2	1024.41	100	
Cd	111	89	No Gas	0.000	ppb	2628.2	-55.93	100	
Cd	114	89	No Gas	0.015	ppb	20.0	243.59	100	
Sn	118	115	No Gas	0.087	ppb	24.4	3997.30	100	
Sb	121	115	No Gas	-0.054	ppb	N/A	1331.19	100	
Sb	121	89	He	-0.083	ppb	N/A	300.01	100	
Sb	123	115	No Gas	-0.025	ppb	N/A	1648.45	100	
Ba	135	115	No Gas	0.023	ppb	34.3	163.50	100	
Ba	137	115	No Gas	0.022	ppb	34.3	306.98	100	
Tl	203	209	No Gas	0.199	ppb	21.9	4351.87	100	
Tl	205	209	No Gas	0.197	ppb	25.4	10361.71	100	
Pb	206	209	No Gas	0.021	ppb	31.1	1428.20	100	
Pb	207	209	No Gas	0.021	ppb	48.1	1187.94	100	
Pb	208	209	No Gas	0.018	ppb	29.4	5352.56	100	
Th	232	209	No Gas	0.306	ppb	20.9	25449.23	100	
U	238	209	No Gas	0.103	ppb	23.9	7229.58	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3421865.51	2.3	5406885.91	63.29	70	125	ISTD Failed
Sc	45	No Gas	17522018.30	5.1	24326295.51	72.03	75	125	ISTD Failed
Sc	45	He	788986.51	0.9	970797.15	81.27	75	125	
Y	89	No Gas	43553003.09	3.9	56662702.82	76.86	75	125	
Y	89	He	6163441.16	1.4	7465540.55	82.56	75	125	
In	115	No Gas	9691427.78	3.4	12379434.81	78.29	75	125	
Tb	159	No Gas	13482557.17	3.1	17053216.17	79.06	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8299255.50	3.1	10541485.14	78.73	75	125	

Initial Calibration Verification (ICV) Report

Sample Name ICV

File Name 391_ICV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:41:13

Sample Type ICV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	75.129	ppb	1.0	1744792.82	80	93.91	90	110	
Be	9	6	No Gas	78.772	ppb	1.1	424621.01	80	98.46	90	110	
B	11	6	No Gas	190.803	ppb	0.6	678030.17	200	95.4	90	110	
Na	23	45	No Gas	7897.732	ppb	0.4	198600121.10	8000	98.72	90	110	
Na	23	45	He	8048.985	ppb	1.0	5708717.83	8000	100.61	90	110	
Mg	24	45	No Gas	7715.190	ppb	1.0	133861781.34	8000	96.44	90	110	
Mg	24	45	He	8049.193	ppb	0.9	2927739.95	8000	100.61	90	110	
Mg	25	45	No Gas	7714.011	ppb	0.7	17852970.56	8000	96.43	90	110	
Al	27	45	No Gas	74.348	ppb	0.9	1695651.75	80	92.94	90	110	
Al	27	45	He	80.671	ppb	2.2	12145.45	80	100.84	90	110	
Si	28	45	No Gas	8057.874	ppb	0.8	74840400.55	8000	100.72	90	110	
Si	29	45	No Gas	8160.937	ppb	0.8	4653339.70	8000	102.01	90	110	
K	39	45	No Gas	7733.976	ppb	0.5	200340517.01	8000	96.67	90	110	
K	39	45	He	8018.842	ppb	1.2	2446228.97	8000	100.24	90	110	
Ca	44	45	No Gas	7732.077	ppb	0.4	5893790.33	8000	96.65	90	110	
Ca	44	45	He	7983.722	ppb	0.7	137316.74	8000	99.8	90	110	
Ti	47	45	No Gas	75.697	ppb	1.3	189110.26	80	94.62	90	110	
V	51	45	No Gas	75.682	ppb	0.7	2410872.88	80	94.6	90	110	
V	51	45	He	79.238	ppb	0.1	328544.71	80	99.05	90	110	
Cr	52	89	No Gas	77.307	ppb	0.6	2297563.71	80	96.63	90	110	
Cr	52	89	He	85.208	ppb	1.2	417861.56	80	106.51	90	110	
Cr	53	89	No Gas	76.043	ppb	0.9	318804.96	80	95.05	90	110	
Mn	55	89	No Gas	78.041	ppb	0.5	3137696.03	80	97.55	90	110	
Mn	55	89	He	79.930	ppb	0.4	225098.80	80	99.91	90	110	
Fe	56	89	No Gas	7942.241	ppb	0.2	226553863.40	8000	99.28	90	110	
Fe	56	89	He	8061.566	ppb	0.2	27662803.75	8000	100.77	90	110	
Co	59	89	No Gas	78.137	ppb	0.4	2548461.44	80	97.67	90	110	
Co	59	89	He	84.380	ppb	0.1	698111.10	80	105.47	90	110	
Ni	60	89	No Gas	80.447	ppb	0.2	581151.41	80	100.56	90	110	
Ni	60	89	He	81.023	ppb	0.9	188454.29	80	101.28	90	110	
Ni	62	89	No Gas	80.234	ppb	1.3	91486.94	80	100.29	90	110	
Cu	63	89	No Gas	79.910	ppb	0.5	1376878.44	80	99.89	90	110	
Cu	63	89	He	84.952	ppb	0.7	521147.12	80	106.19	90	110	
Cu	65	89	No Gas	81.807	ppb	0.5	677077.78	80	102.26	90	110	

Initial Calibration Verification (ICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	78.801	ppb	0.6	404982.12	80	98.5	90	110	
Zn	66	89	He	81.669	ppb	0.9	81105.50	80	102.09	90	110	
Zn	67	89	No Gas	77.998	ppb	1.3	63434.46	80	97.5	90	110	
Zn	68	89	No Gas	79.082	ppb	0.5	293438.68	80	98.85	90	110	
As	75	89	No Gas	79.891	ppb	0.6	431970.52	80	99.86	90	110	
As	75	89	He	80.436	ppb	2.0	59743.55	80	100.55	90	110	
Se	77	89	No Gas	72.855	ppb	1.0	27890.25	80	91.07	90	110	
Se	78	89	No Gas	77.941	ppb	0.8	81097.22	80	97.43	90	110	
Se	78	89	He	79.647	ppb	4.0	3602.73	80	99.56	90	110	
Se	82	89	No Gas	77.773	ppb	4.0	26310.26	80	97.22	90	110	
[Se]	83	89	No Gas	133.616	ppb	94.7	1705.17	80	167.02	90	110	Failed
Sr	88	89	No Gas	75.342	ppb	0.1	3828944.27	80	94.18	90	110	
Mo	95	89	No Gas	77.106	ppb	0.2	735561.68	80	96.38	90	110	
Mo	97	89	No Gas	77.749	ppb	0.4	461306.24	80	97.19	90	110	
Mo	98	89	No Gas	75.095	ppb	0.3	1148583.85	80	93.87	90	110	
[Mo]	99	89	No Gas	57.478	ppb	155.8	23.36	80	71.85	90	110	Failed
Cd	106	89	No Gas	76.566	ppb	1.0	84297.99	80	95.71	90	110	
Ag	107	89	No Gas	78.743	ppb	0.3	2004310.34	80	98.43	90	110	
Ag	107	89	He	83.645	ppb	1.1	978452.70	80	104.56	90	110	
Cd	108	89	No Gas	77.776	ppb	1.9	29148.19	80	97.22	90	110	
Ag	109	89	No Gas	79.710	ppb	0.5	1927391.88	80	99.64	90	110	
Cd	111	89	No Gas	79.272	ppb	0.6	403496.71	80	99.09	90	110	
Cd	114	89	No Gas	79.111	ppb	0.2	1055883.91	80	98.89	90	110	
Sn	118	115	No Gas	76.074	ppb	0.6	1261264.81	80	95.09	90	110	
Sb	121	115	No Gas	78.120	ppb	0.7	1855089.72	80	97.65	90	110	
Sb	121	89	He	80.096	ppb	0.5	421132.74	80	100.12	90	110	
Sb	123	115	No Gas	77.313	ppb	0.7	1432059.09	80	96.64	90	110	
Ba	135	115	No Gas	76.845	ppb	1.3	397818.91	80	96.06	90	110	
Ba	137	115	No Gas	78.848	ppb	1.1	696580.88	80	98.56	90	110	
Tl	203	209	No Gas	77.178	ppb	0.8	1621964.21	80	96.47	90	110	
Tl	205	209	No Gas	76.701	ppb	0.9	3857119.42	80	95.88	90	110	
Pb	206	209	No Gas	76.293	ppb	0.5	1303635.38	80	95.37	90	110	
Pb	207	209	No Gas	77.366	ppb	0.6	1103308.08	80	96.71	90	110	
Pb	208	209	No Gas	76.105	ppb	0.5	5084407.49	80	95.13	90	110	
Th	232	209	No Gas	76.026	ppb	0.8	5105180.92	80	95.03	90	110	
U	238	209	No Gas	73.115	ppb	0.4	4818316.14	80	91.39	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3531227.58	0.9	3546479.06	99.57	70	125	
Sc	45	No Gas	18533869.74	0.6	18068973.18	102.57	75	125	
Sc	45	He	800944.99	0.7	782598.87	102.34	75	125	
Y	89	No Gas	45330016.78	0.6	44605013.43	101.63	75	125	
Y	89	He	6133608.41	1.2	6105468.19	100.46	75	125	
In	115	No Gas	9992312.65	1.1	9924340.73	100.68	75	125	
Tb	159	No Gas	13954998.78	0.5	13751488.6	101.48	75	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8570802.99	0.4	8506561.89	100.76	75	125	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	392_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 01:42:56
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	382CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.033	ppb	172.6	203443.51	100	
Be	9	6	No Gas	0.017	ppb	61.0	203.54	100	
B	11	6	No Gas	1.891	ppb	21.5	18768.23	100	
Na	23	45	No Gas	0.124	ppb	1006.6	1653851.27	500000	
Na	23	45	He	-0.659	ppb	N/A	54295.85	500000	
Mg	24	45	No Gas	0.704	ppb	58.0	53468.10	500000	
Mg	24	45	He	0.551	ppb	111.2	893.43	500000	
Mg	25	45	No Gas	0.578	ppb	31.4	6695.56	500000	
Al	27	45	No Gas	0.171	ppb	15.7	16371.05	500000	
Al	27	45	He	-0.052	ppb	N/A	110.00	500000	
Si	28	45	No Gas	14.546	ppb	22.5	481778.95	100	
Si	29	45	No Gas	13.949	ppb	30.8	69462.42	100	
K	39	45	No Gas	3.946	ppb	21.3	4193666.81	500000	
K	39	45	He	3.803	ppb	83.7	26253.82	500000	
Ca	44	45	No Gas	8.659	ppb	6.2	45276.76	500000	
Ca	44	45	He	0.422	ppb	857.3	226.69	500000	
Ti	47	45	No Gas	0.043	ppb	100.1	293.64	10000	
V	51	45	No Gas	0.078	ppb	45.4	-752.09	100	
V	51	45	He	0.025	ppb	65.5	413.76	100	
Cr	52	89	No Gas	-0.005	ppb	N/A	25355.74	100	
Cr	52	89	He	0.020	ppb	108.5	2115.65	100	
Cr	53	89	No Gas	-0.238	ppb	N/A	40356.68	100	
Mn	55	89	No Gas	-0.297	ppb	N/A	27709.51	100	
Mn	55	89	He	-0.323	ppb	N/A	1691.83	100	
Fe	56	89	No Gas	2.863	ppb	70.6	2083407.01	500000	
Fe	56	89	He	8.739	ppb	3.6	56359.35	500000	
Co	59	89	No Gas	0.020	ppb	31.7	2145.69	100	
Co	59	89	He	0.021	ppb	28.5	443.79	100	
Ni	60	89	No Gas	0.007	ppb	221.1	1161.23	100	
Ni	60	89	He	0.008	ppb	105.1	296.97	100	
Ni	62	89	No Gas	-0.095	ppb	N/A	4625.48	100	
Cu	63	89	No Gas	-0.090	ppb	N/A	7923.69	100	
Cu	63	89	He	-0.075	ppb	N/A	2739.74	100	
Cu	65	89	No Gas	-0.127	ppb	N/A	3887.84	100	

Initial Calibration Blank (ICB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.037	ppb	34.9	1958.79	100	
Zn	66	89	He	-0.060	ppb	N/A	323.67	100	
Zn	67	89	No Gas	0.065	ppb	160.8	397.08	100	
Zn	68	89	No Gas	0.035	ppb	74.2	1424.86	100	
As	75	89	No Gas	0.059	ppb	148.3	3805.18	100	
As	75	89	He	0.033	ppb	80.5	51.11	100	
Se	77	89	No Gas	-1.576	ppb	N/A	6811.97	100	
Se	78	89	No Gas	0.512	ppb	66.4	17605.95	100	
Se	78	89	He	0.502	ppb	27.3	40.00	100	
Se	82	89	No Gas	-0.969	ppb	N/A	-112.40	100	
[Se]	83	89	No Gas	154.361	ppb	65.1	1735.21	100	Failed
Sr	88	89	No Gas	0.006	ppb	90.4	2876.58	100	
Mo	95	89	No Gas	0.255	ppb	26.3	3026.76	10000	
Mo	97	89	No Gas	0.215	ppb	35.8	1728.55	10000	
Mo	98	89	No Gas	0.255	ppb	22.6	4919.28	10000	
[Mo]	99	89	No Gas	-80.154	ppb	N/A	0.00	10000	
Cd	106	89	No Gas	-0.692	ppb	N/A	45530.75	100	
Ag	107	89	No Gas	0.035	ppb	1.8	1446.75	100	
Ag	107	89	He	0.039	ppb	18.2	603.96	100	
Cd	108	89	No Gas	-0.050	ppb	N/A	76.74	100	
Ag	109	89	No Gas	0.037	ppb	17.2	1107.84	100	
Cd	111	89	No Gas	0.012	ppb	42.6	-17.90	100	
Cd	114	89	No Gas	0.011	ppb	50.0	236.91	100	
Sn	118	115	No Gas	0.120	ppb	14.5	4065.10	100	
Sb	121	115	No Gas	0.025	ppb	7.6	1360.08	100	
Sb	121	89	He	0.018	ppb	58.7	313.34	100	
Sb	123	115	No Gas	0.017	ppb	27.1	1474.92	100	
Ba	135	115	No Gas	0.009	ppb	109.5	150.15	100	
Ba	137	115	No Gas	0.017	ppb	8.3	303.65	100	
Tl	203	209	No Gas	0.063	ppb	15.9	1708.53	100	
Tl	205	209	No Gas	0.062	ppb	19.3	4024.75	100	
Pb	206	209	No Gas	0.048	ppb	30.0	1494.94	100	
Pb	207	209	No Gas	0.039	ppb	46.7	1248.00	100	
Pb	208	209	No Gas	0.044	ppb	18.8	5826.46	100	
Th	232	209	No Gas	0.173	ppb	27.7	20401.20	100	
U	238	209	No Gas	0.087	ppb	19.1	6782.12	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3551873.25	0.5	3546479.06	100.15	70	125	
Sc	45	No Gas	18444514.13	0.3	18068973.18	102.08	75	125	
Sc	45	He	809358.28	1.0	782598.87	103.42	75	125	
Y	89	No Gas	45536461.56	0.2	44605013.43	102.09	75	125	
Y	89	He	6220593.52	1.1	6105468.19	101.89	75	125	
In	115	No Gas	10080801.15	0.3	9924340.73	101.58	75	125	
Tb	159	No Gas	14010301.16	0.4	13751488.6	101.88	75	125	

Initial Calibration Blank (ICB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8619229.66	0.5	8506561.89	101.32	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	LLICV
File Name	393LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 01:44:32
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	382CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Li	7	6	No Gas	9.887	ppb	0.5	411102.31	10	98.87	80	120	
Be	9	6	No Gas	1.981	ppb	2.0	10962.07	2	99.05	80	120	
B	11	6	No Gas	19.181	ppb	1.7	80261.07	20	95.9	80	120	
Na	23	45	No Gas	206.175	ppb	1.2	6780302.23	200	103.09	80	120	
Na	23	45	He	220.722	ppb	1.3	210313.15	200	110.36	80	120	
Mg	24	45	No Gas	196.784	ppb	0.6	3444774.43	200	98.39	80	120	
Mg	24	45	He	212.501	ppb	3.0	78357.44	200	106.25	80	120	
Mg	25	45	No Gas	205.306	ppb	0.3	479021.76	200	102.65	80	120	
Al	27	45	No Gas	10.537	ppb	1.1	250387.17	10	105.37	80	120	
Al	27	45	He	10.144	ppb	9.1	1636.79	10	101.44	80	120	
Si	28	45	No Gas	1033.987	ppb	0.2	9879846.95	1000	103.4	80	120	
Si	29	45	No Gas	1109.188	ppb	0.5	684012.76	1000	110.92	80	120	
K	39	45	No Gas	198.847	ppb	0.9	9132459.65	200	99.42	80	120	
K	39	45	He	226.970	ppb	2.4	93829.69	200	113.48	80	120	
Ca	44	45	No Gas	554.829	ppb	1.1	457750.66	500	110.97	80	120	
Ca	44	45	He	449.350	ppb	6.3	7976.27	500	89.87	80	120	
Ti	47	45	No Gas	4.979	ppb	2.3	12578.47	5	99.58	80	120	
V	51	45	No Gas	5.263	ppb	1.5	164137.38	5	105.26	80	120	
V	51	45	He	4.951	ppb	4.1	20917.17	5	99.02	80	120	
Cr	52	89	No Gas	5.054	ppb	1.4	174632.82	5	101.08	80	120	
Cr	52	89	He	5.399	ppb	2.1	28334.57	5	107.98	80	120	
Cr	53	89	No Gas	4.691	ppb	3.2	58409.44	5	93.82	80	120	
Mn	55	89	No Gas	4.895	ppb	1.0	234637.32	5	97.9	80	120	
Mn	55	89	He	5.021	ppb	4.1	16540.13	5	100.42	80	120	
Fe	56	89	No Gas	80.902	ppb	0.8	4297371.84	80	101.13	80	120	
Fe	56	89	He	105.800	ppb	0.4	388290.01	80	132.25	80	120	Failed
Co	59	89	No Gas	5.067	ppb	1.6	167308.22	5	101.34	80	120	
Co	59	89	He	5.454	ppb	2.2	45360.92	5	109.08	80	120	
Ni	60	89	No Gas	5.098	ppb	0.4	38017.92	5	101.96	80	120	
Ni	60	89	He	5.250	ppb	4.6	12461.72	5	105	80	120	
Ni	62	89	No Gas	5.077	ppb	8.6	10237.65	5	101.54	80	120	
Cu	63	89	No Gas	5.225	ppb	0.7	99252.18	5	104.5	80	120	
Cu	63	89	He	5.417	ppb	1.0	36187.93	5	108.34	80	120	
Cu	65	89	No Gas	5.119	ppb	2.2	47165.77	5	102.38	80	120	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	10.140	ppb	1.9	53853.84	10	101.4	80	120	
Zn	66	89	He	10.255	ppb	1.1	10514.75	10	102.55	80	120	
Zn	67	89	No Gas	9.885	ppb	2.2	8371.08	10	98.85	80	120	
Zn	68	89	No Gas	10.012	ppb	3.4	38422.93	10	100.12	80	120	
As	75	89	No Gas	4.955	ppb	3.4	30161.95	5	99.1	80	120	
As	75	89	He	4.893	ppb	3.6	3658.29	5	97.86	80	120	
Se	77	89	No Gas	4.062	ppb	37.8	8414.50	5	81.24	80	120	
Se	78	89	No Gas	4.398	ppb	11.7	20800.50	5	87.96	80	120	
Se	78	89	He	5.453	ppb	3.2	262.22	5	109.06	80	120	
Se	82	89	No Gas	4.055	ppb	26.3	1579.67	5	81.1	80	120	
[Se]	83	89	No Gas	151.803	ppb	124.7	1731.88	5	3036.06	80	120	Failed
Sr	88	89	No Gas	4.973	ppb	1.1	256114.94	5	99.46	80	120	
Mo	95	89	No Gas	5.014	ppb	1.2	48570.35	5	100.28	80	120	
Mo	97	89	No Gas	4.993	ppb	0.9	30157.91	5	99.86	80	120	
Mo	98	89	No Gas	5.036	ppb	1.3	78273.14	5	100.72	80	120	
[Mo]	99	89	No Gas	214.157	ppb	28.4	50.05	5	4283.14	80	120	Failed
Cd	106	89	No Gas	2.608	ppb	37.3	47174.58	2	130.4	80	120	Failed
Ag	107	89	No Gas	5.179	ppb	0.9	132855.16	5	103.58	80	120	
Ag	107	89	He	5.309	ppb	1.5	62217.93	5	106.18	80	120	
Cd	108	89	No Gas	2.149	ppb	10.7	900.95	2	107.45	80	120	
Ag	109	89	No Gas	5.231	ppb	1.6	127169.60	5	104.62	80	120	
Cd	111	89	No Gas	2.012	ppb	1.9	10204.70	2	100.6	80	120	
Cd	114	89	No Gas	1.991	ppb	1.6	26767.51	2	99.55	80	120	
Sn	118	115	No Gas	2.039	ppb	0.4	36558.42	2	101.95	80	120	
Sb	121	115	No Gas	4.710	ppb	0.8	115002.44	5	94.2	80	120	
Sb	121	89	He	4.730	ppb	3.0	25070.88	5	94.6	80	120	
Sb	123	115	No Gas	4.560	ppb	0.9	87403.55	5	91.2	80	120	
Ba	135	115	No Gas	4.765	ppb	1.8	25300.15	5	95.3	80	120	
Ba	137	115	No Gas	4.876	ppb	1.6	44159.55	5	97.52	80	120	
Tl	203	209	No Gas	4.704	ppb	1.1	101888.15	5	94.08	80	120	
Tl	205	209	No Gas	4.626	ppb	0.4	239732.83	5	92.52	80	120	
Pb	206	209	No Gas	4.774	ppb	1.5	84405.16	5	95.48	80	120	
Pb	207	209	No Gas	4.940	ppb	1.6	72992.99	5	98.8	80	120	
Pb	208	209	No Gas	4.814	ppb	0.9	332950.67	5	96.28	80	120	
Th	232	209	No Gas	4.967	ppb	0.3	350845.71	5	99.34	80	120	
U	238	209	No Gas	4.589	ppb	1.5	311531.66	5	91.78	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3587255.57	0.5	3546479.06	101.15	70	125	
Sc	45	No Gas	18480269.89	0.5	18068973.18	102.28	75	125	
Sc	45	He	804989.72	0.7	782598.87	102.86	75	125	
Y	89	No Gas	45510088.51	0.7	44605013.43	102.03	75	125	
Y	89	He	6133180.49	1.6	6105468.19	100.45	75	125	
In	115	No Gas	10209117.25	0.6	9924340.73	102.87	75	125	
Tb	159	No Gas	14014642.17	0.2	13751488.6	101.91	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8801062.15	0.4	8506561.89	103.46	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 394_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 01:46:07

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.334	ppb	0.4	2140091.81	100	98.33	90	110	
Be	9	6	No Gas	101.494	ppb	0.8	527032.57	100	101.49	90	110	
B	11	6	No Gas	241.459	ppb	0.3	823534.32	250	96.58	90	110	
Na	23	45	No Gas	9860.066	ppb	0.3	242702263.76	10000	98.6	90	110	
Na	23	45	He	10131.447	ppb	0.6	7017303.02	10000	101.31	90	110	
Mg	24	45	No Gas	9771.710	ppb	0.1	166226217.52	10000	97.72	90	110	
Mg	24	45	He	10224.860	ppb	0.7	3638874.95	10000	102.25	90	110	
Mg	25	45	No Gas	9762.702	ppb	0.7	22152227.17	10000	97.63	90	110	
Al	27	45	No Gas	97.155	ppb	1.5	2168795.28	100	97.16	90	110	
Al	27	45	He	101.277	ppb	2.2	14891.58	100	101.28	90	110	
Si	28	45	No Gas	9895.858	ppb	0.3	90040240.42	10000	98.96	90	110	
Si	29	45	No Gas	10000.392	ppb	0.4	5577286.88	10000	100	90	110	
K	39	45	No Gas	9808.952	ppb	0.3	248051249.64	10000	98.09	90	110	
K	39	45	He	10072.246	ppb	1.4	3000178.39	10000	100.72	90	110	
Ca	44	45	No Gas	9849.952	ppb	0.9	7351079.68	10000	98.5	90	110	
Ca	44	45	He	10150.169	ppb	1.9	170767.97	10000	101.5	90	110	
Ti	47	45	No Gas	97.668	ppb	0.4	239182.05	100	97.67	90	110	
V	51	45	No Gas	96.149	ppb	0.3	3003945.34	100	96.15	90	110	
V	51	45	He	101.323	ppb	1.1	410953.23	100	101.32	90	110	
Cr	52	89	No Gas	97.417	ppb	0.8	2847568.20	100	97.42	90	110	
Cr	52	89	He	107.433	ppb	1.3	515148.36	100	107.43	90	110	
Cr	53	89	No Gas	99.238	ppb	1.2	397785.30	100	99.24	90	110	
Mn	55	89	No Gas	98.974	ppb	0.8	3912297.62	100	98.97	90	110	
Mn	55	89	He	102.851	ppb	0.8	282769.61	100	102.85	90	110	
Fe	56	89	No Gas	9953.080	ppb	0.5	279376297.91	10000	99.53	90	110	
Fe	56	89	He	10221.886	ppb	0.7	34324018.65	10000	102.22	90	110	
Co	59	89	No Gas	97.886	ppb	0.4	3146805.87	100	97.89	90	110	
Co	59	89	He	106.416	ppb	0.6	861665.94	100	106.42	90	110	
Ni	60	89	No Gas	101.085	ppb	0.9	719542.59	100	101.08	90	110	
Ni	60	89	He	102.365	ppb	1.4	232968.29	100	102.36	90	110	
Ni	62	89	No Gas	101.085	ppb	1.7	112409.36	100	101.08	90	110	
Cu	63	89	No Gas	99.849	ppb	0.6	1693637.34	100	99.85	90	110	
Cu	63	89	He	106.986	ppb	0.4	641599.06	100	106.99	90	110	
Cu	65	89	No Gas	101.804	ppb	0.8	829405.66	100	101.8	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.171	ppb	0.5	501974.17	100	99.17	90	110	
Zn	66	89	He	102.966	ppb	1.4	99988.67	100	102.97	90	110	
Zn	67	89	No Gas	99.277	ppb	1.8	79494.29	100	99.28	90	110	
Zn	68	89	No Gas	99.447	ppb	0.5	363429.51	100	99.45	90	110	
As	75	89	No Gas	100.184	ppb	0.7	533129.92	100	100.18	90	110	
As	75	89	He	101.763	ppb	2.0	73974.43	100	101.76	90	110	
Se	77	89	No Gas	97.751	ppb	2.0	34452.01	100	97.75	90	110	
Se	78	89	No Gas	98.049	ppb	1.4	96213.98	100	98.05	90	110	
Se	78	89	He	103.682	ppb	2.3	4584.13	100	103.68	90	110	
Se	82	89	No Gas	95.744	ppb	0.6	31885.49	100	95.74	90	110	
[Se]	83	89	No Gas	134.434	ppb	58.9	1681.82	100	134.43	90	110	Failed
Sr	88	89	No Gas	97.299	ppb	0.4	4873868.57	100	97.3	90	110	
Mo	95	89	No Gas	100.667	ppb	1.0	946463.99	100	100.67	90	110	
Mo	97	89	No Gas	101.011	ppb	0.3	590661.91	100	101.01	90	110	
Mo	98	89	No Gas	98.218	ppb	0.7	1480587.79	100	98.22	90	110	
[Mo]	99	89	No Gas	200.187	ppb	87.7	46.71	100	200.19	90	110	Failed
Cd	106	89	No Gas	95.950	ppb	1.1	92742.74	100	95.95	90	110	
Ag	107	89	No Gas	99.085	ppb	0.6	2486116.71	100	99.08	90	110	
Ag	107	89	He	101.399	ppb	0.3	1160918.94	100	101.4	90	110	
Cd	108	89	No Gas	98.958	ppb	3.6	36530.54	100	98.96	90	110	
Ag	109	89	No Gas	100.256	ppb	0.8	2389657.32	100	100.26	90	110	
Cd	111	89	No Gas	100.043	ppb	0.2	502001.52	100	100.04	90	110	
Cd	114	89	No Gas	97.160	ppb	0.4	1278313.91	100	97.16	90	110	
Sn	118	115	No Gas	98.948	ppb	0.7	1607718.10	100	98.95	90	110	
Sb	121	115	No Gas	99.374	ppb	0.3	2313311.37	100	99.37	90	110	
Sb	121	89	He	101.890	ppb	0.1	524315.72	100	101.89	90	110	
Sb	123	115	No Gas	98.424	ppb	0.9	1786993.51	100	98.42	90	110	
Ba	135	115	No Gas	98.609	ppb	0.7	500466.33	100	98.61	90	110	
Ba	137	115	No Gas	101.520	ppb	0.4	879281.79	100	101.52	90	110	
Tl	203	209	No Gas	99.132	ppb	0.9	2049909.08	100	99.13	90	110	
Tl	205	209	No Gas	97.548	ppb	1.1	4826779.81	100	97.55	90	110	
Pb	206	209	No Gas	97.113	ppb	0.9	1632695.51	100	97.11	90	110	
Pb	207	209	No Gas	95.758	ppb	1.0	1343590.63	100	95.76	90	110	
Pb	208	209	No Gas	96.472	ppb	0.6	6341263.41	100	96.47	90	110	
Th	232	209	No Gas	98.526	ppb	1.1	6507724.20	100	98.53	90	110	
U	238	209	No Gas	97.869	ppb	0.8	6346216.65	100	97.87	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3401773.18	0.5	3546479.06	95.92	70	125	
Sc	45	No Gas	18171937.81	0.2	18068973.18	100.57	75	125	
Sc	45	He	783663.51	0.8	782598.87	100.14	75	125	
Y	89	No Gas	44685785.87	0.7	44605013.43	100.18	75	125	
Y	89	He	6003372.13	1.0	6105468.19	98.33	75	125	
In	115	No Gas	9795909.05	0.4	9924340.73	98.71	75	125	
Tb	159	No Gas	13911791.82	1.1	13751488.6	101.17	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8433840.22	0.3	8506561.89	99.15	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	395_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 01:47:50
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	382CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.038	ppb	222.7	202043.44	100	
Be	9	6	No Gas	0.016	ppb	19.2	196.87	100	
B	11	6	No Gas	1.595	ppb	38.5	17588.86	100	
Na	23	45	No Gas	4.931	ppb	13.6	1751940.60	500000	
Na	23	45	He	6.133	ppb	18.0	58245.71	500000	
Mg	24	45	No Gas	1.495	ppb	8.4	66321.88	500000	
Mg	24	45	He	2.544	ppb	25.2	1600.23	500000	
Mg	25	45	No Gas	1.646	ppb	14.8	9043.61	500000	
Al	27	45	No Gas	0.261	ppb	7.3	18186.32	500000	
Al	27	45	He	0.028	ppb	408.3	120.00	500000	
Si	28	45	No Gas	14.490	ppb	19.5	475516.04	100	
Si	29	45	No Gas	12.184	ppb	21.6	67658.57	100	
K	39	45	No Gas	5.303	ppb	11.4	4177467.33	500000	
K	39	45	He	7.038	ppb	60.4	26841.31	500000	
Ca	44	45	No Gas	12.215	ppb	28.1	47378.08	500000	
Ca	44	45	He	6.037	ppb	138.1	320.03	500000	
Ti	47	45	No Gas	0.055	ppb	27.9	320.33	10000	
V	51	45	No Gas	0.121	ppb	31.1	585.68	100	
V	51	45	He	0.009	ppb	185.6	340.35	100	
Cr	52	89	No Gas	-0.018	ppb	N/A	24794.16	100	
Cr	52	89	He	0.048	ppb	42.1	2215.77	100	
Cr	53	89	No Gas	-0.440	ppb	N/A	39336.20	100	
Mn	55	89	No Gas	-0.311	ppb	N/A	26937.06	100	
Mn	55	89	He	-0.278	ppb	N/A	1785.27	100	
Fe	56	89	No Gas	4.054	ppb	37.8	2102423.09	500000	
Fe	56	89	He	9.556	ppb	14.8	58114.17	500000	
Co	59	89	No Gas	0.020	ppb	15.0	2108.98	100	
Co	59	89	He	0.027	ppb	18.7	487.17	100	
Ni	60	89	No Gas	0.018	ppb	98.1	1234.64	100	
Ni	60	89	He	-0.007	ppb	N/A	256.93	100	
Ni	62	89	No Gas	-0.139	ppb	N/A	4545.40	100	
Cu	63	89	No Gas	-0.087	ppb	N/A	7920.33	100	
Cu	63	89	He	-0.076	ppb	N/A	2682.99	100	
Cu	65	89	No Gas	-0.111	ppb	N/A	3987.97	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.059	ppb	30.9	2058.91	100	
Zn	66	89	He	-0.075	ppb	N/A	303.65	100	
Zn	67	89	No Gas	-0.052	ppb	N/A	300.31	100	
Zn	68	89	No Gas	0.029	ppb	71.6	1391.49	100	
As	75	89	No Gas	-0.124	ppb	N/A	2794.48	100	
As	75	89	He	0.030	ppb	23.8	47.78	100	
Se	77	89	No Gas	-0.242	ppb	N/A	7142.52	100	
Se	78	89	No Gas	-0.260	ppb	N/A	16850.96	100	
Se	78	89	He	0.372	ppb	88.2	33.33	100	
Se	82	89	No Gas	-1.005	ppb	N/A	-122.62	100	
[Se]	83	89	No Gas	188.035	ppb	126.5	1758.57	100	Failed
Sr	88	89	No Gas	0.011	ppb	25.7	3123.56	100	
Mo	95	89	No Gas	0.277	ppb	15.9	3220.34	10000	
Mo	97	89	No Gas	0.281	ppb	13.4	2105.66	10000	
Mo	98	89	No Gas	0.250	ppb	29.2	4809.16	10000	
[Mo]	99	89	No Gas	-80.154	ppb	N/A	0.00	10000	
Cd	106	89	No Gas	0.516	ppb	580.3	45818.42	100	
Ag	107	89	No Gas	0.041	ppb	10.1	1572.33	100	
Ag	107	89	He	0.037	ppb	8.0	570.60	100	
Cd	108	89	No Gas	-0.004	ppb	N/A	93.43	100	
Ag	109	89	No Gas	0.039	ppb	15.7	1141.21	100	
Cd	111	89	No Gas	0.010	ppb	12.7	-24.69	100	
Cd	114	89	No Gas	0.014	ppb	8.9	283.63	100	
Sn	118	115	No Gas	0.133	ppb	18.5	4231.82	100	
Sb	121	115	No Gas	0.030	ppb	6.3	1462.31	100	
Sb	121	89	He	0.008	ppb	70.2	256.68	100	
Sb	123	115	No Gas	0.009	ppb	32.0	1308.07	100	
Ba	135	115	No Gas	0.021	ppb	38.3	206.88	100	
Ba	137	115	No Gas	0.029	ppb	19.6	410.42	100	
Tl	203	209	No Gas	0.217	ppb	26.1	4979.43	100	
Tl	205	209	No Gas	0.201	ppb	21.4	11116.38	100	
Pb	206	209	No Gas	0.058	ppb	23.2	1668.48	100	
Pb	207	209	No Gas	0.050	ppb	13.3	1404.84	100	
Pb	208	209	No Gas	0.051	ppb	17.4	6303.71	100	
Th	232	209	No Gas	0.238	ppb	23.4	24830.54	100	
U	238	209	No Gas	0.095	ppb	14.6	7322.99	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3525741.15	0.4	3546479.06	99.42	70	125	
Sc	45	No Gas	18224493.28	0.5	18068973.18	100.86	75	125	
Sc	45	He	797514.13	0.6	782598.87	101.91	75	125	
Y	89	No Gas	45216344.77	0.7	44605013.43	101.37	75	125	
Y	89	He	6108259.11	0.8	6105468.19	100.05	75	125	
In	115	No Gas	9987724.75	0.2	9924340.73	100.64	75	125	
Tb	159	No Gas	14032734.43	0.8	13751488.6	102.05	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8633327.71	0.5	8506561.89	101.49	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 406_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b

Acq Time 2020-12-01 02:06:21

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 382CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	97.669	ppb	0.7	2131314.34	100	97.67	90	110	
Be	9	6	No Gas	101.091	ppb	0.5	526031.55	100	101.09	90	110	
B	11	6	No Gas	241.461	ppb	0.4	825223.72	250	96.58	90	110	
Na	23	45	No Gas	9893.495	ppb	0.4	240037063.70	10000	98.93	90	110	
Na	23	45	He	10158.158	ppb	0.8	7056209.69	10000	101.58	90	110	
Mg	24	45	No Gas	9853.007	ppb	0.3	165215297.54	10000	98.53	90	110	
Mg	24	45	He	10253.404	ppb	0.6	3659679.84	10000	102.53	90	110	
Mg	25	45	No Gas	9819.928	ppb	1.0	21962757.17	10000	98.2	90	110	
Al	27	45	No Gas	97.671	ppb	0.7	2149046.74	100	97.67	90	110	
Al	27	45	He	103.240	ppb	1.0	15221.85	100	103.24	90	110	
Si	28	45	No Gas	9884.075	ppb	0.3	88648231.75	10000	98.84	90	110	
Si	29	45	No Gas	10008.809	ppb	0.1	5502261.86	10000	100.09	90	110	
K	39	45	No Gas	9763.872	ppb	0.4	243409443.04	10000	97.64	90	110	
K	39	45	He	10091.648	ppb	1.0	3014661.52	10000	100.92	90	110	
Ca	44	45	No Gas	9830.627	ppb	0.9	7231829.68	10000	98.31	90	110	
Ca	44	45	He	10093.694	ppb	2.3	170293.88	10000	100.94	90	110	
Ti	47	45	No Gas	97.212	ppb	1.2	234651.71	100	97.21	90	110	
V	51	45	No Gas	96.323	ppb	0.7	2966301.10	100	96.32	90	110	
V	51	45	He	101.108	ppb	0.3	411309.79	100	101.11	90	110	
Cr	52	89	No Gas	97.645	ppb	0.6	2814054.06	100	97.64	90	110	
Cr	52	89	He	108.241	ppb	0.5	516439.59	100	108.24	90	110	
Cr	53	89	No Gas	98.822	ppb	0.6	390731.16	100	98.82	90	110	
Mn	55	89	No Gas	99.001	ppb	0.3	3858397.99	100	99	90	110	
Mn	55	89	He	103.298	ppb	1.2	282556.37	100	103.3	90	110	
Fe	56	89	No Gas	9912.791	ppb	1.0	274348489.47	10000	99.13	90	110	
Fe	56	89	He	10218.247	ppb	0.9	34138937.82	10000	102.18	90	110	
Co	59	89	No Gas	97.437	ppb	0.5	3088353.15	100	97.44	90	110	
Co	59	89	He	107.032	ppb	0.6	862292.19	100	107.03	90	110	
Ni	60	89	No Gas	101.208	ppb	0.4	710305.64	100	101.21	90	110	
Ni	60	89	He	103.404	ppb	0.4	234163.66	100	103.4	90	110	
Ni	62	89	No Gas	100.284	ppb	0.2	109994.07	100	100.28	90	110	
Cu	63	89	No Gas	99.274	ppb	0.3	1660293.32	100	99.27	90	110	
Cu	63	89	He	106.543	ppb	0.5	635761.10	100	106.54	90	110	
Cu	65	89	No Gas	101.581	ppb	0.2	815972.35	100	101.58	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.631	ppb	0.3	497211.70	100	99.63	90	110	
Zn	66	89	He	102.808	ppb	1.2	99336.46	100	102.81	90	110	
Zn	67	89	No Gas	98.125	ppb	0.7	77477.51	100	98.12	90	110	
Zn	68	89	No Gas	99.570	ppb	1.1	358758.31	100	99.57	90	110	
As	75	89	No Gas	101.727	ppb	0.8	533672.53	100	101.73	90	110	
As	75	89	He	101.644	ppb	0.5	73528.77	100	101.64	90	110	
Se	77	89	No Gas	97.611	ppb	2.0	33930.24	100	97.61	90	110	
Se	78	89	No Gas	98.534	ppb	0.5	95253.11	100	98.53	90	110	
Se	78	89	He	101.381	ppb	3.2	4460.76	100	101.38	90	110	
Se	82	89	No Gas	100.252	ppb	1.5	32909.20	100	100.25	90	110	
[Se]	83	89	No Gas	144.802	ppb	105.0	1668.47	100	144.8	90	110	Failed
Sr	88	89	No Gas	97.621	ppb	0.2	4821104.76	100	97.62	90	110	
Mo	95	89	No Gas	101.463	ppb	0.3	940549.46	100	101.46	90	110	
Mo	97	89	No Gas	102.319	ppb	0.6	589884.52	100	102.32	90	110	
Mo	98	89	No Gas	98.744	ppb	0.4	1467608.49	100	98.74	90	110	
[Mo]	99	89	No Gas	101.942	ppb	58.9	30.03	100	101.94	90	110	
Cd	106	89	No Gas	97.692	ppb	1.4	92288.74	100	97.69	90	110	
Ag	107	89	No Gas	99.424	ppb	0.5	2459515.95	100	99.42	90	110	
Ag	107	89	He	101.793	ppb	0.5	1159584.14	100	101.79	90	110	
Cd	108	89	No Gas	101.352	ppb	0.9	36891.76	100	101.35	90	110	
Ag	109	89	No Gas	101.212	ppb	0.3	2378541.05	100	101.21	90	110	
Cd	111	89	No Gas	101.361	ppb	0.4	501458.14	100	101.36	90	110	
Cd	114	89	No Gas	98.174	ppb	1.3	1273455.41	100	98.17	90	110	
Sn	118	115	No Gas	98.650	ppb	0.4	1595511.40	100	98.65	90	110	
Sb	121	115	No Gas	99.453	ppb	0.5	2304494.00	100	99.45	90	110	
Sb	121	89	He	102.688	ppb	0.8	525749.02	100	102.69	90	110	
Sb	123	115	No Gas	98.416	ppb	0.3	1778625.24	100	98.42	90	110	
Ba	135	115	No Gas	99.463	ppb	0.5	502471.60	100	99.46	90	110	
Ba	137	115	No Gas	101.664	ppb	0.2	876462.46	100	101.66	90	110	
Tl	203	209	No Gas	98.619	ppb	0.8	2051285.40	100	98.62	90	110	
Tl	205	209	No Gas	97.845	ppb	0.8	4869876.45	100	97.84	90	110	
Pb	206	209	No Gas	96.919	ppb	0.9	1638971.42	100	96.92	90	110	
Pb	207	209	No Gas	96.047	ppb	1.2	1355538.46	100	96.05	90	110	
Pb	208	209	No Gas	96.678	ppb	0.7	6392024.59	100	96.68	90	110	
Th	232	209	No Gas	99.089	ppb	0.4	6583315.41	100	99.09	90	110	
U	238	209	No Gas	98.117	ppb	0.5	6399545.60	100	98.12	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3408767.34	0.5	3546479.06	96.12	70	125	
Sc	45	No Gas	17912515.47	0.9	18068973.18	99.13	75	125	
Sc	45	He	785983.65	0.8	782598.87	100.43	75	125	
Y	89	No Gas	44056905.33	0.4	44605013.43	98.77	75	125	
Y	89	He	5973316.04	0.8	6105468.19	97.84	75	125	
In	115	No Gas	9750793.13	0.6	9924340.73	98.25	75	125	
Tb	159	No Gas	13890700.31	0.3	13751488.6	101.01	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8483192.16	0.2	8506561.89	99.73	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	407_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201130.b
Acq Time	2020-12-01 02:08:06
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	382CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.075	ppb	N/A	200041.42	100	
Be	9	6	No Gas	0.020	ppb	27.2	220.23	100	
B	11	6	No Gas	2.093	ppb	22.2	19356.29	100	
Na	23	45	No Gas	19.357	ppb	5.7	2092855.45	500000	
Na	23	45	He	20.325	ppb	17.1	67982.15	500000	
Mg	24	45	No Gas	3.139	ppb	11.5	93787.87	500000	
Mg	24	45	He	3.292	ppb	4.8	1866.94	500000	
Mg	25	45	No Gas	3.275	ppb	8.9	12673.34	500000	
Al	27	45	No Gas	0.568	ppb	6.8	24877.25	500000	
Al	27	45	He	0.122	ppb	255.4	133.34	500000	
Si	28	45	No Gas	11.656	ppb	19.1	447051.10	100	
Si	29	45	No Gas	12.954	ppb	6.9	67671.97	100	
K	39	45	No Gas	7.855	ppb	17.3	4215470.77	500000	
K	39	45	He	7.001	ppb	31.1	26760.74	500000	
Ca	44	45	No Gas	13.079	ppb	8.7	47738.32	500000	
Ca	44	45	He	3.725	ppb	161.9	280.02	500000	
Ti	47	45	No Gas	0.057	ppb	36.4	323.67	10000	
V	51	45	No Gas	0.129	ppb	8.8	831.41	100	
V	51	45	He	0.021	ppb	57.1	390.40	100	
Cr	52	89	No Gas	-0.008	ppb	N/A	24927.85	100	
Cr	52	89	He	0.019	ppb	84.5	2058.93	100	
Cr	53	89	No Gas	-0.495	ppb	N/A	38887.82	100	
Mn	55	89	No Gas	-0.408	ppb	N/A	22962.43	100	
Mn	55	89	He	-0.435	ppb	N/A	1341.43	100	
Fe	56	89	No Gas	3.873	ppb	58.7	2083761.63	500000	
Fe	56	89	He	12.465	ppb	1.1	67678.01	500000	
Co	59	89	No Gas	0.026	ppb	38.5	2292.54	100	
Co	59	89	He	0.019	ppb	65.5	417.10	100	
Ni	60	89	No Gas	0.010	ppb	184.9	1167.91	100	
Ni	60	89	He	0.014	ppb	117.1	303.65	100	
Ni	62	89	No Gas	-0.137	ppb	N/A	4518.69	100	
Cu	63	89	No Gas	-0.082	ppb	N/A	7963.75	100	
Cu	63	89	He	-0.075	ppb	N/A	2679.66	100	
Cu	65	89	No Gas	-0.105	ppb	N/A	4011.36	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.022	ppb	101.9	1855.35	100	
Zn	66	89	He	-0.039	ppb	N/A	337.02	100	
Zn	67	89	No Gas	0.026	ppb	132.2	360.37	100	
Zn	68	89	No Gas	0.037	ppb	84.8	1411.51	100	
As	75	89	No Gas	0.007	ppb	349.2	3474.58	100	
As	75	89	He	0.041	ppb	38.1	55.56	100	
Se	77	89	No Gas	-1.123	ppb	N/A	6848.72	100	
Se	78	89	No Gas	0.079	ppb	582.9	17021.36	100	
Se	78	89	He	0.425	ppb	51.9	35.56	100	
Se	82	89	No Gas	-0.813	ppb	N/A	-58.76	100	
[Se]	83	89	No Gas	151.270	ppb	44.7	1708.52	100	Failed
Sr	88	89	No Gas	0.032	ppb	20.7	4168.22	100	
Mo	95	89	No Gas	0.313	ppb	22.9	3534.07	10000	
Mo	97	89	No Gas	0.259	ppb	15.4	1962.15	10000	
Mo	98	89	No Gas	0.292	ppb	19.2	5408.49	10000	
[Mo]	99	89	No Gas	-20.495	ppb	N/A	10.01	10000	
Cd	106	89	No Gas	-0.129	ppb	N/A	45206.16	100	
Ag	107	89	No Gas	0.036	ppb	3.3	1443.42	100	
Ag	107	89	He	0.041	ppb	14.7	617.31	100	
Cd	108	89	No Gas	-0.038	ppb	N/A	80.08	100	
Ag	109	89	No Gas	0.041	ppb	17.1	1187.93	100	
Cd	111	89	No Gas	0.013	ppb	70.5	-11.49	100	
Cd	114	89	No Gas	0.024	ppb	21.0	413.76	100	
Sn	118	115	No Gas	0.126	ppb	6.3	4097.33	100	
Sb	121	115	No Gas	0.031	ppb	27.1	1488.98	100	
Sb	121	89	He	0.017	ppb	43.2	300.01	100	
Sb	123	115	No Gas	0.012	ppb	88.9	1348.11	100	
Ba	135	115	No Gas	0.023	ppb	41.7	216.89	100	
Ba	137	115	No Gas	0.029	ppb	19.2	403.75	100	
Tl	203	209	No Gas	0.227	ppb	25.6	5169.71	100	
Tl	205	209	No Gas	0.226	ppb	20.2	12318.78	100	
Pb	206	209	No Gas	0.061	ppb	23.0	1715.20	100	
Pb	207	209	No Gas	0.052	ppb	17.7	1431.54	100	
Pb	208	209	No Gas	0.056	ppb	15.4	6620.76	100	
Th	232	209	No Gas	0.299	ppb	24.6	28883.96	100	
U	238	209	No Gas	0.105	ppb	15.1	7980.77	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3531049.99	0.4	3546479.06	99.56	70	125	
Sc	45	No Gas	18114119.16	0.4	18068973.18	100.25	75	125	
Sc	45	He	795426.29	0.9	782598.87	101.64	75	125	
Y	89	No Gas	44932215.64	0.7	44605013.43	100.73	75	125	
Y	89	He	6072974.03	0.7	6105468.19	99.47	75	125	
In	115	No Gas	9918409.10	0.6	9924340.73	99.94	75	125	
Tb	159	No Gas	13896084.86	0.6	13751488.6	101.05	75	125	

Continuing Calibration Blank (CCB) Report

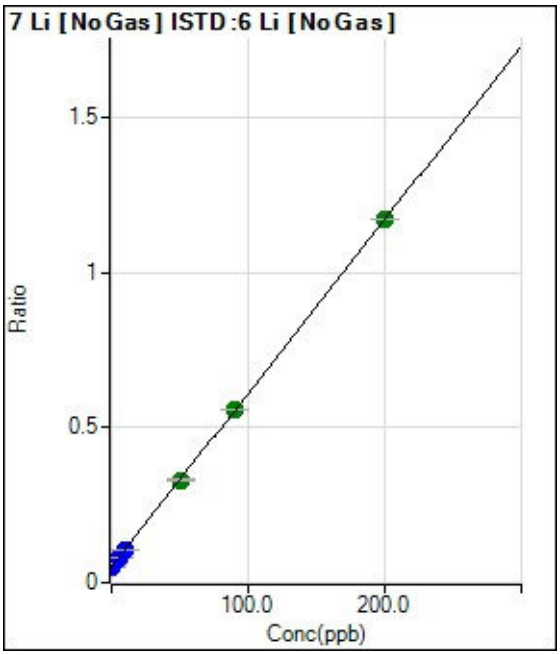
Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8600541.88	0.4	8506561.89	101.1	75	125	

Calibration for 016_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b\
Analysis File: ICPMS3_201201.batch.bin
DA Date-Time: 2020-12-01 14:28:22
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	007CALB.d	std 1	2020-12-01 14:06:39
2	008CALS.d	std 2	2020-12-01 14:09:20
3	009CALS.d	std 3	2020-12-01 14:11:13
4	010CALS.d	std 4	2020-12-01 14:13:06
5	011CALS.d	std 5	2020-12-01 14:14:59
6	012CALS.d	std 6	2020-12-01 14:16:52
7	013CALS.d	std 7	2020-12-01 14:18:48
8	014CALS.d	std 8	2020-12-01 14:20:41

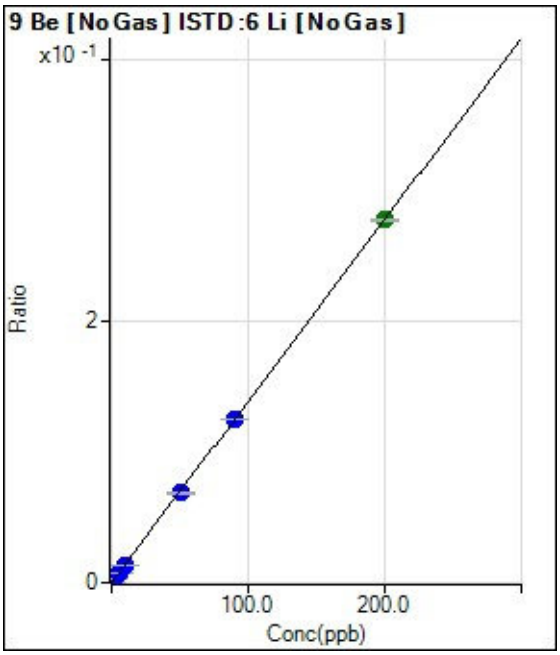
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	252644.41	0.0515	P	1.4
2	☐	0.200	0.293	260137.37	0.0531	P	0.9
3	☐	2.000	2.021	305000.94	0.0628	P	0.2
4	☐	5.000	5.020	385166.17	0.0796	P	0.8
5	☐	10.000	9.812	509065.63	0.1065	P	0.7
6	☐	50.000	50.058	1542275.41	0.3320	A	0.6
7	☐	90.000	90.114	2530486.27	0.5564	A	0.2
8	☐	200.000	199.943	5149884.68	1.1718	A	0.2

y = 0.0056 * x + 0.0515
R = 1.0000
DL = 0.3841
BEC = 9.192

Weight: <None>
Min Conc: <None>

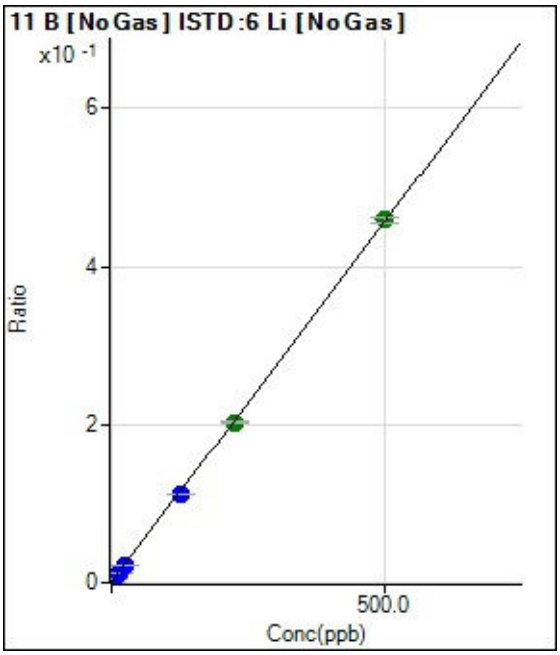


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	0.200	0.180	1227.97	0.0003	P	10.1
3	☐	2.000	1.912	12875.61	0.0027	P	1.6
4	☐	5.000	4.875	32697.54	0.0068	P	1.9
5	☐	10.000	9.598	63626.63	0.0133	P	0.8
6	☐	50.000	49.683	320017.16	0.0689	P	1.7
7	☐	90.000	90.181	568656.35	0.1250	P	0.5
8	☐	200.000	200.022	1218810.69	0.2773	A	0.8

y = 0.0014 * x + 1.3607E-006
R = 1.0000
DL = 0.00255
BEC = 0.0009814

Weight: <None>
Min Conc: <None>

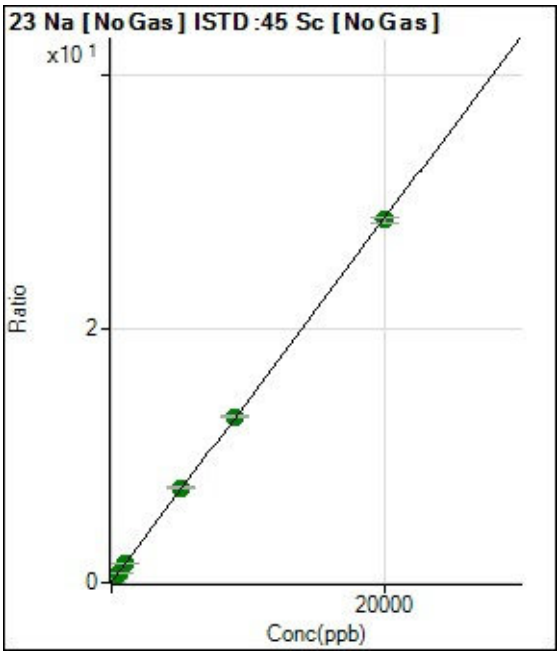
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2142.34	0.0004	P	4.8
2	☐	0.500	0.469	4231.61	0.0009	P	3.4
3	☐	5.000	4.635	22641.16	0.0047	P	2.7
4	☐	12.500	11.708	53762.99	0.0111	P	1.0
5	☐	25.000	23.617	105070.72	0.0220	P	0.8
6	☐	125.000	121.779	518018.32	0.1115	P	1.2
7	☐	225.000	221.196	919517.91	0.2022	A	1.2
8	☐	500.000	502.610	2016501.97	0.4589	A	1.3

y = 9.1207E-004 * x + 4.3674E-004
R = 0.9999
DL = 0.06948
BEC = 0.4788

Weight: <None>
Min Conc: <None>

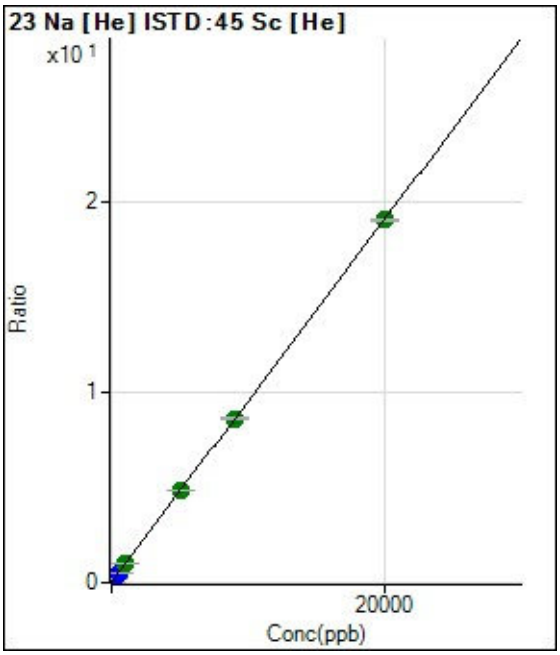


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	741729.62	0.0379	A	1.8
2	☐	20.000	20.303	1303455.08	0.0670	A	1.5
3	☐	200.000	202.901	6358702.36	0.3292	A	1.5
4	☐	500.000	510.234	14850363.87	0.7704	A	0.6
5	☐	1000.000	1022.488	28627552.72	1.5059	A	0.4
6	☐	5000.000	5196.119	140843669.82	7.4983	A	0.9
7	☐	9000.000	9089.441	245398380.48	13.0881	A	0.7
8	☐	20000.000	19909.312	532497645.24	28.6229	A	1.4

y = 0.0014 * x + 0.0379
R = 0.9999
DL = 1.428
BEC = 26.37

Weight: <None>
Min Conc: <None>

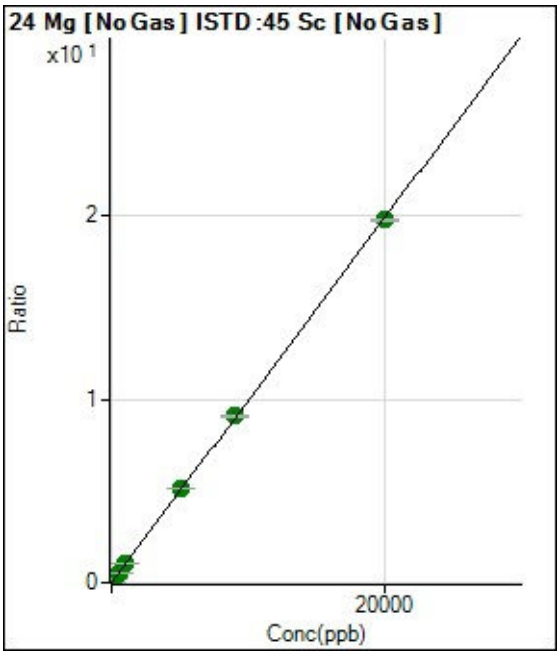
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24676.64	0.0287	P	3.4
2	☐	20.000	20.145	41036.14	0.0478	P	3.7
3	☐	200.000	204.136	188037.74	0.2230	P	2.9
4	☐	500.000	511.949	440083.98	0.5159	P	1.2
5	☐	1000.000	1000.702	819100.85	0.9812	A	0.9
6	☐	5000.000	5047.558	4018701.40	4.8331	A	1.4
7	☐	9000.000	9014.673	7098340.93	8.6091	A	1.0
8	☐	20000.000	19981.132	15352867.69	19.0473	A	0.4

y = 9.5183E-004 * x + 0.0287
R = 1.0000
DL = 3.088
BEC = 30.11

Weight: <None>
Min Conc: <None>

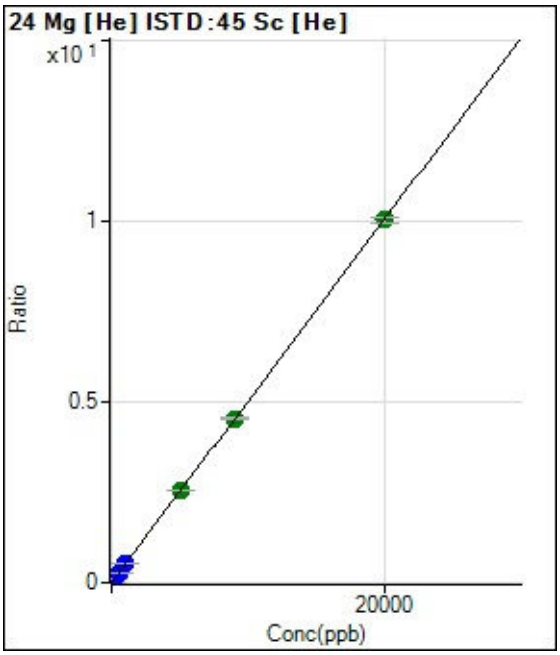


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7055.70	0.0004	P	11.6
2	☐	20.000	20.501	403719.39	0.0208	P	1.5
3	☐	200.000	205.127	3949258.17	0.2044	A	0.5
4	☐	500.000	513.779	9859480.06	0.5115	A	1.2
5	☐	1000.000	1024.420	19382155.13	1.0196	A	0.5
6	☐	5000.000	5168.853	96604508.56	5.1430	A	0.5
7	☐	9000.000	9126.006	170247804.13	9.0801	A	0.5
8	☐	20000.000	19899.467	368339154.51	19.7988	A	0.8

y = 9.9493E-004 * x + 3.6023E-004
R = 0.9999
DL = 0.1259
BEC = 0.3621

Weight: <None>
Min Conc: <None>

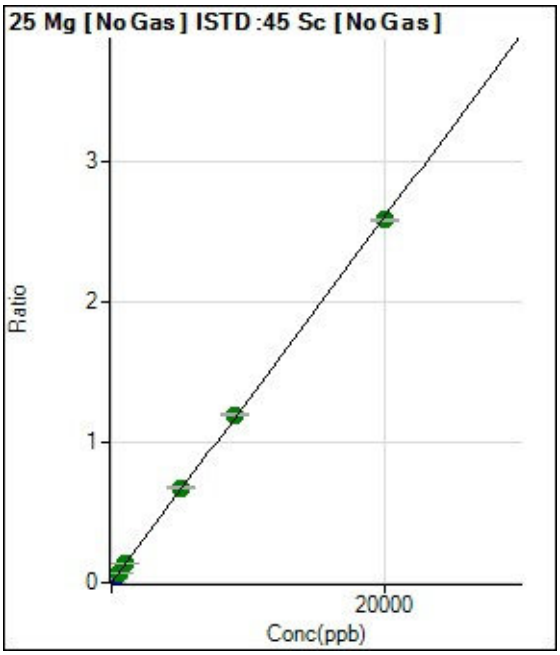
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0001	P	24.2
2	☐	20.000	20.282	8843.41	0.0103	P	5.0
3	☐	200.000	207.606	88162.21	0.1045	P	1.1
4	☐	500.000	508.297	218138.54	0.2557	P	1.6
5	☐	1000.000	1014.950	426222.56	0.5105	P	0.4
6	☐	5000.000	5059.997	2116052.47	2.5448	A	0.1
7	☐	9000.000	9040.632	3749146.51	4.5467	A	0.8
8	☐	20000.000	19965.685	8092920.09	10.0410	A	1.4

y = 5.0291E-004 * x + 1.0833E-004
R = 1.0000
DL = 0.1567
BEC = 0.2154

Weight: <None>
Min Conc: <None>

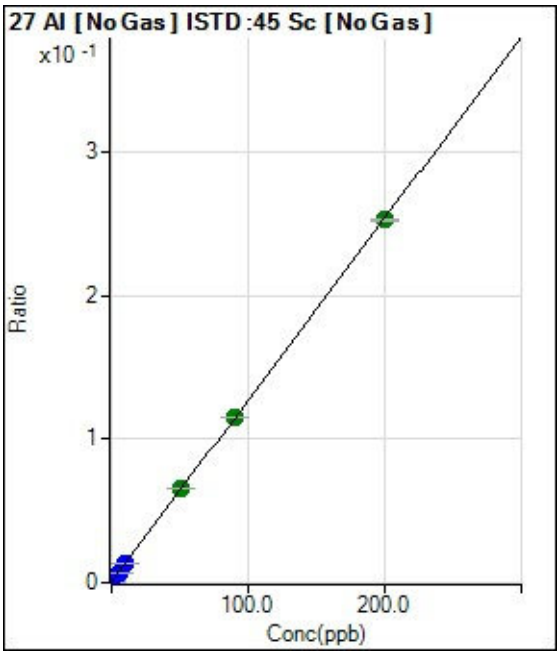


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1240.17	0.0001	P	31.8
2	☐	20.000	20.023	52019.68	0.0027	P	2.2
3	☐	200.000	207.099	522953.29	0.0271	P	0.9
4	☐	500.000	515.417	1296824.04	0.0673	A	1.4
5	☐	1000.000	1034.295	2565439.86	0.1350	A	0.7
6	☐	5000.000	5200.969	12742017.73	0.6784	A	0.7
7	☐	9000.000	9202.110	22503259.66	1.2002	A	0.5
8	☐	20000.000	19856.637	48179817.62	2.5897	A	0.7

y = 1.3042E-004 * x + 6.3313E-005
R = 0.9999
DL = 0.4626
BEC = 0.4855

Weight: <None>
Min Conc: <None>

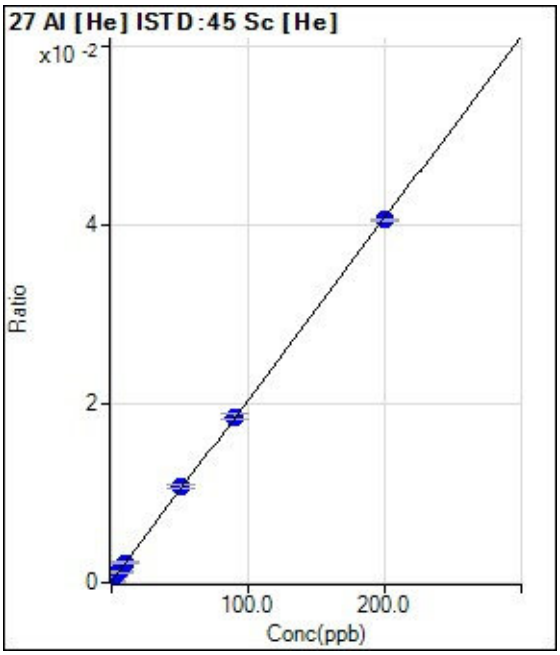
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14034.98	0.0007	P	21.2
2	☐			24329.69	0.0013	P	1.6
3	☐	2.000	2.299	70101.08	0.0036	P	4.2
4	☐	5.000	5.132	139098.23	0.0072	P	1.5
5	☐	10.000	10.183	258805.05	0.0136	P	0.5
6	☐	50.000	51.644	1242147.74	0.0661	A	0.5
7	☐	90.000	90.784	2169404.24	0.1157	A	0.3
8	☐	200.000	199.221	4707726.59	0.2530	A	0.6

y = 0.0013 * x + 7.1661E-004
R = 1.0000
DL = 0.3591
BEC = 0.5658

Weight: <None>
Min Conc: <None>

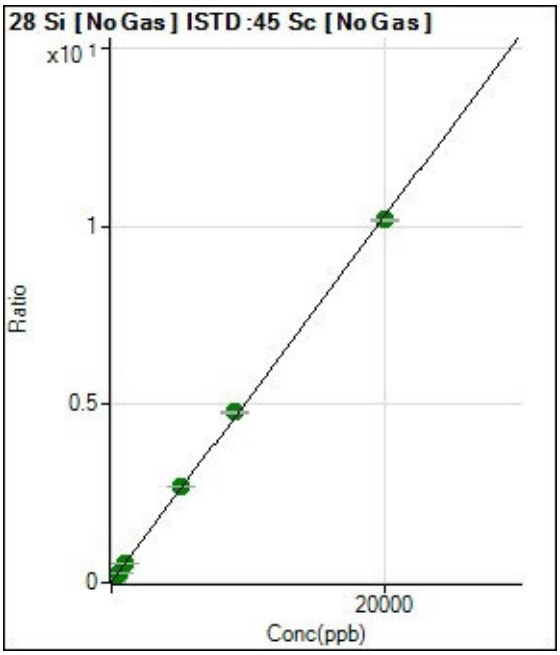


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	28.2
2	☐			216.67	0.0003	P	31.4
3	☐	2.000	2.453	526.68	0.0006	P	16.9
4	☐	5.000	5.573	1073.40	0.0013	P	15.2
5	☐	10.000	10.200	1836.82	0.0022	P	9.0
6	☐	50.000	52.741	9029.76	0.0109	P	4.2
7	☐	90.000	90.616	15315.32	0.0186	P	3.7
8	☐	200.000	199.009	32752.00	0.0406	P	0.7

y = 2.0356E-004 * x + 1.2380E-004
R = 0.9999
DL = 0.5149
BEC = 0.6082

Weight: <None>
Min Conc: <None>

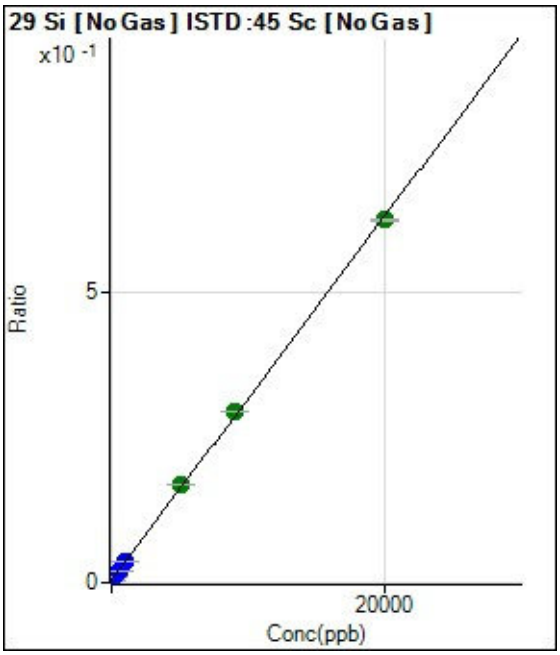
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	451456.01	0.0230	P	0.8
2	☐	20.000	20.829	655781.69	0.0337	P	0.8
3	☐	200.000	206.576	2489360.30	0.1289	A	0.0
4	☐	500.000	517.563	5554479.91	0.2882	A	0.4
5	☐	1000.000	1035.724	10524172.11	0.5536	A	0.6
6	☐	5000.000	5240.149	50855455.56	2.7074	A	0.5
7	☐	9000.000	9276.078	89528068.25	4.7749	A	0.4
8	☐	20000.000	19813.436	189257751.47	10.1729	A	0.6

y = 5.1227E-004 * x + 0.0230
R = 0.9998
DL = 1.015
BEC = 44.99

Weight: <None>
Min Conc: <None>

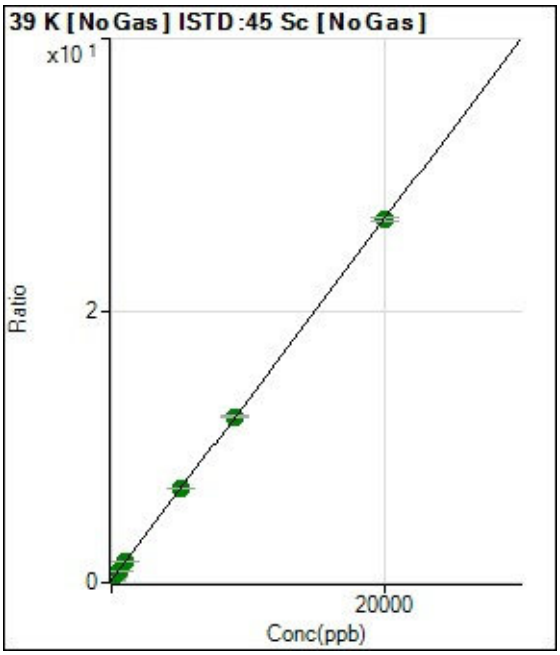


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75341.53	0.0038	P	1.3
2	☐	20.000	14.222	83459.20	0.0043	P	0.2
3	☐	200.000	206.021	198773.42	0.0103	P	1.2
4	☐	500.000	515.751	385063.50	0.0200	P	0.3
5	☐	1000.000	1046.130	695140.74	0.0366	P	0.5
6	☐	5000.000	5266.581	3166442.80	0.1686	A	0.6
7	☐	9000.000	9270.055	5508570.25	0.2938	A	0.6
8	☐	20000.000	19809.075	11598444.72	0.6234	A	0.7

y = 3.1278E-005 * x + 0.0038
R = 0.9998
DL = 4.877
BEC = 123

Weight: <None>
Min Conc: <None>

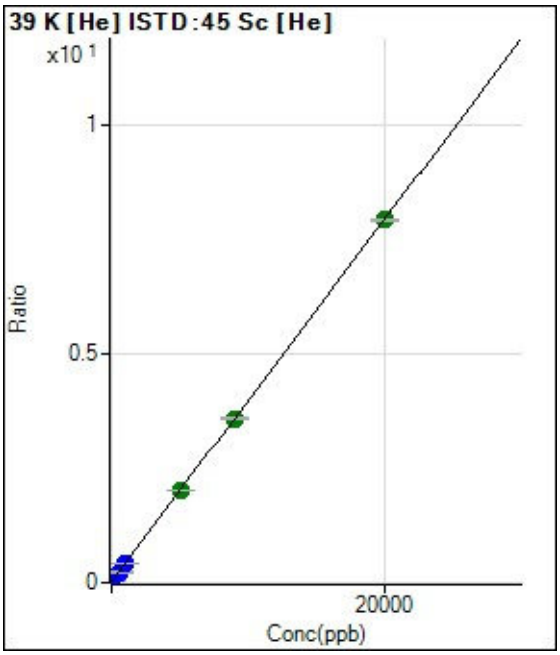
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3826478.38	0.1953	A	0.8
2	☐	20.000	21.061	4343480.15	0.2233	A	0.3
3	☐	200.000	201.407	8941223.62	0.4629	A	0.4
4	☐	500.000	505.207	16699916.00	0.8664	A	0.2
5	☐	1000.000	1006.813	29136365.40	1.5327	A	0.6
6	☐	5000.000	5109.469	131153184.71	6.9822	A	0.1
7	☐	9000.000	9049.441	229041976.59	12.2157	A	0.7
8	☐	20000.000	19949.899	496629005.93	26.6948	A	1.0

y = 0.0013 * x + 0.1953
R = 1.0000
DL = 3.567
BEC = 147.1

Weight: <None>
Min Conc: <None>

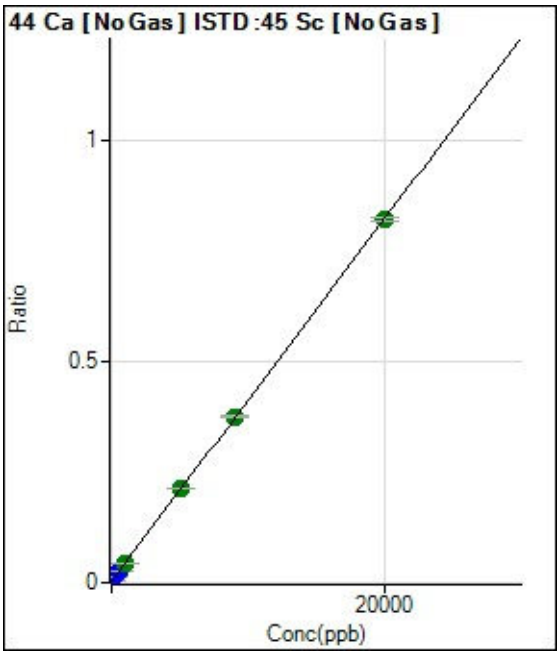


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24423.34	0.0284	P	2.9
2	☐	20.000	17.427	30248.55	0.0353	P	2.6
3	☐	200.000	214.222	95306.09	0.1130	P	2.7
4	☐	500.000	511.972	196717.81	0.2306	P	1.3
5	☐	1000.000	1042.029	367367.38	0.4400	P	0.2
6	☐	5000.000	5068.239	1688518.83	2.0307	A	0.5
7	☐	9000.000	8996.771	2954104.75	3.5827	A	1.1
8	☐	20000.000	19981.853	6385986.99	7.9225	A	0.2

y = 3.9507E-004 * x + 0.0284
R = 1.0000
DL = 6.199
BEC = 71.81

Weight: <None>
Min Conc: <None>

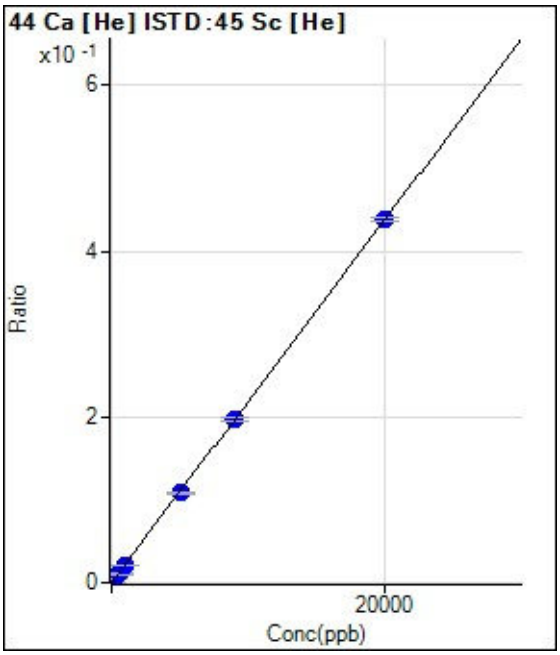
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65666.66	0.0034	P	0.8
2	☐	20.000	18.550	79995.57	0.0041	P	1.8
3	☐	200.000	203.739	226123.37	0.0117	P	0.6
4	☐	500.000	515.506	472029.54	0.0245	P	1.6
5	☐	1000.000	1025.007	862651.52	0.0454	A	0.9
6	☐	5000.000	5091.855	3984552.44	0.2121	A	0.6
7	☐	9000.000	9079.511	7042961.15	0.3756	A	0.5
8	☐	20000.000	19939.582	15272431.02	0.8209	A	1.1

y = 4.1002E-005 * x + 0.0034
R = 1.0000
DL = 1.847
BEC = 81.76

Weight: <None>
Min Conc: <None>

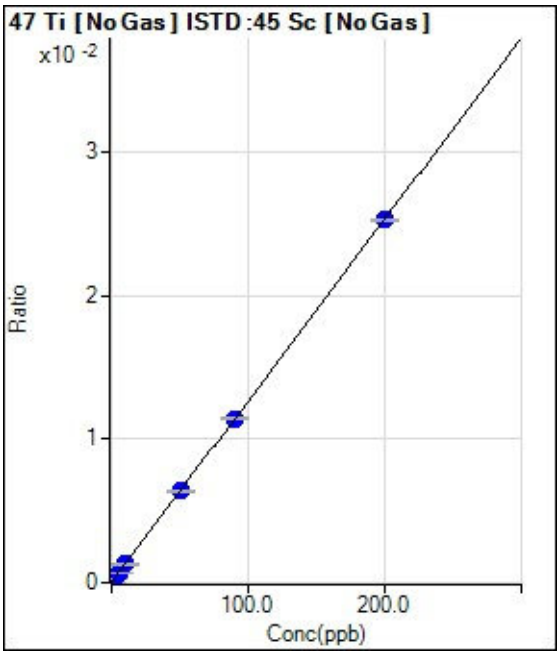


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0001	P	89.1
2	☐	20.000	28.456	626.72	0.0007	P	20.2
3	☐	200.000	196.060	3707.47	0.0044	P	2.7
4	☐	500.000	478.760	9016.96	0.0106	P	9.6
5	☐	1000.000	966.087	17719.24	0.0212	P	3.3
6	☐	5000.000	4946.160	89979.15	0.1082	P	1.1
7	☐	9000.000	9000.285	162320.13	0.1968	P	3.1
8	☐	20000.000	20015.589	352676.82	0.4376	P	1.0

y = 2.1856E-005 * x + 1.0812E-004
R = 1.0000
DL = 13.22
BEC = 4.947

Weight: <None>
Min Conc: <None>

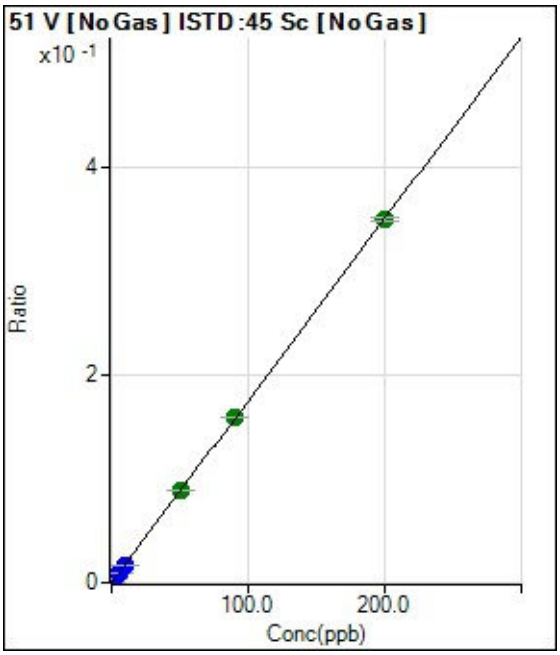
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	430.45	0.0000	P	13.9
2	☐	0.200	0.164	830.87	0.0000	P	15.6
3	☐	2.000	1.871	4992.66	0.0003	P	3.5
4	☐	5.000	5.084	12812.33	0.0007	P	1.6
5	☐	10.000	9.968	24372.98	0.0013	P	2.6
6	☐	50.000	50.356	119996.13	0.0064	P	1.0
7	☐	90.000	90.294	214454.83	0.0114	P	1.2
8	☐	200.000	199.780	470302.40	0.0253	P	0.3

y = 1.2643E-004 * x + 2.1973E-005
R = 1.0000
DL = 0.0724
BEC = 0.1738

Weight: <None>
Min Conc: <None>

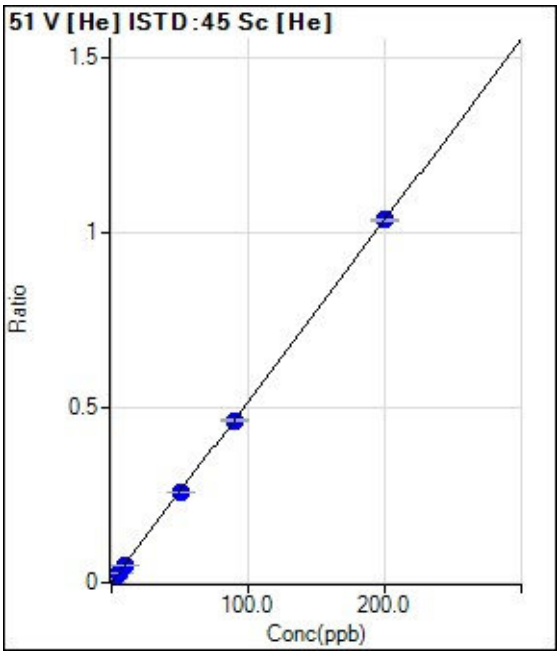


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-6753.07	-0.0003	P	-57.7
2	☐	0.200	0.309	3817.77	0.0002	P	68.4
3	☐	2.000	1.987	60609.72	0.0031	P	0.6
4	☐	5.000	5.134	166785.08	0.0087	P	4.0
5	☐	10.000	9.898	323197.58	0.0170	P	1.3
6	☐	50.000	50.470	1654951.99	0.0881	A	0.4
7	☐	90.000	90.796	2977057.96	0.1588	A	0.2
8	☐	200.000	199.526	6498944.99	0.3493	A	1.1

y = 0.0018 * x - 3.4477E-004
R = 1.0000
DL = 0.3404
BEC = -0.1967

Weight: <None>
Min Conc: <None>

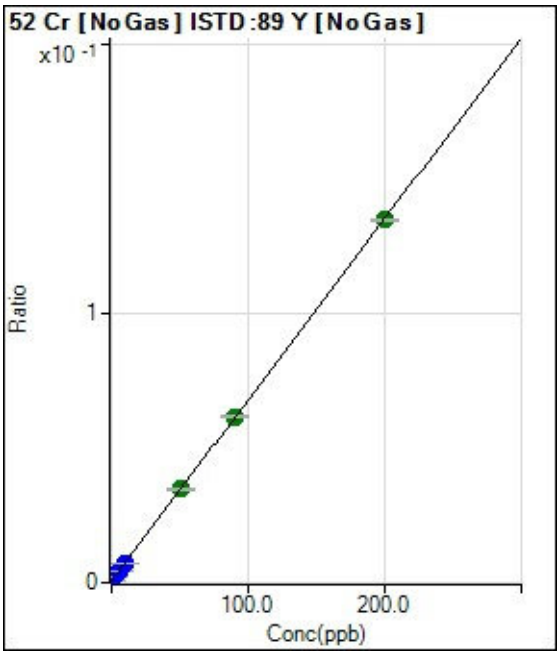
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	520.54	0.0006	P	11.2
2	☐	0.200	0.203	1418.18	0.0017	P	4.3
3	☐	2.000	1.991	9189.11	0.0109	P	2.5
4	☐	5.000	4.923	22213.84	0.0260	P	0.2
5	☐	10.000	9.647	42123.57	0.0505	P	1.4
6	☐	50.000	50.028	215465.77	0.2591	P	0.6
7	☐	90.000	89.564	382117.78	0.4634	P	0.4
8	☐	200.000	200.209	834380.74	1.0352	P	0.5

y = 0.0052 * x + 6.0439E-004
R = 1.0000
DL = 0.03942
BEC = 0.117

Weight: <None>
Min Conc: <None>

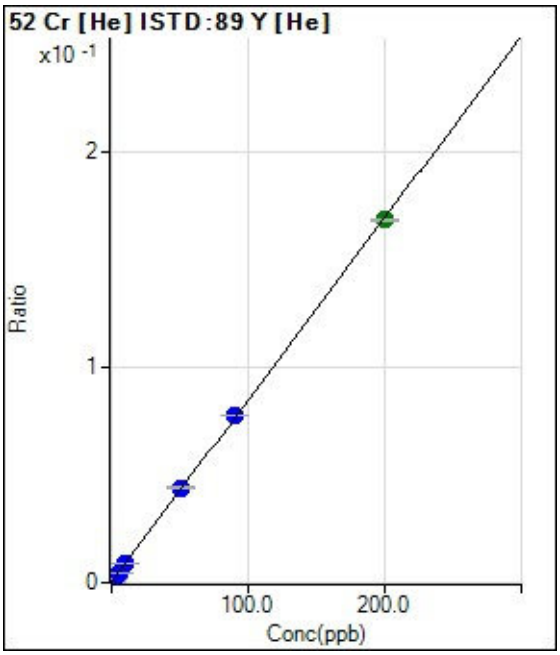


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30996.28	0.0007	P	1.5
2	☐	0.200	0.197	36956.92	0.0008	P	1.7
3	☐	2.000	1.968	89959.79	0.0020	P	0.6
4	☐	5.000	5.013	181628.36	0.0040	P	1.1
5	☐	10.000	10.068	329182.68	0.0074	P	0.6
6	☐	50.000	50.624	1514669.31	0.0347	A	0.7
7	☐	90.000	90.650	2694490.85	0.0615	A	1.3
8	☐	200.000	199.548	5825131.81	0.1347	A	0.2

y = 6.7148E-004 * x + 6.7831E-004
R = 1.0000
DL = 0.04599
BEC = 1.01

Weight: <None>
Min Conc: <None>

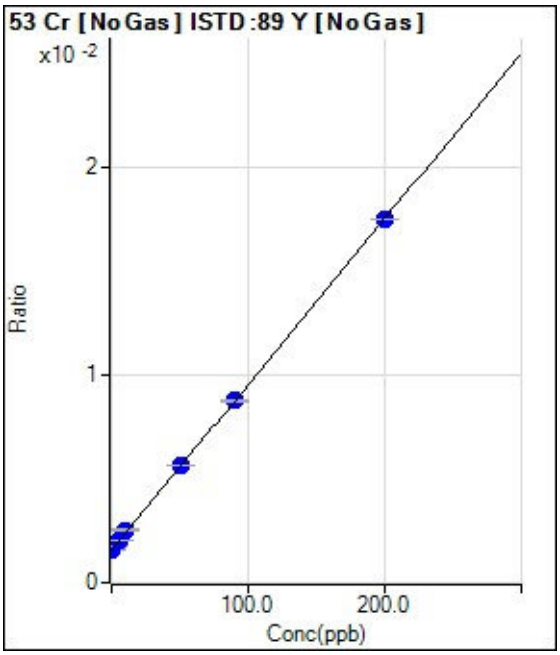
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2459.39	0.0004	P	8.8
2	☐	0.200	0.180	3440.60	0.0005	P	2.3
3	☐	2.000	2.085	13712.05	0.0021	P	4.2
4	☐	5.000	4.915	28638.76	0.0045	P	1.2
5	☐	10.000	10.099	55246.39	0.0089	P	1.6
6	☐	50.000	51.521	271954.87	0.0438	P	1.9
7	☐	90.000	91.389	477526.50	0.0775	P	0.6
8	☐	200.000	198.991	1017672.47	0.1682	A	0.6

y = 8.4358E-004 * x + 3.8357E-004
R = 0.9999
DL = 0.1198
BEC = 0.4547

Weight: <None>
Min Conc: <None>

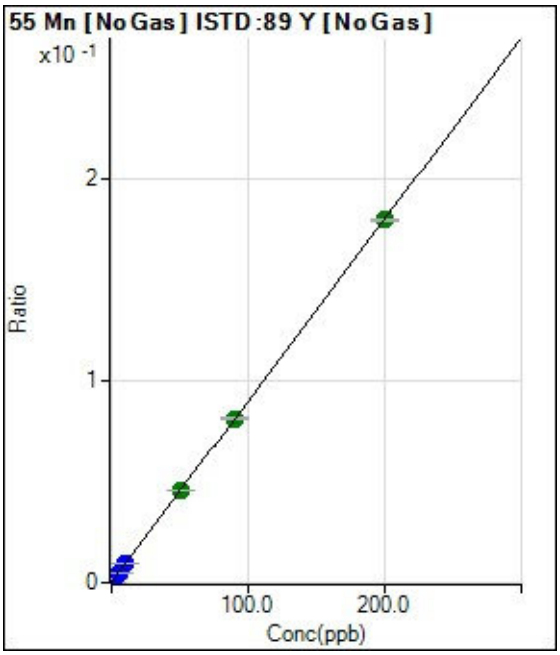


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71567.73	0.0016	P	0.8
2	☐	0.200	0.844	74482.99	0.0016	P	1.5
3	☐	2.000	3.027	81281.71	0.0018	P	0.7
4	☐	5.000	5.901	91435.12	0.0020	P	3.1
5	☐	10.000	12.189	112248.41	0.0025	P	1.0
6	☐	50.000	51.152	246338.41	0.0056	P	0.7
7	☐	90.000	90.415	383714.90	0.0088	P	1.4
8	☐	200.000	199.383	754399.11	0.0174	P	0.1

y = 7.9620E-005 * x + 0.0016
R = 1.0000
DL = 0.4706
BEC = 19.67

Weight: <None>
Min Conc: <None>

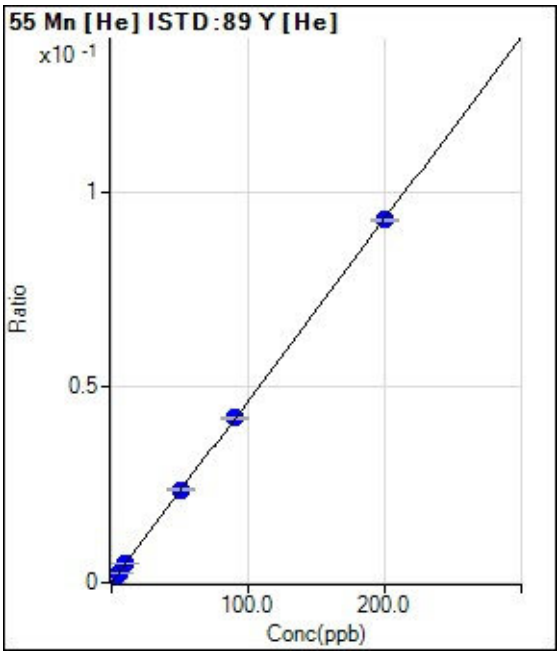
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9856.92	0.0002	P	3.1
2	☐	0.200	0.189	17585.79	0.0004	P	1.0
3	☐	2.000	1.976	89460.30	0.0020	P	1.6
4	☐	5.000	5.029	212351.65	0.0047	P	0.8
5	☐	10.000	10.090	410200.89	0.0093	P	0.3
6	☐	50.000	50.806	2000965.71	0.0458	A	0.5
7	☐	90.000	90.126	3549895.74	0.0811	A	0.9
8	☐	200.000	199.737	7761333.85	0.1794	A	0.2

y = 8.9728E-004 * x + 2.1571E-004
R = 1.0000
DL = 0.02247
BEC = 0.2404

Weight: <None>
Min Conc: <None>

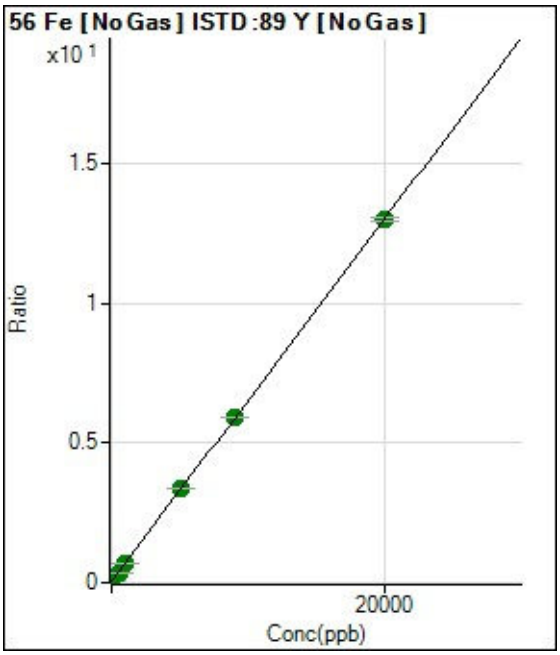


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.25	0.0000	P	23.0
2	☐	0.200	0.192	814.19	0.0001	P	14.0
3	☐	2.000	1.977	6127.59	0.0010	P	3.3
4	☐	5.000	4.883	14609.30	0.0023	P	1.7
5	☐	10.000	10.170	29615.31	0.0048	P	1.2
6	☐	50.000	51.106	147824.87	0.0238	P	0.7
7	☐	90.000	90.502	259933.03	0.0422	P	0.9
8	☐	200.000	199.492	562020.06	0.0929	P	0.6

y = 4.6559E-004 * x + 3.7450E-005
R = 1.0000
DL = 0.05559
BEC = 0.08044

Weight: <None>
Min Conc: <None>

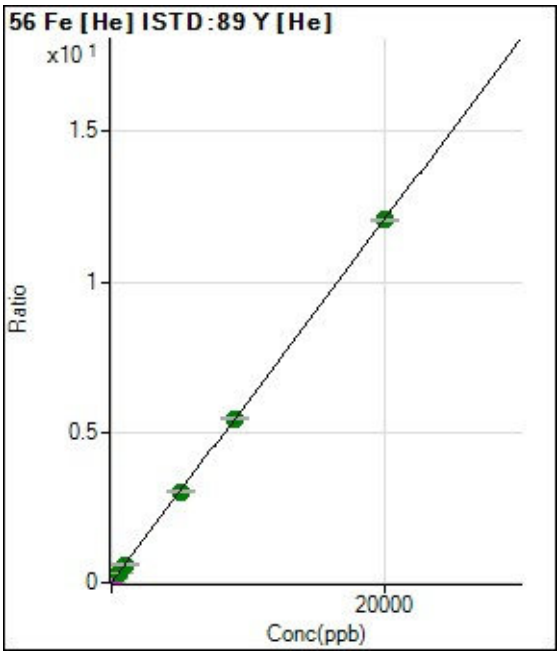
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2199141.20	0.0481	A	1.4
2	☐	20.000	15.086	2640121.54	0.0579	A	1.6
3	☐	200.000	194.292	7824692.88	0.1740	A	0.7
4	☐	500.000	494.252	16537299.33	0.3682	A	0.3
5	☐	1000.000	997.960	30730799.65	0.6945	A	1.3
6	☐	5000.000	5107.146	146603503.28	3.3558	A	0.4
7	☐	9000.000	9031.382	258198522.44	5.8974	A	0.3
8	☐	20000.000	19959.399	561238312.55	12.9750	A	1.0

y = 6.4766E-004 * x + 0.0481
R = 1.0000
DL = 3.087
BEC = 74.3

Weight: <None>
Min Conc: <None>

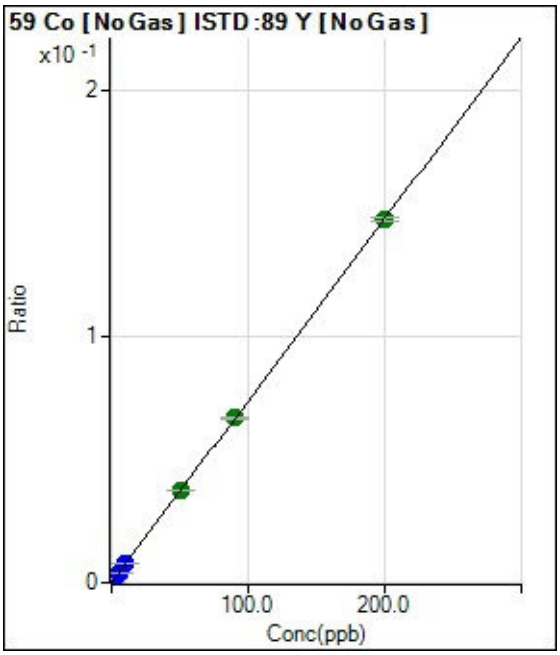


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41759.79	0.0065	P	3.4
2	☐	20.000	20.896	122739.68	0.0191	P	1.6
3	☐	200.000	205.962	836389.44	0.1307	M	9.5
4	☐	500.000	488.622	1904493.62	0.3012	A	1.0
5	☐	1000.000	993.871	3760411.40	0.6060	A	0.7
6	☐	5000.000	5016.170	18805998.47	3.0321	A	2.3
7	☐	9000.000	9032.023	33617232.83	5.4544	A	0.7
8	☐	20000.000	19982.077	72941632.25	12.0592	A	0.3

y = 6.0317E-004 * x + 0.0065
R = 1.0000
DL = 1.11
BEC = 10.8

Weight: <None>
Min Conc: <None>

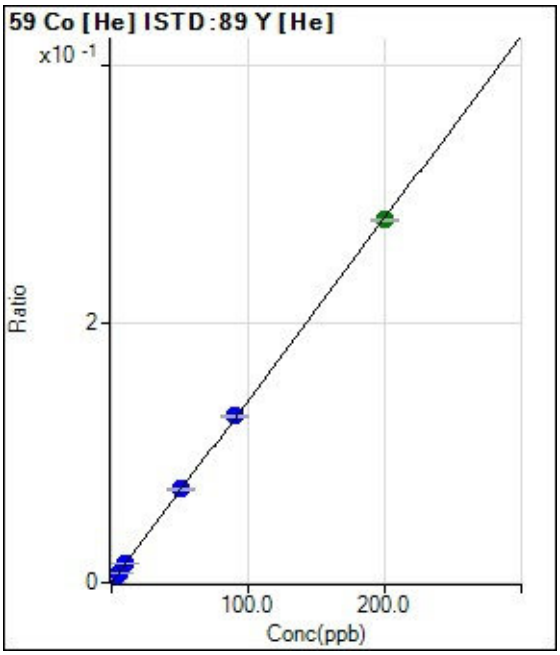
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1241.32	0.0000	P	9.3
2	☐	0.200	0.198	7903.62	0.0002	P	2.6
3	☐	2.000	2.035	68748.29	0.0015	P	4.0
4	☐	5.000	5.090	169907.19	0.0038	P	1.2
5	☐	10.000	10.145	332482.42	0.0075	P	1.4
6	☐	50.000	50.847	1640368.03	0.0375	A	0.8
7	☐	90.000	90.436	2922859.74	0.0668	A	1.2
8	☐	200.000	199.582	6371391.61	0.1473	A	1.0

y = 7.3794E-004 * x + 2.7160E-005
R = 1.0000
DL = 0.01027
BEC = 0.03681

Weight: <None>
Min Conc: <None>

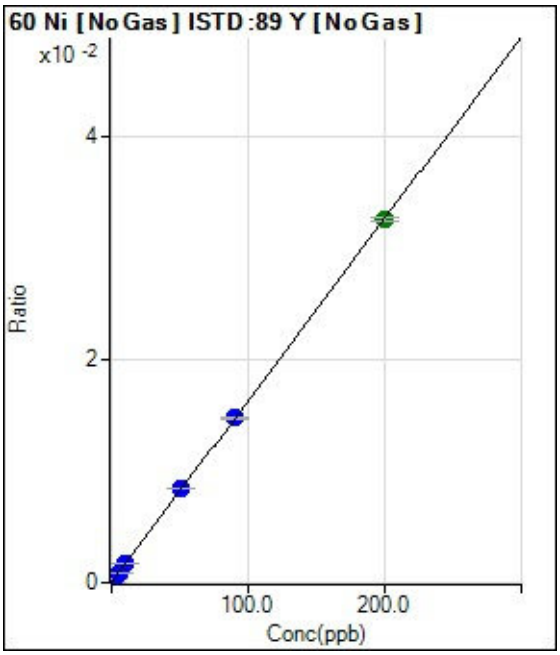


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.96	0.0000	P	24.9
2	☐	0.200	0.187	1982.17	0.0003	P	8.6
3	☐	2.000	1.974	18063.50	0.0028	P	1.0
4	☐	5.000	5.075	45451.31	0.0072	P	1.9
5	☐	10.000	10.123	88712.19	0.0143	P	0.7
6	☐	50.000	51.276	447981.16	0.0722	P	1.9
7	☐	90.000	91.373	793079.46	0.1287	P	0.3
8	☐	200.000	199.055	1695196.24	0.2803	A	0.4

y = 0.0014 * x + 4.4757E-005
R = 0.9999
DL = 0.02375
BEC = 0.03179

Weight: <None>
Min Conc: <None>

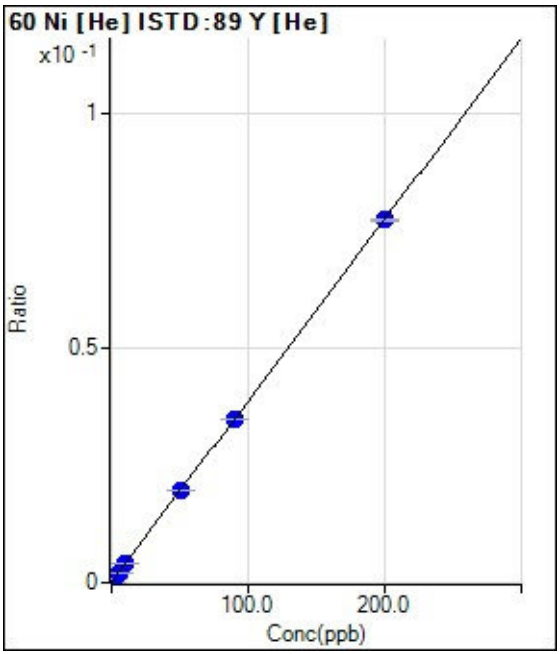
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1181.26	0.0000	P	13.5
2	☐	0.200	0.171	2446.03	0.0001	P	4.0
3	☐	2.000	2.015	15932.11	0.0004	P	4.4
4	☐	5.000	5.082	38359.19	0.0009	P	1.1
5	☐	10.000	10.237	74969.90	0.0017	P	2.1
6	☐	50.000	51.333	366618.52	0.0084	P	0.0
7	☐	90.000	90.543	647173.98	0.0148	P	0.9
8	☐	200.000	199.408	1406798.68	0.0325	A	0.9

y = 1.6298E-004 * x + 2.5840E-005
R = 1.0000
DL = 0.0642
BEC = 0.1586

Weight: <None>
Min Conc: <None>

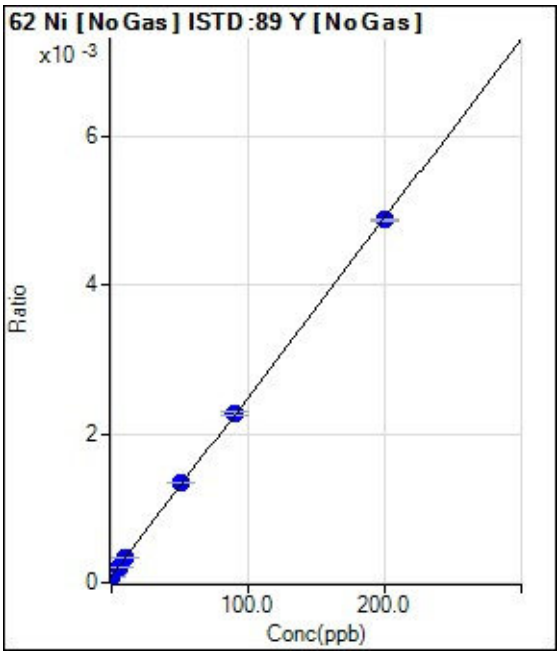


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	987.71	0.0002	P	15.5
2	☐	0.200	-0.089	767.47	0.0001	P	12.8
3	☐	2.000	1.646	5052.74	0.0008	P	5.4
4	☐	5.000	4.934	13019.43	0.0021	P	1.8
5	☐	10.000	9.911	24707.42	0.0040	P	0.7
6	☐	50.000	50.378	121625.51	0.0196	P	1.1
7	☐	90.000	90.150	215522.64	0.0350	P	0.4
8	☐	200.000	199.848	467722.92	0.0773	P	0.7

y = 3.8617E-004 * x + 1.5404E-004
R = 1.0000
DL = 0.1852
BEC = 0.3989

Weight: <None>
Min Conc: <None>

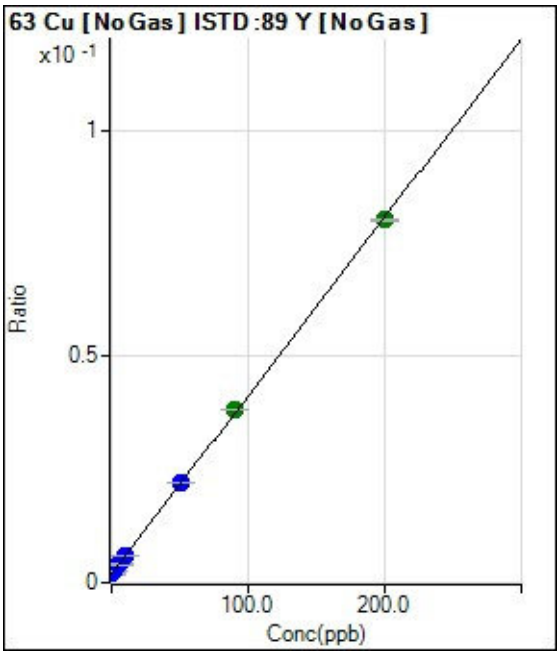
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4041.40	0.0001	P	3.0
2	☐	0.200	0.437	4512.02	0.0001	P	7.1
3	☐	2.000	2.265	6424.70	0.0001	P	7.1
4	☐	5.000	4.857	9215.84	0.0002	P	2.3
5	☐	10.000	10.275	14843.13	0.0003	P	5.4
6	☐	50.000	52.299	58785.35	0.0013	P	1.1
7	☐	90.000	91.010	99641.97	0.0023	P	1.9
8	☐	200.000	198.958	210684.95	0.0049	P	0.6

y = 2.4038E-005 * x + 8.8444E-005
R = 0.9999
DL = 0.3285
BEC = 3.679

Weight: <None>
Min Conc: <None>

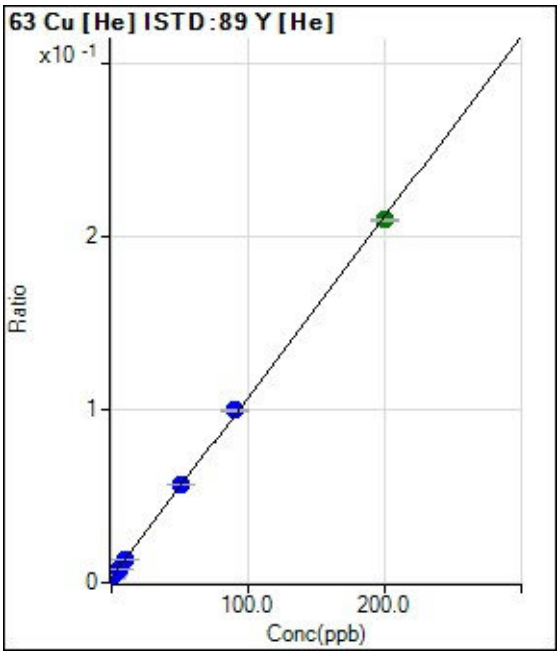


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	88142.23	0.0019	P	3.1
2	☐	0.200	0.034	88571.83	0.0019	P	1.4
3	☐	2.000	1.773	118183.13	0.0026	P	0.3
4	☐	5.000	5.452	183076.37	0.0041	P	3.6
5	☐	10.000	10.595	270056.32	0.0061	P	1.3
6	☐	50.000	51.524	970974.67	0.0222	P	0.3
7	☐	90.000	92.157	1673806.26	0.0382	A	1.0
8	☐	200.000	198.610	3467580.40	0.0802	A	0.5

y = 3.9393E-004 * x + 0.0019
R = 0.9999
DL = 0.4481
BEC = 4.897

Weight: <None>
Min Conc: <None>

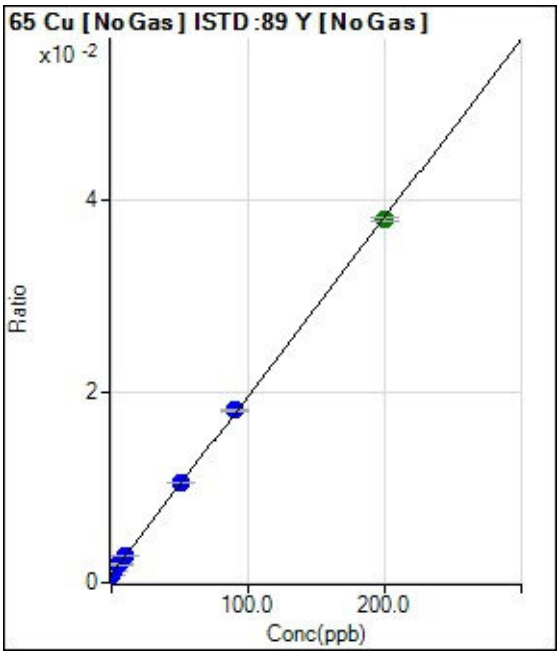
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17956.62	0.0028	P	1.8
2	☐	0.200	0.136	18888.89	0.0029	P	1.2
3	☐	2.000	1.901	30601.76	0.0048	P	1.9
4	☐	5.000	5.111	51401.85	0.0081	P	1.6
5	☐	10.000	10.424	84841.08	0.0137	P	0.1
6	☐	50.000	51.808	352523.15	0.0568	P	0.3
7	☐	90.000	92.673	612967.15	0.0995	P	0.9
8	☐	200.000	198.322	1268043.86	0.2096	A	0.3

y = 0.0010 * x + 0.0028
R = 0.9998
DL = 0.1423
BEC = 2.685

Weight: <None>
Min Conc: <None>

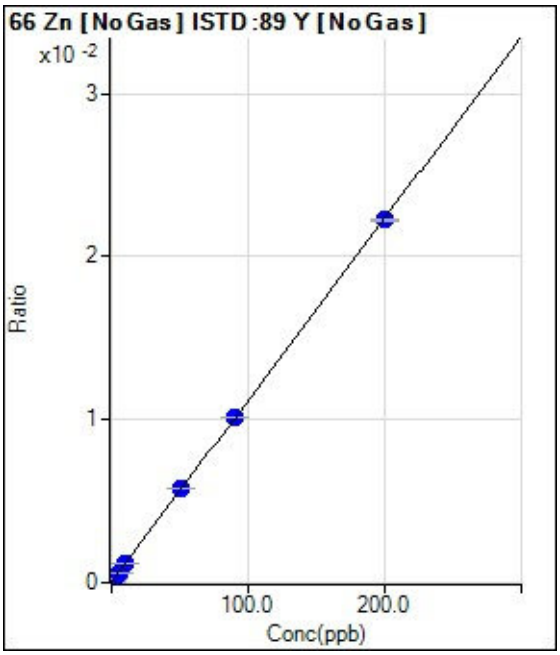


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39667.91	0.0009	P	1.8
2	☐	0.200	0.064	40129.57	0.0009	P	1.7
3	☐	2.000	1.643	52848.75	0.0012	P	2.2
4	☐	5.000	5.591	85885.86	0.0019	P	4.1
5	☐	10.000	10.564	125738.57	0.0028	P	0.9
6	☐	50.000	51.730	460087.12	0.0105	P	0.4
7	☐	90.000	91.922	789748.71	0.0180	P	1.2
8	☐	200.000	198.663	1642769.13	0.0380	A	1.2

y = 1.8681E-004 * x + 8.6807E-004
R = 0.9999
DL = 0.2531
BEC = 4.647

Weight: <None>
Min Conc: <None>

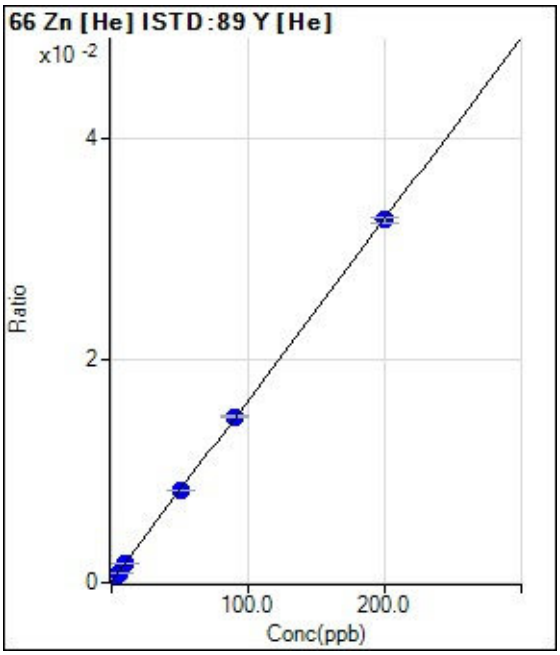
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1872.04	0.0000	P	8.5
2	☐	0.200	0.231	3043.44	0.0001	P	5.1
3	☐	2.000	2.117	12451.67	0.0003	P	4.5
4	☐	5.000	5.197	27843.31	0.0006	P	2.2
5	☐	10.000	10.249	52342.90	0.0012	P	2.2
6	☐	50.000	51.572	252802.13	0.0058	P	0.6
7	☐	90.000	90.722	444314.01	0.0101	P	0.9
8	☐	200.000	199.263	962059.35	0.0222	P	0.4

y = 1.1141E-004 * x + 4.0956E-005
R = 1.0000
DL = 0.09406
BEC = 0.3676

Weight: <None>
Min Conc: <None>

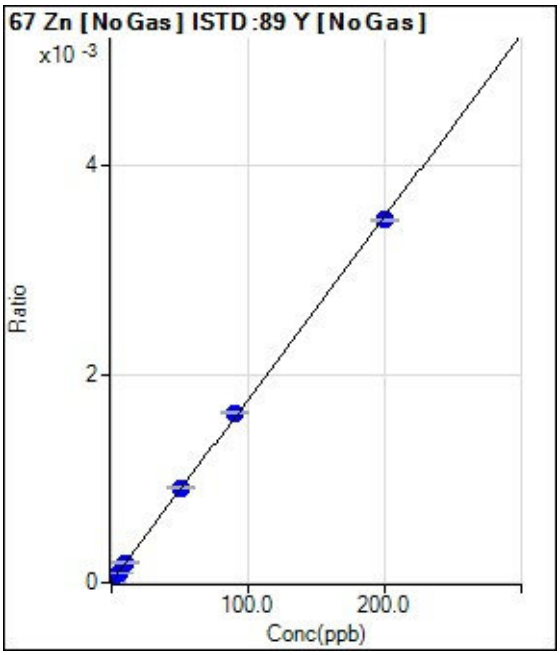


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	794.17	0.0001	P	15.9
2	☐	0.200	-0.052	740.78	0.0001	P	10.4
3	☐	2.000	1.821	2689.68	0.0004	P	3.5
4	☐	5.000	4.731	5653.59	0.0009	P	3.1
5	☐	10.000	9.753	10624.90	0.0017	P	2.7
6	☐	50.000	50.168	51445.50	0.0083	P	0.9
7	☐	90.000	90.966	92068.43	0.0149	P	1.3
8	☐	200.000	199.544	197335.44	0.0326	P	1.3

y = 1.6286E-004 * x + 1.2379E-004
R = 1.0000
DL = 0.3637
BEC = 0.7601

Weight: <None>
Min Conc: <None>

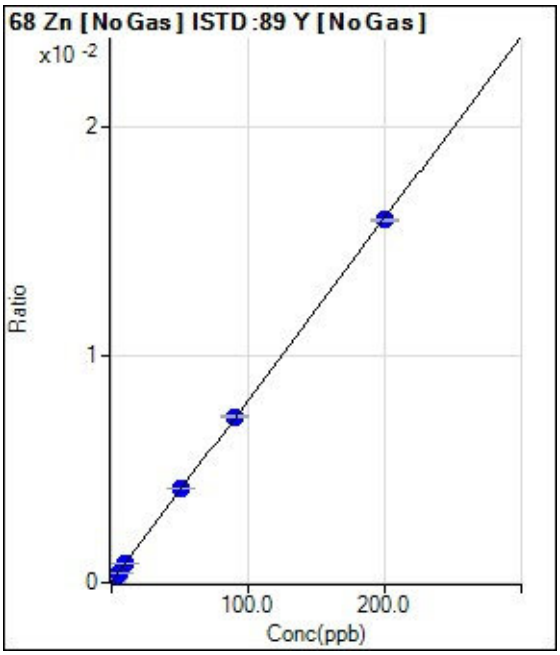
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	377.05	0.0000	P	10.3
2	☐	0.200	0.294	610.63	0.0000	P	8.5
3	☐	2.000	2.202	2105.63	0.0000	P	1.4
4	☐	5.000	4.980	4288.38	0.0001	P	2.2
5	☐	10.000	10.497	8501.31	0.0002	P	2.6
6	☐	50.000	51.612	39855.18	0.0009	P	1.4
7	☐	90.000	92.561	71341.85	0.0016	P	1.4
8	☐	200.000	198.418	150688.93	0.0035	P	0.7

y = 1.7516E-005 * x + 8.2486E-006
R = 0.9999
DL = 0.1461
BEC = 0.4709

Weight: <None>
Min Conc: <None>

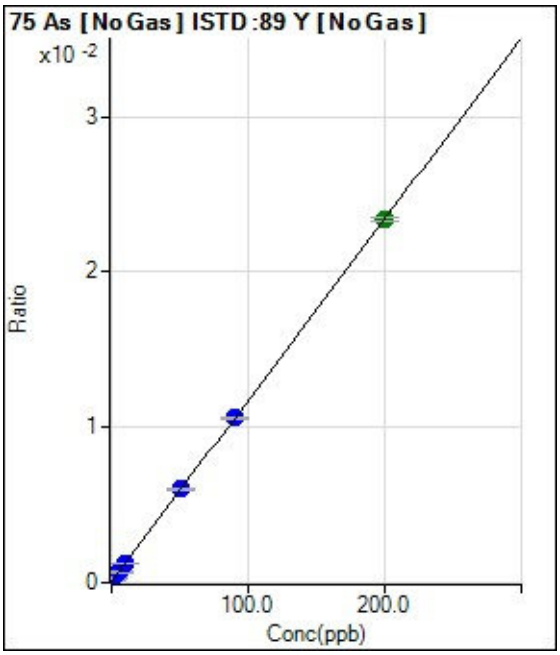


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1514.96	0.0000	P	9.7
2	☐	0.200	0.215	2295.86	0.0001	P	4.2
3	☐	2.000	2.067	8918.64	0.0002	P	0.2
4	☐	5.000	4.965	19299.92	0.0004	P	4.4
5	☐	10.000	10.378	38155.33	0.0009	P	2.3
6	☐	50.000	51.599	181527.65	0.0042	P	0.0
7	☐	90.000	91.039	319853.77	0.0073	P	0.9
8	☐	200.000	199.114	689446.92	0.0159	P	0.6

y = 7.9887E-005 * x + 3.3156E-005
R = 0.9999
DL = 0.1207
BEC = 0.415

Weight: <None>
Min Conc: <None>

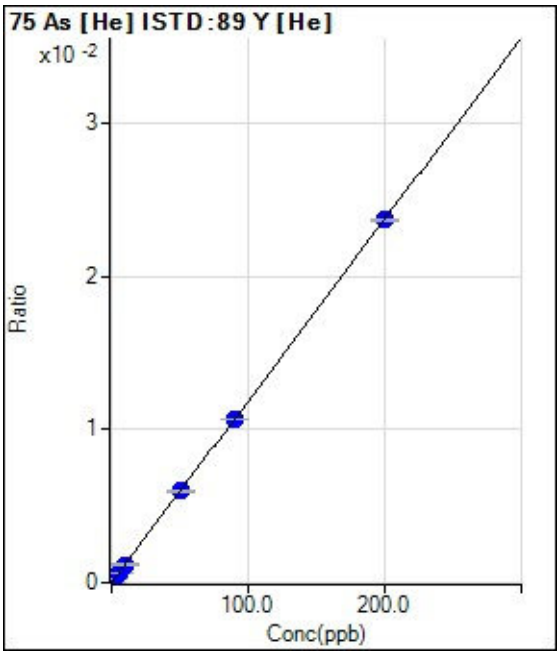
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3353.81	0.0001	P	16.3
2	☐	0.200	0.494	5978.09	0.0001	P	16.2
3	☐	2.000	2.224	14963.48	0.0003	P	14.3
4	☐	5.000	5.374	31447.98	0.0007	P	6.7
5	☐	10.000	10.071	55231.64	0.0012	P	2.0
6	☐	50.000	50.929	262726.26	0.0060	P	0.9
7	☐	90.000	90.199	463828.21	0.0106	P	0.8
8	☐	200.000	199.662	1010510.41	0.0234	A	0.9

y = 1.1664E-004 * x + 7.3408E-005
R = 1.0000
DL = 0.3076
BEC = 0.6293

Weight: <None>
Min Conc: <None>

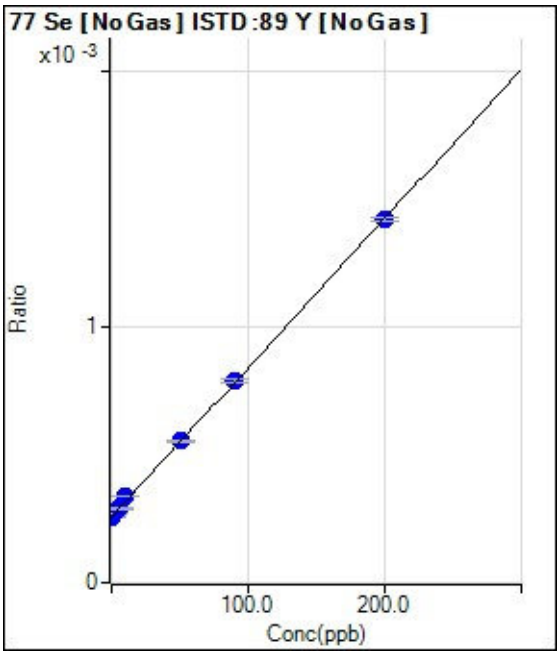


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	14.8
2	☐	0.200	0.159	161.11	0.0000	P	12.6
3	☐	2.000	1.891	1476.75	0.0002	P	6.8
4	☐	5.000	4.890	3709.42	0.0006	P	4.8
5	☐	10.000	9.953	7370.93	0.0012	P	2.7
6	☐	50.000	50.386	37140.85	0.0060	P	1.4
7	☐	90.000	90.239	66070.50	0.0107	P	0.5
8	☐	200.000	199.802	143510.60	0.0237	P	0.6

y = 1.1872E-004 * x + 6.2397E-006
R = 1.0000
DL = 0.02326
BEC = 0.05256

Weight: <None>
Min Conc: <None>

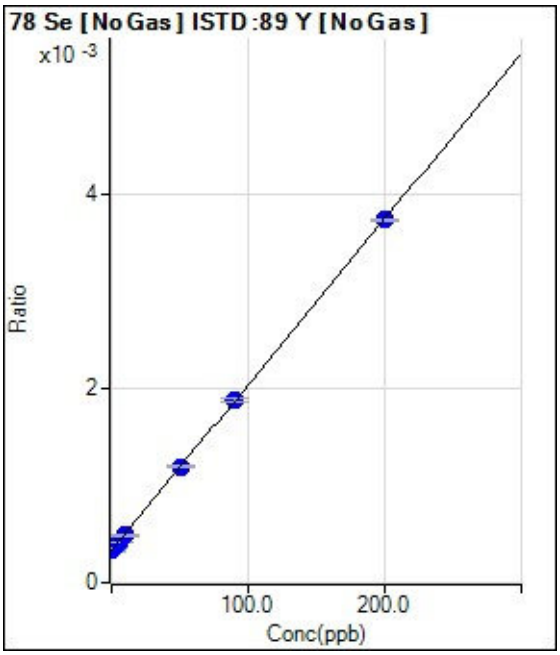
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11750.36	0.0003	P	2.6
2	☐	0.200	0.943	11977.46	0.0003	P	2.0
3	☐	2.000	2.589	12247.98	0.0003	P	2.0
4	☐	5.000	5.709	13046.26	0.0003	P	3.5
5	☐	10.000	14.122	15030.30	0.0003	P	1.3
6	☐	50.000	50.782	24192.88	0.0006	P	1.2
7	☐	90.000	91.235	34592.53	0.0008	P	2.0
8	☐	200.000	199.018	61410.88	0.0014	P	1.0

y = 5.8415E-006 * x + 2.5715E-004
R = 0.9998
DL = 3.443
BEC = 44.02

Weight: <None>
Min Conc: <None>

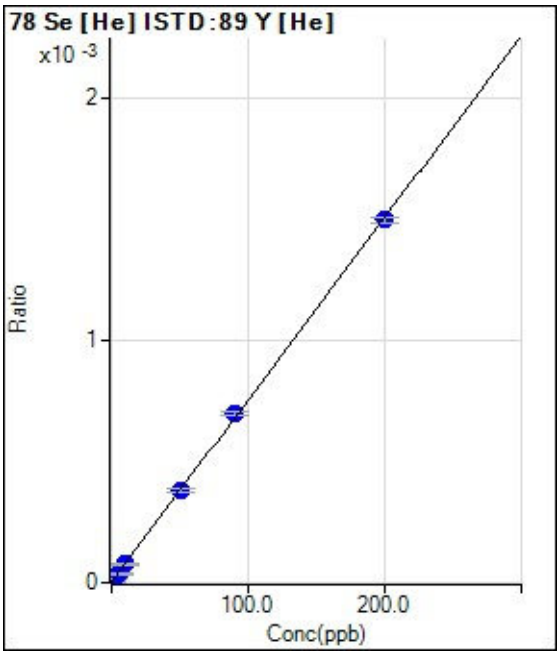


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15287.50	0.0003	P	1.2
2	☐	0.200	-0.380	14960.19	0.0003	P	2.0
3	☐	2.000	1.491	16192.81	0.0004	P	3.6
4	☐	5.000	4.399	18401.15	0.0004	P	1.1
5	☐	10.000	9.009	21619.18	0.0005	P	3.7
6	☐	50.000	50.551	52364.04	0.0012	P	0.9
7	☐	90.000	91.031	82758.69	0.0019	P	2.6
8	☐	200.000	199.469	161947.16	0.0037	P	0.4

y = 1.7093E-005 * x + 3.3453E-004
R = 1.0000
DL = 0.6983
BEC = 19.57

Weight: <None>
Min Conc: <None>

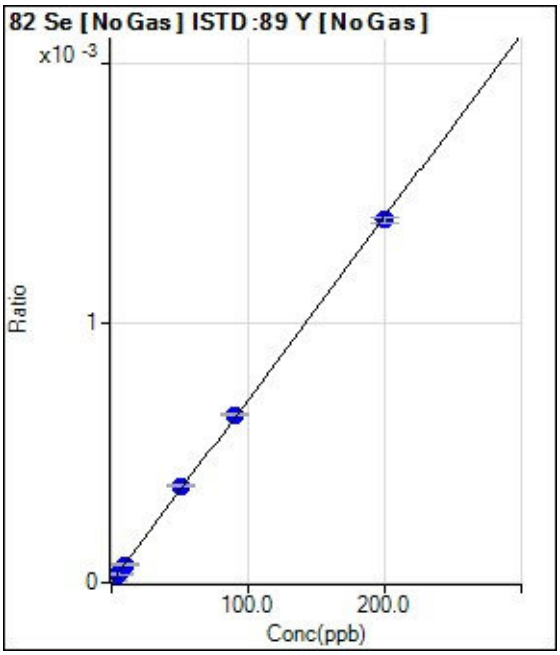
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21.11	0.0000	P	51.1
2	☐	0.200	0.323	36.67	0.0000	P	47.6
3	☐	2.000	1.899	112.22	0.0000	P	8.9
4	☐	5.000	4.434	231.11	0.0000	P	10.9
5	☐	10.000	9.825	477.79	0.0001	P	6.1
6	☐	50.000	50.068	2350.22	0.0004	P	4.8
7	☐	90.000	92.547	4299.59	0.0007	P	2.2
8	☐	200.000	198.861	9043.08	0.0015	P	1.5

y = 7.5020E-006 * x + 3.2947E-006
R = 0.9999
DL = 0.6729
BEC = 0.4392

Weight: <None>
Min Conc: <None>

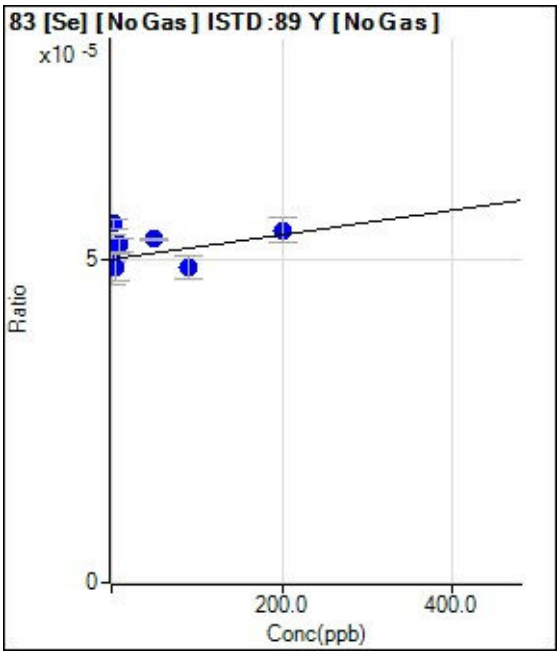


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42.87	0.0000	P	1394.1
2	☐	0.200	0.673	259.71	0.0000	P	33.8
3	☐	2.000	0.944	341.31	0.0000	P	79.5
4	☐	5.000	5.036	1635.71	0.0000	P	19.7
5	☐	10.000	9.832	3106.68	0.0001	P	9.5
6	☐	50.000	52.693	16251.60	0.0004	P	1.9
7	☐	90.000	91.917	28377.21	0.0006	P	1.2
8	☐	200.000	198.482	60492.33	0.0014	P	1.8

y = 7.0415E-006 * x + 9.5978E-007
R = 0.9998
DL = 5.7
BEC = 0.1363

Weight: <None>
Min Conc: <None>

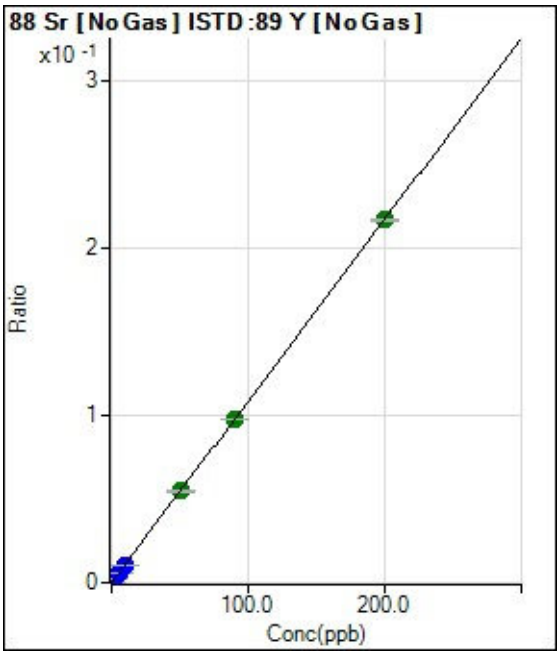
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2282.53	0.0000	P	15.5
2	☐	0.200	17.672	2292.53	0.0001	P	2.6
3	☐	2.000	292.488	2496.10	0.0001	P	2.8
4	☐	5.000	-66.860	2185.74	0.0000	P	8.3
5	☐	10.000	114.712	2305.89	0.0001	P	4.0
6	☐	50.000	162.051	2315.88	0.0001	P	1.1
7	☐	90.000	-70.333	2129.00	0.0000	P	7.4
8	☐	200.000	237.775	2355.94	0.0001	P	7.3

y = 1.8978E-008 * x + 4.9935E-005
R = 0.2955
DL = 1222
BEC = 2631

Weight: <None>
Min Conc: <None>

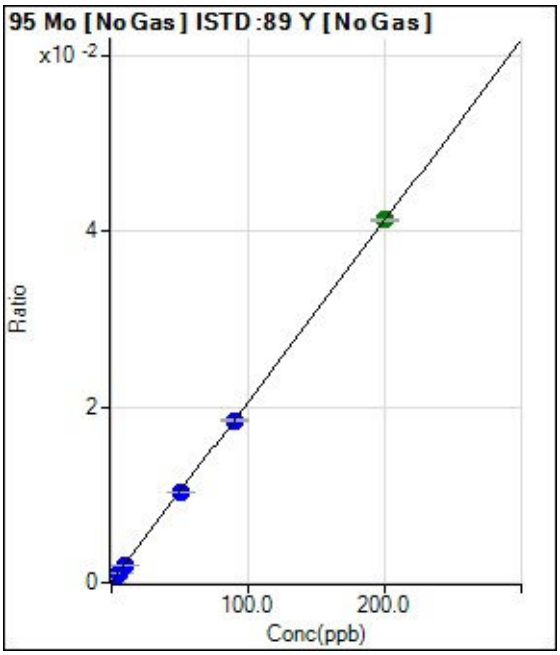


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	323.67	0.0000	P	16.6
2	☐	0.200	0.190	9733.48	0.0002	P	0.8
3	☐	2.000	1.976	96932.10	0.0022	P	1.3
4	☐	5.000	5.017	245154.69	0.0055	P	1.2
5	☐	10.000	9.937	478176.28	0.0108	P	0.6
6	☐	50.000	50.374	2391871.56	0.0548	A	0.5
7	☐	90.000	90.065	4285475.80	0.0979	A	0.9
8	☐	200.000	199.880	9396064.21	0.2172	A	0.3

y = 0.0011 * x + 7.0795E-006
R = 1.0000
DL = 0.003253
BEC = 0.006514

Weight: <None>
Min Conc: <None>

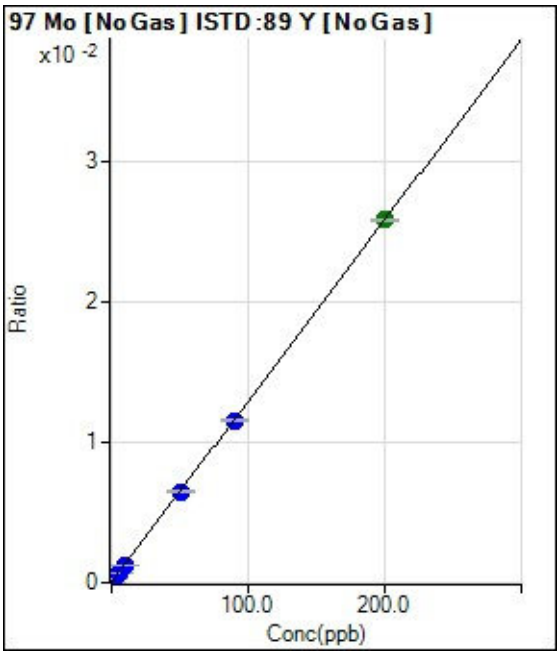
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2272.50	0.0000	P	10.9
2	☐	0.200	0.085	3066.81	0.0001	P	3.3
3	☐	2.000	1.812	19019.51	0.0004	P	0.7
4	☐	5.000	4.710	45791.08	0.0010	P	1.2
5	☐	10.000	9.640	90049.09	0.0020	P	2.2
6	☐	50.000	49.767	449910.00	0.0103	P	1.3
7	☐	90.000	89.211	806495.69	0.0184	P	1.1
8	☐	200.000	200.441	1787596.51	0.0413	A	0.6

y = 2.0594E-004 * x + 4.9716E-005
R = 1.0000
DL = 0.07885
BEC = 0.2414

Weight: <None>
Min Conc: <None>

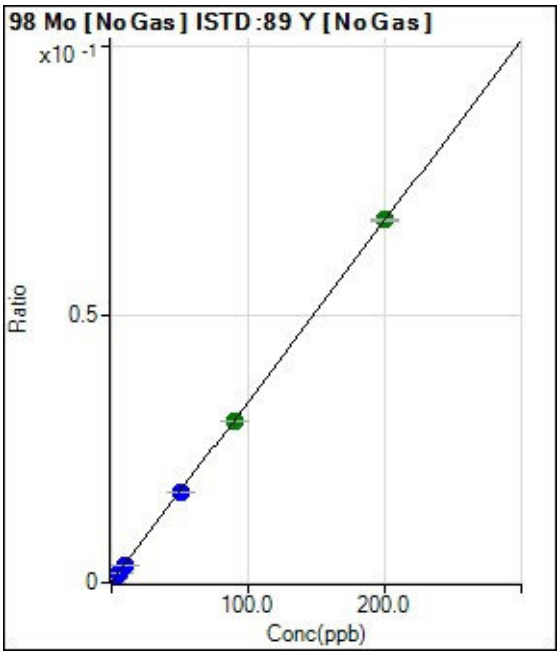


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1605.06	0.0000	P	11.3
2	☐	0.200	0.041	1842.01	0.0000	P	3.8
3	☐	2.000	1.756	11763.87	0.0003	P	1.2
4	☐	5.000	4.723	28923.94	0.0006	P	1.1
5	☐	10.000	9.587	56255.08	0.0013	P	1.2
6	☐	50.000	50.038	283375.45	0.0065	P	1.1
7	☐	90.000	89.477	506610.69	0.0116	P	0.5
8	☐	200.000	200.256	1118310.55	0.0259	A	0.3

y = 1.2893E-004 * x + 3.5112E-005
R = 1.0000
DL = 0.09234
BEC = 0.2723

Weight: <None>
Min Conc: <None>

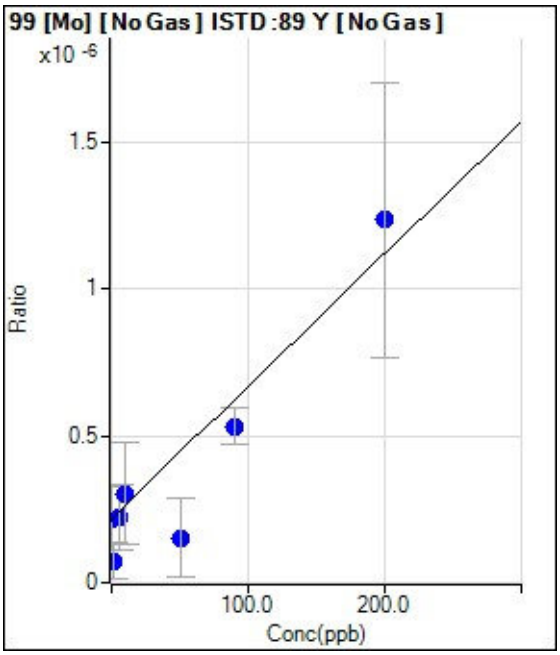
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5355.04	0.0001	P	3.5
2	☐	0.200	0.068	6393.24	0.0001	P	3.5
3	☐	2.000	1.750	31792.83	0.0007	P	1.2
4	☐	5.000	4.699	76379.56	0.0017	P	0.9
5	☐	10.000	9.538	147423.34	0.0033	P	1.2
6	☐	50.000	49.453	733192.27	0.0168	P	0.5
7	☐	90.000	89.150	1320444.34	0.0302	A	0.8
8	☐	200.000	200.552	2928538.05	0.0677	A	0.6

y = 3.3700E-004 * x + 1.1717E-004
R = 1.0000
DL = 0.0369
BEC = 0.3477

Weight: <None>
Min Conc: <None>

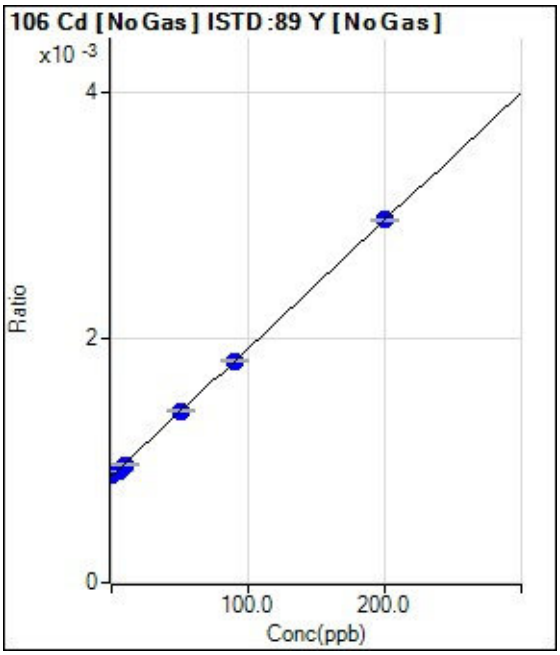


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.01	0.0000	P	0.4
2	☐	0.200	0.019	10.01	0.0000	P	100.0
3	☐	2.000	-32.109	3.34	0.0000	P	173.2
4	☐	5.000	0.896	10.01	0.0000	P	100.0
5	☐	10.000	18.493	13.35	0.0000	P	114.7
6	☐	50.000	-14.608	6.67	0.0000	P	173.2
7	☐	90.000	69.442	23.36	0.0000	P	23.5
8	☐	200.000	225.423	53.39	0.0000	P	75.7

y = 4.5142E-009 * x + 2.1905E-007
R = 0.9465
DL = 0.6249
BEC = 48.52

Weight: <None>
Min Conc: <None>

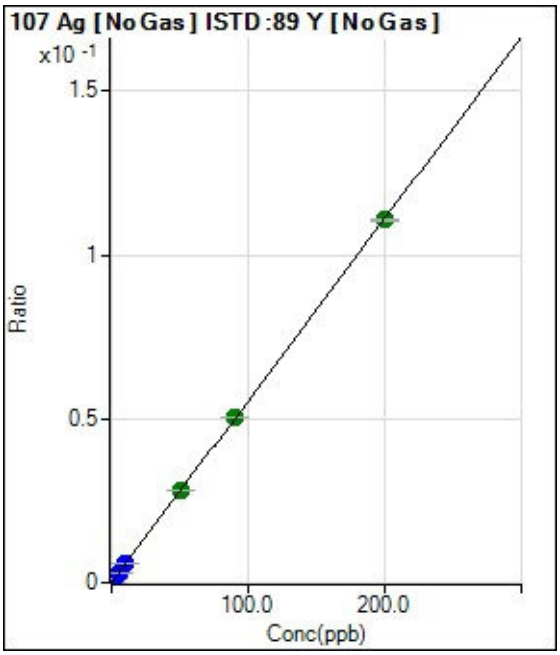
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39880.13	0.0009	P	0.9
2	☐	0.200	1.111	40328.79	0.0009	P	1.8
3	☐	2.000	1.622	40010.68	0.0009	P	3.4
4	☐	5.000	4.200	41165.22	0.0009	P	0.4
5	☐	10.000	8.789	42685.09	0.0010	P	0.5
6	☐	50.000	50.751	61303.08	0.0014	P	1.8
7	☐	90.000	89.464	79155.04	0.0018	P	0.8
8	☐	200.000	200.137	128247.82	0.0030	P	0.8

y = 1.0455E-005 * x + 8.7269E-004
R = 0.9999
DL = 2.242
BEC = 83.47

Weight: <None>
Min Conc: <None>

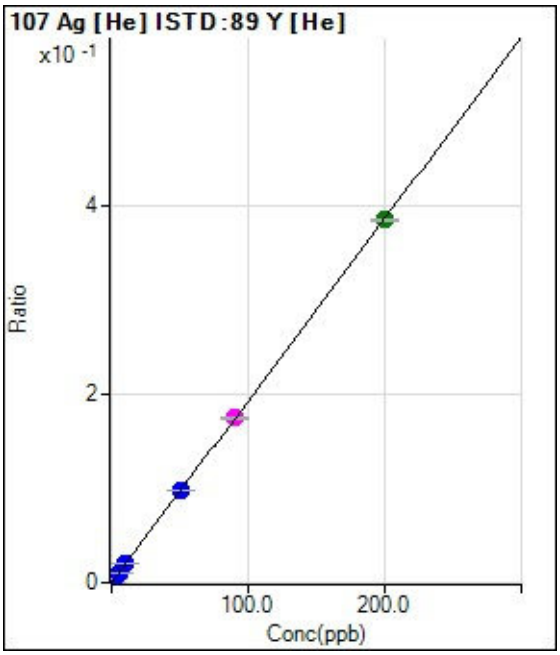


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	514.46	0.0000	P	0.3
2	☐	0.200	0.223	6152.57	0.0001	P	5.8
3	☐	2.000	2.029	51132.63	0.0011	P	1.8
4	☐	5.000	5.026	125744.88	0.0028	P	0.8
5	☐	10.000	10.116	248884.12	0.0056	P	0.5
6	☐	50.000	50.744	1230430.51	0.0282	A	0.6
7	☐	90.000	90.794	2205923.45	0.0504	A	0.9
8	☐	200.000	199.450	4786993.56	0.1107	A	0.3

y = 5.5483E-004 * x + 1.1258E-005
R = 1.0000
DL = 0.0001932
BEC = 0.02029

Weight: <None>
Min Conc: <None>

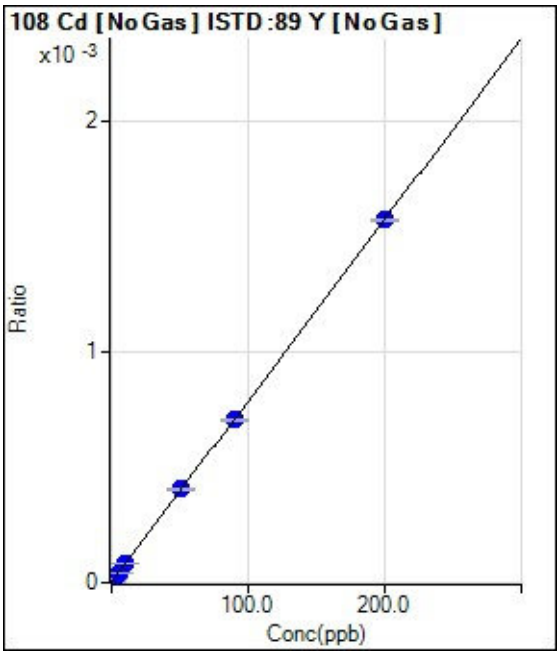
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.50	0.0000	P	18.5
2	☐	0.200	0.219	2879.92	0.0004	P	2.1
3	☐	2.000	1.977	24554.29	0.0038	P	2.2
4	☐	5.000	5.069	61946.48	0.0098	P	1.6
5	☐	10.000	10.152	121625.17	0.0196	P	1.2
6	☐	50.000	51.034	610523.47	0.0984	P	0.7
7	☐	90.000	90.452	1075077.71	0.1744	M	0.4
8	☐	200.000	199.529	2327210.29	0.3847	A	0.2

y = 0.0019 * x + 2.5487E-005
R = 1.0000
DL = 0.007344
BEC = 0.01322

Weight: <None>
Min Conc: <None>

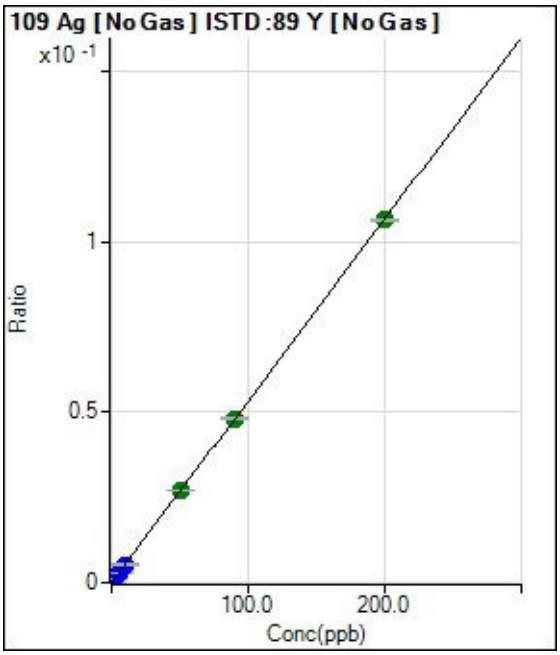


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.43	0.0000	P	27.3
2	☐	0.200	0.355	220.22	0.0000	P	31.7
3	☐	2.000	1.810	730.77	0.0000	P	2.5
4	☐	5.000	4.843	1798.63	0.0000	P	1.3
5	☐	10.000	10.156	3617.51	0.0001	P	5.4
6	☐	50.000	51.287	17669.77	0.0004	P	1.4
7	☐	90.000	89.436	30816.91	0.0007	P	1.7
8	☐	200.000	199.930	67942.24	0.0016	P	0.6

y = 7.8466E-006 * x + 2.0457E-006
R = 1.0000
DL = 0.2139
BEC = 0.2607

Weight: <None>
Min Conc: <None>

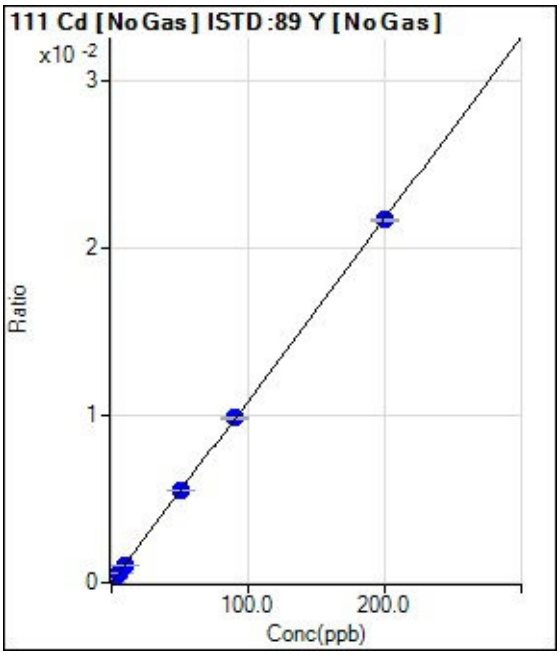
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.86	0.0000	P	25.1
2	☐	0.200	0.226	5683.68	0.0001	P	8.1
3	☐	2.000	2.033	48909.24	0.0011	P	1.6
4	☐	5.000	5.069	121491.41	0.0027	P	1.1
5	☐	10.000	9.995	235858.35	0.0053	P	1.1
6	☐	50.000	50.683	1179950.74	0.0270	A	0.1
7	☐	90.000	90.339	2107499.53	0.0481	A	1.2
8	☐	200.000	199.675	4602105.45	0.1064	A	0.3

y = 5.3283E-004 * x + 4.0876E-006
R = 1.0000
DL = 0.005785
BEC = 0.007671

Weight: <None>
Min Conc: <None>

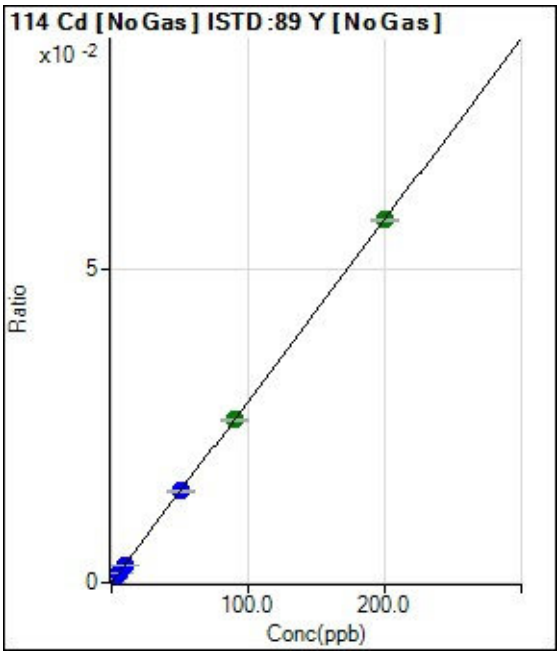


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-95.81	0.0000	P	-28.0
2	☐	0.200	0.198	884.86	0.0000	P	13.9
3	☐	2.000	1.976	9583.34	0.0002	P	1.9
4	☐	5.000	4.968	24198.13	0.0005	P	0.5
5	☐	10.000	9.969	47936.23	0.0011	P	0.3
6	☐	50.000	50.827	241650.94	0.0055	P	0.4
7	☐	90.000	90.620	431838.96	0.0099	P	0.8
8	☐	200.000	199.517	939426.30	0.0217	P	0.6

y = 1.0887E-004 * x - 2.0980E-006
R = 1.0000
DL = 0.01618
BEC = -0.01927

Weight: <None>
Min Conc: <None>

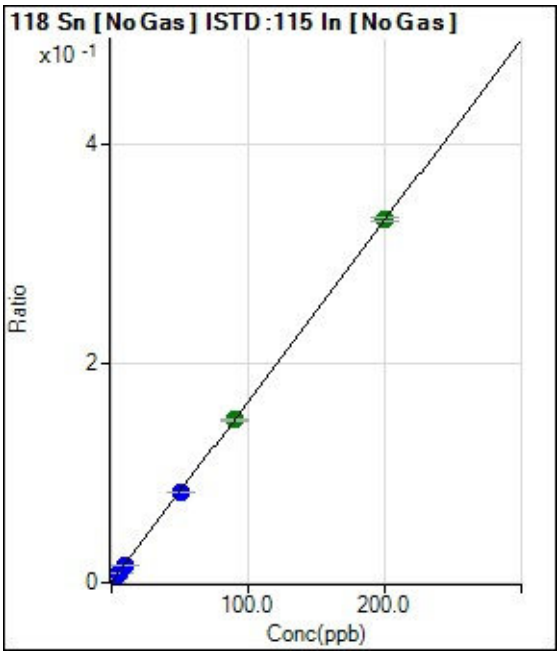
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.76	0.0000	P	15.8
2	☐	0.200	0.192	2626.28	0.0001	P	2.1
3	☐	2.000	1.960	25610.76	0.0006	P	1.5
4	☐	5.000	4.955	64491.76	0.0014	P	1.5
5	☐	10.000	9.892	126767.33	0.0029	P	1.9
6	☐	50.000	50.409	637365.24	0.0146	P	0.6
7	☐	90.000	89.829	1138172.24	0.0260	A	0.8
8	☐	200.000	199.981	2503214.10	0.0579	A	0.6

y = 2.8938E-004 * x + 2.1174E-006
R = 1.0000
DL = 0.003458
BEC = 0.007317

Weight: <None>
Min Conc: <None>

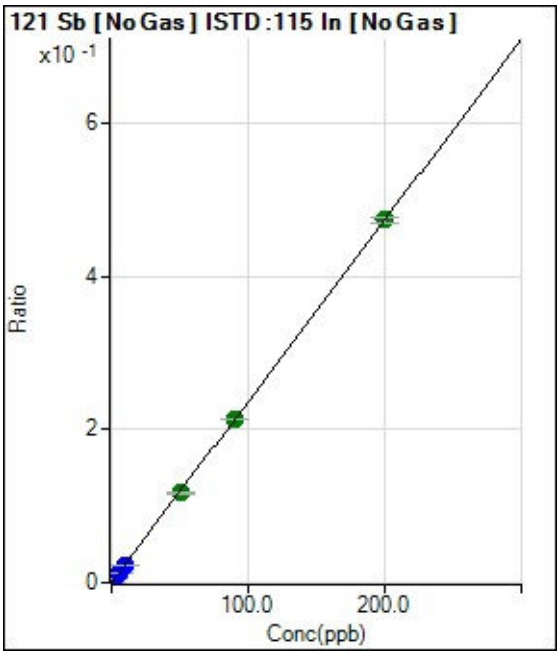


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3367.12	0.0003	P	1.9
2	☐	0.200	0.161	6031.41	0.0006	P	3.5
3	☐	2.000	1.886	34003.84	0.0034	P	1.7
4	☐	5.000	4.802	81022.13	0.0083	P	0.8
5	☐	10.000	9.672	157915.36	0.0163	P	0.6
6	☐	50.000	49.425	784464.00	0.0818	P	0.1
7	☐	90.000	89.710	1411922.82	0.1482	A	0.4
8	☐	200.000	200.297	3087446.33	0.3304	A	1.0

y = 0.0016 * x + 3.3945E-004
R = 1.0000
DL = 0.01156
BEC = 0.206

Weight: <None>
Min Conc: <None>

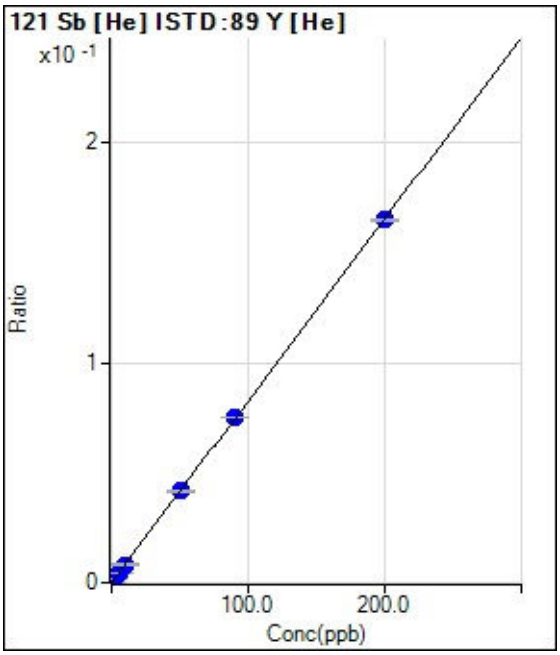
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1230.07	0.0001	P	5.9
2	☐	0.200	0.171	5276.65	0.0005	P	1.6
3	☐	2.000	1.897	45546.44	0.0046	P	0.4
4	☐	5.000	4.825	113426.44	0.0116	P	1.0
5	☐	10.000	9.645	222888.07	0.0230	P	0.3
6	☐	50.000	49.354	1122682.46	0.1170	A	0.4
7	☐	90.000	89.762	2027634.57	0.2128	A	0.2
8	☐	200.000	200.292	4435097.32	0.4746	A	1.5

y = 0.0024 * x + 1.2397E-004
R = 1.0000
DL = 0.00934
BEC = 0.05234

Weight: <None>
Min Conc: <None>

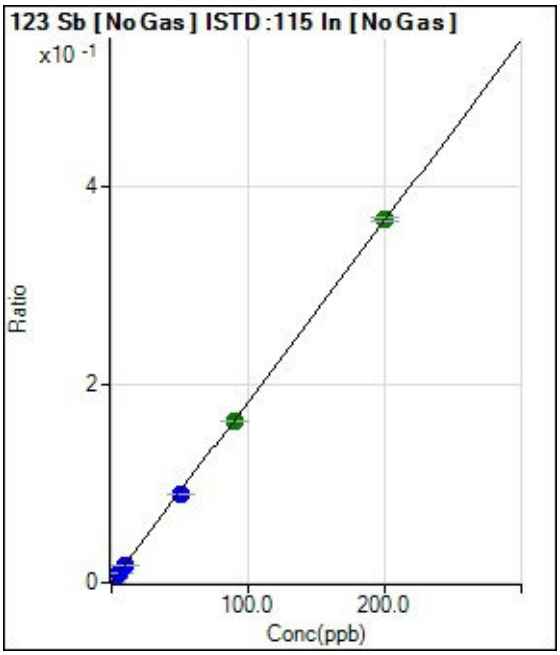


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.34	0.0001	P	13.0
2	☐	0.200	0.180	1306.76	0.0002	P	3.8
3	☐	2.000	1.884	10300.92	0.0016	P	3.1
4	☐	5.000	4.968	26276.63	0.0042	P	2.2
5	☐	10.000	9.983	51477.51	0.0083	P	2.1
6	☐	50.000	50.224	257483.20	0.0415	P	0.5
7	☐	90.000	90.681	461692.05	0.0749	P	0.3
8	☐	200.000	199.640	997152.69	0.1648	P	0.6

y = 8.2544E-004 * x + 5.5107E-005
R = 1.0000
DL = 0.026
BEC = 0.06676

Weight: <None>
Min Conc: <None>

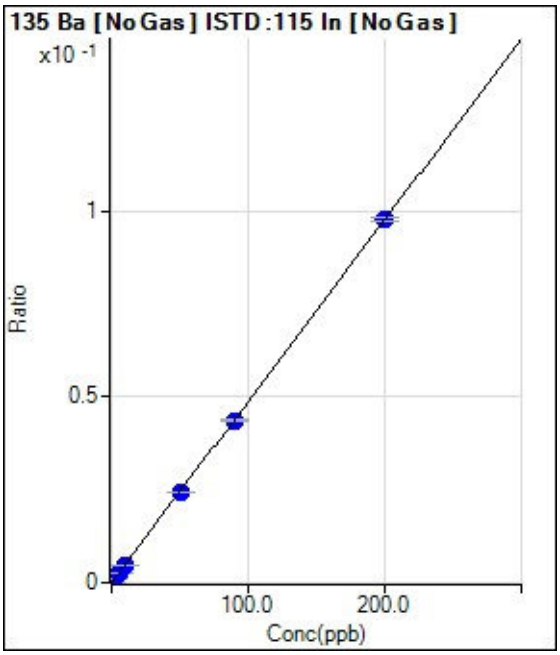
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	904.29	0.0001	P	1.9
2	☐	0.200	0.171	4034.73	0.0004	P	5.9
3	☐	2.000	1.953	36079.42	0.0037	P	2.0
4	☐	5.000	4.764	86305.73	0.0088	P	1.2
5	☐	10.000	9.618	171271.17	0.0177	P	0.3
6	☐	50.000	49.206	862743.42	0.0899	P	0.3
7	☐	90.000	89.389	1556373.15	0.1633	A	0.1
8	☐	200.000	200.499	3422178.23	0.3662	A	1.2

y = 0.0018 * x + 9.1158E-005
R = 1.0000
DL = 0.002886
BEC = 0.04993

Weight: <None>
Min Conc: <None>

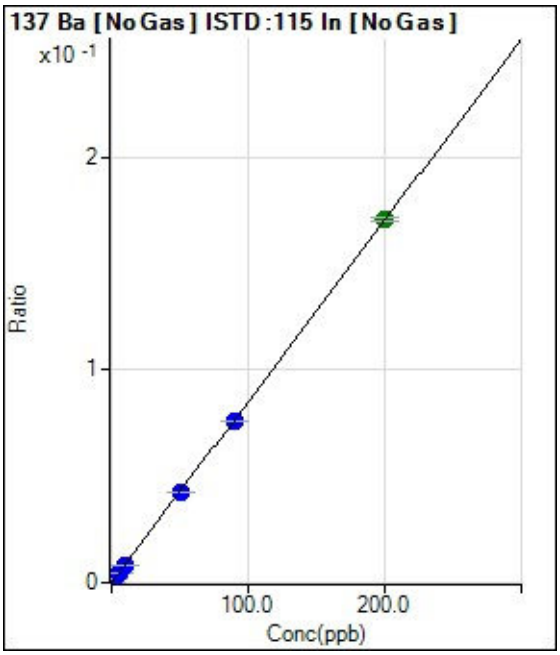


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.42	0.0000	P	25.7
2	☐	0.200	0.180	961.02	0.0001	P	6.0
3	☐	2.000	1.887	9155.85	0.0009	P	2.5
4	☐	5.000	4.844	23260.94	0.0024	P	1.4
5	☐	10.000	9.710	45994.06	0.0047	P	1.4
6	☐	50.000	50.212	234811.92	0.0245	P	0.2
7	☐	90.000	89.585	416154.49	0.0437	P	0.2
8	☐	200.000	200.153	911629.29	0.0975	P	1.0

y = 4.8732E-004 * x + 8.4206E-006
R = 1.0000
DL = 0.0133
BEC = 0.01728

Weight: <None>
Min Conc: <None>

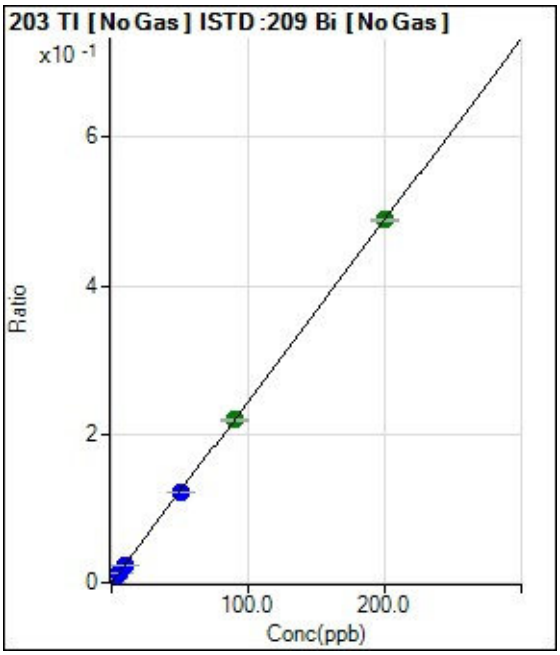
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.77	0.0000	P	38.7
2	☐	0.200	0.216	1938.78	0.0002	P	4.9
3	☐	2.000	1.895	16016.17	0.0016	P	2.7
4	☐	5.000	4.809	40276.20	0.0041	P	1.0
5	☐	10.000	9.855	81448.95	0.0084	P	1.2
6	☐	50.000	49.948	407743.06	0.0425	P	0.6
7	☐	90.000	89.316	724286.14	0.0760	P	0.4
8	☐	200.000	200.334	1592949.99	0.1704	A	1.2

y = 8.5076E-004 * x + 1.0747E-005
R = 1.0000
DL = 0.01465
BEC = 0.01263

Weight: <None>
Min Conc: <None>

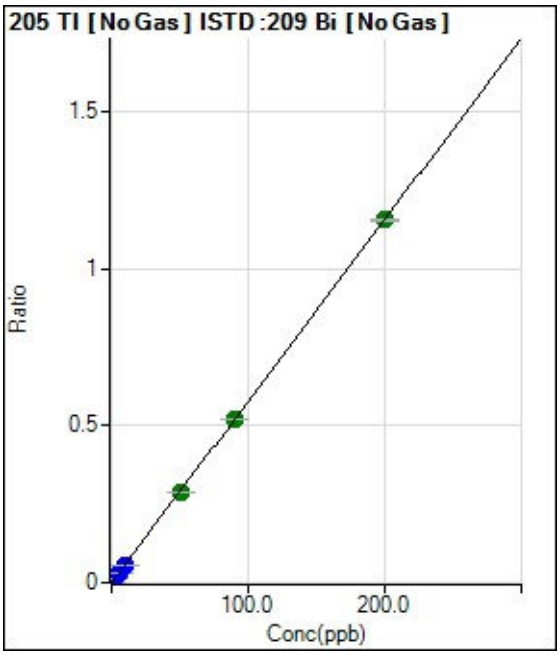


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.84	0.0001	P	15.4
2	☐	0.200	0.192	4455.32	0.0005	P	2.7
3	☐	2.000	1.933	39411.95	0.0048	P	4.1
4	☐	5.000	4.859	99260.79	0.0119	P	0.8
5	☐	10.000	9.696	196135.25	0.0237	P	0.5
6	☐	50.000	49.899	985002.01	0.1219	P	0.8
7	☐	90.000	89.915	1769209.21	0.2197	A	0.7
8	☐	200.000	200.083	3887822.42	0.4888	A	0.3

y = 0.0024 * x + 5.9096E-005
R = 1.0000
DL = 0.01117
BEC = 0.02419

Weight: <None>
Min Conc: <None>

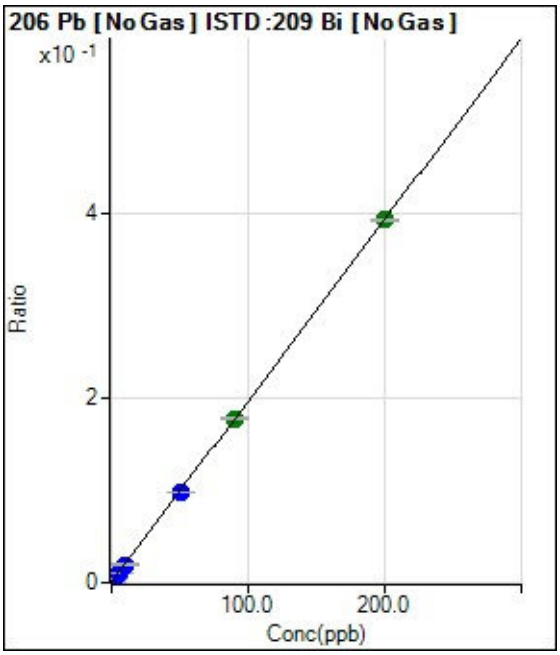
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1067.80	0.0001	P	20.2
2	☐	0.200	0.181	9914.03	0.0012	P	4.6
3	☐	2.000	1.947	93945.68	0.0114	P	1.2
4	☐	5.000	4.820	233155.38	0.0280	P	0.4
5	☐	10.000	9.778	468421.34	0.0567	P	0.9
6	☐	50.000	49.839	2330391.86	0.2885	A	0.6
7	☐	90.000	90.084	4198681.19	0.5214	A	0.7
8	☐	200.000	200.019	9206339.48	1.1574	A	0.6

y = 0.0058 * x + 1.2789E-004
R = 1.0000
DL = 0.01338
BEC = 0.0221

Weight: <None>
Min Conc: <None>

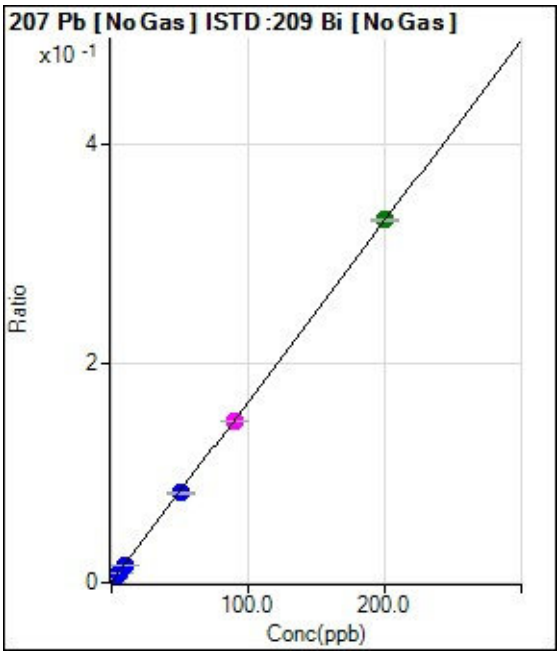


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5570.26	0.0007	P	3.4
2	☐	0.200	0.186	8698.53	0.0010	P	4.4
3	☐	2.000	1.899	36279.52	0.0044	P	2.6
4	☐	5.000	4.810	84203.56	0.0101	P	0.8
5	☐	10.000	9.703	163008.81	0.0197	P	1.2
6	☐	50.000	49.819	796120.73	0.0986	P	0.4
7	☐	90.000	90.223	1433132.04	0.1779	A	0.7
8	☐	200.000	199.965	3130606.65	0.3936	A	0.6

y = 0.0020 * x + 6.6738E-004
R = 1.0000
DL = 0.03466
BEC = 0.3396

Weight: <None>
Min Conc: <None>

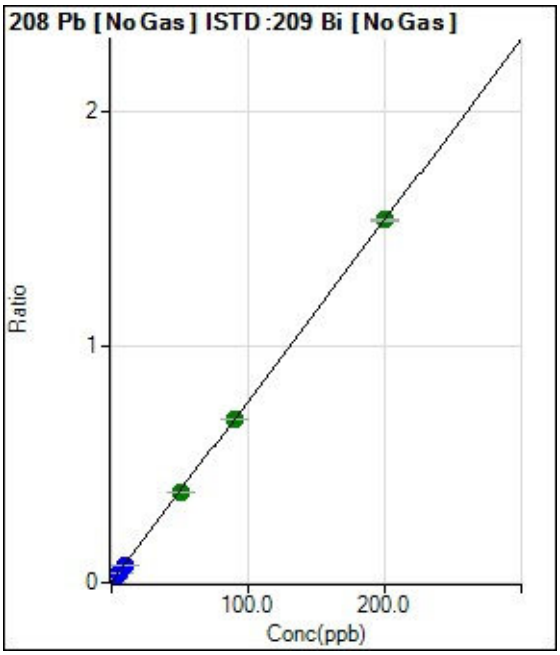
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4722.39	0.0006	P	5.6
2	☐	0.200	0.167	7079.22	0.0008	P	3.8
3	☐	2.000	1.903	30491.42	0.0037	P	2.3
4	☐	5.000	4.791	70361.51	0.0085	P	1.4
5	☐	10.000	9.496	133818.65	0.0162	P	1.0
6	☐	50.000	49.223	659149.02	0.0816	P	0.7
7	☐	90.000	89.072	1185530.14	0.1472	M	0.9
8	☐	200.000	200.643	2631879.13	0.3309	A	0.8

y = 0.0016 * x + 5.6558E-004
R = 1.0000
DL = 0.05819
BEC = 0.3435

Weight: <None>
Min Conc: <None>

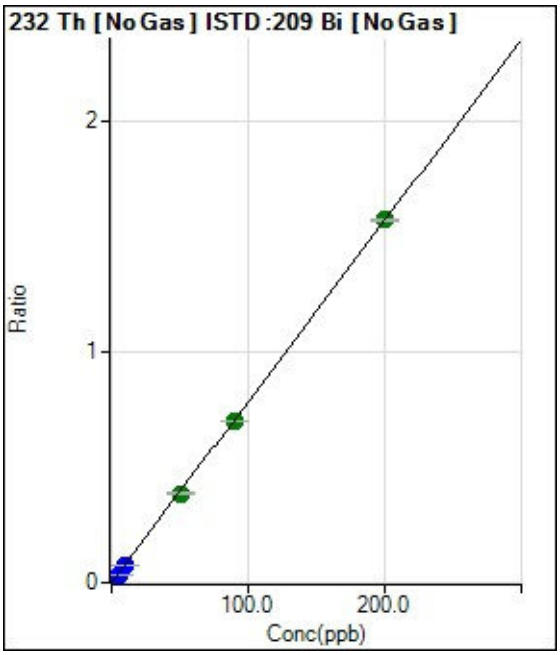


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21866.49	0.0026	P	2.8
2	☐	0.200	0.173	33267.85	0.0039	P	2.7
3	☐	2.000	1.894	141425.17	0.0172	P	1.2
4	☐	5.000	4.836	330643.92	0.0397	P	0.5
5	☐	10.000	9.668	634445.73	0.0768	P	0.2
6	☐	50.000	49.537	3091466.52	0.3827	A	0.5
7	☐	90.000	89.966	5580599.13	0.6929	A	0.3
8	☐	200.000	200.153	12236784.68	1.5384	A	0.6

y = 0.0077 * x + 0.0026
R = 1.0000
DL = 0.02882
BEC = 0.3414

Weight: <None>
Min Conc: <None>

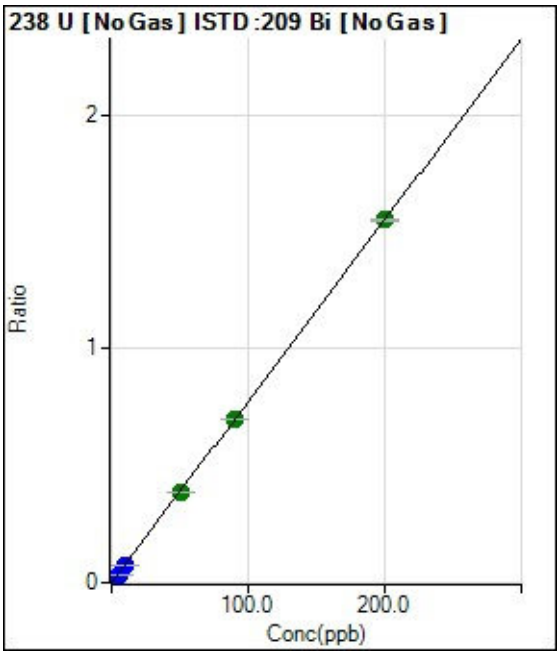
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3090.21	0.0004	P	4.5
2	☐	0.200	0.157	13501.13	0.0016	P	4.5
3	☐	2.000	1.733	115272.28	0.0140	P	1.5
4	☐	5.000	4.548	300292.99	0.0361	P	1.2
5	☐	10.000	9.259	603662.49	0.0731	P	0.2
6	☐	50.000	49.339	3132339.53	0.3878	A	0.3
7	☐	90.000	89.427	5657899.58	0.7025	A	0.4
8	☐	200.000	200.474	12524056.16	1.5745	A	0.2

y = 0.0079 * x + 3.7014E-004
R = 1.0000
DL = 0.006314
BEC = 0.04714

Weight: <None>
Min Conc: <None>

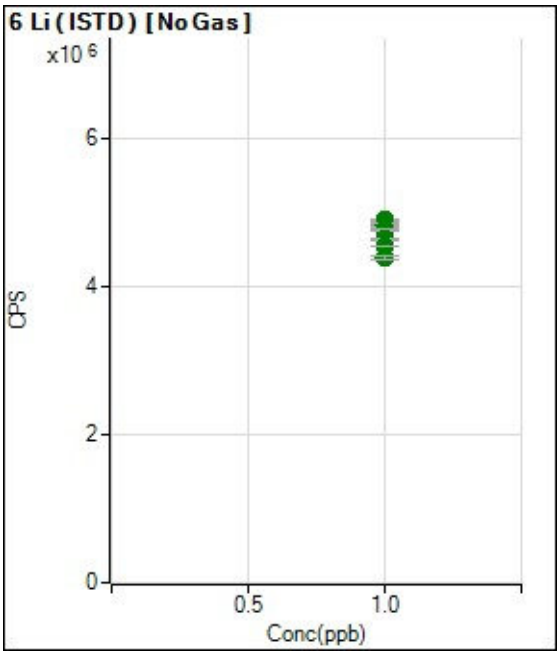


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	407.09	0.0000	P	11.7
2	☐	0.200	0.180	12151.72	0.0014	P	1.9
3	☐	2.000	1.887	121081.37	0.0147	P	0.7
4	☐	5.000	4.748	306852.83	0.0369	P	0.6
5	☐	10.000	9.512	609784.15	0.0738	P	0.9
6	☐	50.000	49.818	3121224.77	0.3864	A	0.1
7	☐	90.000	89.857	5612579.05	0.6969	A	0.4
8	☐	200.000	200.142	12346392.67	1.5522	A	0.4

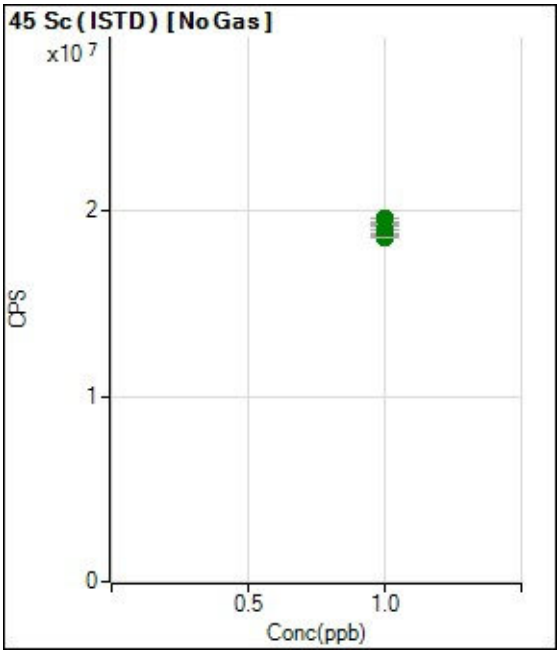
y = 0.0078 * x + 4.8723E-005
R = 1.0000
DL = 0.002199
BEC = 0.006283

Weight: <None>
Min Conc: <None>

Calibration for 016_ICV.d

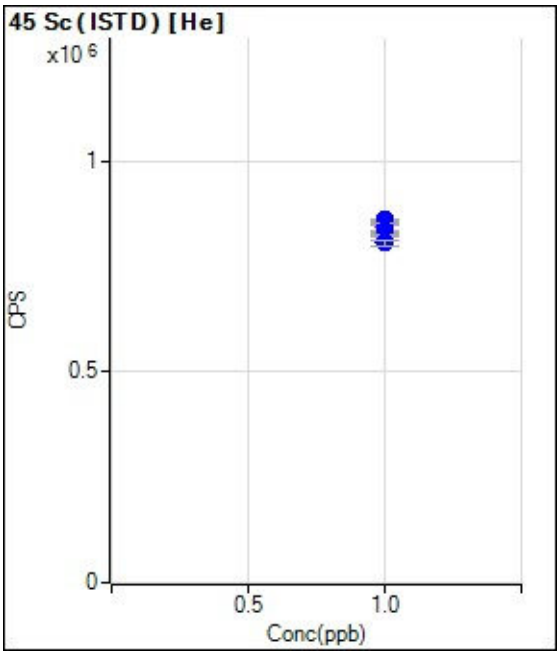


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4905245.08		A	0.4
2	☐	1.000		4894904.82		A	0.4
3	☐	1.000		4854356.96		A	0.7
4	☐	1.000		4837021.63		A	0.9
5	☐	1.000		4780773.99		A	0.5
6	☐	1.000		4645837.16		A	0.7
7	☐	1.000		4547923.67		A	0.2
8	☐	1.000		4394978.98		A	0.8

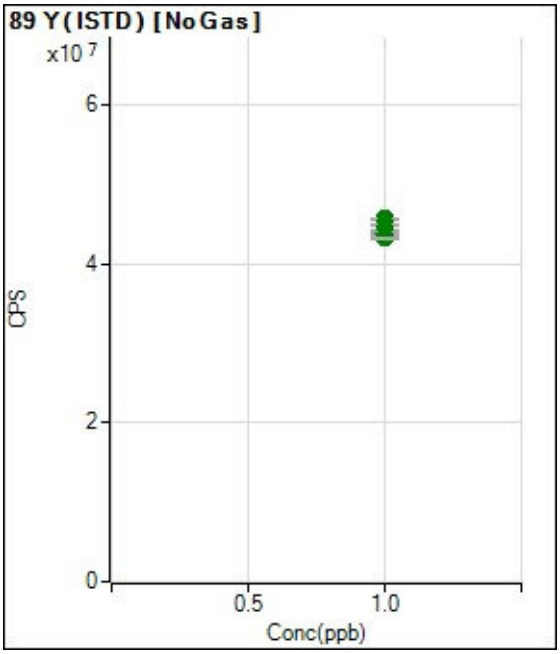


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		19588031.40		A	0.1
2	☐	1.000		19449357.73		A	0.2
3	☐	1.000		19316765.14		A	0.1
4	☐	1.000		19274644.68		A	0.6
5	☐	1.000		19010014.22		A	0.3
6	☐	1.000		18783870.57		A	0.4
7	☐	1.000		18749773.98		A	0.3
8	☐	1.000		18604232.61		A	0.2

Calibration for 016_ICV.d

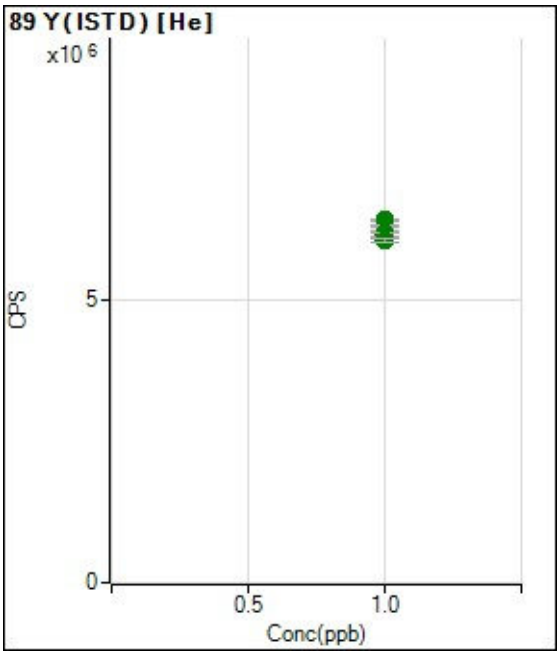


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		860992.42		P	0.5
2	☐	1.000		857958.70		P	0.4
3	☐	1.000		843646.42		M	1.7
4	☐	1.000		852968.84		P	0.3
5	☐	1.000		834848.65		P	0.3
6	☐	1.000		831512.36		P	0.2
7	☐	1.000		824563.96		P	0.9
8	☐	1.000		806059.74		P	1.7

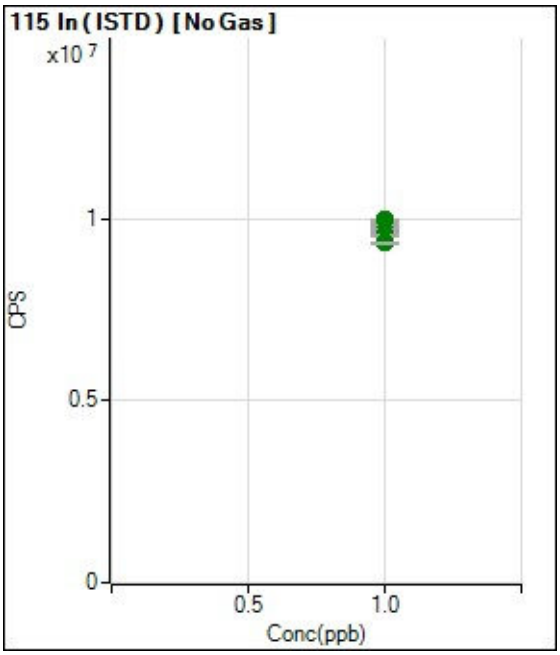


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		45698235.00		A	0.4
2	☐	1.000		45603321.75		A	0.3
3	☐	1.000		44980749.17		A	0.7
4	☐	1.000		44910447.20		A	0.1
5	☐	1.000		44252887.98		A	0.4
6	☐	1.000		43686341.43		A	0.2
7	☐	1.000		43782809.56		A	1.1
8	☐	1.000		43254204.29		A	0.7

Calibration for 016_ICV.d

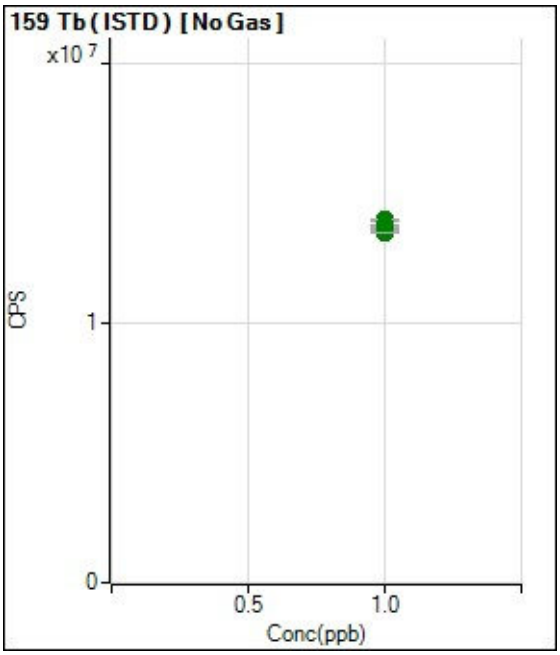


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6413034.51		A	0.3
2	☐	1.000		6420990.17		A	0.6
3	☐	1.000		6398367.96		A	0.4
4	☐	1.000		6322067.08		A	0.5
5	☐	1.000		6205509.90		A	0.3
6	☐	1.000		6202775.29		A	0.6
7	☐	1.000		6163601.74		A	1.0
8	☐	1.000		6048700.59		A	1.1

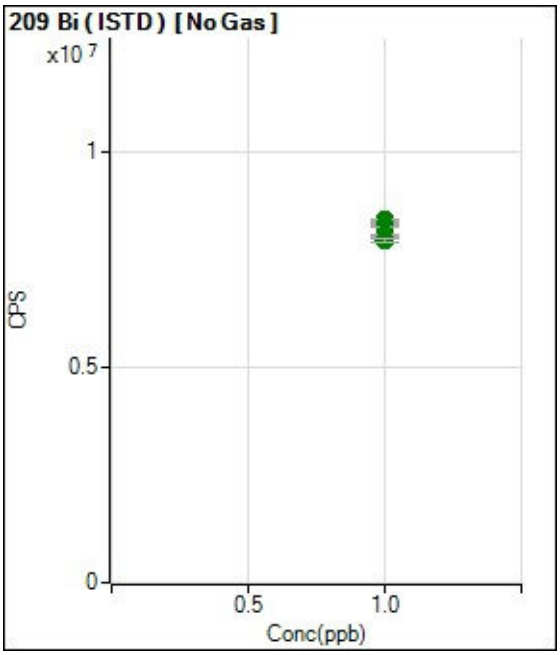


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9919344.87		A	0.8
2	☐	1.000		9978944.81		A	0.7
3	☐	1.000		9865687.89		A	0.4
4	☐	1.000		9818393.85		A	0.2
5	☐	1.000		9702594.11		A	0.2
6	☐	1.000		9592885.46		A	0.2
7	☐	1.000		9530486.40		A	0.6
8	☐	1.000		9346056.84		A	0.9

Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13963078.94		A	0.9
2	☐	1.000		13978808.00		A	0.1
3	☐	1.000		13760578.52		A	0.7
4	☐	1.000		13746650.01		A	0.5
5	☐	1.000		13696642.92		A	0.7
6	☐	1.000		13549190.47		A	0.6
7	☐	1.000		13478566.93		A	0.4
8	☐	1.000		13503577.35		A	0.3



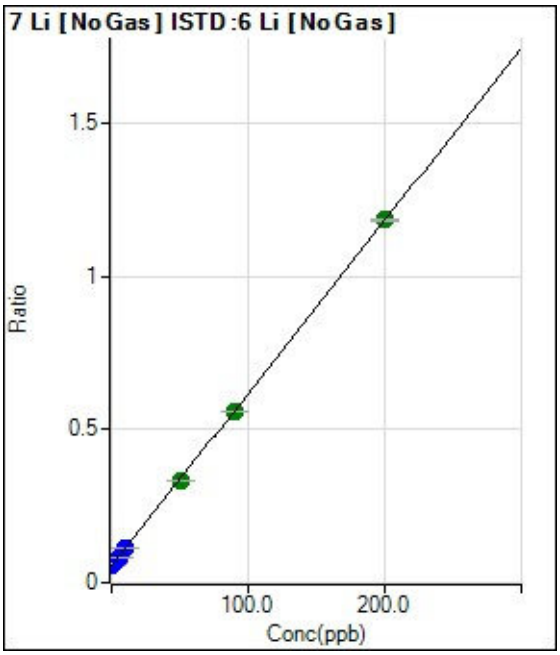
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8348524.39		A	1.1
2	☐	1.000		8424619.39		A	0.3
3	☐	1.000		8245877.73		A	0.2
4	☐	1.000		8322529.67		A	0.9
5	☐	1.000		8260859.40		A	0.3
6	☐	1.000		8077653.29		A	0.2
7	☐	1.000		8053485.51		A	0.4
8	☐	1.000		7954264.13		A	1.1

Calibration for 240_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b\
Analysis File: ICPMS3_201201.batch.bin
DA Date-Time: 2020-12-01 20:46:32
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	231CALB.d	std 1	2020-12-01 20:30:11
2	232CALS.d	std 2	2020-12-01 20:31:50
3	233CALS.d	std 3	2020-12-01 20:33:29
4	234CALS.d	std 4	2020-12-01 20:35:07
5	235CALS.d	std 5	2020-12-01 20:36:46
6	236CALS.d	std 6	2020-12-01 20:38:26
7	237CALS.d	std 7	2020-12-01 20:40:11
8	238CALS.d	std 8	2020-12-01 20:41:59

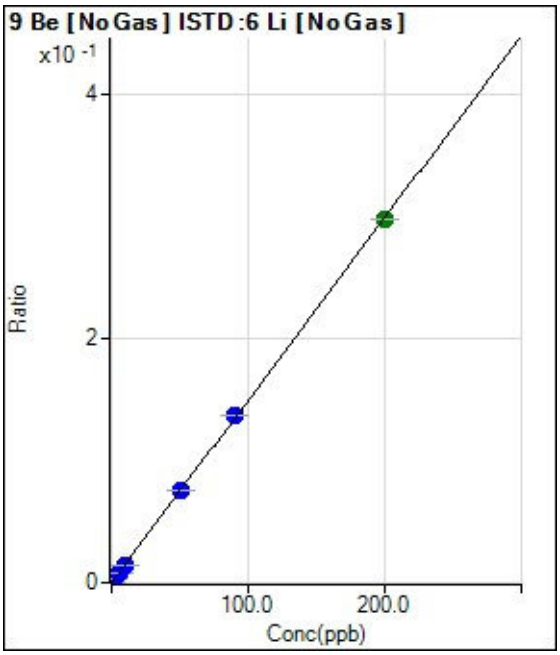
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	179757.90	0.0547	P	0.4
2	☐	0.200	0.150	183421.29	0.0555	P	0.8
3	☐	2.000	1.968	216327.62	0.0658	P	0.4
4	☐	5.000	4.930	270603.16	0.0825	P	1.4
5	☐	10.000	10.119	359189.09	0.1117	P	0.5
6	☐	50.000	49.444	1043490.73	0.3333	A	0.2
7	☐	90.000	89.250	1736467.88	0.5577	A	0.4
8	☐	200.000	200.473	3609651.01	1.1845	A	0.2

y = 0.0056 * x + 0.0547
R = 1.0000
DL = 0.1143
BEC = 9.701

Weight: <None>
Min Conc: <None>

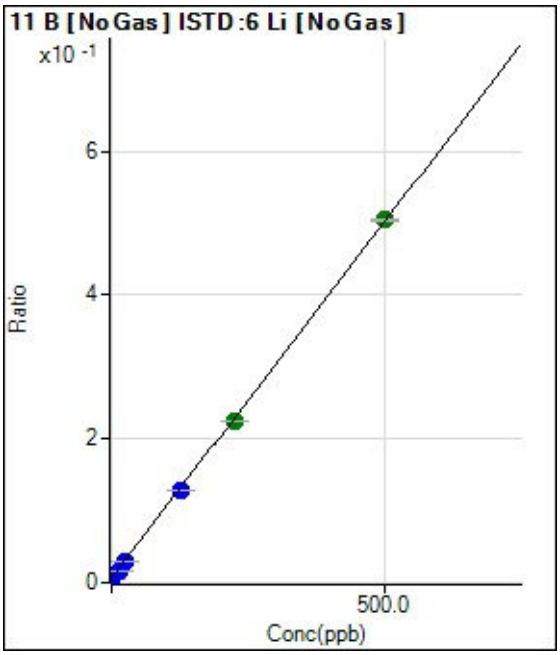


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.71	0.0000	P	24.3
2	☐	0.200	0.189	981.03	0.0003	P	10.2
3	☐	2.000	1.963	9689.83	0.0029	P	2.2
4	☐	5.000	4.874	23931.22	0.0073	P	2.3
5	☐	10.000	9.797	47089.00	0.0146	P	2.7
6	☐	50.000	50.868	237817.42	0.0760	P	0.5
7	☐	90.000	91.823	426969.98	0.1371	P	0.5
8	☐	200.000	198.977	905447.04	0.2971	A	0.1

y = 0.0015 * x + 1.4199E-005
R = 0.9999
DL = 0.00694
BEC = 0.00951

Weight: <None>
Min Conc: <None>

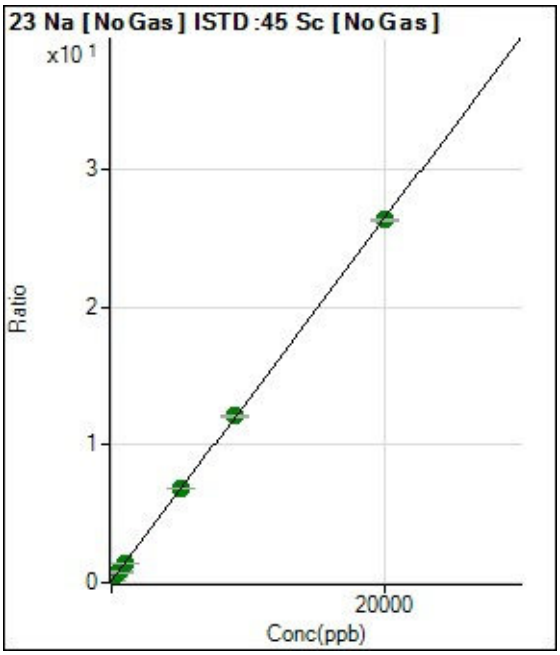
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21113.86	0.0064	P	3.4
2	☐	0.500	-0.250	20398.75	0.0062	P	2.5
3	☐	5.000	3.469	32430.03	0.0099	P	5.1
4	☐	12.500	10.121	53990.85	0.0165	P	0.9
5	☐	25.000	22.727	93075.36	0.0289	P	1.3
6	☐	125.000	123.403	402933.53	0.1287	P	0.6
7	☐	225.000	219.995	698852.97	0.2244	A	0.5
8	☐	500.000	502.841	1538194.03	0.5047	A	0.6

y = 9.9100E-004 * x + 0.0064
R = 0.9999
DL = 0.6546
BEC = 6.481

Weight: <None>
Min Conc: <None>

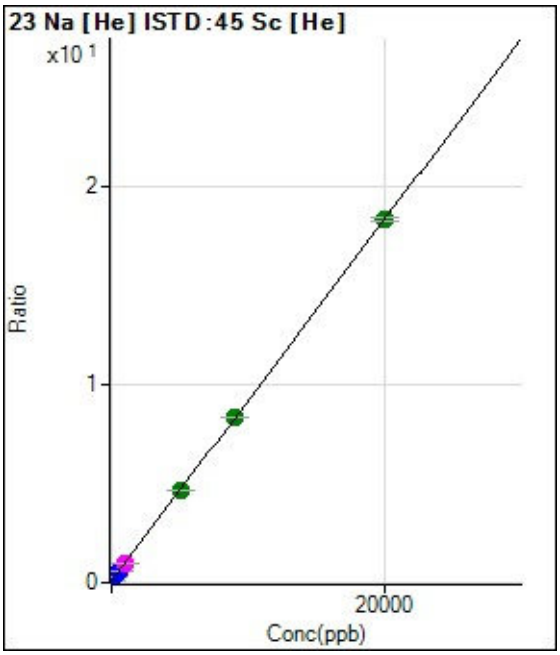


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1920394.38	0.1154	A	1.2
2	☐	20.000	15.910	2264043.28	0.1363	A	1.9
3	☐	200.000	193.393	6145950.92	0.3702	A	1.4
4	☐	500.000	501.421	12755135.44	0.7759	A	2.3
5	☐	1000.000	998.576	23296873.44	1.4309	A	0.4
6	☐	5000.000	5133.853	109913139.9	6.8786	A	0.8
7	☐	9000.000	9098.628	196329012.7	12.101	A	0.4
8	☐	20000.00	19922.26	432158042.9	26.360	A	0.8

y = 0.0013 * x + 0.1154
R = 1.0000
DL = 3.071
BEC = 87.59

Weight: <None>
Min Conc: <None>

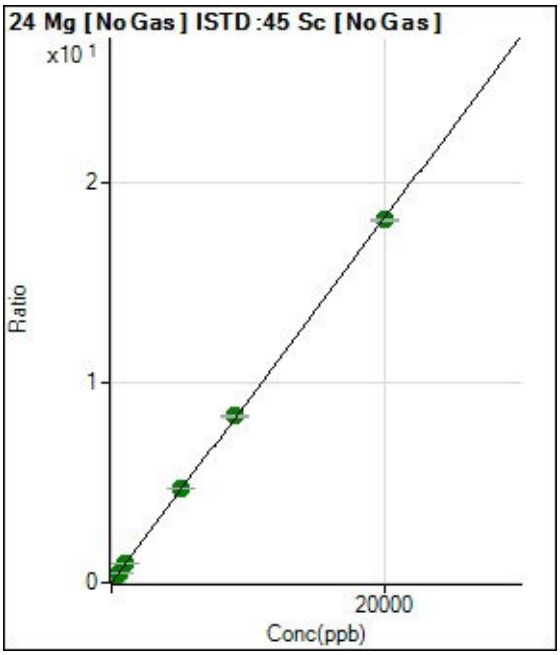
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61096.89	0.0862	P	2.2
2	☐	20.000	24.629	77223.43	0.1087	P	9.5
3	☐	200.000	201.012	191415.67	0.2697	P	0.6
4	☐	500.000	503.347	383544.33	0.5456	P	1.5
5	☐	1000.000	1005.580	699743.12	1.0041	M	2.8
6	☐	5000.000	5026.608	3219687.03	4.6744	A	0.5
7	☐	9000.000	9029.937	5793210.33	8.3286	A	0.5
8	☐	20000.00	19979.49	12856647.31	18.323	A	0.9

y = 9.1278E-004 * x + 0.0862
R = 1.0000
DL = 6.24
BEC = 94.42

Weight: <None>
Min Conc: <None>

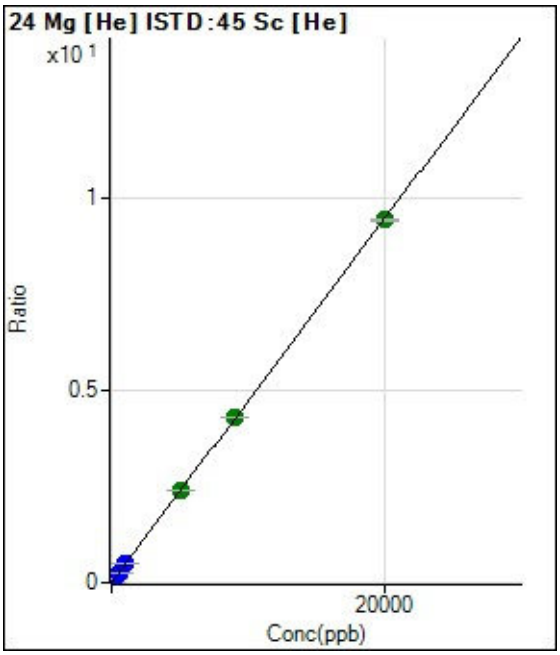


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9484.03	0.0006	P	8.8
2	☐	20.000	20.884	324899.32	0.0196	P	1.6
3	☐	200.000	203.500	3082833.60	0.1857	A	1.5
4	☐	500.000	513.474	7687541.35	0.4676	A	0.5
5	☐	1000.000	1017.712	15081473.11	0.9263	A	0.5
6	☐	5000.000	5150.939	74877068.88	4.6860	A	1.0
7	☐	9000.000	9125.860	134680704.6	8.3016	A	0.7
8	☐	20000.00	19904.37	296841142.2	18.106	A	0.4

y = 9.0962E-004 * x + 5.6984E-004
R = 0.9999
DL = 0.1661
BEC = 0.6265

Weight: <None>
Min Conc: <None>

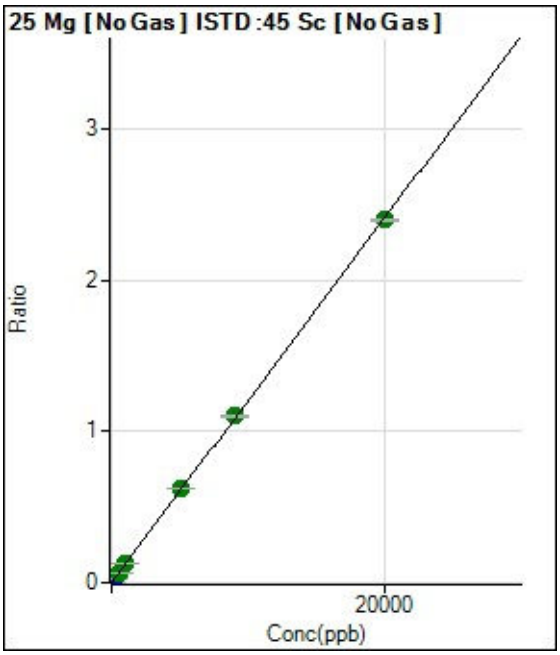
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.35	0.0003	P	22.1
2	☐	20.000	20.977	7282.46	0.0102	P	5.9
3	☐	200.000	213.302	72003.48	0.1014	P	1.7
4	☐	500.000	522.273	174298.99	0.2479	P	1.2
5	☐	1000.000	1046.889	346083.68	0.4967	P	1.1
6	☐	5000.000	5080.327	1659341.54	2.4090	A	0.2
7	☐	9000.000	9081.164	2995142.35	4.3059	A	0.3
8	☐	20000.00	19940.35	6633933.24	9.4546	A	0.8

y = 4.7413E-004 * x + 3.0126E-004
R = 1.0000
DL = 0.4215
BEC = 0.6354

Weight: <None>
Min Conc: <None>

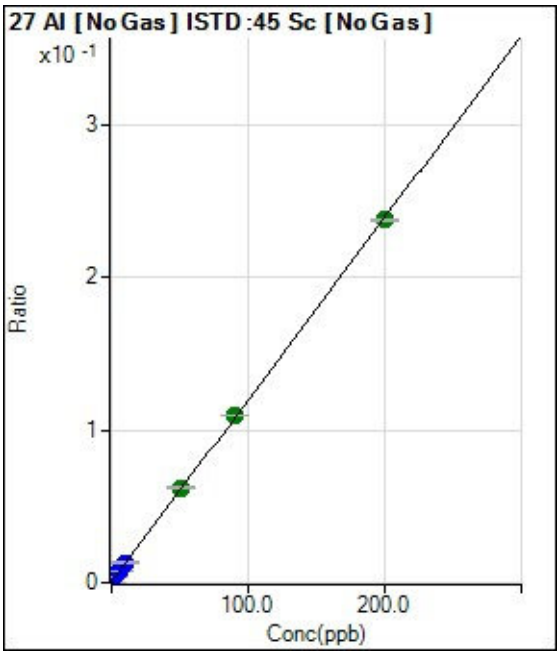


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1213.46	0.0001	P	3.7
2	☐	20.000	20.771	42828.43	0.0026	P	4.0
3	☐	200.000	209.884	421673.52	0.0254	P	0.9
4	☐	500.000	514.541	1021784.83	0.0622	A	0.8
5	☐	1000.000	1026.905	2018511.06	0.1240	A	0.7
6	☐	5000.000	5148.153	9927094.02	0.6212	A	0.3
7	☐	9000.000	9129.825	17872072.23	1.1017	A	1.5
8	☐	20000.00	19902.73	39369886.08	2.4015	A	0.4

y = 1.2066E-004 * x + 7.2910E-005
R = 0.9999
DL = 0.06784
BEC = 0.6043

Weight: <None>
Min Conc: <None>

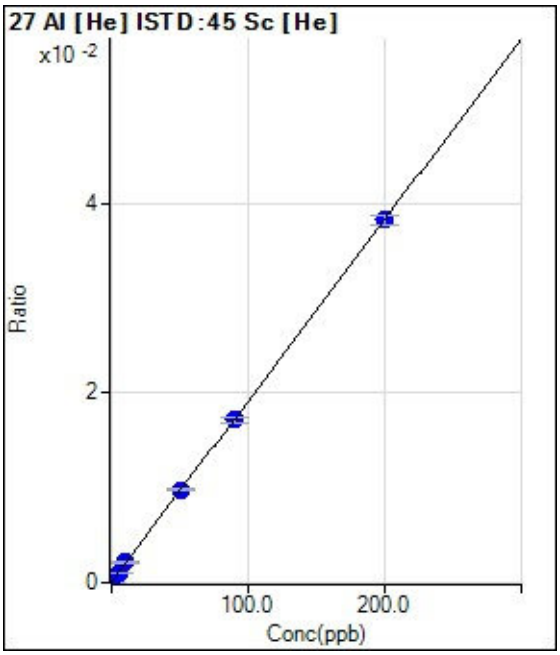
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8376.66	0.0005	P	2.5
2	☐			18667.18	0.0011	P	2.8
3	☐	2.000	2.521	58245.94	0.0035	P	4.6
4	☐	5.000	5.608	118132.78	0.0072	P	2.6
5	☐	10.000	10.646	214784.74	0.0132	P	0.6
6	☐	50.000	51.705	992724.80	0.0621	A	0.7
7	☐	90.000	91.385	1775107.21	0.1094	A	0.5
8	☐	200.000	198.898	3894469.52	0.2376	A	0.4

y = 0.0012 * x + 5.0333E-004
R = 0.9999
DL = 0.03197
BEC = 0.4223

Weight: <None>
Min Conc: <None>

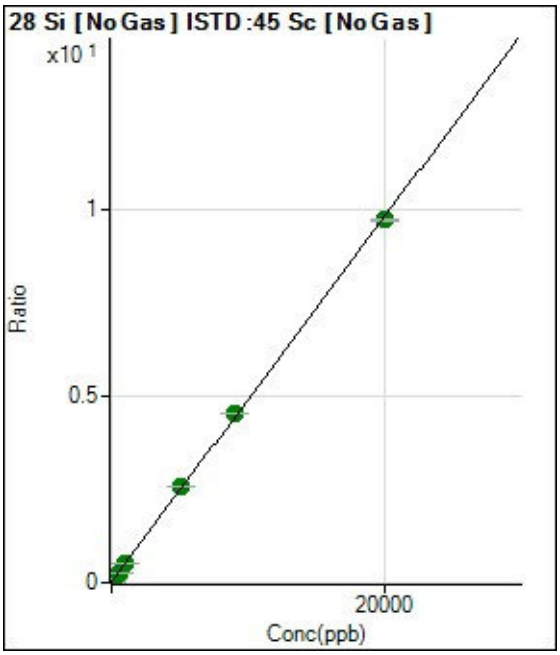


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	35.7
2	☐			170.00	0.0002	P	26.7
3	☐	2.000	2.385	380.01	0.0005	P	1.8
4	☐	5.000	5.064	736.70	0.0010	P	9.4
5	☐	10.000	10.968	1516.78	0.0022	P	9.2
6	☐	50.000	51.026	6768.43	0.0098	P	1.6
7	☐	90.000	89.354	11925.28	0.0171	P	2.9
8	☐	200.000	199.980	26856.09	0.0383	P	2.7

y = 1.9100E-004 * x + 7.9802E-005
R = 1.0000
DL = 0.4471
BEC = 0.4178

Weight: <None>
Min Conc: <None>

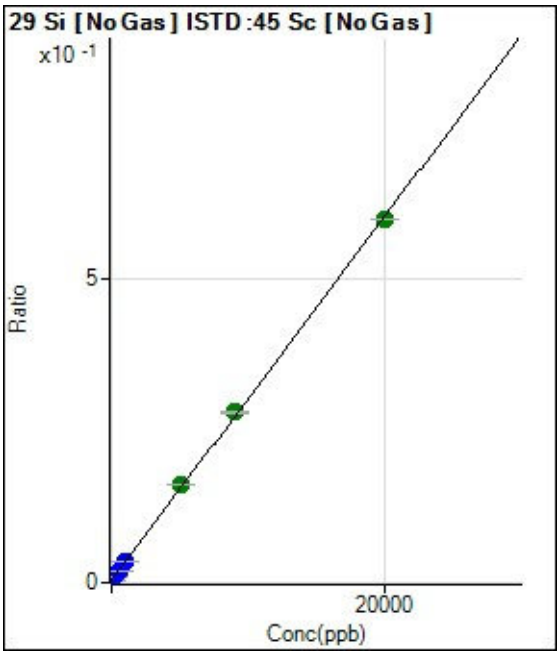
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	359241.03	0.0216	P	1.4
2	☐	20.000	22.841	543585.08	0.0327	P	0.4
3	☐	200.000	204.010	2011913.79	0.1212	A	0.6
4	☐	500.000	514.203	4481294.12	0.2726	A	0.4
5	☐	1000.000	1029.574	8534421.94	0.5242	A	0.4
6	☐	5000.000	5232.477	41160598.18	2.5759	A	0.5
7	☐	9000.000	9245.545	73572370.85	4.5349	A	0.4
8	☐	20000.00	19829.50	159052589.5	9.7016	A	0.2

y = 4.8816E-004 * x + 0.0216
R = 0.9998
DL = 1.853
BEC = 44.22

Weight: <None>
Min Conc: <None>

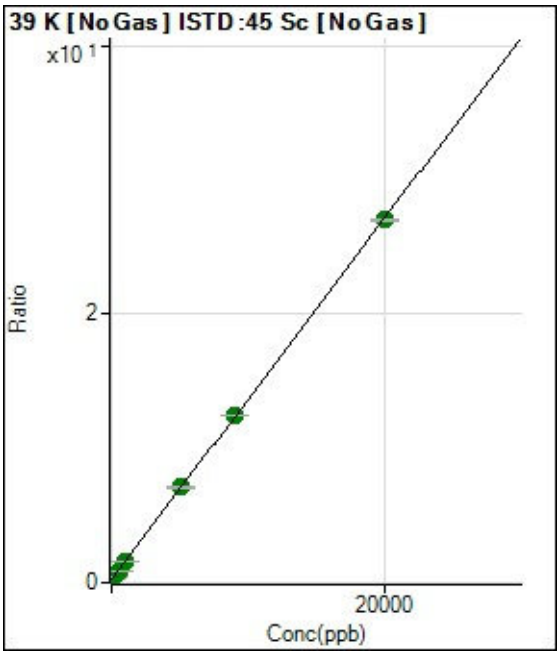


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61037.85	0.0037	P	1.4
2	☐	20.000	16.059	68892.05	0.0041	P	0.3
3	☐	200.000	210.394	165572.99	0.0100	P	1.2
4	☐	500.000	533.021	322874.66	0.0196	P	0.1
5	☐	1000.000	1081.802	587528.69	0.0361	P	0.3
6	☐	5000.000	5234.303	2565065.43	0.1605	A	0.2
7	☐	9000.000	9242.394	4552817.41	0.2806	A	0.4
8	☐	20000.00	19827.33	9801105.50	0.5978	A	0.2

y = 2.9967E-005 * x + 0.0037
R = 0.9998
DL = 5.273
BEC = 122.4

Weight: <None>
Min Conc: <None>

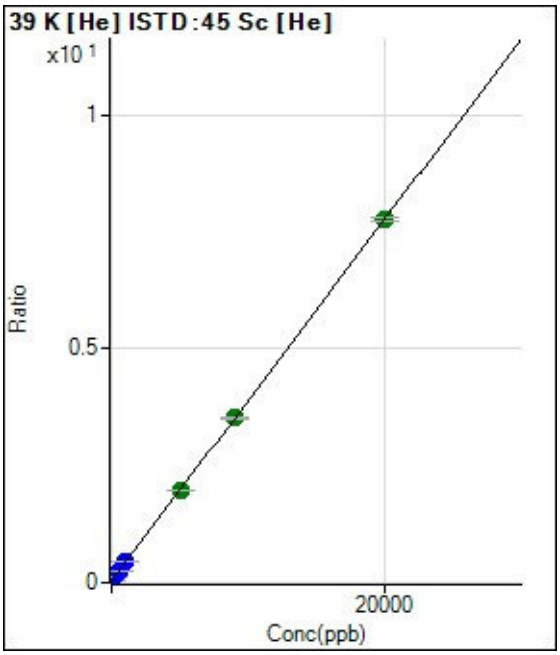
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3816784.42	0.2293	A	1.1
2	☐	20.000	19.569	4244916.29	0.2556	A	0.6
3	☐	200.000	200.970	8292310.29	0.4994	A	0.2
4	☐	500.000	501.869	14857988.95	0.9038	A	0.9
5	☐	1000.000	1011.684	25870893.78	1.5890	A	0.7
6	☐	5000.000	5102.010	113232454.9	7.0862	A	0.5
7	☐	9000.000	9115.641	202475023.6	12.480	A	0.1
8	☐	20000.00	19921.81	442713540.0	27.003	A	0.5

y = 0.0013 * x + 0.2293
R = 1.0000
DL = 5.408
BEC = 170.6

Weight: <None>
Min Conc: <None>

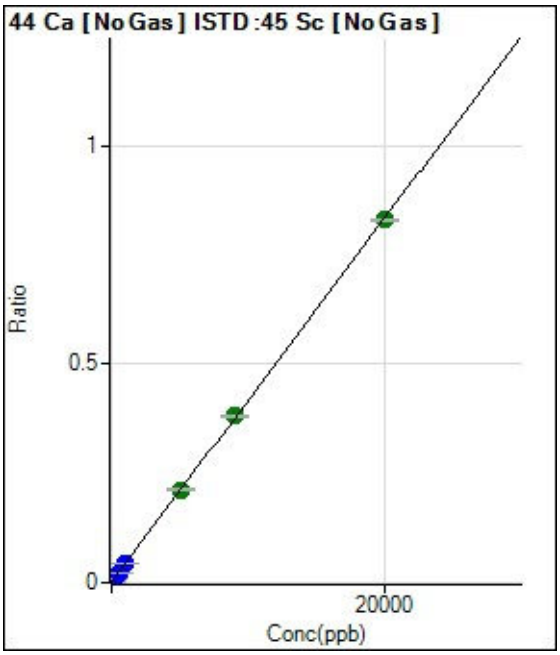


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24316.28	0.0343	P	4.6
2	☐	20.000	19.194	29646.96	0.0417	P	1.7
3	☐	200.000	211.520	82422.39	0.1161	P	3.7
4	☐	500.000	526.453	167210.46	0.2379	P	2.0
5	☐	1000.000	1048.863	306566.43	0.4399	P	0.5
6	☐	5000.000	5006.861	1357391.91	1.9706	A	0.9
7	☐	9000.000	9021.454	2450605.69	3.5232	A	0.4
8	☐	20000.00	19985.41	5447250.75	7.7633	A	0.9

y = 3.8673E-004 * x + 0.0343
R = 1.0000
DL = 12.12
BEC = 88.67

Weight: <None>
Min Conc: <None>

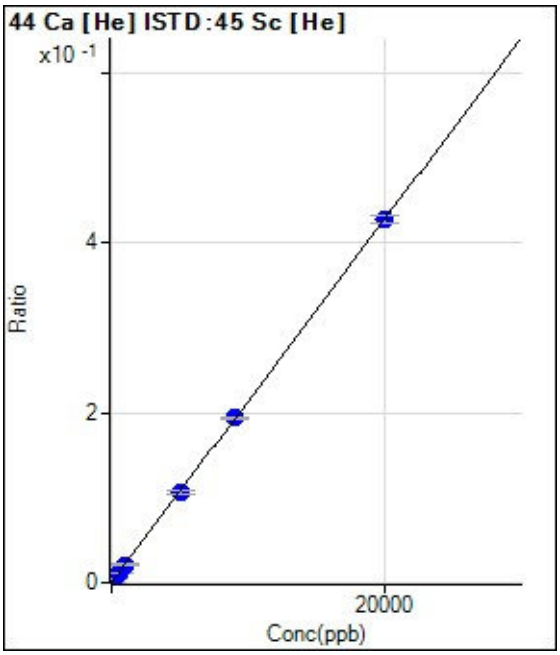
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25024.16	0.0015	P	4.4
2	☐	20.000	21.227	39647.04	0.0024	P	3.7
3	☐	200.000	208.349	169011.74	0.0102	P	1.3
4	☐	500.000	527.063	385515.33	0.0235	P	0.4
5	☐	1000.000	1047.508	734668.48	0.0451	P	0.2
6	☐	5000.000	5087.164	3409020.37	0.2133	A	0.5
7	☐	9000.000	9135.968	6196269.49	0.3819	A	0.6
8	☐	20000.00	19913.88	13619659.80	0.8307	A	0.5

y = 4.1641E-005 * x + 0.0015
R = 1.0000
DL = 4.784
BEC = 36.11

Weight: <None>
Min Conc: <None>

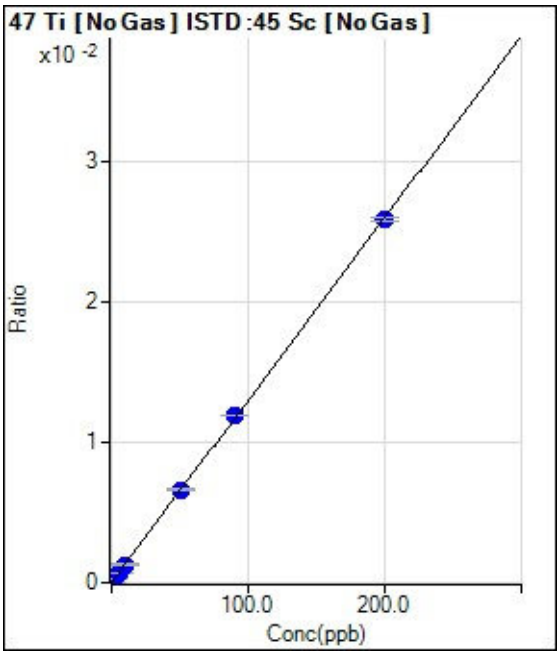


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.68	0.0003	P	12.9
2	☐	20.000	19.266	480.04	0.0007	P	16.8
3	☐	200.000	202.164	3253.96	0.0046	P	9.4
4	☐	500.000	518.412	7976.19	0.0113	P	2.7
5	☐	1000.000	983.918	14849.12	0.0213	P	4.8
6	☐	5000.000	4982.557	73574.93	0.1068	P	3.2
7	☐	9000.000	9057.871	134904.38	0.1940	P	0.9
8	☐	20000.00	19978.64	299943.63	0.4275	P	2.3

y = 2.1383E-005 * x + 2.6353E-004
R = 1.0000
DL = 4.772
BEC = 12.32

Weight: <None>
Min Conc: <None>

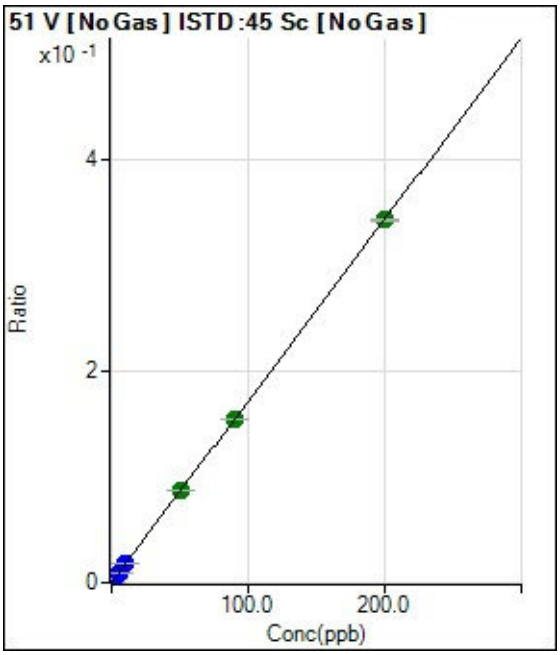
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.54	0.0000	P	14.1
2	☐	0.200	0.159	547.23	0.0000	P	14.1
3	☐	2.000	1.979	4471.95	0.0003	P	2.6
4	☐	5.000	4.862	10584.79	0.0006	P	2.5
5	☐	10.000	9.871	21080.87	0.0013	P	1.3
6	☐	50.000	50.912	105890.68	0.0066	P	1.6
7	☐	90.000	91.706	193500.64	0.0119	P	0.5
8	☐	200.000	199.015	424098.24	0.0259	P	1.1

y = 1.2993E-004 * x + 1.2229E-005
R = 0.9999
DL = 0.03991
BEC = 0.09412

Weight: <None>
Min Conc: <None>

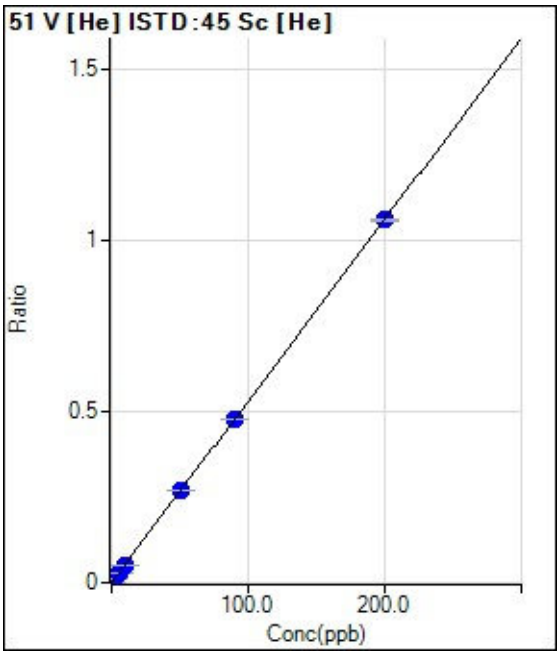


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-1860.30	-0.0001	P	-96.0
2	☐	0.200	0.241	5028.04	0.0003	P	36.2
3	☐	2.000	2.108	58242.60	0.0035	P	8.0
4	☐	5.000	5.162	143901.23	0.0088	P	1.7
5	☐	10.000	10.352	287644.86	0.0177	P	1.0
6	☐	50.000	50.521	1384667.37	0.0867	A	0.2
7	☐	90.000	89.924	2503637.62	0.1543	A	0.4
8	☐	200.000	199.881	5625975.67	0.3432	A	0.3

y = 0.0017 * x - 1.1164E-004
R = 1.0000
DL = 0.1873
BEC = -0.065

Weight: <None>
Min Conc: <None>

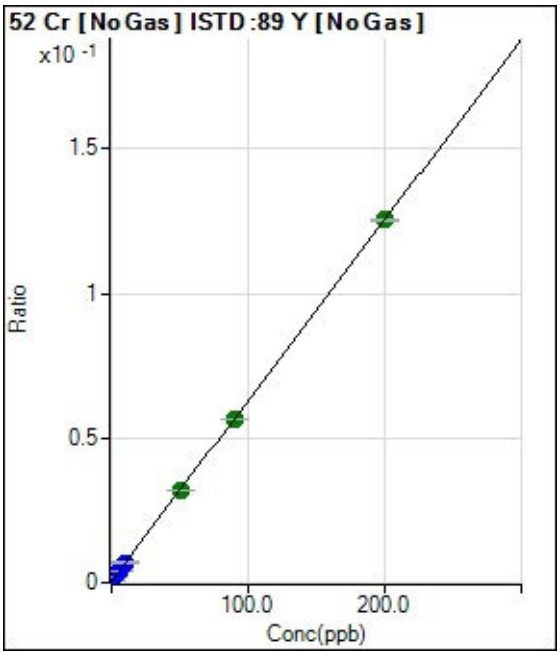
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283.63	0.0004	P	22.5
2	☐	0.200	0.174	940.99	0.0013	P	9.3
3	☐	2.000	1.931	7539.74	0.0106	P	3.8
4	☐	5.000	4.802	18147.02	0.0258	P	1.2
5	☐	10.000	9.695	36030.23	0.0517	P	0.2
6	☐	50.000	50.421	184051.82	0.2672	P	0.1
7	☐	90.000	89.988	331487.79	0.4766	P	0.6
8	☐	200.000	199.921	742565.46	1.0583	P	0.3

y = 0.0053 * x + 4.0085E-004
R = 1.0000
DL = 0.05107
BEC = 0.07575

Weight: <None>
Min Conc: <None>

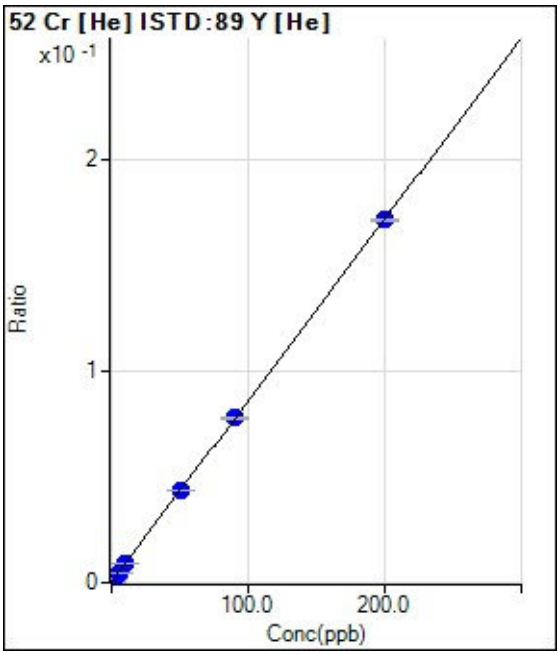


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22487.95	0.0005	P	0.5
2	☐	0.200	0.155	26585.91	0.0006	P	2.0
3	☐	2.000	2.014	74677.32	0.0018	P	2.4
4	☐	5.000	5.025	152336.79	0.0037	P	0.7
5	☐	10.000	10.295	285425.72	0.0070	P	1.1
6	☐	50.000	50.508	1290693.48	0.0321	A	0.1
7	☐	90.000	89.535	2300191.76	0.0565	A	0.5
8	☐	200.000	200.067	5124427.46	0.1255	A	0.8

y = 6.2458E-004 * x + 5.3953E-004
R = 1.0000
DL = 0.01253
BEC = 0.8638

Weight: <None>
Min Conc: <None>

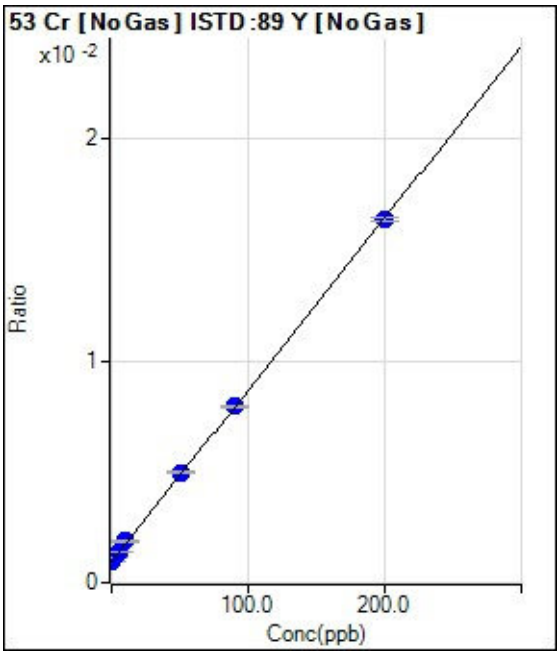
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1872.04	0.0003	P	0.2
2	☐	0.200	0.182	2723.06	0.0005	P	10.0
3	☐	2.000	1.933	10828.65	0.0020	P	2.0
4	☐	5.000	5.058	25125.28	0.0047	P	1.4
5	☐	10.000	9.948	47141.68	0.0089	P	1.3
6	☐	50.000	50.492	229589.61	0.0436	P	0.3
7	☐	90.000	90.326	415327.81	0.0778	P	0.2
8	☐	200.000	199.732	921697.67	0.1715	P	0.6

y = 8.5704E-004 * x + 3.4053E-004
R = 1.0000
DL = 0.002685
BEC = 0.3973

Weight: <None>
Min Conc: <None>

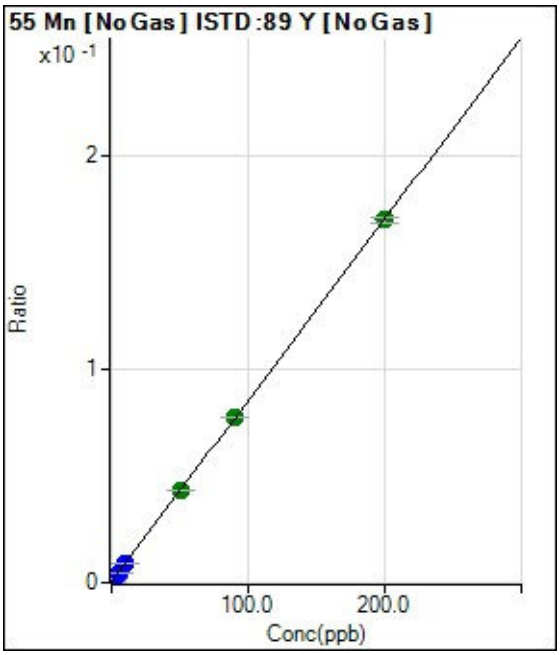


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39272.30	0.0009	P	0.7
2	☐	0.200	0.424	40721.31	0.0010	P	1.6
3	☐	2.000	2.203	46231.21	0.0011	P	2.6
4	☐	5.000	5.833	57715.70	0.0014	P	0.3
5	☐	10.000	12.047	76754.30	0.0019	P	1.5
6	☐	50.000	52.018	199784.88	0.0050	P	1.0
7	☐	90.000	90.692	324234.39	0.0080	P	0.9
8	☐	200.000	199.059	667295.50	0.0163	P	0.9

y = 7.7367E-005 * x + 9.4220E-004
R = 0.9999
DL = 0.2593
BEC = 12.18

Weight: <None>
Min Conc: <None>

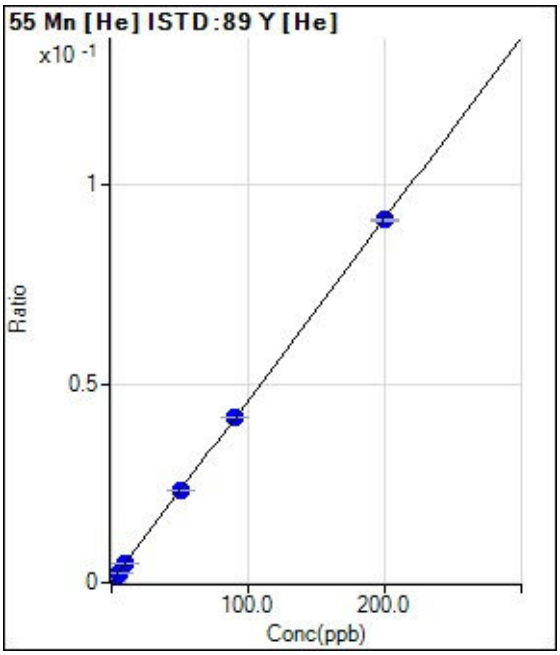
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18571.41	0.0004	P	1.8
2	☐	0.200	0.194	25486.07	0.0006	P	1.2
3	☐	2.000	2.054	91112.26	0.0022	P	1.3
4	☐	5.000	5.103	198266.54	0.0048	P	1.1
5	☐	10.000	10.341	378475.67	0.0092	P	1.6
6	☐	50.000	50.686	1752344.43	0.0436	A	0.2
7	☐	90.000	90.387	3150560.15	0.0773	A	0.3
8	☐	200.000	199.634	6951939.45	0.1703	A	1.3

y = 8.5066E-004 * x + 4.4559E-004
R = 1.0000
DL = 0.02794
BEC = 0.5238

Weight: <None>
Min Conc: <None>

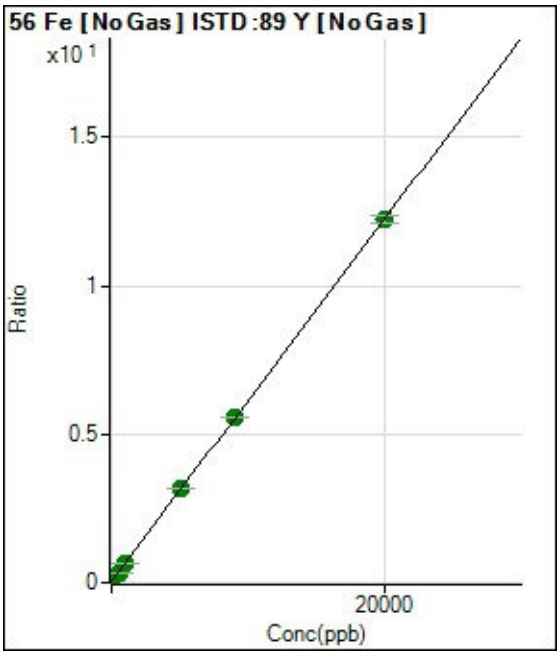


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1157.89	0.0002	P	12.7
2	☐	0.200	0.167	1575.03	0.0003	P	9.0
3	☐	2.000	2.064	6254.48	0.0012	P	3.4
4	☐	5.000	4.993	13383.51	0.0025	P	5.1
5	☐	10.000	10.096	25633.31	0.0048	P	3.1
6	☐	50.000	50.800	123240.51	0.0234	P	0.2
7	☐	90.000	90.600	222148.63	0.0416	P	0.3
8	☐	200.000	199.525	490834.30	0.0913	P	0.4

y = 4.5672E-004 * x + 2.1066E-004
R = 1.0000
DL = 0.1758
BEC = 0.4612

Weight: <None>
Min Conc: <None>

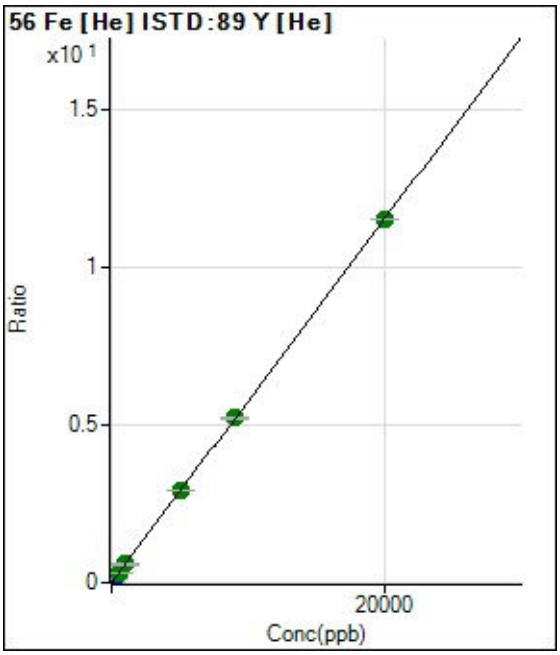
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1846736.76	0.0443	A	1.1
2	☐	20.000	18.444	2320222.38	0.0556	A	0.1
3	☐	200.000	200.879	6928476.98	0.1668	A	0.7
4	☐	500.000	500.823	14480152.93	0.3496	A	0.8
5	☐	1000.000	1000.181	26782755.81	0.6540	A	1.2
6	☐	5000.000	5089.244	126580486.1	3.1467	A	0.4
7	☐	9000.000	9034.559	226171238.3	5.5517	A	0.4
8	☐	20000.00	19962.10	498672527.8	12.213	A	2.0

y = 6.0959E-004 * x + 0.0443
R = 1.0000
DL = 2.359
BEC = 72.69

Weight: <None>
Min Conc: <None>

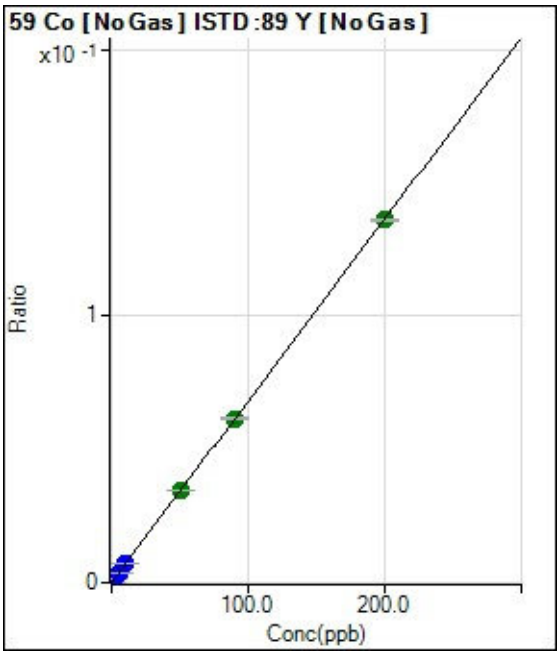


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21164.23	0.0039	P	3.0
2	☐	20.000	23.746	96167.69	0.0175	P	3.2
3	☐	200.000	241.216	774285.87	0.1428	P	0.2
4	☐	500.000	496.635	1557690.45	0.2899	A	0.7
5	☐	1000.000	1001.286	3085833.70	0.5805	A	1.0
6	☐	5000.000	5064.606	15372819.77	2.9204	A	1.0
7	☐	9000.000	9060.441	27889622.08	5.2215	A	0.8
8	☐	20000.00	19956.25	61778944.08	11.496	A	0.2

y = 5.7588E-004 * x + 0.0039
R = 1.0000
DL = 0.6064
BEC = 6.686

Weight: <None>
Min Conc: <None>

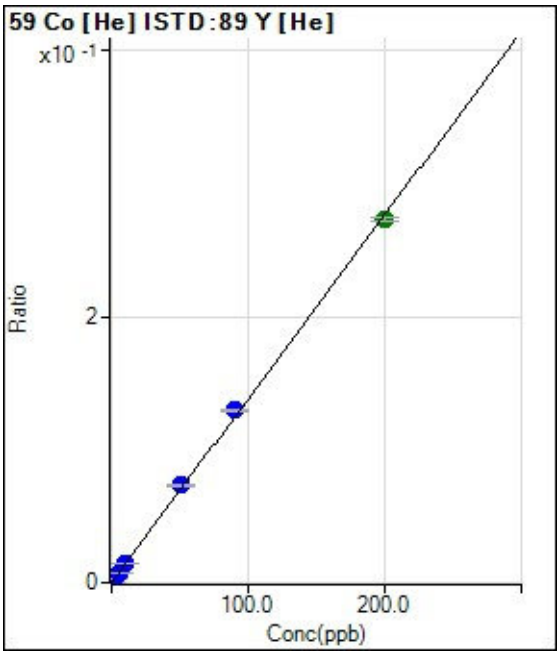
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1364.80	0.0000	P	4.7
2	☐	0.200	0.189	6741.87	0.0002	P	5.0
3	☐	2.000	2.092	60614.85	0.0015	P	1.6
4	☐	5.000	5.164	147182.58	0.0036	P	0.7
5	☐	10.000	10.315	289357.58	0.0071	P	0.7
6	☐	50.000	50.777	1393924.14	0.0347	A	0.7
7	☐	90.000	90.219	2507311.90	0.0615	A	0.7
8	☐	200.000	199.686	5560627.93	0.1362	A	0.7

y = 6.8181E-004 * x + 3.2747E-005
R = 1.0000
DL = 0.006759
BEC = 0.04803

Weight: <None>
Min Conc: <None>

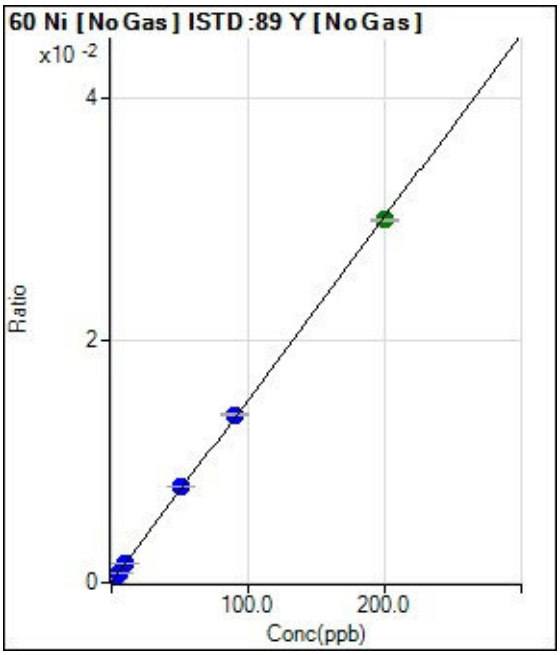


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	293.64	0.0001	P	11.0
2	☐	0.200	0.207	1862.03	0.0003	P	6.8
3	☐	2.000	2.079	15858.66	0.0029	P	1.1
4	☐	5.000	5.106	38171.63	0.0071	P	2.1
5	☐	10.000	10.315	76006.68	0.0143	P	0.9
6	☐	50.000	52.913	384867.54	0.0731	P	0.8
7	☐	90.000	93.960	693268.84	0.1298	P	1.0
8	☐	200.000	197.471	1465542.73	0.2727	A	1.0

y = 0.0014 * x + 5.3419E-005
R = 0.9996
DL = 0.01272
BEC = 0.03869

Weight: <None>
Min Conc: <None>

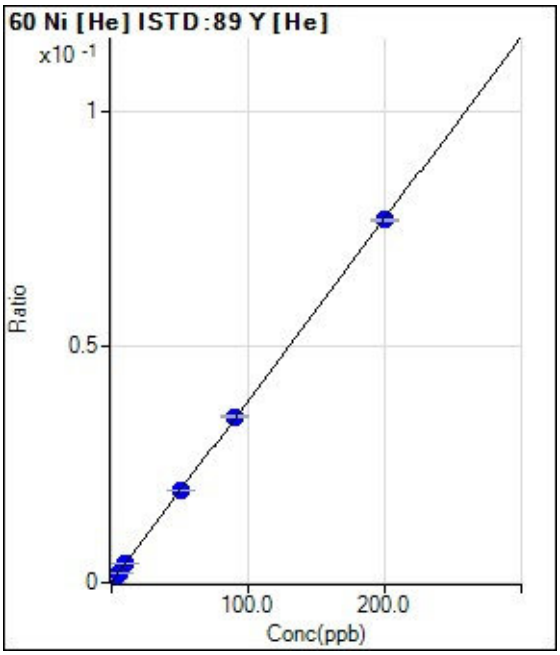
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	944.33	0.0000	P	6.1
2	☐	0.200	0.207	2252.49	0.0001	P	10.5
3	☐	2.000	2.055	13824.32	0.0003	P	1.6
4	☐	5.000	5.129	33000.07	0.0008	P	0.4
5	☐	10.000	10.399	65197.39	0.0016	P	1.5
6	☐	50.000	52.449	319319.93	0.0079	P	0.9
7	☐	90.000	91.962	566339.09	0.0139	P	0.7
8	☐	200.000	198.481	1224015.30	0.0300	A	0.8

y = 1.5092E-004 * x + 2.2657E-005
R = 0.9999
DL = 0.02769
BEC = 0.1501

Weight: <None>
Min Conc: <None>

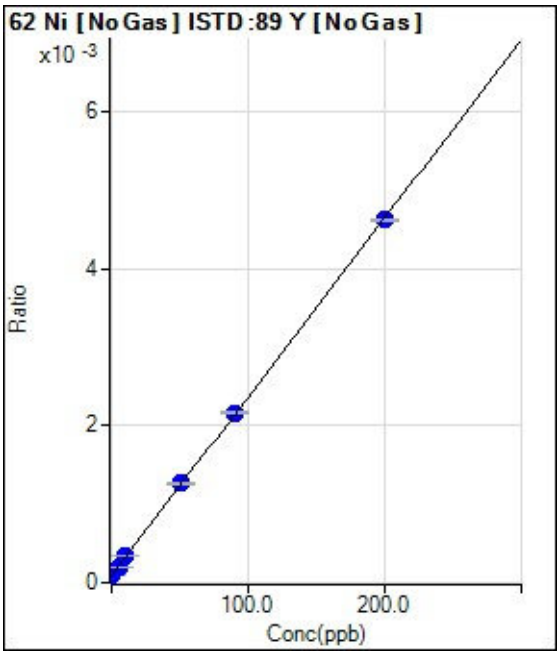


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.97	0.0001	P	14.8
2	☐	0.200	0.159	633.99	0.0001	P	8.4
3	☐	2.000	1.978	4431.91	0.0008	P	1.9
4	☐	5.000	5.056	10768.50	0.0020	P	3.4
5	☐	10.000	10.230	21271.39	0.0040	P	0.7
6	☐	50.000	50.781	103402.72	0.0196	P	0.9
7	☐	90.000	91.000	187790.88	0.0352	P	1.0
8	☐	200.000	199.342	413528.97	0.0770	P	0.9

y = 3.8577E-004 * x + 5.4069E-005
R = 1.0000
DL = 0.06218
BEC = 0.1402

Weight: <None>
Min Conc: <None>

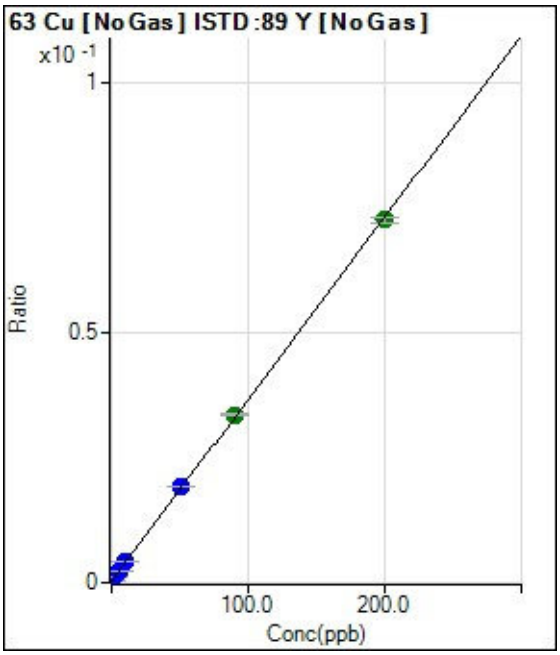
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3821.08	0.0001	P	3.3
2	☐	0.200	0.461	4268.37	0.0001	P	2.1
3	☐	2.000	2.209	5900.62	0.0001	P	3.5
4	☐	5.000	4.942	8461.24	0.0002	P	1.1
5	☐	10.000	10.580	13627.30	0.0003	P	0.6
6	☐	50.000	51.684	51060.26	0.0013	P	1.0
7	☐	90.000	90.939	88151.63	0.0022	P	0.9
8	☐	200.000	199.127	189007.68	0.0046	P	0.8

y = 2.2786E-005 * x + 9.1683E-005
R = 0.9999
DL = 0.4029
BEC = 4.024

Weight: <None>
Min Conc: <None>

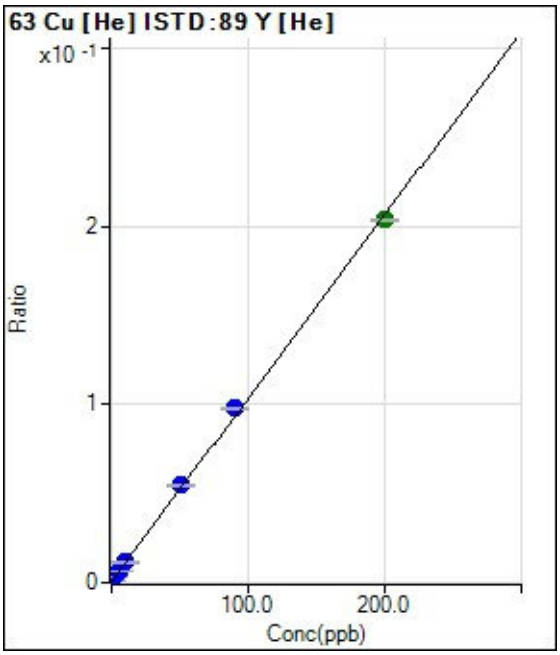


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12722.20	0.0003	P	0.1
2	☐	0.200	0.229	16226.16	0.0004	P	0.7
3	☐	2.000	2.091	44242.87	0.0011	P	0.4
4	☐	5.000	5.259	91789.00	0.0022	P	0.8
5	☐	10.000	10.341	166364.08	0.0041	P	0.7
6	☐	50.000	52.131	774166.12	0.0192	P	1.1
7	☐	90.000	91.667	1369285.43	0.0336	A	0.1
8	☐	200.000	198.692	2959990.73	0.0725	A	1.3

y = 3.6333E-004 * x + 3.0523E-004
R = 0.9999
DL = 0.001322
BEC = 0.8401

Weight: <None>
Min Conc: <None>

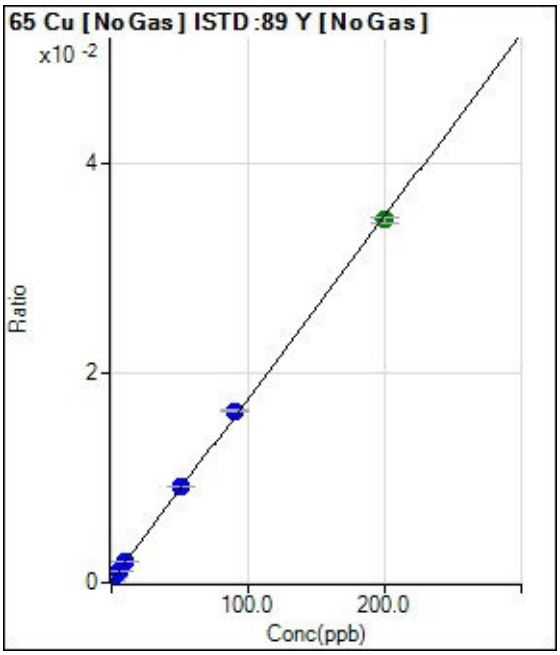
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3754.34	0.0007	P	3.5
2	☐	0.200	0.166	4685.57	0.0009	P	8.3
3	☐	2.000	2.036	15066.91	0.0028	P	1.9
4	☐	5.000	5.245	32678.70	0.0061	P	1.7
5	☐	10.000	10.364	60350.76	0.0114	P	0.4
6	☐	50.000	52.410	287601.33	0.0546	P	0.4
7	☐	90.000	94.398	522660.64	0.0979	P	1.0
8	☐	200.000	197.394	1095601.59	0.2039	A	0.8

y = 0.0010 * x + 6.8270E-004
R = 0.9996
DL = 0.0705
BEC = 0.6632

Weight: <None>
Min Conc: <None>

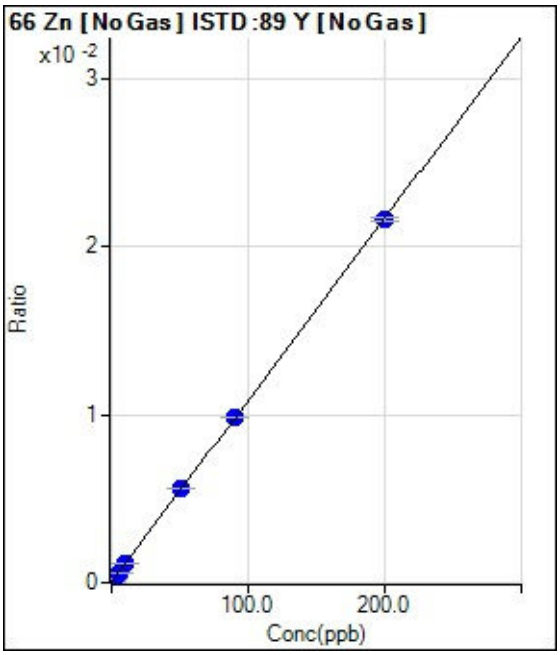


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6217.76	0.0001	P	4.5
2	☐	0.200	0.224	7860.28	0.0002	P	5.9
3	☐	2.000	2.110	21461.98	0.0005	P	2.0
4	☐	5.000	5.212	43771.02	0.0011	P	1.2
5	☐	10.000	10.387	80185.30	0.0020	P	1.3
6	☐	50.000	51.641	367746.55	0.0091	P	0.5
7	☐	90.000	93.402	668689.50	0.0164	P	0.4
8	☐	200.000	198.033	1413989.41	0.0346	A	1.8

y = 1.7414E-004 * x + 1.4919E-004
R = 0.9998
DL = 0.1169
BEC = 0.8567

Weight: <None>
Min Conc: <None>

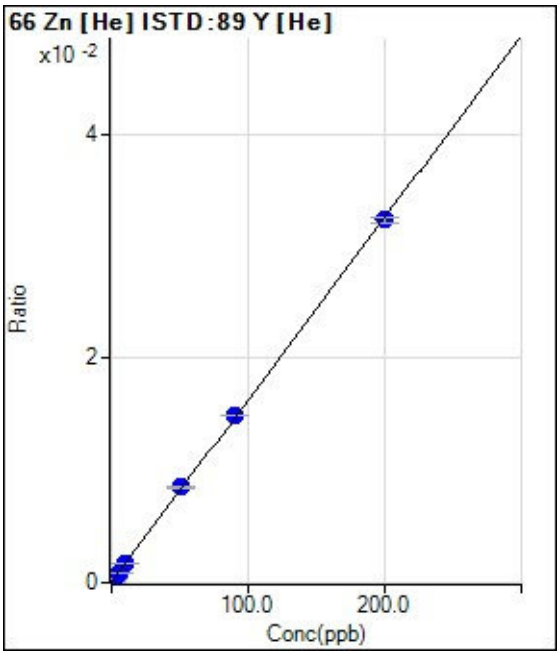
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1581.71	0.0000	P	4.7
2	☐	0.200	0.257	2746.42	0.0001	P	8.5
3	☐	2.000	2.095	10998.94	0.0003	P	3.1
4	☐	5.000	5.134	24587.03	0.0006	P	0.4
5	☐	10.000	10.066	46171.15	0.0011	P	0.7
6	☐	50.000	51.440	225480.59	0.0056	P	1.0
7	☐	90.000	90.742	401656.25	0.0099	P	0.6
8	☐	200.000	199.299	882271.62	0.0216	P	1.1

y = 1.0823E-004 * x + 3.7953E-005
R = 1.0000
DL = 0.04973
BEC = 0.3507

Weight: <None>
Min Conc: <None>

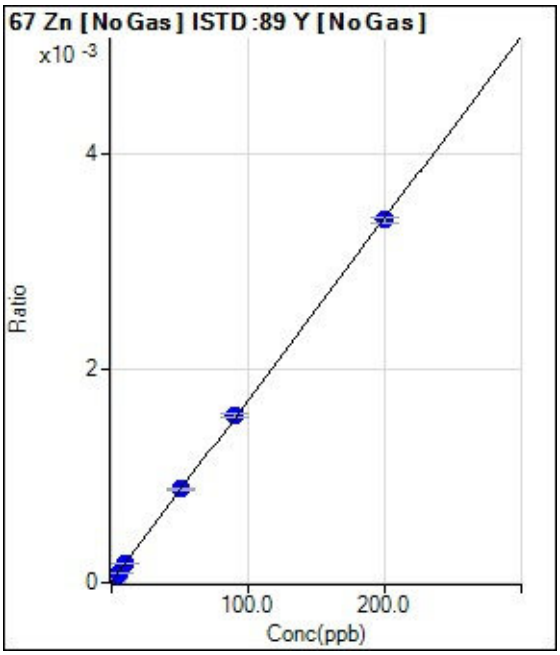


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340.35	0.0001	P	18.9
2	☐	0.200	0.266	577.27	0.0001	P	9.6
3	☐	2.000	1.921	2028.89	0.0004	P	3.2
4	☐	5.000	5.106	4789.04	0.0009	P	2.8
5	☐	10.000	9.994	8958.72	0.0017	P	2.3
6	☐	50.000	52.078	44859.07	0.0085	P	1.1
7	☐	90.000	91.433	79668.76	0.0149	P	0.6
8	☐	200.000	198.834	173900.79	0.0324	P	1.2

y = 1.6244E-004 * x + 6.1896E-005
R = 0.9999
DL = 0.2163
BEC = 0.381

Weight: <None>
Min Conc: <None>

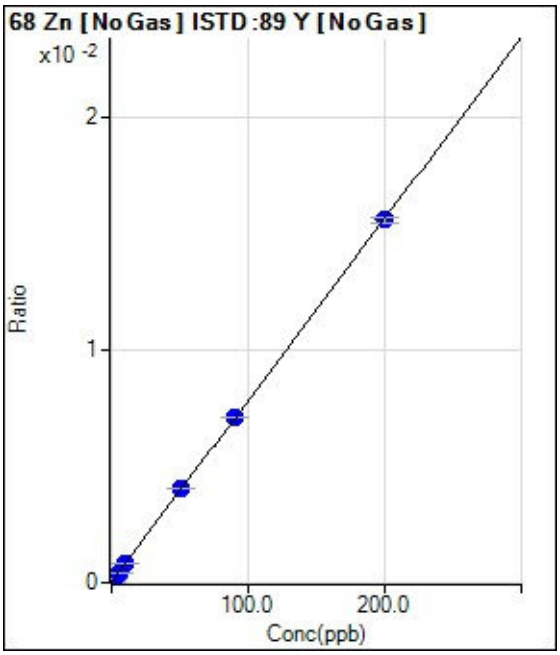
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	330.34	0.0000	P	19.5
2	☐	0.200	0.169	450.47	0.0000	P	16.8
3	☐	2.000	1.970	1718.53	0.0000	P	7.1
4	☐	5.000	5.010	3851.13	0.0001	P	7.8
5	☐	10.000	10.026	7296.08	0.0002	P	1.0
6	☐	50.000	51.126	35241.23	0.0009	P	1.7
7	☐	90.000	91.373	63528.29	0.0016	P	1.9
8	☐	200.000	199.100	138353.09	0.0034	P	1.4

y = 1.6980E-005 * x + 7.9221E-006
R = 0.9999
DL = 0.2726
BEC = 0.4666

Weight: <None>
Min Conc: <None>

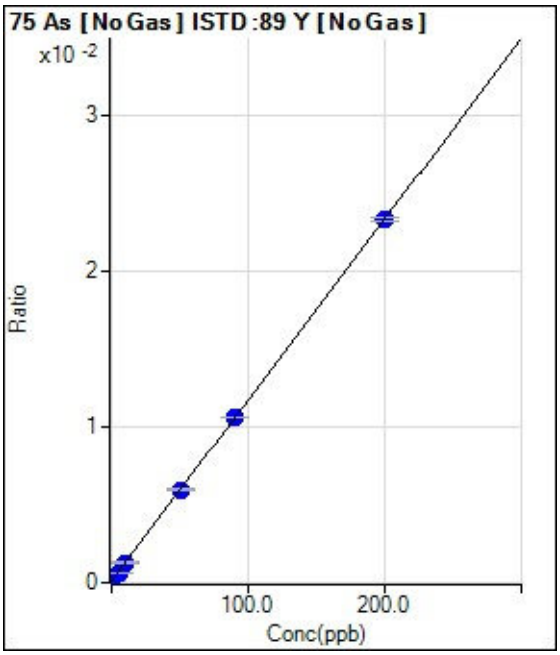


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1164.57	0.0000	P	6.3
2	☐	0.200	0.201	1821.98	0.0000	P	4.8
3	☐	2.000	2.114	8010.51	0.0002	P	3.7
4	☐	5.000	5.074	17545.83	0.0004	P	3.1
5	☐	10.000	10.100	33401.37	0.0008	P	0.4
6	☐	50.000	51.202	161754.92	0.0040	P	0.7
7	☐	90.000	90.494	288663.34	0.0071	P	0.6
8	☐	200.000	199.469	636282.99	0.0156	P	1.3

y = 7.7989E-005 * x + 2.7946E-005
R = 1.0000
DL = 0.06767
BEC = 0.3583

Weight: <None>
Min Conc: <None>

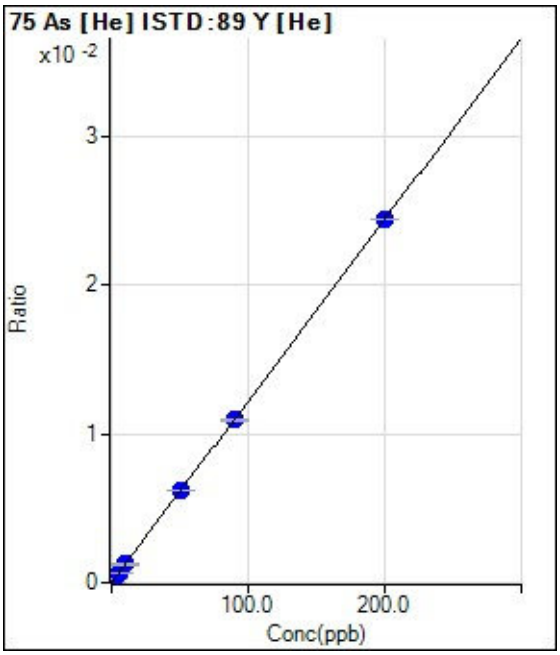
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5272.24	0.0001	P	25.4
2	☐	0.200	0.027	5417.67	0.0001	P	8.1
3	☐	2.000	2.109	15443.20	0.0004	P	7.7
4	☐	5.000	4.516	26974.02	0.0007	P	1.5
5	☐	10.000	10.017	52837.73	0.0013	P	1.8
6	☐	50.000	50.419	240676.00	0.0060	P	0.9
7	☐	90.000	90.471	433289.41	0.0106	P	0.9
8	☐	200.000	199.694	952263.70	0.0233	P	1.0

y = 1.1616E-004 * x + 1.2661E-004
R = 1.0000
DL = 0.8295
BEC = 1.09

Weight: <None>
Min Conc: <None>

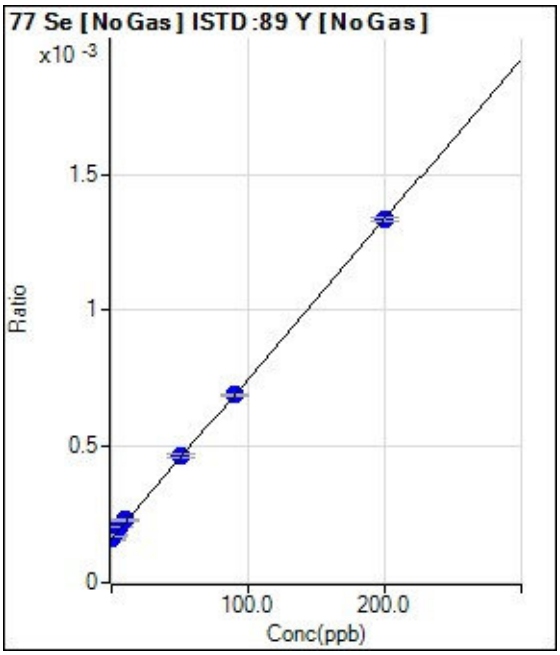


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21.11	0.0000	P	47.2
2	☐	0.200	0.185	144.45	0.0000	P	13.9
3	☐	2.000	1.901	1277.85	0.0002	P	3.2
4	☐	5.000	5.037	3320.43	0.0006	P	5.0
5	☐	10.000	10.036	6523.83	0.0012	P	3.5
6	☐	50.000	50.690	32554.71	0.0062	P	1.5
7	☐	90.000	89.821	58517.19	0.0110	P	0.7
8	☐	200.000	199.906	130994.12	0.0244	P	0.1

y = 1.2192E-004 * x + 3.8229E-006
R = 1.0000
DL = 0.04444
BEC = 0.03136

Weight: <None>
Min Conc: <None>

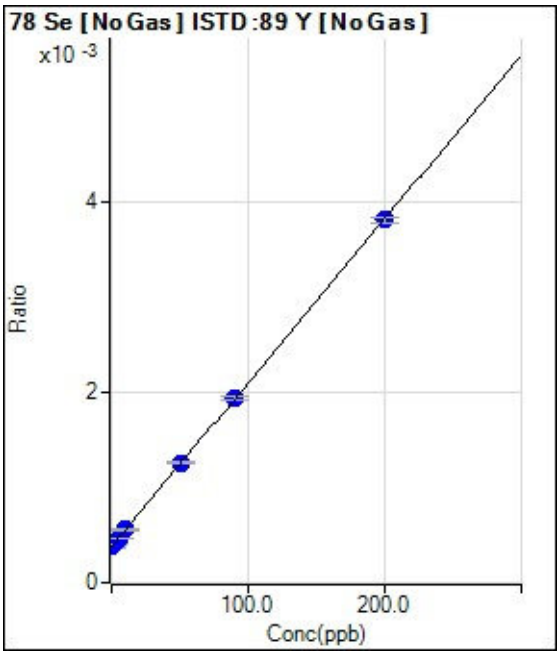
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6735.18	0.0002	P	1.9
2	☐	0.200	0.449	6858.73	0.0002	P	6.8
3	☐	2.000	2.009	7202.56	0.0002	P	5.0
4	☐	5.000	7.657	8554.76	0.0002	P	0.6
5	☐	10.000	11.782	9449.58	0.0002	P	3.5
6	☐	50.000	51.937	18765.38	0.0005	P	1.7
7	☐	90.000	89.865	28077.54	0.0007	P	1.7
8	☐	200.000	199.421	54414.03	0.0013	P	1.1

y = 5.8712E-006 * x + 1.6158E-004
R = 0.9999
DL = 1.591
BEC = 27.52

Weight: <None>
Min Conc: <None>

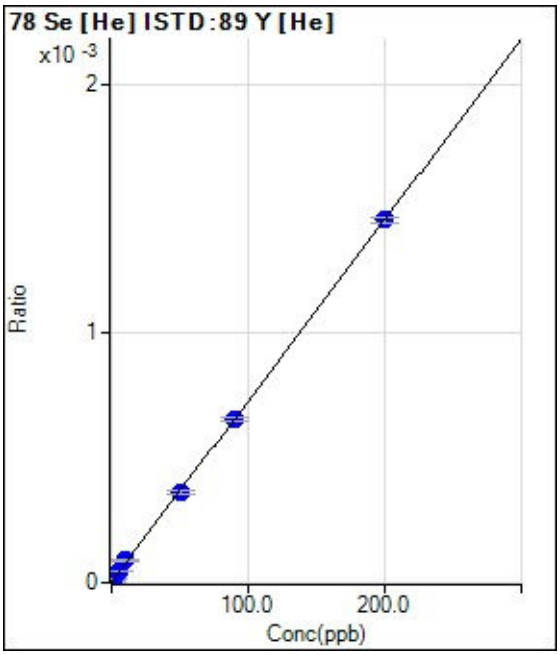


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15848.73	0.0004	P	2.0
2	☐	0.200	-0.068	15832.01	0.0004	P	3.7
3	☐	2.000	1.625	16961.15	0.0004	P	0.6
4	☐	5.000	4.920	19259.95	0.0005	P	2.5
5	☐	10.000	10.290	22832.40	0.0006	P	2.2
6	☐	50.000	51.241	50809.74	0.0013	P	0.9
7	☐	90.000	90.633	79106.41	0.0019	P	1.3
8	☐	200.000	199.396	155799.78	0.0038	P	1.3

y = 1.7229E-005 * x + 3.8024E-004
R = 1.0000
DL = 1.327
BEC = 22.07

Weight: <None>
Min Conc: <None>

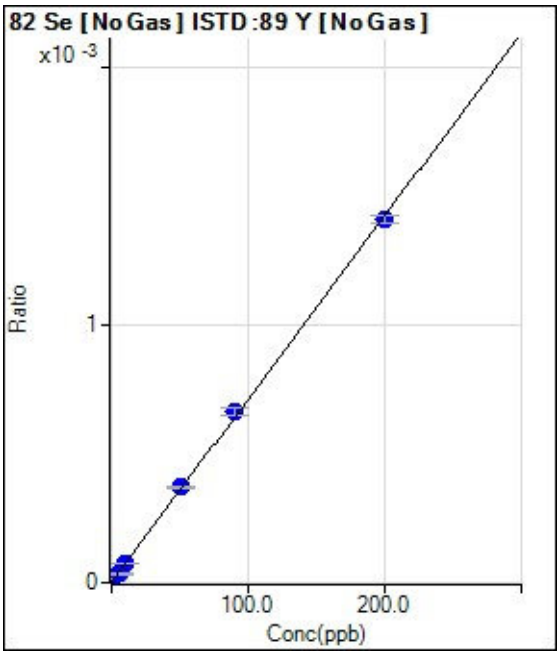
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18.89	0.0000	P	68.2
2	☐	0.200	0.193	26.67	0.0000	P	32.7
3	☐	2.000	1.925	94.45	0.0000	P	11.7
4	☐	5.000	5.624	237.78	0.0000	P	8.0
5	☐	10.000	11.873	476.68	0.0001	P	11.3
6	☐	50.000	49.730	1917.93	0.0004	P	5.3
7	☐	90.000	89.805	3498.25	0.0007	P	2.5
8	☐	200.000	200.047	7816.74	0.0015	P	1.4

y = 7.2543E-006 * x + 3.4554E-006
R = 1.0000
DL = 0.9752
BEC = 0.4763

Weight: <None>
Min Conc: <None>

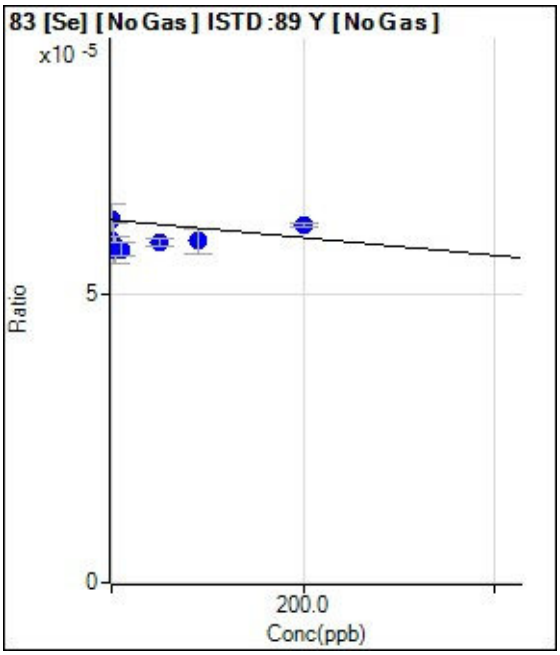


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-6.95	0.0000	P	-2470.9
2	☐	0.200	-0.266	-85.77	0.0000	P	-482.2
3	☐	2.000	2.875	842.35	0.0000	P	50.9
4	☐	5.000	4.829	1416.91	0.0000	P	19.4
5	☐	10.000	10.203	2965.89	0.0001	P	5.1
6	☐	50.000	51.747	14801.00	0.0004	P	1.6
7	☐	90.000	93.319	27037.68	0.0007	P	3.6
8	☐	200.000	198.056	57531.96	0.0014	P	1.9

y = 7.1137E-006 * x - 1.5388E-007
R = 0.9998
DL = 1.603
BEC = -0.02163

Weight: <None>
Min Conc: <None>

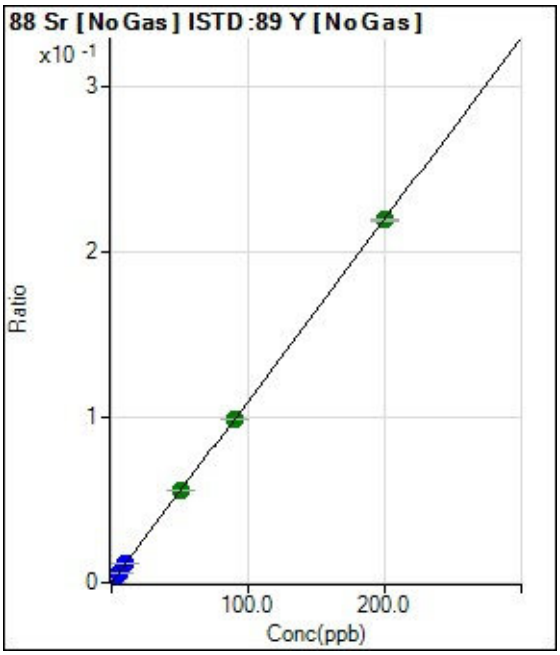
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2626.27	0.0001	P	8.7
2	☐	0.200	232.919	2482.76	0.0001	P	2.4
3	☐	2.000	270.872	2446.06	0.0001	P	12.1
4	☐	5.000	341.486	2392.65	0.0001	P	8.0
5	☐	10.000	331.070	2372.62	0.0001	P	4.1
6	☐	50.000	246.471	2382.63	0.0001	P	2.2
7	☐	90.000	242.184	2416.01	0.0001	P	7.6
8	☐	200.000	55.012	2539.49	0.0001	P	1.1

y = -1.5403E-008 * x + 6.3030E-005
R = 0.4284
DL = -1068
BEC = -4092

Weight: <None>
Min Conc: <None>

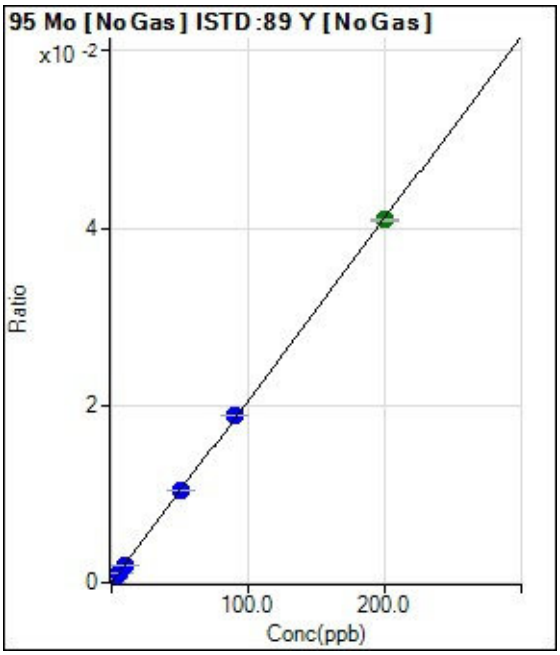


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	727.43	0.0000	P	14.6
2	☐	0.200	0.198	9806.89	0.0002	P	0.8
3	☐	2.000	2.029	93453.82	0.0022	P	0.5
4	☐	5.000	5.051	230841.41	0.0056	P	1.0
5	☐	10.000	10.188	459608.79	0.0112	P	0.5
6	☐	50.000	50.649	2241549.58	0.0557	A	0.6
7	☐	90.000	90.314	4047456.01	0.0993	A	0.1
8	☐	200.000	199.686	8968370.47	0.2196	A	0.7

y = 0.0011 * x + 1.7443E-005
R = 1.0000
DL = 0.006944
BEC = 0.01586

Weight: <None>
Min Conc: <None>

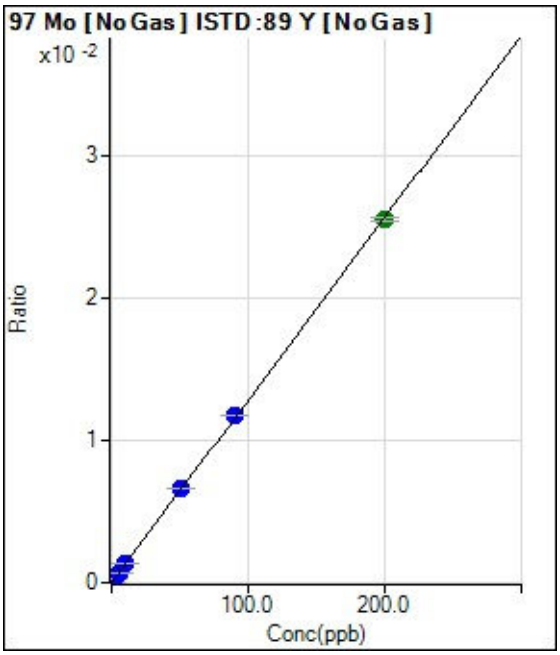
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	567.26	0.0000	P	29.3
2	☐	0.200	0.179	2105.65	0.0001	P	12.9
3	☐	2.000	1.926	16994.76	0.0004	P	0.7
4	☐	5.000	4.957	42714.36	0.0010	P	0.3
5	☐	10.000	9.928	84027.10	0.0021	P	0.4
6	☐	50.000	50.448	417173.13	0.0104	P	0.3
7	☐	90.000	91.547	766242.42	0.0188	P	0.3
8	☐	200.000	199.197	1670408.64	0.0409	A	0.7

y = 2.0530E-004 * x + 1.3618E-005
R = 1.0000
DL = 0.05835
BEC = 0.06633

Weight: <None>
Min Conc: <None>

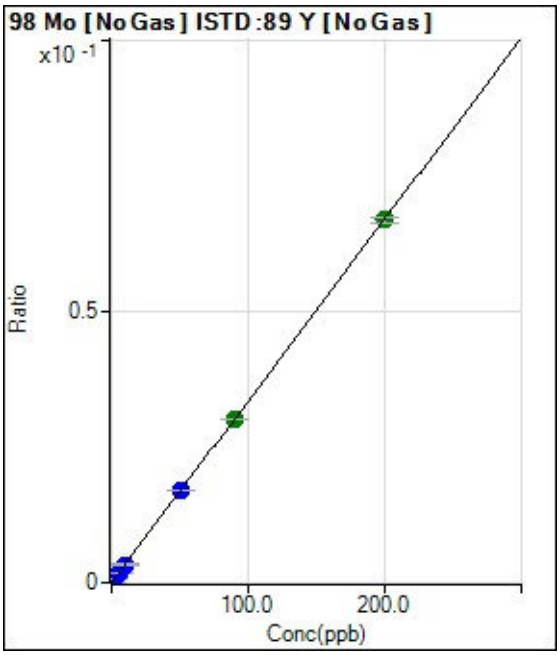


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	347.02	0.0000	P	22.2
2	☐	0.200	0.172	1264.68	0.0000	P	7.7
3	☐	2.000	1.959	10755.25	0.0003	P	3.1
4	☐	5.000	5.031	26991.17	0.0007	P	1.6
5	☐	10.000	10.229	53906.19	0.0013	P	1.1
6	☐	50.000	51.467	265065.97	0.0066	P	1.3
7	☐	90.000	91.585	477453.04	0.0117	P	0.4
8	☐	200.000	198.908	1038827.71	0.0254	A	1.2

y = 1.2787E-004 * x + 8.3315E-006
R = 0.9999
DL = 0.04341
BEC = 0.06515

Weight: <None>
Min Conc: <None>

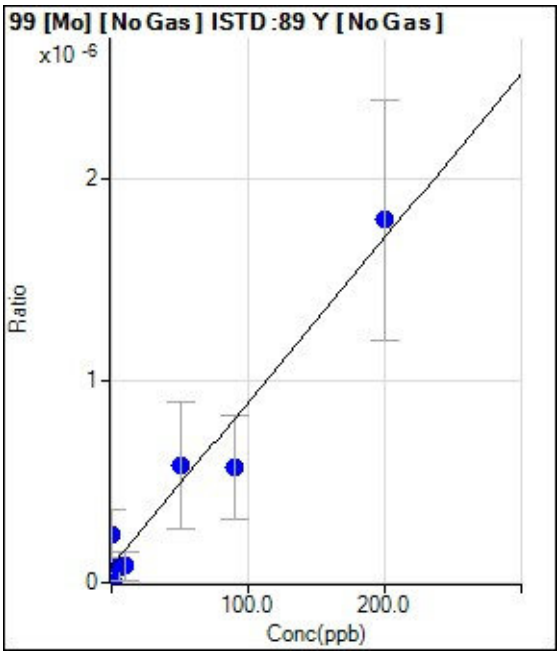
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1027.27	0.0000	P	7.3
2	☐	0.200	0.166	3349.04	0.0001	P	0.6
3	☐	2.000	1.952	28154.83	0.0007	P	0.9
4	☐	5.000	4.945	69523.30	0.0017	P	1.4
5	☐	10.000	9.982	137729.88	0.0034	P	1.5
6	☐	50.000	51.017	687340.31	0.0171	P	1.0
7	☐	90.000	89.931	1226339.45	0.0301	A	0.4
8	☐	200.000	199.780	2729014.77	0.0668	A	1.3

y = 3.3445E-004 * x + 2.4642E-005
R = 1.0000
DL = 0.01611
BEC = 0.07368

Weight: <None>
Min Conc: <None>

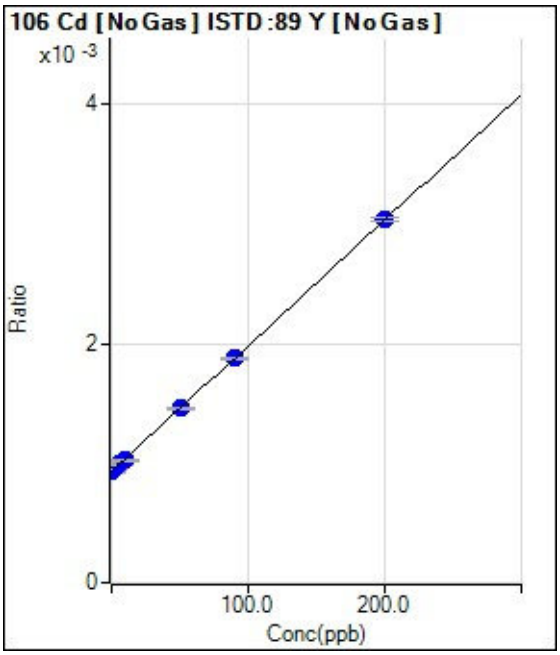


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.34	0.0000	P	173.2
2	☐	0.200	19.621	10.01	0.0000	P	100.0
3	☐	2.000	-9.917	0.00	0.0000	P	
4	☐	5.000	-0.023	3.34	0.0000	P	173.2
5	☐	10.000	0.089	3.34	0.0000	P	173.2
6	☐	50.000	61.757	23.36	0.0000	P	107.7
7	☐	90.000	60.675	23.36	0.0000	P	89.2
8	☐	200.000	210.978	73.41	0.0000	P	66.4

y = 8.1178E-009 * x + 8.0507E-008
R = 0.9769
DL = 51.53
BEC = 9.917

Weight: <None>
Min Conc: <None>

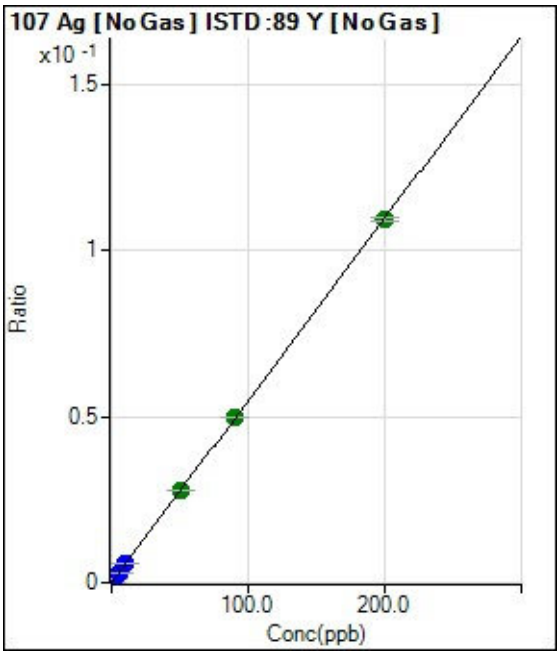
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38835.92	0.0009	P	1.6
2	☐	0.200	0.420	39100.42	0.0009	P	1.0
3	☐	2.000	1.685	39448.36	0.0009	P	0.3
4	☐	5.000	5.617	41038.17	0.0010	P	0.6
5	☐	10.000	8.999	42032.37	0.0010	P	1.9
6	☐	50.000	49.909	58584.63	0.0015	P	1.6
7	☐	90.000	90.009	76509.80	0.0019	P	1.0
8	☐	200.000	200.056	123918.58	0.0030	P	0.9

y = 1.0513E-005 * x + 9.3175E-004
R = 1.0000
DL = 4.218
BEC = 88.63

Weight: <None>
Min Conc: <None>

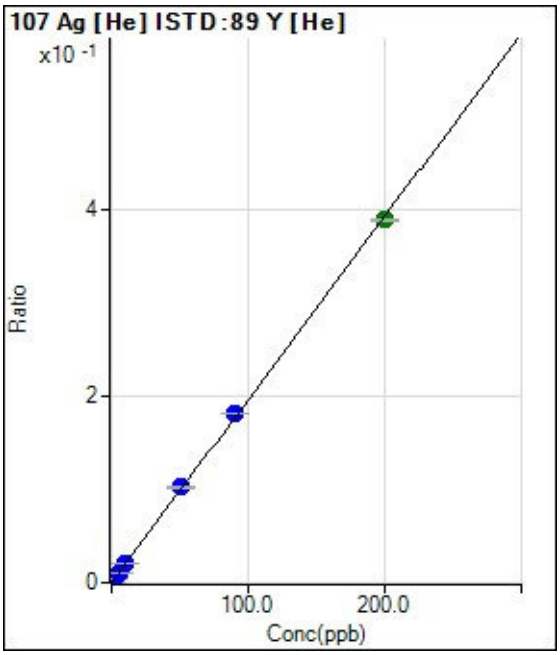


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	527.79	0.0000	P	6.6
2	☐	0.200	0.232	5841.32	0.0001	P	1.4
3	☐	2.000	2.078	47812.59	0.0012	P	1.0
4	☐	5.000	5.149	117327.25	0.0028	P	0.6
5	☐	10.000	10.348	232625.70	0.0057	P	0.5
6	☐	50.000	50.964	1123341.28	0.0279	A	0.4
7	☐	90.000	91.046	2032009.36	0.0499	A	0.2
8	☐	200.000	199.266	4456698.57	0.1092	A	0.9

y = 5.4770E-004 * x + 1.2660E-005
R = 1.0000
DL = 0.004594
BEC = 0.02311

Weight: <None>
Min Conc: <None>

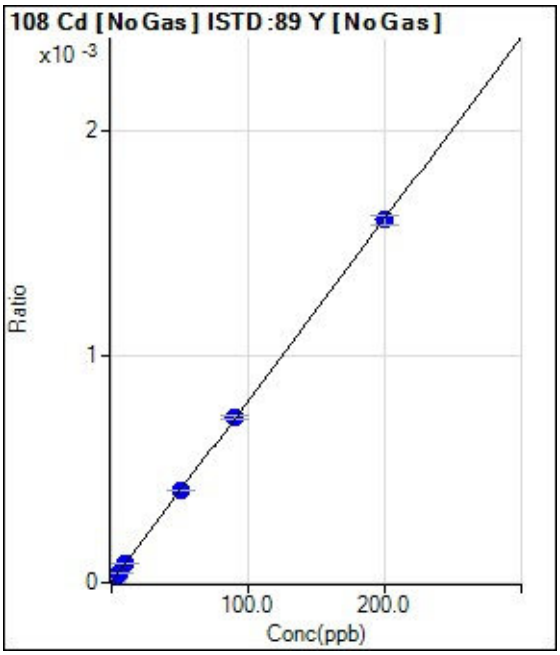
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.52	0.0000	P	12.0
2	☐	0.200	0.222	2572.87	0.0005	P	10.5
3	☐	2.000	2.047	22013.89	0.0041	P	3.4
4	☐	5.000	5.188	55002.60	0.0102	P	0.6
5	☐	10.000	10.359	108472.77	0.0204	P	1.3
6	☐	50.000	52.091	539430.94	0.1025	P	0.5
7	☐	90.000	92.638	973262.90	0.1822	P	0.8
8	☐	200.000	198.267	2095449.31	0.3899	A	0.8

y = 0.0020 * x + 3.3402E-005
R = 0.9998
DL = 0.006137
BEC = 0.01698

Weight: <None>
Min Conc: <None>

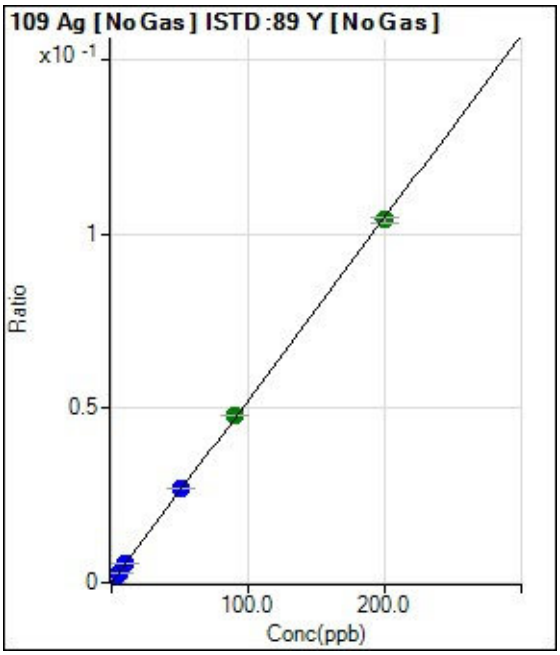


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.06	0.0000	P	16.1
2	☐	0.200	0.298	160.16	0.0000	P	41.1
3	☐	2.000	1.892	690.72	0.0000	P	8.4
4	☐	5.000	5.359	1842.01	0.0000	P	4.2
5	☐	10.000	10.630	3554.09	0.0001	P	1.5
6	☐	50.000	50.744	16446.96	0.0004	P	0.7
7	☐	90.000	90.602	29693.36	0.0007	P	2.1
8	☐	200.000	199.504	65457.19	0.0016	P	2.5

y = 8.0289E-006 * x + 1.4401E-006
R = 1.0000
DL = 0.08669
BEC = 0.1794

Weight: <None>
Min Conc: <None>

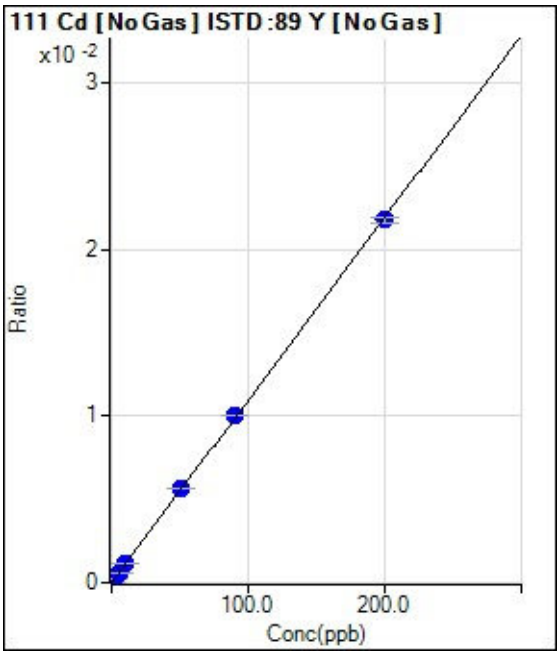
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	196.87	0.0000	P	24.7
2	☐	0.200	0.235	5336.51	0.0001	P	1.4
3	☐	2.000	2.069	45219.34	0.0011	P	1.0
4	☐	5.000	5.172	112423.95	0.0027	P	0.8
5	☐	10.000	10.350	222232.82	0.0054	P	1.6
6	☐	50.000	52.013	1096226.20	0.0273	P	0.5
7	☐	90.000	91.532	1953634.21	0.0480	A	0.5
8	☐	200.000	198.785	4251806.30	0.1041	A	1.4

y = 5.2386E-004 * x + 4.7198E-006
R = 0.9999
DL = 0.006683
BEC = 0.00901

Weight: <None>
Min Conc: <None>

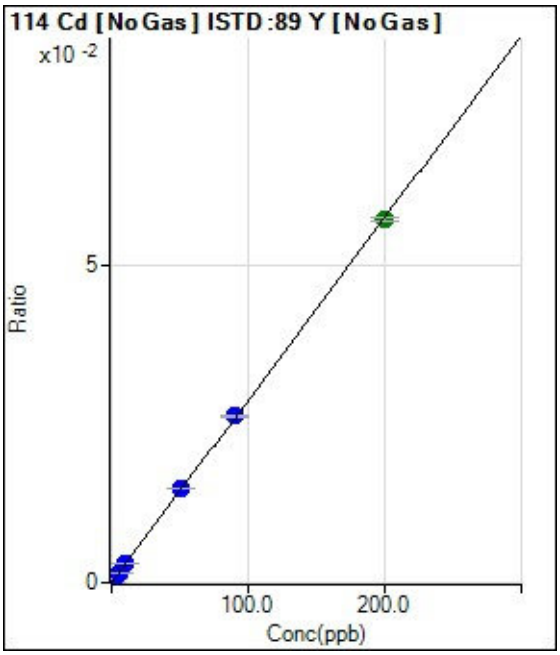


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-52.22	0.0000	P	-21.1
2	☐	0.200	0.197	847.08	0.0000	P	7.0
3	☐	2.000	2.019	9132.58	0.0002	P	2.9
4	☐	5.000	5.048	22839.07	0.0006	P	1.3
5	☐	10.000	10.128	45358.64	0.0011	P	1.7
6	☐	50.000	51.511	226804.45	0.0056	P	0.6
7	☐	90.000	91.623	408609.95	0.0100	P	0.3
8	☐	200.000	198.884	888911.13	0.0218	P	1.8

y = 1.0948E-004 * x - 1.2521E-006
R = 0.9999
DL = 0.007252
BEC = -0.01144

Weight: <None>
Min Conc: <None>

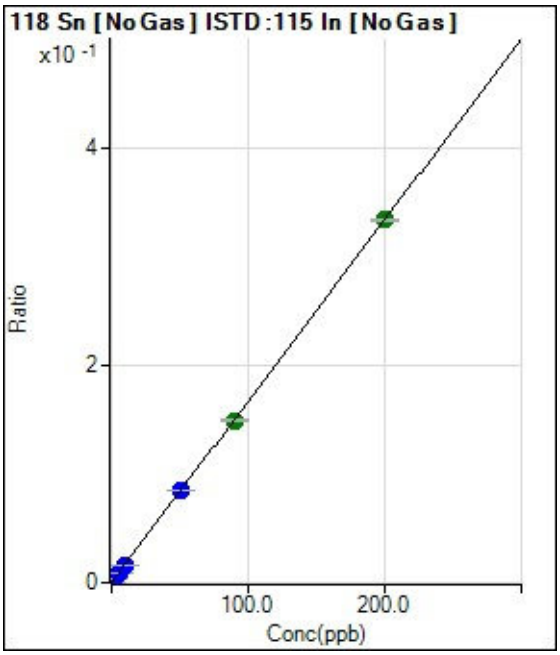
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.05	0.0000	P	69.3
2	☐	0.200	0.193	2375.97	0.0001	P	8.7
3	☐	2.000	2.039	24470.72	0.0006	P	3.4
4	☐	5.000	4.990	59630.85	0.0014	P	2.0
5	☐	10.000	10.148	119846.37	0.0029	P	1.1
6	☐	50.000	51.729	599845.67	0.0149	P	0.8
7	☐	90.000	91.418	1073586.27	0.0264	P	0.7
8	☐	200.000	198.922	2341261.47	0.0573	A	0.9

y = 2.8825E-004 * x + 1.2008E-006
R = 0.9999
DL = 0.008659
BEC = 0.004166

Weight: <None>
Min Conc: <None>

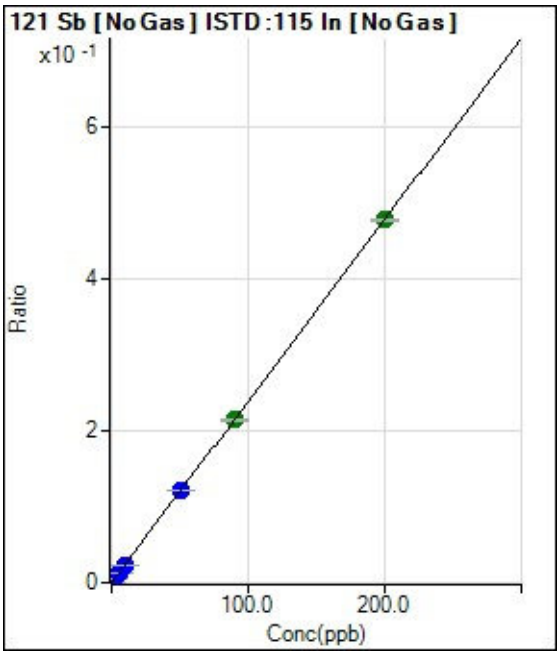


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2134.70	0.0002	P	15.8
2	☐	0.200	0.176	4834.25	0.0005	P	2.8
3	☐	2.000	1.945	31983.22	0.0035	P	0.8
4	☐	5.000	4.931	77025.08	0.0085	P	0.3
5	☐	10.000	9.893	152242.72	0.0167	P	0.8
6	☐	50.000	50.450	748161.57	0.0844	P	0.5
7	☐	90.000	89.509	1334280.57	0.1496	A	0.3
8	☐	200.000	200.116	2951135.30	0.3342	A	0.5

y = 0.0017 * x + 2.3267E-004
R = 1.0000
DL = 0.06591
BEC = 0.1394

Weight: <None>
Min Conc: <None>

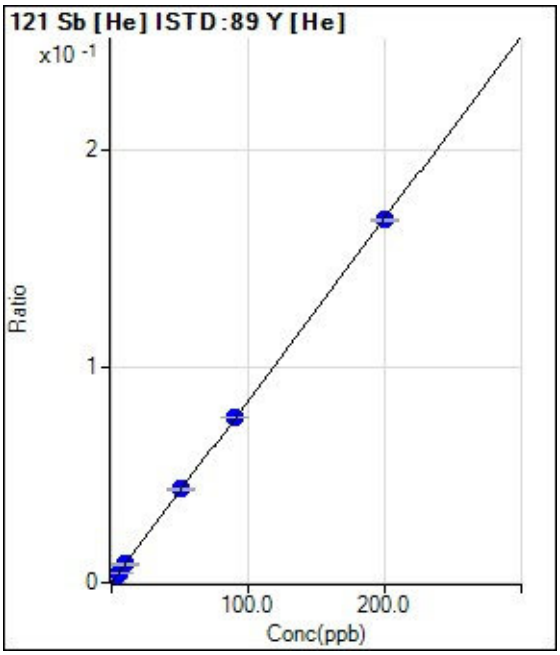
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	653.35	0.0001	P	7.1
2	☐	0.200	0.194	4897.61	0.0005	P	5.8
3	☐	2.000	1.942	43313.35	0.0047	P	1.4
4	☐	5.000	4.951	108317.22	0.0119	P	1.3
5	☐	10.000	9.798	213486.55	0.0235	P	0.7
6	☐	50.000	50.803	1076207.25	0.1214	P	0.3
7	☐	90.000	89.594	1909575.90	0.2141	A	0.6
8	☐	200.000	199.994	4219902.89	0.4779	A	0.2

y = 0.0024 * x + 7.1233E-005
R = 1.0000
DL = 0.006392
BEC = 0.02981

Weight: <None>
Min Conc: <None>

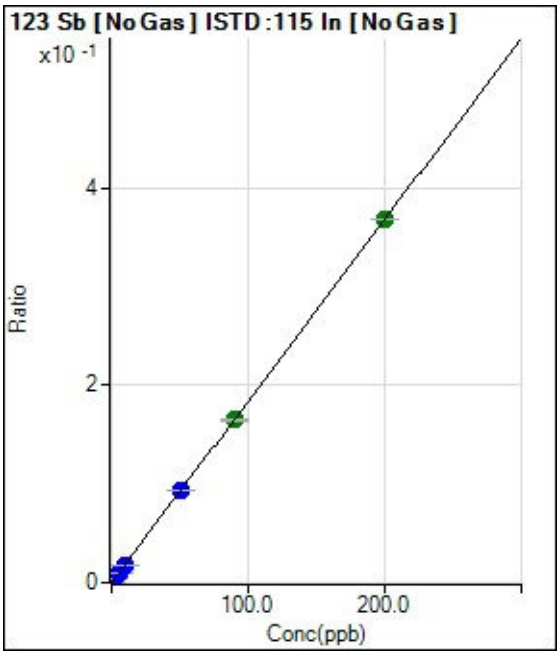


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	196.67	0.0000	P	25.0
2	☐	0.200	0.205	1146.74	0.0002	P	7.9
3	☐	2.000	1.903	8896.49	0.0016	P	2.2
4	☐	5.000	5.192	23718.46	0.0044	P	1.2
5	☐	10.000	10.087	45409.07	0.0085	P	2.8
6	☐	50.000	51.317	227979.66	0.0433	P	1.5
7	☐	90.000	90.952	409859.94	0.0767	P	0.6
8	☐	200.000	199.234	902971.89	0.1680	P	0.7

y = 8.4322E-004 * x + 3.5855E-005
R = 1.0000
DL = 0.03184
BEC = 0.04252

Weight: <None>
Min Conc: <None>

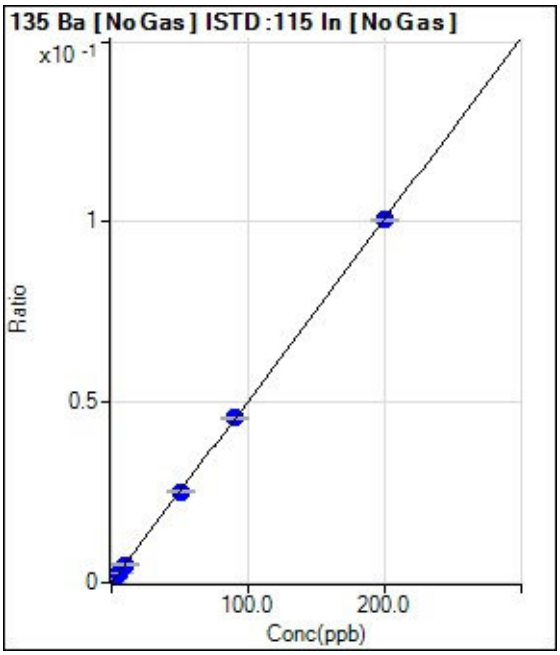
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	670.70	0.0001	P	10.2
2	☐	0.200	0.198	4004.73	0.0004	P	7.5
3	☐	2.000	1.933	33352.65	0.0036	P	0.7
4	☐	5.000	4.883	82406.54	0.0091	P	1.9
5	☐	10.000	9.834	165102.58	0.0182	P	1.6
6	☐	50.000	50.767	828019.45	0.0934	P	0.1
7	☐	90.000	89.650	1471041.35	0.1650	A	0.8
8	☐	200.000	199.978	3248272.97	0.3679	A	0.0

y = 0.0018 * x + 7.3107E-005
R = 1.0000
DL = 0.01213
BEC = 0.03975

Weight: <None>
Min Conc: <None>

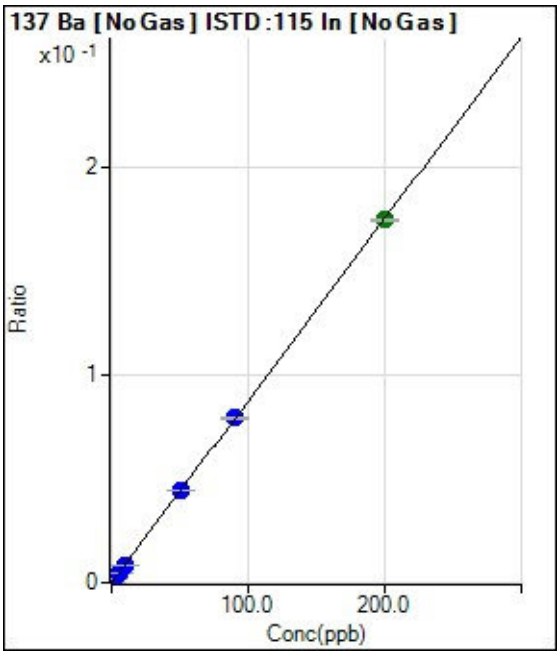


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.42	0.0000	P	72.5
2	☐	0.200	0.181	917.64	0.0001	P	19.9
3	☐	2.000	1.962	9169.22	0.0010	P	2.0
4	☐	5.000	4.914	22622.48	0.0025	P	3.4
5	☐	10.000	9.920	45518.54	0.0050	P	3.6
6	☐	50.000	50.240	224384.98	0.0253	P	1.0
7	☐	90.000	90.666	407461.99	0.0457	P	0.5
8	☐	200.000	199.647	888329.32	0.1006	P	0.7

y = 5.0384E-004 * x + 9.1064E-006
R = 1.0000
DL = 0.03929
BEC = 0.01807

Weight: <None>
Min Conc: <None>

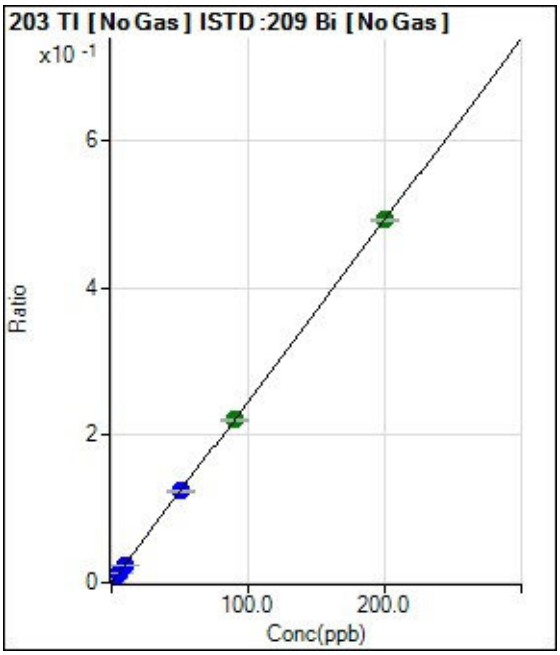
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.81	0.0000	P	51.1
2	☐	0.200	0.203	1765.26	0.0002	P	4.0
3	☐	2.000	1.959	15882.56	0.0017	P	3.1
4	☐	5.000	4.886	39028.06	0.0043	P	2.5
5	☐	10.000	9.876	78658.79	0.0087	P	2.4
6	☐	50.000	50.627	392470.41	0.0443	P	0.8
7	☐	90.000	90.812	708389.54	0.0794	P	1.0
8	☐	200.000	199.487	1540618.59	0.1745	A	0.5

y = 8.7455E-004 * x + 1.4903E-005
R = 1.0000
DL = 0.02615
BEC = 0.01704

Weight: <None>
Min Conc: <None>

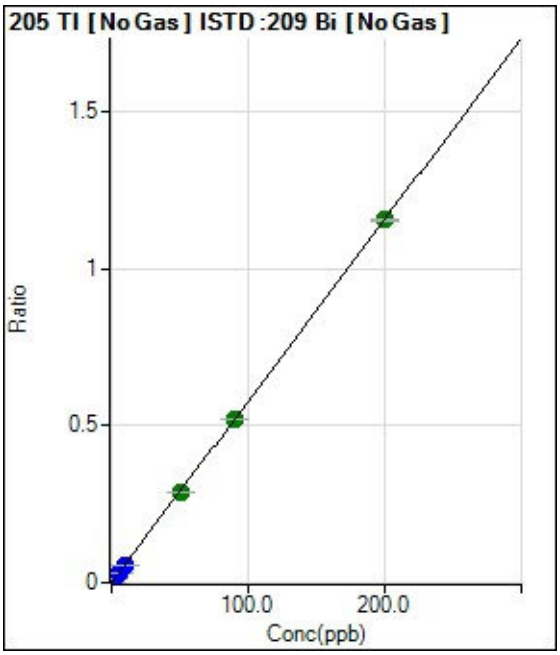


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	470.49	0.0001	P	21.8
2	☐	0.200	0.182	4028.09	0.0005	P	1.3
3	☐	2.000	1.931	38270.51	0.0048	P	2.9
4	☐	5.000	4.892	95517.93	0.0121	P	1.4
5	☐	10.000	9.797	190291.50	0.0242	P	1.2
6	☐	50.000	50.366	958441.05	0.1240	P	1.3
7	☐	90.000	89.645	1711309.54	0.2206	A	0.4
8	☐	200.000	200.082	3736466.58	0.4924	A	0.2

y = 0.0025 * x + 5.9353E-005
R = 1.0000
DL = 0.01576
BEC = 0.02412

Weight: <None>
Min Conc: <None>

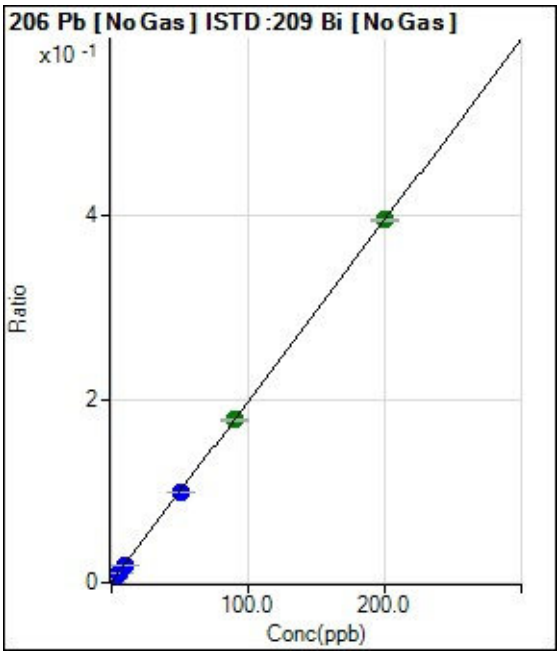
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1231.31	0.0002	P	4.0
2	☐	0.200	0.193	10111.03	0.0013	P	5.4
3	☐	2.000	1.929	89874.58	0.0113	P	1.4
4	☐	5.000	4.929	226032.30	0.0286	P	1.3
5	☐	10.000	9.893	451200.17	0.0573	P	0.8
6	☐	50.000	50.011	2234193.68	0.2890	A	0.1
7	☐	90.000	90.105	4037776.12	0.5206	A	0.6
8	☐	200.000	199.958	8765775.38	1.1551	A	0.6

y = 0.0058 * x + 1.5539E-004
R = 1.0000
DL = 0.003255
BEC = 0.0269

Weight: <None>
Min Conc: <None>

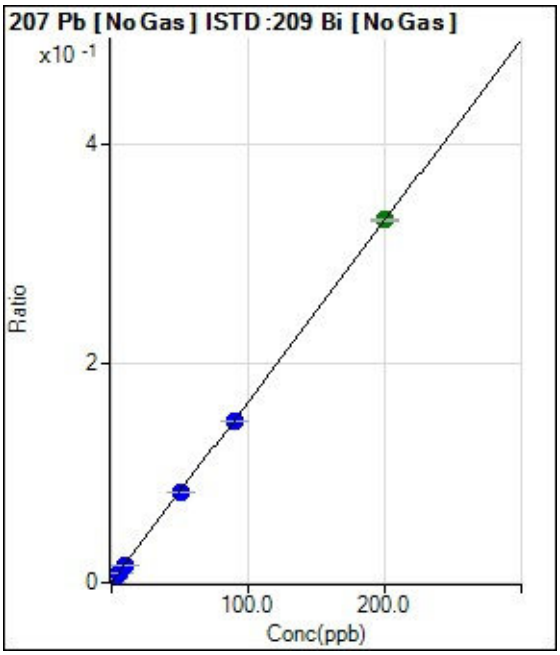


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2469.43	0.0003	P	5.4
2	☐	0.200	0.205	5700.44	0.0007	P	2.0
3	☐	2.000	1.933	32809.62	0.0041	P	1.1
4	☐	5.000	4.941	79448.17	0.0101	P	1.7
5	☐	10.000	9.859	155645.51	0.0198	P	0.4
6	☐	50.000	49.956	764402.79	0.0989	P	0.2
7	☐	90.000	89.634	1374188.67	0.1772	A	0.7
8	☐	200.000	200.185	2999890.52	0.3953	A	0.6

y = 0.0020 * x + 3.1163E-004
R = 1.0000
DL = 0.02574
BEC = 0.1579

Weight: <None>
Min Conc: <None>

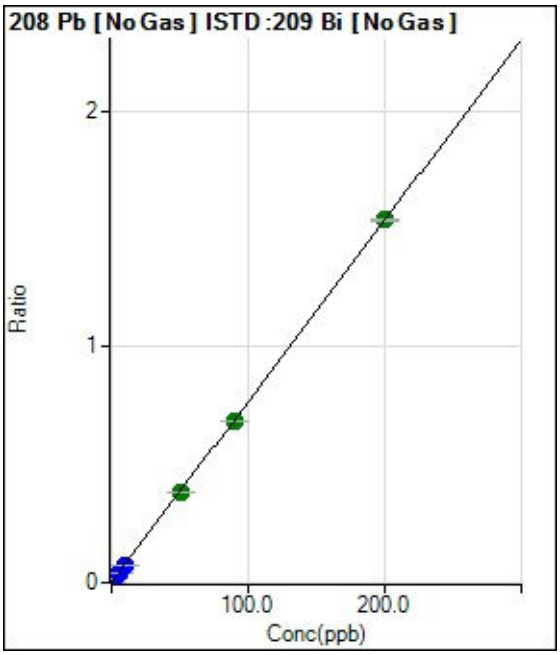
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2028.90	0.0003	P	9.7
2	☐	0.200	0.208	4765.78	0.0006	P	1.8
3	☐	2.000	1.963	27769.05	0.0035	P	1.0
4	☐	5.000	4.933	66221.28	0.0084	P	1.7
5	☐	10.000	9.837	129722.52	0.0165	P	1.6
6	☐	50.000	50.138	640879.28	0.0829	P	0.6
7	☐	90.000	89.167	1142008.05	0.1472	P	0.8
8	☐	200.000	200.351	2508183.61	0.3305	A	0.4

y = 0.0016 * x + 2.5604E-004
R = 1.0000
DL = 0.04508
BEC = 0.1553

Weight: <None>
Min Conc: <None>

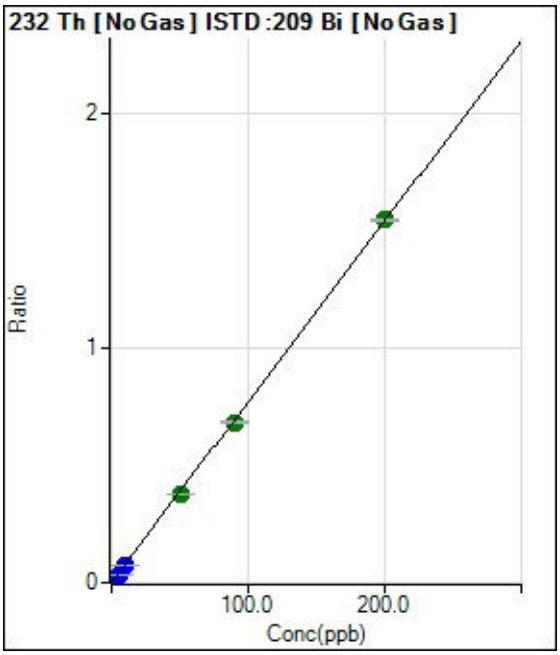


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9517.77	0.0012	P	6.8
2	☐	0.200	0.210	22384.08	0.0028	P	1.2
3	☐	2.000	1.957	128927.23	0.0162	P	1.4
4	☐	5.000	4.931	308071.41	0.0390	P	0.7
5	☐	10.000	9.877	605975.44	0.0770	P	0.0
6	☐	50.000	49.814	2962591.57	0.3833	A	0.3
7	☐	90.000	89.369	5325405.94	0.6866	A	0.6
8	☐	200.000	200.339	11668935.21	1.5377	A	0.3

y = 0.0077 * x + 0.0012
R = 1.0000
DL = 0.03197
BEC = 0.1566

Weight: <None>
Min Conc: <None>

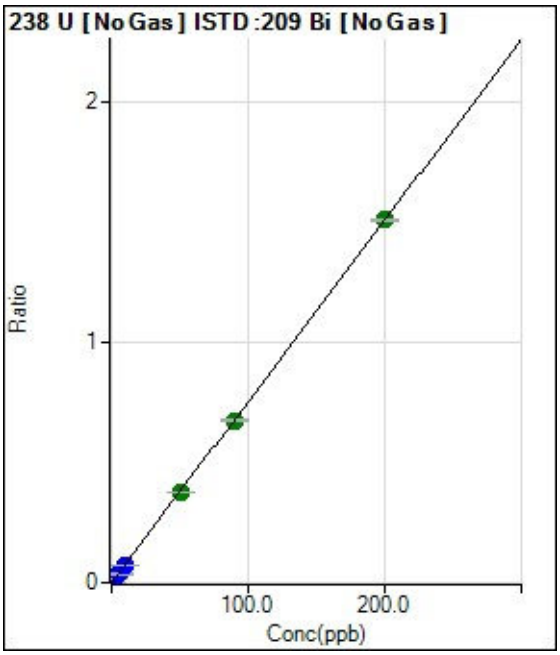
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9700.39	0.0012	P	14.0
2	☐	0.200	0.110	16487.78	0.0021	P	2.6
3	☐	2.000	1.654	111042.01	0.0140	P	0.9
4	☐	5.000	4.448	280166.75	0.0355	P	1.1
5	☐	10.000	9.288	572950.78	0.0728	P	0.7
6	☐	50.000	49.012	2927258.20	0.3787	A	0.9
7	☐	90.000	88.625	5303286.01	0.6838	A	0.9
8	☐	200.000	200.919	11751873.98	1.5486	A	0.3

y = 0.0077 * x + 0.0012
R = 1.0000
DL = 0.06675
BEC = 0.1589

Weight: <None>
Min Conc: <None>

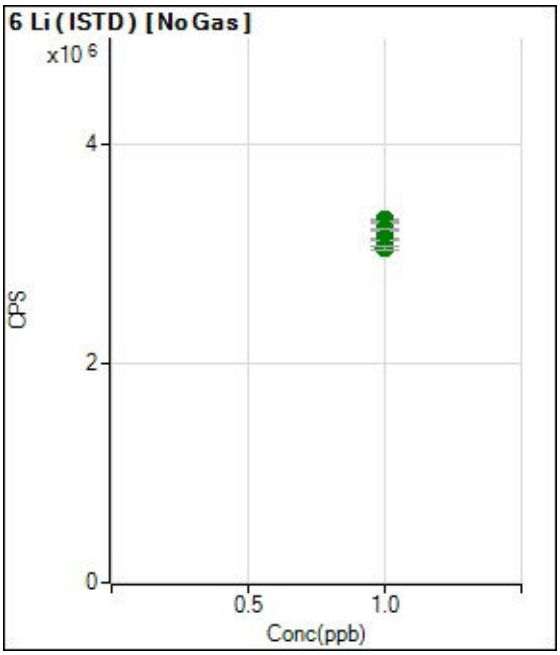


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	991.06	0.0001	P	8.9
2	☐	0.200	0.185	12088.30	0.0015	P	2.4
3	☐	2.000	1.881	113569.65	0.0143	P	0.7
4	☐	5.000	4.785	285250.24	0.0361	P	1.1
5	☐	10.000	9.710	576341.94	0.0732	P	0.4
6	☐	50.000	49.957	2906741.96	0.3760	A	0.8
7	☐	90.000	89.304	5212720.86	0.6721	A	1.1
8	☐	200.000	200.345	11440871.73	1.5076	A	0.2

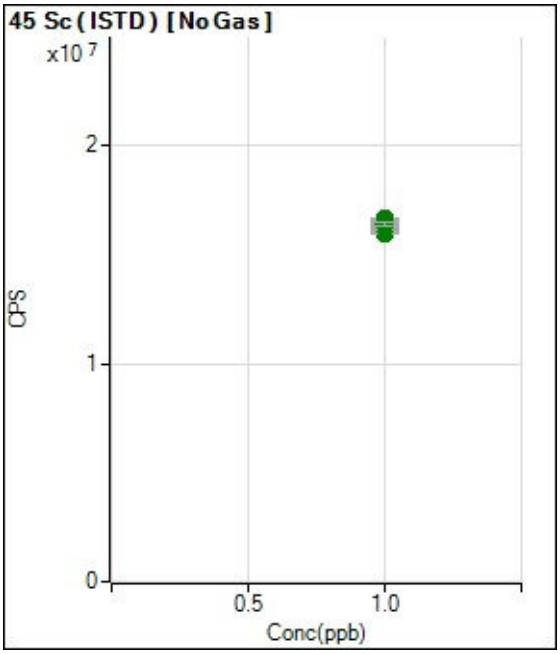
y = 0.0075 * x + 1.2507E-004
R = 1.0000
DL = 0.00444
BEC = 0.01662

Weight: <None>
Min Conc: <None>

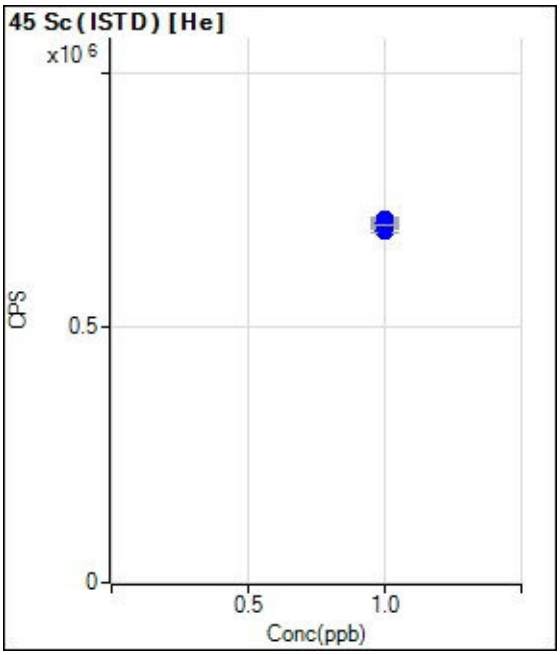
Calibration for 240_ICV.d



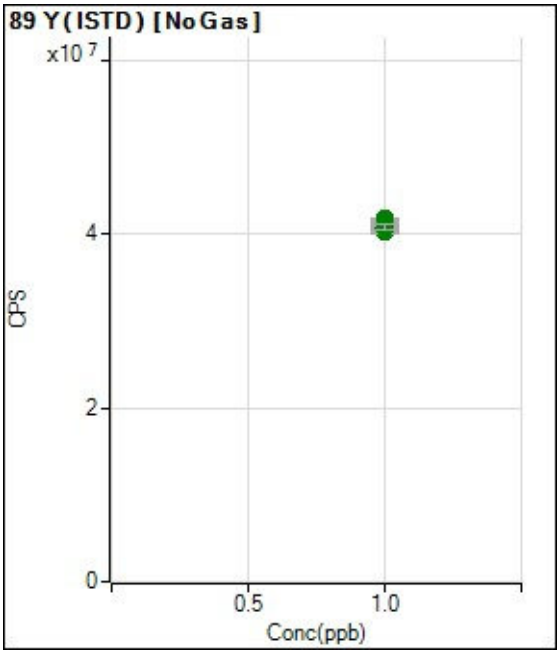
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3287788.30		A	0.4
2	☐	1.000		3303764.66		A	0.6
3	☐	1.000		3289303.84		A	0.2
4	☐	1.000		3281753.93		A	0.4
5	☐	1.000		3215554.98		A	0.3
6	☐	1.000		3130506.32		A	0.6
7	☐	1.000		3113806.40		A	0.2
8	☐	1.000		3047398.64		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16642937.14		A	0.2
2	☐	1.000		16605341.21		A	0.2
3	☐	1.000		16603420.96		A	0.2
4	☐	1.000		16439258.88		A	0.4
5	☐	1.000		16281464.41		A	0.2
6	☐	1.000		15979514.97		A	0.5
7	☐	1.000		16223510.63		A	0.5
8	☐	1.000		16394242.61		A	1.2

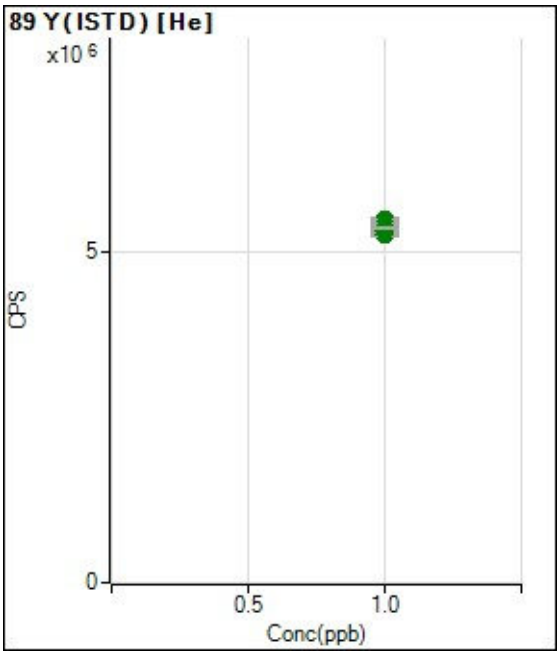


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		708779.09		P	1.6
2	☐	1.000		710712.39		P	0.5
3	☐	1.000		709827.72		P	0.8
4	☐	1.000		702982.25		P	1.5
5	☐	1.000		696892.56		P	1.4
6	☐	1.000		688795.02		P	0.9
7	☐	1.000		695575.91		P	0.8
8	☐	1.000		701662.16		P	0.1

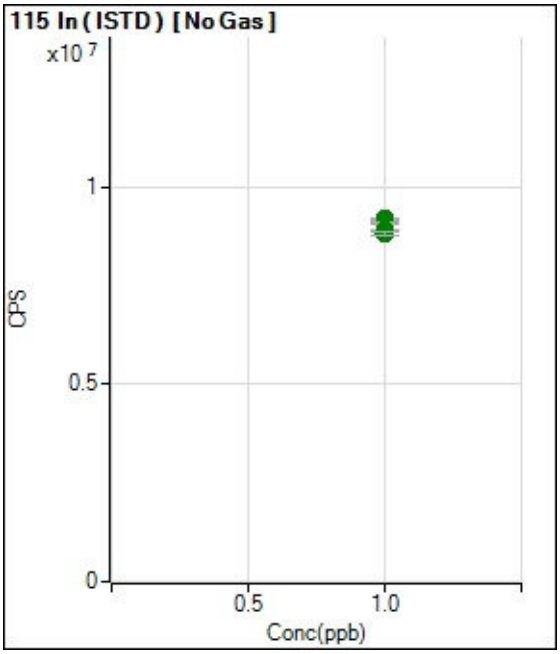


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		41680351.27		A	0.6
2	☐	1.000		41766835.25		A	0.1
3	☐	1.000		41547680.27		A	0.4
4	☐	1.000		41419144.23		A	0.3
5	☐	1.000		40952666.92		A	0.3
6	☐	1.000		40226458.21		A	0.5
7	☐	1.000		40739419.50		A	0.2
8	☐	1.000		40834911.66		A	1.9

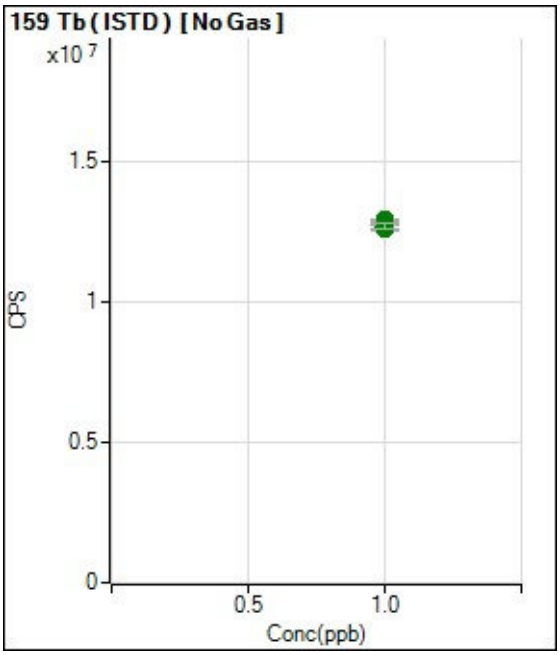
Calibration for 240_ICV.d



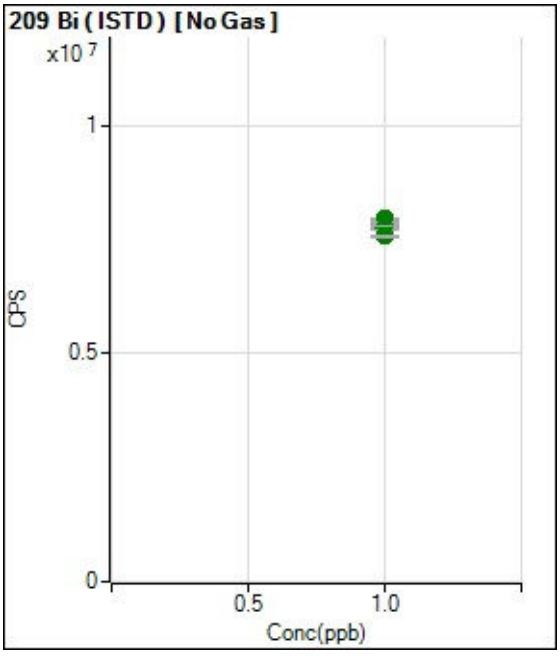
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5497469.77		A	1.4
2	☐	1.000		5487594.27		A	0.6
3	☐	1.000		5423587.56		A	0.9
4	☐	1.000		5373993.79		A	1.4
5	☐	1.000		5316632.79		A	1.4
6	☐	1.000		5264074.09		A	1.3
7	☐	1.000		5341560.95		A	1.1
8	☐	1.000		5373923.72		A	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9172632.54		A	0.3
2	☐	1.000		9170629.10		A	0.6
3	☐	1.000		9192413.44		A	0.3
4	☐	1.000		9102220.50		A	0.7
5	☐	1.000		9092471.76		A	0.8
6	☐	1.000		8861383.48		A	0.3
7	☐	1.000		8917908.07		A	0.2
8	☐	1.000		8830054.42		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12859728.08		A	0.4
2	☐	1.000		12890125.98		A	0.4
3	☐	1.000		12894240.10		A	0.5
4	☐	1.000		12833652.85		A	0.7
5	☐	1.000		12734765.63		A	0.6
6	☐	1.000		12566559.92		A	0.6
7	☐	1.000		12715628.16		A	0.4
8	☐	1.000		12670654.01		A	1.4



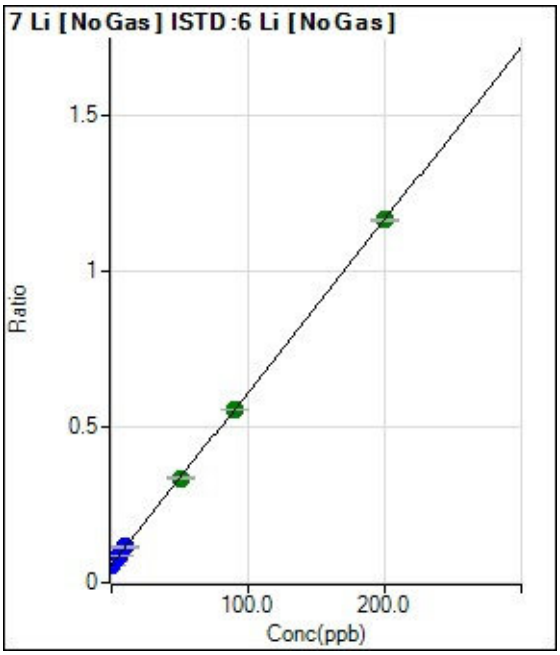
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7923397.19		A	0.3
2	☐	1.000		7956055.52		A	0.5
3	☐	1.000		7953668.30		A	0.4
4	☐	1.000		7895831.07		A	0.5
5	☐	1.000		7874756.35		A	0.6
6	☐	1.000		7730172.75		A	0.6
7	☐	1.000		7756152.19		A	0.7
8	☐	1.000		7588583.86		A	0.6

Calibration for 281_ICV.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b\
Analysis File: ICPMS3_201201.batch.bin
DA Date-Time: 2020-12-01 21:55:21
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	272CALB.d	std 1	2020-12-01 21:38:58
2	273CALS.d	std 2	2020-12-01 21:40:36
3	274CALS.d	std 3	2020-12-01 21:42:15
4	275CALS.d	std 4	2020-12-01 21:43:54
5	276CALS.d	std 5	2020-12-01 21:45:33
6	277CALS.d	std 6	2020-12-01 21:47:13
7	278CALS.d	std 7	2020-12-01 21:48:58
8	279CALS.d	std 8	2020-12-01 21:50:47

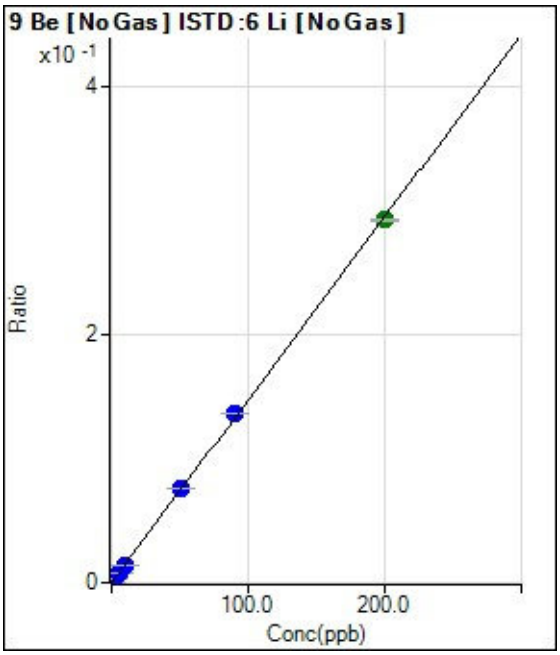
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226122.44	0.0576	P	0.9
2	☐	0.200	0.139	212183.79	0.0584	P	0.4
3	☐	2.000	2.042	232977.91	0.0689	P	1.0
4	☐	5.000	5.125	279541.38	0.0860	P	1.4
5	☐	10.000	10.247	364801.59	0.1143	P	1.3
6	☐	50.000	50.300	1061178.60	0.3360	A	1.1
7	☐	90.000	90.098	1720920.04	0.5562	A	0.3
8	☐	200.000	199.865	3553542.51	1.1637	A	0.2

y = 0.0055 * x + 0.0576
R = 1.0000
DL = 0.266
BEC = 10.41

Weight: <None>
Min Conc: <None>

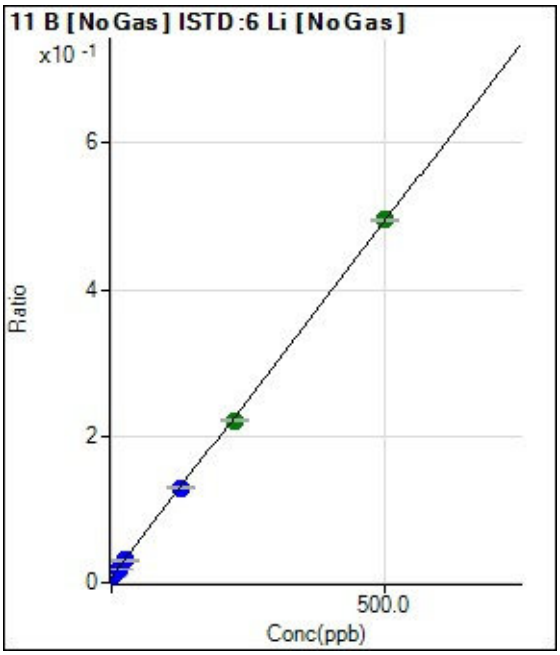


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.08	0.0000	P	66.6
2	☐	0.200	0.175	1014.40	0.0003	P	10.2
3	☐	2.000	1.897	9526.21	0.0028	P	1.8
4	☐	5.000	4.922	23667.09	0.0073	P	1.2
5	☐	10.000	9.900	46653.99	0.0146	P	0.3
6	☐	50.000	51.118	238109.01	0.0754	P	0.3
7	☐	90.000	92.761	423169.79	0.1368	P	0.6
8	☐	200.000	198.486	893602.51	0.2926	A	0.4

y = 0.0015 * x + 2.0435E-005
R = 0.9998
DL = 0.0277
BEC = 0.01386

Weight: <None>
Min Conc: <None>

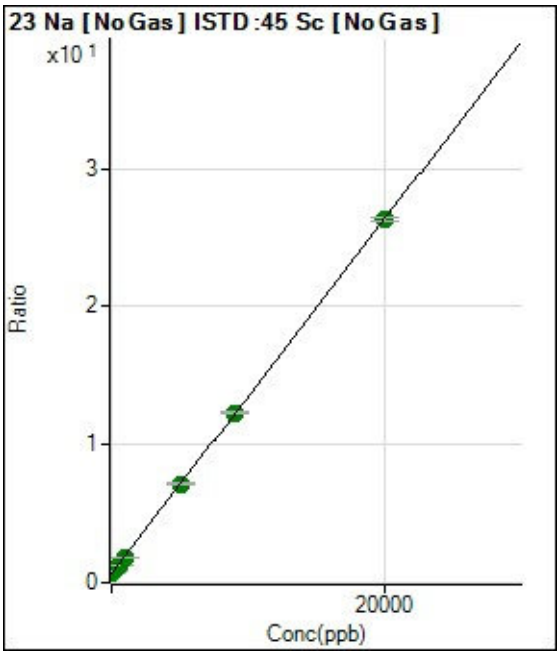
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31129.06	0.0079	P	1.9
2	☐	0.500	-0.704	26344.53	0.0072	P	3.1
3	☐	5.000	3.279	37567.93	0.0111	P	1.8
4	☐	12.500	10.370	58506.59	0.0180	P	0.7
5	☐	25.000	22.956	96387.49	0.0302	P	2.2
6	☐	125.000	125.528	409764.57	0.1297	P	0.6
7	☐	225.000	220.218	685645.62	0.2216	A	0.6
8	☐	500.000	502.194	1512188.03	0.4952	A	0.8

y = 9.7030E-004 * x + 0.0079
R = 0.9999
DL = 0.4711
BEC = 8.17

Weight: <None>
Min Conc: <None>

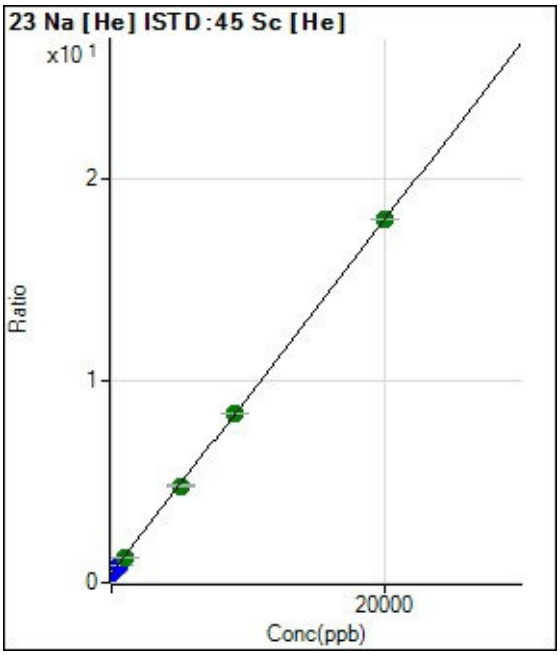


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12498384.14	0.6622	A	1.7
2	☐	20.000	-2.609	11670046.10	0.6589	A	1.0
3	☐	200.000	153.548	14481923.76	0.8593	A	0.5
4	☐	500.000	443.087	20118062.95	1.2310	A	1.4
5	☐	1000.000	934.805	30305048.60	1.8622	A	1.0
6	☐	5000.000	5064.653	116683923.4	7.1634	A	1.1
7	☐	9000.000	9075.569	199922204.4	12.312	A	0.9
8	☐	20000.00	19955.00	429768792.9	26.277	A	1.2

y = 0.0013 * x + 0.6622
R = 1.0000
DL = 26.59
BEC = 515.9

Weight: <None>
Min Conc: <None>

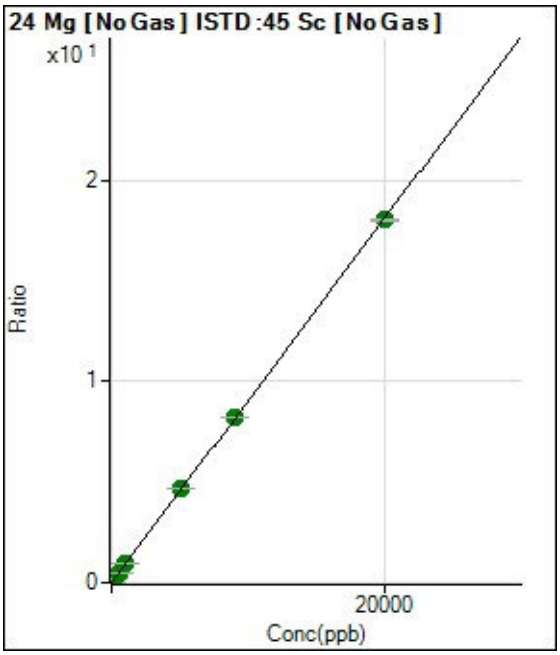
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	381038.18	0.4679	P	0.4
2	☐	20.000	2.864	358010.55	0.4704	P	1.2
3	☐	200.000	161.902	446701.67	0.6097	P	1.5
4	☐	500.000	467.313	632278.90	0.8771	P	1.0
5	☐	1000.000	904.248	892381.70	1.2596	A	0.8
6	☐	5000.000	4942.021	3412556.93	4.7949	A	1.0
7	☐	9000.000	9039.629	5919155.75	8.3826	A	0.7
8	☐	20000.00	20002.66	12820393.56	17.981	A	0.1

y = 8.7555E-004 * x + 0.4679
R = 1.0000
DL = 6.941
BEC = 534.4

Weight: <None>
Min Conc: <None>

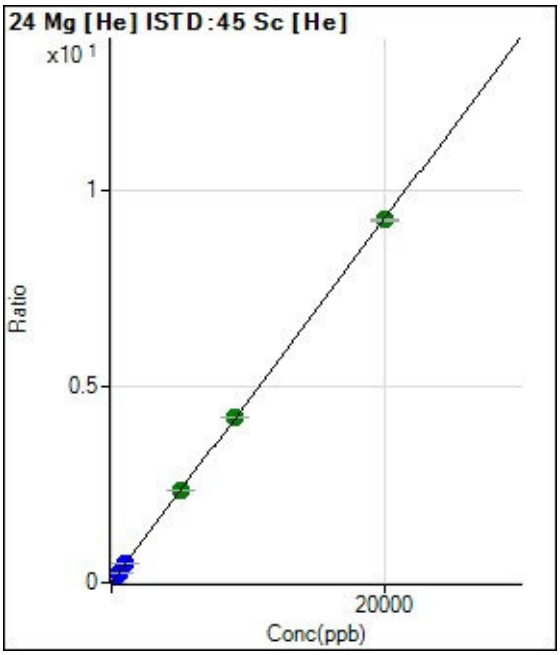


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10538.20	0.0006	P	9.3
2	☐	20.000	21.732	358388.60	0.0202	P	1.7
3	☐	200.000	205.085	3138517.14	0.1862	A	0.6
4	☐	500.000	517.322	7663582.18	0.4689	A	1.0
5	☐	1000.000	1022.563	15075246.02	0.9263	A	1.2
6	☐	5000.000	5136.243	75753002.20	4.6507	A	0.4
7	☐	9000.000	9096.152	133735111.3	8.2358	A	0.3
8	☐	20000.00	19921.05	294977828.9	18.036	A	0.5

y = 9.0535E-004 * x + 5.5831E-004
R = 1.0000
DL = 0.1725
BEC = 0.6167

Weight: <None>
Min Conc: <None>

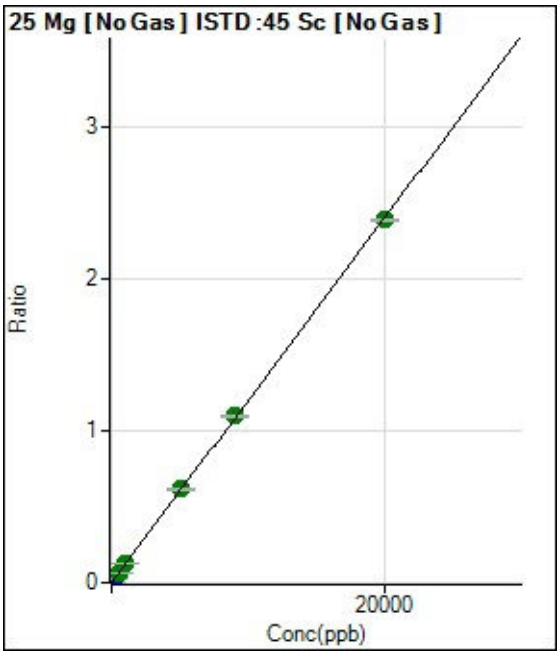
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.36	0.0004	P	37.3
2	☐	20.000	20.549	7576.02	0.0100	P	4.9
3	☐	200.000	215.507	73624.96	0.1005	P	2.8
4	☐	500.000	530.191	177799.03	0.2466	P	1.6
5	☐	1000.000	1075.417	354070.22	0.4998	P	2.2
6	☐	5000.000	5111.581	1689701.85	2.3741	A	0.1
7	☐	9000.000	9077.250	2976821.73	4.2157	A	0.8
8	☐	20000.00	19932.66	6599970.32	9.2568	A	0.3

y = 4.6438E-004 * x + 4.1005E-004
R = 1.0000
DL = 0.988
BEC = 0.883

Weight: <None>
Min Conc: <None>

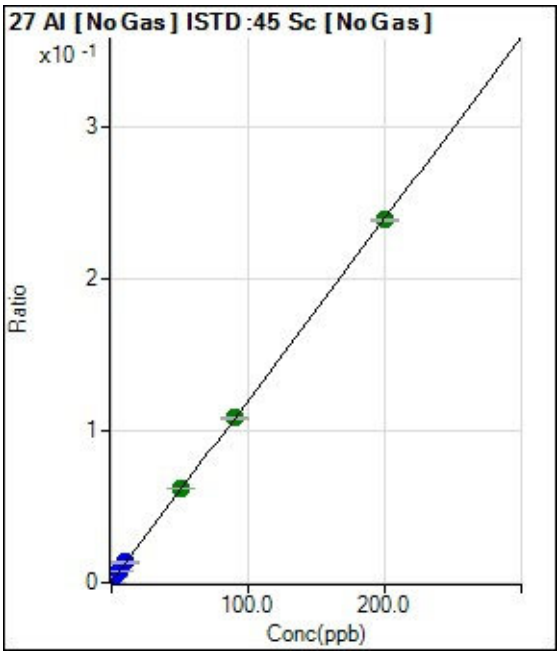


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1426.83	0.0001	P	8.3
2	☐	20.000	21.958	48032.45	0.0027	P	5.2
3	☐	200.000	213.243	432752.33	0.0257	P	1.1
4	☐	500.000	517.461	1016583.11	0.0622	A	1.0
5	☐	1000.000	1014.433	1983326.06	0.1219	A	0.8
6	☐	5000.000	5134.230	10041855.47	0.6165	A	0.9
7	☐	9000.000	9137.201	17814787.23	1.0971	A	0.6
8	☐	20000.00	19903.40	39082828.58	2.3897	A	0.5

y = 1.2006E-004 * x + 7.5608E-005
R = 0.9999
DL = 0.1574
BEC = 0.6298

Weight: <None>
Min Conc: <None>

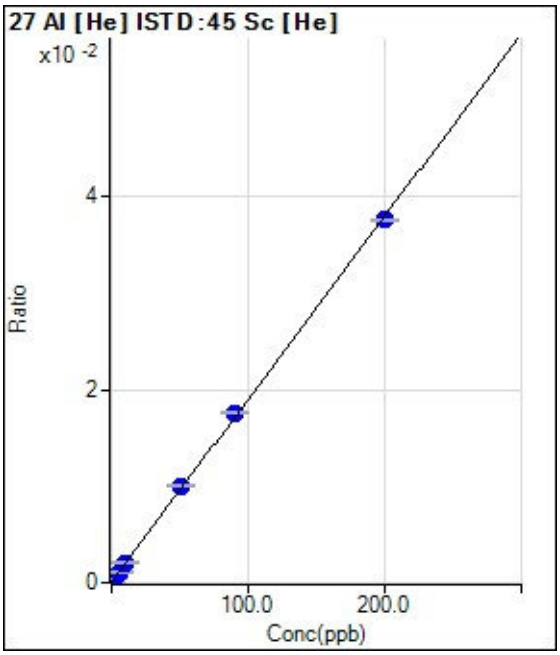
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10377.93	0.0005	P	4.2
2	☐			21431.54	0.0012	P	3.5
3	☐	2.000	2.455	58740.91	0.0035	P	1.2
4	☐	5.000	5.488	116235.13	0.0071	P	2.9
5	☐	10.000	10.711	217429.02	0.0134	P	2.2
6	☐	50.000	51.233	1006920.43	0.0618	A	0.4
7	☐	90.000	90.503	1766347.42	0.1088	A	0.9
8	☐	200.000	199.413	3909055.36	0.2390	A	0.7

y = 0.0012 * x + 5.4990E-004
R = 1.0000
DL = 0.0576
BEC = 0.4598

Weight: <None>
Min Conc: <None>

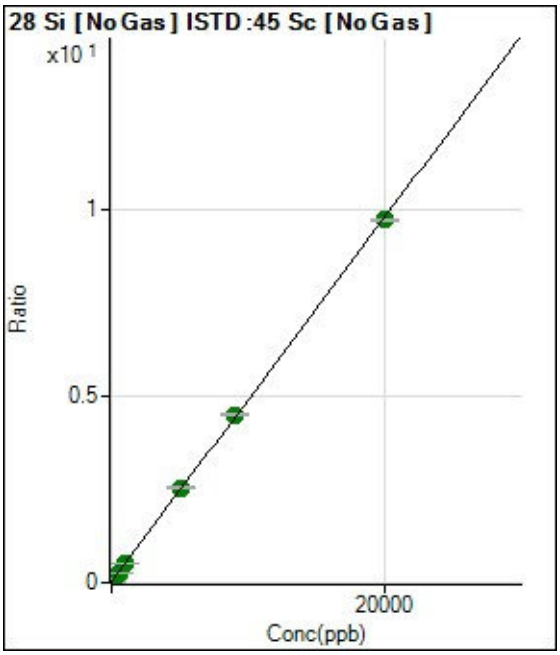


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	36.2
2	☐			153.34	0.0002	P	32.0
3	☐	2.000	2.252	363.34	0.0005	P	14.2
4	☐	5.000	5.368	783.37	0.0011	P	11.4
5	☐	10.000	10.239	1423.43	0.0020	P	9.2
6	☐	50.000	52.560	7135.30	0.0100	P	1.3
7	☐	90.000	92.504	12422.43	0.0176	P	1.3
8	☐	200.000	198.210	26819.48	0.0376	P	0.2

y = 1.8943E-004 * x + 6.9484E-005
R = 0.9998
DL = 0.398
BEC = 0.3668

Weight: <None>
Min Conc: <None>

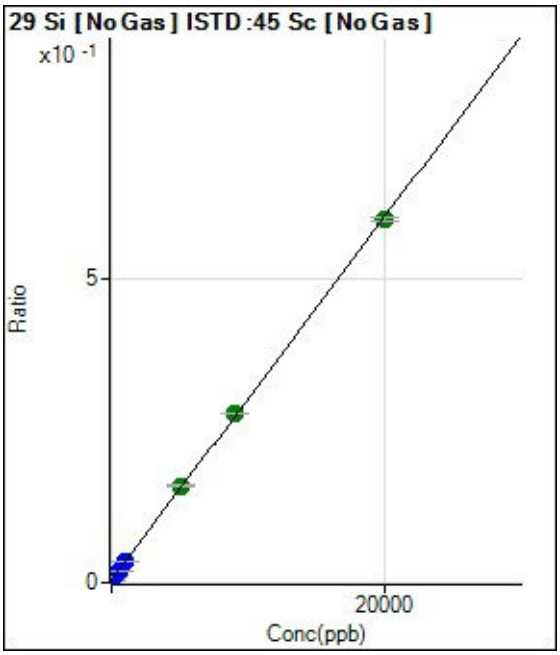
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	464863.12	0.0246	P	0.7
2	☐	20.000	20.943	617509.32	0.0349	P	0.6
3	☐	200.000	201.780	2076865.88	0.1232	A	0.2
4	☐	500.000	510.199	4477304.71	0.2740	A	0.2
5	☐	1000.000	1018.958	8504302.45	0.5226	A	1.1
6	☐	5000.000	5167.407	41532355.77	2.5498	A	0.9
7	☐	9000.000	9184.458	73280710.86	4.5128	A	0.3
8	☐	20000.00	19873.92	159238789.1	9.7365	A	0.5

y = 4.8867E-004 * x + 0.0246
R = 0.9999
DL = 1.119
BEC = 50.4

Weight: <None>
Min Conc: <None>

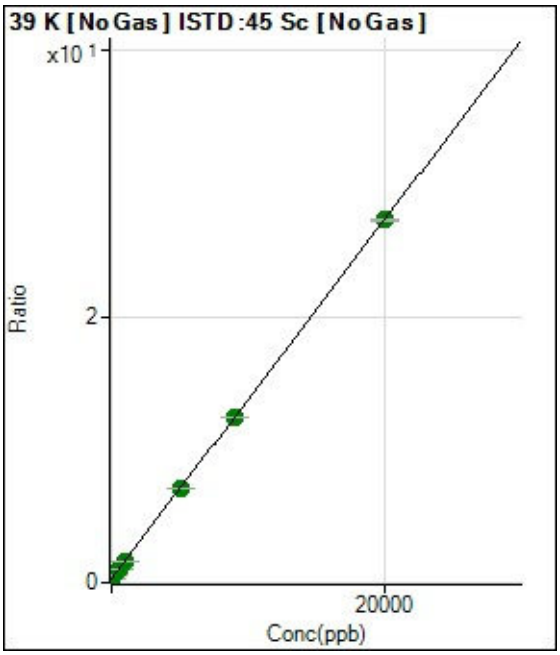


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77801.08	0.0041	P	2.2
2	☐	20.000	16.061	81512.75	0.0046	P	1.5
3	☐	200.000	205.752	173164.42	0.0103	P	0.6
4	☐	500.000	529.591	326206.40	0.0200	P	0.5
5	☐	1000.000	1074.477	590009.99	0.0363	P	0.7
6	☐	5000.000	5210.057	2604965.81	0.1599	A	0.6
7	☐	9000.000	9213.588	4540999.03	0.2796	A	0.4
8	☐	20000.00	19846.85	9774337.06	0.5976	A	0.9

y = 2.9904E-005 * x + 0.0041
R = 0.9999
DL = 9.085
BEC = 137.8

Weight: <None>
Min Conc: <None>

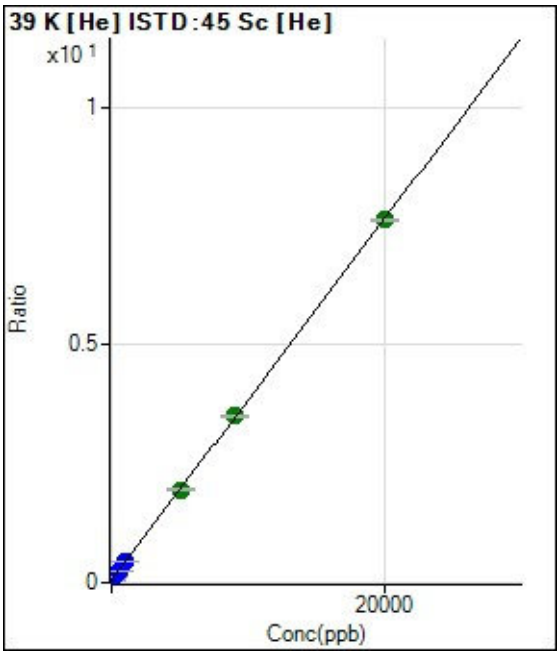
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5565995.33	0.2949	A	1.2
2	☐	20.000	18.545	5666676.37	0.3199	A	0.1
3	☐	200.000	194.206	9387656.11	0.5570	A	0.2
4	☐	500.000	495.427	15748271.44	0.9636	A	0.3
5	☐	1000.000	996.168	26680929.60	1.6394	A	0.5
6	☐	5000.000	5000.511	114737778.2	7.0441	A	0.7
7	☐	9000.000	9014.014	202348276.9	12.461	A	0.3
8	☐	20000.00	19993.93	446168900.0	27.280	A	0.8

y = 0.0013 * x + 0.2949
R = 1.0000
DL = 7.795
BEC = 218.5

Weight: <None>
Min Conc: <None>

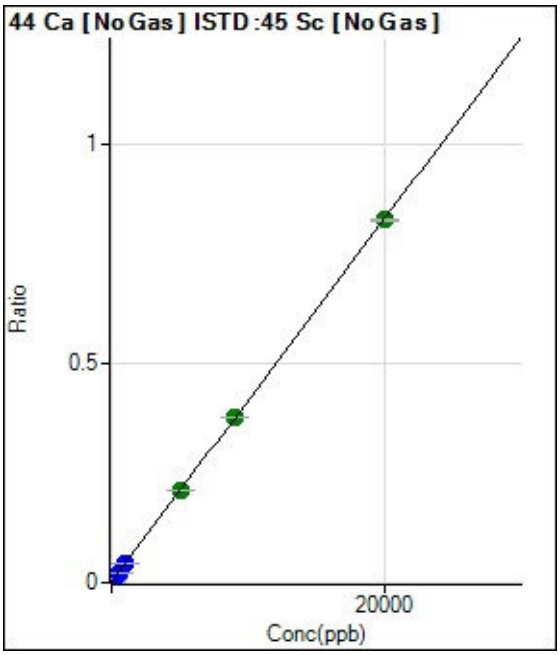


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40929.87	0.0502	P	6.7
2	☐	20.000	23.166	44942.79	0.0591	P	6.0
3	☐	200.000	215.686	96901.50	0.1323	P	1.5
4	☐	500.000	522.311	179413.53	0.2489	P	1.0
5	☐	1000.000	1072.429	324484.57	0.4580	P	1.3
6	☐	5000.000	5025.034	1395673.21	1.9610	A	0.7
7	☐	9000.000	9115.350	2483001.84	3.5164	A	1.0
8	☐	20000.00	19937.49	5441174.08	7.6316	A	0.6

y = 3.8026E-004 * x + 0.0502
R = 1.0000
DL = 26.47
BEC = 132.1

Weight: <None>
Min Conc: <None>

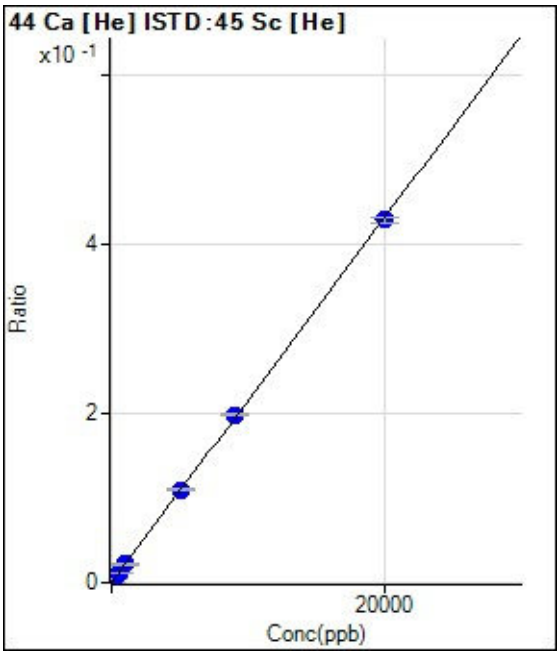
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37413.16	0.0020	P	1.6
2	☐	20.000	15.865	46722.02	0.0026	P	0.9
3	☐	200.000	205.618	176636.37	0.0105	P	1.6
4	☐	500.000	523.770	386217.47	0.0236	P	0.9
5	☐	1000.000	1039.460	731478.82	0.0449	P	0.5
6	☐	5000.000	5070.767	3446180.26	0.2116	A	0.3
7	☐	9000.000	9088.660	6132189.07	0.3776	A	0.4
8	☐	20000.00	19939.79	13511334.38	0.8261	A	0.5

y = 4.1332E-005 * x + 0.0020
R = 1.0000
DL = 2.344
BEC = 47.96

Weight: <None>
Min Conc: <None>

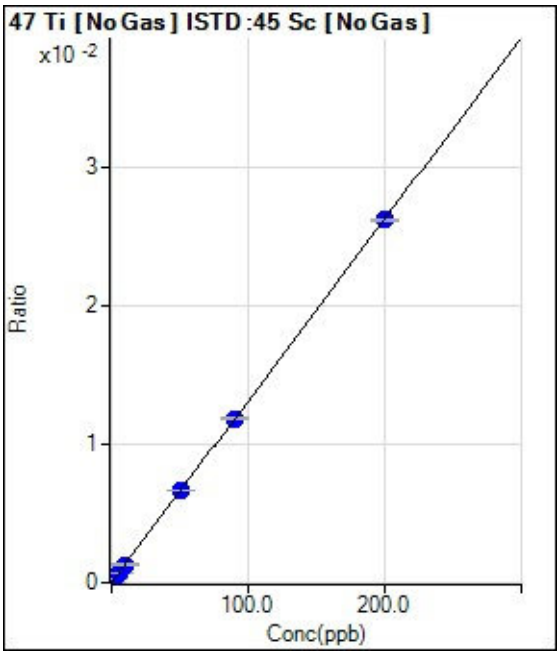


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	77.7
2	☐	20.000	15.068	346.70	0.0005	P	29.6
3	☐	200.000	224.896	3654.10	0.0050	P	7.4
4	☐	500.000	519.618	8189.65	0.0114	P	12.6
5	☐	1000.000	1001.845	15422.95	0.0218	P	2.6
6	☐	5000.000	5101.692	78522.71	0.1103	P	1.6
7	☐	9000.000	9210.040	140574.26	0.1991	P	0.3
8	☐	20000.00	19879.23	306250.45	0.4295	P	1.4

y = 2.1601E-005 * x + 1.3058E-004
R = 0.9999
DL = 14.09
BEC = 6.045

Weight: <None>
Min Conc: <None>

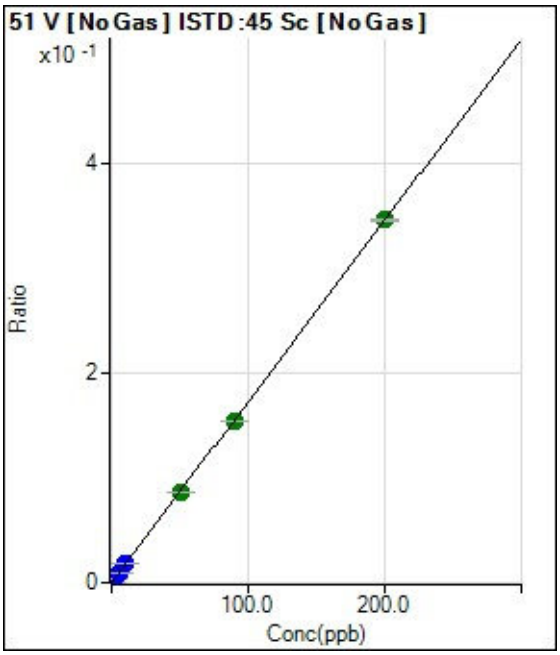
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	206.88	0.0000	P	39.4
2	☐	0.200	0.190	634.00	0.0000	P	10.4
3	☐	2.000	1.983	4562.07	0.0003	P	6.7
4	☐	5.000	5.040	10968.90	0.0007	P	3.9
5	☐	10.000	9.975	21441.87	0.0013	P	2.1
6	☐	50.000	50.793	108550.36	0.0067	P	0.7
7	☐	90.000	90.217	192083.58	0.0118	P	1.4
8	☐	200.000	199.704	427994.53	0.0262	P	0.8

y = 1.3099E-004 * x + 1.0971E-005
R = 1.0000
DL = 0.09891
BEC = 0.08376

Weight: <None>
Min Conc: <None>

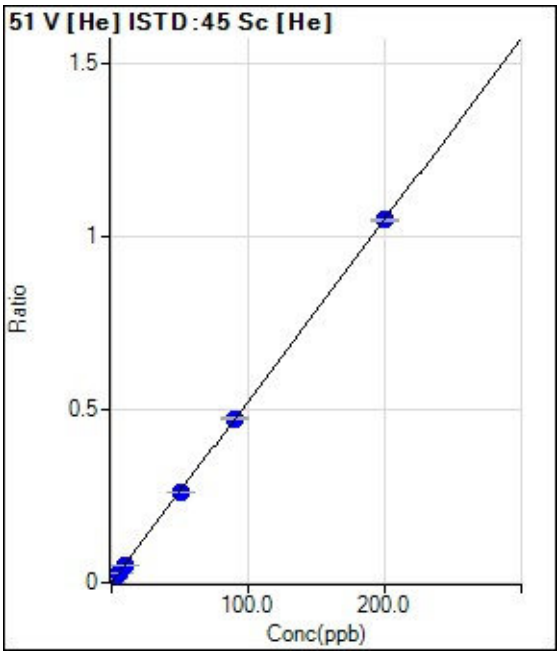


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-3184.67	-0.0002	P	-59.8
2	☐	0.200	0.193	2932.86	0.0002	P	79.4
3	☐	2.000	2.030	56374.07	0.0033	P	1.8
4	☐	5.000	5.285	146722.16	0.0090	P	2.1
5	☐	10.000	10.328	288160.04	0.0177	P	0.4
6	☐	50.000	49.567	1394661.65	0.0856	A	0.6
7	☐	90.000	89.250	2505681.91	0.1543	A	1.0
8	☐	200.000	200.422	5670557.98	0.3467	A	0.6

y = 0.0017 * x - 1.6895E-004
R = 1.0000
DL = 0.1752
BEC = -0.09761

Weight: <None>
Min Conc: <None>

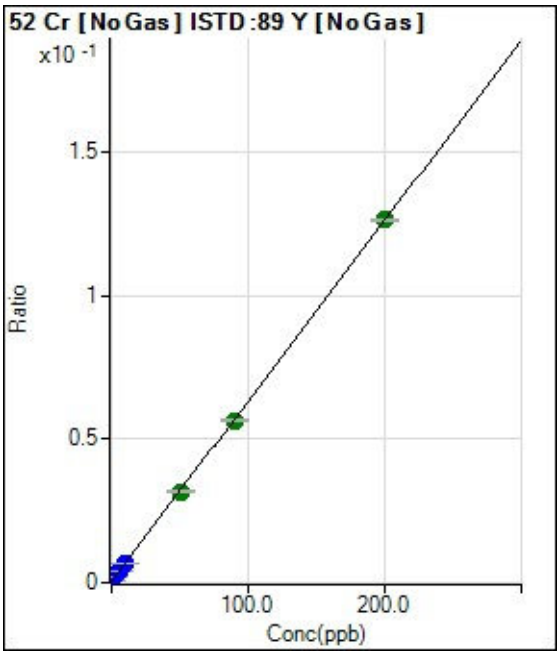
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.31	0.0004	P	19.4
2	☐	0.200	0.198	1071.13	0.0014	P	17.2
3	☐	2.000	1.843	7352.83	0.0100	P	5.2
4	☐	5.000	4.899	18788.63	0.0261	P	2.4
5	☐	10.000	9.708	36327.96	0.0513	P	1.6
6	☐	50.000	49.578	185297.86	0.2604	P	0.6
7	☐	90.000	90.465	335237.86	0.4748	P	0.7
8	☐	200.000	199.915	747728.09	1.0487	P	0.4

y = 0.0052 * x + 3.6917E-004
R = 1.0000
DL = 0.04104
BEC = 0.0704

Weight: <None>
Min Conc: <None>

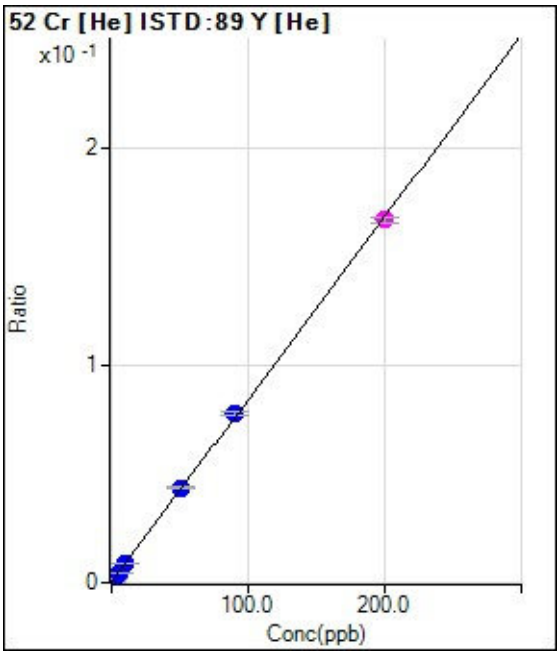


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23751.19	0.0005	P	2.7
2	☐	0.200	0.169	27431.81	0.0006	P	1.1
3	☐	2.000	1.985	74285.05	0.0018	P	1.2
4	☐	5.000	5.093	152687.60	0.0037	P	0.9
5	☐	10.000	10.273	283992.69	0.0070	P	0.5
6	☐	50.000	49.818	1300804.89	0.0318	A	0.7
7	☐	90.000	89.096	2302844.05	0.0564	A	1.0
8	☐	200.000	200.436	5110850.76	0.1263	A	0.4

y = 6.2735E-004 * x + 5.2685E-004
R = 1.0000
DL = 0.06743
BEC = 0.8398

Weight: <None>
Min Conc: <None>

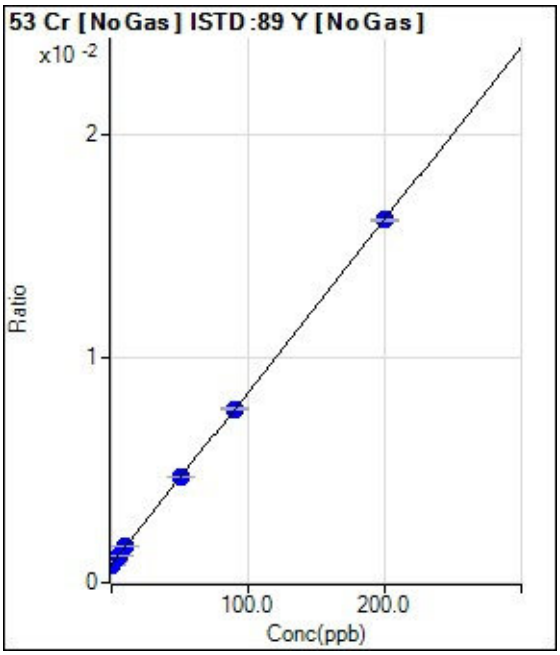
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2102.31	0.0003	P	6.8
2	☐	0.200	0.179	2846.53	0.0005	P	4.4
3	☐	2.000	1.991	11189.24	0.0020	P	2.2
4	☐	5.000	5.109	25382.43	0.0046	P	1.2
5	☐	10.000	9.920	47282.22	0.0087	P	0.8
6	☐	50.000	51.414	234998.96	0.0435	P	1.7
7	☐	90.000	92.509	418700.21	0.0780	P	1.5
8	☐	200.000	198.519	908614.06	0.1669	M	1.8

y = 8.3910E-004 * x + 3.4834E-004
R = 0.9999
DL = 0.08431
BEC = 0.4151

Weight: <None>
Min Conc: <None>

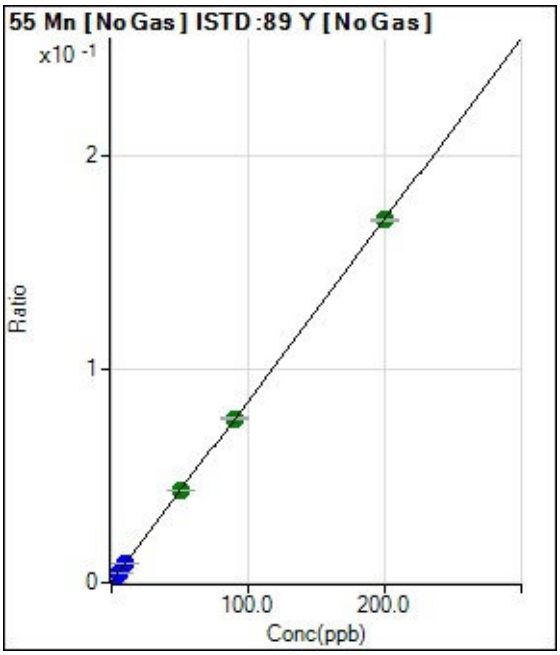


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36495.34	0.0008	P	1.6
2	☐	0.200	0.335	36224.47	0.0008	P	1.2
3	☐	2.000	1.875	39991.84	0.0010	P	1.1
4	☐	5.000	4.941	48819.16	0.0012	P	1.2
5	☐	10.000	10.989	67436.52	0.0017	P	0.7
6	☐	50.000	50.616	192625.35	0.0047	P	0.8
7	☐	90.000	90.074	316056.75	0.0077	P	0.6
8	☐	200.000	199.766	655193.27	0.0162	P	0.4

y = 7.6980E-005 * x + 8.0958E-004
R = 1.0000
DL = 0.4936
BEC = 10.52

Weight: <None>
Min Conc: <None>

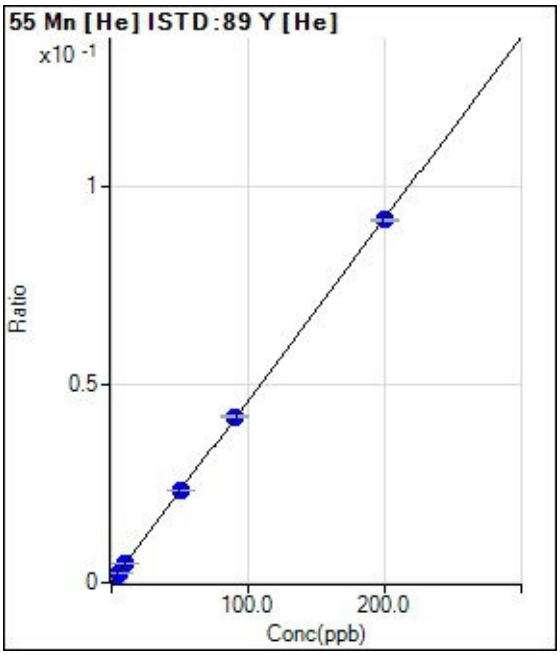
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9452.83	0.0002	P	2.5
2	☐	0.200	0.209	16810.62	0.0004	P	0.5
3	☐	2.000	2.060	82227.93	0.0020	P	1.0
4	☐	5.000	5.229	191000.33	0.0047	P	0.5
5	☐	10.000	10.387	368270.76	0.0090	P	0.8
6	☐	50.000	50.258	1757595.10	0.0429	A	0.5
7	☐	90.000	90.221	3139361.55	0.0769	A	0.8
8	☐	200.000	199.811	6884360.41	0.1701	A	0.5

y = 8.5022E-004 * x + 2.0969E-004
R = 1.0000
DL = 0.01875
BEC = 0.2466

Weight: <None>
Min Conc: <None>

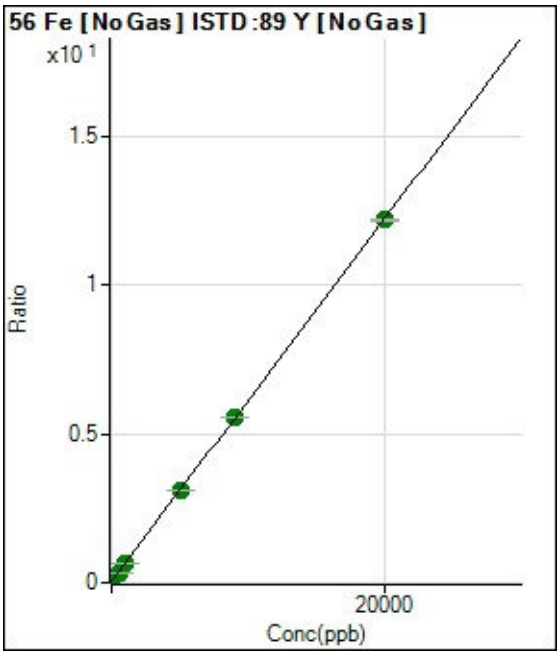


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	377.05	0.0001	P	9.9
2	☐	0.200	0.220	934.32	0.0002	P	3.0
3	☐	2.000	1.930	5256.37	0.0009	P	4.0
4	☐	5.000	5.008	12939.23	0.0024	P	3.0
5	☐	10.000	10.050	25502.86	0.0047	P	1.3
6	☐	50.000	50.588	125863.10	0.0233	P	1.4
7	☐	90.000	90.986	224701.58	0.0418	P	1.1
8	☐	200.000	199.407	498763.79	0.0916	P	0.4

y = 4.5921E-004 * x + 6.2457E-005
R = 1.0000
DL = 0.04035
BEC = 0.136

Weight: <None>
Min Conc: <None>

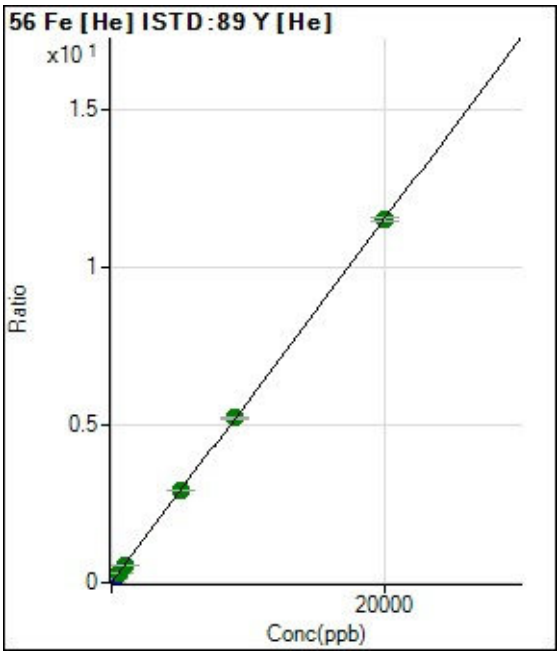
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2000177.39	0.0444	A	1.2
2	☐	20.000	17.849	2395516.39	0.0552	A	1.1
3	☐	200.000	196.829	6886558.75	0.1643	A	0.4
4	☐	500.000	495.086	14193657.61	0.3460	A	0.8
5	☐	1000.000	1004.144	26723678.72	0.6561	A	0.9
6	☐	5000.000	5033.553	127322465.3	3.1106	A	0.9
7	☐	9000.000	9078.365	227546363.4	5.5746	A	0.6
8	☐	20000.00	19956.29	493840177.7	12.201	A	0.7

y = 6.0917E-004 * x + 0.0444
R = 1.0000
DL = 2.699
BEC = 72.84

Weight: <None>
Min Conc: <None>

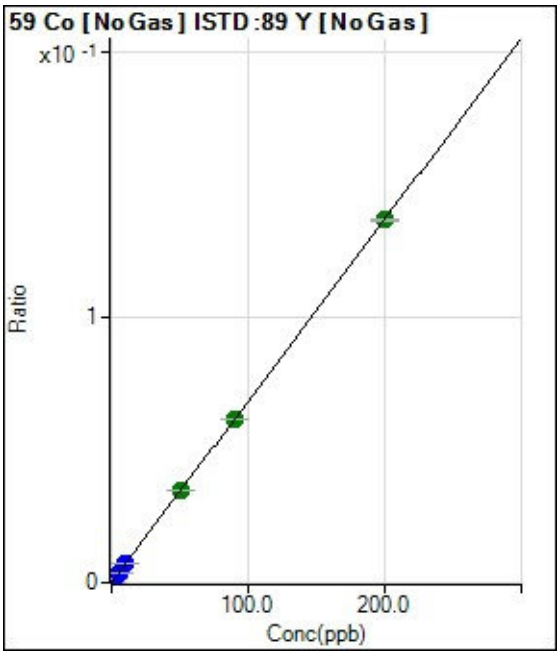


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24062.80	0.0040	P	2.2
2	☐	20.000	23.822	101137.73	0.0177	P	1.9
3	☐	200.000	244.380	801575.90	0.1446	P	1.8
4	☐	500.000	497.151	1588610.19	0.2901	A	0.6
5	☐	1000.000	988.621	3123541.41	0.5729	A	0.4
6	☐	5000.000	5070.880	15790315.18	2.9222	A	0.7
7	☐	9000.000	9058.483	28015317.08	5.2169	A	1.1
8	☐	20000.00	19956.15	62531479.07	11.488	A	1.2

y = 5.7548E-004 * x + 0.0040
R = 1.0000
DL = 0.4525
BEC = 6.927

Weight: <None>
Min Conc: <None>

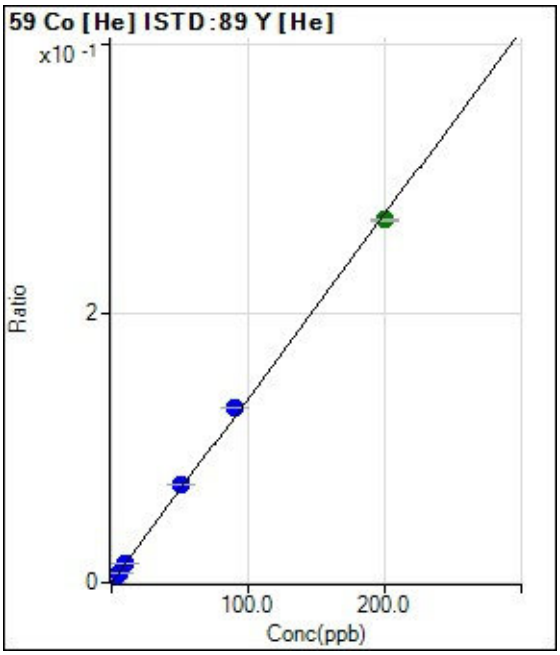
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1421.52	0.0000	P	9.5
2	☐	0.200	0.199	7259.29	0.0002	P	5.8
3	☐	2.000	2.079	60863.00	0.0015	P	1.8
4	☐	5.000	5.259	148700.86	0.0036	P	0.3
5	☐	10.000	10.391	290435.87	0.0071	P	1.0
6	☐	50.000	50.396	1410504.36	0.0345	A	0.3
7	☐	90.000	89.894	2507808.12	0.0614	A	0.8
8	☐	200.000	199.922	5529292.01	0.1366	A	0.4

y = 6.8315E-004 * x + 3.1528E-005
R = 1.0000
DL = 0.01318
BEC = 0.04615

Weight: <None>
Min Conc: <None>

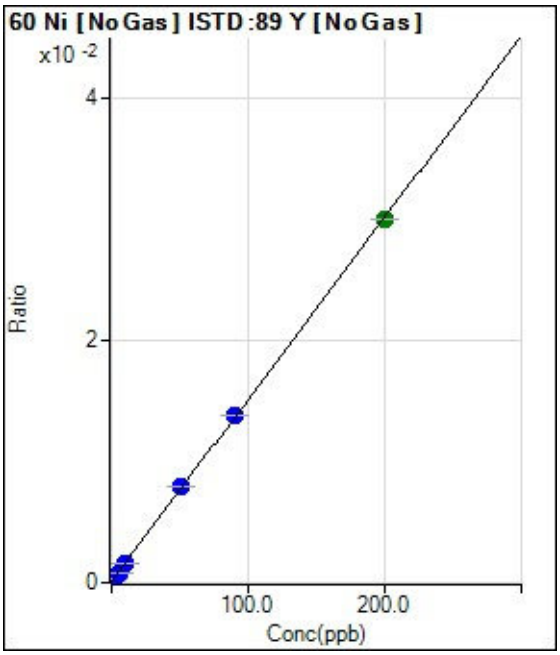


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.31	0.0000	P	20.4
2	☐	0.200	0.196	1815.31	0.0003	P	2.9
3	☐	2.000	2.101	16209.42	0.0029	P	1.3
4	☐	5.000	5.209	39299.27	0.0072	P	2.8
5	☐	10.000	10.342	77432.63	0.0142	P	0.9
6	☐	50.000	53.052	392558.54	0.0726	P	1.0
7	☐	90.000	94.890	697552.63	0.1299	P	0.8
8	☐	200.000	197.013	1467706.77	0.2696	A	0.9

y = 0.0014 * x + 4.9761E-005
R = 0.9995
DL = 0.02228
BEC = 0.03636

Weight: <None>
Min Conc: <None>

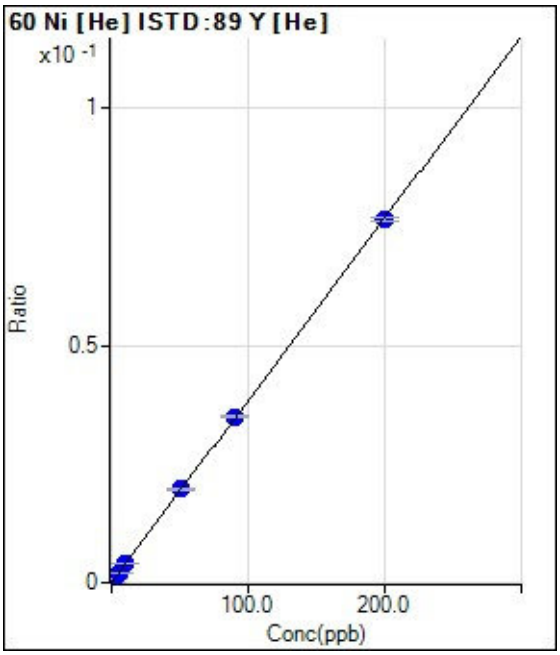
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5182.93	0.0001	P	4.4
2	☐	0.200	0.112	5713.69	0.0001	P	6.7
3	☐	2.000	1.849	16473.27	0.0004	P	2.1
4	☐	5.000	4.855	34655.65	0.0008	P	1.9
5	☐	10.000	10.118	66642.34	0.0016	P	2.0
6	☐	50.000	51.859	323801.07	0.0079	P	0.6
7	☐	90.000	91.665	567146.38	0.0139	P	0.1
8	☐	200.000	198.785	1214152.82	0.0300	A	0.1

y = 1.5033E-004 * x + 1.1498E-004
R = 0.9999
DL = 0.1004
BEC = 0.7648

Weight: <None>
Min Conc: <None>

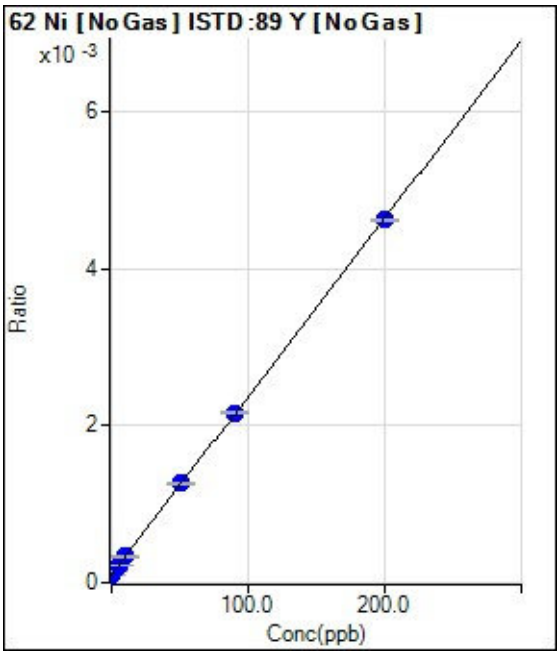


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	263.61	0.0000	P	12.0
2	☐	0.200	0.192	670.70	0.0001	P	10.2
3	☐	2.000	2.065	4632.16	0.0008	P	1.3
4	☐	5.000	4.964	10668.31	0.0019	P	1.9
5	☐	10.000	9.990	21131.07	0.0039	P	1.0
6	☐	50.000	51.264	106492.60	0.0197	P	1.0
7	☐	90.000	91.058	187807.93	0.0350	P	0.6
8	☐	200.000	199.209	416155.48	0.0765	P	0.9

y = 3.8358E-004 * x + 4.3663E-005
R = 1.0000
DL = 0.04099
BEC = 0.1138

Weight: <None>
Min Conc: <None>

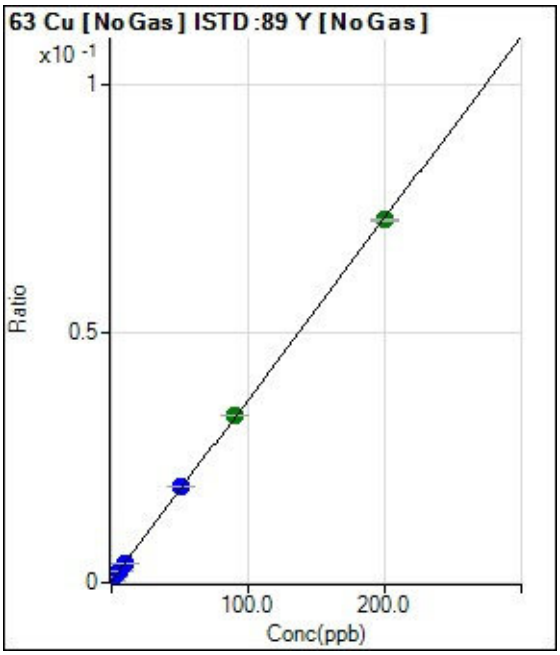
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4615.47	0.0001	P	2.2
2	☐	0.200	0.080	4518.69	0.0001	P	5.6
3	☐	2.000	1.885	6084.19	0.0001	P	6.0
4	☐	5.000	4.941	8795.07	0.0002	P	2.8
5	☐	10.000	10.077	13473.69	0.0003	P	1.2
6	☐	50.000	51.217	51706.57	0.0013	P	1.2
7	☐	90.000	90.872	88242.52	0.0022	P	1.0
8	☐	200.000	199.302	186974.08	0.0046	P	0.9

y = 2.2664E-005 * x + 1.0239E-004
R = 1.0000
DL = 0.2982
BEC = 4.518

Weight: <None>
Min Conc: <None>

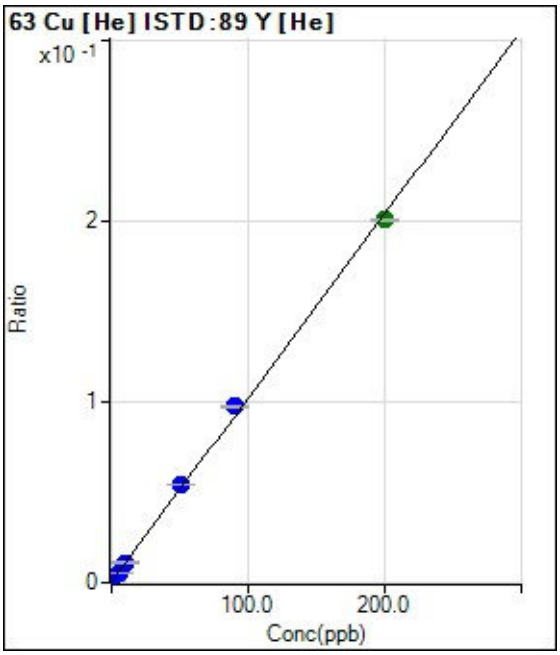


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14131.65	0.0003	P	4.0
2	☐	0.200	0.185	16510.04	0.0004	P	2.2
3	☐	2.000	2.014	43907.98	0.0010	P	1.2
4	☐	5.000	5.126	89498.51	0.0022	P	0.6
5	☐	10.000	10.218	164446.58	0.0040	P	0.4
6	☐	50.000	51.838	786016.62	0.0192	P	0.8
7	☐	90.000	91.137	1368302.94	0.0335	A	0.5
8	☐	200.000	199.015	2947996.33	0.0728	A	0.2

y = 3.6440E-004 * x + 3.1347E-004
R = 0.9999
DL = 0.103
BEC = 0.8602

Weight: <None>
Min Conc: <None>

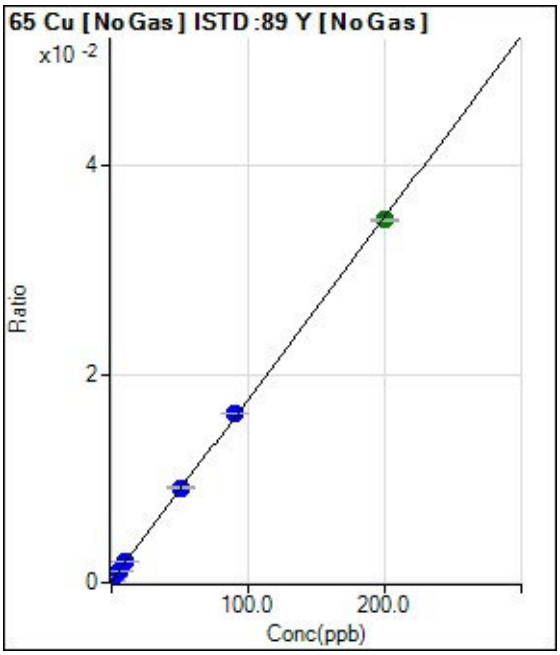
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3430.59	0.0006	P	0.7
2	☐	0.200	0.219	4518.69	0.0008	P	4.0
3	☐	2.000	2.118	15086.99	0.0027	P	1.5
4	☐	5.000	5.126	31641.96	0.0058	P	0.1
5	☐	10.000	10.406	60759.35	0.0111	P	1.3
6	☐	50.000	52.757	292819.00	0.0542	P	0.9
7	☐	90.000	95.267	523005.18	0.0974	P	0.9
8	☐	200.000	196.916	1092476.31	0.2007	A	0.6

y = 0.0010 * x + 5.6830E-004
R = 0.9994
DL = 0.01102
BEC = 0.5591

Weight: <None>
Min Conc: <None>

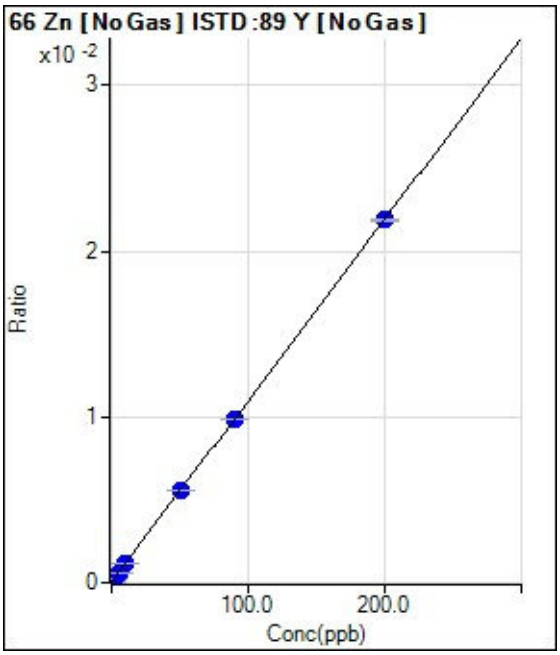


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6658.40	0.0001	P	4.1
2	☐	0.200	0.181	7776.80	0.0002	P	5.2
3	☐	2.000	2.034	21080.99	0.0005	P	3.0
4	☐	5.000	5.099	42599.48	0.0010	P	1.4
5	☐	10.000	10.332	79524.11	0.0020	P	1.0
6	☐	50.000	51.458	373924.34	0.0091	P	0.7
7	☐	90.000	92.047	662227.80	0.0162	P	0.6
8	☐	200.000	198.695	1410656.13	0.0349	A	0.7

y = 1.7466E-004 * x + 1.4769E-004
R = 0.9999
DL = 0.1036
BEC = 0.8456

Weight: <None>
Min Conc: <None>

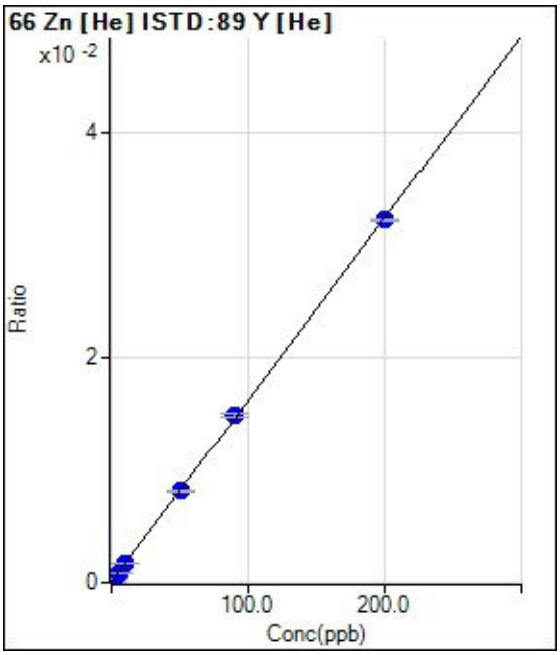
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2245.81	0.0000	P	0.4
2	☐	0.200	0.228	3240.35	0.0001	P	0.9
3	☐	2.000	2.009	11292.81	0.0003	P	3.0
4	☐	5.000	5.024	24567.05	0.0006	P	2.8
5	☐	10.000	10.176	47326.59	0.0012	P	1.5
6	☐	50.000	50.308	227059.99	0.0055	P	1.1
7	☐	90.000	90.060	403736.40	0.0099	P	0.2
8	☐	200.000	199.887	886131.76	0.0219	P	0.4

y = 1.0928E-004 * x + 4.9822E-005
R = 1.0000
DL = 0.005895
BEC = 0.4559

Weight: <None>
Min Conc: <None>

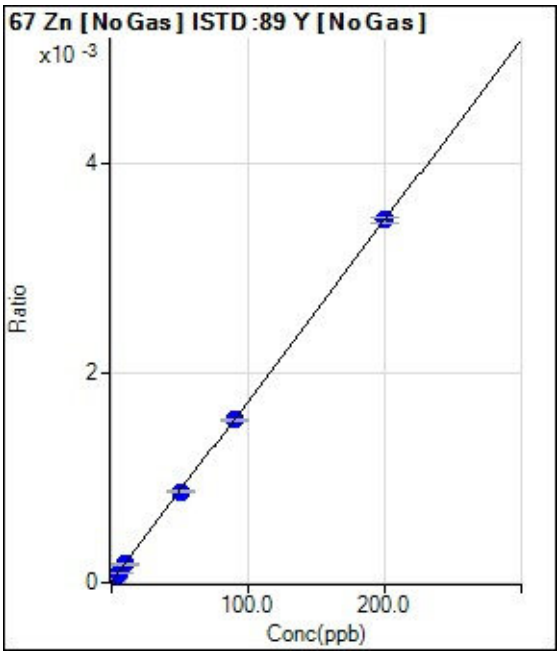


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	387.06	0.0001	P	6.1
2	☐	0.200	0.239	587.28	0.0001	P	5.7
3	☐	2.000	1.994	2142.36	0.0004	P	6.4
4	☐	5.000	4.855	4652.21	0.0008	P	4.0
5	☐	10.000	10.167	9315.99	0.0017	P	3.5
6	☐	50.000	50.002	44052.36	0.0082	P	0.6
7	☐	90.000	91.895	80166.04	0.0149	P	2.4
8	☐	200.000	199.142	175691.92	0.0323	P	0.4

y = 1.6176E-004 * x + 6.4109E-005
R = 0.9999
DL = 0.07242
BEC = 0.3963

Weight: <None>
Min Conc: <None>

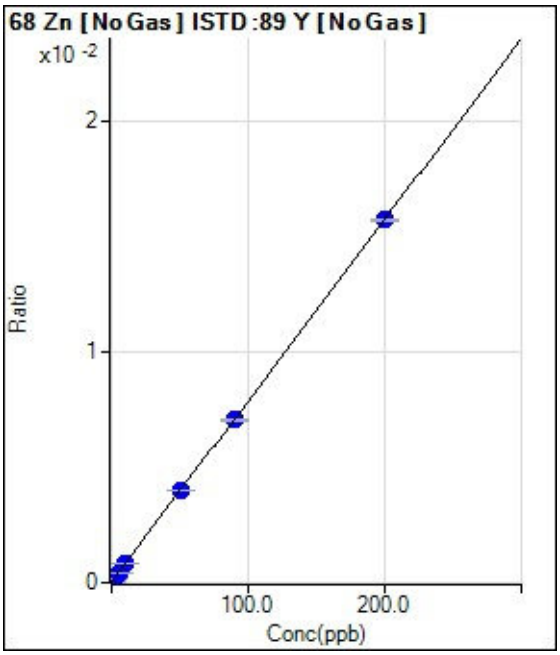
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	387.07	0.0000	P	9.3
2	☐	0.200	0.371	650.68	0.0000	P	8.0
3	☐	2.000	1.967	1785.27	0.0000	P	5.0
4	☐	5.000	4.940	3854.48	0.0001	P	7.2
5	☐	10.000	9.872	7299.42	0.0002	P	5.8
6	☐	50.000	49.914	35659.49	0.0009	P	2.8
7	☐	90.000	89.579	63545.52	0.0016	P	0.9
8	☐	200.000	200.219	140402.60	0.0035	P	1.5

y = 1.7284E-005 * x + 8.5878E-006
R = 1.0000
DL = 0.1381
BEC = 0.4969

Weight: <None>
Min Conc: <None>

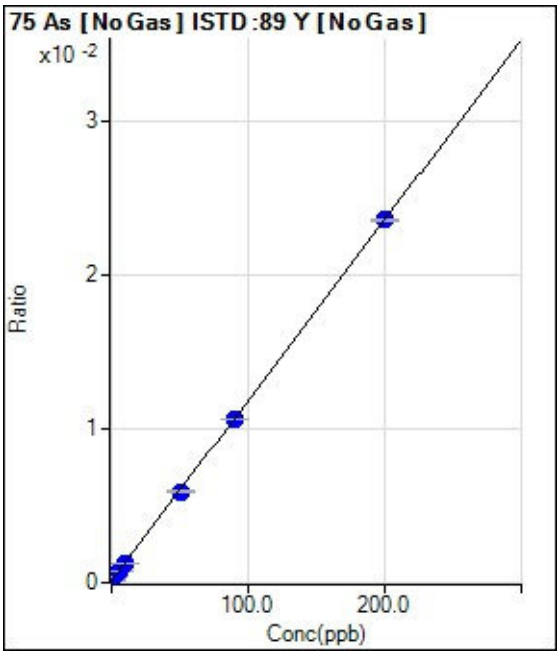


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1534.99	0.0000	P	6.4
2	☐	0.200	0.222	2232.46	0.0001	P	5.0
3	☐	2.000	1.921	7753.42	0.0002	P	0.7
4	☐	5.000	4.861	17058.02	0.0004	P	4.1
5	☐	10.000	10.235	34134.00	0.0008	P	0.2
6	☐	50.000	50.790	164672.57	0.0040	P	1.0
7	☐	90.000	89.643	288750.36	0.0071	P	1.2
8	☐	200.000	199.956	637039.82	0.0157	P	0.4

y = 7.8542E-005 * x + 3.4060E-005
R = 1.0000
DL = 0.08346
BEC = 0.4337

Weight: <None>
Min Conc: <None>

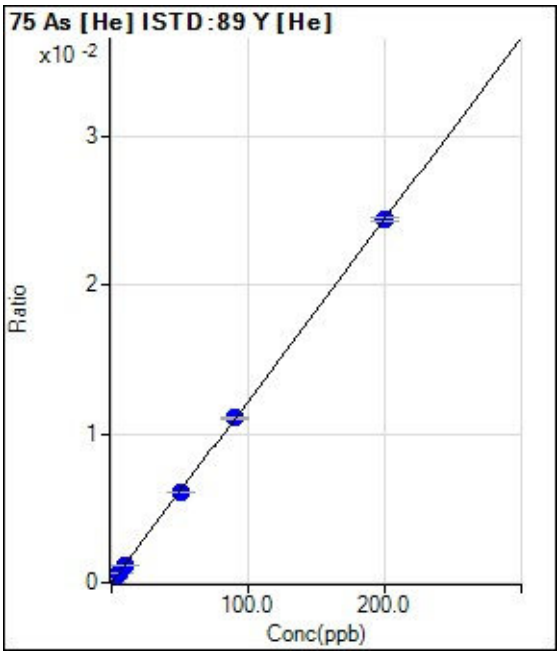
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5761.72	0.0001	P	33.4
2	☐	0.200	0.367	7409.98	0.0002	P	19.8
3	☐	2.000	2.235	16333.35	0.0004	P	4.6
4	☐	5.000	4.928	28914.37	0.0007	P	5.0
5	☐	10.000	10.001	52897.66	0.0013	P	1.0
6	☐	50.000	49.543	242627.90	0.0059	P	0.3
7	☐	90.000	89.742	434025.57	0.0106	P	0.5
8	☐	200.000	200.230	953895.44	0.0236	P	0.3

y = 1.1706E-004 * x + 1.2792E-004
R = 1.0000
DL = 1.094
BEC = 1.093

Weight: <None>
Min Conc: <None>

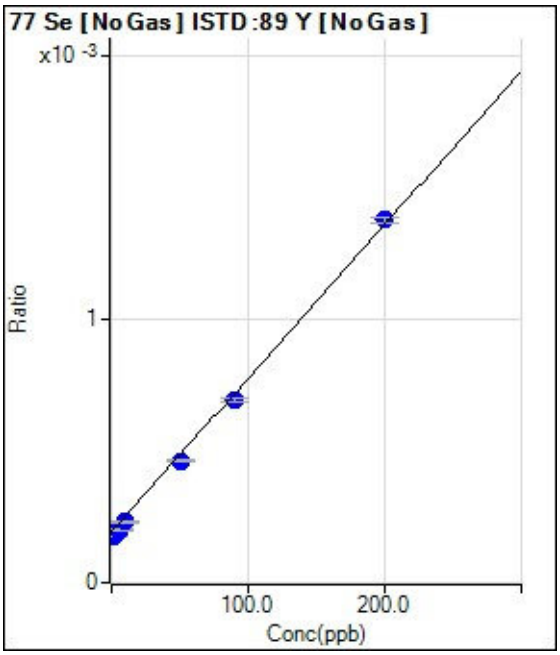


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0000	P	30.9
2	☐	0.200	0.236	185.56	0.0000	P	9.4
3	☐	2.000	1.817	1247.84	0.0002	P	2.4
4	☐	5.000	5.012	3365.99	0.0006	P	2.1
5	☐	10.000	9.622	6415.99	0.0012	P	1.3
6	☐	50.000	49.987	32953.46	0.0061	P	0.8
7	☐	90.000	90.613	59344.09	0.0111	P	2.0
8	☐	200.000	199.748	132581.52	0.0244	P	0.9

y = 1.2192E-004 * x + 3.6792E-006
R = 1.0000
DL = 0.02801
BEC = 0.03018

Weight: <None>
Min Conc: <None>

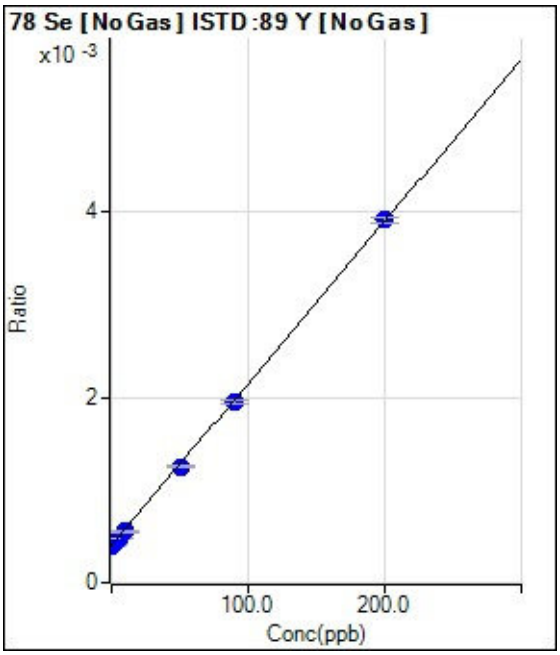
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8718.37	0.0002	P	3.9
2	☐	0.200	-1.549	7993.85	0.0002	P	7.7
3	☐	2.000	-2.662	7456.32	0.0002	P	1.8
4	☐	5.000	0.917	8154.07	0.0002	P	2.3
5	☐	10.000	6.591	9442.91	0.0002	P	1.7
6	☐	50.000	46.047	18905.70	0.0005	P	1.6
7	☐	90.000	86.058	28371.86	0.0007	P	1.7
8	☐	200.000	203.083	55750.65	0.0014	P	1.3

y = 5.8308E-006 * x + 1.9339E-004
R = 0.9996
DL = 3.849
BEC = 33.17

Weight: <None>
Min Conc: <None>

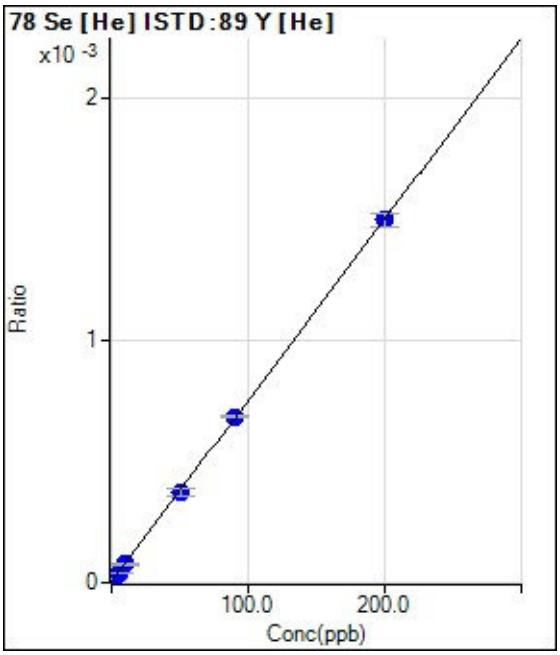


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18160.57	0.0004	P	2.8
2	☐	0.200	-0.670	16961.16	0.0004	P	0.4
3	☐	2.000	0.856	17515.78	0.0004	P	3.0
4	☐	5.000	4.357	19657.56	0.0005	P	2.7
5	☐	10.000	8.488	22461.42	0.0006	P	1.2
6	☐	50.000	48.410	51168.19	0.0013	P	1.8
7	☐	90.000	89.084	80069.85	0.0020	P	2.1
8	☐	200.000	200.914	158618.69	0.0039	P	1.3

y = 1.7501E-005 * x + 4.0287E-004
R = 1.0000
DL = 1.927
BEC = 23.02

Weight: <None>
Min Conc: <None>

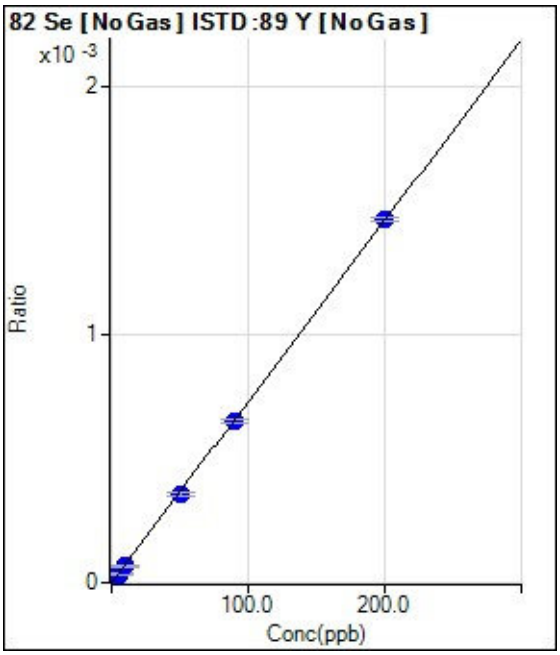
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0000	P	25.3
2	☐	0.200	0.347	41.11	0.0000	P	10.0
3	☐	2.000	1.956	106.67	0.0000	P	21.3
4	☐	5.000	4.846	223.34	0.0000	P	10.9
5	☐	10.000	9.697	420.01	0.0001	P	8.0
6	☐	50.000	49.284	2013.50	0.0004	P	7.2
7	☐	90.000	91.089	3678.29	0.0007	P	1.4
8	☐	200.000	199.708	8143.62	0.0015	P	3.6

y = 7.4685E-006 * x + 4.6038E-006
R = 1.0000
DL = 0.4673
BEC = 0.6164

Weight: <None>
Min Conc: <None>

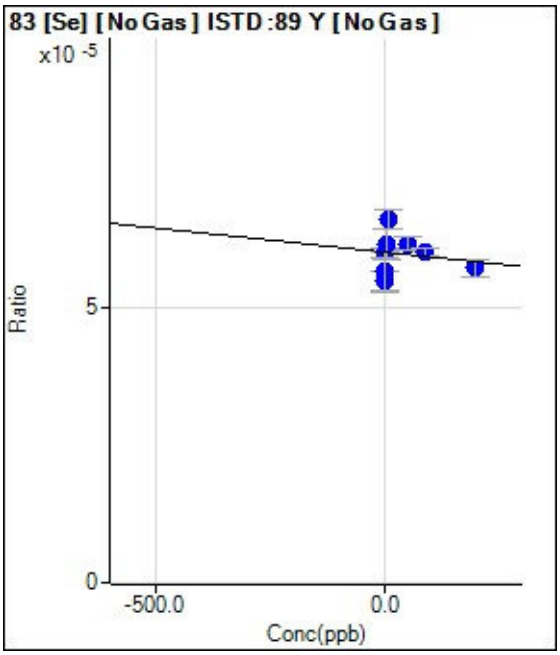


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-131.25	0.0000	P	-231.8
2	☐	0.200	1.237	265.58	0.0000	P	97.6
3	☐	2.000	3.034	806.31	0.0000	P	63.7
4	☐	5.000	4.290	1165.38	0.0000	P	26.2
5	☐	10.000	9.382	2669.32	0.0001	P	10.6
6	☐	50.000	49.084	14536.01	0.0004	P	3.1
7	☐	90.000	89.084	26398.64	0.0006	P	2.0
8	☐	200.000	200.678	59121.22	0.0015	P	1.0

y = 7.2935E-006 * x - 2.8883E-006
R = 0.9999
DL = 2.754
BEC = -0.396

Weight: <None>
Min Conc: <None>

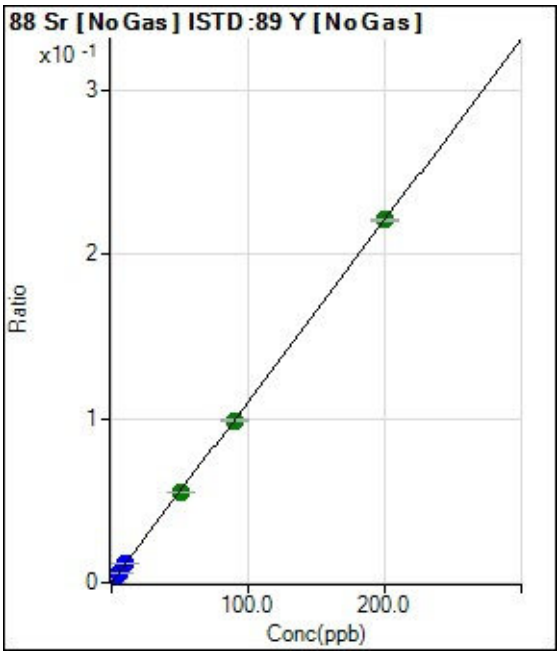
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2716.38	0.0001	P	2.9
2	☐	0.200	606.675	2382.63	0.0001	P	6.4
3	☐	2.000	418.303	2372.64	0.0001	P	13.0
4	☐	5.000	-159.504	2529.49	0.0001	P	9.3
5	☐	10.000	-667.825	2693.02	0.0001	P	5.2
6	☐	50.000	-167.867	2526.14	0.0001	P	4.1
7	☐	90.000	-0.796	2459.39	0.0001	P	1.8
8	☐	200.000	328.559	2322.57	0.0001	P	5.2

y = -8.7611E-009 * x + 6.0255E-005
R = -0.1750
DL = -596.9
BEC = -6878

Weight: <None>
Min Conc: <None>

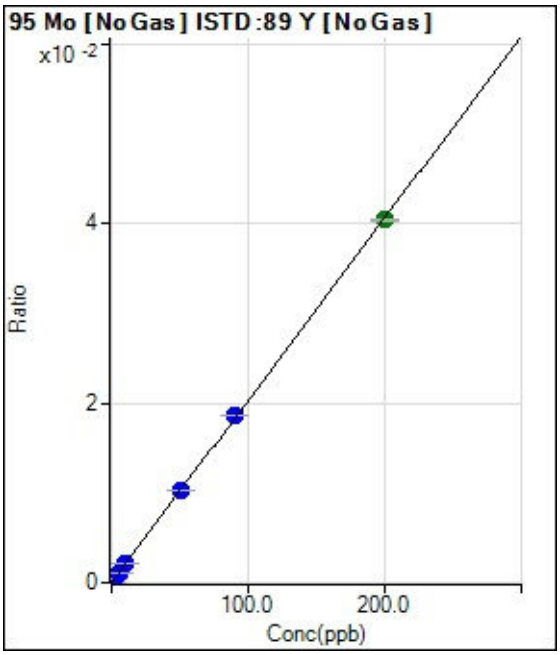


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2502.79	0.0001	P	4.8
2	☐	0.200	0.196	11813.87	0.0003	P	1.9
3	☐	2.000	1.995	94710.83	0.0023	P	0.6
4	☐	5.000	5.053	231316.37	0.0056	P	0.7
5	☐	10.000	10.153	459152.05	0.0113	P	0.6
6	☐	50.000	49.990	2262719.86	0.0553	A	0.5
7	☐	90.000	89.596	4042149.14	0.0990	A	0.6
8	☐	200.000	200.175	8952660.18	0.2212	A	0.2

y = 0.0011 * x + 5.5515E-005
R = 1.0000
DL = 0.007267
BEC = 0.05025

Weight: <None>
Min Conc: <None>

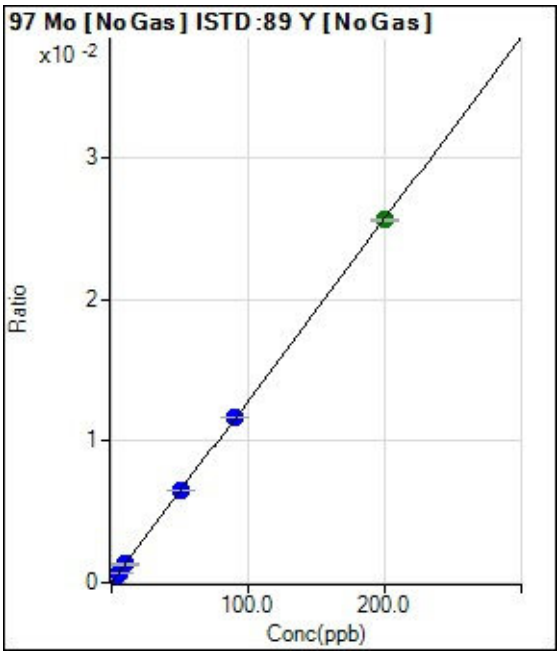
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	854.23	0.0000	P	14.1
2	☐	0.200	0.179	2399.33	0.0001	P	5.4
3	☐	2.000	1.995	17773.19	0.0004	P	3.8
4	☐	5.000	5.033	42707.90	0.0010	P	0.8
5	☐	10.000	10.012	83577.52	0.0021	P	0.3
6	☐	50.000	50.787	422862.62	0.0103	P	0.3
7	☐	90.000	91.452	758694.84	0.0186	P	0.3
8	☐	200.000	199.148	1637385.62	0.0405	A	0.3

y = 2.0304E-004 * x + 1.8954E-005
R = 1.0000
DL = 0.0396
BEC = 0.09335

Weight: <None>
Min Conc: <None>

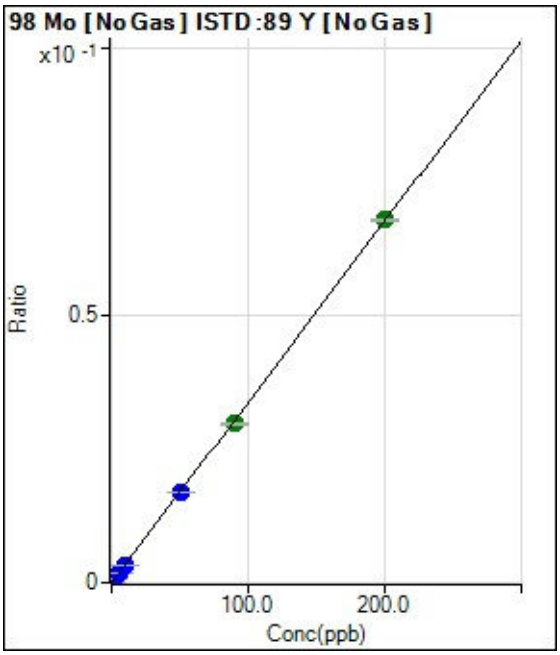


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.86	0.0000	P	6.6
2	☐	0.200	0.197	1581.71	0.0000	P	7.9
3	☐	2.000	1.890	10625.06	0.0003	P	2.4
4	☐	5.000	4.999	26743.82	0.0007	P	2.3
5	☐	10.000	9.995	52639.63	0.0013	P	1.0
6	☐	50.000	50.415	264945.96	0.0065	P	0.4
7	☐	90.000	90.861	475787.77	0.0117	P	0.8
8	☐	200.000	199.510	1035460.57	0.0256	A	0.5

y = 1.2817E-004 * x + 1.1180E-005
R = 1.0000
DL = 0.01727
BEC = 0.08723

Weight: <None>
Min Conc: <None>

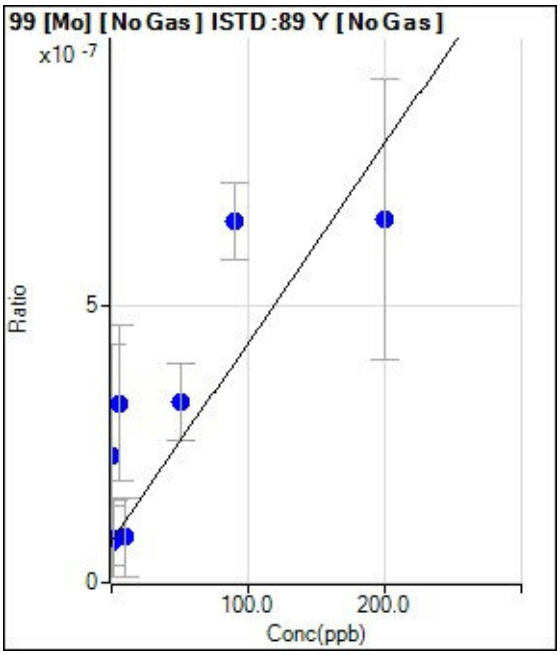
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1354.29	0.0000	P	7.7
2	☐	0.200	0.176	3883.06	0.0001	P	4.9
3	☐	2.000	1.943	28759.62	0.0007	P	0.6
4	☐	5.000	4.902	69119.28	0.0017	P	1.3
5	☐	10.000	9.852	136681.22	0.0034	P	0.5
6	☐	50.000	50.085	693176.00	0.0169	P	0.8
7	☐	90.000	87.836	1211285.11	0.0297	A	0.6
8	☐	200.000	200.963	2746639.73	0.0679	A	0.3

y = 3.3753E-004 * x + 3.0052E-005
R = 0.9999
DL = 0.0206
BEC = 0.08904

Weight: <None>
Min Conc: <None>

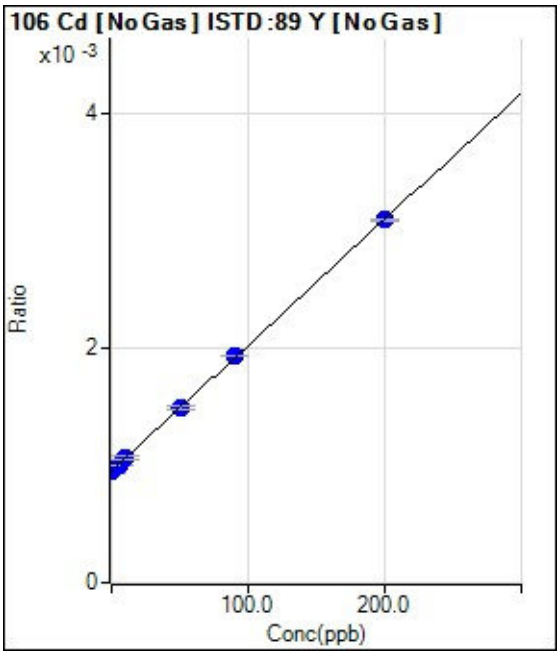


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.34	0.0000	P	173.2
2	☐	0.200	43.423	10.01	0.0000	P	173.2
3	☐	2.000	1.488	3.34	0.0000	P	173.2
4	☐	5.000	69.815	13.35	0.0000	P	86.6
5	☐	10.000	2.148	3.34	0.0000	P	173.2
6	☐	50.000	69.854	13.35	0.0000	P	42.8
7	☐	90.000	160.914	26.69	0.0000	P	21.2
8	☐	200.000	161.859	26.69	0.0000	P	77.4

y = 3.6006E-009 * x + 7.4101E-008
R = 0.8482
DL = 106.9
BEC = 20.58

Weight: <None>
Min Conc: <None>

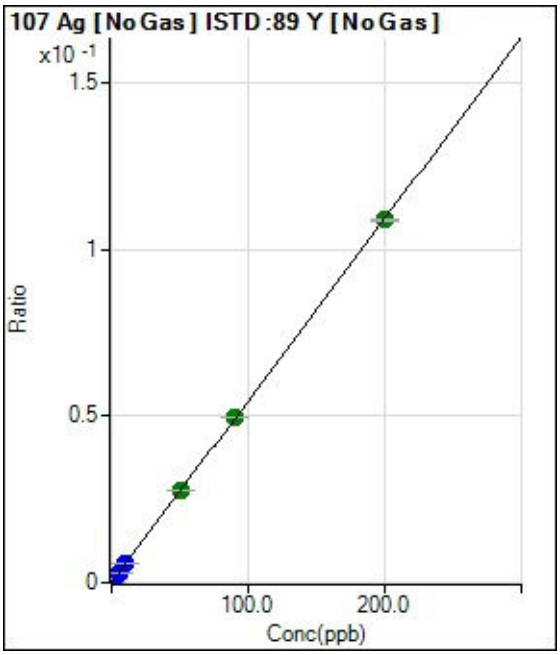
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43033.41	0.0010	P	2.3
2	☐	0.200	1.349	42019.01	0.0010	P	4.1
3	☐	2.000	2.771	41269.12	0.0010	P	2.3
4	☐	5.000	4.096	40971.44	0.0010	P	1.0
5	☐	10.000	10.633	43538.50	0.0011	P	1.9
6	☐	50.000	49.839	60994.62	0.0015	P	2.0
7	☐	90.000	91.532	79117.69	0.0019	P	0.4
8	☐	200.000	199.333	125350.33	0.0031	P	0.4

y = 1.0748E-005 * x + 9.5460E-004
R = 0.9999
DL = 6.152
BEC = 88.82

Weight: <None>
Min Conc: <None>

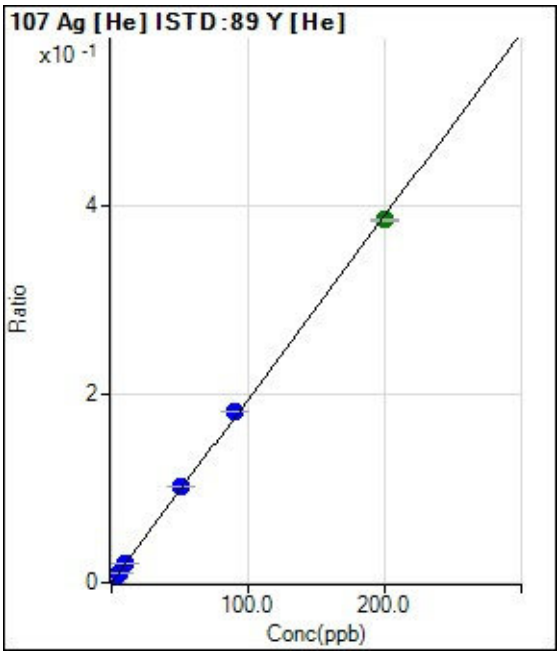


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1884.59	0.0000	P	7.4
2	☐	0.200	0.200	6534.98	0.0002	P	3.7
3	☐	2.000	2.020	47896.17	0.0011	P	1.1
4	☐	5.000	5.118	116097.73	0.0028	P	1.1
5	☐	10.000	10.301	230288.13	0.0057	P	0.7
6	☐	50.000	50.612	1130266.48	0.0276	A	0.7
7	☐	90.000	90.654	2017447.77	0.0494	A	0.4
8	☐	200.000	199.535	4401362.88	0.1087	A	0.3

y = 5.4478E-004 * x + 4.1804E-005
R = 1.0000
DL = 0.01706
BEC = 0.07674

Weight: <None>
Min Conc: <None>

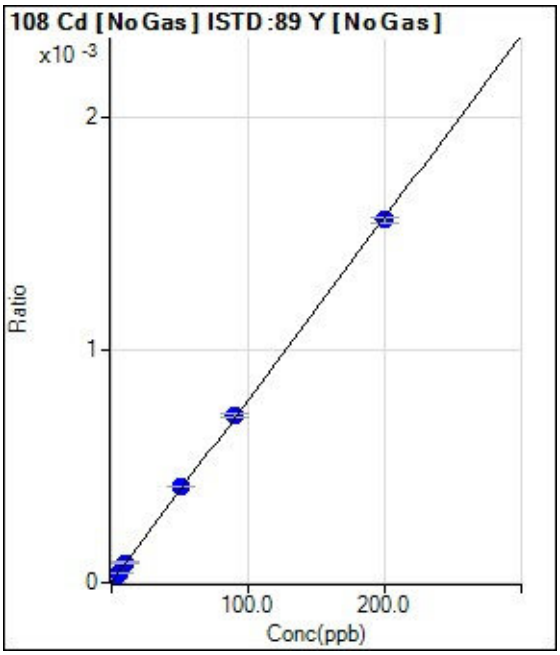
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	714.08	0.0001	P	12.2
2	☐	0.200	0.213	3036.77	0.0005	P	4.0
3	☐	2.000	2.050	22709.08	0.0041	P	3.6
4	☐	5.000	5.187	55779.62	0.0102	P	0.6
5	☐	10.000	10.245	109061.70	0.0200	P	1.0
6	☐	50.000	52.337	549566.47	0.1017	P	0.9
7	☐	90.000	93.348	973620.16	0.1813	P	0.8
8	☐	200.000	197.892	2091412.82	0.3842	A	0.2

y = 0.0019 * x + 1.1831E-004
R = 0.9997
DL = 0.02224
BEC = 0.06095

Weight: <None>
Min Conc: <None>

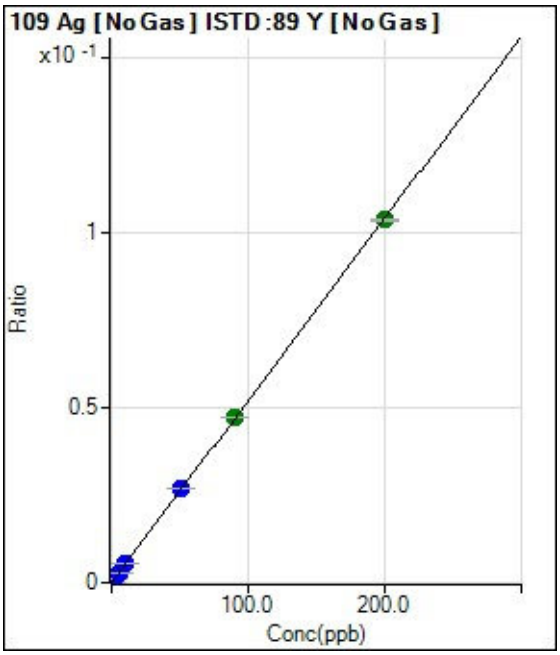


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.74	0.0000	P	20.3
2	☐	0.200	0.214	146.82	0.0000	P	4.1
3	☐	2.000	2.116	767.47	0.0000	P	27.9
4	☐	5.000	5.089	1708.52	0.0000	P	13.3
5	☐	10.000	10.677	3484.02	0.0001	P	5.0
6	☐	50.000	52.299	16877.89	0.0004	P	0.4
7	☐	90.000	91.614	29435.85	0.0007	P	2.8
8	☐	200.000	198.662	63203.65	0.0016	P	1.8

y = 7.8518E-006 * x + 1.7035E-006
R = 0.9999
DL = 0.132
BEC = 0.217

Weight: <None>
Min Conc: <None>

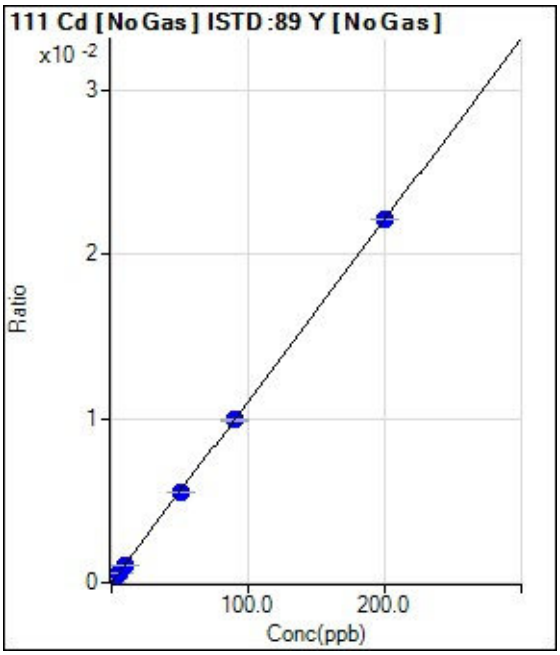
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1661.80	0.0000	P	6.2
2	☐	0.200	0.187	5803.85	0.0001	P	2.6
3	☐	2.000	2.023	45560.94	0.0011	P	1.1
4	☐	5.000	5.137	110901.64	0.0027	P	0.5
5	☐	10.000	10.344	220210.04	0.0054	P	0.1
6	☐	50.000	51.758	1101136.06	0.0269	P	0.8
7	☐	90.000	90.519	1919313.17	0.0470	A	0.3
8	☐	200.000	199.306	4188661.69	0.1035	A	0.4

y = 5.1906E-004 * x + 3.6872E-005
R = 1.0000
DL = 0.01315
BEC = 0.07104

Weight: <None>
Min Conc: <None>

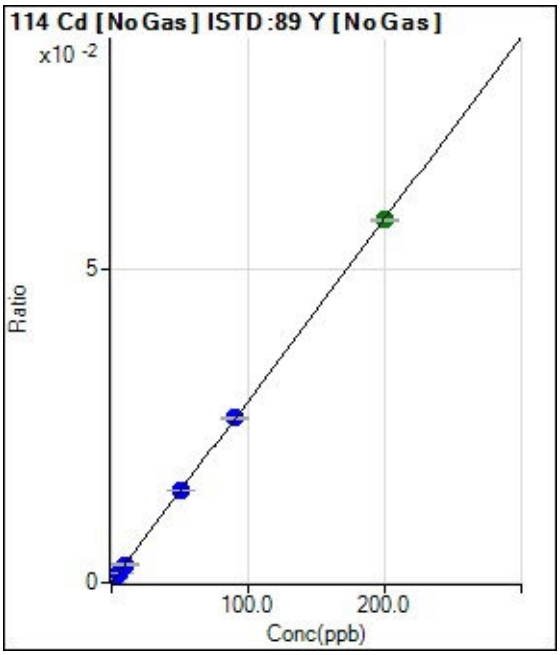


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-74.57	0.0000	P	-28.0
2	☐	0.200	0.192	848.06	0.0000	P	3.8
3	☐	2.000	1.939	8923.47	0.0002	P	1.2
4	☐	5.000	4.948	22394.50	0.0005	P	0.3
5	☐	10.000	9.975	44889.61	0.0011	P	0.3
6	☐	50.000	50.171	227150.78	0.0055	P	0.6
7	☐	90.000	89.922	406014.23	0.0099	P	0.9
8	☐	200.000	199.996	895577.86	0.0221	P	0.1

y = 1.1064E-004 * x - 1.6558E-006
R = 1.0000
DL = 0.01259
BEC = -0.01497

Weight: <None>
Min Conc: <None>

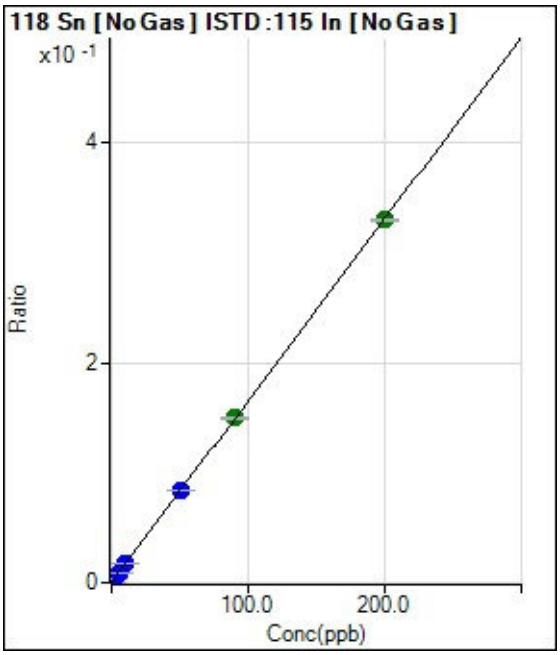
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.40	0.0000	P	65.8
2	☐	0.200	0.190	2446.05	0.0001	P	6.9
3	☐	2.000	1.981	24133.26	0.0006	P	3.2
4	☐	5.000	5.065	60301.22	0.0015	P	0.5
5	☐	10.000	10.000	118152.64	0.0029	P	1.7
6	☐	50.000	50.507	599431.97	0.0146	P	0.5
7	☐	90.000	90.690	1073223.80	0.0263	P	0.9
8	☐	200.000	199.562	2341883.55	0.0579	A	0.4

y = 2.8992E-004 * x + 1.4078E-006
R = 1.0000
DL = 0.009589
BEC = 0.004856

Weight: <None>
Min Conc: <None>

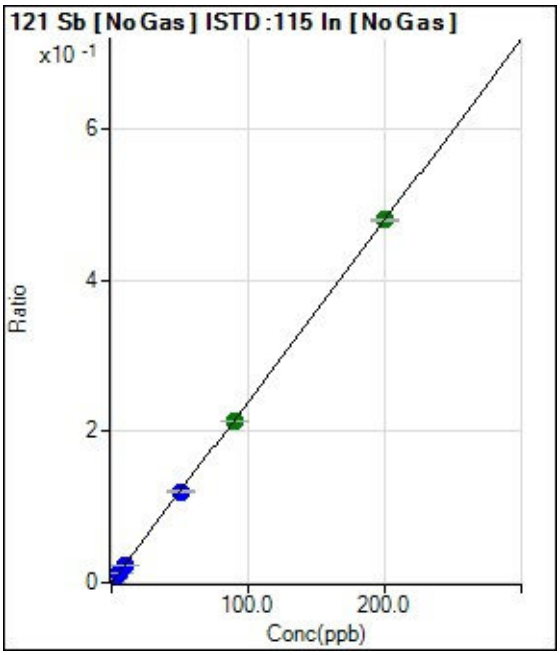


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3144.85	0.0003	P	4.9
2	☐	0.200	0.167	5651.24	0.0006	P	1.0
3	☐	2.000	1.966	32612.55	0.0036	P	0.9
4	☐	5.000	4.938	76093.15	0.0085	P	1.3
5	☐	10.000	10.015	150834.73	0.0169	P	0.6
6	☐	50.000	51.030	756004.54	0.0846	P	0.4
7	☐	90.000	90.385	1326464.18	0.1496	A	0.3
8	☐	200.000	199.570	2892257.66	0.3300	A	0.3

y = 0.0017 * x + 3.2652E-004
R = 1.0000
DL = 0.02898
BEC = 0.1977

Weight: <None>
Min Conc: <None>

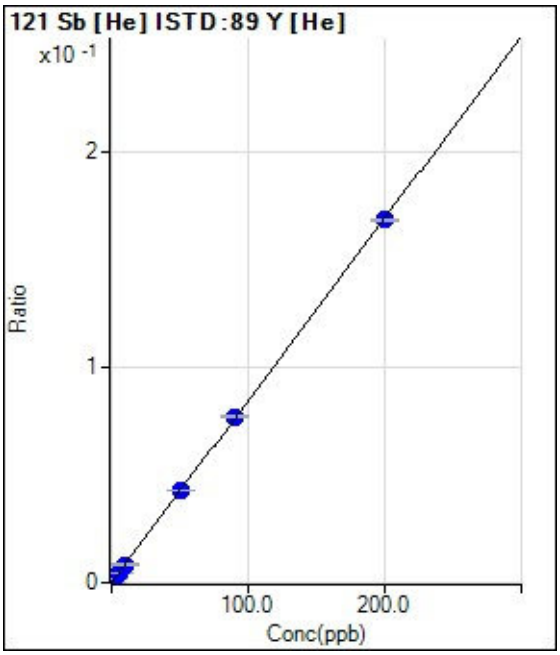
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1371.19	0.0001	P	14.2
2	☐	0.200	0.186	5518.97	0.0006	P	5.1
3	☐	2.000	1.953	43977.80	0.0048	P	1.0
4	☐	5.000	4.921	106956.11	0.0119	P	1.1
5	☐	10.000	9.823	211549.76	0.0237	P	0.9
6	☐	50.000	50.336	1078055.83	0.1207	P	0.5
7	☐	90.000	89.216	1894940.20	0.2138	A	0.6
8	☐	200.000	200.280	4204507.61	0.4797	A	0.3

y = 0.0024 * x + 1.4232E-004
R = 1.0000
DL = 0.02538
BEC = 0.05944

Weight: <None>
Min Conc: <None>

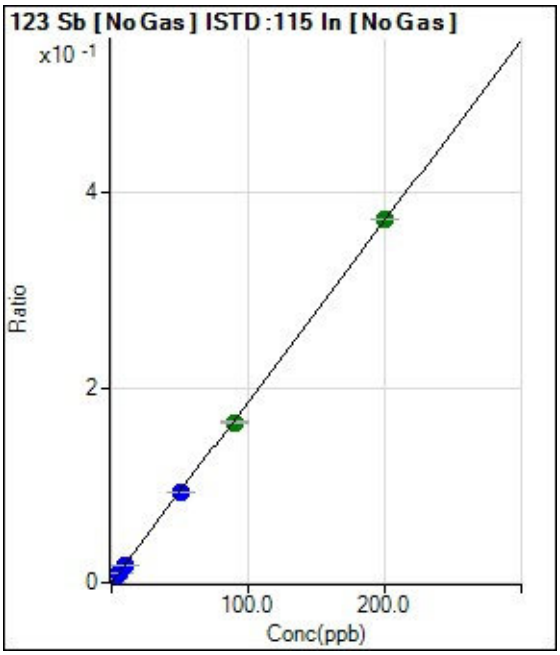


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	416.68	0.0001	P	4.0
2	☐	0.200	0.183	1276.75	0.0002	P	13.9
3	☐	2.000	1.962	9563.67	0.0017	P	0.8
4	☐	5.000	4.966	23331.00	0.0043	P	0.5
5	☐	10.000	9.923	46041.02	0.0084	P	2.4
6	☐	50.000	50.818	232153.06	0.0430	P	0.5
7	☐	90.000	91.143	413483.64	0.0770	P	0.7
8	☐	200.000	199.286	915947.67	0.1683	P	0.6

y = 8.4405E-004 * x + 6.9033E-005
R = 1.0000
DL = 0.00985
BEC = 0.08179

Weight: <None>
Min Conc: <None>

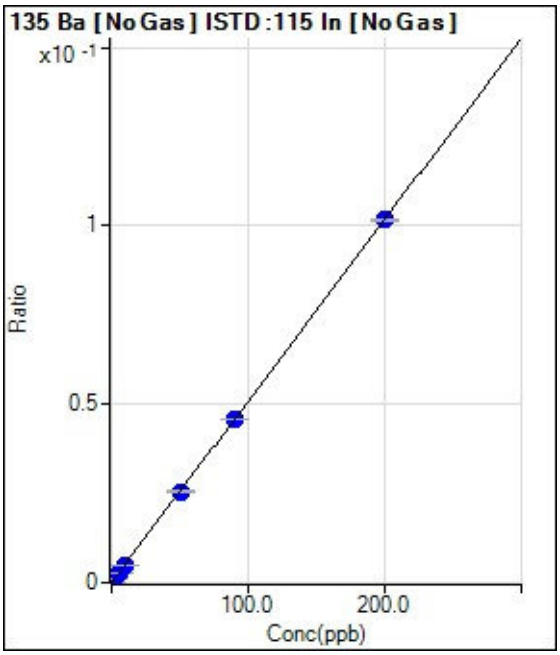
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1728.54	0.0002	P	12.4
2	☐	0.200	0.176	4749.03	0.0005	P	1.1
3	☐	2.000	1.918	34132.02	0.0037	P	2.2
4	☐	5.000	4.926	83622.09	0.0093	P	0.4
5	☐	10.000	9.724	162967.35	0.0182	P	1.0
6	☐	50.000	49.913	829274.23	0.0928	P	1.0
7	☐	90.000	88.708	1461163.72	0.1648	A	0.6
8	☐	200.000	200.620	3265338.26	0.3725	A	0.0

y = 0.0019 * x + 1.7944E-004
R = 1.0000
DL = 0.03606
BEC = 0.09668

Weight: <None>
Min Conc: <None>

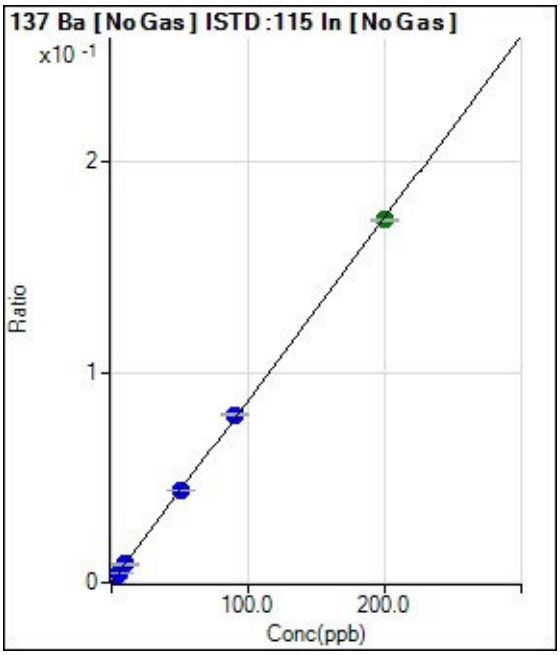


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	497.18	0.0001	P	23.6
2	☐	0.200	0.192	1398.16	0.0001	P	6.2
3	☐	2.000	1.985	9673.41	0.0011	P	3.2
4	☐	5.000	4.965	23087.11	0.0026	P	0.9
5	☐	10.000	9.836	45136.90	0.0050	P	0.9
6	☐	50.000	49.917	227006.73	0.0254	P	1.4
7	☐	90.000	90.097	406186.68	0.0458	P	0.7
8	☐	200.000	199.986	890871.19	0.1016	P	0.6

y = 5.0797E-004 * x + 5.1601E-005
R = 1.0000
DL = 0.07205
BEC = 0.1016

Weight: <None>
Min Conc: <None>

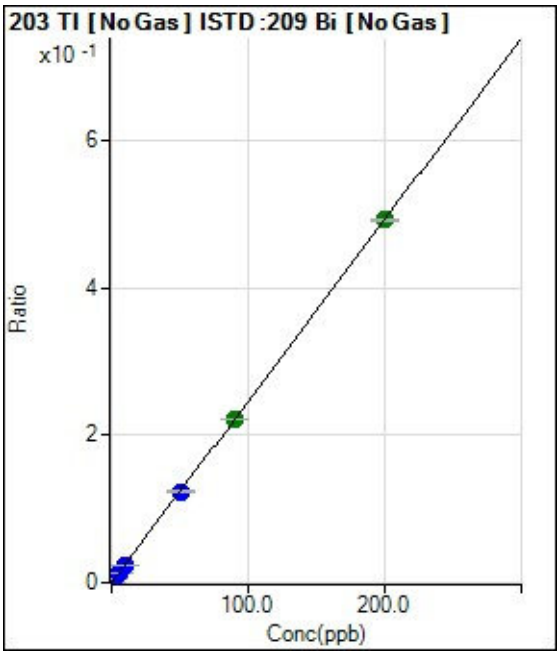
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	827.54	0.0001	P	13.5
2	☐	0.200	0.210	2509.46	0.0003	P	3.7
3	☐	2.000	2.009	16674.22	0.0018	P	4.2
4	☐	5.000	4.983	39509.94	0.0044	P	1.6
5	☐	10.000	9.926	77688.47	0.0087	P	0.4
6	☐	50.000	50.956	395317.90	0.0442	P	0.1
7	☐	90.000	91.905	706857.35	0.0797	P	0.8
8	☐	200.000	198.908	1511715.36	0.1725	A	0.2

y = 8.6663E-004 * x + 8.5905E-005
R = 0.9999
DL = 0.04004
BEC = 0.09913

Weight: <None>
Min Conc: <None>

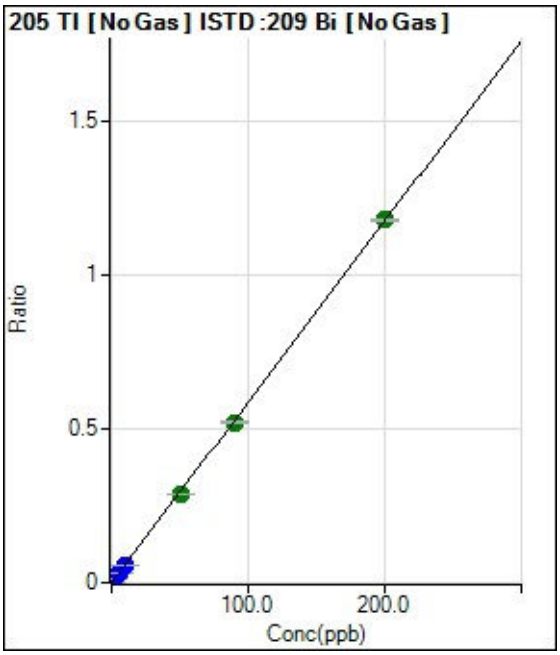


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	553.91	0.0001	P	16.7
2	☐	0.200	0.183	4091.50	0.0005	P	2.8
3	☐	2.000	1.945	37674.73	0.0049	P	1.2
4	☐	5.000	4.911	92788.88	0.0121	P	1.5
5	☐	10.000	9.831	185606.78	0.0242	P	0.5
6	☐	50.000	50.135	943699.71	0.1234	P	1.0
7	☐	90.000	89.977	1674075.17	0.2214	A	0.7
8	☐	200.000	199.988	3616373.78	0.4919	A	0.7

y = 0.0025 * x + 7.0757E-005
R = 1.0000
DL = 0.01442
BEC = 0.02877

Weight: <None>
Min Conc: <None>

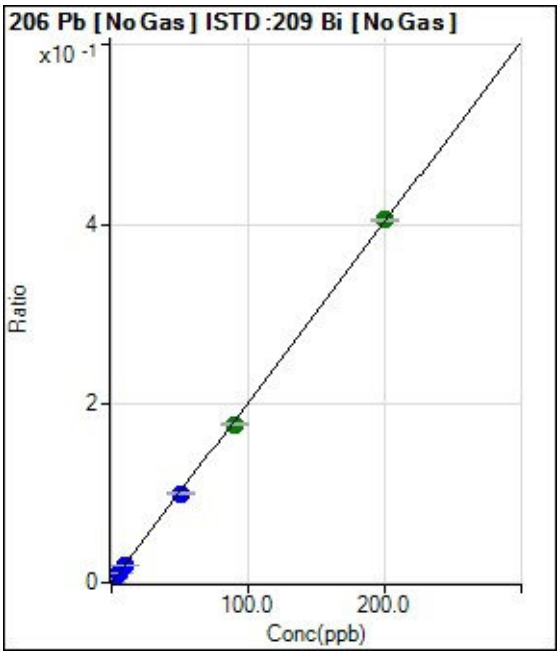
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1408.18	0.0002	P	22.9
2	☐	0.200	0.179	9663.53	0.0012	P	0.2
3	☐	2.000	1.917	88574.63	0.0114	P	2.4
4	☐	5.000	4.885	220068.04	0.0288	P	0.8
5	☐	10.000	9.747	438624.96	0.0573	P	0.9
6	☐	50.000	49.036	2199745.90	0.2876	A	0.9
7	☐	90.000	88.676	3931978.03	0.5199	A	1.2
8	☐	200.000	200.853	8655420.85	1.1774	A	0.5

y = 0.0059 * x + 1.7963E-004
R = 1.0000
DL = 0.02106
BEC = 0.03065

Weight: <None>
Min Conc: <None>

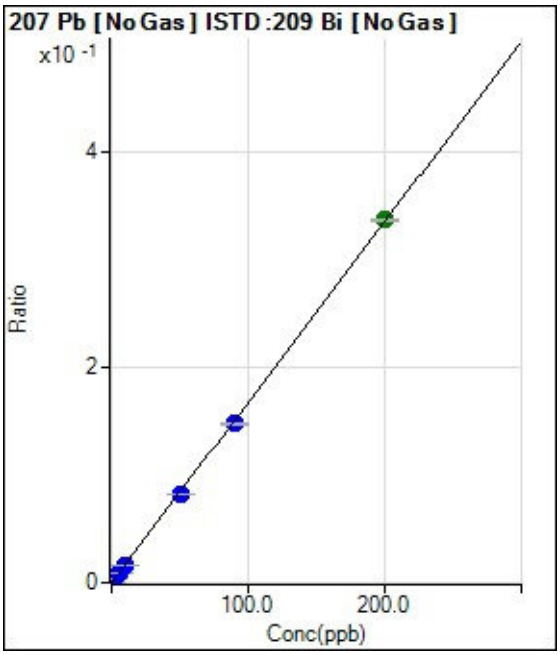


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1738.56	0.0002	P	7.8
2	☐	0.200	0.183	4638.92	0.0006	P	1.5
3	☐	2.000	1.917	31655.29	0.0041	P	1.1
4	☐	5.000	4.812	75657.47	0.0099	P	1.4
5	☐	10.000	9.730	151552.31	0.0198	P	0.1
6	☐	50.000	49.315	760676.12	0.0995	P	0.8
7	☐	90.000	87.857	1338571.86	0.1770	A	1.3
8	☐	200.000	201.155	2976967.28	0.4050	A	0.9

y = 0.0020 * x + 2.2197E-004
R = 0.9999
DL = 0.02581
BEC = 0.1103

Weight: <None>
Min Conc: <None>

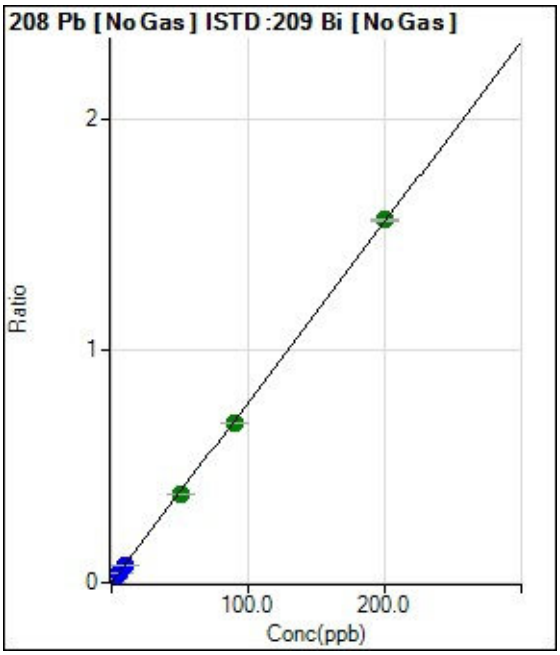
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1281.38	0.0002	P	5.0
2	☐	0.200	0.197	3877.87	0.0005	P	7.6
3	☐	2.000	1.887	25829.41	0.0033	P	1.3
4	☐	5.000	4.769	62357.93	0.0082	P	1.2
5	☐	10.000	9.592	124399.90	0.0163	P	0.9
6	☐	50.000	49.127	631579.16	0.0826	P	0.5
7	☐	90.000	87.955	1116995.46	0.1477	P	0.7
8	☐	200.000	201.166	2481793.05	0.3376	A	0.9

y = 0.0017 * x + 1.6360E-004
R = 0.9999
DL = 0.01465
BEC = 0.09753

Weight: <None>
Min Conc: <None>

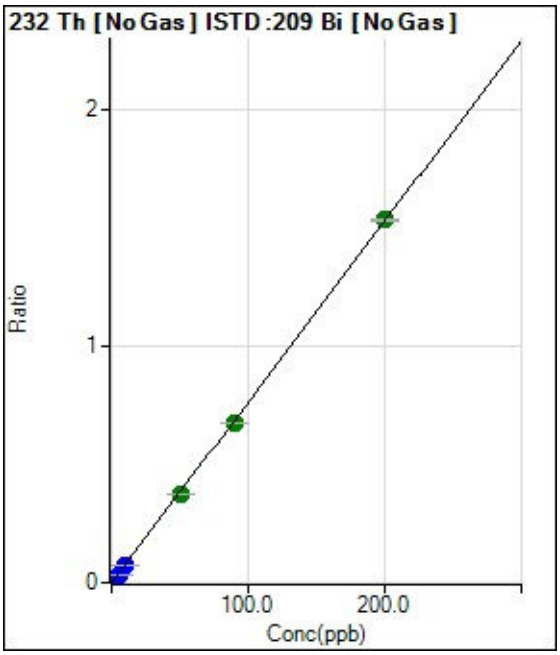


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6440.57	0.0008	P	3.4
2	☐	0.200	0.192	18203.77	0.0023	P	2.0
3	☐	2.000	1.930	122777.42	0.0158	P	0.5
4	☐	5.000	4.844	293892.21	0.0385	P	0.5
5	☐	10.000	9.795	589049.01	0.0770	P	0.8
6	☐	50.000	49.048	2922380.77	0.3821	A	0.6
7	☐	90.000	88.269	5194847.43	0.6869	A	0.9
8	☐	200.000	201.032	11493054.64	1.5634	A	0.6

y = 0.0078 * x + 8.2234E-004
R = 0.9999
DL = 0.01077
BEC = 0.1058

Weight: <None>
Min Conc: <None>

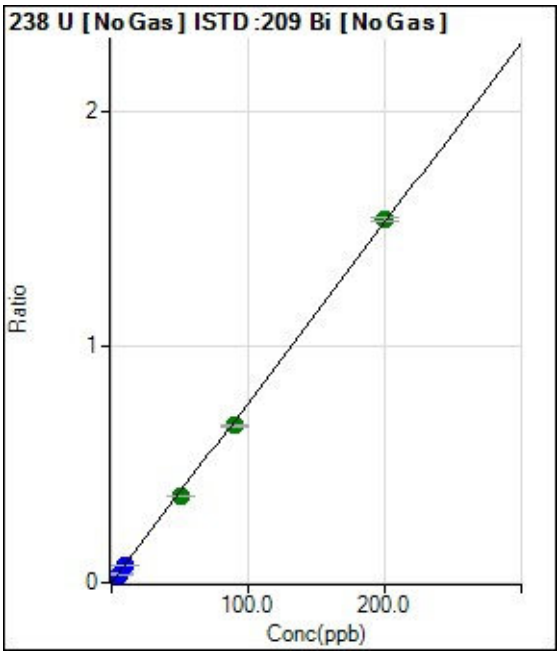
Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7686.94	0.0010	P	12.1
2	☐	0.200	0.133	15679.29	0.0020	P	3.3
3	☐	2.000	1.690	107794.48	0.0139	P	0.1
4	☐	5.000	4.520	271232.76	0.0355	P	0.6
5	☐	10.000	9.356	554537.91	0.0724	P	0.9
6	☐	50.000	48.793	2858323.85	0.3737	A	0.5
7	☐	90.000	88.635	5127369.36	0.6780	A	0.1
8	☐	200.000	200.963	11291585.78	1.5360	A	0.5

y = 0.0076 * x + 9.8105E-004
R = 1.0000
DL = 0.04653
BEC = 0.1284

Weight: <None>
Min Conc: <None>

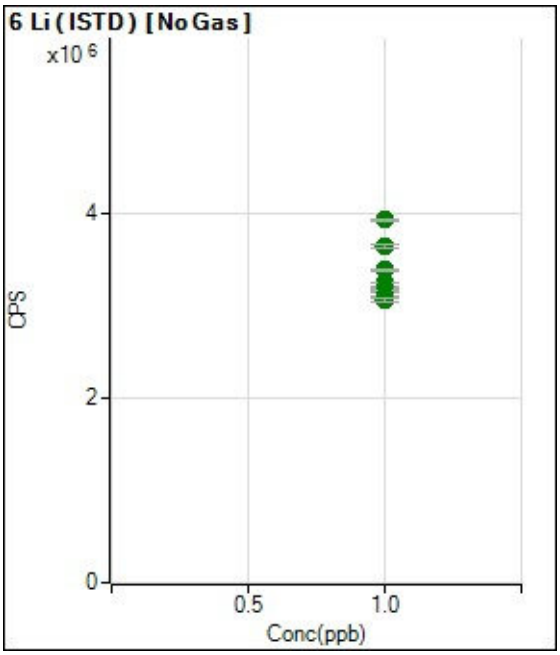


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1137.88	0.0001	P	1.0
2	☐	0.200	0.179	11871.14	0.0015	P	1.4
3	☐	2.000	1.865	111623.27	0.0144	P	1.9
4	☐	5.000	4.760	278731.54	0.0365	P	2.0
5	☐	10.000	9.490	555721.95	0.0726	P	0.2
6	☐	50.000	48.181	2815048.49	0.3680	A	0.7
7	☐	90.000	87.463	5051422.37	0.6680	A	1.0
8	☐	200.000	201.629	11318671.61	1.5397	A	0.9

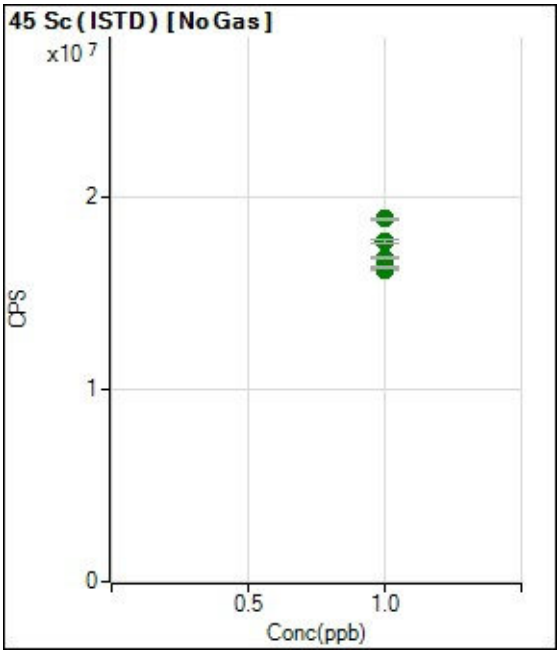
y = 0.0076 * x + 1.4531E-004
R = 0.9999
DL = 0.0005698
BEC = 0.01903

Weight: <None>
Min Conc: <None>

Calibration for 281_ICV.d

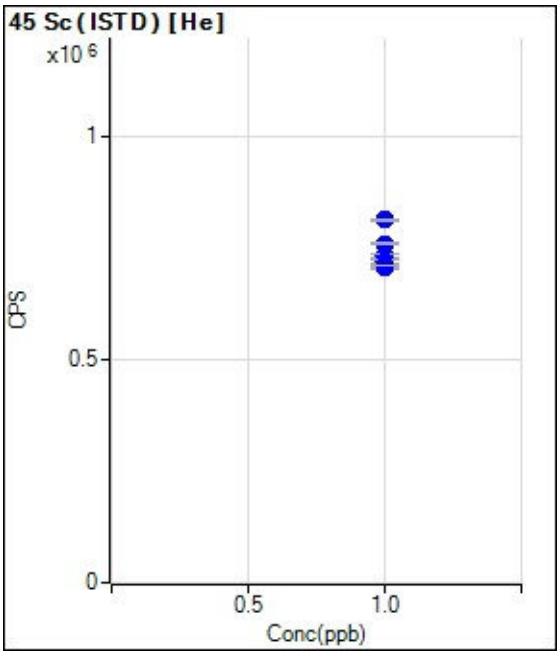


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3926441.81		A	0.4
2	☐	1.000		3635966.23		A	0.9
3	☐	1.000		3381971.07		A	1.0
4	☐	1.000		3252193.21		A	0.2
5	☐	1.000		3191948.87		A	1.0
6	☐	1.000		3158736.51		A	0.6
7	☐	1.000		3093955.47		A	0.4
8	☐	1.000		3053631.83		A	1.1

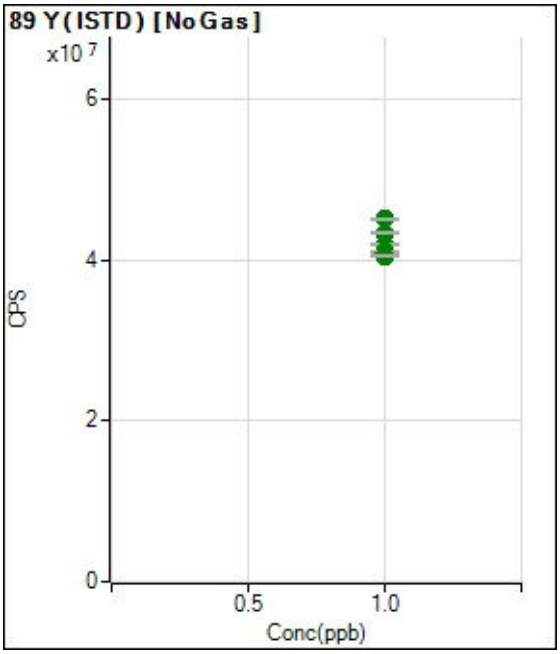


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		18873842.21		A	0.4
2	☐	1.000		17711567.85		A	0.6
3	☐	1.000		16853029.73		A	0.4
4	☐	1.000		16343538.57		A	0.3
5	☐	1.000		16274780.65		A	0.7
6	☐	1.000		16288905.61		A	0.5
7	☐	1.000		16238510.21		A	0.8
8	☐	1.000		16354504.95		A	0.7

Calibration for 281_ICV.d

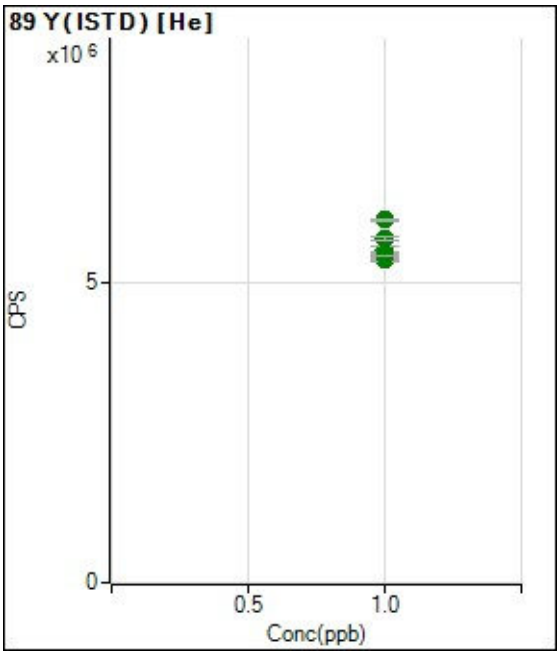


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		814336.22		P	0.9
2	☐	1.000		761008.46		P	0.9
3	☐	1.000		732648.75		P	0.9
4	☐	1.000		720921.46		P	0.7
5	☐	1.000		708436.31		P	0.3
6	☐	1.000		711710.89		P	0.4
7	☐	1.000		706123.72		P	0.5
8	☐	1.000		712984.07		P	0.3

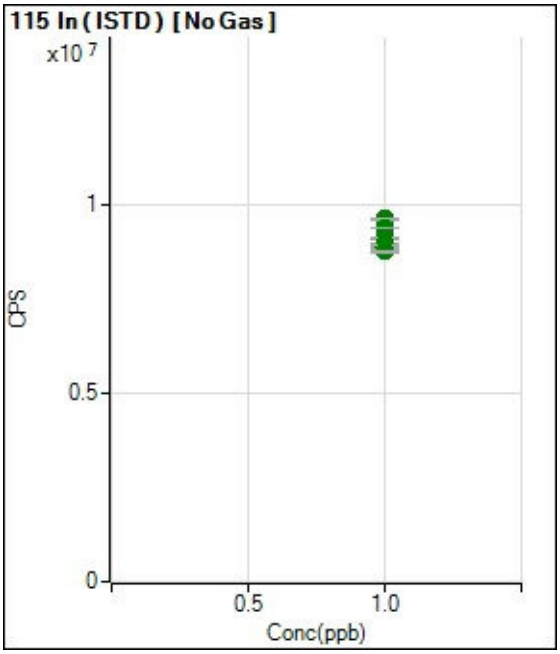


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		45077078.84		A	0.5
2	☐	1.000		43362679.43		A	0.3
3	☐	1.000		41921637.56		A	0.4
4	☐	1.000		41026828.58		A	0.4
5	☐	1.000		40734051.63		A	0.3
6	☐	1.000		40932445.86		A	0.7
7	☐	1.000		40817297.38		A	1.2
8	☐	1.000		40474578.00		A	0.8

Calibration for 281_ICV.d

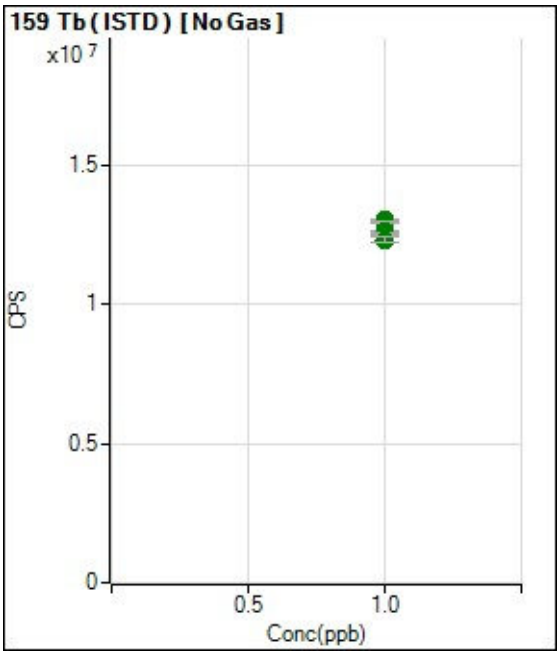


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6036502.97		A	0.5
2	☐	1.000		5715590.81		A	1.1
3	☐	1.000		5543228.86		A	1.5
4	☐	1.000		5476565.12		A	1.1
5	☐	1.000		5452071.46		A	0.4
6	☐	1.000		5403620.72		A	0.3
7	☐	1.000		5370191.04		A	0.8
8	☐	1.000		5443137.73		A	0.2

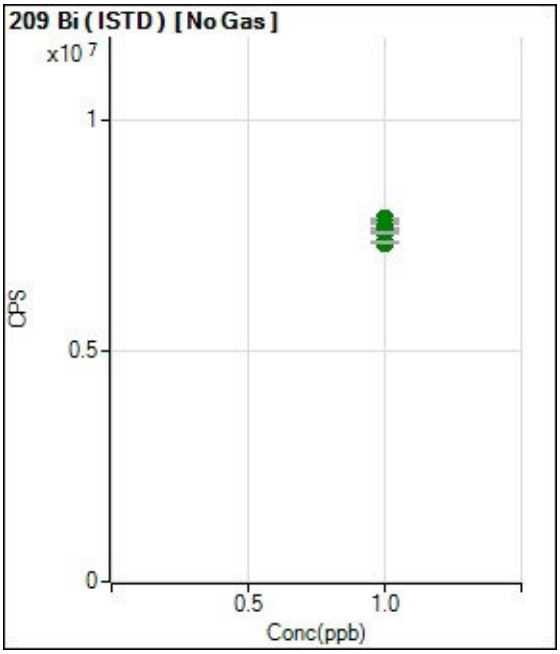


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9630269.52		A	0.5
2	☐	1.000		9381933.67		A	0.2
3	☐	1.000		9127156.73		A	0.5
4	☐	1.000		8970333.74		A	0.6
5	☐	1.000		8941695.69		A	1.1
6	☐	1.000		8934506.32		A	0.1
7	☐	1.000		8865581.88		A	1.2
8	☐	1.000		8765372.59		A	0.6

Calibration for 281_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13043986.51		A	0.6
2	☐	1.000		12982718.16		A	0.6
3	☐	1.000		12649396.51		A	0.3
4	☐	1.000		12489192.97		A	0.2
5	☐	1.000		12456412.27		A	0.6
6	☐	1.000		12523549.83		A	0.4
7	☐	1.000		12530835.03		A	0.6
8	☐	1.000		12335105.96		A	1.5

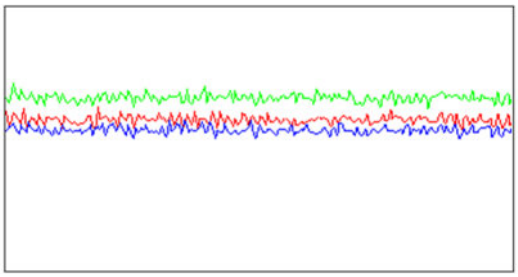


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7831047.47		A	0.8
2	☐	1.000		7858278.02		A	0.2
3	☐	1.000		7759070.81		A	0.4
4	☐	1.000		7638515.81		A	0.7
5	☐	1.000		7654145.53		A	0.4
6	☐	1.000		7648986.92		A	0.5
7	☐	1.000		7562299.14		A	0.6
8	☐	1.000		7351374.15		A	1.1

Performance Report

Operator Name	ALSHN ICPMS
Acq. Date-Time	2020-12-01 13:04:02
Instrument Name	G8421A JP17200678
Sample Introduction	ISIS
Nebulizer Type	MicroMist
Ion Lens Model	x-Lens
Tune Parameters	Standard Tune

Sensitivity



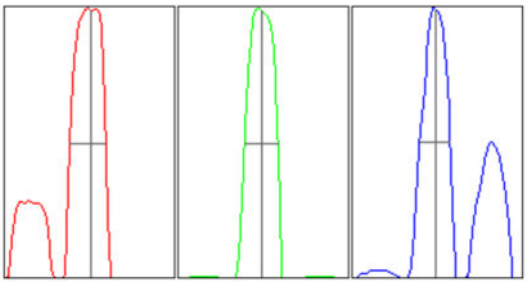
Mass	Range	Count	RSD%	Background
7	5000	2869	2.881	0.550
89	10000	6577	2.493	0.200
205	10000	5354	2.706	17.650

Sampling Period [sec]	0.311
Integration Time [sec]	0.1

Oxide/Doubly Charged Ratio

Oxide	156 / 140 1.181 %
Doubly Charged	70 / 140 2.975 %

Resolution/Axis



Mass	Peak Height	Axis	W-50%	W-10%
7	2862.98	7.05	0.64	0.76
89	6513.43	89.00	0.60	0.74
205	5349.10	205.00	0.55	0.74

Integration Time [sec]	0.1
Acquisition Time [sec]	22.74

Tune Parameters

Plasma Parameters

RF Power	1550 W	Option Gas	---	Makeup Gas	0.00 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Auxiliary Gas	0.90 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C	Plasma Gas	15.0 L/min
Nebulizer Gas	1.01 L/min				

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.4 V	Deflect	13.0 V
Extract 2	-150.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-80 V	Cell Exit	-50 V		

Performance Report

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

QP Bias	-3.0 V

Hardware Settings

Torch

Torch H	0.1 mm	Torch H (Hot)	---	Torch H (Cool)	---
Torch V	-0.7 mm	Torch V (Hot)	---	Torch V (Cool)	---

Plasma Correction

Nebulizer Gas Offset	-0.04 L/min	Makeup Gas (Hot)	---	Makeup Gas (Cool)	---
		Sample Depth (Hot)	---		

Resolution/Axis

Mass Gain	128	Axis Gain	0.9994		
Mass Offset	125	Axis Offset	0.06		

EM

Discriminator	4.4 mV	Analog HV	2201 V	Pulse HV	910 V

Performance Report

Meter

Name	Value	Unit
Nebulizer Gas	1.01	L/min
MU./Dil. Gas	0.00	L/min
Plasma Gas	15.01	L/min
Aux Gas	0.90	L/min
Ar Gas Tank Press	7.48E+2	kPa
+5V (Press Gage)	5.0	V
Ar AMFC Temp	25.4	°C
Nebulizer Gas(DP)	5.43E+0	kPa
MU./Dil. Gas(DP)	-4.63E-2	kPa
Aux Gas(DP)	1.30E+1	kPa
Plasma Gas(DP)	1.19E+1	kPa
Nebulizer Gas(BP)	3.32E+2	kPa
MU./Dil. Gas(BP)	-3.40E+0	kPa
Aux Gas(BP)	4.32E+1	kPa
Plasma Gas(BP)	3.46E+1	kPa
S/C Temp (H)	20.2	°C
S/C Temp (L)	2.0	°C
Peltier Voltage	3.6	V
IF/BK Press	2.76E+2	Pa
Analyzer Press	5.30E-5	Pa
IG HV	176	V
IG Emission	4.95	µA
TMP Revolution	100.0	%
TMP Rev (RAW)	101.1	%
TMP Current	3.20	A
PWR AMP Drain I	0.2	A
PWR AMP Bias	4.06	V
OctP RF (Avg)	203.7	V
OctP RF Set	4.0	V
OctP FET Bias Set	3.96	V
OctP RF(+)	190.2	V
OctP RF(-)	217.5	V
OctP Bias	-7.9	V
Cell Temp.	65.0	°C
Cell Heater Volt.	3.6	V
+U Voltage	175.4	V

Name	Value	Unit
-U Voltage	-181.4	V
V Voltage	787.5	V
QPRF Fader	0.5	V
Pickup Temp	55.0	°C
PWR Amp Temp	0.1	V
+600V	614.5	V
-120V	-133.4	V
-720V	-736.5	V
Prefilter Bias	-5.06	V
Pickup Heater I	0.06	A
QP PS +48V	47.5	V
QP PS +48V I	0.00	A
Analog HV	-2219	V
Pulse HV	918	V
EM Gate	-47.4	V
Pulse Gate	207.3	V
EM Entrance	0.1	V
EM HV Gain	-827.2	V
Inner Pole	-300.2	V
Outer Pole	20.0	V
Analog -5V	-5.1	V
Analog +15V	14.6	V
Analog -15V	-14.4	V
Analog +5V	5.2	V
Shunt C Pos	1.6	V
Drain Volt.(max)	64.6	V
RF PS +48V	47.1	V
Forward Power	1552	W
Reflected Power	0	W
Plasma Freq.	27.09	MHz
Drain I 1	11.36	A
Drain I 2	10.31	A
Drain I 3	10.40	A
Drain I 4	10.58	A
Temp Sensor	2.9	V
Driver I	4.30	A

Name	Value	Unit
Igniter	0.0	V
Driver Voltage Set	6.6	V
Unbalance Current	0.13	A
PWM Threshold Set	0.1	V
Driver Voltage	5.3	V
PWM Threshold	0.1	V
Phase Detector	-7.8	mV
He Gas	0.04	mL/min
He Gas Press	2.18E-1	kPa
ORS AMFC Temp	27.5	°C
Atmospheric Press	9.76E+1	kPa
Extract 1	0.0	V
Extract 2	-150.2	V
Omega Bias	-79.9	V
Omega Lens	8.4	V
Cell Entrance	-30.0	V
Cell Exit	-50.3	V
Deflect	13.1	V
Plate Bias	-35.0	V
HV+530V	521	V
HV+240V	237	V
HV-360V	-356	V
Inlet Temp	25.2	°C
Internal Temp	32.3	°C
+24V	23.4	V
Water Temp	21.1	°C
Water RF/WC/IF	1.58	L/min
ISIS 3 Pump Speed	0.0	%
Valve Position		
Tune/ISTD Valve		

Performance Report History

Sensitivity

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-12-01 13:04:02	2869	6577	5354
2020-12-01 12:32:55	2535	10471	5422
2020-11-30 12:15:10	4375	53591	6109
2020-11-25 13:43:34	4328	9823	5363
2020-11-25 12:08:17	3809	8645	6001
2020-11-24 12:09:17	4324	12347	7584
2020-11-23 11:50:06	3034	42138	8098
2020-11-23 11:38:36	3314	57723	8410
2020-11-20 11:49:48	5464	16984	7451
2020-11-19 22:38:32	5083	29635	7105
2020-11-19 22:12:06	5103	27003	6960
2020-11-19 20:45:43	4347	32149	5434
2020-11-19 20:03:01	3585	18619	5089
2020-11-19 19:23:01	3949	19717	5928
2020-11-19 18:43:36	3514	18121	6550
2020-11-19 17:33:58	3807	21854	7269
2020-11-19 15:22:58	3372	9203	6291
2020-11-19 15:10:53	3488	16204	6439
2020-11-19 14:53:10	3591	10734	6362
2020-11-18 11:54:13	1205	3826	2617
2020-11-17 11:15:31	1278	4273	2515
2020-11-16 13:44:07	1502	3059	2375
2020-11-16 13:09:13	1612	30454	2447
2020-11-13 11:20:44	1592	4157	2527
2020-11-12 14:37:14	1511	3607	2249
2020-11-12 13:53:08	1414	2984	1983
2020-11-12 12:32:41	931	2818	2004
2020-11-11 12:53:39	3414	5572	3330
2020-11-11 11:44:42	2763	5635	3242
2020-11-10 13:55:09	2971	9147	3735
2020-11-10 12:53:54	2632	5380	3447
2020-11-10 11:37:01	3049	7267	3473
2020-11-09 11:47:17	2520	4773	2882
2020-11-09 11:29:50	2615	11059	3065
2020-11-06 11:38:12	2354	4226	2795
2020-11-06 11:01:15	2571	5599	2896
2020-11-05 11:47:54	2413	5380	3110
2020-11-04 11:19:46	2310	5433	3223
2020-11-03 12:28:48	2819	5476	3321
2020-11-03 12:08:40	2411	8720	2893
2020-11-02 11:05:14	3543	37180	4248

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-30 12:05:49	2406	6469	3233
2020-10-29 12:49:39	2719	6440	4108
2020-10-29 11:48:38	2674	6232	3641
2020-10-28 15:02:21	3490	7322	4645
2020-10-28 14:05:42	3278	7160	3912
2020-10-27 12:05:48	727	1703	1914
2020-10-27 11:35:55	722	2099	2000
2020-10-26 12:04:37	1203	16839	2202
2020-10-23 12:12:34	1315	2468	2006
2020-10-23 11:37:57	1324	3647	2052
2020-10-22 12:16:30	959	2448	2163
2020-10-21 13:24:11	1073	2520	1884
2020-10-21 12:27:39	1122	2716	2011
2020-10-20 11:47:10	1637	3688	2449
2020-10-19 11:53:52	1128	2675	1888
2020-10-19 11:39:21	1179	4811	1928
2020-10-18 09:36:10	1665	20856	1974
2020-10-16 12:04:16	1928	4436	2616
2020-10-15 12:04:01	1667	4055	2820
2020-10-14 12:01:53	1989	4573	3176
2020-10-13 11:51:04	3074	6060	3832
2020-10-12 12:42:47	1484	3937	2762
2020-10-12 11:44:44	1746	4685	2448
2020-10-11 11:11:57	1796	4232	2388
2020-10-11 10:56:11	2094	4350	2402
2020-10-11 08:29:31	1939	4366	2390
2020-10-09 11:09:17	2309	4840	2851
2020-10-09 10:39:06	2498	5197	2889
2020-10-08 11:31:44	2281	6060	3333
2020-10-07 11:59:14	2012	4671	3330
2020-10-07 10:50:29	2119	5045	3372
2020-10-06 12:34:49	4071	7270	4025
2020-10-05 11:04:01	4647	9324	4922
2020-10-04 07:54:14	3927	67077	3990
2020-10-02 09:38:02	3301	7010	3890
2020-10-01 11:27:45	3428	7471	3998
2020-09-30 13:00:41	3691	8414	5069
2020-09-30 11:53:41	3488	7737	5379
2020-09-30 11:07:07	3555	8878	4820
2020-09-30 10:48:54	3682	11707	4994
2020-09-29 13:53:16	3262	8894	4481

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-29 12:19:04	1966	6072	2077
2020-09-28 12:53:55	1731	2590	2754
2020-09-28 11:59:28	1492	2271	2305
2020-09-25 16:18:31	2585	3865	3214
2020-09-25 16:06:07	2605	4109	3244
2020-09-25 14:56:33	2519	3579	3129
2020-09-25 12:48:13	2533	3206	2532
2020-09-24 10:55:05	2087	3690	2707
2020-09-23 12:36:58	2231	3540	3006
2020-09-23 11:38:39	2196	3459	2555
2020-09-23 10:51:49	2108	3110	2362
2020-09-22 11:10:32	3440	4661	2948
2020-09-22 10:54:35	3690	6894	3279
2020-09-21 13:13:36	2058	3480	2639
2020-09-21 12:44:05	2485	4086	2622
2020-09-21 11:41:44	2836	4407	2790
2020-09-21 11:23:15	2719	5102	2900
2020-09-20 08:10:06	3189	5254	3302
2020-09-20 07:22:36	3383	5278	3143
2020-09-20 06:54:39	2995	6878	3376
2020-09-18 11:40:25	3276	6815	3156
2020-09-18 11:29:16	3184	5773	2888
2020-09-18 11:06:40	3354	7920	3226
2020-09-17 15:29:32	3459	8016	3486
2020-09-16 20:54:26	3508	6510	3613
2020-09-16 19:16:27	3299	6829	3612
2020-09-16 17:59:29	3413	8566	3547
2020-09-16 11:19:13	2416	5647	3177
2020-09-15 16:24:15	3165	8407	4428
2020-09-15 16:09:17	3268	16881	4507
2020-09-15 14:28:15	3335	7860	4752
2020-09-15 13:19:00	2887	7602	5214
2020-09-15 11:28:27	3122	6972	4514
2020-09-15 09:52:18	2394	6064	4140
2020-09-14 12:35:34	2919	8029	4829
2020-09-14 10:47:40	2465	13982	4153
2020-09-14 10:18:12	2981	147428	4124
2020-09-11 10:57:10	4177	9295	5215
2020-09-10 11:27:38	4077	9423	4893
2020-09-09 11:12:49	4615	9919	5732
2020-09-09 10:40:25	4893	37172	5907

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-04 11:48:35	3441	8270	4733
2020-09-03 16:21:25	4052	9316	5806
2020-09-01 11:42:55	4000	12068	5666
2020-08-31 11:13:32	4245	87845	5643
2020-08-28 11:16:24	3088	10564	4710
2020-08-27 13:51:21	4108	11229	6176
2020-08-26 12:03:40	709	2074	2014
2020-08-25 12:03:05	1056	2659	2933
2020-08-25 11:32:14	1104	18306	2909
2020-08-21 13:01:12	544	2306	2585
2020-08-21 12:07:01	484	9012	2232
2020-08-20 11:15:30	579	1923	2458
2020-08-20 10:49:50	476	1836	2364
2020-08-20 10:10:21	583	2361	2456
2020-08-19 11:28:46	454	1880	1981
2020-08-18 11:07:27	515	1987	2499
2020-08-18 09:49:58	615	2314	2495
2020-08-17 12:34:56	637	2325	2666
2020-08-17 11:28:15	642	17377	2443
2020-08-14 07:34:28	660	2479	2687
2020-08-14 06:44:33	786	3289	2613
2020-08-13 09:37:45	558	2133	2410
2020-08-13 09:10:45	521	1962	2329
2020-08-13 08:48:39	496	1934	2288
2020-08-13 08:12:32	517	2418	2261
2020-08-13 07:26:07	652	2431	2391
2020-08-12 14:30:16	436	1985	2383
2020-08-12 13:28:46	430	1890	2337
2020-08-12 12:58:58	424	2141	2450
2020-08-12 12:32:10	423	1957	2334
2020-08-12 12:17:37	426	2078	2338
2020-08-12 11:28:35	396	1839	2187
2020-08-12 10:46:03	391	1783	2042
2020-08-12 10:01:12	402	1940	1946
2020-08-11 08:44:26	425	2072	2353
2020-08-11 07:53:34	450	2345	2270
2020-08-10 08:02:54	585	2329	2467
2020-08-10 07:18:05	680	19393	2348
2020-08-07 08:01:44	808	3281	3044
2020-08-06 15:31:02	706	2194	2639
2020-08-06 14:31:40	536	1812	1907

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-05 11:00:59	818	2750	2903
2020-08-04 11:11:16	831	2836	2585
2020-08-03 11:52:42	844	2601	2537
2020-07-31 14:27:24	741	2213	2630
2020-07-28 07:30:44	1155	3696	3239
2020-07-27 13:58:30	1574	3907	4099
2020-07-27 12:42:07	1014	3778	2005
2020-07-27 11:55:01	839	2602	2096
2020-07-27 11:13:19	908	15206	2137
2020-07-24 12:42:53	2542	6017	3827
2020-07-24 12:14:18	2635	6571	3838
2020-07-24 12:00:19	2346	5435	3627
2020-07-24 11:13:53	2629	37625	3757
2020-07-24 11:05:21	2180	5918	3134
2020-07-21 12:40:51	168	989	667
2020-07-21 11:57:51	516	1894	1030
2020-07-20 12:40:12	1371	4507	2970
2020-07-20 11:37:51	1446	38757	3136
2020-07-17 11:48:52	1876	5563	3247
2020-07-16 18:15:26	1515	5146	3133
2020-07-16 12:56:52	976	4431	2619
2020-07-16 12:30:29	1077	4360	2638
2020-07-15 12:44:11	1189	4329	3053
2020-07-15 12:10:56	1426	4997	3214
2020-07-14 11:48:58	1625	15999	3092
2020-07-14 11:11:56	1641	5261	3112
2020-07-13 12:32:05	2542	45774	3475
2020-07-10 12:07:31	2901	7213	4579
2020-07-09 11:10:24	8832	7204	3897
2020-07-08 12:38:35	3200	8957	4519
2020-07-07 11:49:59	3333	8506	4397
2020-07-06 13:18:03	3035	8959	5251
2020-07-06 11:44:36	672	12761	1235
2020-07-02 11:58:12	865	3063	2215
2020-07-02 11:17:30	1685	6809	2735
2020-07-01 13:38:18	2102	5052	3514
2020-07-01 12:51:19	2225	5177	3700
2020-07-01 12:27:56	2297	5659	3399
2020-07-01 11:46:22	2046	6438	3466
2020-06-30 13:54:10	2534	5477	3652
2020-06-30 13:18:33	3085	5788	3775

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-06-30 12:13:58	2145	5434	3864
2020-06-29 12:28:14	2120	5553	4029
2020-06-29 11:42:42	2695	58980	4207
2020-06-27 11:13:24	2630	6982	4598
2020-06-26 12:29:21	2315	7936	4455
2020-06-25 11:42:24	3056	7116	4865
2020-06-24 11:38:27	3958	9538	5780
2020-06-23 12:16:39	3639	8920	5072
2020-06-22 12:41:53	4068	9166	5330
2020-06-22 12:03:52	3706	11025	4681

Background

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-12-01 13:04:02	0.550	0.200	17.650
2020-12-01 12:32:55	0.750	0.400	21.650
2020-11-30 12:15:10	0.450	0.150	67.350
2020-11-25 13:43:34	0.600	0.000	14.750
2020-11-25 12:08:17	0.700	0.000	32.150
2020-11-24 12:09:17	0.950	0.250	39.850
2020-11-23 11:50:06	0.350	0.400	30.150
2020-11-23 11:38:36	0.400	0.300	25.050
2020-11-20 11:49:48	1.250	0.250	80.700
2020-11-19 22:38:32	1.050	0.450	56.700
2020-11-19 22:12:06	0.700	0.500	75.900
2020-11-19 20:45:43	1.050	0.450	68.650
2020-11-19 20:03:01	0.900	0.450	92.050
2020-11-19 19:23:01	1.000	0.400	58.600
2020-11-19 18:43:36	0.600	0.200	48.950
2020-11-19 17:33:58	1.000	0.500	67.550
2020-11-19 15:22:58	0.950	0.400	55.500
2020-11-19 15:10:53	0.600	0.700	46.050
2020-11-19 14:53:10	1.250	0.600	73.500
2020-11-18 11:54:13	0.050	0.350	15.650
2020-11-17 11:15:31	0.350	0.200	18.500
2020-11-16 13:44:07	0.100	0.300	2.100
2020-11-16 13:09:13	0.100	0.150	3.500
2020-11-13 11:20:44	0.200	0.150	9.500
2020-11-12 14:37:14	0.250	0.400	4.200

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-11-12 13:53:08	0.200	0.100	6.400
2020-11-12 12:32:41	0.100	0.150	8.600
2020-11-11 12:53:39	0.550	0.400	5.150
2020-11-11 11:44:42	0.150	0.700	4.300
2020-11-10 13:55:09	0.350	0.350	7.650
2020-11-10 12:53:54	0.250	0.200	20.900
2020-11-10 11:37:01	0.350	0.550	20.400
2020-11-09 11:47:17	0.150	0.500	4.900
2020-11-09 11:29:50	0.400	0.450	4.200
2020-11-06 11:38:12	0.450	0.300	9.000
2020-11-06 11:01:15	0.400	0.200	8.200
2020-11-05 11:47:54	0.200	0.200	4.350
2020-11-04 11:19:46	0.250	0.450	11.950
2020-11-03 12:28:48	0.400	0.250	5.200
2020-11-03 12:08:40	0.200	0.300	6.050
2020-11-02 11:05:14	0.000	0.300	4.550
2020-10-30 12:05:49	0.300	0.500	16.050
2020-10-29 12:49:39	0.250	0.250	13.050
2020-10-29 11:48:38	0.650	0.200	16.950
2020-10-28 15:02:21	0.300	0.300	3.050
2020-10-28 14:05:42	0.250	0.200	7.100
2020-10-27 12:05:48	0.100	0.050	11.750
2020-10-27 11:35:55	0.050	0.100	8.250
2020-10-26 12:04:37	0.050	0.150	5.750
2020-10-23 12:12:34	0.050	0.050	4.650
2020-10-23 11:37:57	0.300	0.200	3.050
2020-10-22 12:16:30	0.150	0.050	8.450
2020-10-21 13:24:11	0.050	0.250	8.300
2020-10-21 12:27:39	0.200	0.200	17.800
2020-10-20 11:47:10	0.050	0.150	3.950
2020-10-19 11:53:52	0.200	0.100	16.800
2020-10-19 11:39:21	0.000	0.150	7.500
2020-10-18 09:36:10	0.200	0.150	4.850
2020-10-16 12:04:16	0.350	0.300	9.700
2020-10-15 12:04:01	0.100	0.050	16.500
2020-10-14 12:01:53	0.250	0.050	9.350
2020-10-13 11:51:04	0.100	0.050	17.000
2020-10-12 12:42:47	0.250	0.200	6.400
2020-10-12 11:44:44	0.200	0.150	10.100
2020-10-11 11:11:57	0.200	0.350	13.250
2020-10-11 10:56:11	0.350	0.300	16.250

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-10-11 08:29:31	0.300	0.200	38.550
2020-10-09 11:09:17	0.250	0.350	26.700
2020-10-09 10:39:06	0.250	0.100	23.800
2020-10-08 11:31:44	0.200	0.200	25.600
2020-10-07 11:59:14	0.150	0.350	27.550
2020-10-07 10:50:29	0.350	0.250	27.950
2020-10-06 12:34:49	0.350	0.200	22.950
2020-10-05 11:04:01	0.250	0.250	58.600
2020-10-04 07:54:14	0.200	0.400	56.750
2020-10-02 09:38:02	0.150	0.650	93.650
2020-10-01 11:27:45	0.250	0.350	55.900
2020-09-30 13:00:41	0.400	0.350	55.200
2020-09-30 11:53:41	0.300	0.250	16.350
2020-09-30 11:07:07	0.250	0.350	60.700
2020-09-30 10:48:54	0.600	0.300	20.300
2020-09-29 13:53:16	0.100	0.400	20.250
2020-09-29 12:19:04	0.250	0.400	14.700
2020-09-28 12:53:55	0.100	0.300	17.550
2020-09-28 11:59:28	0.100	0.150	12.600
2020-09-25 16:18:31	0.050	0.050	10.200
2020-09-25 16:06:07	0.050	0.300	10.250
2020-09-25 14:56:33	0.100	0.250	11.500
2020-09-25 12:48:13	0.100	0.200	37.000
2020-09-24 10:55:05	0.250	0.150	11.000
2020-09-23 12:36:58	0.150	0.200	24.350
2020-09-23 11:38:39	0.050	0.150	11.400
2020-09-23 10:51:49	0.050	0.300	15.050
2020-09-22 11:10:32	0.000	0.100	29.150
2020-09-22 10:54:35	0.200	0.200	22.400
2020-09-21 13:13:36	0.200	0.400	14.200
2020-09-21 12:44:05	0.100	0.200	13.500
2020-09-21 11:41:44	0.200	0.100	20.400
2020-09-21 11:23:15	0.050	0.500	21.150
2020-09-20 08:10:06	0.250	0.450	13.400
2020-09-20 07:22:36	0.250	0.400	13.750
2020-09-20 06:54:39	0.150	0.100	6.250
2020-09-18 11:40:25	0.150	0.200	7.600
2020-09-18 11:29:16	0.450	0.150	8.550
2020-09-18 11:06:40	0.100	0.350	10.000
2020-09-17 15:29:32	0.350	0.300	9.300
2020-09-16 20:54:26	0.100	0.450	17.400

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-09-16 19:16:27	0.100	0.200	7.050
2020-09-16 17:59:29	0.150	0.350	15.250
2020-09-16 11:19:13	0.250	0.550	10.850
2020-09-15 16:24:15	0.250	0.200	9.050
2020-09-15 16:09:17	0.150	0.250	15.750
2020-09-15 14:28:15	0.150	0.150	14.300
2020-09-15 13:19:00	0.100	0.100	14.150
2020-09-15 11:28:27	0.100	0.300	12.500
2020-09-15 09:52:18	0.100	0.050	4.350
2020-09-14 12:35:34	0.250	0.300	18.000
2020-09-14 10:47:40	0.150	0.350	8.550
2020-09-14 10:18:12	0.100	0.250	8.250
2020-09-11 10:57:10	0.200	0.300	20.200
2020-09-10 11:27:38	0.300	0.400	18.050
2020-09-09 11:12:49	0.350	0.250	16.700
2020-09-09 10:40:25	0.500	0.350	11.550
2020-09-04 11:48:35	0.250	0.050	93.750
2020-09-03 16:21:25	0.350	0.300	43.700
2020-09-01 11:42:55	0.300	0.450	45.100
2020-08-31 11:13:32	0.400	0.150	26.850
2020-08-28 11:16:24	0.250	0.550	12.400
2020-08-27 13:51:21	0.200	0.250	18.250
2020-08-26 12:03:40	0.000	0.100	10.750
2020-08-25 12:03:05	0.100	0.100	10.100
2020-08-25 11:32:14	0.050	0.050	21.750
2020-08-21 13:01:12	0.050	0.050	14.900
2020-08-21 12:07:01	0.050	0.150	16.500
2020-08-20 11:15:30	0.000	0.000	28.100
2020-08-20 10:49:50	0.050	0.000	22.300
2020-08-20 10:10:21	0.050	0.150	10.800
2020-08-19 11:28:46	0.050	0.000	7.550
2020-08-18 11:07:27	0.100	0.100	9.200
2020-08-18 09:49:58	0.050	0.100	8.650
2020-08-17 12:34:56	0.050	0.100	20.400
2020-08-17 11:28:15	0.050	0.000	12.450
2020-08-14 07:34:28	0.050	0.050	8.400
2020-08-14 06:44:33	0.100	0.150	6.700
2020-08-13 09:37:45	0.100	0.100	8.150
2020-08-13 09:10:45	0.050	0.000	5.000
2020-08-13 08:48:39	0.100	0.150	6.150
2020-08-13 08:12:32	0.050	0.100	12.400

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-08-13 07:26:07	0.050	0.050	12.700
2020-08-12 14:30:16	0.050	0.100	25.550
2020-08-12 13:28:46	0.050	0.050	4.550
2020-08-12 12:58:58	0.100	0.050	8.000
2020-08-12 12:32:10	0.100	0.200	15.800
2020-08-12 12:17:37	0.050	0.100	16.950
2020-08-12 11:28:35	0.000	0.050	16.900
2020-08-12 10:46:03	0.050	0.000	3.100
2020-08-12 10:01:12	0.000	0.000	8.200
2020-08-11 08:44:26	0.050	0.000	3.450
2020-08-11 07:53:34	0.050	0.100	5.100
2020-08-10 08:02:54	0.000	0.050	13.600
2020-08-10 07:18:05	0.000	0.100	18.700
2020-08-07 08:01:44	0.050	0.150	9.000
2020-08-06 15:31:02	0.050	0.100	10.550
2020-08-06 14:31:40	0.000	0.150	12.500
2020-08-05 11:00:59	0.000	0.100	9.350
2020-08-04 11:11:16	0.000	0.100	6.500
2020-08-03 11:52:42	0.000	0.050	4.750
2020-07-31 14:27:24	0.050	0.200	3.050
2020-07-28 07:30:44	0.050	0.050	4.800
2020-07-27 13:58:30	0.050	0.000	4.500
2020-07-27 12:42:07	0.000	0.350	6.000
2020-07-27 11:55:01	0.250	0.100	3.500
2020-07-27 11:13:19	0.000	0.150	4.000
2020-07-24 12:42:53	0.150	0.350	12.150
2020-07-24 12:14:18	0.050	0.150	12.100
2020-07-24 12:00:19	0.150	0.250	7.700
2020-07-24 11:13:53	0.200	0.200	12.000
2020-07-24 11:05:21	0.150	0.400	7.450
2020-07-21 12:40:51	0.250	0.150	22.450
2020-07-21 11:57:51	0.350	0.350	31.100
2020-07-20 12:40:12	0.050	0.300	11.200
2020-07-20 11:37:51	0.050	0.300	14.750
2020-07-17 11:48:52	0.400	0.200	5.150
2020-07-16 18:15:26	0.100	0.250	11.250
2020-07-16 12:56:52	0.250	0.150	8.100
2020-07-16 12:30:29	0.050	0.200	7.650
2020-07-15 12:44:11	0.350	0.400	9.450
2020-07-15 12:10:56	0.500	0.050	10.400
2020-07-14 11:48:58	0.250	0.250	17.450

Performance Report

Created Date	Channel 1 Count	Channel 2 Count	Channel 3 Count
2020-07-14 11:11:56	0.100	0.400	17.000
2020-07-13 12:32:05	0.350	0.400	29.750
2020-07-10 12:07:31	0.150	0.150	11.350
2020-07-09 11:10:24	0.300	0.350	31.650
2020-07-08 12:38:35	0.150	0.400	29.700
2020-07-07 11:49:59	0.100	0.550	8.550
2020-07-06 13:18:03	0.250	0.250	22.550
2020-07-06 11:44:36	0.150	0.050	18.500
2020-07-02 11:58:12	0.250	0.300	4.850
2020-07-02 11:17:30	0.100	0.150	3.850
2020-07-01 13:38:18	0.050	0.200	18.250
2020-07-01 12:51:19	0.150	0.300	12.650
2020-07-01 12:27:56	0.250	0.050	18.900
2020-07-01 11:46:22	0.200	0.050	7.500
2020-06-30 13:54:10	0.250	0.350	12.050
2020-06-30 13:18:33	0.350	0.250	9.600
2020-06-30 12:13:58	0.100	0.150	23.850
2020-06-29 12:28:14	0.200	0.100	39.500
2020-06-29 11:42:42	0.100	0.350	44.450
2020-06-27 11:13:24	0.100	0.100	30.600
2020-06-26 12:29:21	0.200	0.300	58.300
2020-06-25 11:42:24	0.150	0.250	21.450
2020-06-24 11:38:27	0.300	0.450	12.650
2020-06-23 12:16:39	0.550	0.400	37.200
2020-06-22 12:41:53	0.600	0.300	31.050
2020-06-22 12:03:52	0.400	0.300	32.100

Tune Parameters

Created Date	Extract 1	Extract 2	Omega Bias
2020-12-01 13:04:02	0.0 V	-150.0 V	-80 V
2020-12-01 12:32:55	0.0 V	-150.0 V	-80 V
2020-11-30 12:15:10	0.0 V	-150.0 V	-80 V
2020-11-25 13:43:34	0.0 V	-155.0 V	-80 V
2020-11-25 12:08:17	0.0 V	-155.0 V	-80 V
2020-11-24 12:09:17	0.0 V	-155.0 V	-80 V
2020-11-23 11:50:06	0.0 V	-160.0 V	-80 V
2020-11-23 11:38:36	0.0 V	-160.0 V	-80 V
2020-11-20 11:49:48	0.0 V	-180.0 V	-90 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-11-19 22:38:32	0.0 V	-175.0 V	-80 V
2020-11-19 22:12:06	0.0 V	-175.0 V	-80 V
2020-11-19 20:45:43	0.0 V	-175.0 V	-90 V
2020-11-19 20:03:01	0.0 V	-170.0 V	-90 V
2020-11-19 19:23:01	0.0 V	-165.0 V	-80 V
2020-11-19 18:43:36	0.0 V	-170.0 V	-80 V
2020-11-19 17:33:58	0.0 V	-170.0 V	-80 V
2020-11-19 15:22:58	0.0 V	-180.0 V	-90 V
2020-11-19 15:10:53	0.0 V	-180.0 V	-90 V
2020-11-19 14:53:10	0.0 V	-180.0 V	-90 V
2020-11-18 11:54:13	0.0 V	-160.0 V	-70 V
2020-11-17 11:15:31	0.0 V	-170.0 V	-80 V
2020-11-16 13:44:07	0.0 V	-145.0 V	-70 V
2020-11-16 13:09:13	0.0 V	-145.0 V	-70 V
2020-11-13 11:20:44	0.0 V	-155.0 V	-70 V
2020-11-12 14:37:14	0.0 V	-150.0 V	-70 V
2020-11-12 13:53:08	0.0 V	-145.0 V	-70 V
2020-11-12 12:32:41	0.0 V	-145.0 V	-70 V
2020-11-11 12:53:39	0.0 V	-170.0 V	-70 V
2020-11-11 11:44:42	0.0 V	-175.0 V	-70 V
2020-11-10 13:55:09	0.0 V	-200.0 V	-70 V
2020-11-10 12:53:54	0.0 V	-185.0 V	-70 V
2020-11-10 11:37:01	0.0 V	-180.0 V	-70 V
2020-11-09 11:47:17	0.0 V	-175.0 V	-70 V
2020-11-09 11:29:50	0.0 V	-175.0 V	-70 V
2020-11-06 11:38:12	0.0 V	-170.0 V	-70 V
2020-11-06 11:01:15	0.0 V	-170.0 V	-70 V
2020-11-05 11:47:54	0.0 V	-195.0 V	-70 V
2020-11-04 11:19:46	0.0 V	-190.0 V	-80 V
2020-11-03 12:28:48	0.0 V	-190.0 V	-80 V
2020-11-03 12:08:40	0.0 V	-190.0 V	-80 V
2020-11-02 11:05:14	0.0 V	-195.0 V	-80 V
2020-10-30 12:05:49	0.0 V	-195.0 V	-70 V
2020-10-29 12:49:39	0.0 V	-195.0 V	-70 V
2020-10-29 11:48:38	0.0 V	-180.0 V	-70 V
2020-10-28 15:02:21	0.0 V	-200.0 V	-70 V
2020-10-28 14:05:42	0.0 V	-180.0 V	-70 V
2020-10-27 12:05:48	0.0 V	-140.0 V	-70 V
2020-10-27 11:35:55	0.0 V	-140.0 V	-70 V
2020-10-26 12:04:37	0.0 V	-150.0 V	-70 V
2020-10-23 12:12:34	0.0 V	-145.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-10-23 11:37:57	0.0 V	-145.0 V	-70 V
2020-10-22 12:16:30	0.0 V	-140.0 V	-70 V
2020-10-21 13:24:11	0.0 V	-140.0 V	-70 V
2020-10-21 12:27:39	0.0 V	-140.0 V	-70 V
2020-10-20 11:47:10	0.0 V	-150.0 V	-70 V
2020-10-19 11:53:52	0.0 V	-145.0 V	-70 V
2020-10-19 11:39:21	0.0 V	-145.0 V	-70 V
2020-10-18 09:36:10	0.0 V	-150.0 V	-70 V
2020-10-16 12:04:16	0.0 V	-155.0 V	-70 V
2020-10-15 12:04:01	0.0 V	-155.0 V	-70 V
2020-10-14 12:01:53	0.0 V	-155.0 V	-70 V
2020-10-13 11:51:04	0.0 V	-180.0 V	-70 V
2020-10-12 12:42:47	0.0 V	-175.0 V	-70 V
2020-10-12 11:44:44	0.0 V	-170.0 V	-70 V
2020-10-11 11:11:57	0.0 V	-170.0 V	-70 V
2020-10-11 10:56:11	0.0 V	-170.0 V	-70 V
2020-10-11 08:29:31	0.0 V	-170.0 V	-70 V
2020-10-09 11:09:17	0.0 V	-170.0 V	-70 V
2020-10-09 10:39:06	0.0 V	-170.0 V	-70 V
2020-10-08 11:31:44	0.0 V	-175.0 V	-70 V
2020-10-07 11:59:14	0.0 V	-190.0 V	-80 V
2020-10-07 10:50:29	0.0 V	-190.0 V	-80 V
2020-10-06 12:34:49	0.0 V	-200.0 V	-80 V
2020-10-05 11:04:01	0.0 V	-200.0 V	-70 V
2020-10-04 07:54:14	0.0 V	-200.0 V	-70 V
2020-10-02 09:38:02	0.0 V	-200.0 V	-70 V
2020-10-01 11:27:45	0.0 V	-200.0 V	-80 V
2020-09-30 13:00:41	0.0 V	-200.0 V	-80 V
2020-09-30 11:53:41	0.0 V	-200.0 V	-70 V
2020-09-30 11:07:07	0.0 V	-190.0 V	-70 V
2020-09-30 10:48:54	0.0 V	-190.0 V	-70 V
2020-09-29 13:53:16	0.0 V	-195.0 V	-80 V
2020-09-29 12:19:04	0.0 V	-175.0 V	-80 V
2020-09-28 12:53:55	0.0 V	-140.0 V	-70 V
2020-09-28 11:59:28	0.0 V	-140.0 V	-70 V
2020-09-25 16:18:31	0.0 V	-160.0 V	-70 V
2020-09-25 16:06:07	0.0 V	-160.0 V	-70 V
2020-09-25 14:56:33	0.0 V	-160.0 V	-70 V
2020-09-25 12:48:13	0.0 V	-180.0 V	-80 V
2020-09-24 10:55:05	0.0 V	-190.0 V	-70 V
2020-09-23 12:36:58	0.0 V	-185.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-09-23 11:38:39	0.0 V	-185.0 V	-70 V
2020-09-23 10:51:49	0.0 V	-165.0 V	-70 V
2020-09-22 11:10:32	0.0 V	-150.0 V	-70 V
2020-09-22 10:54:35	0.0 V	-150.0 V	-70 V
2020-09-21 13:13:36	0.0 V	-200.0 V	-80 V
2020-09-21 12:44:05	0.0 V	-180.0 V	-70 V
2020-09-21 11:41:44	0.0 V	-170.0 V	-70 V
2020-09-21 11:23:15	0.0 V	-170.0 V	-70 V
2020-09-20 08:10:06	0.0 V	-160.0 V	-70 V
2020-09-20 07:22:36	0.0 V	-160.0 V	-70 V
2020-09-20 06:54:39	0.0 V	-160.0 V	-70 V
2020-09-18 11:40:25	0.0 V	-155.0 V	-70 V
2020-09-18 11:29:16	0.0 V	-155.0 V	-70 V
2020-09-18 11:06:40	0.0 V	-155.0 V	-70 V
2020-09-17 15:29:32	0.0 V	-185.0 V	-70 V
2020-09-16 20:54:26	0.0 V	-190.0 V	-70 V
2020-09-16 19:16:27	0.0 V	-195.0 V	-70 V
2020-09-16 17:59:29	0.0 V	-200.0 V	-70 V
2020-09-16 11:19:13	0.0 V	-165.0 V	-70 V
2020-09-15 16:24:15	0.0 V	-180.0 V	-70 V
2020-09-15 16:09:17	0.0 V	-180.0 V	-70 V
2020-09-15 14:28:15	0.0 V	-195.0 V	-70 V
2020-09-15 13:19:00	0.0 V	-195.0 V	-70 V
2020-09-15 11:28:27	0.0 V	-190.0 V	-70 V
2020-09-15 09:52:18	0.0 V	-175.0 V	-70 V
2020-09-14 12:35:34	0.0 V	-200.0 V	-70 V
2020-09-14 10:47:40	0.0 V	-175.0 V	-70 V
2020-09-14 10:18:12	0.0 V	-175.0 V	-70 V
2020-09-11 10:57:10	0.0 V	-200.0 V	-70 V
2020-09-10 11:27:38	0.0 V	-195.0 V	-70 V
2020-09-09 11:12:49	0.0 V	-195.0 V	-70 V
2020-09-09 10:40:25	0.0 V	-195.0 V	-70 V
2020-09-04 11:48:35	0.0 V	-190.0 V	-70 V
2020-09-03 16:21:25	0.0 V	-195.0 V	-70 V
2020-09-01 11:42:55	0.0 V	-185.0 V	-70 V
2020-08-31 11:13:32	0.0 V	-190.0 V	-70 V
2020-08-28 11:16:24	0.0 V	-190.0 V	-70 V
2020-08-27 13:51:21	0.0 V	-200.0 V	-70 V
2020-08-26 12:03:40	0.0 V	-140.0 V	-70 V
2020-08-25 12:03:05	0.0 V	-145.0 V	-70 V
2020-08-25 11:32:14	0.0 V	-145.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-08-21 13:01:12	0.0 V	-140.0 V	-70 V
2020-08-21 12:07:01	0.0 V	-145.0 V	-70 V
2020-08-20 11:15:30	0.0 V	-145.0 V	-70 V
2020-08-20 10:49:50	0.0 V	-145.0 V	-70 V
2020-08-20 10:10:21	0.0 V	-145.0 V	-70 V
2020-08-19 11:28:46	0.0 V	-140.0 V	-70 V
2020-08-18 11:07:27	0.0 V	-145.0 V	-70 V
2020-08-18 09:49:58	0.0 V	-145.0 V	-70 V
2020-08-17 12:34:56	0.0 V	-140.0 V	-70 V
2020-08-17 11:28:15	0.0 V	-140.0 V	-70 V
2020-08-14 07:34:28	0.0 V	-140.0 V	-70 V
2020-08-14 06:44:33	0.0 V	-140.0 V	-70 V
2020-08-13 09:37:45	0.0 V	-140.0 V	-70 V
2020-08-13 09:10:45	0.0 V	-140.0 V	-70 V
2020-08-13 08:48:39	0.0 V	-140.0 V	-70 V
2020-08-13 08:12:32	0.0 V	-140.0 V	-70 V
2020-08-13 07:26:07	0.0 V	-140.0 V	-70 V
2020-08-12 14:30:16	0.0 V	-140.0 V	-70 V
2020-08-12 13:28:46	0.0 V	-140.0 V	-70 V
2020-08-12 12:58:58	0.0 V	-140.0 V	-70 V
2020-08-12 12:32:10	0.0 V	-140.0 V	-70 V
2020-08-12 12:17:37	0.0 V	-140.0 V	-70 V
2020-08-12 11:28:35	0.0 V	-140.0 V	-70 V
2020-08-12 10:46:03	0.0 V	-140.0 V	-70 V
2020-08-12 10:01:12	0.0 V	-140.0 V	-70 V
2020-08-11 08:44:26	0.0 V	-140.0 V	-70 V
2020-08-11 07:53:34	0.0 V	-140.0 V	-70 V
2020-08-10 08:02:54	0.0 V	-140.0 V	-70 V
2020-08-10 07:18:05	0.0 V	-140.0 V	-70 V
2020-08-07 08:01:44	0.0 V	-150.0 V	-70 V
2020-08-06 15:31:02	0.0 V	-140.0 V	-70 V
2020-08-06 14:31:40	0.0 V	-140.0 V	-70 V
2020-08-05 11:00:59	0.0 V	-140.0 V	-70 V
2020-08-04 11:11:16	0.0 V	-140.0 V	-70 V
2020-08-03 11:52:42	0.0 V	-140.0 V	-70 V
2020-07-31 14:27:24	0.0 V	-140.0 V	-70 V
2020-07-28 07:30:44	0.0 V	-145.0 V	-70 V
2020-07-27 13:58:30	0.0 V	-160.0 V	-70 V
2020-07-27 12:42:07	0.0 V	-155.0 V	-70 V
2020-07-27 11:55:01	0.0 V	-150.0 V	-70 V
2020-07-27 11:13:19	0.0 V	-150.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-07-24 12:42:53	0.0 V	-160.0 V	-70 V
2020-07-24 12:14:18	0.0 V	-160.0 V	-70 V
2020-07-24 12:00:19	0.0 V	-165.0 V	-70 V
2020-07-24 11:13:53	0.0 V	-165.0 V	-70 V
2020-07-24 11:05:21	0.0 V	-165.0 V	-70 V
2020-07-21 12:40:51	0.0 V	-160.0 V	-70 V
2020-07-21 11:57:51	0.0 V	-155.0 V	-70 V
2020-07-20 12:40:12	0.0 V	-150.0 V	-70 V
2020-07-20 11:37:51	0.0 V	-155.0 V	-70 V
2020-07-17 11:48:52	0.0 V	-165.0 V	-70 V
2020-07-16 18:15:26	0.0 V	-160.0 V	-70 V
2020-07-16 12:56:52	0.0 V	-165.0 V	-70 V
2020-07-16 12:30:29	0.0 V	-165.0 V	-70 V
2020-07-15 12:44:11	0.0 V	-160.0 V	-70 V
2020-07-15 12:10:56	0.0 V	-160.0 V	-70 V
2020-07-14 11:48:58	0.0 V	-165.0 V	-70 V
2020-07-14 11:11:56	0.0 V	-165.0 V	-70 V
2020-07-13 12:32:05	0.0 V	-160.0 V	-70 V
2020-07-10 12:07:31	0.0 V	-180.0 V	-70 V
2020-07-09 11:10:24	0.0 V	-175.0 V	-70 V
2020-07-08 12:38:35	0.0 V	-200.0 V	-70 V
2020-07-07 11:49:59	0.0 V	-200.0 V	-70 V
2020-07-06 13:18:03	0.0 V	-200.0 V	-70 V
2020-07-06 11:44:36	0.0 V	-145.0 V	-70 V
2020-07-02 11:58:12	0.0 V	-155.0 V	-70 V
2020-07-02 11:17:30	0.0 V	-155.0 V	-70 V
2020-07-01 13:38:18	0.0 V	-160.0 V	-70 V
2020-07-01 12:51:19	0.0 V	-160.0 V	-70 V
2020-07-01 12:27:56	0.0 V	-165.0 V	-70 V
2020-07-01 11:46:22	0.0 V	-165.0 V	-70 V
2020-06-30 13:54:10	0.0 V	-175.0 V	-70 V
2020-06-30 13:18:33	0.0 V	-175.0 V	-70 V
2020-06-30 12:13:58	0.0 V	-175.0 V	-70 V
2020-06-29 12:28:14	0.0 V	-185.0 V	-70 V
2020-06-29 11:42:42	0.0 V	-185.0 V	-70 V
2020-06-27 11:13:24	0.0 V	-175.0 V	-70 V
2020-06-26 12:29:21	0.0 V	-160.0 V	-70 V
2020-06-25 11:42:24	0.0 V	-180.0 V	-70 V
2020-06-24 11:38:27	0.0 V	-195.0 V	-70 V
2020-06-23 12:16:39	0.0 V	-200.0 V	-70 V
2020-06-22 12:41:53	0.0 V	-195.0 V	-70 V

Performance Report

Created Date	Extract 1	Extract 2	Omega Bias
2020-06-22 12:03:52	0.0 V	-195.0 V	-70 V

US EPA Tune Check Report

Operator Name	ALSHN ICPMS
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq. Date-Time	2020-12-01 13:53:51
Report Comment	---
Instrument Name	G8421A JP17200678

[No Gas]

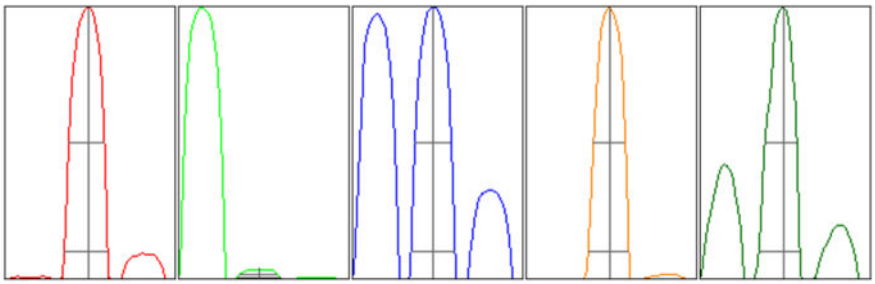
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
9	310	3095.45	1.206	5.000	
24	1270	12699.15	0.714	5.000	
59	1634	16336.15	0.460	5.000	
115	2826	28264.28	0.634	5.000	
208	1738	17382.20	0.769	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	307	310	316	308	307
24	1259	1267	1283	1267	1275
59	1634	1634	1634	1623	1644
115	2806	2817	2820	2838	2851
208	1749	1745	1747	1732	1718

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	515.65	9.00	8.90 - 9.10	
24	2004.17	23.95	23.90 - 24.10	
59	2650.15	58.95	58.90 - 59.10	
115	5144.56	115.00	114.90 - 115.10	
208	3288.82	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.64	0.763	0.900	
24	0.68	0.777	0.900	
59	0.65	0.773	0.900	
115	0.57	0.721	0.900	
208	0.57	0.723	0.900	

US EPA Tune Check Report

Integration Time [sec]	0.1
Acquisition Time [sec]	168.5
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.01 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.6 V	Deflect	13.0 V
Extract 2	-145.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-80 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	128	Axis Gain	0.9994	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.06		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm

EM

Discriminator	4.4 mV	Analog HV	2201 V	Pulse HV	910 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	438	4376.09	1.221	5.000	
89	411	4107.45	1.595	5.000	
205	874	8741.60	1.177	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	441	434	430	443	440
89	422	411	408	408	405
205	887	880	872	873	859

Integration Time [sec]	0.1

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.01 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

US EPA Tune Check Report

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.6 V	Deflect	1.4 V
Extract 2	-145.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	128	Axis Gain	0.9994	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.06		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	-0.7 mm		

EM

Discriminator	4.4 mV	Analog HV	2201 V	Pulse HV	910 V

Calibration Blank Report

Sample Name	std 1
File Name	007CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:06:39
Sample Type	CalBlk
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	252644.41	1.5
Be	9	6	No Gas	6.67	86.6
B	11	6	No Gas	2142.34	4.9
Na	23	45	No Gas	741729.62	1.8
Na	23	45	He	24676.64	3.9
Mg	24	45	No Gas	7055.70	11.5
Mg	24	45	He	93.34	24.7
Mg	25	45	No Gas	1240.17	31.8
Al	27	45	No Gas	14034.98	21.1
Al	27	45	He	106.67	28.6
Si	28	45	No Gas	451456.01	0.7
Si	29	45	No Gas	75341.53	1.4
K	39	45	No Gas	3826478.38	0.9
K	39	45	He	24423.34	2.4
Ca	44	45	No Gas	65666.66	0.8
Ca	44	45	He	93.34	89.2
Ti	47	45	No Gas	430.45	14.0
V	51	45	No Gas	-6753.07	-57.7
V	51	45	He	520.54	11.7
Cr	52	89	No Gas	30996.28	1.1
Cr	52	89	He	2459.39	8.4
Cr	53	89	No Gas	71567.73	1.0
Mn	55	89	No Gas	9856.92	2.8
Mn	55	89	He	240.25	23.2
Fe	56	89	No Gas	2199141.20	1.4
Fe	56	89	He	41759.79	3.3
Co	59	89	No Gas	1241.32	9.5
Co	59	89	He	286.96	24.7
Ni	60	89	No Gas	1181.26	13.9
Ni	60	89	He	987.71	15.4
Ni	62	89	No Gas	4041.40	2.5
Cu	63	89	No Gas	88142.23	2.7
Cu	63	89	He	17956.62	1.4
Cu	65	89	No Gas	39667.91	1.5
Zn	66	89	No Gas	1872.04	8.9

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	794.17	16.3
Zn	67	89	No Gas	377.05	10.7
Zn	68	89	No Gas	1514.96	9.5
As	75	89	No Gas	3353.81	16.1
As	75	89	He	40.00	14.4
Se	77	89	No Gas	11750.36	2.3
Se	78	89	No Gas	15287.50	1.2
Se	78	89	He	21.11	50.8
Se	82	89	No Gas	42.87	1429.3
[Se]	83	89	No Gas	2282.53	15.8
Sr	88	89	No Gas	323.67	17.0
Mo	95	89	No Gas	2272.50	11.2
Mo	97	89	No Gas	1605.06	11.7
Mo	98	89	No Gas	5355.04	4.0
[Mo]	99	89	No Gas	10.01	0.0
Cd	106	89	No Gas	39880.13	0.8
Ag	107	89	No Gas	514.46	0.4
Ag	107	89	He	163.50	18.7
Cd	108	89	No Gas	93.43	27.0
Ag	109	89	No Gas	186.86	25.3
Cd	111	89	No Gas	-95.81	-27.6
Cd	114	89	No Gas	96.76	15.8
Sn	118	115	No Gas	3367.12	1.9
Sb	121	115	No Gas	1230.07	6.7
Sb	121	89	He	353.34	12.8
Sb	123	115	No Gas	904.29	2.6
Ba	135	115	No Gas	83.42	25.0
Ba	137	115	No Gas	106.77	39.0
Tl	203	209	No Gas	493.84	16.3
Tl	205	209	No Gas	1067.80	20.4
Pb	206	209	No Gas	5570.26	2.3
Pb	207	209	No Gas	4722.39	6.1
Pb	208	209	No Gas	21866.49	2.6
Th	232	209	No Gas	3090.21	4.7
U	238	209	No Gas	407.09	12.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	4905245.08	0.4
Sc	45	No Gas	19588031.40	0.1
Sc	45	He	860992.42	0.5
Y	89	No Gas	45698235.00	0.4
Y	89	He	6413034.51	0.3
In	115	No Gas	9919344.87	0.8
Tb	159	No Gas	13963078.94	0.9
Bi	209	No Gas	8348524.39	1.1

Calibration Standard Report

Sample Name	std 2
File Name	008CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:09:20
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	260137.37	0.6
Be	9	6	No Gas	1227.97	9.7
B	11	6	No Gas	4231.61	3.6
Na	23	45	No Gas	1303455.08	1.6
Na	23	45	He	41036.14	3.6
Mg	24	45	No Gas	403719.39	1.5
Mg	24	45	He	8843.41	4.7
Mg	25	45	No Gas	52019.68	2.0
Al	27	45	No Gas	24329.69	1.5
Al	27	45	He	216.67	31.4
Si	28	45	No Gas	655781.69	0.8
Si	29	45	No Gas	83459.20	0.4
K	39	45	No Gas	4343480.15	0.3
K	39	45	He	30248.55	3.0
Ca	44	45	No Gas	79995.57	1.9
Ca	44	45	He	626.72	20.5
Ti	47	45	No Gas	830.87	15.7
V	51	45	No Gas	3817.77	68.4
V	51	45	He	1418.18	4.1
Cr	52	89	No Gas	36956.92	1.4
Cr	52	89	He	3440.60	2.9
Cr	53	89	No Gas	74482.99	1.2
Mn	55	89	No Gas	17585.79	1.1
Mn	55	89	He	814.19	14.6
Fe	56	89	No Gas	2640121.54	1.4
Fe	56	89	He	122739.68	1.4
Co	59	89	No Gas	7903.62	2.3
Co	59	89	He	1982.17	9.1
Ni	60	89	No Gas	2446.03	4.1
Ni	60	89	He	767.47	13.1
Ni	62	89	No Gas	4512.02	6.9
Cu	63	89	No Gas	88571.83	1.3
Cu	63	89	He	18888.89	1.3
Cu	65	89	No Gas	40129.57	2.0
Zn	66	89	No Gas	3043.44	5.3

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	740.78	10.6
Zn	67	89	No Gas	610.63	8.2
Zn	68	89	No Gas	2295.86	4.1
As	75	89	No Gas	5978.09	16.4
As	75	89	He	161.11	12.6
Se	77	89	No Gas	11977.46	1.8
Se	78	89	No Gas	14960.19	2.3
Se	78	89	He	36.67	47.2
Se	82	89	No Gas	259.71	33.8
[Se]	83	89	No Gas	2292.53	2.7
Sr	88	89	No Gas	9733.48	1.0
Mo	95	89	No Gas	3066.81	3.1
Mo	97	89	No Gas	1842.01	3.6
Mo	98	89	No Gas	6393.24	3.2
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	40328.79	2.1
Ag	107	89	No Gas	6152.57	5.6
Ag	107	89	He	2879.92	2.4
Cd	108	89	No Gas	220.22	31.8
Ag	109	89	No Gas	5683.68	8.0
Cd	111	89	No Gas	884.86	13.7
Cd	114	89	No Gas	2626.28	2.3
Sn	118	115	No Gas	6031.41	2.9
Sb	121	115	No Gas	5276.65	0.9
Sb	121	89	He	1306.76	4.2
Sb	123	115	No Gas	4034.73	6.4
Ba	135	115	No Gas	961.02	5.5
Ba	137	115	No Gas	1938.78	5.3
Tl	203	209	No Gas	4455.32	2.6
Tl	205	209	No Gas	9914.03	4.6
Pb	206	209	No Gas	8698.53	4.2
Pb	207	209	No Gas	7079.22	3.7
Pb	208	209	No Gas	33267.85	2.4
Th	232	209	No Gas	13501.13	4.3
U	238	209	No Gas	12151.72	1.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4894904.82	0.4	4905245.08	99.79	70	125	
Sc	45	No Gas	19449357.73	0.2	19588031.4	99.29	75	125	
Sc	45	He	857958.70	0.4	860992.42	99.65	75	125	
Y	89	No Gas	45603321.75	0.3	45698235	99.79	75	125	
Y	89	He	6420990.17	0.6	6413034.51	100.12	75	125	
In	115	No Gas	9978944.81	0.7	9919344.87	100.6	75	125	
Tb	159	No Gas	13978808.00	0.1	13963078.94	100.11	75	125	
Bi	209	No Gas	8424619.39	0.3	8348524.39	100.91	75	125	

Calibration Standard Report

Sample Name	std 3
File Name	009CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:11:13
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	305000.94	0.5
Be	9	6	No Gas	12875.61	2.3
B	11	6	No Gas	22641.16	2.2
Na	23	45	No Gas	6358702.36	1.4
Na	23	45	He	188037.74	1.2
Mg	24	45	No Gas	3949258.17	0.7
Mg	24	45	He	88162.21	0.6
Mg	25	45	No Gas	522953.29	0.7
Al	27	45	No Gas	70101.08	4.1
Al	27	45	He	526.68	18.4
Si	28	45	No Gas	2489360.30	0.1
Si	29	45	No Gas	198773.42	1.2
K	39	45	No Gas	8941223.62	0.3
K	39	45	He	95306.09	1.4
Ca	44	45	No Gas	226123.37	0.6
Ca	44	45	He	3707.47	4.4
Ti	47	45	No Gas	4992.66	3.6
V	51	45	No Gas	60609.72	0.7
V	51	45	He	9189.11	2.4
Cr	52	89	No Gas	89959.79	0.2
Cr	52	89	He	13712.05	4.6
Cr	53	89	No Gas	81281.71	0.2
Mn	55	89	No Gas	89460.30	1.1
Mn	55	89	He	6127.59	3.1
Fe	56	89	No Gas	7824692.88	0.9
Fe	56	89	He	836389.44	9.2
Co	59	89	No Gas	68748.29	3.6
Co	59	89	He	18063.50	1.3
Ni	60	89	No Gas	15932.11	4.1
Ni	60	89	He	5052.74	5.5
Ni	62	89	No Gas	6424.70	6.4
Cu	63	89	No Gas	118183.13	0.6
Cu	63	89	He	30601.76	1.7
Cu	65	89	No Gas	52848.75	1.9
Zn	66	89	No Gas	12451.67	4.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2689.68	3.2
Zn	67	89	No Gas	2105.63	0.7
Zn	68	89	No Gas	8918.64	0.5
As	75	89	No Gas	14963.48	13.7
As	75	89	He	1476.75	7.0
Se	77	89	No Gas	12247.98	2.7
Se	78	89	No Gas	16192.81	3.5
Se	78	89	He	112.22	8.6
Se	82	89	No Gas	341.31	79.6
[Se]	83	89	No Gas	2496.10	3.4
Sr	88	89	No Gas	96932.10	1.5
Mo	95	89	No Gas	19019.51	0.6
Mo	97	89	No Gas	11763.87	0.9
Mo	98	89	No Gas	31792.83	0.6
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	40010.68	2.6
Ag	107	89	No Gas	51132.63	1.1
Ag	107	89	He	24554.29	1.8
Cd	108	89	No Gas	730.77	2.7
Ag	109	89	No Gas	48909.24	1.2
Cd	111	89	No Gas	9583.34	2.5
Cd	114	89	No Gas	25610.76	1.7
Sn	118	115	No Gas	34003.84	1.9
Sb	121	115	No Gas	45546.44	0.3
Sb	121	89	He	10300.92	2.7
Sb	123	115	No Gas	36079.42	2.1
Ba	135	115	No Gas	9155.85	2.2
Ba	137	115	No Gas	16016.17	3.0
Tl	203	209	No Gas	39411.95	4.0
Tl	205	209	No Gas	93945.68	1.3
Pb	206	209	No Gas	36279.52	2.6
Pb	207	209	No Gas	30491.42	2.5
Pb	208	209	No Gas	141425.17	1.4
Th	232	209	No Gas	115272.28	1.5
U	238	209	No Gas	121081.37	0.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4854356.96	0.7	4905245.08	98.96	70	125	
Sc	45	No Gas	19316765.14	0.1	19588031.4	98.62	75	125	
Sc	45	He	843646.42	1.7	860992.42	97.99	75	125	
Y	89	No Gas	44980749.17	0.7	45698235	98.43	75	125	
Y	89	He	6398367.96	0.4	6413034.51	99.77	75	125	
In	115	No Gas	9865687.89	0.4	9919344.87	99.46	75	125	
Tb	159	No Gas	13760578.52	0.7	13963078.94	98.55	75	125	
Bi	209	No Gas	8245877.73	0.2	8348524.39	98.77	75	125	

Calibration Standard Report

Sample Name	std 4
File Name	010CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:13:06
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	385166.17	0.2
Be	9	6	No Gas	32697.54	2.0
B	11	6	No Gas	53762.99	0.2
Na	23	45	No Gas	14850363.87	1.3
Na	23	45	He	440083.98	1.2
Mg	24	45	No Gas	9859480.06	1.3
Mg	24	45	He	218138.54	1.8
Mg	25	45	No Gas	1296824.04	1.3
Al	27	45	No Gas	139098.23	1.2
Al	27	45	He	1073.40	15.4
Si	28	45	No Gas	5554479.91	0.3
Si	29	45	No Gas	385063.50	0.4
K	39	45	No Gas	16699916.00	0.8
K	39	45	He	196717.81	1.0
Ca	44	45	No Gas	472029.54	1.9
Ca	44	45	He	9016.96	9.5
Ti	47	45	No Gas	12812.33	2.1
V	51	45	No Gas	166785.08	4.4
V	51	45	He	22213.84	0.3
Cr	52	89	No Gas	181628.36	1.0
Cr	52	89	He	28638.76	1.2
Cr	53	89	No Gas	91435.12	3.2
Mn	55	89	No Gas	212351.65	0.7
Mn	55	89	He	14609.30	2.2
Fe	56	89	No Gas	16537299.33	0.2
Fe	56	89	He	1904493.62	1.5
Co	59	89	No Gas	169907.19	1.1
Co	59	89	He	45451.31	2.2
Ni	60	89	No Gas	38359.19	1.1
Ni	60	89	He	13019.43	1.8
Ni	62	89	No Gas	9215.84	2.2
Cu	63	89	No Gas	183076.37	3.5
Cu	63	89	He	51401.85	1.3
Cu	65	89	No Gas	85885.86	3.9
Zn	66	89	No Gas	27843.31	2.1

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	5653.59	3.2
Zn	67	89	No Gas	4288.38	2.2
Zn	68	89	No Gas	19299.92	4.2
As	75	89	No Gas	31447.98	6.7
As	75	89	He	3709.42	5.0
Se	77	89	No Gas	13046.26	3.5
Se	78	89	No Gas	18401.15	1.2
Se	78	89	He	231.11	10.8
Se	82	89	No Gas	1635.71	19.7
[Se]	83	89	No Gas	2185.74	8.4
Sr	88	89	No Gas	245154.69	1.0
Mo	95	89	No Gas	45791.08	1.1
Mo	97	89	No Gas	28923.94	1.1
Mo	98	89	No Gas	76379.56	0.9
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	41165.22	0.5
Ag	107	89	No Gas	125744.88	0.7
Ag	107	89	He	61946.48	1.1
Cd	108	89	No Gas	1798.63	1.4
Ag	109	89	No Gas	121491.41	1.3
Cd	111	89	No Gas	24198.13	0.6
Cd	114	89	No Gas	64491.76	1.4
Sn	118	115	No Gas	81022.13	0.8
Sb	121	115	No Gas	113426.44	1.1
Sb	121	89	He	26276.63	2.6
Sb	123	115	No Gas	86305.73	1.4
Ba	135	115	No Gas	23260.94	1.2
Ba	137	115	No Gas	40276.20	1.0
Tl	203	209	No Gas	99260.79	0.5
Tl	205	209	No Gas	233155.38	0.5
Pb	206	209	No Gas	84203.56	0.4
Pb	207	209	No Gas	70361.51	2.4
Pb	208	209	No Gas	330643.92	1.3
Th	232	209	No Gas	300292.99	1.1
U	238	209	No Gas	306852.83	0.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4837021.63	0.9	4905245.08	98.61	70	125	
Sc	45	No Gas	19274644.68	0.6	19588031.4	98.4	75	125	
Sc	45	He	852968.84	0.3	860992.42	99.07	75	125	
Y	89	No Gas	44910447.20	0.1	45698235	98.28	75	125	
Y	89	He	6322067.08	0.5	6413034.51	98.58	75	125	
In	115	No Gas	9818393.85	0.2	9919344.87	98.98	75	125	
Tb	159	No Gas	13746650.01	0.5	13963078.94	98.45	75	125	
Bi	209	No Gas	8322529.67	0.9	8348524.39	99.69	75	125	

Calibration Standard Report

Sample Name std 5

File Name 011CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 14:14:59

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	509065.63	1.2
Be	9	6	No Gas	63626.63	0.4
B	11	6	No Gas	105070.72	1.1
Na	23	45	No Gas	28627552.72	0.5
Na	23	45	He	819100.85	0.6
Mg	24	45	No Gas	19382155.13	0.4
Mg	24	45	He	426222.56	0.7
Mg	25	45	No Gas	2565439.86	0.5
Al	27	45	No Gas	258805.05	0.6
Al	27	45	He	1836.82	9.1
Si	28	45	No Gas	10524172.11	0.2
Si	29	45	No Gas	695140.74	0.5
K	39	45	No Gas	29136365.40	0.5
K	39	45	He	367367.38	0.4
Ca	44	45	No Gas	862651.52	0.6
Ca	44	45	He	17719.24	3.5
Ti	47	45	No Gas	24372.98	2.4
V	51	45	No Gas	323197.58	1.0
V	51	45	He	42123.57	1.4
Cr	52	89	No Gas	329182.68	0.9
Cr	52	89	He	55246.39	1.3
Cr	53	89	No Gas	112248.41	0.7
Mn	55	89	No Gas	410200.89	0.3
Mn	55	89	He	29615.31	1.4
Fe	56	89	No Gas	30730799.65	0.9
Fe	56	89	He	3760411.40	0.4
Co	59	89	No Gas	332482.42	1.2
Co	59	89	He	88712.19	0.4
Ni	60	89	No Gas	74969.90	1.7
Ni	60	89	He	24707.42	1.0
Ni	62	89	No Gas	14843.13	5.2
Cu	63	89	No Gas	270056.32	1.1
Cu	63	89	He	84841.08	0.3
Cu	65	89	No Gas	125738.57	0.5
Zn	66	89	No Gas	52342.90	2.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	10624.90	2.6
Zn	67	89	No Gas	8501.31	2.5
Zn	68	89	No Gas	38155.33	1.9
As	75	89	No Gas	55231.64	1.8
As	75	89	He	7370.93	2.4
Se	77	89	No Gas	15030.30	1.6
Se	78	89	No Gas	21619.18	3.9
Se	78	89	He	477.79	5.9
Se	82	89	No Gas	3106.68	9.7
[Se]	83	89	No Gas	2305.89	3.6
Sr	88	89	No Gas	478176.28	0.3
Mo	95	89	No Gas	90049.09	1.9
Mo	97	89	No Gas	56255.08	1.3
Mo	98	89	No Gas	147423.34	1.2
[Mo]	99	89	No Gas	13.35	114.6
Cd	106	89	No Gas	42685.09	0.4
Ag	107	89	No Gas	248884.12	0.4
Ag	107	89	He	121625.17	0.9
Cd	108	89	No Gas	3617.51	5.8
Ag	109	89	No Gas	235858.35	0.7
Cd	111	89	No Gas	47936.23	0.4
Cd	114	89	No Gas	126767.33	1.6
Sn	118	115	No Gas	157915.36	0.4
Sb	121	115	No Gas	222888.07	0.3
Sb	121	89	He	51477.51	1.8
Sb	123	115	No Gas	171271.17	0.3
Ba	135	115	No Gas	45994.06	1.4
Ba	137	115	No Gas	81448.95	1.0
Tl	203	209	No Gas	196135.25	0.2
Tl	205	209	No Gas	468421.34	1.1
Pb	206	209	No Gas	163008.81	0.9
Pb	207	209	No Gas	133818.65	1.3
Pb	208	209	No Gas	634445.73	0.2
Th	232	209	No Gas	603662.49	0.3
U	238	209	No Gas	609784.15	0.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4780773.99	0.5	4905245.08	97.46	70	125	
Sc	45	No Gas	19010014.22	0.3	19588031.4	97.05	75	125	
Sc	45	He	834848.65	0.3	860992.42	96.96	75	125	
Y	89	No Gas	44252887.98	0.4	45698235	96.84	75	125	
Y	89	He	6205509.90	0.3	6413034.51	96.76	75	125	
In	115	No Gas	9702594.11	0.2	9919344.87	97.81	75	125	
Tb	159	No Gas	13696642.92	0.7	13963078.94	98.09	75	125	
Bi	209	No Gas	8260859.40	0.3	8348524.39	98.95	75	125	

Calibration Standard Report

Sample Name std 6

File Name 012CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 14:16:52

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1542275.41	0.1
Be	9	6	No Gas	320017.16	1.1
B	11	6	No Gas	518018.32	0.5
Na	23	45	No Gas	140843669.82	0.6
Na	23	45	He	4018701.40	1.2
Mg	24	45	No Gas	96604508.56	0.4
Mg	24	45	He	2116052.47	0.2
Mg	25	45	No Gas	12742017.73	0.4
Al	27	45	No Gas	1242147.74	0.3
Al	27	45	He	9029.76	4.1
Si	28	45	No Gas	50855455.56	0.3
Si	29	45	No Gas	3166442.80	0.2
K	39	45	No Gas	131153184.71	0.3
K	39	45	He	1688518.83	0.5
Ca	44	45	No Gas	3984552.44	0.4
Ca	44	45	He	89979.15	0.9
Ti	47	45	No Gas	119996.13	1.0
V	51	45	No Gas	1654951.99	0.1
V	51	45	He	215465.77	0.8
Cr	52	89	No Gas	1514669.31	0.7
Cr	52	89	He	271954.87	1.6
Cr	53	89	No Gas	246338.41	0.6
Mn	55	89	No Gas	2000965.71	0.4
Mn	55	89	He	147824.87	1.3
Fe	56	89	No Gas	146603503.28	0.6
Fe	56	89	He	18805998.47	1.8
Co	59	89	No Gas	1640368.03	0.8
Co	59	89	He	447981.16	1.3
Ni	60	89	No Gas	366618.52	0.2
Ni	60	89	He	121625.51	1.0
Ni	62	89	No Gas	58785.35	1.3
Cu	63	89	No Gas	970974.67	0.2
Cu	63	89	He	352523.15	0.8
Cu	65	89	No Gas	460087.12	0.4
Zn	66	89	No Gas	252802.13	0.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	51445.50	0.4
Zn	67	89	No Gas	39855.18	1.3
Zn	68	89	No Gas	181527.65	0.2
As	75	89	No Gas	262726.26	1.0
As	75	89	He	37140.85	1.1
Se	77	89	No Gas	24192.88	1.2
Se	78	89	No Gas	52364.04	1.1
Se	78	89	He	2350.22	4.8
Se	82	89	No Gas	16251.60	2.1
[Se]	83	89	No Gas	2315.88	1.2
Sr	88	89	No Gas	2391871.56	0.7
Mo	95	89	No Gas	449910.00	1.3
Mo	97	89	No Gas	283375.45	1.2
Mo	98	89	No Gas	733192.27	0.7
[Mo]	99	89	No Gas	6.67	173.2
Cd	106	89	No Gas	61303.08	1.6
Ag	107	89	No Gas	1230430.51	0.5
Ag	107	89	He	610523.47	1.3
Cd	108	89	No Gas	17669.77	1.3
Ag	109	89	No Gas	1179950.74	0.1
Cd	111	89	No Gas	241650.94	0.5
Cd	114	89	No Gas	637365.24	0.4
Sn	118	115	No Gas	784464.00	0.1
Sb	121	115	No Gas	1122682.46	0.3
Sb	121	89	He	257483.20	0.2
Sb	123	115	No Gas	862743.42	0.1
Ba	135	115	No Gas	234811.92	0.3
Ba	137	115	No Gas	407743.06	0.9
Tl	203	209	No Gas	985002.01	0.7
Tl	205	209	No Gas	2330391.86	0.5
Pb	206	209	No Gas	796120.73	0.3
Pb	207	209	No Gas	659149.02	0.5
Pb	208	209	No Gas	3091466.52	0.4
Th	232	209	No Gas	3132339.53	0.4
U	238	209	No Gas	3121224.77	0.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4645837.16	0.7	4905245.08	94.71	70	125	
Sc	45	No Gas	18783870.57	0.4	19588031.4	95.89	75	125	
Sc	45	He	831512.36	0.2	860992.42	96.58	75	125	
Y	89	No Gas	43686341.43	0.2	45698235	95.6	75	125	
Y	89	He	6202775.29	0.6	6413034.51	96.72	75	125	
In	115	No Gas	9592885.46	0.2	9919344.87	96.71	75	125	
Tb	159	No Gas	13549190.47	0.6	13963078.94	97.04	75	125	
Bi	209	No Gas	8077653.29	0.2	8348524.39	96.76	75	125	

Calibration Standard Report

Sample Name std 7

File Name 013CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 14:18:48

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	2530486.27	0.1
Be	9	6	No Gas	568656.35	0.3
B	11	6	No Gas	919517.91	1.2
Na	23	45	No Gas	245398380.48	0.6
Na	23	45	He	7098340.93	0.4
Mg	24	45	No Gas	170247804.13	0.4
Mg	24	45	He	3749146.51	1.5
Mg	25	45	No Gas	22503259.66	0.7
Al	27	45	No Gas	2169404.24	0.5
Al	27	45	He	15315.32	4.6
Si	28	45	No Gas	89528068.25	0.3
Si	29	45	No Gas	5508570.25	0.5
K	39	45	No Gas	229041976.59	0.8
K	39	45	He	2954104.75	1.2
Ca	44	45	No Gas	7042961.15	0.5
Ca	44	45	He	162320.13	3.9
Ti	47	45	No Gas	214454.83	1.5
V	51	45	No Gas	2977057.96	0.2
V	51	45	He	382117.78	0.5
Cr	52	89	No Gas	2694490.85	0.2
Cr	52	89	He	477526.50	0.5
Cr	53	89	No Gas	383714.90	0.4
Mn	55	89	No Gas	3549895.74	0.6
Mn	55	89	He	259933.03	0.8
Fe	56	89	No Gas	258198522.44	0.9
Fe	56	89	He	33617232.83	0.4
Co	59	89	No Gas	2922859.74	0.5
Co	59	89	He	793079.46	0.7
Ni	60	89	No Gas	647173.98	0.3
Ni	60	89	He	215522.64	0.7
Ni	62	89	No Gas	99641.97	0.9
Cu	63	89	No Gas	1673806.26	0.2
Cu	63	89	He	612967.15	1.0
Cu	65	89	No Gas	789748.71	0.2
Zn	66	89	No Gas	444314.01	0.7

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	92068.43	0.7
Zn	67	89	No Gas	71341.85	0.7
Zn	68	89	No Gas	319853.77	0.3
As	75	89	No Gas	463828.21	0.6
As	75	89	He	66070.50	1.5
Se	77	89	No Gas	34592.53	2.3
Se	78	89	No Gas	82758.69	1.6
Se	78	89	He	4299.59	2.4
Se	82	89	No Gas	28377.21	0.4
[Se]	83	89	No Gas	2129.00	8.5
Sr	88	89	No Gas	4285475.80	0.8
Mo	95	89	No Gas	806495.69	0.6
Mo	97	89	No Gas	506610.69	0.8
Mo	98	89	No Gas	1320444.34	0.4
[Mo]	99	89	No Gas	23.36	24.7
Cd	106	89	No Gas	79155.04	0.3
Ag	107	89	No Gas	2205923.45	0.5
Ag	107	89	He	1075077.71	0.7
Cd	108	89	No Gas	30816.91	2.5
Ag	109	89	No Gas	2107499.53	0.1
Cd	111	89	No Gas	431838.96	0.7
Cd	114	89	No Gas	1138172.24	0.7
Sn	118	115	No Gas	1411922.82	0.3
Sb	121	115	No Gas	2027634.57	0.8
Sb	121	89	He	461692.05	0.9
Sb	123	115	No Gas	1556373.15	0.6
Ba	135	115	No Gas	416154.49	0.8
Ba	137	115	No Gas	724286.14	0.4
Tl	203	209	No Gas	1769209.21	0.4
Tl	205	209	No Gas	4198681.19	0.4
Pb	206	209	No Gas	1433132.04	1.0
Pb	207	209	No Gas	1185530.14	1.2
Pb	208	209	No Gas	5580599.13	0.6
Th	232	209	No Gas	5657899.58	0.1
U	238	209	No Gas	5612579.05	0.1

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4547923.67	0.2	4905245.08	92.72	70	125	
Sc	45	No Gas	18749773.98	0.3	19588031.4	95.72	75	125	
Sc	45	He	824563.96	0.9	860992.42	95.77	75	125	
Y	89	No Gas	43782809.56	1.1	45698235	95.81	75	125	
Y	89	He	6163601.74	1.0	6413034.51	96.11	75	125	
In	115	No Gas	9530486.40	0.6	9919344.87	96.08	75	125	
Tb	159	No Gas	13478566.93	0.4	13963078.94	96.53	75	125	
Bi	209	No Gas	8053485.51	0.4	8348524.39	96.47	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	014CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:20:41
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	5149884.68	0.7
Be	9	6	No Gas	1218810.69	0.0
B	11	6	No Gas	2016501.97	0.5
Na	23	45	No Gas	532497645.24	1.2
Na	23	45	He	15352867.69	1.5
Mg	24	45	No Gas	368339154.51	0.7
Mg	24	45	He	8092920.09	1.4
Mg	25	45	No Gas	48179817.62	0.7
Al	27	45	No Gas	4707726.59	0.4
Al	27	45	He	32752.00	1.3
Si	28	45	No Gas	189257751.47	0.4
Si	29	45	No Gas	11598444.72	0.5
K	39	45	No Gas	496629005.93	0.9
K	39	45	He	6385986.99	1.6
Ca	44	45	No Gas	15272431.02	1.1
Ca	44	45	He	352676.82	0.9
Ti	47	45	No Gas	470302.40	0.4
V	51	45	No Gas	6498944.99	0.9
V	51	45	He	834380.74	1.2
Cr	52	89	No Gas	5825131.81	0.8
Cr	52	89	He	1017672.47	1.0
Cr	53	89	No Gas	754399.11	0.8
Mn	55	89	No Gas	7761333.85	0.8
Mn	55	89	He	562020.06	0.9
Fe	56	89	No Gas	561238312.55	1.5
Fe	56	89	He	72941632.25	1.0
Co	59	89	No Gas	6371391.61	0.6
Co	59	89	He	1695196.24	0.9
Ni	60	89	No Gas	1406798.68	0.6
Ni	60	89	He	467722.92	0.4
Ni	62	89	No Gas	210684.95	0.2
Cu	63	89	No Gas	3467580.40	0.8
Cu	63	89	He	1268043.86	1.2
Cu	65	89	No Gas	1642769.13	1.4
Zn	66	89	No Gas	962059.35	1.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	197335.44	2.3
Zn	67	89	No Gas	150688.93	0.9
Zn	68	89	No Gas	689446.92	0.5
As	75	89	No Gas	1010510.41	1.1
As	75	89	He	143510.60	1.1
Se	77	89	No Gas	61410.88	1.7
Se	78	89	No Gas	161947.16	0.7
Se	78	89	He	9043.08	1.2
Se	82	89	No Gas	60492.33	1.7
[Se]	83	89	No Gas	2355.94	8.0
Sr	88	89	No Gas	9396064.21	1.0
Mo	95	89	No Gas	1787596.51	0.7
Mo	97	89	No Gas	1118310.55	1.0
Mo	98	89	No Gas	2928538.05	1.3
[Mo]	99	89	No Gas	53.39	75.8
Cd	106	89	No Gas	128247.82	0.5
Ag	107	89	No Gas	4786993.56	0.7
Ag	107	89	He	2327210.29	1.3
Cd	108	89	No Gas	67942.24	0.3
Ag	109	89	No Gas	4602105.45	0.6
Cd	111	89	No Gas	939426.30	0.2
Cd	114	89	No Gas	2503214.10	0.6
Sn	118	115	No Gas	3087446.33	0.8
Sb	121	115	No Gas	4435097.32	1.0
Sb	121	89	He	997152.69	1.7
Sb	123	115	No Gas	3422178.23	1.0
Ba	135	115	No Gas	911629.29	0.2
Ba	137	115	No Gas	1592949.99	1.1
Tl	203	209	No Gas	3887822.42	0.8
Tl	205	209	No Gas	9206339.48	0.8
Pb	206	209	No Gas	3130606.65	0.9
Pb	207	209	No Gas	2631879.13	0.9
Pb	208	209	No Gas	12236784.68	1.0
Th	232	209	No Gas	12524056.16	1.3
U	238	209	No Gas	12346392.67	0.8

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4394978.98	0.8	4905245.08	89.6	70	125	
Sc	45	No Gas	18604232.61	0.2	19588031.4	94.98	75	125	
Sc	45	He	806059.74	1.7	860992.42	93.62	75	125	
Y	89	No Gas	43254204.29	0.7	45698235	94.65	75	125	
Y	89	He	6048700.59	1.1	6413034.51	94.32	75	125	
In	115	No Gas	9346056.84	0.9	9919344.87	94.22	75	125	
Tb	159	No Gas	13503577.35	0.3	13963078.94	96.71	75	125	
Bi	209	No Gas	7954264.13	1.1	8348524.39	95.28	75	125	

Calibration Blank Report

Sample Name std 1

File Name 231CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 20:30:11

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 231CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	179757.90	0.3
Be	9	6	No Gas	46.71	24.7
B	11	6	No Gas	21113.86	3.0
Na	23	45	No Gas	1920394.38	1.3
Na	23	45	He	61096.89	3.5
Mg	24	45	No Gas	9484.03	8.9
Mg	24	45	He	213.35	21.7
Mg	25	45	No Gas	1213.46	3.8
Al	27	45	No Gas	8376.66	2.4
Al	27	45	He	56.67	36.7
Si	28	45	No Gas	359241.03	1.2
Si	29	45	No Gas	61037.85	1.3
K	39	45	No Gas	3816784.42	0.8
K	39	45	He	24316.28	6.0
Ca	44	45	No Gas	25024.16	4.3
Ca	44	45	He	186.68	12.4
Ti	47	45	No Gas	203.54	14.2
V	51	45	No Gas	-1860.30	-96.2
V	51	45	He	283.63	21.3
Cr	52	89	No Gas	22487.95	1.0
Cr	52	89	He	1872.04	1.4
Cr	53	89	No Gas	39272.30	1.3
Mn	55	89	No Gas	18571.41	1.4
Mn	55	89	He	1157.89	12.6
Fe	56	89	No Gas	1846736.76	0.6
Fe	56	89	He	21164.23	2.3
Co	59	89	No Gas	1364.80	4.5
Co	59	89	He	293.64	11.0
Ni	60	89	No Gas	944.33	6.1
Ni	60	89	He	296.97	14.0
Ni	62	89	No Gas	3821.08	3.0
Cu	63	89	No Gas	12722.20	0.6
Cu	63	89	He	3754.34	4.9
Cu	65	89	No Gas	6217.76	4.3
Zn	66	89	No Gas	1581.71	4.4

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	340.35	19.3
Zn	67	89	No Gas	330.34	19.9
Zn	68	89	No Gas	1164.57	5.9
As	75	89	No Gas	5272.24	24.8
As	75	89	He	21.11	48.2
Se	77	89	No Gas	6735.18	2.4
Se	78	89	No Gas	15848.73	2.2
Se	78	89	He	18.89	66.8
Se	82	89	No Gas	-6.95	-2273.9
[Se]	83	89	No Gas	2626.27	8.2
Sr	88	89	No Gas	727.43	15.2
Mo	95	89	No Gas	567.26	29.1
Mo	97	89	No Gas	347.02	21.8
Mo	98	89	No Gas	1027.27	7.6
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	38835.92	1.8
Ag	107	89	No Gas	527.79	7.2
Ag	107	89	He	183.52	11.4
Cd	108	89	No Gas	60.06	16.7
Ag	109	89	No Gas	196.87	25.1
Cd	111	89	No Gas	-52.22	-21.6
Cd	114	89	No Gas	50.05	69.3
Sn	118	115	No Gas	2134.70	16.0
Sb	121	115	No Gas	653.35	7.0
Sb	121	89	He	196.67	23.5
Sb	123	115	No Gas	670.70	10.4
Ba	135	115	No Gas	83.42	72.3
Ba	137	115	No Gas	136.81	51.4
Tl	203	209	No Gas	470.49	22.1
Tl	205	209	No Gas	1231.31	4.3
Pb	206	209	No Gas	2469.43	5.7
Pb	207	209	No Gas	2028.90	9.9
Pb	208	209	No Gas	9517.77	7.0
Th	232	209	No Gas	9700.39	14.2
U	238	209	No Gas	991.06	9.1

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	3287788.30	0.4
Sc	45	No Gas	16642937.14	0.2
Sc	45	He	708779.09	1.6
Y	89	No Gas	41680351.27	0.6
Y	89	He	5497469.77	1.4
In	115	No Gas	9172632.54	0.3
Tb	159	No Gas	12859728.08	0.4
Bi	209	No Gas	7923397.19	0.3

Calibration Standard Report

Sample Name	std 2
File Name	232CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:31:50
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	183421.29	0.4
Be	9	6	No Gas	981.03	10.8
B	11	6	No Gas	20398.75	2.6
Na	23	45	No Gas	2264043.28	1.8
Na	23	45	He	77223.43	9.3
Mg	24	45	No Gas	324899.32	1.6
Mg	24	45	He	7282.46	5.8
Mg	25	45	No Gas	42828.43	4.1
Al	27	45	No Gas	18667.18	2.7
Al	27	45	He	170.00	27.0
Si	28	45	No Gas	543585.08	0.4
Si	29	45	No Gas	68892.05	0.4
K	39	45	No Gas	4244916.29	0.5
K	39	45	He	29646.96	1.2
Ca	44	45	No Gas	39647.04	3.8
Ca	44	45	He	480.04	16.7
Ti	47	45	No Gas	547.23	14.2
V	51	45	No Gas	5028.04	36.4
V	51	45	He	940.99	9.8
Cr	52	89	No Gas	26585.91	2.0
Cr	52	89	He	2723.06	9.3
Cr	53	89	No Gas	40721.31	1.5
Mn	55	89	No Gas	25486.07	1.2
Mn	55	89	He	1575.03	9.6
Fe	56	89	No Gas	2320222.38	0.1
Fe	56	89	He	96167.69	3.0
Co	59	89	No Gas	6741.87	4.9
Co	59	89	He	1862.03	6.7
Ni	60	89	No Gas	2252.49	10.5
Ni	60	89	He	633.99	9.0
Ni	62	89	No Gas	4268.37	2.1
Cu	63	89	No Gas	16226.16	0.7
Cu	63	89	He	4685.57	8.7
Cu	65	89	No Gas	7860.28	6.0
Zn	66	89	No Gas	2746.42	8.6

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	577.27	10.2
Zn	67	89	No Gas	450.47	16.8
Zn	68	89	No Gas	1821.98	4.7
As	75	89	No Gas	5417.67	8.1
As	75	89	He	144.45	14.1
Se	77	89	No Gas	6858.73	6.8
Se	78	89	No Gas	15832.01	3.7
Se	78	89	He	26.67	33.1
Se	82	89	No Gas	-85.77	-481.4
[Se]	83	89	No Gas	2482.76	2.5
Sr	88	89	No Gas	9806.89	0.9
Mo	95	89	No Gas	2105.65	12.9
Mo	97	89	No Gas	1264.68	7.8
Mo	98	89	No Gas	3349.04	0.7
[Mo]	99	89	No Gas	10.01	100.0
Cd	106	89	No Gas	39100.42	0.9
Ag	107	89	No Gas	5841.32	1.3
Ag	107	89	He	2572.87	9.9
Cd	108	89	No Gas	160.16	41.0
Ag	109	89	No Gas	5336.51	1.4
Cd	111	89	No Gas	847.08	7.1
Cd	114	89	No Gas	2375.97	8.7
Sn	118	115	No Gas	4834.25	2.3
Sb	121	115	No Gas	4897.61	5.7
Sb	121	89	He	1146.74	8.5
Sb	123	115	No Gas	4004.73	7.9
Ba	135	115	No Gas	917.64	19.6
Ba	137	115	No Gas	1765.26	4.2
Tl	203	209	No Gas	4028.09	1.7
Tl	205	209	No Gas	10111.03	5.9
Pb	206	209	No Gas	5700.44	2.4
Pb	207	209	No Gas	4765.78	1.7
Pb	208	209	No Gas	22384.08	1.1
Th	232	209	No Gas	16487.78	2.7
U	238	209	No Gas	12088.30	2.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3303764.66	0.6	3287788.3	100.49	70	125	
Sc	45	No Gas	16605341.21	0.2	16642937.14	99.77	75	125	
Sc	45	He	710712.39	0.5	708779.09	100.27	75	125	
Y	89	No Gas	41766835.25	0.1	41680351.27	100.21	75	125	
Y	89	He	5487594.27	0.6	5497469.77	99.82	75	125	
In	115	No Gas	9170629.10	0.6	9172632.54	99.98	75	125	
Tb	159	No Gas	12890125.98	0.4	12859728.08	100.24	75	125	
Bi	209	No Gas	7956055.52	0.5	7923397.19	100.41	75	125	

Calibration Standard Report

Sample Name	std 3
File Name	233CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:33:29
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	216327.62	0.2
Be	9	6	No Gas	9689.83	2.1
B	11	6	No Gas	32430.03	4.9
Na	23	45	No Gas	6145950.92	1.6
Na	23	45	He	191415.67	0.9
Mg	24	45	No Gas	3082833.60	1.3
Mg	24	45	He	72003.48	2.2
Mg	25	45	No Gas	421673.52	0.7
Al	27	45	No Gas	58245.94	4.9
Al	27	45	He	380.01	2.6
Si	28	45	No Gas	2011913.79	0.5
Si	29	45	No Gas	165572.99	1.0
K	39	45	No Gas	8292310.29	0.4
K	39	45	He	82422.39	4.4
Ca	44	45	No Gas	169011.74	1.1
Ca	44	45	He	3253.96	8.6
Ti	47	45	No Gas	4471.95	2.5
V	51	45	No Gas	58242.60	7.8
V	51	45	He	7539.74	4.3
Cr	52	89	No Gas	74677.32	2.1
Cr	52	89	He	10828.65	1.2
Cr	53	89	No Gas	46231.21	3.0
Mn	55	89	No Gas	91112.26	1.1
Mn	55	89	He	6254.48	2.5
Fe	56	89	No Gas	6928476.98	0.3
Fe	56	89	He	774285.87	1.1
Co	59	89	No Gas	60614.85	1.3
Co	59	89	He	15858.66	0.4
Ni	60	89	No Gas	13824.32	1.5
Ni	60	89	He	4431.91	2.7
Ni	62	89	No Gas	5900.62	3.3
Cu	63	89	No Gas	44242.87	0.8
Cu	63	89	He	15066.91	1.2
Cu	65	89	No Gas	21461.98	2.0
Zn	66	89	No Gas	10998.94	3.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2028.89	4.0
Zn	67	89	No Gas	1718.53	6.8
Zn	68	89	No Gas	8010.51	3.4
As	75	89	No Gas	15443.20	8.0
As	75	89	He	1277.85	3.8
Se	77	89	No Gas	7202.56	4.6
Se	78	89	No Gas	16961.15	0.4
Se	78	89	He	94.45	11.3
Se	82	89	No Gas	842.35	50.5
[Se]	83	89	No Gas	2446.06	12.4
Sr	88	89	No Gas	93453.82	0.6
Mo	95	89	No Gas	16994.76	0.5
Mo	97	89	No Gas	10755.25	3.3
Mo	98	89	No Gas	28154.83	1.2
[Mo]	99	89	No Gas	0.00	N/A
Cd	106	89	No Gas	39448.36	0.7
Ag	107	89	No Gas	47812.59	1.0
Ag	107	89	He	22013.89	4.1
Cd	108	89	No Gas	690.72	8.1
Ag	109	89	No Gas	45219.34	0.9
Cd	111	89	No Gas	9132.58	2.6
Cd	114	89	No Gas	24470.72	3.1
Sn	118	115	No Gas	31983.22	0.5
Sb	121	115	No Gas	43313.35	1.1
Sb	121	89	He	8896.49	2.6
Sb	123	115	No Gas	33352.65	0.8
Ba	135	115	No Gas	9169.22	1.7
Ba	137	115	No Gas	15882.56	3.0
Tl	203	209	No Gas	38270.51	2.7
Tl	205	209	No Gas	89874.58	1.3
Pb	206	209	No Gas	32809.62	0.8
Pb	207	209	No Gas	27769.05	0.7
Pb	208	209	No Gas	128927.23	1.1
Th	232	209	No Gas	111042.01	0.8
U	238	209	No Gas	113569.65	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3289303.84	0.2	3287788.3	100.05	70	125	
Sc	45	No Gas	16603420.96	0.2	16642937.14	99.76	75	125	
Sc	45	He	709827.72	0.8	708779.09	100.15	75	125	
Y	89	No Gas	41547680.27	0.4	41680351.27	99.68	75	125	
Y	89	He	5423587.56	0.9	5497469.77	98.66	75	125	
In	115	No Gas	9192413.44	0.3	9172632.54	100.22	75	125	
Tb	159	No Gas	12894240.10	0.5	12859728.08	100.27	75	125	
Bi	209	No Gas	7953668.30	0.4	7923397.19	100.38	75	125	

Calibration Standard Report

Sample Name	std 4
File Name	234CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:35:07
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	270603.16	1.4
Be	9	6	No Gas	23931.22	2.2
B	11	6	No Gas	53990.85	0.5
Na	23	45	No Gas	12755135.44	1.9
Na	23	45	He	383544.33	1.5
Mg	24	45	No Gas	7687541.35	0.4
Mg	24	45	He	174298.99	2.4
Mg	25	45	No Gas	1021784.83	0.5
Al	27	45	No Gas	118132.78	2.2
Al	27	45	He	736.70	10.9
Si	28	45	No Gas	4481294.12	0.2
Si	29	45	No Gas	322874.66	0.3
K	39	45	No Gas	14857988.95	0.6
K	39	45	He	167210.46	1.5
Ca	44	45	No Gas	385515.33	0.2
Ca	44	45	He	7976.19	1.5
Ti	47	45	No Gas	10584.79	2.1
V	51	45	No Gas	143901.23	1.3
V	51	45	He	18147.02	2.5
Cr	52	89	No Gas	152336.79	0.6
Cr	52	89	He	25125.28	1.4
Cr	53	89	No Gas	57715.70	0.6
Mn	55	89	No Gas	198266.54	0.9
Mn	55	89	He	13383.51	4.6
Fe	56	89	No Gas	14480152.93	0.5
Fe	56	89	He	1557690.45	1.8
Co	59	89	No Gas	147182.58	0.7
Co	59	89	He	38171.63	0.8
Ni	60	89	No Gas	33000.07	0.6
Ni	60	89	He	10768.50	2.0
Ni	62	89	No Gas	8461.24	1.1
Cu	63	89	No Gas	91789.00	0.6
Cu	63	89	He	32678.70	0.9
Cu	65	89	No Gas	43771.02	1.0
Zn	66	89	No Gas	24587.03	0.1

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	4789.04	2.2
Zn	67	89	No Gas	3851.13	7.5
Zn	68	89	No Gas	17545.83	2.9
As	75	89	No Gas	26974.02	1.8
As	75	89	He	3320.43	5.0
Se	77	89	No Gas	8554.76	0.8
Se	78	89	No Gas	19259.95	2.3
Se	78	89	He	237.78	7.7
Se	82	89	No Gas	1416.91	19.5
[Se]	83	89	No Gas	2392.65	7.8
Sr	88	89	No Gas	230841.41	1.0
Mo	95	89	No Gas	42714.36	0.4
Mo	97	89	No Gas	26991.17	1.4
Mo	98	89	No Gas	69523.30	1.1
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	41038.17	0.8
Ag	107	89	No Gas	117327.25	0.4
Ag	107	89	He	55002.60	1.0
Cd	108	89	No Gas	1842.01	4.4
Ag	109	89	No Gas	112423.95	1.0
Cd	111	89	No Gas	22839.07	1.4
Cd	114	89	No Gas	59630.85	2.1
Sn	118	115	No Gas	77025.08	1.0
Sb	121	115	No Gas	108317.22	0.7
Sb	121	89	He	23718.46	1.6
Sb	123	115	No Gas	82406.54	1.4
Ba	135	115	No Gas	22622.48	4.1
Ba	137	115	No Gas	39028.06	2.6
Tl	203	209	No Gas	95517.93	1.0
Tl	205	209	No Gas	226032.30	0.8
Pb	206	209	No Gas	79448.17	1.6
Pb	207	209	No Gas	66221.28	1.4
Pb	208	209	No Gas	308071.41	0.4
Th	232	209	No Gas	280166.75	0.6
U	238	209	No Gas	285250.24	0.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3281753.93	0.4	3287788.3	99.82	70	125	
Sc	45	No Gas	16439258.88	0.4	16642937.14	98.78	75	125	
Sc	45	He	702982.25	1.5	708779.09	99.18	75	125	
Y	89	No Gas	41419144.23	0.3	41680351.27	99.37	75	125	
Y	89	He	5373993.79	1.4	5497469.77	97.75	75	125	
In	115	No Gas	9102220.50	0.7	9172632.54	99.23	75	125	
Tb	159	No Gas	12833652.85	0.7	12859728.08	99.8	75	125	
Bi	209	No Gas	7895831.07	0.5	7923397.19	99.65	75	125	

Calibration Standard Report

Sample Name	std 5
File Name	235CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:36:46
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	359189.09	0.4
Be	9	6	No Gas	47089.00	3.0
B	11	6	No Gas	93075.36	1.4
Na	23	45	No Gas	23296873.44	0.5
Na	23	45	He	699743.12	3.3
Mg	24	45	No Gas	15081473.11	0.3
Mg	24	45	He	346083.68	0.3
Mg	25	45	No Gas	2018511.06	0.4
Al	27	45	No Gas	214784.74	0.8
Al	27	45	He	1516.78	10.5
Si	28	45	No Gas	8534421.94	0.2
Si	29	45	No Gas	587528.69	0.3
K	39	45	No Gas	25870893.78	0.5
K	39	45	He	306566.43	0.9
Ca	44	45	No Gas	734668.48	0.2
Ca	44	45	He	14849.12	5.6
Ti	47	45	No Gas	21080.87	1.3
V	51	45	No Gas	287644.86	1.2
V	51	45	He	36030.23	1.6
Cr	52	89	No Gas	285425.72	0.8
Cr	52	89	He	47141.68	2.1
Cr	53	89	No Gas	76754.30	1.4
Mn	55	89	No Gas	378475.67	1.3
Mn	55	89	He	25633.31	2.9
Fe	56	89	No Gas	26782755.81	0.9
Fe	56	89	He	3085833.70	0.5
Co	59	89	No Gas	289357.58	0.5
Co	59	89	He	76006.68	0.6
Ni	60	89	No Gas	65197.39	1.4
Ni	60	89	He	21271.39	2.1
Ni	62	89	No Gas	13627.30	0.9
Cu	63	89	No Gas	166364.08	0.5
Cu	63	89	He	60350.76	1.1
Cu	65	89	No Gas	80185.30	1.6
Zn	66	89	No Gas	46171.15	1.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	8958.72	1.6
Zn	67	89	No Gas	7296.08	0.7
Zn	68	89	No Gas	33401.37	0.7
As	75	89	No Gas	52837.73	2.0
As	75	89	He	6523.83	2.4
Se	77	89	No Gas	9449.58	3.3
Se	78	89	No Gas	22832.40	2.4
Se	78	89	He	476.68	12.4
Se	82	89	No Gas	2965.89	4.8
[Se]	83	89	No Gas	2372.62	4.4
Sr	88	89	No Gas	459608.79	0.2
Mo	95	89	No Gas	84027.10	0.2
Mo	97	89	No Gas	53906.19	1.0
Mo	98	89	No Gas	137729.88	1.6
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	42032.37	2.0
Ag	107	89	No Gas	232625.70	0.2
Ag	107	89	He	108472.77	0.8
Cd	108	89	No Gas	3554.09	1.2
Ag	109	89	No Gas	222232.82	1.5
Cd	111	89	No Gas	45358.64	1.4
Cd	114	89	No Gas	119846.37	1.0
Sn	118	115	No Gas	152242.72	0.5
Sb	121	115	No Gas	213486.55	0.1
Sb	121	89	He	45409.07	3.1
Sb	123	115	No Gas	165102.58	1.2
Ba	135	115	No Gas	45518.54	3.0
Ba	137	115	No Gas	78658.79	1.7
Tl	203	209	No Gas	190291.50	0.8
Tl	205	209	No Gas	451200.17	0.6
Pb	206	209	No Gas	155645.51	0.8
Pb	207	209	No Gas	129722.52	2.0
Pb	208	209	No Gas	605975.44	0.5
Th	232	209	No Gas	572950.78	0.6
U	238	209	No Gas	576341.94	0.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3215554.98	0.3	3287788.3	97.8	70	125	
Sc	45	No Gas	16281464.41	0.2	16642937.14	97.83	75	125	
Sc	45	He	696892.56	1.4	708779.09	98.32	75	125	
Y	89	No Gas	40952666.92	0.3	41680351.27	98.25	75	125	
Y	89	He	5316632.79	1.4	5497469.77	96.71	75	125	
In	115	No Gas	9092471.76	0.8	9172632.54	99.13	75	125	
Tb	159	No Gas	12734765.63	0.6	12859728.08	99.03	75	125	
Bi	209	No Gas	7874756.35	0.6	7923397.19	99.39	75	125	

Calibration Standard Report

Sample Name	std 6
File Name	236CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:38:26
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1043490.73	0.6
Be	9	6	No Gas	237817.42	0.4
B	11	6	No Gas	402933.53	0.3
Na	23	45	No Gas	109913139.96	0.3
Na	23	45	He	3219687.03	1.0
Mg	24	45	No Gas	74877068.88	0.5
Mg	24	45	He	1659341.54	1.1
Mg	25	45	No Gas	9927094.02	0.6
Al	27	45	No Gas	992724.80	0.3
Al	27	45	He	6768.43	2.4
Si	28	45	No Gas	41160598.18	0.3
Si	29	45	No Gas	2565065.43	0.3
K	39	45	No Gas	113232454.98	0.2
K	39	45	He	1357391.91	1.6
Ca	44	45	No Gas	3409020.37	0.5
Ca	44	45	He	73574.93	3.7
Ti	47	45	No Gas	105890.68	1.1
V	51	45	No Gas	1384667.37	0.4
V	51	45	He	184051.82	1.0
Cr	52	89	No Gas	1290693.48	0.4
Cr	52	89	He	229589.61	1.4
Cr	53	89	No Gas	199784.88	0.5
Mn	55	89	No Gas	1752344.43	0.4
Mn	55	89	He	123240.51	1.1
Fe	56	89	No Gas	126580486.16	0.9
Fe	56	89	He	15372819.77	1.2
Co	59	89	No Gas	1393924.14	0.3
Co	59	89	He	384867.54	0.4
Ni	60	89	No Gas	319319.93	0.5
Ni	60	89	He	103402.72	1.0
Ni	62	89	No Gas	51060.26	0.6
Cu	63	89	No Gas	774166.12	0.7
Cu	63	89	He	287601.33	1.7
Cu	65	89	No Gas	367746.55	1.0
Zn	66	89	No Gas	225480.59	0.7

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	44859.07	1.9
Zn	67	89	No Gas	35241.23	2.1
Zn	68	89	No Gas	161754.92	0.4
As	75	89	No Gas	240676.00	0.5
As	75	89	He	32554.71	2.5
Se	77	89	No Gas	18765.38	1.3
Se	78	89	No Gas	50809.74	1.2
Se	78	89	He	1917.93	6.3
Se	82	89	No Gas	14801.00	1.2
[Se]	83	89	No Gas	2382.63	1.8
Sr	88	89	No Gas	2241549.58	0.4
Mo	95	89	No Gas	417173.13	0.4
Mo	97	89	No Gas	265065.97	0.8
Mo	98	89	No Gas	687340.31	0.6
[Mo]	99	89	No Gas	23.36	107.9
Cd	106	89	No Gas	58584.63	1.1
Ag	107	89	No Gas	1123341.28	0.1
Ag	107	89	He	539430.94	1.1
Cd	108	89	No Gas	16446.96	1.1
Ag	109	89	No Gas	1096226.20	0.1
Cd	111	89	No Gas	226804.45	0.1
Cd	114	89	No Gas	599845.67	0.3
Sn	118	115	No Gas	748161.57	0.2
Sb	121	115	No Gas	1076207.25	0.6
Sb	121	89	He	227979.66	2.1
Sb	123	115	No Gas	828019.45	0.3
Ba	135	115	No Gas	224384.98	0.9
Ba	137	115	No Gas	392470.41	0.5
Tl	203	209	No Gas	958441.05	1.2
Tl	205	209	No Gas	2234193.68	0.6
Pb	206	209	No Gas	764402.79	0.7
Pb	207	209	No Gas	640879.28	0.9
Pb	208	209	No Gas	2962591.57	0.4
Th	232	209	No Gas	2927258.20	0.3
U	238	209	No Gas	2906741.96	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3130506.32	0.6	3287788.3	95.22	70	125	
Sc	45	No Gas	15979514.97	0.5	16642937.14	96.01	75	125	
Sc	45	He	688795.02	0.9	708779.09	97.18	75	125	
Y	89	No Gas	40226458.21	0.5	41680351.27	96.51	75	125	
Y	89	He	5264074.09	1.3	5497469.77	95.75	75	125	
In	115	No Gas	8861383.48	0.3	9172632.54	96.61	75	125	
Tb	159	No Gas	12566559.92	0.6	12859728.08	97.72	75	125	
Bi	209	No Gas	7730172.75	0.6	7923397.19	97.56	75	125	

Calibration Standard Report

Sample Name	std 7
File Name	237CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:40:11
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1736467.88	0.5
Be	9	6	No Gas	426969.98	0.5
B	11	6	No Gas	698852.97	0.4
Na	23	45	No Gas	196329012.72	0.2
Na	23	45	He	5793210.33	1.1
Mg	24	45	No Gas	134680704.66	0.6
Mg	24	45	He	2995142.35	1.1
Mg	25	45	No Gas	17872072.23	1.2
Al	27	45	No Gas	1775107.21	0.1
Al	27	45	He	11925.28	2.4
Si	28	45	No Gas	73572370.85	0.7
Si	29	45	No Gas	4552817.41	0.2
K	39	45	No Gas	202475023.65	0.5
K	39	45	He	2450605.69	0.5
Ca	44	45	No Gas	6196269.49	0.5
Ca	44	45	He	134904.38	0.8
Ti	47	45	No Gas	193500.64	0.7
V	51	45	No Gas	2503637.62	0.4
V	51	45	He	331487.79	0.7
Cr	52	89	No Gas	2300191.76	0.4
Cr	52	89	He	415327.81	1.2
Cr	53	89	No Gas	324234.39	0.8
Mn	55	89	No Gas	3150560.15	0.4
Mn	55	89	He	222148.63	0.9
Fe	56	89	No Gas	226171238.39	0.2
Fe	56	89	He	27889622.08	0.5
Co	59	89	No Gas	2507311.90	0.7
Co	59	89	He	693268.84	0.3
Ni	60	89	No Gas	566339.09	0.7
Ni	60	89	He	187790.88	0.2
Ni	62	89	No Gas	88151.63	0.7
Cu	63	89	No Gas	1369285.43	0.3
Cu	63	89	He	522660.64	0.1
Cu	65	89	No Gas	668689.50	0.2
Zn	66	89	No Gas	401656.25	0.4

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	79668.76	1.6
Zn	67	89	No Gas	63528.29	1.8
Zn	68	89	No Gas	288663.34	0.7
As	75	89	No Gas	433289.41	0.9
As	75	89	He	58517.19	1.7
Se	77	89	No Gas	28077.54	1.7
Se	78	89	No Gas	79106.41	1.2
Se	78	89	He	3498.25	2.6
Se	82	89	No Gas	27037.68	3.5
[Se]	83	89	No Gas	2416.01	7.8
Sr	88	89	No Gas	4047456.01	0.1
Mo	95	89	No Gas	766242.42	0.2
Mo	97	89	No Gas	477453.04	0.6
Mo	98	89	No Gas	1226339.45	0.3
[Mo]	99	89	No Gas	23.36	89.2
Cd	106	89	No Gas	76509.80	1.1
Ag	107	89	No Gas	2032009.36	0.1
Ag	107	89	He	973262.90	0.5
Cd	108	89	No Gas	29693.36	2.0
Ag	109	89	No Gas	1953634.21	0.6
Cd	111	89	No Gas	408609.95	0.3
Cd	114	89	No Gas	1073586.27	0.8
Sn	118	115	No Gas	1334280.57	0.2
Sb	121	115	No Gas	1909575.90	0.4
Sb	121	89	He	409859.94	1.5
Sb	123	115	No Gas	1471041.35	0.7
Ba	135	115	No Gas	407461.99	0.4
Ba	137	115	No Gas	708389.54	1.0
Tl	203	209	No Gas	1711309.54	0.6
Tl	205	209	No Gas	4037776.12	0.1
Pb	206	209	No Gas	1374188.67	0.2
Pb	207	209	No Gas	1142008.05	0.2
Pb	208	209	No Gas	5325405.94	0.2
Th	232	209	No Gas	5303286.01	0.3
U	238	209	No Gas	5212720.86	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3113806.40	0.2	3287788.3	94.71	70	125	
Sc	45	No Gas	16223510.63	0.5	16642937.14	97.48	75	125	
Sc	45	He	695575.91	0.8	708779.09	98.14	75	125	
Y	89	No Gas	40739419.50	0.2	41680351.27	97.74	75	125	
Y	89	He	5341560.95	1.1	5497469.77	97.16	75	125	
In	115	No Gas	8917908.07	0.2	9172632.54	97.22	75	125	
Tb	159	No Gas	12715628.16	0.4	12859728.08	98.88	75	125	
Bi	209	No Gas	7756152.19	0.7	7923397.19	97.89	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	238CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:41:59
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	3609651.01	1.2
Be	9	6	No Gas	905447.04	0.9
B	11	6	No Gas	1538194.03	1.5
Na	23	45	No Gas	432158042.99	1.4
Na	23	45	He	12856647.31	0.9
Mg	24	45	No Gas	296841142.25	1.5
Mg	24	45	He	6633933.24	0.9
Mg	25	45	No Gas	39369886.08	0.9
Al	27	45	No Gas	3894469.52	1.2
Al	27	45	He	26856.09	2.6
Si	28	45	No Gas	159052589.58	1.4
Si	29	45	No Gas	9801105.50	1.3
K	39	45	No Gas	442713540.07	1.6
K	39	45	He	5447250.75	0.9
Ca	44	45	No Gas	13619659.80	1.5
Ca	44	45	He	299943.63	2.2
Ti	47	45	No Gas	424098.24	1.4
V	51	45	No Gas	5625975.67	1.4
V	51	45	He	742565.46	0.4
Cr	52	89	No Gas	5124427.46	1.6
Cr	52	89	He	921697.67	0.4
Cr	53	89	No Gas	667295.50	1.3
Mn	55	89	No Gas	6951939.45	1.2
Mn	55	89	He	490834.30	0.6
Fe	56	89	No Gas	498672527.81	2.3
Fe	56	89	He	61778944.08	0.7
Co	59	89	No Gas	5560627.93	1.6
Co	59	89	He	1465542.73	0.3
Ni	60	89	No Gas	1224015.30	1.3
Ni	60	89	He	413528.97	0.5
Ni	62	89	No Gas	189007.68	1.3
Cu	63	89	No Gas	2959990.73	1.2
Cu	63	89	He	1095601.59	0.7
Cu	65	89	No Gas	1413989.41	0.8
Zn	66	89	No Gas	882271.62	1.0

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	173900.79	1.3
Zn	67	89	No Gas	138353.09	1.1
Zn	68	89	No Gas	636282.99	0.7
As	75	89	No Gas	952263.70	1.0
As	75	89	He	130994.12	0.8
Se	77	89	No Gas	54414.03	2.7
Se	78	89	No Gas	155799.78	1.6
Se	78	89	He	7816.74	0.9
Se	82	89	No Gas	57531.96	3.2
[Se]	83	89	No Gas	2539.49	2.8
Sr	88	89	No Gas	8968370.47	1.3
Mo	95	89	No Gas	1670408.64	1.4
Mo	97	89	No Gas	1038827.71	0.8
Mo	98	89	No Gas	2729014.77	0.7
[Mo]	99	89	No Gas	73.41	67.3
Cd	106	89	No Gas	123918.58	1.2
Ag	107	89	No Gas	4456698.57	1.2
Ag	107	89	He	2095449.31	0.0
Cd	108	89	No Gas	65457.19	2.3
Ag	109	89	No Gas	4251806.30	0.7
Cd	111	89	No Gas	888911.13	0.8
Cd	114	89	No Gas	2341261.47	1.3
Sn	118	115	No Gas	2951135.30	1.1
Sb	121	115	No Gas	4219902.89	1.2
Sb	121	89	He	902971.89	0.4
Sb	123	115	No Gas	3248272.97	1.0
Ba	135	115	No Gas	888329.32	1.6
Ba	137	115	No Gas	1540618.59	0.9
Tl	203	209	No Gas	3736466.58	0.6
Tl	205	209	No Gas	8765775.38	1.0
Pb	206	209	No Gas	2999890.52	0.6
Pb	207	209	No Gas	2508183.61	0.3
Pb	208	209	No Gas	11668935.21	0.4
Th	232	209	No Gas	11751873.98	0.8
U	238	209	No Gas	11440871.73	0.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3047398.64	1.0	3287788.3	92.69	70	125	
Sc	45	No Gas	16394242.61	1.2	16642937.14	98.51	75	125	
Sc	45	He	701662.16	0.1	708779.09	99	75	125	
Y	89	No Gas	40834911.66	1.9	41680351.27	97.97	75	125	
Y	89	He	5373923.72	0.8	5497469.77	97.75	75	125	
In	115	No Gas	8830054.42	1.0	9172632.54	96.27	75	125	
Tb	159	No Gas	12670654.01	1.4	12859728.08	98.53	75	125	
Bi	209	No Gas	7588583.86	0.6	7923397.19	95.77	75	125	

Calibration Blank Report

Sample Name std 1

File Name 272CALB.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 21:38:58

Sample Type CalBlk

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	226122.44	1.2
Be	9	6	No Gas	80.08	66.1
B	11	6	No Gas	31129.06	2.4
Na	23	45	No Gas	12498384.14	1.6
Na	23	45	He	381038.18	1.0
Mg	24	45	No Gas	10538.20	9.4
Mg	24	45	He	333.36	36.7
Mg	25	45	No Gas	1426.83	8.1
Al	27	45	No Gas	10377.93	3.9
Al	27	45	He	56.67	36.7
Si	28	45	No Gas	464863.12	0.5
Si	29	45	No Gas	77801.08	2.3
K	39	45	No Gas	5565995.33	1.0
K	39	45	He	40929.87	7.5
Ca	44	45	No Gas	37413.16	1.5
Ca	44	45	He	106.67	78.1
Ti	47	45	No Gas	206.88	39.1
V	51	45	No Gas	-3184.67	-59.6
V	51	45	He	300.31	18.6
Cr	52	89	No Gas	23751.19	3.2
Cr	52	89	He	2102.31	6.3
Cr	53	89	No Gas	36495.34	2.1
Mn	55	89	No Gas	9452.83	3.0
Mn	55	89	He	377.05	10.1
Fe	56	89	No Gas	2000177.39	1.3
Fe	56	89	He	24062.80	2.3
Co	59	89	No Gas	1421.52	9.9
Co	59	89	He	300.31	20.3
Ni	60	89	No Gas	5182.93	4.5
Ni	60	89	He	263.61	12.2
Ni	62	89	No Gas	4615.47	2.1
Cu	63	89	No Gas	14131.65	4.4
Cu	63	89	He	3430.59	1.0
Cu	65	89	No Gas	6658.40	4.6
Zn	66	89	No Gas	2245.81	0.7

Calibration Blank Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	387.06	6.5
Zn	67	89	No Gas	387.07	9.1
Zn	68	89	No Gas	1534.99	5.9
As	75	89	No Gas	5761.72	33.0
As	75	89	He	22.22	31.2
Se	77	89	No Gas	8718.37	4.2
Se	78	89	No Gas	18160.57	2.9
Se	78	89	He	27.78	25.0
Se	82	89	No Gas	-131.25	-230.4
[Se]	83	89	No Gas	2716.38	3.4
Sr	88	89	No Gas	2502.79	5.3
Mo	95	89	No Gas	854.23	14.0
Mo	97	89	No Gas	503.86	6.1
Mo	98	89	No Gas	1354.29	7.2
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	43033.41	2.8
Ag	107	89	No Gas	1884.59	7.7
Ag	107	89	He	714.08	12.1
Cd	108	89	No Gas	76.74	19.9
Ag	109	89	No Gas	1661.80	5.7
Cd	111	89	No Gas	-74.57	-27.7
Cd	114	89	No Gas	63.40	65.7
Sn	118	115	No Gas	3144.85	5.3
Sb	121	115	No Gas	1371.19	14.7
Sb	121	89	He	416.68	3.7
Sb	123	115	No Gas	1728.54	12.8
Ba	135	115	No Gas	497.18	24.0
Ba	137	115	No Gas	827.54	13.8
Tl	203	209	No Gas	553.91	16.4
Tl	205	209	No Gas	1408.18	23.6
Pb	206	209	No Gas	1738.56	8.2
Pb	207	209	No Gas	1281.38	5.5
Pb	208	209	No Gas	6440.57	3.9
Th	232	209	No Gas	7686.94	12.8
U	238	209	No Gas	1137.88	0.5

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	3926441.81	0.4
Sc	45	No Gas	18873842.21	0.4
Sc	45	He	814336.22	0.9
Y	89	No Gas	45077078.84	0.5
Y	89	He	6036502.97	0.5
In	115	No Gas	9630269.52	0.5
Tb	159	No Gas	13043986.51	0.6
Bi	209	No Gas	7831047.47	0.8

Calibration Standard Report

Sample Name	std 2
File Name	273CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:40:36
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	212183.79	1.3
Be	9	6	No Gas	1014.40	10.3
B	11	6	No Gas	26344.53	4.0
Na	23	45	No Gas	11670046.10	1.6
Na	23	45	He	358010.55	1.9
Mg	24	45	No Gas	358388.60	2.2
Mg	24	45	He	7576.02	5.6
Mg	25	45	No Gas	48032.45	5.2
Al	27	45	No Gas	21431.54	3.9
Al	27	45	He	153.34	32.2
Si	28	45	No Gas	617509.32	0.9
Si	29	45	No Gas	81512.75	1.1
K	39	45	No Gas	5666676.37	0.7
K	39	45	He	44942.79	6.3
Ca	44	45	No Gas	46722.02	0.3
Ca	44	45	He	346.70	29.0
Ti	47	45	No Gas	634.00	10.3
V	51	45	No Gas	2932.86	79.5
V	51	45	He	1071.13	17.8
Cr	52	89	No Gas	27431.81	1.0
Cr	52	89	He	2846.53	3.2
Cr	53	89	No Gas	36224.47	1.0
Mn	55	89	No Gas	16810.62	0.7
Mn	55	89	He	934.32	3.4
Fe	56	89	No Gas	2395516.39	0.8
Fe	56	89	He	101137.73	2.2
Co	59	89	No Gas	7259.29	5.6
Co	59	89	He	1815.31	4.0
Ni	60	89	No Gas	5713.69	6.5
Ni	60	89	He	670.70	9.1
Ni	62	89	No Gas	4518.69	5.7
Cu	63	89	No Gas	16510.04	2.1
Cu	63	89	He	4518.69	3.0
Cu	65	89	No Gas	7776.80	5.2
Zn	66	89	No Gas	3240.35	0.9

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	587.28	6.5
Zn	67	89	No Gas	650.68	8.1
Zn	68	89	No Gas	2232.46	4.7
As	75	89	No Gas	7409.98	19.9
As	75	89	He	185.56	9.9
Se	77	89	No Gas	7993.85	7.5
Se	78	89	No Gas	16961.16	0.7
Se	78	89	He	41.11	9.4
Se	82	89	No Gas	265.58	97.4
[Se]	83	89	No Gas	2382.63	6.7
Sr	88	89	No Gas	11813.87	1.6
Mo	95	89	No Gas	2399.33	5.7
Mo	97	89	No Gas	1581.71	7.7
Mo	98	89	No Gas	3883.06	5.0
[Mo]	99	89	No Gas	10.01	173.2
Cd	106	89	No Gas	42019.01	3.7
Ag	107	89	No Gas	6534.98	3.4
Ag	107	89	He	3036.77	3.8
Cd	108	89	No Gas	146.82	3.9
Ag	109	89	No Gas	5803.85	2.3
Cd	111	89	No Gas	848.06	3.8
Cd	114	89	No Gas	2446.05	7.0
Sn	118	115	No Gas	5651.24	0.9
Sb	121	115	No Gas	5518.97	5.1
Sb	121	89	He	1276.75	14.2
Sb	123	115	No Gas	4749.03	1.1
Ba	135	115	No Gas	1398.16	6.2
Ba	137	115	No Gas	2509.46	3.5
Tl	203	209	No Gas	4091.50	2.7
Tl	205	209	No Gas	9663.53	0.4
Pb	206	209	No Gas	4638.92	1.5
Pb	207	209	No Gas	3877.87	7.6
Pb	208	209	No Gas	18203.77	2.0
Th	232	209	No Gas	15679.29	3.2
U	238	209	No Gas	11871.14	1.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3635966.23	0.9	3926441.81	92.6	70	125	
Sc	45	No Gas	17711567.85	0.6	18873842.21	93.84	75	125	
Sc	45	He	761008.46	0.9	814336.22	93.45	75	125	
Y	89	No Gas	43362679.43	0.3	45077078.84	96.2	75	125	
Y	89	He	5715590.81	1.1	6036502.97	94.68	75	125	
In	115	No Gas	9381933.67	0.2	9630269.52	97.42	75	125	
Tb	159	No Gas	12982718.16	0.6	13043986.51	99.53	75	125	
Bi	209	No Gas	7858278.02	0.2	7831047.47	100.35	75	125	

Calibration Standard Report

Sample Name std 3

File Name 274CALS.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 21:42:15

Sample Type CalStd

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	232977.91	1.3
Be	9	6	No Gas	9526.21	2.7
B	11	6	No Gas	37567.93	1.3
Na	23	45	No Gas	14481923.76	0.3
Na	23	45	He	446701.67	2.3
Mg	24	45	No Gas	3138517.14	0.3
Mg	24	45	He	73624.96	3.1
Mg	25	45	No Gas	432752.33	1.3
Al	27	45	No Gas	58740.91	1.2
Al	27	45	He	363.34	13.9
Si	28	45	No Gas	2076865.88	0.2
Si	29	45	No Gas	173164.42	0.6
K	39	45	No Gas	9387656.11	0.6
K	39	45	He	96901.50	2.0
Ca	44	45	No Gas	176636.37	1.7
Ca	44	45	He	3654.10	7.0
Ti	47	45	No Gas	4562.07	6.8
V	51	45	No Gas	56374.07	2.0
V	51	45	He	7352.83	5.6
Cr	52	89	No Gas	74285.05	0.9
Cr	52	89	He	11189.24	1.9
Cr	53	89	No Gas	39991.84	1.4
Mn	55	89	No Gas	82227.93	0.7
Mn	55	89	He	5256.37	2.6
Fe	56	89	No Gas	6886558.75	0.2
Fe	56	89	He	801575.90	1.4
Co	59	89	No Gas	60863.00	1.5
Co	59	89	He	16209.42	0.1
Ni	60	89	No Gas	16473.27	2.1
Ni	60	89	He	4632.16	1.5
Ni	62	89	No Gas	6084.19	6.4
Cu	63	89	No Gas	43907.98	1.1
Cu	63	89	He	15086.99	2.8
Cu	65	89	No Gas	21080.99	3.0
Zn	66	89	No Gas	11292.81	3.3

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	2142.36	5.8
Zn	67	89	No Gas	1785.27	4.7
Zn	68	89	No Gas	7753.42	1.0
As	75	89	No Gas	16333.35	4.7
As	75	89	He	1247.84	0.9
Se	77	89	No Gas	7456.32	1.4
Se	78	89	No Gas	17515.78	2.6
Se	78	89	He	106.67	22.5
Se	82	89	No Gas	806.31	63.7
[Se]	83	89	No Gas	2372.64	13.2
Sr	88	89	No Gas	94710.83	0.9
Mo	95	89	No Gas	17773.19	3.6
Mo	97	89	No Gas	10625.06	2.2
Mo	98	89	No Gas	28759.62	0.9
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	41269.12	2.7
Ag	107	89	No Gas	47896.17	1.5
Ag	107	89	He	22709.08	2.8
Cd	108	89	No Gas	767.47	27.6
Ag	109	89	No Gas	45560.94	1.4
Cd	111	89	No Gas	8923.47	1.3
Cd	114	89	No Gas	24133.26	3.1
Sn	118	115	No Gas	32612.55	1.0
Sb	121	115	No Gas	43977.80	0.9
Sb	121	89	He	9563.67	0.7
Sb	123	115	No Gas	34132.02	2.6
Ba	135	115	No Gas	9673.41	2.7
Ba	137	115	No Gas	16674.22	3.7
Tl	203	209	No Gas	37674.73	1.0
Tl	205	209	No Gas	88574.63	2.3
Pb	206	209	No Gas	31655.29	0.8
Pb	207	209	No Gas	25829.41	1.4
Pb	208	209	No Gas	122777.42	0.4
Th	232	209	No Gas	107794.48	0.4
U	238	209	No Gas	111623.27	1.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3381971.07	1.0	3926441.81	86.13	70	125	
Sc	45	No Gas	16853029.73	0.4	18873842.21	89.29	75	125	
Sc	45	He	732648.75	0.9	814336.22	89.97	75	125	
Y	89	No Gas	41921637.56	0.4	45077078.84	93	75	125	
Y	89	He	5543228.86	1.5	6036502.97	91.83	75	125	
In	115	No Gas	9127156.73	0.5	9630269.52	94.78	75	125	
Tb	159	No Gas	12649396.51	0.3	13043986.51	96.97	75	125	
Bi	209	No Gas	7759070.81	0.4	7831047.47	99.08	75	125	

Calibration Standard Report

Sample Name	std 4
File Name	275CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:43:54
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	279541.38	1.6
Be	9	6	No Gas	23667.09	1.4
B	11	6	No Gas	58506.59	0.8
Na	23	45	No Gas	20118062.95	1.1
Na	23	45	He	632278.90	0.8
Mg	24	45	No Gas	7663582.18	0.7
Mg	24	45	He	177799.03	2.0
Mg	25	45	No Gas	1016583.11	0.7
Al	27	45	No Gas	116235.13	2.6
Al	27	45	He	783.37	11.9
Si	28	45	No Gas	4477304.71	0.1
Si	29	45	No Gas	326206.40	0.7
K	39	45	No Gas	15748271.44	0.1
K	39	45	He	179413.53	1.8
Ca	44	45	No Gas	386217.47	1.2
Ca	44	45	He	8189.65	13.2
Ti	47	45	No Gas	10968.90	4.2
V	51	45	No Gas	146722.16	1.8
V	51	45	He	18788.63	3.1
Cr	52	89	No Gas	152687.60	0.5
Cr	52	89	He	25382.43	1.0
Cr	53	89	No Gas	48819.16	1.5
Mn	55	89	No Gas	191000.33	0.6
Mn	55	89	He	12939.23	4.0
Fe	56	89	No Gas	14193657.61	0.8
Fe	56	89	He	1588610.19	0.6
Co	59	89	No Gas	148700.86	0.4
Co	59	89	He	39299.27	1.9
Ni	60	89	No Gas	34655.65	1.5
Ni	60	89	He	10668.31	3.0
Ni	62	89	No Gas	8795.07	2.4
Cu	63	89	No Gas	89498.51	0.4
Cu	63	89	He	31641.96	1.0
Cu	65	89	No Gas	42599.48	1.8
Zn	66	89	No Gas	24567.05	2.9

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	4652.21	4.5
Zn	67	89	No Gas	3854.48	6.8
Zn	68	89	No Gas	17058.02	3.7
As	75	89	No Gas	28914.37	4.7
As	75	89	He	3365.99	1.0
Se	77	89	No Gas	8154.07	2.7
Se	78	89	No Gas	19657.56	2.9
Se	78	89	He	223.34	10.4
Se	82	89	No Gas	1165.38	26.3
[Se]	83	89	No Gas	2529.49	9.4
Sr	88	89	No Gas	231316.37	1.0
Mo	95	89	No Gas	42707.90	1.2
Mo	97	89	No Gas	26743.82	1.9
Mo	98	89	No Gas	69119.28	1.2
[Mo]	99	89	No Gas	13.35	86.6
Cd	106	89	No Gas	40971.44	1.4
Ag	107	89	No Gas	116097.73	1.3
Ag	107	89	He	55779.62	0.8
Cd	108	89	No Gas	1708.52	12.9
Ag	109	89	No Gas	110901.64	0.1
Cd	111	89	No Gas	22394.50	0.2
Cd	114	89	No Gas	60301.22	0.9
Sn	118	115	No Gas	76093.15	1.2
Sb	121	115	No Gas	106956.11	0.6
Sb	121	89	He	23331.00	1.1
Sb	123	115	No Gas	83622.09	0.7
Ba	135	115	No Gas	23087.11	1.4
Ba	137	115	No Gas	39509.94	1.5
Tl	203	209	No Gas	92788.88	0.9
Tl	205	209	No Gas	220068.04	0.5
Pb	206	209	No Gas	75657.47	2.1
Pb	207	209	No Gas	62357.93	0.7
Pb	208	209	No Gas	293892.21	0.3
Th	232	209	No Gas	271232.76	0.2
U	238	209	No Gas	278731.54	1.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3252193.21	0.2	3926441.81	82.83	70	125	
Sc	45	No Gas	16343538.57	0.3	18873842.21	86.59	75	125	
Sc	45	He	720921.46	0.7	814336.22	88.53	75	125	
Y	89	No Gas	41026828.58	0.4	45077078.84	91.01	75	125	
Y	89	He	5476565.12	1.1	6036502.97	90.72	75	125	
In	115	No Gas	8970333.74	0.6	9630269.52	93.15	75	125	
Tb	159	No Gas	12489192.97	0.2	13043986.51	95.75	75	125	
Bi	209	No Gas	7638515.81	0.7	7831047.47	97.54	75	125	

Calibration Standard Report

Sample Name	std 5
File Name	276CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:45:33
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	364801.59	0.3
Be	9	6	No Gas	46653.99	0.8
B	11	6	No Gas	96387.49	1.3
Na	23	45	No Gas	30305048.60	0.4
Na	23	45	He	892381.70	1.1
Mg	24	45	No Gas	15075246.02	0.8
Mg	24	45	He	354070.22	1.9
Mg	25	45	No Gas	1983326.06	0.1
Al	27	45	No Gas	217429.02	2.6
Al	27	45	He	1423.43	9.4
Si	28	45	No Gas	8504302.45	0.6
Si	29	45	No Gas	590009.99	0.6
K	39	45	No Gas	26680929.60	0.5
K	39	45	He	324484.57	1.0
Ca	44	45	No Gas	731478.82	1.0
Ca	44	45	He	15422.95	2.3
Ti	47	45	No Gas	21441.87	1.7
V	51	45	No Gas	288160.04	0.2
V	51	45	He	36327.96	1.6
Cr	52	89	No Gas	283992.69	0.8
Cr	52	89	He	47282.22	1.2
Cr	53	89	No Gas	67436.52	0.9
Mn	55	89	No Gas	368270.76	0.6
Mn	55	89	He	25502.86	1.6
Fe	56	89	No Gas	26723678.72	0.6
Fe	56	89	He	3123541.41	0.1
Co	59	89	No Gas	290435.87	0.9
Co	59	89	He	77432.63	1.3
Ni	60	89	No Gas	66642.34	2.1
Ni	60	89	He	21131.07	1.2
Ni	62	89	No Gas	13473.69	1.1
Cu	63	89	No Gas	164446.58	0.2
Cu	63	89	He	60759.35	0.9
Cu	65	89	No Gas	79524.11	1.0
Zn	66	89	No Gas	47326.59	1.6

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	9315.99	3.4
Zn	67	89	No Gas	7299.42	5.6
Zn	68	89	No Gas	34134.00	0.3
As	75	89	No Gas	52897.66	0.7
As	75	89	He	6415.99	1.5
Se	77	89	No Gas	9442.91	1.7
Se	78	89	No Gas	22461.42	1.2
Se	78	89	He	420.01	8.2
Se	82	89	No Gas	2669.32	10.4
[Se]	83	89	No Gas	2693.02	5.5
Sr	88	89	No Gas	459152.05	0.5
Mo	95	89	No Gas	83577.52	0.5
Mo	97	89	No Gas	52639.63	1.2
Mo	98	89	No Gas	136681.22	0.7
[Mo]	99	89	No Gas	3.34	173.2
Cd	106	89	No Gas	43538.50	1.7
Ag	107	89	No Gas	230288.13	0.5
Ag	107	89	He	109061.70	1.3
Cd	108	89	No Gas	3484.02	4.9
Ag	109	89	No Gas	220210.04	0.2
Cd	111	89	No Gas	44889.61	0.6
Cd	114	89	No Gas	118152.64	1.9
Sn	118	115	No Gas	150834.73	0.8
Sb	121	115	No Gas	211549.76	0.2
Sb	121	89	He	46041.02	2.2
Sb	123	115	No Gas	162967.35	0.9
Ba	135	115	No Gas	45136.90	0.8
Ba	137	115	No Gas	77688.47	1.4
Tl	203	209	No Gas	185606.78	0.4
Tl	205	209	No Gas	438624.96	0.5
Pb	206	209	No Gas	151552.31	0.5
Pb	207	209	No Gas	124399.90	0.5
Pb	208	209	No Gas	589049.01	0.4
Th	232	209	No Gas	554537.91	0.9
U	238	209	No Gas	555721.95	0.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3191948.87	1.0	3926441.81	81.29	70	125	
Sc	45	No Gas	16274780.65	0.7	18873842.21	86.23	75	125	
Sc	45	He	708436.31	0.3	814336.22	87	75	125	
Y	89	No Gas	40734051.63	0.3	45077078.84	90.37	75	125	
Y	89	He	5452071.46	0.4	6036502.97	90.32	75	125	
In	115	No Gas	8941695.69	1.1	9630269.52	92.85	75	125	
Tb	159	No Gas	12456412.27	0.6	13043986.51	95.5	75	125	
Bi	209	No Gas	7654145.53	0.4	7831047.47	97.74	75	125	

Calibration Standard Report

Sample Name	std 6
File Name	277CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:47:13
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1061178.60	0.6
Be	9	6	No Gas	238109.01	0.5
B	11	6	No Gas	409764.57	0.2
Na	23	45	No Gas	116683923.44	1.2
Na	23	45	He	3412556.93	1.0
Mg	24	45	No Gas	75753002.20	0.1
Mg	24	45	He	1689701.85	0.5
Mg	25	45	No Gas	10041855.47	0.7
Al	27	45	No Gas	1006920.43	0.3
Al	27	45	He	7135.30	1.3
Si	28	45	No Gas	41532355.77	0.5
Si	29	45	No Gas	2604965.81	0.1
K	39	45	No Gas	114737778.29	0.4
K	39	45	He	1395673.21	0.4
Ca	44	45	No Gas	3446180.26	0.5
Ca	44	45	He	78522.71	1.3
Ti	47	45	No Gas	108550.36	0.6
V	51	45	No Gas	1394661.65	0.2
V	51	45	He	185297.86	0.7
Cr	52	89	No Gas	1300804.89	0.6
Cr	52	89	He	234998.96	1.6
Cr	53	89	No Gas	192625.35	0.9
Mn	55	89	No Gas	1757595.10	0.4
Mn	55	89	He	125863.10	1.3
Fe	56	89	No Gas	127322465.35	0.7
Fe	56	89	He	15790315.18	0.8
Co	59	89	No Gas	1410504.36	0.4
Co	59	89	He	392558.54	1.1
Ni	60	89	No Gas	323801.07	0.2
Ni	60	89	He	106492.60	1.3
Ni	62	89	No Gas	51706.57	1.5
Cu	63	89	No Gas	786016.62	0.4
Cu	63	89	He	292819.00	1.2
Cu	65	89	No Gas	373924.34	0.3
Zn	66	89	No Gas	227059.99	0.5

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	44052.36	0.5
Zn	67	89	No Gas	35659.49	2.1
Zn	68	89	No Gas	164672.57	0.4
As	75	89	No Gas	242627.90	0.4
As	75	89	He	32953.46	1.0
Se	77	89	No Gas	18905.70	1.7
Se	78	89	No Gas	51168.19	1.8
Se	78	89	He	2013.50	6.9
Se	82	89	No Gas	14536.01	3.4
[Se]	83	89	No Gas	2526.14	3.4
Sr	88	89	No Gas	2262719.86	0.2
Mo	95	89	No Gas	422862.62	0.7
Mo	97	89	No Gas	264945.96	0.3
Mo	98	89	No Gas	693176.00	0.5
[Mo]	99	89	No Gas	13.35	43.3
Cd	106	89	No Gas	60994.62	1.3
Ag	107	89	No Gas	1130266.48	0.2
Ag	107	89	He	549566.47	0.8
Cd	108	89	No Gas	16877.89	0.5
Ag	109	89	No Gas	1101136.06	0.1
Cd	111	89	No Gas	227150.78	0.4
Cd	114	89	No Gas	599431.97	0.5
Sn	118	115	No Gas	756004.54	0.4
Sb	121	115	No Gas	1078055.83	0.5
Sb	121	89	He	232153.06	0.7
Sb	123	115	No Gas	829274.23	1.1
Ba	135	115	No Gas	227006.73	1.4
Ba	137	115	No Gas	395317.90	0.1
Tl	203	209	No Gas	943699.71	0.6
Tl	205	209	No Gas	2199745.90	0.9
Pb	206	209	No Gas	760676.12	0.3
Pb	207	209	No Gas	631579.16	0.7
Pb	208	209	No Gas	2922380.77	0.0
Th	232	209	No Gas	2858323.85	0.8
U	238	209	No Gas	2815048.49	0.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3158736.51	0.6	3926441.81	80.45	70	125	
Sc	45	No Gas	16288905.61	0.5	18873842.21	86.3	75	125	
Sc	45	He	711710.89	0.4	814336.22	87.4	75	125	
Y	89	No Gas	40932445.86	0.7	45077078.84	90.81	75	125	
Y	89	He	5403620.72	0.3	6036502.97	89.52	75	125	
In	115	No Gas	8934506.32	0.1	9630269.52	92.78	75	125	
Tb	159	No Gas	12523549.83	0.4	13043986.51	96.01	75	125	
Bi	209	No Gas	7648986.92	0.5	7831047.47	97.68	75	125	

Calibration Standard Report

Sample Name	std 7
File Name	278CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:48:58
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	1720920.04	0.5
Be	9	6	No Gas	423169.79	0.3
B	11	6	No Gas	685645.62	1.0
Na	23	45	No Gas	199922204.47	0.7
Na	23	45	He	5919155.75	0.9
Mg	24	45	No Gas	133735111.34	0.7
Mg	24	45	He	2976821.73	0.9
Mg	25	45	No Gas	17814787.23	0.6
Al	27	45	No Gas	1766347.42	0.8
Al	27	45	He	12422.43	1.5
Si	28	45	No Gas	73280710.86	0.7
Si	29	45	No Gas	4540999.03	0.5
K	39	45	No Gas	202348276.99	0.8
K	39	45	He	2483001.84	1.0
Ca	44	45	No Gas	6132189.07	0.8
Ca	44	45	He	140574.26	0.6
Ti	47	45	No Gas	192083.58	2.1
V	51	45	No Gas	2505681.91	1.3
V	51	45	He	335237.86	0.2
Cr	52	89	No Gas	2302844.05	1.0
Cr	52	89	He	418700.21	0.9
Cr	53	89	No Gas	316056.75	0.9
Mn	55	89	No Gas	3139361.55	0.5
Mn	55	89	He	224701.58	0.6
Fe	56	89	No Gas	227546363.42	1.6
Fe	56	89	He	28015317.08	1.1
Co	59	89	No Gas	2507808.12	0.7
Co	59	89	He	697552.63	0.3
Ni	60	89	No Gas	567146.38	1.1
Ni	60	89	He	187807.93	1.3
Ni	62	89	No Gas	88242.52	1.3
Cu	63	89	No Gas	1368302.94	0.7
Cu	63	89	He	523005.18	0.4
Cu	65	89	No Gas	662227.80	0.9
Zn	66	89	No Gas	403736.40	1.1

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	80166.04	2.0
Zn	67	89	No Gas	63545.52	1.4
Zn	68	89	No Gas	288750.36	0.7
As	75	89	No Gas	434025.57	1.1
As	75	89	He	59344.09	1.4
Se	77	89	No Gas	28371.86	1.0
Se	78	89	No Gas	80069.85	1.2
Se	78	89	He	3678.29	2.2
Se	82	89	No Gas	26398.64	0.8
[Se]	83	89	No Gas	2459.39	0.6
Sr	88	89	No Gas	4042149.14	0.6
Mo	95	89	No Gas	758694.84	1.2
Mo	97	89	No Gas	475787.77	1.0
Mo	98	89	No Gas	1211285.11	0.6
[Mo]	99	89	No Gas	26.69	21.7
Cd	106	89	No Gas	79117.69	0.9
Ag	107	89	No Gas	2017447.77	0.8
Ag	107	89	He	973620.16	0.3
Cd	108	89	No Gas	29435.85	3.9
Ag	109	89	No Gas	1919313.17	1.3
Cd	111	89	No Gas	406014.23	0.6
Cd	114	89	No Gas	1073223.80	0.9
Sn	118	115	No Gas	1326464.18	1.1
Sb	121	115	No Gas	1894940.20	0.6
Sb	121	89	He	413483.64	0.2
Sb	123	115	No Gas	1461163.72	0.8
Ba	135	115	No Gas	406186.68	1.0
Ba	137	115	No Gas	706857.35	0.9
Tl	203	209	No Gas	1674075.17	0.9
Tl	205	209	No Gas	3931978.03	1.6
Pb	206	209	No Gas	1338571.86	1.6
Pb	207	209	No Gas	1116995.46	1.1
Pb	208	209	No Gas	5194847.43	1.2
Th	232	209	No Gas	5127369.36	0.5
U	238	209	No Gas	5051422.37	0.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3093955.47	0.4	3926441.81	78.8	70	125	
Sc	45	No Gas	16238510.21	0.8	18873842.21	86.04	75	125	
Sc	45	He	706123.72	0.5	814336.22	86.71	75	125	
Y	89	No Gas	40817297.38	1.2	45077078.84	90.55	75	125	
Y	89	He	5370191.04	0.8	6036502.97	88.96	75	125	
In	115	No Gas	8865581.88	1.2	9630269.52	92.06	75	125	
Tb	159	No Gas	12530835.03	0.6	13043986.51	96.07	75	125	
Bi	209	No Gas	7562299.14	0.6	7831047.47	96.57	75	125	

Calibration Standard Report

Sample Name	std 8
File Name	279CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:50:47
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Li	7	6	No Gas	3553542.51	1.1
Be	9	6	No Gas	893602.51	0.9
B	11	6	No Gas	1512188.03	1.5
Na	23	45	No Gas	429768792.94	1.8
Na	23	45	He	12820393.56	0.4
Mg	24	45	No Gas	294977828.94	1.2
Mg	24	45	He	6599970.32	0.6
Mg	25	45	No Gas	39082828.58	1.1
Al	27	45	No Gas	3909055.36	1.0
Al	27	45	He	26819.48	0.6
Si	28	45	No Gas	159238789.11	1.2
Si	29	45	No Gas	9774337.06	1.5
K	39	45	No Gas	446168900.02	1.3
K	39	45	He	5441174.08	0.5
Ca	44	45	No Gas	13511334.38	1.2
Ca	44	45	He	306250.45	1.2
Ti	47	45	No Gas	427994.53	1.2
V	51	45	No Gas	5670557.98	1.2
V	51	45	He	747728.09	0.6
Cr	52	89	No Gas	5110850.76	1.2
Cr	52	89	He	908614.06	2.0
Cr	53	89	No Gas	655193.27	1.2
Mn	55	89	No Gas	6884360.41	0.8
Mn	55	89	He	498763.79	0.2
Fe	56	89	No Gas	493840177.71	1.3
Fe	56	89	He	62531479.07	1.1
Co	59	89	No Gas	5529292.01	1.2
Co	59	89	He	1467706.77	0.8
Ni	60	89	No Gas	1214152.82	0.8
Ni	60	89	He	416155.48	0.8
Ni	62	89	No Gas	186974.08	1.4
Cu	63	89	No Gas	2947996.33	1.1
Cu	63	89	He	1092476.31	0.6
Cu	65	89	No Gas	1410656.13	1.4
Zn	66	89	No Gas	886131.76	1.2

Calibration Standard Report

Name	Mass	ISTD	Tune	CPS	RSD
Zn	66	89	He	175691.92	0.5
Zn	67	89	No Gas	140402.60	1.0
Zn	68	89	No Gas	637039.82	1.2
As	75	89	No Gas	953895.44	1.0
As	75	89	He	132581.52	0.7
Se	77	89	No Gas	55750.65	0.6
Se	78	89	No Gas	158618.69	1.2
Se	78	89	He	8143.62	3.6
Se	82	89	No Gas	59121.22	0.4
[Se]	83	89	No Gas	2322.57	5.7
Sr	88	89	No Gas	8952660.18	0.7
Mo	95	89	No Gas	1637385.62	1.0
Mo	97	89	No Gas	1035460.57	1.2
Mo	98	89	No Gas	2746639.73	0.9
[Mo]	99	89	No Gas	26.69	78.1
Cd	106	89	No Gas	125350.33	0.8
Ag	107	89	No Gas	4401362.88	0.9
Ag	107	89	He	2091412.82	0.3
Cd	108	89	No Gas	63203.65	2.1
Ag	109	89	No Gas	4188661.69	1.0
Cd	111	89	No Gas	895577.86	1.0
Cd	114	89	No Gas	2341883.55	1.3
Sn	118	115	No Gas	2892257.66	0.3
Sb	121	115	No Gas	4204507.61	0.7
Sb	121	89	He	915947.67	0.4
Sb	123	115	No Gas	3265338.26	0.6
Ba	135	115	No Gas	890871.19	0.1
Ba	137	115	No Gas	1511715.36	0.5
Tl	203	209	No Gas	3616373.78	1.0
Tl	205	209	No Gas	8655420.85	0.6
Pb	206	209	No Gas	2976967.28	0.8
Pb	207	209	No Gas	2481793.05	1.0
Pb	208	209	No Gas	11493054.64	0.8
Th	232	209	No Gas	11291585.78	0.7
U	238	209	No Gas	11318671.61	1.0

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3053631.83	1.1	3926441.81	77.77	70	125	
Sc	45	No Gas	16354504.95	0.7	18873842.21	86.65	75	125	
Sc	45	He	712984.07	0.3	814336.22	87.55	75	125	
Y	89	No Gas	40474578.00	0.8	45077078.84	89.79	75	125	
Y	89	He	5443137.73	0.2	6036502.97	90.17	75	125	
In	115	No Gas	8765372.59	0.6	9630269.52	91.02	75	125	
Tb	159	No Gas	12335105.96	1.5	13043986.51	94.57	75	125	
Bi	209	No Gas	7351374.15	1.1	7831047.47	93.87	75	125	

Initial Calibration Verification (ICV) Report

Sample Name	ICV
File Name	016_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:24:08
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	78.361	ppb	0.7	2262586.81	80	97.95	90	110	
Be	9	6	No Gas	78.794	ppb	0.3	503880.77	80	98.49	90	110	
B	11	6	No Gas	189.608	ppb	0.7	799659.19	200	94.8	90	110	
Na	23	45	No Gas	8223.536	ppb	0.7	225460188.37	8000	102.79	90	110	
Na	23	45	He	8024.022	ppb	1.1	6400452.20	8000	100.3	90	110	
Mg	24	45	No Gas	8066.700	ppb	0.8	152762714.39	8000	100.83	90	110	
Mg	24	45	He	7942.294	ppb	0.6	3334946.72	8000	99.28	90	110	
Mg	25	45	No Gas	8176.054	ppb	0.6	20296496.37	8000	102.2	90	110	
Al	27	45	No Gas	78.002	ppb	1.0	1894040.44	80	97.5	90	110	
Al	27	45	He	76.914	ppb	3.5	13176.45	80	96.14	90	110	
Si	28	45	No Gas	8429.348	ppb	0.4	82628111.61	8000	105.37	90	110	
Si	29	45	No Gas	8505.287	ppb	0.5	5136750.20	8000	106.32	90	110	
K	39	45	No Gas	8092.270	ppb	0.5	208315450.23	8000	101.15	90	110	
K	39	45	He	8070.230	ppb	0.1	2685662.67	8000	100.88	90	110	
Ca	44	45	No Gas	8041.518	ppb	1.0	6339459.49	8000	100.52	90	110	
Ca	44	45	He	7913.856	ppb	2.0	144507.02	8000	98.92	90	110	
Ti	47	45	No Gas	78.073	ppb	0.7	188295.07	80	97.59	90	110	
V	51	45	No Gas	79.243	ppb	0.9	2636770.57	80	99.05	90	110	
V	51	45	He	78.507	ppb	0.2	339219.65	80	98.13	90	110	
Cr	52	89	No Gas	79.922	ppb	0.1	2421760.62	80	99.9	90	110	
Cr	52	89	He	80.492	ppb	0.7	428226.76	80	100.62	90	110	
Cr	53	89	No Gas	75.859	ppb	0.1	338944.64	80	94.82	90	110	
Mn	55	89	No Gas	79.230	ppb	0.8	3177518.99	80	99.04	90	110	
Mn	55	89	He	79.029	ppb	0.4	230980.17	80	98.79	90	110	
Fe	56	89	No Gas	8041.955	ppb	0.8	234235555.24	8000	100.52	90	110	
Fe	56	89	He	8000.866	ppb	0.6	30304036.22	8000	100.01	90	110	
Co	59	89	No Gas	80.476	ppb	0.7	2647494.17	80	100.59	90	110	
Co	59	89	He	81.425	ppb	0.3	719093.08	80	101.78	90	110	
Ni	60	89	No Gas	79.411	ppb	0.8	577870.55	80	99.26	90	110	
Ni	60	89	He	78.774	ppb	0.5	191736.17	80	98.47	90	110	
Ni	62	89	No Gas	79.865	ppb	2.0	89481.84	80	99.83	90	110	
Cu	63	89	No Gas	80.863	ppb	1.0	1505447.95	80	101.08	90	110	
Cu	63	89	He	81.180	ppb	0.3	548500.58	80	101.48	90	110	
Cu	65	89	No Gas	79.917	ppb	0.8	703960.76	80	99.9	90	110	

Initial Calibration Verification (ICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	79.603	ppb	0.3	397039.89	80	99.5	90	110	
Zn	66	89	He	80.054	ppb	0.5	82535.08	80	100.07	90	110	
Zn	67	89	No Gas	79.613	ppb	0.1	62512.39	80	99.52	90	110	
Zn	68	89	No Gas	80.159	ppb	0.7	286830.64	80	100.2	90	110	
As	75	89	No Gas	80.074	ppb	1.3	419450.54	80	100.09	90	110	
As	75	89	He	80.128	ppb	1.2	59692.13	80	100.16	90	110	
Se	77	89	No Gas	71.920	ppb	2.8	30184.20	80	89.9	90	110	Failed
Se	78	89	No Gas	79.797	ppb	0.8	75693.97	80	99.75	90	110	
Se	78	89	He	77.888	ppb	2.2	3684.97	80	97.36	90	110	
Se	82	89	No Gas	80.768	ppb	3.4	25381.84	80	100.96	90	110	
[Se]	83	89	No Gas	320.262	ppb	13.8	2496.12	80	400.33	90	110	Failed
Sr	88	89	No Gas	77.760	ppb	0.4	3766083.18	80	97.2	90	110	
Mo	95	89	No Gas	76.590	ppb	0.3	705117.59	80	95.74	90	110	
Mo	97	89	No Gas	75.718	ppb	0.8	436576.46	80	94.65	90	110	
Mo	98	89	No Gas	76.548	ppb	1.3	1154692.17	80	95.68	90	110	
[Mo]	99	89	No Gas	166.953	ppb	95.8	43.38	80	208.69	90	110	Failed
Cd	106	89	No Gas	79.096	ppb	1.3	75737.70	80	98.87	90	110	
Ag	107	89	No Gas	80.642	ppb	0.3	1994312.91	80	100.8	90	110	
Ag	107	89	He	80.627	ppb	0.8	975032.17	80	100.78	90	110	
Cd	108	89	No Gas	79.327	ppb	3.1	27824.05	80	99.16	90	110	
Ag	109	89	No Gas	80.213	ppb	0.6	1904734.74	80	100.27	90	110	
Cd	111	89	No Gas	79.605	ppb	0.6	386106.44	80	99.51	90	110	
Cd	114	89	No Gas	78.370	ppb	0.4	1010731.41	80	97.96	90	110	
Sn	118	115	No Gas	77.715	ppb	0.5	1243200.75	80	97.14	90	110	
Sb	121	115	No Gas	78.821	ppb	1.0	1809072.50	80	98.53	90	110	
Sb	121	89	He	79.494	ppb	0.7	411844.08	80	99.37	90	110	
Sb	123	115	No Gas	79.148	ppb	1.2	1400168.61	80	98.94	90	110	
Ba	135	115	No Gas	79.334	ppb	0.4	374438.44	80	99.17	90	110	
Ba	137	115	No Gas	78.453	ppb	0.3	646417.04	80	98.07	90	110	
Tl	203	209	No Gas	78.675	ppb	0.7	1575025.96	80	98.34	90	110	
Tl	205	209	No Gas	78.496	ppb	0.2	3722458.40	80	98.12	90	110	
Pb	206	209	No Gas	79.067	ppb	0.3	1278427.18	80	98.83	90	110	
Pb	207	209	No Gas	77.275	ppb	0.4	1046998.17	80	96.59	90	110	
Pb	208	209	No Gas	78.548	ppb	0.1	4959817.88	80	98.18	90	110	
Th	232	209	No Gas	77.014	ppb	1.2	4957682.69	80	96.27	90	110	
U	238	209	No Gas	75.196	ppb	0.1	4778707.78	80	93.99	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4612265.42	0.7	4905245.08	94.03	70	125	
Sc	45	No Gas	19033797.17	0.7	19588031.4	97.17	75	125	
Sc	45	He	834926.98	0.5	860992.42	96.97	75	125	
Y	89	No Gas	44562913.00	1.0	45698235	97.52	75	125	
Y	89	He	6271068.79	0.3	6413034.51	97.79	75	125	
In	115	No Gas	9683227.04	0.8	9919344.87	97.62	75	125	
Tb	159	No Gas	13711593.70	0.8	13963078.94	98.2	75	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8193713.00	1.0	8348524.39	98.15	75	125	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	017_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:25:51
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.124	ppb	44.8	243414.45	100	
Be	9	6	No Gas	0.008	ppb	57.7	56.72	100	
B	11	6	No Gas	3.906	ppb	11.3	18644.69	100	
Na	23	45	No Gas	4.501	ppb	9.3	839052.10	500000	
Na	23	45	He	6.087	ppb	13.1	28685.27	500000	
Mg	24	45	No Gas	0.338	ppb	53.9	13167.65	500000	
Mg	24	45	He	0.454	ppb	56.4	280.02	500000	
Mg	25	45	No Gas	0.412	ppb	29.4	2213.67	500000	
Al	27	45	No Gas	-0.161	ppb	N/A	9710.65	500000	
Al	27	45	He	-0.293	ppb	N/A	53.33	500000	
Si	28	45	No Gas	9.871	ppb	26.5	531880.79	100	
Si	29	45	No Gas	3.139	ppb	80.6	74660.85	100	
K	39	45	No Gas	-1.314	ppb	N/A	3664609.01	500000	
K	39	45	He	-4.362	ppb	N/A	22192.91	500000	
Ca	44	45	No Gas	1.924	ppb	123.4	64943.46	500000	
Ca	44	45	He	1.649	ppb	3.9	120.01	500000	
Ti	47	45	No Gas	-0.066	ppb	N/A	256.93	10000	
V	51	45	No Gas	0.183	ppb	19.7	-470.04	100	
V	51	45	He	-0.004	ppb	N/A	483.83	100	
Cr	52	89	No Gas	0.022	ppb	74.1	30822.34	100	
Cr	52	89	He	-0.042	ppb	N/A	2182.41	100	
Cr	53	89	No Gas	-2.261	ppb	N/A	61643.37	100	
Mn	55	89	No Gas	-0.006	ppb	N/A	9362.73	100	
Mn	55	89	He	-0.004	ppb	N/A	223.56	100	
Fe	56	89	No Gas	-13.136	ppb	N/A	1761986.63	500000	
Fe	56	89	He	4.708	ppb	15.6	58568.76	500000	
Co	59	89	No Gas	0.004	ppb	19.3	1328.08	100	
Co	59	89	He	0.006	ppb	106.0	333.68	100	
Ni	60	89	No Gas	-0.001	ppb	N/A	1144.55	100	
Ni	60	89	He	-0.282	ppb	N/A	283.63	100	
Ni	62	89	No Gas	-0.010	ppb	N/A	3924.56	100	
Cu	63	89	No Gas	-0.131	ppb	N/A	83481.41	100	
Cu	63	89	He	-0.111	ppb	N/A	16810.77	100	
Cu	65	89	No Gas	-0.142	ppb	N/A	37419.28	100	

Initial Calibration Blank (ICB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.021	ppb	153.2	1925.42	100	
Zn	66	89	He	-0.387	ppb	N/A	380.39	100	
Zn	67	89	No Gas	-0.009	ppb	N/A	360.37	100	
Zn	68	89	No Gas	0.014	ppb	238.2	1524.97	100	
As	75	89	No Gas	0.271	ppb	34.9	4667.82	100	
As	75	89	He	0.007	ppb	33.0	44.44	100	
Se	77	89	No Gas	-3.287	ppb	N/A	10581.58	100	
Se	78	89	No Gas	-0.690	ppb	N/A	14352.12	100	
Se	78	89	He	0.010	ppb	1070.6	21.11	100	
Se	82	89	No Gas	-0.044	ppb	N/A	27.86	100	
[Se]	83	89	No Gas	289.713	ppb	85.8	2466.08	100	Failed
Sr	88	89	No Gas	0.004	ppb	61.7	490.51	100	
Mo	95	89	No Gas	0.072	ppb	95.6	2873.25	10000	
Mo	97	89	No Gas	0.014	ppb	230.1	1641.77	10000	
Mo	98	89	No Gas	0.050	ppb	82.5	5960.18	10000	
[Mo]	99	89	No Gas	84.615	ppb	123.5	26.69	10000	
Cd	106	89	No Gas	0.703	ppb	107.0	39137.15	100	
Ag	107	89	No Gas	0.015	ppb	15.9	867.81	100	
Ag	107	89	He	0.012	ppb	14.4	310.32	100	
Cd	108	89	No Gas	0.045	ppb	190.5	106.77	100	
Ag	109	89	No Gas	0.014	ppb	17.6	517.20	100	
Cd	111	89	No Gas	0.003	ppb	229.5	-76.79	100	
Cd	114	89	No Gas	0.011	ppb	14.5	240.25	100	
Sn	118	115	No Gas	0.053	ppb	37.8	4147.36	100	
Sb	121	115	No Gas	0.002	ppb	74.2	1256.73	100	
Sb	121	89	He	-0.006	ppb	N/A	313.34	100	
Sb	123	115	No Gas	0.003	ppb	285.9	937.66	100	
Ba	135	115	No Gas	0.000	ppb	N/A	80.08	100	
Ba	137	115	No Gas	0.008	ppb	66.6	166.84	100	
Tl	203	209	No Gas	0.072	ppb	21.2	1942.14	100	
Tl	205	209	No Gas	0.071	ppb	12.3	4475.37	100	
Pb	206	209	No Gas	-0.006	ppb	N/A	5426.69	100	
Pb	207	209	No Gas	-0.014	ppb	N/A	4498.71	100	
Pb	208	209	No Gas	-0.015	ppb	N/A	20761.16	100	
Th	232	209	No Gas	0.214	ppb	20.9	17029.31	100	
U	238	209	No Gas	0.092	ppb	20.2	6311.42	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4663401.84	0.9	4905245.08	95.07	70	125	
Sc	45	No Gas	18929000.29	0.7	19588031.4	96.64	75	125	
Sc	45	He	832535.59	1.0	860992.42	96.69	75	125	
Y	89	No Gas	44471903.66	0.6	45698235	97.32	75	125	
Y	89	He	6262249.35	0.6	6413034.51	97.65	75	125	
In	115	No Gas	9734336.79	0.4	9919344.87	98.13	75	125	
Tb	159	No Gas	13736667.53	0.5	13963078.94	98.38	75	125	

Initial Calibration Blank (ICB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8285556.89	0.4	8348524.39	99.25	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	LLICV
File Name	018LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:27:26
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Li	7	6	No Gas	9.957	ppb	1.2	503190.73	10	99.57	80	120	
Be	9	6	No Gas	1.977	ppb	0.8	12862.19	2	98.85	80	120	
B	11	6	No Gas	20.625	ppb	0.9	90271.59	20	103.12	80	120	
Na	23	45	No Gas	214.045	ppb	0.5	6544260.83	200	107.02	80	120	
Na	23	45	He	210.767	ppb	2.1	192254.28	200	105.38	80	120	
Mg	24	45	No Gas	206.495	ppb	0.6	3901816.61	200	103.25	80	120	
Mg	24	45	He	209.298	ppb	1.9	88349.97	200	104.65	80	120	
Mg	25	45	No Gas	206.998	ppb	1.5	513008.59	200	103.5	80	120	
Al	27	45	No Gas	10.198	ppb	0.5	258463.62	10	101.98	80	120	
Al	27	45	He	10.665	ppb	6.8	1923.50	10	106.65	80	120	
Si	28	45	No Gas	1101.551	ppb	1.0	11135107.21	1000	110.16	80	120	
Si	29	45	No Gas	1115.500	ppb	1.0	734389.60	1000	111.55	80	120	
K	39	45	No Gas	200.665	ppb	0.8	8756683.20	200	100.33	80	120	
K	39	45	He	204.175	ppb	2.3	91412.34	200	102.09	80	120	
Ca	44	45	No Gas	520.877	ppb	0.0	468454.33	500	104.18	80	120	
Ca	44	45	He	505.256	ppb	10.1	9350.61	500	101.05	80	120	
Ti	47	45	No Gas	5.230	ppb	0.8	12952.55	5	104.6	80	120	
V	51	45	No Gas	5.121	ppb	1.0	163614.29	5	102.42	80	120	
V	51	45	He	5.029	ppb	1.2	22293.98	5	100.58	80	120	
Cr	52	89	No Gas	5.055	ppb	0.2	181407.78	5	101.1	80	120	
Cr	52	89	He	5.109	ppb	2.3	29508.18	5	102.18	80	120	
Cr	53	89	No Gas	4.204	ppb	18.5	84658.32	5	84.08	80	120	
Mn	55	89	No Gas	5.054	ppb	0.8	211604.07	5	101.08	80	120	
Mn	55	89	He	5.133	ppb	4.9	15257.37	5	102.66	80	120	
Fe	56	89	No Gas	65.872	ppb	1.5	4043580.95	80	82.34	80	120	
Fe	56	89	He	95.111	ppb	1.8	401669.76	80	118.89	80	120	
Co	59	89	No Gas	5.043	ppb	1.2	166968.50	5	100.86	80	120	
Co	59	89	He	5.114	ppb	0.7	45551.54	5	102.28	80	120	
Ni	60	89	No Gas	5.139	ppb	0.8	38452.84	5	102.78	80	120	
Ni	60	89	He	4.854	ppb	3.1	12755.59	5	97.08	80	120	
Ni	62	89	No Gas	5.393	ppb	3.0	9713.32	5	107.86	80	120	
Cu	63	89	No Gas	4.888	ppb	1.9	171670.78	5	97.76	80	120	
Cu	63	89	He	5.012	ppb	1.1	50474.05	5	100.24	80	120	
Cu	65	89	No Gas	4.960	ppb	2.2	79934.04	5	99.2	80	120	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	10.427	ppb	0.9	53568.91	10	104.27	80	120	
Zn	66	89	He	9.987	ppb	4.3	11002.33	10	99.87	80	120	
Zn	67	89	No Gas	10.037	ppb	4.5	8197.50	10	100.37	80	120	
Zn	68	89	No Gas	10.152	ppb	1.6	37599.89	10	101.52	80	120	
As	75	89	No Gas	5.124	ppb	4.7	29889.97	5	102.48	80	120	
As	75	89	He	4.960	ppb	3.3	3740.54	5	99.2	80	120	
Se	77	89	No Gas	3.480	ppb	35.1	12358.21	5	69.6	80	120	Failed
Se	78	89	No Gas	3.647	ppb	16.9	17676.15	5	72.94	80	120	Failed
Se	78	89	He	4.510	ppb	12.1	233.34	5	90.2	80	120	
Se	82	89	No Gas	4.826	ppb	20.1	1556.09	5	96.52	80	120	
[Se]	83	89	No Gas	-108.519	ppb	N/A	2132.34	5	-2170.38	80	120	Failed
Sr	88	89	No Gas	4.936	ppb	0.9	239217.24	5	98.72	80	120	
Mo	95	89	No Gas	4.902	ppb	0.9	47174.16	5	98.04	80	120	
Mo	97	89	No Gas	4.677	ppb	3.8	28422.40	5	93.54	80	120	
Mo	98	89	No Gas	4.754	ppb	1.2	76580.40	5	95.08	80	120	
[Mo]	99	89	No Gas	134.208	ppb	107.5	36.70	5	2684.16	80	120	Failed
Cd	106	89	No Gas	3.296	ppb	51.7	40405.62	2	164.8	80	120	Failed
Ag	107	89	No Gas	5.095	ppb	0.6	126418.13	5	101.9	80	120	
Ag	107	89	He	5.069	ppb	0.8	61614.57	5	101.38	80	120	
Cd	108	89	No Gas	1.954	ppb	3.3	774.15	2	97.7	80	120	
Ag	109	89	No Gas	5.071	ppb	1.2	120521.82	5	101.42	80	120	
Cd	111	89	No Gas	2.033	ppb	1.1	9763.64	2	101.65	80	120	
Cd	114	89	No Gas	2.034	ppb	1.5	26312.75	2	101.7	80	120	
Sn	118	115	No Gas	1.957	ppb	0.8	34899.55	2	97.85	80	120	
Sb	121	115	No Gas	4.573	ppb	0.2	107259.94	5	91.46	80	120	
Sb	121	89	He	4.720	ppb	1.9	24847.09	5	94.4	80	120	
Sb	123	115	No Gas	4.610	ppb	2.0	83310.11	5	92.2	80	120	
Ba	135	115	No Gas	4.814	ppb	3.1	23050.50	5	96.28	80	120	
Ba	137	115	No Gas	4.877	ppb	0.9	40731.37	5	97.54	80	120	
Tl	203	209	No Gas	4.641	ppb	1.6	95360.26	5	92.82	80	120	
Tl	205	209	No Gas	4.628	ppb	0.4	225129.93	5	92.56	80	120	
Pb	206	209	No Gas	4.691	ppb	0.3	82715.29	5	93.82	80	120	
Pb	207	209	No Gas	4.913	ppb	2.4	72405.06	5	98.26	80	120	
Pb	208	209	No Gas	4.795	ppb	1.3	329795.30	5	95.9	80	120	
Th	232	209	No Gas	4.970	ppb	0.5	329663.52	5	99.4	80	120	
U	238	209	No Gas	4.577	ppb	0.9	297432.14	5	91.54	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4689755.54	0.1	4905245.08	95.61	70	125	
Sc	45	No Gas	18958558.60	0.4	19588031.4	96.79	75	125	
Sc	45	He	838472.21	0.9	860992.42	97.38	75	125	
Y	89	No Gas	44540048.47	0.2	45698235	97.47	75	125	
Y	89	He	6287966.31	1.2	6413034.51	98.05	75	125	
In	115	No Gas	9790615.73	0.4	9919344.87	98.7	75	125	
Tb	159	No Gas	13635998.94	0.3	13963078.94	97.66	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8367649.39	0.3	8348524.39	100.23	75	125	

Interference Check Solution A (ICS-A) Report

Sample Name	ICSA
File Name	019ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:29:30
Sample Type	ICSA
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Li	7	6	No Gas	-0.068	ppb	N/A	233399.52			120	
Be	9	6	No Gas	0.045	ppb	13.3	293.64			120	
B	11	6	No Gas	2.607	ppb	5.6	12845.56			120	
Na	23	45	No Gas	45918.662	ppb	1.5	1303074895.79			120	
Na	23	45	He	46962.661	ppb	0.5	37790182.77			120	
Mg	24	45	No Gas	45676.356	ppb	1.3	897737559.96			120	
Mg	24	45	He	45960.279	ppb	0.6	19528392.63			120	
Mg	25	45	No Gas	46132.314	ppb	0.3	118867884.90			120	
Al	27	45	No Gas	43985.767	ppb	0.2	1100778276.93			120	
Al	27	45	He	43144.128	ppb	0.7	7420425.72			120	
Si	28	45	No Gas	38.137	ppb	9.0	841776.44			120	Failed
Si	29	45	No Gas	50.348	ppb	4.9	107123.46			120	Failed
K	39	45	No Gas	46339.539	ppb	1.2	1219814515.16			120	
K	39	45	He	46935.600	ppb	0.9	15689800.19			120	
Ca	44	45	No Gas	45799.520	ppb	0.7	37165790.28			120	
Ca	44	45	He	44756.253	ppb	1.4	826504.73			120	
Ti	47	45	No Gas	960.853	ppb	1.0	2400230.60			120	
V	51	45	No Gas	0.159	ppb	48.2	-1307.98			120	
V	51	45	He	0.027	ppb	61.2	627.32			120	
Cr	52	89	No Gas	0.289	ppb	4.5	40179.10			120	
Cr	52	89	He	0.242	ppb	38.7	3798.28			120	
Cr	53	89	No Gas	-2.337	ppb	N/A	63537.41			120	
Mn	55	89	No Gas	0.604	ppb	1.1	34879.60			120	
Mn	55	89	He	0.691	ppb	3.6	2319.23			120	
Fe	56	89	No Gas	45849.697	ppb	0.5	1369836497.28			120	
Fe	56	89	He	45838.150	ppb	0.7	178510777.34			120	
Co	59	89	No Gas	0.289	ppb	4.8	11072.41			120	
Co	59	89	He	0.207	ppb	10.1	2172.39			120	
Ni	60	89	No Gas	0.599	ppb	5.7	5683.64			120	
Ni	60	89	He	-0.017	ppb	N/A	951.00			120	
Ni	62	89	No Gas	1.956	ppb	17.0	6234.43			120	
Cu	63	89	No Gas	-0.188	ppb	N/A	85391.81			120	
Cu	63	89	He	0.067	ppb	53.0	18524.65			120	
Cu	65	89	No Gas	0.257	ppb	39.8	42181.00			120	

Interference Check Solution A (ICS-A) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Zn	66	89	No Gas	1.074	ppb	7.4	7389.54			120	
Zn	66	89	He	0.091	ppb	133.4	894.27			120	
Zn	67	89	No Gas	2.131	ppb	8.2	2098.97			120	
Zn	68	89	No Gas	0.454	ppb	10.2	3196.95			120	
As	75	89	No Gas	0.392	ppb	56.9	5482.55			120	
As	75	89	He	0.168	ppb	9.7	168.89			120	
Se	77	89	No Gas	11.418	ppb	14.0	14910.02			120	
Se	78	89	No Gas	-0.794	ppb	N/A	14779.79			120	
Se	78	89	He	0.226	ppb	97.3	32.22			120	
Se	82	89	No Gas	-0.103	ppb	N/A	11.69			120	
[Se]	83	89	No Gas	125.376	ppb	42.3	2409.32			120	Failed
Sr	88	89	No Gas	0.912	ppb	0.9	45951.58			120	
Mo	95	89	No Gas	926.289	ppb	0.6	8787419.73			120	
Mo	97	89	No Gas	927.401	ppb	0.4	5508245.97			120	
Mo	98	89	No Gas	926.004	ppb	0.6	14376855.76			120	
[Mo]	99	89	No Gas	210.141	ppb	60.7	53.39			120	
Cd	106	89	No Gas	-0.048	ppb	N/A	40154.79			120	
Ag	107	89	No Gas	0.266	ppb	2.4	7319.83			120	
Ag	107	89	He	0.281	ppb	1.0	3667.58			120	
Cd	108	89	No Gas	16.835	ppb	6.6	6177.70			120	Failed
Ag	109	89	No Gas	0.274	ppb	1.5	6908.89			120	
Cd	111	89	No Gas	-0.424	ppb	N/A	-2225.68			120	
Cd	114	89	No Gas	0.536	ppb	5.7	7229.34			120	
Sn	118	115	No Gas	0.143	ppb	5.8	5575.66			120	
Sb	121	115	No Gas	0.065	ppb	9.2	2690.30			120	
Sb	121	89	He	0.068	ppb	17.2	716.70			120	
Sb	123	115	No Gas	0.061	ppb	14.9	1968.81			120	
Ba	135	115	No Gas	0.256	ppb	7.5	1288.04			120	
Ba	137	115	No Gas	0.252	ppb	9.8	2185.74			120	
Tl	203	209	No Gas	0.012	ppb	16.7	700.73			120	
Tl	205	209	No Gas	0.018	ppb	10.0	1875.39			120	
Pb	206	209	No Gas	-0.037	ppb	N/A	4772.47			120	
Pb	207	209	No Gas	-0.040	ppb	N/A	4008.06			120	
Pb	208	209	No Gas	-0.041	ppb	N/A	18450.80			120	
Th	232	209	No Gas	0.165	ppb	18.4	13370.95			120	
U	238	209	No Gas	0.020	ppb	16.8	1621.76			120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4565741.53	1.0	4905245.08	93.08	70	125	
Sc	45	No Gas	19757627.66	1.9	19588031.4	100.87	75	125	
Sc	45	He	844894.41	0.9	860992.42	98.13	75	125	
Y	89	No Gas	46056716.81	2.2	45698235	100.78	75	125	
Y	89	He	6454763.11	0.8	6413034.51	100.65	75	125	
In	115	No Gas	9684940.72	1.6	9919344.87	97.64	75	125	
Tb	159	No Gas	14102168.03	1.4	13963078.94	101	75	125	

Interference Check Solution A (ICS-A) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8010377.18	2.4	8348524.39	95.95	75	125	

Linear Range Sample (LRS) Report

Sample Name	LDR
File Name	020_LRS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:31:19
Sample Type	LRS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Be	9	6	No Gas	2117.103	ppb	0.5	12065539.32	2000	105.86	90	110	
B	11	6	No Gas	9916.718	ppb	0.3	37178994.90	10000	99.17	90	110	
Na	23	45	He	197637.869	ppb	0.7	149496357.77	200000	98.82	90	110	
Mg	24	45	He	194897.125	ppb	0.5	77876845.51	200000	97.45	90	110	
Al	27	45	No Gas	1872.652	ppb	1.6	44034041.01	2000	93.63	90	110	
Si	29	45	No Gas	10431.583	ppb	0.8	6127084.39	10000	104.32	90	110	
K	39	45	He	202394.486	ppb	0.8	63556127.39	200000	101.2	90	110	
Ca	44	45	No Gas	196995.731	ppb	0.7	149972477.76	200000	98.5	90	110	
Ti	47	45	No Gas	1933.279	ppb	0.3	4536749.26	2000	96.66	90	110	
V	51	45	He	1990.950	ppb	0.3	8175076.13	2000	99.55	90	110	
Cr	52	89	He	1973.852	ppb	0.5	10052270.62	2000	98.69	90	110	
Mn	55	89	No Gas	1921.208	ppb	1.4	73354819.97	2000	96.06	90	110	
Fe	56	89	He	194095.177	ppb	0.6	706635402.80	200000	97.05	90	110	
Co	59	89	He	1896.274	ppb	1.1	16110975.17	2000	94.81	90	110	
Ni	60	89	He	1865.353	ppb	1.0	4348437.72	2000	93.27	90	110	
Cu	63	89	He	1851.565	ppb	0.8	11671593.70	2000	92.58	90	110	
Zn	66	89	He	1850.316	ppb	0.4	1819550.08	2000	92.52	90	110	
As	75	89	He	1951.626	ppb	0.6	1398419.94	2000	97.58	90	110	
Se	78	89	He	1897.435	ppb	0.4	85936.46	2000	94.87	90	110	
Sr	88	89	No Gas	1960.344	ppb	0.6	90653507.02	2000	98.02	90	110	
Mo	98	89	No Gas	2017.906	ppb	1.9	28937054.35	2000	100.9	90	110	
Ag	107	89	He	982.229	ppb	9.6	11442596.16	2000	49.11	90	110	LRS Main CR1 Failed
Cd	111	89	No Gas	1923.083	ppb	1.5	8907754.45	2000	96.15	90	110	
Sn	118	115	No Gas	2004.874	ppb	0.8	29503059.94	2000	100.24	90	110	
Sb	121	89	He	1809.347	ppb	0.2	9014843.62	2000	90.47	90	110	
Ba	137	115	No Gas	1999.637	ppb	0.5	15193543.16	2000	99.98	90	110	
Tl	203	209	No Gas	1872.735	ppb	1.1	33738456.86	2000	93.64	90	110	
Pb	206	209	No Gas	1930.679	ppb	1.2	27984263.49	2000	96.53	90	110	
Pb	207	209	No Gas	2047.481	ppb	1.1	24864996.72	2000	102.37	90	110	
Pb	208	209	No Gas	1995.804	ppb	0.6	112968935.00	2000	99.79	90	110	
Th	232	209	No Gas	2014.918	ppb	1.3	116688742.31	2000	100.75	90	110	
U	238	209	No Gas	1974.288	ppb	1.8	112922002.23	2000	98.71	90	110	

QC ISTD Table

Linear Range Sample (LRS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4110312.14	0.8	4905245.08	83.79	70	125	
Sc	45	No Gas	18560098.88	0.6	19588031.4	94.75	75	125	
Y	89	No Gas	42553129.88	1.6	45698235	93.12	75	125	
In	115	No Gas	8930754.57	0.9	9919344.87	90.03	75	125	
Tb	159	No Gas	13003605.30	1.0	13963078.94	93.13	75	125	
Bi	209	No Gas	7375819.15	0.8	8348524.39	88.35	75	125	
Sc	45	He	794553.62	0.8	860992.42	92.28	75	125	
Y	89	He	6035891.32	1.6	6413034.51	94.12	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 023_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 14:37:57

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.709	ppb	0.8	2683892.54	100	99.71	90	110	
Be	9	6	No Gas	98.425	ppb	1.2	600268.69	100	98.42	90	110	
B	11	6	No Gas	263.500	ppb	0.6	1059076.94	250	105.4	90	110	
Na	23	45	No Gas	9931.032	ppb	1.2	271781006.07	10000	99.31	90	110	
Na	23	45	He	10044.986	ppb	0.1	7868653.01	10000	100.45	90	110	
Mg	24	45	No Gas	9940.044	ppb	0.9	188018177.20	10000	99.4	90	110	
Mg	24	45	He	9887.741	ppb	0.7	4080192.65	10000	98.88	90	110	
Mg	25	45	No Gas	9959.532	ppb	0.9	24694201.30	10000	99.6	90	110	
Al	27	45	No Gas	99.251	ppb	0.9	2403542.47	100	99.25	90	110	
Al	27	45	He	95.679	ppb	2.9	16082.84	100	95.68	90	110	
Si	28	45	No Gas	10089.545	ppb	0.2	98700280.48	10000	100.9	90	110	
Si	29	45	No Gas	10151.804	ppb	0.7	6109609.83	10000	101.52	90	110	
K	39	45	No Gas	10004.144	ppb	1.1	256333502.85	10000	100.04	90	110	
K	39	45	He	9999.069	ppb	1.0	3264663.28	10000	99.99	90	110	
Ca	44	45	No Gas	10068.192	ppb	0.8	7911726.97	10000	100.68	90	110	
Ca	44	45	He	10072.456	ppb	1.6	180718.84	10000	100.72	90	110	
Ti	47	45	No Gas	97.946	ppb	0.3	235833.73	100	97.95	90	110	
V	51	45	No Gas	100.003	ppb	0.5	3325333.54	100	100	90	110	
V	51	45	He	99.030	ppb	1.7	420381.45	100	99.03	90	110	
Cr	52	89	No Gas	98.865	ppb	1.3	3021345.20	100	98.86	90	110	
Cr	52	89	He	100.395	ppb	0.7	528967.80	100	100.4	90	110	
Cr	53	89	No Gas	90.895	ppb	0.8	396604.19	100	90.9	90	110	
Mn	55	89	No Gas	99.121	ppb	0.2	4016655.94	100	99.12	90	110	
Mn	55	89	He	97.927	ppb	0.9	283714.02	100	97.93	90	110	
Fe	56	89	No Gas	9897.680	ppb	1.0	290978348.17	10000	98.98	90	110	
Fe	56	89	He	9910.333	ppb	0.1	37206952.78	10000	99.1	90	110	
Co	59	89	No Gas	98.668	ppb	1.0	3281472.83	100	98.67	90	110	
Co	59	89	He	99.611	ppb	0.1	872143.58	100	99.61	90	110	
Ni	60	89	No Gas	96.873	ppb	0.7	712450.42	100	96.87	90	110	
Ni	60	89	He	98.885	ppb	0.6	238388.09	100	98.88	90	110	
Ni	62	89	No Gas	97.264	ppb	1.3	109321.56	100	97.26	90	110	
Cu	63	89	No Gas	100.137	ppb	0.5	1864088.00	100	100.14	90	110	
Cu	63	89	He	100.896	ppb	0.3	671674.91	100	100.9	90	110	
Cu	65	89	No Gas	98.401	ppb	0.6	867255.82	100	98.4	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.244	ppb	0.8	494970.27	100	98.24	90	110	
Zn	66	89	He	99.497	ppb	1.3	101518.02	100	99.5	90	110	
Zn	67	89	No Gas	97.367	ppb	0.8	77208.91	100	97.37	90	110	
Zn	68	89	No Gas	98.429	ppb	0.7	355743.61	100	98.43	90	110	
As	75	89	No Gas	97.714	ppb	1.1	516779.36	100	97.71	90	110	
As	75	89	He	98.839	ppb	0.3	72994.74	100	98.84	90	110	
Se	77	89	No Gas	84.678	ppb	1.9	33870.10	100	84.68	90	110	Failed
Se	78	89	No Gas	96.977	ppb	1.1	89753.43	100	96.98	90	110	
Se	78	89	He	94.045	ppb	3.3	4407.41	100	94.04	90	110	
Se	82	89	No Gas	98.162	ppb	1.9	31182.41	100	98.16	90	110	
[Se]	83	89	No Gas	30.388	ppb	214.3	2275.85	100	30.39	90	110	Failed
Sr	88	89	No Gas	99.330	ppb	0.8	4863507.37	100	99.33	90	110	
Mo	95	89	No Gas	97.315	ppb	0.4	905134.41	100	97.32	90	110	
Mo	97	89	No Gas	97.047	ppb	0.4	565292.46	100	97.05	90	110	
Mo	98	89	No Gas	98.149	ppb	1.1	1495413.67	100	98.15	90	110	
[Mo]	99	89	No Gas	164.781	ppb	34.6	43.38	100	164.78	90	110	Failed
Cd	106	89	No Gas	99.585	ppb	1.8	86225.59	100	99.58	90	110	
Ag	107	89	No Gas	101.193	ppb	0.8	2529981.85	100	101.19	90	110	
Ag	107	89	He	101.627	ppb	0.4	1218471.52	100	101.63	90	110	
Cd	108	89	No Gas	99.160	ppb	2.5	35145.26	100	99.16	90	110	
Ag	109	89	No Gas	100.573	ppb	0.6	2414437.83	100	100.57	90	110	
Cd	111	89	No Gas	97.968	ppb	0.6	480419.27	100	97.97	90	110	
Cd	114	89	No Gas	99.153	ppb	0.9	1292764.25	100	99.15	90	110	
Sn	118	115	No Gas	99.853	ppb	0.5	1606088.62	100	99.85	90	110	
Sb	121	115	No Gas	104.465	ppb	1.9	2411809.35	100	104.46	90	110	
Sb	121	89	He	106.989	ppb	1.0	549421.92	100	106.99	90	110	
Sb	123	115	No Gas	103.557	ppb	1.3	1842885.13	100	103.56	90	110	
Ba	135	115	No Gas	98.207	ppb	0.9	466323.21	100	98.21	90	110	
Ba	137	115	No Gas	97.954	ppb	0.4	811958.03	100	97.95	90	110	
Tl	203	209	No Gas	99.805	ppb	0.7	2019943.44	100	99.8	90	110	
Tl	205	209	No Gas	99.214	ppb	1.2	4756334.16	100	99.21	90	110	
Pb	206	209	No Gas	98.870	ppb	0.9	1614815.65	100	98.87	90	110	
Pb	207	209	No Gas	98.798	ppb	0.2	1352060.45	100	98.8	90	110	
Pb	208	209	No Gas	98.724	ppb	0.3	6296830.54	100	98.72	90	110	
Th	232	209	No Gas	98.481	ppb	0.6	6408633.02	100	98.48	90	110	
U	238	209	No Gas	97.510	ppb	0.6	6264725.57	100	97.51	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4398832.62	1.2	4905245.08	89.68	70	125	
Sc	45	No Gas	19011661.70	0.9	19588031.4	97.06	75	125	
Sc	45	He	820529.46	0.4	860992.42	95.3	75	125	
Y	89	No Gas	45052692.78	0.5	45698235	98.59	75	125	
Y	89	He	6217558.41	0.3	6413034.51	96.95	75	125	
In	115	No Gas	9742061.12	0.4	9919344.87	98.21	75	125	
Tb	159	No Gas	14011036.06	0.8	13963078.94	100.34	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8283783.28	0.2	8348524.39	99.22	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	024_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:39:42
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.045	ppb	N/A	234260.26	100	
Be	9	6	No Gas	0.020	ppb	21.2	130.13	100	
B	11	6	No Gas	11.693	ppb	7.2	50735.90	100	
Na	23	45	No Gas	4.775	ppb	13.2	855809.62	500000	
Na	23	45	He	6.475	ppb	44.2	28952.22	500000	
Mg	24	45	No Gas	0.629	ppb	33.8	18854.52	500000	
Mg	24	45	He	0.835	ppb	21.3	440.04	500000	
Mg	25	45	No Gas	0.423	ppb	29.2	2267.01	500000	
Al	27	45	No Gas	-0.128	ppb	N/A	10604.94	500000	
Al	27	45	He	-0.175	ppb	N/A	73.33	500000	
Si	28	45	No Gas	5.016	ppb	36.2	490163.52	100	
Si	29	45	No Gas	-0.846	ppb	N/A	73091.24	100	
K	39	45	No Gas	2.233	ppb	53.1	3795307.03	500000	
K	39	45	He	2.176	ppb	112.5	24316.15	500000	
Ca	44	45	No Gas	-7.332	ppb	N/A	58408.33	500000	
Ca	44	45	He	2.386	ppb	52.6	133.34	500000	
Ti	47	45	No Gas	-0.033	ppb	N/A	340.35	10000	
V	51	45	No Gas	0.182	ppb	42.0	-504.46	100	
V	51	45	He	-0.035	ppb	N/A	353.70	100	
Cr	52	89	No Gas	-0.149	ppb	N/A	26265.06	100	
Cr	52	89	He	-0.024	ppb	N/A	2319.22	100	
Cr	53	89	No Gas	-8.370	ppb	N/A	40841.84	100	
Mn	55	89	No Gas	-0.025	ppb	N/A	8758.32	100	
Mn	55	89	He	-0.010	ppb	N/A	210.22	100	
Fe	56	89	No Gas	-10.361	ppb	N/A	1880238.91	500000	
Fe	56	89	He	7.977	ppb	14.3	72289.57	500000	
Co	59	89	No Gas	0.008	ppb	46.5	1488.26	100	
Co	59	89	He	0.002	ppb	452.0	300.31	100	
Ni	60	89	No Gas	-0.039	ppb	N/A	884.26	100	
Ni	60	89	He	-0.293	ppb	N/A	260.27	100	
Ni	62	89	No Gas	0.039	ppb	627.9	4058.07	100	
Cu	63	89	No Gas	-0.136	ppb	N/A	85140.12	100	
Cu	63	89	He	-0.103	ppb	N/A	17198.24	100	
Cu	65	89	No Gas	-0.131	ppb	N/A	38295.80	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.058	ppb	32.5	2152.36	100	
Zn	66	89	He	-0.381	ppb	N/A	393.74	100	
Zn	67	89	No Gas	-0.039	ppb	N/A	343.69	100	
Zn	68	89	No Gas	0.082	ppb	27.5	1801.95	100	
As	75	89	No Gas	0.368	ppb	17.5	5284.32	100	
As	75	89	He	0.018	ppb	52.3	53.33	100	
Se	77	89	No Gas	-16.471	ppb	N/A	7306.09	100	
Se	78	89	No Gas	-0.792	ppb	N/A	14572.64	100	
Se	78	89	He	0.328	ppb	78.5	36.67	100	
Se	82	89	No Gas	-1.316	ppb	N/A	-376.87	100	
[Se]	83	89	No Gas	347.166	ppb	45.3	2566.20	100	Failed
Sr	88	89	No Gas	0.007	ppb	49.6	647.34	100	
Mo	95	89	No Gas	0.190	ppb	36.8	4034.71	10000	
Mo	97	89	No Gas	0.143	ppb	54.0	2429.37	10000	
Mo	98	89	No Gas	0.180	ppb	36.9	8080.55	10000	
[Mo]	99	89	No Gas	179.677	ppb	63.1	46.71	10000	
Cd	106	89	No Gas	1.282	ppb	84.4	40228.32	100	
Ag	107	89	No Gas	1.151	ppb	17.5	29501.31	100	
Ag	107	89	He	1.568	ppb	6.3	19464.04	100	
Cd	108	89	No Gas	0.030	ppb	290.6	103.44	100	
Ag	109	89	No Gas	1.128	ppb	16.8	27486.98	100	
Cd	111	89	No Gas	0.008	ppb	60.2	-55.43	100	
Cd	114	89	No Gas	0.016	ppb	8.5	300.31	100	
Sn	118	115	No Gas	0.220	ppb	21.1	6984.14	100	
Sb	121	115	No Gas	1.357	ppb	31.0	33201.30	100	
Sb	121	89	He	2.372	ppb	6.1	12853.19	100	
Sb	123	115	No Gas	1.350	ppb	30.6	25418.58	100	
Ba	135	115	No Gas	0.004	ppb	59.6	103.44	100	
Ba	137	115	No Gas	0.016	ppb	35.6	243.59	100	
Tl	203	209	No Gas	0.167	ppb	12.9	3921.30	100	
Tl	205	209	No Gas	0.169	ppb	17.1	9282.97	100	
Pb	206	209	No Gas	0.012	ppb	147.4	5803.92	100	
Pb	207	209	No Gas	0.003	ppb	685.8	4792.47	100	
Pb	208	209	No Gas	0.010	ppb	105.5	22617.70	100	
Th	232	209	No Gas	0.239	ppb	25.5	18860.75	100	
U	238	209	No Gas	0.103	ppb	23.3	7146.10	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4570634.22	0.5	4905245.08	93.18	70	125	
Sc	45	No Gas	19138005.96	0.9	19588031.4	97.7	75	125	
Sc	45	He	831950.07	1.3	860992.42	96.63	75	125	
Y	89	No Gas	45399754.85	0.4	45698235	99.35	75	125	
Y	89	He	6386567.83	0.9	6413034.51	99.59	75	125	
In	115	No Gas	9938155.47	0.4	9919344.87	100.19	75	125	
Tb	159	No Gas	13995442.14	0.2	13963078.94	100.23	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8397005.22	0.6	8348524.39	100.58	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 027_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 14:44:31

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.028	ppb	0.5	2710925.31	100	99.03	90	110	
Be	9	6	No Gas	97.934	ppb	0.7	607100.92	100	97.93	90	110	
B	11	6	No Gas	248.374	ppb	0.3	1014758.51	250	99.35	90	110	
Na	23	45	No Gas	9984.074	ppb	0.2	275261114.49	10000	99.84	90	110	
Na	23	45	He	9896.671	ppb	0.7	7827940.30	10000	98.97	90	110	
Mg	24	45	No Gas	9912.262	ppb	0.5	188879210.52	10000	99.12	90	110	
Mg	24	45	He	9947.686	ppb	1.3	4144766.29	10000	99.48	90	110	
Mg	25	45	No Gas	10009.218	ppb	0.5	25001258.80	10000	100.09	90	110	
Al	27	45	No Gas	99.295	ppb	0.7	2422332.00	100	99.3	90	110	
Al	27	45	He	96.009	ppb	1.9	16293.11	100	96.01	90	110	
Si	28	45	No Gas	10166.010	ppb	0.1	100178375.25	10000	101.66	90	110	
Si	29	45	No Gas	10131.263	ppb	0.8	6142456.63	10000	101.31	90	110	
K	39	45	No Gas	10070.447	ppb	1.3	259916029.46	10000	100.7	90	110	
K	39	45	He	9989.997	ppb	0.5	3293247.35	10000	99.9	90	110	
Ca	44	45	No Gas	10014.967	ppb	0.3	7928585.93	10000	100.15	90	110	
Ca	44	45	He	9865.301	ppb	2.4	178720.21	10000	98.65	90	110	
Ti	47	45	No Gas	98.351	ppb	0.6	238558.09	100	98.35	90	110	
V	51	45	No Gas	99.852	ppb	0.9	3344755.90	100	99.85	90	110	
V	51	45	He	99.321	ppb	0.5	425715.82	100	99.32	90	110	
Cr	52	89	No Gas	99.162	ppb	0.5	3035563.07	100	99.16	90	110	
Cr	52	89	He	101.740	ppb	0.8	536076.05	100	101.74	90	110	
Cr	53	89	No Gas	91.648	ppb	0.5	399982.33	100	91.65	90	110	
Mn	55	89	No Gas	98.680	ppb	0.3	4005561.19	100	98.68	90	110	
Mn	55	89	He	99.815	ppb	0.7	289215.30	100	99.82	90	110	
Fe	56	89	No Gas	9884.160	ppb	1.1	291059698.18	10000	98.84	90	110	
Fe	56	89	He	9987.143	ppb	0.5	37499019.44	10000	99.87	90	110	
Co	59	89	No Gas	98.783	ppb	0.1	3290929.37	100	98.78	90	110	
Co	59	89	He	101.305	ppb	0.3	887075.72	100	101.3	90	110	
Ni	60	89	No Gas	98.279	ppb	0.5	724005.31	100	98.28	90	110	
Ni	60	89	He	99.263	ppb	1.1	239331.75	100	99.26	90	110	
Ni	62	89	No Gas	98.829	ppb	1.9	111201.97	100	98.83	90	110	
Cu	63	89	No Gas	100.509	ppb	1.0	1873838.90	100	100.51	90	110	
Cu	63	89	He	101.617	ppb	1.0	676399.29	100	101.62	90	110	
Cu	65	89	No Gas	99.105	ppb	1.1	874640.89	100	99.1	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.416	ppb	0.4	496678.14	100	98.42	90	110	
Zn	66	89	He	100.004	ppb	1.1	102039.09	100	100	90	110	
Zn	67	89	No Gas	99.653	ppb	1.3	79148.81	100	99.65	90	110	
Zn	68	89	No Gas	98.779	ppb	0.1	357615.48	100	98.78	90	110	
As	75	89	No Gas	98.444	ppb	0.6	521504.07	100	98.44	90	110	
As	75	89	He	99.944	ppb	0.8	73815.88	100	99.94	90	110	
Se	77	89	No Gas	86.032	ppb	1.5	34284.81	100	86.03	90	110	Failed
Se	78	89	No Gas	97.570	ppb	0.8	90361.08	100	97.57	90	110	
Se	78	89	He	100.597	ppb	2.4	4713.07	100	100.6	90	110	
Se	82	89	No Gas	98.456	ppb	1.1	31329.64	100	98.46	90	110	
[Se]	83	89	No Gas	18.789	ppb	1374.5	2269.17	100	18.79	90	110	Failed
Sr	88	89	No Gas	99.497	ppb	0.2	4880011.38	100	99.5	90	110	
Mo	95	89	No Gas	97.151	ppb	0.4	905152.89	100	97.15	90	110	
Mo	97	89	No Gas	97.804	ppb	0.3	570656.05	100	97.8	90	110	
Mo	98	89	No Gas	98.499	ppb	0.3	1503313.06	100	98.5	90	110	
[Mo]	99	89	No Gas	180.781	ppb	31.4	46.71	100	180.78	90	110	Failed
Cd	106	89	No Gas	103.027	ppb	2.6	87995.43	100	103.03	90	110	
Ag	107	89	No Gas	99.747	ppb	0.6	2498034.83	100	99.75	90	110	
Ag	107	89	He	100.070	ppb	1.2	1199900.43	100	100.07	90	110	
Cd	108	89	No Gas	97.581	ppb	1.4	34646.98	100	97.58	90	110	
Ag	109	89	No Gas	99.384	ppb	0.4	2389981.18	100	99.38	90	110	
Cd	111	89	No Gas	98.313	ppb	0.4	482932.61	100	98.31	90	110	
Cd	114	89	No Gas	98.814	ppb	0.7	1290571.95	100	98.81	90	110	
Sn	118	115	No Gas	98.331	ppb	0.8	1583492.44	100	98.33	90	110	
Sb	121	115	No Gas	99.696	ppb	1.3	2304469.70	100	99.7	90	110	
Sb	121	89	He	100.953	ppb	0.5	518505.93	100	100.95	90	110	
Sb	123	115	No Gas	99.543	ppb	1.3	1773554.13	100	99.54	90	110	
Ba	135	115	No Gas	98.343	ppb	0.6	467513.80	100	98.34	90	110	
Ba	137	115	No Gas	97.750	ppb	1.4	811178.81	100	97.75	90	110	
Tl	203	209	No Gas	98.446	ppb	0.7	1965861.70	100	98.45	90	110	
Tl	205	209	No Gas	98.409	ppb	0.3	4654903.14	100	98.41	90	110	
Pb	206	209	No Gas	98.874	ppb	0.0	1593349.60	100	98.87	90	110	
Pb	207	209	No Gas	98.444	ppb	0.5	1329256.50	100	98.44	90	110	
Pb	208	209	No Gas	98.805	ppb	0.2	6217862.41	100	98.8	90	110	
Th	232	209	No Gas	97.721	ppb	0.5	6274411.51	100	97.72	90	110	
U	238	209	No Gas	97.420	ppb	0.3	6175477.99	100	97.42	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4470916.22	0.6	4905245.08	91.15	70	125	
Sc	45	No Gas	19151660.87	0.4	19588031.4	97.77	75	125	
Sc	45	He	828486.67	0.6	860992.42	96.22	75	125	
Y	89	No Gas	45128838.93	0.3	45698235	98.75	75	125	
Y	89	He	6218299.15	0.9	6413034.51	96.96	75	125	
In	115	No Gas	9753596.50	0.7	9919344.87	98.33	75	125	
Tb	159	No Gas	13716354.72	0.4	13963078.94	98.23	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8173244.40	0.1	8348524.39	97.9	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	028_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 14:46:16
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.080	ppb	52.9	240011.24	100	
Be	9	6	No Gas	0.014	ppb	14.0	93.43	100	
B	11	6	No Gas	5.371	ppb	8.2	24643.22	100	
Na	23	45	No Gas	3.477	ppb	15.5	827929.74	500000	
Na	23	45	He	5.252	ppb	9.0	28390.96	500000	
Mg	24	45	No Gas	0.356	ppb	53.8	13794.90	500000	
Mg	24	45	He	0.193	ppb	27.9	173.34	500000	
Mg	25	45	No Gas	0.235	ppb	31.9	1813.59	500000	
Al	27	45	No Gas	-0.151	ppb	N/A	10151.22	500000	
Al	27	45	He	-0.317	ppb	N/A	50.00	500000	
Si	28	45	No Gas	4.634	ppb	30.4	491077.90	100	
Si	29	45	No Gas	0.970	ppb	339.6	74886.22	100	
K	39	45	No Gas	1.402	ppb	51.0	3809748.07	500000	
K	39	45	He	-0.896	ppb	N/A	23648.53	500000	
Ca	44	45	No Gas	-7.585	ppb	N/A	58756.30	500000	
Ca	44	45	He	1.567	ppb	240.4	120.01	500000	
Ti	47	45	No Gas	-0.039	ppb	N/A	330.34	10000	
V	51	45	No Gas	0.208	ppb	32.6	385.54	100	
V	51	45	He	-0.024	ppb	N/A	403.75	100	
Cr	52	89	No Gas	-0.146	ppb	N/A	26388.80	100	
Cr	52	89	He	-0.040	ppb	N/A	2245.80	100	
Cr	53	89	No Gas	-8.126	ppb	N/A	41805.86	100	
Mn	55	89	No Gas	-0.035	ppb	N/A	8387.75	100	
Mn	55	89	He	-0.013	ppb	N/A	200.21	100	
Fe	56	89	No Gas	-10.429	ppb	N/A	1882067.04	500000	
Fe	56	89	He	5.514	ppb	23.5	63097.67	500000	
Co	59	89	No Gas	0.004	ppb	51.1	1361.46	100	
Co	59	89	He	0.007	ppb	10.8	347.02	100	
Ni	60	89	No Gas	-0.021	ppb	N/A	1017.74	100	
Ni	60	89	He	-0.282	ppb	N/A	290.30	100	
Ni	62	89	No Gas	0.215	ppb	37.2	4258.32	100	
Cu	63	89	No Gas	-0.404	ppb	N/A	80500.98	100	
Cu	63	89	He	-0.220	ppb	N/A	16483.40	100	
Cu	65	89	No Gas	-0.279	ppb	N/A	37114.66	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.027	ppb	56.1	1998.84	100	
Zn	66	89	He	-0.389	ppb	N/A	387.07	100	
Zn	67	89	No Gas	0.032	ppb	115.5	400.41	100	
Zn	68	89	No Gas	0.060	ppb	104.4	1725.20	100	
As	75	89	No Gas	0.252	ppb	26.5	4678.33	100	
As	75	89	He	0.034	ppb	89.4	65.55	100	
Se	77	89	No Gas	-14.726	ppb	N/A	7783.50	100	
Se	78	89	No Gas	-0.597	ppb	N/A	14753.06	100	
Se	78	89	He	0.254	ppb	109.2	33.33	100	
Se	82	89	No Gas	0.001	ppb	119538.9	42.72	100	
[Se]	83	89	No Gas	31.382	ppb	513.2	2299.20	100	
Sr	88	89	No Gas	0.004	ppb	20.2	527.21	100	
Mo	95	89	No Gas	0.074	ppb	58.7	2953.35	10000	
Mo	97	89	No Gas	0.057	ppb	148.8	1935.44	10000	
Mo	98	89	No Gas	0.056	ppb	75.5	6185.24	10000	
[Mo]	99	89	No Gas	146.469	ppb	0.9	40.04	10000	
Cd	106	89	No Gas	2.801	ppb	81.5	41028.32	100	
Ag	107	89	No Gas	0.400	ppb	19.5	10603.28	100	
Ag	107	89	He	0.566	ppb	1.0	7165.91	100	
Cd	108	89	No Gas	0.048	ppb	120.8	110.11	100	
Ag	109	89	No Gas	0.397	ppb	24.3	9820.45	100	
Cd	111	89	No Gas	0.003	ppb	82.3	-79.26	100	
Cd	114	89	No Gas	0.010	ppb	32.2	226.90	100	
Sn	118	115	No Gas	0.105	ppb	21.2	5079.90	100	
Sb	121	115	No Gas	0.419	ppb	33.0	11056.11	100	
Sb	121	89	He	0.725	ppb	7.4	4194.08	100	
Sb	123	115	No Gas	0.418	ppb	27.0	8458.09	100	
Ba	135	115	No Gas	0.002	ppb	207.9	93.43	100	
Ba	137	115	No Gas	0.010	ppb	47.7	190.20	100	
Tl	203	209	No Gas	0.135	ppb	33.5	3270.45	100	
Tl	205	209	No Gas	0.156	ppb	15.2	8618.46	100	
Pb	206	209	No Gas	-0.037	ppb	N/A	4976.05	100	
Pb	207	209	No Gas	-0.039	ppb	N/A	4198.32	100	
Pb	208	209	No Gas	-0.037	ppb	N/A	19562.60	100	
Th	232	209	No Gas	0.252	ppb	20.2	19679.44	100	
U	238	209	No Gas	0.094	ppb	24.5	6515.13	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4620014.23	0.7	4905245.08	94.19	70	125	
Sc	45	No Gas	19318808.02	0.8	19588031.4	98.63	75	125	
Sc	45	He	843627.47	1.4	860992.42	97.98	75	125	
Y	89	No Gas	45489429.52	0.7	45698235	99.54	75	125	
Y	89	He	6411969.69	0.5	6413034.51	99.98	75	125	
In	115	No Gas	9899413.61	0.2	9919344.87	99.8	75	125	
Tb	159	No Gas	13874925.37	0.4	13963078.94	99.37	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8367026.61	1.2	8348524.39	100.22	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 041_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 15:11:18

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	97.060	ppb	0.9	2361350.73	100	97.06	90	110	
Be	9	6	No Gas	100.840	ppb	0.8	554579.82	100	100.84	90	110	
B	11	6	No Gas	266.421	ppb	1.1	965542.63	250	106.57	90	110	
Na	23	45	No Gas	9399.926	ppb	0.3	262627489.20	10000	94	90	110	
Na	23	45	He	10132.012	ppb	0.7	7892774.05	10000	101.32	90	110	
Mg	24	45	No Gas	9275.527	ppb	0.5	179084850.67	10000	92.76	90	110	
Mg	24	45	He	9791.696	ppb	1.4	4018121.71	10000	97.92	90	110	
Mg	25	45	No Gas	9391.867	ppb	0.4	23769965.48	10000	93.92	90	110	
Al	27	45	No Gas	94.343	ppb	0.4	2332685.49	100	94.34	90	110	
Al	27	45	He	92.924	ppb	2.8	15535.53	100	92.92	90	110	
Si	28	45	No Gas	9674.137	ppb	0.7	96613066.60	10000	96.74	90	110	
Si	29	45	No Gas	9779.287	ppb	0.7	6010125.97	10000	97.79	90	110	
K	39	45	No Gas	9981.253	ppb	1.1	261058522.78	10000	99.81	90	110	
K	39	45	He	9847.478	ppb	0.2	3197776.62	10000	98.47	90	110	
Ca	44	45	No Gas	10025.078	ppb	0.5	8041529.88	10000	100.25	90	110	
Ca	44	45	He	9816.471	ppb	2.9	175195.62	10000	98.16	90	110	
Ti	47	45	No Gas	98.065	ppb	1.4	241000.92	100	98.06	90	110	
V	51	45	No Gas	98.695	ppb	0.7	3349660.11	100	98.7	90	110	
V	51	45	He	101.470	ppb	0.9	428342.69	100	101.47	90	110	
Cr	52	89	No Gas	94.906	ppb	0.2	3032907.18	100	94.91	90	110	
Cr	52	89	He	102.228	ppb	1.0	541741.98	100	102.23	90	110	
Cr	53	89	No Gas	86.772	ppb	0.2	399087.96	100	86.77	90	110	Failed
Mn	55	89	No Gas	96.568	ppb	0.5	4090418.87	100	96.57	90	110	
Mn	55	89	He	97.263	ppb	0.7	283457.81	100	97.26	90	110	
Fe	56	89	No Gas	9594.365	ppb	1.2	294875139.93	10000	95.94	90	110	
Fe	56	89	He	9889.984	ppb	0.8	37349877.78	10000	98.9	90	110	
Co	59	89	No Gas	94.189	ppb	0.5	3274344.88	100	94.19	90	110	
Co	59	89	He	102.700	ppb	0.9	904473.25	100	102.7	90	110	
Ni	60	89	No Gas	93.634	ppb	0.3	719834.89	100	93.63	90	110	
Ni	60	89	He	101.461	ppb	1.2	246004.45	100	101.46	90	110	
Ni	62	89	No Gas	94.159	ppb	1.0	110747.53	100	94.16	90	110	
Cu	63	89	No Gas	125.107	ppb	2.1	2411498.01	100	125.11	90	110	Failed
Cu	63	89	He	115.942	ppb	0.7	773802.21	100	115.94	90	110	Failed
Cu	65	89	No Gas	124.073	ppb	1.8	1132272.33	100	124.07	90	110	Failed

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.169	ppb	0.1	516972.99	100	98.17	90	110	
Zn	66	89	He	101.162	ppb	1.4	103814.18	100	101.16	90	110	
Zn	67	89	No Gas	99.698	ppb	2.3	82629.61	100	99.7	90	110	
Zn	68	89	No Gas	97.882	ppb	0.1	369782.70	100	97.88	90	110	
As	75	89	No Gas	97.348	ppb	0.7	538163.16	100	97.35	90	110	
As	75	89	He	100.325	ppb	0.8	74530.75	100	100.32	90	110	
Se	77	89	No Gas	84.927	ppb	2.0	35469.13	100	84.93	90	110	Failed
Se	78	89	No Gas	99.246	ppb	2.3	95642.79	100	99.25	90	110	
Se	78	89	He	96.156	ppb	4.1	4531.90	100	96.16	90	110	
Se	82	89	No Gas	97.677	ppb	0.9	32433.35	100	97.68	90	110	
[Se]	83	89	No Gas	501.762	ppb	12.3	2799.80	100	501.76	90	110	Failed
Sr	88	89	No Gas	99.721	ppb	0.4	5103529.17	100	99.72	90	110	
Mo	95	89	No Gas	97.307	ppb	0.4	946004.13	100	97.31	90	110	
Mo	97	89	No Gas	98.199	ppb	1.1	597836.35	100	98.2	90	110	
Mo	98	89	No Gas	100.184	ppb	0.6	1595355.73	100	100.18	90	110	
[Mo]	99	89	No Gas	265.446	ppb	10.5	66.73	100	265.45	90	110	Failed
Cd	106	89	No Gas	100.739	ppb	1.4	90689.64	100	100.74	90	110	
Ag	107	89	No Gas	99.634	ppb	0.7	2603717.47	100	99.63	90	110	
Ag	107	89	He	102.741	ppb	0.4	1239160.72	100	102.74	90	110	
Cd	108	89	No Gas	99.661	ppb	1.2	36922.03	100	99.66	90	110	
Ag	109	89	No Gas	99.124	ppb	0.3	2487326.96	100	99.12	90	110	
Cd	111	89	No Gas	100.272	ppb	0.7	513959.74	100	100.27	90	110	
Cd	114	89	No Gas	99.887	ppb	0.5	1361251.20	100	99.89	90	110	
Sn	118	115	No Gas	98.790	ppb	0.5	1677610.66	100	98.79	90	110	
Sb	121	115	No Gas	99.561	ppb	1.0	2426798.59	100	99.56	90	110	
Sb	121	89	He	98.628	ppb	0.8	509535.12	100	98.63	90	110	
Sb	123	115	No Gas	99.884	ppb	0.5	1876670.17	100	99.88	90	110	
Ba	135	115	No Gas	98.796	ppb	0.3	495258.44	100	98.8	90	110	
Ba	137	115	No Gas	98.228	ppb	0.1	859620.41	100	98.23	90	110	
Tl	203	209	No Gas	98.896	ppb	0.9	2141583.72	100	98.9	90	110	
Tl	205	209	No Gas	98.746	ppb	1.1	5065008.77	100	98.75	90	110	
Pb	206	209	No Gas	99.014	ppb	0.9	1730277.89	100	99.01	90	110	
Pb	207	209	No Gas	98.938	ppb	1.1	1448659.29	100	98.94	90	110	
Pb	208	209	No Gas	98.877	ppb	0.4	6747771.54	100	98.88	90	110	
Th	232	209	No Gas	98.482	ppb	0.3	6857122.35	100	98.48	90	110	
U	238	209	No Gas	97.909	ppb	1.5	6730130.14	100	97.91	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3966579.30	0.7	4905245.08	80.86	70	125	
Sc	45	No Gas	19404995.45	0.4	19588031.4	99.07	75	125	
Sc	45	He	816029.13	1.4	860992.42	94.78	75	125	
Y	89	No Gas	47090233.66	0.4	45698235	103.05	75	125	
Y	89	He	6254627.77	1.2	6413034.51	97.53	75	125	
In	115	No Gas	10285063.47	0.7	9919344.87	103.69	75	125	
Tb	159	No Gas	14658652.43	0.5	13963078.94	104.98	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8863486.59	0.7	8348524.39	106.17	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	042_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 15:13:02
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.505	ppb	10.0	221806.37	100	
Be	9	6	No Gas	0.010	ppb	17.8	60.06	100	
B	11	6	No Gas	8.780	ppb	7.3	34456.92	100	
Na	23	45	No Gas	97.533	ppb	2.1	3495150.08	500000	
Na	23	45	He	107.748	ppb	1.4	108961.59	500000	
Mg	24	45	No Gas	0.521	ppb	37.4	17252.39	500000	
Mg	24	45	He	0.360	ppb	70.8	240.02	500000	
Mg	25	45	No Gas	0.431	ppb	72.0	2347.10	500000	
Al	27	45	No Gas	-0.193	ppb	N/A	9270.41	500000	
Al	27	45	He	-0.155	ppb	N/A	76.67	500000	
Si	28	45	No Gas	4.466	ppb	45.4	497742.80	100	
Si	29	45	No Gas	-7.912	ppb	N/A	70703.43	100	
K	39	45	No Gas	4.837	ppb	10.4	3964147.13	500000	
K	39	45	He	5.170	ppb	66.4	25251.58	500000	
Ca	44	45	No Gas	-4.584	ppb	N/A	62171.77	500000	
Ca	44	45	He	0.207	ppb	2220.0	93.34	500000	
Ti	47	45	No Gas	-0.078	ppb	N/A	236.91	10000	
V	51	45	No Gas	0.213	ppb	25.3	551.39	100	
V	51	45	He	-0.026	ppb	N/A	390.41	100	
Cr	52	89	No Gas	-0.269	ppb	N/A	24032.00	100	
Cr	52	89	He	-0.043	ppb	N/A	2212.44	100	
Cr	53	89	No Gas	-8.817	ppb	N/A	41708.81	100	
Mn	55	89	No Gas	-0.010	ppb	N/A	9993.78	100	
Mn	55	89	He	-0.026	ppb	N/A	160.16	100	
Fe	56	89	No Gas	-13.825	ppb	N/A	1890766.64	500000	
Fe	56	89	He	4.648	ppb	38.6	59306.28	500000	
Co	59	89	No Gas	0.009	ppb	81.7	1638.43	100	
Co	59	89	He	0.005	ppb	39.0	330.34	100	
Ni	60	89	No Gas	0.110	ppb	26.8	2112.32	100	
Ni	60	89	He	-0.263	ppb	N/A	333.68	100	
Ni	62	89	No Gas	0.011	ppb	1386.7	4281.68	100	
Cu	63	89	No Gas	13.320	ppb	7.3	346336.43	100	
Cu	63	89	He	6.349	ppb	4.1	60015.57	100	
Cu	65	89	No Gas	13.003	ppb	7.8	159128.56	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.246	ppb	24.5	3300.43	100	
Zn	66	89	He	-0.336	ppb	N/A	440.45	100	
Zn	67	89	No Gas	0.188	ppb	51.4	557.25	100	
Zn	68	89	No Gas	-0.007	ppb	N/A	1571.69	100	
As	75	89	No Gas	0.479	ppb	21.4	6239.91	100	
As	75	89	He	0.017	ppb	82.5	52.22	100	
Se	77	89	No Gas	-16.699	ppb	N/A	7703.36	100	
Se	78	89	No Gas	-0.301	ppb	N/A	15898.84	100	
Se	78	89	He	0.236	ppb	47.3	32.22	100	
Se	82	89	No Gas	-0.128	ppb	N/A	2.98	100	
[Se]	83	89	No Gas	246.564	ppb	86.1	2636.28	100	Failed
Sr	88	89	No Gas	0.008	ppb	41.8	740.78	100	
Mo	95	89	No Gas	0.049	ppb	108.4	2886.59	10000	
Mo	97	89	No Gas	0.050	ppb	133.0	2008.87	10000	
Mo	98	89	No Gas	0.354	ppb	3.4	11419.16	10000	
[Mo]	99	89	No Gas	181.089	ppb	25.0	50.05	10000	
Cd	106	89	No Gas	1.476	ppb	61.7	42869.19	100	
Ag	107	89	No Gas	0.021	ppb	6.4	1103.39	100	
Ag	107	89	He	0.019	ppb	27.0	397.08	100	
Cd	108	89	No Gas	-0.014	ppb	N/A	93.43	100	
Ag	109	89	No Gas	0.019	ppb	10.9	694.06	100	
Cd	111	89	No Gas	0.007	ppb	71.2	-64.69	100	
Cd	114	89	No Gas	0.008	ppb	45.7	210.22	100	
Sn	118	115	No Gas	0.035	ppb	68.9	4201.81	100	
Sb	121	115	No Gas	0.057	ppb	20.1	2734.75	100	
Sb	121	89	He	0.044	ppb	7.0	580.02	100	
Sb	123	115	No Gas	0.057	ppb	17.8	2058.92	100	
Ba	135	115	No Gas	0.005	ppb	134.4	116.79	100	
Ba	137	115	No Gas	0.009	ppb	39.6	193.53	100	
Tl	203	209	No Gas	0.137	ppb	22.7	3627.58	100	
Tl	205	209	No Gas	0.143	ppb	21.4	8802.13	100	
Pb	206	209	No Gas	-0.145	ppb	N/A	3520.77	100	
Pb	207	209	No Gas	-0.146	ppb	N/A	2996.75	100	
Pb	208	209	No Gas	-0.148	ppb	N/A	13670.20	100	
Th	232	209	No Gas	0.268	ppb	21.3	22751.24	100	
U	238	209	No Gas	0.096	ppb	20.3	7279.63	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4082233.35	1.1	4905245.08	83.22	70	125	
Sc	45	No Gas	19646744.28	0.2	19588031.4	100.3	75	125	
Sc	45	He	830414.64	0.4	860992.42	96.45	75	125	
Y	89	No Gas	48268223.32	0.4	45698235	105.62	75	125	
Y	89	He	6369814.83	0.8	6413034.51	99.33	75	125	
In	115	No Gas	10587575.47	0.8	9919344.87	106.74	75	125	
Tb	159	No Gas	14962716.50	0.5	13963078.94	107.16	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9199468.24	0.5	8348524.39	110.19	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 056_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 15:36:20

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.858	ppb	0.8	2391939.65	100	98.86	90	110	
Be	9	6	No Gas	105.533	ppb	0.7	578126.20	100	105.53	90	110	
B	11	6	No Gas	270.797	ppb	1.5	977550.70	250	108.32	90	110	
Na	23	45	No Gas	9357.077	ppb	0.7	271921647.74	10000	93.57	90	110	
Na	23	45	He	10148.962	ppb	0.8	8210213.21	10000	101.49	90	110	
Mg	24	45	No Gas	9318.866	ppb	0.5	187141490.54	10000	93.19	90	110	
Mg	24	45	He	9825.393	ppb	0.3	4187466.29	10000	98.25	90	110	
Mg	25	45	No Gas	9376.500	ppb	0.9	24682925.46	10000	93.76	90	110	
Al	27	45	No Gas	95.062	ppb	0.2	2444711.37	100	95.06	90	110	
Al	27	45	He	93.993	ppb	1.2	16319.90	100	93.99	90	110	
Si	28	45	No Gas	9644.919	ppb	0.3	100190273.81	10000	96.45	90	110	
Si	29	45	No Gas	9744.824	ppb	0.3	6229651.54	10000	97.45	90	110	
K	39	45	No Gas	9959.784	ppb	0.5	270967209.29	10000	99.6	90	110	
K	39	45	He	9876.449	ppb	1.0	3330539.53	10000	98.76	90	110	
Ca	44	45	No Gas	9998.931	ppb	0.4	8342623.00	10000	99.99	90	110	
Ca	44	45	He	9535.032	ppb	1.7	176710.14	10000	95.35	90	110	
Ti	47	45	No Gas	98.314	ppb	0.2	251315.93	100	98.31	90	110	
V	51	45	No Gas	97.894	ppb	1.4	3455712.13	100	97.89	90	110	
V	51	45	He	102.079	ppb	1.0	447502.62	100	102.08	90	110	
Cr	52	89	No Gas	95.125	ppb	0.5	3146028.85	100	95.12	90	110	
Cr	52	89	He	104.378	ppb	1.3	562408.60	100	104.38	90	110	
Cr	53	89	No Gas	91.687	ppb	1.0	432093.73	100	91.69	90	110	
Mn	55	89	No Gas	97.352	ppb	0.4	4267568.20	100	97.35	90	110	
Mn	55	89	He	98.708	ppb	1.2	292516.44	100	98.71	90	110	
Fe	56	89	No Gas	9735.890	ppb	0.7	309645156.92	10000	97.36	90	110	
Fe	56	89	He	10019.991	ppb	0.8	38480964.43	10000	100.2	90	110	
Co	59	89	No Gas	94.774	ppb	0.4	3409700.85	100	94.77	90	110	
Co	59	89	He	105.629	ppb	0.8	945976.13	100	105.63	90	110	
Ni	60	89	No Gas	94.565	ppb	0.6	752369.53	100	94.56	90	110	
Ni	60	89	He	104.486	ppb	0.7	257622.49	100	104.49	90	110	
Ni	62	89	No Gas	95.430	ppb	0.6	116104.03	100	95.43	90	110	
Cu	63	89	No Gas	97.516	ppb	0.3	1966131.76	100	97.52	90	110	
Cu	63	89	He	107.179	ppb	0.2	728750.99	100	107.18	90	110	
Cu	65	89	No Gas	97.143	ppb	0.5	926687.00	100	97.14	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.395	ppb	1.0	536250.33	100	98.4	90	110	
Zn	66	89	He	102.864	ppb	0.8	107331.68	100	102.86	90	110	
Zn	67	89	No Gas	98.489	ppb	0.3	84479.28	100	98.49	90	110	
Zn	68	89	No Gas	99.121	ppb	0.3	387525.56	100	99.12	90	110	
As	75	89	No Gas	98.229	ppb	0.5	561956.39	100	98.23	90	110	
As	75	89	He	102.768	ppb	1.3	77633.62	100	102.77	90	110	
Se	77	89	No Gas	87.865	ppb	1.7	37546.63	100	87.86	90	110	Failed
Se	78	89	No Gas	100.076	ppb	2.2	99672.41	100	100.08	90	110	
Se	78	89	He	97.254	ppb	3.5	4661.94	100	97.25	90	110	
Se	82	89	No Gas	99.559	ppb	1.5	34211.22	100	99.56	90	110	
[Se]	83	89	No Gas	161.604	ppb	48.5	2582.88	100	161.6	90	110	Failed
Sr	88	89	No Gas	99.474	ppb	0.6	5268722.79	100	99.47	90	110	
Mo	95	89	No Gas	97.929	ppb	0.8	985299.81	100	97.93	90	110	
Mo	97	89	No Gas	98.191	ppb	0.2	618686.64	100	98.19	90	110	
Mo	98	89	No Gas	98.496	ppb	0.4	1623373.51	100	98.5	90	110	
[Mo]	99	89	No Gas	194.456	ppb	59.4	53.39	100	194.46	90	110	Failed
Cd	106	89	No Gas	95.507	ppb	1.5	91190.68	100	95.51	90	110	
Ag	107	89	No Gas	98.895	ppb	0.1	2674617.12	100	98.9	90	110	
Ag	107	89	He	104.537	ppb	0.7	1282045.83	100	104.54	90	110	
Cd	108	89	No Gas	100.279	ppb	1.8	38447.89	100	100.28	90	110	
Ag	109	89	No Gas	98.299	ppb	1.0	2552839.51	100	98.3	90	110	
Cd	111	89	No Gas	99.414	ppb	0.4	527365.08	100	99.41	90	110	
Cd	114	89	No Gas	99.228	ppb	0.4	1399511.29	100	99.23	90	110	
Sn	118	115	No Gas	98.974	ppb	0.9	1720742.15	100	98.97	90	110	
Sb	121	115	No Gas	99.406	ppb	0.6	2480811.22	100	99.41	90	110	
Sb	121	89	He	98.475	ppb	0.6	517317.09	100	98.48	90	110	
Sb	123	115	No Gas	98.468	ppb	0.6	1894156.92	100	98.47	90	110	
Ba	135	115	No Gas	98.190	ppb	1.2	503947.07	100	98.19	90	110	
Ba	137	115	No Gas	98.811	ppb	0.9	885312.55	100	98.81	90	110	
Tl	203	209	No Gas	99.741	ppb	0.7	2180564.84	100	99.74	90	110	
Tl	205	209	No Gas	98.896	ppb	1.1	5121394.74	100	98.9	90	110	
Pb	206	209	No Gas	99.175	ppb	0.5	1749721.65	100	99.18	90	110	
Pb	207	209	No Gas	98.817	ppb	1.4	1460755.44	100	98.82	90	110	
Pb	208	209	No Gas	99.093	ppb	0.8	6827167.54	100	99.09	90	110	
Th	232	209	No Gas	98.324	ppb	1.0	6911634.98	100	98.32	90	110	
U	238	209	No Gas	97.105	ppb	1.5	6739056.36	100	97.1	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3951066.37	0.3	4905245.08	80.55	70	125	
Sc	45	No Gas	20183914.37	0.4	19588031.4	103.04	75	125	
Sc	45	He	847424.65	0.8	860992.42	98.42	75	125	
Y	89	No Gas	48734958.39	0.4	45698235	106.65	75	125	
Y	89	He	6360152.46	1.1	6413034.51	99.18	75	125	
In	115	No Gas	10529996.18	0.1	9919344.87	106.16	75	125	
Tb	159	No Gas	14992154.27	0.6	13963078.94	107.37	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8948341.59	0.4	8348524.39	107.18	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	057_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 15:38:06
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.238	ppb	26.3	216511.78	100	
Be	9	6	No Gas	0.014	ppb	19.2	86.75	100	
B	11	6	No Gas	4.457	ppb	11.9	18437.54	100	
Na	23	45	No Gas	25.044	ppb	1.4	1505446.88	500000	
Na	23	45	He	37.212	ppb	11.1	54656.36	500000	
Mg	24	45	No Gas	0.314	ppb	34.6	13714.85	500000	
Mg	24	45	He	0.343	ppb	93.5	240.02	500000	
Mg	25	45	No Gas	0.187	ppb	81.5	1786.94	500000	
Al	27	45	No Gas	-0.174	ppb	N/A	10111.09	500000	
Al	27	45	He	-0.264	ppb	N/A	60.00	500000	
Si	28	45	No Gas	6.337	ppb	34.3	536115.63	100	
Si	29	45	No Gas	-5.636	ppb	N/A	74835.50	100	
K	39	45	No Gas	-0.484	ppb	N/A	3970492.34	500000	
K	39	45	He	2.749	ppb	98.6	25131.22	500000	
Ca	44	45	No Gas	-11.351	ppb	N/A	58862.71	500000	
Ca	44	45	He	2.799	ppb	263.6	146.68	500000	
Ti	47	45	No Gas	-0.039	ppb	N/A	347.03	10000	
V	51	45	No Gas	0.176	ppb	28.6	-749.97	100	
V	51	45	He	-0.014	ppb	N/A	453.80	100	
Cr	52	89	No Gas	-0.208	ppb	N/A	26793.29	100	
Cr	52	89	He	-0.013	ppb	N/A	2422.68	100	
Cr	53	89	No Gas	-6.420	ppb	N/A	52499.70	100	
Mn	55	89	No Gas	-0.020	ppb	N/A	9833.49	100	
Mn	55	89	He	-0.022	ppb	N/A	176.84	100	
Fe	56	89	No Gas	-13.828	ppb	N/A	1949087.09	500000	
Fe	56	89	He	6.078	ppb	19.6	66136.73	500000	
Co	59	89	No Gas	0.002	ppb	189.7	1428.20	100	
Co	59	89	He	0.004	ppb	130.8	323.67	100	
Ni	60	89	No Gas	0.026	ppb	75.6	1494.94	100	
Ni	60	89	He	-0.283	ppb	N/A	290.30	100	
Ni	62	89	No Gas	-0.287	ppb	N/A	4058.08	100	
Cu	63	89	No Gas	0.731	ppb	13.5	110317.77	100	
Cu	63	89	He	0.675	ppb	7.3	22775.41	100	
Cu	65	89	No Gas	0.832	ppb	10.5	50929.56	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.026	ppb	201.7	2182.39	100	
Zn	66	89	He	-0.394	ppb	N/A	387.07	100	
Zn	67	89	No Gas	0.027	ppb	376.6	433.78	100	
Zn	68	89	No Gas	0.001	ppb	2518.2	1655.13	100	
As	75	89	No Gas	0.339	ppb	36.0	5621.74	100	
As	75	89	He	-0.004	ppb	N/A	37.78	100	
Se	77	89	No Gas	-12.779	ppb	N/A	9082.31	100	
Se	78	89	No Gas	0.388	ppb	104.0	16977.91	100	
Se	78	89	He	0.017	ppb	628.8	22.22	100	
Se	82	89	No Gas	-0.329	ppb	N/A	-67.47	100	
[Se]	83	89	No Gas	202.472	ppb	33.2	2676.32	100	Failed
Sr	88	89	No Gas	0.004	ppb	56.5	567.25	100	
Mo	95	89	No Gas	0.058	ppb	120.1	3066.81	10000	
Mo	97	89	No Gas	0.042	ppb	94.6	2015.53	10000	
Mo	98	89	No Gas	0.060	ppb	52.7	6832.92	10000	
[Mo]	99	89	No Gas	25.726	ppb	99.8	16.68	10000	
Cd	106	89	No Gas	-3.838	ppb	N/A	41433.22	100	
Ag	107	89	No Gas	0.021	ppb	24.1	1153.39	100	
Ag	107	89	He	0.022	ppb	6.2	437.12	100	
Cd	108	89	No Gas	-0.013	ppb	N/A	96.76	100	
Ag	109	89	No Gas	0.024	ppb	8.9	834.21	100	
Cd	111	89	No Gas	0.006	ppb	90.5	-70.50	100	
Cd	114	89	No Gas	0.005	ppb	45.2	173.51	100	
Sn	118	115	No Gas	0.044	ppb	51.0	4449.67	100	
Sb	121	115	No Gas	0.028	ppb	36.1	2053.50	100	
Sb	121	89	He	0.029	ppb	75.2	513.35	100	
Sb	123	115	No Gas	0.033	ppb	13.4	1635.10	100	
Ba	135	115	No Gas	0.006	ppb	34.2	120.12	100	
Ba	137	115	No Gas	0.006	ppb	163.6	173.51	100	
Tl	203	209	No Gas	0.135	ppb	26.3	3580.84	100	
Tl	205	209	No Gas	0.134	ppb	27.9	8334.70	100	
Pb	206	209	No Gas	-0.149	ppb	N/A	3457.33	100	
Pb	207	209	No Gas	-0.137	ppb	N/A	3133.58	100	
Pb	208	209	No Gas	-0.146	ppb	N/A	13840.42	100	
Th	232	209	No Gas	0.274	ppb	25.1	23229.45	100	
U	238	209	No Gas	0.096	ppb	18.5	7309.68	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4097850.97	0.7	4905245.08	83.54	70	125	
Sc	45	No Gas	20392558.43	0.5	19588031.4	104.11	75	125	
Sc	45	He	853669.58	2.4	860992.42	99.15	75	125	
Y	89	No Gas	49764734.84	0.2	45698235	108.9	75	125	
Y	89	He	6500355.79	0.9	6413034.51	101.36	75	125	
In	115	No Gas	10785556.84	0.3	9919344.87	108.73	75	125	
Tb	159	No Gas	14989623.40	0.6	13963078.94	107.35	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9212725.75	0.6	8348524.39	110.35	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 068_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 15:55:56

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.888	ppb	0.4	2391361.37	100	98.89	90	110	
Be	9	6	No Gas	105.794	ppb	0.5	579250.90	100	105.79	90	110	
B	11	6	No Gas	290.848	ppb	0.5	1049276.23	250	116.34	90	110	Failed
Na	23	45	No Gas	9341.624	ppb	1.0	271183714.39	10000	93.42	90	110	
Na	23	45	He	10204.907	ppb	0.3	8118185.71	10000	102.05	90	110	
Mg	24	45	No Gas	9406.001	ppb	0.4	188688350.52	10000	94.06	90	110	
Mg	24	45	He	9952.934	ppb	1.0	4171273.38	10000	99.53	90	110	
Mg	25	45	No Gas	9407.425	ppb	0.8	24738239.63	10000	94.07	90	110	
Al	27	45	No Gas	94.978	ppb	0.9	2439922.36	100	94.98	90	110	
Al	27	45	He	93.077	ppb	4.0	15892.67	100	93.08	90	110	
Si	28	45	No Gas	9685.452	ppb	0.3	100501334.87	10000	96.85	90	110	
Si	29	45	No Gas	9788.740	ppb	0.5	6250634.61	10000	97.89	90	110	
K	39	45	No Gas	9950.761	ppb	0.3	270434535.97	10000	99.51	90	110	
K	39	45	He	9858.919	ppb	1.1	3269429.95	10000	98.59	90	110	
Ca	44	45	No Gas	10021.259	ppb	0.6	8352001.54	10000	100.21	90	110	
Ca	44	45	He	9630.034	ppb	1.9	175479.83	10000	96.3	90	110	
Ti	47	45	No Gas	97.397	ppb	0.6	248710.91	100	97.4	90	110	
V	51	45	No Gas	97.731	ppb	0.8	3446312.79	100	97.73	90	110	
V	51	45	He	101.985	ppb	0.8	439675.72	100	101.98	90	110	
Cr	52	89	No Gas	94.906	ppb	0.7	3137968.70	100	94.91	90	110	
Cr	52	89	He	105.110	ppb	0.9	556080.56	100	105.11	90	110	
Cr	53	89	No Gas	88.845	ppb	0.9	420952.92	100	88.84	90	110	Failed
Mn	55	89	No Gas	96.706	ppb	0.2	4238215.93	100	96.71	90	110	
Mn	55	89	He	100.073	ppb	0.9	291184.60	100	100.07	90	110	
Fe	56	89	No Gas	9643.438	ppb	1.4	306645615.19	10000	96.43	90	110	
Fe	56	89	He	10109.141	ppb	0.9	38119374.43	10000	101.09	90	110	
Co	59	89	No Gas	94.225	ppb	0.4	3389043.84	100	94.22	90	110	
Co	59	89	He	105.773	ppb	0.7	930130.21	100	105.77	90	110	
Ni	60	89	No Gas	93.979	ppb	1.2	747504.59	100	93.98	90	110	
Ni	60	89	He	104.892	ppb	1.1	253897.28	100	104.89	90	110	
Ni	62	89	No Gas	94.977	ppb	0.4	115544.74	100	94.98	90	110	
Cu	63	89	No Gas	95.361	ppb	0.4	1924249.67	100	95.36	90	110	
Cu	63	89	He	107.309	ppb	0.3	716378.57	100	107.31	90	110	
Cu	65	89	No Gas	95.223	ppb	0.3	908965.56	100	95.22	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.227	ppb	0.7	529776.74	100	97.23	90	110	
Zn	66	89	He	102.902	ppb	1.5	105428.36	100	102.9	90	110	
Zn	67	89	No Gas	97.269	ppb	0.5	83414.93	100	97.27	90	110	
Zn	68	89	No Gas	97.421	ppb	0.3	380800.50	100	97.42	90	110	
As	75	89	No Gas	97.376	ppb	0.7	556971.90	100	97.38	90	110	
As	75	89	He	102.361	ppb	0.5	75922.89	100	102.36	90	110	
Se	77	89	No Gas	84.368	ppb	2.1	36539.65	100	84.37	90	110	Failed
Se	78	89	No Gas	99.608	ppb	1.6	99252.29	100	99.61	90	110	
Se	78	89	He	95.295	ppb	3.4	4484.10	100	95.3	90	110	
Se	82	89	No Gas	99.933	ppb	2.1	34332.47	100	99.93	90	110	
[Se]	83	89	No Gas	68.216	ppb	208.0	2496.11	100	68.22	90	110	Failed
Sr	88	89	No Gas	99.848	ppb	0.5	5287118.59	100	99.85	90	110	
Mo	95	89	No Gas	97.666	ppb	0.7	982369.95	100	97.67	90	110	
Mo	97	89	No Gas	97.875	ppb	0.6	616532.42	100	97.88	90	110	
Mo	98	89	No Gas	98.062	ppb	0.5	1615814.54	100	98.06	90	110	
[Mo]	99	89	No Gas	148.727	ppb	17.9	43.38	100	148.73	90	110	Failed
Cd	106	89	No Gas	99.291	ppb	0.2	93095.49	100	99.29	90	110	
Ag	107	89	No Gas	98.820	ppb	0.4	2671898.99	100	98.82	90	110	
Ag	107	89	He	104.711	ppb	0.4	1260901.60	100	104.71	90	110	
Cd	108	89	No Gas	101.239	ppb	1.2	38802.54	100	101.24	90	110	
Ag	109	89	No Gas	97.892	ppb	0.7	2541517.36	100	97.89	90	110	
Cd	111	89	No Gas	98.780	ppb	0.5	523862.18	100	98.78	90	110	
Cd	114	89	No Gas	98.769	ppb	0.5	1392680.81	100	98.77	90	110	
Sn	118	115	No Gas	99.414	ppb	1.0	1735246.11	100	99.41	90	110	
Sb	121	115	No Gas	98.719	ppb	0.9	2473432.26	100	98.72	90	110	
Sb	121	89	He	99.949	ppb	0.9	515531.89	100	99.95	90	110	
Sb	123	115	No Gas	98.856	ppb	1.2	1909100.09	100	98.86	90	110	
Ba	135	115	No Gas	98.418	ppb	1.2	507106.70	100	98.42	90	110	
Ba	137	115	No Gas	97.975	ppb	1.1	881307.04	100	97.98	90	110	
Tl	203	209	No Gas	98.633	ppb	0.9	2172159.14	100	98.63	90	110	
Tl	205	209	No Gas	98.734	ppb	0.8	5150593.84	100	98.73	90	110	
Pb	206	209	No Gas	98.459	ppb	0.6	1749874.25	100	98.46	90	110	
Pb	207	209	No Gas	98.784	ppb	0.4	1471059.66	100	98.78	90	110	
Pb	208	209	No Gas	98.770	ppb	0.5	6855017.37	100	98.77	90	110	
Th	232	209	No Gas	96.847	ppb	0.3	6857930.86	100	96.85	90	110	
U	238	209	No Gas	95.985	ppb	0.7	6710289.26	100	95.98	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3948980.21	0.3	4905245.08	80.51	70	125	
Sc	45	No Gas	20162131.76	0.3	19588031.4	102.93	75	125	
Sc	45	He	833320.31	0.3	860992.42	96.79	75	125	
Y	89	No Gas	48722035.47	0.3	45698235	106.62	75	125	
Y	89	He	6244645.91	0.9	6413034.51	97.37	75	125	
In	115	No Gas	10572294.67	1.0	9919344.87	106.58	75	125	
Tb	159	No Gas	14903680.38	0.4	13963078.94	106.74	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9014062.98	0.6	8348524.39	107.97	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	069_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 15:57:41
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.153	ppb	73.3	215160.71	100	
Be	9	6	No Gas	0.013	ppb	40.1	80.08	100	
B	11	6	No Gas	16.161	ppb	6.8	62350.51	100	
Na	23	45	No Gas	18.077	ppb	3.7	1302616.82	500000	
Na	23	45	He	29.675	ppb	5.2	48366.79	500000	
Mg	24	45	No Gas	0.302	ppb	47.5	13487.72	500000	
Mg	24	45	He	0.600	ppb	82.0	346.70	500000	
Mg	25	45	No Gas	0.136	ppb	90.6	1653.56	500000	
Al	27	45	No Gas	-0.176	ppb	N/A	10084.58	500000	
Al	27	45	He	-0.166	ppb	N/A	76.67	500000	
Si	28	45	No Gas	1.012	ppb	99.3	480988.63	100	
Si	29	45	No Gas	-5.547	ppb	N/A	74962.79	100	
K	39	45	No Gas	3.560	ppb	25.3	4083705.25	500000	
K	39	45	He	2.336	ppb	79.2	24904.00	500000	
Ca	44	45	No Gas	-10.913	ppb	N/A	59292.15	500000	
Ca	44	45	He	5.092	ppb	86.6	186.68	500000	
Ti	47	45	No Gas	-0.046	ppb	N/A	330.34	10000	
V	51	45	No Gas	0.177	ppb	68.2	-724.95	100	
V	51	45	He	-0.019	ppb	N/A	430.45	100	
Cr	52	89	No Gas	-0.277	ppb	N/A	24339.60	100	
Cr	52	89	He	-0.019	ppb	N/A	2382.64	100	
Cr	53	89	No Gas	-7.630	ppb	N/A	47423.13	100	
Mn	55	89	No Gas	0.018	ppb	59.9	11453.14	100	
Mn	55	89	He	0.015	ppb	187.1	286.96	100	
Fe	56	89	No Gas	-13.493	ppb	N/A	1948377.84	500000	
Fe	56	89	He	5.089	ppb	16.2	62144.70	500000	
Co	59	89	No Gas	0.003	ppb	97.5	1451.56	100	
Co	59	89	He	0.003	ppb	251.8	316.99	100	
Ni	60	89	No Gas	0.023	ppb	100.6	1464.91	100	
Ni	60	89	He	-0.287	ppb	N/A	280.29	100	
Ni	62	89	No Gas	-0.102	ppb	N/A	4255.00	100	
Cu	63	89	No Gas	-0.067	ppb	N/A	94120.95	100	
Cu	63	89	He	0.230	ppb	44.1	19724.19	100	
Cu	65	89	No Gas	0.090	ppb	56.5	43781.25	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.007	ppb	732.7	2065.62	100	
Zn	66	89	He	-0.378	ppb	N/A	403.75	100	
Zn	67	89	No Gas	-0.097	ppb	N/A	323.67	100	
Zn	68	89	No Gas	-0.013	ppb	N/A	1588.38	100	
As	75	89	No Gas	0.297	ppb	85.3	5344.88	100	
As	75	89	He	0.009	ppb	171.6	47.78	100	
Se	77	89	No Gas	-15.620	ppb	N/A	8207.53	100	
Se	78	89	No Gas	-0.201	ppb	N/A	16379.85	100	
Se	78	89	He	0.063	ppb	169.2	24.44	100	
Se	82	89	No Gas	-0.579	ppb	N/A	-154.51	100	
[Se]	83	89	No Gas	251.131	ppb	51.7	2706.37	100	Failed
Sr	88	89	No Gas	0.006	ppb	28.3	677.37	100	
Mo	95	89	No Gas	0.064	ppb	86.7	3110.21	10000	
Mo	97	89	No Gas	0.009	ppb	492.0	1795.29	10000	
Mo	98	89	No Gas	0.084	ppb	79.2	7195.90	10000	
[Mo]	99	89	No Gas	56.015	ppb	122.1	23.36	10000	
Cd	106	89	No Gas	-0.413	ppb	N/A	42959.61	100	
Ag	107	89	No Gas	0.020	ppb	10.4	1093.39	100	
Ag	107	89	He	0.014	ppb	51.3	340.35	100	
Cd	108	89	No Gas	0.092	ppb	59.3	136.80	100	
Ag	109	89	No Gas	0.021	ppb	10.3	747.45	100	
Cd	111	89	No Gas	-0.001	ppb	N/A	-106.79	100	
Cd	114	89	No Gas	0.006	ppb	29.9	183.52	100	
Sn	118	115	No Gas	0.018	ppb	152.1	3952.84	100	
Sb	121	115	No Gas	0.022	ppb	33.0	1879.04	100	
Sb	121	89	He	0.007	ppb	81.8	396.68	100	
Sb	123	115	No Gas	0.014	ppb	48.1	1251.34	100	
Ba	135	115	No Gas	0.005	ppb	58.2	116.78	100	
Ba	137	115	No Gas	0.014	ppb	53.4	240.25	100	
Tl	203	209	No Gas	0.143	ppb	22.5	3754.38	100	
Tl	205	209	No Gas	0.134	ppb	21.5	8304.66	100	
Pb	206	209	No Gas	-0.151	ppb	N/A	3407.27	100	
Pb	207	209	No Gas	-0.156	ppb	N/A	2833.21	100	
Pb	208	209	No Gas	-0.150	ppb	N/A	13466.61	100	
Th	232	209	No Gas	0.284	ppb	24.4	23901.53	100	
U	238	209	No Gas	0.098	ppb	19.2	7466.60	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4109128.65	0.5	4905245.08	83.77	70	125	
Sc	45	No Gas	20410836.29	0.2	19588031.4	104.2	75	125	
Sc	45	He	850147.03	1.8	860992.42	98.74	75	125	
Y	89	No Gas	49472963.06	0.2	45698235	108.26	75	125	
Y	89	He	6487530.04	0.9	6413034.51	101.16	75	125	
In	115	No Gas	10705590.94	0.9	9919344.87	107.93	75	125	
Tb	159	No Gas	15135137.25	0.4	13963078.94	108.39	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9190977.41	0.7	8348524.39	110.09	75	125	

Sample Report

Sample Name 20111764-07A

File Name 078SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 16:11:49

Sample Type Sample

Total Dilution 10.0000

Comment 6020W B168407

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	17.174	ppb	8.7	250083.20	2000	
Be	9	6	No Gas	1.608	ppb	5.0	917.63	2000	
B	11	6	No Gas	82.374	ppb	2.0	32523.62	10000	
Na	23	45	No Gas	301658.636	ppb	1.1	856615385.81	200000	
Na	23	45	He	317380.425	ppb	0.3	25375542.12	200000	
Mg	24	45	No Gas	16117.683	ppb	1.1	31695414.53	200000	
Mg	24	45	He	16996.159	ppb	0.7	717363.30	200000	
Mg	25	45	No Gas	16299.473	ppb	0.7	4202000.15	200000	
Al	27	45	No Gas	13104.829	ppb	1.8	32813100.35	2000	
Al	27	45	He	12785.828	ppb	1.3	218498.68	2000	
Si	28	45	No Gas	23046.474	ppb	1.5	23784597.15	20000	
Si	29	45	No Gas	23571.743	ppb	0.8	1532961.30	20000	
K	39	45	No Gas	6676.223	ppb	1.4	21384153.01	200000	
K	39	45	He	6753.067	ppb	3.2	247723.13	200000	
Ca	44	45	No Gas	58154.904	ppb	1.1	4778218.99	200000	
Ca	44	45	He	54778.514	ppb	2.5	100544.08	200000	
Ti	47	45	No Gas	211.061	ppb	2.1	53160.22	2000	
V	51	45	No Gas	32.155	ppb	3.9	104578.41	2000	
V	51	45	He	34.726	ppb	1.7	15564.62	2000	
Cr	52	89	No Gas	172.125	ppb	0.2	587406.35	2000	
Cr	52	89	He	189.425	ppb	1.1	102782.02	2000	
Cr	53	89	No Gas	122.184	ppb	4.0	121876.60	2000	
Mn	55	89	No Gas	1336.355	ppb	0.7	5766496.72	2000	
Mn	55	89	He	1367.400	ppb	1.8	400118.10	2000	
Fe	56	89	No Gas	36924.860	ppb	1.3	117108931.79	200000	
Fe	56	89	He	38372.359	ppb	0.9	14579076.45	200000	
Co	59	89	No Gas	15.373	ppb	2.3	55759.38	2000	
Co	59	89	He	16.457	ppb	3.5	14833.20	2000	
Ni	60	89	No Gas	148.712	ppb	1.7	117584.12	2000	
Ni	60	89	He	156.074	ppb	1.1	38831.06	2000	
Ni	62	89	No Gas	145.177	ppb	2.0	20997.45	2000	
Cu	63	89	No Gas	389.469	ppb	0.9	829103.32	2000	
Cu	63	89	He	435.624	ppb	0.4	302985.39	2000	
Cu	65	89	No Gas	388.973	ppb	1.0	390485.48	2000	
Zn	66	89	No Gas	10313.710	ppb	0.6	5518147.12	2000	

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	10456.510	ppb	1.1	1070442.09	2000	
Zn	67	89	No Gas	9908.533	ppb	1.0	833576.08	2000	
Zn	68	89	No Gas	10166.535	ppb	1.0	3900354.74	2000	
As	75	89	No Gas	162.854	ppb	1.6	94708.60	2000	
As	75	89	He	170.698	ppb	3.7	12766.09	2000	
Se	77	89	No Gas	-68.598	ppb	N/A	10421.33	2000	
Se	78	89	No Gas	10.340	ppb	43.0	16907.79	2000	
Se	78	89	He	5.277	ppb	31.2	45.56	2000	
Se	82	89	No Gas	4.184	ppb	100.5	187.04	2000	
[Se]	83	89	No Gas	1993.571	ppb	120.6	2579.53	2000	
Sr	88	89	No Gas	99.725	ppb	1.0	520589.72	2000	
Mo	95	89	No Gas	21.354	ppb	0.6	23497.82	2000	
Mo	97	89	No Gas	21.700	ppb	2.8	15117.34	2000	
Mo	98	89	No Gas	21.124	ppb	0.5	39799.70	2000	
[Mo]	99	89	No Gas	2590.713	ppb	40.7	66.73	2000	
Cd	106	89	No Gas	-1.773	ppb	N/A	41804.85	2000	
Ag	107	89	No Gas	17.262	ppb	1.0	46516.98	200	
Ag	107	89	He	18.795	ppb	1.4	22926.43	200	
Cd	108	89	No Gas	25.301	ppb	7.9	1051.11	2000	
Ag	109	89	No Gas	17.223	ppb	1.7	44248.32	200	
Cd	111	89	No Gas	21.667	ppb	2.7	11222.44	2000	
Cd	114	89	No Gas	22.443	ppb	1.8	31281.96	2000	
Sn	118	115	No Gas	66.370	ppb	0.9	117108.07	2000	
Sb	121	115	No Gas	202.379	ppb	0.8	499195.41	2000	
Sb	121	89	He	203.982	ppb	1.9	106099.91	2000	
Sb	123	115	No Gas	202.274	ppb	0.6	384542.47	2000	
Ba	135	115	No Gas	224.204	ppb	0.3	113569.27	2000	
Ba	137	115	No Gas	221.494	ppb	1.4	195821.65	2000	
Tl	203	209	No Gas	0.803	ppb	8.9	2422.70	2000	
Tl	205	209	No Gas	0.833	ppb	2.9	5787.25	2000	
Pb	206	209	No Gas	7311.048	ppb	0.8	13644801.50	2000	
Pb	207	209	No Gas	7471.318	ppb	0.2	11682969.25	2000	
Pb	208	209	No Gas	7377.474	ppb	0.5	53767919.28	2000	
Th	232	209	No Gas	0.840	ppb	7.6	9777.17	2000	
U	238	209	No Gas	1.710	ppb	6.3	13053.52	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4091507.79	0.9	4905245.08	83.41	70	125	
Sc	45	No Gas	19762130.51	0.9	19588031.4	100.89	75	125	
Sc	45	He	839180.39	1.1	860992.42	97.47	75	125	
Y	89	No Gas	48005672.43	0.5	45698235	105.05	75	125	
Y	89	He	6281658.96	1.0	6413034.51	97.95	75	125	
In	115	No Gas	10386573.01	0.8	9919344.87	104.71	75	125	
Tb	159	No Gas	14600235.26	0.7	13963078.94	104.56	75	125	
Bi	209	No Gas	9493939.34	0.5	8348524.39	113.72	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 080_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 16:15:09

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.913	ppb	0.4	2386163.88	100	98.91	90	110	
Be	9	6	No Gas	103.983	ppb	0.4	567959.35	100	103.98	90	110	
B	11	6	No Gas	267.350	ppb	1.0	962294.36	250	106.94	90	110	
Na	23	45	No Gas	9480.075	ppb	0.3	266714347.63	10000	94.8	90	110	
Na	23	45	He	10081.109	ppb	0.4	7860953.84	10000	100.81	90	110	
Mg	24	45	No Gas	9380.472	ppb	0.6	182374870.61	10000	93.8	90	110	
Mg	24	45	He	9841.456	ppb	1.2	4042760.67	10000	98.41	90	110	
Mg	25	45	No Gas	9515.849	ppb	0.5	24251692.97	10000	95.16	90	110	
Al	27	45	No Gas	95.633	ppb	0.5	2380905.02	100	95.63	90	110	
Al	27	45	He	92.832	ppb	4.1	15535.55	100	92.83	90	110	
Si	28	45	No Gas	9725.893	ppb	0.3	97808485.35	10000	97.26	90	110	
Si	29	45	No Gas	9818.011	ppb	0.8	6075784.76	10000	98.18	90	110	
K	39	45	No Gas	9886.714	ppb	0.5	260434389.45	10000	98.87	90	110	
K	39	45	He	9760.300	ppb	0.7	3172750.79	10000	97.6	90	110	
Ca	44	45	No Gas	10067.369	ppb	0.6	8131403.84	10000	100.67	90	110	
Ca	44	45	He	9702.208	ppb	1.6	173290.33	10000	97.02	90	110	
Ti	47	45	No Gas	98.562	ppb	0.9	243915.73	100	98.56	90	110	
V	51	45	No Gas	97.877	ppb	1.0	3345021.47	100	97.88	90	110	
V	51	45	He	101.453	ppb	0.9	428711.27	100	101.45	90	110	
Cr	52	89	No Gas	95.286	ppb	0.4	3030661.81	100	95.29	90	110	
Cr	52	89	He	104.216	ppb	0.5	540378.96	100	104.22	90	110	
Cr	53	89	No Gas	94.123	ppb	1.9	424639.14	100	94.12	90	110	
Mn	55	89	No Gas	97.377	ppb	0.7	4105302.50	100	97.38	90	110	
Mn	55	89	He	98.896	ppb	0.5	282012.33	100	98.9	90	110	
Fe	56	89	No Gas	9619.429	ppb	0.9	294254456.58	10000	96.19	90	110	
Fe	56	89	He	10010.859	ppb	0.2	36991711.95	10000	100.11	90	110	
Co	59	89	No Gas	94.980	ppb	0.6	3286326.54	100	94.98	90	110	
Co	59	89	He	105.200	ppb	0.9	906505.73	100	105.2	90	110	
Ni	60	89	No Gas	94.969	ppb	0.9	726648.84	100	94.97	90	110	
Ni	60	89	He	104.269	ppb	1.1	247348.69	100	104.27	90	110	
Ni	62	89	No Gas	94.759	ppb	1.0	110909.11	100	94.76	90	110	
Cu	63	89	No Gas	95.569	ppb	0.5	1854955.48	100	95.57	90	110	
Cu	63	89	He	105.840	ppb	0.5	692638.94	100	105.84	90	110	
Cu	65	89	No Gas	95.236	ppb	0.3	874534.85	100	95.24	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.924	ppb	0.9	518490.09	100	98.92	90	110	
Zn	66	89	He	102.284	ppb	0.6	102694.66	100	102.28	90	110	
Zn	67	89	No Gas	98.989	ppb	0.3	81655.81	100	98.99	90	110	
Zn	68	89	No Gas	99.510	ppb	0.4	374145.93	100	99.51	90	110	
As	75	89	No Gas	97.757	ppb	0.5	537883.27	100	97.76	90	110	
As	75	89	He	101.964	ppb	0.6	74114.00	100	101.96	90	110	
Se	77	89	No Gas	93.962	ppb	1.4	37777.39	100	93.96	90	110	
Se	78	89	No Gas	99.982	ppb	0.8	95780.44	100	99.98	90	110	
Se	78	89	He	98.407	ppb	1.8	4537.46	100	98.41	90	110	
Se	82	89	No Gas	98.199	ppb	1.3	32454.96	100	98.2	90	110	
[Se]	83	89	No Gas	238.425	ppb	106.7	2552.85	100	238.42	90	110	Failed
Sr	88	89	No Gas	100.327	ppb	0.3	5110607.60	100	100.33	90	110	
Mo	95	89	No Gas	98.158	ppb	0.4	949786.06	100	98.16	90	110	
Mo	97	89	No Gas	98.854	ppb	0.8	599022.21	100	98.85	90	110	
Mo	98	89	No Gas	99.084	ppb	0.8	1570558.85	100	99.08	90	110	
[Mo]	99	89	No Gas	267.105	ppb	41.2	66.73	100	267.1	90	110	Failed
Cd	106	89	No Gas	102.929	ppb	1.3	91338.39	100	102.93	90	110	
Ag	107	89	No Gas	99.989	ppb	0.3	2600712.54	100	99.99	90	110	
Ag	107	89	He	104.928	ppb	0.9	1238178.28	100	104.93	90	110	
Cd	108	89	No Gas	100.307	ppb	0.6	36985.60	100	100.31	90	110	
Ag	109	89	No Gas	99.035	ppb	0.5	2473481.35	100	99.04	90	110	
Cd	111	89	No Gas	100.459	ppb	0.3	512519.37	100	100.46	90	110	
Cd	114	89	No Gas	100.709	ppb	0.7	1366082.49	100	100.71	90	110	
Sn	118	115	No Gas	99.670	ppb	0.4	1685738.58	100	99.67	90	110	
Sb	121	115	No Gas	99.680	ppb	0.5	2420052.61	100	99.68	90	110	
Sb	121	89	He	99.437	ppb	0.5	502651.86	100	99.44	90	110	
Sb	123	115	No Gas	98.906	ppb	0.1	1850866.50	100	98.91	90	110	
Ba	135	115	No Gas	98.717	ppb	0.1	492885.38	100	98.72	90	110	
Ba	137	115	No Gas	98.254	ppb	0.7	856402.60	100	98.25	90	110	
Tl	203	209	No Gas	100.029	ppb	0.9	2139799.96	100	100.03	90	110	
Tl	205	209	No Gas	99.687	ppb	1.5	5051278.47	100	99.69	90	110	
Pb	206	209	No Gas	100.057	ppb	1.7	1727199.34	100	100.06	90	110	
Pb	207	209	No Gas	99.936	ppb	1.3	1445479.75	100	99.94	90	110	
Pb	208	209	No Gas	99.771	ppb	1.0	6725892.31	100	99.77	90	110	
Th	232	209	No Gas	97.381	ppb	1.2	6698166.10	100	97.38	90	110	
U	238	209	No Gas	97.501	ppb	1.0	6621094.86	100	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3939465.01	0.6	4905245.08	80.31	70	125	
Sc	45	No Gas	19540802.92	0.6	19588031.4	99.76	75	125	
Sc	45	He	816790.64	0.4	860992.42	94.87	75	125	
Y	89	No Gas	46870091.85	0.4	45698235	102.56	75	125	
Y	89	He	6119681.36	1.0	6413034.51	95.43	75	125	
In	115	No Gas	10243804.77	0.1	9919344.87	103.27	75	125	
Tb	159	No Gas	14608728.76	0.5	13963078.94	104.62	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8755941.32	0.6	8348524.39	104.88	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	081_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 16:16:54
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.105	ppb	29.5	211245.00	100	
Be	9	6	No Gas	0.014	ppb	20.0	83.42	100	
B	11	6	No Gas	4.071	ppb	8.7	16827.10	100	
Na	23	45	No Gas	24.737	ppb	6.9	1459823.34	500000	
Na	23	45	He	33.217	ppb	5.1	50587.69	500000	
Mg	24	45	No Gas	0.260	ppb	50.5	12300.00	500000	
Mg	24	45	He	0.228	ppb	88.2	186.68	500000	
Mg	25	45	No Gas	0.132	ppb	156.9	1600.23	500000	
Al	27	45	No Gas	-0.204	ppb	N/A	9123.68	500000	
Al	27	45	He	-0.061	ppb	N/A	93.33	500000	
Si	28	45	No Gas	-1.164	ppb	N/A	446640.44	100	
Si	29	45	No Gas	-4.322	ppb	N/A	73842.23	100	
K	39	45	No Gas	8.002	ppb	13.7	4098244.52	500000	
K	39	45	He	6.330	ppb	77.1	25906.64	500000	
Ca	44	45	No Gas	-5.965	ppb	N/A	61822.02	500000	
Ca	44	45	He	3.066	ppb	179.5	146.68	500000	
Ti	47	45	No Gas	-0.057	ppb	N/A	293.64	10000	
V	51	45	No Gas	0.134	ppb	68.9	-2183.67	100	
V	51	45	He	-0.010	ppb	N/A	463.81	100	
Cr	52	89	No Gas	-0.222	ppb	N/A	25633.13	100	
Cr	52	89	He	-0.048	ppb	N/A	2179.06	100	
Cr	53	89	No Gas	-5.357	ppb	N/A	55169.70	100	
Mn	55	89	No Gas	0.001	ppb	1487.6	10471.34	100	
Mn	55	89	He	-0.005	ppb	N/A	223.57	100	
Fe	56	89	No Gas	-14.101	ppb	N/A	1887795.88	500000	
Fe	56	89	He	3.805	ppb	21.2	55959.64	500000	
Co	59	89	No Gas	0.003	ppb	100.6	1424.85	100	
Co	59	89	He	-0.005	ppb	N/A	236.91	100	
Ni	60	89	No Gas	0.020	ppb	37.2	1408.18	100	
Ni	60	89	He	-0.265	ppb	N/A	330.34	100	
Ni	62	89	No Gas	-0.353	ppb	N/A	3871.15	100	
Cu	63	89	No Gas	0.017	ppb	1512.8	93691.56	100	
Cu	63	89	He	0.219	ppb	15.7	19246.37	100	
Cu	65	89	No Gas	-0.016	ppb	N/A	41869.97	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.035	ppb	50.7	2172.39	100	
Zn	66	89	He	-0.418	ppb	N/A	353.70	100	
Zn	67	89	No Gas	-0.121	ppb	N/A	296.97	100	
Zn	68	89	No Gas	-0.025	ppb	N/A	1508.29	100	
As	75	89	No Gas	0.367	ppb	44.4	5622.73	100	
As	75	89	He	-0.002	ppb	N/A	37.78	100	
Se	77	89	No Gas	-12.049	ppb	N/A	9042.25	100	
Se	78	89	No Gas	-0.035	ppb	N/A	16166.01	100	
Se	78	89	He	0.307	ppb	50.0	35.55	100	
Se	82	89	No Gas	-0.513	ppb	N/A	-127.63	100	
[Se]	83	89	No Gas	293.506	ppb	104.9	2686.34	100	Failed
Sr	88	89	No Gas	0.004	ppb	38.0	527.21	100	
Mo	95	89	No Gas	0.015	ppb	317.9	2556.18	10000	
Mo	97	89	No Gas	0.010	ppb	594.7	1761.92	10000	
Mo	98	89	No Gas	-0.004	ppb	N/A	5610.11	10000	
[Mo]	99	89	No Gas	165.242	ppb	64.0	46.71	10000	
Cd	106	89	No Gas	-0.885	ppb	N/A	41798.26	100	
Ag	107	89	No Gas	0.015	ppb	10.6	943.37	100	
Ag	107	89	He	0.013	ppb	25.5	327.00	100	
Cd	108	89	No Gas	-0.059	ppb	N/A	76.74	100	
Ag	109	89	No Gas	0.019	ppb	16.1	677.37	100	
Cd	111	89	No Gas	0.010	ppb	74.9	-51.24	100	
Cd	114	89	No Gas	0.006	ppb	133.5	183.52	100	
Sn	118	115	No Gas	0.008	ppb	144.8	3694.99	100	
Sb	121	115	No Gas	0.011	ppb	15.9	1570.10	100	
Sb	121	89	He	0.017	ppb	63.3	440.02	100	
Sb	123	115	No Gas	0.018	ppb	25.1	1294.71	100	
Ba	135	115	No Gas	0.002	ppb	375.2	96.76	100	
Ba	137	115	No Gas	0.008	ppb	75.0	180.18	100	
Tl	203	209	No Gas	0.107	ppb	17.8	2919.99	100	
Tl	205	209	No Gas	0.111	ppb	23.7	7022.52	100	
Pb	206	209	No Gas	-0.146	ppb	N/A	3464.00	100	
Pb	207	209	No Gas	-0.158	ppb	N/A	2779.82	100	
Pb	208	209	No Gas	-0.152	ppb	N/A	13232.89	100	
Th	232	209	No Gas	0.269	ppb	20.2	22580.75	100	
U	238	209	No Gas	0.091	ppb	17.6	6875.66	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4055193.78	0.4	4905245.08	82.67	70	125	
Sc	45	No Gas	19897744.87	1.1	19588031.4	101.58	75	125	
Sc	45	He	839402.69	0.8	860992.42	97.49	75	125	
Y	89	No Gas	48412791.22	0.5	45698235	105.94	75	125	
Y	89	He	6356310.07	1.0	6413034.51	99.12	75	125	
In	115	No Gas	10469821.30	1.3	9919344.87	105.55	75	125	
Tb	159	No Gas	14843913.94	1.3	13963078.94	106.31	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	9096535.19	0.7	8348524.39	108.96	75	125	

Sample Report

Sample Name 20111837-02BSD

File Name 084SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 16:21:50

Sample Type Sample

Total Dilution 5.0000

Comment 6020W B168407

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	28.398	ppb	1.8	347262.89	2000	
Be	9	6	No Gas	0.079	ppb	82.2	96.77	2000	
B	11	6	No Gas	554.982	ppb	1.3	423652.86	10000	
Na	23	45	No Gas	OR	ppb	OR	OR	200000	
Na	23	45	He	1449395.056	ppb	0.3	230203976.57	200000	>LDR
Mg	24	45	No Gas	80328.948	ppb	0.7	309071015.39	200000	
Mg	24	45	He	80814.751	ppb	1.1	6781005.31	200000	
Mg	25	45	No Gas	80817.853	ppb	0.3	40761695.23	200000	
Al	27	45	No Gas	8311.496	ppb	0.1	40724904.39	2000	
Al	27	45	He	8286.748	ppb	0.7	281563.15	2000	
Si	28	45	No Gas	10490.691	ppb	0.5	21227986.36	20000	
Si	29	45	No Gas	10905.195	ppb	0.7	1393416.39	20000	
K	39	45	No Gas	OR	ppb	OR	OR	200000	
K	39	45	He	975681.679	ppb	0.6	64339214.04	200000	>LDR
Ca	44	45	No Gas	198964.891	ppb	0.7	31612428.70	200000	
Ca	44	45	He	193452.463	ppb	1.3	705529.05	200000	
Ti	47	45	No Gas	32.759	ppb	3.3	16439.80	2000	
V	51	45	No Gas	7.895	ppb	1.5	46843.91	2000	
V	51	45	He	6.579	ppb	5.0	6177.67	2000	
Cr	52	89	No Gas	7.018	ppb	0.8	74002.91	2000	
Cr	52	89	He	7.943	ppb	5.7	10755.16	2000	
Cr	53	89	No Gas	-40.315	ppb	N/A	42194.07	2000	
Mn	55	89	No Gas	1760.195	ppb	0.6	14432652.68	2000	
Mn	55	89	He	1723.669	ppb	0.2	1001972.78	2000	
Fe	56	89	No Gas	1652.979	ppb	0.2	11973456.52	200000	
Fe	56	89	He	1683.804	ppb	0.8	1308429.75	200000	
Co	59	89	No Gas	3.856	ppb	3.4	27224.64	2000	
Co	59	89	He	3.713	ppb	2.3	6805.27	2000	
Ni	60	89	No Gas	25.713	ppb	2.5	39449.92	2000	
Ni	60	89	He	19.921	ppb	3.5	10561.47	2000	
Ni	62	89	No Gas	22.552	ppb	5.6	8988.77	2000	
Cu	63	89	No Gas	20.958	ppb	6.3	163473.91	2000	
Cu	63	89	He	22.536	ppb	1.7	46814.01	2000	
Cu	65	89	No Gas	15.716	ppb	4.7	66444.86	2000	
Zn	66	89	No Gas	100.576	ppb	2.1	104194.38	2000	

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	98.248	ppb	0.9	20746.90	2000	
Zn	67	89	No Gas	96.169	ppb	5.6	15758.46	2000	
Zn	68	89	No Gas	98.160	ppb	0.6	73122.55	2000	
As	75	89	No Gas	4.767	ppb	0.6	8429.59	2000	
As	75	89	He	2.129	ppb	3.5	354.45	2000	
Se	77	89	No Gas	132.740	ppb	5.2	18822.19	2000	
Se	78	89	No Gas	6.571	ppb	24.9	16299.74	2000	
Se	78	89	He	2.191	ppb	64.8	41.11	2000	
Se	82	89	No Gas	0.841	ppb	538.9	98.22	2000	
[Se]	83	89	No Gas	3039.452	ppb	41.9	2806.48	2000	
Sr	88	89	No Gas	242.229	ppb	0.5	2404178.61	2000	
Mo	95	89	No Gas	5.783	ppb	3.8	13146.50	2000	
Mo	97	89	No Gas	5.882	ppb	6.1	8528.05	2000	
Mo	98	89	No Gas	5.232	ppb	0.7	21450.68	2000	
[Mo]	99	89	No Gas	1133.514	ppb	32.7	56.72	2000	
Cd	106	89	No Gas	4.418	ppb	206.1	40268.56	2000	
Ag	107	89	No Gas	0.163	ppb	8.1	1338.97	200	
Ag	107	89	He	0.183	ppb	10.1	600.62	200	
Cd	108	89	No Gas	0.606	ppb	58.5	136.80	2000	
Ag	109	89	No Gas	0.179	ppb	23.0	1057.79	200	
Cd	111	89	No Gas	0.022	ppb	151.6	-73.46	2000	
Cd	114	89	No Gas	0.049	ppb	24.4	226.90	2000	
Sn	118	115	No Gas	-0.004	ppb	N/A	3251.53	2000	
Sb	121	115	No Gas	1.249	ppb	16.0	6882.97	2000	
Sb	121	89	He	1.547	ppb	6.0	1936.85	2000	
Sb	123	115	No Gas	1.192	ppb	13.8	5062.80	2000	
Ba	135	115	No Gas	19.097	ppb	1.7	17980.62	2000	
Ba	137	115	No Gas	20.061	ppb	1.4	32928.29	2000	
Tl	203	209	No Gas	-0.015	ppb	N/A	407.09	2000	
Tl	205	209	No Gas	-0.020	ppb	N/A	820.86	2000	
Pb	206	209	No Gas	-0.153	ppb	N/A	4779.12	2000	
Pb	207	209	No Gas	-0.328	ppb	N/A	3600.86	2000	
Pb	208	209	No Gas	-0.274	ppb	N/A	17308.94	2000	
Th	232	209	No Gas	0.118	ppb	31.9	4368.59	2000	
U	238	209	No Gas	0.197	ppb	21.3	2789.82	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4167215.38	1.4	4905245.08	84.95	70	125	
Sc	45	No Gas	19336018.14	0.6	19588031.4	98.71	75	125	
Sc	45	He	834259.91	1.1	860992.42	96.9	75	125	
Y	89	No Gas	45659139.23	0.2	45698235	99.91	75	125	
Y	89	He	6241332.80	1.3	6413034.51	97.32	75	125	
In	115	No Gas	9616486.86	0.5	9919344.87	96.95	75	125	
Tb	159	No Gas	13847844.12	0.7	13963078.94	99.17	75	125	
Bi	209	No Gas	7869096.91	0.6	8348524.39	94.26	75	125	

Sample Report

Sample Name	20111837-02BPDS
File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 16:23:32
Sample Type	Sample
Total Dilution	1.0000
Comment	6020W B168407
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	137.908	ppb	0.7	3578933.63	2000	
Be	9	6	No Gas	109.123	ppb	1.7	656593.56	2000	
B	11	6	No Gas	1025.689	ppb	1.4	4062163.32	10000	
Na	23	45	No Gas	OR	ppb	OR	OR	200000	
Na	23	45	He	1459964.778	ppb	0.9	1224751341.75	200000	>LDR
Mg	24	45	No Gas	96164.634	ppb	1.0	1770467920.28	200000	
Mg	24	45	He	92488.038	ppb	0.3	40994956.05	200000	
Mg	25	45	No Gas	96047.836	ppb	1.6	231820316.55	200000	
Al	27	45	No Gas	8749.821	ppb	0.6	205090150.28	2000	>LDR
Al	27	45	He	8758.799	ppb	0.3	1571521.07	2000	>LDR
Si	28	45	No Gas	10941.020	ppb	1.2	104140243.79	20000	
Si	29	45	No Gas	11078.512	ppb	0.5	6484094.53	20000	
K	39	45	No Gas	OR	ppb	OR	OR	200000	
K	39	45	He	1030611.125	ppb	0.3	358875581.32	200000	>LDR
Ca	44	45	No Gas	209285.985	ppb	1.4	158816010.97	200000	>LDR
Ca	44	45	He	201160.319	ppb	0.5	3875158.48	200000	>LDR
Ti	47	45	No Gas	31.742	ppb	2.0	74633.81	2000	
V	51	45	No Gas	116.919	ppb	1.5	3784360.75	2000	
V	51	45	He	113.279	ppb	0.5	516452.80	2000	
Cr	52	89	No Gas	117.007	ppb	1.9	3328471.19	2000	
Cr	52	89	He	114.943	ppb	1.3	620485.15	2000	
Cr	53	89	No Gas	97.810	ppb	1.6	392853.31	2000	
Mn	55	89	No Gas	1878.252	ppb	0.8	70790530.68	2000	>LDR
Mn	55	89	He	1876.274	ppb	1.3	5568274.33	2000	>LDR
Fe	56	89	No Gas	12329.152	ppb	1.5	337422640.87	200000	
Fe	56	89	He	12202.252	ppb	0.9	46955857.64	200000	
Co	59	89	No Gas	108.659	ppb	1.7	3369069.08	2000	
Co	59	89	He	105.310	ppb	0.9	945225.51	2000	
Ni	60	89	No Gas	121.996	ppb	1.3	836150.42	2000	
Ni	60	89	He	115.818	ppb	0.6	286089.86	2000	
Ni	62	89	No Gas	158.076	ppb	0.6	163300.63	2000	
Cu	63	89	No Gas	133.213	ppb	2.6	2285385.39	2000	
Cu	63	89	He	115.562	ppb	0.5	786090.67	2000	
Cu	65	89	No Gas	118.418	ppb	1.3	965505.11	2000	
Zn	66	89	No Gas	199.388	ppb	1.1	934652.28	2000	

Sample Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Zn	66	89	He	194.397	ppb	0.4	202594.31	2000	
Zn	67	89	No Gas	194.098	ppb	1.2	143153.62	2000	
Zn	68	89	No Gas	195.215	ppb	1.1	656357.59	2000	
As	75	89	No Gas	113.102	ppb	0.2	557136.89	2000	
As	75	89	He	112.268	ppb	1.4	84989.58	2000	
Se	77	89	No Gas	127.971	ppb	3.6	42184.97	2000	
Se	78	89	No Gas	150.253	ppb	2.8	121880.98	2000	
Se	78	89	He	113.370	ppb	1.6	5442.24	2000	
Se	82	89	No Gas	111.822	ppb	1.4	33104.23	2000	
[Se]	83	89	No Gas	1181.681	ppb	13.2	3040.09	2000	
Sr	88	89	No Gas	346.930	ppb	0.7	15833553.17	2000	
Mo	95	89	No Gas	107.719	ppb	0.9	933660.54	2000	
Mo	97	89	No Gas	107.672	ppb	0.2	584514.21	2000	
Mo	98	89	No Gas	109.533	ppb	0.7	1555112.92	2000	
[Mo]	99	89	No Gas	1848.763	ppb	25.0	360.37	2000	>LDR
Cd	106	89	No Gas	101.244	ppb	3.0	81105.13	2000	
Ag	107	89	No Gas	87.726	ppb	0.7	2044551.31	200	
Ag	107	89	He	80.257	ppb	0.3	986550.46	200	
Cd	108	89	No Gas	102.443	ppb	1.5	33840.75	2000	
Ag	109	89	No Gas	87.493	ppb	1.0	1957872.83	200	
Cd	111	89	No Gas	98.432	ppb	1.3	449914.65	2000	
Cd	114	89	No Gas	100.058	ppb	1.3	1216059.00	2000	
Sn	118	115	No Gas	111.672	ppb	0.8	1573653.17	2000	
Sb	121	115	No Gas	92.193	ppb	1.3	1865334.16	2000	
Sb	121	89	He	82.980	ppb	0.2	436962.17	2000	
Sb	123	115	No Gas	91.925	ppb	0.6	1433751.31	2000	
Ba	135	115	No Gas	125.779	ppb	1.7	523276.88	2000	
Ba	137	115	No Gas	126.119	ppb	1.2	916021.36	2000	
Tl	203	209	No Gas	107.135	ppb	0.4	1743671.64	2000	
Tl	205	209	No Gas	106.627	ppb	0.4	4110587.89	2000	
Pb	206	209	No Gas	110.289	ppb	0.4	1448080.69	2000	
Pb	207	209	No Gas	115.394	ppb	0.7	1269313.12	2000	
Pb	208	209	No Gas	112.513	ppb	0.3	5768563.42	2000	
Th	232	209	No Gas	0.012	ppb	33.7	3110.25	2000	
U	238	209	No Gas	0.124	ppb	1.6	6738.71	2000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4342268.44	5.1	4905245.08	88.52	70	125	
Sc	45	No Gas	18507569.69	4.4	19588031.4	94.48	75	125	
Sc	45	He	881358.47	0.6	860992.42	102.37	75	125	
Y	89	No Gas	41998208.29	1.7	45698235	91.9	75	125	
Y	89	He	6374451.55	1.2	6413034.51	99.4	75	125	
In	115	No Gas	8537755.04	2.0	9919344.87	86.07	75	125	
Tb	159	No Gas	12330933.46	0.1	13963078.94	88.31	75	125	
Bi	209	No Gas	6661491.96	0.8	8348524.39	79.79	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 092_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 16:35:07

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.714	ppb	0.6	2296528.88	100	98.71	90	110	
Be	9	6	No Gas	103.083	ppb	1.4	542884.41	100	103.08	90	110	
B	11	6	No Gas	264.402	ppb	0.4	917676.77	250	105.76	90	110	
Na	23	45	No Gas	9453.912	ppb	0.5	252663980.65	10000	94.54	90	110	
Na	23	45	He	10126.033	ppb	0.5	7564484.47	10000	101.26	90	110	
Mg	24	45	No Gas	9447.228	ppb	0.5	174481704.07	10000	94.47	90	110	
Mg	24	45	He	9910.001	ppb	0.5	3899906.61	10000	99.1	90	110	
Mg	25	45	No Gas	9470.850	ppb	0.2	22929321.33	10000	94.71	90	110	
Al	27	45	No Gas	95.332	ppb	0.9	2254672.52	100	95.33	90	110	
Al	27	45	He	93.197	ppb	2.3	14941.60	100	93.2	90	110	
Si	28	45	No Gas	9708.171	ppb	0.7	92743320.18	10000	97.08	90	110	
Si	29	45	No Gas	9820.231	ppb	0.6	5773038.67	10000	98.2	90	110	
K	39	45	No Gas	9966.115	ppb	0.3	249358509.62	10000	99.66	90	110	
K	39	45	He	9895.074	ppb	0.2	3081234.74	10000	98.95	90	110	
Ca	44	45	No Gas	10072.909	ppb	0.7	7728731.55	10000	100.73	90	110	
Ca	44	45	He	9667.606	ppb	0.9	165423.96	10000	96.68	90	110	
Ti	47	45	No Gas	98.356	ppb	0.2	231230.46	100	98.36	90	110	
V	51	45	No Gas	98.310	ppb	0.4	3191800.26	100	98.31	90	110	
V	51	45	He	101.560	ppb	0.5	411155.05	100	101.56	90	110	
Cr	52	89	No Gas	95.683	ppb	0.8	2914085.45	100	95.68	90	110	
Cr	52	89	He	102.653	ppb	0.7	516949.74	100	102.65	90	110	
Cr	53	89	No Gas	93.894	ppb	1.5	405810.96	100	93.89	90	110	
Mn	55	89	No Gas	98.248	ppb	0.8	3966263.56	100	98.25	90	110	
Mn	55	89	He	98.708	ppb	0.8	273357.12	100	98.71	90	110	
Fe	56	89	No Gas	9731.290	ppb	0.9	285027481.37	10000	97.31	90	110	
Fe	56	89	He	9926.574	ppb	1.0	35623100.30	10000	99.27	90	110	
Co	59	89	No Gas	94.668	ppb	0.6	3136629.55	100	94.67	90	110	
Co	59	89	He	103.455	ppb	0.7	865830.96	100	103.46	90	110	
Ni	60	89	No Gas	94.105	ppb	0.6	689522.91	100	94.1	90	110	
Ni	60	89	He	101.904	ppb	1.0	234801.28	100	101.9	90	110	
Ni	62	89	No Gas	94.422	ppb	1.0	105845.04	100	94.42	90	110	
Cu	63	89	No Gas	94.934	ppb	0.7	1765067.26	100	94.93	90	110	
Cu	63	89	He	103.824	ppb	0.6	660200.62	100	103.82	90	110	
Cu	65	89	No Gas	95.278	ppb	0.8	837789.09	100	95.28	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.966	ppb	1.1	496708.17	100	98.97	90	110	
Zn	66	89	He	102.727	ppb	1.3	100170.23	100	102.73	90	110	
Zn	67	89	No Gas	99.446	ppb	3.1	78544.85	100	99.45	90	110	
Zn	68	89	No Gas	98.407	ppb	0.3	354335.20	100	98.41	90	110	
As	75	89	No Gas	97.866	ppb	0.6	515632.12	100	97.87	90	110	
As	75	89	He	101.242	ppb	0.3	71475.70	100	101.24	90	110	
Se	77	89	No Gas	95.688	ppb	2.9	36626.67	100	95.69	90	110	
Se	78	89	No Gas	101.164	ppb	1.1	92625.61	100	101.16	90	110	
Se	78	89	He	94.533	ppb	2.0	4235.13	100	94.53	90	110	
Se	82	89	No Gas	99.451	ppb	3.4	31469.86	100	99.45	90	110	
[Se]	83	89	No Gas	83.234	ppb	211.2	2312.56	100	83.23	90	110	Failed
Sr	88	89	No Gas	100.775	ppb	0.4	4915668.91	100	100.78	90	110	
Mo	95	89	No Gas	98.258	ppb	0.5	910425.43	100	98.26	90	110	
Mo	97	89	No Gas	99.044	ppb	0.4	574711.19	100	99.04	90	110	
Mo	98	89	No Gas	99.455	ppb	0.2	1509563.00	100	99.46	90	110	
[Mo]	99	89	No Gas	149.381	ppb	58.1	40.04	100	149.38	90	110	Failed
Cd	106	89	No Gas	101.505	ppb	3.7	86792.97	100	101.5	90	110	
Ag	107	89	No Gas	100.395	ppb	0.7	2500514.41	100	100.4	90	110	
Ag	107	89	He	104.588	ppb	1.0	1198645.29	100	104.59	90	110	
Cd	108	89	No Gas	103.898	ppb	1.5	36681.37	100	103.9	90	110	
Ag	109	89	No Gas	100.038	ppb	0.0	2392620.80	100	100.04	90	110	
Cd	111	89	No Gas	101.090	ppb	1.1	493859.92	100	101.09	90	110	
Cd	114	89	No Gas	101.859	ppb	1.2	1323025.66	100	101.86	90	110	
Sn	118	115	No Gas	98.767	ppb	0.3	1623682.44	100	98.77	90	110	
Sb	121	115	No Gas	99.651	ppb	0.3	2351554.14	100	99.65	90	110	
Sb	121	89	He	101.750	ppb	0.8	499519.25	100	101.75	90	110	
Sb	123	115	No Gas	99.820	ppb	0.6	1815618.59	100	99.82	90	110	
Ba	135	115	No Gas	99.195	ppb	1.0	481405.24	100	99.2	90	110	
Ba	137	115	No Gas	98.973	ppb	0.7	838477.72	100	98.97	90	110	
Tl	203	209	No Gas	98.960	ppb	0.4	2118008.64	100	98.96	90	110	
Tl	205	209	No Gas	97.992	ppb	0.9	4967972.98	100	97.99	90	110	
Pb	206	209	No Gas	98.460	ppb	0.3	1700639.81	100	98.46	90	110	
Pb	207	209	No Gas	98.361	ppb	0.6	1423498.66	100	98.36	90	110	
Pb	208	209	No Gas	98.437	ppb	0.2	6639644.19	100	98.44	90	110	
Th	232	209	No Gas	96.999	ppb	0.6	6675255.48	100	97	90	110	
U	238	209	No Gas	96.980	ppb	0.6	6589018.20	100	96.98	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3798509.20	0.4	4905245.08	77.44	70	125	
Sc	45	No Gas	18562777.81	0.3	19588031.4	94.77	75	125	
Sc	45	He	782515.28	0.7	860992.42	90.89	75	125	
Y	89	No Gas	44883024.78	0.6	45698235	98.22	75	125	
Y	89	He	5943631.35	1.2	6413034.51	92.68	75	125	
In	115	No Gas	9956822.96	0.4	9919344.87	100.38	75	125	
Tb	159	No Gas	14387516.30	0.7	13963078.94	103.04	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8760131.60	0.2	8348524.39	104.93	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	093_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 16:36:50
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.154	ppb	34.7	204771.36	100	
Be	9	6	No Gas	0.017	ppb	27.1	96.76	100	
B	11	6	No Gas	3.675	ppb	9.7	14812.88	100	
Na	23	45	No Gas	40.428	ppb	1.2	1778596.52	500000	
Na	23	45	He	47.684	ppb	2.4	58967.61	500000	
Mg	24	45	No Gas	0.364	ppb	27.2	13394.22	500000	
Mg	24	45	He	0.616	ppb	51.1	333.36	500000	
Mg	25	45	No Gas	0.165	ppb	55.7	1573.54	500000	
Al	27	45	No Gas	-0.198	ppb	N/A	8643.36	500000	
Al	27	45	He	-0.115	ppb	N/A	80.00	500000	
Si	28	45	No Gas	-1.713	ppb	N/A	411104.78	100	
Si	29	45	No Gas	-1.284	ppb	N/A	70578.71	100	
K	39	45	No Gas	15.273	ppb	3.0	3998850.46	500000	
K	39	45	He	10.609	ppb	25.7	25932.61	500000	
Ca	44	45	No Gas	-6.482	ppb	N/A	57241.85	500000	
Ca	44	45	He	6.546	ppb	35.3	200.02	500000	
Ti	47	45	No Gas	-0.044	ppb	N/A	303.65	10000	
V	51	45	No Gas	0.161	ppb	43.4	-1172.08	100	
V	51	45	He	0.008	ppb	262.2	513.87	100	
Cr	52	89	No Gas	-0.160	ppb	N/A	26154.72	100	
Cr	52	89	He	-0.047	ppb	N/A	2088.95	100	
Cr	53	89	No Gas	-4.374	ppb	N/A	55789.83	100	
Mn	55	89	No Gas	-0.013	ppb	N/A	9336.02	100	
Mn	55	89	He	-0.004	ppb	N/A	216.89	100	
Fe	56	89	No Gas	-15.660	ppb	N/A	1739938.26	500000	
Fe	56	89	He	3.237	ppb	41.1	51433.64	500000	
Co	59	89	No Gas	0.005	ppb	44.0	1414.85	100	
Co	59	89	He	0.003	ppb	409.3	293.64	100	
Ni	60	89	No Gas	0.021	ppb	53.3	1338.09	100	
Ni	60	89	He	-0.290	ppb	N/A	256.93	100	
Ni	62	89	No Gas	0.018	ppb	644.2	4071.44	100	
Cu	63	89	No Gas	-0.765	ppb	N/A	74564.65	100	
Cu	63	89	He	-0.262	ppb	N/A	15364.24	100	
Cu	65	89	No Gas	-0.683	ppb	N/A	33923.09	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.024	ppb	N/A	1755.24	100	
Zn	66	89	He	-0.430	ppb	N/A	327.00	100	
Zn	67	89	No Gas	-0.022	ppb	N/A	360.37	100	
Zn	68	89	No Gas	-0.060	ppb	N/A	1301.39	100	
As	75	89	No Gas	0.370	ppb	40.6	5339.78	100	
As	75	89	He	0.004	ppb	372.7	41.11	100	
Se	77	89	No Gas	-8.270	ppb	N/A	9566.46	100	
Se	78	89	No Gas	-0.128	ppb	N/A	15224.01	100	
Se	78	89	He	0.097	ppb	118.0	24.44	100	
Se	82	89	No Gas	0.033	ppb	1467.8	54.30	100	
[Se]	83	89	No Gas	239.467	ppb	92.3	2496.12	100	Failed
Sr	88	89	No Gas	0.005	ppb	69.1	557.25	100	
Mo	95	89	No Gas	0.032	ppb	190.0	2579.56	10000	
Mo	97	89	No Gas	0.002	ppb	2493.4	1618.41	10000	
Mo	98	89	No Gas	0.030	ppb	215.1	5832.39	10000	
[Mo]	99	89	No Gas	112.757	ppb	107.6	33.37	10000	
Cd	106	89	No Gas	-0.681	ppb	N/A	39652.63	100	
Ag	107	89	No Gas	0.017	ppb	19.5	947.82	100	
Ag	107	89	He	0.024	ppb	9.2	433.79	100	
Cd	108	89	No Gas	-0.029	ppb	N/A	83.42	100	
Ag	109	89	No Gas	0.020	ppb	19.5	677.38	100	
Cd	111	89	No Gas	0.010	ppb	31.1	-43.95	100	
Cd	114	89	No Gas	0.009	ppb	22.8	210.22	100	
Sn	118	115	No Gas	0.019	ppb	156.8	3752.78	100	
Sb	121	115	No Gas	0.070	ppb	28.8	2940.36	100	
Sb	121	89	He	0.101	ppb	12.1	843.38	100	
Sb	123	115	No Gas	0.071	ppb	22.9	2225.79	100	
Ba	135	115	No Gas	0.005	ppb	42.4	110.11	100	
Ba	137	115	No Gas	0.006	ppb	45.8	163.50	100	
Tl	203	209	No Gas	0.128	ppb	19.5	3333.84	100	
Tl	205	209	No Gas	0.131	ppb	22.9	7937.38	100	
Pb	206	209	No Gas	-0.186	ppb	N/A	2716.39	100	
Pb	207	209	No Gas	-0.190	ppb	N/A	2265.85	100	
Pb	208	209	No Gas	-0.186	ppb	N/A	10689.34	100	
Th	232	209	No Gas	0.273	ppb	23.1	22587.58	100	
U	238	209	No Gas	0.093	ppb	24.8	6922.44	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3910216.46	0.5	4905245.08	79.72	70	125	
Sc	45	No Gas	18544659.28	0.5	19588031.4	94.67	75	125	
Sc	45	He	796328.13	0.7	860992.42	92.49	75	125	
Y	89	No Gas	45811132.89	0.5	45698235	100.25	75	125	
Y	89	He	6080833.97	1.2	6413034.51	94.82	75	125	
In	115	No Gas	10108234.89	0.6	9919344.87	101.9	75	125	
Tb	159	No Gas	14421006.04	0.4	13963078.94	103.28	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8975219.09	0.5	8348524.39	107.51	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 104_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 16:55:08

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.322	ppb	0.9	2283161.86	100	99.32	90	110	
Be	9	6	No Gas	104.441	ppb	0.2	543817.60	100	104.44	90	110	
B	11	6	No Gas	266.741	ppb	1.2	915203.46	250	106.7	90	110	
Na	23	45	No Gas	9483.837	ppb	1.1	254336314.02	10000	94.84	90	110	
Na	23	45	He	10116.087	ppb	0.9	7608476.76	10000	101.16	90	110	
Mg	24	45	No Gas	9387.518	ppb	0.7	173982090.74	10000	93.88	90	110	
Mg	24	45	He	9866.680	ppb	0.5	3909365.46	10000	98.67	90	110	
Mg	25	45	No Gas	9494.330	ppb	0.8	23065748.82	10000	94.94	90	110	
Al	27	45	No Gas	95.748	ppb	0.6	2272512.99	100	95.75	90	110	
Al	27	45	He	94.494	ppb	1.9	15251.89	100	94.49	90	110	
Si	28	45	No Gas	9738.319	ppb	0.4	93355879.40	10000	97.38	90	110	
Si	29	45	No Gas	9846.604	ppb	0.5	5808544.60	10000	98.47	90	110	
K	39	45	No Gas	9957.028	ppb	0.9	249996762.94	10000	99.57	90	110	
K	39	45	He	9838.988	ppb	0.3	3084717.66	10000	98.39	90	110	
Ca	44	45	No Gas	10036.277	ppb	0.1	7727973.64	10000	100.36	90	110	
Ca	44	45	He	9573.686	ppb	1.7	164937.06	10000	95.74	90	110	
Ti	47	45	No Gas	99.658	ppb	0.8	235096.00	100	99.66	90	110	
V	51	45	No Gas	98.405	ppb	0.7	3205973.14	100	98.4	90	110	
V	51	45	He	100.208	ppb	0.8	408440.46	100	100.21	90	110	
Cr	52	89	No Gas	94.139	ppb	0.4	2913214.57	100	94.14	90	110	
Cr	52	89	He	102.356	ppb	0.4	519001.45	100	102.36	90	110	
Cr	53	89	No Gas	89.248	ppb	0.7	395409.27	100	89.25	90	110	Failed
Mn	55	89	No Gas	96.038	ppb	0.4	3938987.12	100	96.04	90	110	
Mn	55	89	He	98.699	ppb	1.0	275207.75	100	98.7	90	110	
Fe	56	89	No Gas	9494.369	ppb	0.6	282570172.99	10000	94.94	90	110	
Fe	56	89	He	9869.110	ppb	0.1	35661776.14	10000	98.69	90	110	
Co	59	89	No Gas	93.005	ppb	0.7	3130669.01	100	93	90	110	
Co	59	89	He	103.149	ppb	0.3	869222.97	100	103.15	90	110	
Ni	60	89	No Gas	92.764	ppb	0.9	690534.42	100	92.76	90	110	
Ni	60	89	He	101.857	ppb	0.4	236309.80	100	101.86	90	110	
Ni	62	89	No Gas	93.072	ppb	1.7	106046.34	100	93.07	90	110	
Cu	63	89	No Gas	92.808	ppb	0.8	1754986.50	100	92.81	90	110	
Cu	63	89	He	103.490	ppb	0.5	662654.27	100	103.49	90	110	
Cu	65	89	No Gas	93.823	ppb	0.7	838743.33	100	93.82	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.718	ppb	0.6	498281.64	100	97.72	90	110	
Zn	66	89	He	101.854	ppb	0.4	100005.98	100	101.85	90	110	
Zn	67	89	No Gas	98.471	ppb	0.3	79024.35	100	98.47	90	110	
Zn	68	89	No Gas	98.689	ppb	0.1	360992.95	100	98.69	90	110	
As	75	89	No Gas	96.724	ppb	0.8	517760.13	100	96.72	90	110	
As	75	89	He	100.951	ppb	0.4	71755.93	100	100.95	90	110	
Se	77	89	No Gas	87.761	ppb	2.6	35101.01	100	87.76	90	110	Failed
Se	78	89	No Gas	99.267	ppb	0.6	92622.07	100	99.27	90	110	
Se	78	89	He	96.226	ppb	0.0	4339.61	100	96.23	90	110	
Se	82	89	No Gas	95.874	ppb	0.9	30826.04	100	95.87	90	110	
[Se]	83	89	No Gas	287.931	ppb	50.5	2526.14	100	287.93	90	110	Failed
Sr	88	89	No Gas	99.906	ppb	0.7	4950739.50	100	99.91	90	110	
Mo	95	89	No Gas	97.733	ppb	0.5	919993.75	100	97.73	90	110	
Mo	97	89	No Gas	97.710	ppb	0.4	576011.55	100	97.71	90	110	
Mo	98	89	No Gas	97.678	ppb	0.1	1506264.42	100	97.68	90	110	
[Mo]	99	89	No Gas	210.656	ppb	47.7	53.39	100	210.66	90	110	Failed
Cd	106	89	No Gas	97.723	ppb	0.7	86376.68	100	97.72	90	110	
Ag	107	89	No Gas	98.620	ppb	0.3	2495412.89	100	98.62	90	110	
Ag	107	89	He	103.282	ppb	0.3	1191838.56	100	103.28	90	110	
Cd	108	89	No Gas	100.066	ppb	0.7	35894.75	100	100.07	90	110	
Ag	109	89	No Gas	98.319	ppb	0.3	2388878.99	100	98.32	90	110	
Cd	111	89	No Gas	100.105	ppb	0.6	496833.76	100	100.1	90	110	
Cd	114	89	No Gas	99.640	ppb	0.8	1314803.64	100	99.64	90	110	
Sn	118	115	No Gas	99.784	ppb	0.6	1636875.80	100	99.78	90	110	
Sb	121	115	No Gas	99.827	ppb	0.4	2350679.70	100	99.83	90	110	
Sb	121	89	He	99.947	ppb	0.8	494018.95	100	99.95	90	110	
Sb	123	115	No Gas	99.844	ppb	0.6	1812168.01	100	99.84	90	110	
Ba	135	115	No Gas	99.448	ppb	0.8	481582.83	100	99.45	90	110	
Ba	137	115	No Gas	99.509	ppb	0.7	841226.54	100	99.51	90	110	
Tl	203	209	No Gas	99.248	ppb	0.7	2089332.72	100	99.25	90	110	
Tl	205	209	No Gas	99.622	ppb	0.0	4967798.33	100	99.62	90	110	
Pb	206	209	No Gas	99.501	ppb	0.1	1690363.44	100	99.5	90	110	
Pb	207	209	No Gas	99.939	ppb	0.4	1422529.51	100	99.94	90	110	
Pb	208	209	No Gas	99.571	ppb	0.1	6605691.80	100	99.57	90	110	
Th	232	209	No Gas	97.676	ppb	1.1	6611373.89	100	97.68	90	110	
U	238	209	No Gas	97.573	ppb	1.4	6520203.13	100	97.57	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3755476.40	1.3	4905245.08	76.56	70	125	
Sc	45	No Gas	18628063.94	1.1	19588031.4	95.1	75	125	
Sc	45	He	787837.43	0.0	860992.42	91.5	75	125	
Y	89	No Gas	45596324.75	0.4	45698235	99.78	75	125	
Y	89	He	5984205.68	0.6	6413034.51	93.31	75	125	
In	115	No Gas	9935607.65	0.4	9919344.87	100.16	75	125	
Tb	159	No Gas	14181758.45	0.7	13963078.94	101.57	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8616466.88	0.7	8348524.39	103.21	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	105_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 16:56:51
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.108	ppb	17.9	203105.69	100	
Be	9	6	No Gas	0.014	ppb	53.9	80.08	100	
B	11	6	No Gas	3.891	ppb	9.9	15527.72	100	
Na	23	45	No Gas	13.302	ppb	3.8	1057262.59	500000	
Na	23	45	He	19.760	ppb	12.3	37359.91	500000	
Mg	24	45	No Gas	0.314	ppb	34.0	12486.57	500000	
Mg	24	45	He	0.323	ppb	47.2	213.35	500000	
Mg	25	45	No Gas	0.231	ppb	52.2	1733.56	500000	
Al	27	45	No Gas	-0.130	ppb	N/A	10231.32	500000	
Al	27	45	He	-0.128	ppb	N/A	76.67	500000	
Si	28	45	No Gas	-0.273	ppb	N/A	425141.33	100	
Si	29	45	No Gas	-2.846	ppb	N/A	69734.02	100	
K	39	45	No Gas	5.252	ppb	11.6	3755268.80	500000	
K	39	45	He	-4.101	ppb	N/A	21057.56	500000	
Ca	44	45	No Gas	-14.494	ppb	N/A	51192.12	500000	
Ca	44	45	He	6.673	ppb	91.7	200.02	500000	
Ti	47	45	No Gas	-0.064	ppb	N/A	256.93	10000	
V	51	45	No Gas	0.226	ppb	60.9	935.03	100	
V	51	45	He	-0.019	ppb	N/A	400.41	100	
Cr	52	89	No Gas	-0.216	ppb	N/A	24349.48	100	
Cr	52	89	He	-0.049	ppb	N/A	2055.58	100	
Cr	53	89	No Gas	-6.298	ppb	N/A	48635.04	100	
Mn	55	89	No Gas	-0.038	ppb	N/A	8284.24	100	
Mn	55	89	He	0.005	ppb	165.7	240.25	100	
Fe	56	89	No Gas	-15.405	ppb	N/A	1742664.75	500000	
Fe	56	89	He	5.230	ppb	13.5	58073.35	500000	
Co	59	89	No Gas	-0.005	ppb	N/A	1057.79	100	
Co	59	89	He	-0.002	ppb	N/A	253.60	100	
Ni	60	89	No Gas	0.002	ppb	1147.9	1194.61	100	
Ni	60	89	He	-0.248	ppb	N/A	350.36	100	
Ni	62	89	No Gas	-0.075	ppb	N/A	3957.93	100	
Cu	63	89	No Gas	-1.428	ppb	N/A	62395.45	100	
Cu	63	89	He	-0.711	ppb	N/A	12374.85	100	
Cu	65	89	No Gas	-1.345	ppb	N/A	28174.30	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.017	ppb	273.2	1958.81	100	
Zn	66	89	He	-0.361	ppb	N/A	390.40	100	
Zn	67	89	No Gas	-0.120	ppb	N/A	280.29	100	
Zn	68	89	No Gas	-0.008	ppb	N/A	1484.93	100	
As	75	89	No Gas	0.408	ppb	11.0	5526.97	100	
As	75	89	He	0.016	ppb	166.1	48.89	100	
Se	77	89	No Gas	-10.730	ppb	N/A	8881.97	100	
Se	78	89	No Gas	0.019	ppb	1233.3	15294.10	100	
Se	78	89	He	0.005	ppb	2918.8	20.00	100	
Se	82	89	No Gas	0.068	ppb	944.4	64.88	100	
[Se]	83	89	No Gas	174.696	ppb	47.1	2432.69	100	Failed
Sr	88	89	No Gas	0.004	ppb	22.3	537.22	100	
Mo	95	89	No Gas	0.014	ppb	364.4	2402.66	10000	
Mo	97	89	No Gas	-0.001	ppb	N/A	1601.74	10000	
Mo	98	89	No Gas	-0.002	ppb	N/A	5329.32	10000	
[Mo]	99	89	No Gas	81.358	ppb	92.3	26.69	10000	
Cd	106	89	No Gas	-0.175	ppb	N/A	39776.49	100	
Ag	107	89	No Gas	0.016	ppb	27.8	911.15	100	
Ag	107	89	He	0.014	ppb	43.0	310.32	100	
Cd	108	89	No Gas	0.083	ppb	80.7	123.46	100	
Ag	109	89	No Gas	0.017	ppb	15.6	603.97	100	
Cd	111	89	No Gas	-0.001	ppb	N/A	-101.36	100	
Cd	114	89	No Gas	0.008	ppb	40.2	196.87	100	
Sn	118	115	No Gas	0.108	ppb	23.5	5208.84	100	
Sb	121	115	No Gas	0.073	ppb	22.1	2988.14	100	
Sb	121	89	He	0.100	ppb	13.7	826.71	100	
Sb	123	115	No Gas	0.076	ppb	32.4	2312.56	100	
Ba	135	115	No Gas	0.001	ppb	1024.6	90.09	100	
Ba	137	115	No Gas	0.015	ppb	35.0	233.57	100	
Tl	203	209	No Gas	0.120	ppb	25.1	3110.23	100	
Tl	205	209	No Gas	0.119	ppb	23.0	7249.52	100	
Pb	206	209	No Gas	-0.100	ppb	N/A	4174.95	100	
Pb	207	209	No Gas	-0.098	ppb	N/A	3580.82	100	
Pb	208	209	No Gas	-0.103	ppb	N/A	16217.25	100	
Th	232	209	No Gas	0.201	ppb	24.3	17270.00	100	
U	238	209	No Gas	0.079	ppb	13.8	5884.10	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3897766.90	0.8	4905245.08	79.46	70	125	
Sc	45	No Gas	18560874.25	0.6	19588031.4	94.76	75	125	
Sc	45	He	787252.71	0.7	860992.42	91.44	75	125	
Y	89	No Gas	45676146.24	0.9	45698235	99.95	75	125	
Y	89	He	6008314.37	0.6	6413034.51	93.69	75	125	
In	115	No Gas	10070072.35	0.6	9919344.87	101.52	75	125	
Tb	159	No Gas	14311963.24	0.4	13963078.94	102.5	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8852569.09	0.7	8348524.39	106.04	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 152_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 18:17:31

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.302	ppb	0.3	2470183.42	100	98.3	90	110	
Be	9	6	No Gas	102.322	ppb	0.3	581858.50	100	102.32	90	110	
B	11	6	No Gas	263.091	ppb	0.2	985940.86	250	105.24	90	110	
Na	23	45	No Gas	9348.466	ppb	0.5	278736789.57	10000	93.48	90	110	
Na	23	45	He	10108.724	ppb	1.7	8094284.05	10000	101.09	90	110	
Mg	24	45	No Gas	9346.142	ppb	0.6	192567883.80	10000	93.46	90	110	
Mg	24	45	He	9862.217	ppb	1.5	4160273.58	10000	98.62	90	110	
Mg	25	45	No Gas	9454.767	ppb	0.6	25536056.29	10000	94.55	90	110	
Al	27	45	No Gas	97.025	ppb	1.0	2559691.31	100	97.02	90	110	
Al	27	45	He	98.342	ppb	3.8	16890.56	100	98.34	90	110	
Si	28	45	No Gas	9846.134	ppb	0.3	104928094.97	10000	98.46	90	110	
Si	29	45	No Gas	9900.873	ppb	0.2	6492629.52	10000	99.01	90	110	
K	39	45	No Gas	10056.652	ppb	0.9	280672322.48	10000	100.57	90	110	
K	39	45	He	10246.350	ppb	1.2	3419281.72	10000	102.46	90	110	
Ca	44	45	No Gas	10119.255	ppb	0.4	8661570.91	10000	101.19	90	110	
Ca	44	45	He	9997.332	ppb	0.3	183394.54	10000	99.97	90	110	
Ti	47	45	No Gas	100.320	ppb	0.5	263100.12	100	100.32	90	110	
V	51	45	No Gas	99.549	ppb	0.9	3605689.27	100	99.55	90	110	
V	51	45	He	101.471	ppb	0.9	440348.92	100	101.47	90	110	
Cr	52	89	No Gas	97.210	ppb	0.3	3241485.25	100	97.21	90	110	
Cr	52	89	He	101.072	ppb	0.9	551682.43	100	101.07	90	110	
Cr	53	89	No Gas	91.647	ppb	2.2	435592.28	100	91.65	90	110	
Mn	55	89	No Gas	98.250	ppb	0.6	4343369.53	100	98.25	90	110	
Mn	55	89	He	97.496	ppb	1.8	292611.86	100	97.5	90	110	
Fe	56	89	No Gas	9814.197	ppb	0.7	314759323.70	10000	98.14	90	110	
Fe	56	89	He	9936.864	ppb	0.9	38649386.09	10000	99.37	90	110	
Co	59	89	No Gas	96.318	ppb	0.3	3494607.32	100	96.32	90	110	
Co	59	89	He	101.687	ppb	1.5	922325.35	100	101.69	90	110	
Ni	60	89	No Gas	95.541	ppb	0.3	766569.36	100	95.54	90	110	
Ni	60	89	He	99.303	ppb	1.8	247992.49	100	99.3	90	110	
Ni	62	89	No Gas	95.266	ppb	1.3	116894.84	100	95.27	90	110	
Cu	63	89	No Gas	93.909	ppb	0.1	1912986.01	100	93.91	90	110	
Cu	63	89	He	99.633	ppb	0.8	687371.96	100	99.63	90	110	
Cu	65	89	No Gas	93.325	ppb	0.6	899499.71	100	93.32	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	96.861	ppb	0.4	532398.85	100	96.86	90	110	
Zn	66	89	He	99.935	ppb	1.2	105636.69	100	99.94	90	110	
Zn	67	89	No Gas	97.366	ppb	0.5	84227.33	100	97.37	90	110	
Zn	68	89	No Gas	97.588	ppb	1.5	384790.39	100	97.59	90	110	
As	75	89	No Gas	98.327	ppb	1.0	567283.30	100	98.33	90	110	
As	75	89	He	101.137	ppb	0.5	77382.27	100	101.14	90	110	
Se	77	89	No Gas	89.981	ppb	3.9	38470.22	100	89.98	90	110	Failed
Se	78	89	No Gas	98.308	ppb	0.3	99030.47	100	98.31	90	110	
Se	78	89	He	94.336	ppb	2.9	4580.80	100	94.34	90	110	
Se	82	89	No Gas	96.581	ppb	2.5	33470.43	100	96.58	90	110	
[Se]	83	89	No Gas	370.882	ppb	59.5	2799.81	100	370.88	90	110	Failed
Sr	88	89	No Gas	100.325	ppb	0.1	5358840.52	100	100.32	90	110	
Mo	95	89	No Gas	98.771	ppb	0.3	1002157.39	100	98.77	90	110	
Mo	97	89	No Gas	96.838	ppb	1.0	615348.78	100	96.84	90	110	
Mo	98	89	No Gas	98.073	ppb	0.7	1630133.09	100	98.07	90	110	
[Mo]	99	89	No Gas	266.952	ppb	73.2	70.07	100	266.95	90	110	Failed
Cd	106	89	No Gas	86.184	ppb	1.3	87175.83	100	86.18	90	110	Failed
Ag	107	89	No Gas	97.887	ppb	0.3	2669835.66	100	97.89	90	110	
Ag	107	89	He	100.244	ppb	1.5	1245135.63	100	100.24	90	110	
Cd	108	89	No Gas	97.089	ppb	2.0	37541.07	100	97.09	90	110	
Ag	109	89	No Gas	97.437	ppb	0.5	2551882.15	100	97.44	90	110	
Cd	111	89	No Gas	96.437	ppb	0.6	515905.19	100	96.44	90	110	
Cd	114	89	No Gas	97.614	ppb	0.5	1388417.95	100	97.61	90	110	
Sn	118	115	No Gas	102.134	ppb	0.4	1779797.01	100	102.13	90	110	
Sb	121	115	No Gas	99.293	ppb	0.5	2483880.80	100	99.29	90	110	
Sb	121	89	He	99.096	ppb	0.9	527243.55	100	99.1	90	110	
Sb	123	115	No Gas	99.244	ppb	0.5	1913601.63	100	99.24	90	110	
Ba	135	115	No Gas	98.591	ppb	0.9	507208.16	100	98.59	90	110	
Ba	137	115	No Gas	98.331	ppb	0.5	883105.97	100	98.33	90	110	
Tl	203	209	No Gas	101.075	ppb	1.1	2098179.23	100	101.08	90	110	
Tl	205	209	No Gas	99.870	ppb	0.8	4910857.95	100	99.87	90	110	
Pb	206	209	No Gas	101.439	ppb	0.3	1699231.94	100	101.44	90	110	
Pb	207	209	No Gas	101.272	ppb	0.5	1421403.23	100	101.27	90	110	
Pb	208	209	No Gas	101.129	ppb	0.1	6615495.04	100	101.13	90	110	
Th	232	209	No Gas	96.300	ppb	1.7	6427633.27	100	96.3	90	110	
U	238	209	No Gas	95.557	ppb	1.5	6296927.36	100	95.56	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4101357.53	0.3	4905245.08	83.61	70	125	
Sc	45	No Gas	20708417.63	0.2	19588031.4	105.72	75	125	
Sc	45	He	838918.63	1.8	860992.42	97.44	75	125	
Y	89	No Gas	49148283.38	0.3	45698235	107.55	75	125	
Y	89	He	6441803.48	1.1	6413034.51	100.45	75	125	
In	115	No Gas	10555010.91	0.1	9919344.87	106.41	75	125	
Tb	159	No Gas	14541076.52	0.6	13963078.94	104.14	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8496720.22	0.5	8348524.39	101.78	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	153_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 18:19:16
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.397	ppb	11.8	222625.51	100	
Be	9	6	No Gas	0.030	ppb	29.4	180.18	100	
B	11	6	No Gas	4.819	ppb	8.7	20037.95	100	
Na	23	45	No Gas	-3.267	ppb	N/A	672933.27	500000	
Na	23	45	He	1.259	ppb	114.6	24917.15	500000	
Mg	24	45	No Gas	1.280	ppb	18.1	33136.19	500000	
Mg	24	45	He	1.149	ppb	45.2	573.39	500000	
Mg	25	45	No Gas	1.078	ppb	15.3	4134.27	500000	
Al	27	45	No Gas	1.138	ppb	64.0	43763.17	500000	
Al	27	45	He	0.570	ppb	46.2	200.00	500000	
Si	28	45	No Gas	8.262	ppb	30.1	553323.39	100	
Si	29	45	No Gas	-11.991	ppb	N/A	70408.48	100	
K	39	45	No Gas	-0.010	ppb	N/A	3962159.21	500000	
K	39	45	He	0.654	ppb	648.8	23875.52	500000	
Ca	44	45	No Gas	-39.008	ppb	N/A	35554.96	500000	
Ca	44	45	He	3.861	ppb	115.4	160.01	500000	
Ti	47	45	No Gas	0.050	ppb	59.0	573.93	10000	
V	51	45	No Gas	0.291	ppb	4.5	3365.17	100	
V	51	45	He	0.000	ppb	N/A	503.86	100	
Cr	52	89	No Gas	-0.156	ppb	N/A	27742.82	100	
Cr	52	89	He	-0.007	ppb	N/A	2432.69	100	
Cr	53	89	No Gas	-5.507	ppb	N/A	54529.76	100	
Mn	55	89	No Gas	0.012	ppb	169.3	10965.55	100	
Mn	55	89	He	0.070	ppb	14.3	450.47	100	
Fe	56	89	No Gas	8.914	ppb	59.8	2605713.27	500000	
Fe	56	89	He	16.620	ppb	8.7	106499.08	500000	
Co	59	89	No Gas	0.000	ppb	219.9	1331.42	100	
Co	59	89	He	-0.003	ppb	N/A	256.93	100	
Ni	60	89	No Gas	-0.033	ppb	N/A	991.04	100	
Ni	60	89	He	-0.283	ppb	N/A	286.96	100	
Ni	62	89	No Gas	-0.267	ppb	N/A	3964.65	100	
Cu	63	89	No Gas	-3.545	ppb	N/A	25753.82	100	
Cu	63	89	He	-1.717	ppb	N/A	6501.51	100	
Cu	65	89	No Gas	-3.320	ppb	N/A	11990.81	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.344	ppb	13.9	3837.79	100	
Zn	66	89	He	-0.060	ppb	N/A	734.10	100	
Zn	67	89	No Gas	0.241	ppb	34.3	603.96	100	
Zn	68	89	No Gas	0.335	ppb	13.6	2899.92	100	
As	75	89	No Gas	0.268	ppb	106.0	5048.01	100	
As	75	89	He	0.084	ppb	12.8	104.44	100	
Se	77	89	No Gas	-6.146	ppb	N/A	10705.09	100	
Se	78	89	No Gas	1.832	ppb	54.9	17692.79	100	
Se	78	89	He	0.434	ppb	118.9	42.22	100	
Se	82	89	No Gas	-0.308	ppb	N/A	-61.59	100	
[Se]	83	89	No Gas	375.949	ppb	43.8	2763.10	100	Failed
Sr	88	89	No Gas	0.017	ppb	16.9	1241.32	100	
Mo	95	89	No Gas	0.026	ppb	239.7	2652.97	10000	
Mo	97	89	No Gas	-0.013	ppb	N/A	1615.08	10000	
Mo	98	89	No Gas	-0.077	ppb	N/A	4409.47	10000	
[Mo]	99	89	No Gas	27.552	ppb	92.0	16.68	10000	
Cd	106	89	No Gas	-7.379	ppb	N/A	38501.68	100	
Ag	107	89	No Gas	0.012	ppb	27.8	858.92	100	
Ag	107	89	He	0.009	ppb	25.3	270.28	100	
Cd	108	89	No Gas	-0.068	ppb	N/A	73.41	100	
Ag	109	89	No Gas	0.014	ppb	5.7	570.59	100	
Cd	111	89	No Gas	0.012	ppb	36.3	-39.88	100	
Cd	114	89	No Gas	0.025	ppb	13.0	457.14	100	
Sn	118	115	No Gas	0.560	ppb	19.3	13017.70	100	
Sb	121	115	No Gas	0.197	ppb	15.2	6102.59	100	
Sb	121	89	He	0.190	ppb	13.3	1366.77	100	
Sb	123	115	No Gas	0.193	ppb	16.5	4575.46	100	
Ba	135	115	No Gas	0.074	ppb	13.7	460.48	100	
Ba	137	115	No Gas	0.069	ppb	19.9	720.76	100	
Tl	203	209	No Gas	0.121	ppb	24.0	3000.09	100	
Tl	205	209	No Gas	0.121	ppb	27.9	6979.10	100	
Pb	206	209	No Gas	0.606	ppb	8.2	15722.56	100	
Pb	207	209	No Gas	0.580	ppb	3.2	12873.07	100	
Pb	208	209	No Gas	0.591	ppb	3.9	60538.76	100	
Th	232	209	No Gas	0.148	ppb	33.3	12916.94	100	
U	238	209	No Gas	0.076	ppb	26.2	5376.74	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4143180.38	3.4	4905245.08	84.46	70	125	
Sc	45	No Gas	20284121.66	0.3	19588031.4	103.55	75	125	
Sc	45	He	834551.95	1.7	860992.42	96.93	75	125	
Y	89	No Gas	48383642.07	1.8	45698235	105.88	75	125	
Y	89	He	6440172.27	0.2	6413034.51	100.42	75	125	
In	115	No Gas	10333315.61	2.2	9919344.87	104.17	75	125	
Tb	159	No Gas	14164464.08	2.7	13963078.94	101.44	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8467518.83	2.9	8348524.39	101.43	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 164_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 18:37:58

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	102.211	ppb	8.1	2350037.65	100	102.21	90	110	
Be	9	6	No Gas	104.001	ppb	7.8	542829.99	100	104	90	110	
B	11	6	No Gas	261.258	ppb	7.7	898690.00	250	104.5	90	110	
Na	23	45	No Gas	10232.316	ppb	8.0	254318564.02	10000	102.32	90	110	
Na	23	45	He	9830.183	ppb	0.3	7225772.81	10000	98.3	90	110	
Mg	24	45	No Gas	10120.747	ppb	8.2	173844864.08	10000	101.21	90	110	
Mg	24	45	He	9666.431	ppb	0.9	3742744.00	10000	96.66	90	110	
Mg	25	45	No Gas	10198.662	ppb	8.7	22959297.99	10000	101.99	90	110	
Al	27	45	No Gas	101.983	ppb	8.2	2242483.40	100	101.98	90	110	
Al	27	45	He	95.937	ppb	3.6	15131.77	100	95.94	90	110	
Si	28	45	No Gas	10497.441	ppb	8.3	93236500.02	10000	104.97	90	110	
Si	29	45	No Gas	10558.360	ppb	8.2	5768068.50	10000	105.58	90	110	
K	39	45	No Gas	10633.515	ppb	7.4	247333576.31	10000	106.34	90	110	
K	39	45	He	10013.578	ppb	0.4	3067618.91	10000	100.14	90	110	
Ca	44	45	No Gas	10510.574	ppb	8.2	7498226.76	10000	105.11	90	110	
Ca	44	45	He	9957.898	ppb	0.7	167649.09	10000	99.58	90	110	
Ti	47	45	No Gas	104.853	ppb	8.0	229267.60	100	104.85	90	110	
V	51	45	No Gas	104.117	ppb	8.5	3143816.52	100	104.12	90	110	
V	51	45	He	100.036	ppb	1.1	398452.22	100	100.04	90	110	
Cr	52	89	No Gas	101.889	ppb	10.6	2851926.10	100	101.89	90	110	
Cr	52	89	He	99.311	ppb	0.8	495345.93	100	99.31	90	110	
Cr	53	89	No Gas	119.643	ppb	20.1	455946.43	100	119.64	90	110	Failed
Mn	55	89	No Gas	102.917	ppb	11.4	3818432.09	100	102.92	90	110	
Mn	55	89	He	98.256	ppb	0.4	269470.36	100	98.26	90	110	
Fe	56	89	No Gas	10250.186	ppb	11.2	275881647.83	10000	102.5	90	110	
Fe	56	89	He	9584.783	ppb	0.7	34065102.83	10000	95.85	90	110	
Co	59	89	No Gas	100.662	ppb	10.2	3067573.52	100	100.66	90	110	
Co	59	89	He	99.100	ppb	0.1	821353.86	100	99.1	90	110	
Ni	60	89	No Gas	100.420	ppb	10.5	676605.10	100	100.42	90	110	
Ni	60	89	He	97.962	ppb	0.3	223564.69	100	97.96	90	110	
Ni	62	89	No Gas	101.920	ppb	10.1	104821.96	100	101.92	90	110	
Cu	63	89	No Gas	96.834	ppb	10.3	1654766.75	100	96.83	90	110	
Cu	63	89	He	97.223	ppb	0.6	613267.92	100	97.22	90	110	
Cu	65	89	No Gas	96.971	ppb	10.8	783626.67	100	96.97	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	102.253	ppb	9.8	472108.36	100	102.25	90	110	
Zn	66	89	He	98.289	ppb	0.9	94941.45	100	98.29	90	110	
Zn	67	89	No Gas	103.239	ppb	10.7	74977.79	100	103.24	90	110	
Zn	68	89	No Gas	102.147	ppb	9.9	338315.94	100	102.15	90	110	
As	75	89	No Gas	103.268	ppb	9.1	500652.05	100	103.27	90	110	
As	75	89	He	98.532	ppb	0.2	68884.40	100	98.53	90	110	
Se	77	89	No Gas	134.487	ppb	29.2	42734.50	100	134.49	90	110	Failed
Se	78	89	No Gas	108.176	ppb	11.7	90163.18	100	108.18	90	110	
Se	78	89	He	97.542	ppb	3.1	4326.27	100	97.54	90	110	
Se	82	89	No Gas	103.267	ppb	9.0	30090.76	100	103.27	90	110	
[Se]	83	89	No Gas	502.596	ppb	60.6	2456.06	100	502.6	90	110	Failed
Sr	88	89	No Gas	106.355	ppb	9.8	4772893.53	100	106.36	90	110	
Mo	95	89	No Gas	103.885	ppb	10.4	885116.84	100	103.88	90	110	
Mo	97	89	No Gas	103.461	ppb	10.0	552201.40	100	103.46	90	110	
Mo	98	89	No Gas	103.309	ppb	10.1	1442174.13	100	103.31	90	110	
[Mo]	99	89	No Gas	81.835	ppb	147.8	23.36	100	81.83	90	110	Failed
Cd	106	89	No Gas	107.400	ppb	8.9	82647.82	100	107.4	90	110	
Ag	107	89	No Gas	103.921	ppb	10.3	2380598.59	100	103.92	90	110	
Ag	107	89	He	99.785	ppb	0.5	1132544.89	100	99.78	90	110	
Cd	108	89	No Gas	104.793	ppb	10.6	34024.88	100	104.79	90	110	
Ag	109	89	No Gas	103.806	ppb	10.5	2283168.07	100	103.81	90	110	
Cd	111	89	No Gas	104.244	ppb	9.7	468563.15	100	104.24	90	110	
Cd	114	89	No Gas	104.444	ppb	10.2	1247823.03	100	104.44	90	110	
Sn	118	115	No Gas	105.907	ppb	9.9	1570959.90	100	105.91	90	110	
Sb	121	115	No Gas	105.004	ppb	9.4	2236666.72	100	105	90	110	
Sb	121	89	He	99.885	ppb	0.6	485601.40	100	99.88	90	110	
Sb	123	115	No Gas	105.032	ppb	9.6	1724326.57	100	105.03	90	110	
Ba	135	115	No Gas	106.214	ppb	10.3	465050.10	100	106.21	90	110	
Ba	137	115	No Gas	106.393	ppb	9.8	813473.63	100	106.39	90	110	
Tl	203	209	No Gas	105.946	ppb	9.0	1951755.82	100	105.95	90	110	
Tl	205	209	No Gas	104.787	ppb	8.9	4573004.89	100	104.79	90	110	
Pb	206	209	No Gas	105.281	ppb	9.2	1564732.76	100	105.28	90	110	
Pb	207	209	No Gas	104.772	ppb	9.3	1304654.94	100	104.77	90	110	
Pb	208	209	No Gas	104.774	ppb	9.6	6079730.24	100	104.77	90	110	
Th	232	209	No Gas	102.595	ppb	8.9	6077394.70	100	102.6	90	110	
U	238	209	No Gas	101.624	ppb	9.4	5941892.53	100	101.62	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3777964.20	6.9	4905245.08	77.02	70	125	
Sc	45	No Gas	17332548.83	7.2	19588031.4	88.49	75	125	
Sc	45	He	769907.21	0.5	860992.42	89.42	75	125	
Y	89	No Gas	41542768.69	9.2	45698235	90.91	75	125	
Y	89	He	5885690.29	0.3	6413034.51	91.78	75	125	
In	115	No Gas	9039769.23	9.1	9919344.87	91.13	75	125	
Tb	159	No Gas	12805050.08	9.5	13963078.94	91.71	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7581693.87	9.1	8348524.39	90.81	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	165_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 18:39:42
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.544	ppb	6.2	230544.05	100	
Be	9	6	No Gas	0.018	ppb	5.3	113.45	100	
B	11	6	No Gas	4.151	ppb	8.4	17842.70	100	
Na	23	45	No Gas	58.393	ppb	1.4	2327318.87	500000	
Na	23	45	He	58.745	ppb	1.9	70367.46	500000	
Mg	24	45	No Gas	1.025	ppb	13.7	26387.35	500000	
Mg	24	45	He	0.931	ppb	36.6	480.04	500000	
Mg	25	45	No Gas	0.867	ppb	16.1	3373.94	500000	
Al	27	45	No Gas	-0.118	ppb	N/A	10845.14	500000	
Al	27	45	He	-0.293	ppb	N/A	53.33	500000	
Si	28	45	No Gas	7.295	ppb	25.1	512168.35	100	
Si	29	45	No Gas	-3.510	ppb	N/A	71454.24	100	
K	39	45	No Gas	17.508	ppb	7.8	4180464.62	500000	
K	39	45	He	7.838	ppb	49.3	26186.96	500000	
Ca	44	45	No Gas	-40.931	ppb	N/A	32012.89	500000	
Ca	44	45	He	2.393	ppb	55.7	133.34	500000	
Ti	47	45	No Gas	-0.050	ppb	N/A	300.31	10000	
V	51	45	No Gas	0.015	ppb	349.2	-6098.93	100	
V	51	45	He	0.043	ppb	76.0	687.38	100	
Cr	52	89	No Gas	0.084	ppb	10.7	33872.56	100	
Cr	52	89	He	-0.012	ppb	N/A	2359.27	100	
Cr	53	89	No Gas	3.748	ppb	5.3	85994.67	100	
Mn	55	89	No Gas	-0.063	ppb	N/A	7339.43	100	
Mn	55	89	He	0.000	ppb	17851.9	236.91	100	
Fe	56	89	No Gas	16.023	ppb	22.2	2698497.07	500000	
Fe	56	89	He	5.855	ppb	24.6	63404.22	500000	
Co	59	89	No Gas	0.002	ppb	14.4	1324.75	100	
Co	59	89	He	0.000	ppb	3781.6	283.63	100	
Ni	60	89	No Gas	0.019	ppb	147.5	1331.42	100	
Ni	60	89	He	-0.298	ppb	N/A	246.92	100	
Ni	62	89	No Gas	-0.028	ppb	N/A	4048.05	100	
Cu	63	89	No Gas	-4.113	ppb	N/A	14238.57	100	
Cu	63	89	He	-2.040	ppb	N/A	4248.34	100	
Cu	65	89	No Gas	-3.867	ppb	N/A	6721.85	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.167	ppb	11.2	2746.41	100	
Zn	66	89	He	-0.186	ppb	N/A	590.62	100	
Zn	67	89	No Gas	0.173	ppb	24.4	520.54	100	
Zn	68	89	No Gas	0.120	ppb	47.3	1968.82	100	
As	75	89	No Gas	0.259	ppb	73.4	4778.80	100	
As	75	89	He	0.039	ppb	67.8	68.89	100	
Se	77	89	No Gas	6.634	ppb	14.2	13647.47	100	
Se	78	89	No Gas	2.213	ppb	36.6	17175.03	100	
Se	78	89	He	0.124	ppb	204.5	26.67	100	
Se	82	89	No Gas	-0.369	ppb	N/A	-76.28	100	
[Se]	83	89	No Gas	273.147	ppb	80.8	2542.83	100	Failed
Sr	88	89	No Gas	0.013	ppb	15.8	994.38	100	
Mo	95	89	No Gas	0.017	ppb	203.4	2452.73	10000	
Mo	97	89	No Gas	0.016	ppb	452.6	1718.53	10000	
Mo	98	89	No Gas	-0.079	ppb	N/A	4183.47	10000	
[Mo]	99	89	No Gas	-0.721	ppb	N/A	10.01	10000	
Cd	106	89	No Gas	3.141	ppb	25.0	41764.63	100	
Ag	107	89	No Gas	0.017	ppb	6.4	966.71	100	
Ag	107	89	He	0.010	ppb	61.7	286.96	100	
Cd	108	89	No Gas	-0.012	ppb	N/A	90.09	100	
Ag	109	89	No Gas	0.018	ppb	12.1	630.66	100	
Cd	111	89	No Gas	0.008	ppb	12.3	-56.67	100	
Cd	114	89	No Gas	0.007	ppb	62.2	186.86	100	
Sn	118	115	No Gas	0.043	ppb	35.3	4128.45	100	
Sb	121	115	No Gas	0.015	ppb	24.1	1595.66	100	
Sb	121	89	He	0.020	ppb	54.1	453.35	100	
Sb	123	115	No Gas	0.020	ppb	6.5	1281.37	100	
Ba	135	115	No Gas	0.015	ppb	35.9	156.83	100	
Ba	137	115	No Gas	0.010	ppb	48.3	193.53	100	
Tl	203	209	No Gas	0.126	ppb	34.7	3003.44	100	
Tl	205	209	No Gas	0.111	ppb	27.0	6344.80	100	
Pb	206	209	No Gas	0.043	ppb	39.3	6177.80	100	
Pb	207	209	No Gas	0.051	ppb	16.1	5333.24	100	
Pb	208	209	No Gas	0.045	ppb	3.5	24320.64	100	
Th	232	209	No Gas	0.237	ppb	21.0	18339.34	100	
U	238	209	No Gas	0.090	ppb	21.3	6144.51	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4225864.09	0.0	4905245.08	86.15	70	125	
Sc	45	No Gas	19123477.27	0.6	19588031.4	97.63	75	125	
Sc	45	He	832021.46	0.8	860992.42	96.64	75	125	
Y	89	No Gas	46121064.49	0.5	45698235	100.93	75	125	
Y	89	He	6312425.77	0.2	6413034.51	98.43	75	125	
In	115	No Gas	10043674.95	0.6	9919344.87	101.25	75	125	
Tb	159	No Gas	13767106.72	0.8	13963078.94	98.6	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8209683.84	0.5	8348524.39	98.34	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 176_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 18:57:55

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.293	ppb	0.5	2294451.91	100	98.29	90	110	
Be	9	6	No Gas	101.857	ppb	0.5	538029.85	100	101.86	90	110	
B	11	6	No Gas	252.282	ppb	0.9	878224.37	250	100.91	90	110	
Na	23	45	No Gas	9668.429	ppb	0.3	246261763.84	10000	96.68	90	110	
Na	23	45	He	9689.659	ppb	0.4	6915267.81	10000	96.9	90	110	
Mg	24	45	No Gas	9603.159	ppb	0.6	169039247.48	10000	96.03	90	110	
Mg	24	45	He	9634.511	ppb	0.8	3621549.11	10000	96.35	90	110	
Mg	25	45	No Gas	9657.860	ppb	0.5	22285468.83	10000	96.58	90	110	
Al	27	45	No Gas	97.371	ppb	1.1	2194470.07	100	97.37	90	110	
Al	27	45	He	95.493	ppb	0.8	14621.22	100	95.49	90	110	
Si	28	45	No Gas	10022.772	ppb	0.1	91246606.79	10000	100.23	90	110	
Si	29	45	No Gas	10038.685	ppb	0.6	5623089.35	10000	100.39	90	110	
K	39	45	No Gas	10220.548	ppb	0.4	243639616.37	10000	102.21	90	110	
K	39	45	He	9816.591	ppb	1.1	2920077.77	10000	98.17	90	110	
Ca	44	45	No Gas	10081.932	ppb	1.1	7372243.02	10000	100.82	90	110	
Ca	44	45	He	9815.917	ppb	2.1	160431.40	10000	98.16	90	110	
Ti	47	45	No Gas	100.978	ppb	0.1	226254.27	100	100.98	90	110	
V	51	45	No Gas	98.066	ppb	0.4	3034471.98	100	98.07	90	110	
V	51	45	He	99.528	ppb	0.4	384887.95	100	99.53	90	110	
Cr	52	89	No Gas	95.280	ppb	0.6	2777105.03	100	95.28	90	110	
Cr	52	89	He	100.584	ppb	0.4	483018.57	100	100.58	90	110	
Cr	53	89	No Gas	109.217	ppb	3.5	440782.40	100	109.22	90	110	
Mn	55	89	No Gas	97.082	ppb	0.5	3750697.79	100	97.08	90	110	
Mn	55	89	He	98.755	ppb	1.1	260747.02	100	98.76	90	110	
Fe	56	89	No Gas	9693.840	ppb	0.7	271728689.40	10000	96.94	90	110	
Fe	56	89	He	9612.697	ppb	0.7	32892189.51	10000	96.13	90	110	
Co	59	89	No Gas	94.368	ppb	0.9	2992150.18	100	94.37	90	110	
Co	59	89	He	100.129	ppb	0.8	798962.71	100	100.13	90	110	
Ni	60	89	No Gas	94.871	ppb	1.2	665205.47	100	94.87	90	110	
Ni	60	89	He	98.258	ppb	0.9	215882.45	100	98.26	90	110	
Ni	62	89	No Gas	96.471	ppb	1.5	103396.77	100	96.47	90	110	
Cu	63	89	No Gas	90.492	ppb	1.1	1613933.62	100	90.49	90	110	
Cu	63	89	He	98.163	ppb	0.7	595985.02	100	98.16	90	110	
Cu	65	89	No Gas	91.252	ppb	0.8	769445.85	100	91.25	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.662	ppb	0.8	469101.42	100	97.66	90	110	
Zn	66	89	He	98.416	ppb	0.4	91531.59	100	98.42	90	110	
Zn	67	89	No Gas	96.813	ppb	1.1	73189.65	100	96.81	90	110	
Zn	68	89	No Gas	97.688	ppb	0.5	336616.98	100	97.69	90	110	
As	75	89	No Gas	97.370	ppb	1.3	490951.57	100	97.37	90	110	
As	75	89	He	101.163	ppb	0.9	68096.10	100	101.16	90	110	
Se	77	89	No Gas	125.377	ppb	2.3	42502.94	100	125.38	90	110	Failed
Se	78	89	No Gas	101.514	ppb	1.9	88893.14	100	101.51	90	110	
Se	78	89	He	96.669	ppb	3.9	4129.55	100	96.67	90	110	
Se	82	89	No Gas	98.410	ppb	1.5	29803.05	100	98.41	90	110	
[Se]	83	89	No Gas	402.027	ppb	81.6	2472.75	100	402.03	90	110	Failed
Sr	88	89	No Gas	100.008	ppb	0.2	4668282.04	100	100.01	90	110	
Mo	95	89	No Gas	98.264	ppb	0.5	871306.67	100	98.26	90	110	
Mo	97	89	No Gas	98.493	ppb	0.5	546929.66	100	98.49	90	110	
Mo	98	89	No Gas	97.481	ppb	0.4	1416011.01	100	97.48	90	110	
[Mo]	99	89	No Gas	54.602	ppb	93.9	20.02	100	54.6	90	110	Failed
Cd	106	89	No Gas	101.593	ppb	2.3	83102.57	100	101.59	90	110	
Ag	107	89	No Gas	98.002	ppb	0.4	2335870.95	100	98	90	110	
Ag	107	89	He	99.870	ppb	0.3	1091335.08	100	99.87	90	110	
Cd	108	89	No Gas	100.133	ppb	0.6	33834.04	100	100.13	90	110	
Ag	109	89	No Gas	97.917	ppb	0.5	2241041.67	100	97.92	90	110	
Cd	111	89	No Gas	98.899	ppb	0.3	462364.80	100	98.9	90	110	
Cd	114	89	No Gas	98.429	ppb	0.6	1223461.62	100	98.43	90	110	
Sn	118	115	No Gas	99.817	ppb	0.2	1532429.35	100	99.82	90	110	
Sb	121	115	No Gas	100.060	ppb	0.3	2205085.61	100	100.06	90	110	
Sb	121	89	He	101.250	ppb	1.1	473896.54	100	101.25	90	110	
Sb	123	115	No Gas	99.056	ppb	0.7	1682577.42	100	99.06	90	110	
Ba	135	115	No Gas	101.029	ppb	0.9	457866.62	100	101.03	90	110	
Ba	137	115	No Gas	101.335	ppb	1.2	801708.45	100	101.34	90	110	
Tl	203	209	No Gas	99.518	ppb	1.5	1931034.53	100	99.52	90	110	
Tl	205	209	No Gas	98.058	ppb	1.3	4507021.30	100	98.06	90	110	
Pb	206	209	No Gas	98.262	ppb	1.1	1538712.52	100	98.26	90	110	
Pb	207	209	No Gas	98.387	ppb	1.0	1290908.62	100	98.39	90	110	
Pb	208	209	No Gas	98.339	ppb	1.0	6013560.71	100	98.34	90	110	
Th	232	209	No Gas	93.871	ppb	0.3	5856930.69	100	93.87	90	110	
U	238	209	No Gas	94.875	ppb	1.2	5843926.65	100	94.88	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3809858.09	1.6	4905245.08	77.67	70	125	
Sc	45	No Gas	17692370.74	1.4	19588031.4	90.32	75	125	
Sc	45	He	747451.57	1.1	860992.42	86.81	75	125	
Y	89	No Gas	42950664.09	0.4	45698235	93.99	75	125	
Y	89	He	5666833.30	1.4	6413034.51	88.36	75	125	
In	115	No Gas	9298504.62	0.6	9919344.87	93.74	75	125	
Tb	159	No Gas	13217901.26	0.4	13963078.94	94.66	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7942299.13	0.6	8348524.39	95.13	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	177_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 18:59:39
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.505	ppb	13.2	215390.36	100	
Be	9	6	No Gas	0.020	ppb	58.7	116.78	100	
B	11	6	No Gas	3.651	ppb	8.1	14926.42	100	
Na	23	45	No Gas	35.712	ppb	2.4	1616652.97	500000	
Na	23	45	He	42.835	ppb	3.3	51792.68	500000	
Mg	24	45	No Gas	0.721	ppb	19.0	19534.91	500000	
Mg	24	45	He	0.745	ppb	15.3	360.03	500000	
Mg	25	45	No Gas	0.536	ppb	34.4	2413.75	500000	
Al	27	45	No Gas	-0.126	ppb	N/A	10097.72	500000	
Al	27	45	He	-0.038	ppb	N/A	86.67	500000	
Si	28	45	No Gas	3.502	ppb	40.1	450474.80	100	
Si	29	45	No Gas	-3.489	ppb	N/A	67772.28	100	
K	39	45	No Gas	18.863	ppb	3.5	3997556.81	500000	
K	39	45	He	11.050	ppb	8.2	24423.49	500000	
Ca	44	45	No Gas	-40.729	ppb	N/A	30516.04	500000	
Ca	44	45	He	4.057	ppb	127.0	146.68	500000	
Ti	47	45	No Gas	-0.026	ppb	N/A	340.35	10000	
V	51	45	No Gas	-0.003	ppb	N/A	-6324.30	100	
V	51	45	He	0.056	ppb	46.3	667.36	100	
Cr	52	89	No Gas	0.031	ppb	62.2	30986.10	100	
Cr	52	89	He	-0.008	ppb	N/A	2135.67	100	
Cr	53	89	No Gas	3.941	ppb	5.6	83308.93	100	
Mn	55	89	No Gas	-0.078	ppb	N/A	6478.10	100	
Mn	55	89	He	-0.012	ppb	N/A	180.19	100	
Fe	56	89	No Gas	6.287	ppb	39.1	2313634.62	500000	
Fe	56	89	He	9.205	ppb	8.8	68321.76	500000	
Co	59	89	No Gas	0.001	ppb	353.1	1224.64	100	
Co	59	89	He	0.003	ppb	162.4	280.29	100	
Ni	60	89	No Gas	-0.024	ppb	N/A	971.02	100	
Ni	60	89	He	-0.268	ppb	N/A	286.96	100	
Ni	62	89	No Gas	0.317	ppb	73.4	4258.33	100	
Cu	63	89	No Gas	-4.125	ppb	N/A	13477.04	100	
Cu	63	89	He	-2.061	ppb	N/A	3684.27	100	
Cu	65	89	No Gas	-3.854	ppb	N/A	6568.27	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.080	ppb	26.9	2212.44	100	
Zn	66	89	He	-0.246	ppb	N/A	473.82	100	
Zn	67	89	No Gas	0.173	ppb	42.2	500.52	100	
Zn	68	89	No Gas	0.030	ppb	118.1	1575.03	100	
As	75	89	No Gas	0.504	ppb	48.9	5866.09	100	
As	75	89	He	0.033	ppb	23.4	57.78	100	
Se	77	89	No Gas	6.544	ppb	23.0	13089.62	100	
Se	78	89	No Gas	2.259	ppb	18.4	16536.91	100	
Se	78	89	He	0.371	ppb	47.5	34.44	100	
Se	82	89	No Gas	0.105	ppb	174.6	74.96	100	
[Se]	83	89	No Gas	252.696	ppb	65.0	2426.02	100	Failed
Sr	88	89	No Gas	0.010	ppb	14.3	794.16	100	
Mo	95	89	No Gas	0.054	ppb	98.2	2699.69	10000	
Mo	97	89	No Gas	0.026	ppb	321.0	1705.18	10000	
Mo	98	89	No Gas	-0.042	ppb	N/A	4573.51	10000	
[Mo]	99	89	No Gas	18.205	ppb	159.0	13.35	10000	
Cd	106	89	No Gas	2.368	ppb	43.0	39773.00	100	
Ag	107	89	No Gas	0.016	ppb	9.4	888.93	100	
Ag	107	89	He	0.009	ppb	56.8	243.58	100	
Cd	108	89	No Gas	-0.021	ppb	N/A	83.42	100	
Ag	109	89	No Gas	0.015	ppb	24.0	540.56	100	
Cd	111	89	No Gas	0.009	ppb	33.6	-47.29	100	
Cd	114	89	No Gas	0.006	ppb	52.2	173.51	100	
Sn	118	115	No Gas	0.041	ppb	31.4	3912.82	100	
Sb	121	115	No Gas	0.011	ppb	19.9	1450.09	100	
Sb	121	89	He	0.005	ppb	63.0	333.34	100	
Sb	123	115	No Gas	0.011	ppb	52.7	1074.47	100	
Ba	135	115	No Gas	0.005	ppb	50.2	103.44	100	
Ba	137	115	No Gas	0.010	ppb	40.5	183.52	100	
Tl	203	209	No Gas	0.121	ppb	20.2	2913.31	100	
Tl	205	209	No Gas	0.122	ppb	18.5	6838.86	100	
Pb	206	209	No Gas	-0.054	ppb	N/A	4608.87	100	
Pb	207	209	No Gas	-0.054	ppb	N/A	3911.25	100	
Pb	208	209	No Gas	-0.055	ppb	N/A	18030.07	100	
Th	232	209	No Gas	0.435	ppb	15.8	31107.99	100	
U	238	209	No Gas	0.113	ppb	21.7	7606.85	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3964129.79	0.9	4905245.08	80.81	70	125	
Sc	45	No Gas	18137797.00	1.1	19588031.4	92.6	75	125	
Sc	45	He	746062.94	1.0	860992.42	86.65	75	125	
Y	89	No Gas	44319077.50	0.8	45698235	96.98	75	125	
Y	89	He	5662447.87	0.6	6413034.51	88.3	75	125	
In	115	No Gas	9599592.20	1.5	9919344.87	96.78	75	125	
Tb	159	No Gas	13415656.93	0.3	13963078.94	96.08	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8208658.01	0.7	8348524.39	98.32	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 188_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 19:17:30

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.460	ppb	0.5	2246681.53	100	98.46	90	110	
Be	9	6	No Gas	102.629	ppb	0.7	530035.09	100	102.63	90	110	
B	11	6	No Gas	255.827	ppb	1.0	870698.46	250	102.33	90	110	
Na	23	45	No Gas	9512.126	ppb	0.6	242566205.42	10000	95.12	90	110	
Na	23	45	He	9858.737	ppb	1.2	6981123.02	10000	98.59	90	110	
Mg	24	45	No Gas	9523.069	ppb	0.6	167822784.16	10000	95.23	90	110	
Mg	24	45	He	9663.088	ppb	1.6	3604316.30	10000	96.63	90	110	
Mg	25	45	No Gas	9557.546	ppb	0.6	22079661.34	10000	95.58	90	110	
Al	27	45	No Gas	95.388	ppb	0.6	2152630.75	100	95.39	90	110	
Al	27	45	He	96.618	ppb	3.3	14677.96	100	96.62	90	110	
Si	28	45	No Gas	9862.589	ppb	0.4	89897414.26	10000	98.63	90	110	
Si	29	45	No Gas	9943.091	ppb	0.4	5576774.70	10000	99.43	90	110	
K	39	45	No Gas	10106.944	ppb	0.5	241246169.74	10000	101.07	90	110	
K	39	45	He	9922.151	ppb	0.2	2928520.68	10000	99.22	90	110	
Ca	44	45	No Gas	10026.337	ppb	0.8	7340861.77	10000	100.26	90	110	
Ca	44	45	He	9880.497	ppb	0.0	160255.28	10000	98.8	90	110	
Ti	47	45	No Gas	100.540	ppb	0.7	225526.44	100	100.54	90	110	
V	51	45	No Gas	98.011	ppb	0.7	3036279.57	100	98.01	90	110	
V	51	45	He	100.710	ppb	0.8	386443.48	100	100.71	90	110	
Cr	52	89	No Gas	94.928	ppb	0.6	2770895.28	100	94.93	90	110	
Cr	52	89	He	101.004	ppb	0.6	482353.10	100	101	90	110	
Cr	53	89	No Gas	93.814	ppb	1.6	388643.34	100	93.81	90	110	
Mn	55	89	No Gas	96.399	ppb	0.3	3729718.37	100	96.4	90	110	
Mn	55	89	He	98.525	ppb	0.5	258728.46	100	98.52	90	110	
Fe	56	89	No Gas	9558.446	ppb	0.7	268343339.33	10000	95.58	90	110	
Fe	56	89	He	9624.900	ppb	0.6	32754387.84	10000	96.25	90	110	
Co	59	89	No Gas	94.336	ppb	0.4	2995468.81	100	94.34	90	110	
Co	59	89	He	100.470	ppb	1.1	797333.90	100	100.47	90	110	
Ni	60	89	No Gas	95.405	ppb	0.8	669912.39	100	95.4	90	110	
Ni	60	89	He	98.704	ppb	1.2	215674.65	100	98.7	90	110	
Ni	62	89	No Gas	96.155	ppb	1.6	103221.63	100	96.16	90	110	
Cu	63	89	No Gas	89.733	ppb	1.0	1603406.69	100	89.73	90	110	Failed
Cu	63	89	He	98.428	ppb	0.2	594325.45	100	98.43	90	110	
Cu	65	89	No Gas	91.385	ppb	0.6	771619.59	100	91.38	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.997	ppb	0.7	471386.91	100	98	90	110	
Zn	66	89	He	98.604	ppb	0.5	91198.90	100	98.6	90	110	
Zn	67	89	No Gas	97.460	ppb	0.9	73783.41	100	97.46	90	110	
Zn	68	89	No Gas	97.938	ppb	0.6	337956.00	100	97.94	90	110	
As	75	89	No Gas	98.506	ppb	0.6	497366.65	100	98.51	90	110	
As	75	89	He	101.026	ppb	0.7	67628.14	100	101.03	90	110	
Se	77	89	No Gas	93.991	ppb	2.2	34676.07	100	93.99	90	110	
Se	78	89	No Gas	101.981	ppb	2.3	89367.11	100	101.98	90	110	
Se	78	89	He	94.457	ppb	4.4	4011.73	100	94.46	90	110	
Se	82	89	No Gas	100.805	ppb	1.1	30572.18	100	100.8	90	110	
[Se]	83	89	No Gas	402.132	ppb	31.8	2476.08	100	402.13	90	110	Failed
Sr	88	89	No Gas	100.410	ppb	0.4	4693858.87	100	100.41	90	110	
Mo	95	89	No Gas	98.146	ppb	0.9	871508.88	100	98.15	90	110	
Mo	97	89	No Gas	98.039	ppb	1.3	545193.68	100	98.04	90	110	
Mo	98	89	No Gas	97.393	ppb	0.8	1416771.51	100	97.39	90	110	
[Mo]	99	89	No Gas	106.130	ppb	84.1	30.03	100	106.13	90	110	
Cd	106	89	No Gas	104.142	ppb	2.1	84368.44	100	104.14	90	110	
Ag	107	89	No Gas	98.298	ppb	0.0	2346338.10	100	98.3	90	110	
Ag	107	89	He	100.535	ppb	0.1	1092605.37	100	100.54	90	110	
Cd	108	89	No Gas	99.432	ppb	1.0	33646.68	100	99.43	90	110	
Ag	109	89	No Gas	98.015	ppb	0.8	2246524.76	100	98.02	90	110	
Cd	111	89	No Gas	99.882	ppb	0.6	467635.48	100	99.88	90	110	
Cd	114	89	No Gas	98.784	ppb	0.4	1229664.17	100	98.78	90	110	
Sn	118	115	No Gas	99.904	ppb	0.4	1540672.30	100	99.9	90	110	
Sb	121	115	No Gas	99.799	ppb	0.6	2209263.87	100	99.8	90	110	
Sb	121	89	He	101.300	ppb	0.9	471561.45	100	101.3	90	110	
Sb	123	115	No Gas	99.005	ppb	0.8	1689317.08	100	99	90	110	
Ba	135	115	No Gas	101.775	ppb	0.8	463344.71	100	101.78	90	110	
Ba	137	115	No Gas	101.949	ppb	0.6	810237.40	100	101.95	90	110	
Tl	203	209	No Gas	98.608	ppb	0.9	1940519.27	100	98.61	90	110	
Tl	205	209	No Gas	98.795	ppb	1.5	4605241.19	100	98.8	90	110	
Pb	206	209	No Gas	98.892	ppb	0.8	1570523.81	100	98.89	90	110	
Pb	207	209	No Gas	98.184	ppb	0.1	1306576.32	100	98.18	90	110	
Pb	208	209	No Gas	98.153	ppb	0.4	6087572.69	100	98.15	90	110	
Th	232	209	No Gas	94.489	ppb	0.9	5979098.28	100	94.49	90	110	
U	238	209	No Gas	95.609	ppb	1.1	5972876.01	100	95.61	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3724876.50	1.2	4905245.08	75.94	70	125	
Sc	45	No Gas	17712496.28	0.8	19588031.4	90.43	75	125	
Sc	45	He	741721.85	0.7	860992.42	86.15	75	125	
Y	89	No Gas	43012777.86	0.2	45698235	94.12	75	125	
Y	89	He	5635799.14	0.8	6413034.51	87.88	75	125	
In	115	No Gas	9340635.30	0.7	9919344.87	94.17	75	125	
Tb	159	No Gas	13301103.21	0.4	13963078.94	95.26	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8054941.62	0.7	8348524.39	96.48	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	189_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 19:19:15
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.514	ppb	10.0	209486.55	100	
Be	9	6	No Gas	0.026	ppb	24.0	143.48	100	
B	11	6	No Gas	3.792	ppb	12.8	14996.54	100	
Na	23	45	No Gas	18.571	ppb	1.9	1159346.77	500000	
Na	23	45	He	22.374	ppb	7.0	38829.69	500000	
Mg	24	45	No Gas	0.579	ppb	26.9	16811.37	500000	
Mg	24	45	He	0.839	ppb	82.1	413.37	500000	
Mg	25	45	No Gas	0.323	ppb	40.3	1893.59	500000	
Al	27	45	No Gas	-0.158	ppb	N/A	9283.96	500000	
Al	27	45	He	0.087	ppb	125.6	110.00	500000	
Si	28	45	No Gas	1.139	ppb	85.6	424514.74	100	
Si	29	45	No Gas	-2.856	ppb	N/A	67497.23	100	
K	39	45	No Gas	19.019	ppb	2.1	3963613.27	500000	
K	39	45	He	8.993	ppb	45.7	24810.70	500000	
Ca	44	45	No Gas	-39.771	ppb	N/A	30930.29	500000	
Ca	44	45	He	2.134	ppb	222.4	120.01	500000	
Ti	47	45	No Gas	-0.046	ppb	N/A	290.30	10000	
V	51	45	No Gas	0.188	ppb	39.3	-300.07	100	
V	51	45	He	0.017	ppb	115.3	537.22	100	
Cr	52	89	No Gas	-0.121	ppb	N/A	26368.73	100	
Cr	52	89	He	-0.041	ppb	N/A	2065.59	100	
Cr	53	89	No Gas	-3.786	ppb	N/A	55879.84	100	
Mn	55	89	No Gas	-0.077	ppb	N/A	6471.48	100	
Mn	55	89	He	-0.012	ppb	N/A	190.20	100	
Fe	56	89	No Gas	1.981	ppb	167.5	2183184.10	500000	
Fe	56	89	He	7.437	ppb	20.6	65132.50	500000	
Co	59	89	No Gas	0.003	ppb	99.4	1301.39	100	
Co	59	89	He	-0.003	ppb	N/A	240.25	100	
Ni	60	89	No Gas	-0.015	ppb	N/A	1034.43	100	
Ni	60	89	He	-0.314	ppb	N/A	193.53	100	
Ni	62	89	No Gas	0.232	ppb	106.2	4154.86	100	
Cu	63	89	No Gas	-4.076	ppb	N/A	14275.32	100	
Cu	63	89	He	-2.001	ppb	N/A	4231.63	100	
Cu	65	89	No Gas	-3.887	ppb	N/A	6274.49	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.059	ppb	16.2	2098.97	100	
Zn	66	89	He	-0.397	ppb	N/A	350.36	100	
Zn	67	89	No Gas	0.025	ppb	396.5	383.73	100	
Zn	68	89	No Gas	0.040	ppb	11.2	1605.07	100	
As	75	89	No Gas	0.642	ppb	6.4	6554.34	100	
As	75	89	He	0.031	ppb	47.3	58.89	100	
Se	77	89	No Gas	-8.610	ppb	N/A	9139.07	100	
Se	78	89	No Gas	1.808	ppb	22.7	16146.00	100	
Se	78	89	He	0.186	ppb	103.4	27.78	100	
Se	82	89	No Gas	0.324	ppb	483.3	144.01	100	
[Se]	83	89	No Gas	398.135	ppb	83.9	2539.50	100	Failed
Sr	88	89	No Gas	0.006	ppb	10.9	597.29	100	
Mo	95	89	No Gas	0.052	ppb	117.8	2669.67	10000	
Mo	97	89	No Gas	0.022	ppb	279.0	1675.15	10000	
Mo	98	89	No Gas	-0.053	ppb	N/A	4388.98	10000	
[Mo]	99	89	No Gas	51.996	ppb	97.2	20.02	10000	
Cd	106	89	No Gas	4.096	ppb	31.4	40449.11	100	
Ag	107	89	No Gas	0.019	ppb	15.4	957.82	100	
Ag	107	89	He	0.014	ppb	24.5	310.32	100	
Cd	108	89	No Gas	0.057	ppb	175.2	110.11	100	
Ag	109	89	No Gas	0.019	ppb	10.0	617.31	100	
Cd	111	89	No Gas	0.002	ppb	380.7	-83.70	100	
Cd	114	89	No Gas	0.005	ppb	130.2	153.49	100	
Sn	118	115	No Gas	0.040	ppb	59.8	3895.04	100	
Sb	121	115	No Gas	0.058	ppb	29.3	2510.26	100	
Sb	121	89	He	0.090	ppb	5.8	766.70	100	
Sb	123	115	No Gas	0.060	ppb	23.7	1925.44	100	
Ba	135	115	No Gas	0.008	ppb	140.4	120.12	100	
Ba	137	115	No Gas	0.016	ppb	25.2	230.24	100	
Tl	203	209	No Gas	0.122	ppb	26.5	2943.36	100	
Tl	205	209	No Gas	0.119	ppb	26.5	6725.38	100	
Pb	206	209	No Gas	-0.066	ppb	N/A	4431.97	100	
Pb	207	209	No Gas	-0.082	ppb	N/A	3547.46	100	
Pb	208	209	No Gas	-0.074	ppb	N/A	16911.74	100	
Th	232	209	No Gas	0.375	ppb	18.4	27351.94	100	
U	238	209	No Gas	0.096	ppb	20.0	6528.42	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3851822.40	0.8	4905245.08	78.52	70	125	
Sc	45	No Gas	17966574.95	1.0	19588031.4	91.72	75	125	
Sc	45	He	777364.99	0.5	860992.42	90.29	75	125	
Y	89	No Gas	44182195.62	0.5	45698235	96.68	75	125	
Y	89	He	5927125.47	1.4	6413034.51	92.42	75	125	
In	115	No Gas	9594291.33	1.0	9919344.87	96.72	75	125	
Tb	159	No Gas	13378334.19	0.8	13963078.94	95.81	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8243052.45	0.2	8348524.39	98.74	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	202_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 19:41:41
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.984	ppb	0.5	2109036.23	100	98.98	90	110	
Be	9	6	No Gas	104.659	ppb	1.3	504928.65	100	104.66	90	110	
B	11	6	No Gas	363.109	ppb	1.3	1153896.90	250	145.24	90	110	Failed
Na	23	45	No Gas	9283.101	ppb	0.8	239412188.68	10000	92.83	90	110	
Na	23	45	He	9663.456	ppb	0.9	6863035.73	10000	96.63	90	110	
Mg	24	45	No Gas	9252.608	ppb	0.5	164895924.21	10000	92.53	90	110	
Mg	24	45	He	9582.160	ppb	1.2	3584336.20	10000	95.82	90	110	
Mg	25	45	No Gas	9368.222	ppb	0.2	21884884.67	10000	93.68	90	110	
Al	27	45	No Gas	94.636	ppb	0.5	2159782.05	100	94.64	90	110	
Al	27	45	He	93.766	ppb	4.1	14297.58	100	93.77	90	110	
Si	28	45	No Gas	9766.425	ppb	0.6	90023970.82	10000	97.66	90	110	
Si	29	45	No Gas	9798.088	ppb	0.1	5558150.25	10000	97.98	90	110	
K	39	45	No Gas	10154.613	ppb	0.9	245094943.01	10000	101.55	90	110	
K	39	45	He	9871.653	ppb	0.6	2922018.19	10000	98.72	90	110	
Ca	44	45	No Gas	10020.831	ppb	1.0	7419256.76	10000	100.21	90	110	
Ca	44	45	He	9639.207	ppb	1.0	156813.29	10000	96.39	90	110	
Ti	47	45	No Gas	101.236	ppb	0.1	229640.39	100	101.24	90	110	
V	51	45	No Gas	98.633	ppb	0.4	3089959.47	100	98.63	90	110	
V	51	45	He	102.030	ppb	0.3	392643.41	100	102.03	90	110	
Cr	52	89	No Gas	92.919	ppb	0.7	2802125.46	100	92.92	90	110	
Cr	52	89	He	99.702	ppb	1.4	485837.99	100	99.7	90	110	
Cr	53	89	No Gas	89.470	ppb	1.3	386063.19	100	89.47	90	110	Failed
Mn	55	89	No Gas	95.497	ppb	1.0	3816431.23	100	95.5	90	110	
Mn	55	89	He	97.753	ppb	0.9	261952.17	100	97.75	90	110	
Fe	56	89	No Gas	9530.286	ppb	1.8	276357564.51	10000	95.3	90	110	
Fe	56	89	He	9687.208	ppb	0.6	33639537.00	10000	96.87	90	110	
Co	59	89	No Gas	92.674	ppb	0.7	3039500.76	100	92.67	90	110	
Co	59	89	He	100.633	ppb	1.1	814918.41	100	100.63	90	110	
Ni	60	89	No Gas	92.952	ppb	0.8	674186.77	100	92.95	90	110	
Ni	60	89	He	99.570	ppb	0.4	222031.78	100	99.57	90	110	
Ni	62	89	No Gas	93.816	ppb	1.1	104119.04	100	93.82	90	110	
Cu	63	89	No Gas	89.006	ppb	0.8	1643422.49	100	89.01	90	110	Failed
Cu	63	89	He	99.377	ppb	0.6	612157.24	100	99.38	90	110	
Cu	65	89	No Gas	89.815	ppb	1.7	783961.49	100	89.82	90	110	Failed

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	95.462	ppb	0.6	474340.20	100	95.46	90	110	
Zn	66	89	He	98.283	ppb	0.8	92774.24	100	98.28	90	110	
Zn	67	89	No Gas	95.528	ppb	1.0	74709.02	100	95.53	90	110	
Zn	68	89	No Gas	96.259	ppb	1.2	343111.43	100	96.26	90	110	
As	75	89	No Gas	97.267	ppb	0.2	507313.30	100	97.27	90	110	
As	75	89	He	101.024	ppb	0.3	69010.73	100	101.02	90	110	
Se	77	89	No Gas	87.188	ppb	4.2	34050.64	100	87.19	90	110	Failed
Se	78	89	No Gas	101.430	ppb	0.9	91889.71	100	101.43	90	110	
Se	78	89	He	98.446	ppb	1.8	4267.37	100	98.45	90	110	
Se	82	89	No Gas	97.065	ppb	1.4	30407.86	100	97.06	90	110	
[Se]	83	89	No Gas	384.679	ppb	33.2	2542.83	100	384.68	90	110	Failed
Sr	88	89	No Gas	99.966	ppb	0.4	4826825.07	100	99.97	90	110	
Mo	95	89	No Gas	97.957	ppb	0.4	898460.81	100	97.96	90	110	
Mo	97	89	No Gas	98.191	ppb	0.3	564004.62	100	98.19	90	110	
Mo	98	89	No Gas	97.497	ppb	0.4	1464944.58	100	97.5	90	110	
[Mo]	99	89	No Gas	51.320	ppb	257.2	20.02	100	51.32	90	110	Failed
Cd	106	89	No Gas	100.699	ppb	1.9	85543.53	100	100.7	90	110	
Ag	107	89	No Gas	98.230	ppb	0.4	2421859.42	100	98.23	90	110	
Ag	107	89	He	101.263	ppb	0.4	1123022.35	100	101.26	90	110	
Cd	108	89	No Gas	99.692	ppb	2.3	34844.36	100	99.69	90	110	
Ag	109	89	No Gas	97.763	ppb	0.8	2314465.77	100	97.76	90	110	
Cd	111	89	No Gas	98.849	ppb	0.2	478026.06	100	98.85	90	110	
Cd	114	89	No Gas	98.742	ppb	0.2	1269578.46	100	98.74	90	110	
Sn	118	115	No Gas	99.232	ppb	0.5	1583900.15	100	99.23	90	110	
Sb	121	115	No Gas	99.072	ppb	0.7	2269924.42	100	99.07	90	110	
Sb	121	89	He	101.061	ppb	0.9	480025.93	100	101.06	90	110	
Sb	123	115	No Gas	98.761	ppb	0.7	1744152.91	100	98.76	90	110	
Ba	135	115	No Gas	99.848	ppb	0.5	470478.62	100	99.85	90	110	
Ba	137	115	No Gas	99.692	ppb	0.5	820035.79	100	99.69	90	110	
Tl	203	209	No Gas	99.329	ppb	0.5	1991838.36	100	99.33	90	110	
Tl	205	209	No Gas	98.865	ppb	1.2	4695933.55	100	98.86	90	110	
Pb	206	209	No Gas	99.253	ppb	0.4	1606184.73	100	99.25	90	110	
Pb	207	209	No Gas	99.230	ppb	0.3	1345493.21	100	99.23	90	110	
Pb	208	209	No Gas	98.746	ppb	0.5	6240516.47	100	98.75	90	110	
Th	232	209	No Gas	94.912	ppb	0.9	6119940.58	100	94.91	90	110	
U	238	209	No Gas	95.366	ppb	1.0	6070751.60	100	95.37	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3479659.71	0.2	4905245.08	70.94	70	125	
Sc	45	No Gas	17911468.17	0.5	19588031.4	91.44	75	125	
Sc	45	He	743884.05	1.9	860992.42	86.4	75	125	
Y	89	No Gas	44427884.64	0.2	45698235	97.22	75	125	
Y	89	He	5751191.20	1.9	6413034.51	89.68	75	125	
In	115	No Gas	9667475.57	0.4	9919344.87	97.46	75	125	
Tb	159	No Gas	13620258.62	0.6	13963078.94	97.54	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8207850.23	0.9	8348524.39	98.31	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	203_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 19:43:25
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.488	ppb	10.0	200875.68	100	
Be	9	6	No Gas	0.035	ppb	25.3	183.52	100	
B	11	6	No Gas	78.814	ppb	3.1	267790.75	100	
Na	23	45	No Gas	36.561	ppb	1.9	1671162.47	500000	
Na	23	45	He	41.246	ppb	4.0	53840.46	500000	
Mg	24	45	No Gas	1.169	ppb	10.8	28164.54	500000	
Mg	24	45	He	1.256	ppb	4.7	586.72	500000	
Mg	25	45	No Gas	1.123	ppb	10.8	3880.82	500000	
Al	27	45	No Gas	-0.014	ppb	N/A	12927.07	500000	
Al	27	45	He	-0.174	ppb	N/A	70.00	500000	
Si	28	45	No Gas	8.148	ppb	24.0	503371.03	100	
Si	29	45	No Gas	-0.211	ppb	N/A	71008.27	100	
K	39	45	No Gas	14.541	ppb	10.5	3970312.23	500000	
K	39	45	He	5.489	ppb	56.9	24209.33	500000	
Ca	44	45	No Gas	-43.118	ppb	N/A	29312.97	500000	
Ca	44	45	He	2.746	ppb	128.1	133.35	500000	
Ti	47	45	No Gas	-0.038	ppb	N/A	316.99	10000	
V	51	45	No Gas	0.166	ppb	40.8	-1019.71	100	
V	51	45	He	0.003	ppb	971.4	490.51	100	
Cr	52	89	No Gas	-0.141	ppb	N/A	26602.60	100	
Cr	52	89	He	-0.024	ppb	N/A	2212.44	100	
Cr	53	89	No Gas	-5.283	ppb	N/A	52235.27	100	
Mn	55	89	No Gas	0.340	ppb	7.0	23737.87	100	
Mn	55	89	He	0.446	ppb	4.6	1491.60	100	
Fe	56	89	No Gas	8.852	ppb	34.1	2456181.11	500000	
Fe	56	89	He	7.428	ppb	12.5	66940.44	500000	
Co	59	89	No Gas	0.015	ppb	39.3	1748.56	100	
Co	59	89	He	-0.003	ppb	N/A	250.26	100	
Ni	60	89	No Gas	-0.017	ppb	N/A	1054.45	100	
Ni	60	89	He	-0.275	ppb	N/A	290.30	100	
Ni	62	89	No Gas	-0.136	ppb	N/A	3884.52	100	
Cu	63	89	No Gas	-4.051	ppb	N/A	15183.85	100	
Cu	63	89	He	-1.945	ppb	N/A	4698.95	100	
Cu	65	89	No Gas	-3.772	ppb	N/A	7452.93	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.055	ppb	50.9	2145.69	100	
Zn	66	89	He	-0.420	ppb	N/A	337.01	100	
Zn	67	89	No Gas	0.022	ppb	77.0	393.74	100	
Zn	68	89	No Gas	-0.008	ppb	N/A	1481.58	100	
As	75	89	No Gas	0.515	ppb	15.6	6089.25	100	
As	75	89	He	0.015	ppb	62.2	48.89	100	
Se	77	89	No Gas	-12.457	ppb	N/A	8407.81	100	
Se	78	89	No Gas	2.591	ppb	16.5	17275.18	100	
Se	78	89	He	0.243	ppb	184.8	31.11	100	
Se	82	89	No Gas	0.290	ppb	122.8	136.55	100	
[Se]	83	89	No Gas	403.321	ppb	11.6	2626.26	100	Failed
Sr	88	89	No Gas	0.008	ppb	25.2	730.77	100	
Mo	95	89	No Gas	0.047	ppb	156.8	2713.06	10000	
Mo	97	89	No Gas	0.000	ppb	13363.7	1605.07	10000	
Mo	98	89	No Gas	-0.053	ppb	N/A	4523.93	10000	
[Mo]	99	89	No Gas	0.222	ppb	21907.4	10.01	10000	
Cd	106	89	No Gas	2.429	ppb	22.0	40954.64	100	
Ag	107	89	No Gas	0.020	ppb	7.9	1031.16	100	
Ag	107	89	He	0.013	ppb	15.2	313.66	100	
Cd	108	89	No Gas	-0.093	ppb	N/A	60.06	100	
Ag	109	89	No Gas	0.021	ppb	22.0	697.40	100	
Cd	111	89	No Gas	0.013	ppb	25.9	-30.00	100	
Cd	114	89	No Gas	0.006	ppb	38.7	176.85	100	
Sn	118	115	No Gas	0.043	ppb	50.3	4069.54	100	
Sb	121	115	No Gas	0.019	ppb	29.8	1677.90	100	
Sb	121	89	He	0.016	ppb	80.8	416.68	100	
Sb	123	115	No Gas	0.028	ppb	17.2	1408.17	100	
Ba	135	115	No Gas	0.005	ppb	109.7	106.77	100	
Ba	137	115	No Gas	0.004	ppb	103.1	143.48	100	
Tl	203	209	No Gas	0.131	ppb	18.0	3160.30	100	
Tl	205	209	No Gas	0.133	ppb	24.4	7466.56	100	
Pb	206	209	No Gas	-0.113	ppb	N/A	3700.99	100	
Pb	207	209	No Gas	-0.115	ppb	N/A	3126.91	100	
Pb	208	209	No Gas	-0.120	ppb	N/A	14120.78	100	
Th	232	209	No Gas	0.293	ppb	20.2	22239.81	100	
U	238	209	No Gas	0.098	ppb	22.4	6755.46	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3703511.79	0.9	4905245.08	75.5	70	125	
Sc	45	No Gas	18496139.93	1.0	19588031.4	94.43	75	125	
Sc	45	He	792764.43	0.2	860992.42	92.08	75	125	
Y	89	No Gas	45601182.94	0.5	45698235	99.79	75	125	
Y	89	He	6089809.40	0.4	6413034.51	94.96	75	125	
In	115	No Gas	9914709.99	0.5	9919344.87	99.95	75	125	
Tb	159	No Gas	13789233.43	0.0	13963078.94	98.75	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8327074.67	0.4	8348524.39	99.74	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 214_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 20:01:58

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.306	ppb	0.2	2106396.35	100	99.31	90	110	
Be	9	6	No Gas	105.840	ppb	0.4	508476.16	100	105.84	90	110	
B	11	6	No Gas	282.973	ppb	0.7	895770.09	250	113.19	90	110	Failed
Na	23	45	No Gas	9221.829	ppb	0.2	235261946.93	10000	92.22	90	110	
Na	23	45	He	9601.406	ppb	0.5	6893982.60	10000	96.01	90	110	
Mg	24	45	No Gas	9251.447	ppb	0.4	163094107.57	10000	92.51	90	110	
Mg	24	45	He	9552.903	ppb	0.7	3612762.45	10000	95.53	90	110	
Mg	25	45	No Gas	9342.425	ppb	0.4	21588727.18	10000	93.42	90	110	
Al	27	45	No Gas	94.398	ppb	0.4	2131149.97	100	94.4	90	110	
Al	27	45	He	94.400	ppb	3.0	14544.50	100	94.4	90	110	
Si	28	45	No Gas	9740.496	ppb	0.6	88815045.23	10000	97.4	90	110	
Si	29	45	No Gas	9808.320	ppb	0.8	5503603.82	10000	98.08	90	110	
K	39	45	No Gas	10135.999	ppb	0.3	242008849.73	10000	101.36	90	110	
K	39	45	He	9801.682	ppb	0.6	2933295.58	10000	98.02	90	110	
Ca	44	45	No Gas	10027.720	ppb	0.8	7344252.18	10000	100.28	90	110	
Ca	44	45	He	9792.739	ppb	1.0	161034.57	10000	97.93	90	110	
Ti	47	45	No Gas	100.646	ppb	0.9	225834.31	100	100.65	90	110	
V	51	45	No Gas	97.637	ppb	0.2	3025697.74	100	97.64	90	110	
V	51	45	He	100.923	ppb	0.3	392632.09	100	100.92	90	110	
Cr	52	89	No Gas	93.408	ppb	0.3	2765932.19	100	93.41	90	110	
Cr	52	89	He	100.512	ppb	0.2	491462.41	100	100.51	90	110	
Cr	53	89	No Gas	89.978	ppb	0.8	380855.57	100	89.98	90	110	Failed
Mn	55	89	No Gas	96.092	ppb	0.3	3770911.12	100	96.09	90	110	
Mn	55	89	He	97.879	ppb	1.1	263163.04	100	97.88	90	110	
Fe	56	89	No Gas	9509.093	ppb	0.7	270775239.39	10000	95.09	90	110	
Fe	56	89	He	9558.076	ppb	0.2	33303252.00	10000	95.58	90	110	
Co	59	89	No Gas	93.139	ppb	0.6	2999605.76	100	93.14	90	110	
Co	59	89	He	100.704	ppb	0.7	818242.05	100	100.7	90	110	
Ni	60	89	No Gas	93.998	ppb	0.8	669448.41	100	94	90	110	
Ni	60	89	He	98.951	ppb	0.5	221376.95	100	98.95	90	110	
Ni	62	89	No Gas	95.039	ppb	1.3	103520.80	100	95.04	90	110	
Cu	63	89	No Gas	90.095	ppb	0.8	1632477.12	100	90.1	90	110	
Cu	63	89	He	97.977	ppb	0.6	605775.63	100	97.98	90	110	
Cu	65	89	No Gas	91.263	ppb	0.7	781620.48	100	91.26	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	96.629	ppb	1.2	471446.70	100	96.63	90	110	
Zn	66	89	He	98.664	ppb	1.7	93426.16	100	98.66	90	110	
Zn	67	89	No Gas	96.784	ppb	1.0	74319.84	100	96.78	90	110	
Zn	68	89	No Gas	97.046	ppb	0.3	339672.41	100	97.05	90	110	
As	75	89	No Gas	98.701	ppb	0.6	505455.22	100	98.7	90	110	
As	75	89	He	99.664	ppb	0.7	68308.28	100	99.66	90	110	
Se	77	89	No Gas	83.976	ppb	1.3	32618.76	100	83.98	90	110	Failed
Se	78	89	No Gas	101.594	ppb	1.6	90354.61	100	101.59	90	110	
Se	78	89	He	93.315	ppb	0.5	4058.41	100	93.32	90	110	
Se	82	89	No Gas	98.605	ppb	1.5	30333.86	100	98.6	90	110	
[Se]	83	89	No Gas	520.612	ppb	41.2	2609.57	100	520.61	90	110	Failed
Sr	88	89	No Gas	99.991	ppb	0.4	4740977.44	100	99.99	90	110	
Mo	95	89	No Gas	98.021	ppb	0.0	882819.62	100	98.02	90	110	
Mo	97	89	No Gas	98.542	ppb	0.9	555804.41	100	98.54	90	110	
Mo	98	89	No Gas	98.173	ppb	0.3	1448460.96	100	98.17	90	110	
[Mo]	99	89	No Gas	52.870	ppb	191.6	20.02	100	52.87	90	110	Failed
Cd	106	89	No Gas	101.808	ppb	1.8	84506.41	100	101.81	90	110	
Ag	107	89	No Gas	98.399	ppb	0.3	2382228.24	100	98.4	90	110	
Ag	107	89	He	99.937	ppb	0.5	1111997.89	100	99.94	90	110	
Cd	108	89	No Gas	98.978	ppb	0.8	33971.16	100	98.98	90	110	
Ag	109	89	No Gas	97.963	ppb	0.5	2277388.38	100	97.96	90	110	
Cd	111	89	No Gas	99.158	ppb	0.1	470869.97	100	99.16	90	110	
Cd	114	89	No Gas	98.326	ppb	0.4	1241438.65	100	98.33	90	110	
Sn	118	115	No Gas	99.350	ppb	0.2	1554949.18	100	99.35	90	110	
Sb	121	115	No Gas	99.098	ppb	0.2	2226382.00	100	99.1	90	110	
Sb	121	89	He	100.483	ppb	0.5	478913.47	100	100.48	90	110	
Sb	123	115	No Gas	99.240	ppb	0.4	1718494.54	100	99.24	90	110	
Ba	135	115	No Gas	101.227	ppb	0.4	467691.01	100	101.23	90	110	
Ba	137	115	No Gas	101.191	ppb	0.9	816157.67	100	101.19	90	110	
Tl	203	209	No Gas	99.354	ppb	1.1	1944031.43	100	99.35	90	110	
Tl	205	209	No Gas	99.304	ppb	1.5	4602595.00	100	99.3	90	110	
Pb	206	209	No Gas	99.176	ppb	0.5	1566021.86	100	99.18	90	110	
Pb	207	209	No Gas	99.338	ppb	0.6	1314281.55	100	99.34	90	110	
Pb	208	209	No Gas	98.834	ppb	0.4	6094519.92	100	98.83	90	110	
Th	232	209	No Gas	95.868	ppb	0.6	6031524.87	100	95.87	90	110	
U	238	209	No Gas	94.925	ppb	1.3	5896091.10	100	94.92	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3464986.22	0.6	4905245.08	70.64	70	125	
Sc	45	No Gas	17718038.91	0.7	19588031.4	90.45	75	125	
Sc	45	He	751991.29	0.4	860992.42	87.34	75	125	
Y	89	No Gas	43626141.23	0.4	45698235	95.47	75	125	
Y	89	He	5770126.18	0.5	6413034.51	89.97	75	125	
In	115	No Gas	9479315.43	0.5	9919344.87	95.56	75	125	
Tb	159	No Gas	13318033.89	0.6	13963078.94	95.38	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8008716.91	0.3	8348524.39	95.93	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	215_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:03:41
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.489	ppb	18.4	197681.31	100	
Be	9	6	No Gas	0.036	ppb	20.7	186.86	100	
B	11	6	No Gas	17.803	ppb	5.7	60754.98	100	
Na	23	45	No Gas	22.156	ppb	1.8	1257500.45	500000	
Na	23	45	He	27.269	ppb	8.6	41892.15	500000	
Mg	24	45	No Gas	1.055	ppb	3.6	25451.73	500000	
Mg	24	45	He	1.099	ppb	42.9	506.71	500000	
Mg	25	45	No Gas	0.897	ppb	35.9	3253.96	500000	
Al	27	45	No Gas	-0.129	ppb	N/A	9977.74	500000	
Al	27	45	He	-0.181	ppb	N/A	66.67	500000	
Si	28	45	No Gas	9.954	ppb	25.6	507961.49	100	
Si	29	45	No Gas	1.282	ppb	136.9	70139.62	100	
K	39	45	No Gas	19.725	ppb	3.1	3998388.79	500000	
K	39	45	He	8.833	ppb	23.2	24436.76	500000	
Ca	44	45	No Gas	-45.703	ppb	N/A	26681.05	500000	
Ca	44	45	He	-0.164	ppb	N/A	80.01	500000	
Ti	47	45	No Gas	-0.033	ppb	N/A	320.33	10000	
V	51	45	No Gas	0.169	ppb	28.7	-886.89	100	
V	51	45	He	-0.029	ppb	N/A	350.36	100	
Cr	52	89	No Gas	-0.164	ppb	N/A	25232.05	100	
Cr	52	89	He	-0.035	ppb	N/A	2068.94	100	
Cr	53	89	No Gas	-6.630	ppb	N/A	46124.00	100	
Mn	55	89	No Gas	0.333	ppb	7.0	22858.89	100	
Mn	55	89	He	0.359	ppb	15.6	1194.60	100	
Fe	56	89	No Gas	2.765	ppb	80.9	2217679.09	500000	
Fe	56	89	He	5.790	ppb	14.6	58421.97	500000	
Co	59	89	No Gas	0.013	ppb	58.3	1621.75	100	
Co	59	89	He	0.006	ppb	122.5	313.66	100	
Ni	60	89	No Gas	-0.021	ppb	N/A	997.72	100	
Ni	60	89	He	-0.301	ppb	N/A	220.23	100	
Ni	62	89	No Gas	0.309	ppb	64.4	4258.35	100	
Cu	63	89	No Gas	-3.617	ppb	N/A	22397.70	100	
Cu	63	89	He	-1.507	ppb	N/A	7172.50	100	
Cu	65	89	No Gas	-3.390	ppb	N/A	10434.54	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.026	ppb	107.8	1945.46	100	
Zn	66	89	He	-0.413	ppb	N/A	330.34	100	
Zn	67	89	No Gas	-0.097	ppb	N/A	290.30	100	
Zn	68	89	No Gas	-0.034	ppb	N/A	1351.44	100	
As	75	89	No Gas	0.522	ppb	41.3	5960.12	100	
As	75	89	He	0.020	ppb	107.6	50.00	100	
Se	77	89	No Gas	-15.187	ppb	N/A	7483.01	100	
Se	78	89	No Gas	2.709	ppb	18.7	16917.82	100	
Se	78	89	He	0.220	ppb	99.5	28.89	100	
Se	82	89	No Gas	-0.331	ppb	N/A	-61.89	100	
[Se]	83	89	No Gas	685.346	ppb	39.9	2796.48	100	Failed
Sr	88	89	No Gas	0.013	ppb	9.4	930.99	100	
Mo	95	89	No Gas	0.054	ppb	86.1	2703.03	10000	
Mo	97	89	No Gas	-0.003	ppb	N/A	1541.66	10000	
Mo	98	89	No Gas	-0.046	ppb	N/A	4521.07	10000	
[Mo]	99	89	No Gas	-15.415	ppb	N/A	6.67	10000	
Cd	106	89	No Gas	3.130	ppb	45.0	40221.49	100	
Ag	107	89	No Gas	0.023	ppb	9.5	1061.16	100	
Ag	107	89	He	0.017	ppb	26.1	343.69	100	
Cd	108	89	No Gas	-0.021	ppb	N/A	83.42	100	
Ag	109	89	No Gas	0.022	ppb	22.1	690.72	100	
Cd	111	89	No Gas	0.010	ppb	28.7	-43.95	100	
Cd	114	89	No Gas	0.012	ppb	38.0	253.60	100	
Sn	118	115	No Gas	0.043	ppb	42.3	3973.96	100	
Sb	121	115	No Gas	0.012	ppb	20.6	1467.87	100	
Sb	121	89	He	0.004	ppb	205.3	340.01	100	
Sb	123	115	No Gas	0.017	ppb	64.5	1191.27	100	
Ba	135	115	No Gas	0.012	ppb	83.7	140.14	100	
Ba	137	115	No Gas	0.009	ppb	90.4	176.85	100	
Tl	203	209	No Gas	0.137	ppb	20.5	3207.01	100	
Tl	205	209	No Gas	0.135	ppb	20.0	7433.13	100	
Pb	206	209	No Gas	-0.131	ppb	N/A	3337.19	100	
Pb	207	209	No Gas	-0.136	ppb	N/A	2789.83	100	
Pb	208	209	No Gas	-0.132	ppb	N/A	13112.74	100	
Th	232	209	No Gas	0.348	ppb	18.8	25292.17	100	
U	238	209	No Gas	0.107	ppb	18.7	7156.09	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3644408.48	0.6	4905245.08	74.3	70	125	
Sc	45	No Gas	18047525.06	0.2	19588031.4	92.14	75	125	
Sc	45	He	767076.95	0.3	860992.42	89.09	75	125	
Y	89	No Gas	44426529.95	0.9	45698235	97.22	75	125	
Y	89	He	5839809.82	0.4	6413034.51	91.06	75	125	
In	115	No Gas	9680923.46	1.1	9919344.87	97.6	75	125	
Tb	159	No Gas	13401399.34	1.0	13963078.94	95.98	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8155409.12	0.9	8348524.39	97.69	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 228_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 20:25:20

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 007CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.381	ppb	0.4	1924979.78	100	99.38	90	110	
Be	9	6	No Gas	106.929	ppb	0.2	469151.43	100	106.93	90	110	
B	11	6	No Gas	270.586	ppb	1.1	782318.65	250	108.23	90	110	
Na	23	45	No Gas	9168.694	ppb	0.4	218329346.55	10000	91.69	90	110	
Na	23	45	He	9418.173	ppb	0.7	6388277.40	10000	94.18	90	110	
Mg	24	45	No Gas	9101.977	ppb	0.4	149767164.43	10000	91.02	90	110	
Mg	24	45	He	9310.184	ppb	1.7	3325628.81	10000	93.1	90	110	
Mg	25	45	No Gas	9196.817	ppb	0.5	19836852.62	10000	91.97	90	110	
Al	27	45	No Gas	93.667	ppb	1.1	1973844.50	100	93.67	90	110	
Al	27	45	He	92.140	ppb	1.8	13409.95	100	92.14	90	110	
Si	28	45	No Gas	9631.868	ppb	0.9	81980899.40	10000	96.32	90	110	
Si	29	45	No Gas	9696.717	ppb	0.6	5079443.93	10000	96.97	90	110	
K	39	45	No Gas	10086.345	ppb	0.3	224796709.98	10000	100.86	90	110	
K	39	45	He	9642.449	ppb	1.3	2726048.08	10000	96.42	90	110	
Ca	44	45	No Gas	9989.403	ppb	0.8	6828978.23	10000	99.89	90	110	
Ca	44	45	He	9750.081	ppb	0.7	151463.44	10000	97.5	90	110	
Ti	47	45	No Gas	101.848	ppb	0.7	213307.85	100	101.85	90	110	
V	51	45	No Gas	97.332	ppb	0.4	2815263.30	100	97.33	90	110	
V	51	45	He	100.635	ppb	0.6	369834.51	100	100.64	90	110	
Cr	52	89	No Gas	92.082	ppb	0.1	2571030.15	100	92.08	90	110	
Cr	52	89	He	98.716	ppb	1.1	457073.34	100	98.72	90	110	
Cr	53	89	No Gas	88.114	ppb	0.7	352975.73	100	88.11	90	110	Failed
Mn	55	89	No Gas	94.699	ppb	0.3	3503701.52	100	94.7	90	110	
Mn	55	89	He	97.988	ppb	1.3	249455.48	100	97.99	90	110	
Fe	56	89	No Gas	9376.482	ppb	0.6	251749130.63	10000	93.76	90	110	
Fe	56	89	He	9392.296	ppb	0.3	30990946.21	10000	93.92	90	110	
Co	59	89	No Gas	92.007	ppb	0.6	2793618.62	100	92.01	90	110	
Co	59	89	He	99.815	ppb	0.9	767951.44	100	99.82	90	110	
Ni	60	89	No Gas	93.540	ppb	0.6	628084.53	100	93.54	90	110	
Ni	60	89	He	97.752	ppb	0.7	207094.81	100	97.75	90	110	
Ni	62	89	No Gas	95.029	ppb	1.0	97587.71	100	95.03	90	110	
Cu	63	89	No Gas	87.940	ppb	0.4	1504161.82	100	87.94	90	110	Failed
Cu	63	89	He	96.840	ppb	0.3	567161.17	100	96.84	90	110	
Cu	65	89	No Gas	90.003	ppb	0.9	727207.23	100	90	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	96.485	ppb	0.9	443813.82	100	96.48	90	110	
Zn	66	89	He	98.033	ppb	1.3	87904.09	100	98.03	90	110	
Zn	67	89	No Gas	97.729	ppb	1.3	70744.15	100	97.73	90	110	
Zn	68	89	No Gas	96.502	ppb	0.3	318443.64	100	96.5	90	110	
As	75	89	No Gas	98.584	ppb	0.5	475962.99	100	98.58	90	110	
As	75	89	He	100.636	ppb	0.7	65311.27	100	100.64	90	110	
Se	77	89	No Gas	85.153	ppb	2.0	31037.07	100	85.15	90	110	Failed
Se	78	89	No Gas	102.893	ppb	2.0	86096.28	100	102.89	90	110	
Se	78	89	He	94.121	ppb	7.3	3873.91	100	94.12	90	110	
Se	82	89	No Gas	100.410	ppb	1.0	29120.41	100	100.41	90	110	
[Se]	83	89	No Gas	609.921	ppb	30.0	2529.49	100	609.92	90	110	Failed
Sr	88	89	No Gas	100.463	ppb	0.2	4490736.89	100	100.46	90	110	
Mo	95	89	No Gas	98.982	ppb	0.2	840448.60	100	98.98	90	110	
Mo	97	89	No Gas	98.966	ppb	1.0	526254.77	100	98.97	90	110	
Mo	98	89	No Gas	97.744	ppb	0.4	1359652.40	100	97.74	90	110	
[Mo]	99	89	No Gas	77.095	ppb	80.2	23.36	100	77.1	90	110	Failed
Cd	106	89	No Gas	107.389	ppb	2.4	82074.73	100	107.39	90	110	
Ag	107	89	No Gas	98.284	ppb	0.5	2243333.04	100	98.28	90	110	
Ag	107	89	He	102.168	ppb	0.8	1076443.06	100	102.17	90	110	
Cd	108	89	No Gas	100.065	ppb	0.9	32378.77	100	100.06	90	110	
Ag	109	89	No Gas	98.278	ppb	0.6	2154018.87	100	98.28	90	110	
Cd	111	89	No Gas	100.434	ppb	0.2	449643.83	100	100.43	90	110	
Cd	114	89	No Gas	98.962	ppb	0.7	1177935.51	100	98.96	90	110	
Sn	118	115	No Gas	99.687	ppb	0.3	1485604.42	100	99.69	90	110	
Sb	121	115	No Gas	99.206	ppb	0.7	2122228.87	100	99.21	90	110	
Sb	121	89	He	101.959	ppb	0.7	460139.68	100	101.96	90	110	
Sb	123	115	No Gas	98.960	ppb	0.2	1631748.99	100	98.96	90	110	
Ba	135	115	No Gas	102.138	ppb	0.6	449342.03	100	102.14	90	110	
Ba	137	115	No Gas	102.083	ppb	0.9	783976.74	100	102.08	90	110	
Tl	203	209	No Gas	98.870	ppb	0.9	1884101.76	100	98.87	90	110	
Tl	205	209	No Gas	98.310	ppb	0.1	4437669.76	100	98.31	90	110	
Pb	206	209	No Gas	98.583	ppb	0.5	1516054.86	100	98.58	90	110	
Pb	207	209	No Gas	98.239	ppb	0.6	1265880.91	100	98.24	90	110	
Pb	208	209	No Gas	98.373	ppb	0.1	5907855.14	100	98.37	90	110	
Th	232	209	No Gas	95.528	ppb	0.8	5853333.76	100	95.53	90	110	
U	238	209	No Gas	95.535	ppb	1.2	5779259.48	100	95.54	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3164423.72	0.6	4905245.08	64.51	70	125	ISTD Failed
Sc	45	No Gas	16537706.07	0.2	19588031.4	84.43	75	125	
Sc	45	He	710377.40	1.6	860992.42	82.51	75	125	
Y	89	No Gas	41129945.03	0.7	45698235	90	75	125	
Y	89	He	5464160.63	1.7	6413034.51	85.2	75	125	
In	115	No Gas	9026131.11	0.5	9919344.87	91	75	125	
Tb	159	No Gas	12813737.51	0.9	13963078.94	91.77	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7799685.52	0.2	8348524.39	93.43	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	229_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:27:03
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.488	ppb	5.0	179142.35	100	
Be	9	6	No Gas	0.019	ppb	30.6	90.09	100	
B	11	6	No Gas	10.075	ppb	6.6	31788.04	100	
Na	23	45	No Gas	64.116	ppb	3.7	2190719.38	500000	
Na	23	45	He	69.677	ppb	4.0	67967.71	500000	
Mg	24	45	No Gas	0.740	ppb	18.0	18480.76	500000	
Mg	24	45	He	0.341	ppb	86.9	200.02	500000	
Mg	25	45	No Gas	0.667	ppb	40.1	2533.81	500000	
Al	27	45	No Gas	-0.149	ppb	N/A	8910.34	500000	
Al	27	45	He	-0.151	ppb	N/A	66.67	500000	
Si	28	45	No Gas	3.076	ppb	53.6	415186.67	100	
Si	29	45	No Gas	-4.803	ppb	N/A	62321.69	100	
K	39	45	No Gas	25.749	ppb	4.7	3870613.69	500000	
K	39	45	He	11.133	ppb	11.0	23448.30	500000	
Ca	44	45	No Gas	-45.392	ppb	N/A	25144.56	500000	
Ca	44	45	He	2.737	ppb	187.9	120.01	500000	
Ti	47	45	No Gas	-0.028	ppb	N/A	310.32	10000	
V	51	45	No Gas	0.134	ppb	34.9	-1858.11	100	
V	51	45	He	-0.027	ppb	N/A	333.68	100	
Cr	52	89	No Gas	-0.206	ppb	N/A	22812.02	100	
Cr	52	89	He	-0.061	ppb	N/A	1831.99	100	
Cr	53	89	No Gas	-7.488	ppb	N/A	40975.86	100	
Mn	55	89	No Gas	0.220	ppb	1.8	17462.22	100	
Mn	55	89	He	0.310	ppb	13.8	1004.39	100	
Fe	56	89	No Gas	-2.050	ppb	N/A	1976931.23	500000	
Fe	56	89	He	4.963	ppb	28.0	52505.17	500000	
Co	59	89	No Gas	0.006	ppb	25.6	1338.09	100	
Co	59	89	He	0.011	ppb	54.5	330.34	100	
Ni	60	89	No Gas	-0.017	ppb	N/A	977.70	100	
Ni	60	89	He	-0.301	ppb	N/A	210.22	100	
Ni	62	89	No Gas	0.010	ppb	3227.5	3747.67	100	
Cu	63	89	No Gas	-4.118	ppb	N/A	12959.32	100	
Cu	63	89	He	-2.011	ppb	N/A	3884.52	100	
Cu	65	89	No Gas	-3.802	ppb	N/A	6665.10	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.017	ppb	N/A	1651.79	100	
Zn	66	89	He	-0.470	ppb	N/A	260.27	100	
Zn	67	89	No Gas	-0.047	ppb	N/A	313.66	100	
Zn	68	89	No Gas	-0.083	ppb	N/A	1121.19	100	
As	75	89	No Gas	0.507	ppb	25.4	5599.29	100	
As	75	89	He	0.003	ppb	921.5	36.67	100	
Se	77	89	No Gas	-16.744	ppb	N/A	6731.87	100	
Se	78	89	No Gas	2.432	ppb	21.9	15888.78	100	
Se	78	89	He	0.500	ppb	26.6	38.89	100	
Se	82	89	No Gas	0.296	ppb	337.4	128.05	100	
[Se]	83	89	No Gas	435.535	ppb	74.8	2459.39	100	Failed
Sr	88	89	No Gas	0.014	ppb	8.2	937.66	100	
Mo	95	89	No Gas	0.036	ppb	148.0	2416.02	10000	
Mo	97	89	No Gas	0.003	ppb	1515.8	1501.61	10000	
Mo	98	89	No Gas	-0.058	ppb	N/A	4122.91	10000	
[Mo]	99	89	No Gas	21.576	ppb	372.2	13.35	10000	
Cd	106	89	No Gas	5.116	ppb	32.4	39130.73	100	
Ag	107	89	No Gas	0.018	ppb	18.7	898.92	100	
Ag	107	89	He	0.015	ppb	36.5	303.65	100	
Cd	108	89	No Gas	-0.029	ppb	N/A	76.74	100	
Ag	109	89	No Gas	0.019	ppb	20.0	590.62	100	
Cd	111	89	No Gas	0.009	ppb	52.9	-45.68	100	
Cd	114	89	No Gas	0.007	ppb	38.7	180.19	100	
Sn	118	115	No Gas	0.021	ppb	109.5	3471.59	100	
Sb	121	115	No Gas	0.005	ppb	64.2	1264.51	100	
Sb	121	89	He	-0.008	ppb	N/A	266.68	100	
Sb	123	115	No Gas	0.012	ppb	46.3	1047.77	100	
Ba	135	115	No Gas	0.008	ppb	113.9	113.45	100	
Ba	137	115	No Gas	0.016	ppb	40.3	223.56	100	
Tl	203	209	No Gas	0.105	ppb	18.8	2526.16	100	
Tl	205	209	No Gas	0.121	ppb	20.4	6661.94	100	
Pb	206	209	No Gas	-0.158	ppb	N/A	2863.25	100	
Pb	207	209	No Gas	-0.165	ppb	N/A	2362.65	100	
Pb	208	209	No Gas	-0.163	ppb	N/A	10976.42	100	
Th	232	209	No Gas	0.351	ppb	17.1	25111.51	100	
U	238	209	No Gas	0.101	ppb	21.6	6685.35	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3302927.81	0.3	4905245.08	67.33	70	125	ISTD Failed
Sc	45	No Gas	16861915.28	0.2	19588031.4	86.08	75	125	
Sc	45	He	715584.87	0.3	860992.42	83.11	75	125	
Y	89	No Gas	42248016.44	0.3	45698235	92.45	75	125	
Y	89	He	5526443.74	1.2	6413034.51	86.18	75	125	
In	115	No Gas	9281828.30	0.3	9919344.87	93.57	75	125	
Tb	159	No Gas	13109741.02	0.1	13963078.94	93.89	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8021114.96	0.7	8348524.39	96.08	75	125	

Initial Calibration Verification (ICV) Report

Sample Name ICV

File Name 240_ICV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 20:45:25

Sample Type ICV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 231CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	77.821	ppb	1.0	1580246.81	80	97.28	90	110	
Be	9	6	No Gas	82.294	ppb	1.2	393723.24	80	102.87	90	110	
B	11	6	No Gas	195.740	ppb	0.8	642034.85	200	97.87	90	110	
Na	23	45	No Gas	8153.308	ppb	1.0	179836058.19	8000	101.92	90	110	
Na	23	45	He	7986.318	ppb	0.3	5267490.75	8000	99.83	90	110	
Mg	24	45	No Gas	8091.233	ppb	0.6	121931341.51	8000	101.14	90	110	
Mg	24	45	He	8063.357	ppb	0.6	2730361.00	8000	100.79	90	110	
Mg	25	45	No Gas	8129.864	ppb	0.2	16251166.84	8000	101.62	90	110	
Al	27	45	No Gas	78.918	ppb	0.7	1566454.98	80	98.65	90	110	
Al	27	45	He	77.109	ppb	1.5	10574.17	80	96.39	90	110	
Si	28	45	No Gas	8490.192	ppb	0.5	69015103.58	8000	106.13	90	110	
Si	29	45	No Gas	8536.865	ppb	0.4	4298697.04	8000	106.71	90	110	
K	39	45	No Gas	8092.106	ppb	0.8	183953643.93	8000	101.15	90	110	
K	39	45	He	7963.265	ppb	0.6	2223791.84	8000	99.54	90	110	
Ca	44	45	No Gas	8012.936	ppb	0.2	5552355.96	8000	100.16	90	110	
Ca	44	45	He	7988.086	ppb	1.2	122171.14	8000	99.85	90	110	
Ti	47	45	No Gas	78.992	ppb	1.1	170211.46	80	98.74	90	110	
V	51	45	No Gas	79.760	ppb	0.3	2267335.10	80	99.7	90	110	
V	51	45	He	79.068	ppb	0.4	299074.39	80	98.84	90	110	
Cr	52	89	No Gas	79.821	ppb	0.4	2090827.03	80	99.78	90	110	
Cr	52	89	He	80.145	ppb	1.0	375569.17	80	100.18	90	110	
Cr	53	89	No Gas	78.009	ppb	0.8	289492.70	80	97.51	90	110	
Mn	55	89	No Gas	79.958	ppb	0.5	2840496.23	80	99.95	90	110	
Mn	55	89	He	81.113	ppb	1.6	202699.09	80	101.39	90	110	
Fe	56	89	No Gas	8081.449	ppb	0.9	206230550.44	8000	101.02	90	110	
Fe	56	89	He	8101.427	ppb	1.2	25404278.79	8000	101.27	90	110	
Co	59	89	No Gas	80.474	ppb	0.8	2277764.17	80	100.59	90	110	
Co	59	89	He	83.813	ppb	1.1	629961.02	80	104.77	90	110	
Ni	60	89	No Gas	81.646	ppb	0.2	512179.75	80	102.06	90	110	
Ni	60	89	He	79.539	ppb	1.3	167234.47	80	99.42	90	110	
Ni	62	89	No Gas	79.669	ppb	1.4	79117.89	80	99.59	90	110	
Cu	63	89	No Gas	81.543	ppb	0.4	1241875.63	80	101.93	90	110	
Cu	63	89	He	83.521	ppb	0.9	471502.40	80	104.4	90	110	
Cu	65	89	No Gas	82.700	ppb	0.6	603681.73	80	103.38	90	110	

Initial Calibration Verification (ICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	81.106	ppb	0.6	365777.11	80	101.38	90	110	
Zn	66	89	He	80.803	ppb	1.1	71750.59	80	101	90	110	
Zn	67	89	No Gas	81.513	ppb	0.7	57756.96	80	101.89	90	110	
Zn	68	89	No Gas	80.656	ppb	0.3	262151.24	80	100.82	90	110	
As	75	89	No Gas	79.698	ppb	0.3	389359.26	80	99.62	90	110	
As	75	89	He	79.776	ppb	1.4	52938.77	80	99.72	90	110	
Se	77	89	No Gas	76.508	ppb	2.6	25339.40	80	95.64	90	110	
Se	78	89	No Gas	81.555	ppb	3.4	74066.55	80	101.94	90	110	
Se	78	89	He	80.969	ppb	0.4	3214.85	80	101.21	90	110	
Se	82	89	No Gas	79.993	ppb	2.4	23607.05	80	99.99	90	110	
[Se]	83	89	No Gas	285.003	ppb	102.6	2432.69	80	356.25	90	110	Failed
Sr	88	89	No Gas	77.516	ppb	0.4	3537993.94	80	96.9	90	110	
Mo	95	89	No Gas	77.974	ppb	0.4	664771.23	80	97.47	90	110	
Mo	97	89	No Gas	78.492	ppb	0.6	416769.14	80	98.12	90	110	
Mo	98	89	No Gas	76.580	ppb	0.7	1063641.91	80	95.72	90	110	
[Mo]	99	89	No Gas	59.331	ppb	27.7	23.36	80	74.16	90	110	Failed
Cd	106	89	No Gas	78.737	ppb	1.6	73000.35	80	98.42	90	110	
Ag	107	89	No Gas	81.065	ppb	1.0	1842552.15	80	101.33	90	110	
Ag	107	89	He	82.725	ppb	1.0	885333.82	80	103.41	90	110	
Cd	108	89	No Gas	80.137	ppb	3.9	26750.75	80	100.17	90	110	
Ag	109	89	No Gas	81.221	ppb	1.4	1765371.99	80	101.53	90	110	
Cd	111	89	No Gas	80.862	ppb	1.4	367257.87	80	101.08	90	110	
Cd	114	89	No Gas	80.350	ppb	0.4	960979.68	80	100.44	90	110	
Sn	118	115	No Gas	77.411	ppb	0.3	1171420.68	80	96.76	90	110	
Sb	121	115	No Gas	79.460	ppb	0.4	1718903.68	80	99.32	90	110	
Sb	121	89	He	80.999	ppb	1.0	371804.76	80	101.25	90	110	
Sb	123	115	No Gas	79.547	ppb	0.9	1324816.75	80	99.43	90	110	
Ba	135	115	No Gas	79.358	ppb	0.2	361971.50	80	99.2	90	110	
Ba	137	115	No Gas	79.965	ppb	1.3	633096.03	80	99.96	90	110	
Tl	203	209	No Gas	77.920	ppb	0.9	1505101.93	80	97.4	90	110	
Tl	205	209	No Gas	78.542	ppb	0.4	3561239.58	80	98.18	90	110	
Pb	206	209	No Gas	79.080	ppb	0.8	1226919.73	80	98.85	90	110	
Pb	207	209	No Gas	78.793	ppb	0.7	1021299.95	80	98.49	90	110	
Pb	208	209	No Gas	79.060	ppb	0.8	4767711.78	80	98.82	90	110	
Th	232	209	No Gas	76.553	ppb	0.8	4636098.82	80	95.69	90	110	
U	238	209	No Gas	74.758	ppb	1.6	4414906.58	80	93.45	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3203705.73	0.5	3287788.3	97.44	70	125	
Sc	45	No Gas	16565748.70	0.6	16642937.14	99.54	75	125	
Sc	45	He	714141.71	0.6	708779.09	100.76	75	125	
Y	89	No Gas	41490395.48	1.0	41680351.27	99.54	75	125	
Y	89	He	5441145.95	0.9	5497469.77	98.98	75	125	
In	115	No Gas	9050847.48	0.2	9172632.54	98.67	75	125	
Tb	159	No Gas	12845853.38	0.6	12859728.08	99.89	75	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7847420.24	0.9	7923397.19	99.04	75	125	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	241_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:47:08
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.021	ppb	444.4	179301.37	100	
Be	9	6	No Gas	0.021	ppb	9.5	150.15	100	
B	11	6	No Gas	0.264	ppb	194.5	21865.71	100	
Na	23	45	No Gas	-28.422	ppb	N/A	1294305.01	500000	
Na	23	45	He	-27.415	ppb	N/A	43349.78	500000	
Mg	24	45	No Gas	0.427	ppb	19.2	15916.91	500000	
Mg	24	45	He	0.198	ppb	217.8	280.03	500000	
Mg	25	45	No Gas	0.361	ppb	95.2	1933.62	500000	
Al	27	45	No Gas	-0.006	ppb	N/A	8229.78	500000	
Al	27	45	He	0.148	ppb	54.9	76.67	500000	
Si	28	45	No Gas	14.242	ppb	21.4	473856.80	100	
Si	29	45	No Gas	9.900	ppb	11.2	65827.82	100	
K	39	45	No Gas	-0.124	ppb	N/A	3805474.32	500000	
K	39	45	He	-3.144	ppb	N/A	23448.01	500000	
Ca	44	45	No Gas	0.213	ppb	808.9	25117.95	500000	
Ca	44	45	He	0.008	ppb	132275.3	186.69	500000	
Ti	47	45	No Gas	0.016	ppb	123.9	236.91	10000	
V	51	45	No Gas	0.042	ppb	84.8	-651.39	100	
V	51	45	He	0.034	ppb	50.0	410.43	100	
Cr	52	89	No Gas	-0.040	ppb	N/A	21518.72	100	
Cr	52	89	He	-0.017	ppb	N/A	1765.25	100	
Cr	53	89	No Gas	0.257	ppb	81.2	40222.94	100	
Mn	55	89	No Gas	-0.206	ppb	N/A	11292.78	100	
Mn	55	89	He	-0.232	ppb	N/A	567.26	100	
Fe	56	89	No Gas	3.032	ppb	75.1	1929879.40	500000	
Fe	56	89	He	8.885	ppb	8.4	48528.87	500000	
Co	59	89	No Gas	0.006	ppb	156.1	1538.32	100	
Co	59	89	He	0.003	ppb	337.0	310.32	100	
Ni	60	89	No Gas	-0.008	ppb	N/A	897.61	100	
Ni	60	89	He	-0.031	ppb	N/A	226.90	100	
Ni	62	89	No Gas	-0.044	ppb	N/A	3791.06	100	
Cu	63	89	No Gas	0.048	ppb	65.1	13497.07	100	
Cu	63	89	He	0.021	ppb	108.1	3811.08	100	
Cu	65	89	No Gas	0.026	ppb	135.0	6428.09	100	

Initial Calibration Blank (ICB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.008	ppb	348.8	1625.09	100	
Zn	66	89	He	-0.020	ppb	N/A	316.99	100	
Zn	67	89	No Gas	0.003	ppb	2927.9	333.68	100	
Zn	68	89	No Gas	0.002	ppb	2564.2	1174.59	100	
As	75	89	No Gas	0.009	ppb	2533.2	5338.70	100	
As	75	89	He	0.021	ppb	101.3	34.44	100	
Se	77	89	No Gas	-1.168	ppb	N/A	6468.10	100	
Se	78	89	No Gas	0.135	ppb	262.4	15995.70	100	
Se	78	89	He	0.119	ppb	217.6	23.33	100	
Se	82	89	No Gas	-0.573	ppb	N/A	-177.15	100	
[Se]	83	89	No Gas	14.218	ppb	1989.5	2626.27	100	
Sr	88	89	No Gas	0.003	ppb	41.5	854.23	100	
Mo	95	89	No Gas	0.218	ppb	15.2	2439.38	10000	
Mo	97	89	No Gas	0.229	ppb	16.1	1571.70	10000	
Mo	98	89	No Gas	0.218	ppb	22.3	4084.31	10000	
[Mo]	99	89	No Gas	-0.044	ppb	N/A	3.34	10000	
Cd	106	89	No Gas	-2.542	ppb	N/A	37838.84	100	
Ag	107	89	No Gas	0.017	ppb	23.9	914.48	100	
Ag	107	89	He	0.011	ppb	61.7	293.64	100	
Cd	108	89	No Gas	-0.010	ppb	N/A	56.72	100	
Ag	109	89	No Gas	0.017	ppb	35.9	577.27	100	
Cd	111	89	No Gas	0.003	ppb	171.7	-38.64	100	
Cd	114	89	No Gas	0.010	ppb	38.7	176.85	100	
Sn	118	115	No Gas	0.112	ppb	13.7	3832.81	100	
Sb	121	115	No Gas	0.022	ppb	6.9	1128.94	100	
Sb	121	89	He	0.027	ppb	63.1	316.68	100	
Sb	123	115	No Gas	0.019	ppb	27.5	984.37	100	
Ba	135	115	No Gas	0.019	ppb	41.7	170.18	100	
Ba	137	115	No Gas	0.015	ppb	15.1	260.27	100	
Tl	203	209	No Gas	0.065	ppb	29.0	1735.22	100	
Tl	205	209	No Gas	0.065	ppb	23.5	4194.99	100	
Pb	206	209	No Gas	0.012	ppb	118.2	2649.65	100	
Pb	207	209	No Gas	0.015	ppb	79.0	2219.13	100	
Pb	208	209	No Gas	0.016	ppb	97.7	10455.73	100	
Th	232	209	No Gas	0.166	ppb	32.3	19786.32	100	
U	238	209	No Gas	0.095	ppb	15.9	6628.62	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3272282.27	0.5	3287788.3	99.53	70	125	
Sc	45	No Gas	16605450.06	0.2	16642937.14	99.77	75	125	
Sc	45	He	708773.29	0.6	708779.09	100	75	125	
Y	89	No Gas	41812314.90	0.6	41680351.27	100.32	75	125	
Y	89	He	5413059.53	0.8	5497469.77	98.46	75	125	
In	115	No Gas	9147459.17	0.5	9172632.54	99.73	75	125	
Tb	159	No Gas	12859511.62	0.8	12859728.08	100	75	125	

Initial Calibration Blank (ICB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7905493.02	0.7	7923397.19	99.77	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	LLICV
File Name	242LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:48:44
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Li	7	6	No Gas	10.183	ppb	1.1	365468.87	10	101.83	80	120	
Be	9	6	No Gas	2.058	ppb	2.4	10070.48	2	102.9	80	120	
B	11	6	No Gas	18.049	ppb	0.4	79277.87	20	90.24	80	120	
Na	23	45	No Gas	178.312	ppb	1.8	5788731.90	200	89.16	80	120	
Na	23	45	He	189.340	ppb	2.1	184618.49	200	94.67	80	120	
Mg	24	45	No Gas	207.239	ppb	0.2	3124742.87	200	103.62	80	120	
Mg	24	45	He	208.386	ppb	1.8	70636.58	200	104.19	80	120	
Mg	25	45	No Gas	212.893	ppb	1.5	425735.32	200	106.45	80	120	
Al	27	45	No Gas	10.677	ppb	1.0	218613.33	10	106.77	80	120	
Al	27	45	He	11.584	ppb	15.3	1633.46	10	115.84	80	120	
Si	28	45	No Gas	1103.649	ppb	1.1	9259999.19	1000	110.36	80	120	
Si	29	45	No Gas	1160.510	ppb	1.5	635309.72	1000	116.05	80	120	
K	39	45	No Gas	201.013	ppb	1.1	8254507.17	200	100.51	80	120	
K	39	45	He	212.523	ppb	5.1	83013.65	200	106.26	80	120	
Ca	44	45	No Gas	535.577	ppb	1.4	393406.04	500	107.12	80	120	
Ca	44	45	He	503.640	ppb	10.3	7869.42	500	100.73	80	120	
Ti	47	45	No Gas	5.174	ppb	1.4	11312.79	5	103.48	80	120	
V	51	45	No Gas	5.233	ppb	1.2	146677.97	5	104.66	80	120	
V	51	45	He	4.954	ppb	2.1	18972.27	5	99.08	80	120	
Cr	52	89	No Gas	5.152	ppb	1.0	156142.95	5	103.04	80	120	
Cr	52	89	He	5.044	ppb	2.7	25185.29	5	100.88	80	120	
Cr	53	89	No Gas	6.014	ppb	6.9	58489.71	5	120.28	80	120	Failed
Mn	55	89	No Gas	5.026	ppb	0.9	196198.09	5	100.52	80	120	
Mn	55	89	He	5.003	ppb	1.4	13480.33	5	100.06	80	120	
Fe	56	89	No Gas	79.376	ppb	1.5	3852438.11	80	99.22	80	120	
Fe	56	89	He	104.355	ppb	1.8	345363.42	80	130.44	80	120	Failed
Co	59	89	No Gas	5.197	ppb	0.4	148630.09	5	103.94	80	120	
Co	59	89	He	5.244	ppb	1.9	39396.50	5	104.88	80	120	
Ni	60	89	No Gas	5.141	ppb	2.3	33187.08	5	102.82	80	120	
Ni	60	89	He	5.072	ppb	1.8	10858.70	5	101.44	80	120	
Ni	62	89	No Gas	5.225	ppb	1.1	8758.39	5	104.5	80	120	
Cu	63	89	No Gas	5.280	ppb	0.8	92410.91	5	105.6	80	120	
Cu	63	89	He	5.473	ppb	2.3	34123.69	5	109.46	80	120	
Cu	65	89	No Gas	5.224	ppb	3.5	44001.97	5	104.48	80	120	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	10.381	ppb	1.6	48270.87	10	103.81	80	120	
Zn	66	89	He	10.337	ppb	3.5	9406.09	10	103.37	80	120	
Zn	67	89	No Gas	9.880	ppb	5.9	7302.73	10	98.8	80	120	
Zn	68	89	No Gas	9.993	ppb	0.4	33551.92	10	99.93	80	120	
As	75	89	No Gas	4.923	ppb	8.0	29023.51	5	98.46	80	120	
As	75	89	He	4.878	ppb	4.3	3232.63	5	97.56	80	120	
Se	77	89	No Gas	4.854	ppb	21.9	7900.36	5	97.08	80	120	
Se	78	89	No Gas	4.546	ppb	12.3	19059.41	5	90.92	80	120	
Se	78	89	He	5.420	ppb	13.1	231.11	5	108.4	80	120	
Se	82	89	No Gas	5.310	ppb	29.8	1563.88	5	106.2	80	120	
[Se]	83	89	No Gas	369.858	ppb	21.8	2382.63	5	7397.16	80	120	Failed
Sr	88	89	No Gas	5.031	ppb	0.1	230701.74	5	100.62	80	120	
Mo	95	89	No Gas	5.079	ppb	2.3	43902.85	5	101.58	80	120	
Mo	97	89	No Gas	5.029	ppb	2.6	27074.92	5	100.58	80	120	
Mo	98	89	No Gas	5.091	ppb	1.3	71781.46	5	101.82	80	120	
[Mo]	99	89	No Gas	49.416	ppb	59.8	20.02	5	988.32	80	120	Failed
Cd	106	89	No Gas	0.778	ppb	119.4	39063.54	2	38.9	80	120	Failed
Ag	107	89	No Gas	5.192	ppb	1.0	118707.99	5	103.84	80	120	
Ag	107	89	He	5.276	ppb	0.5	56222.04	5	105.52	80	120	
Cd	108	89	No Gas	2.210	ppb	13.5	797.51	2	110.5	80	120	
Ag	109	89	No Gas	5.187	ppb	0.3	113116.07	5	103.74	80	120	
Cd	111	89	No Gas	2.032	ppb	4.7	9193.70	2	101.6	80	120	
Cd	114	89	No Gas	2.027	ppb	2.2	24333.80	2	101.35	80	120	
Sn	118	115	No Gas	2.035	ppb	1.7	33357.72	2	101.75	80	120	
Sb	121	115	No Gas	4.717	ppb	0.9	104252.68	5	94.34	80	120	
Sb	121	89	He	4.831	ppb	1.9	22199.09	5	96.62	80	120	
Sb	123	115	No Gas	4.709	ppb	0.4	80288.17	5	94.18	80	120	
Ba	135	115	No Gas	4.856	ppb	1.9	22572.49	5	97.12	80	120	
Ba	137	115	No Gas	4.859	ppb	1.6	39198.43	5	97.18	80	120	
Tl	203	209	No Gas	4.647	ppb	1.4	92031.88	5	92.94	80	120	
Tl	205	209	No Gas	4.700	ppb	0.5	218618.44	5	94	80	120	
Pb	206	209	No Gas	4.885	ppb	1.8	79679.63	5	97.7	80	120	
Pb	207	209	No Gas	5.107	ppb	1.8	69465.39	5	102.14	80	120	
Pb	208	209	No Gas	4.988	ppb	1.2	315935.33	5	99.76	80	120	
Th	232	209	No Gas	5.009	ppb	0.6	318706.92	5	100.18	80	120	
U	238	209	No Gas	4.660	ppb	0.9	281810.37	5	93.2	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3261317.07	0.3	3287788.3	99.19	70	125	
Sc	45	No Gas	16526184.97	0.5	16642937.14	99.3	75	125	
Sc	45	He	712840.46	1.1	708779.09	100.57	75	125	
Y	89	No Gas	41559869.12	0.6	41680351.27	99.71	75	125	
Y	89	He	5401403.50	0.9	5497469.77	98.25	75	125	
In	115	No Gas	9192692.01	0.3	9172632.54	100.22	75	125	
Tb	159	No Gas	12774760.62	0.7	12859728.08	99.34	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	8007884.68	0.1	7923397.19	101.07	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 243_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 20:50:19

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 231CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.571	ppb	0.6	1885065.38	100	98.57	90	110	
Be	9	6	No Gas	101.660	ppb	0.5	468970.52	100	101.66	90	110	
B	11	6	No Gas	240.807	ppb	0.2	757055.76	250	96.32	90	110	
Na	23	45	No Gas	10022.268	ppb	0.6	215246071.48	10000	100.22	90	110	
Na	23	45	He	9905.448	ppb	1.5	6343947.20	10000	99.05	90	110	
Mg	24	45	No Gas	10100.295	ppb	0.6	148491391.12	10000	101	90	110	
Mg	24	45	He	10019.630	ppb	0.0	3301967.97	10000	100.2	90	110	
Mg	25	45	No Gas	10054.351	ppb	1.0	19607099.71	10000	100.54	90	110	
Al	27	45	No Gas	100.150	ppb	0.8	1937171.84	100	100.15	90	110	
Al	27	45	He	98.011	ppb	2.7	13066.35	100	98.01	90	110	
Si	28	45	No Gas	10149.262	ppb	0.9	80420537.37	10000	101.49	90	110	
Si	29	45	No Gas	10123.677	ppb	0.6	4962253.20	10000	101.24	90	110	
K	39	45	No Gas	10012.728	ppb	1.2	221182976.71	10000	100.13	90	110	
K	39	45	He	9849.246	ppb	0.7	2671203.71	10000	98.49	90	110	
Ca	44	45	No Gas	9958.739	ppb	0.8	6726373.44	10000	99.59	90	110	
Ca	44	45	He	10026.670	ppb	0.6	149199.39	10000	100.27	90	110	
Ti	47	45	No Gas	100.035	ppb	0.4	210250.83	100	100.04	90	110	
V	51	45	No Gas	98.755	ppb	0.5	2739181.52	100	98.76	90	110	
V	51	45	He	98.851	ppb	0.4	363827.12	100	98.85	90	110	
Cr	52	89	No Gas	99.194	ppb	0.3	2527513.56	100	99.19	90	110	
Cr	52	89	He	100.037	ppb	0.6	457665.10	100	100.04	90	110	
Cr	53	89	No Gas	101.198	ppb	0.3	354759.72	100	101.2	90	110	
Mn	55	89	No Gas	99.539	ppb	0.5	3442514.40	100	99.54	90	110	
Mn	55	89	He	99.234	ppb	1.2	242109.58	100	99.23	90	110	
Fe	56	89	No Gas	9965.246	ppb	1.1	247465955.53	10000	99.65	90	110	
Fe	56	89	He	9974.456	ppb	0.7	30562307.88	10000	99.74	90	110	
Co	59	89	No Gas	99.343	ppb	1.4	2740535.65	100	99.34	90	110	
Co	59	89	He	103.323	ppb	0.3	758876.56	100	103.32	90	110	
Ni	60	89	No Gas	101.097	ppb	0.9	617972.05	100	101.1	90	110	
Ni	60	89	He	99.866	ppb	0.9	205127.97	100	99.87	90	110	
Ni	62	89	No Gas	99.744	ppb	0.8	95625.97	100	99.74	90	110	
Cu	63	89	No Gas	99.788	ppb	1.6	1478549.07	100	99.79	90	110	
Cu	63	89	He	102.791	ppb	0.3	566233.56	100	102.79	90	110	
Cu	65	89	No Gas	101.612	ppb	0.6	721649.18	100	101.61	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	100.697	ppb	0.5	442316.12	100	100.7	90	110	
Zn	66	89	He	100.316	ppb	1.8	86967.06	100	100.32	90	110	
Zn	67	89	No Gas	100.442	ppb	1.3	69292.09	100	100.44	90	110	
Zn	68	89	No Gas	99.836	ppb	0.4	316033.71	100	99.84	90	110	
As	75	89	No Gas	99.485	ppb	0.9	472471.66	100	99.48	90	110	
As	75	89	He	98.397	ppb	0.2	63805.33	100	98.4	90	110	
Se	77	89	No Gas	99.618	ppb	1.8	30187.47	100	99.62	90	110	
Se	78	89	No Gas	99.426	ppb	1.2	84658.75	100	99.43	90	110	
Se	78	89	He	99.656	ppb	3.7	3862.79	100	99.66	90	110	
Se	82	89	No Gas	99.648	ppb	1.4	28661.16	100	99.65	90	110	
[Se]	83	89	No Gas	-230.120	ppb	N/A	2693.01	100	-230.12	90	110	Failed
Sr	88	89	No Gas	99.485	ppb	0.8	4426002.88	100	99.48	90	110	
Mo	95	89	No Gas	99.797	ppb	0.4	829176.26	100	99.8	90	110	
Mo	97	89	No Gas	100.361	ppb	0.9	519358.79	100	100.36	90	110	
Mo	98	89	No Gas	98.636	ppb	0.3	1335203.83	100	98.64	90	110	
[Mo]	99	89	No Gas	91.620	ppb	18.2	33.37	100	91.62	90	110	
Cd	106	89	No Gas	100.887	ppb	0.2	80581.29	100	100.89	90	110	
Ag	107	89	No Gas	99.784	ppb	1.1	2210734.77	100	99.78	90	110	
Ag	107	89	He	102.063	ppb	0.3	1067387.08	100	102.06	90	110	
Cd	108	89	No Gas	99.049	ppb	2.2	32218.35	100	99.05	90	110	
Ag	109	89	No Gas	99.231	ppb	1.1	2102465.44	100	99.23	90	110	
Cd	111	89	No Gas	100.506	ppb	1.1	444958.78	100	100.51	90	110	
Cd	114	89	No Gas	99.241	ppb	1.0	1156943.11	100	99.24	90	110	
Sn	118	115	No Gas	98.544	ppb	0.7	1451749.56	100	98.54	90	110	
Sb	121	115	No Gas	99.132	ppb	0.5	2088370.20	100	99.13	90	110	
Sb	121	89	He	100.071	ppb	0.4	448845.07	100	100.07	90	110	
Sb	123	115	No Gas	99.141	ppb	0.7	1607888.62	100	99.14	90	110	
Ba	135	115	No Gas	99.316	ppb	0.2	441172.57	100	99.32	90	110	
Ba	137	115	No Gas	100.285	ppb	0.4	773230.13	100	100.28	90	110	
Tl	203	209	No Gas	98.206	ppb	0.8	1855534.08	100	98.21	90	110	
Tl	205	209	No Gas	98.024	ppb	0.5	4347489.48	100	98.02	90	110	
Pb	206	209	No Gas	98.397	ppb	0.7	1492824.60	100	98.4	90	110	
Pb	207	209	No Gas	98.717	ppb	0.2	1251178.21	100	98.72	90	110	
Pb	208	209	No Gas	98.648	ppb	0.7	5817028.34	100	98.65	90	110	
Th	232	209	No Gas	96.862	ppb	0.4	5736115.09	100	96.86	90	110	
U	238	209	No Gas	98.356	ppb	0.4	5682271.45	100	98.36	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3089232.51	0.8	3287788.3	93.96	70	125	
Sc	45	No Gas	16161609.98	0.3	16642937.14	97.11	75	125	
Sc	45	He	695021.97	0.0	708779.09	98.06	75	125	
Y	89	No Gas	40444622.20	1.0	41680351.27	97.04	75	125	
Y	89	He	5317043.51	0.6	5497469.77	96.72	75	125	
In	115	No Gas	8814982.23	0.7	9172632.54	96.1	75	125	
Tb	159	No Gas	12593948.14	1.6	12859728.08	97.93	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7676575.53	0.7	7923397.19	96.88	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	244_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 20:52:03
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.001	ppb	8444.8	176540.70	100	
Be	9	6	No Gas	0.028	ppb	55.8	180.18	100	
B	11	6	No Gas	-0.288	ppb	N/A	19810.68	100	
Na	23	45	No Gas	-31.585	ppb	N/A	1213324.44	500000	
Na	23	45	He	-31.119	ppb	N/A	40862.66	500000	
Mg	24	45	No Gas	0.416	ppb	25.5	15596.57	500000	
Mg	24	45	He	0.517	ppb	46.9	386.70	500000	
Mg	25	45	No Gas	0.337	ppb	13.2	1866.94	500000	
Al	27	45	No Gas	-0.030	ppb	N/A	7696.03	500000	
Al	27	45	He	0.298	ppb	29.4	96.67	500000	
Si	28	45	No Gas	13.407	ppb	18.4	462599.90	100	
Si	29	45	No Gas	9.236	ppb	41.8	64865.91	100	
K	39	45	No Gas	-0.567	ppb	N/A	3759130.05	500000	
K	39	45	He	-3.481	ppb	N/A	23301.25	500000	
Ca	44	45	No Gas	-0.307	ppb	N/A	24516.83	500000	
Ca	44	45	He	-4.388	ppb	N/A	120.01	500000	
Ti	47	45	No Gas	0.037	ppb	157.8	280.29	10000	
V	51	45	No Gas	0.041	ppb	205.2	-664.69	100	
V	51	45	He	0.028	ppb	98.5	387.07	100	
Cr	52	89	No Gas	-0.043	ppb	N/A	21281.48	100	
Cr	52	89	He	-0.002	ppb	N/A	1835.32	100	
Cr	53	89	No Gas	0.382	ppb	69.1	40316.57	100	
Mn	55	89	No Gas	-0.195	ppb	N/A	11620.06	100	
Mn	55	89	He	-0.237	ppb	N/A	553.91	100	
Fe	56	89	No Gas	2.846	ppb	68.6	1910451.02	500000	
Fe	56	89	He	10.359	ppb	4.0	53160.01	500000	
Co	59	89	No Gas	0.005	ppb	16.7	1491.60	100	
Co	59	89	He	0.004	ppb	138.4	320.33	100	
Ni	60	89	No Gas	-0.001	ppb	N/A	930.98	100	
Ni	60	89	He	-0.009	ppb	N/A	273.62	100	
Ni	62	89	No Gas	0.202	ppb	87.9	3994.65	100	
Cu	63	89	No Gas	0.020	ppb	147.7	12969.38	100	
Cu	63	89	He	-0.002	ppb	N/A	3687.59	100	
Cu	65	89	No Gas	0.024	ppb	84.1	6364.63	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.036	ppb	92.8	1735.22	100	
Zn	66	89	He	-0.044	ppb	N/A	296.97	100	
Zn	67	89	No Gas	0.054	ppb	78.1	367.04	100	
Zn	68	89	No Gas	0.036	ppb	51.9	1274.69	100	
As	75	89	No Gas	0.267	ppb	99.6	6540.57	100	
As	75	89	He	0.022	ppb	12.4	35.56	100	
Se	77	89	No Gas	-1.913	ppb	N/A	6237.78	100	
Se	78	89	No Gas	-0.679	ppb	N/A	15290.88	100	
Se	78	89	He	0.344	ppb	38.0	32.22	100	
Se	82	89	No Gas	0.312	ppb	107.1	85.76	100	
[Se]	83	89	No Gas	431.755	ppb	11.6	2339.24	100	Failed
Sr	88	89	No Gas	-0.001	ppb	N/A	670.70	100	
Mo	95	89	No Gas	0.204	ppb	24.8	2305.89	10000	
Mo	97	89	No Gas	0.218	ppb	22.7	1504.95	10000	
Mo	98	89	No Gas	0.221	ppb	24.1	4090.01	10000	
[Mo]	99	89	No Gas	19.834	ppb	150.0	10.01	10000	
Cd	106	89	No Gas	-0.638	ppb	N/A	38380.84	100	
Ag	107	89	No Gas	0.021	ppb	28.8	991.15	100	
Ag	107	89	He	0.017	ppb	30.5	360.37	100	
Cd	108	89	No Gas	0.081	ppb	56.5	86.75	100	
Ag	109	89	No Gas	0.017	ppb	39.8	563.92	100	
Cd	111	89	No Gas	-0.001	ppb	N/A	-55.31	100	
Cd	114	89	No Gas	0.008	ppb	22.4	140.14	100	
Sn	118	115	No Gas	0.123	ppb	31.0	3989.58	100	
Sb	121	115	No Gas	0.030	ppb	14.9	1304.52	100	
Sb	121	89	He	0.014	ppb	144.1	256.67	100	
Sb	123	115	No Gas	0.025	ppb	31.2	1087.82	100	
Ba	135	115	No Gas	0.007	ppb	146.6	116.78	100	
Ba	137	115	No Gas	0.009	ppb	23.5	210.22	100	
Tl	203	209	No Gas	0.122	ppb	20.2	2846.57	100	
Tl	205	209	No Gas	0.126	ppb	21.7	6975.74	100	
Pb	206	209	No Gas	0.012	ppb	129.4	2649.64	100	
Pb	207	209	No Gas	0.015	ppb	115.4	2215.79	100	
Pb	208	209	No Gas	0.011	ppb	40.8	10151.94	100	
Th	232	209	No Gas	0.219	ppb	30.3	23038.88	100	
U	238	209	No Gas	0.087	ppb	23.6	6191.24	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3228676.53	0.6	3287788.3	98.2	70	125	
Sc	45	No Gas	16445918.45	0.3	16642937.14	98.82	75	125	
Sc	45	He	707253.83	0.5	708779.09	99.78	75	125	
Y	89	No Gas	41490955.20	0.2	41680351.27	99.55	75	125	
Y	89	He	5415620.84	0.3	5497469.77	98.51	75	125	
In	115	No Gas	9124627.76	0.2	9172632.54	99.48	75	125	
Tb	159	No Gas	12745074.27	0.2	12859728.08	99.11	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7899163.30	0.9	7923397.19	99.69	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 255_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 21:10:22

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 231CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.482	ppb	0.4	1888884.83	100	98.48	90	110	
Be	9	6	No Gas	99.569	ppb	0.1	460649.13	100	99.57	90	110	
B	11	6	No Gas	255.833	ppb	0.4	805359.55	250	102.33	90	110	
Na	23	45	No Gas	10045.765	ppb	1.0	215731688.15	10000	100.46	90	110	
Na	23	45	He	9893.583	ppb	1.1	6340196.99	10000	98.94	90	110	
Mg	24	45	No Gas	9970.569	ppb	0.9	146574797.82	10000	99.71	90	110	
Mg	24	45	He	9915.440	ppb	0.6	3269993.18	10000	99.15	90	110	
Mg	25	45	No Gas	9965.656	ppb	0.9	19433164.71	10000	99.66	90	110	
Al	27	45	No Gas	99.141	ppb	0.3	1917609.61	100	99.14	90	110	
Al	27	45	He	102.848	ppb	1.1	13716.94	100	102.85	90	110	
Si	28	45	No Gas	10124.549	ppb	0.0	80220175.34	10000	101.25	90	110	
Si	29	45	No Gas	10149.472	ppb	0.4	4974437.68	10000	101.49	90	110	
K	39	45	No Gas	9938.464	ppb	0.3	219558423.40	10000	99.38	90	110	
K	39	45	He	9849.129	ppb	0.3	2672995.06	10000	98.49	90	110	
Ca	44	45	No Gas	9954.977	ppb	0.1	6723376.77	10000	99.55	90	110	
Ca	44	45	He	10058.578	ppb	1.8	149777.44	10000	100.59	90	110	
Ti	47	45	No Gas	98.653	ppb	0.6	207332.94	100	98.65	90	110	
V	51	45	No Gas	98.904	ppb	0.2	2743136.64	100	98.9	90	110	
V	51	45	He	97.870	ppb	1.2	360427.63	100	97.87	90	110	
Cr	52	89	No Gas	98.469	ppb	0.4	2520525.06	100	98.47	90	110	
Cr	52	89	He	97.644	ppb	2.0	449003.28	100	97.64	90	110	
Cr	53	89	No Gas	98.007	ppb	0.9	346326.78	100	98.01	90	110	
Mn	55	89	No Gas	98.464	ppb	0.1	3420950.23	100	98.46	90	110	
Mn	55	89	He	98.603	ppb	0.9	241816.35	100	98.6	90	110	
Fe	56	89	No Gas	9887.205	ppb	0.5	246659463.85	10000	98.87	90	110	
Fe	56	89	He	9831.746	ppb	0.6	30280877.05	10000	98.32	90	110	
Co	59	89	No Gas	98.558	ppb	0.5	2731318.09	100	98.56	90	110	
Co	59	89	He	102.268	ppb	0.8	754996.40	100	102.27	90	110	
Ni	60	89	No Gas	100.466	ppb	0.4	616908.39	100	100.47	90	110	
Ni	60	89	He	98.693	ppb	0.9	203762.27	100	98.69	90	110	
Ni	62	89	No Gas	98.666	ppb	0.6	95061.58	100	98.67	90	110	
Cu	63	89	No Gas	99.383	ppb	0.7	1479378.91	100	99.38	90	110	
Cu	63	89	He	101.836	ppb	1.0	563881.46	100	101.84	90	110	
Cu	65	89	No Gas	99.969	ppb	0.2	713293.24	100	99.97	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.224	ppb	0.7	437850.26	100	99.22	90	110	
Zn	66	89	He	98.639	ppb	0.6	85966.73	100	98.64	90	110	
Zn	67	89	No Gas	98.610	ppb	1.4	68346.38	100	98.61	90	110	
Zn	68	89	No Gas	99.488	ppb	0.7	316358.44	100	99.49	90	110	
As	75	89	No Gas	97.776	ppb	1.2	466551.63	100	97.78	90	110	
As	75	89	He	97.330	ppb	0.6	63440.25	100	97.33	90	110	
Se	77	89	No Gas	97.183	ppb	3.4	29746.14	100	97.18	90	110	
Se	78	89	No Gas	98.974	ppb	0.6	84726.28	100	98.97	90	110	
Se	78	89	He	98.106	ppb	3.7	3823.90	100	98.11	90	110	
Se	82	89	No Gas	96.866	ppb	2.1	27987.90	100	96.87	90	110	
[Se]	83	89	No Gas	369.549	ppb	55.4	2329.24	100	369.55	90	110	Failed
Sr	88	89	No Gas	98.999	ppb	0.3	4424328.92	100	99	90	110	
Mo	95	89	No Gas	99.125	ppb	0.5	827327.15	100	99.12	90	110	
Mo	97	89	No Gas	99.468	ppb	0.5	517082.98	100	99.47	90	110	
Mo	98	89	No Gas	98.174	ppb	0.2	1334950.11	100	98.17	90	110	
[Mo]	99	89	No Gas	20.435	ppb	0.4	10.01	100	20.43	90	110	Failed
Cd	106	89	No Gas	100.800	ppb	2.0	80906.95	100	100.8	90	110	
Ag	107	89	No Gas	98.833	ppb	0.3	2199653.73	100	98.83	90	110	
Ag	107	89	He	100.546	ppb	1.2	1056879.36	100	100.55	90	110	
Cd	108	89	No Gas	98.605	ppb	1.1	32221.84	100	98.6	90	110	
Ag	109	89	No Gas	98.809	ppb	0.5	2103071.51	100	98.81	90	110	
Cd	111	89	No Gas	99.730	ppb	0.5	443533.97	100	99.73	90	110	
Cd	114	89	No Gas	99.055	ppb	0.4	1160037.23	100	99.06	90	110	
Sn	118	115	No Gas	98.321	ppb	0.2	1455839.04	100	98.32	90	110	
Sb	121	115	No Gas	98.112	ppb	0.5	2077342.56	100	98.11	90	110	
Sb	121	89	He	100.158	ppb	0.8	451571.35	100	100.16	90	110	
Sb	123	115	No Gas	97.927	ppb	0.3	1596277.32	100	97.93	90	110	
Ba	135	115	No Gas	99.063	ppb	0.3	442281.45	100	99.06	90	110	
Ba	137	115	No Gas	99.357	ppb	0.6	769954.15	100	99.36	90	110	
Tl	203	209	No Gas	98.971	ppb	0.4	1848907.09	100	98.97	90	110	
Tl	205	209	No Gas	99.353	ppb	0.8	4356914.22	100	99.35	90	110	
Pb	206	209	No Gas	99.075	ppb	1.0	1486233.21	100	99.08	90	110	
Pb	207	209	No Gas	98.590	ppb	0.1	1235531.91	100	98.59	90	110	
Pb	208	209	No Gas	98.732	ppb	0.5	5756687.87	100	98.73	90	110	
Th	232	209	No Gas	96.788	ppb	0.6	5667207.64	100	96.79	90	110	
U	238	209	No Gas	98.615	ppb	0.7	5633227.82	100	98.62	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3098086.67	0.2	3287788.3	94.23	70	125	
Sc	45	No Gas	16160410.02	0.1	16642937.14	97.1	75	125	
Sc	45	He	695511.90	1.7	708779.09	98.13	75	125	
Y	89	No Gas	40626456.54	0.2	41680351.27	97.47	75	125	
Y	89	He	5344990.63	2.1	5497469.77	97.23	75	125	
In	115	No Gas	8859524.86	0.5	9172632.54	96.59	75	125	
Tb	159	No Gas	12642507.12	0.1	12859728.08	98.31	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7590286.36	0.2	7923397.19	95.8	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	256_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:12:05
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.048	ppb	N/A	175051.31	100	
Be	9	6	No Gas	0.015	ppb	82.8	120.12	100	
B	11	6	No Gas	12.322	ppb	6.9	59967.42	100	
Na	23	45	No Gas	33.983	ppb	9.5	2630465.03	500000	
Na	23	45	He	36.245	ppb	2.3	84029.58	500000	
Mg	24	45	No Gas	0.425	ppb	38.7	15716.82	500000	
Mg	24	45	He	0.163	ppb	153.6	266.69	500000	
Mg	25	45	No Gas	0.244	ppb	86.1	1680.24	500000	
Al	27	45	No Gas	0.021	ppb	157.5	8670.13	500000	
Al	27	45	He	-0.046	ppb	N/A	50.00	500000	
Si	28	45	No Gas	17.937	ppb	16.5	498348.15	100	
Si	29	45	No Gas	17.210	ppb	12.5	68707.88	100	
K	39	45	No Gas	7.606	ppb	11.4	3934619.84	500000	
K	39	45	He	2.039	ppb	97.2	24716.94	500000	
Ca	44	45	No Gas	0.715	ppb	415.3	25184.67	500000	
Ca	44	45	He	-6.123	ppb	N/A	93.34	500000	
Ti	47	45	No Gas	0.020	ppb	67.6	243.59	10000	
V	51	45	No Gas	-0.024	ppb	N/A	-2510.14	100	
V	51	45	He	0.005	ppb	342.2	300.31	100	
Cr	52	89	No Gas	-0.027	ppb	N/A	21655.74	100	
Cr	52	89	He	0.023	ppb	150.4	1948.78	100	
Cr	53	89	No Gas	-0.350	ppb	N/A	37920.71	100	
Mn	55	89	No Gas	-0.309	ppb	N/A	7589.83	100	
Mn	55	89	He	-0.341	ppb	N/A	296.97	100	
Fe	56	89	No Gas	3.771	ppb	54.6	1931415.93	500000	
Fe	56	89	He	9.789	ppb	7.0	51392.65	500000	
Co	59	89	No Gas	0.000	ppb	N/A	1344.77	100	
Co	59	89	He	0.003	ppb	307.2	310.32	100	
Ni	60	89	No Gas	-0.004	ppb	N/A	914.29	100	
Ni	60	89	He	-0.016	ppb	N/A	260.27	100	
Ni	62	89	No Gas	0.243	ppb	75.5	4028.03	100	
Cu	63	89	No Gas	0.762	ppb	5.4	24115.78	100	
Cu	63	89	He	0.639	ppb	12.5	7255.97	100	
Cu	65	89	No Gas	0.701	ppb	10.1	11239.38	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.017	ppb	N/A	1494.94	100	
Zn	66	89	He	-0.078	ppb	N/A	266.94	100	
Zn	67	89	No Gas	-0.040	ppb	N/A	300.31	100	
Zn	68	89	No Gas	-0.027	ppb	N/A	1071.13	100	
As	75	89	No Gas	0.130	ppb	211.1	5873.35	100	
As	75	89	He	0.036	ppb	10.0	44.44	100	
Se	77	89	No Gas	-3.022	ppb	N/A	5960.72	100	
Se	78	89	No Gas	0.450	ppb	321.2	16075.85	100	
Se	78	89	He	0.201	ppb	234.2	26.67	100	
Se	82	89	No Gas	0.378	ppb	215.3	105.51	100	
[Se]	83	89	No Gas	379.764	ppb	62.3	2369.28	100	Failed
Sr	88	89	No Gas	0.023	ppb	16.0	1751.90	100	
Mo	95	89	No Gas	0.204	ppb	24.7	2302.55	10000	
Mo	97	89	No Gas	0.214	ppb	18.1	1481.60	10000	
Mo	98	89	No Gas	0.209	ppb	30.1	3919.79	10000	
[Mo]	99	89	No Gas	19.788	ppb	150.1	10.01	10000	
Cd	106	89	No Gas	1.188	ppb	76.8	39127.25	100	
Ag	107	89	No Gas	0.014	ppb	6.3	831.14	100	
Ag	107	89	He	0.009	ppb	30.9	280.29	100	
Cd	108	89	No Gas	0.052	ppb	277.4	76.74	100	
Ag	109	89	No Gas	0.016	ppb	26.9	547.24	100	
Cd	111	89	No Gas	0.001	ppb	1662.0	-49.01	100	
Cd	114	89	No Gas	0.011	ppb	36.7	183.52	100	
Sn	118	115	No Gas	0.077	ppb	30.8	3267.09	100	
Sb	121	115	No Gas	0.023	ppb	4.5	1145.61	100	
Sb	121	89	He	0.019	ppb	31.9	280.01	100	
Sb	123	115	No Gas	0.012	ppb	57.0	854.23	100	
Ba	135	115	No Gas	0.004	ppb	196.5	100.10	100	
Ba	137	115	No Gas	0.003	ppb	211.9	156.83	100	
Tl	203	209	No Gas	0.108	ppb	24.8	2536.18	100	
Tl	205	209	No Gas	0.113	ppb	26.4	6301.39	100	
Pb	206	209	No Gas	-0.014	ppb	N/A	2212.46	100	
Pb	207	209	No Gas	-0.021	ppb	N/A	1735.23	100	
Pb	208	209	No Gas	-0.019	ppb	N/A	8246.13	100	
Th	232	209	No Gas	0.277	ppb	23.4	26208.03	100	
U	238	209	No Gas	0.102	ppb	20.1	6965.77	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3218076.26	0.8	3287788.3	97.88	70	125	
Sc	45	No Gas	16424409.86	0.1	16642937.14	98.69	75	125	
Sc	45	He	704521.38	0.3	708779.09	99.4	75	125	
Y	89	No Gas	41438878.96	0.3	41680351.27	99.42	75	125	
Y	89	He	5415978.49	1.0	5497469.77	98.52	75	125	
In	115	No Gas	9062099.74	0.3	9172632.54	98.79	75	125	
Tb	159	No Gas	12740424.20	0.1	12859728.08	99.07	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7814013.58	0.4	7923397.19	98.62	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 269_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 21:34:05

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 231CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	97.547	ppb	0.2	2762714.18	100	97.55	90	110	
Be	9	6	No Gas	95.223	ppb	0.8	649953.26	100	95.22	90	110	
B	11	6	No Gas	238.605	ppb	0.3	1110144.29	250	95.44	90	110	
Na	23	45	No Gas	11198.627	ppb	0.6	318364215.45	10000	111.99	90	110	Failed
Na	23	45	He	11087.618	ppb	0.3	9069658.82	10000	110.88	90	110	Failed
Mg	24	45	No Gas	10744.284	ppb	0.7	209285430.21	10000	107.44	90	110	
Mg	24	45	He	10693.989	ppb	0.5	4505772.02	10000	106.94	90	110	
Mg	25	45	No Gas	10590.825	ppb	0.9	27364366.26	10000	105.91	90	110	
Al	27	45	No Gas	104.968	ppb	0.4	2689538.81	100	104.97	90	110	
Al	27	45	He	109.921	ppb	3.3	18729.49	100	109.92	90	110	
Si	28	45	No Gas	10648.606	ppb	0.7	111771318.21	10000	106.49	90	110	
Si	29	45	No Gas	10544.104	ppb	0.4	6844415.26	10000	105.44	90	110	
K	39	45	No Gas	10226.304	ppb	1.0	299202422.21	10000	102.26	90	110	
K	39	45	He	10797.576	ppb	0.8	3741155.26	10000	107.98	90	110	
Ca	44	45	No Gas	9953.707	ppb	0.4	8907442.16	10000	99.54	90	110	
Ca	44	45	He	10795.483	ppb	0.7	205355.53	10000	107.95	90	110	
Ti	47	45	No Gas	98.410	ppb	1.2	274048.39	100	98.41	90	110	
V	51	45	No Gas	97.784	ppb	1.1	3593551.86	100	97.78	90	110	
V	51	45	He	101.508	ppb	0.8	477651.17	100	101.51	90	110	
Cr	52	89	No Gas	107.339	ppb	0.4	3266431.12	100	107.34	90	110	
Cr	52	89	He	104.324	ppb	0.9	591620.16	100	104.32	90	110	
Cr	53	89	No Gas	104.713	ppb	0.6	437107.27	100	104.71	90	110	
Mn	55	89	No Gas	106.063	ppb	0.1	4382322.75	100	106.06	90	110	
Mn	55	89	He	106.139	ppb	0.8	320930.55	100	106.14	90	110	
Fe	56	89	No Gas	10625.431	ppb	0.5	315211157.05	10000	106.25	90	110	
Fe	56	89	He	10418.797	ppb	0.5	39575179.41	10000	104.19	90	110	
Co	59	89	No Gas	106.516	ppb	0.3	3511651.03	100	106.52	90	110	
Co	59	89	He	104.523	ppb	0.5	951729.44	100	104.52	90	110	
Ni	60	89	No Gas	109.633	ppb	0.5	800822.86	100	109.63	90	110	
Ni	60	89	He	100.785	ppb	0.5	256638.14	100	100.78	90	110	
Ni	62	89	No Gas	107.413	ppb	0.4	122731.11	100	107.41	90	110	
Cu	63	89	No Gas	106.141	ppb	0.9	1878615.91	100	106.14	90	110	
Cu	63	89	He	102.270	ppb	0.3	698442.06	100	102.27	90	110	
Cu	65	89	No Gas	105.345	ppb	1.5	893795.75	100	105.34	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	102.610	ppb	1.2	538563.02	100	102.61	90	110	
Zn	66	89	He	101.099	ppb	0.9	108659.87	100	101.1	90	110	
Zn	67	89	No Gas	102.917	ppb	1.6	84841.92	100	102.92	90	110	
Zn	68	89	No Gas	102.690	ppb	0.9	388435.18	100	102.69	90	110	
As	75	89	No Gas	101.790	ppb	0.8	577573.25	100	101.79	90	110	
As	75	89	He	100.925	ppb	1.1	81135.02	100	100.92	90	110	
Se	77	89	No Gas	116.184	ppb	1.7	40779.21	100	116.18	90	110	Failed
Se	78	89	No Gas	102.952	ppb	1.3	104102.77	100	102.95	90	110	
Se	78	89	He	103.520	ppb	1.7	4973.17	100	103.52	90	110	
Se	82	89	No Gas	98.037	ppb	2.6	33694.62	100	98.04	90	110	
[Se]	83	89	No Gas	-350.418	ppb	N/A	3307.11	100	-350.42	90	110	Failed
Sr	88	89	No Gas	99.623	ppb	0.7	5296838.52	100	99.62	90	110	
Mo	95	89	No Gas	97.742	ppb	0.7	970502.90	100	97.74	90	110	
Mo	97	89	No Gas	97.410	ppb	0.4	602467.56	100	97.41	90	110	
Mo	98	89	No Gas	95.669	ppb	1.4	1547526.52	100	95.67	90	110	
[Mo]	99	89	No Gas	49.831	ppb	128.8	23.36	100	49.83	90	110	Failed
Cd	106	89	No Gas	99.103	ppb	3.1	95379.96	100	99.1	90	110	
Ag	107	89	No Gas	96.130	ppb	0.5	2545392.75	100	96.13	90	110	
Ag	107	89	He	92.281	ppb	0.1	1196478.57	100	92.28	90	110	
Cd	108	89	No Gas	95.841	ppb	0.5	37263.21	100	95.84	90	110	
Ag	109	89	No Gas	95.188	ppb	0.4	2410287.90	100	95.19	90	110	
Cd	111	89	No Gas	94.386	ppb	0.4	499382.53	100	94.39	90	110	
Cd	114	89	No Gas	93.967	ppb	0.2	1309223.73	100	93.97	90	110	
Sn	118	115	No Gas	97.207	ppb	0.6	1633568.41	100	97.21	90	110	
Sb	121	115	No Gas	96.130	ppb	0.4	2309938.45	100	96.13	90	110	
Sb	121	89	He	94.915	ppb	0.5	527801.96	100	94.92	90	110	
Sb	123	115	No Gas	96.331	ppb	0.8	1782013.37	100	96.33	90	110	
Ba	135	115	No Gas	97.517	ppb	0.7	494108.29	100	97.52	90	110	
Ba	137	115	No Gas	96.977	ppb	1.1	852887.47	100	96.98	90	110	
Tl	203	209	No Gas	98.525	ppb	0.4	1838348.93	100	98.52	90	110	
Tl	205	209	No Gas	99.083	ppb	0.8	4339817.33	100	99.08	90	110	
Pb	206	209	No Gas	99.317	ppb	0.7	1488042.11	100	99.32	90	110	
Pb	207	209	No Gas	98.700	ppb	0.9	1235450.40	100	98.7	90	110	
Pb	208	209	No Gas	98.840	ppb	0.6	5756161.44	100	98.84	90	110	
Th	232	209	No Gas	94.335	ppb	0.7	5517108.79	100	94.34	90	110	
U	238	209	No Gas	94.948	ppb	1.3	5417108.16	100	94.95	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4570796.33	0.7	3287788.3	139.02	70	125	ISTD Failed
Sc	45	No Gas	21412692.74	0.2	16642937.14	128.66	75	125	ISTD Failed
Sc	45	He	888583.02	0.7	708779.09	125.37	75	125	ISTD Failed
Y	89	No Gas	48333181.61	1.2	41680351.27	115.96	75	125	
Y	89	He	6591662.93	0.5	5497469.77	119.9	75	125	
In	115	No Gas	10054685.12	1.0	9172632.54	109.62	75	125	
Tb	159	No Gas	13249182.96	1.7	12859728.08	103.03	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7581171.64	0.5	7923397.19	95.68	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	270_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:35:50
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	231CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.401	ppb	14.3	257096.15	100	
Be	9	6	No Gas	0.023	ppb	16.1	220.23	100	
B	11	6	No Gas	4.769	ppb	8.0	50347.31	100	
Na	23	45	No Gas	523.575	ppb	0.2	16998900.90	500000	
Na	23	45	He	544.203	ppb	0.7	499077.16	500000	
Mg	24	45	No Gas	0.468	ppb	14.7	21017.49	500000	
Mg	24	45	He	0.250	ppb	75.1	360.03	500000	
Mg	25	45	No Gas	0.516	ppb	13.0	2853.82	500000	
Al	27	45	No Gas	0.043	ppb	120.1	11685.68	500000	
Al	27	45	He	0.092	ppb	74.7	83.33	500000	
Si	28	45	No Gas	18.401	ppb	9.0	645525.05	100	
Si	29	45	No Gas	28.440	ppb	6.1	95433.74	100	
K	39	45	No Gas	53.274	ppb	6.6	6352736.16	500000	
K	39	45	He	60.578	ppb	13.4	49398.62	500000	
Ca	44	45	No Gas	16.179	ppb	10.3	45959.86	500000	
Ca	44	45	He	-2.105	ppb	N/A	186.68	500000	
Ti	47	45	No Gas	0.035	ppb	51.8	353.70	10000	
V	51	45	No Gas	0.069	ppb	43.4	129.47	100	
V	51	45	He	0.019	ppb	76.7	430.45	100	
Cr	52	89	No Gas	0.023	ppb	104.5	26733.14	100	
Cr	52	89	He	0.051	ppb	20.3	2502.77	100	
Cr	53	89	No Gas	-1.567	ppb	N/A	39603.83	100	
Mn	55	89	No Gas	-0.274	ppb	N/A	10267.63	100	
Mn	55	89	He	-0.323	ppb	N/A	410.43	100	
Fe	56	89	No Gas	8.719	ppb	27.3	2393727.59	500000	
Fe	56	89	He	11.415	ppb	3.7	67837.93	500000	
Co	59	89	No Gas	0.007	ppb	42.4	1808.63	100	
Co	59	89	He	0.001	ppb	1389.9	353.70	100	
Ni	60	89	No Gas	0.787	ppb	3.2	6821.99	100	
Ni	60	89	He	-0.033	ppb	N/A	270.28	100	
Ni	62	89	No Gas	0.871	ppb	9.8	5379.88	100	
Cu	63	89	No Gas	0.159	ppb	10.6	17519.03	100	
Cu	63	89	He	-0.102	ppb	N/A	3757.66	100	
Cu	65	89	No Gas	0.026	ppb	112.7	7412.90	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.163	ppb	20.5	2683.00	100	
Zn	66	89	He	-0.037	ppb	N/A	363.71	100	
Zn	67	89	No Gas	0.120	ppb	116.3	480.50	100	
Zn	68	89	No Gas	0.045	ppb	102.9	1518.30	100	
As	75	89	No Gas	0.334	ppb	40.8	7983.32	100	
As	75	89	He	0.036	ppb	85.4	53.33	100	
Se	77	89	No Gas	8.356	ppb	10.1	10160.83	100	
Se	78	89	No Gas	1.860	ppb	18.8	19888.09	100	
Se	78	89	He	0.253	ppb	115.0	34.44	100	
Se	82	89	No Gas	0.568	ppb	90.1	187.79	100	
[Se]	83	89	No Gas	233.874	ppb	60.6	2866.56	100	Failed
Sr	88	89	No Gas	0.040	ppb	15.6	2990.04	100	
Mo	95	89	No Gas	0.259	ppb	25.3	3220.34	10000	
Mo	97	89	No Gas	0.232	ppb	23.3	1835.34	10000	
Mo	98	89	No Gas	0.244	ppb	26.1	5117.13	10000	
[Mo]	99	89	No Gas	32.702	ppb	45.3	16.68	10000	
Cd	106	89	No Gas	1.311	ppb	141.4	45614.35	100	
Ag	107	89	No Gas	0.234	ppb	4.4	6781.78	100	
Ag	107	89	He	0.182	ppb	3.5	2552.84	100	
Cd	108	89	No Gas	0.036	ppb	80.8	83.42	100	
Ag	109	89	No Gas	0.236	ppb	3.4	6197.74	100	
Cd	111	89	No Gas	0.004	ppb	23.0	-40.62	100	
Cd	114	89	No Gas	0.011	ppb	57.7	206.88	100	
Sn	118	115	No Gas	0.165	ppb	17.9	5128.81	100	
Sb	121	115	No Gas	0.065	ppb	15.6	2276.88	100	
Sb	121	89	He	0.057	ppb	15.6	543.36	100	
Sb	123	115	No Gas	0.089	ppb	4.9	2385.98	100	
Ba	135	115	No Gas	0.129	ppb	5.6	747.45	100	
Ba	137	115	No Gas	0.107	ppb	21.9	1091.16	100	
Tl	203	209	No Gas	0.139	ppb	15.1	3146.96	100	
Tl	205	209	No Gas	0.132	ppb	26.2	7216.17	100	
Pb	206	209	No Gas	-0.039	ppb	N/A	1835.34	100	
Pb	207	209	No Gas	-0.043	ppb	N/A	1454.90	100	
Pb	208	209	No Gas	-0.033	ppb	N/A	7408.46	100	
Th	232	209	No Gas	0.190	ppb	35.3	21099.92	100	
U	238	209	No Gas	0.090	ppb	22.7	6268.05	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4515560.18	0.6	3287788.3	137.34	70	125	ISTD Failed
Sc	45	No Gas	21113096.47	1.4	16642937.14	126.86	75	125	ISTD Failed
Sc	45	He	856162.59	1.1	708779.09	120.79	75	125	
Y	89	No Gas	48240839.27	0.4	41680351.27	115.74	75	125	
Y	89	He	6508048.69	0.6	5497469.77	118.38	75	125	
In	115	No Gas	10089385.57	0.6	9172632.54	109.99	75	125	
Tb	159	No Gas	13383279.97	0.3	12859728.08	104.07	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7843121.07	0.3	7923397.19	98.99	75	125	

Initial Calibration Verification (ICV) Report

Sample Name ICV

File Name 281_ICV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 21:54:13

Sample Type ICV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	79.045	ppb	0.4	1578026.62	80	98.81	90	110	
Be	9	6	No Gas	81.774	ppb	0.3	384355.75	80	102.22	90	110	
B	11	6	No Gas	197.077	ppb	0.8	634807.67	200	98.54	90	110	
Na	23	45	No Gas	8003.559	ppb	0.4	182609187.42	8000	100.04	90	110	
Na	23	45	He	8025.103	ppb	1.3	5417231.79	8000	100.31	90	110	
Mg	24	45	No Gas	8034.832	ppb	0.5	121477174.86	8000	100.44	90	110	
Mg	24	45	He	8046.671	ppb	0.7	2701391.73	8000	100.58	90	110	
Mg	25	45	No Gas	8046.687	ppb	0.4	16133105.18	8000	100.58	90	110	
Al	27	45	No Gas	76.912	ppb	0.8	1545018.31	80	96.14	90	110	
Al	27	45	He	79.239	ppb	2.9	10901.10	80	99.05	90	110	
Si	28	45	No Gas	8380.286	ppb	0.4	68793466.94	8000	104.75	90	110	
Si	29	45	No Gas	8441.805	ppb	0.6	4284192.85	8000	105.52	90	110	
K	39	45	No Gas	7978.547	ppb	0.5	184739023.91	8000	99.73	90	110	
K	39	45	He	8122.579	ppb	1.1	2268939.08	8000	101.53	90	110	
Ca	44	45	No Gas	8021.048	ppb	0.7	5568920.75	8000	100.26	90	110	
Ca	44	45	He	8040.253	ppb	2.6	125629.28	8000	100.5	90	110	
Ti	47	45	No Gas	78.733	ppb	0.8	172390.14	80	98.42	90	110	
V	51	45	No Gas	78.482	ppb	0.7	2265399.16	80	98.1	90	110	
V	51	45	He	80.124	ppb	0.9	303972.66	80	100.16	90	110	
Cr	52	89	No Gas	79.757	ppb	0.9	2095313.29	80	99.7	90	110	
Cr	52	89	He	81.396	ppb	0.2	378182.03	80	101.74	90	110	
Cr	53	89	No Gas	79.078	ppb	0.3	285811.10	80	98.85	90	110	
Mn	55	89	No Gas	80.255	ppb	0.3	2836314.97	80	100.32	90	110	
Mn	55	89	He	79.029	ppb	0.4	200277.94	80	98.79	90	110	
Fe	56	89	No Gas	8172.863	ppb	0.8	208152237.99	8000	102.16	90	110	
Fe	56	89	He	7984.817	ppb	1.3	25335285.46	8000	99.81	90	110	
Co	59	89	No Gas	80.965	ppb	0.8	2293399.45	80	101.21	90	110	
Co	59	89	He	83.686	ppb	1.8	631057.07	80	104.61	90	110	
Ni	60	89	No Gas	82.345	ppb	1.3	517738.08	80	102.93	90	110	
Ni	60	89	He	80.988	ppb	1.7	171351.29	80	101.24	90	110	
Ni	62	89	No Gas	81.395	ppb	1.1	80691.67	80	101.74	90	110	
Cu	63	89	No Gas	81.342	ppb	0.6	1241316.66	80	101.68	90	110	
Cu	63	89	He	83.752	ppb	0.6	472039.50	80	104.69	90	110	
Cu	65	89	No Gas	83.062	ppb	0.8	607322.34	80	103.83	90	110	

Initial Calibration Verification (ICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	80.170	ppb	1.4	365116.94	80	100.21	90	110	
Zn	66	89	He	80.232	ppb	2.3	71834.46	80	100.29	90	110	
Zn	67	89	No Gas	79.945	ppb	1.4	57616.26	80	99.93	90	110	
Zn	68	89	No Gas	79.838	ppb	0.9	261266.10	80	99.8	90	110	
As	75	89	No Gas	79.900	ppb	0.4	392911.41	80	99.88	90	110	
As	75	89	He	80.317	ppb	0.7	53969.45	80	100.4	90	110	
Se	77	89	No Gas	71.968	ppb	4.7	25402.91	80	89.96	90	110	Failed
Se	78	89	No Gas	78.219	ppb	1.1	73422.62	80	97.77	90	110	
Se	78	89	He	79.728	ppb	2.5	3304.87	80	99.66	90	110	
Se	82	89	No Gas	78.395	ppb	2.2	23575.02	80	97.99	90	110	
[Se]	83	89	No Gas	-595.186	ppb	N/A	2713.05	80	-743.98	90	110	Failed
Sr	88	89	No Gas	77.611	ppb	0.3	3555305.21	80	97.01	90	110	
Mo	95	89	No Gas	79.202	ppb	0.4	667196.91	80	99	90	110	
Mo	97	89	No Gas	79.010	ppb	0.6	420115.25	80	98.76	90	110	
Mo	98	89	No Gas	76.479	ppb	0.1	1070979.22	80	95.6	90	110	
[Mo]	99	89	No Gas	68.832	ppb	56.0	13.35	80	86.04	90	110	Failed
Cd	106	89	No Gas	77.477	ppb	0.8	74067.24	80	96.85	90	110	
Ag	107	89	No Gas	81.448	ppb	0.1	1840478.75	80	101.81	90	110	
Ag	107	89	He	83.100	ppb	0.5	889217.19	80	103.87	90	110	
Cd	108	89	No Gas	83.528	ppb	2.0	27248.90	80	104.41	90	110	
Ag	109	89	No Gas	82.055	ppb	0.5	1766503.95	80	102.57	90	110	
Cd	111	89	No Gas	79.619	ppb	0.4	364993.62	80	99.52	90	110	
Cd	114	89	No Gas	80.218	ppb	0.3	963836.89	80	100.27	90	110	
Sn	118	115	No Gas	78.004	ppb	0.1	1171168.98	80	97.51	90	110	
Sb	121	115	No Gas	78.701	ppb	0.2	1709802.05	80	98.38	90	110	
Sb	121	89	He	80.266	ppb	0.3	373613.88	80	100.33	90	110	
Sb	123	115	No Gas	78.063	ppb	0.5	1315249.70	80	97.58	90	110	
Ba	135	115	No Gas	78.948	ppb	0.9	364071.61	80	98.68	90	110	
Ba	137	115	No Gas	80.925	ppb	0.5	636661.70	80	101.16	90	110	
Tl	203	209	No Gas	77.607	ppb	0.7	1473444.70	80	97.01	90	110	
Tl	205	209	No Gas	77.151	ppb	0.4	3490820.62	80	96.44	90	110	
Pb	206	209	No Gas	77.240	ppb	0.2	1200997.04	80	96.55	90	110	
Pb	207	209	No Gas	77.331	ppb	0.5	1002250.90	80	96.66	90	110	
Pb	208	209	No Gas	77.661	ppb	0.3	4664566.45	80	97.08	90	110	
Th	232	209	No Gas	76.367	ppb	0.7	4508822.89	80	95.46	90	110	
U	238	209	No Gas	73.320	ppb	0.9	4321196.93	80	91.65	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3187651.87	0.5	3926441.81	81.18	70	125	
Sc	45	No Gas	16698082.70	0.3	18873842.21	88.47	75	125	
Sc	45	He	722831.88	0.6	814336.22	88.76	75	125	
Y	89	No Gas	41440117.70	0.2	45077078.84	91.93	75	125	
Y	89	He	5508997.34	1.6	6036502.97	91.26	75	125	
In	115	No Gas	9066879.56	0.3	9630269.52	94.15	75	125	
Tb	159	No Gas	12679605.88	0.7	13043986.51	97.21	75	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7716615.25	0.3	7831047.47	98.54	75	125	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	282_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:55:56
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.001	ppb	N/A	185830.53	100	
Be	9	6	No Gas	0.023	ppb	52.0	173.51	100	
B	11	6	No Gas	-0.838	ppb	N/A	22955.27	100	
Na	23	45	No Gas	-226.956	ppb	N/A	6182192.06	500000	
Na	23	45	He	-224.395	ppb	N/A	194810.93	500000	
Mg	24	45	No Gas	0.712	ppb	39.5	20042.72	500000	
Mg	24	45	He	0.278	ppb	205.2	386.70	500000	
Mg	25	45	No Gas	0.643	ppb	28.9	2547.12	500000	
Al	27	45	No Gas	-0.005	ppb	N/A	9057.00	500000	
Al	27	45	He	0.149	ppb	198.8	70.00	500000	
Si	28	45	No Gas	9.441	ppb	38.6	487448.15	100	
Si	29	45	No Gas	-3.684	ppb	N/A	66873.76	100	
K	39	45	No Gas	-27.474	ppb	N/A	4297718.79	500000	
K	39	45	He	-23.868	ppb	N/A	29540.58	500000	
Ca	44	45	No Gas	-11.347	ppb	N/A	25225.18	500000	
Ca	44	45	He	4.273	ppb	181.6	160.01	500000	
Ti	47	45	No Gas	0.009	ppb	28.8	203.54	10000	
V	51	45	No Gas	0.029	ppb	318.2	-1964.55	100	
V	51	45	He	0.017	ppb	76.5	330.34	100	
Cr	52	89	No Gas	-0.028	ppb	N/A	21415.06	100	
Cr	52	89	He	0.000	ppb	N/A	1922.10	100	
Cr	53	89	No Gas	0.105	ppb	236.8	34371.13	100	
Mn	55	89	No Gas	-0.007	ppb	N/A	8568.09	100	
Mn	55	89	He	-0.011	ppb	N/A	317.00	100	
Fe	56	89	No Gas	0.691	ppb	139.6	1883146.66	500000	
Fe	56	89	He	8.512	ppb	7.5	49024.33	500000	
Co	59	89	No Gas	0.009	ppb	54.3	1578.36	100	
Co	59	89	He	-0.001	ppb	N/A	263.61	100	
Ni	60	89	No Gas	-0.533	ppb	N/A	1464.90	100	
Ni	60	89	He	0.012	ppb	153.4	266.94	100	
Ni	62	89	No Gas	-0.213	ppb	N/A	4101.47	100	
Cu	63	89	No Gas	-0.118	ppb	N/A	11372.97	100	
Cu	63	89	He	0.006	ppb	412.6	3166.93	100	
Cu	65	89	No Gas	-0.074	ppb	N/A	5663.58	100	

Initial Calibration Blank (ICB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.080	ppb	N/A	1728.54	100	
Zn	66	89	He	0.000	ppb	N/A	353.70	100	
Zn	67	89	No Gas	-0.056	ppb	N/A	320.33	100	
Zn	68	89	No Gas	-0.060	ppb	N/A	1234.65	100	
As	75	89	No Gas	0.114	ppb	55.9	5939.94	100	
As	75	89	He	0.021	ppb	109.0	34.44	100	
Se	77	89	No Gas	-7.142	ppb	N/A	6377.99	100	
Se	78	89	No Gas	-1.757	ppb	N/A	15644.94	100	
Se	78	89	He	0.058	ppb	163.5	27.78	100	
Se	82	89	No Gas	0.506	ppb	208.6	34.24	100	
[Se]	83	89	No Gas	88.339	ppb	1008.7	2499.45	100	
Sr	88	89	No Gas	-0.007	ppb	N/A	1985.50	100	
Mo	95	89	No Gas	0.199	ppb	28.2	2496.12	10000	
Mo	97	89	No Gas	0.212	ppb	37.9	1611.74	10000	
Mo	98	89	No Gas	0.189	ppb	24.6	3953.64	10000	
[Mo]	99	89	No Gas	23.742	ppb	323.3	6.67	10000	
Cd	106	89	No Gas	-1.424	ppb	N/A	39485.07	100	
Ag	107	89	No Gas	-0.036	ppb	N/A	922.26	100	
Ag	107	89	He	-0.030	ppb	N/A	327.01	100	
Cd	108	89	No Gas	0.016	ppb	449.7	76.74	100	
Ag	109	89	No Gas	-0.046	ppb	N/A	543.90	100	
Cd	111	89	No Gas	0.007	ppb	103.0	-39.01	100	
Cd	114	89	No Gas	0.014	ppb	46.7	233.57	100	
Sn	118	115	No Gas	0.059	ppb	34.4	3886.16	100	
Sb	121	115	No Gas	0.006	ppb	151.6	1434.53	100	
Sb	121	89	He	-0.020	ppb	N/A	286.68	100	
Sb	123	115	No Gas	-0.015	ppb	N/A	1388.16	100	
Ba	135	115	No Gas	-0.019	ppb	N/A	383.73	100	
Ba	137	115	No Gas	-0.034	ppb	N/A	520.54	100	
Tl	203	209	No Gas	0.051	ppb	21.4	1524.98	100	
Tl	205	209	No Gas	0.053	ppb	15.5	3804.46	100	
Pb	206	209	No Gas	0.013	ppb	72.6	1922.10	100	
Pb	207	209	No Gas	0.031	ppb	58.6	1678.49	100	
Pb	208	209	No Gas	0.016	ppb	75.1	7351.63	100	
Th	232	209	No Gas	0.178	ppb	25.1	18185.45	100	
U	238	209	No Gas	0.090	ppb	15.8	6441.61	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3227181.88	0.6	3926441.81	82.19	70	125	
Sc	45	No Gas	16668809.68	0.1	18873842.21	88.32	75	125	
Sc	45	He	717666.26	0.5	814336.22	88.13	75	125	
Y	89	No Gas	42038843.09	0.6	45077078.84	93.26	75	125	
Y	89	He	5518602.99	0.6	6036502.97	91.42	75	125	
In	115	No Gas	9160506.85	0.1	9630269.52	95.12	75	125	
Tb	159	No Gas	12692319.84	0.6	13043986.51	97.3	75	125	

Initial Calibration Blank (ICB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7767135.25	0.5	7831047.47	99.18	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	LLICV
File Name	283LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 21:57:33
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Li	7	6	No Gas	10.321	ppb	2.7	368190.64	10	103.21	80	120	
Be	9	6	No Gas	2.117	ppb	3.4	10080.50	2	105.85	80	120	
B	11	6	No Gas	17.351	ppb	2.4	79489.57	20	86.76	80	120	
Na	23	45	No Gas	-19.965	ppb	N/A	10579778.88	200	-9.98	80	120	Failed
Na	23	45	He	-7.894	ppb	N/A	331733.37	200	-3.95	80	120	Failed
Mg	24	45	No Gas	205.389	ppb	0.8	3099688.29	200	102.69	80	120	
Mg	24	45	He	209.460	ppb	5.2	70272.97	200	104.73	80	120	
Mg	25	45	No Gas	216.881	ppb	0.8	434007.95	200	108.44	80	120	
Al	27	45	No Gas	10.632	ppb	0.8	220443.12	10	106.32	80	120	
Al	27	45	He	9.347	ppb	10.1	1323.42	10	93.47	80	120	
Si	28	45	No Gas	1082.702	ppb	0.5	9202568.21	1000	108.27	80	120	
Si	29	45	No Gas	1138.235	ppb	1.5	634199.98	1000	113.82	80	120	
K	39	45	No Gas	173.793	ppb	1.7	8799631.12	200	86.9	80	120	
K	39	45	He	191.388	ppb	3.2	88514.18	200	95.69	80	120	
Ca	44	45	No Gas	531.242	ppb	0.5	397874.19	500	106.25	80	120	
Ca	44	45	He	512.155	ppb	4.7	8056.25	500	102.43	80	120	
Ti	47	45	No Gas	5.317	ppb	3.8	11756.91	5	106.34	80	120	
V	51	45	No Gas	5.264	ppb	1.2	148611.39	5	105.28	80	120	
V	51	45	He	4.950	ppb	1.3	18945.52	5	99	80	120	
Cr	52	89	No Gas	5.088	ppb	1.4	155690.77	5	101.76	80	120	
Cr	52	89	He	5.114	ppb	1.1	25459.40	5	102.28	80	120	
Cr	53	89	No Gas	5.171	ppb	3.4	50557.28	5	103.42	80	120	
Mn	55	89	No Gas	5.169	ppb	0.6	192772.57	5	103.38	80	120	
Mn	55	89	He	5.031	ppb	2.2	13022.72	5	100.62	80	120	
Fe	56	89	No Gas	76.177	ppb	1.0	3800339.02	80	95.22	80	120	
Fe	56	89	He	102.151	ppb	1.7	344458.70	80	127.69	80	120	Failed
Co	59	89	No Gas	5.193	ppb	0.4	149847.01	5	103.86	80	120	
Co	59	89	He	5.283	ppb	2.1	39942.03	5	105.66	80	120	
Ni	60	89	No Gas	4.677	ppb	2.0	34247.33	5	93.54	80	120	
Ni	60	89	He	5.287	ppb	1.3	11369.60	5	105.74	80	120	
Ni	62	89	No Gas	4.651	ppb	10.9	8698.28	5	93.02	80	120	
Cu	63	89	No Gas	5.314	ppb	0.3	94198.12	5	106.28	80	120	
Cu	63	89	He	5.406	ppb	1.9	33267.57	5	108.12	80	120	
Cu	65	89	No Gas	5.225	ppb	0.8	44390.23	5	104.5	80	120	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	10.200	ppb	0.5	48749.47	10	102	80	120	
Zn	66	89	He	10.633	ppb	6.9	9793.51	10	106.33	80	120	
Zn	67	89	No Gas	9.823	ppb	4.1	7466.32	10	98.23	80	120	
Zn	68	89	No Gas	9.990	ppb	1.6	34274.38	10	99.9	80	120	
As	75	89	No Gas	4.993	ppb	3.5	29824.64	5	99.86	80	120	
As	75	89	He	4.931	ppb	3.0	3319.32	5	98.62	80	120	
Se	77	89	No Gas	-1.626	ppb	N/A	7699.99	5	-32.52	80	120	Failed
Se	78	89	No Gas	3.471	ppb	29.7	19410.22	5	69.42	80	120	Failed
Se	78	89	He	4.696	ppb	9.5	217.78	5	93.92	80	120	
Se	82	89	No Gas	5.115	ppb	25.1	1440.68	5	102.3	80	120	
[Se]	83	89	No Gas	-545.427	ppb	N/A	2723.05	5	-10908.54	80	120	Failed
Sr	88	89	No Gas	5.026	ppb	0.8	234760.97	5	100.52	80	120	
Mo	95	89	No Gas	5.016	ppb	3.0	43431.01	5	100.32	80	120	
Mo	97	89	No Gas	5.035	ppb	1.1	27486.05	5	100.7	80	120	
Mo	98	89	No Gas	4.927	ppb	1.6	70883.58	5	98.54	80	120	
[Mo]	99	89	No Gas	67.929	ppb	112.8	13.35	5	1358.58	80	120	Failed
Cd	106	89	No Gas	0.658	ppb	260.5	40258.27	2	32.9	80	120	Failed
Ag	107	89	No Gas	5.176	ppb	1.0	119795.47	5	103.52	80	120	
Ag	107	89	He	5.145	ppb	2.3	55451.81	5	102.9	80	120	
Cd	108	89	No Gas	2.006	ppb	9.6	730.77	2	100.3	80	120	
Ag	109	89	No Gas	5.169	ppb	1.0	113867.09	5	103.38	80	120	
Cd	111	89	No Gas	2.053	ppb	2.1	9442.09	2	102.65	80	120	
Cd	114	89	No Gas	2.009	ppb	1.0	24440.64	2	100.45	80	120	
Sn	118	115	No Gas	2.034	ppb	1.1	33772.11	2	101.7	80	120	
Sb	121	115	No Gas	4.738	ppb	1.0	105236.79	5	94.76	80	120	
Sb	121	89	He	4.751	ppb	1.8	22386.05	5	95.02	80	120	
Sb	123	115	No Gas	4.634	ppb	2.1	80432.31	5	92.68	80	120	
Ba	135	115	No Gas	4.671	ppb	1.8	22208.11	5	93.42	80	120	
Ba	137	115	No Gas	4.973	ppb	0.9	40269.62	5	99.46	80	120	
Tl	203	209	No Gas	4.575	ppb	1.1	90194.09	5	91.5	80	120	
Tl	205	209	No Gas	4.607	ppb	0.7	216540.29	5	92.14	80	120	
Pb	206	209	No Gas	4.701	ppb	0.5	77117.64	5	94.02	80	120	
Pb	207	209	No Gas	4.995	ppb	1.6	68043.42	5	99.9	80	120	
Pb	208	209	No Gas	4.862	ppb	0.8	307627.40	5	97.24	80	120	
Th	232	209	No Gas	4.991	ppb	0.5	311495.91	5	99.82	80	120	
U	238	209	No Gas	4.597	ppb	0.9	280777.56	5	91.94	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3210126.38	0.9	3926441.81	81.76	70	125	
Sc	45	No Gas	16619873.66	0.5	18873842.21	88.06	75	125	
Sc	45	He	719576.76	0.7	814336.22	88.36	75	125	
Y	89	No Gas	41864628.88	0.4	45077078.84	92.87	75	125	
Y	89	He	5487759.23	0.8	6036502.97	90.91	75	125	
In	115	No Gas	9161948.01	0.4	9630269.52	95.14	75	125	
Tb	159	No Gas	12792367.39	0.9	13043986.51	98.07	75	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7965865.24	0.4	7831047.47	101.72	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 284_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 21:59:08

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.959	ppb	0.2	1865101.15	100	98.96	90	110	
Be	9	6	No Gas	102.120	ppb	0.4	463981.77	100	102.12	90	110	
B	11	6	No Gas	244.121	ppb	1.2	754358.97	250	97.65	90	110	
Na	23	45	No Gas	9904.714	ppb	1.2	219118371.56	10000	99.05	90	110	
Na	23	45	He	9847.463	ppb	0.8	6461245.53	10000	98.47	90	110	
Mg	24	45	No Gas	9917.874	ppb	0.8	147093024.47	10000	99.18	90	110	
Mg	24	45	He	9932.828	ppb	1.7	3278676.51	10000	99.33	90	110	
Mg	25	45	No Gas	9892.031	ppb	0.5	19455965.13	10000	98.92	90	110	
Al	27	45	No Gas	98.121	ppb	0.3	1931117.47	100	98.12	90	110	
Al	27	45	He	99.454	ppb	0.6	13440.04	100	99.45	90	110	
Si	28	45	No Gas	10004.737	ppb	0.7	80491107.94	10000	100.05	90	110	
Si	29	45	No Gas	10051.600	ppb	0.6	4991447.81	10000	100.52	90	110	
K	39	45	No Gas	9877.378	ppb	1.5	223215303.34	10000	98.77	90	110	
K	39	45	He	10032.055	ppb	0.6	2747274.96	10000	100.32	90	110	
Ca	44	45	No Gas	9931.896	ppb	0.6	6756968.44	10000	99.32	90	110	
Ca	44	45	He	9958.548	ppb	0.6	153000.74	10000	99.59	90	110	
Ti	47	45	No Gas	99.596	ppb	0.8	213874.08	100	99.6	90	110	
V	51	45	No Gas	97.705	ppb	0.5	2767371.67	100	97.7	90	110	
V	51	45	He	99.533	ppb	0.5	371272.29	100	99.53	90	110	
Cr	52	89	No Gas	99.047	ppb	0.9	2553499.65	100	99.05	90	110	
Cr	52	89	He	101.339	ppb	0.5	462877.21	100	101.34	90	110	
Cr	53	89	No Gas	100.577	ppb	0.6	348502.38	100	100.58	90	110	
Mn	55	89	No Gas	100.113	ppb	1.5	3476903.05	100	100.11	90	110	
Mn	55	89	He	99.123	ppb	0.6	247109.40	100	99.12	90	110	
Fe	56	89	No Gas	10074.531	ppb	0.7	251896563.96	10000	100.75	90	110	
Fe	56	89	He	9879.155	ppb	1.0	30841775.37	10000	98.79	90	110	
Co	59	89	No Gas	99.010	ppb	0.6	2757576.02	100	99.01	90	110	
Co	59	89	He	103.128	ppb	0.8	765319.59	100	103.13	90	110	
Ni	60	89	No Gas	101.675	ppb	0.9	627528.88	100	101.68	90	110	
Ni	60	89	He	100.581	ppb	0.4	209408.76	100	100.58	90	110	
Ni	62	89	No Gas	100.593	ppb	0.6	97081.11	100	100.59	90	110	
Cu	63	89	No Gas	99.855	ppb	0.6	1495554.62	100	99.86	90	110	
Cu	63	89	He	103.674	ppb	0.6	574318.80	100	103.67	90	110	
Cu	65	89	No Gas	101.417	ppb	0.2	727870.48	100	101.42	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.270	ppb	1.0	444080.54	100	99.27	90	110	
Zn	66	89	He	100.210	ppb	1.2	88222.65	100	100.21	90	110	
Zn	67	89	No Gas	97.970	ppb	2.1	69355.78	100	97.97	90	110	
Zn	68	89	No Gas	98.984	ppb	0.5	318197.46	100	98.98	90	110	
As	75	89	No Gas	98.695	ppb	0.4	476036.17	100	98.7	90	110	
As	75	89	He	99.404	ppb	2.3	65713.28	100	99.4	90	110	
Se	77	89	No Gas	95.557	ppb	1.4	30585.52	100	95.56	90	110	
Se	78	89	No Gas	98.040	ppb	1.3	86334.77	100	98.04	90	110	
Se	78	89	He	96.770	ppb	1.7	3942.82	100	96.77	90	110	
Se	82	89	No Gas	99.666	ppb	0.5	29505.50	100	99.67	90	110	
[Se]	83	89	No Gas	24.448	ppb	1953.6	2446.06	100	24.45	90	110	Failed
Sr	88	89	No Gas	98.670	ppb	0.3	4444225.28	100	98.67	90	110	
Mo	95	89	No Gas	101.203	ppb	0.4	838168.35	100	101.2	90	110	
Mo	97	89	No Gas	101.417	ppb	0.8	530150.75	100	101.42	90	110	
Mo	98	89	No Gas	97.805	ppb	0.3	1346488.13	100	97.8	90	110	
[Mo]	99	89	No Gas	206.207	ppb	49.5	33.37	100	206.21	90	110	Failed
Cd	106	89	No Gas	97.843	ppb	2.8	81749.39	100	97.84	90	110	
Ag	107	89	No Gas	99.908	ppb	0.3	2219655.68	100	99.91	90	110	
Ag	107	89	He	101.376	ppb	1.9	1067278.69	100	101.38	90	110	
Cd	108	89	No Gas	100.022	ppb	1.4	32074.45	100	100.02	90	110	
Ag	109	89	No Gas	100.346	ppb	0.2	2124026.17	100	100.35	90	110	
Cd	111	89	No Gas	99.504	ppb	0.6	448581.24	100	99.5	90	110	
Cd	114	89	No Gas	98.712	ppb	0.3	1166308.34	100	98.71	90	110	
Sn	118	115	No Gas	99.045	ppb	0.3	1458375.25	100	99.04	90	110	
Sb	121	115	No Gas	98.111	ppb	0.2	2091157.00	100	98.11	90	110	
Sb	121	89	He	99.694	ppb	1.7	456512.62	100	99.69	90	110	
Sb	123	115	No Gas	97.673	ppb	0.4	1614375.21	100	97.67	90	110	
Ba	135	115	No Gas	98.847	ppb	0.6	447155.71	100	98.85	90	110	
Ba	137	115	No Gas	101.372	ppb	0.2	782363.77	100	101.37	90	110	
Tl	203	209	No Gas	98.786	ppb	1.6	1848255.60	100	98.79	90	110	
Tl	205	209	No Gas	97.122	ppb	1.4	4330510.42	100	97.12	90	110	
Pb	206	209	No Gas	96.733	ppb	1.3	1481892.47	100	96.73	90	110	
Pb	207	209	No Gas	96.695	ppb	1.5	1234747.30	100	96.7	90	110	
Pb	208	209	No Gas	97.339	ppb	1.1	5760252.56	100	97.34	90	110	
Th	232	209	No Gas	97.313	ppb	0.7	5660477.57	100	97.31	90	110	
U	238	209	No Gas	97.138	ppb	0.7	5641946.96	100	97.14	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3081478.63	0.4	3926441.81	78.48	70	125	
Sc	45	No Gas	16380789.16	0.4	18873842.21	86.79	75	125	
Sc	45	He	710794.94	0.7	814336.22	87.29	75	125	
Y	89	No Gas	40751509.09	1.0	45077078.84	90.4	75	125	
Y	89	He	5421516.74	1.4	6036502.97	89.81	75	125	
In	115	No Gas	8896734.53	0.9	9630269.52	92.38	75	125	
Tb	159	No Gas	12620425.45	1.1	13043986.51	96.75	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7605255.53	0.6	7831047.47	97.12	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	285_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 22:00:51
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.080	ppb	N/A	184265.44	100	
Be	9	6	No Gas	0.024	ppb	57.8	180.18	100	
B	11	6	No Gas	-1.701	ppb	N/A	20238.25	100	
Na	23	45	No Gas	-257.340	ppb	N/A	5558377.73	500000	
Na	23	45	He	-252.179	ppb	N/A	177363.85	500000	
Mg	24	45	No Gas	0.439	ppb	35.5	15997.13	500000	
Mg	24	45	He	-0.083	ppb	N/A	266.69	500000	
Mg	25	45	No Gas	0.451	ppb	15.9	2173.65	500000	
Al	27	45	No Gas	-0.051	ppb	N/A	8189.61	500000	
Al	27	45	He	-0.146	ppb	N/A	30.00	500000	
Si	28	45	No Gas	7.621	ppb	37.5	474858.64	100	
Si	29	45	No Gas	-6.940	ppb	N/A	65559.93	100	
K	39	45	No Gas	-29.837	ppb	N/A	4264639.83	500000	
K	39	45	He	-26.976	ppb	N/A	28698.48	500000	
Ca	44	45	No Gas	-9.860	ppb	N/A	26373.91	500000	
Ca	44	45	He	4.271	ppb	59.5	160.01	500000	
Ti	47	45	No Gas	0.050	ppb	117.7	293.63	10000	
V	51	45	No Gas	0.048	ppb	128.0	-1436.14	100	
V	51	45	He	0.020	ppb	69.3	340.35	100	
Cr	52	89	No Gas	-0.048	ppb	N/A	20843.60	100	
Cr	52	89	He	-0.014	ppb	N/A	1858.68	100	
Cr	53	89	No Gas	0.063	ppb	341.1	34180.49	100	
Mn	55	89	No Gas	-0.005	ppb	N/A	8604.82	100	
Mn	55	89	He	0.027	ppb	46.1	413.76	100	
Fe	56	89	No Gas	1.843	ppb	127.1	1909249.33	500000	
Fe	56	89	He	9.432	ppb	7.0	52048.08	500000	
Co	59	89	No Gas	0.010	ppb	37.2	1608.40	100	
Co	59	89	He	0.006	ppb	239.0	320.33	100	
Ni	60	89	No Gas	-0.540	ppb	N/A	1418.18	100	
Ni	60	89	He	0.003	ppb	998.0	246.92	100	
Ni	62	89	No Gas	-0.371	ppb	N/A	3944.58	100	
Cu	63	89	No Gas	-0.063	ppb	N/A	12191.18	100	
Cu	63	89	He	0.064	ppb	29.6	3504.01	100	
Cu	65	89	No Gas	0.001	ppb	6255.4	6204.39	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.059	ppb	N/A	1821.98	100	
Zn	66	89	He	-0.035	ppb	N/A	323.67	100	
Zn	67	89	No Gas	-0.115	ppb	N/A	276.95	100	
Zn	68	89	No Gas	-0.068	ppb	N/A	1204.61	100	
As	75	89	No Gas	0.139	ppb	84.8	6052.36	100	
As	75	89	He	0.028	ppb	38.0	38.89	100	
Se	77	89	No Gas	-8.264	ppb	N/A	6094.24	100	
Se	78	89	No Gas	-1.719	ppb	N/A	15644.93	100	
Se	78	89	He	0.110	ppb	73.0	30.00	100	
Se	82	89	No Gas	0.806	ppb	57.7	125.56	100	
[Se]	83	89	No Gas	442.250	ppb	84.7	2365.94	100	Failed
Sr	88	89	No Gas	-0.013	ppb	N/A	1715.20	100	
Mo	95	89	No Gas	0.195	ppb	18.3	2452.72	10000	
Mo	97	89	No Gas	0.186	ppb	39.0	1468.25	10000	
Mo	98	89	No Gas	0.194	ppb	19.6	4014.21	10000	
[Mo]	99	89	No Gas	1.459	ppb	2616.2	3.34	10000	
Cd	106	89	No Gas	-1.135	ppb	N/A	39552.44	100	
Ag	107	89	No Gas	-0.036	ppb	N/A	937.82	100	
Ag	107	89	He	-0.034	ppb	N/A	286.96	100	
Cd	108	89	No Gas	0.137	ppb	55.0	116.78	100	
Ag	109	89	No Gas	-0.043	ppb	N/A	617.31	100	
Cd	111	89	No Gas	-0.005	ppb	N/A	-94.20	100	
Cd	114	89	No Gas	0.011	ppb	23.1	186.86	100	
Sn	118	115	No Gas	0.056	ppb	49.8	3838.36	100	
Sb	121	115	No Gas	0.004	ppb	113.0	1386.74	100	
Sb	121	89	He	-0.021	ppb	N/A	283.34	100	
Sb	123	115	No Gas	-0.005	ppb	N/A	1555.00	100	
Ba	135	115	No Gas	-0.041	ppb	N/A	280.29	100	
Ba	137	115	No Gas	-0.039	ppb	N/A	480.50	100	
Tl	203	209	No Gas	0.112	ppb	27.1	2713.06	100	
Tl	205	209	No Gas	0.118	ppb	28.6	6818.91	100	
Pb	206	209	No Gas	0.008	ppb	224.8	1865.37	100	
Pb	207	209	No Gas	0.033	ppb	13.0	1718.54	100	
Pb	208	209	No Gas	0.015	ppb	67.9	7338.30	100	
Th	232	209	No Gas	0.232	ppb	30.8	21537.89	100	
U	238	209	No Gas	0.087	ppb	25.1	6368.19	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3224645.73	0.4	3926441.81	82.13	70	125	
Sc	45	No Gas	16748093.13	0.4	18873842.21	88.74	75	125	
Sc	45	He	717710.42	0.6	814336.22	88.13	75	125	
Y	89	No Gas	41968682.94	0.3	45077078.84	93.1	75	125	
Y	89	He	5528836.14	0.3	6036502.97	91.59	75	125	
In	115	No Gas	9145383.89	0.3	9630269.52	94.96	75	125	
Tb	159	No Gas	12719867.81	0.7	13043986.51	97.52	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7826673.30	0.5	7831047.47	99.94	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 296_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 22:19:41

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.796	ppb	1.0	1949966.74	100	98.8	90	110	
Be	9	6	No Gas	98.955	ppb	1.1	470735.02	100	98.96	90	110	
B	11	6	No Gas	241.539	ppb	0.2	781740.57	250	96.62	90	110	
Na	23	45	No Gas	9998.510	ppb	0.6	223460621.66	10000	99.99	90	110	
Na	23	45	He	9973.709	ppb	1.2	6574021.78	10000	99.74	90	110	
Mg	24	45	No Gas	10035.228	ppb	0.7	150434651.09	10000	100.35	90	110	
Mg	24	45	He	10181.358	ppb	0.2	3378570.89	10000	101.81	90	110	
Mg	25	45	No Gas	10032.210	ppb	0.5	19943428.87	10000	100.32	90	110	
Al	27	45	No Gas	99.528	ppb	1.2	1979706.90	100	99.53	90	110	
Al	27	45	He	101.715	ppb	2.1	13817.02	100	101.72	90	110	
Si	28	45	No Gas	10218.511	ppb	0.2	83084374.54	10000	102.19	90	110	
Si	29	45	No Gas	10291.237	ppb	0.4	5163662.94	10000	102.91	90	110	
K	39	45	No Gas	9923.078	ppb	0.7	226631136.62	10000	99.23	90	110	
K	39	45	He	10115.687	ppb	0.7	2784365.69	10000	101.16	90	110	
Ca	44	45	No Gas	9978.476	ppb	0.3	6861309.90	10000	99.78	90	110	
Ca	44	45	He	9877.920	ppb	1.8	152554.30	10000	98.78	90	110	
Ti	47	45	No Gas	97.982	ppb	0.5	212678.27	100	97.98	90	110	
V	51	45	No Gas	98.662	ppb	0.2	2824521.74	100	98.66	90	110	
V	51	45	He	98.898	ppb	0.6	370834.34	100	98.9	90	110	
Cr	52	89	No Gas	99.112	ppb	0.6	2587685.82	100	99.11	90	110	
Cr	52	89	He	101.171	ppb	0.3	466309.79	100	101.17	90	110	
Cr	53	89	No Gas	100.244	ppb	1.2	351859.63	100	100.24	90	110	
Mn	55	89	No Gas	99.956	ppb	0.2	3515747.73	100	99.96	90	110	
Mn	55	89	He	99.534	ppb	0.5	250380.59	100	99.53	90	110	
Fe	56	89	No Gas	9930.662	ppb	0.1	251477905.62	10000	99.31	90	110	
Fe	56	89	He	9977.804	ppb	0.1	31433037.86	10000	99.78	90	110	
Co	59	89	No Gas	99.411	ppb	1.0	2803931.85	100	99.41	90	110	
Co	59	89	He	103.549	ppb	0.4	775416.85	100	103.55	90	110	
Ni	60	89	No Gas	100.424	ppb	0.8	627745.01	100	100.42	90	110	
Ni	60	89	He	99.085	ppb	1.2	208149.21	100	99.08	90	110	
Ni	62	89	No Gas	100.735	ppb	1.8	98441.85	100	100.74	90	110	
Cu	63	89	No Gas	100.019	ppb	1.2	1517020.88	100	100.02	90	110	
Cu	63	89	He	102.555	ppb	0.6	573303.55	100	102.56	90	110	
Cu	65	89	No Gas	100.395	ppb	0.4	729728.71	100	100.4	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.801	ppb	0.8	443109.70	100	97.8	90	110	
Zn	66	89	He	99.406	ppb	0.9	88317.04	100	99.41	90	110	
Zn	67	89	No Gas	96.698	ppb	0.9	69325.73	100	96.7	90	110	
Zn	68	89	No Gas	98.326	ppb	0.9	320113.63	100	98.33	90	110	
As	75	89	No Gas	97.627	ppb	0.8	476923.35	100	97.63	90	110	
As	75	89	He	98.987	ppb	1.3	66041.48	100	98.99	90	110	
Se	77	89	No Gas	95.017	ppb	3.6	30842.89	100	95.02	90	110	
Se	78	89	No Gas	97.169	ppb	2.0	86808.31	100	97.17	90	110	
Se	78	89	He	100.975	ppb	0.7	4150.66	100	100.98	90	110	
Se	82	89	No Gas	97.483	ppb	2.8	29222.74	100	97.48	90	110	
[Se]	83	89	No Gas	739.855	ppb	6.5	2219.12	100	739.86	90	110	Failed
Sr	88	89	No Gas	98.574	ppb	0.6	4496170.97	100	98.57	90	110	
Mo	95	89	No Gas	100.374	ppb	0.6	841837.23	100	100.37	90	110	
Mo	97	89	No Gas	99.244	ppb	0.9	525388.41	100	99.24	90	110	
Mo	98	89	No Gas	97.281	ppb	0.8	1356247.55	100	97.28	90	110	
[Mo]	99	89	No Gas	114.527	ppb	102.2	20.02	100	114.53	90	110	Failed
Cd	106	89	No Gas	96.240	ppb	5.0	82075.23	100	96.24	90	110	
Ag	107	89	No Gas	98.850	ppb	0.6	2224003.94	100	98.85	90	110	
Ag	107	89	He	99.932	ppb	0.9	1061727.98	100	99.93	90	110	
Cd	108	89	No Gas	100.054	ppb	1.4	32489.37	100	100.05	90	110	
Ag	109	89	No Gas	99.370	ppb	1.0	2130014.39	100	99.37	90	110	
Cd	111	89	No Gas	99.275	ppb	0.4	453222.70	100	99.28	90	110	
Cd	114	89	No Gas	98.542	ppb	0.5	1179059.06	100	98.54	90	110	
Sn	118	115	No Gas	98.622	ppb	0.4	1450266.50	100	98.62	90	110	
Sb	121	115	No Gas	97.961	ppb	0.8	2085205.82	100	97.96	90	110	
Sb	121	89	He	98.575	ppb	0.9	455533.57	100	98.58	90	110	
Sb	123	115	No Gas	97.430	ppb	0.5	1608246.69	100	97.43	90	110	
Ba	135	115	No Gas	98.428	ppb	1.2	444688.52	100	98.43	90	110	
Ba	137	115	No Gas	100.641	ppb	0.8	775690.56	100	100.64	90	110	
Tl	203	209	No Gas	98.364	ppb	0.8	1820048.54	100	98.36	90	110	
Tl	205	209	No Gas	97.173	ppb	0.3	4284910.75	100	97.17	90	110	
Pb	206	209	No Gas	96.664	ppb	0.3	1464515.30	100	96.66	90	110	
Pb	207	209	No Gas	96.478	ppb	0.5	1218381.09	100	96.48	90	110	
Pb	208	209	No Gas	96.922	ppb	0.2	5672260.34	100	96.92	90	110	
Th	232	209	No Gas	97.492	ppb	1.4	5607916.88	100	97.49	90	110	
U	238	209	No Gas	96.598	ppb	1.2	5548292.26	100	96.6	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3226428.92	0.7	3926441.81	82.17	70	125	
Sc	45	No Gas	16556777.22	0.2	18873842.21	87.72	75	125	
Sc	45	He	714523.86	0.3	814336.22	87.74	75	125	
Y	89	No Gas	41267941.36	0.5	45077078.84	91.55	75	125	
Y	89	He	5470448.17	0.3	6036502.97	90.62	75	125	
In	115	No Gas	8885170.33	0.7	9630269.52	92.26	75	125	
Tb	159	No Gas	12544065.34	0.2	13043986.51	96.17	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7520981.92	0.5	7831047.47	96.04	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	297_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 22:21:24
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.009	ppb	1408.1	193249.91	100	
Be	9	6	No Gas	0.015	ppb	53.9	143.48	100	
B	11	6	No Gas	0.865	ppb	52.9	29390.36	100	
Na	23	45	No Gas	-208.209	ppb	N/A	6645975.15	500000	
Na	23	45	He	-214.318	ppb	N/A	203530.18	500000	
Mg	24	45	No Gas	1.278	ppb	26.0	28872.53	500000	
Mg	24	45	He	1.216	ppb	47.8	706.74	500000	
Mg	25	45	No Gas	1.364	ppb	19.7	4027.61	500000	
Al	27	45	No Gas	0.003	ppb	411.3	9310.68	500000	
Al	27	45	He	0.142	ppb	3.8	70.00	500000	
Si	28	45	No Gas	33.905	ppb	15.8	693254.60	100	
Si	29	45	No Gas	21.173	ppb	34.1	80019.20	100	
K	39	45	No Gas	-29.636	ppb	N/A	4289459.31	500000	
K	39	45	He	-29.088	ppb	N/A	28444.46	500000	
Ca	44	45	No Gas	-13.513	ppb	N/A	23955.86	500000	
Ca	44	45	He	-0.086	ppb	N/A	93.34	500000	
Ti	47	45	No Gas	0.040	ppb	93.3	273.62	10000	
V	51	45	No Gas	0.046	ppb	193.7	-1504.70	100	
V	51	45	He	0.001	ppb	525.5	273.62	100	
Cr	52	89	No Gas	0.021	ppb	48.5	22738.51	100	
Cr	52	89	He	-0.001	ppb	N/A	1925.44	100	
Cr	53	89	No Gas	0.609	ppb	46.7	36057.02	100	
Mn	55	89	No Gas	-0.007	ppb	N/A	8581.40	100	
Mn	55	89	He	-0.035	ppb	N/A	256.93	100	
Fe	56	89	No Gas	3.675	ppb	66.2	1962396.46	500000	
Fe	56	89	He	9.745	ppb	9.1	53172.88	500000	
Co	59	89	No Gas	0.008	ppb	24.4	1545.00	100	
Co	59	89	He	-0.003	ppb	N/A	256.93	100	
Ni	60	89	No Gas	-0.593	ppb	N/A	1087.82	100	
Ni	60	89	He	0.020	ppb	20.1	283.63	100	
Ni	62	89	No Gas	-0.405	ppb	N/A	3924.56	100	
Cu	63	89	No Gas	0.087	ppb	7.9	14529.23	100	
Cu	63	89	He	0.186	ppb	3.8	4198.25	100	
Cu	65	89	No Gas	0.081	ppb	8.5	6815.29	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.106	ppb	N/A	1611.74	100	
Zn	66	89	He	-0.053	ppb	N/A	306.99	100	
Zn	67	89	No Gas	-0.139	ppb	N/A	260.27	100	
Zn	68	89	No Gas	-0.092	ppb	N/A	1131.20	100	
As	75	89	No Gas	-0.108	ppb	N/A	4855.10	100	
As	75	89	He	0.018	ppb	73.4	32.22	100	
Se	77	89	No Gas	-6.954	ppb	N/A	6434.75	100	
Se	78	89	No Gas	-1.147	ppb	N/A	16115.93	100	
Se	78	89	He	-0.026	ppb	N/A	24.44	100	
Se	82	89	No Gas	-0.168	ppb	N/A	-172.98	100	
[Se]	83	89	No Gas	10.517	ppb	1454.6	2532.82	100	
Sr	88	89	No Gas	-0.012	ppb	N/A	1778.59	100	
Mo	95	89	No Gas	0.189	ppb	32.5	2416.02	10000	
Mo	97	89	No Gas	0.191	ppb	27.1	1501.62	10000	
Mo	98	89	No Gas	0.190	ppb	24.1	3967.02	10000	
[Mo]	99	89	No Gas	23.447	ppb	162.6	6.67	10000	
Cd	106	89	No Gas	-2.063	ppb	N/A	39254.15	100	
Ag	107	89	No Gas	-0.033	ppb	N/A	1006.71	100	
Ag	107	89	He	-0.029	ppb	N/A	343.69	100	
Cd	108	89	No Gas	1.217	ppb	13.8	473.82	100	
Ag	109	89	No Gas	-0.038	ppb	N/A	724.09	100	
Cd	111	89	No Gas	1.121	ppb	10.5	5152.83	100	
Cd	114	89	No Gas	1.133	ppb	10.5	13891.43	100	
Sn	118	115	No Gas	0.029	ppb	53.8	3408.24	100	
Sb	121	115	No Gas	-0.004	ppb	N/A	1213.39	100	
Sb	121	89	He	-0.012	ppb	N/A	326.68	100	
Sb	123	115	No Gas	-0.019	ppb	N/A	1311.40	100	
Ba	135	115	No Gas	-0.069	ppb	N/A	150.15	100	
Ba	137	115	No Gas	-0.064	ppb	N/A	273.62	100	
Tl	203	209	No Gas	0.121	ppb	22.3	2849.90	100	
Tl	205	209	No Gas	0.125	ppb	24.3	7049.23	100	
Pb	206	209	No Gas	-0.010	ppb	N/A	1558.35	100	
Pb	207	209	No Gas	0.008	ppb	180.2	1361.47	100	
Pb	208	209	No Gas	-0.001	ppb	N/A	6300.39	100	
Th	232	209	No Gas	0.277	ppb	29.7	23894.73	100	
U	238	209	No Gas	0.098	ppb	25.0	6865.64	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3352618.47	0.2	3926441.81	85.39	70	125	
Sc	45	No Gas	16827678.55	0.6	18873842.21	89.16	75	125	
Sc	45	He	726252.11	1.1	814336.22	89.18	75	125	
Y	89	No Gas	42100236.99	0.1	45077078.84	93.4	75	125	
Y	89	He	5542965.68	1.2	6036502.97	91.82	75	125	
In	115	No Gas	9086866.57	0.8	9630269.52	94.36	75	125	
Tb	159	No Gas	12677539.23	0.9	13043986.51	97.19	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7709059.42	0.9	7831047.47	98.44	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 308_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 22:39:36

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.106	ppb	0.1	1885308.85	100	99.11	90	110	
Be	9	6	No Gas	101.775	ppb	1.0	466805.53	100	101.78	90	110	
B	11	6	No Gas	245.355	ppb	0.5	765214.88	250	98.14	90	110	
Na	23	45	No Gas	9932.419	ppb	1.2	214468246.46	10000	99.32	90	110	
Na	23	45	He	9777.791	ppb	0.3	6328988.86	10000	97.78	90	110	
Mg	24	45	No Gas	10079.350	ppb	0.9	145930274.49	10000	100.79	90	110	
Mg	24	45	He	10002.638	ppb	0.6	3256445.68	10000	100.03	90	110	
Mg	25	45	No Gas	10114.539	ppb	0.7	19419932.63	10000	101.15	90	110	
Al	27	45	No Gas	99.187	ppb	1.1	1905601.53	100	99.19	90	110	
Al	27	45	He	99.861	ppb	1.9	13309.92	100	99.86	90	110	
Si	28	45	No Gas	10177.849	ppb	0.3	79927996.49	10000	101.78	90	110	
Si	29	45	No Gas	10188.038	ppb	0.1	4937950.98	10000	101.88	90	110	
K	39	45	No Gas	9954.547	ppb	0.9	219561110.06	10000	99.55	90	110	
K	39	45	He	10068.269	ppb	0.4	2718974.23	10000	100.68	90	110	
Ca	44	45	No Gas	10009.720	ppb	0.7	6647541.36	10000	100.1	90	110	
Ca	44	45	He	9996.837	ppb	1.7	151462.01	10000	99.97	90	110	
Ti	47	45	No Gas	99.392	ppb	0.9	208363.25	100	99.39	90	110	
V	51	45	No Gas	98.591	ppb	0.4	2726026.04	100	98.59	90	110	
V	51	45	He	98.206	ppb	1.0	361236.09	100	98.21	90	110	
Cr	52	89	No Gas	99.068	ppb	0.3	2495977.54	100	99.07	90	110	
Cr	52	89	He	101.292	ppb	0.9	451998.72	100	101.29	90	110	
Cr	53	89	No Gas	100.598	ppb	0.8	340633.49	100	100.6	90	110	
Mn	55	89	No Gas	99.818	ppb	0.7	3388044.61	100	99.82	90	110	
Mn	55	89	He	99.879	ppb	0.6	243242.67	100	99.88	90	110	
Fe	56	89	No Gas	10016.323	ppb	0.3	244753055.47	10000	100.16	90	110	
Fe	56	89	He	9941.836	ppb	1.5	30320306.21	10000	99.42	90	110	
Co	59	89	No Gas	98.997	ppb	0.5	2694466.24	100	99	90	110	
Co	59	89	He	103.515	ppb	0.7	750461.32	100	103.52	90	110	
Ni	60	89	No Gas	101.320	ppb	0.6	611124.49	100	101.32	90	110	
Ni	60	89	He	100.664	ppb	0.6	204724.29	100	100.66	90	110	
Ni	62	89	No Gas	100.130	ppb	1.5	94453.43	100	100.13	90	110	
Cu	63	89	No Gas	99.814	ppb	0.3	1460945.74	100	99.81	90	110	
Cu	63	89	He	102.676	ppb	0.3	555693.73	100	102.68	90	110	
Cu	65	89	No Gas	101.274	ppb	0.2	710302.13	100	101.27	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.836	ppb	0.7	432102.04	100	98.84	90	110	
Zn	66	89	He	101.322	ppb	1.1	87145.32	100	101.32	90	110	
Zn	67	89	No Gas	98.110	ppb	0.7	67870.17	100	98.11	90	110	
Zn	68	89	No Gas	98.496	ppb	0.7	309425.07	100	98.5	90	110	
As	75	89	No Gas	98.768	ppb	0.2	465536.23	100	98.77	90	110	
As	75	89	He	99.316	ppb	0.6	64151.51	100	99.32	90	110	
Se	77	89	No Gas	96.035	ppb	2.2	30000.26	100	96.04	90	110	
Se	78	89	No Gas	97.977	ppb	1.5	84326.20	100	97.98	90	110	
Se	78	89	He	99.021	ppb	2.8	3940.60	100	99.02	90	110	
Se	82	89	No Gas	99.591	ppb	0.5	28810.99	100	99.59	90	110	
[Se]	83	89	No Gas	307.311	ppb	94.4	2292.53	100	307.31	90	110	Failed
Sr	88	89	No Gas	98.698	ppb	0.4	4344240.08	100	98.7	90	110	
Mo	95	89	No Gas	102.457	ppb	0.2	829193.07	100	102.46	90	110	
Mo	97	89	No Gas	101.324	ppb	0.1	517618.35	100	101.32	90	110	
Mo	98	89	No Gas	98.205	ppb	0.5	1321203.84	100	98.2	90	110	
[Mo]	99	89	No Gas	142.087	ppb	74.7	23.36	100	142.09	90	110	Failed
Cd	106	89	No Gas	98.287	ppb	2.7	80081.39	100	98.29	90	110	
Ag	107	89	No Gas	99.179	ppb	0.4	2153319.36	100	99.18	90	110	
Ag	107	89	He	101.252	ppb	0.4	1041483.18	100	101.25	90	110	
Cd	108	89	No Gas	101.046	ppb	1.4	31663.12	100	101.05	90	110	
Ag	109	89	No Gas	99.738	ppb	0.1	2063115.15	100	99.74	90	110	
Cd	111	89	No Gas	99.124	ppb	0.2	436698.32	100	99.12	90	110	
Cd	114	89	No Gas	98.441	ppb	0.2	1136633.96	100	98.44	90	110	
Sn	118	115	No Gas	99.826	ppb	0.4	1422485.50	100	99.83	90	110	
Sb	121	115	No Gas	100.127	ppb	0.5	2065347.49	100	100.13	90	110	
Sb	121	89	He	101.197	ppb	0.6	452727.22	100	101.2	90	110	
Sb	123	115	No Gas	98.683	ppb	0.2	1578504.08	100	98.68	90	110	
Ba	135	115	No Gas	98.287	ppb	0.5	430316.26	100	98.29	90	110	
Ba	137	115	No Gas	100.943	ppb	0.5	753936.41	100	100.94	90	110	
Tl	203	209	No Gas	98.127	ppb	0.3	1786562.71	100	98.13	90	110	
Tl	205	209	No Gas	96.754	ppb	0.4	4198042.95	100	96.75	90	110	
Pb	206	209	No Gas	96.334	ppb	0.8	1436100.43	100	96.33	90	110	
Pb	207	209	No Gas	96.302	ppb	0.5	1196666.64	100	96.3	90	110	
Pb	208	209	No Gas	96.719	ppb	0.4	5569659.28	100	96.72	90	110	
Th	232	209	No Gas	97.317	ppb	0.6	5508361.91	100	97.32	90	110	
U	238	209	No Gas	96.086	ppb	0.3	5430550.77	100	96.09	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3110700.56	0.2	3926441.81	79.22	70	125	
Sc	45	No Gas	15991267.13	0.5	18873842.21	84.73	75	125	
Sc	45	He	700971.64	0.9	814336.22	86.08	75	125	
Y	89	No Gas	39823163.24	0.3	45077078.84	88.34	75	125	
Y	89	He	5296116.96	0.6	6036502.97	87.73	75	125	
In	115	No Gas	8609977.41	0.5	9630269.52	89.41	75	125	
Tb	159	No Gas	12229623.82	0.4	13043986.51	93.76	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7400339.71	0.6	7831047.47	94.5	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	309_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 22:41:19
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.205	ppb	N/A	180984.41	100	
Be	9	6	No Gas	0.029	ppb	28.3	203.54	100	
B	11	6	No Gas	-0.533	ppb	N/A	23744.10	100	
Na	23	45	No Gas	-321.527	ppb	N/A	4060256.60	500000	
Na	23	45	He	-325.325	ppb	N/A	129041.29	500000	
Mg	24	45	No Gas	0.640	ppb	23.6	18520.37	500000	
Mg	24	45	He	0.095	ppb	127.8	320.02	500000	
Mg	25	45	No Gas	0.592	ppb	32.2	2387.07	500000	
Al	27	45	No Gas	-0.040	ppb	N/A	8162.96	500000	
Al	27	45	He	0.206	ppb	108.3	76.67	500000	
Si	28	45	No Gas	7.283	ppb	33.3	458748.34	100	
Si	29	45	No Gas	-3.848	ppb	N/A	65210.86	100	
K	39	45	No Gas	-32.165	ppb	N/A	4092932.54	500000	
K	39	45	He	-34.376	ppb	N/A	26199.85	500000	
Ca	44	45	No Gas	-14.551	ppb	N/A	22473.21	500000	
Ca	44	45	He	1.801	ppb	380.5	120.01	500000	
Ti	47	45	No Gas	0.045	ppb	51.5	273.62	10000	
V	51	45	No Gas	0.029	ppb	151.1	-1927.43	100	
V	51	45	He	0.029	ppb	30.9	367.04	100	
Cr	52	89	No Gas	-0.004	ppb	N/A	21227.87	100	
Cr	52	89	He	0.005	ppb	496.5	1892.05	100	
Cr	53	89	No Gas	1.001	ppb	14.7	35896.57	100	
Mn	55	89	No Gas	0.033	ppb	38.9	9626.50	100	
Mn	55	89	He	0.014	ppb	138.7	370.38	100	
Fe	56	89	No Gas	4.313	ppb	56.6	1902953.17	500000	
Fe	56	89	He	10.358	ppb	6.6	53401.76	500000	
Co	59	89	No Gas	0.010	ppb	29.6	1561.68	100	
Co	59	89	He	0.008	ppb	98.3	327.00	100	
Ni	60	89	No Gas	-0.602	ppb	N/A	991.04	100	
Ni	60	89	He	0.004	ppb	361.4	243.59	100	
Ni	62	89	No Gas	-0.201	ppb	N/A	3961.28	100	
Cu	63	89	No Gas	0.134	ppb	10.3	14666.09	100	
Cu	63	89	He	0.189	ppb	20.7	4081.43	100	
Cu	65	89	No Gas	0.116	ppb	50.6	6801.95	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.098	ppb	N/A	1585.03	100	
Zn	66	89	He	-0.012	ppb	N/A	333.68	100	
Zn	67	89	No Gas	-0.092	ppb	N/A	283.63	100	
Zn	68	89	No Gas	-0.078	ppb	N/A	1131.20	100	
As	75	89	No Gas	0.161	ppb	73.7	5942.39	100	
As	75	89	He	0.014	ppb	20.9	28.89	100	
Se	77	89	No Gas	-7.734	ppb	N/A	6004.10	100	
Se	78	89	No Gas	-1.548	ppb	N/A	15213.97	100	
Se	78	89	He	-0.062	ppb	N/A	22.22	100	
Se	82	89	No Gas	0.607	ppb	99.6	62.22	100	
[Se]	83	89	No Gas	235.936	ppb	95.9	2355.94	100	Failed
Sr	88	89	No Gas	-0.017	ppb	N/A	1501.62	100	
Mo	95	89	No Gas	0.295	ppb	25.6	3193.64	10000	
Mo	97	89	No Gas	0.311	ppb	20.7	2065.59	10000	
Mo	98	89	No Gas	0.296	ppb	17.5	5268.29	10000	
[Mo]	99	89	No Gas	48.209	ppb	143.0	10.01	10000	
Cd	106	89	No Gas	-1.121	ppb	N/A	38160.09	100	
Ag	107	89	No Gas	-0.033	ppb	N/A	960.04	100	
Ag	107	89	He	-0.027	ppb	N/A	350.36	100	
Cd	108	89	No Gas	0.308	ppb	46.9	166.84	100	
Ag	109	89	No Gas	-0.042	ppb	N/A	620.65	100	
Cd	111	89	No Gas	0.308	ppb	12.8	1313.30	100	
Cd	114	89	No Gas	0.319	ppb	8.2	3801.09	100	
Sn	118	115	No Gas	0.080	ppb	19.2	4059.54	100	
Sb	121	115	No Gas	0.215	ppb	24.6	5821.36	100	
Sb	121	89	He	0.327	ppb	8.3	1853.50	100	
Sb	123	115	No Gas	0.201	ppb	17.4	4895.90	100	
Ba	135	115	No Gas	-0.068	ppb	N/A	150.15	100	
Ba	137	115	No Gas	-0.062	ppb	N/A	286.96	100	
Tl	203	209	No Gas	0.131	ppb	24.8	2970.07	100	
Tl	205	209	No Gas	0.125	ppb	28.9	6895.66	100	
Pb	206	209	No Gas	-0.001	ppb	N/A	1668.49	100	
Pb	207	209	No Gas	0.014	ppb	61.0	1418.20	100	
Pb	208	209	No Gas	0.005	ppb	144.8	6540.68	100	
Th	232	209	No Gas	0.234	ppb	22.8	20952.72	100	
U	238	209	No Gas	0.106	ppb	22.3	7209.52	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3205710.25	1.2	3926441.81	81.64	70	125	
Sc	45	No Gas	16274162.95	0.1	18873842.21	86.23	75	125	
Sc	45	He	704739.07	0.9	814336.22	86.54	75	125	
Y	89	No Gas	40486632.55	0.3	45077078.84	89.82	75	125	
Y	89	He	5369362.70	0.7	6036502.97	88.95	75	125	
In	115	No Gas	8846614.95	0.3	9630269.52	91.86	75	125	
Tb	159	No Gas	12344666.77	1.0	13043986.51	94.64	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7560854.70	0.8	7831047.47	96.55	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	320_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 23:01:07
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.281	ppb	0.5	2638991.60	100	99.28	90	110	
Be	9	6	No Gas	96.527	ppb	1.0	618736.68	100	96.53	90	110	
B	11	6	No Gas	245.058	ppb	0.8	1068213.90	250	98.02	90	110	
Na	23	45	No Gas	10769.566	ppb	0.6	297768831.66	10000	107.7	90	110	
Na	23	45	He	10499.430	ppb	3.8	8478312.17	10000	104.99	90	110	
Mg	24	45	No Gas	10591.838	ppb	0.1	197116237.06	10000	105.92	90	110	
Mg	24	45	He	10459.127	ppb	3.0	4263212.43	10000	104.59	90	110	
Mg	25	45	No Gas	10596.071	ppb	0.5	26150321.28	10000	105.96	90	110	
Al	27	45	No Gas	103.683	ppb	1.0	2559818.76	100	103.68	90	110	
Al	27	45	He	105.639	ppb	3.9	17621.39	100	105.64	90	110	
Si	28	45	No Gas	10527.543	ppb	0.2	106249993.54	10000	105.28	90	110	
Si	29	45	No Gas	10554.605	ppb	0.2	6572422.85	10000	105.55	90	110	
K	39	45	No Gas	10158.774	ppb	0.3	287889749.04	10000	101.59	90	110	
K	39	45	He	10712.927	ppb	2.5	3619712.34	10000	107.13	90	110	
Ca	44	45	No Gas	9992.256	ppb	0.3	8529836.75	10000	99.92	90	110	
Ca	44	45	He	10208.902	ppb	1.6	193705.35	10000	102.09	90	110	
Ti	47	45	No Gas	97.292	ppb	0.7	262176.37	100	97.29	90	110	
V	51	45	No Gas	96.544	ppb	0.8	3431095.01	100	96.54	90	110	
V	51	45	He	97.629	ppb	3.5	449626.33	100	97.63	90	110	
Cr	52	89	No Gas	106.432	ppb	1.4	3113483.49	100	106.43	90	110	
Cr	52	89	He	104.496	ppb	0.8	554056.04	100	104.5	90	110	
Cr	53	89	No Gas	108.280	ppb	1.6	423090.55	100	108.28	90	110	
Mn	55	89	No Gas	106.621	ppb	1.4	4203666.70	100	106.62	90	110	
Mn	55	89	He	104.814	ppb	1.0	303333.52	100	104.81	90	110	
Fe	56	89	No Gas	10648.244	ppb	1.0	302160365.09	10000	106.48	90	110	
Fe	56	89	He	10372.729	ppb	0.3	37596403.61	10000	103.73	90	110	
Co	59	89	No Gas	106.162	ppb	0.7	3356995.33	100	106.16	90	110	
Co	59	89	He	104.894	ppb	0.5	903760.48	100	104.89	90	110	
Ni	60	89	No Gas	107.394	ppb	1.1	752256.16	100	107.39	90	110	
Ni	60	89	He	100.524	ppb	0.8	242968.81	100	100.52	90	110	
Ni	62	89	No Gas	106.305	ppb	1.4	116207.87	100	106.3	90	110	
Cu	63	89	No Gas	105.575	ppb	1.1	1794435.79	100	105.58	90	110	
Cu	63	89	He	102.975	ppb	0.2	662333.56	100	102.98	90	110	
Cu	65	89	No Gas	104.943	ppb	1.1	854864.24	100	104.94	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	101.441	ppb	0.2	515212.09	100	101.44	90	110	
Zn	66	89	He	100.752	ppb	1.7	102984.19	100	100.75	90	110	
Zn	67	89	No Gas	102.310	ppb	0.6	82213.81	100	102.31	90	110	
Zn	68	89	No Gas	101.338	ppb	1.2	369816.60	100	101.34	90	110	
As	75	89	No Gas	100.653	ppb	0.8	551077.89	100	100.65	90	110	
As	75	89	He	100.722	ppb	0.3	77318.59	100	100.72	90	110	
Se	77	89	No Gas	110.614	ppb	1.8	38788.15	100	110.61	90	110	Failed
Se	78	89	No Gas	100.543	ppb	2.6	100041.53	100	100.54	90	110	
Se	78	89	He	102.984	ppb	3.2	4870.91	100	102.98	90	110	
Se	82	89	No Gas	97.844	ppb	1.1	32883.74	100	97.84	90	110	
[Se]	83	89	No Gas	-506.317	ppb	N/A	2993.38	100	-506.32	90	110	Failed
Sr	88	89	No Gas	99.667	ppb	0.7	5096829.34	100	99.67	90	110	
Mo	95	89	No Gas	98.782	ppb	1.1	928826.09	100	98.78	90	110	
Mo	97	89	No Gas	98.568	ppb	1.2	585014.46	100	98.57	90	110	
Mo	98	89	No Gas	96.406	ppb	0.7	1506904.13	100	96.41	90	110	
[Mo]	99	89	No Gas	59.794	ppb	59.9	13.35	100	59.79	90	110	Failed
Cd	106	89	No Gas	96.644	ppb	2.7	92221.79	100	96.64	90	110	
Ag	107	89	No Gas	96.522	ppb	0.4	2434876.99	100	96.52	90	110	
Ag	107	89	He	93.101	ppb	1.0	1138182.14	100	93.1	90	110	
Cd	108	89	No Gas	94.871	ppb	1.4	34546.63	100	94.87	90	110	
Ag	109	89	No Gas	95.946	ppb	0.5	2306076.71	100	95.95	90	110	
Cd	111	89	No Gas	94.342	ppb	1.2	482865.03	100	94.34	90	110	
Cd	114	89	No Gas	94.235	ppb	1.4	1264088.44	100	94.24	90	110	
Sn	118	115	No Gas	98.158	ppb	0.5	1575153.45	100	98.16	90	110	
Sb	121	115	No Gas	96.467	ppb	0.4	2240751.44	100	96.47	90	110	
Sb	121	89	He	94.555	ppb	0.3	502774.51	100	94.56	90	110	
Sb	123	115	No Gas	95.906	ppb	0.7	1727529.41	100	95.91	90	110	
Ba	135	115	No Gas	95.848	ppb	0.9	472546.60	100	95.85	90	110	
Ba	137	115	No Gas	98.028	ppb	0.5	824523.25	100	98.03	90	110	
Tl	203	209	No Gas	98.766	ppb	1.1	1787609.75	100	98.77	90	110	
Tl	205	209	No Gas	97.801	ppb	0.7	4218395.70	100	97.8	90	110	
Pb	206	209	No Gas	97.309	ppb	0.3	1442054.40	100	97.31	90	110	
Pb	207	209	No Gas	97.418	ppb	1.1	1203389.35	100	97.42	90	110	
Pb	208	209	No Gas	97.791	ppb	0.5	5598035.83	100	97.79	90	110	
Th	232	209	No Gas	95.070	ppb	0.8	5349628.60	100	95.07	90	110	
U	238	209	No Gas	93.972	ppb	0.4	5279787.72	100	93.97	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4347355.54	0.7	3926441.81	110.72	70	125	
Sc	45	No Gas	20554652.61	0.4	18873842.21	108.91	75	125	
Sc	45	He	878105.97	2.5	814336.22	107.83	75	125	
Y	89	No Gas	46269536.30	1.1	45077078.84	102.65	75	125	
Y	89	He	6294263.65	1.0	6036502.97	104.27	75	125	
In	115	No Gas	9695638.51	0.5	9630269.52	100.68	75	125	
Tb	159	No Gas	12741483.18	0.8	13043986.51	97.68	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7356708.88	0.2	7831047.47	93.94	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	321_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 23:02:53
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.223	ppb	N/A	236867.99	100	
Be	9	6	No Gas	0.015	ppb	35.9	180.19	100	
B	11	6	No Gas	4.586	ppb	7.5	52044.83	100	
Na	23	45	No Gas	-117.265	ppb	N/A	10122603.09	500000	
Na	23	45	He	-138.237	ppb	N/A	298821.41	500000	
Mg	24	45	No Gas	1.122	ppb	30.0	31171.81	500000	
Mg	24	45	He	0.619	ppb	117.1	600.06	500000	
Mg	25	45	No Gas	1.093	ppb	34.7	4094.23	500000	
Al	27	45	No Gas	-0.027	ppb	N/A	10244.44	500000	
Al	27	45	He	0.389	ppb	44.8	123.34	500000	
Si	28	45	No Gas	10.236	ppb	20.2	586243.29	100	
Si	29	45	No Gas	7.309	ppb	19.3	85866.01	100	
K	39	45	No Gas	-3.953	ppb	N/A	5728075.75	500000	
K	39	45	He	-3.641	ppb	N/A	42092.83	500000	
Ca	44	45	No Gas	-4.765	ppb	N/A	35314.30	500000	
Ca	44	45	He	1.830	ppb	133.1	146.68	500000	
Ti	47	45	No Gas	0.071	ppb	98.6	400.42	10000	
V	51	45	No Gas	-0.044	ppb	N/A	-4866.17	100	
V	51	45	He	0.018	ppb	41.7	400.41	100	
Cr	52	89	No Gas	0.079	ppb	43.2	26395.44	100	
Cr	52	89	He	0.014	ppb	209.3	2249.15	100	
Cr	53	89	No Gas	1.169	ppb	26.7	41193.34	100	
Mn	55	89	No Gas	0.017	ppb	56.3	10257.58	100	
Mn	55	89	He	-0.024	ppb	N/A	320.33	100	
Fe	56	89	No Gas	10.388	ppb	20.0	2321384.69	500000	
Fe	56	89	He	10.083	ppb	9.2	61153.47	500000	
Co	59	89	No Gas	0.006	ppb	71.2	1618.42	100	
Co	59	89	He	-0.002	ppb	N/A	296.97	100	
Ni	60	89	No Gas	-0.046	ppb	N/A	4949.28	100	
Ni	60	89	He	0.005	ppb	210.5	283.63	100	
Ni	62	89	No Gas	0.226	ppb	14.9	4922.56	100	
Cu	63	89	No Gas	-0.009	ppb	N/A	14201.80	100	
Cu	63	89	He	-0.004	ppb	N/A	3527.38	100	
Cu	65	89	No Gas	0.026	ppb	128.7	6972.19	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	0.000	ppb	5360.7	2282.51	100	
Zn	66	89	He	-0.050	ppb	N/A	350.36	100	
Zn	67	89	No Gas	0.013	ppb	608.4	403.75	100	
Zn	68	89	No Gas	-0.028	ppb	N/A	1458.22	100	
As	75	89	No Gas	0.390	ppb	101.0	7947.24	100	
As	75	89	He	0.046	ppb	29.4	57.78	100	
Se	77	89	No Gas	0.785	ppb	310.8	9065.59	100	
Se	78	89	No Gas	1.186	ppb	44.7	19396.94	100	
Se	78	89	He	0.049	ppb	505.8	31.11	100	
Se	82	89	No Gas	0.763	ppb	6.1	122.37	100	
[Se]	83	89	No Gas	97.606	ppb	215.6	2719.70	100	
Sr	88	89	No Gas	0.035	ppb	31.7	4325.11	100	
Mo	95	89	No Gas	0.225	ppb	27.0	2956.68	10000	
Mo	97	89	No Gas	0.253	ppb	14.2	1995.51	10000	
Mo	98	89	No Gas	0.244	ppb	27.1	5148.12	10000	
[Mo]	99	89	No Gas	39.894	ppb	151.2	10.01	10000	
Cd	106	89	No Gas	1.784	ppb	37.6	44589.92	100	
Ag	107	89	No Gas	-0.039	ppb	N/A	952.26	100	
Ag	107	89	He	-0.033	ppb	N/A	340.35	100	
Cd	108	89	No Gas	0.377	ppb	25.9	213.56	100	
Ag	109	89	No Gas	-0.045	ppb	N/A	610.64	100	
Cd	111	89	No Gas	0.368	ppb	5.4	1789.91	100	
Cd	114	89	No Gas	0.363	ppb	4.3	4885.89	100	
Sn	118	115	No Gas	0.051	ppb	40.1	3971.73	100	
Sb	121	115	No Gas	0.006	ppb	88.9	1522.32	100	
Sb	121	89	He	-0.015	ppb	N/A	353.34	100	
Sb	123	115	No Gas	0.032	ppb	11.7	2312.55	100	
Ba	135	115	No Gas	0.060	ppb	23.9	794.17	100	
Ba	137	115	No Gas	0.054	ppb	21.3	1281.37	100	
Tl	203	209	No Gas	0.123	ppb	23.1	2829.88	100	
Tl	205	209	No Gas	0.113	ppb	25.2	6364.84	100	
Pb	206	209	No Gas	0.001	ppb	1631.1	1695.17	100	
Pb	207	209	No Gas	0.016	ppb	48.8	1448.22	100	
Pb	208	209	No Gas	0.005	ppb	125.4	6547.34	100	
Th	232	209	No Gas	0.208	ppb	27.4	19472.21	100	
U	238	209	No Gas	0.086	ppb	11.8	6061.02	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4203831.46	1.3	3926441.81	107.06	70	125	
Sc	45	No Gas	19780764.14	0.8	18873842.21	104.81	75	125	
Sc	45	He	861399.03	0.6	814336.22	105.78	75	125	
Y	89	No Gas	45790265.36	0.6	45077078.84	101.58	75	125	
Y	89	He	6250273.20	1.3	6036502.97	103.54	75	125	
In	115	No Gas	9681205.65	0.3	9630269.52	100.53	75	125	
Tb	159	No Gas	12912357.38	0.6	13043986.51	98.99	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7572823.86	0.6	7831047.47	96.7	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 332_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 23:21:33

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.537	ppb	0.2	1838551.73	100	99.54	90	110	
Be	9	6	No Gas	100.644	ppb	1.1	448399.77	100	100.64	90	110	
B	11	6	No Gas	240.018	ppb	0.8	727639.78	250	96.01	90	110	
Na	23	45	No Gas	9879.842	ppb	0.5	206833746.29	10000	98.8	90	110	
Na	23	45	He	9611.221	ppb	1.0	6053828.66	10000	96.11	90	110	
Mg	24	45	No Gas	10101.666	ppb	0.7	141762247.89	10000	101.02	90	110	
Mg	24	45	He	9919.232	ppb	0.3	3139708.49	10000	99.19	90	110	
Mg	25	45	No Gas	10107.315	ppb	0.4	18810058.89	10000	101.07	90	110	
Al	27	45	No Gas	98.636	ppb	0.8	1836776.38	100	98.64	90	110	
Al	27	45	He	99.831	ppb	2.2	12936.20	100	99.83	90	110	
Si	28	45	No Gas	10191.946	ppb	0.6	77578929.08	10000	101.92	90	110	
Si	29	45	No Gas	10211.863	ppb	0.6	4797207.22	10000	102.12	90	110	
K	39	45	No Gas	10038.103	ppb	0.9	214566870.14	10000	100.38	90	110	
K	39	45	He	10037.332	ppb	0.7	2635481.73	10000	100.37	90	110	
Ca	44	45	No Gas	10020.511	ppb	0.3	6450232.61	10000	100.21	90	110	
Ca	44	45	He	10001.951	ppb	2.4	147322.96	10000	100.02	90	110	
Ti	47	45	No Gas	98.209	ppb	0.5	199559.05	100	98.21	90	110	
V	51	45	No Gas	98.307	ppb	0.1	2634653.36	100	98.31	90	110	
V	51	45	He	98.348	ppb	0.5	351741.60	100	98.35	90	110	
Cr	52	89	No Gas	99.416	ppb	0.2	2419529.95	100	99.42	90	110	
Cr	52	89	He	99.147	ppb	1.3	437008.35	100	99.15	90	110	
Cr	53	89	No Gas	102.637	ppb	1.3	335080.30	100	102.64	90	110	
Mn	55	89	No Gas	99.733	ppb	0.3	3270071.74	100	99.73	90	110	
Mn	55	89	He	98.849	ppb	0.3	237791.56	100	98.85	90	110	
Fe	56	89	No Gas	10003.176	ppb	0.8	236124730.28	10000	100.03	90	110	
Fe	56	89	He	9806.149	ppb	0.2	29542273.72	10000	98.06	90	110	
Co	59	89	No Gas	99.978	ppb	0.4	2628651.10	100	99.98	90	110	
Co	59	89	He	100.872	ppb	0.7	722343.31	100	100.87	90	110	
Ni	60	89	No Gas	102.124	ppb	0.6	595010.05	100	102.12	90	110	
Ni	60	89	He	97.168	ppb	0.8	195200.39	100	97.17	90	110	
Ni	62	89	No Gas	100.981	ppb	2.3	91980.45	100	100.98	90	110	
Cu	63	89	No Gas	100.251	ppb	0.8	1417385.25	100	100.25	90	110	
Cu	63	89	He	99.928	ppb	0.8	534259.80	100	99.93	90	110	
Cu	65	89	No Gas	101.226	ppb	0.7	685815.30	100	101.23	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	99.156	ppb	0.4	418752.07	100	99.16	90	110	
Zn	66	89	He	98.950	ppb	1.4	84066.39	100	98.95	90	110	
Zn	67	89	No Gas	98.472	ppb	0.7	65804.71	100	98.47	90	110	
Zn	68	89	No Gas	98.488	ppb	0.2	298888.96	100	98.49	90	110	
As	75	89	No Gas	98.485	ppb	0.6	448439.11	100	98.48	90	110	
As	75	89	He	97.752	ppb	0.5	62368.63	100	97.75	90	110	
Se	77	89	No Gas	100.706	ppb	3.6	30026.99	100	100.71	90	110	
Se	78	89	No Gas	97.058	ppb	0.6	80842.07	100	97.06	90	110	
Se	78	89	He	99.360	ppb	0.2	3906.13	100	99.36	90	110	
Se	82	89	No Gas	99.990	ppb	1.7	27944.33	100	99.99	90	110	
[Se]	83	89	No Gas	-82.746	ppb	N/A	2345.93	100	-82.75	90	110	Failed
Sr	88	89	No Gas	98.888	ppb	0.6	4204611.81	100	98.89	90	110	
Mo	95	89	No Gas	100.524	ppb	0.3	785911.23	100	100.52	90	110	
Mo	97	89	No Gas	100.683	ppb	0.2	496859.45	100	100.68	90	110	
Mo	98	89	No Gas	97.419	ppb	0.3	1266090.23	100	97.42	90	110	
[Mo]	99	89	No Gas	51.689	ppb	139.6	10.01	100	51.69	90	110	Failed
Cd	106	89	No Gas	97.832	ppb	3.2	77174.80	100	97.83	90	110	
Ag	107	89	No Gas	99.874	ppb	0.1	2094668.74	100	99.87	90	110	
Ag	107	89	He	99.472	ppb	0.6	1010654.20	100	99.47	90	110	
Cd	108	89	No Gas	99.085	ppb	0.6	29994.22	100	99.08	90	110	
Ag	109	89	No Gas	100.117	ppb	0.5	2000511.19	100	100.12	90	110	
Cd	111	89	No Gas	98.749	ppb	0.5	420247.70	100	98.75	90	110	
Cd	114	89	No Gas	98.632	ppb	0.1	1100120.56	100	98.63	90	110	
Sn	118	115	No Gas	99.266	ppb	0.3	1377156.12	100	99.27	90	110	
Sb	121	115	No Gas	98.046	ppb	0.7	1968902.49	100	98.05	90	110	
Sb	121	89	He	99.856	ppb	0.9	441251.22	100	99.86	90	110	
Sb	123	115	No Gas	97.572	ppb	0.8	1519437.61	100	97.57	90	110	
Ba	135	115	No Gas	99.489	ppb	0.9	424034.20	100	99.49	90	110	
Ba	137	115	No Gas	101.157	ppb	0.8	735538.35	100	101.16	90	110	
Tl	203	209	No Gas	97.918	ppb	0.7	1710408.54	100	97.92	90	110	
Tl	205	209	No Gas	96.744	ppb	0.5	4027257.89	100	96.74	90	110	
Pb	206	209	No Gas	96.027	ppb	0.5	1373425.56	100	96.03	90	110	
Pb	207	209	No Gas	96.478	ppb	0.2	1150200.39	100	96.48	90	110	
Pb	208	209	No Gas	96.697	ppb	0.5	5342322.15	100	96.7	90	110	
Th	232	209	No Gas	97.717	ppb	0.9	5306495.15	100	97.72	90	110	
U	238	209	No Gas	96.201	ppb	1.0	5216444.58	100	96.2	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3021673.77	0.8	3926441.81	76.96	70	125	
Sc	45	No Gas	15499746.03	0.2	18873842.21	82.12	75	125	
Sc	45	He	681548.86	1.2	814336.22	83.69	75	125	
Y	89	No Gas	38469246.82	0.3	45077078.84	85.34	75	125	
Y	89	He	5231379.10	1.2	6036502.97	86.66	75	125	
In	115	No Gas	8382354.31	0.6	9630269.52	87.04	75	125	
Tb	159	No Gas	11787827.85	0.9	13043986.51	90.37	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7099982.49	0.1	7831047.47	90.66	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	333_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 23:23:16
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.093	ppb	14.5	178456.71	100	
Be	9	6	No Gas	0.015	ppb	104.1	130.13	100	
B	11	6	No Gas	0.704	ppb	87.0	26448.22	100	
Na	23	45	No Gas	-347.017	ppb	N/A	3332544.34	500000	
Na	23	45	He	-350.341	ppb	N/A	108949.12	500000	
Mg	24	45	No Gas	1.076	ppb	23.1	23568.63	500000	
Mg	24	45	He	0.390	ppb	84.3	400.03	500000	
Mg	25	45	No Gas	0.872	ppb	47.5	2773.80	500000	
Al	27	45	No Gas	-0.058	ppb	N/A	7375.85	500000	
Al	27	45	He	0.050	ppb	184.4	53.33	500000	
Si	28	45	No Gas	1.521	ppb	109.1	390118.43	100	
Si	29	45	No Gas	-4.658	ppb	N/A	61232.37	100	
K	39	45	No Gas	-23.408	ppb	N/A	4048217.65	500000	
K	39	45	He	-23.912	ppb	N/A	27816.34	500000	
Ca	44	45	No Gas	-13.600	ppb	N/A	21832.36	500000	
Ca	44	45	He	-1.485	ppb	N/A	66.67	500000	
Ti	47	45	No Gas	0.045	ppb	55.4	260.27	10000	
V	51	45	No Gas	0.039	ppb	184.4	-1555.59	100	
V	51	45	He	0.015	ppb	92.7	303.65	100	
Cr	52	89	No Gas	0.043	ppb	19.0	21401.59	100	
Cr	52	89	He	-0.037	ppb	N/A	1658.46	100	
Cr	53	89	No Gas	1.549	ppb	6.9	35903.17	100	
Mn	55	89	No Gas	0.006	ppb	123.4	8314.30	100	
Mn	55	89	He	-0.007	ppb	N/A	310.32	100	
Fe	56	89	No Gas	3.718	ppb	31.3	1802789.69	500000	
Fe	56	89	He	8.712	ppb	7.6	47043.64	500000	
Co	59	89	No Gas	0.001	ppb	293.8	1248.00	100	
Co	59	89	He	-0.006	ppb	N/A	216.89	100	
Ni	60	89	No Gas	-0.538	ppb	N/A	1318.07	100	
Ni	60	89	He	0.013	ppb	237.1	253.59	100	
Ni	62	89	No Gas	-0.163	ppb	N/A	3814.42	100	
Cu	63	89	No Gas	-0.092	ppb	N/A	10821.96	100	
Cu	63	89	He	0.064	ppb	33.1	3310.43	100	
Cu	65	89	No Gas	0.014	ppb	239.5	5807.14	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.115	ppb	N/A	1441.55	100	
Zn	66	89	He	-0.104	ppb	N/A	246.92	100	
Zn	67	89	No Gas	-0.117	ppb	N/A	253.60	100	
Zn	68	89	No Gas	-0.085	ppb	N/A	1057.78	100	
As	75	89	No Gas	-0.108	ppb	N/A	4459.97	100	
As	75	89	He	0.013	ppb	237.7	27.78	100	
Se	77	89	No Gas	-3.725	ppb	N/A	6635.06	100	
Se	78	89	No Gas	-0.648	ppb	N/A	15133.89	100	
Se	78	89	He	0.151	ppb	145.3	30.00	100	
Se	82	89	No Gas	0.097	ppb	95.0	-84.34	100	
[Se]	83	89	No Gas	9.477	ppb	1830.6	2325.91	100	
Sr	88	89	No Gas	0.021	ppb	29.7	3046.80	100	
Mo	95	89	No Gas	0.177	ppb	12.1	2125.67	10000	
Mo	97	89	No Gas	0.175	ppb	27.6	1298.06	10000	
Mo	98	89	No Gas	0.205	ppb	27.5	3835.87	10000	
[Mo]	99	89	No Gas	75.404	ppb	110.2	13.35	10000	
Cd	106	89	No Gas	0.253	ppb	152.4	37005.57	100	
Ag	107	89	No Gas	-0.037	ppb	N/A	831.15	100	
Ag	107	89	He	-0.029	ppb	N/A	323.67	100	
Cd	108	89	No Gas	0.234	ppb	17.0	136.80	100	
Ag	109	89	No Gas	-0.042	ppb	N/A	580.60	100	
Cd	111	89	No Gas	0.142	ppb	13.1	544.34	100	
Cd	114	89	No Gas	0.154	ppb	12.2	1781.93	100	
Sn	118	115	No Gas	0.044	ppb	64.3	3380.46	100	
Sb	121	115	No Gas	-0.001	ppb	N/A	1191.17	100	
Sb	121	89	He	-0.012	ppb	N/A	310.01	100	
Sb	123	115	No Gas	0.021	ppb	53.0	1848.68	100	
Ba	135	115	No Gas	-0.034	ppb	N/A	290.30	100	
Ba	137	115	No Gas	-0.028	ppb	N/A	523.88	100	
Tl	203	209	No Gas	0.111	ppb	34.0	2509.48	100	
Tl	205	209	No Gas	0.113	ppb	29.5	6134.49	100	
Pb	206	209	No Gas	0.003	ppb	57.0	1658.47	100	
Pb	207	209	No Gas	0.020	ppb	70.2	1438.21	100	
Pb	208	209	No Gas	0.008	ppb	85.0	6470.58	100	
Th	232	209	No Gas	0.219	ppb	23.4	19341.73	100	
U	238	209	No Gas	0.081	ppb	23.7	5546.94	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3071466.41	0.4	3926441.81	78.23	70	125	
Sc	45	No Gas	15374048.66	0.6	18873842.21	81.46	75	125	
Sc	45	He	675933.57	0.9	814336.22	83	75	125	
Y	89	No Gas	38655498.91	0.4	45077078.84	85.75	75	125	
Y	89	He	5228557.94	0.8	6036502.97	86.62	75	125	
In	115	No Gas	8470844.71	0.5	9630269.52	87.96	75	125	
Tb	159	No Gas	11841873.15	0.4	13043986.51	90.78	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7284591.10	0.7	7831047.47	93.02	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 344_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-01 23:42:11

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	98.605	ppb	1.4	2549394.14	100	98.6	90	110	
Be	9	6	No Gas	97.059	ppb	1.1	604767.99	100	97.06	90	110	
B	11	6	No Gas	246.716	ppb	1.0	1045101.59	250	98.69	90	110	
Na	23	45	No Gas	11061.615	ppb	2.2	300442815.05	10000	110.62	90	110	Failed
Na	23	45	He	10392.101	ppb	1.1	8466478.41	10000	103.92	90	110	
Mg	24	45	No Gas	10532.660	ppb	1.3	192796170.46	10000	105.33	90	110	
Mg	24	45	He	10110.761	ppb	0.8	4155526.19	10000	101.11	90	110	
Mg	25	45	No Gas	10554.850	ppb	0.7	25620889.62	10000	105.55	90	110	
Al	27	45	No Gas	103.232	ppb	0.8	2506947.10	100	103.23	90	110	
Al	27	45	He	104.785	ppb	2.3	17628.02	100	104.78	90	110	
Si	28	45	No Gas	10524.867	ppb	0.7	104477811.36	10000	105.25	90	110	
Si	29	45	No Gas	10475.051	ppb	0.5	6416273.79	10000	104.75	90	110	
K	39	45	No Gas	10125.057	ppb	1.0	282237155.79	10000	101.25	90	110	
K	39	45	He	10345.233	ppb	0.6	3525759.63	10000	103.45	90	110	
Ca	44	45	No Gas	10005.036	ppb	0.5	8400314.87	10000	100.05	90	110	
Ca	44	45	He	9933.833	ppb	1.0	190018.41	10000	99.34	90	110	
Ti	47	45	No Gas	98.664	ppb	1.6	261494.14	100	98.66	90	110	
V	51	45	No Gas	96.687	ppb	1.3	3379735.46	100	96.69	90	110	
V	51	45	He	96.196	ppb	0.6	446756.16	100	96.2	90	110	
Cr	52	89	No Gas	106.614	ppb	0.5	3075147.24	100	106.61	90	110	
Cr	52	89	He	103.646	ppb	0.7	547941.45	100	103.65	90	110	
Cr	53	89	No Gas	106.779	ppb	0.4	411905.87	100	106.78	90	110	
Mn	55	89	No Gas	106.687	ppb	0.4	4147455.69	100	106.69	90	110	
Mn	55	89	He	103.515	ppb	0.5	298686.71	100	103.52	90	110	
Fe	56	89	No Gas	10608.979	ppb	0.3	296836464.97	10000	106.09	90	110	
Fe	56	89	He	10168.032	ppb	0.8	36744490.29	10000	101.68	90	110	
Co	59	89	No Gas	105.506	ppb	0.9	3289374.90	100	105.51	90	110	
Co	59	89	He	103.511	ppb	0.6	889184.60	100	103.51	90	110	
Ni	60	89	No Gas	108.014	ppb	1.1	745955.04	100	108.01	90	110	
Ni	60	89	He	100.320	ppb	1.1	241751.47	100	100.32	90	110	
Ni	62	89	No Gas	106.651	ppb	1.0	114939.36	100	106.65	90	110	
Cu	63	89	No Gas	105.736	ppb	0.6	1771963.84	100	105.74	90	110	
Cu	63	89	He	102.127	ppb	0.7	654927.98	100	102.13	90	110	
Cu	65	89	No Gas	105.442	ppb	0.8	846854.95	100	105.44	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	101.332	ppb	1.0	507406.98	100	101.33	90	110	
Zn	66	89	He	100.264	ppb	0.8	102180.41	100	100.26	90	110	
Zn	67	89	No Gas	100.587	ppb	0.5	79699.11	100	100.59	90	110	
Zn	68	89	No Gas	100.578	ppb	1.0	361912.55	100	100.58	90	110	
As	75	89	No Gas	101.142	ppb	0.2	545956.37	100	101.14	90	110	
As	75	89	He	99.370	ppb	1.1	76052.57	100	99.37	90	110	
Se	77	89	No Gas	113.292	ppb	1.3	38955.47	100	113.29	90	110	Failed
Se	78	89	No Gas	101.825	ppb	0.4	99672.01	100	101.83	90	110	
Se	78	89	He	99.519	ppb	2.2	4693.06	100	99.52	90	110	
Se	82	89	No Gas	100.407	ppb	0.6	33275.74	100	100.41	90	110	
[Se]	83	89	No Gas	-419.865	ppb	N/A	2916.62	100	-419.86	90	110	Failed
Sr	88	89	No Gas	98.834	ppb	0.4	4983262.65	100	98.83	90	110	
Mo	95	89	No Gas	99.915	ppb	0.6	926299.68	100	99.92	90	110	
Mo	97	89	No Gas	98.885	ppb	0.6	578674.52	100	98.88	90	110	
Mo	98	89	No Gas	95.941	ppb	1.0	1478576.91	100	95.94	90	110	
[Mo]	99	89	No Gas	161.748	ppb	163.6	30.03	100	161.75	90	110	Failed
Cd	106	89	No Gas	93.928	ppb	4.1	89597.67	100	93.93	90	110	
Ag	107	89	No Gas	96.197	ppb	0.7	2392506.15	100	96.2	90	110	
Ag	107	89	He	92.085	ppb	0.4	1122369.17	100	92.08	90	110	
Cd	108	89	No Gas	96.110	ppb	4.2	34499.68	100	96.11	90	110	
Ag	109	89	No Gas	95.526	ppb	0.9	2263549.65	100	95.53	90	110	
Cd	111	89	No Gas	94.134	ppb	0.8	475048.95	100	94.13	90	110	
Cd	114	89	No Gas	93.613	ppb	1.2	1238136.65	100	93.61	90	110	
Sn	118	115	No Gas	98.011	ppb	0.7	1548548.83	100	98.01	90	110	
Sb	121	115	No Gas	96.182	ppb	1.1	2199676.16	100	96.18	90	110	
Sb	121	89	He	94.647	ppb	0.9	501745.43	100	94.65	90	110	
Sb	123	115	No Gas	95.759	ppb	0.9	1698304.30	100	95.76	90	110	
Ba	135	115	No Gas	95.744	ppb	0.4	464788.89	100	95.74	90	110	
Ba	137	115	No Gas	98.182	ppb	0.8	813075.60	100	98.18	90	110	
Tl	203	209	No Gas	97.991	ppb	1.3	1739022.05	100	97.99	90	110	
Tl	205	209	No Gas	97.440	ppb	1.1	4121059.82	100	97.44	90	110	
Pb	206	209	No Gas	97.144	ppb	1.8	1411555.20	100	97.14	90	110	
Pb	207	209	No Gas	96.354	ppb	1.4	1167059.38	100	96.35	90	110	
Pb	208	209	No Gas	97.129	ppb	1.1	5451928.63	100	97.13	90	110	
Th	232	209	No Gas	95.109	ppb	0.7	5247825.86	100	95.11	90	110	
U	238	209	No Gas	93.825	ppb	0.4	5169037.69	100	93.82	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4225955.29	0.7	3926441.81	107.63	70	125	
Sc	45	No Gas	20216936.98	0.3	18873842.21	107.12	75	125	
Sc	45	He	884958.86	0.5	814336.22	108.67	75	125	
Y	89	No Gas	45617919.68	0.3	45077078.84	101.2	75	125	
Y	89	He	6275201.05	0.3	6036502.97	103.95	75	125	
In	115	No Gas	9546444.29	0.8	9630269.52	99.13	75	125	
Tb	159	No Gas	12500014.62	0.7	13043986.51	95.83	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7213745.83	0.6	7831047.47	92.12	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	345_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-01 23:43:56
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.310	ppb	N/A	222858.40	100	
Be	9	6	No Gas	0.024	ppb	18.7	223.57	100	
B	11	6	No Gas	5.443	ppb	8.5	52701.24	100	
Na	23	45	No Gas	137.167	ppb	12.8	15946980.56	500000	
Na	23	45	He	100.786	ppb	4.7	460873.26	500000	
Mg	24	45	No Gas	1.216	ppb	27.0	31558.88	500000	
Mg	24	45	He	0.153	ppb	463.3	400.04	500000	
Mg	25	45	No Gas	1.157	ppb	44.7	4080.95	500000	
Al	27	45	No Gas	-0.031	ppb	N/A	9750.86	500000	
Al	27	45	He	0.354	ppb	56.3	113.33	500000	
Si	28	45	No Gas	15.628	ppb	25.1	613810.77	100	
Si	29	45	No Gas	11.417	ppb	28.0	84912.88	100	
K	39	45	No Gas	7.167	ppb	45.9	5794079.71	500000	
K	39	45	He	2.016	ppb	168.0	42267.20	500000	
Ca	44	45	No Gas	-4.776	ppb	N/A	33950.58	500000	
Ca	44	45	He	0.645	ppb	685.6	120.01	500000	
Ti	47	45	No Gas	0.033	ppb	41.9	290.30	10000	
V	51	45	No Gas	0.067	ppb	57.6	-1000.20	100	
V	51	45	He	0.011	ppb	83.8	353.70	100	
Cr	52	89	No Gas	0.058	ppb	29.0	25078.23	100	
Cr	52	89	He	0.026	ppb	73.0	2235.80	100	
Cr	53	89	No Gas	0.156	ppb	27.8	36578.98	100	
Mn	55	89	No Gas	0.026	ppb	52.8	10311.04	100	
Mn	55	89	He	-0.031	ppb	N/A	290.30	100	
Fe	56	89	No Gas	10.857	ppb	18.0	2269860.86	500000	
Fe	56	89	He	10.985	ppb	4.8	62211.98	500000	
Co	59	89	No Gas	0.012	ppb	29.2	1761.91	100	
Co	59	89	He	0.004	ppb	141.2	330.34	100	
Ni	60	89	No Gas	0.075	ppb	105.4	5623.55	100	
Ni	60	89	He	-0.013	ppb	N/A	233.57	100	
Ni	62	89	No Gas	0.181	ppb	118.0	4742.31	100	
Cu	63	89	No Gas	0.058	ppb	39.4	14903.27	100	
Cu	63	89	He	0.044	ppb	53.8	3697.61	100	
Cu	65	89	No Gas	0.041	ppb	24.7	6895.40	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.047	ppb	N/A	1988.85	100	
Zn	66	89	He	-0.079	ppb	N/A	310.32	100	
Zn	67	89	No Gas	0.019	ppb	279.7	397.08	100	
Zn	68	89	No Gas	-0.034	ppb	N/A	1398.16	100	
As	75	89	No Gas	0.063	ppb	162.7	6024.28	100	
As	75	89	He	0.038	ppb	43.0	50.00	100	
Se	77	89	No Gas	3.196	ppb	19.2	9439.55	100	
Se	78	89	No Gas	1.072	ppb	21.7	18772.03	100	
Se	78	89	He	0.394	ppb	43.4	45.56	100	
Se	82	89	No Gas	0.783	ppb	92.1	125.91	100	
[Se]	83	89	No Gas	-37.915	ppb	N/A	2696.35	100	
Sr	88	89	No Gas	0.043	ppb	9.5	4578.80	100	
Mo	95	89	No Gas	0.386	ppb	23.5	4335.14	10000	
Mo	97	89	No Gas	0.392	ppb	25.2	2736.41	10000	
Mo	98	89	No Gas	0.382	ppb	22.1	7072.35	10000	
[Mo]	99	89	No Gas	125.193	ppb	29.2	23.36	10000	
Cd	106	89	No Gas	2.322	ppb	60.6	43608.88	100	
Ag	107	89	No Gas	-0.037	ppb	N/A	962.26	100	
Ag	107	89	He	-0.032	ppb	N/A	343.69	100	
Cd	108	89	No Gas	0.088	ppb	97.1	106.77	100	
Ag	109	89	No Gas	-0.045	ppb	N/A	590.62	100	
Cd	111	89	No Gas	0.119	ppb	1.4	513.23	100	
Cd	114	89	No Gas	0.103	ppb	5.4	1394.83	100	
Sn	118	115	No Gas	0.097	ppb	29.6	4616.40	100	
Sb	121	115	No Gas	0.026	ppb	28.3	1933.49	100	
Sb	121	89	He	0.020	ppb	39.8	520.02	100	
Sb	123	115	No Gas	0.029	ppb	4.7	2212.43	100	
Ba	135	115	No Gas	-0.034	ppb	N/A	323.67	100	
Ba	137	115	No Gas	-0.028	ppb	N/A	587.28	100	
Tl	203	209	No Gas	0.154	ppb	23.5	3333.85	100	
Tl	205	209	No Gas	0.144	ppb	26.0	7596.79	100	
Pb	206	209	No Gas	-0.002	ppb	N/A	1611.76	100	
Pb	207	209	No Gas	0.016	ppb	155.3	1411.52	100	
Pb	208	209	No Gas	0.007	ppb	169.0	6477.27	100	
Th	232	209	No Gas	0.193	ppb	29.3	18202.25	100	
U	238	209	No Gas	0.113	ppb	23.5	7459.92	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3988826.58	1.1	3926441.81	101.59	70	125	
Sc	45	No Gas	19022678.13	0.7	18873842.21	100.79	75	125	
Sc	45	He	828668.28	0.7	814336.22	101.76	75	125	
Y	89	No Gas	44520191.95	0.6	45077078.84	98.76	75	125	
Y	89	He	6036235.62	0.5	6036502.97	100	75	125	
In	115	No Gas	9476482.37	0.6	9630269.52	98.4	75	125	
Tb	159	No Gas	12592992.60	0.3	13043986.51	96.54	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7420782.76	0.5	7831047.47	94.76	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 356_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-02 00:03:00

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	100.181	ppb	0.6	1820269.49	100	100.18	90	110	
Be	9	6	No Gas	100.703	ppb	0.3	441636.19	100	100.7	90	110	
B	11	6	No Gas	244.933	ppb	1.0	730414.95	250	97.97	90	110	
Na	23	45	No Gas	9953.690	ppb	1.5	205113725.42	10000	99.54	90	110	
Na	23	45	He	9532.362	ppb	0.6	5866516.37	10000	95.32	90	110	
Mg	24	45	No Gas	10108.891	ppb	1.0	139689334.58	10000	101.09	90	110	
Mg	24	45	He	9917.136	ppb	0.3	3065491.31	10000	99.17	90	110	
Mg	25	45	No Gas	10033.769	ppb	0.8	18386802.23	10000	100.34	90	110	
Al	27	45	No Gas	98.376	ppb	0.9	1803879.30	100	98.38	90	110	
Al	27	45	He	102.600	ppb	2.0	12982.92	100	102.6	90	110	
Si	28	45	No Gas	10173.953	ppb	0.7	76256481.64	10000	101.74	90	110	
Si	29	45	No Gas	10224.447	ppb	0.7	4729542.88	10000	102.24	90	110	
K	39	45	No Gas	10011.342	ppb	1.0	210724203.53	10000	100.11	90	110	
K	39	45	He	10079.419	ppb	0.2	2584483.71	10000	100.79	90	110	
Ca	44	45	No Gas	9981.316	ppb	0.0	6326820.12	10000	99.81	90	110	
Ca	44	45	He	10098.253	ppb	0.4	145272.70	10000	100.98	90	110	
Ti	47	45	No Gas	98.341	ppb	1.6	196756.03	100	98.34	90	110	
V	51	45	No Gas	97.530	ppb	1.0	2573719.76	100	97.53	90	110	
V	51	45	He	97.925	ppb	0.4	342039.07	100	97.92	90	110	
Cr	52	89	No Gas	99.281	ppb	0.5	2372097.88	100	99.28	90	110	
Cr	52	89	He	98.266	ppb	0.6	423363.90	100	98.27	90	110	
Cr	53	89	No Gas	103.687	ppb	1.0	332010.56	100	103.69	90	110	
Mn	55	89	No Gas	100.375	ppb	0.6	3230896.21	100	100.37	90	110	
Mn	55	89	He	99.136	ppb	1.4	233093.69	100	99.14	90	110	
Fe	56	89	No Gas	10039.720	ppb	0.8	232645138.53	10000	100.4	90	110	
Fe	56	89	He	9747.301	ppb	0.4	28701025.41	10000	97.47	90	110	
Co	59	89	No Gas	100.664	ppb	0.9	2598290.48	100	100.66	90	110	
Co	59	89	He	101.099	ppb	0.3	707613.27	100	101.1	90	110	
Ni	60	89	No Gas	102.653	ppb	0.4	587134.83	100	102.65	90	110	
Ni	60	89	He	97.961	ppb	0.8	192340.60	100	97.96	90	110	
Ni	62	89	No Gas	100.790	ppb	0.9	90136.49	100	100.79	90	110	
Cu	63	89	No Gas	100.825	ppb	0.6	1399393.25	100	100.82	90	110	
Cu	63	89	He	100.117	ppb	0.3	523181.95	100	100.12	90	110	
Cu	65	89	No Gas	101.650	ppb	0.6	676084.42	100	101.65	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	98.671	ppb	1.1	409097.41	100	98.67	90	110	
Zn	66	89	He	98.744	ppb	1.0	81998.08	100	98.74	90	110	
Zn	67	89	No Gas	98.046	ppb	0.8	64323.13	100	98.05	90	110	
Zn	68	89	No Gas	98.364	ppb	0.5	293054.23	100	98.36	90	110	
As	75	89	No Gas	99.273	ppb	0.6	443719.50	100	99.27	90	110	
As	75	89	He	98.061	ppb	0.4	61148.63	100	98.06	90	110	
Se	77	89	No Gas	96.130	ppb	1.2	28471.96	100	96.13	90	110	
Se	78	89	No Gas	97.887	ppb	1.1	79915.27	100	97.89	90	110	
Se	78	89	He	99.778	ppb	2.4	3833.89	100	99.78	90	110	
Se	82	89	No Gas	96.723	ppb	0.1	26533.32	100	96.72	90	110	
[Se]	83	89	No Gas	-120.741	ppb	N/A	2315.89	100	-120.74	90	110	Failed
Sr	88	89	No Gas	98.875	ppb	0.3	4127265.71	100	98.88	90	110	
Mo	95	89	No Gas	101.532	ppb	0.1	779271.62	100	101.53	90	110	
Mo	97	89	No Gas	101.431	ppb	0.6	491394.35	100	101.43	90	110	
Mo	98	89	No Gas	98.356	ppb	0.9	1254875.72	100	98.36	90	110	
[Mo]	99	89	No Gas	77.799	ppb	145.0	13.35	100	77.8	90	110	Failed
Cd	106	89	No Gas	100.275	ppb	3.0	76751.93	100	100.28	90	110	
Ag	107	89	No Gas	99.961	ppb	0.7	2058160.89	100	99.96	90	110	
Ag	107	89	He	99.666	ppb	0.3	989721.00	100	99.67	90	110	
Cd	108	89	No Gas	101.992	ppb	1.0	30308.55	100	101.99	90	110	
Ag	109	89	No Gas	100.155	ppb	0.1	1964729.21	100	100.16	90	110	
Cd	111	89	No Gas	98.515	ppb	0.1	411596.51	100	98.52	90	110	
Cd	114	89	No Gas	99.434	ppb	0.5	1088786.55	100	99.43	90	110	
Sn	118	115	No Gas	98.860	ppb	0.6	1345696.47	100	98.86	90	110	
Sb	121	115	No Gas	97.868	ppb	0.3	1928401.45	100	97.87	90	110	
Sb	121	89	He	99.898	ppb	0.6	431462.01	100	99.9	90	110	
Sb	123	115	No Gas	97.290	ppb	0.6	1486566.99	100	97.29	90	110	
Ba	135	115	No Gas	98.379	ppb	1.4	411422.40	100	98.38	90	110	
Ba	137	115	No Gas	100.713	ppb	0.5	718557.99	100	100.71	90	110	
Tl	203	209	No Gas	98.627	ppb	0.5	1677647.39	100	98.63	90	110	
Tl	205	209	No Gas	97.335	ppb	0.5	3945695.60	100	97.34	90	110	
Pb	206	209	No Gas	97.008	ppb	0.2	1351094.90	100	97.01	90	110	
Pb	207	209	No Gas	96.988	ppb	0.3	1125982.29	100	96.99	90	110	
Pb	208	209	No Gas	97.357	ppb	0.2	5237830.24	100	97.36	90	110	
Th	232	209	No Gas	97.511	ppb	0.3	5156525.39	100	97.51	90	110	
U	238	209	No Gas	96.168	ppb	0.5	5078013.13	100	96.17	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2974290.63	1.0	3926441.81	75.75	70	125	
Sc	45	No Gas	15262651.02	0.7	18873842.21	80.87	75	125	
Sc	45	He	665586.69	0.6	814336.22	81.73	75	125	
Y	89	No Gas	37766286.36	0.3	45077078.84	83.78	75	125	
Y	89	He	5112933.36	0.7	6036502.97	84.7	75	125	
In	115	No Gas	8224687.84	0.5	9630269.52	85.4	75	125	
Tb	159	No Gas	11537718.57	1.1	13043986.51	88.45	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	6913985.14	0.3	7831047.47	88.29	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	357_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-02 00:04:43
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.207	ppb	6.9	175474.28	100	
Be	9	6	No Gas	0.023	ppb	70.9	160.16	100	
B	11	6	No Gas	3.105	ppb	23.8	32687.52	100	
Na	23	45	No Gas	-339.812	ppb	N/A	3393118.70	500000	
Na	23	45	He	-346.336	ppb	N/A	109821.48	500000	
Mg	24	45	No Gas	1.423	ppb	9.0	27723.17	500000	
Mg	24	45	He	0.882	ppb	8.8	546.72	500000	
Mg	25	45	No Gas	1.115	ppb	33.2	3147.28	500000	
Al	27	45	No Gas	-0.002	ppb	N/A	8216.32	500000	
Al	27	45	He	0.056	ppb	434.6	53.33	500000	
Si	28	45	No Gas	2.685	ppb	70.3	389513.11	100	
Si	29	45	No Gas	-4.265	ppb	N/A	59972.45	100	
K	39	45	No Gas	-15.844	ppb	N/A	4106433.59	500000	
K	39	45	He	-23.171	ppb	N/A	27629.45	500000	
Ca	44	45	No Gas	-13.831	ppb	N/A	21177.55	500000	
Ca	44	45	He	1.362	ppb	118.4	106.68	500000	
Ti	47	45	No Gas	0.004	ppb	256.6	173.51	10000	
V	51	45	No Gas	0.034	ppb	306.7	-1639.72	100	
V	51	45	He	0.042	ppb	25.1	393.74	100	
Cr	52	89	No Gas	0.038	ppb	62.6	20800.12	100	
Cr	52	89	He	0.035	ppb	119.9	1948.79	100	
Cr	53	89	No Gas	1.454	ppb	19.2	34812.52	100	
Mn	55	89	No Gas	0.059	ppb	12.7	9813.48	100	
Mn	55	89	He	0.027	ppb	109.8	387.07	100	
Fe	56	89	No Gas	6.818	ppb	17.9	1833238.19	500000	
Fe	56	89	He	9.239	ppb	16.9	47967.92	500000	
Co	59	89	No Gas	0.007	ppb	93.7	1371.46	100	
Co	59	89	He	-0.010	ppb	N/A	186.86	100	
Ni	60	89	No Gas	-0.577	ppb	N/A	1064.46	100	
Ni	60	89	He	0.033	ppb	17.0	290.30	100	
Ni	62	89	No Gas	-0.129	ppb	N/A	3757.67	100	
Cu	63	89	No Gas	-0.096	ppb	N/A	10521.41	100	
Cu	63	89	He	0.091	ppb	46.6	3407.24	100	
Cu	65	89	No Gas	0.029	ppb	182.1	5767.08	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.078	ppb	N/A	1561.68	100	
Zn	66	89	He	-0.125	ppb	N/A	226.90	100	
Zn	67	89	No Gas	-0.078	ppb	N/A	273.62	100	
Zn	68	89	No Gas	-0.081	ppb	N/A	1047.78	100	
As	75	89	No Gas	-0.020	ppb	N/A	4744.71	100	
As	75	89	He	0.009	ppb	139.3	24.44	100	
Se	77	89	No Gas	-4.741	ppb	N/A	6261.17	100	
Se	78	89	No Gas	-0.367	ppb	N/A	14976.80	100	
Se	78	89	He	-0.041	ppb	N/A	22.22	100	
Se	82	89	No Gas	0.095	ppb	385.6	-83.24	100	
[Se]	83	89	No Gas	223.189	ppb	236.1	2202.43	100	Failed
Sr	88	89	No Gas	0.026	ppb	20.5	3186.96	100	
Mo	95	89	No Gas	0.337	ppb	29.9	3300.45	10000	
Mo	97	89	No Gas	0.318	ppb	14.1	1962.14	10000	
Mo	98	89	No Gas	0.307	ppb	21.2	5051.25	10000	
[Mo]	99	89	No Gas	224.519	ppb	37.5	33.37	10000	
Cd	106	89	No Gas	0.916	ppb	212.6	36433.52	100	
Ag	107	89	No Gas	-0.037	ppb	N/A	807.81	100	
Ag	107	89	He	-0.034	ppb	N/A	273.62	100	
Cd	108	89	No Gas	0.165	ppb	61.9	113.45	100	
Ag	109	89	No Gas	-0.044	ppb	N/A	527.21	100	
Cd	111	89	No Gas	0.085	ppb	9.3	292.72	100	
Cd	114	89	No Gas	0.080	ppb	2.9	927.64	100	
Sn	118	115	No Gas	0.039	ppb	26.6	3227.08	100	
Sb	121	115	No Gas	0.009	ppb	6.7	1362.30	100	
Sb	121	89	He	-0.003	ppb	N/A	343.34	100	
Sb	123	115	No Gas	0.016	ppb	79.5	1725.21	100	
Ba	135	115	No Gas	-0.022	ppb	N/A	333.68	100	
Ba	137	115	No Gas	-0.015	ppb	N/A	603.96	100	
Tl	203	209	No Gas	0.120	ppb	28.3	2596.26	100	
Tl	205	209	No Gas	0.113	ppb	22.7	5994.25	100	
Pb	206	209	No Gas	0.002	ppb	387.9	1605.07	100	
Pb	207	209	No Gas	0.008	ppb	162.4	1261.35	100	
Pb	208	209	No Gas	0.004	ppb	253.8	6043.41	100	
Th	232	209	No Gas	0.221	ppb	26.6	18984.27	100	
U	238	209	No Gas	0.089	ppb	25.4	5884.12	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2987717.91	0.1	3926441.81	76.09	70	125	
Sc	45	No Gas	15013079.36	0.4	18873842.21	79.54	75	125	
Sc	45	He	666909.92	0.5	814336.22	81.9	75	125	
Y	89	No Gas	37777772.85	0.4	45077078.84	83.81	75	125	
Y	89	He	5156837.06	0.4	6036502.97	85.43	75	125	
In	115	No Gas	8260302.08	0.3	9630269.52	85.77	75	125	
Tb	159	No Gas	11580935.55	0.2	13043986.51	88.78	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7110385.00	0.6	7831047.47	90.8	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 368_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-02 00:23:14

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	99.226	ppb	0.8	1684856.63	100	99.23	90	110	
Be	9	6	No Gas	102.153	ppb	0.6	418257.05	100	102.15	90	110	
B	11	6	No Gas	250.779	ppb	0.4	697716.62	250	100.31	90	110	
Na	23	45	No Gas	9857.350	ppb	0.5	192827562.64	10000	98.57	90	110	
Na	23	45	He	9616.325	ppb	0.7	5743499.91	10000	96.16	90	110	
Mg	24	45	No Gas	9948.904	ppb	1.1	130442471.39	10000	99.49	90	110	
Mg	24	45	He	9822.943	ppb	0.7	2948154.02	10000	98.23	90	110	
Mg	25	45	No Gas	9920.237	ppb	0.8	17248621.82	10000	99.2	90	110	
Al	27	45	No Gas	98.057	ppb	1.6	1706014.45	100	98.06	90	110	
Al	27	45	He	104.206	ppb	6.5	12799.44	100	104.21	90	110	
Si	28	45	No Gas	10049.728	ppb	0.3	71474724.87	10000	100.5	90	110	
Si	29	45	No Gas	10075.871	ppb	0.4	4423090.29	10000	100.76	90	110	
K	39	45	No Gas	9974.885	ppb	1.0	199231377.03	10000	99.75	90	110	
K	39	45	He	9892.940	ppb	0.4	2463540.28	10000	98.93	90	110	
Ca	44	45	No Gas	9951.768	ppb	1.2	5985297.83	10000	99.52	90	110	
Ca	44	45	He	9970.779	ppb	1.1	139267.82	10000	99.71	90	110	
Ti	47	45	No Gas	100.095	ppb	0.4	190026.58	100	100.1	90	110	
V	51	45	No Gas	97.958	ppb	1.1	2452734.46	100	97.96	90	110	
V	51	45	He	97.741	ppb	0.2	331472.33	100	97.74	90	110	
Cr	52	89	No Gas	96.923	ppb	0.5	2257983.72	100	96.92	90	110	
Cr	52	89	He	99.217	ppb	1.8	415967.39	100	99.22	90	110	
Cr	53	89	No Gas	99.821	ppb	2.1	312687.72	100	99.82	90	110	
Mn	55	89	No Gas	98.090	ppb	0.8	3078063.59	100	98.09	90	110	
Mn	55	89	He	100.404	ppb	2.0	229710.26	100	100.4	90	110	
Fe	56	89	No Gas	9860.901	ppb	0.7	222783438.31	10000	98.61	90	110	
Fe	56	89	He	9686.686	ppb	1.3	27755763.75	10000	96.87	90	110	
Co	59	89	No Gas	97.824	ppb	0.6	2461537.58	100	97.82	90	110	
Co	59	89	He	101.341	ppb	0.9	690236.49	100	101.34	90	110	
Ni	60	89	No Gas	101.292	ppb	1.0	564824.42	100	101.29	90	110	
Ni	60	89	He	98.324	ppb	0.7	187872.69	100	98.32	90	110	
Ni	62	89	No Gas	101.351	ppb	0.6	88339.68	100	101.35	90	110	
Cu	63	89	No Gas	98.597	ppb	1.2	1334278.76	100	98.6	90	110	
Cu	63	89	He	100.887	ppb	0.8	513007.97	100	100.89	90	110	
Cu	65	89	No Gas	100.790	ppb	1.7	653521.14	100	100.79	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	97.993	ppb	2.0	396049.89	100	97.99	90	110	
Zn	66	89	He	98.056	ppb	1.4	79245.74	100	98.06	90	110	
Zn	67	89	No Gas	98.774	ppb	0.7	63169.60	100	98.77	90	110	
Zn	68	89	No Gas	98.566	ppb	0.7	286268.60	100	98.57	90	110	
As	75	89	No Gas	98.583	ppb	0.9	429580.52	100	98.58	90	110	
As	75	89	He	98.603	ppb	1.1	59835.00	100	98.6	90	110	
Se	77	89	No Gas	95.964	ppb	1.1	27719.70	100	95.96	90	110	
Se	78	89	No Gas	98.472	ppb	2.5	78274.34	100	98.47	90	110	
Se	78	89	He	100.364	ppb	5.0	3752.77	100	100.36	90	110	
Se	82	89	No Gas	96.801	ppb	3.1	25885.96	100	96.8	90	110	
[Se]	83	89	No Gas	237.710	ppb	519.4	2142.36	100	237.71	90	110	Failed
Sr	88	89	No Gas	98.724	ppb	0.6	4017323.48	100	98.72	90	110	
Mo	95	89	No Gas	101.797	ppb	0.2	761674.02	100	101.8	90	110	
Mo	97	89	No Gas	102.301	ppb	1.0	483137.73	100	102.3	90	110	
Mo	98	89	No Gas	97.362	ppb	1.0	1210943.17	100	97.36	90	110	
[Mo]	99	89	No Gas	181.248	ppb	64.4	26.69	100	181.25	90	110	Failed
Cd	106	89	No Gas	98.310	ppb	2.9	74046.97	100	98.31	90	110	
Ag	107	89	No Gas	99.853	ppb	1.1	2004183.60	100	99.85	90	110	
Ag	107	89	He	101.403	ppb	0.2	979925.86	100	101.4	90	110	
Cd	108	89	No Gas	103.418	ppb	5.2	29950.79	100	103.42	90	110	
Ag	109	89	No Gas	100.077	ppb	1.3	1913746.30	100	100.08	90	110	
Cd	111	89	No Gas	100.019	ppb	1.0	407358.81	100	100.02	90	110	
Cd	114	89	No Gas	101.020	ppb	0.9	1078309.33	100	101.02	90	110	
Sn	118	115	No Gas	98.372	ppb	0.3	1320827.31	100	98.37	90	110	
Sb	121	115	No Gas	97.080	ppb	0.1	1886824.16	100	97.08	90	110	
Sb	121	89	He	101.665	ppb	0.8	427306.69	100	101.66	90	110	
Sb	123	115	No Gas	97.033	ppb	0.2	1462458.76	100	97.03	90	110	
Ba	135	115	No Gas	99.035	ppb	0.7	408529.94	100	99.04	90	110	
Ba	137	115	No Gas	101.502	ppb	0.6	714314.13	100	101.5	90	110	
Tl	203	209	No Gas	97.859	ppb	0.6	1689468.48	100	97.86	90	110	
Tl	205	209	No Gas	96.635	ppb	1.0	3975855.45	100	96.64	90	110	
Pb	206	209	No Gas	96.638	ppb	0.5	1366077.44	100	96.64	90	110	
Pb	207	209	No Gas	97.470	ppb	0.1	1148498.32	100	97.47	90	110	
Pb	208	209	No Gas	97.144	ppb	0.2	5304568.26	100	97.14	90	110	
Th	232	209	No Gas	97.908	ppb	0.2	5254942.35	100	97.91	90	110	
U	238	209	No Gas	96.978	ppb	0.6	5197282.81	100	96.98	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2776917.35	0.3	3926441.81	70.72	70	125	
Sc	45	No Gas	14481385.58	0.3	18873842.21	76.73	75	125	
Sc	45	He	646237.39	0.3	814336.22	79.36	75	125	
Y	89	No Gas	36817240.65	0.8	45077078.84	81.68	75	125	
Y	89	He	4975648.26	0.6	6036502.97	82.43	75	125	
In	115	No Gas	8112520.64	0.1	9630269.52	84.24	75	125	
Tb	159	No Gas	11554824.02	0.6	13043986.51	88.58	75	125	

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7017412.78	0.3	7831047.47	89.61	75	125	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	369_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-02 00:24:57
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.458	ppb	7.4	173048.24	100	
Be	9	6	No Gas	0.016	ppb	73.0	126.79	100	
B	11	6	No Gas	-1.752	ppb	N/A	17919.53	100	
Na	23	45	No Gas	-292.894	ppb	N/A	4183070.93	500000	
Na	23	45	He	-295.300	ppb	N/A	135554.51	500000	
Mg	24	45	No Gas	0.672	ppb	34.9	17038.45	500000	
Mg	24	45	He	0.846	ppb	83.3	520.05	500000	
Mg	25	45	No Gas	0.549	ppb	28.7	2066.98	500000	
Al	27	45	No Gas	0.006	ppb	1099.0	8139.72	500000	
Al	27	45	He	0.177	ppb	148.4	66.67	500000	
Si	28	45	No Gas	3.118	ppb	80.0	382151.11	100	
Si	29	45	No Gas	-3.933	ppb	N/A	58521.22	100	
K	39	45	No Gas	-26.234	ppb	N/A	3792233.38	500000	
K	39	45	He	-28.425	ppb	N/A	25532.08	500000	
Ca	44	45	No Gas	-17.958	ppb	N/A	18120.01	500000	
Ca	44	45	He	2.534	ppb	112.8	120.01	500000	
Ti	47	45	No Gas	0.057	ppb	32.4	270.28	10000	
V	51	45	No Gas	0.062	ppb	175.1	-899.51	100	
V	51	45	He	0.020	ppb	79.6	306.98	100	
Cr	52	89	No Gas	0.026	ppb	25.7	20322.32	100	
Cr	52	89	He	0.011	ppb	320.4	1788.61	100	
Cr	53	89	No Gas	0.924	ppb	39.3	32969.59	100	
Mn	55	89	No Gas	0.017	ppb	69.5	8374.39	100	
Mn	55	89	He	-0.007	ppb	N/A	296.97	100	
Fe	56	89	No Gas	2.846	ppb	79.0	1726037.80	500000	
Fe	56	89	He	8.887	ppb	14.5	45492.05	500000	
Co	59	89	No Gas	0.008	ppb	52.3	1394.82	100	
Co	59	89	He	-0.003	ppb	N/A	230.24	100	
Ni	60	89	No Gas	-0.603	ppb	N/A	910.96	100	
Ni	60	89	He	0.020	ppb	85.4	256.93	100	
Ni	62	89	No Gas	-0.097	ppb	N/A	3751.02	100	
Cu	63	89	No Gas	0.000	ppb	10655.3	11736.96	100	
Cu	63	89	He	0.098	ppb	20.7	3340.46	100	
Cu	65	89	No Gas	0.044	ppb	6.0	5813.82	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-0.076	ppb	N/A	1555.01	100	
Zn	66	89	He	-0.066	ppb	N/A	266.94	100	
Zn	67	89	No Gas	-0.089	ppb	N/A	263.61	100	
Zn	68	89	No Gas	-0.104	ppb	N/A	967.69	100	
As	75	89	No Gas	0.004	ppb	3811.1	4805.27	100	
As	75	89	He	0.045	ppb	6.5	45.56	100	
Se	77	89	No Gas	-6.136	ppb	N/A	5900.62	100	
Se	78	89	No Gas	-0.773	ppb	N/A	14575.98	100	
Se	78	89	He	0.127	ppb	105.0	27.78	100	
Se	82	89	No Gas	0.348	ppb	375.5	-13.77	100	
[Se]	83	89	No Gas	-49.908	ppb	N/A	2272.51	100	
Sr	88	89	No Gas	-0.009	ppb	N/A	1721.86	100	
Mo	95	89	No Gas	0.201	ppb	22.4	2235.81	10000	
Mo	97	89	No Gas	0.254	ppb	5.8	1635.10	10000	
Mo	98	89	No Gas	0.240	ppb	21.0	4160.13	10000	
[Mo]	99	89	No Gas	53.494	ppb	138.4	10.01	10000	
Cd	106	89	No Gas	-0.333	ppb	N/A	35600.18	100	
Ag	107	89	No Gas	-0.037	ppb	N/A	810.03	100	
Ag	107	89	He	-0.027	ppb	N/A	330.34	100	
Cd	108	89	No Gas	0.090	ppb	76.2	90.09	100	
Ag	109	89	No Gas	-0.041	ppb	N/A	583.94	100	
Cd	111	89	No Gas	0.076	ppb	10.1	252.23	100	
Cd	114	89	No Gas	0.079	ppb	4.8	914.29	100	
Sn	118	115	No Gas	0.038	ppb	49.3	3198.19	100	
Sb	121	115	No Gas	0.000	ppb	439.0	1174.51	100	
Sb	121	89	He	-0.028	ppb	N/A	226.67	100	
Sb	123	115	No Gas	-0.017	ppb	N/A	1211.29	100	
Ba	135	115	No Gas	-0.054	ppb	N/A	200.20	100	
Ba	137	115	No Gas	-0.050	ppb	N/A	347.02	100	
Tl	203	209	No Gas	0.142	ppb	19.5	2996.75	100	
Tl	205	209	No Gas	0.124	ppb	25.7	6441.58	100	
Pb	206	209	No Gas	0.001	ppb	1225.7	1595.07	100	
Pb	207	209	No Gas	0.015	ppb	38.3	1338.10	100	
Pb	208	209	No Gas	0.007	ppb	129.1	6236.97	100	
Th	232	209	No Gas	0.305	ppb	25.6	23577.01	100	
U	238	209	No Gas	0.102	ppb	20.5	6601.88	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2878360.49	1.1	3926441.81	73.31	70	125	
Sc	45	No Gas	14613720.41	0.5	18873842.21	77.43	75	125	
Sc	45	He	647491.43	0.4	814336.22	79.51	75	125	
Y	89	No Gas	37434927.50	0.4	45077078.84	83.05	75	125	
Y	89	He	4999832.76	0.4	6036502.97	82.83	75	125	
In	115	No Gas	8215320.86	0.4	9630269.52	85.31	75	125	
Tb	159	No Gas	11539752.69	0.2	13043986.51	88.47	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	7119267.49	0.7	7831047.47	90.91	75	125	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 444_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b

Acq Time 2020-12-02 02:38:00

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 272CALB.d

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

Operator **ALSHN**
ICPMS

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Li	7	6	No Gas	101.089	ppb	0.7	1144497.58	100	101.09	90	110	
Be	9	6	No Gas	106.359	ppb	0.8	290894.17	100	106.36	90	110	
B	11	6	No Gas	244.633	ppb	1.0	454961.24	250	97.85	90	110	
Na	23	45	No Gas	9496.055	ppb	0.2	133783544.66	10000	94.96	90	110	
Na	23	45	He	8743.360	ppb	0.6	3858058.90	10000	87.43	90	110	Failed
Mg	24	45	No Gas	9737.122	ppb	0.7	91772758.63	10000	97.37	90	110	
Mg	24	45	He	9221.484	ppb	0.4	2034065.96	10000	92.21	90	110	
Mg	25	45	No Gas	9752.366	ppb	0.5	12189442.74	10000	97.52	90	110	
Al	27	45	No Gas	96.453	ppb	1.7	1206438.34	100	96.45	90	110	
Al	27	45	He	106.965	ppb	2.4	9656.83	100	106.96	90	110	
Si	28	45	No Gas	9995.406	ppb	0.3	51102325.76	10000	99.95	90	110	
Si	29	45	No Gas	9980.396	ppb	0.5	3149810.44	10000	99.8	90	110	
K	39	45	No Gas	9961.655	ppb	0.5	143032047.87	10000	99.62	90	110	
K	39	45	He	9725.280	ppb	0.6	1780359.24	10000	97.25	90	110	
Ca	44	45	No Gas	9946.846	ppb	0.7	4300389.00	10000	99.47	90	110	
Ca	44	45	He	10190.719	ppb	1.8	104614.83	10000	101.91	90	110	
Ti	47	45	No Gas	102.421	ppb	0.8	139769.98	100	102.42	90	110	
V	51	45	No Gas	96.410	ppb	1.0	1735252.34	100	96.41	90	110	
V	51	45	He	97.614	ppb	0.2	243301.95	100	97.61	90	110	
Cr	52	89	No Gas	93.918	ppb	1.1	1610941.73	100	93.92	90	110	
Cr	52	89	He	94.257	ppb	1.5	298617.69	100	94.26	90	110	
Cr	53	89	No Gas	99.943	ppb	0.9	230443.42	100	99.94	90	110	
Mn	55	89	No Gas	95.773	ppb	0.3	2212394.95	100	95.77	90	110	
Mn	55	89	He	96.655	ppb	1.5	167082.70	100	96.66	90	110	
Fe	56	89	No Gas	9551.788	ppb	0.6	158884724.38	10000	95.52	90	110	
Fe	56	89	He	9148.717	ppb	0.4	19807902.21	10000	91.49	90	110	
Co	59	89	No Gas	95.976	ppb	0.3	1777713.86	100	95.98	90	110	
Co	59	89	He	96.886	ppb	0.2	498619.87	100	96.89	90	110	
Ni	60	89	No Gas	100.352	ppb	0.4	411942.94	100	100.35	90	110	
Ni	60	89	He	93.042	ppb	0.4	134336.46	100	93.04	90	110	
Ni	62	89	No Gas	98.933	ppb	1.8	63541.41	100	98.93	90	110	
Cu	63	89	No Gas	100.878	ppb	0.6	1004680.54	100	100.88	90	110	
Cu	63	89	He	95.082	ppb	0.4	365435.66	100	95.08	90	110	
Cu	65	89	No Gas	100.185	ppb	0.1	478213.69	100	100.19	90	110	

Continuing Calibration Verification (CCV) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Zn	66	89	No Gas	96.069	ppb	0.7	285864.27	100	96.07	90	110	
Zn	66	89	He	95.970	ppb	0.9	58608.10	100	95.97	90	110	
Zn	67	89	No Gas	95.496	ppb	1.8	44959.41	100	95.5	90	110	
Zn	68	89	No Gas	96.525	ppb	0.2	206378.34	100	96.52	90	110	
As	75	89	No Gas	99.678	ppb	0.7	319690.17	100	99.68	90	110	
As	75	89	He	98.466	ppb	0.7	45147.32	100	98.47	90	110	
Se	77	89	No Gas	90.346	ppb	3.7	19517.28	100	90.35	90	110	
Se	78	89	No Gas	101.598	ppb	0.5	59104.86	100	101.6	90	110	
Se	78	89	He	101.152	ppb	3.2	2858.09	100	101.15	90	110	
Se	82	89	No Gas	98.620	ppb	2.5	19412.84	100	98.62	90	110	
[Se]	83	89	No Gas	-1074.823	ppb	N/A	1888.71	100	-1074.82	90	110	Failed
Sr	88	89	No Gas	99.026	ppb	0.4	2966114.14	100	99.03	90	110	
Mo	95	89	No Gas	103.022	ppb	0.5	567381.05	100	103.02	90	110	
Mo	97	89	No Gas	102.920	ppb	0.1	357787.52	100	102.92	90	110	
Mo	98	89	No Gas	101.201	ppb	0.3	926504.72	100	101.2	90	110	
[Mo]	99	89	No Gas	115.938	ppb	102.0	13.35	100	115.94	90	110	Failed
Cd	106	89	No Gas	99.010	ppb	4.1	54704.42	100	99.01	90	110	
Ag	107	89	No Gas	99.014	ppb	0.2	1462924.07	100	99.01	90	110	
Ag	107	89	He	99.989	ppb	0.9	730044.60	100	99.99	90	110	
Cd	108	89	No Gas	103.632	ppb	1.6	22097.48	100	103.63	90	110	
Ag	109	89	No Gas	99.607	ppb	0.2	1402115.24	100	99.61	90	110	
Cd	111	89	No Gas	101.327	ppb	1.2	303773.36	100	101.33	90	110	
Cd	114	89	No Gas	101.518	ppb	0.6	797656.36	100	101.52	90	110	
Sn	118	115	No Gas	102.622	ppb	0.2	1025169.89	100	102.62	90	110	
Sb	121	115	No Gas	97.068	ppb	0.6	1403720.40	100	97.07	90	110	
Sb	121	89	He	105.173	ppb	0.5	333988.91	100	105.17	90	110	
Sb	123	115	No Gas	97.758	ppb	2.1	1096205.14	100	97.76	90	110	
Ba	135	115	No Gas	102.551	ppb	0.4	314763.00	100	102.55	90	110	
Ba	137	115	No Gas	104.943	ppb	0.4	549505.17	100	104.94	90	110	
Tl	203	209	No Gas	96.060	ppb	1.3	1251110.93	100	96.06	90	110	
Tl	205	209	No Gas	94.763	ppb	1.3	2941243.54	100	94.76	90	110	
Pb	206	209	No Gas	96.895	ppb	1.3	1033279.66	100	96.9	90	110	
Pb	207	209	No Gas	96.767	ppb	1.4	860156.23	100	96.77	90	110	
Pb	208	209	No Gas	96.177	ppb	1.0	3961936.95	100	96.18	90	110	
Th	232	209	No Gas	95.816	ppb	1.4	3879685.63	100	95.82	90	110	
U	238	209	No Gas	94.521	ppb	1.0	3821492.96	100	94.52	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1854853.17	0.9	3926441.81	47.24	70	125	ISTD Failed
Sc	45	No Gas	10409731.63	0.4	18873842.21	55.15	75	125	ISTD Failed
Sc	45	He	474953.66	1.1	814336.22	58.32	75	125	ISTD Failed
Y	89	No Gas	27100187.74	0.6	45077078.84	60.12	75	125	ISTD Failed
Y	89	He	3759519.21	1.3	6036502.97	62.28	75	125	ISTD Failed
In	115	No Gas	6036381.84	0.8	9630269.52	62.68	75	125	ISTD Failed
Tb	159	No Gas	8683828.01	0.7	13043986.51	66.57	75	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	5294054.79	0.6	7831047.47	67.6	75	125	ISTD Failed

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	445_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-02 02:39:44
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	385CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	12.358	ppb	115.8	116173.67	100	
Be	9	6	No Gas	-51.235	ppb	N/A	110.11	100	
B	11	6	No Gas	0.451	ppb	3764.1	6995.49	100	
Na	23	45	No Gas	5371.055	ppb	1.8	1111289.54	500000	
Na	23	45	He	-96.266	ppb	N/A	35073.16	500000	
Mg	24	45	No Gas	-27214.352	ppb	N/A	24036.13	500000	
Mg	24	45	He	-1.359	ppb	N/A	413.37	500000	
Mg	25	45	No Gas	461.021	ppb	21087.5	2920.51	500000	
Al	27	45	No Gas	35.949	ppb	28.6	6709.01	500000	
Al	27	45	He	0.395	ppb	64.7	66.67	500000	
Si	28	45	No Gas	3855.825	ppb	8.0	367284.88	100	Failed
Si	29	45	No Gas	1271.128	ppb	15.6	45854.83	100	Failed
K	39	45	No Gas	-924.002	ppb	N/A	2620647.67	500000	
K	39	45	He	15.387	ppb	102.2	16971.50	500000	
Ca	44	45	No Gas	3637.333	ppb	46.6	8990.38	500000	
Ca	44	45	He	-3.785	ppb	N/A	40.00	500000	
Ti	47	45	No Gas	-57.741	ppb	N/A	243.58	10000	
V	51	45	No Gas	-175.710	ppb	N/A	-812.26	100	
V	51	45	He	0.048	ppb	136.8	233.57	100	
Cr	52	89	No Gas	-2.645	ppb	N/A	16536.69	100	
Cr	52	89	He	0.130	ppb	24.7	1434.88	100	
Cr	53	89	No Gas	-4.965	ppb	N/A	27007.14	100	
Mn	55	89	No Gas	46.955	ppb	36.2	4288.37	100	
Mn	55	89	He	-0.011	ppb	N/A	190.20	100	
Fe	56	89	No Gas	-2222.109	ppb	N/A	1581619.83	500000	
Fe	56	89	He	36.727	ppb	16.1	49105.69	500000	
Co	59	89	No Gas	-179.679	ppb	N/A	914.30	100	
Co	59	89	He	0.006	ppb	280.4	180.18	100	
Ni	60	89	No Gas	2.481	ppb	3124.5	573.93	100	
Ni	60	89	He	-0.029	ppb	N/A	150.15	100	
Ni	62	89	No Gas	21.045	ppb	57.4	2446.05	100	
Cu	63	89	No Gas	39.474	ppb	14.2	8701.62	100	
Cu	63	89	He	-0.604	ppb	N/A	2783.12	100	
Cu	65	89	No Gas	41.457	ppb	10.9	4098.11	100	

Continuing Calibration Blank (CCB) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Zn	66	89	No Gas	-2.137	ppb	N/A	1114.52	100	
Zn	66	89	He	-0.150	ppb	N/A	186.86	100	
Zn	67	89	No Gas	18.578	ppb	117.4	220.23	100	
Zn	68	89	No Gas	36.785	ppb	45.6	757.46	100	
As	75	89	No Gas	-57.110	ppb	N/A	4291.44	100	
As	75	89	He	0.091	ppb	90.4	26.67	100	
Se	77	89	No Gas	1.764	ppb	607.0	4204.94	100	
Se	78	89	No Gas	-5.078	ppb	N/A	12074.34	100	
Se	78	89	He	0.074	ppb	270.4	18.89	100	
Se	82	89	No Gas	195.413	ppb	8.9	30.88	100	Failed
[Se]	83	89	No Gas	2.148	ppb	309.7	1758.58	100	
Sr	88	89	No Gas	-93.097	ppb	N/A	1384.81	100	
Mo	95	89	No Gas	-1440.870	ppb	N/A	2265.83	10000	
Mo	97	89	No Gas	-1237.029	ppb	N/A	1601.73	10000	
Mo	98	89	No Gas	-1141.546	ppb	N/A	3909.76	10000	
[Mo]	99	89	No Gas	1857.106	ppb	100.2	10.01	10000	
Cd	106	89	No Gas	-6.624	ppb	N/A	25707.73	100	
Ag	107	89	No Gas	-760.648	ppb	N/A	693.35	100	
Ag	107	89	He	0.027	ppb	14.7	206.88	100	
Cd	108	89	No Gas	4.803	ppb	434.2	76.74	100	
Ag	109	89	No Gas	7534.062	ppb	9.8	440.46	100	Failed
Cd	111	89	No Gas	181.175	ppb	20.9	44.32	100	Failed
Cd	114	89	No Gas	88.760	ppb	15.2	363.71	100	
Sn	118	115	No Gas	-171.326	ppb	N/A	3083.71	100	
Sb	121	115	No Gas	-327.545	ppb	N/A	1094.50	100	
Sb	121	89	He	0.089	ppb	69.4	230.01	100	
Sb	123	115	No Gas	-228.317	ppb	N/A	1171.25	100	
Ba	135	115	No Gas	-22.342	ppb	N/A	100.10	100	
Ba	137	115	No Gas	-114.523	ppb	N/A	226.90	100	
Tl	203	209	No Gas	-6056.905	ppb	N/A	2806.51	100	
Tl	205	209	No Gas	-8350.617	ppb	N/A	6681.94	100	
Pb	206	209	No Gas	-59.057	ppb	N/A	1905.42	100	
Pb	207	209	No Gas	-43.705	ppb	N/A	1575.03	100	
Pb	208	209	No Gas	-64.242	ppb	N/A	7421.76	100	
Th	232	209	No Gas	-704.232	ppb	N/A	15138.10	100	
U	238	209	No Gas	7207.948	ppb	15.2	5099.60	100	Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1901581.16	0.2	2593792.95	73.31	70	125	
Sc	45	No Gas	10517620.76	0.5	13368518.13	78.67	75	125	
Sc	45	He	481942.81	0.2	599319.87	80.41	75	125	
Y	89	No Gas	27850654.04	0.2	34486157.06	80.76	75	125	
Y	89	He	3849120.17	0.3	4699190.76	81.91	75	125	
In	115	No Gas	6204574.10	0.2	7547858.08	82.2	75	125	
Tb	159	No Gas	8806837.48	0.2	10611572.85	82.99	75	125	

Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	5376854.51	0.3	6493145.02	82.81	75	125	

Interference Check Solution A (ICS-A) Report

Sample Name	ICSA
File Name	446ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\ICPMS3_201201.b
Acq Time	2020-12-02 02:41:24
Sample Type	ICSA
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	272CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**ALSHN** **ICPMS**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Li	7	6	No Gas	0.624	ppb	16.0	107819.31			120	
Be	9	6	No Gas	0.053	ppb	35.7	173.51			120	
B	11	6	No Gas	-3.950	ppb	N/A	7235.91			120	
Na	23	45	No Gas	45278.084	ppb	0.3	598703480.05			120	
Na	23	45	He	42692.771	ppb	0.6	17629088.91			120	
Mg	24	45	No Gas	44220.543	ppb	1.2	407745367.26			120	
Mg	24	45	He	42212.661	ppb	0.2	9131115.70			120	
Mg	25	45	No Gas	44304.783	ppb	0.5	54176724.19			120	
Al	27	45	No Gas	41845.128	ppb	0.7	509665672.41			120	
Al	27	45	He	40451.871	ppb	0.3	3569265.88			120	
Si	28	45	No Gas	67.667	ppb	8.2	587775.70			120	Failed
Si	29	45	No Gas	84.507	ppb	4.5	67728.59			120	Failed
K	39	45	No Gas	46329.258	ppb	0.6	639864003.80			120	
K	39	45	He	45491.702	ppb	0.6	8081099.88			120	
Ca	44	45	No Gas	46020.569	ppb	0.7	19392912.63			120	
Ca	44	45	He	46346.097	ppb	0.2	466381.30			120	
Ti	47	45	No Gas	934.082	ppb	0.8	1246232.77			120	
V	51	45	No Gas	0.110	ppb	49.0	217.47			120	
V	51	45	He	0.072	ppb	32.0	347.03			120	
Cr	52	89	No Gas	0.526	ppb	5.1	23290.03			120	
Cr	52	89	He	0.183	ppb	26.9	1882.05			120	
Cr	53	89	No Gas	4.105	ppb	3.6	30601.77			120	
Mn	55	89	No Gas	0.571	ppb	3.1	18888.84			120	
Mn	55	89	He	0.625	ppb	8.7	1311.40			120	
Fe	56	89	No Gas	43775.800	ppb	1.2	726135766.23			120	
Fe	56	89	He	42190.666	ppb	0.3	91086031.98			120	
Co	59	89	No Gas	0.297	ppb	0.9	6381.32			120	
Co	59	89	He	0.220	ppb	4.2	1318.07			120	
Ni	60	89	No Gas	0.086	ppb	8.3	3477.31			120	
Ni	60	89	He	0.276	ppb	23.6	560.58			120	
Ni	62	89	No Gas	1.757	ppb	23.7	3864.50			120	
Cu	63	89	No Gas	0.735	ppb	1.4	15805.16			120	
Cu	63	89	He	0.390	ppb	5.3	3617.49			120	
Cu	65	89	No Gas	1.025	ppb	6.9	8878.62			120	

Interference Check Solution A (ICS-A) Report

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Zn	66	89	No Gas	1.100	ppb	7.1	4625.49			120	
Zn	66	89	He	0.423	ppb	38.0	497.18			120	
Zn	67	89	No Gas	3.565	ppb	5.0	1908.76			120	
Zn	68	89	No Gas	0.385	ppb	7.2	1748.55			120	
As	75	89	No Gas	0.323	ppb	55.2	4500.90			120	
As	75	89	He	0.167	ppb	15.7	90.00			120	
Se	77	89	No Gas	11.908	ppb	2.6	7145.83			120	
Se	78	89	No Gas	2.064	ppb	23.2	11934.03			120	
Se	78	89	He	0.137	ppb	250.4	21.11			120	
Se	82	89	No Gas	-0.436	ppb	N/A	-165.91			120	
[Se]	83	89	No Gas	-2013.558	ppb	N/A	2118.99			120	
Sr	88	89	No Gas	0.946	ppb	1.9	29920.24			120	
Mo	95	89	No Gas	920.542	ppb	0.4	5081937.05			120	
Mo	97	89	No Gas	916.333	ppb	0.6	3193275.05			120	
Mo	98	89	No Gas	911.126	ppb	0.5	8361457.44			120	
[Mo]	99	89	No Gas	115.841	ppb	51.2	13.35			120	
Cd	106	89	No Gas	-1.406	ppb	N/A	25540.66			120	
Ag	107	89	No Gas	0.228	ppb	3.2	4518.57			120	
Ag	107	89	He	0.248	ppb	5.1	2252.50			120	
Cd	108	89	No Gas	17.340	ppb	10.4	3744.35			120	Failed
Ag	109	89	No Gas	0.242	ppb	8.7	4415.23			120	
Cd	111	89	No Gas	-0.428	ppb	N/A	-1329.62			120	
Cd	114	89	No Gas	0.596	ppb	2.8	4739.00			120	
Sn	118	115	No Gas	0.177	ppb	10.2	3650.52			120	
Sb	121	115	No Gas	0.051	ppb	3.7	1560.10			120	
Sb	121	89	He	0.027	ppb	23.2	343.34			120	
Sb	123	115	No Gas	0.032	ppb	15.9	1411.51			120	
Ba	135	115	No Gas	0.187	ppb	15.6	864.25			120	
Ba	137	115	No Gas	0.259	ppb	46.7	1832.76			120	
Tl	203	209	No Gas	0.009	ppb	15.6	483.84			120	
Tl	205	209	No Gas	0.002	ppb	203.9	997.72			120	
Pb	206	209	No Gas	0.054	ppb	26.1	1708.53			120	
Pb	207	209	No Gas	0.065	ppb	20.4	1408.19			120	
Pb	208	209	No Gas	0.057	ppb	12.8	6534.00			120	
Th	232	209	No Gas	0.231	ppb	25.0	14192.79			120	
U	238	209	No Gas	0.006	ppb	57.8	1004.39			120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	1766292.79	0.7	3926441.81	44.98	70	125	ISTD Failed
Sc	45	No Gas	10185116.59	0.7	18873842.21	53.96	75	125	ISTD Failed
Sc	45	He	465795.61	0.4	814336.22	57.2	75	125	ISTD Failed
Y	89	No Gas	27187476.70	1.4	45077078.84	60.31	75	125	ISTD Failed
Y	89	He	3750938.76	0.5	6036502.97	62.14	75	125	ISTD Failed
In	115	No Gas	5905816.28	1.0	9630269.52	61.33	75	125	ISTD Failed
Tb	159	No Gas	8781185.79	1.4	13043986.51	67.32	75	125	ISTD Failed

Interference Check Solution A (ICS-A) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Bi	209	No Gas	5167098.13	1.3	7831047.47	65.98	75	125	ISTD Failed

ALS Environmental

Report Generated By Teledyne Leeman QuickTrace

Analyst: M7600 Hg,

Worksheet file: C:\Users\Public\Documents\Teledyne CETAC\QuickTrace\Worksheets\HG4_201130A.wszf

Creation Date: 10/11/2019 10:38:42 AM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
Calibration Blank	STD	11/30/20 09:35:55 am	0.000	264	5.75	0.02		N/A
Replicates	272.5	275.0	268.0	242.0				
Standard #1 (0.1 ug/L)	STD	11/30/20 09:37:41 am	0.100	1843	1.50	0.01		N/A
Replicates	1819.2	1844.9	1826.9	1881.4				
Standard #2 (0.5 ug/L)	STD	11/30/20 09:39:27 am	0.500	8469	0.61	0.00		N/A
Replicates	8415.3	8445.9	8476.4	8536.4				
Standard #3 (1.0 ug/L)	STD	11/30/20 09:41:13 am	1.000	16533	0.52	-0.04		N/A
Replicates	16422.8	16528.0	16549.5	16631.5				
Standard #4 (2.0 ug/L)	STD	11/30/20 09:43:00 am	2.000	34556	0.46	0.00		N/A
Replicates	34400.4	34485.7	34568.7	34769.7				
Standard #5 (4.0 ug/L)	STD	11/30/20 09:44:47 am	4.000	69156	0.26	0.00		N/A
Replicates	69014.5	69037.5	69170.0	69403.5				

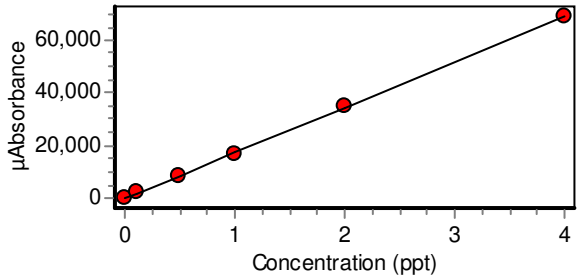
Calibration

Equation: Abs = 17276.395x + -79.871

R2: 0.99982

SEE: 396.5618

Flags:



ICV	ICV	11/30/20 09:47:23 am	1.930	33252	0.16			96.47
Replicates	33207.6	33214.4	33268.4	33318.9				
ICB	ICB	11/30/20 09:49:11 am	0.018	225	7.06			N/A
Replicates	245.5	220.8	236.3	196.3				
CCV	CCV	11/30/20 09:50:58 am	2.010	34609	0.12			100.39
Replicates	34654.9	34596.2	34624.7	34558.2				
CRDL	CRDL	11/30/20 09:52:46 am	0.216	3646	1.01			107.84
Replicates	3630.3	3607.5	3651.5	3696.0				
CCB	CCB	11/30/20 09:54:34 am	0.018	227	5.76			N/A
Replicates	227.1	218.8	210.3	251.3				
CCV	CCV	11/30/20 01:07:18 pm	1.900	32692	0.12			94.85
Replicates	32657.4	32677.4	32687.9	32745.4				

Sample Name	Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
CRDL	CRDL	11/30/20 01:09:06 pm	0.208	3517	0.26			104.11
Replicates	3506.8	3513.3	3520.3	3528.8				
CCB	CCB	11/30/20 01:10:54 pm	0.018	234	6.01			N/A
Replicates	258.4	232.9	212.4	231.9				
20111577-03A2X	UNK	11/30/20 01:12:39 pm	1.900	32661	0.72			N/A
Replicates	32393.9	32554.2	32764.7	32930.7				
20111577-05A10X	UNK	11/30/20 01:14:25 pm	2.640	45477	0.77			N/A
Replicates	45062.9	45347.0	45623.0	45873.5				
20111580-04A10X	UNK	11/30/20 01:16:11 pm	2.450	42245	0.57			N/A
Replicates	41953.4	42163.1	42343.6	42518.6				
20111580-05A20X	UNK	11/30/20 01:17:56 pm	O/R	71773	0.61		O	N/A
Replicates	71282.0	71609.1	71892.1	72309.1				
20111580-06A20X	UNK	11/30/20 01:20:28 pm	3.140	54241	0.51			N/A
Replicates	53926.9	54155.9	54292.9	54587.4				
MBLK-168413	UNK	11/30/20 01:22:59 pm	0.016	196	4.78			N/A
Replicates	205.7	184.2	208.2	184.2				
LCS-168413	UNK	11/30/20 01:24:45 pm	1.380	23680	0.70			N/A
Replicates	23509.5	23605.5	23708.5	23896.0				
20111727-02C	UNK	11/30/20 01:26:31 pm	0.019	243	19.62			N/A
Replicates	318.1	170.1	218.6	265.1				
20111829-01D	UNK	11/30/20 01:28:18 pm	0.027	381	2.03			N/A
Replicates	369.3	383.1	378.1	391.6				
20111831-01J	UNK	11/30/20 01:30:04 pm	0.010	96	49.73			N/A
Replicates	71.2	104.4	-1.6	208.4				
CCV	CCV	11/30/20 01:31:52 pm	1.930	33270	0.15			96.52
Replicates	33332.6	33286.1	33244.6	33214.6				
CRDL	CRDL	11/30/20 01:33:40 pm	0.206	3472	0.71			102.81
Replicates	3488.1	3495.4	3466.4	3439.4				
CCB	CCB	11/30/20 01:35:27 pm	0.018	225	10.86			N/A
Replicates	272.8	216.0	198.0	211.5				
20111831-01JMS	UNK	11/30/20 01:37:14 pm	1.370	23529	0.69			N/A
Replicates	23348.6	23463.6	23570.1	23732.6				
20111831-01JMSD	UNK	11/30/20 01:39:01 pm	1.370	23607	0.41			N/A
Replicates	23514.4	23553.6	23623.6	23738.1				
20111933-01B	UNK	11/30/20 01:40:46 pm	0.013	142	2.24			N/A
Replicates	142.6	143.6	146.1	134.6				
20111934-01D	UNK	11/30/20 01:42:31 pm	0.014	163	9.55			N/A
Replicates	166.6	131.3	168.8	186.8				

Sample Name	Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
20111935-01A	UNK	11/30/20 01:44:17 pm	0.014	168	7.32			N/A
Replicates	169.2	188.2	144.2	171.7				
20111943-01A	UNK	11/30/20 01:46:02 pm	0.245	4149	0.70			N/A
Replicates	4110.9	4151.8	4150.8	4183.3				
20111943-02A	UNK	11/30/20 01:47:48 pm	0.022	293	3.85			N/A
Replicates	295.7	312.4	285.9	279.4				
20111943-03A	UNK	11/30/20 01:49:34 pm	0.016	193	6.59			N/A
Replicates	201.5	190.2	210.2	168.7				
20111943-03ADUP	UNK	11/30/20 01:51:20 pm	0.014	159	13.44			N/A
Replicates	202.7	129.6	141.6	162.1				
20111961-01A	UNK	11/30/20 01:53:06 pm	0.020	260	213.35			N/A
Replicates	167.1	216.1	-553.9	1210.6				
CCV	CCV	11/30/20 01:54:54 pm	1.650	28482	0.46		Q	82.66
Replicates	28310.5	28447.8	28558.3	28610.3				
CCV	CCV	11/30/20 01:56:43 pm	1.970	34002	0.26			98.64
Replicates	33969.2	33965.7	33939.7	34134.7				
CRDL	CRDL	11/30/20 01:58:31 pm	0.168	2829	0.98			84.18
Replicates	2841.3	2860.8	2816.8	2795.8				
CCB	CCB	11/30/20 02:00:18 pm	0.014	169	13.30			N/A
Replicates	185.1	203.3	158.8	127.3				
20111964-02B	UNK	11/30/20 02:02:04 pm	0.016	197	2.77			N/A
Replicates	187.2	200.4	204.9	194.4				
20111964-02BMS	UNK	11/30/20 02:03:51 pm	1.190	20467	0.47			N/A
Replicates	20345.5	20446.5	20507.5	20570.5				
20111964-02BMSD	UNK	11/30/20 02:05:38 pm	1.210	20762	0.54			N/A
Replicates	20626.0	20723.1	20813.6	20884.1				
20111988-01A	UNK	11/30/20 02:07:24 pm	0.219	3702	1.02			N/A
Replicates	3678.1	3686.7	3684.7	3759.7				
20112060-01J	UNK	11/30/20 02:09:10 pm	0.004	-4	574.54			N/A
Replicates	319.2	-308.6	415.4	-443.1				
20112105-01A	UNK	11/30/20 02:10:55 pm	0.373	6364	1.67			N/A
Replicates	6256.9	6299.7	6402.2	6497.7				
20112105-02A	UNK	11/30/20 02:12:41 pm	0.023	321	2.90			N/A
Replicates	336.3	324.6	314.6	310.1				
20112105-03A	UNK	11/30/20 02:14:26 pm	0.029	419	21.65			N/A
Replicates	325.4	461.6	552.1	337.1				
20112105-03ADUP	UNK	11/30/20 02:16:12 pm	0.013	142	7.83			N/A
Replicates	149.7	154.2	116.2	147.7				

Sample Name	Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
MBLK-168415	UNK	11/30/20 02:17:58 pm	0.012	134	3.26			N/A
Replicates	135.0	143.6	129.1	128.6				
CCV	CCV	11/30/20 02:19:46 pm	1.650	28432	0.30		Q	82.52
Replicates	28553.3	28404.8	28411.8	28356.8				
CCV	CCV	11/30/20 02:21:35 pm	1.680	28891	0.19		Q	83.85
Replicates	28952.0	28922.6	28840.6	28850.1				
CRDL	CRDL	11/30/20 02:23:23 pm	0.172	2889	0.66			85.91
Replicates	2894.1	2884.1	2864.6	2911.6				
CCB	CCB	11/30/20 02:25:10 pm	0.015	182	9.37			N/A
Replicates	175.7	150.2	200.7	202.2				
	UNK	11/30/20 02:27:54 pm	1.620	27990	0.73			N/A
Replicates	27727.6	27932.8	28102.8	28196.3				
CCV	CCV	11/30/20 02:34:35 pm	1.080	18596	1.74		Q	54.05
Replicates	18222.8	18476.7	18695.7	18987.2				
CCV	CCV	11/30/20 02:42:18 pm	1.310	22567	1.25		Q	65.54
Replicates	22883.7	22689.5	22463.0	22231.0				
CRDL	CRDL	11/30/20 02:48:27 pm	0.118	1957	0.46		Y	58.96
Replicates	1964.7	1951.7	1965.7	1946.7				
CRDL	CRDL	11/30/20 02:50:16 pm	0.149	2500	1.19			74.68
Replicates	2468.2	2485.0	2509.5	2539.0				
CCB	CCB	11/30/20 02:52:03 pm	0.014	156	14.44			N/A
Replicates	196.6	121.6	135.1	170.6				
CCV	CCV	11/30/20 02:53:51 pm	1.220	20966	0.25		Q	60.91
Replicates	20939.6	20923.9	20958.9	21043.4				
CCV	CCV	11/30/20 02:55:40 pm	1.920	33020	1.56			95.80
Replicates	33600.3	33228.6	32859.1	32392.1				
CRDL	CRDL	11/30/20 02:57:28 pm	0.171	2867	0.63			85.27
Replicates	2883.7	2860.2	2843.2	2879.2				
CCB	CCB	11/30/20 02:59:15 pm	0.016	198	7.53			N/A
Replicates	216.7	214.0	186.5	174.0				
20111964-02B	UNK	11/30/20 03:01:02 pm	0.013	148	12.14			N/A
Replicates	146.2	134.2	124.2	187.2				
20111964-02BMS	UNK	11/30/20 03:03:39 pm	0.782	13439	1.03			N/A
Replicates	13638.8	13428.3	13342.8	13344.8				
20111964-02BMSD	UNK	11/30/20 03:05:26 pm	0.974	16754	0.85			N/A
Replicates	16586.8	16702.9	16805.9	16921.4				
20111988-01A	UNK	11/30/20 03:07:13 pm	0.181	3040	0.58			N/A
Replicates	3031.1	3056.3	3053.3	3018.8				

Sample Name				Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
20112060-01J				UNK	11/30/20 03:08:58 pm	0.012	121	13.30			N/A
	Replicates	117.0	100.0	108.0	160.0						
20112105-01A				UNK	11/30/20 03:10:43 pm	0.335	5705	1.01			N/A
	Replicates	5637.6	5674.6	5753.1	5755.1						
20112105-02A				UNK	11/30/20 03:12:29 pm	0.023	318	0.68			N/A
	Replicates	314.3	319.8	317.8	320.3						
20112105-03A				UNK	11/30/20 03:14:14 pm	0.015	176	16.91			N/A
	Replicates	202.2	186.0	112.0	203.0						
20112105-03ADUP				UNK	11/30/20 03:16:00 pm	0.011	103	17.36			N/A
	Replicates	124.4	135.1	85.1	68.1						
MBLK-168415				UNK	11/30/20 03:17:46 pm	0.011	109	16.57			N/A
	Replicates	107.5	91.5	83.5	153.5						
CCV				CCV	11/30/20 03:19:34 pm	1.320	22641	0.78		Q	65.76
	Replicates	22461.9	22561.1	22665.6	22876.1						
CCV				CCV	11/30/20 03:23:21 pm	1.030	17676	1.07		Q	51.39
	Replicates	17453.5	17613.0	17735.0	17902.5						
CRDL				CRDL	11/30/20 03:25:10 pm	0.105	1734	1.57		Y	52.49
	Replicates	1715.0	1711.9	1773.9	1734.9						
CCB				CCB	11/30/20 03:57:01 pm	0.020	266	5.00			N/A
	Replicates	285.5	251.3	251.3	275.3						
CCV				CCV	11/30/20 03:58:49 pm	2.180	37591	0.17			109.02
	Replicates	37670.2	37608.6	37564.1	37522.1						
CRDL				CRDL	11/30/20 04:00:37 pm	0.236	3989	0.46			117.76
	Replicates	4007.4	3984.7	3999.7	3964.7						
CCB				CCB	11/30/20 04:02:24 pm	0.016	200	6.26			N/A
	Replicates	177.5	200.3	220.3	200.3						
20111964-02B				UNK	11/30/20 04:04:11 pm	0.015	187	7.96			N/A
	Replicates	210.8	189.6	187.6	159.1						
20111964-02BMS				UNK	11/30/20 04:05:57 pm	1.520	26098	0.10			N/A
	Replicates	26068.9	26082.7	26127.7	26113.2						
20111964-02BMSD				UNK	11/30/20 04:07:44 pm	1.540	26548	0.63			N/A
	Replicates	26785.3	26387.6	26525.1	26495.6						
20111988-01A				UNK	11/30/20 04:09:30 pm	0.302	5136	0.42			N/A
	Replicates	5161.5	5147.2	5114.7	5121.2						
20112060-01J				UNK	11/30/20 04:11:16 pm	0.014	161	4.84			N/A
	Replicates	151.5	177.5	154.5	159.5						
20112105-01A				UNK	11/30/20 04:13:01 pm	0.535	9170	20.19			N/A
	Replicates	8443.3	7989.1	11957.1	8291.6						

Sample Name					Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
20112105-02A					UNK	11/30/20 04:14:47 pm	0.029	412	2.88			N/A
	Replicates	400.9	421.3	398.8	426.8							
20112105-03A					UNK	11/30/20 04:16:32 pm	0.017	206	3.16			N/A
	Replicates	216.7	202.1	210.1	196.1							
20112105-03ADUP					UNK	11/30/20 04:18:18 pm	0.015	174	12.66			N/A
	Replicates	177.5	218.5	148.5	152.5							
MBLK-168415					UNK	11/30/20 04:20:04 pm	0.038	571	116.08			N/A
	Replicates	1639.2	-123.3	476.2	290.7							
CCV					CCV	11/30/20 04:21:52 pm	2.210	38170	0.25		Q	110.70
	Replicates	38287.3	38203.8	38128.3	38061.8							
CCV					CCV	11/30/20 04:23:41 pm	2.140	36841	0.53			106.85
	Replicates	36605.6	36782.3	36911.8	37064.3							
CRDL					CRDL	11/30/20 04:25:29 pm	0.235	3977	0.65			117.40
	Replicates	3985.8	3964.8	3947.3	4008.3							
CCB					CCB	11/30/20 04:27:16 pm	0.018	228	3.23			N/A
	Replicates	230.2	240.5	223.0	217.5							
LCS-168415					UNK	11/30/20 04:29:02 pm	1.580	27159	0.12			N/A
	Replicates	27155.8	27124.1	27157.1	27200.6							
20102094-19A					UNK	11/30/20 04:30:48 pm	0.154	2586	0.79			N/A
	Replicates	2577.6	2617.4	2574.4	2574.9							
20111351-01A					UNK	11/30/20 04:32:35 pm	0.008	60	394.13			N/A
	Replicates	-332.0	-191.8	-111.8	875.7							
20111581-05C					UNK	11/30/20 04:34:21 pm	0.345	5881	2.61			N/A
	Replicates	5677.5	5853.0	5951.5	6040.5							
20111581-06C					UNK	11/30/20 04:36:08 pm	0.361	6152	0.56			N/A
	Replicates	6113.9	6131.5	6178.0	6186.0							
20111581-07C					UNK	11/30/20 04:37:55 pm	0.608	10423	0.21			N/A
	Replicates	10440.0	10428.4	10431.9	10391.4							
20111581-08C					UNK	11/30/20 04:39:40 pm	0.051	792	1.99			N/A
	Replicates	767.5	794.5	808.5	797.0							
20111636-01B					UNK	11/30/20 04:41:26 pm	0.092	1519	0.72			N/A
	Replicates	1525.0	1530.5	1514.0	1504.5							
20111636-02B					UNK	11/30/20 04:43:11 pm	0.095	1553	1.59			N/A
	Replicates	1557.8	1518.3	1556.8	1580.8							
20111636-02BMS					UNK	11/30/20 04:44:57 pm	1.610	27694	0.34			N/A
	Replicates	27584.8	27662.4	27720.4	27806.9							
CCV					CCV	11/30/20 04:46:44 pm	2.100	36235	0.16			105.10
	Replicates	36219.5	36185.3	36214.3	36320.3							

Sample Name	Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual Flags	% Recovery
CRDL	CRDL	11/30/20 04:48:32 pm	0.234	3971	0.09		117.24
Replicates	3967.1	3969.2	3975.2	3972.2			
CCB	CCB	11/30/20 04:50:20 pm	0.019	246	6.85		N/A
Replicates	229.8	226.8	274.8	251.8			
20111636-02BMSD	UNK	11/30/20 04:52:05 pm	1.660	28655	0.27		N/A
Replicates	28577.4	28604.9	28694.9	28744.9			
20111636-03B	UNK	11/30/20 04:53:51 pm	0.092	1517	1.61		N/A
Replicates	1520.6	1548.3	1485.8	1513.8			
20111733-02A	UNK	11/30/20 04:55:37 pm	0.015	176	9.54		N/A
Replicates	208.8	173.0	174.0	149.5			
20111764-02A	UNK	11/30/20 04:57:23 pm	0.014	169	3.63		N/A
Replicates	160.6	175.6	178.1	162.1			
20111764-04A	UNK	11/30/20 04:59:10 pm	0.012	124	6.19		N/A
Replicates	117.5	114.2	121.2	142.2			
20111764-06A	UNK	11/30/20 05:00:56 pm	0.012	121	18.02		N/A
Replicates	151.1	150.1	106.6	76.6			
20111764-07A	UNK	11/30/20 05:02:43 pm	0.596	10214	0.18		N/A
Replicates	10217.7	10187.2	10220.2	10229.7			
20111781-03A	UNK	11/30/20 05:04:30 pm	0.011	116	6.37		N/A
Replicates	132.2	104.6	108.6	120.6			
20111800-01B	UNK	11/30/20 05:06:15 pm	0.016	189	9.12		N/A
Replicates	208.9	210.0	175.5	161.0			
20111800-02B	UNK	11/30/20 05:08:01 pm	0.022	306	4.80		N/A
Replicates	286.8	305.3	331.3	301.3			
CCV	CCV	11/30/20 05:09:49 pm	2.050	35332	0.13		102.49
Replicates	35398.5	35324.8	35301.3	35302.3			
CRDL	CRDL	11/30/20 05:11:37 pm	0.232	3923	0.37		115.86
Replicates	3924.0	3932.6	3902.1	3934.6			
CCB	CCB	11/30/20 05:13:24 pm	0.019	254	2.86		N/A
Replicates	267.5	244.8	252.3	251.8			
20111800-03B	UNK	11/30/20 05:15:10 pm	0.088	1437	0.34		N/A
Replicates	1429.7	1437.1	1438.6	1442.1			
20111800-04B	UNK	11/30/20 05:16:56 pm	0.038	570	28.09		N/A
Replicates	789.2	400.0	440.5	648.5			
20112050-01A	UNK	11/30/20 05:18:41 pm	0.012	133	2.29		N/A
Replicates	132.5	131.2	128.2	139.7			
MBLK-168422	UNK	11/30/20 05:20:27 pm	0.012	121	9.31		N/A
Replicates	105.3	134.0	140.5	105.0			

Sample Name					Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
LCS-168422					UNK	11/30/20 05:22:13 pm	1.570	27040	0.21			N/A
Replicates	27000.6	26983.6	27073.6	27103.6								
20111636-04B					UNK	11/30/20 05:24:00 pm	0.107	1772	1.04			N/A
Replicates	1780.9	1744.9	1772.4	1789.4								
20111636-04BMS					UNK	11/30/20 05:25:46 pm	1.540	26505	0.17			N/A
Replicates	26471.9	26480.0	26497.0	26570.5								
20111636-04BMSD					UNK	11/30/20 05:27:32 pm	1.540	26521	0.03			N/A
Replicates	26521.2	26528.8	26508.8	26524.8								
20111760-02A					UNK	11/30/20 05:29:19 pm	0.010	93	3.74			N/A
Replicates	97.2	83.1	95.6	94.6								
20111760-04A					UNK	11/30/20 05:31:06 pm	0.013	148	8.00			N/A
Replicates	133.1	134.7	172.2	150.7								
CCV					CCV	11/30/20 05:32:53 pm	2.100	36163	0.21			104.89
Replicates	36262.0	36169.7	36143.2	36076.2								
CRDL					CRDL	11/30/20 05:34:41 pm	0.236	4005	0.78			118.22
Replicates	3973.2	4049.1	3998.1	3999.6								
CCB					CCB	11/30/20 05:36:29 pm	0.019	246	4.76			N/A
Replicates	241.6	265.3	228.3	250.3								
20111760-06A					UNK	11/30/20 05:38:15 pm	0.012	121	4.81			N/A
Replicates	119.0	135.4	117.4	113.4								
20111760-08A					UNK	11/30/20 05:40:01 pm	0.011	107	13.79			N/A
Replicates	120.7	83.4	135.9	86.9								
20111760-10A					UNK	11/30/20 05:41:47 pm	0.013	150	1.29			N/A
Replicates	150.8	149.0	154.0	147.0								
20111823-01A					UNK	11/30/20 05:43:33 pm	0.022	298	128.90			N/A
Replicates	-274.8	395.6	174.1	896.6								
20111824-02A					UNK	11/30/20 05:45:19 pm	0.012	130	5.28			N/A
Replicates	114.6	130.4	133.4	140.9								
20111826-01A					UNK	11/30/20 05:47:05 pm	0.046	719	111.57			N/A
Replicates	477.3	-367.2	1745.8	1020.3								
20111827-02A					UNK	11/30/20 05:48:51 pm	0.008	58	535.18			N/A
Replicates	432.0	427.1	417.1	-1045.9								
20111898-01C					UNK	11/30/20 05:50:37 pm	0.011	102	56.38			N/A
Replicates	189.5	137.2	127.7	-46.3								
20111898-02C					UNK	11/30/20 05:52:23 pm	0.015	188	5.15			N/A
Replicates	179.7	200.6	199.1	173.1								
20111983-01A					UNK	11/30/20 05:54:10 pm	0.011	108	6.37			N/A
Replicates	99.7	106.9	100.4	125.4								

Sample Name					Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
CCV					CCV	11/30/20 05:55:57 pm	2.100	36225	0.24			105.07
	Replicates	36353.5	36197.2	36182.7	36166.2							
CRDL					CRDL	11/30/20 05:57:45 pm	0.238	4039	1.29			119.21
	Replicates	4074.2	4052.6	4069.1	3960.6							
CCB					CCB	11/30/20 05:59:33 pm	0.019	251	9.37			N/A
	Replicates	246.6	262.1	283.6	210.1							
20111984-01A					UNK	11/30/20 06:01:19 pm	0.015	178	8.38			N/A
	Replicates	203.8	150.9	176.9	178.9							
20111984-02A					UNK	11/30/20 06:03:06 pm	0.012	127	9.55			N/A
	Replicates	126.9	153.0	123.5	105.0							
20111984-03A					UNK	11/30/20 06:04:52 pm	0.012	131	10.23			N/A
	Replicates	123.9	161.9	112.9	123.4							
20111984-04A					UNK	11/30/20 06:06:38 pm	0.013	154	4.93			N/A
	Replicates	158.6	166.6	150.6	139.6							
20111984-05A					UNK	11/30/20 06:08:24 pm	0.014	154	7.64			N/A
	Replicates	146.2	167.1	171.1	133.1							
20111984-07A					UNK	11/30/20 06:10:10 pm	0.013	148	7.72			N/A
	Replicates	155.2	123.4	164.4	149.9							
20112165-01A					UNK	11/30/20 06:11:56 pm	0.012	134	7.17			N/A
	Replicates	156.0	122.1	132.1	125.1							
MBLK-168423					UNK	11/30/20 06:13:42 pm	0.013	137	3.33			N/A
	Replicates	128.3	132.9	140.9	143.9							
LCS-168423					UNK	11/30/20 06:15:28 pm	1.570	27004	0.13			N/A
	Replicates	26965.2	26992.2	27011.7	27046.7							
20111913-01C					UNK	11/30/20 06:17:14 pm	0.015	188	6.04			N/A
	Replicates	196.5	197.0	193.5	163.5							
CCV					CCV	11/30/20 06:19:02 pm	2.090	35960	0.23			104.30
	Replicates	36075.6	35961.1	35922.6	35878.6							
CRDL					CRDL	11/30/20 06:20:50 pm	0.235	3974	0.48			117.33
	Replicates	3967.3	4003.1	3960.1	3966.6							
CCB					CCB	11/30/20 06:22:37 pm	0.016	193	4.69			N/A
	Replicates	192.8	198.8	205.8	175.8							
20111913-02C					UNK	11/30/20 06:24:24 pm	0.012	127	3.25			N/A
	Replicates	132.9	132.4	122.4	119.9							
20111913-03C					UNK	11/30/20 06:26:10 pm	0.015	170	6.37			N/A
	Replicates	156.7	155.7	180.7	186.2							
20111913-04C					UNK	11/30/20 06:27:57 pm	0.014	159	9.25			N/A
	Replicates	140.9	163.8	143.8	188.8							

Sample Name	Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual Flags	% Recovery
20111913-05C	UNK	11/30/20 06:29:44 pm	0.016	199	5.81		N/A
Replicates	187.8	188.5	222.5	198.0			
20111965-02A	UNK	11/30/20 06:31:30 pm	0.013	148	14.41		N/A
Replicates	130.6	109.8	171.3	178.3			
20111966-02A	UNK	11/30/20 06:33:16 pm	0.013	140	7.68		N/A
Replicates	133.2	164.7	131.7	128.7			
20111992-02A	UNK	11/30/20 06:35:02 pm	0.012	132	13.60		N/A
Replicates	156.4	110.2	158.2	104.7			
20111992-04A	UNK	11/30/20 06:36:49 pm	0.013	142	8.89		N/A
Replicates	171.1	129.6	136.1	130.6			
20111992-10A	UNK	11/30/20 06:38:35 pm	0.013	150	8.57		N/A
Replicates	137.6	153.9	131.4	175.4			
20111992-12A	UNK	11/30/20 06:40:21 pm	0.012	135	4.11		N/A
Replicates	143.1	134.3	139.3	122.8			
CCV	CCV	11/30/20 06:42:09 pm	2.090	35980	0.12		104.36
Replicates	36020.3	36014.1	35929.6	35956.1			
CRDL	CRDL	11/30/20 06:43:57 pm	0.234	3963	0.96		116.99
Replicates	4006.8	3978.8	3946.8	3917.8			
CCB	CCB	11/30/20 06:45:44 pm	0.020	262	8.22		N/A
Replicates	256.1	280.1	224.6	286.6			
20111992-12AMS	UNK	11/30/20 06:47:31 pm	1.510	26052	0.11		N/A
Replicates	26013.9	26042.9	26074.9	26077.4			
20111992-12AMSD	UNK	11/30/20 06:49:17 pm	1.410	24333	0.29		N/A
Replicates	24244.4	24321.4	24350.9	24415.9			
20111992-14A	UNK	11/30/20 06:51:03 pm	0.011	119	9.20		N/A
Replicates	98.5	109.7	140.2	125.7			
20111992-16A	UNK	11/30/20 06:52:50 pm	0.013	154	6.38		N/A
Replicates	137.0	154.2	150.7	173.2			
20111992-19A	UNK	11/30/20 06:54:36 pm	0.011	106	14.99		N/A
Replicates	81.1	145.6	100.1	96.1			
20112033-01A	UNK	11/30/20 06:56:23 pm	0.010	97	7.43		N/A
Replicates	93.8	100.1	80.6	112.1			
20112150-01A	UNK	11/30/20 06:58:09 pm	0.012	134	18.46		N/A
Replicates	182.9	138.7	128.2	86.7			
20112162-02A	UNK	11/30/20 06:59:56 pm	0.013	139	6.93		N/A
Replicates	136.0	118.5	146.0	153.5			
20112226-02C	UNK	11/30/20 07:01:42 pm	0.013	137	10.30		N/A
Replicates	145.7	106.4	135.9	158.9			

Sample Name				Type	Date/Time	Conc (ppt)	µAbs	%RSD	Residual	Flags	% Recovery
20112226-04A				UNK	11/30/20 07:03:28 pm	0.013	144	10.45			N/A
	Replicates	138.1	146.2	173.7	117.2						
CCV				CCV	11/30/20 07:05:16 pm	2.090	35951	0.10			104.28
	Replicates	36003.0	35937.2	35927.7	35934.2						
CRDL				CRDL	11/30/20 07:07:04 pm	0.250	4239	11.04			125.00
	Replicates	4952.9	3962.1	4028.6	4013.1						
CCB				CCB	11/30/20 07:08:51 pm	0.018	237	8.63			N/A
	Replicates	229.6	208.6	274.1	235.1						
20112292-01A				UNK	11/30/20 07:10:37 pm	0.004	-17	389.33			N/A
	Replicates	466.7	529.7	-1311.8	246.7						

Sample Prep and Screen Data

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PREP BATCH REPORT

Batch ID: **168379** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 2:02:56 PM** End Date: **11/29/2020 3:04:23 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111754-22A	Tclp Extract			2.5	0	27.5	11
20111754-22AMS	Tclp Extract			2.5	0	27.5	11
20111754-22AMS	Tclp Extract			2.5	0	27.5	11
20111754-24A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111764-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111764-04A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111764-06A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111823-01A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111824-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111826-01A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111827-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
LCS-168379				25	0	27.5	1.1
MBLK-168379				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168379** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 2:02:56 PM** End Date: **11/29/2020 3:04:23 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168407** Prep Code: **MP_6020_W**

Start Date: **11/30/2020 10:06:14 AM** End Date: **11/30/2020 1:11:27 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	50 mL
FinSampVol:	50 mL
OriginalFac:	1
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111764-07A	Water			50	0	50	1
20111837-01B	Groundwater			50	0	50	1
20111837-02B	Wastewater			50	0	50	1
20111837-02BMS	Wastewater			50	0	50	1
20111837-02BMS	Wastewater			50	0	50	1
20111882-01A	Tclp Extract	<2		5	0	50	10
11/29 @ 1:09 PM							
20111913-01C	Water			5	0	50	10
Limited Sample Volume							
20111913-02C	Water			50	0	50	1
20111913-03C	Water			50	0	50	1
20111913-04C	Water			50	0	50	1
20111913-05C	Water			50	0	50	1
20112150-01A	Tclp Extract	<2		5	0	50	10
11/30 @ 11:20 AM							
20112165-01A	Tclp Extract	<2		5	0	50	10
11/30 @ 11:20 AM							
20112226-02C	Tclp Extract	<2		5	0	50	10
11/30 @ 11:20 AM							
20112226-04A	Tclp Extract	<2		5	0	50	10
11/30 @ 11:20 AM							
20112292-01A	Tclp Extract	<2		5	0	50	10
11/30 @ 11:20 AM							
20112310-01A	Water			50	0	50	1
20112310-02A	Water			50	0	50	1
20112310-03A	Water			50	0	50	1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3214-6-2/U:1461-115-14; HNO3:3214-15-4; HCl: 3214-4-6;Pipette: ME-31; Pipette tips:12718309, 5mL Pipette tips:2BO423T, Digestion cup lot #: 2008043*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168407** Prep Code: **MP_6020_W**

Start Date: **11/30/2020 10:06:14 AM** End Date: **11/30/2020 1:11:27 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	50 mL
FinSampVol:	50 mL
OriginalFac:	1
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20112310-04A	Water			50	0	50	1
LCS-168407				50	0	50	1
MBLK-168407				50	0	50	1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3214-6-2/U:1461-115-14; HNO3:3214-15-4; HCl: 3214-4-6;Pipette: ME-31; Pipette tips:12718309, 5mL Pipette tips:2BO423T, Digestion cup lot #: 2008043*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168407** Prep Code: **MP_6020_W**

Start Date: **11/30/2020 10:06:14 AM** End Date: **11/30/2020 1:11:27 PM**

Technician: **Kate Achatz**

InitSamp Wt/Vol:	50 mL
FinSampVol:	50 mL
OriginalFac:	1
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3214-6-2/U:1461-115-14; HNO3:3214-15-4; HCl: 3214-4-6;Pipette: ME-31; Pipette tips:12718309, 5mL Pipette tips:2BO423T, Digestion cup lot #: 2008043*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168415** Prep Code: **HGPR_7470_W**

Start Date: **11/30/2020 11:08:36 AM** End Date: **11/30/2020 1:10:54 PM**

Technician: **Mark Cistaro**

InitSamp Wt/Vol: 10 mL
FinSampVol: 15 mL
OriginalFac: 1.5
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20102094-19A	Aqueous			10	0	15	1.5
	The prep HoldTime was exceeded by 44137 days.						
20111351-01A	Tclp Extract			1	0	15	15
	11/29 @ 1:09 PM						
20111581-05C	Groundwater			10	0	15	1.5
20111581-06C	Groundwater			10	0	15	1.5
20111581-07C	Groundwater			10	0	15	1.5
20111581-08C	Groundwater			10	0	15	1.5
20111636-01B	Water			10	0	15	1.5
20111636-02B	Water			10	0	15	1.5
20111636-02BMS	Water			10	0	15	1.5
20111636-02BMS	Water			10	0	15	1.5
20111636-03B	Water			10	0	15	1.5
20111733-02A	Tclp Extract			1	0	15	15
	11/29 @ 1:09 PM						
20111764-02A	Tclp Extract			1	0	15	15
	11/29 @ 1:09 PM						
20111764-04A	Tclp Extract			1	0	15	15
	11/29 @ 1:09 PM						
20111764-06A	Tclp Extract			1	0	15	15
	11/29 @ 1:09 PM						
20111764-07A	Water			10	0	15	1.5
20111781-03A	Tclp Extract			1	0	15	15
	11/29 @ 1:09 PM						
20111800-01B	Liquid			10	0	15	1.5
20111800-02B	Liquid			10	0	15	1.5

Notes: *NOTED. BAL:18 // BLOCK A 95 degrees C // Digestion Cups: 2008043 // Auto Sampler Tubes: 297109 // Boiling Chips: 26397-103/3081-164-6 LCS Spike: 3236-9-8// MS/D Spike: 3236-9-9*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168415** Prep Code: **HGPR_7470_W**

Start Date: **11/30/2020 11:08:36 AM** End Date: **11/30/2020 1:10:54 PM**

Technician: **Mark Cistaro**

InitSamp Wt/Vol: 10 mL
FinSampVol: 15 mL
OriginalFac: 1.5
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111800-03B	Liquid			10	0	15	1.5
20111800-04B	Liquid			10	0	15	1.5
20112050-01A	Solid			1	0	15	15
11/29 @ 1:09 PM							
LCS-168415				10	0	15	1.5
MBLK-168415				10	0	15	1.5

Notes: *NOTED. BAL:18 // BLOCK A 95 degrees C // Digestion Cups: 2008043 // Auto Sampler Tubes: 297109 // Boiling Chips: 26397-103/3081-164-6 LCS Spike: 3236-9-8// MS/D Spike: 3236-9-9*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168415** Prep Code: **HGPR_7470_W**

Start Date: **11/30/2020 11:08:36 AM** End Date: **11/30/2020 1:10:54 PM**

Technician: **Mark Cistaro**

InitSamp Wt/Vol:	10 mL
FinSampVol:	15 mL
OriginalFac:	1.5
PrepUnitFac:	

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes: *NOTED. BAL:18 // BLOCK A 95 degrees C //*
Digestion Cups: 2008043 // Auto Sampler Tubes:
297109 // Boiling Chips: 26397-103/3081-164-6
LCS Spike: 3236-9-8// MS/D Spike: 3236-9-9

General Chemistry

ALS Enviromental - Holland Laboratory
3352 128th Avenue, Holland, MI 49424
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www.alsglobal.com

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:15
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:E2-3:S000010	**Basis:**	Wet
Lab Code:	20111764-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Flashpoint/Ignitability	SW1010AMOD	**>200**	°F	50.0	1	12/02/20 15:45	NA	
pH	SW9045D	**8.34**	s.u.	0.100	1	11/21/20 12:15	11/20/20 19:30	
Temperature	SW9045D	**20.1**	°C	0.100	1	11/21/20 12:15	11/20/20 19:30	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:30
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:C5-3:S00010	**Basis:**	Wet
Lab Code:	20111764-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Flashpoint/Ignitability	SW1010AMOD	**>200**	°F	50.0	1	12/02/20 15:45	NA	
pH	SW9045D	**7.65**	s.u.	0.100	1	11/21/20 12:15	11/20/20 19:30	
Temperature	SW9045D	**20.2**	°C	0.100	1	11/21/20 12:15	11/20/20 19:30	

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111764
Project:	IDA001/IDA001	**Date Collected:**	11/17/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/19/20 09:30
Sample Name:	IDA001:B8-3:S00010	**Basis:**	Wet
Lab Code:	20111764-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Flashpoint/Ignitability	SW1010AMOD	**>200**	°F	50.0	1	12/02/20 15:45	NA	
pH	SW9045D	**7.57**	s.u.	0.100	1	11/21/20 12:15	11/20/20 19:30	
Temperature	SW9045D	**20.0**	°C	0.100	1	11/21/20 12:15	11/20/20 19:30	

ALS Environmental

Pensky-Marten Flash Point

Analyst: RM
Date / Time: 12/2/20 3:45PM
Batch ID: WETCHEM_201202V
p-Xylene ID: **3081-55-12**
Unit #1 Therm ID: 701315
Unit #2 Therm ID: 1123985
Unit #3 Therm ID:

Barometric Pressure (mmHg):		747	DO Probe S/N:		20203939039868				
Sample ID	**Bottle no.**	**Sample Volume**	**Unit #:**	**Stir Speed**	**Start Temp.**	**End Temp.**	**Corrected Value**	**Analytical Method**	**Comments**
		(mL)	***(1, 2, 3)***	***(slow/fast)***	***(^{0}F)***	***(^{0}F)***	***(^{0}F)***	***ASTM D93 / SW1010A***	
LCS (p-xylene)		70	2	SLOW	68	82	83	SW1010A	
20112226-01C	1	70	2	SLOW	51	100	101	SW1010A	
20112226-01C DUP	1	70	2	SLOW	60	105	106	SW1010A	
20112124-01A	1	70	2	SLOW	54	>200	#VALUE!	SW1010A	
20112124-02A	1	70	2	SLOW	59	<59	#VALUE!	SW1010A	Insufficent sample to run in duplicate
20112124-05A	1	70	2	SLOW	48	>200	#VALUE!	SW1010A	
20111764-01A	4	70	1	NA	58	>200	#VALUE!	SW1010A	MOD
20111764-03A	1	70	1	NA	58	>200	#VALUE!	SW1010A	MOD
20111764-05A	1	70	1	NA	58	>200	#VALUE!	SW1010A	MOD
							1		
							1		
LCS (p-xylene)							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

Process LCS every 10 samples, DUP every 20.
Acceptance criteria: 79^0 F to 83^0 F

File Name: 201202A

ALS Environmental

pH #5

Parameter: pH | Instrument: Mettler SN: B337782726 | Probe: LE438 pH

Analyst: QN | Date: 11/21/2020 | Time: 12:15PM

Calibration

	Buffer	ATC		BPL Identifier	Slope*
pH 1.68 Buffer	1.68	Temp (°C)	19.7	3081-182-3	
pH 4 Buffer	4	Temp (°C)	19.7	3081-236-7	98%
pH 10 Buffer	10.06	Temp (°C)	19.8	3081-247-3	
pH 7 buffer	7.04	Temp (°C)	19.8	3081-247-2	
LCS:	3.94 19.8C	True value = 4.00		3238-29-5	

WO #	Sample #	Temp °C	Reading (su) Sample	Reading (su) Duplicate	WO #	Sample #	Temp °C	Reading (su) Sample	Reading (su) Duplicate
20111710	01B	19.9	7.99		20111632	02A	5.6	7.47	7.45
20111764	01A	20.1	8.34		20111632	02A DUP	5.6	7.44	7.44
20111764	01A DUP	20	8.28						
20111764	03A	20.2	7.65						
20111764	05A	20	7.57						
20111865	01B	20	9.21						
20111867	01A	20	6.84						

Comments:

168126 WETCHEM_201121C WETCHEM_201121D

Reviewed By:

Reviewed On:

Slope must verified or re-calibrated every 20 samples

Parameter: pH | Instrument: Mettler SN: B337782726 | Probe: LE438 pH

Analyst: | Date: | Time:

Calibration

	Buffer	ATC		BPL Identifier	Slope*
pH 1.68 Buffer		Temp (°C)			
pH 4 Buffer		Temp (°C)			
pH 10 Buffer		Temp (°C)			
pH 7 buffer		Temp (°C)			
LCS:		True value = 4.00			

WO #	Sample #	Temp °C	Reading (su) Sample	Reading (su) Duplicate	WO #	Sample #	Temp °C	Reading (su) Sample	Reading (su) Duplicate

Comments:

Reviewed By:

Reviewed On:

Slope: **Must fall between 95 - 105**
Check Soln: **Must fall between 6.95 - 7.05**

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168126** Prep Code: **1:1S_PH_PREP**

Start Date: **11/20/2020 6:29:23 PM** End Date: **11/20/2020 7:30:19 PM**

Technician: **Quoc-Thang Nguyen**

InitSamp Wt/Vol:	20 g
FinSampVol:	20 mL
OriginalFac:	1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111710-01B	Soil		20	0	0	20	1
20111764-01A	Soil		20	0	0	20	1
20111764-01A DU			20	0	0	20	1
20111764-03A	Soil		20	0	0	20	1
20111764-05A	Soil		20	0	0	20	1
20111865-01B	Soil		20	0	0	20	1
20111867-01A	Solid		20	0	0	20	1
The prep HoldTime was exceeded by 2 days.							
LCS-168126			20	0	0	20	1
MBLK-168126			20	0	0	20	1

Notes:

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168126** Prep Code: **1:1S_PH_PREP**

Start Date: **11/20/2020 6:29:23 PM** End Date: **11/20/2020 7:30:19 PM**

Technician: **Quoc-Thang Nguyen**

InitSamp Wt/Vol:	20 g
FinSampVol:	20 mL
OriginalFac:	1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor

Prep Analytics

Notes:

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/24/2020 SAMPLE ID: 20111764-024 ANALYST: AL

ANALYSIS REQUIRED: TCLP ZHE, SV, MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 7.38 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.97 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-10
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.93
EXTRACTION FLUID USED FOR VOLATILES (BPL): 3236-9-1
and pH OF EXTRACTION FLUID USED FOR VOLATILES: ~~Sol 1~~ Sol 1 4.98

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): 25.4 g NON-VOLATILES: 100.1 g
BALANCE ID: 11 BALANCE ID: 11
EXTRACTOR ID #: Z29 EXTRACTOR ID #: 031838
FINAL Pressure: 53 psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): 500 mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/24/2020 1910 FINISH: 11/25/2020 1222
RPM: 30
EXTRACTION pH AT FINISH: 5.41 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.14 LOW: 22.49

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: ZHE not tumbled 11/24
ZHE tumbled on 11/28

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/24/2020 SAMPLE ID: 20111764-044 ANALYST: AL

ANALYSIS REQUIRED: TCLP ZHE, SU, MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 8.48 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 5.066 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-6-1
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 2 2.93
EXTRACTION FLUID USED FOR VOLATILES (BPL): 3236-8-10
and pH OF EXTRACTION FLUID USED FOR VOLATILES: Sol 1 4.93

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE):	25.0 g	NON-VOLATILES:	100.3 g
BALANCE ID:	11	BALANCE ID:	11
EXTRACTOR ID #:	Z33	EXTRACTOR ID #:	11202020 60
FINAL Pressure:	50 psi		

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE):	500 mL	NON-VOLATILES:	2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/24/2020 1910 FINISH: 11/25/2020 1222
RPM: 30
EXTRACTION pH AT FINISH: 5.87 PRESERVATION BPL: —
pH Meter ID: pH TCLP THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.14 LOW: 22.49

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/24/2020 SAMPLE ID: 20111764-064 ANALYST: AL

ANALYSIS REQUIRED: TCLP ZHE, SU, MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.33 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 5.79 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-6-1

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 2 4.93

EXTRACTION FLUID USED FOR VOLATILES (BPL): 3236-8-10

and pH OF EXTRACTION FLUID USED FOR VOLATILES: Sol 1 4.93

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): 25.0 g NON-VOLATILES: 100.3 g

BALANCE ID: 11 BALANCE ID: 11

EXTRACTOR ID #: Z34 EXTRACTOR ID #: m31838

FINAL Pressure: 50 psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): 500 mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/24/2020 1910 FINISH: 11/25/2020 1222

RPM: 30

EXTRACTION pH AT FINISH: 5.97 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.14 LOW: 22.49

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Charge

Note: One Blank extraction must be processed for every 20 sample extractions.

03-Dec-2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Re: **IDA001** Work Order: **20111764**

Dear Ray,

ALS Environmental received 7 samples on 19-Nov-2020 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 32.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: OH: CL 103

ALS Group, USA

Date: 03-Dec-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111764**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111764-01	IDA001:E2-3:S000010	Soil	E2-3	11/17/2020 10:15	11/19/2020 09:30	☐
20111764-02	IDA001:E2-3:S00010	Tclp Extract	E2-3	11/17/2020 10:15	11/19/2020 09:30	☐
20111764-03	IDA001:C5-3:S00010	Soil	C5-3	11/17/2020 10:30	11/19/2020 09:30	☐
20111764-04	IDA001:C5-3:S00010	Tclp Extract	C5-3	11/17/2020 10:30	11/19/2020 09:30	☐
20111764-05	IDA001:B8-3:S00010	Soil	B8-3	11/17/2020 10:50	11/19/2020 09:30	☐
20111764-06	IDA001:B8-3:S00010	Tclp Extract	B8-3	11/17/2020 10:50	11/19/2020 09:30	☐
20111764-07	IDA001:DECONWATER:W111720	Water	DECONWATER	11/17/2020 11:41	11/19/2020 09:30	☐

Client: Hull & Associates
Project: IDA001
WorkOrder: **20111764**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
°C	Degrees Celcius
°F	Degrees Fahrenheit
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter
s.u.	Standard Units

Client: Hull & Associates
Project: IDA001
Work Order: 20111764

Case Narrative

Samples for the above noted Work Order were received on 11/19/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
No other deviations or anomalies were noted.

Extractable Organics:
No other deviations or anomalies were noted.

Metals:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

ALS Group, USA

Date: *03-Dec-20*

Client: Hull & Associates
Project: IDA001
Work Order: 20111764
Sample ID: IDA001:E2-3:S000010
Lab ID: 20111764-01
Collection Date: 11/17/2020 10:15 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor		Date Analyzed
MODIFIED FLASHPOINT ANALYSIS			**SW1010AMOD**				Analyst: **RZM**
Flashpoint/Ignitability	*>200*		50.0	°F	1		12/2/2020 03:45 PM
SOIL PH MEASURED IN WATER AT NOTED TEMP.			**SW9045D**		Prep: SW9045D	11/20/20 19:30	Analyst: **QTN**
pH	**8.34**		**0.100**	**s.u.**	1		11/21/2020 12:15 PM
Temperature	**20.1**		**0.100**	**°C**	1		11/21/2020 12:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:E2-3:S00010 **Lab ID:** 20111764-02
Collection Date: 11/17/2020 10:15 AM **Matrix:** TCLP EXTRACT

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY BY CVAA			**SW7470A**		Prep: SW7470 11/30/20 13:10	Analyst: **MAC**
Mercury	U		0.0020	mg/L	1	11/30/2020 04:57 PM
TCLP METALS ANALYSIS BY ICP			**SW6010D**		Prep: SW3015A 11/29/20 15:04	Analyst: **ABL**
Arsenic	U		0.050	mg/L	1	12/1/2020 02:25 AM
Barium	**0.65**		**0.050**	**mg/L**	1	12/1/2020 02:25 AM
Cadmium	**0.10**		**0.10**	**mg/L**	1	12/1/2020 02:25 AM
Chromium	U		0.10	mg/L	1	12/1/2020 02:25 AM
Lead	**29**	*	**0.50**	**mg/L**	10	12/1/2020 03:19 PM
Selenium	U		0.10	mg/L	1	12/1/2020 02:25 AM
Silver	U		0.050	mg/L	1	12/1/2020 02:25 AM
TCLP SEMI-VOLATILE ORGANICS			**SW8270D**		Prep: SW3510 11/27/20 12:49	Analyst: **EE**
1,4-Dichlorobenzene	U		100	µg/L	1	12/1/2020 01:20 AM
2,4,5-Trichlorophenol	U		100	µg/L	1	12/1/2020 01:20 AM
2,4,6-Trichlorophenol	U		100	µg/L	1	12/1/2020 01:20 AM
2,4-Dinitrotoluene	U		100	µg/L	1	12/1/2020 01:20 AM
Hexachloro-1,3-butadiene	U		100	µg/L	1	12/1/2020 01:20 AM
Hexachlorobenzene	U		100	µg/L	1	12/1/2020 01:20 AM
Hexachloroethane	U		100	µg/L	1	12/1/2020 01:20 AM
m-Cresol	U		100	µg/L	1	12/1/2020 01:20 AM
Nitrobenzene	U		100	µg/L	1	12/1/2020 01:20 AM
o-Cresol	U		100	µg/L	1	12/1/2020 01:20 AM
p-Cresol	U		100	µg/L	1	12/1/2020 01:20 AM
Pentachlorophenol	U		100	µg/L	1	12/1/2020 01:20 AM
Pyridine	U		200	µg/L	1	12/1/2020 01:20 AM
Surr: 2,4,6-Tribromophenol	*52.3*		*27-83*	*%REC*	1	12/1/2020 01:20 AM
Surr: 2-Fluorobiphenyl	*47.2*		*26-79*	*%REC*	1	12/1/2020 01:20 AM
Surr: 2-Fluorophenol	*33.4*		*13-56*	*%REC*	1	12/1/2020 01:20 AM
Surr: 4-Terphenyl-d14	*71.1*		*43-106*	*%REC*	1	12/1/2020 01:20 AM
Surr: Nitrobenzene-d5	*45.6*		*29-80*	*%REC*	1	12/1/2020 01:20 AM
Surr: Phenol-d6	*23.0*		*10-35*	*%REC*	1	12/1/2020 01:20 AM
TCLP VOLATILE ORGANICS			**SW8260C**		Leachate: SW1311 / 11/30/20	Analyst: **BG**
1,1-Dichloroethene	U		20	µg/L	20	12/1/2020 11:00 PM
1,2-Dichloroethane	U		20	µg/L	20	12/1/2020 11:00 PM
2-Butanone	U		100	µg/L	20	12/1/2020 11:00 PM
Benzene	U		20	µg/L	20	12/1/2020 11:00 PM
Carbon tetrachloride	U		20	µg/L	20	12/1/2020 11:00 PM
Chlorobenzene	U		20	µg/L	20	12/1/2020 11:00 PM
Chloroform	U		20	µg/L	20	12/1/2020 11:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:E2-3:S00010 **Lab ID:** 20111764-02
Collection Date: 11/17/2020 10:15 AM **Matrix:** TCLP EXTRACT

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	U		20	µg/L	20	12/1/2020 11:00 PM
Trichloroethene	U		20	µg/L	20	12/1/2020 11:00 PM
Vinyl chloride	U		20	µg/L	20	12/1/2020 11:00 PM
Surr: 1,2-Dichloroethane-d4	*108*		*75-120*	*%REC*	20	12/1/2020 11:00 PM
Surr: 4-Bromofluorobenzene	*91.5*		*80-110*	*%REC*	20	12/1/2020 11:00 PM
Surr: Dibromofluoromethane	*105*		*85-115*	*%REC*	20	12/1/2020 11:00 PM
Surr: Toluene-d8	*103*		*85-110*	*%REC*	20	12/1/2020 11:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *03-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:C5-3:S00010
Collection Date: 11/17/2020 10:30 AM

Work Order: 20111764
Lab ID: 20111764-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor		Date Analyzed
MODIFIED FLASHPOINT ANALYSIS			**SW1010AMOD**				Analyst: **RZM**
Flashpoint/Ignitability	*>200*		50.0	°F	1		12/2/2020 03:45 PM
SOIL PH MEASURED IN WATER AT NOTED TEMP.			**SW9045D**		Prep: SW9045D	11/20/20 19:30	Analyst: **QTN**
pH	**7.65**		**0.100**	**s.u.**	1		11/21/2020 12:15 PM
Temperature	**20.2**		**0.100**	**°C**	1		11/21/2020 12:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:C5-3:S00010 **Lab ID:** 20111764-04
Collection Date: 11/17/2020 10:30 AM **Matrix:** TCLP EXTRACT

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY BY CVAA			**SW7470A**		Prep: SW7470 11/30/20 13:10	Analyst: **MAC**
Mercury	U		0.0020	mg/L	1	11/30/2020 04:59 PM
TCLP METALS ANALYSIS BY ICP			**SW6010D**		Prep: SW3015A 11/29/20 15:04	Analyst: **ABL**
Arsenic	U		0.050	mg/L	1	12/1/2020 02:30 AM
Barium	**1.4**		**0.050**	**mg/L**	1	12/1/2020 02:30 AM
Cadmium	U		0.10	mg/L	1	12/1/2020 02:30 AM
Chromium	U		0.10	mg/L	1	12/1/2020 02:30 AM
Lead	**0.098**		**0.050**	**mg/L**	1	12/1/2020 02:30 AM
Selenium	U		0.10	mg/L	1	12/1/2020 02:30 AM
Silver	U		0.050	mg/L	1	12/1/2020 02:30 AM
TCLP SEMI-VOLATILE ORGANICS			**SW8270D**		Prep: SW3510 11/27/20 12:49	Analyst: **EE**
1,4-Dichlorobenzene	U		100	µg/L	1	12/1/2020 01:43 AM
2,4,5-Trichlorophenol	U		100	µg/L	1	12/1/2020 01:43 AM
2,4,6-Trichlorophenol	U		100	µg/L	1	12/1/2020 01:43 AM
2,4-Dinitrotoluene	U		100	µg/L	1	12/1/2020 01:43 AM
Hexachloro-1,3-butadiene	U		100	µg/L	1	12/1/2020 01:43 AM
Hexachlorobenzene	U		100	µg/L	1	12/1/2020 01:43 AM
Hexachloroethane	U		100	µg/L	1	12/1/2020 01:43 AM
m-Cresol	U		100	µg/L	1	12/1/2020 01:43 AM
Nitrobenzene	U		100	µg/L	1	12/1/2020 01:43 AM
o-Cresol	U		100	µg/L	1	12/1/2020 01:43 AM
p-Cresol	U		100	µg/L	1	12/1/2020 01:43 AM
Pentachlorophenol	U		100	µg/L	1	12/1/2020 01:43 AM
Pyridine	U		200	µg/L	1	12/1/2020 01:43 AM
Surr: 2,4,6-Tribromophenol	*58.5*		*27-83*	*%REC*	1	12/1/2020 01:43 AM
Surr: 2-Fluorobiphenyl	*50.4*		*26-79*	*%REC*	1	12/1/2020 01:43 AM
Surr: 2-Fluorophenol	*39.3*		*13-56*	*%REC*	1	12/1/2020 01:43 AM
Surr: 4-Terphenyl-d14	*72.7*		*43-106*	*%REC*	1	12/1/2020 01:43 AM
Surr: Nitrobenzene-d5	*51.5*		*29-80*	*%REC*	1	12/1/2020 01:43 AM
Surr: Phenol-d6	*27.5*		*10-35*	*%REC*	1	12/1/2020 01:43 AM
TCLP VOLATILE ORGANICS			**SW8260C**		Leachate: SW1311 / 11/25/20 Prep: SW1311 11/25/20 12:36	Analyst: **JNS**
1,1-Dichloroethene	U		20	µg/L	20	11/28/2020 01:14 AM
1,2-Dichloroethane	U		20	µg/L	20	11/28/2020 01:14 AM
2-Butanone	U		100	µg/L	20	11/28/2020 01:14 AM
Benzene	**200**		**20**	**µg/L**	20	11/28/2020 01:14 AM
Carbon tetrachloride	U		20	µg/L	20	11/28/2020 01:14 AM
Chlorobenzene	U		20	µg/L	20	11/28/2020 01:14 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:C5-3:S00010 **Lab ID:** 20111764-04
Collection Date: 11/17/2020 10:30 AM **Matrix:** TCLP EXTRACT

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chloroform	U		20	µg/L	20	11/28/2020 01:14 AM
Tetrachloroethene	U		20	µg/L	20	11/28/2020 01:14 AM
Trichloroethene	U		20	µg/L	20	11/28/2020 01:14 AM
Vinyl chloride	U		20	µg/L	20	11/28/2020 01:14 AM
Surr: 1,2-Dichloroethane-d4	*103*		*75-120*	*%REC*	20	11/28/2020 01:14 AM
Surr: 4-Bromofluorobenzene	*101*		*80-110*	*%REC*	20	11/28/2020 01:14 AM
Surr: Dibromofluoromethane	*102*		*85-115*	*%REC*	20	11/28/2020 01:14 AM
Surr: Toluene-d8	*101*		*85-110*	*%REC*	20	11/28/2020 01:14 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:B8-3:S00010 **Lab ID:** 20111764-05
Collection Date: 11/17/2020 10:50 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor		Date Analyzed
MODIFIED FLASHPOINT ANALYSIS			**SW1010AMOD**				Analyst: **RZM**
Flashpoint/Ignitability	*>200*		50.0	°F	1		12/2/2020 03:45 PM
SOIL PH MEASURED IN WATER AT NOTED TEMP.			**SW9045D**		Prep: SW9045D	11/20/20 19:30	Analyst: **QTN**
pH	**7.57**		**0.100**	**s.u.**	1		11/21/2020 12:15 PM
Temperature	**20.0**		**0.100**	**°C**	1		11/21/2020 12:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:B8-3:S00010 **Lab ID:** 20111764-06
Collection Date: 11/17/2020 10:50 AM **Matrix:** TCLP EXTRACT

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY BY CVAA			**SW7470A**		Prep: SW7470 11/30/20 13:10	Analyst: **MAC**
Mercury	U		0.0020	mg/L	1	11/30/2020 05:00 PM
TCLP METALS ANALYSIS BY ICP			**SW6010D**		Prep: SW3015A 11/29/20 15:04	Analyst: **ABL**
Arsenic	U		0.050	mg/L	1	12/1/2020 02:36 AM
Barium	**1.4**		**0.050**	**mg/L**	1	12/1/2020 02:36 AM
Cadmium	**0.013**	J	**0.10**	**mg/L**	1	12/1/2020 02:36 AM
Chromium	U		0.10	mg/L	1	12/1/2020 02:36 AM
Lead	**0.12**		**0.050**	**mg/L**	1	12/1/2020 02:36 AM
Selenium	U		0.10	mg/L	1	12/1/2020 02:36 AM
Silver	U		0.050	mg/L	1	12/1/2020 02:36 AM
TCLP SEMI-VOLATILE ORGANICS			**SW8270D**		Prep: SW3510 11/27/20 12:49	Analyst: **EE**
1,4-Dichlorobenzene	U		100	µg/L	1	12/1/2020 02:07 AM
2,4,5-Trichlorophenol	U		100	µg/L	1	12/1/2020 02:07 AM
2,4,6-Trichlorophenol	U		100	µg/L	1	12/1/2020 02:07 AM
2,4-Dinitrotoluene	U		100	µg/L	1	12/1/2020 02:07 AM
Hexachloro-1,3-butadiene	U		100	µg/L	1	12/1/2020 02:07 AM
Hexachlorobenzene	U		100	µg/L	1	12/1/2020 02:07 AM
Hexachloroethane	U		100	µg/L	1	12/1/2020 02:07 AM
m-Cresol	U		100	µg/L	1	12/1/2020 02:07 AM
Nitrobenzene	U		100	µg/L	1	12/1/2020 02:07 AM
o-Cresol	U		100	µg/L	1	12/1/2020 02:07 AM
p-Cresol	U		100	µg/L	1	12/1/2020 02:07 AM
Pentachlorophenol	U		100	µg/L	1	12/1/2020 02:07 AM
Pyridine	U		200	µg/L	1	12/1/2020 02:07 AM
Surr: 2,4,6-Tribromophenol	*55.8*		*27-83*	*%REC*	1	12/1/2020 02:07 AM
Surr: 2-Fluorobiphenyl	*52.8*		*26-79*	*%REC*	1	12/1/2020 02:07 AM
Surr: 2-Fluorophenol	*39.0*		*13-56*	*%REC*	1	12/1/2020 02:07 AM
Surr: 4-Terphenyl-d14	*75.1*		*43-106*	*%REC*	1	12/1/2020 02:07 AM
Surr: Nitrobenzene-d5	*52.6*		*29-80*	*%REC*	1	12/1/2020 02:07 AM
Surr: Phenol-d6	*26.1*		*10-35*	*%REC*	1	12/1/2020 02:07 AM
TCLP VOLATILE ORGANICS			**SW8260C**		Leachate: SW1311 / 11/25/20	Analyst: **MF**
1,1-Dichloroethene	U		20	µg/L	20	12/1/2020 01:46 PM
1,2-Dichloroethane	U		20	µg/L	20	12/1/2020 01:46 PM
2-Butanone	U		100	µg/L	20	12/1/2020 01:46 PM
Benzene	**77**		**20**	**µg/L**	20	12/1/2020 01:46 PM
Carbon tetrachloride	U		20	µg/L	20	12/1/2020 01:46 PM
Chlorobenzene	U		20	µg/L	20	12/1/2020 01:46 PM
Chloroform	U		20	µg/L	20	12/1/2020 01:46 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:B8-3:S00010 **Lab ID:** 20111764-06
Collection Date: 11/17/2020 10:50 AM **Matrix:** TCLP EXTRACT

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	U		20	µg/L	20	12/1/2020 01:46 PM
Trichloroethene	U		20	µg/L	20	12/1/2020 01:46 PM
Vinyl chloride	U		20	µg/L	20	12/1/2020 01:46 PM
Surr: 1,2-Dichloroethane-d4	*96.7*		*75-120*	*%REC*	20	12/1/2020 01:46 PM
Surr: 4-Bromofluorobenzene	*103*		*80-110*	*%REC*	20	12/1/2020 01:46 PM
Surr: Dibromofluoromethane	*101*		*85-115*	*%REC*	20	12/1/2020 01:46 PM
Surr: Toluene-d8	*101*		*85-110*	*%REC*	20	12/1/2020 01:46 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Hull & Associates
Project: IDA001 **Work Order:** 20111764
Sample ID: IDA001:DECONWATER:W111720 **Lab ID:** 20111764-07
Collection Date: 11/17/2020 11:41 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			**SW7470A**		Prep: SW7470 11/30/20 13:10	Analyst: **MAC**
Mercury	**0.00089**		**0.00020**	**mg/L**	1	11/30/2020 05:02 PM
METALS BY ICP-MS			**SW6020B**		Prep: SW3005A 11/30/20 13:11	Analyst: **STP**
Arsenic	**0.17**		**0.0050**	**mg/L**	1	11/30/2020 11:55 PM
Barium	**0.23**		**0.0050**	**mg/L**	1	11/30/2020 11:55 PM
Cadmium	**0.020**		**0.0020**	**mg/L**	1	11/30/2020 11:55 PM
Chromium	**0.17**		**0.0050**	**mg/L**	1	11/30/2020 11:55 PM
Lead	**7.4**		**0.050**	**mg/L**	10	12/1/2020 04:11 PM
Selenium	**0.0048**	J	**0.0050**	**mg/L**	1	11/30/2020 11:55 PM
Silver	**0.016**		**0.0050**	**mg/L**	1	11/30/2020 11:55 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 03-Dec-20

Client: Hull & Associates

Work Order: 20111764

Project: IDA001

QC BATCH REPORT

Batch ID: **168415** Instrument ID **HG4** Method: **SW7470A**

MBLK Sample ID: **MBLK-168415-168415** Units: **mg/L** Analysis Date: **11/30/2020 04:20 PM**

Client ID: Run ID: **HG4_201130A** SeqNo: **6943477** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020								

LCS Sample ID: **LCS-168415-168415** Units: **mg/L** Analysis Date: **11/30/2020 04:29 PM**

Client ID: Run ID: **HG4_201130A** SeqNo: **6943482** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00237	0.00020	0.002	0	118	80-120	0			

MS Sample ID: **20111636-02BMS** Units: **mg/L** Analysis Date: **11/30/2020 04:44 PM**

Client ID: Run ID: **HG4_201130A** SeqNo: **6943491** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.002415	0.00020	0.002	0.0001425	114	75-125	0			

MSD Sample ID: **20111636-02BMSD** Units: **mg/L** Analysis Date: **11/30/2020 04:52 PM**

Client ID: Run ID: **HG4_201130A** SeqNo: **6943495** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00249	0.00020	0.002	0.0001425	117	75-125	0.002415	3.06	20	

The following samples were analyzed in this batch:

20111764-02A 20111764-04A 20111764-06A
20111764-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **168379** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168379-168379** Units: **mg/L** Analysis Date: **12/1/2020 01:45 AM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943747** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Barium	U	0.0050								
Cadmium	U	0.010								
Chromium	U	0.0050								
Lead	U	0.0050								
Selenium	0.00341	0.010								J
Silver	U	0.0050								

LCS Sample ID: **LCS-168379-168379** Units: **mg/L** Analysis Date: **12/1/2020 01:50 AM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943748** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09691	0.0050	0.1	0	96.9	80-120	0			
Barium	0.1064	0.0050	0.1	0	106	80-120	0			
Cadmium	0.1006	0.010	0.1	0	101	80-120	0			
Chromium	0.1056	0.0050	0.1	0	106	80-120	0			
Lead	0.1079	0.0050	0.1	0	108	80-120	0			
Selenium	0.09526	0.010	0.1	0	95.3	80-120	0			
Silver	0.1006	0.0050	0.1	0	101	80-120	0			

MS Sample ID: **20111754-22AMS** Units: **mg/L** Analysis Date: **12/1/2020 02:10 AM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943752** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.013	0.050	1	-0.004378	102	75-125	0			
Barium	1.497	0.050	1	0.4609	104	75-125	0			
Cadmium	1.038	0.10	1	0.02277	102	75-125	0			
Chromium	1.056	0.10	1	0.001815	105	75-125	0			
Lead	1.467	0.050	1	0.4389	103	75-125	0			
Selenium	0.9966	0.10	1	-0.002486	99.9	75-125	0			
Silver	1.025	0.050	1	0.0143	101	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **168379** Instrument ID **ICP2** Method: **SW6010D**

MSD	Sample ID: **20111754-22AMSD**				Units: **mg/L**		Analysis Date: **12/1/2020 02:15 AM**			
Client ID:		Run ID: **ICP2_201130B**			SeqNo: **6943753**		Prep Date: **11/29/2020**	DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.99	0.050	1	-0.004378	99.4	75-125	1.013	2.28	20	
Barium	1.408	0.050	1	0.4609	94.7	75-125	1.497	6.17	20	
Cadmium	1.008	0.10	1	0.02277	98.5	75-125	1.038	3.01	20	
Chromium	1.02	0.10	1	0.001815	102	75-125	1.056	3.5	20	
Lead	1.487	0.050	1	0.4389	105	75-125	1.467	1.32	20	
Selenium	0.968	0.10	1	-0.002486	97	75-125	0.9966	2.91	20	
Silver	0.9757	0.050	1	0.0143	96.1	75-125	1.025	4.95	20	

The following samples were analyzed in this batch: 20111764-02A 20111764-04A 20111764-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **168407** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-168407-168407** Units: **mg/L** Analysis Date: **11/30/2020 11:48 PM**
Client ID: Run ID: **ICPMS3_201130A** SeqNo: **6944047** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Barium	U	0.0050								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Lead	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								

LCS Sample ID: **LCS-168407-168407** Units: **mg/L** Analysis Date: **11/30/2020 11:49 PM**
Client ID: Run ID: **ICPMS3_201130A** SeqNo: **6944048** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1024	0.0050	0.1	0	102	80-120	0			
Barium	0.1035	0.0050	0.1	0	103	80-120	0			
Cadmium	0.1036	0.0020	0.1	0	104	80-120	0			
Chromium	0.09934	0.0050	0.1	0	99.3	80-120	0			
Lead	0.09972	0.0050	0.1	0	99.7	80-120	0			
Selenium	0.1031	0.0050	0.1	0	103	80-120	0			
Silver	0.09368	0.0050	0.1	0	93.7	80-120	0			

MS Sample ID: **20111837-02BMS** Units: **mg/L** Analysis Date: **12/1/2020 12:00 AM**
Client ID: Run ID: **ICPMS3_201130A** SeqNo: **6944054** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1075	0.0050	0.1	0.002261	105	75-125	0			
Barium	0.1212	0.0050	0.1	0.0202	101	75-125	0			
Cadmium	0.08889	0.0020	0.1	0.000059	88.8	75-125	0			
Chromium	0.1063	0.0050	0.1	0.007548	98.8	75-125	0			
Lead	0.104	0.0050	0.1	0.001117	103	75-125	0			
Selenium	0.02569	0.0050	0.1	0.002423	23.3	75-125	0			S
Silver	0.000917	0.0050	0.1	0.000142	0.775	75-125	0			JS

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **168407** Instrument ID **ICPMS3** Method: **SW6020B**

MSD Sample ID: **20111837-02BMSD** Units: **mg/L** Analysis Date: **12/1/2020 12:02 AM**
Client ID: Run ID: **ICPMS3_201130A** SeqNo: **6944055** Prep Date: **11/30/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.106	0.0050	0.1	0.002261	104	75-125	0.1075	1.39	20	
Barium	0.1201	0.0050	0.1	0.0202	99.9	75-125	0.1212	0.972	20	
Cadmium	0.08726	0.0020	0.1	0.000059	87.2	75-125	0.08889	1.85	20	
Chromium	0.1062	0.0050	0.1	0.007548	98.7	75-125	0.1063	0.0903	20	
Lead	0.1028	0.0050	0.1	0.001117	102	75-125	0.104	1.12	20	
Selenium	0.02385	0.0050	0.1	0.002423	21.4	75-125	0.02569	7.43	20	S
Silver	0.002337	0.0050	0.1	0.000142	2.2	75-125	0.000917	0	20	JS

The following samples were analyzed in this batch: 20111764-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **168343** Instrument ID **SVMS9** Method: **SW8270D**

MBLK Sample ID: **SBLKW1-168343-168343** Units: **µg/L** Analysis Date: **11/30/2020 06:30 PM**
Client ID: Run ID: **SVMS9_201130A** SeqNo: **6946817** Prep Date: **11/27/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dichlorobenzene	U	5.0								
2,4,5-Trichlorophenol	U	5.0								
2,4,6-Trichlorophenol	U	5.0								
2,4-Dinitrotoluene	U	5.0								
Hexachloro-1,3-butadiene	U	5.0								
Hexachlorobenzene	U	5.0								
Hexachloroethane	U	5.0								
m-Cresol	U	5.0								
Nitrobenzene	U	5.0								
o-Cresol	U	5.0								
p-Cresol	U	5.0								
Pentachlorophenol	U	5.0								
Pyridine	U	10								
Surr: 2,4,6-Tribromophenol	*36.13*	0	*50*	0	*72.3*	*27-83*	0			
Surr: 2-Fluorobiphenyl	*36*	0	*50*	0	*72*	*26-79*	0			
Surr: 2-Fluorophenol	*25.4*	0	*50*	0	*50.8*	*13-56*	0			
Surr: 4-Terphenyl-d14	*42.52*	0	*50*	0	*85*	*43-106*	0			
Surr: Nitrobenzene-d5	*35.75*	0	*50*	0	*71.5*	*29-80*	0			
Surr: Phenol-d6	*15.79*	0	*50*	0	*31.6*	*10-35*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **168343** Instrument ID **SVMS9** Method: **SW8270D**

LCS Sample ID: **SLCSW1-168343-168343** Units: **µg/L** Analysis Date: **11/30/2020 06:54 PM**
Client ID: Run ID: **SVMS9_201130A** SeqNo: **6946818** Prep Date: **11/27/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dichlorobenzene	10.88	5.0	20	0	54.4	12-85	0			
2,4,5-Trichlorophenol	15.64	5.0	20	0	78.2	47-84	0			
2,4,6-Trichlorophenol	14.79	5.0	20	0	74	45-83	0			
2,4-Dinitrotoluene	15.71	5.0	20	0	78.6	54-93	0			
Hexachloro-1,3-butadiene	12.12	5.0	20	0	60.6	11-83	0			
Hexachlorobenzene	15.94	5.0	20	0	79.7	53-89	0			
Hexachloroethane	10.28	5.0	20	0	51.4	10-85	0			
m-Cresol	12.06	5.0	20	0	60.3	30-110	0			
Nitrobenzene	14.78	5.0	20	0	73.9	38-86	0			
o-Cresol	12.86	5.0	20	0	64.3	30-110	0			
p-Cresol	12.06	5.0	20	0	60.3	30-110	0			
Pentachlorophenol	15.8	5.0	20	0	79	37-94	0			
Pyridine	7.74	10	20	0	38.7	10-50	0			J
Surr: 2,4,6-Tribromophenol	*38.63*	0	*50*	0	*77.3*	*27-83*	0			
Surr: 2-Fluorobiphenyl	*35.52*	0	*50*	0	*71*	*26-79*	0			
Surr: 2-Fluorophenol	*21.57*	0	*50*	0	*43.1*	*13-56*	0			
Surr: 4-Terphenyl-d14	*40.84*	0	*50*	0	*81.7*	*43-106*	0			
Surr: Nitrobenzene-d5	*35.5*	0	*50*	0	*71*	*29-80*	0			
Surr: Phenol-d6	*14.4*	0	*50*	0	*28.8*	*10-35*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **168343** Instrument ID **SVMS9** Method: **SW8270D**

MS Sample ID: **20111733-02A MS** Units: **µg/L** Analysis Date: **12/1/2020 12:08 AM**
Client ID: Run ID: **SVMS9_201130A** SeqNo: **6946819** Prep Date: **11/27/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dichlorobenzene	178.8	100	400	0	44.7	12-85	0			
2,4,5-Trichlorophenol	294.4	100	400	0	73.6	47-84	0			
2,4,6-Trichlorophenol	274.2	100	400	0	68.6	45-83	0			
2,4-Dinitrotoluene	288.2	100	400	0	72	54-93	0			
Hexachloro-1,3-butadiene	189.4	100	400	0	47.4	11-83	0			
Hexachlorobenzene	279.4	100	400	0	69.8	53-89	0			
Hexachloroethane	168.8	100	400	0	42.2	10-85	0			
m-Cresol	242	100	400	0	60.5	30-110	0			
Nitrobenzene	270.4	100	400	0	67.6	38-86	0			
o-Cresol	252.2	100	400	0	63	30-110	0			
p-Cresol	242	100	400	0	60.5	30-110	0			
Pentachlorophenol	301.6	100	400	0	75.4	37-94	0			
Pyridine	165.2	200	400	0	41.3	10-50	0			J
Surr: 2,4,6-Tribromophenol	*707.4*	0	*1000*	0	*70.7*	*27-83*	0			
Surr: 2-Fluorobiphenyl	*629.6*	0	*1000*	0	*63*	*26-79*	0			
Surr: 2-Fluorophenol	*436.6*	0	*1000*	0	*43.7*	*13-56*	0			
Surr: 4-Terphenyl-d14	*794.2*	0	*1000*	0	*79.4*	*43-106*	0			
Surr: Nitrobenzene-d5	*652.2*	0	*1000*	0	*65.2*	*29-80*	0			
Surr: Phenol-d6	*303*	0	*1000*	0	*30.3*	*10-35*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **168343** Instrument ID **SVMS9** Method: **SW8270D**

MSD Sample ID: **20111733-02A MSD** Units: **µg/L** Analysis Date: **12/1/2020 12:32 AM**
Client ID: Run ID: **SVMS9_201130A** SeqNo: **6946820** Prep Date: **11/27/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dichlorobenzene	223	100	400	0	55.8	12-85	178.8	22	30	
2,4,5-Trichlorophenol	295.2	100	400	0	73.8	47-84	294.4	0.271	30	
2,4,6-Trichlorophenol	276.2	100	400	0	69	45-83	274.2	0.727	30	
2,4-Dinitrotoluene	287.8	100	400	0	72	54-93	288.2	0.139	30	
Hexachloro-1,3-butadiene	231.8	100	400	0	58	11-83	189.4	20.1	30	
Hexachlorobenzene	279	100	400	0	69.8	53-89	279.4	0.143	30	
Hexachloroethane	216.8	100	400	0	54.2	10-85	168.8	24.9	30	
m-Cresol	242	100	400	0	60.5	30-110	242	0	30	
Nitrobenzene	283.6	100	400	0	70.9	38-86	270.4	4.77	30	
o-Cresol	255.6	100	400	0	63.9	30-110	252.2	1.34	30	
p-Cresol	242	100	400	0	60.5	30-110	242	0	30	
Pentachlorophenol	294.6	100	400	0	73.6	37-94	301.6	2.35	30	
Pyridine	163.6	200	400	0	40.9	10-50	165.2	0	30	J
Surr: 2,4,6-Tribromophenol	*707.4*	0	*1000*	0	*70.7*	*27-83*	707.4	*0*	*40*	
Surr: 2-Fluorobiphenyl	*650.6*	0	*1000*	0	*65.1*	*26-79*	629.6	*3.28*	*40*	
Surr: 2-Fluorophenol	*459.2*	0	*1000*	0	*45.9*	*13-56*	436.6	*5.05*	*40*	
Surr: 4-Terphenyl-d14	*790.4*	0	*1000*	0	*79*	*43-106*	794.2	*0.48*	*40*	
Surr: Nitrobenzene-d5	*682.8*	0	*1000*	0	*68.3*	*29-80*	652.2	*4.58*	*40*	
Surr: Phenol-d6	*312.2*	0	*1000*	0	*31.2*	*10-35*	303	*2.99*	*40*	

The following samples were analyzed in this batch: 20111764-02A 20111764-04A 20111764-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **R304735c** Instrument ID **VMS8** Method: **SW8260C**

MBLK Sample ID: **VBLKW1-201201-R304735c** Units: **µg/L** Analysis Date: **12/1/2020 11:20 AM**
Client ID: Run ID: **VMS8_201201A** SeqNo: **6950103** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	U	1.0								
1,2-Dichloroethane	U	1.0								
2-Butanone	U	5.0								
Benzene	U	1.0								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroform	U	1.0								
Tetrachloroethene	U	1.0								
Trichloroethene	U	1.0								
Vinyl chloride	U	1.0								
Surr: 1,2-Dichloroethane-d4	*19.84*	0	*20*	0	*99.2*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*20.38*	0	*20*	0	*102*	*80-110*	0			
Surr: Dibromofluoromethane	*20.43*	0	*20*	0	*102*	*85-115*	0			
Surr: Toluene-d8	*20.34*	0	*20*	0	*102*	*85-110*	0			

LCS Sample ID: **VLCSW1-201201-R304735c** Units: **µg/L** Analysis Date: **12/1/2020 10:31 AM**
Client ID: Run ID: **VMS8_201201A** SeqNo: **6950101** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	23.25	1.0	20	0	116	70-145	0			
1,2-Dichloroethane	20.79	1.0	20	0	104	78-125	0			
2-Butanone	20.75	5.0	20	0	104	55-150	0			
Benzene	22.63	1.0	20	0	113	70-130	0			
Carbon tetrachloride	19.27	1.0	20	0	96.4	65-140	0			
Chlorobenzene	23.09	1.0	20	0	115	80-120	0			
Chloroform	19.97	1.0	20	0	99.8	66-135	0			
Tetrachloroethene	23.7	1.0	20	0	118	68-166	0			
Trichloroethene	21.83	1.0	20	0	109	77-125	0			
Vinyl chloride	23.25	1.0	20	0	116	50-136	0			
Surr: 1,2-Dichloroethane-d4	*18.44*	0	*20*	0	*92.2*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*19.92*	0	*20*	0	*99.6*	*80-110*	0			
Surr: Dibromofluoromethane	*19.32*	0	*20*	0	*96.6*	*85-115*	0			
Surr: Toluene-d8	*19.61*	0	*20*	0	*98*	*85-110*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **R304735c** Instrument ID **VMS8** Method: **SW8260C**

MS Sample ID: **20111803-03A MS** Units: **µg/L** Analysis Date: **12/1/2020 05:58 PM**

Client ID: Run ID: **VMS8_201201A** SeqNo: **6950126** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1115	50	1000	0	112	70-145	0			HH
1,2-Dichloroethane	998.5	50	1000	0	99.8	78-125	0			HH
2-Butanone	1050	250	1000	0	105	55-150	0			HH
Benzene	1094	50	1000	0	109	70-130	0			HH
Carbon tetrachloride	950	50	1000	0	95	65-140	0			HH
Chlorobenzene	1100	50	1000	0	110	80-120	0			HH
Chloroform	972.5	50	1000	0	97.2	66-135	0			HH
Tetrachloroethene	1112	50	1000	0	111	68-166	0			HH
Trichloroethene	1058	50	1000	0	106	77-125	0			HH
Vinyl chloride	1048	50	1000	0	105	50-136	0			HH
Surr: 1,2-Dichloroethane-d4	*967.5*	0	*1000*	0	*96.8*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*1010*	0	*1000*	0	*101*	*80-110*	0			
Surr: Dibromofluoromethane	*994.5*	0	*1000*	0	*99.4*	*85-115*	0			
Surr: Toluene-d8	*1019*	0	*1000*	0	*102*	*85-110*	0			

MSD Sample ID: **20111803-03A MSD** Units: **µg/L** Analysis Date: **12/1/2020 06:14 PM**

Client ID: Run ID: **VMS8_201201A** SeqNo: **6950127** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1093	50	1000	0	109	70-145	1115	1.99	30	HH
1,2-Dichloroethane	983.5	50	1000	0	98.4	78-125	998.5	1.51	30	HH
2-Butanone	1013	250	1000	0	101	55-150	1050	3.54	30	HH
Benzene	1100	50	1000	0	110	70-130	1094	0.593	30	HH
Carbon tetrachloride	977.5	50	1000	0	97.8	65-140	950	2.85	30	HH
Chlorobenzene	1116	50	1000	0	112	80-120	1100	1.44	30	HH
Chloroform	934.5	50	1000	0	93.4	66-135	972.5	3.99	30	HH
Tetrachloroethene	1124	50	1000	0	112	68-166	1112	1.03	30	HH
Trichloroethene	1032	50	1000	0	103	77-125	1058	2.39	30	HH
Vinyl chloride	998.5	50	1000	0	99.8	50-136	1048	4.89	30	HH
Surr: 1,2-Dichloroethane-d4	*938.5*	0	*1000*	0	*93.8*	*75-120*	967.5	*3.04*	*30*	
Surr: 4-Bromofluorobenzene	*998.5*	0	*1000*	0	*99.8*	*80-110*	1010	*1.19*	*30*	
Surr: Dibromofluoromethane	*983*	0	*1000*	0	*98.3*	*85-115*	994.5	*1.16*	*30*	
Surr: Toluene-d8	*998*	0	*1000*	0	*99.8*	*85-110*	1019	*2.08*	*30*	

The following samples were analyzed in this batch: 20111764-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **R304783c** Instrument ID **VMS7** Method: **SW8260C**

MBLK Sample ID: **VBLKW1-201201-R304783c** Units: **µg/L** Analysis Date: **12/1/2020 06:04 PM**
Client ID: Run ID: **VMS7_201201A** SeqNo: **6949627** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	U	1.0								
1,2-Dichloroethane	U	1.0								
2-Butanone	U	5.0								
Benzene	U	1.0								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroform	U	1.0								
Tetrachloroethene	U	1.0								
Trichloroethene	U	1.0								
Vinyl chloride	U	1.0								
Surr: 1,2-Dichloroethane-d4	*18.89*	0	*20*	0	*94.4*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*18.24*	0	*20*	0	*91.2*	*80-110*	0			
Surr: Dibromofluoromethane	*20.04*	0	*20*	0	*100*	*85-115*	0			
Surr: Toluene-d8	*20.17*	0	*20*	0	*101*	*85-110*	0			

LCS Sample ID: **VLCSW1-201201-R304783c** Units: **µg/L** Analysis Date: **12/1/2020 05:14 PM**
Client ID: Run ID: **VMS7_201201A** SeqNo: **6949625** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	19.21	1.0	20	0	96	70-145	0			
1,2-Dichloroethane	17.74	1.0	20	0	88.7	78-125	0			
2-Butanone	16.52	5.0	20	0	82.6	55-150	0			
Benzene	20.02	1.0	20	0	100	70-130	0			
Carbon tetrachloride	18.68	1.0	20	0	93.4	65-140	0			
Chlorobenzene	20.83	1.0	20	0	104	80-120	0			
Chloroform	17.26	1.0	20	0	86.3	66-135	0			
Tetrachloroethene	22.74	1.0	20	0	114	68-166	0			
Trichloroethene	20.94	1.0	20	0	105	77-125	0			
Vinyl chloride	22.06	1.0	20	0	110	50-136	0			
Surr: 1,2-Dichloroethane-d4	*17.91*	0	*20*	0	*89.6*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*20.11*	0	*20*	0	*101*	*80-110*	0			
Surr: Dibromofluoromethane	*19.35*	0	*20*	0	*96.8*	*85-115*	0			
Surr: Toluene-d8	*20.59*	0	*20*	0	*103*	*85-110*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **R304783c** Instrument ID **VMS7** Method: **SW8260C**

MS Sample ID: **20111985-06A MS** Units: **µg/L** Analysis Date: **12/2/2020 12:06 AM**

Client ID: Run ID: **VMS7_201201A** SeqNo: **6949649** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	22.34	1.0	20	0	112	70-145	0			H
1,2-Dichloroethane	21.81	1.0	20	0	109	78-125	0			H
2-Butanone	18.84	5.0	20	0	94.2	55-150	0			H
Benzene	22.01	1.0	20	0	110	70-130	0			H
Carbon tetrachloride	20.73	1.0	20	0	104	65-140	0			H
Chlorobenzene	21.24	1.0	20	0	106	80-120	0			H
Chloroform	19.7	1.0	20	0	98.5	66-135	0			H
Tetrachloroethene	22.72	1.0	20	0	114	68-166	0			H
Trichloroethene	22.36	1.0	20	0	112	77-125	0			H
Vinyl chloride	23.34	1.0	20	0	117	50-136	0			H
Surr: 1,2-Dichloroethane-d4	*20.46*	0	*20*	0	*102*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*19.91*	0	*20*	0	*99.6*	*80-110*	0			
Surr: Dibromofluoromethane	*21.07*	0	*20*	0	*105*	*85-115*	0			
Surr: Toluene-d8	*20.14*	0	*20*	0	*101*	*85-110*	0			

MSD Sample ID: **20111985-06A MSD** Units: **µg/L** Analysis Date: **12/2/2020 12:22 AM**

Client ID: Run ID: **VMS7_201201A** SeqNo: **6949650** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	22.29	1.0	20	0	111	70-145	22.34	0.224	30	H
1,2-Dichloroethane	21.72	1.0	20	0	109	78-125	21.81	0.414	30	H
2-Butanone	18.98	5.0	20	0	94.9	55-150	18.84	0.74	30	H
Benzene	22.06	1.0	20	0	110	70-130	22.01	0.227	30	H
Carbon tetrachloride	20.75	1.0	20	0	104	65-140	20.73	0.0964	30	H
Chlorobenzene	21.86	1.0	20	0	109	80-120	21.24	2.88	30	H
Chloroform	19.76	1.0	20	0	98.8	66-135	19.7	0.304	30	H
Tetrachloroethene	23.04	1.0	20	0	115	68-166	22.72	1.4	30	H
Trichloroethene	22.61	1.0	20	0	113	77-125	22.36	1.11	30	H
Vinyl chloride	23.58	1.0	20	0	118	50-136	23.34	1.02	30	H
Surr: 1,2-Dichloroethane-d4	*20.24*	0	*20*	0	*101*	*75-120*	20.46	*1.08*	*30*	
Surr: 4-Bromofluorobenzene	*20.35*	0	*20*	0	*102*	*80-110*	19.91	*2.19*	*30*	
Surr: Dibromofluoromethane	*20.86*	0	*20*	0	*104*	*85-115*	21.07	*1*	*30*	
Surr: Toluene-d8	*20.73*	0	*20*	0	*104*	*85-110*	20.14	*2.89*	*30*	

The following samples were analyzed in this batch: 20111764-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **168126** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-168126-168126** Units: **s.u.** Analysis Date: **11/21/2020 12:15 PM**
Client ID: Run ID: **WETCHEM_201121C** SeqNo: **6921278** Prep Date: **11/20/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.94	0.10	4	0	98.5	90-110	0			

DUP Sample ID: **20111764-01A DUP** Units: **s.u.** Analysis Date: **11/21/2020 12:15 PM**
Client ID: **IDA001:E2-3:S000010** Run ID: **WETCHEM_201121C** SeqNo: **6921281** Prep Date: **11/20/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.28	0.10	0	0	0	0-0	8.34	0.722	20	
Temperature	20	0.10	0	0	0		20.1	0.499		

The following samples were analyzed in this batch: 20111764-01A 20111764-03A 20111764-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111764
Project: IDA001

QC BATCH REPORT

Batch ID: **R304918** Instrument ID **WETCHEM** Method: **SW1010A**

LCS Sample ID: **LCS-R304918-R304918** Units: **°F** Analysis Date: **12/2/2020 03:45 PM**
Client ID: Run ID: **WETCHEM_201202V** SeqNo: **6953600** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Flashpoint/Ignitability	83	50	81	0	102	97-103	0			

LCS Sample ID: **LCS-R304918-R304918** Units: **°F** Analysis Date: **12/2/2020 03:45 PM**
Client ID: Run ID: **WETCHEM_201202V** SeqNo: **6953606** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Flashpoint/Ignitability	83	50	81	0	102	97-103	0			

DUP Sample ID: **20112226-01C DUP** Units: **°F** Analysis Date: **12/2/2020 03:45 PM**
Client ID: Run ID: **WETCHEM_201202V** SeqNo: **6953605** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Flashpoint/Ignitability	106	50	0	0	0	0-0	101	4.83	10	

The following samples were analyzed in this batch: 20111764-01A 20111764-03A 20111764-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

20111764

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK
DATA ADMIN
LANCE TURLEY

PAGE 1 OF 1

NO. 382

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: RAYMOND KENNEDY

Client: IDA
Site: USLEAD OU-1; ZONE 1
Project #: IDA001 Phase: DI SAMPLING
Samplers: TIM LOIS / SERENITY CONNER
Purchase Order # IDA001_DUS_RUK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	PRESERVATIVES A	TCLP - VOCs	TCLP - SVOCs	IGNITABILITY SW1030	pH 9045C	RCRA 8 METALS	TCLP - RCRA 8 METALS			COMMENTS
IDA001 : E2-3 : SOOOO10	5	DISCRETE	11/17/20 / 1015	N	X	X	X	X		X				
IDA001 : C5-3 : SOOOO10	5	~~DUS~~ DISCRETE	11/17/20 / 1030	N	X	X	X	X		X				
IDA001 : B8-3 : SOOOO10	5	DISCRETE	11/17/20 / 1050	N	X	X	X	X		X				
IDA001 : DEION-WATER : W111720	2	DISCRETE	11/17/20 / 1141	N					X					
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											
: :			/											

RELINQUISHED BY:	DATE: 11/18/2020	RECEIVED BY: FEDEX	DATE: 11/18/2020	Deliver To: ALS-HOLLAND, MI
RELINQUISHED BY: FEDEX	TIME: 1600	RECEIVED BY:	TIME: 1600	Method of Delivery: FEDEX
	DATE: 11/19/20		DATE:	Airbill Number:
	TIME: 0930		TIME:	Regulatory Program: CERCLA
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:	Required Limits:
	TIME:		TIME:	

COOLER TEMPERATURE AS RECEIVED 4.7 °C 103

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES:

TURN AROUND TIME: STD DAYS

552 of 553

ALS Group, USA

Sample Receipt Checklist

Client Name: **HULL&ASSOC-DUBLIN** Date/Time Received: **19-Nov-20 09:30**

Work Order: **20111764** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 19-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 19-Nov-20 (Date)

Matrices: Soil & Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.7/5.7 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/19/2020 2:20:54 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

THIRD-PARTY DATA VALIDATION PACKAGES

DATA VALIDATION REPORT

Project Name:	**IDA001 - USS Lead OU-1: Zone 1**
SDG #	**20111251**
Performed for:	Hull & Associates
Laboratory:	ALS Group, USA
Analytical Method:	Analytical Fraction:
SW 846 6010D	Metals (ICP)
SW 846 1311	Toxicity Characteristic Leaching Procedure (TCLP)
Validation Performed by:	ECT.CON INC
Validation Guidance:	USEPA National Functional Guidelines for Inorganic (2017) Data Review, Project QAPP and the Analytical Method
Validation Report Date:	1/6/21

Samples/Matrix:

	Sample Date	Sample ID	Laboratory ID	Matrix
1	11/09/20	IDA001:DU-A1	20111251-01	solid
2	11/09/20	IDA001:DU-A1	20111251-02	aqueous
3	11/09/20	IDA001:DU-B1	20111251-03	solid
4	11/09/20	IDA001:DU-B1	20111251-04	aqueous
5	11/10/20	IDA001:DU-E1	20111251-05	solid
6	11/10/20	IDA001:DU-E1	20111251-06	aqueous
7	11/09/20	IDA001:DU-A2	20111251-07	solid
8	11/09/20	IDA001:DU-A2	20111251-08	aqueous
9	11/09/20	IDA001:DU-A2 TE	20111251-09	solid
10	11/09/20	IDA001:DU-A2 TS	20111251-10	solid
11	11/10/20	IDA001:DU-B2	20111251-11	solid
12	11/10/20	IDA001:DU-B2	20111251-12	aqueous
13	11/10/20	IDA001:DU-C2	20111251-13	solid
14	11/10/20	IDA001:DU-C2	20111251-14	aqueous
15	11/10/20	IDA001:DU-D2	20111251-15	solid
16	11/10/20	IDA001:DU-D2	20111251-16	aqueous
17	11/10/20	IDA001:DU-E2	20111251-17	solid
18	11/10/20	IDA001:DU-E2	20111251-18	aqueous
19	11/10/20	IDA001:DU-A3	20111251-19	solid
20	11/10/20	IDA001:DU-A3	20111251-20	aqueous
	Sample Date	**Sample ID**	**Laboratory ID**	**Matrix**
21	11/10/20	IDA001:DU-B3	20111251-21	solid
22	11/10/20	IDA001:DU-B3	20111251-22	aqueous
23	11/10/20	IDA001:DU-C3	20111251-23	solid
24	11/10/20	IDA001:DU-C3	20111251-24	aqueous
25	11/11/20	IDA001:DU-D3	20111251-25	solid
26	11/11/20	IDA001:DU-D3	20111251-26	aqueous
27	11/11/20	IDA001:DU-E3	20111251-27	solid
28	11/11/20	IDA001:DU-E3	20111251-28	aqueous
29	11/11/20	IDA001:DU-E3 TE	20111251-29	solid
30	11/11/20	IDA001:DU-E3 TS	20111251-30	solid
31	11/11/20	IDA001:DU-A4	20111251-31	solid

32	11/11/20	IDA001:DU-A4	20111251-32	aqueous
33	11/11/20	IDA001:DU-B4	20111251-33	solid
34	11/11/20	IDA001:DU-B4	20111251-34	aqueous
35	11/11/20	IDA001:DU-B4 TE	20111251-35	solid
36	11/11/20	IDA001:DU-B4 TS	20111251-36	solid
37	11/11/20	IDA001:DU-C4	20111251-37	solid
38	11/11/20	IDA001:DU-C4	20111251-38	aqueous
39	11/11/20	IDA001:DU-D4	20111251-39	solid
40	11/11/20	IDA001:DU-D4	20111251-40	aqueous
41	11/11/20	IDA001:DU-E4	20111251-41	solid
42	11/11/20	IDA001:DU-E4	20111251-42	aqueous
43	11/11/20	IDA001:DU-A5	20111251-43	solid
44	11/11/20	IDA001:DU-A5	20111251-44	aqueous

This sample set consists of the following:

Field Samples :	44
Trip Blanks :	0
Equipment Blanks :	0
Field Blanks :	0
Field Duplicates:	0

The original data package dated 12/29/20 was reviewed for this validation. It was determined that the original data package did not contain the TCLP worksheets. The lab provided these worksheets and also prepared and provided a revised data package dated 1/6/21. The revised data package was not reviewed or validated.

Samples/Analytical Fraction

Project Number: 20111251
Analytical Method: Analytical Fraction:
SW 846 6010D Metals (ICP)
SW 846 1311 Toxicity Characteristic Leaching Procedure (TCLP)

					Metals ICP	TCLP
	Sample Date	Sample ID	Laboratory ID	Matrix	6010D	1311
1	11/09/20	IDA001:DU-A1	20111251-01	solid	X	
2	11/09/20	IDA001:DU-A1	20111251-02	aqueous	X	X
3	11/09/20	IDA001:DU-B1	20111251-03	solid	X	
4	11/09/20	IDA001:DU-B1	20111251-04	aqueous	X	X
5	11/10/20	IDA001:DU-E1	20111251-05	solid	X	
6	11/10/20	IDA001:DU-E1	20111251-06	aqueous	X	X
7	11/09/20	IDA001:DU-A2	20111251-07	solid	X	
8	11/09/20	IDA001:DU-A2	20111251-08	aqueous	X	X
9	11/09/20	IDA001:DU-A2 TE	20111251-09	solid	X	
10	11/09/20	IDA001:DU-A2 TS	20111251-10	solid	X	
11	11/10/20	IDA001:DU-B2	20111251-11	solid	X	
12	11/10/20	IDA001:DU-B2	20111251-12	aqueous	X	X
13	11/10/20	IDA001:DU-C2	20111251-13	solid	X	
14	11/10/20	IDA001:DU-C2	20111251-14	aqueous	X	X
15	11/10/20	IDA001:DU-D2	20111251-15	solid	X	
16	11/10/20	IDA001:DU-D2	20111251-16	aqueous	X	X
17	11/10/20	IDA001:DU-E2	20111251-17	solid	X	
18	11/10/20	IDA001:DU-E2	20111251-18	aqueous	X	X
19	11/10/20	IDA001:DU-A3	20111251-19	solid	X	
20	11/10/20	IDA001:DU-A3	20111251-20	aqueous	X	X
21	11/10/20	IDA001:DU-B3	20111251-21	solid	X	
22	11/10/20	IDA001:DU-B3	20111251-22	aqueous	X	X
23	11/10/20	IDA001:DU-C3	20111251-23	solid	X	
24	11/10/20	IDA001:DU-C3	20111251-24	aqueous	X	X
25	11/11/20	IDA001:DU-D3	20111251-25	solid	X	
26	11/11/20	IDA001:DU-D3	20111251-26	aqueous	X	X
27	11/11/20	IDA001:DU-E3	20111251-27	solid	X	
28	11/11/20	IDA001:DU-E3	20111251-28	aqueous	X	X
29	11/11/20	IDA001:DU-E3 TE	20111251-29	solid	X	
30	11/11/20	IDA001:DU-E3 TS	20111251-30	solid	X	
31	11/11/20	IDA001:DU-A4	20111251-31	solid	X	
32	11/11/20	IDA001:DU-A4	20111251-32	aqueous	X	X
33	11/11/20	IDA001:DU-B4	20111251-33	solid	X	

					Metals ICP	TCLP
	Sample Date	Sample ID	Laboratory ID	Matrix	6010D	1311
34	11/11/20	IDA001:DU-B4	20111251-34	aqueous	X	X
35	11/11/20	IDA001:DU-B4 TE	20111251-35	solid	X	
36	11/11/20	IDA001:DU-B4 TS	20111251-36	solid	X	
37	11/11/20	IDA001:DU-C4	20111251-37	solid	X	
38	11/11/20	IDA001:DU-C4	20111251-38	aqueous	X	X
39	11/11/20	IDA001:DU-D4	20111251-39	solid	X	
40	11/11/20	IDA001:DU-D4	20111251-40	aqueous	X	X
41	11/11/20	IDA001:DU-E4	20111251-41	solid	X	
42	11/11/20	IDA001:DU-E4	20111251-42	aqueous	X	X
43	11/11/20	IDA001:DU-A5	20111251-43	solid	X	
44	11/11/20	IDA001:DU-A5	20111251-44	aqueous	X	X
					44	19

Analytical data in this report were reviewed to determine analytical limitations of the data based on specific quality control criteria. This review is performed on a laboratory signed data data package. The laboratory signature indicates that the laboratory has reviewed and has certified that the information provided in the data package are correct and complete.
The results of the review are an interpretation of the reported quality control information provided by the laboratory in comparison to the specified validation criteria for the project. Laboratory calculations have been verified as part of the validation. Form 1's and/or analytical results sheets are annotated with the results of the validation.

This evaluation was conducted in accordance with the requested validation guidelines, project requirement and the analytical method. Findings from this validation should be considered when using the analytical data.

The inorganic and general chemistry findings are based upon the assessment of the following, where applicable:

Sample Preservation
Holding Times
Calibration (Initial and Continuing)
Blanks (lab and field)
ICP MS Tune (if applicable)
ICP MS Internal Standards (if applicable)
ICP Spectral Interference Check sample
Laboratory Control Sample (LCS)
Duplicate Sample Analysis
Spike Sample Analysis
Graphite Furnace Atomic Absorption (GFAA) QC (if applicable)
ICP Serial Dilution
Field Duplicates (if applicable)

This report consists of the validation findings. This is followed by annotated Form 1's. The final section of the report is supporting documentation. This consists of the Chain of Custody, laboratory case narrative and the validation worksheets.

FINDINGS

Metals ICP

(1) Sample Preservation/Holding Time

All criteria were met.

(2) Initial Calibration

The 11/20/20 low level verification sample percent recovery for lead (124%) was greater than the upper control limit. For the following samples, qualify lead positive results as estimated "J".

IDA001:DU-A1	solid	IDA001:DU-D3	solid
IDA001:DU-B1	solid	IDA001:DU-E3 TE	solid
IDA001:DU-E1	solid	IDA001:DU-E3 TS	solid
IDA001:DU-A2	solid	IDA001:DU-A4	solid
IDA001:DU-A2 TE	solid	IDA001:DU-B4	solid
IDA001:DU-A2 TS	solid	IDA001:DU-B4 TE	solid
IDA001:DU-B2	solid	IDA001:DU-B4 TS	solid
IDA001:DU-C2	solid	IDA001:DU-C4	solid
IDA001:DU-D2	solid	IDA001:DU-C4	aqueous
IDA001:DU-A3	solid	IDA001:DU-D4	solid
IDA001:DU-B3	solid	IDA001:DU-E4	aqueous
IDA001:DU-C3	solid	IDA001:DU-A5	solid

(3) Continuing Calibration

All criteria were met.

(4) Field and Lab Blanks

All criteria were met.

(5) ICP Spectral Interference Check Sample (SIC)

All criteria were met.

(6) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All criteria were met.

(7) Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

All criteria were met.

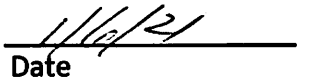
(8) ICP Serial Dilution

All criteria were met.

(9) Compound Quantitation

Positive results less than the reporting limit are qualified as estimated "J" due to uncertainty near the detection limit.

Data Reviewer



Date

NOTES

Metals - ICP

A. Sample Receipt/Sample Preservation/Hold Time

There are no notes for this item.

B. Initial Calibration

There are no notes for this item.

C. Continuing Calibration

There are no notes for this item.

D. Field and Lab Blanks

There are no notes for this item.

E. ICP Spectral Interference Check Sample (SIC)

The analytical method (SW 846 6010D) requires a Spectral Interference Check (SIC) and not an ICS. The lab uses a mixed element SIC. This is run on at the beginning of an analytical run or once every 12 hours of continuing sample analysis. The SIC is to check that the instrument is free from interefence from elements typcially observed in high concentrations (arsenic and lead are not applicable via 6010D). ccording to the lab SOP, the concentration measured for any target analytes must be < 2x the MQL. Data are not qualified on this basis.

F. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

For IDA001:DU-E4, IDA001:DU-B4 TE and IDA001:DU-A5 MS/MSD, the percent recovery and relative percent difference for lead is not applicable because the original sample concentration is greater than 4x the spike amount. Data are not qualified on this basis.

For IDA001:DU-A5 MS/MSD, the percent recovery and relative percent difference for arsenic is not applicable because the original sample concentration is greater than 4x the spike amount. Data are not qualified on this basis.

For QC batch 168036 (aqueous), the MS/MSD was not a project sample in this sample delivery group. All arsenic and lead MS/MSD items were within lab control limits. No raw data was provided for this MS/MSD. Data are not qualified on this basis.

G. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

There are no notes for this item.

H. ICP Serial Dilution

There are no ICP serial dilutions for the TCLP (aqueous) samples. All aqueous matrix spike recoveries and relative percent differences were within control limits. Data are not qualified on this basis.

I. Compound Quantitation

The following sample(s) were analyzed at the listed dilution for the noted parameter(s).

Sample ID	Parameter(s)	Dilution Factor	Matrix
IDA001:DU-A1	arsenic and lead	10	solid
IDA001:DU-B1	arsenic and lead	10	solid
IDA001:DU-E1	arsenic and lead	10	solid
IDA001:DU-A2	arsenic and lead	10	solid
IDA001:DU-A2 TE	arsenic and lead	10	solid
IDA001:DU-A2 TS	arsenic and lead	10	solid
IDA001:DU-B2	arsenic and lead	10	solid
IDA001:DU-C2	arsenic and lead	10	solid
IDA001:DU-D2	arsenic and lead	10	solid
IDA001:DU-E2	arsenic	10	solid
	lead	100	
IDA001:DU-A3	arsenic and lead	10	solid
IDA001:DU-B3	arsenic and lead	10	solid
IDA001:DU-C3	arsenic and lead	10	solid
IDA001:DU-D3	arsenic and lead	10	solid
IDA001:DU-E3	arsenic	10	solid
	lead	100	
IDA001:DU-E3 TE	arsenic and lead	10	solid
IDA001:DU-E3 TS	arsenic and lead	10	solid
IDA001:DU-A4	arsenic and lead	10	solid
IDA001:DU-B4	arsenic and lead	10	solid
IDA001:DU-B4 TE	arsenic and lead	10	solid
IDA001:DU-B4 TS	arsenic and lead	10	solid
IDA001:DU-C4	arsenic and lead	10	solid
IDA001:DU-D4	arsenic and lead	10	solid
IDA001:DU-E4	arsenic	10	solid
	lead	100	
IDA001:DU-C4	lead	10	aqueous
IDA001:DU-E4	lead	10	aqueous

This accounts for the elevated reporting limits. Data are not qualified on this basis.

J. Field Duplicates

No field duplicates were associated with this sample delivery group.

K. Sample Preparation

Samples were homogenized and sieved using a No. 10 sieve (2 mm).

Data Reviewer

Date 1/6/21

FINDINGS/NOTES

TCLP

(1) Sample Preservation/Holding Time

All criteria were met.

(2) Preliminary Evaluation

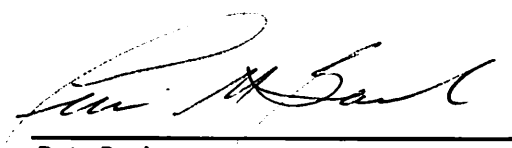
All criteria were met.

(3) Extraction Requirements

All criteria were met.

(4) Physical Requirements

All criteria were met.



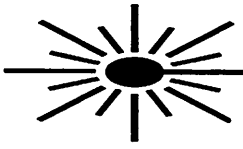
Data Reviewer

1/6/21

Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.
NJ	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts. Reported value may not be accurate or precise.



ECT.CON INC.
Environmental and Computer
Technology Consultants

Annotated Form 1's
(Spreadsheet)

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Dry
Lab Code:	20111251-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	11	mg/Kg-dry	3.8	10	11/20/20 19:08	11/19/20 15:33	
Lead	SW6010D	300	mg/Kg-dry	3.8	10	11/20/20 19:08	11/19/20 15:33	

MB 1/5/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:06	11/19/20 13:52	
Lead	SW6010D	**0.61**	mg/L	0.050	1	11/19/20 22:06	11/19/20 13:52	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Dry
Lab Code:	20111251-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.3**	mg/Kg-dry	3.8	10	11/20/20 19:13	11/19/20 15:33	
Lead	SW6010D	**680** J	mg/Kg-dry	3.8	10	11/20/20 19:13	11/19/20 15:33	

OMB 11/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.022**	mg/L	0.050	1	11/19/20 22:12	11/19/20 13:52	
Lead	SW6010D	**1.1**	mg/L	0.050	1	11/19/20 22:12	11/19/20 13:52	

OMB 11/5/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Dry
Lab Code:	20111251-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	12 J	mg/Kg-dry	4.2	10	11/20/20 19:18	11/19/20 15:33	
Lead	SW6010D	900 J	mg/Kg-dry	4.2	10	11/20/20 19:18	11/19/20 15:33	

11/5/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:17	11/19/20 13:52	
Lead	SW6010D	**4.2**	mg/L	0.050	1	11/19/20 22:17	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Dry
Lab Code:	20111251-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	4.7	10	11/20/20 19:23	11/19/20 15:33	
Lead	SW6010D	**500** J	mg/Kg-dry	4.7	10	11/20/20 19:23	11/19/20 15:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:22	11/19/20 13:52	
Lead	SW6010D	**0.40**	mg/L	0.050	1	11/19/20 22:22	11/19/20 13:52	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	11 J	mg/Kg-dry	3.8	10	11/20/20 19:43	11/19/20 15:33	
Lead	SW6010D	520 J	mg/Kg-dry	3.8	10	11/20/20 19:43	11/19/20 15:33	

OMB 1/5/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	13	mg/Kg-dry	3.5	10	11/20/20 19:48	11/19/20 15:33	
Lead	SW6010D	570 J	mg/Kg-dry	3.5	10	11/20/20 19:48	11/19/20 15:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Dry
Lab Code:	20111251-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	7.3	mg/Kg-dry	3.9	10	11/20/20 19:53	11/19/20 15:33	
Lead	SW6010D	250	mg/Kg-dry	3.9	10	11/20/20 19:53	11/19/20 15:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:27	11/19/20 13:52	
Lead	SW6010D	**0.88**	mg/L	0.050	1	11/19/20 22:27	11/19/20 13:52	

JMB 1/5/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Dry
Lab Code:	20111251-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	20	mg/Kg-dry	4.1	10	11/20/20 19:58	11/19/20 15:33	
Lead	SW6010D	1,700 J	mg/Kg-dry	4.1	10	11/20/20 19:58	11/19/20 15:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:32	11/19/20 13:52	
Lead	SW6010D	**6.6**	mg/L	0.050	1	11/19/20 22:32	11/19/20 13:52	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Dry
Lab Code:	20111251-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	13	mg/Kg-dry	3.7	10	11/20/20 20:03	11/19/20 15:33	
Lead	SW6010D	950 J	mg/Kg-dry	3.7	10	11/20/20 20:03	11/19/20 15:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:52	11/19/20 13:52	
Lead	SW6010D	**3.8**	mg/L	0.050	1	11/19/20 22:52	11/19/20 13:52	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Dry
Lab Code:	20111251-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**30**	mg/Kg-dry	4.0	10	11/20/20 20:08	11/19/20 15:33	
Lead	SW6010D	**12,000**	mg/Kg-dry	40	100	11/21/20 19:27	11/19/20 15:33	

OMB 11/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 22:58	11/19/20 13:52	
Lead	SW6010D	**11**	mg/L	0.050	1	11/19/20 22:58	11/19/20 13:52	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Dry
Lab Code:	20111251-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	9.5 J	mg/Kg-dry	3.8	10	11/20/20 20:13	11/19/20 15:33	
Lead	SW6010D	410 J	mg/Kg-dry	3.8	10	11/20/20 20:13	11/19/20 15:33	

GMB 1/5/21

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.017**	mg/L	0.050	1	11/19/20 23:03	11/19/20 13:52	
Lead	SW6010D	**0.45**	mg/L	0.050	1	11/19/20 23:03	11/19/20 13:52	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Dry
Lab Code:	20111251-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	13	mg/Kg-dry	3.7	10	11/20/20 20:18	11/19/20 15:33	
Lead	SW6010D	1,200	mg/Kg-dry	3.7	10	11/20/20 20:18	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:08	11/19/20 13:52	
Lead	SW6010D	17	mg/L	0.050	1	11/19/20 23:08	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Dry
Lab Code:	20111251-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**14**	mg/Kg-dry	4.0	10	11/20/20 20:23	11/19/20 15:33	
Lead	SW6010D	**720** J	mg/Kg-dry	4.0	10	11/20/20 20:23	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:13	11/19/20 13:52	
Lead	SW6010D	**11**	mg/L	0.050	1	11/19/20 23:13	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Dry
Lab Code:	20111251-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**52**	mg/Kg-dry	4.5	10	11/20/20 20:28	11/19/20 15:33	
Lead	SW6010D	**2,900**	mg/Kg-dry	4.5	10	11/20/20 20:28	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-26		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:18	11/19/20 13:52	
Lead	SW6010D	**1.4**	mg/L	0.050	1	11/19/20 23:18	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Dry
Lab Code:	20111251-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	4.0	10	11/20/20 20:48	11/19/20 15:33	
Lead	SW6010D	**5,400**	mg/Kg-dry	40	100	11/21/20 19:32	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-28		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:24	11/19/20 13:52	
Lead	SW6010D	**19**	mg/L	0.050	1	11/19/20 23:24	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	14	mg/Kg-dry	3.6	10	11/20/20 20:53	11/19/20 15:33	
Lead	SW6010D	1,200	mg/Kg-dry	3.6	10	11/20/20 20:53	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	10	mg/Kg-dry	4.3	10	11/20/20 20:58	11/19/20 15:33	
Lead	SW6010D	1,500	mg/Kg-dry	4.3	10	11/20/20 20:58	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Dry
Lab Code:	20111251-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**23**	mg/Kg-dry	3.7	10	11/20/20 21:03	11/19/20 15:33	
Lead	SW6010D	**560**	mg/Kg-dry	3.7	10	11/20/20 21:03	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-32		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.022**	mg/L	0.050	1	11/19/20 23:29	11/19/20 13:52	
Lead	SW6010D	**0.93**	mg/L	0.050	1	11/19/20 23:29	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Dry
Lab Code:	20111251-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**5.0**	mg/Kg-dry	3.7	10	11/20/20 21:08	11/19/20 15:33	
Lead	SW6010D	**1,600**	mg/Kg-dry	3.7	10	11/20/20 21:08	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-34		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:34	11/19/20 13:52	
Lead	SW6010D	44	mg/L	0.050	1	11/19/20 23:34	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Dry
Lab Code:	20111251-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	5.9	mg/Kg-dry	4.0	10	11/20/20 21:13	11/19/20 15:33	
Lead	SW6010D	1,500	mg/Kg-dry	4.0	10	11/20/20 21:13	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Dry
Lab Code:	20111251-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.2**	mg/Kg-dry	4.1	10	11/20/20 21:53	11/19/20 15:33	
Lead	SW6010D	**660**	mg/Kg-dry	4.1	10	11/20/20 21:53	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Dry
Lab Code:	20111251-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	12	mg/Kg-dry	4.1	10	11/20/20 21:58	11/19/20 15:33	
Lead	SW6010D	3,300 J	mg/Kg-dry	4.1	10	11/20/20 21:58	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-38		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:39	11/19/20 13:52	
Lead	SW6010D	**7.2**	mg/L	0.50	10	11/20/20 18:52	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Dry
Lab Code:	20111251-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.1**	mg/Kg-dry	4.4	10	11/20/20 22:03	11/19/20 15:33	
Lead	SW6010D	**2,100**	mg/Kg-dry	4.4	10	11/20/20 22:03	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-40		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 23:59	11/19/20 13:52	
Lead	SW6010D	**9.6**	mg/L	0.050	1	11/19/20 23:59	11/19/20 13:52	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Dry
Lab Code:	20111251-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**22**	mg/Kg-dry	4.1	10	11/20/20 22:08	11/19/20 15:33	
Lead	SW6010D	**5,700**	mg/Kg-dry	41	100	11/21/20 19:37	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-42		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/19/20 18:36	11/19/20 13:58	
Lead	SW6010D	64	mg/L	0.50	10	11/20/20 16:29	11/19/20 13:58	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Dry
Lab Code:	20111251-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**69**	mg/Kg-dry	4.4	10	11/20/20 22:14	11/19/20 15:33	
Lead	SW6010D	**1,200** J	mg/Kg-dry	4.4	10	11/20/20 22:14	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Water	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-44		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.052**	mg/L	0.050	1	11/19/20 18:51	11/19/20 13:58	
Lead	SW6010D	**0.58**	mg/L	0.050	1	11/19/20 18:51	11/19/20 13:58	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:08
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A1:S000010	**Basis:**	Wet
Lab Code:	20111251-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 11:22
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B1:S000010	**Basis:**	Wet
Lab Code:	20111251-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	12	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E1:S000010	**Basis:**	Wet
Lab Code:	20111251-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.5**	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:01
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2:S000010	**Basis:**	Wet
Lab Code:	20111251-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	13	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/09/20 16:11
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A2-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-10		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.4**	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B2:S000010	**Basis:**	Wet
Lab Code:	20111251-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.4**	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:47
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C2:S000010	**Basis:**	Wet
Lab Code:	20111251-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.2**	% of sample	0.10	1	11/18/20 13:32	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 11:13
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D2:S000010	**Basis:**	Wet
Lab Code:	20111251-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**8.4**	% of sample	0.10	1	11/18/20 13:32	NA	

GMB 1/5/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 10:48
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E2:S000010	**Basis:**	Wet
Lab Code:	20111251-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 13:32	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 13:12
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A3:S000010	**Basis:**	Wet
Lab Code:	20111251-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 13:32	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B3:S000010	**Basis:**	Wet
Lab Code:	20111251-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.0**	% of sample	0.10	1	11/18/20 13:32	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/10/20 14:45
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C3:S000010	**Basis:**	Wet
Lab Code:	20111251-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**4.5**	% of sample	0.10	1	11/18/20 13:32	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 07:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D3:S000010	**Basis:**	Wet
Lab Code:	20111251-25		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**19**	% of sample	0.10	1	11/18/20 13:32	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 08:35
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3:S000010	**Basis:**	Wet
Lab Code:	20111251-27		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 14:54	NA	

12/31/20

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:05
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-29		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	11	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 09:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E3-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-30		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 10:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A4:S000010	**Basis:**	Wet
Lab Code:	20111251-31		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 11:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4:S000010	**Basis:**	Wet
Lab Code:	20111251-33		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.4**	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:00
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Lab Code:	20111251-35		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.7**	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 12:40
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-B4-TS:S000010	**Basis:**	Wet
Lab Code:	20111251-36		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**6.0**	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-C4:S000010	**Basis:**	Wet
Lab Code:	20111251-37		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-D4:S000010	**Basis:**	Wet
Lab Code:	20111251-39		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 14:54	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 14:41
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-E4:S000010	**Basis:**	Wet
Lab Code:	20111251-41		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/18/20 14:54	NA	

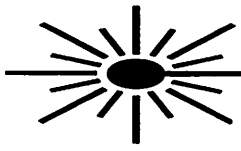
ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	11/11/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/13/20 09:00
Sample Name:	IDA001:DU-A5:S000010	**Basis:**	Wet
Lab Code:	20111251-43		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/18/20 14:54	NA	



ECT.CON INC.
Environmental and Computer
Technology Consultants

Support Documentation

COC

20111251

DATA ADMIN PAGE 1 OF 3

LANCE TURLEY NO. 374

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH	Newark, OH	Mason, OH	Bedford, OH	Toledo, OH	St Clairsville, OH	Pittsburgh, PA
6397 Emerald Pkwy	59 Grant St	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	146 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9977			P: (800) 241-7173	P: (412) 446-0315

REPORT TO: RAY KENNEDY

Client: IDA

Site: USS LEAD OU-1; ZONE 1

Project #: IDA0001 Phase: DU SAMPLING

Samplers: TIM LOAS / JEREMY GARNER

Purchase Order #: IDA0001_DUS_RI.02

SAMPLE MATRIX	
AA-AMBIENT AIR	
C-ASBESTOS	
D-SEDIMENT	
G-GROUNDWATER	
IA-INDOOR AIR	
L-LEACHATE	
P-PRODUCT	
S-SOIL	
SG-SOIL GAS	
SS-SURFSLAB	
VAPOR	
W-WATER	
X-CONCRETE	

PRESERVATIVES	
A-Cool only, <4 deg. C	H-EDTA
B-HNO_3 pH<2	I-Sol 1:1 HCL
C-H_2SO_4 pH<2	J-none
D-NaOH pH>12	K-Stored in dark
E-ZnAcetate + NaOH, pH>9	L-NH4Cl
F-$Na_2S_2O_3$ (0.008%)	M-Methanol
G-HCL pH <2	S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA0001 : DU-A1 : S000010	1	COMPOSITE	11/09/20 / 1108	N	X	X	X	X	
IDA0001 : DU-B1 : S000010	1	COMPOSITE	11/09/20 / 1122	N	X	X	X	X	
IDA0001 : DU-E1 : S000010	1	COMPOSITE	11/10/20 / 0820	N	X	X	X	X	
IDA0001 : DU-A2 : S000010	1	COMPOSITE	11/09/20 / 1601	N	X	X	X	X	
IDA0001 : DU-A2-TS : S000010	1	COMPOSITE	11/09/20 / 1630	N	X	X	X	X	
IDA0001 : DU-A2-TS : S000010	1	COMPOSITE	11/09/20 / 1611	N	X	X	X	X	
IDA0001 : DU-B2 : S000010	1	COMPOSITE	11/10/20 / 1240	N	X	X	X	X	
IDA0001 : DU-C2 : S000010	1	COMPOSITE	11/10/20 / 1147	N	X	X	X	X	
IDA0001 : DU-D2 : S000010	1	COMPOSITE	11/10/20 / 1113	N	X	X	X	X	
IDA0001 : DU-E2 : S000010	1	COMPOSITE	11/10/20 / 1048	N	X	X	X	X	
IDA0001 : DU-A3 : S000010	1	COMPOSITE	11/10/20 / 1312	N	X	X	X	X	
IDA0001 : DU-B3 : S000010	1	COMPOSITE	11/10/20 / 1410	N	X	X	X	X	

RELINQUISHED BY:	DATE: 11 NOV 20	RECEIVED BY: FEDEX	DATE: 11 NOV 20	Deliver To: ALS-HOLLAND, MI.
	TIME: 1730		TIME: 1730	Method of Delivery: FEDEX
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:	Airbill Number:
	TIME:		TIME:	Regulatory Program: CERCLA
RELINQUISHED BY: FEDEX	DATE: 11/13/20	RECEIVED BY:	DATE:	Required Limits:
	TIME: 0900		TIME:	

COOLER TEMPERATURE AS RECEIVED: IR1 4.0 2 °C

5.2 5.0 2

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

CK

20111251

DATA ADMIN PAGE 2 OF 3

LANCE TURLEY NO. 375

REPORT TO: RAYMOND KENNEDY

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	148 W. Main St.	300 Merchant Ln.
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9977			P: (800) 241-7173	P: (412) 446-0315

Client: IDA

Site: VOLUNTEER DU-1; ZONE 1

Project #: IDA001 Phase: DU SAMPLING

Samplers: TIM LOIS / JEREMY COOPER

Purchase Order #: IDA001_DUS_RI_KQ1

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SURSLAB
VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP-ARSENIC	TCLP-LEAD	COMMENTS
IDA001 : DU-C3 : S000010	1	COMPOSITE	11/10/20/1445	N	X	X	X	X	
IDA001 : DU-D3 : S000010	1	COMPOSITE	11/10/20/0750	N	X	X	X	X	
IDA001 : DU-E3 : S000010	1	COMPOSITE	11/11/20/0835	N	X	X	X	X	
IDA001 : DU-E3-TE : S000010	1	COMPOSITE	11/11/20/0905	N	X	X	X	X	
IDA001 : DU-E3-TS : S000010	1	COMPOSITE	11/11/20/0940	N	X	X	X	X	
IDA001 : DU-A4 dup : S000010	1	COMPOSITE	11/11/20/1050	N	X	X	X	X	
IDA001 : DU-B4 : S000010	1	COMPOSITE	11/11/20/1120	N	X	X	X	X	
IDA001 : DU-B4-TE : S000010	1	COMPOSITE	11/11/20/1200	N	X	X	X	X	
IDA001 : DU-B4-TS : S000010	1	COMPOSITE	11/11/20/1240	N	X	X	X	X	
IDA001 : DU-C4 : S000010	1	COMPOSITE	11/11/20/1320	N	X	X	X	X	
IDA001 : DU-D4 : S000010	1	COMPOSITE	11/11/20/1350	N	X	X	X	X	
IDA001 : DU-E4 : S000010	1	COMPOSITE	11/11/20/1441	N	X	X	X	X	

RELINQUISHED BY:	DATE: 11 NOV 20	RECEIVED BY: FEDEX	DATE: 11 NOV 20
	TIME: 1730		TIME: 1730
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY: FEDEX	DATE: 11/13/20	RECEIVED BY:	DATE:
	TIME: 0900		TIME:

Deliver To: ALS - HOLLAND, MI

Method of Delivery: FEDEX

Airbill Number:

Regulatory Program: CERCLA

Required Limits:

COOLER TEMPERATURE AS RECEIVED: 1.0°C, 5.0°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

975

20111251

PAGE 3 OF 3

HULL

CHAIN OF CUSTODY RECORD

NO. 376

Dublin, OH (X) — 6397 Emerald Pkwy, Suite 200, Dublin, OH 43016, P: (614) 793-8777
Newark, OH ☐ — 59 Grant St., Newark, OH 43055, P: (740) 344-5451
Mason, OH ☐ — 4770 Duke Dr., Suite 300, Mason, OH 45040, P: (513) 459-9677
Bedford, OH ☐ — 4 Hemisphere Way, Bedford, OH 44146, P: (440) 232-4945
Toledo, OH ☐ — 219 S. Erie St., Toledo, OH 43604, P: (419) 385-2018
St. Clairsville, OH ☐ — 148 W. Main St., 2nd Floor, St. Clairsville, OH 43950, P: (800) 241-7173
Pittsburgh, PA ☐ — 300 Merchant Ln., Suite 307, Pittsburgh, PA 15205, P: (412) 446-0315

REPORT TO: DATA ADMIN
LANCE TOLLEY
RAYMOND KENNEDY

Client: IDA
Site: US6 LEAD OU-1 ; ZONE 1
Project #: IDA001 Phase: DS SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order #: IDA001_DS_RI&FS1

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
H-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SB-SUDDLAB
VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F8u- filtered with 8 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP-ARSENIC	TCLP-LEAD	COMMENTS
IDA001 : DS-A5 : S000010	1	COMPOSITE	11/12/20 / 1530	N	X	X	X	X	
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						
: :			/						

RELINQUISHED BY:	DATE: 13 NOV 20	RECEIVED BY: FEDEX	DATE: 14 NOV 20	Deliver To: AS-HOLLAND, MI
RELINQUISHED BY:	TIME: 1730	RECEIVED BY:	TIME: 930	Method of Delivery: FEDEX
RELINQUISHED BY: FEDEX	DATE:	RECEIVED BY:	DATE:	Airbill Number:
	TIME:		TIME:	Regulatory Program: CERCLA
	DATE: 11/13/20		DATE:	Required Limits:
	TIME: 0900		TIME:	

COOLER TEMPERATURE AS RECEIVED: IR1 4.0 °C, 5.2 °C, 5.0 °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED/SIEVED/HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

20111251

DATA ADMIN PAGE 1 OF 3

LANCE TURLEY NO. 374

REPORT TO: RAY KENNEDY

HULL

CHAIN OF CUSTODY RECORD

Dublin, OH	Newark, OH	Mason, OH	Bedford, OH	Toledo, OH	St. Clairsville, OH	Pittsburgh, PA
6397 Emerald Pkwy Suite 200 Dublin, OH 43016 P: (614) 793-8777	59 Grant St. Newark, OH 43055 P: (740) 344-5451	4770 Duke Dr. Suite 300 Mason, OH 45040 P: (513) 459-8677	4 Homesphere Way Bedford, OH 44146 P: (440) 232-9945	219 S. Erie St. Toledo, OH 43604 P: (419) 385-2018	148 W. Main St. 2nd Floor St. Clairsville, OH 43950 P: (800) 241-7173	350 Merchant Ln., Suite 307 Pittsburgh, PA 15205 P: (412) 446-0315

Client: IDA
Site: USS LEAD OU-1, ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOS / JEROME ARMER
Purchase Order #: IDA001_DUS_RLK01

SAMPLE MATRIX: AA-AMBIENT AIR; C-ASBESTOS; D-SEDIMENT; G-GROUNDWATER; H-INDOOR AIR; L-LEACHATE; P-PRODUCT; S-SOIL; SG-SOIL GAS; SS-SUBSLAB VAPOR; W-WATER; X-CONCRETE

PRESERVATIVES: A-Cool only, <4 deg. C; B-HNO_3 pH<2; C-H_2SO_4 pH<2; D-NaOH pH>12; E-ZnAcetate + NaOH, pH>9; F-$Na_2S_2O_3$ (0.008%); G-HCL pH <2; H-EDTA; I-Add 1:1 HCL; J-none; K-Stored in dark; L-HNO3; M-Methanol; S-Sodium

METALS: N - Not filtered; F45u- filtered with 0.45 micron; F8u- filtered with 8 micron

ANALYSES / PRESERVATIVES: ARSENIC 6010D; LEAD 6010D; TCLP - ARSENIC; TCLP - LEAD

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-A1 : SOOOD10	1	COMPOSITE	11/09/20 / 1108	N	X	X	X	X	
IDA001 : DU-B1 : SOOOD10	1	COMPOSITE	11/09/20 / 1122	N	X	X	X	X	
IDA001 : DU-E1 : SOOOD10	1	COMPOSITE	11/10/20 / 0820	N	X	X	X	X	
IDA001 : DU-A2 : SOOOD10	1	COMPOSITE	11/09/20 / 1601	N	X	X	X	X	
[redacted]									DO NOT RUN TCLP ON THESE TWO SAMPLES DU-A2-TE AND DU-A2-TS
IDA001 : DU-B2 : SOOOD10	1	COMPOSITE	11/10/20 / 1240	N	X	X	X	X	
IDA001 : DU-C2 : SOOOD10	1	COMPOSITE	11/10/20 / 1147	N	X	X	X	X	
IDA001 : DU-D2 : SOOOD10	1	COMPOSITE	11/10/20 / 1113	N	X	X	X	X	
IDA001 : DU-E2 : SOOOD10	1	COMPOSITE	11/10/20 / 1048	N	X	X	X	X	
IDA001 : DU-A3 : SOOOD10	1	COMPOSITE	11/10/20 / 1312	N	X	X	X	X	
IDA001 : DU-B3 : SOOOD10	1	COMPOSITE	11/10/20 / 1410	N	X	X	X	X	

RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME: 1730	FEDEX	TIME: 1730
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

COOLER TEMPERATURE AS RECEIVED °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
AirBill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED/SIEVED / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

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HULL

CHAIN OF CUSTODY RECORD

DATA ADMIN PAGE 2 OF 3

LANCE TURLEY NO. 375

REPORT TO: RAYMOND KENNEDY

Dublin OH — 6397 Emerald Pkwy, Suite 200, Dublin OH 43016, P (614) 793-8777

Newark OH — 99 Glenn St, Newark, OH 43055, P (740) 344-5451

Wilson OH — 4770 Duke Dr, Suite 300, Wilson OH 45140, P (513) 459-8877

Lakeland OH — 4 Hemisphere Way, Lakeland OH 44146, P (440) 232-9345

Toledo OH — 218 S. Erie St, Toledo OH 43604, P (419) 385-2018

St. Clairsville OH — 146 W. Main St, 2nd Floor, St. Clairsville OH 43950, P (800) 241-7173

Pittsburgh PA — 305 Mercury Dr, Suite 307, Pittsburgh PA 15205, P (412) 449-2315

Client: IDA

Site: WSLEAD AU-1; ZONE 1

Project #: IDA0001 Phase: DU SAMPLING

Samplers: Trent Lee / JEREMY CONNER

Purchase Order #: IDA0001 DUS RUKBI

SAMPLE MATRIX: AA-AMBIENT AIR; C-ASBESTOS; D-SEDIMENT; G-GROUNDWATER; H-INDOOR AIR; L-LEACHATE; P-PRODUCT; S-SOIL; SG-SOIL GAS; SS-SURFACE; W-WATER; X-CONCRETE

PRESERVATIVES: A-Cool only, <4 deg. C; B-HNO_3 pH<2; C-H_2SO_4 pH<2; D-NaOH pH>12; E-ZnAcetate + NaOH, pH>9; F-$Na_2S_2O_3$ (0.008%); G-HCL pH<2; H-EDTA; I-5ml 1:1 HCL; J-none; K-Stored in dark; L-NaHCl; M-Methanol; S-Sodium

METALS: N - Not filtered; F-filtered with 0.45 micron; FF- filtered with 5 micron

ANALYSES / PRESERVATIVES: ARSENIC 6010D; LEAD 6010D; TCLP - ARSENIC; TCLP - LEAD; J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA0001 : DU-C3 : S000010	1	COMPOSITE	11/10/20 / 1445	N	X	X	X	X	
IDA0001 : DU-D3 : S000010	1	COMPOSITE	11/10/20 / 0750	N	X	X	X	X	
IDA0001 : DU-E3 : S000010	1	COMPOSITE	11/11/20 / 0835	N	X	X	X	X	
									DO NOT RUN TCLP ON THESE TWO SAMPLES DU-E3-TE AND DU-E3-TS
IDA0001 : DU-A4-E : S000010	1	COMPOSITE	11/11/20 / 1030	N	X	X	X	X	
IDA0001 : DU-B4 : S000010	1	COMPOSITE	11/11/20 / 1120	N	X	X	X	X	
									DO NOT RUN TCLP ON THESE TWO SAMPLES DU-B4-TE AND DU-B4-TS
IDA0001 : DU-C4 : S000010	1	COMPOSITE	11/11/20 / 1320	N	X	X	X	X	
IDA0001 : DU-D4 : S000010	1	COMPOSITE	11/11/20 / 1350	N	X	X	X	X	
IDA0001 : DU-E4 : S000010	1	COMPOSITE	11/11/20 / 1441	N	X	X	X	X	

RELINQUISHED BY:	DATE: 11/12/20	RECEIVED BY: FEDEX	DATE: 11/12/20
	TIME: 1330		TIME: 1730
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

COOLER TEMPERATURE AS RECEIVED °C

DISTRIBUTION: WHITE - LAB USE (MUST BE RETURNED WITH REPORT); YELLOW - LAB USE; PINK - RETAINED BY HULL

Deliver To: U.S. - HOLLAND, MI

Method of Delivery: FEDEX

Airbill Number:

Regulatory Program: CERCLA

Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / SIEVED / HOMOGENIZED BY LAB'S PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

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HULL

CHAIN OF CUSTODY RECORD

PAGE 2 OF 3

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ANALYSES

PRESERVATIVES

PROJECT NO	SAMPLE LOCATION	NO OF CONT	SAMPLE TYPE	COLLECTION DATE/TIME	METALS	HNO3	H2SO4	NaOH-ASCORBIC	TCLP-METALS	TCLP-LEAD	REMARKS
[illegible]	DW-A5	1	GRAB/WATER	11/6/90 / 1350	A5	X	X	X	X		

RELINQUISHED BY: [signature] DATE: 11/6/90 TIME: 1530

RECEIVED BY: [signature] DATE: 11/6/90 TIME: 0930

RELINQUISHED BY: DATE: TIME:

RECEIVED BY: DATE: TIME:

RELINQUISHED BY: DATE: TIME:

RECEIVED BY: DATE: TIME:

SAMPLE CONDITION AS RECEIVED: °C

LAB NUMBER: WHITE YELLOW PINK

LAB USE ONLY: LAB NUMBER(S) ASSIGNED:

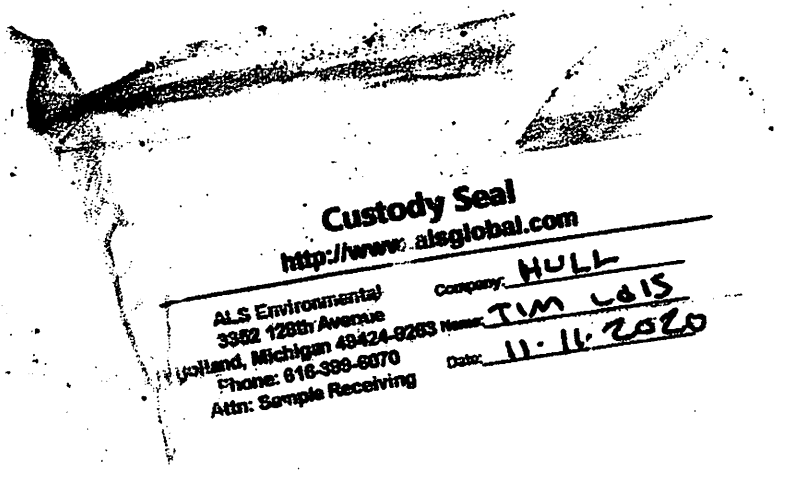
REMARKS: [illegible]

SHIPPED VIA: Ms Hauler, MS

AIRBILL NUMBER: [illegible]

REGULATORY PROGRAM: CERCLA

PROJECT LIMITS:


Custody Seal
http://www.alsglobal.com
ALS Environmental
3352 128th Avenue
Holland, Michigan 49424-9263
Phone: 616-399-6070
Attn: Sample Receiving
Company: HULL
Name: TIM LOIS
Date: 11.11.2020

ALS Group, USA

Sample Receipt Checklist

Client Name: ***HULL&ASSOC-DUBLIN*** Date/Time Received: ***13-Nov-20 09:00***

Work Order: ***20111251*** Received by: ***DS***

Checklist completed by Bill Carey (eSignature) 13-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 13-Nov-20 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	4.0, 5.2, 5.0 C		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/13/2020 2:53:27 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Laboratory Case Narrative

ALS Environmental

December 29, 2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Work Order: **20111251**

Re: **IDA001**

Dear Ray,

ALS Environmental received 44 sample(s) on Nov 13, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 975.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

/S/ Bill Carey

Bill Carey
Project Manager

ALS Group, USA *Date: 29-Dec-20*

Client:	Hull & Associates
Project:	IDA001
Work Order:	20111251

Case Narrative

Samples for the above noted Work Order were received on 11/13/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168040, Method SW6010D, Sample 20111251-35AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168042, Method SW6010D, Sample 20111251-43AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168037, Method SW6010D, Sample 20111251-42AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168040, Method SW6010D, Sample 20111251-35AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168042, Method SW6010D, Sample 20111251-43AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Wet Chemistry:

Client:	Hull & Associates
Project:	IDA001
Work Order:	20111251

Case Narrative

No other deviations or anomalies were noted.

ALS Group, USA

Date: 29-Dec-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111251**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111251-01	IDA001:DU-A1:S000010	Soil	DU-A1	11/9/2020 11:08	11/13/2020 09:00	☐
20111251-02	IDA001:DU-A1:S000010	Tclp Extract	DU-A1	11/9/2020 11:08	11/13/2020 09:00	☐
20111251-03	IDA001:DU-B1:S000010	Soil	DU-B1	11/9/2020 11:22	11/13/2020 09:00	☐
20111251-04	IDA001:DU-B1:S000010	Tclp Extract	DU-B1	11/9/2020 11:22	11/13/2020 09:00	☐
20111251-05	IDA001:DU-E1:S000010	Soil	DU-E1	11/10/2020 08:20	11/13/2020 09:00	☐
20111251-06	IDA001:DU-E1:S000010	Tclp Extract	DU-E1	11/10/2020 08:20	11/13/2020 09:00	☐
20111251-07	IDA001:DU-A2:S000010	Soil	DU-A2	11/9/2020 16:01	11/13/2020 09:00	☐
20111251-08	IDA001:DU-A2:S000010	Tclp Extract	DU-A2	11/9/2020 16:01	11/13/2020 09:00	☐
20111251-09	IDA001:DU-A2-TE:S000010	Soil	DU-A2-TE	11/9/2020 16:30	11/13/2020 09:00	☐
20111251-10	IDA001:DU-A2-TS:S000010	Soil	DU-A2-TS	11/9/2020 16:11	11/13/2020 09:00	☐
20111251-11	IDA001:DU-B2:S000010	Soil	DU-B2	11/10/2020 12:40	11/13/2020 09:00	☐
20111251-12	IDA001:DU-B2:S000010	Tclp Extract	DU-B2	11/10/2020 12:40	11/13/2020 09:00	☐
20111251-13	IDA001:DU-C2:S000010	Soil	DU-C2	11/10/2020 11:47	11/13/2020 09:00	☐
20111251-14	IDA001:DU-C2:S000010	Tclp Extract	DU-C2	11/10/2020 11:47	11/13/2020 09:00	☐
20111251-15	IDA001:DU-D2:S000010	Soil	DU-D2	11/10/2020 11:13	11/13/2020 09:00	☐
20111251-16	IDA001:DU-D2:S000010	Tclp Extract	DU-D2	11/10/2020 11:13	11/13/2020 09:00	☐
20111251-17	IDA001:DU-E2:S000010	Soil	DU-E2	11/10/2020 10:48	11/13/2020 09:00	☐
20111251-18	IDA001:DU-E2:S000010	Tclp Extract	DU-E2	11/10/2020 10:48	11/13/2020 09:00	☐
20111251-19	IDA001:DU-A3:S000010	Soil	DU-A3	11/10/2020 13:12	11/13/2020 09:00	☐
20111251-20	IDA001:DU-A3:S000010	Tclp Extract	DU-A3	11/10/2020 13:12	11/13/2020 09:00	☐
20111251-21	IDA001:DU-B3:S000010	Soil	DU-B3	11/10/2020 14:10	11/13/2020 09:00	☐
20111251-22	IDA001:DU-B3:S000010	Tclp Extract	DU-B3	11/10/2020 14:10	11/13/2020 09:00	☐
20111251-23	IDA001:DU-C3:S000010	Soil	DU-C3	11/10/2020 14:45	11/13/2020 09:00	☐
20111251-24	IDA001:DU-C3:S000010	Tclp Extract	DU-C3	11/10/2020 14:45	11/13/2020 09:00	☐
20111251-25	IDA001:DU-D3:S000010	Soil	DU-D3	11/11/2020 07:50	11/13/2020 09:00	☐
20111251-26	IDA001:DU-D3:S000010	Tclp Extract	DU-D3	11/11/2020 07:50	11/13/2020 09:00	☐
20111251-27	IDA001:DU-E3:S000010	Soil	DU-E3	11/11/2020 08:35	11/13/2020 09:00	☐
20111251-28	IDA001:DU-E3:S000010	Tclp Extract	DU-E3	11/11/2020 08:35	11/13/2020 09:00	☐
20111251-29	IDA001:DU-E3-TE:S000010	Soil	DU-E3-TE	11/11/2020 09:05	11/13/2020 09:00	☐
20111251-30	IDA001:DU-E3-TS:S000010	Soil	DU-E3-TS	11/11/2020 09:40	11/13/2020 09:00	☐
20111251-31	IDA001:DU-A4:S000010	Soil	DU-A4	11/11/2020 10:50	11/13/2020 09:00	☐
20111251-32	IDA001:DU-A4:S000010	Tclp Extract	DU-A4	11/11/2020 10:50	11/13/2020 09:00	☐
20111251-33	IDA001:DU-B4:S000010	Soil	DU-B4	11/11/2020 11:20	11/13/2020 09:00	☐
20111251-34	IDA001:DU-B4:S000010	Tclp Extract	DU-B4	11/11/2020 11:20	11/13/2020 09:00	☐
20111251-35	IDA001:DU-B4-TE:S000010	Soil	DU-B4-TE	11/11/2020 12:00	11/13/2020 09:00	☐
20111251-36	IDA001:DU-B4-TS:S000010	Soil	DU-B4-TS	11/11/2020 12:40	11/13/2020 09:00	☐
20111251-37	IDA001:DU-C4:S000010	Soil	DU-C4	11/11/2020 13:20	11/13/2020 09:00	☐
20111251-38	IDA001:DU-C4:S000010	Tclp Extract	DU-C4	11/11/2020 13:20	11/13/2020 09:00	☐
20111251-39	IDA001:DU-D4:S000010	Soil	DU-D4	11/11/2020 13:50	11/13/2020 09:00	☐

Client: Hull & Associates
Project: IDA001
Work Order: **20111251**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111251-40	IDA001:DU-D4:S000010	Tclp Extract	DU-D4	11/11/2020 13:50	11/13/2020 09:00	☐
20111251-41	IDA001:DU-E4:S000010	Soil	DU-E4	11/11/2020 14:41	11/13/2020 09:00	☐
20111251-42	IDA001:DU-E4:S000010	Tclp Extract	DU-E4	11/11/2020 14:41	11/13/2020 09:00	☐
20111251-43	IDA001:DU-A5:S000010	Soil	DU-A5	11/11/2020 15:30	11/13/2020 09:00	☐
20111251-44	IDA001:DU-A5:S000010	Tclp Extract	DU-A5	11/11/2020 15:30	11/13/2020 09:00	☐

Worksheets

ALS Group, USA

Date: 29-Dec-20

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
µg/L	Micrograms per Liter
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
ng/L	Nanograms per Liter

ANALTYTICAL METHODS: **6010D**

HOLDING TIMES

Cooler Temp: <6C

Sample pH N/A for soils; aqueous pH <2

ICP Metals

180 days from collection to prep and analysis

Sample Date	11/9/20	Prepare by	5/8/21	Analyze by	5/8/21
Sample Date	11/10/20	Prepare by	5/9/21	Analyze by	5/9/21
Sample Date	11/11/20	Prepare by	5/10/21	Analyze by	5/10/21

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	As/Pb	Date Prepared	Date Analyzed	DF	matrix
1	11/09/20	IDA001:DU-A1	20111251-01	X	11/19/20	11/20/20	10	solid
2	11/09/20	IDA001:DU-A1	20111251-02	X	11/19/20	11/19/20		aqueous
3	11/09/20	IDA001:DU-B1	20111251-03	X	11/19/20	11/20/20	10	solid
4	11/09/20	IDA001:DU-B1	20111251-04	X	11/19/20	11/19/20		aqueous
5	11/10/20	IDA001:DU-E1	20111251-05	X	11/19/20	11/20/20	10	solid
6	11/10/20	IDA001:DU-E1	20111251-06	X	11/19/20	11/19/20		aqueous
7	11/09/20	IDA001:DU-A2	20111251-07	X	11/19/20	11/20/20	10	solid
8	11/09/20	IDA001:DU-A2	20111251-08	X	11/19/20	11/19/20		aqueous
9	11/09/20	IDA001:DU-A2 TE	20111251-09	X	11/19/20	11/20/20	10	solid
10	11/09/20	IDA001:DU-A2 TS	20111251-10	X	11/19/20	11/20/20	10	solid
11	11/10/20	IDA001:DU-B2	20111251-11	X	11/19/20	11/20/20	10	solid
12	11/10/20	IDA001:DU-B2	20111251-12	X	11/19/20	11/19/20		aqueous
13	11/10/20	IDA001:DU-C2	20111251-13	X	11/19/20	11/20/20	10	solid
14	11/10/20	IDA001:DU-C2	20111251-14	X	11/19/20	11/19/20		aqueous
15	11/10/20	IDA001:DU-D2	20111251-15	X	11/19/20	11/20/20	10	solid
16	11/10/20	IDA001:DU-D2	20111251-16	X	11/19/20	11/19/20		aqueous
17	11/10/20	IDA001:DU-E2	20111251-17	X	11/19/20	11/20-21/20	10As/100 Pb	solid
18	11/10/20	IDA001:DU-E2	20111251-18	X	11/19/20	11/19/20		aqueous
19	11/10/20	IDA001:DU-A3	20111251-19	X	11/19/20	11/20/20	10	solid
20	11/10/20	IDA001:DU-A3	20111251-20	X	11/19/20	11/19/20		aqueous
21	11/10/20	IDA001:DU-B3	20111251-21	X	11/19/20	11/20/20	10	solid
22	11/10/20	IDA001:DU-B3	20111251-22	X	11/19/20	11/19/20		aqueous
23	11/10/20	IDA001:DU-C3	20111251-23	X	11/19/20	11/20/20	10	solid
24	11/10/20	IDA001:DU-C3	20111251-24	X	11/19/20	11/19/20		aqueous
25	11/11/20	IDA001:DU-D3	20111251-25	X	11/19/20	11/20/20	10	solid
26	11/11/20	IDA001:DU-D3	20111251-26	X	11/19/20	11/19/20		aqueous
27	11/11/20	IDA001:DU-E3	20111251-27	X	11/19/20	11/20-21/20	10As/100 Pb	solid
28	11/11/20	IDA001:DU-E3	20111251-28	X	11/19/20	11/19/20		aqueous
29	11/11/20	IDA001:DU-E3 TE	20111251-29	X	11/19/20	11/20/20	10	solid
30	11/11/20	IDA001:DU-E3 TS	20111251-30	X	11/19/20	11/20/20	10	solid
31	11/11/20	IDA001:DU-A4	20111251-31	X	11/19/20	11/20/20	10	solid
32	11/11/20	IDA001:DU-A4	20111251-32	X	11/19/20	11/19/20		aqueous
33	11/11/20	IDA001:DU-B4	20111251-33	X	11/19/20	11/20/20	10	solid
34	11/11/20	IDA001:DU-B4	20111251-34	X	11/19/20	11/19/20		aqueous
35	11/11/20	IDA001:DU-B4 TE	20111251-35	X	11/19/20	11/20/20	10	solid
36	11/11/20	IDA001:DU-B4 TS	20111251-36	X	11/19/20	11/20/20	10	solid
37	11/11/20	IDA001:DU-C4	20111251-37	X	11/19/20	11/20/20	10	solid
38	11/11/20	IDA001:DU-C4	20111251-38	X	11/19/20	11/19-20/20	Pb 10	aqueous
39	11/11/20	IDA001:DU-D4	20111251-39	X	11/19/20	11/20/20	10	solid
40	11/11/20	IDA001:DU-D4	20111251-40	X	11/19/20	11/19/20		aqueous
41	11/11/20	IDA001:DU-E4	20111251-41	X	11/19/20	11/20-21/20	10As/100 Pb	solid
42	11/11/20	IDA001:DU-E4	20111251-42	X	11/19/20	11/19-20/20	As/Pb 10	aqueous
43	11/11/20	IDA001:DU-A5	20111251-43	X	11/19/20	11/20/20	10	solid
44	11/11/20	IDA001:DU-A5	20111251-44	X	11/19/20	11/19/20		aqueous

aqueous is TCLP

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

Spike performed on field sample?	YES	B4-TE; E4; A5
Laboratory using correct control limit (RPD) SW 846 6010 - 25%?	Yes - lab 25%	
Percent recovery meet criteria (NFG 75-125) ?	Yes	
Outliers flagged with "N"?	yes	

	IDA001:DU-E4	IDA001:DU-E4	B4-TE	B4-TE	43A	43A
Analyte	Pb	As	Pb	As	Pb	As
Original Sample	64.2587	-0.0055	1460	5.5	1002.9	58.5
Spike Sample	65.2311	0.9515	1511	12.3	433.0	64.9
True Value	1.0000	1.0000	7.7040	7.7	7.2	7.2
Percent Recovery	97.2%	95.7%	660.7%	88.3%	-7910.0%	88.1%
Lab Value	972.0%	95.7%	661.0	**88.2**	**-7910.0**	**88.1**
Duplicate Sample	62.1599	0.9185	1507	12.6	559.4	54.5
True Value	1.0000	1.0000	7.6690	7.7	7.5	7.5
Percent Recovery	-209.9%	92.4%	624.3%	92.4%	-5889.4%	-53.5%
Lab Value	**-210.0%**	92.4%	624.0	**92.9**	**-5890.0**	**-52.8**
RPD	4.8	3.5	0.2	-2.2	-25.5	17.4
Lab Value	0.3	3.5	0.2	**2.62**	25.5	17.3

Percent Recovery = ((spike sample-original sample)/true value)*100

RPD = (Original - Duplicate)/((Original + Duplicate)/2)*100

IDA001:DU-E4

Pb	mg/L			DF		4x
Sample		5.8417	2.5	27.5	1	64.2587
MS		5.9301	2.5	27.5	1	65.2311
MSD		5.6509	2.5	27.5	1	62.1599

IDA001:DU-E4

As	mg/L			DF		
Sample		-0.0005	2.5	27.5	1	-0.0055
MS		0.0865	2.5	27.5	1	0.9515
MSD		0.0835	2.5	27.5	1	0.9185

B4-TE

Pb					
Sample	19.2375	0.659	50	1	1459.597876
MS	19.6063	0.649	50	1	1510.50077
MSD	19.6575	0.652	50	1	1507.476994

B4-TE

As					
Sample	0.0729	0.659	50	1	5.531107739
MS	0.1601	0.649	50	1	12.33436055
MSD	0.1645	0.652	50	1	12.61503067

43A

Pb					
Sample	13.4587	0.671	50	1	1002.883756
MS	6.0096	0.694	50	1	432.9682997
MSD	7.429	0.664	50	1	559.4126506

43A

As					
Sample	0.7853	0.671	50	1	58.5171386
MS	0.9003	0.694	50	1	64.86311239
MSD	0.7236	0.664	50	1	54.48795181

DUPLICATE RELATIVE PERCENT DIFFERENCE see MS/MSD

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R
168037	all	ok
168036	all	ok
168040	all	ok
168042	all	ok

Were there any transcription errors between the raw data and Forms? No
Were laboratory acceptance limits used as the basis for validation? Yes
Percent recovery within control limits (70-130 - ICP/ Sb & Ag 50-150)? Yes
(SW 846 6010C - 80-120%)

SAMPLE 168037 COMPOUND Pb

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	0.09922	0.1	99.22%	99.2

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

SAMPLE 168036 COMPOUND As

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	0.09097	0.1	90.97	91

SAMPLE 168040 COMPOUND Pb

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	5.19	5	103.80%	104

SAMPLE 168042 COMPOUND As

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	4.4	5	88.00%	88

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

0.0902
25
27.5
1

0.0827
25
27.5
1

0.1038
50
1
1

0.088
50
1
1

BLANKS

Blank	Parameter	Concentration		Units
168037	all	ND		mg/L
168036	all	ND		mg/L
168040	all	ND		mg/kg
168042	all	ND		mg/kg
ICB/CCB				
ICB/CCB 11/19/20	all	nd		mg/L
ICB/CCB 11/20/20	all	nd		mg/L
ICB/CCB 11/21/20	all	nd		mg/L

ICP Interference Check Sample - Spectral Interference Check Sample (SIC)

ICP SIC performed beginning and end of run	beginning	all samples within 12 hours
The concentration measured for any target analytes must be less than1/2x the MQL (which according to lab is the MRL) (lab SOP). Spiked values must be 80%-120%	Yes	MQL = As = 0.05 Pb = 0.05
NOTES: As and Pb are not a required constituent in the SIC solution.		

ICP Serial Dilution

Serial Dilution performed on field sample?	yes
Analyte > 50 x IDL serial dilution meet QC limit of 10% (15% FOR SOIL)?	yes

Pb									
ORIGINAL		13.4587	0.671	50	1	1	1002.883756		
SD		13.1204	0.671	50	1	1	977.6751118		
A5									
	MDL	50*IDL	OS				OS>50IDL	OS-ND	SD-ND %D
As	0.065	3.25	58.49		56.63		Yes	Yes	3
Pb	0.2	10	1002.884		977.67511		Yes	Yes	3

CALIBRATION

ICV

ICP linear correl coeff ≥ 0.995 - NFG - SW 846 6020B ≥ 0.995 (r^2 = 0.99)?	Yes
Calibration = blank,low, mid and high level standard?	Yes
Percent recovery within ±20% for LLQC?	Yes
ICV analyzed after system standardized and for every analyte	Yes
Percent Recovery within limits for target parameters?	Yes

(90-110) ICP

	11/19/20	11/20/20	11/21/20
Analyte	Pb	As	As
Reported conc.	1.0356	0.9628	0.9994
True conc.	1	1	1
Percent recovery	103.6%	96.3%	99.9%
Lab Value	104.0%	96.3%	99.9%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

NOTES: Low check - falls within 80-120 ; high standard check falls within 90-110

CCVs

CCV performed every 2 hours or 10% frequency	Yes
CCV performed beginning and end of sample analysis	Yes
CCV standard for all target analytes	Yes
Percent Recovery within limits for target parameters?	Yes

(90-110) ICP

	11/19/20 9:36	11/19/20 11:49	11/20/20 6:27	11/20/20 9:38	11/21/20 8:08	11/21/20 7:07
	CCV	CCV	CCV	CCV	CCV	CCV
Analyte	Pb	As	As	Pb	As	Pb
Reported conc.	0.5175	0.5011	0.4837	0.4934	0.47	0.4928
True conc.	0.5	0.5	0.5	0.5	0.5	0.5
Percent recovery	103.5%	100.2%	96.7%	98.7%	94.0%	98.6%
Lab Value	103.5%	100.2%	96.7%	98.7%	94.0%	98.6%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

SAMPLE CALCULATION	27A	11A	29A	39A
	IDA001:DU-E3	IDA001:DU-B2	IDA001:DU-E3TE	IDA001:DU-D4
	Pb	As	As	Pb
Conc (ppm)	68.6355	0.0931	0.1943	24.2324
final vol	50	50	50	50
sample wt	0.716	0.681	0.785	0.678
Conversion	1	1	1	1
Dilution Factor	1	1	1	1
% solids	0.88	0.936	0.89	0.84
Result (mg/kg)	5446.570277	7.302923052	13.90539	2127.44065
Lab (mg/kg)	5400	7.3	14	2100

Please note that the DF is included in the conc. These samples were run at dilutions

Dilution Factor	100	10	10	10

	20 TCLP	40 TCLP
	IDA001:DU-A3	IDA001:DU-D4
	As	Pb
Conc (ppm)	0.0015	0.8733
final vol	27.5	27.5
sample wt	25	25
Conversion	0.1	0.1
Dilution Factor	1	1
Result (mg/L)	0.0165	9.6063
Lab (mg/L)	0.017	9.6

Are there any transcription errors?	NO
Are Form1s present for all field and quality control samples?	Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.?	Yes

QUARTERLY VERIFICATION OF INSTRUMENT PARAMETERS

IDL analyzed and reported quarterly for each element on Form 10?	not quarterly
IDL<RL for each element?	Yes
ICP interelement correction factor analyzed and reported for each element on Forms 11 and 12?	No - did SIC to verify
Linear range analyzed and reported annually and quarterly for each element on Forms 11 and 12?	No - given LDR sheet

	11/19/20 As	Pb	
	0	0	0
	0.005	2	7
	0.1	43	126
	0.2	88	252
	1	458	1249
correl cal		0.999962705	0.999999
lab corre		0.9998	1

	11/20/20 As	Pb	
	0	0	0
	0.005	2	6
	0.1	41	105
	0.2	84	209
	1	426	1003
correl cal		0.999991813	0.999964
lab corre		1	0.9999

	11/21/20 As	Pb	
	0	0	0
	0.005	2	7
	0.1	41	124
	0.2	86	252
	1	449	1229
correl cal		0.999944787	0.999988
lab corre		0.9998	1

Test Specifications

TestCode	TestName		TestNo	Matrix	Units
SampType					
Analyte	Type	SpkVal	LowLimit	HighLimit	RPDLimit
ICP_6010_W	Metals Analysis by ICP		SW6010D	Water	mg/L
LDR					
Aluminum	A	200	90	110	
Antimony	A	5	90	110	
Arsenic	A	5	90	110	
Barium	A	20	90	110	
Beryllium	A	2	90	110	
Boron	A	20	90	110	
Cadmium	A	1	90	110	
Calcium	A	200	90	110	
Chromium	A	10	90	110	
Cobalt	A	10	90	110	
Copper	A	20	90	110	
Iron	A	200	90	110	
Lead	A	5	90	110	
Lithium	A	10	90	110	
Magnesium	A	200	90	110	
Manganese	A	10	90	110	
Molybdenum	A	10	90	110	
Nickel	A	10	90	110	
Selenium	A	5	90	110	
Silicon	A	20	90	110	
Silver	A	2	90	110	
Strontium	A	10	90	110	
Thallium	A	5	90	110	
Tin	A	5	90	110	
Titanium	A	10	90	110	
Vanadium	A	10	90	110	
Zinc	A	5	90	110	

Calibration Summary

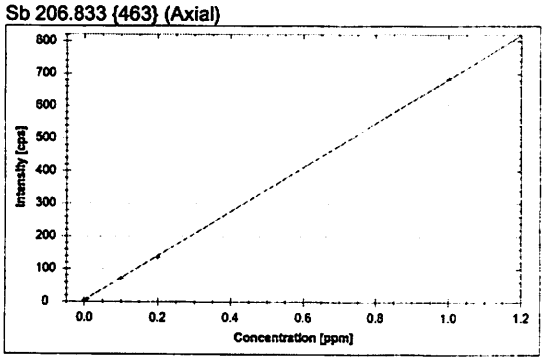
11/20/2020 11:36:51 AM

QTEGRA

LabBook: ICP2_201119C.imexp

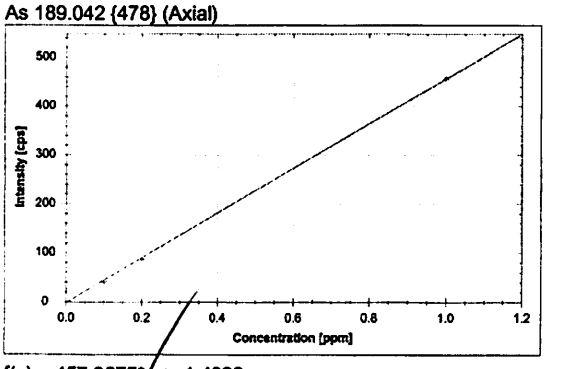
Calibration Graphs

Sb 206.833 {463} (Axial)



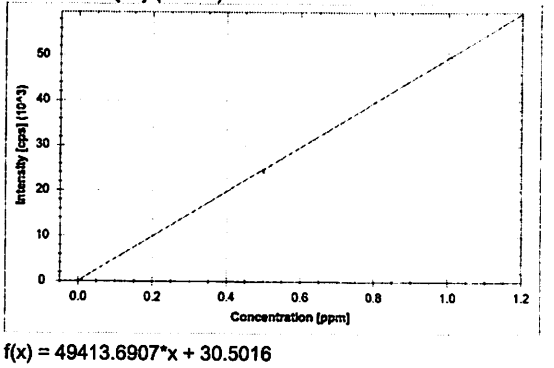
f(x) = 678.3993*x + 4.3934
R² = 0.9999
BEC = 0.006 ppm
LoD = 0.0014 ppm

As 189.042 {478} (Axial)



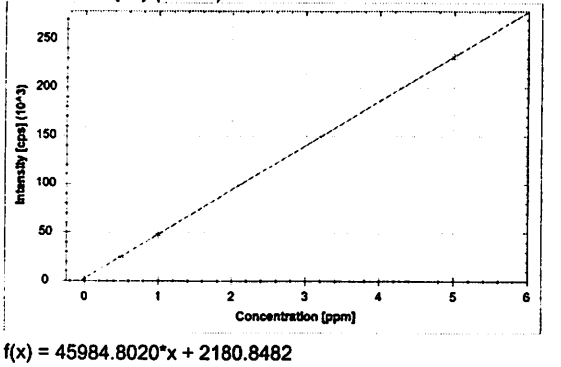
f(x) = 457.3675*x + -1.4999
R² = 0.9998
BEC = -0.003 ppm
LoD = 0.0018 ppm

Ba 455.403 {74} (Radial)



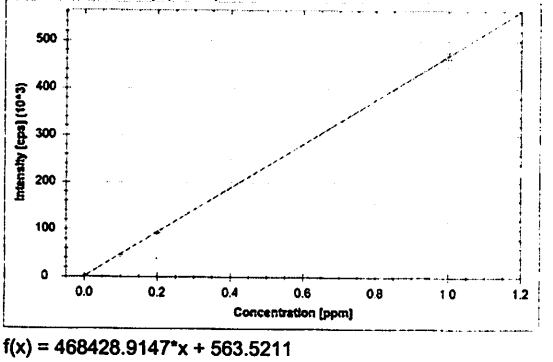
f(x) = 49413.6907*x + 30.5016
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0001 ppm

Ba 493.409 {68} (Radial)



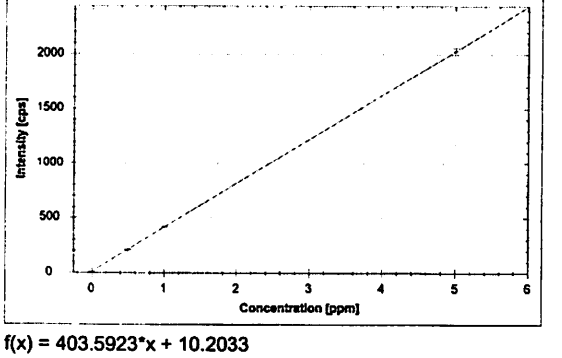
f(x) = 45984.8020*x + 2180.8482
R² = 1.0000
BEC = 0.047 ppm
LoD = 0.0009 ppm

Be 313.042 {108} (Axial)



f(x) = 468428.9147*x + 563.5211
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



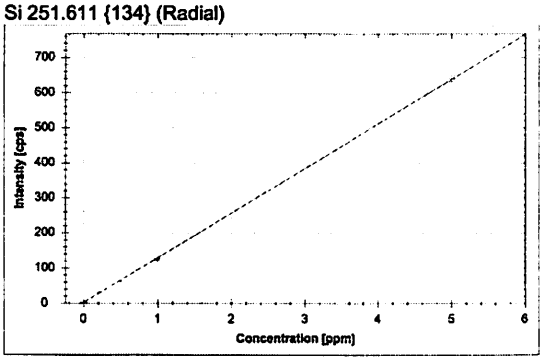
f(x) = 403.5923*x + 10.2033
R² = 1.0000
BEC = 0.025 ppm
LoD = 0.0066 ppm

Calibration Summary

11/20/2020 11:36:51 AM

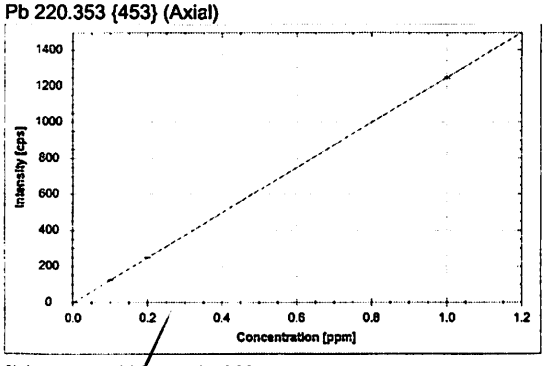
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 127.3127*x + 2.0009
R² = 0.9999
BEC = 0.016 ppm
LoD = 0.0229 ppm

Pb 220.353 {453} (Axial)



f(x) = 1249.1838*x + -2.4369
R² = 1.0000
BEC = -0.002 ppm
LoD = 0.0007 ppm

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LabBook: ICP2_201119C.imexp

ICAL1

Sample type: BLK Analysis started at: 11/19/2020 11:55:45 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-127.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	-9.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	3.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	0 cps	0.0000 ppm	-4.8 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/19/2020 12:00:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0043 ppm	23.4 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0043 ppm	21.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	238 cps	0.0048 ppm	4.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	841 cps	0.0018 ppm	2.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	199 cps	0.4934 ppm	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	128 cps	0.0091 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	33 cps	0.0048 ppm	0.2 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0047 ppm	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	284 cps	0.0102 ppm	3.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	29 cps	0.0750 ppm	4.9 %	0.0 ppm
Li 670.784 {50} (Radial)	163 cps	0.0113 ppm	10.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	419 cps	0.0048 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	16 cps	0.0048 ppm	2.6 %	0.0 ppm
Na 589.592 {57} (Radial)	427 cps	0.1898 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0048 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	155 cps	0.2544 ppm	4.6 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0068 ppm	14.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	74 cps	0.0049 ppm	5.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	272 cps	0.0046 ppm	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0096 ppm	2.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	7 cps	0.0038 ppm	9.8 %	0.0 ppm
V 292.402 {115} (Axial)	88 cps	0.0044 ppm	3.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	116 cps	0.0092 ppm	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.6204 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		101.0651 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	12 cps	0.1915 ppm	12.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	5 cps	0.0105 ppm	8.2 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0083 ppm	26.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2448 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	7 cps	0.0181 ppm	27.9 %	0.0 ppm
Al 396.152 {85} (Radial)	17 cps	0.0264 ppm	13.1 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.2209 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0053 ppm	9.0 %	0.0 ppm
Y 224.306 {450} (Axial)		101.6599 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.9512 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/19/2020 12:06:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	0.0956 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	43 cps	0.0931 ppm	3.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	24,305 cps	0.4919 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	22,500 cps	0.4893 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	44,844 cps	0.0957 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	201 cps	0.4990 ppm	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,345 cps	0.0953 ppm	2.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	684 cps	0.0986 ppm	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	5,115 cps	0.4898 ppm	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	13,597 cps	0.4896 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	191 cps	0.4940 ppm	2.6 %	0.0 ppm
Li 670.784 {50} (Radial)	6,935 cps	0.4797 ppm	2.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,586 cps	0.0987 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,623 cps	0.4835 ppm	2.2 %	0.0 ppm
Na 589.592 {57} (Radial)	21,601 cps	9.6083 ppm	2.2 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,534 cps	0.4912 ppm	2.2 %	0.0 ppm
K 766.490 {44} (Radial)	5,867 cps	9.6404 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	124 cps	0.4672 ppm	2.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,474 cps	0.0985 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,734 cps	0.0960 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	127 cps	0.0977 ppm	2.5 %	0.0 ppm
Tl 334.941 {101} (Radial)	179 cps	0.0960 ppm	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,908 cps	0.0962 ppm	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,979 cps	0.2361 ppm	2.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.9283 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		97.7314 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	31 cps	0.5111 ppm	6.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	45 cps	0.1035 ppm	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	781 cps	0.5107 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0374 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	196 cps	0.4785 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	314 cps	0.5009 ppm	1.9 %	0.0 ppm
Si 251.611 {134} (Radial)	61 cps	0.4762 ppm	0.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	126 cps	0.1005 ppm	2.8 %	0.0 ppm
Y 224.306 {450} (Axial)		99.0431 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		98.8123 %	0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/19/2020 12:11:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	131 cps	0.1934 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	88 cps	0.1921 ppm	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	49,615 cps	1.0041 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	45,510 cps	0.9897 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	91,187 cps	0.1947 ppm	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	405 cps	1.0044 ppm	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,728 cps	0.1931 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	2,314 cps	0.1968 ppm	0.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,392 cps	0.2007 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	10,329 cps	0.9890 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	27,025 cps	0.9731 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	380 cps	0.9849 ppm	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	14,070 cps	0.9732 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	17,099 cps	0.1965 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,288 cps	0.9796 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	44,112 cps	19.6215 ppm	2.4 %	0.5 ppm
Ni 231.604 {445} (Axial)	5,112 cps	0.9909 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	11,873 cps	19.5083 ppm	2.3 %	0.4 ppm
Se 196.090 {472} (Axial)	254 cps	0.9533 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,934 cps	0.1961 ppm	0.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,621 cps	0.1946 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	257 cps	0.1974 ppm	1.2 %	0.0 ppm
Tl 334.941 {101} (Radial)	365 cps	0.1959 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	3,844 cps	0.1938 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,066 cps	0.4808 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4489 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.3583 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	61 cps	0.9933 ppm	2.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	90 cps	0.2081 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	1,520 cps	0.9947 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0366 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	400 cps	0.9786 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	617 cps	0.9856 ppm	2.1 %	0.0 ppm
Si 251.611 {134} (Radial)	123 cps	0.9633 ppm	2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	252 cps	0.2018 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1953 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		99.4762 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/19/2020 12:15:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	680 cps	1.0018 ppm	0.5 %	0.0 ppm
As 189.042 {478} (Axial)	458 cps	1.0023 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	230,068 cps	5.0031 ppm	1.1 %	0.1 ppm
Be 313.042 {108} (Axial)	469,129 cps	1.0015 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,018 cps	4.9999 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	14,150 cps	1.0019 ppm	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	11,765 cps	1.0006 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	52,249 cps	5.0032 ppm	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	139,037 cps	5.0064 ppm	1.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,930 cps	5.0037 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	72,394 cps	5.0074 ppm	1.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	87,071 cps	1.0008 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	16,804 cps	5.0057 ppm	0.3 %	0.0 ppm
Na 589.592 {57} (Radial)	225,075 cps	100.1149 ppm	1.5 %	1.5 ppm
Ni 231.604 {445} (Axial)	25,811 cps	5.0027 ppm	0.2 %	0.0 ppm
K 766.490 {44} (Radial)	60,942 cps	100.1342 ppm	1.5 %	1.5 ppm
Se 196.090 {472} (Axial)	1,335 cps	5.0126 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	14,978 cps	1.0009 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	59,792 cps	1.0015 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,301 cps	1.0008 ppm	0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,863 cps	1.0012 ppm	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	19,873 cps	1.0016 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	31,613 cps	2.5052 ppm	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.5342 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		87.3739 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	307 cps	5.0006 ppm	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	430 cps	0.9980 ppm	0.1 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		107.4510 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	2,047 cps	5.0064 ppm	1.5 %	0.1 ppm
Al 396.152 {85} (Radial)	3,133 cps	5.0028 ppm	1.3 %	0.1 ppm
Si 251.611 {134} (Radial)	638 cps	5.0089 ppm	1.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,249 cps	0.9996 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		93.3924 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.8711 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/19/2020 12:52:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3,460 cps	5.1008 ppm	1.1 %	0.1 ppm
As 189.042 {478} (Axial)	2,163 cps	4.7290 ppm	1.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	152 cps	0.0031 ppm	19.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	955 cps	0.0208 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	-108 cps	-0.0002 ppm	10.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	16 cps	0.0405 ppm	0.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	398 cps	0.0282 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	-2 cps	-0.0002 ppm	65.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	42 cps	0.0060 ppm	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	107,183 cps	10.2635 ppm	1.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	256 cps	0.0092 ppm	2.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	27 cps	0.0711 ppm	16.2 %	0.0 ppm
Li 670.784 {50} (Radial)	86 cps	0.0060 ppm	12.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	-288 cps	-0.0033 ppm	4.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	34,291 cps	10.2149 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	1 cps	0.0004 ppm	737.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	53,100 cps	10.2919 ppm	1.1 %	0.1 ppm
K 766.490 {44} (Radial)	62 cps	0.1015 ppm	15.0 %	0.0 ppm
Se 196.090 {472} (Axial)	1,264 cps	4.7475 ppm	1.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	-1 cps	0.0000 ppm	173.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	81 cps	0.0014 ppm	23.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	6,449 cps	4.9597 ppm	1.1 %	0.1 ppm
Ti 334.941 {101} (Radial)	14 cps	0.0075 ppm	12.0 %	0.0 ppm
V 292.402 {115} (Axial)	-1 cps	-0.0001 ppm	372.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	60,008 cps	4.7555 ppm	1.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.3790 %	0.3 %	0.2 %
Sc 188.060 {479} (Axial)		92.8411 %	0.2 %	0.1 %
Mg 279.079 {121} (Radial)	0 cps	0.0002 ppm	5,980.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	2,372 cps	5.5001 ppm	0.9 %	0.1 ppm
Al 167.079 {502} (Axial)	11 cps	0.0073 ppm	29.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.3305 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	16 cps	0.0384 ppm	12.4 %	0.0 ppm
Al 396.152 {85} (Radial)	297 cps	0.4747 ppm	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	12 cps	0.0973 ppm	2.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	6,497 cps	5.2014 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		96.1350 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.0080 %	0.6 %	0.5 %

Calibration Summary

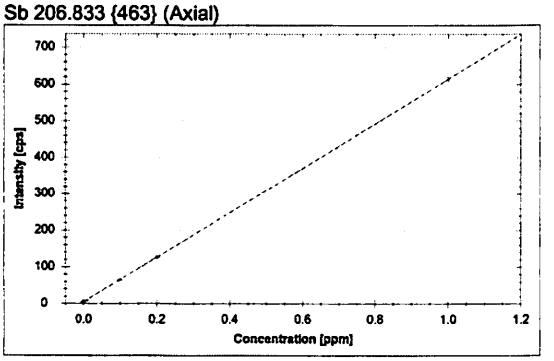
11/23/2020 6:47:52 PM

QTEGRA

LabBook: ICP2_201121B.imexp

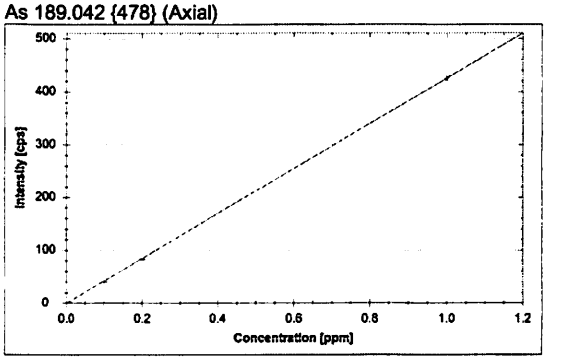
Calibration Graphs

Sb 206.833 {463} (Axial)



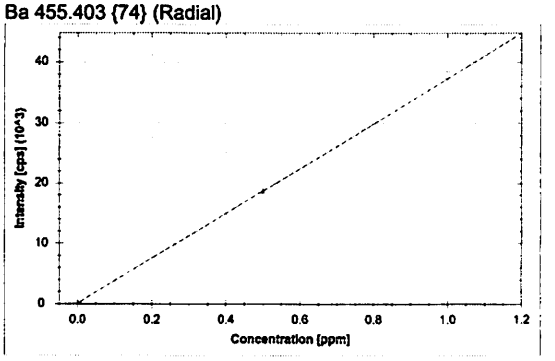
f(x) = 609.3654*x + 4.3553
R² = 1.0000
BEC = 0.007 ppm
LoD = 0.0026 ppm

As 189.042 {478} (Axial)



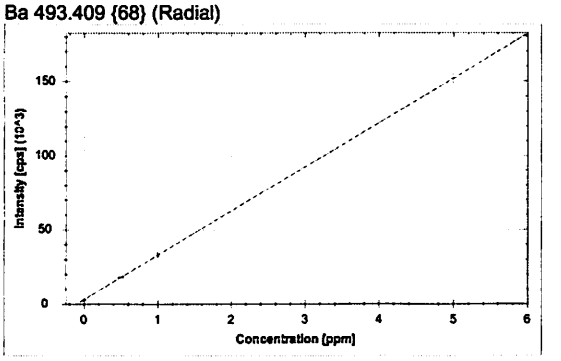
f(x) = 425.6732*x + -0.8224
R² = 1.0000
BEC = -0.002 ppm
LoD = 0.0049 ppm

Ba 455.403 {74} (Radial)



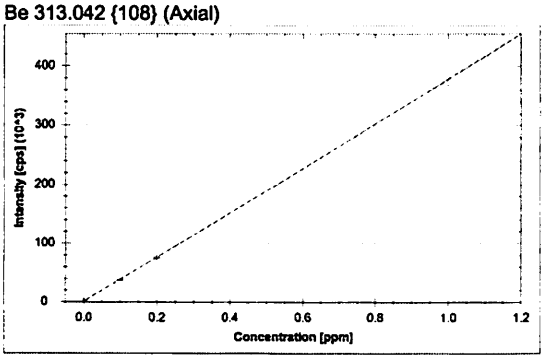
f(x) = 37203.5658*x + 93.3419
R² = 1.0000
BEC = 0.003 ppm
LoD = 0.0008 ppm

Ba 493.409 {68} (Radial)



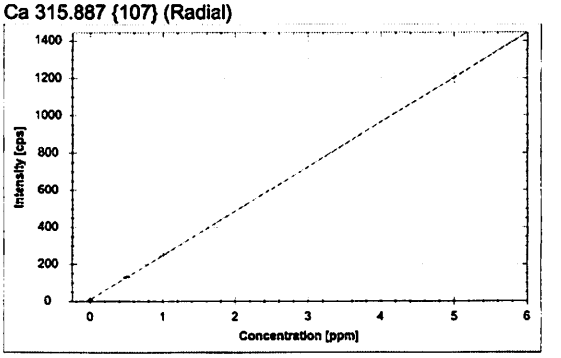
f(x) = 29758.5638*x + 3096.8186
R² = 1.0000
BEC = 0.104 ppm
LoD = 0.0019 ppm

Be 313.042 {108} (Axial)



f(x) = 377447.4565*x + 671.1392
R² = 1.0000
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



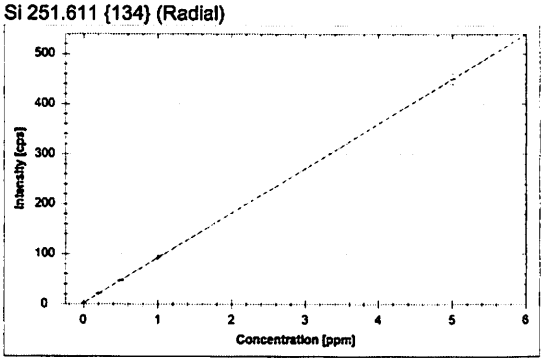
f(x) = 238.7647*x + 9.3984
R² = 1.0000
BEC = 0.039 ppm
LoD = 0.0407 ppm

Calibration Summary

11/23/2020 6:47:52 PM

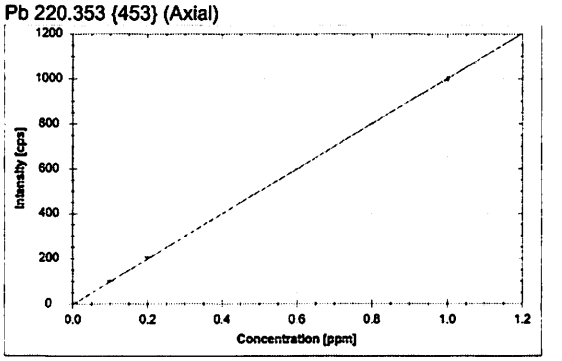
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 89.4479*x + 2.5539
R^2 = 1.0000
BEC = 0.029 ppm
LoD = 0.0316 ppm

Pb 220.353 {453} (Axial)



f(x) = 1004.8622*x + -3.3208
R^2 = 0.9999
BEC = -0.003 ppm
LoD = 0.0027 ppm

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

LabBook: ICP2_201121B.imexp

ICAL1

Sample type: BLK Analysis started at: 11/21/2020 2:43:42 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Tl 334.941 {101} (Radial)	0 cps	0.0000 ppm	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-2.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/21/2020 2:48:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0053 ppm	21.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0043 ppm	23.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	174 cps	0.0047 ppm	10.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	708 cps	0.0019 ppm	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	121 cps	0.5053 ppm	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	117 cps	0.0096 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	32 cps	0.0048 ppm	3.8 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0050 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	256 cps	0.0099 ppm	0.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	20 cps	0.0759 ppm	5.5 %	0.0 ppm
Li 670.784 {50} (Radial)	127 cps	0.0086 ppm	3.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	349 cps	0.0050 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	14 cps	0.0050 ppm	2.5 %	0.0 ppm
Na 589.592 {57} (Radial)	342 cps	0.1845 ppm	10.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0050 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	93 cps	0.1646 ppm	9.9 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0099 ppm	27.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	59 cps	0.0046 ppm	11.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	200 cps	0.0048 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0099 ppm	2.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0043 ppm	7.5 %	0.0 ppm
V 292.402 {115} (Axial)	80 cps	0.0046 ppm	6.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	101 cps	0.0096 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7994 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		100.9915 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	8 cps	0.1902 ppm	13.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0103 ppm	7.9 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0092 ppm	3.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0893 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	7 cps	0.0175 ppm	4.2 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0057 ppm	86.7 %	0.0 ppm
Si 251.611 {134} (Radial)	18 cps	0.2052 ppm	3.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0057 ppm	13.5 %	0.0 ppm
Y 224.306 {450} (Axial)		100.9870 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.8177 %	0.3 %	0.3 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/21/2020 2:54:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	60 cps	0.0986 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	41 cps	0.0957 ppm	2.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	18,575 cps	0.4993 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	14,811 cps	0.4977 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	36,433 cps	0.0965 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	120 cps	0.5038 ppm	2.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,201 cps	0.0978 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	660 cps	0.0987 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4,109 cps	0.5049 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	12,740 cps	0.4952 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	130 cps	0.5016 ppm	2.3 %	0.0 ppm
Li 670.784 {50} (Radial)	7,071 cps	0.4784 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,058 cps	0.1002 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,362 cps	0.4977 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	18,184 cps	9.8053 ppm	2.3 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,078 cps	0.5079 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	5,350 cps	9.4998 ppm	2.0 %	0.2 ppm
Se 196.090 {472} (Axial)	145 cps	0.4829 ppm	0.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,280 cps	0.0986 ppm	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,197 cps	0.1006 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	105 cps	0.1009 ppm	1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	131 cps	0.1000 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	1,704 cps	0.0978 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,570 cps	0.2438 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7731 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		98.8794 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	22 cps	0.5159 ppm	6.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	39 cps	0.1066 ppm	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	721 cps	0.5683 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.6790 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	185 cps	0.4940 ppm	2.6 %	0.0 ppm
Al 396.152 {85} (Radial)	260 cps	0.5748 ppm	3.0 %	0.0 ppm
Si 251.611 {134} (Radial)	45 cps	0.4984 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	105 cps	0.1042 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		98.8220 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.3403 %	0.2 %	0.2 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/21/2020 2:59:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	121 cps	0.1988 ppm	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	84 cps	0.1966 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	37,217 cps	1.0004 ppm	3.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	29,849 cps	1.0031 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	74,952 cps	0.1986 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	243 cps	1.0169 ppm	2.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,448 cps	0.1993 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,899 cps	0.2017 ppm	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,341 cps	0.2007 ppm	1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	8,300 cps	1.0198 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	25,731 cps	1.0002 ppm	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	263 cps	1.0174 ppm	2.2 %	0.0 ppm
Li 670.784 {50} (Radial)	14,325 cps	0.9692 ppm	3.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,223 cps	0.2019 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,762 cps	1.0095 ppm	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	36,744 cps	19.8129 ppm	3.2 %	0.6 ppm
Ni 231.604 {445} (Axial)	4,192 cps	1.0247 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	10,887 cps	19.3298 ppm	3.4 %	0.6 ppm
Se 196.090 {472} (Axial)	298 cps	0.9901 ppm	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,576 cps	0.1984 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	8,405 cps	0.2015 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	213 cps	0.2046 ppm	1.5 %	0.0 ppm
Tl 334.941 {101} (Radial)	263 cps	0.2008 ppm	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	3,478 cps	0.1996 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,233 cps	0.4964 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7135 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.5306 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	43 cps	1.0273 ppm	5.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	77 cps	0.2123 ppm	1.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1,225 cps	0.9659 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.6252 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	376 cps	1.0037 ppm	2.9 %	0.0 ppm
Al 396.152 {85} (Radial)	453 cps	1.0021 ppm	2.9 %	0.0 ppm
Si 251.611 {134} (Radial)	90 cps	1.0036 ppm	4.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	209 cps	0.2079 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7335 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.6616 %	0.1 %	0.1 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/21/2020 3:04:05 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	610 cps	1.0004 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	426 cps	1.0011 ppm	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	148,781 cps	4.9996 ppm	1.9 %	0.1 ppm
Be 313.042 {108} (Axial)	377,686 cps	1.0006 ppm	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,193 cps	4.9957 ppm	2.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	12,291 cps	1.0004 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,411 cps	0.9997 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	40,657 cps	4.9956 ppm	1.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	128,636 cps	5.0004 ppm	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,292 cps	4.9964 ppm	1.8 %	0.1 ppm
Li 670.784 {50} (Radial)	74,023 cps	5.0083 ppm	1.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	70,411 cps	0.9996 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	13,676 cps	4.9983 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	185,558 cps	100.0569 ppm	2.0 %	2.0 ppm
Ni 231.604 {445} (Axial)	20,429 cps	4.9943 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	56,426 cps	100.1841 ppm	2.2 %	2.3 ppm
Se 196.090 {472} (Axial)	1,506 cps	5.0037 ppm	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	12,994 cps	1.0005 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	41,695 cps	0.9996 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,040 cps	0.9990 ppm	0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,308 cps	0.9999 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	17,436 cps	1.0003 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,370 cps	2.5013 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.4051 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		88.7197 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	209 cps	4.9934 ppm	2.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	360 cps	0.9969 ppm	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		98.8620 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1,874 cps	4.9999 ppm	1.8 %	0.1 ppm
Al 396.152 {85} (Radial)	2,256 cps	4.9921 ppm	1.7 %	0.1 ppm
Si 251.611 {134} (Radial)	447 cps	4.9992 ppm	2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,003 cps	0.9980 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		93.9561 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.8421 %	0.4 %	0.4 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/21/2020 3:45:29 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,997 cps	4.9177 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	1,960 cps	4.6056 ppm	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	268 cps	0.0072 ppm	22.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	203 cps	0.0068 ppm	27.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-58 cps	-0.0002 ppm	32.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	19 cps	0.0815 ppm	28.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	339 cps	0.0276 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0009 ppm	54.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	161.1 %	0.0 ppm
Co 228.616 {447} (Axial)	82,044 cps	10.0808 ppm	1.0 %	0.1 ppm
Cu 324.754 {104} (Axial)	228 cps	0.0088 ppm	7.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	39 cps	0.1520 ppm	21.7 %	0.0 ppm
Li 670.784 {50} (Radial)	78 cps	0.0053 ppm	33.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	-93 cps	-0.0013 ppm	23.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	26,958 cps	9.8530 ppm	1.0 %	0.1 ppm
Na 589.592 {57} (Radial)	6 cps	0.0035 ppm	126.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	41,015 cps	10.0271 ppm	0.9 %	0.1 ppm
K 766.490 {44} (Radial)	38 cps	0.0668 ppm	18.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1,407 cps	4.6735 ppm	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	731.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	148 cps	0.0035 ppm	24.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,097 cps	4.8938 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	21 cps	0.0160 ppm	14.6 %	0.0 ppm
V 292.402 {115} (Axial)	23 cps	0.0013 ppm	16.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	49,658 cps	4.7103 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.5194 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		99.5995 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	3 cps	0.0720 ppm	34.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,927 cps	5.3279 ppm	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	17 cps	0.0137 ppm	35.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0812 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	17 cps	0.0443 ppm	11.8 %	0.0 ppm
Al 396.152 {85} (Radial)	203 cps	0.4481 ppm	6.1 %	0.0 ppm
Si 251.611 {134} (Radial)	8 cps	0.0875 ppm	10.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,172 cps	5.1473 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1268 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5904 %	0.3 %	0.3 %

Calibration Summary

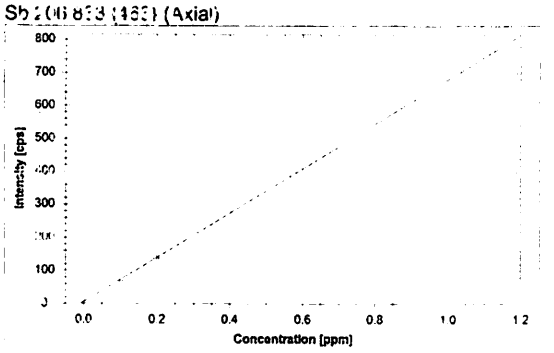
11/21/2020 11:25:34 AM

QTEGRA

LabBook: ICP2_201120A.imexp

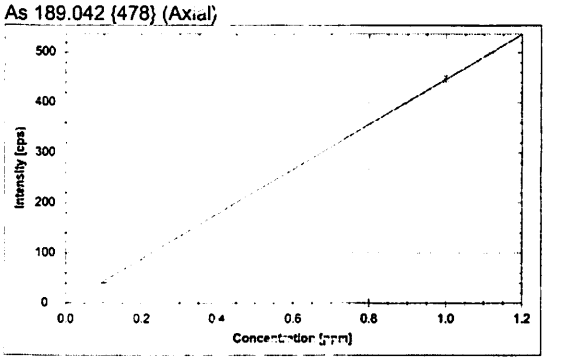
Calibration Graphs

Sb 206.833 (133) (Axial)



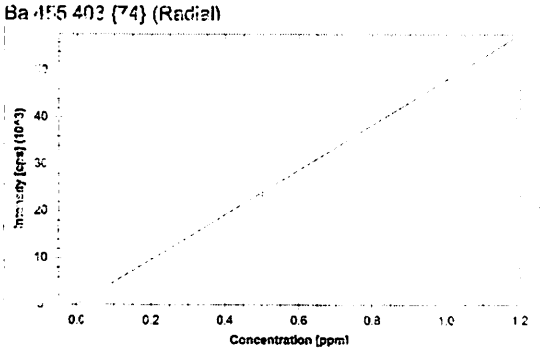
f(x) = 674.5113*x + 4.3271
R² = 0.9999
BEC = 0.006 ppm
LoD = 0.0025 ppm

As 189.042 (478) (Axial)



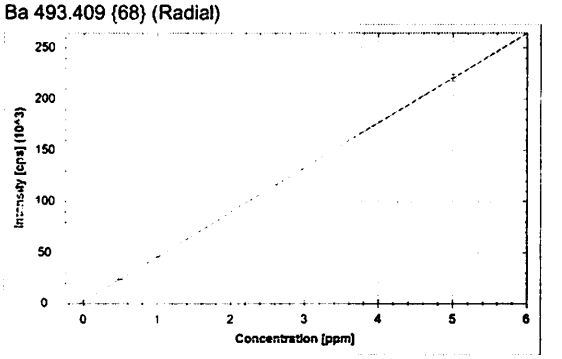
f(x) = 447.7280*x + -1.4790
R² = 0.9998
BEC = -0.003 ppm
LoD = 0.0018 ppm

Ba 455.403 (74) (Radial)



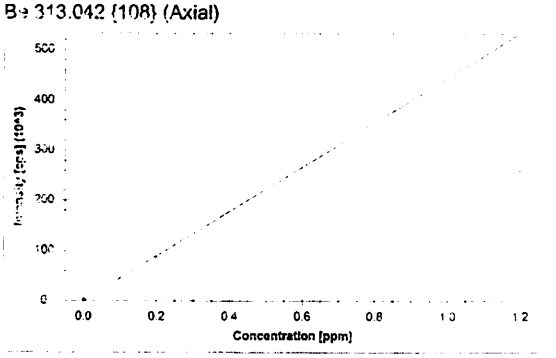
f(x) = 48011.2000*x + 40.5620
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0007 ppm

Ba 493.409 (68) (Radial)



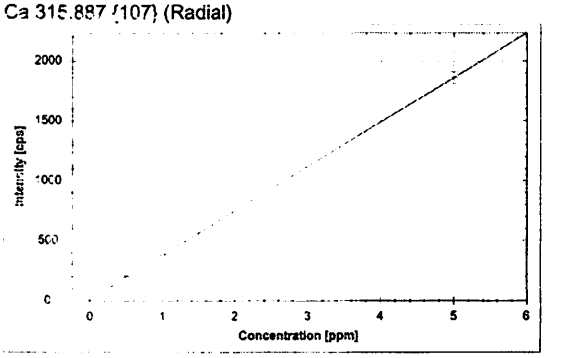
f(x) = 43595.3693*x + 2588.0899
R² = 1.0000
BEC = 0.059 ppm
LoD = 0.0029 ppm

Be 313.042 (108) (Axial)



f(x) = 442562.0652*x + 574.5072
R² = 0.9999
BEC = 0.001 ppm
LoD = 0.0001 ppm

Ca 315.887 (107) (Radial)



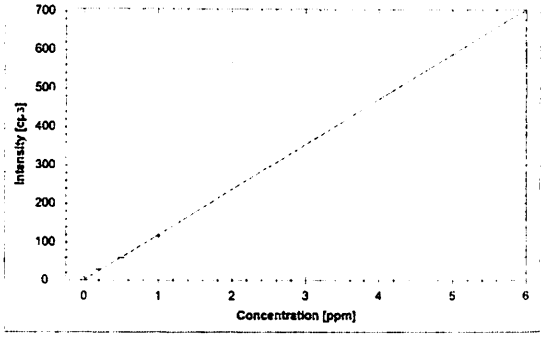
f(x) = 370.5007*x + 8.6971
R² = 0.9999
BEC = 0.023 ppm
LoD = 0.0164 ppm

Calibration Summary

11/21/2020 11:25:34 AM

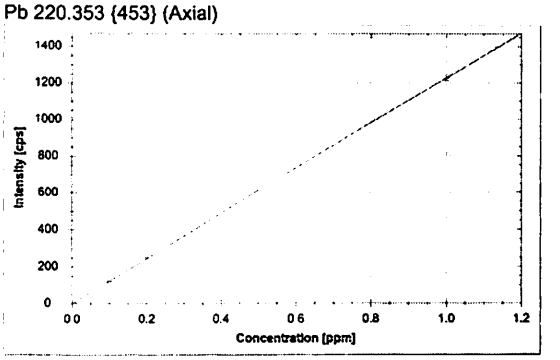
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 117.6384*x + 1.4409
R² = 0.9999
BEC = 0.012 ppm
LoD = 0.0102 ppm

Pb 220.353 {453} (Axial)



f(x) = 1230.7286*x + -3.3825
R² = 1.0000
BEC = -0.003 ppm
LoD = 0.0028 ppm

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LabBook: ICP2_201120A.imexp

ICAL1

Sample type: BLK Analysis started at: 11/20/2020 1:56:39 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.8 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	3.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/20/2020 2:01:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0049 ppm	26.9 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0044 ppm	13.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	243 cps	0.0051 ppm	4.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	864 cps	0.0020 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	198 cps	0.5345 ppm	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	135 cps	0.0097 ppm	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	39 cps	0.0051 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0049 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	285 cps	0.0106 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	31 cps	0.0851 ppm	1.2 %	0.0 ppm
Li 670.784 {50} (Radial)	168 cps	0.0121 ppm	3.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	431 cps	0.0052 ppm	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	17 cps	0.0051 ppm	3.0 %	0.0 ppm
Na 589.592 {57} (Radial)	441 cps	0.2081 ppm	3.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0052 ppm	4.0 %	0.0 ppm
K 766.490 {44} (Radial)	160 cps	0.2637 ppm	5.4 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0078 ppm	32.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	78 cps	0.0055 ppm	4.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	307 cps	0.0051 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	13 cps	0.0099 ppm	3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0049 ppm	9.8 %	0.0 ppm
V 292.402 {115} (Axial)	92 cps	0.0048 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	120 cps	0.0097 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5705 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		99.3769 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	13 cps	0.2324 ppm	2.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	5 cps	0.0111 ppm	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	10 cps	0.0064 ppm	2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.5474 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.0197 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	-4 cps	-0.0059 ppm	174.1 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.2297 ppm	3.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	7 cps	0.0058 ppm	3.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.2932 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.9707 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/20/2020 2:07:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	64 cps	0.0947 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	41 cps	0.0924 ppm	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	23,768 cps	0.4951 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	21,461 cps	0.4923 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	41,980 cps	0.0949 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	186 cps	0.5007 ppm	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,328 cps	0.0950 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	745 cps	0.0977 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	4,976 cps	0.4916 ppm	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	13,019 cps	0.4858 ppm	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	178 cps	0.4933 ppm	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	6,790 cps	0.4898 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	8,096 cps	0.0983 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,606 cps	0.4838 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	20,850 cps	9.8480 ppm	2.1 %	0.2 ppm
Ni 231.604 {445} (Axial)	2,482 cps	0.4944 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	5,863 cps	9.6675 ppm	2.0 %	0.2 ppm
Se 196.090 {472} (Axial)	118 cps	0.4732 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,371 cps	0.0963 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,878 cps	0.0982 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	125 cps	0.0971 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	158 cps	0.0978 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,848 cps	0.0960 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,909 cps	0.2361 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.1354 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		99.4328 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	30 cps	0.5224 ppm	1.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	45 cps	0.1037 ppm	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	760 cps	0.5054 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2509 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	182 cps	0.4873 ppm	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	289 cps	0.4782 ppm	2.4 %	0.0 ppm
Si 251.611 {134} (Radial)	58 cps	0.4890 ppm	1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	124 cps	0.1005 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		99.8480 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.4378 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/20/2020 2:11:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	132 cps	0.1958 ppm	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	86 cps	0.1931 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	48,130 cps	1.0025 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	43,547 cps	0.9989 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	86,444 cps	0.1953 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	370 cps	0.9990 ppm	0.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,732 cps	0.1955 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	2,187 cps	0.1974 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,534 cps	0.2011 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	10,173 cps	1.0050 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	26,312 cps	0.9819 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	360 cps	0.9974 ppm	0.8 %	0.0 ppm
Li 670.784 {50} (Radial)	13,698 cps	0.9881 ppm	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	16,275 cps	0.1976 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,299 cps	0.9939 ppm	0.8 %	0.0 ppm
Na 589.592 {57} (Radial)	42,191 cps	19.9278 ppm	1.4 %	0.3 ppm
Ni 231.604 {445} (Axial)	5,064 cps	1.0089 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	11,933 cps	19.6769 ppm	1.5 %	0.3 ppm
Se 196.090 {472} (Axial)	244 cps	0.9761 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,777 cps	0.1950 ppm	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,842 cps	0.1978 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	255 cps	0.1985 ppm	0.7 %	0.0 ppm
Tl 334.941 {101} (Radial)	319 cps	0.1980 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	3,755 cps	0.1952 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	6,005 cps	0.4874 ppm	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6287 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		96.6061 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	58 cps	1.0066 ppm	2.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	90 cps	0.2088 ppm	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1,499 cps	0.9973 ppm	0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4816 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	367 cps	0.9846 ppm	1.6 %	0.0 ppm
Al 396.152 {85} (Radial)	585 cps	0.9687 ppm	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	116 cps	0.9831 ppm	1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	252 cps	0.2048 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7227 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.7702 %	0.8 %	0.8 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/20/2020 2:16:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	675 cps	1.0014 ppm	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	449 cps	1.0021 ppm	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	218,020 cps	5.0010 ppm	1.5 %	0.1 ppm
Be 313.042 {108} (Axial)	443,203 cps	1.0014 ppm	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,851 cps	4.9967 ppm	2.6 %	0.1 ppm
Cd 228.802 {447} (Axial)	13,995 cps	1.0014 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	11,086 cps	1.0005 ppm	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	50,607 cps	4.9998 ppm	1.3 %	0.1 ppm
Cu 324.754 {104} (Axial)	134,126 cps	5.0050 ppm	1.3 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,804 cps	5.0011 ppm	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	69,365 cps	5.0034 ppm	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	82,424 cps	1.0007 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	16,605 cps	5.0028 ppm	1.4 %	0.1 ppm
Na 589.592 {57} (Radial)	211,783 cps	100.0296 ppm	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	25,092 cps	4.9988 ppm	1.3 %	0.1 ppm
K 766.490 {44} (Radial)	60,706 cps	100.0977 ppm	2.3 %	2.3 ppm
Se 196.090 {472} (Axial)	1,251 cps	5.0075 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	14,261 cps	1.0014 ppm	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	59,889 cps	1.0006 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,285 cps	1.0006 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,613 cps	1.0006 ppm	2.7 %	0.0 ppm
V 292.402 {115} (Axial)	19,264 cps	1.0014 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	30,851 cps	2.5039 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.5269 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		90.3801 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	290 cps	4.9951 ppm	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	429 cps	0.9979 ppm	0.4 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		109.4700 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	1,867 cps	5.0043 ppm	2.3 %	0.1 ppm
Al 396.152 {85} (Radial)	3,026 cps	5.0085 ppm	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	589 cps	5.0033 ppm	2.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	1,229 cps	0.9990 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		93.5823 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.2957 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/20/2020 2:53:16 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3,437 cps	5.0948 ppm	1.2 %	0.1 ppm
As 189.042 {478} (Axial)	2,130 cps	4.7573 ppm	1.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	173 cps	0.0036 ppm	27.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	411 cps	0.0094 ppm	7.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-122 cps	-0.0003 ppm	13.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	27 cps	0.0731 ppm	13.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	424 cps	0.0304 ppm	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	-3 cps	-0.0003 ppm	72.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	8 cps	0.0011 ppm	10.8 %	0.0 ppm
Co 228.616 {447} (Axial)	104,657 cps	10.3399 ppm	1.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	255 cps	0.0095 ppm	3.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	31 cps	0.0853 ppm	20.5 %	0.0 ppm
Li 670.784 {50} (Radial)	71 cps	0.0051 ppm	9.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-120 cps	-0.0015 ppm	7.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	33,957 cps	10.2310 ppm	1.3 %	0.1 ppm
Na 589.592 {57} (Radial)	16 cps	0.0074 ppm	49.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	51,958 cps	10.3510 ppm	1.2 %	0.1 ppm
K 766.490 {44} (Radial)	39 cps	0.0641 ppm	11.1 %	0.0 ppm
Se 196.090 {472} (Axial)	1,206 cps	4.8261 ppm	1.2 %	0.1 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0005 ppm	69.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	118 cps	0.0020 ppm	26.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	6,389 cps	4.9756 ppm	1.3 %	0.1 ppm
Tl 334.941 {101} (Radial)	14 cps	0.0087 ppm	11.7 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	159.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	58,858 cps	4.7770 ppm	1.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		102.4524 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		96.0465 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	4 cps	0.0729 ppm	28.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	2,365 cps	5.5075 ppm	1.0 %	0.1 ppm
Al 167.079 {502} (Axial)	13 cps	0.0089 ppm	30.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.4901 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	16 cps	0.0427 ppm	20.2 %	0.0 ppm
Al 396.152 {85} (Radial)	268 cps	0.4440 ppm	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	11 cps	0.0896 ppm	8.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	6,411 cps	5.2095 ppm	1.1 %	0.1 ppm
Y 224.306 {450} (Axial)		97.6761 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		102.1171 %	0.4 %	0.5 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/19/20 - 11/20/20
		Date Extracted:	11/19/2020

Extra 168037

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111251-42A	**Units:**	mg/L
Lab Code:	IDA001:DU-E4:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111251-42AMS			Duplicate Matrix Spike 20111251-42AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	-0.005643	0.9515	1	95.7	0.9185	1	92.4	75-125	3.53	20
Lead	64.26	65.23 O	1	97.2	62.16 SO	1	-210 *	75-125	4.82	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-42A

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:36:13 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	6 cps	0.0083 ppm	10.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0005 ppm	115.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,891 cps	0.0585 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,479 cps	0.0757 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	141 cps	0.0003 ppm	9.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,625 cps	11.4604 ppm	2.0 %	0.2 ppm
Cd 228.802 {447} (Axial)	115 cps	0.0082 ppm	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0003 ppm	77.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0001 ppm	26.3 %	0.0 ppm
Co 228.616 {447} (Axial)	6 cps	0.0005 ppm	2.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	239 cps	0.0086 ppm	2.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0063 ppm	9.0 %	0.0 ppm
Li 670.784 {50} (Radial)	40 cps	0.0027 ppm	8.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,689 cps	0.0424 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	118.0 %	0.0 ppm
Na 589.592 {57} (Radial)	279,103 cps	124.1468 ppm	1.8 %	2.2 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0040 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	119 cps	0.1955 ppm	4.0 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0035 ppm	69.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	11.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,374 cps	0.0230 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0012 ppm	17.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0033 ppm	25.8 %	0.0 ppm
V 292.402 {115} (Axial)	-9 cps	-0.0004 ppm	37.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	45,497 cps	3.6055 ppm	2.1 %	0.1 ppm
Sc 357.253 {94} (Axial)		91.9049 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		83.7555 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	68 cps	1.1065 ppm	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0013 ppm	73.7 %	0.0 ppm
Al 167.079 {502} (Axial)	17 cps	0.0113 ppm	2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.3601 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	4 cps	0.0098 ppm	24.5 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0084 ppm	60.4 %	0.0 ppm
Si 251.611 {134} (Radial)	54 cps	0.4243 ppm	1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	6,691 cps	5.3559 ppm	2.1 %	0.1 ppm
Y 224.306 {450} (Axial)		90.0142 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.8537 %	0.3 %	0.3 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-42AMS

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:41:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	68 cps	0.0996 ppm	2.6 %	0.0 ppm
As 189.042 {478} (Axial)	40 cps	0.0865 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,716 cps	0.1561 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,748 cps	0.1685 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	40,633 cps	0.0867 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,115 cps	20.1067 ppm	3.0 %	0.6 ppm
Cd 228.802 {447} (Axial)	1,367 cps	0.0968 ppm	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,012 cps	0.0861 ppm	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	613 cps	0.0884 ppm	1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	907 cps	0.0868 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,852 cps	0.1027 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,532 cps	9.1558 ppm	3.0 %	0.3 ppm
Li 670.784 {50} (Radial)	1,445 cps	0.1000 ppm	3.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	11,352 cps	0.1305 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	308 cps	0.0917 ppm	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	298,717 cps	132.8713 ppm	2.2 %	2.9 ppm
Ni 231.604 {445} (Axial)	461 cps	0.0893 ppm	1.7 %	0.0 ppm
K 766.490 {44} (Radial)	6,072 cps	9.9772 ppm	2.9 %	0.3 ppm
Se 196.090 {472} (Axial)	23 cps	0.0845 ppm	2.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,385 cps	0.0926 ppm	0.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,921 cps	0.1159 ppm	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	112 cps	0.0858 ppm	1.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	0.0901 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,833 cps	0.0924 ppm	0.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	47,171 cps	3.7381 ppm	1.8 %	0.1 ppm
Sc 357.253 {94} (Axial)		89.8573 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		82.3263 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	601 cps	9.8017 ppm	3.2 %	0.3 ppm
Tl 190.856 {477} (Axial)	37 cps	0.0850 ppm	2.5 %	0.0 ppm
Al 167.079 {502} (Axial)	177 cps	0.1158 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		81.0459 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	193 cps	0.4730 ppm	3.4 %	0.0 ppm
Al 396.152 {85} (Radial)	60 cps	0.0965 ppm	12.9 %	0.0 ppm
Si 251.611 {134} (Radial)	1,136 cps	8.9207 ppm	3.1 %	0.3 ppm
Pb 220.353 {453} (Axial)	6,830 cps	5.4678 ppm	1.8 %	0.1 ppm
Y 224.306 {450} (Axial)		88.8645 %	0.4 %	0.3 %
Sc 361.384 {93} (Radial)		97.2598 %	0.7 %	0.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-42AMSD

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:46:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	0.0952 ppm	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	38 cps	0.0835 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	7,386 cps	0.1495 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,478 cps	0.1626 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	38,329 cps	0.0818 ppm	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,712 cps	19.1090 ppm	1.8 %	0.3 ppm
Cd 228.802 {447} (Axial)	1,309 cps	0.0927 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	951 cps	0.0809 ppm	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	589 cps	0.0849 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	870 cps	0.0834 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,725 cps	0.0981 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,375 cps	8.7468 ppm	1.7 %	0.1 ppm
Li 670.784 {50} (Radial)	1,377 cps	0.0952 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	10,814 cps	0.1243 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	294 cps	0.0875 ppm	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	286,558 cps	127.4627 ppm	1.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	443 cps	0.0858 ppm	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	5,826 cps	9.5721 ppm	2.0 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0795 ppm	0.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,307 cps	0.0874 ppm	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,623 cps	0.1109 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	108 cps	0.0832 ppm	1.2 %	0.0 ppm
Tl 334.941 {101} (Radial)	161 cps	0.0863 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	1,743 cps	0.0879 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	45,397 cps	3.5976 ppm	1.5 %	0.1 ppm
Sc 357.253 {94} (Axial)		90.6072 %	0.2 %	0.1 %
Sc 188.060 {479} (Axial)		82.3057 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	568 cps	9.2504 ppm	1.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	35 cps	0.0819 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	169 cps	0.1103 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		81.2083 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	186 cps	0.4546 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	58 cps	0.0931 ppm	5.0 %	0.0 ppm
Si 251.611 {134} (Radial)	1,089 cps	8.5514 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	6,580 cps	5.2676 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		89.1925 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.5475 %	0.1 %	0.1 %

QTEGRA

Simple Sample Report

11/21/2020 11:26:14 AM

20111251-42A

Sample type: UNKNOWN Analysis started at: 11/20/2020 4:29:32 PM

Standard DF: 10 ← already in #'s below

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0193 ppm	52.4 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0087 ppm	78.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	273 cps	0.0568 ppm	4.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	642 cps	0.1472 ppm	3.6 %	0.0 ppm
Be 313.042 {108} (Axial)	43 cps	0.0010 ppm	11.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	458 cps	12.3545 ppm	1.6 %	0.2 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0122 ppm	3.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	-1 cps	-0.0008 ppm	158.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0010 ppm	80.0 %	0.0 ppm
Co 228.616 {447} (Axial)	-1 cps	-0.0005 ppm	118.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	60 cps	0.0225 ppm	12.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0010 ppm	1,799.4 %	0.0 ppm
Li 670.784 {50} (Radial)	4 cps	0.0032 ppm	102.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	365 cps	0.0443 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0010 ppm	56.9 %	0.0 ppm
Na 589.592 {57} (Radial)	27,233 cps	128.6290 ppm	2.0 %	2.6 ppm
Ni 231.604 {445} (Axial)	2 cps	0.0037 ppm	35.2 %	0.0 ppm
K 766.490 {44} (Radial)	24 cps	0.3919 ppm	26.9 %	0.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0272 ppm	65.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	16 cps	0.0112 ppm	5.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	149 cps	0.0249 ppm	4.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	-0.0015 ppm	251.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0001 ppm	19,499.6 %	0.0 ppm
V 292.402 {115} (Axial)	-10 cps	-0.0051 ppm	37.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,577 cps	3.7149 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.4603 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.5195 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	8 cps	1.4238 ppm	0.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0192 ppm	9.1 %	0.0 ppm
Al 167.079 {502} (Axial)	-6 cps	-0.0373 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.4858 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1 cps	0.0304 ppm	138.5 %	0.0 ppm
Al 396.152 {85} (Radial)	-8 cps	-0.1342 ppm	26.9 %	0.0 ppm
Si 251.611 {134} (Radial)	5 cps	0.4112 ppm	31.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	719 cps	5.8417 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		95.0984 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.8542 %	0.1 %	0.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-42AMS

Sample type: UNKNOWN Analysis started at: 11/20/2020 4:34:41 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.0996 ppm	7.3 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0793 ppm	8.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	719 cps	0.1498 ppm	0.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	997 cps	0.2286 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	3,708 cps	0.0838 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	776 cps	20.9541 ppm	0.7 %	0.1 ppm
Cd 228.802 {447} (Axial)	142 cps	0.1015 ppm	2.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	96 cps	0.0866 ppm	3.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	72 cps	0.0947 ppm	3.4 %	0.0 ppm
Co 228.616 {447} (Axial)	91 cps	0.0902 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	304 cps	0.1134 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	338 cps	9.3793 ppm	0.6 %	0.1 ppm
Li 670.784 {50} (Radial)	138 cps	0.0997 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,094 cps	0.1328 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	32 cps	0.0955 ppm	3.2 %	0.0 ppm
Na 589.592 {57} (Radial)	28,420 cps	134.2353 ppm	1.2 %	1.6 ppm
Ni 231.604 {445} (Axial)	48 cps	0.0955 ppm	2.3 %	0.0 ppm
K 766.490 {44} (Radial)	604 cps	9.9591 ppm	0.9 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0770 ppm	14.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	147 cps	0.1031 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	707 cps	0.1182 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0864 ppm	3.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	14 cps	0.0855 ppm	12.3 %	0.0 ppm
V 292.402 {115} (Axial)	164 cps	0.0852 ppm	3.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,698 cps	3.8131 ppm	2.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.7008 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		94.0320 %	1.0 %	0.9 %
Mg 279.079 {121} (Radial)	62 cps	10.6259 ppm	2.7 %	0.3 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0945 ppm	4.4 %	0.0 ppm
Al 167.079 {502} (Axial)	11 cps	0.0755 ppm	6.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.9931 %	1.0 %	0.9 %
B 249.773 {135} (Radial)	19 cps	0.5207 ppm	6.0 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0125 ppm	423.5 %	0.1 ppm
Si 251.611 {134} (Radial)	107 cps	9.0715 ppm	0.8 %	0.1 ppm
Pb 220.353 {453} (Axial)	730 cps	5.9301 ppm	2.2 %	0.1 ppm
Y 224.306 {450} (Axial)		94.2347 %	0.6 %	0.5 %
Sc 361.384 {93} (Radial)		102.3969 %	0.6 %	0.6 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-42AMSD

Sample type: UNKNOWN Analysis started at: 11/20/2020 4:39:47 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.1021 ppm	8.9 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0813 ppm	4.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	683 cps	0.1424 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	997 cps	0.2286 ppm	2.7 %	0.0 ppm
Be 313.042 {108} (Axial)	3,489 cps	0.0788 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	734 cps	19.8230 ppm	0.9 %	0.2 ppm
Cd 228.802 {447} (Axial)	135 cps	0.0967 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	88 cps	0.0796 ppm	3.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	69 cps	0.0906 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	87 cps	0.0858 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	298 cps	0.1111 ppm	3.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	319 cps	8.8537 ppm	1.0 %	0.1 ppm
Li 670.784 {50} (Radial)	130 cps	0.0940 ppm	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,037 cps	0.1259 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	30 cps	0.0897 ppm	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	26,886 cps	126.9892 ppm	1.3 %	1.6 ppm
Ni 231.604 {445} (Axial)	45 cps	0.0897 ppm	3.7 %	0.0 ppm
K 766.490 {44} (Radial)	580 cps	9.5665 ppm	2.8 %	0.3 ppm
Se 196.090 {472} (Axial)	2 cps	0.0674 ppm	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	135 cps	0.0944 ppm	3.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	664 cps	0.1109 ppm	0.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0860 ppm	7.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	13 cps	0.0822 ppm	4.4 %	0.0 ppm
V 292.402 {115} (Axial)	151 cps	0.0785 ppm	4.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,467 cps	3.6256 ppm	1.5 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.4353 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.8911 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	58 cps	9.9311 ppm	2.3 %	0.2 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0789 ppm	16.8 %	0.0 ppm
Al 167.079 {502} (Axial)	69 cps	0.4562 ppm	3.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.7041 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	18 cps	0.4804 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	20 cps	0.3333 ppm	26.3 %	0.1 ppm
Si 251.611 {134} (Radial)	101 cps	8.5585 ppm	1.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	695 cps	5.6509 ppm	1.7 %	0.1 ppm
Y 224.306 {450} (Axial)		94.2785 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.9365 %	0.7 %	0.8 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

batch 114640

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111251-35A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-B4-TE:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111251-35AMS			Duplicate Matrix Spike 20111251-35AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	5.531	12.33	7.704	88.2	12.65	7.669	92.9	75-125	2.62	20
Lead	1460	1510 SO	7.704	661 *	1507 SO	7.669	624 *	75-125	0.2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-35A

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:13:38 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	32 cps	0.4777 ppm	3.7 %	0.0 ppm
As 189.042 {478} (Axial)	3 cps	0.0729 ppm	17.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	726 cps	0.1512 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,002 cps	0.2298 ppm	1.0 %	0.0 ppm
Be 313.042 {108} (Axial)	53 cps	0.0012 ppm	5.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,067 cps	352.6853 ppm	0.5 %	1.8 ppm
Cd 228.802 {447} (Axial)	17 cps	0.0122 ppm	8.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	54 cps	0.0483 ppm	3.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0472 ppm	3.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21 cps	0.0207 ppm	3.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,792 cps	1.0418 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,471 cps	68.5030 ppm	0.5 %	0.4 ppm
Li 670.784 {50} (Radial)	46 cps	0.0329 ppm	14.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	13,483 cps	1.6369 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0060 ppm	10.1 %	0.0 ppm
Na 589.592 {57} (Radial)	115 cps	0.5437 ppm	8.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	37 cps	0.0740 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	139 cps	2.2961 ppm	1.0 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0305 ppm	32.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0194 ppm	3.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	833 cps	0.1391 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	15 cps	0.1133 ppm	3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	143 cps	0.8858 ppm	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	119 cps	0.0616 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	34,968 cps	28.3812 ppm	3.6 %	1.0 ppm
Sc 357.253 {94} (Axial)		101.0325 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.8166 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	1,228 cps	211.7287 ppm	0.3 %	0.6 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0172 ppm	29.6 %	0.0 ppm
Al 167.079 {502} (Axial)	2,330 cps	15.4996 ppm	3.1 %	0.5 ppm
Sc 227.318 {448} (Axial)		93.1319 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	7 cps	0.1754 ppm	12.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,061 cps	17.5565 ppm	0.6 %	0.1 ppm
Si 251.611 {134} (Radial)	140 cps	11.8660 ppm	0.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,368 cps	19.2375 ppm	3.7 %	0.7 ppm
Y 224.306 {450} (Axial)		97.2177 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		103.3125 %	0.4 %	0.4 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-35AMS

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:18:41 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	41 cps	0.6088 ppm	1.7 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1601 ppm	3.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,127 cps	0.2348 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,320 cps	0.3027 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	4,038 cps	0.0912 ppm	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,411 cps	334.9846 ppm	1.7 %	5.5 ppm
Cd 228.802 {447} (Axial)	151 cps	0.1084 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	162 cps	0.1466 ppm	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	121 cps	0.1581 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	120 cps	0.1189 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,362 cps	1.2547 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,870 cps	79.5772 ppm	1.4 %	1.1 ppm
Li 670.784 {50} (Radial)	179 cps	0.1288 ppm	4.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	15,379 cps	1.8671 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	35 cps	0.1066 ppm	2.8 %	0.0 ppm
Na 589.592 {57} (Radial)	2,174 cps	10.2666 ppm	1.2 %	0.1 ppm
Ni 231.604 {445} (Axial)	76 cps	0.1519 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	843 cps	13.9052 ppm	1.4 %	0.2 ppm
Se 196.090 {472} (Axial)	2 cps	0.0666 ppm	46.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	168 cps	0.1181 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,490 cps	0.2489 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	53 cps	0.4104 ppm	1.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	198 cps	1.2267 ppm	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	328 cps	0.1707 ppm	3.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	19,914 cps	16.1624 ppm	0.8 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.8591 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		96.3230 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	1,179 cps	203.2220 ppm	1.6 %	3.3 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0917 ppm	10.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,300 cps	21.9513 ppm	0.9 %	0.2 ppm
Sc 227.318 {448} (Axial)		92.7725 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	25 cps	0.6770 ppm	4.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,349 cps	22.3327 ppm	1.7 %	0.4 ppm
Si 251.611 {134} (Radial)	305 cps	25.9221 ppm	1.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	2,413 cps	19.6063 ppm	0.8 %	0.2 ppm
Y 224.306 {450} (Axial)		97.1537 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		103.4425 %	0.5 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-35AMSD

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:23:42 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	43 cps	0.6363 ppm	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1645 ppm	5.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,213 cps	0.2527 ppm	0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,401 cps	0.3214 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	4,125 cps	0.0932 ppm	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,041 cps	351.9915 ppm	0.3 %	1.0 ppm
Cd 228.802 {447} (Axial)	147 cps	0.1049 ppm	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	169 cps	0.1523 ppm	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	119 cps	0.1561 ppm	4.0 %	0.0 ppm
Co 228.616 {447} (Axial)	116 cps	0.1149 ppm	3.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	3,496 cps	1.3044 ppm	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,905 cps	108.2578 ppm	0.1 %	0.1 ppm
Li 670.784 {50} (Radial)	199 cps	0.1436 ppm	4.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	15,769 cps	1.9144 ppm	0.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	34 cps	0.1015 ppm	3.6 %	0.0 ppm
Na 589.592 {57} (Radial)	2,320 cps	10.9577 ppm	0.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	73 cps	0.1461 ppm	3.8 %	0.0 ppm
K 766.490 {44} (Radial)	896 cps	14.7665 ppm	1.1 %	0.2 ppm
Se 196.090 {472} (Axial)	2 cps	0.0668 ppm	37.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	170 cps	0.1194 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,533 cps	0.2562 ppm	0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	43 cps	0.3318 ppm	3.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	193 cps	1.1962 ppm	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	333 cps	0.1733 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	21,970 cps	17.8318 ppm	4.0 %	0.7 ppm
Sc 357.253 {94} (Axial)		100.4930 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		97.1483 %	1.9 %	1.8 %
Mg 279.079 {121} (Radial)	1,252 cps	215.8586 ppm	0.1 %	0.3 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0858 ppm	12.0 %	0.0 ppm
Al 167.079 {502} (Axial)	3,195 cps	21.2557 ppm	3.6 %	0.8 ppm
Sc 227.318 {448} (Axial)		93.4991 %	1.8 %	1.7 %
B 249.773 {135} (Radial)	28 cps	0.7539 ppm	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,447 cps	23.9552 ppm	0.4 %	0.1 ppm
Si 251.611 {134} (Radial)	304 cps	25.8268 ppm	0.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,419 cps	19.6575 ppm	4.0 %	0.8 ppm
Y 224.306 {450} (Axial)		97.7409 %	1.6 %	1.6 %
Sc 361.384 {93} (Radial)		102.8678 %	0.2 %	0.2 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

Bulk 1484.42

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111251-43A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-A5:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111251-43AMS			Duplicate Matrix Spike 20111251-43AMSD				
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	58.49	64.84 O	7.205	88.1	54.52 SO	7.53	-52.8 *	75-125	17.3	20
Lead	1003	433.0 SO	7.205	-7910 *	559.4 SRO	7.53	-5890 *	75-125	25.5*	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-43A

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:14:00 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	175 cps	2.5903 ppm	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	35 cps	0.7853 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,524 cps	0.5257 ppm	4.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,496 cps	0.5726 ppm	5.5 %	0.0 ppm
Be 313.042 {108} (Axial)	132 cps	0.0030 ppm	7.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,558 cps	69.0529 ppm	4.1 %	2.8 ppm
Cd 228.802 {447} (Axial)	46 cps	0.0329 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	113 cps	0.1016 ppm	2.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	86 cps	0.1134 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0365 ppm	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	6,324 cps	2.3597 ppm	0.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,793 cps	160.6095 ppm	3.9 %	6.3 ppm
Li 670.784 {50} (Radial)	61 cps	0.0440 ppm	25.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	21,139 cps	2.5663 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0126 ppm	7.0 %	0.0 ppm
Na 589.592 {57} (Radial)	-20 cps	-0.0930 ppm	44.8 %	0.0 ppm
Ni 231.604 {445} (Axial)	113 cps	0.2249 ppm	0.3 %	0.0 ppm
K 766.490 {44} (Radial)	281 cps	4.6288 ppm	7.7 %	0.4 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0170 ppm	45.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	32 cps	0.0222 ppm	16.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	585 cps	0.0978 ppm	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	162 cps	1.2586 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	107 cps	0.6663 ppm	5.1 %	0.0 ppm
V 292.402 {115} (Axial)	218 cps	0.1132 ppm	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	29,582 cps	24.0091 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		104.4625 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		100.4327 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	187 cps	32.1523 ppm	3.7 %	1.2 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0258 ppm	33.3 %	0.0 ppm
Al 167.079 {502} (Axial)	5,029 cps	33.4548 ppm	0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		96.2513 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	11 cps	0.2995 ppm	12.4 %	0.0 ppm
Al 396.152 {85} (Radial)	2,220 cps	36.7516 ppm	4.2 %	1.6 ppm
Si 251.611 {134} (Radial)	171 cps	14.5131 ppm	4.4 %	0.6 ppm
Pb 220.353 {453} (Axial)	1,656 cps	13.4587 ppm	0.4 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5041 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		106.3874 %	2.0 %	2.1 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-43AMS

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:19:02 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	37 cps	0.5521 ppm	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	40 cps	0.9003 ppm	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,961 cps	0.6168 ppm	4.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,933 cps	0.6727 ppm	4.2 %	0.0 ppm
Be 313.042 {108} (Axial)	3,991 cps	0.0902 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,634 cps	71.0858 ppm	4.2 %	3.0 ppm
Cd 228.802 {447} (Axial)	173 cps	0.1237 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	232 cps	0.2094 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	182 cps	0.2382 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	140 cps	0.1381 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,220 cps	0.8285 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	6,180 cps	171.3312 ppm	3.9 %	6.6 ppm
Li 670.784 {50} (Radial)	240 cps	0.1728 ppm	4.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,779 cps	2.7655 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	36 cps	0.1092 ppm	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	1,929 cps	9.1091 ppm	4.2 %	0.4 ppm
Ni 231.604 {445} (Axial)	90 cps	0.1794 ppm	2.1 %	0.0 ppm
K 766.490 {44} (Radial)	1,051 cps	17.3332 ppm	5.8 %	1.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0788 ppm	39.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	169 cps	0.1187 ppm	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,213 cps	0.2027 ppm	3.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	49 cps	0.3813 ppm	0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	168 cps	1.0443 ppm	4.3 %	0.0 ppm
V 292.402 {115} (Axial)	486 cps	0.2526 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,212 cps	10.7229 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		104.7795 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		100.0997 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	239 cps	41.1686 ppm	4.1 %	1.7 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0838 ppm	8.3 %	0.0 ppm
Al 167.079 {502} (Axial)	7,215 cps	47.9982 ppm	0.8 %	0.4 ppm
Sc 227.318 {448} (Axial)		95.9988 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	30 cps	0.8024 ppm	6.5 %	0.1 ppm
Al 396.152 {85} (Radial)	3,264 cps	54.0212 ppm	4.1 %	2.2 ppm
Si 251.611 {134} (Radial)	265 cps	22.5167 ppm	3.9 %	0.9 ppm
Pb 220.353 {453} (Axial)	740 cps	6.0096 ppm	1.0 %	0.1 ppm
Y 224.306 {450} (Axial)		98.7759 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		105.3476 %	0.7 %	0.8 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-43AMSD

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:24:04 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	102 cps	1.5192 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.7236 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,962 cps	0.6169 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,865 cps	0.6571 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	4,085 cps	0.0923 ppm	6.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,712 cps	73.2002 ppm	2.3 %	1.7 ppm
Cd 228.802 {447} (Axial)	168 cps	0.1206 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	234 cps	0.2111 ppm	7.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	178 cps	0.2332 ppm	0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	137 cps	0.1356 ppm	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,919 cps	1.8356 ppm	6.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	5,902 cps	163.6385 ppm	2.3 %	3.8 ppm
Li 670.784 {50} (Radial)	229 cps	0.1649 ppm	4.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,223 cps	2.6980 ppm	6.0 %	0.2 ppm
Mo 202.030 {467} (Axial)	36 cps	0.1090 ppm	2.8 %	0.0 ppm
Na 589.592 {57} (Radial)	1,961 cps	9.2612 ppm	3.3 %	0.3 ppm
Ni 231.604 {445} (Axial)	122 cps	0.2423 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	1,073 cps	17.6868 ppm	3.4 %	0.6 ppm
Se 196.090 {472} (Axial)	2 cps	0.0938 ppm	5.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	168 cps	0.1183 ppm	3.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,203 cps	0.2010 ppm	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	96 cps	0.7509 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	165 cps	1.0260 ppm	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	480 cps	0.2493 ppm	6.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,317 cps	11.6201 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		101.6542 %	4.9 %	5.0 %
Sc 188.060 {479} (Axial)		100.5987 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	246 cps	42.3617 ppm	2.0 %	0.8 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0782 ppm	12.6 %	0.0 ppm
Al 167.079 {502} (Axial)	6,956 cps	46.2703 ppm	0.9 %	0.4 ppm
Sc 227.318 {448} (Axial)		96.4322 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	31 cps	0.8181 ppm	6.6 %	0.1 ppm
Al 396.152 {85} (Radial)	3,245 cps	53.7108 ppm	2.4 %	1.3 ppm
Si 251.611 {134} (Radial)	272 cps	23.1008 ppm	2.3 %	0.5 ppm
Pb 220.353 {453} (Axial)	914 cps	7.4290 ppm	1.1 %	0.1 ppm
Y 224.306 {450} (Axial)		99.5262 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		106.7535 %	0.9 %	0.9 %

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/20/2020
		Date Extracted:	11/19/2020

batch 140634

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111584-02A	**Units:**	mg/L
Lab Code:	BatchQC	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

<- ref sample in SDG

		Matrix Spike 20111584-02AMS			Duplicate Matrix Spike 20111584-02AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	-0.002717	0.9350	1	93.8	0.9031	1	90.6	75-125	3.47	20
Lead	0.2176	1.160	1	94.2	1.123	1	90.5	75-125	3.24	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/19/2020
Sample Matrix:	Water	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201119A

LCS-168037

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.08954	0.1	89.5	80-120
Lead	0.09922	0.1	99.2	80-120

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LCS-168037

Sample type: UNKNOWN Analysis started at: 11/19/2020 6:10:50 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	60 cps	0.0878 ppm	0.2 %	0.0 ppm
As 189.042 {478} (Axial)	37 cps	0.0814 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,675 cps	0.0946 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	5,033 cps	0.1095 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	37,112 cps	0.0792 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,312 cps	8.2062 ppm	1.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,206 cps	0.0854 ppm	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	948 cps	0.0806 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	608 cps	0.0876 ppm	0.3 %	0.0 ppm
Co 228.616 {447} (Axial)	901 cps	0.0863 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,553 cps	0.0919 ppm	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,442 cps	8.9214 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	1,402 cps	0.0969 ppm	1.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,229 cps	0.0831 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	300 cps	0.0895 ppm	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	20,031 cps	8.9101 ppm	1.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	440 cps	0.0854 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	5,789 cps	9.5126 ppm	1.8 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0778 ppm	2.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,308 cps	0.0874 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,413 cps	0.0907 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	111 cps	0.0857 ppm	0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	160 cps	0.0858 ppm	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	1,710 cps	0.0862 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,015 cps	0.0804 ppm	0.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3190 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		87.9666 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	511 cps	8.3362 ppm	1.8 %	0.1 ppm
Tl 190.856 {477} (Axial)	39 cps	0.0896 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	156 cps	0.1024 ppm	0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.9395 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	186 cps	0.4538 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	52 cps	0.0832 ppm	15.1 %	0.0 ppm
Si 251.611 {134} (Radial)	1,066 cps	8.3697 ppm	1.9 %	0.2 ppm
Pb 220.353 {453} (Axial)	113 cps	0.0902 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.9951 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.2029 %	0.7 %	0.7 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/19/2020
Sample Matrix:	Water	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201119A

LCS-168036

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.09101	0.1	91.0	80-120
Lead	0.1006	0.1	101	80-120

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

LCS-168036

Sample type: UNKNOWN Analysis started at: 11/19/2020 10:01:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	60 cps	0.0890 ppm	2.3 %	0.0 ppm
As 189.042 {478} (Axial)	38 cps	0.0827 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,663 cps	0.0944 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,988 cps	0.1085 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	38,027 cps	0.0812 ppm	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,337 cps	8.2674 ppm	0.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,223 cps	0.0866 ppm	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	977 cps	0.0831 ppm	1.7 %	0.0 ppm
Cr 205.560 {464} (Axial)	608 cps	0.0877 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	905 cps	0.0866 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,592 cps	0.0933 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,469 cps	8.9909 ppm	1.0 %	0.1 ppm
Li 670.784 {50} (Radial)	1,378 cps	0.0953 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,377 cps	0.0848 ppm	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	304 cps	0.0904 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	19,820 cps	8.8163 ppm	1.1 %	0.1 ppm
Ni 231.604 {445} (Axial)	445 cps	0.0862 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	5,851 cps	9.6136 ppm	0.7 %	0.1 ppm
Se 196.090 {472} (Axial)	21 cps	0.0798 ppm	2.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,319 cps	0.0882 ppm	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,394 cps	0.0904 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	113 cps	0.0866 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	159 cps	0.0852 ppm	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	1,751 cps	0.0883 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,025 cps	0.0812 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.8633 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		89.4015 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	526 cps	8.5651 ppm	0.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	39 cps	0.0906 ppm	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	158 cps	0.1031 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.4011 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	187 cps	0.4570 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	52 cps	0.0823 ppm	3.6 %	0.0 ppm
Si 251.611 {134} (Radial)	1,048 cps	8.2345 ppm	1.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	114 cps	0.0915 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		92.5693 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		100.6138 %	0.5 %	0.5 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/20/2020
Sample Matrix:	Soil	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201120A

LCS-168040

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.575	5	91.5	80-120
Lead	5.189	5	104	80-120

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LCS-168040

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:03:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	68 cps	0.1004 ppm	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	41 cps	0.0915 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,830 cps	0.1006 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,630 cps	0.1062 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	39,763 cps	0.0898 ppm	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,506 cps	9.4630 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,356 cps	0.0970 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,040 cps	0.0938 ppm	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	810 cps	0.1063 ppm	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	989 cps	0.0977 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,734 cps	0.1020 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,719 cps	10.3093 ppm	1.3 %	0.1 ppm
Li 670.784 {50} (Radial)	1,421 cps	0.1025 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,802 cps	0.0947 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	343 cps	0.1035 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	20,141 cps	9.5130 ppm	1.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	491 cps	0.0977 ppm	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	6,361 cps	10.4878 ppm	1.9 %	0.2 ppm
Se 196.090 {472} (Axial)	22 cps	0.0862 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,390 cps	0.0976 ppm	0.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	6,168 cps	0.1031 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	125 cps	0.0974 ppm	1.4 %	0.0 ppm
Tl 334.941 {101} (Radial)	151 cps	0.0936 ppm	3.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,889 cps	0.0982 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,135 cps	0.0921 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.5990 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		92.7188 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	578 cps	9.9699 ppm	1.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	43 cps	0.0992 ppm	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	180 cps	0.1197 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		89.2159 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	191 cps	0.5110 ppm	1.1 %	0.0 ppm
Al 396.152 {85} (Radial)	58 cps	0.0955 ppm	2.3 %	0.0 ppm
Si 251.611 {134} (Radial)	1,097 cps	9.3223 ppm	1.9 %	0.2 ppm
Pb 220.353 {453} (Axial)	128 cps	0.1038 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.1270 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.4327 %	0.5 %	0.6 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/20/2020
Sample Matrix:	Soil	**Date Extracted:**	11/19/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201120A

LCS-168042

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.4	5	88.0	80-120
Lead	4.915	5	98.3	80-120

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

LCS-168042

Sample type: UNKNOWN Analysis started at: 11/20/2020 9:33:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	65 cps	0.0963 ppm	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	39 cps	0.0880 ppm	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,577 cps	0.0953 ppm	1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,300 cps	0.0986 ppm	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	37,820 cps	0.0855 ppm	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,355 cps	9.0558 ppm	0.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,302 cps	0.0931 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	997 cps	0.0900 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	777 cps	0.1019 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	952 cps	0.0940 ppm	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,589 cps	0.0966 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,534 cps	9.7980 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	1,340 cps	0.0966 ppm	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,432 cps	0.0902 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	328 cps	0.0987 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	19,145 cps	9.0426 ppm	1.5 %	0.1 ppm
Ni 231.604 {445} (Axial)	470 cps	0.0936 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	5,990 cps	9.8769 ppm	1.5 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0831 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,324 cps	0.0930 ppm	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	5,832 cps	0.0974 ppm	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	122 cps	0.0947 ppm	0.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	145 cps	0.0898 ppm	1.3 %	0.0 ppm
V 292.402 {115} (Axial)	1,796 cps	0.0934 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,078 cps	0.0875 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.5681 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		95.4793 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	552 cps	9.5080 ppm	0.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	41 cps	0.0952 ppm	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	169 cps	0.1124 ppm	1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.1252 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	181 cps	0.4862 ppm	1.7 %	0.0 ppm
Al 396.152 {85} (Radial)	52 cps	0.0855 ppm	6.2 %	0.0 ppm
Si 251.611 {134} (Radial)	1,028 cps	8.7420 ppm	1.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	121 cps	0.0983 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9483 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		104.9835 %	0.4 %	0.4 %

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dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/19/20 12:20						
Arsenic	SW6010D	ICP2_201119A	0.9994	1	99.9	90-110
Barium	SW6010D	ICP2_201119A	1.056	1	106	90-110
Cadmium	SW6010D	ICP2_201119A	1.015	1	101	90-110
Chromium	SW6010D	ICP2_201119A	1.035	1	104	90-110
Lead	SW6010D	ICP2_201119A	1.055	1	106	90-110
Selenium	SW6010D	ICP2_201119A	1.005	1	101	90-110
Silver	SW6010D	ICP2_201119A	1.081	1	108	90-110
CCV 11/19/20 13:07						
Arsenic	SW6010D	ICP2_201119A	0.4927	0.5	98.5	90-110
Barium	SW6010D	ICP2_201119A	2.508	2.5	100	90-110
Cadmium	SW6010D	ICP2_201119A	0.5006	0.5	100	90-110
Chromium	SW6010D	ICP2_201119A	0.4739	0.5	94.8	90-110
Lead	SW6010D	ICP2_201119A	0.505	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.472	2.5	98.9	90-110
Silver	SW6010D	ICP2_201119A	0.4771	0.5	95.4	90-110
CCV 11/19/20 14:18						
Arsenic	SW6010D	ICP2_201119A	0.4946	0.5	98.9	90-110
Barium	SW6010D	ICP2_201119A	2.453	2.5	98.1	90-110
Cadmium	SW6010D	ICP2_201119A	0.5031	0.5	101	90-110
Chromium	SW6010D	ICP2_201119A	0.4643	0.5	92.9	90-110
Lead	SW6010D	ICP2_201119A	0.5045	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.504	2.5	100	90-110
Silver	SW6010D	ICP2_201119A	0.4708	0.5	94.2	90-110
CCV 11/19/20 15:20						
Arsenic	SW6010D	ICP2_201119A	0.4897	0.5	97.9	90-110
Barium	SW6010D	ICP2_201119A	2.479	2.5	99.1	90-110
Cadmium	SW6010D	ICP2_201119A	0.4983	0.5	99.7	90-110
Chromium	SW6010D	ICP2_201119A	0.465	0.5	93.0	90-110
Lead	SW6010D	ICP2_201119A	0.499	0.5	99.8	90-110
Selenium	SW6010D	ICP2_201119A	2.46	2.5	98.4	90-110
Silver	SW6010D	ICP2_201119A	0.4737	0.5	94.7	90-110
CCV 11/19/20 16:29						
Arsenic	SW6010D	ICP2_201119A	0.5013	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.563	2.5	103	90-110
Cadmium	SW6010D	ICP2_201119A	0.5098	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4756	0.5	95.1	90-110

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/19/2020 12:20:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	690 cps	1.0166 ppm	101.663 %	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	457 cps	0.9994 ppm	99.939 %	0.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	53,383 cps	1.0803 ppm		1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	48,545 cps	1.0557 ppm	105.567 %	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	473,894 cps	1.0117 ppm	101.167 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,571 cps	6.3696 ppm	106.159 %	1.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	14,332 cps	1.0147 ppm	101.474 %	0.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	12,172 cps	1.0353 ppm	103.530 %	1.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	7,281 cps	1.0495 ppm		0.2 %	0.0 ppm
Co 228.616 {447} (Axial)	10,799 cps	1.0340 ppm	103.404 %	0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	28,935 cps	1.0419 ppm	104.190 %	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	406 cps	1.0510 ppm	105.104 %	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	14,968 cps	1.0353 ppm	103.534 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	91,564 cps	1.0525 ppm	105.246 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,536 cps	1.0532 ppm	105.319 %	0.2 %	0.0 ppm
Na 589.592 {57} (Radial)	48,974 cps	21.7841 ppm	103.734 %	1.7 %	0.4 ppm
Ni 231.604 {445} (Axial)	5,363 cps	1.0394 ppm	103.941 %	0.2 %	0.0 ppm
K 766.490 {44} (Radial)	13,321 cps	21.8884 ppm	104.231 %	1.5 %	0.3 ppm
Se 196.090 {472} (Axial)	268 cps	1.0054 ppm	100.540 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	16,181 cps	1.0813 ppm	108.132 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	62,665 cps	1.0496 ppm	104.958 %	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,345 cps	1.0344 ppm		0.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,915 cps	1.0292 ppm	102.918 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	20,910 cps	1.0539 ppm	105.391 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,686 cps	1.0053 ppm	100.531 %	0.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.1786 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.0731 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	64 cps	1.0471 ppm	104.715 %	2.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	460 cps	1.0666 ppm	106.660 %	0.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1,613 cps	1.0553 ppm		0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.7777 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	432 cps	1.0560 ppm	105.605 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	669 cps	1.0678 ppm	106.783 %	2.8 %	0.0 ppm
Si 251.611 {134} (Radial)	130 cps	1.0225 ppm		3.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,318 cps	1.0552 ppm	105.518 %	0.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9787 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		96.2123 %		0.2 %	0.2 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/19/20 16:29						
Lead	SW6010D	ICP2_201119A	0.5093	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.5	2.5	100.0	90-110
Silver	SW6010D	ICP2_201119A	0.4832	0.5	96.6	90-110
CCV 11/19/20 17:19						
Arsenic	SW6010D	ICP2_201119A	0.4981	0.5	99.6	90-110
Barium	SW6010D	ICP2_201119A	2.491	2.5	99.6	90-110
Cadmium	SW6010D	ICP2_201119A	0.5085	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4683	0.5	93.7	90-110
Lead	SW6010D	ICP2_201119A	0.5095	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.496	2.5	99.8	90-110
Silver	SW6010D	ICP2_201119A	0.4751	0.5	95.0	90-110
CCV 11/19/20 18:21						
Arsenic	SW6010D	ICP2_201119A	0.5022	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.476	2.5	99.1	90-110
Cadmium	SW6010D	ICP2_201119A	0.5122	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4707	0.5	94.1	90-110
Lead	SW6010D	ICP2_201119A	0.51	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.498	2.5	99.9	90-110
Silver	SW6010D	ICP2_201119A	0.4806	0.5	96.1	90-110
CCV 11/19/20 19:22						
Arsenic	SW6010D	ICP2_201119A	0.4992	0.5	99.8	90-110
Barium	SW6010D	ICP2_201119A	2.556	2.5	102	90-110
Cadmium	SW6010D	ICP2_201119A	0.5078	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4656	0.5	93.1	90-110
Lead	SW6010D	ICP2_201119A	0.5064	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.465	2.5	98.6	90-110
Silver	SW6010D	ICP2_201119A	0.4756	0.5	95.1	90-110
CCV 11/19/20 20:29						
Arsenic	SW6010D	ICP2_201119A	0.4988	0.5	99.8	90-110
Barium	SW6010D	ICP2_201119A	2.495	2.5	99.8	90-110
Cadmium	SW6010D	ICP2_201119A	0.5063	0.5	101	90-110
Chromium	SW6010D	ICP2_201119A	0.4673	0.5	93.5	90-110
Lead	SW6010D	ICP2_201119A	0.5035	0.5	101	90-110
Selenium	SW6010D	ICP2_201119A	2.439	2.5	97.6	90-110
Silver	SW6010D	ICP2_201119A	0.4797	0.5	95.9	90-110

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/19/20 21:36						
Arsenic	SW6010D	ICP2_201119A	0.5098	0.5	102	90-110
Barium	SW6010D	ICP2_201119A	2.559	2.5	102	90-110
Cadmium	SW6010D	ICP2_201119A	0.5207	0.5	104	90-110
Chromium	SW6010D	ICP2_201119A	0.4726	0.5	94.5	90-110
Lead	SW6010D	ICP2_201119A	0.5175	0.5	104	90-110
Selenium	SW6010D	ICP2_201119A	2.495	2.5	99.8	90-110
Silver	SW6010D	ICP2_201119A	0.481	0.5	96.2	90-110
CCV 11/19/20 22:42						
Arsenic	SW6010D	ICP2_201119A	0.5018	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.53	2.5	101	90-110
Cadmium	SW6010D	ICP2_201119A	0.511	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4694	0.5	93.9	90-110
Lead	SW6010D	ICP2_201119A	0.5096	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.454	2.5	98.2	90-110
Silver	SW6010D	ICP2_201119A	0.4793	0.5	95.9	90-110
CCV 11/19/20 23:49						
Arsenic	SW6010D	ICP2_201119A	0.5011	0.5	100	90-110
Barium	SW6010D	ICP2_201119A	2.515	2.5	101	90-110
Cadmium	SW6010D	ICP2_201119A	0.5102	0.5	102	90-110
Chromium	SW6010D	ICP2_201119A	0.4718	0.5	94.4	90-110
Lead	SW6010D	ICP2_201119A	0.5098	0.5	102	90-110
Selenium	SW6010D	ICP2_201119A	2.448	2.5	97.9	90-110
Silver	SW6010D	ICP2_201119A	0.4785	0.5	95.7	90-110
CCV 11/20/20 00:25						
Arsenic	SW6010D	ICP2_201119A	0.4913	0.5	98.3	90-110
Barium	SW6010D	ICP2_201119A	2.482	2.5	99.3	90-110
Cadmium	SW6010D	ICP2_201119A	0.5006	0.5	100	90-110
Chromium	SW6010D	ICP2_201119A	0.4663	0.5	93.3	90-110
Lead	SW6010D	ICP2_201119A	0.5003	0.5	100	90-110
Selenium	SW6010D	ICP2_201119A	2.411	2.5	96.5	90-110
Silver	SW6010D	ICP2_201119A	0.4726	0.5	94.5	90-110
ICV 11/20/20 14:21						
Arsenic	SW6010D	ICP2_201120A	0.9628	1	96.3	90-110
Barium	SW6010D	ICP2_201120A	1.027	1	103	90-110
Calcium	SW6010D	ICP2_201120A	6.141	6	102	90-110
Iron	SW6010D	ICP2_201120A	1.015	1	102	90-110

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 9:36:02 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	363 cps	0.5347 ppm	106.935 %	0.4 %	0.0 ppm
As 189.042 {478} (Axial)	233 cps	0.5098 ppm	101.959 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	131,897 cps	2.6692 ppm		2.0 %	0.1 ppm
Ba 493.409 {68} (Radial)	117,693 cps	2.5594 ppm	102.375 %	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	225,721 cps	0.4819 ppm	96.374 %	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	948 cps	2.3480 ppm	93.919 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	7,355 cps	0.5207 ppm	104.145 %	0.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,556 cps	0.4726 ppm	94.520 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,556 cps	0.5126 ppm		0.5 %	0.0 ppm
Co 228.616 {447} (Axial)	26,687 cps	2.5555 ppm	102.219 %	0.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	72,031 cps	2.5937 ppm	103.746 %	2.0 %	0.1 ppm
Fe 259.940 {130} (Radial)	987 cps	2.5581 ppm	102.323 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	37,977 cps	2.6268 ppm	105.072 %	2.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,915 cps	0.4818 ppm	96.356 %	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,784 cps	2.6167 ppm	104.667 %	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	112,550 cps	50.0632 ppm	100.126 %	2.2 %	1.1 ppm
Ni 231.604 {445} (Axial)	13,271 cps	2.5722 ppm	102.889 %	0.4 %	0.0 ppm
K 766.490 {44} (Radial)	32,605 cps	53.5743 ppm	107.149 %	2.4 %	1.3 ppm
Se 196.090 {472} (Axial)	665 cps	2.4954 ppm	99.815 %	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,197 cps	0.4810 ppm	96.192 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,577 cps	0.5121 ppm	102.427 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	665 cps	0.5114 ppm		0.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	843 cps	0.4528 ppm	90.558 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	10,079 cps	0.5080 ppm	101.601 %	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	16,098 cps	1.2757 ppm	102.057 %	0.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.9610 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		85.3821 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	145 cps	2.3613 ppm	94.452 %	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	230 cps	0.5328 ppm	106.558 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	3,609 cps	2.3612 ppm		0.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		92.2687 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	1,019 cps	2.4926 ppm	99.705 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	1,529 cps	2.4420 ppm	97.681 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	310 cps	2.4350 ppm		1.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	646 cps	0.5175 ppm	103.506 %	0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		88.3377 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.5601 %		0.4 %	0.4 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/19/2020 11:49:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	354 cps	0.5216 ppm	104.327 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	229 cps	0.5011 ppm	100.228 %	0.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	129,916 cps	2.6292 ppm		3.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	115,650 cps	2.5150 ppm	100.598 %	3.1 %	0.1 ppm
Be 313.042 {108} (Axial)	224,895 cps	0.4801 ppm	96.021 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	936 cps	2.3181 ppm	92.726 %	2.9 %	0.1 ppm
Cd 228.802 {447} (Axial)	7,206 cps	0.5102 ppm	102.041 %	0.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,546 cps	0.4718 ppm	94.350 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,505 cps	0.5052 ppm		0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	26,244 cps	2.5130 ppm	100.520 %	0.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	70,986 cps	2.5561 ppm	102.242 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	965 cps	2.5001 ppm	100.003 %	3.2 %	0.1 ppm
Li 670.784 {50} (Radial)	37,408 cps	2.5874 ppm	103.497 %	3.1 %	0.1 ppm
Mn 257.610 {131} (Axial)	41,759 cps	0.4800 ppm	95.998 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,623 cps	2.5686 ppm	102.746 %	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	111,650 cps	49.6626 ppm	99.325 %	3.1 %	1.6 ppm
Ni 231.604 {445} (Axial)	13,045 cps	2.5283 ppm	101.134 %	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	32,113 cps	52.7661 ppm	105.532 %	3.1 %	1.7 ppm
Se 196.090 {472} (Axial)	652 cps	2.4484 ppm	97.934 %	0.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	7,160 cps	0.4785 ppm	95.692 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	30,021 cps	0.5028 ppm	100.567 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	655 cps	0.5039 ppm		0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	835 cps	0.4485 ppm	89.705 %	3.3 %	0.0 ppm
V 292.402 {115} (Axial)	9,979 cps	0.5029 ppm	100.589 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,798 cps	1.2519 ppm	100.155 %	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3235 %		0.4 %	0.3 %
Sc 188.060 {479} (Axial)		87.9008 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	143 cps	2.3362 ppm	93.449 %	3.3 %	0.1 ppm
Tl 190.856 {477} (Axial)	226 cps	0.5242 ppm	104.840 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	3,571 cps	2.3363 ppm		0.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.0687 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	1,000 cps	2.4461 ppm	97.845 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	1,512 cps	2.4146 ppm	96.583 %	3.6 %	0.1 ppm
Si 251.611 {134} (Radial)	304 cps	2.3878 ppm		3.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	637 cps	0.5098 ppm	101.959 %	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		90.7746 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		97.8086 %		0.6 %	0.5 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/20/2020 2:21:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	662 cps	0.9820 ppm	98.202 %	2.9 %	0.0 ppm
As 189.042 {478} (Axial)	431 cps	0.9628 ppm	96.277 %	3.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	49,425 cps	1.0294 ppm		1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	44,759 cps	1.0267 ppm	102.668 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	426,978 cps	0.9648 ppm	96.479 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,275 cps	6.1411 ppm	102.352 %	1.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	13,701 cps	0.9804 ppm	98.037 %	2.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	10,987 cps	0.9916 ppm	99.165 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	7,597 cps	0.9961 ppm		3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	10,076 cps	0.9955 ppm	99.551 %	2.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	27,175 cps	1.0141 ppm	101.406 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	366 cps	1.0153 ppm	101.531 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	14,342 cps	1.0345 ppm	103.455 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	83,030 cps	1.0080 ppm	100.801 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	3,361 cps	1.0125 ppm	101.252 %	2.9 %	0.0 ppm
Na 589.592 {57} (Radial)	44,994 cps	21.2517 ppm	101.198 %	2.0 %	0.4 ppm
Ni 231.604 {445} (Axial)	5,018 cps	0.9997 ppm	99.973 %	2.8 %	0.0 ppm
K 766.490 {44} (Radial)	13,027 cps	21.4804 ppm	102.288 %	1.7 %	0.4 ppm
Se 196.090 {472} (Axial)	244 cps	0.9776 ppm	97.761 %	2.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	14,918 cps	1.0475 ppm	104.753 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	60,883 cps	1.0172 ppm	101.722 %	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,282 cps	0.9985 ppm		3.1 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,617 cps	1.0032 ppm	100.315 %	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	19,394 cps	1.0081 ppm	100.810 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,942 cps	0.9692 ppm	96.921 %	3.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.5758 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		94.6307 %		1.7 %	1.6 %
Mg 279.079 {121} (Radial)	59 cps	1.0213 ppm	102.128 %	0.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	443 cps	1.0310 ppm	103.097 %	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	1,482 cps	0.9860 ppm		3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.2244 %		1.6 %	1.5 %
B 249.773 {135} (Radial)	381 cps	1.0222 ppm	102.221 %	1.2 %	0.0 ppm
Al 396.152 {85} (Radial)	596 cps	0.9862 ppm	98.624 %	0.9 %	0.0 ppm
Si 251.611 {134} (Radial)	120 cps	1.0181 ppm		1.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,248 cps	1.0139 ppm	101.394 %	2.7 %	0.0 ppm
Y 224.306 {450} (Axial)		96.9888 %		1.7 %	1.6 %
Sc 361.384 {93} (Radial)		99.3617 %		0.5 %	0.5 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/20/20 14:21						
Lead	SW6010D	ICP2_201120A	1.014	1	101	90-110
Magnesium	SW6010D	ICP2_201120A	1.021	1	102	90-110
Manganese	SW6010D	ICP2_201120A	1.008	1	101	90-110
Potassium	SW6010D	ICP2_201120A	21.48	21	102	90-110
Silicon	SW6010D	ICP2_201120A	1.018	1	102	90-110
Sodium	SW6010D	ICP2_201120A	21.25	21	101	90-110
Strontium	SW6010D	ICP2_201120A	1.017	1	102	90-110
CCV 11/20/20 15:08						
Arsenic	SW6010D	ICP2_201120A	0.4932	0.5	98.6	90-110
Barium	SW6010D	ICP2_201120A	2.467	2.5	98.7	90-110
Calcium	SW6010D	ICP2_201120A	2.359	2.5	94.4	90-110
Iron	SW6010D	ICP2_201120A	2.412	2.5	96.5	90-110
Lead	SW6010D	ICP2_201120A	0.5034	0.5	101	90-110
Magnesium	SW6010D	ICP2_201120A	2.348	2.5	93.9	90-110
Manganese	SW6010D	ICP2_201120A	0.4805	0.5	96.1	90-110
Potassium	SW6010D	ICP2_201120A	49.64	50	99.3	90-110
Silicon	SW6010D	ICP2_201120A	2.351	2.5	94.1	90-110
Sodium	SW6010D	ICP2_201120A	49.23	50	98.5	90-110
Strontium	SW6010D	ICP2_201120A	0.4946	0.5	98.9	90-110
CCV 11/20/20 16:14						
Arsenic	SW6010D	ICP2_201120A	0.5031	0.5	101	90-110
Barium	SW6010D	ICP2_201120A	2.517	2.5	101	90-110
Calcium	SW6010D	ICP2_201120A	2.381	2.5	95.3	90-110
Iron	SW6010D	ICP2_201120A	2.528	2.5	101	90-110
Lead	SW6010D	ICP2_201120A	0.5124	0.5	102	90-110
Magnesium	SW6010D	ICP2_201120A	2.43	2.5	97.2	90-110
Manganese	SW6010D	ICP2_201120A	0.4719	0.5	94.4	90-110
Potassium	SW6010D	ICP2_201120A	50.79	50	102	90-110
Silicon	SW6010D	ICP2_201120A	2.45	2.5	98.0	90-110
Sodium	SW6010D	ICP2_201120A	48.67	50	97.3	90-110
Strontium	SW6010D	ICP2_201120A	0.5094	0.5	102	90-110
CCV 11/20/20 17:15						
Arsenic	SW6010D	ICP2_201120A	0.4953	0.5	99.1	90-110
Barium	SW6010D	ICP2_201120A	2.423	2.5	96.9	90-110
Calcium	SW6010D	ICP2_201120A	2.269	2.5	90.8	90-110
Iron	SW6010D	ICP2_201120A	2.45	2.5	98.0	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/20/20 17:15						
Lead	SW6010D	ICP2_201120A	0.5046	0.5	101	90-110
Magnesium	SW6010D	ICP2_201120A	2.339	2.5	93.5	90-110
Manganese	SW6010D	ICP2_201120A	0.4692	0.5	93.8	90-110
Potassium	SW6010D	ICP2_201120A	50.01	50	100	90-110
Silicon	SW6010D	ICP2_201120A	2.379	2.5	95.2	90-110
Sodium	SW6010D	ICP2_201120A	46.82	50	93.6	90-110
Strontium	SW6010D	ICP2_201120A	0.4957	0.5	99.1	90-110
CCV 11/20/20 18:27						
Arsenic	SW6010D	ICP2_201120A	0.4837	0.5	96.7	90-110
Barium	SW6010D	ICP2_201120A	2.39	2.5	95.6	90-110
Calcium	SW6010D	ICP2_201120A	2.26	2.5	90.4	90-110
Iron	SW6010D	ICP2_201120A	2.459	2.5	98.4	90-110
Lead	SW6010D	ICP2_201120A	0.4958	0.5	99.2	90-110
Magnesium	SW6010D	ICP2_201120A	2.37	2.5	94.8	90-110
Manganese	SW6010D	ICP2_201120A	0.4557	0.5	91.1	90-110
Potassium	SW6010D	ICP2_201120A	50.09	50	100	90-110
Silicon	SW6010D	ICP2_201120A	2.377	2.5	95.1	90-110
Sodium	SW6010D	ICP2_201120A	46.14	50	92.3	90-110
Strontium	SW6010D	ICP2_201120A	0.4919	0.5	98.4	90-110
CCV 11/20/20 19:28						
Arsenic	SW6010D	ICP2_201120A	0.4844	0.5	96.9	90-110
Barium	SW6010D	ICP2_201120A	2.475	2.5	99.0	90-110
Calcium	SW6010D	ICP2_201120A	2.358	2.5	94.3	90-110
Iron	SW6010D	ICP2_201120A	2.597	2.5	104	90-110
Lead	SW6010D	ICP2_201120A	0.4969	0.5	99.4	90-110
Magnesium	SW6010D	ICP2_201120A	2.488	2.5	99.5	90-110
Manganese	SW6010D	ICP2_201120A	0.4708	0.5	94.2	90-110
Potassium	SW6010D	ICP2_201120A	52.04	50	104	90-110
Silicon	SW6010D	ICP2_201120A	2.5	2.5	100.0	90-110
Sodium	SW6010D	ICP2_201120A	48.1	50	96.2	90-110
Strontium	SW6010D	ICP2_201120A	0.512	0.5	102	90-110
CCV 11/20/20 20:33						
Arsenic	SW6010D	ICP2_201120A	0.4811	0.5	96.2	90-110
Barium	SW6010D	ICP2_201120A	2.423	2.5	96.9	90-110
Calcium	SW6010D	ICP2_201120A	2.323	2.5	92.9	90-110
Iron	SW6010D	ICP2_201120A	2.55	2.5	102	90-110

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 6:27:21 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	339 cps	0.5025 ppm	100.506 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	217 cps	0.4837 ppm	96.744 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	115,659 cps	2.4090 ppm		2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	104,195 cps	2.3901 ppm	95.602 %	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	203,521 cps	0.4599 ppm	91.974 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	837 cps	2.2603 ppm	90.411 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,913 cps	0.4947 ppm	98.930 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,013 cps	0.4524 ppm	90.487 %	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,929 cps	0.5151 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	24,658 cps	2.4361 ppm	97.444 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	64,389 cps	2.4027 ppm	96.109 %	2.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	887 cps	2.4591 ppm	98.363 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	33,417 cps	2.4104 ppm	96.416 %	2.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	37,540 cps	0.4557 ppm	91.149 %	2.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,248 cps	2.4850 ppm	99.400 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	97,685 cps	46.1385 ppm	92.277 %	2.2 %	1.0 ppm
Ni 231.604 {445} (Axial)	12,361 cps	2.4625 ppm	98.501 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	30,376 cps	50.0874 ppm	100.175 %	2.5 %	1.3 ppm
Se 196.090 {472} (Axial)	586 cps	2.3437 ppm	93.748 %	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,576 cps	0.4618 ppm	92.355 %	2.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,441 cps	0.4919 ppm	98.379 %	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	635 cps	0.4948 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	690 cps	0.4283 ppm	85.653 %	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	9,168 cps	0.4766 ppm	95.311 %	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,990 cps	1.2166 ppm	97.327 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.1381 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		92.5173 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	137 cps	2.3698 ppm	94.791 %	2.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	219 cps	0.5089 ppm	101.789 %	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	3,408 cps	2.2673 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.4763 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	893 cps	2.3938 ppm	95.751 %	2.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,362 cps	2.2539 ppm	90.154 %	1.5 %	0.0 ppm
Si 251.611 {134} (Radial)	280 cps	2.3775 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	610 cps	0.4958 ppm	99.150 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.9856 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.6444 %		0.2 %	0.2 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/20/20 20:33						
Lead	SW6010D	ICP2_201120A	0.4926	0.5	98.5	90-110
Magnesium	SW6010D	ICP2_201120A	2.431	2.5	97.2	90-110
Manganese	SW6010D	ICP2_201120A	0.4628	0.5	92.6	90-110
Potassium	SW6010D	ICP2_201120A	50.77	50	102	90-110
Silicon	SW6010D	ICP2_201120A	2.433	2.5	97.3	90-110
Sodium	SW6010D	ICP2_201120A	46.62	50	93.2	90-110
Strontium	SW6010D	ICP2_201120A	0.5009	0.5	100	90-110
CCV 11/20/20 21:38						
Arsenic	SW6010D	ICP2_201120A	0.4797	0.5	95.9	90-110
Barium	SW6010D	ICP2_201120A	2.39	2.5	95.6	90-110
Calcium	SW6010D	ICP2_201120A	2.313	2.5	92.5	90-110
Iron	SW6010D	ICP2_201120A	2.519	2.5	101	90-110
Lead	SW6010D	ICP2_201120A	0.4934	0.5	98.7	90-110
Magnesium	SW6010D	ICP2_201120A	2.422	2.5	96.9	90-110
Manganese	SW6010D	ICP2_201120A	0.464	0.5	92.8	90-110
Potassium	SW6010D	ICP2_201120A	49.95	50	99.9	90-110
Silicon	SW6010D	ICP2_201120A	2.419	2.5	96.8	90-110
Sodium	SW6010D	ICP2_201120A	46.39	50	92.8	90-110
Strontium	SW6010D	ICP2_201120A	0.4928	0.5	98.6	90-110
CCV 11/20/20 22:49						
Arsenic	SW6010D	ICP2_201120A	0.4781	0.5	95.6	90-110
Barium	SW6010D	ICP2_201120A	2.45	2.5	98.0	90-110
Calcium	SW6010D	ICP2_201120A	2.35	2.5	94.0	90-110
Iron	SW6010D	ICP2_201120A	2.556	2.5	102	90-110
Lead	SW6010D	ICP2_201120A	0.4915	0.5	98.3	90-110
Magnesium	SW6010D	ICP2_201120A	2.515	2.5	101	90-110
Manganese	SW6010D	ICP2_201120A	0.4629	0.5	92.6	90-110
Potassium	SW6010D	ICP2_201120A	50.79	50	102	90-110
Silicon	SW6010D	ICP2_201120A	2.462	2.5	98.5	90-110
Sodium	SW6010D	ICP2_201120A	47.04	50	94.1	90-110
Strontium	SW6010D	ICP2_201120A	0.5051	0.5	101	90-110
CCV 11/20/20 23:55						
Arsenic	SW6010D	ICP2_201120A	0.4715	0.5	94.3	90-110
Barium	SW6010D	ICP2_201120A	2.316	2.5	92.7	90-110
Calcium	SW6010D	ICP2_201120A	2.239	2.5	89.6 *	90-110
Iron	SW6010D	ICP2_201120A	2.401	2.5	96.0	90-110

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/20/2020 9:38:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	333 cps	0.4943 ppm	98.859 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	215 cps	0.4797 ppm	95.933 %	0.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	115,794 cps	2.4118 ppm		3.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	104,187 cps	2.3899 ppm	95.594 %	3.6 %	0.1 ppm
Be 313.042 {108} (Axial)	207,395 cps	0.4686 ppm	93.725 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	857 cps	2.3131 ppm	92.526 %	3.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	6,861 cps	0.4909 ppm	98.186 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	5,140 cps	0.4639 ppm	92.785 %	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,911 cps	0.5128 ppm		1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	24,496 cps	2.4201 ppm	96.805 %	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	64,926 cps	2.4228 ppm	96.912 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	908 cps	2.5186 ppm	100.744 %	3.0 %	0.1 ppm
Li 670.784 {50} (Radial)	33,421 cps	2.4107 ppm	96.429 %	3.8 %	0.1 ppm
Mn 257.610 {131} (Axial)	38,223 cps	0.4640 ppm	92.808 %	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	8,184 cps	2.4659 ppm	98.634 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	98,225 cps	46.3939 ppm	92.788 %	3.9 %	1.8 ppm
Ni 231.604 {445} (Axial)	12,274 cps	2.4453 ppm	97.811 %	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	30,295 cps	49.9534 ppm	99.907 %	4.1 %	2.0 ppm
Se 196.090 {472} (Axial)	575 cps	2.3011 ppm	92.042 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,685 cps	0.4694 ppm	93.884 %	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	29,495 cps	0.4928 ppm	98.558 %	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	634 cps	0.4940 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	696 cps	0.4321 ppm	86.426 %	3.6 %	0.0 ppm
V 292.402 {115} (Axial)	9,288 cps	0.4828 ppm	96.563 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,865 cps	1.2065 ppm	96.520 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.5064 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.2754 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	141 cps	2.4224 ppm	96.896 %	3.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	217 cps	0.5048 ppm	100.969 %	0.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,429 cps	2.2814 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.2371 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	900 cps	2.4134 ppm	96.537 %	3.5 %	0.1 ppm
Al 396.152 {85} (Radial)	1,382 cps	2.2870 ppm	91.481 %	3.4 %	0.1 ppm
Si 251.611 {134} (Radial)	285 cps	2.4195 ppm		3.7 %	0.1 ppm
Pb 220.353 {453} (Axial)	607 cps	0.4934 ppm	98.675 %	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.5169 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.4447 %		0.9 %	0.9 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/20/20 23:55						
Lead	SW6010D	ICP2_201120A	0.4842	0.5	96.8	90-110
Magnesium	SW6010D	ICP2_201120A	2.339	2.5	93.6	90-110
Manganese	SW6010D	ICP2_201120A	0.4518	0.5	90.4	90-110
Potassium	SW6010D	ICP2_201120A	48.43	50	96.9	90-110
Silicon	SW6010D	ICP2_201120A	2.329	2.5	93.2	90-110
Sodium	SW6010D	ICP2_201120A	44.79	50	89.6 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4753	0.5	95.1	90-110
CCV 11/21/20 01:03						
Arsenic	SW6010D	ICP2_201120A	0.4774	0.5	95.5	90-110
Barium	SW6010D	ICP2_201120A	2.394	2.5	95.8	90-110
Calcium	SW6010D	ICP2_201120A	2.309	2.5	92.4	90-110
Iron	SW6010D	ICP2_201120A	2.492	2.5	99.7	90-110
Lead	SW6010D	ICP2_201120A	0.4917	0.5	98.3	90-110
Magnesium	SW6010D	ICP2_201120A	2.458	2.5	98.3	90-110
Manganese	SW6010D	ICP2_201120A	0.4554	0.5	91.1	90-110
Potassium	SW6010D	ICP2_201120A	49.7	50	99.4	90-110
Silicon	SW6010D	ICP2_201120A	2.414	2.5	96.6	90-110
Sodium	SW6010D	ICP2_201120A	45.94	50	91.9	90-110
Strontium	SW6010D	ICP2_201120A	0.4926	0.5	98.5	90-110
CCV 11/21/20 02:10						
Arsenic	SW6010D	ICP2_201120A	0.4627	0.5	92.5	90-110
Barium	SW6010D	ICP2_201120A	2.254	2.5	90.2	90-110
Calcium	SW6010D	ICP2_201120A	2.225	2.5	89.0 *	90-110
Iron	SW6010D	ICP2_201120A	2.376	2.5	95.0	90-110
Lead	SW6010D	ICP2_201120A	0.4789	0.5	95.8	90-110
Magnesium	SW6010D	ICP2_201120A	2.347	2.5	93.9	90-110
Manganese	SW6010D	ICP2_201120A	0.4371	0.5	87.4 *	90-110
Potassium	SW6010D	ICP2_201120A	46.63	50	93.3	90-110
Silicon	SW6010D	ICP2_201120A	2.284	2.5	91.4	90-110
Sodium	SW6010D	ICP2_201120A	43.36	50	86.7 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4624	0.5	92.5	90-110
CCV 11/21/20 03:17						
Arsenic	SW6010D	ICP2_201120A	0.4694	0.5	93.9	90-110
Barium	SW6010D	ICP2_201120A	2.35	2.5	94.0	90-110
Calcium	SW6010D	ICP2_201120A	2.32	2.5	92.8	90-110
Iron	SW6010D	ICP2_201120A	2.474	2.5	99.0	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 03:17						
Lead	SW6010D	ICP2_201120A	0.4856	0.5	97.1	90-110
Magnesium	SW6010D	ICP2_201120A	2.457	2.5	98.3	90-110
Manganese	SW6010D	ICP2_201120A	0.4503	0.5	90.1	90-110
Potassium	SW6010D	ICP2_201120A	49.09	50	98.2	90-110
Silicon	SW6010D	ICP2_201120A	2.389	2.5	95.5	90-110
Sodium	SW6010D	ICP2_201120A	45.03	50	90.1	90-110
Strontium	SW6010D	ICP2_201120A	0.4834	0.5	96.7	90-110
CCV 11/21/20 04:18						
Arsenic	SW6010D	ICP2_201120A	0.4647	0.5	92.9	90-110
Barium	SW6010D	ICP2_201120A	2.307	2.5	92.3	90-110
Calcium	SW6010D	ICP2_201120A	2.336	2.5	93.4	90-110
Iron	SW6010D	ICP2_201120A	2.468	2.5	98.7	90-110
Lead	SW6010D	ICP2_201120A	0.4776	0.5	95.5	90-110
Magnesium	SW6010D	ICP2_201120A	2.393	2.5	95.7	90-110
Manganese	SW6010D	ICP2_201120A	0.4542	0.5	90.8	90-110
Potassium	SW6010D	ICP2_201120A	48.1	50	96.2	90-110
Silicon	SW6010D	ICP2_201120A	2.321	2.5	92.9	90-110
Sodium	SW6010D	ICP2_201120A	44.25	50	88.5 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4781	0.5	95.6	90-110
CCV 11/21/20 05:31						
Arsenic	SW6010D	ICP2_201120A	0.4504	0.5	90.1	90-110
Barium	SW6010D	ICP2_201120A	2.16	2.5	86.4 *	90-110
Calcium	SW6010D	ICP2_201120A	2.138	2.5	85.5 *	90-110
Iron	SW6010D	ICP2_201120A	2.289	2.5	91.6	90-110
Lead	SW6010D	ICP2_201120A	0.4671	0.5	93.4	90-110
Magnesium	SW6010D	ICP2_201120A	2.262	2.5	90.5	90-110
Manganese	SW6010D	ICP2_201120A	0.4262	0.5	85.2 *	90-110
Potassium	SW6010D	ICP2_201120A	45.58	50	91.2	90-110
Silicon	SW6010D	ICP2_201120A	2.194	2.5	87.8 *	90-110
Sodium	SW6010D	ICP2_201120A	41.85	50	83.7 *	90-110
Strontium	SW6010D	ICP2_201120A	0.447	0.5	89.4 *	90-110
CCV 11/21/20 06:01						
Arsenic	SW6010D	ICP2_201120A	0.4391	0.5	87.8 *	90-110
Barium	SW6010D	ICP2_201120A	2.184	2.5	87.3 *	90-110
Calcium	SW6010D	ICP2_201120A	2.171	2.5	86.9 *	90-110
Iron	SW6010D	ICP2_201120A	2.301	2.5	92.0	90-110

does not bracket samples

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 06:01						
Lead	SW6010D	ICP2_201120A	0.4569	0.5	91.4	90-110
Magnesium	SW6010D	ICP2_201120A	2.324	2.5	93.0	90-110
Manganese	SW6010D	ICP2_201120A	0.4281	0.5	85.6 *	90-110
Potassium	SW6010D	ICP2_201120A	46.17	50	92.3	90-110
Silicon	SW6010D	ICP2_201120A	2.227	2.5	89.1 *	90-110
Sodium	SW6010D	ICP2_201120A	42.2	50	84.4 *	90-110
Strontium	SW6010D	ICP2_201120A	0.4504	0.5	90.1	90-110
ICV 11/21/20 15:14						
Aluminum	SW6010D	ICP2_201121A	1.063	1	106	90-110
Antimony	SW6010D	ICP2_201121A	0.9981	1	99.8	90-110
Arsenic	SW6010D	ICP2_201121A	0.9697	1	97.0	90-110
Barium	SW6010D	ICP2_201121A	1.054	1	105	90-110
Beryllium	SW6010D	ICP2_201121A	0.9887	1	98.9	90-110
Boron	SW6010D	ICP2_201121A	1.064	1	106	90-110
Cadmium	SW6010D	ICP2_201121A	0.9995	1	99.9	90-110
Calcium	SW6010D	ICP2_201121A	6.453	6	108	90-110
Chromium	SW6010D	ICP2_201121A	1.022	1	102	90-110
Cobalt	SW6010D	ICP2_201121A	1.013	1	101	90-110
Copper	SW6010D	ICP2_201121A	1.013	1	101	90-110
Iron	SW6010D	ICP2_201121A	1.054	1	105	90-110
Lead	SW6010D	ICP2_201121A	1.036	1	104	90-110
Lithium	SW6010D	ICP2_201121A	1.032	1	103	90-110
Magnesium	SW6010D	ICP2_201121A	1.053	1	105	90-110
Manganese	SW6010D	ICP2_201121A	1.029	1	103	90-110
Molybdenum	SW6010D	ICP2_201121A	1.029	1	103	90-110
Nickel	SW6010D	ICP2_201121A	1.018	1	102	90-110
Potassium	SW6010D	ICP2_201121A	21.45	21	102	90-110
Selenium	SW6010D	ICP2_201121A	0.9875	1	98.8	90-110
Silicon	SW6010D	ICP2_201121A	1.079	1	108	90-110
Silver	SW6010D	ICP2_201121A	1.056	1	106	90-110
Sodium	SW6010D	ICP2_201121A	21.61	21	103	90-110
Strontium	SW6010D	ICP2_201121A	1.054	1	105	90-110
Thallium	SW6010D	ICP2_201121A	1.056	1	106	90-110
Tin	SW6010D	ICP2_201121A	1.026	1	103	90-110
Titanium	SW6010D	ICP2_201121A	1.045	1	104	90-110
Vanadium	SW6010D	ICP2_201121A	1.02	1	102	90-110

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/21/2020 3:14:04 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	608 cps	0.9981 ppm	99.807 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	413 cps	0.9697 ppm	96.970 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	38,992 cps	1.0481 ppm		1.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	31,362 cps	1.0539 ppm	105.388 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	373,177 cps	0.9887 ppm	98.869 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,541 cps	6.4534 ppm	107.557 %	1.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	12,280 cps	0.9995 ppm	99.947 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,624 cps	1.0223 ppm	102.232 %	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	6,651 cps	0.9950 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	8,243 cps	1.0128 ppm	101.276 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	26,062 cps	1.0131 ppm	101.309 %	1.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	272 cps	1.0538 ppm	105.377 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	15,255 cps	1.0322 ppm	103.215 %	1.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	72,494 cps	1.0292 ppm	102.916 %	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,815 cps	1.0287 ppm	102.868 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	40,077 cps	21.6101 ppm	102.905 %	1.7 %	0.4 ppm
Ni 231.604 {445} (Axial)	4,164 cps	1.0181 ppm	101.806 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	12,083 cps	21.4529 ppm	102.157 %	1.6 %	0.3 ppm
Se 196.090 {472} (Axial)	297 cps	0.9875 ppm	98.750 %	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	13,722 cps	1.0565 ppm	105.650 %	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	43,953 cps	1.0538 ppm	105.377 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,068 cps	1.0259 ppm		0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,367 cps	1.0447 ppm	104.473 %	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	17,773 cps	1.0197 ppm	101.966 %	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,419 cps	0.9883 ppm	98.830 %	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8873 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.7838 %		1.0 %	1.0 %
Mg 279.079 {121} (Radial)	44 cps	1.0528 ppm	105.282 %	3.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	382 cps	1.0557 ppm	105.569 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1,217 cps	0.9602 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.5877 %		1.0 %	0.9 %
B 249.773 {135} (Radial)	399 cps	1.0635 ppm	106.355 %	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	480 cps	1.0627 ppm	106.273 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	96 cps	1.0787 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,041 cps	1.0356 ppm	103.563 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		97.4327 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.5422 %		0.2 %	0.2 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/21/20 15:14						
Zinc	SW6010D	ICP2_201121A	0.9883	1	98.8	90-110
CCV 11/21/20 16:00						
Aluminum	SW6010D	ICP2_201121A	2.489	2.5	99.6	90-110
Antimony	SW6010D	ICP2_201121A	0.4908	0.5	98.2	90-110
Arsenic	SW6010D	ICP2_201121A	0.4867	0.5	97.3	90-110
Barium	SW6010D	ICP2_201121A	2.492	2.5	99.7	90-110
Beryllium	SW6010D	ICP2_201121A	0.4935	0.5	98.7	90-110
Boron	SW6010D	ICP2_201121A	2.454	2.5	98.1	90-110
Cadmium	SW6010D	ICP2_201121A	0.4917	0.5	98.3	90-110
Calcium	SW6010D	ICP2_201121A	2.503	2.5	100	90-110
Chromium	SW6010D	ICP2_201121A	0.4924	0.5	98.5	90-110
Cobalt	SW6010D	ICP2_201121A	2.49	2.5	99.6	90-110
Copper	SW6010D	ICP2_201121A	2.445	2.5	97.8	90-110
Iron	SW6010D	ICP2_201121A	2.469	2.5	98.8	90-110
Lead	SW6010D	ICP2_201121A	0.5021	0.5	100	90-110
Lithium	SW6010D	ICP2_201121A	2.442	2.5	97.7	90-110
Magnesium	SW6010D	ICP2_201121A	2.506	2.5	100	90-110
Manganese	SW6010D	ICP2_201121A	0.4905	0.5	98.1	90-110
Molybdenum	SW6010D	ICP2_201121A	2.473	2.5	98.9	90-110
Nickel	SW6010D	ICP2_201121A	2.49	2.5	99.6	90-110
Potassium	SW6010D	ICP2_201121A	48.71	50	97.4	90-110
Selenium	SW6010D	ICP2_201121A	2.451	2.5	98.0	90-110
Silicon	SW6010D	ICP2_201121A	2.438	2.5	97.5	90-110
Silver	SW6010D	ICP2_201121A	0.4946	0.5	98.9	90-110
Sodium	SW6010D	ICP2_201121A	49.44	50	98.9	90-110
Strontium	SW6010D	ICP2_201121A	0.4954	0.5	99.1	90-110
Thallium	SW6010D	ICP2_201121A	0.5131	0.5	103	90-110
Tin	SW6010D	ICP2_201121A	0.5039	0.5	101	90-110
Titanium	SW6010D	ICP2_201121A	0.4944	0.5	98.9	90-110
Vanadium	SW6010D	ICP2_201121A	0.4878	0.5	97.6	90-110
Zinc	SW6010D	ICP2_201121A	1.228	1.25	98.3	90-110
CCV 11/21/20 17:02						
Aluminum	SW6010D	ICP2_201121A	2.514	2.5	101	90-110
Antimony	SW6010D	ICP2_201121A	0.4935	0.5	98.7	90-110
Arsenic	SW6010D	ICP2_201121A	0.4883	0.5	97.7	90-110
Barium	SW6010D	ICP2_201121A	2.532	2.5	101	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 17:02						
Beryllium	SW6010D	ICP2_201121A	0.4925	0.5	98.5	90-110
Boron	SW6010D	ICP2_201121A	2.551	2.5	102	90-110
Cadmium	SW6010D	ICP2_201121A	0.4924	0.5	98.5	90-110
Calcium	SW6010D	ICP2_201121A	2.529	2.5	101	90-110
Chromium	SW6010D	ICP2_201121A	0.4935	0.5	98.7	90-110
Cobalt	SW6010D	ICP2_201121A	2.487	2.5	99.5	90-110
Copper	SW6010D	ICP2_201121A	2.453	2.5	98.1	90-110
Iron	SW6010D	ICP2_201121A	2.644	2.5	106	90-110
Lead	SW6010D	ICP2_201121A	0.5016	0.5	100	90-110
Lithium	SW6010D	ICP2_201121A	2.482	2.5	99.3	90-110
Magnesium	SW6010D	ICP2_201121A	2.568	2.5	103	90-110
Manganese	SW6010D	ICP2_201121A	0.4892	0.5	97.8	90-110
Molybdenum	SW6010D	ICP2_201121A	2.479	2.5	99.1	90-110
Nickel	SW6010D	ICP2_201121A	2.489	2.5	99.6	90-110
Potassium	SW6010D	ICP2_201121A	49.16	50	98.3	90-110
Selenium	SW6010D	ICP2_201121A	2.461	2.5	98.4	90-110
Silicon	SW6010D	ICP2_201121A	2.532	2.5	101	90-110
Silver	SW6010D	ICP2_201121A	0.4943	0.5	98.9	90-110
Sodium	SW6010D	ICP2_201121A	49.96	50	99.9	90-110
Strontium	SW6010D	ICP2_201121A	0.5051	0.5	101	90-110
Thallium	SW6010D	ICP2_201121A	0.5112	0.5	102	90-110
Tin	SW6010D	ICP2_201121A	0.5045	0.5	101	90-110
Titanium	SW6010D	ICP2_201121A	0.5024	0.5	100	90-110
Vanadium	SW6010D	ICP2_201121A	0.4871	0.5	97.4	90-110
Zinc	SW6010D	ICP2_201121A	1.229	1.25	98.3	90-110
CCV 11/21/20 18:05						
Aluminum	SW6010D	ICP2_201121A	2.355	2.5	94.2	90-110
Antimony	SW6010D	ICP2_201121A	0.4856	0.5	97.1	90-110
Arsenic	SW6010D	ICP2_201121A	0.4816	0.5	96.3	90-110
Barium	SW6010D	ICP2_201121A	2.359	2.5	94.4	90-110
Beryllium	SW6010D	ICP2_201121A	0.4679	0.5	93.6	90-110
Boron	SW6010D	ICP2_201121A	2.38	2.5	95.2	90-110
Cadmium	SW6010D	ICP2_201121A	0.4844	0.5	96.9	90-110
Calcium	SW6010D	ICP2_201121A	2.398	2.5	95.9	90-110
Chromium	SW6010D	ICP2_201121A	0.4687	0.5	93.7	90-110
Cobalt	SW6010D	ICP2_201121A	2.447	2.5	97.9	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 18:05						
Copper	SW6010D	ICP2_201121A	2.37	2.5	94.8	90-110
Iron	SW6010D	ICP2_201121A	2.395	2.5	95.8	90-110
Lead	SW6010D	ICP2_201121A	0.4921	0.5	98.4	90-110
Lithium	SW6010D	ICP2_201121A	2.324	2.5	92.9	90-110
Magnesium	SW6010D	ICP2_201121A	2.385	2.5	95.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4669	0.5	93.4	90-110
Molybdenum	SW6010D	ICP2_201121A	2.437	2.5	97.5	90-110
Nickel	SW6010D	ICP2_201121A	2.447	2.5	97.9	90-110
Potassium	SW6010D	ICP2_201121A	45.77	50	91.5	90-110
Selenium	SW6010D	ICP2_201121A	2.429	2.5	97.1	90-110
Silicon	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Silver	SW6010D	ICP2_201121A	0.4722	0.5	94.4	90-110
Sodium	SW6010D	ICP2_201121A	46.72	50	93.4	90-110
Strontium	SW6010D	ICP2_201121A	0.472	0.5	94.4	90-110
Thallium	SW6010D	ICP2_201121A	0.5055	0.5	101	90-110
Tin	SW6010D	ICP2_201121A	0.4933	0.5	98.7	90-110
Titanium	SW6010D	ICP2_201121A	0.47	0.5	94.0	90-110
Vanadium	SW6010D	ICP2_201121A	0.4672	0.5	93.4	90-110
Zinc	SW6010D	ICP2_201121A	1.21	1.25	96.8	90-110
CCV 11/21/20 19:07						
Aluminum	SW6010D	ICP2_201121A	2.513	2.5	101	90-110
Antimony	SW6010D	ICP2_201121A	0.476	0.5	95.2	90-110
Arsenic	SW6010D	ICP2_201121A	0.4755	0.5	95.1	90-110
Barium	SW6010D	ICP2_201121A	2.497	2.5	99.9	90-110
Beryllium	SW6010D	ICP2_201121A	0.4971	0.5	99.4	90-110
Boron	SW6010D	ICP2_201121A	2.523	2.5	101	90-110
Cadmium	SW6010D	ICP2_201121A	0.4798	0.5	96.0	90-110
Calcium	SW6010D	ICP2_201121A	2.589	2.5	104	90-110
Chromium	SW6010D	ICP2_201121A	0.4967	0.5	99.3	90-110
Cobalt	SW6010D	ICP2_201121A	2.443	2.5	97.7	90-110
Copper	SW6010D	ICP2_201121A	2.43	2.5	97.2	90-110
Iron	SW6010D	ICP2_201121A	2.582	2.5	103	90-110
Lead	SW6010D	ICP2_201121A	0.4928	0.5	98.6	90-110
Lithium	SW6010D	ICP2_201121A	2.442	2.5	97.7	90-110
Magnesium	SW6010D	ICP2_201121A	2.58	2.5	103	90-110
Manganese	SW6010D	ICP2_201121A	0.4938	0.5	98.8	90-110

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 7:07:01 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	290 cps	0.4760 ppm	95.194 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	202 cps	0.4755 ppm	95.102 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	93,009 cps	2.5000 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	74,301 cps	2.4968 ppm	99.871 %	2.4 %	0.1 ppm
Be 313.042 {108} (Axial)	187,635 cps	0.4971 ppm	99.423 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	618 cps	2.5887 ppm	103.548 %	2.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,895 cps	0.4798 ppm	95.963 %	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,676 cps	0.4967 ppm	99.341 %	1.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,233 cps	0.4837 ppm		0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	19,880 cps	2.4427 ppm	97.706 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	62,521 cps	2.4304 ppm	97.214 %	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	668 cps	2.5820 ppm	103.279 %	2.4 %	0.1 ppm
Li 670.784 {50} (Radial)	36,096 cps	2.4422 ppm	97.687 %	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	34,782 cps	0.4938 ppm	98.758 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,638 cps	2.4261 ppm	97.046 %	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	91,611 cps	49.3983 ppm	98.797 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,012 cps	2.4477 ppm	97.908 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	27,339 cps	48.5412 ppm	97.082 %	2.7 %	1.3 ppm
Se 196.090 {472} (Axial)	717 cps	2.3813 ppm	95.252 %	0.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,367 cps	0.4902 ppm	98.049 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	20,948 cps	0.5022 ppm	100.444 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	519 cps	0.4981 ppm		0.9 %	0.0 ppm
Tl 334.941 {101} (Radial)	657 cps	0.5023 ppm	100.460 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,572 cps	0.4918 ppm	98.351 %	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,674 cps	1.2022 ppm	96.173 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8322 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		96.0523 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	108 cps	2.5798 ppm	103.191 %	2.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	181 cps	0.4995 ppm	99.897 %	0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,791 cps	2.2011 ppm		0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0225 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	946 cps	2.5228 ppm	100.912 %	2.4 %	0.1 ppm
Al 396.152 {85} (Radial)	1,136 cps	2.5134 ppm	100.538 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	226 cps	2.5249 ppm		2.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	495 cps	0.4928 ppm	98.552 %	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4509 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		102.7153 %		0.2 %	0.2 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 19:07						
Molybdenum	SW6010D	ICP2_201121A	2.426	2.5	97.0	90-110
Nickel	SW6010D	ICP2_201121A	2.448	2.5	97.9	90-110
Potassium	SW6010D	ICP2_201121A	48.54	50	97.1	90-110
Selenium	SW6010D	ICP2_201121A	2.381	2.5	95.3	90-110
Silicon	SW6010D	ICP2_201121A	2.525	2.5	101	90-110
Silver	SW6010D	ICP2_201121A	0.4902	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201121A	49.4	50	98.8	90-110
Strontium	SW6010D	ICP2_201121A	0.5022	0.5	100	90-110
Thallium	SW6010D	ICP2_201121A	0.4995	0.5	99.9	90-110
Tin	SW6010D	ICP2_201121A	0.4981	0.5	99.6	90-110
Titanium	SW6010D	ICP2_201121A	0.5023	0.5	100	90-110
Vanadium	SW6010D	ICP2_201121A	0.4918	0.5	98.4	90-110
Zinc	SW6010D	ICP2_201121A	1.202	1.25	96.2	90-110
CCV 11/21/20 20:08						
Aluminum	SW6010D	ICP2_201121A	2.374	2.5	95.0	90-110
Antimony	SW6010D	ICP2_201121A	0.4663	0.5	93.3	90-110
Arsenic	SW6010D	ICP2_201121A	0.47	0.5	94.0	90-110
Barium	SW6010D	ICP2_201121A	2.328	2.5	93.1	90-110
Beryllium	SW6010D	ICP2_201121A	0.4832	0.5	96.6	90-110
Boron	SW6010D	ICP2_201121A	2.345	2.5	93.8	90-110
Cadmium	SW6010D	ICP2_201121A	0.4724	0.5	94.5	90-110
Calcium	SW6010D	ICP2_201121A	2.45	2.5	98.0	90-110
Chromium	SW6010D	ICP2_201121A	0.4843	0.5	96.9	90-110
Cobalt	SW6010D	ICP2_201121A	2.423	2.5	96.9	90-110
Copper	SW6010D	ICP2_201121A	2.333	2.5	93.3	90-110
Iron	SW6010D	ICP2_201121A	2.406	2.5	96.2	90-110
Lead	SW6010D	ICP2_201121A	0.4887	0.5	97.7	90-110
Lithium	SW6010D	ICP2_201121A	2.282	2.5	91.3	90-110
Magnesium	SW6010D	ICP2_201121A	2.443	2.5	97.7	90-110
Manganese	SW6010D	ICP2_201121A	0.4814	0.5	96.3	90-110
Molybdenum	SW6010D	ICP2_201121A	2.391	2.5	95.6	90-110
Nickel	SW6010D	ICP2_201121A	2.422	2.5	96.9	90-110
Potassium	SW6010D	ICP2_201121A	45.55	50	91.1	90-110
Selenium	SW6010D	ICP2_201121A	2.336	2.5	93.4	90-110
Silicon	SW6010D	ICP2_201121A	2.344	2.5	93.8	90-110
Silver	SW6010D	ICP2_201121A	0.4746	0.5	94.9	90-110

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/21/2020 8:08:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	284 cps	0.4663 ppm	93.258 %	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	200 cps	0.4700 ppm	94.005 %	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	86,235 cps	2.3179 ppm		3.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	69,293 cps	2.3285 ppm	93.140 %	3.7 %	0.1 ppm
Be 313.042 {108} (Axial)	182,381 cps	0.4832 ppm	96.639 %	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	585 cps	2.4504 ppm	98.017 %	3.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,804 cps	0.4724 ppm	94.471 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,559 cps	0.4843 ppm	96.862 %	2.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	3,166 cps	0.4735 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	19,717 cps	2.4226 ppm	96.905 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,027 cps	2.3334 ppm	93.337 %	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	622 cps	2.4060 ppm	96.238 %	3.5 %	0.1 ppm
Li 670.784 {50} (Radial)	33,732 cps	2.2822 ppm	91.289 %	3.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,910 cps	0.4814 ppm	96.281 %	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,542 cps	2.3909 ppm	95.636 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	86,764 cps	46.7849 ppm	93.570 %	3.8 %	1.8 ppm
Ni 231.604 {445} (Axial)	9,906 cps	2.4217 ppm	96.869 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	25,656 cps	45.5518 ppm	91.104 %	3.8 %	1.8 ppm
Se 196.090 {472} (Axial)	703 cps	2.3357 ppm	93.429 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,164 cps	0.4746 ppm	94.913 %	2.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,444 cps	0.4662 ppm	93.232 %	3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	510 cps	0.4898 ppm		1.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	623 cps	0.4761 ppm	95.212 %	3.0 %	0.0 ppm
V 292.402 {115} (Axial)	8,281 cps	0.4751 ppm	95.014 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,529 cps	1.1884 ppm	95.073 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.2178 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		96.6940 %		0.9 %	0.9 %
Mg 279.079 {121} (Radial)	102 cps	2.4428 ppm	97.711 %	3.6 %	0.1 ppm
Tl 190.856 {477} (Axial)	178 cps	0.4928 ppm	98.559 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,770 cps	2.1845 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.4523 %		1.0 %	1.0 %
B 249.773 {135} (Radial)	879 cps	2.3453 ppm	93.812 %	3.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,073 cps	2.3742 ppm	94.968 %	3.6 %	0.1 ppm
Si 251.611 {134} (Radial)	210 cps	2.3440 ppm		4.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	491 cps	0.4887 ppm	97.747 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		100.4359 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.8009 %		1.7 %	1.8 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 20:08						
Sodium	SW6010D	ICP2_201121A	46.78	50	93.6	90-110
Strontium	SW6010D	ICP2_201121A	0.4662	0.5	93.2	90-110
Thallium	SW6010D	ICP2_201121A	0.4928	0.5	98.6	90-110
Tin	SW6010D	ICP2_201121A	0.4898	0.5	98.0	90-110
Titanium	SW6010D	ICP2_201121A	0.4761	0.5	95.2	90-110
Vanadium	SW6010D	ICP2_201121A	0.4751	0.5	95.0	90-110
Zinc	SW6010D	ICP2_201121A	1.188	1.25	95.1	90-110
CCV 11/21/20 21:10						
Aluminum	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Antimony	SW6010D	ICP2_201121A	0.4527	0.5	90.5	90-110
Arsenic	SW6010D	ICP2_201121A	0.4577	0.5	91.5	90-110
Barium	SW6010D	ICP2_201121A	2.339	2.5	93.5	90-110
Beryllium	SW6010D	ICP2_201121A	0.4811	0.5	96.2	90-110
Boron	SW6010D	ICP2_201121A	2.333	2.5	93.3	90-110
Cadmium	SW6010D	ICP2_201121A	0.459	0.5	91.8	90-110
Calcium	SW6010D	ICP2_201121A	2.462	2.5	98.5	90-110
Chromium	SW6010D	ICP2_201121A	0.4831	0.5	96.6	90-110
Cobalt	SW6010D	ICP2_201121A	2.37	2.5	94.8	90-110
Copper	SW6010D	ICP2_201121A	2.314	2.5	92.5	90-110
Iron	SW6010D	ICP2_201121A	2.381	2.5	95.2	90-110
Lead	SW6010D	ICP2_201121A	0.4755	0.5	95.1	90-110
Lithium	SW6010D	ICP2_201121A	2.308	2.5	92.3	90-110
Magnesium	SW6010D	ICP2_201121A	2.436	2.5	97.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4804	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201121A	2.324	2.5	93.0	90-110
Nickel	SW6010D	ICP2_201121A	2.361	2.5	94.4	90-110
Potassium	SW6010D	ICP2_201121A	45.42	50	90.8	90-110
Selenium	SW6010D	ICP2_201121A	2.263	2.5	90.5	90-110
Silicon	SW6010D	ICP2_201121A	2.352	2.5	94.1	90-110
Silver	SW6010D	ICP2_201121A	0.4715	0.5	94.3	90-110
Sodium	SW6010D	ICP2_201121A	47.64	50	95.3	90-110
Strontium	SW6010D	ICP2_201121A	0.4643	0.5	92.9	90-110
Thallium	SW6010D	ICP2_201121A	0.4799	0.5	96.0	90-110
Tin	SW6010D	ICP2_201121A	0.4758	0.5	95.2	90-110
Titanium	SW6010D	ICP2_201121A	0.4831	0.5	96.6	90-110
Vanadium	SW6010D	ICP2_201121A	0.4712	0.5	94.2	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 21:10						
Zinc	SW6010D	ICP2_201121A	1.157	1.25	92.6	90-110
CCV 11/21/20 22:12						
Aluminum	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Antimony	SW6010D	ICP2_201121A	0.4507	0.5	90.1	90-110
Arsenic	SW6010D	ICP2_201121A	0.4544	0.5	90.9	90-110
Barium	SW6010D	ICP2_201121A	2.37	2.5	94.8	90-110
Beryllium	SW6010D	ICP2_201121A	0.4693	0.5	93.9	90-110
Boron	SW6010D	ICP2_201121A	2.351	2.5	94.0	90-110
Cadmium	SW6010D	ICP2_201121A	0.4554	0.5	91.1	90-110
Calcium	SW6010D	ICP2_201121A	2.471	2.5	98.9	90-110
Chromium	SW6010D	ICP2_201121A	0.4697	0.5	93.9	90-110
Cobalt	SW6010D	ICP2_201121A	2.346	2.5	93.8	90-110
Copper	SW6010D	ICP2_201121A	2.275	2.5	91.0	90-110
Iron	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Lead	SW6010D	ICP2_201121A	0.4717	0.5	94.3	90-110
Lithium	SW6010D	ICP2_201121A	2.339	2.5	93.6	90-110
Magnesium	SW6010D	ICP2_201121A	2.499	2.5	100.0	90-110
Manganese	SW6010D	ICP2_201121A	0.4684	0.5	93.7	90-110
Molybdenum	SW6010D	ICP2_201121A	2.308	2.5	92.3	90-110
Nickel	SW6010D	ICP2_201121A	2.34	2.5	93.6	90-110
Potassium	SW6010D	ICP2_201121A	45.83	50	91.7	90-110
Selenium	SW6010D	ICP2_201121A	2.259	2.5	90.3	90-110
Silicon	SW6010D	ICP2_201121A	2.375	2.5	95.0	90-110
Silver	SW6010D	ICP2_201121A	0.4608	0.5	92.2	90-110
Sodium	SW6010D	ICP2_201121A	47.97	50	95.9	90-110
Strontium	SW6010D	ICP2_201121A	0.4703	0.5	94.1	90-110
Thallium	SW6010D	ICP2_201121A	0.4759	0.5	95.2	90-110
Tin	SW6010D	ICP2_201121A	0.4702	0.5	94.0	90-110
Titanium	SW6010D	ICP2_201121A	0.487	0.5	97.4	90-110
Vanadium	SW6010D	ICP2_201121A	0.4604	0.5	92.1	90-110
Zinc	SW6010D	ICP2_201121A	1.148	1.25	91.8	90-110
CCV 11/21/20 23:14						
Aluminum	SW6010D	ICP2_201121A	2.446	2.5	97.8	90-110
Antimony	SW6010D	ICP2_201121A	0.4523	0.5	90.5	90-110
Arsenic	SW6010D	ICP2_201121A	0.4571	0.5	91.4	90-110
Barium	SW6010D	ICP2_201121A	2.4	2.5	96.0	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/21/20 23:14						
Beryllium	SW6010D	ICP2_201121A	0.473	0.5	94.6	90-110
Boron	SW6010D	ICP2_201121A	2.372	2.5	94.9	90-110
Cadmium	SW6010D	ICP2_201121A	0.4588	0.5	91.8	90-110
Calcium	SW6010D	ICP2_201121A	2.488	2.5	99.5	90-110
Chromium	SW6010D	ICP2_201121A	0.4746	0.5	94.9	90-110
Cobalt	SW6010D	ICP2_201121A	2.376	2.5	95.0	90-110
Copper	SW6010D	ICP2_201121A	2.289	2.5	91.5	90-110
Iron	SW6010D	ICP2_201121A	2.435	2.5	97.4	90-110
Lead	SW6010D	ICP2_201121A	0.4752	0.5	95.0	90-110
Lithium	SW6010D	ICP2_201121A	2.384	2.5	95.4	90-110
Magnesium	SW6010D	ICP2_201121A	2.434	2.5	97.3	90-110
Manganese	SW6010D	ICP2_201121A	0.4732	0.5	94.6	90-110
Molybdenum	SW6010D	ICP2_201121A	2.33	2.5	93.2	90-110
Nickel	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Potassium	SW6010D	ICP2_201121A	46.34	50	92.7	90-110
Selenium	SW6010D	ICP2_201121A	2.261	2.5	90.5	90-110
Silicon	SW6010D	ICP2_201121A	2.392	2.5	95.7	90-110
Silver	SW6010D	ICP2_201121A	0.463	0.5	92.6	90-110
Sodium	SW6010D	ICP2_201121A	48.79	50	97.6	90-110
Strontium	SW6010D	ICP2_201121A	0.4758	0.5	95.2	90-110
Thallium	SW6010D	ICP2_201121A	0.4778	0.5	95.6	90-110
Tin	SW6010D	ICP2_201121A	0.475	0.5	95.0	90-110
Titanium	SW6010D	ICP2_201121A	0.4957	0.5	99.1	90-110
Vanadium	SW6010D	ICP2_201121A	0.4639	0.5	92.8	90-110
Zinc	SW6010D	ICP2_201121A	1.159	1.25	92.8	90-110
CCV 11/22/20 00:16						
Aluminum	SW6010D	ICP2_201121A	2.348	2.5	93.9	90-110
Antimony	SW6010D	ICP2_201121A	0.45	0.5	90.0 *	90-110
Arsenic	SW6010D	ICP2_201121A	0.4544	0.5	90.9	90-110
Barium	SW6010D	ICP2_201121A	2.324	2.5	92.9	90-110
Beryllium	SW6010D	ICP2_201121A	0.4663	0.5	93.3	90-110
Boron	SW6010D	ICP2_201121A	2.288	2.5	91.5	90-110
Cadmium	SW6010D	ICP2_201121A	0.4538	0.5	90.8	90-110
Calcium	SW6010D	ICP2_201121A	2.407	2.5	96.3	90-110
Chromium	SW6010D	ICP2_201121A	0.4656	0.5	93.1	90-110
Cobalt	SW6010D	ICP2_201121A	2.35	2.5	94.0	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/22/20 00:16						
Copper	SW6010D	ICP2_201121A	2.274	2.5	91.0	90-110
Iron	SW6010D	ICP2_201121A	2.34	2.5	93.6	90-110
Lead	SW6010D	ICP2_201121A	0.4686	0.5	93.7	90-110
Lithium	SW6010D	ICP2_201121A	2.319	2.5	92.8	90-110
Magnesium	SW6010D	ICP2_201121A	2.36	2.5	94.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4664	0.5	93.3	90-110
Molybdenum	SW6010D	ICP2_201121A	2.307	2.5	92.3	90-110
Nickel	SW6010D	ICP2_201121A	2.338	2.5	93.5	90-110
Potassium	SW6010D	ICP2_201121A	45.01	50	90.0	90-110
Selenium	SW6010D	ICP2_201121A	2.243	2.5	89.7 *	90-110
Silicon	SW6010D	ICP2_201121A	2.307	2.5	92.3	90-110
Silver	SW6010D	ICP2_201121A	0.4603	0.5	92.1	90-110
Sodium	SW6010D	ICP2_201121A	47.55	50	95.1	90-110
Strontium	SW6010D	ICP2_201121A	0.4598	0.5	92.0	90-110
Thallium	SW6010D	ICP2_201121A	0.4736	0.5	94.7	90-110
Tin	SW6010D	ICP2_201121A	0.4688	0.5	93.8	90-110
Titanium	SW6010D	ICP2_201121A	0.4819	0.5	96.4	90-110
Vanadium	SW6010D	ICP2_201121A	0.4578	0.5	91.6	90-110
Zinc	SW6010D	ICP2_201121A	1.147	1.25	91.8	90-110
CCV 11/22/20 01:23						
Aluminum	SW6010D	ICP2_201121A	2.434	2.5	97.4	90-110
Antimony	SW6010D	ICP2_201121A	0.4476	0.5	89.5 *	90-110
Arsenic	SW6010D	ICP2_201121A	0.4509	0.5	90.2	90-110
Barium	SW6010D	ICP2_201121A	2.414	2.5	96.6	90-110
Beryllium	SW6010D	ICP2_201121A	0.4675	0.5	93.5	90-110
Boron	SW6010D	ICP2_201121A	2.347	2.5	93.9	90-110
Cadmium	SW6010D	ICP2_201121A	0.4501	0.5	90.0	90-110
Calcium	SW6010D	ICP2_201121A	2.458	2.5	98.3	90-110
Chromium	SW6010D	ICP2_201121A	0.467	0.5	93.4	90-110
Cobalt	SW6010D	ICP2_201121A	2.34	2.5	93.6	90-110
Copper	SW6010D	ICP2_201121A	2.296	2.5	91.8	90-110
Iron	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Lead	SW6010D	ICP2_201121A	0.465	0.5	93.0	90-110
Lithium	SW6010D	ICP2_201121A	2.423	2.5	96.9	90-110
Magnesium	SW6010D	ICP2_201121A	2.403	2.5	96.1	90-110
Manganese	SW6010D	ICP2_201121A	0.4681	0.5	93.6	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/22/20 01:23						
Molybdenum	SW6010D	ICP2_201121A	2.295	2.5	91.8	90-110
Nickel	SW6010D	ICP2_201121A	2.325	2.5	93.0	90-110
Potassium	SW6010D	ICP2_201121A	46.13	50	92.3	90-110
Selenium	SW6010D	ICP2_201121A	2.225	2.5	89.0 *	90-110
Silicon	SW6010D	ICP2_201121A	2.367	2.5	94.7	90-110
Silver	SW6010D	ICP2_201121A	0.4618	0.5	92.4	90-110
Sodium	SW6010D	ICP2_201121A	49.39	50	98.8	90-110
Strontium	SW6010D	ICP2_201121A	0.4749	0.5	95.0	90-110
Thallium	SW6010D	ICP2_201121A	0.4696	0.5	93.9	90-110
Tin	SW6010D	ICP2_201121A	0.4642	0.5	92.8	90-110
Titanium	SW6010D	ICP2_201121A	0.5022	0.5	100	90-110
Vanadium	SW6010D	ICP2_201121A	0.4586	0.5	91.7	90-110
Zinc	SW6010D	ICP2_201121A	1.14	1.25	91.2	90-110
CCV 11/22/20 01:58						
Aluminum	SW6010D	ICP2_201121A	2.411	2.5	96.4	90-110
Antimony	SW6010D	ICP2_201121A	0.4421	0.5	88.4 *	90-110
Arsenic	SW6010D	ICP2_201121A	0.4471	0.5	89.4 *	90-110
Barium	SW6010D	ICP2_201121A	2.379	2.5	95.1	90-110
Beryllium	SW6010D	ICP2_201121A	0.4689	0.5	93.8	90-110
Boron	SW6010D	ICP2_201121A	2.346	2.5	93.9	90-110
Cadmium	SW6010D	ICP2_201121A	0.4453	0.5	89.1 *	90-110
Calcium	SW6010D	ICP2_201121A	2.456	2.5	98.3	90-110
Chromium	SW6010D	ICP2_201121A	0.4688	0.5	93.8	90-110
Cobalt	SW6010D	ICP2_201121A	2.319	2.5	92.8	90-110
Copper	SW6010D	ICP2_201121A	2.303	2.5	92.1	90-110
Iron	SW6010D	ICP2_201121A	2.397	2.5	95.9	90-110
Lead	SW6010D	ICP2_201121A	0.4599	0.5	92.0	90-110
Lithium	SW6010D	ICP2_201121A	2.405	2.5	96.2	90-110
Magnesium	SW6010D	ICP2_201121A	2.385	2.5	95.4	90-110
Manganese	SW6010D	ICP2_201121A	0.4706	0.5	94.1	90-110
Molybdenum	SW6010D	ICP2_201121A	2.268	2.5	90.7	90-110
Nickel	SW6010D	ICP2_201121A	2.303	2.5	92.1	90-110
Potassium	SW6010D	ICP2_201121A	45.58	50	91.2	90-110
Selenium	SW6010D	ICP2_201121A	2.189	2.5	87.5 *	90-110
Silicon	SW6010D	ICP2_201121A	2.378	2.5	95.1	90-110
Silver	SW6010D	ICP2_201121A	0.4614	0.5	92.3	90-110

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/22/20 01:58						
Sodium	SW6010D	ICP2_201121A	49.47	50	98.9	90-110
Strontium	SW6010D	ICP2_201121A	0.4691	0.5	93.8	90-110
Thallium	SW6010D	ICP2_201121A	0.4627	0.5	92.5	90-110
Tin	SW6010D	ICP2_201121A	0.4597	0.5	91.9	90-110
Titanium	SW6010D	ICP2_201121A	0.5039	0.5	101	90-110
Vanadium	SW6010D	ICP2_201121A	0.461	0.5	92.2	90-110
Zinc	SW6010D	ICP2_201121A	1.128	1.25	90.2	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Arsenic	SW6010D	ICP2_201119A	0.00419	0.005	83.8	80-120	11/19/20 12:31
Barium	SW6010D	ICP2_201119A	0.00541	0.005	108	80-120	11/19/20 12:31
Cadmium	SW6010D	ICP2_201119A	0.00874	0.01	87.4	80-120	11/19/20 12:31
Chromium	SW6010D	ICP2_201119A	0.00465	0.005	93.0	80-120	11/19/20 12:31
Lead	SW6010D	ICP2_201119A	0.00496	0.005	99.2	80-120	11/19/20 12:31
Selenium	SW6010D	ICP2_201119A	0.00856	0.01	85.6	80-120	11/19/20 12:31
Silver	SW6010D	ICP2_201119A	0.00509	0.005	102	80-120	11/19/20 12:31
LLICV							
Arsenic	SW6010D	ICP2_201120A	0.00438	0.005	87.6	80-120	11/20/20 15:18
Barium	SW6010D	ICP2_201120A	0.00522	0.005	104	80-120	11/20/20 15:18
Calcium	SW6010D	ICP2_201120A	0.5011	0.5	100	80-120	11/20/20 15:18
Iron	SW6010D	ICP2_201120A	0.0828	0.08	103	80-120	11/20/20 15:18
Lead	SW6010D	ICP2_201120A	0.00622	0.005	124 *	80-120	11/20/20 15:18
Magnesium	SW6010D	ICP2_201120A	0.224	0.2	112	80-120	11/20/20 15:18
Manganese	SW6010D	ICP2_201120A	0.00504	0.005	101	80-120	11/20/20 15:18
Potassium	SW6010D	ICP2_201120A	0.2656	0.2	133 *	80-120	11/20/20 15:18
Silicon	SW6010D	ICP2_201120A	0.2309	0.2	115	80-120	11/20/20 15:18
Sodium	SW6010D	ICP2_201120A	0	0.2	96.9	80-120	11/20/20 15:18
Strontium	SW6010D	ICP2_201120A	0.00522	0.005	104	80-120	11/20/20 15:18
LLICV							
Aluminum	SW6010D	ICP2_201121A	0	0.01	92.8	80-120	11/21/20 15:29
Antimony	SW6010D	ICP2_201121A	0.00502	0.005	100	80-120	11/21/20 15:29
Arsenic	SW6010D	ICP2_201121A	0.00477	0.005	95.4	80-120	11/21/20 15:29
Barium	SW6010D	ICP2_201121A	0.00478	0.005	95.6	80-120	11/21/20 15:29
Beryllium	SW6010D	ICP2_201121A	0.00185	0.002	92.5	80-120	11/21/20 15:29
Boron	SW6010D	ICP2_201121A	0.0138	0.02	69.0 *	80-120	11/21/20 15:29
Cadmium	SW6010D	ICP2_201121A	0.00974	0.01	97.4	80-120	11/21/20 15:29
Calcium	SW6010D	ICP2_201121A	0.4976	0.5	99.5	80-120	11/21/20 15:29
Chromium	SW6010D	ICP2_201121A	0.00498	0.005	99.6	80-120	11/21/20 15:29
Cobalt	SW6010D	ICP2_201121A	0.00504	0.005	101	80-120	11/21/20 15:29
Copper	SW6010D	ICP2_201121A	0.00976	0.01	97.6	80-120	11/21/20 15:29
Iron	SW6010D	ICP2_201121A	0	0.08	94.0	80-120	11/21/20 15:29
Lead	SW6010D	ICP2_201121A	0.00591	0.005	118	80-120	11/21/20 15:29
Lithium	SW6010D	ICP2_201121A	0.00896	0.01	89.6	80-120	11/21/20 15:29
Magnesium	SW6010D	ICP2_201121A	0.2214	0.2	111	80-120	11/21/20 15:29
Manganese	SW6010D	ICP2_201121A	0.00497	0.005	99.4	80-120	11/21/20 15:29

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/19/2020 12:31:09 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0037 ppm	73.489 %	18.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0042 ppm	83.726 %	30.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	267 cps	0.0054 ppm		2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	957 cps	0.0208 ppm		2.9 %	0.0 ppm
Be 313.042 {108} (Axial)	866 cps	0.0018 ppm	92.402 %	0.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	197 cps	0.4874 ppm	97.481 %	3.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	123 cps	0.0087 ppm	87.415 %	3.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	55 cps	0.0047 ppm	93.637 %	4.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	32 cps	0.0047 ppm	93.077 %	3.2 %	0.0 ppm
Co 228.616 {447} (Axial)	48 cps	0.0046 ppm	91.423 %	4.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	324 cps	0.0117 ppm	116.682 %	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	32 cps	0.0827 ppm	103.374 %	0.5 %	0.0 ppm
Li 670.784 {50} (Radial)	205 cps	0.0142 ppm	142.016 %	3.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	431 cps	0.0050 ppm	99.183 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	16 cps	0.0048 ppm	95.330 %	3.3 %	0.0 ppm
Na 589.592 {57} (Radial)	441 cps	0.1963 ppm	98.145 %	2.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	24 cps	0.0047 ppm	93.935 %	3.0 %	0.0 ppm
K 766.490 {44} (Radial)	191 cps	0.3132 ppm	156.592 %	7.1 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0086 ppm	85.599 %	6.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	76 cps	0.0051 ppm	101.789 %	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	290 cps	0.0049 ppm	97.173 %	3.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	12 cps	0.0095 ppm		2.4 %	0.0 ppm
Tl 334.941 {101} (Radial)	10 cps	0.0055 ppm	109.332 %	5.9 %	0.0 ppm
V 292.402 {115} (Axial)	88 cps	0.0044 ppm	88.672 %	7.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	113 cps	0.0089 ppm	89.181 %	3.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.7057 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		96.4828 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	12 cps	0.1938 ppm	96.917 %	6.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0100 ppm	99.828 %	18.2 %	0.0 ppm
Al 167.079 {502} (Axial)	10 cps	0.0062 ppm		5.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2839 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	10 cps	0.0241 ppm	120.503 %	11.7 %	0.0 ppm
Al 396.152 {85} (Radial)	5 cps	0.0073 ppm		121.6 %	0.0 ppm
Si 251.611 {134} (Radial)	29 cps	0.2302 ppm		4.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0050 ppm	99.248 %	4.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.6094 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		94.8399 %		0.4 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/20/2020 3:18:40 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0049 ppm	98.572 %	5.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0044 ppm	87.611 %	4.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	251 cps	0.0052 ppm		2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	645 cps	0.0148 ppm		9.2 %	0.0 ppm
Be 313.042 {108} (Axial)	851 cps	0.0019 ppm	96.109 %	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	186 cps	0.5011 ppm	100.223 %	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	139 cps	0.0099 ppm	99.406 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	49 cps	0.0044 ppm	88.903 %	6.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	39 cps	0.0051 ppm	101.549 %	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	50 cps	0.0049 ppm	98.184 %	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	307 cps	0.0115 ppm	114.700 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	30 cps	0.0828 ppm	103.544 %	1.9 %	0.0 ppm
Li 670.784 {50} (Radial)	162 cps	0.0117 ppm	116.802 %	0.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	415 cps	0.0050 ppm	100.799 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	18 cps	0.0053 ppm	106.895 %	2.8 %	0.0 ppm
Na 589.592 {57} (Radial)	410 cps	0.1938 ppm	96.883 %	3.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	26 cps	0.0051 ppm	102.097 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	161 cps	0.2656 ppm	132.815 %	3.2 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0095 ppm	95.202 %	21.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	78 cps	0.0055 ppm	109.364 %	6.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	313 cps	0.0052 ppm	104.493 %	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	12 cps	0.0096 ppm		2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	8 cps	0.0050 ppm	100.067 %	23.3 %	0.0 ppm
V 292.402 {115} (Axial)	84 cps	0.0044 ppm	87.634 %	6.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	118 cps	0.0096 ppm	96.139 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.2438 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		96.0204 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	13 cps	0.2240 ppm	112.007 %	3.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0099 ppm	98.906 %	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0060 ppm		2.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		95.2364 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	9 cps	0.0251 ppm	125.591 %	16.1 %	0.0 ppm
Al 396.152 {85} (Radial)	-1 cps	-0.0010 ppm		756.2 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.2309 ppm		2.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	8 cps	0.0062 ppm	124.432 %	4.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5408 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.7693 %		0.7 %	0.7 %

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/21/2020 3:29:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0050 ppm	100.359 %	8.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0048 ppm	95.342 %	21.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	178 cps	0.0048 ppm		1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	149 cps	0.0050 ppm		22.4 %	0.0 ppm
Be 313.042 {108} (Axial)	699 cps	0.0019 ppm	92.662 %	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	119 cps	0.4976 ppm	99.513 %	2.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	120 cps	0.0097 ppm	97.381 %	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	45 cps	0.0048 ppm	95.547 %	4.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	33 cps	0.0050 ppm	99.629 %	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	41 cps	0.0050 ppm	100.841 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	251 cps	0.0098 ppm	97.592 %	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	19 cps	0.0752 ppm	94.020 %	4.3 %	0.0 ppm
Li 670.784 {50} (Radial)	132 cps	0.0090 ppm	89.648 %	7.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	350 cps	0.0050 ppm	99.432 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	14 cps	0.0051 ppm	102.663 %	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	367 cps	0.1977 ppm	98.846 %	1.2 %	0.0 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0051 ppm	102.337 %	4.8 %	0.0 ppm
K 766.490 {44} (Radial)	130 cps	0.2313 ppm	115.667 %	1.8 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0098 ppm	98.406 %	13.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	66 cps	0.0051 ppm	101.445 %	8.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	204 cps	0.0049 ppm	97.652 %	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0101 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0046 ppm	92.101 %	41.3 %	0.0 ppm
V 292.402 {115} (Axial)	81 cps	0.0046 ppm	92.865 %	10.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	102 cps	0.0096 ppm	96.292 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.0008 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		100.7436 %		1.5 %	1.5 %
Mg 279.079 {121} (Radial)	9 cps	0.2214 ppm	110.711 %	8.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0111 ppm	111.307 %	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0093 ppm		2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7521 %		1.4 %	1.4 %
B 249.773 {135} (Radial)	5 cps	0.0138 ppm	69.054 %	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0127 ppm		71.3 %	0.0 ppm
Si 251.611 {134} (Radial)	19 cps	0.2146 ppm		5.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0059 ppm	118.156 %	11.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5897 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.2909 %		0.4 %	0.4 %

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Molybdenum	SW6010D	ICP2_201121A	0.00513	0.005	103	80-120	11/21/20 15:29
Nickel	SW6010D	ICP2_201121A	0.00512	0.005	102	80-120	11/21/20 15:29
Potassium	SW6010D	ICP2_201121A	0.2313	0.2	116	80-120	11/21/20 15:29
Selenium	SW6010D	ICP2_201121A	0.00984	0.01	98.4	80-120	11/21/20 15:29
Silicon	SW6010D	ICP2_201121A	0.2146	0.2	107	80-120	11/21/20 15:29
Silver	SW6010D	ICP2_201121A	0.00507	0.005	101	80-120	11/21/20 15:29
Sodium	SW6010D	ICP2_201121A	0	0.2	98.8	80-120	11/21/20 15:29
Strontium	SW6010D	ICP2_201121A	0.00488	0.005	97.6	80-120	11/21/20 15:29
Thallium	SW6010D	ICP2_201121A	0.01113	0.01	111	80-120	11/21/20 15:29
Tin	SW6010D	ICP2_201121A	0.0101	0.01	101	80-120	11/21/20 15:29
Titanium	SW6010D	ICP2_201121A	0.00461	0.005	92.2	80-120	11/21/20 15:29
Vanadium	SW6010D	ICP2_201121A	0.00464	0.005	92.8	80-120	11/21/20 15:29
Zinc	SW6010D	ICP2_201121A	0.00963	0.01	96.3	80-120	11/21/20 15:29

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/19/20 12:25				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 13:12				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 14:23				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 15:25				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 16:34				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 11/19/20 16:34					
	Lead	SW6010D	ICP2_201119A	0	
	Selenium	SW6010D	ICP2_201119A	0	
	Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 17:24					
	Arsenic	SW6010D	ICP2_201119A	0	
	Barium	SW6010D	ICP2_201119A	0	
	Cadmium	SW6010D	ICP2_201119A	0	
	Chromium	SW6010D	ICP2_201119A	0	
	Lead	SW6010D	ICP2_201119A	0	
	Selenium	SW6010D	ICP2_201119A	0	
	Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 18:25					
	Arsenic	SW6010D	ICP2_201119A	0	
	Barium	SW6010D	ICP2_201119A	0	
	Cadmium	SW6010D	ICP2_201119A	0	
	Chromium	SW6010D	ICP2_201119A	0	
	Lead	SW6010D	ICP2_201119A	0	
	Selenium	SW6010D	ICP2_201119A	0	
	Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 19:27					
	Arsenic	SW6010D	ICP2_201119A	0	
	Barium	SW6010D	ICP2_201119A	0	
	Cadmium	SW6010D	ICP2_201119A	0	
	Chromium	SW6010D	ICP2_201119A	0	
	Lead	SW6010D	ICP2_201119A	0	
	Selenium	SW6010D	ICP2_201119A	0	
	Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 20:34					
	Arsenic	SW6010D	ICP2_201119A	0	
	Barium	SW6010D	ICP2_201119A	0	
	Cadmium	SW6010D	ICP2_201119A	0	
	Chromium	SW6010D	ICP2_201119A	0	
	Lead	SW6010D	ICP2_201119A	0	
	Selenium	SW6010D	ICP2_201119A	0	
	Silver	SW6010D	ICP2_201119A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/19/20 21:40				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 22:47				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/19/20 23:54				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
CCB 11/20/20 00:29				
Arsenic	SW6010D	ICP2_201119A	0	
Barium	SW6010D	ICP2_201119A	0	
Cadmium	SW6010D	ICP2_201119A	0	
Chromium	SW6010D	ICP2_201119A	0	
Lead	SW6010D	ICP2_201119A	0	
Selenium	SW6010D	ICP2_201119A	0	
Silver	SW6010D	ICP2_201119A	0	
ICB 11/20/20 14:26				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/20/20 14:26				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 15:13				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 16:19				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 17:25				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 11/20/20 17:25					
	Lead	SW6010D	ICP2_201120A	0	
	Magnesium	SW6010D	ICP2_201120A	0	
	Manganese	SW6010D	ICP2_201120A	0	
	Potassium	SW6010D	ICP2_201120A	0	
	Silicon	SW6010D	ICP2_201120A	0	
	Sodium	SW6010D	ICP2_201120A	0	
	Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 18:32					
	Arsenic	SW6010D	ICP2_201120A	0	
	Barium	SW6010D	ICP2_201120A	0	
	Calcium	SW6010D	ICP2_201120A	0	
	Iron	SW6010D	ICP2_201120A	0	
	Lead	SW6010D	ICP2_201120A	0	
	Magnesium	SW6010D	ICP2_201120A	0	
	Manganese	SW6010D	ICP2_201120A	0	
	Potassium	SW6010D	ICP2_201120A	0	
	Silicon	SW6010D	ICP2_201120A	0	
	Sodium	SW6010D	ICP2_201120A	0	
	Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 19:37					
	Arsenic	SW6010D	ICP2_201120A	0	
	Barium	SW6010D	ICP2_201120A	0	
	Calcium	SW6010D	ICP2_201120A	0	
	Iron	SW6010D	ICP2_201120A	0	
	Lead	SW6010D	ICP2_201120A	0	
	Magnesium	SW6010D	ICP2_201120A	0	
	Manganese	SW6010D	ICP2_201120A	0	
	Potassium	SW6010D	ICP2_201120A	0	
	Silicon	SW6010D	ICP2_201120A	0	
	Sodium	SW6010D	ICP2_201120A	0	
	Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 20:43					
	Arsenic	SW6010D	ICP2_201120A	0	
	Barium	SW6010D	ICP2_201120A	0	
	Calcium	SW6010D	ICP2_201120A	0	
	Iron	SW6010D	ICP2_201120A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/20/20 20:43				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 21:48				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/20/20 22:54				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 00:00				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 00:00				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 01:07				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 02:14				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0.1877	J
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 03:22				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 03:22				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0.1914 NJ	J
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 04:28				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 05:36				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
CCB 11/21/20 06:06				
Arsenic	SW6010D	ICP2_201120A	0	
Barium	SW6010D	ICP2_201120A	0	
Calcium	SW6010D	ICP2_201120A	0	
Iron	SW6010D	ICP2_201120A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 06:06				
Lead	SW6010D	ICP2_201120A	0	
Magnesium	SW6010D	ICP2_201120A	0	
Manganese	SW6010D	ICP2_201120A	0	
Potassium	SW6010D	ICP2_201120A	0	
Silicon	SW6010D	ICP2_201120A	0	
Sodium	SW6010D	ICP2_201120A	0	
Strontium	SW6010D	ICP2_201120A	0	
ICB 11/21/20 15:19				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000641	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0.00372	J
Vanadium	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/21/20 15:19				
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 16:05				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0.00989	J
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.00103	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 17:07				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 17:07				
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000928	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 18:09				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 18:09					
	Copper	SW6010D	ICP2_201121A	0	
	Iron	SW6010D	ICP2_201121A	0	
	Lead	SW6010D	ICP2_201121A	0	
	Lithium	SW6010D	ICP2_201121A	0	
	Magnesium	SW6010D	ICP2_201121A	0	
	Manganese	SW6010D	ICP2_201121A	0	
	Molybdenum	SW6010D	ICP2_201121A	0.000816	J
	Nickel	SW6010D	ICP2_201121A	0	
	Potassium	SW6010D	ICP2_201121A	0	
	Selenium	SW6010D	ICP2_201121A	0	
	Silicon	SW6010D	ICP2_201121A	0	
	Silver	SW6010D	ICP2_201121A	0	
	Sodium	SW6010D	ICP2_201121A	0	
	Strontium	SW6010D	ICP2_201121A	0	
	Thallium	SW6010D	ICP2_201121A	0	
	Tin	SW6010D	ICP2_201121A	0	
	Titanium	SW6010D	ICP2_201121A	0	
	Vanadium	SW6010D	ICP2_201121A	0	
	Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 19:11					
	Aluminum	SW6010D	ICP2_201121A	0	
	Antimony	SW6010D	ICP2_201121A	0	
	Arsenic	SW6010D	ICP2_201121A	0	
	Barium	SW6010D	ICP2_201121A	0	
	Beryllium	SW6010D	ICP2_201121A	0	
	Boron	SW6010D	ICP2_201121A	0	
	Cadmium	SW6010D	ICP2_201121A	0	
	Calcium	SW6010D	ICP2_201121A	0	
	Chromium	SW6010D	ICP2_201121A	0	
	Cobalt	SW6010D	ICP2_201121A	0	
	Copper	SW6010D	ICP2_201121A	0	
	Iron	SW6010D	ICP2_201121A	0	
	Lead	SW6010D	ICP2_201121A	0	
	Lithium	SW6010D	ICP2_201121A	0	
	Magnesium	SW6010D	ICP2_201121A	0	
	Manganese	SW6010D	ICP2_201121A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 19:11				
Molybdenum	SW6010D	ICP2_201121A	0.000855	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 20:13				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000816	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 20:13				
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 21:15				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000859	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 21:15				
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 22:17				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000833	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/21/20 23:19				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/21/20 23:19				
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.000818	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/22/20 00:26				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/22/20 00:26				
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.00102	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/22/20 01:33				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/22/20 01:33				
Molybdenum	SW6010D	ICP2_201121A	0.00103	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	
Sodium	SW6010D	ICP2_201121A	0	
Strontium	SW6010D	ICP2_201121A	0	
Thallium	SW6010D	ICP2_201121A	0	
Tin	SW6010D	ICP2_201121A	0	
Titanium	SW6010D	ICP2_201121A	0	
Vanadium	SW6010D	ICP2_201121A	0	
Zinc	SW6010D	ICP2_201121A	0	
CCB 11/22/20 02:03				
Aluminum	SW6010D	ICP2_201121A	0	
Antimony	SW6010D	ICP2_201121A	0	
Arsenic	SW6010D	ICP2_201121A	0	
Barium	SW6010D	ICP2_201121A	0	
Beryllium	SW6010D	ICP2_201121A	0	
Boron	SW6010D	ICP2_201121A	0	
Cadmium	SW6010D	ICP2_201121A	0	
Calcium	SW6010D	ICP2_201121A	0	
Chromium	SW6010D	ICP2_201121A	0	
Cobalt	SW6010D	ICP2_201121A	0	
Copper	SW6010D	ICP2_201121A	0	
Iron	SW6010D	ICP2_201121A	0	
Lead	SW6010D	ICP2_201121A	0	
Lithium	SW6010D	ICP2_201121A	0	
Magnesium	SW6010D	ICP2_201121A	0	
Manganese	SW6010D	ICP2_201121A	0	
Molybdenum	SW6010D	ICP2_201121A	0.00103	J
Nickel	SW6010D	ICP2_201121A	0	
Potassium	SW6010D	ICP2_201121A	0	
Selenium	SW6010D	ICP2_201121A	0	
Silicon	SW6010D	ICP2_201121A	0	
Silver	SW6010D	ICP2_201121A	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 11/22/20 02:03					
	Sodium	SW6010D	ICP2_201121A	0	
	Strontium	SW6010D	ICP2_201121A	0	
	Thallium	SW6010D	ICP2_201121A	0	
	Tin	SW6010D	ICP2_201121A	0	
	Titanium	SW6010D	ICP2_201121A	0	
	Vanadium	SW6010D	ICP2_201121A	0	
	Zinc	SW6010D	ICP2_201121A	0	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168036	**Basis:**	Wet
Lab Code:	MBLK-168036		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 21:56	11/19/20 13:52	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 21:56	11/19/20 13:52	

ALS Group USA, Corp.
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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168037	**Basis:**	Wet
Lab Code:	MBLK-168037		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 18:05	11/19/20 13:58	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/19/20 18:05	11/19/20 13:58	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168040	**Basis:**	Wet
Lab Code:	MBLK-168040		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 18:57	11/19/20 15:33	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 18:57	11/19/20 15:33	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168042	**Basis:**	Wet
Lab Code:	MBLK-168042		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 21:28	11/19/20 15:33	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/20/20 21:28	11/19/20 15:33	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201119A	93.07	100	93.1	80-120	11/19/20 12:41
Arsenic	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Barium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Cadmium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Calcium	SW6010D	ICP2_201119A	91.43	100	91.4	80-120	11/19/20 12:41
Chromium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Iron	SW6010D	ICP2_201119A	91.67	100	91.7	80-120	11/19/20 12:41
Lead	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Magnesium	SW6010D	ICP2_201119A	94.64	100	94.6	80-120	11/19/20 12:41
Molybdenum	SW6010D	ICP2_201119A	1.957	2	97.9	80-120	11/19/20 12:41
Potassium	SW6010D	ICP2_201119A	99.93 E	100	99.9	80-120	11/19/20 12:41
Selenium	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Silver	SW6010D	ICP2_201119A	0	-	-	-	11/19/20 12:41
Sodium	SW6010D	ICP2_201119A	96.84 E	100	96.8	80-120	11/19/20 12:41
Titanium	SW6010D	ICP2_201119A	1.836	2	91.8	80-120	11/19/20 12:41

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/19/2020 12:41:31 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-15 cps	-0.0221 ppm		6.0 %	0.0 ppm
As 189.042 {478} (Axial)	-14 cps	-0.0306 ppm	0.000 %	3.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	33 cps	0.0007 ppm	0.000 %	4.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	820 cps	0.0178 ppm	0.000 %	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-1,207 cps	-0.0026 ppm	0.000 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	36,899 cps	91.4257 ppm	91.426 %	1.8 %	1.6 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.000 %	1,223.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	20 cps	0.0017 ppm	0.000 %	9.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	6 cps	0.0008 ppm	0.000 %	14.8 %	0.0 ppm
Co 228.616 {447} (Axial)	6 cps	0.0006 ppm	0.000 %	24.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	137 cps	0.0049 ppm	0.000 %	4.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	35,368 cps	91.6712 ppm	91.671 %	1.6 %	1.5 ppm
Li 670.784 {50} (Radial)	72 cps	0.0050 ppm		10.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	-547 cps	-0.0063 ppm	0.000 %	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,571 cps	1.9573 ppm	97.867 %	0.8 %	0.0 ppm
Na 589.592 {57} (Radial)	217,703 cps	96.8357 ppm	96.836 %	2.1 %	2.0 ppm
Ni 231.604 {445} (Axial)	-75 cps	-0.0146 ppm	0.000 %	2.9 %	0.0 ppm
K 766.490 {44} (Radial)	60,815 cps	99.9266 ppm	99.927 %	2.3 %	2.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0031 ppm	0.000 %	48.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0002 ppm	0.000 %	44.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	-115 cps	-0.0019 ppm		3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	-9 cps	-0.0071 ppm		10.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	3,417 cps	1.8362 ppm		1.8 %	0.0 ppm
V 292.402 {115} (Axial)	24 cps	0.0012 ppm	0.000 %	30.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	-192 cps	-0.0152 ppm	0.000 %	3.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		89.6226 %		0.4 %	0.3 %
Sc 188.060 {479} (Axial)		80.9042 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	5,807 cps	94.6363 ppm	94.636 %	1.7 %	1.6 ppm
Tl 190.856 {477} (Axial)	-4 cps	-0.0088 ppm	0.000 %	11.5 %	0.0 ppm
Al 167.079 {502} (Axial)	22,442 cps	14.6811 ppm		0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.0341 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	48 cps	0.1173 ppm		3.8 %	0.0 ppm
Al 396.152 {85} (Radial)	58,280 cps	93.0665 ppm	93.066 %	1.5 %	1.4 ppm
Si 251.611 {134} (Radial)	3 cps	0.0248 ppm	0.000 %	6.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	-2 cps	-0.0018 ppm	0.000 %	12.4 %	0.0 ppm
Y 224.306 {450} (Axial)		90.3487 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		93.5026 %		0.2 %	0.2 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201120A	94.23	100	94.2	80-120	11/20/20 14:42
Arsenic	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Barium	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Calcium	SW6010D	ICP2_201120A	93.4	100	93.4	80-120	11/20/20 14:42
Iron	SW6010D	ICP2_201120A	93.91	100	93.9	80-120	11/20/20 14:42
Lead	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Magnesium	SW6010D	ICP2_201120A	95.37	100	95.4	80-120	11/20/20 14:42
Manganese	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Molybdenum	SW6010D	ICP2_201120A	2.001	2	100	80-120	11/20/20 14:42
Potassium	SW6010D	ICP2_201120A	100.9 E	100	101	80-120	11/20/20 14:42
Silicon	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Sodium	SW6010D	ICP2_201120A	98.72 E	100	98.7	80-120	11/20/20 14:42
Strontium	SW6010D	ICP2_201120A	0	-	-	-	11/20/20 14:42
Titanium	SW6010D	ICP2_201120A	1.934	2	96.7	80-120	11/20/20 14:42

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/20/2020 2:42:28 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-16 cps	-0.0242 ppm		3.7 %	0.0 ppm
As 189.042 {478} (Axial)	-14 cps	-0.0319 ppm	0.000 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	19 cps	0.0004 ppm	0.000 %	18.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	394 cps	0.0090 ppm	0.000 %	11.6 %	0.0 ppm
Be 313.042 {108} (Axial)	-1,091 cps	-0.0025 ppm	0.000 %	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	34,606 cps	93.4029 ppm	93.403 %	1.8 %	1.7 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0004 ppm	0.000 %	22.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	13 cps	0.0012 ppm	0.000 %	14.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	-2 cps	-0.0003 ppm	0.000 %	58.0 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0007 ppm	0.000 %	16.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	138 cps	0.0051 ppm	0.000 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	33,873 cps	93.9092 ppm	93.909 %	1.6 %	1.5 ppm
Li 670.784 {50} (Radial)	37 cps	0.0027 ppm		26.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-453 cps	-0.0055 ppm	0.000 %	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,641 cps	2.0009 ppm	100.046 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	209,020 cps	98.7246 ppm	98.725 %	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	-75 cps	-0.0150 ppm	0.000 %	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	61,165 cps	100.8543 ppm	100.854 %	2.7 %	2.8 ppm
Se 196.090 {472} (Axial)	1 cps	0.0031 ppm	0.000 %	140.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0003 ppm	0.000 %	195.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	-92 cps	-0.0015 ppm		3.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	-9 cps	-0.0067 ppm		13.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	3,116 cps	1.9336 ppm		1.7 %	0.0 ppm
V 292.402 {115} (Axial)	11 cps	0.0006 ppm	0.000 %	36.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	-188 cps	-0.0152 ppm	0.000 %	3.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0309 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		81.3452 %		0.5 %	0.4 %
Mg 279.079 {121} (Radial)	5,533 cps	95.3669 ppm	95.367 %	1.7 %	1.7 ppm
Tl 190.856 {477} (Axial)	-4 cps	-0.0082 ppm	0.000 %	11.9 %	0.0 ppm
Al 167.079 {502} (Axial)	21,725 cps	14.4519 ppm		0.5 %	0.1 ppm
Sc 227.318 {448} (Axial)		81.9498 %		0.5 %	0.4 %
B 249.773 {135} (Radial)	50 cps	0.1346 ppm		4.0 %	0.0 ppm
Al 396.152 {85} (Radial)	56,927 cps	94.2296 ppm	94.230 %	1.6 %	1.5 ppm
Si 251.611 {134} (Radial)	4 cps	0.0334 ppm	0.000 %	3.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0003 ppm	0.000 %	204.2 %	0.0 ppm
Y 224.306 {450} (Axial)		89.0060 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.2675 %		0.2 %	0.2 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201121A	101.7	100	102	80-120	11/21/20 15:34
Antimony	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Arsenic	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Barium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Beryllium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Boron	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Cadmium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Calcium	SW6010D	ICP2_201121A	101.2	100	101	80-120	11/21/20 15:34
Chromium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Cobalt	SW6010D	ICP2_201121A	0.00117 J	-	-	-	11/21/20 15:34
Copper	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Iron	SW6010D	ICP2_201121A	100.3	100	100	80-120	11/21/20 15:34
Lead	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Lithium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Magnesium	SW6010D	ICP2_201121A	104.5	100	104	80-120	11/21/20 15:34
Manganese	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Molybdenum	SW6010D	ICP2_201121A	2.027	2	101	80-120	11/21/20 15:34
Nickel	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Potassium	SW6010D	ICP2_201121A	105.2 E	100	105	80-120	11/21/20 15:34
Selenium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Silicon	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Silver	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Sodium	SW6010D	ICP2_201121A	104.3 E	100	104	80-120	11/21/20 15:34
Strontium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Thallium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Tin	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Titanium	SW6010D	ICP2_201121A	2.07	2	104	80-120	11/21/20 15:34
Vanadium	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34
Zinc	SW6010D	ICP2_201121A	0	-	-	-	11/21/20 15:34

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/21/2020 3:34:39 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-12 cps	-0.0203 ppm		5.3 %	0.0 ppm
As 189.042 {478} (Axial)	-10 cps	-0.0235 ppm	0.000 %	9.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	27 cps	0.0007 ppm	0.000 %	13.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	122 cps	0.0041 ppm	0.000 %	10.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-924 cps	-0.0024 ppm	0.000 %	3.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	24,152 cps	101.1528 ppm	101.153 %	0.7 %	0.7 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	0.000 %	20.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	12 cps	0.0013 ppm	0.000 %	15.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	-2 cps	-0.0002 ppm	0.000 %	62.3 %	0.0 ppm
Co 228.616 {447} (Axial)	10 cps	0.0012 ppm	0.000 %	7.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	96 cps	0.0037 ppm	0.000 %	6.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	25,924 cps	100.2702 ppm	100.270 %	0.6 %	0.6 ppm
Li 670.784 {50} (Radial)	37 cps	0.0025 ppm		39.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-380 cps	-0.0054 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,545 cps	2.0267 ppm	101.336 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	193,412 cps	104.2917 ppm	104.292 %	0.8 %	0.8 ppm
Ni 231.604 {445} (Axial)	-66 cps	-0.0161 ppm	0.000 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	59,275 cps	105.2428 ppm	105.243 %	1.2 %	1.3 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0020 ppm	0.000 %	96.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-2 cps	-0.0001 ppm	0.000 %	98.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	-65 cps	-0.0016 ppm		3.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	-6 cps	-0.0055 ppm		5.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	2,708 cps	2.0704 ppm		0.4 %	0.0 ppm
V 292.402 {115} (Axial)	-5 cps	-0.0003 ppm	0.000 %	80.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	-101 cps	-0.0096 ppm	0.000 %	0.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.5055 %		0.6 %	0.5 %
Sc 188.060 {479} (Axial)		82.4865 %		0.3 %	0.2 %
Mg 279.079 {121} (Radial)	4,365 cps	104.4865 ppm	104.486 %	0.7 %	0.8 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0056 ppm	0.000 %	7.0 %	0.0 ppm
Al 167.079 {502} (Axial)	18,830 cps	14.8516 ppm		0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		82.6238 %		0.4 %	0.3 %
B 249.773 {135} (Radial)	-23 cps	-0.0611 ppm		2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	45,975 cps	101.7128 ppm	101.713 %	0.5 %	0.5 ppm
Si 251.611 {134} (Radial)	1 cps	0.0088 ppm	0.000 %	43.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	-2 cps	-0.0021 ppm	0.000 %	25.3 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2484 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.3722 %		0.7 %	0.7 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

ICP SERIAL DILUTIONS

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
20111251-43ASD							
Arsenic	SW6010D	ICP2_201121A	58.49	56.63	3.18	10	11/21/20 19:43
Lead	SW6010D	ICP2_201121A	1003	977.7	2.51	10	11/21/20 19:43

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

20111251-43ASD

Sample type: UNKNOWN Analysis started at: 11/21/2020 7:43:01 PM

Standard DF: 50

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	28 cps	2.3281 ppm	4.3 %	0.1 ppm
As 189.042 {478} (Axial)	6 cps	0.7621 ppm	9.4 %	0.1 ppm
Ba 455.403 {74} (Radial)	372 cps	0.4993 ppm	4.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	129 cps	0.2161 ppm	20.9 %	0.0 ppm
Be 313.042 {108} (Axial)	-18 cps	-0.0024 ppm	41.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	346 cps	72.4990 ppm	3.9 %	2.8 ppm
Cd 228.802 {447} (Axial)	5 cps	0.0192 ppm	30.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	20 cps	0.1074 ppm	3.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	14 cps	0.1028 ppm	2.8 %	0.0 ppm
Co 228.616 {447} (Axial)	6 cps	0.0367 ppm	9.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,118 cps	2.1736 ppm	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	789 cps	152.6216 ppm	2.6 %	4.0 ppm
Li 670.784 {50} (Radial)	-17 cps	-0.0564 ppm	65.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,722 cps	2.6417 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0069 ppm	120.5 %	0.0 ppm
Na 589.592 {57} (Radial)	115 cps	3.1066 ppm	7.0 %	0.2 ppm
Ni 231.604 {445} (Axial)	18 cps	0.2190 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	60 cps	5.2978 ppm	19.0 %	1.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0283 ppm	58.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0043 ppm	294.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	75 cps	0.0900 ppm	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	25 cps	1.2063 ppm	2.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	17 cps	0.6557 ppm	5.3 %	0.0 ppm
V 292.402 {115} (Axial)	38 cps	0.1083 ppm	11.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,853 cps	23.0165 ppm	0.9 %	0.2 ppm
Sc 357.253 {94} (Axial)		104.0032 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		103.2342 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	26 cps	30.9823 ppm	5.4 %	1.7 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0219 ppm	217.8 %	0.0 ppm
Al 167.079 {502} (Axial)	904 cps	35.6435 ppm	1.0 %	0.4 ppm
Sc 227.318 {448} (Axial)		103.1973 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	-4 cps	-0.5409 ppm	25.2 %	0.1 ppm
Al 396.152 {85} (Radial)	334 cps	36.9766 ppm	4.5 %	1.7 ppm
Si 251.611 {134} (Radial)	26 cps	14.6709 ppm	1.8 %	0.3 ppm
Pb 220.353 {453} (Axial)	264 cps	13.1204 ppm	0.9 %	0.1 ppm
Y 224.306 {450} (Axial)		105.0876 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.7732 %	0.7 %	0.7 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Detection Limits

Instrument: ICP2 **Matrix:** Soil

Analyte	Units	MRL	MDL	Method
Arsenic	mg/Kg-dry	0.25	0.065	SW6010D
Lead	mg/Kg-dry	0.25	0.20	SW6010D

Instrument: ICP2 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.0016	SW6010D
Lead	mg/L	0.0050	0.0013	SW6010D

Simple Sample Report

11/23/2020 6:48:32 PM

QTEGRA

20111251-27A

Sample type: UNKNOWN Analysis started at: 11/21/2020 7:32:45 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.4995 ppm	7.8 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.2086 ppm	22.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	196 cps	0.5263 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	120 cps	0.4020 ppm	44.5 %	0.2 ppm
Be 313.042 {108} (Axial)	-22 cps	-0.0058 ppm	12.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	689 cps	288.6422 ppm	3.7 %	10.6 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0071 ppm	183.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0645 ppm	80.2 %	0.1 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0807 ppm	6.0 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0329 ppm	26.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	294 cps	1.1444 ppm	3.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	269 cps	104.0715 ppm	3.2 %	3.3 ppm
Li 670.784 {50} (Radial)	-3 cps	-0.0196 ppm	215.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	2,046 cps	2.9040 ppm	1.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0026 ppm	654.6 %	0.0 ppm
Na 589.592 {57} (Radial)	195 cps	10.5131 ppm	3.8 %	0.4 ppm
Ni 231.604 {445} (Axial)	4 cps	0.1004 ppm	8.4 %	0.0 ppm
K 766.490 {44} (Radial)	52 cps	9.2646 ppm	12.8 %	1.2 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0245 ppm	691.9 %	0.2 ppm
Ag 328.068 {103} (Axial)	4 cps	0.0306 ppm	50.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	62 cps	0.1494 ppm	4.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	7 cps	0.6338 ppm	5.4 %	0.0 ppm
Tl 334.941 {101} (Radial)	16 cps	1.2131 ppm	5.4 %	0.1 ppm
V 292.402 {115} (Axial)	18 cps	0.1050 ppm	26.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,308 cps	21.8927 ppm	0.9 %	0.2 ppm
Sc 357.253 {94} (Axial)		103.7559 %	0.9 %	1.0 %
Sc 188.060 {479} (Axial)		102.4082 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	60 cps	144.4910 ppm	4.8 %	6.9 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0248 ppm	258.3 %	0.1 ppm
Al 167.079 {502} (Axial)	457 cps	36.0271 ppm	1.0 %	0.4 ppm
Sc 227.318 {448} (Axial)		102.3878 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	-3 cps	-0.7201 ppm	34.2 %	0.2 ppm
Al 396.152 {85} (Radial)	177 cps	39.0628 ppm	1.1 %	0.4 ppm
Si 251.611 {134} (Radial)	13 cps	14.4468 ppm	5.1 %	0.7 ppm
Pb 220.353 {453} (Axial)	690 cps	68.6355 ppm	0.7 %	0.5 ppm
Y 224.306 {450} (Axial)		103.9313 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.1201 %	1.2 %	1.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-11A

Sample type: UNKNOWN Analysis started at: 11/20/2020 7:53:15 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	10 cps	0.1531 ppm	9.0 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.0931 ppm	3.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,939 cps	0.6122 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,085 cps	0.7076 ppm	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	398 cps	0.0090 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	21,638 cps	584.0239 ppm	1.7 %	10.2 ppm
Cd 228.802 {447} (Axial)	38 cps	0.0268 ppm	4.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	113 cps	0.1017 ppm	0.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	86 cps	0.1124 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	31 cps	0.0306 ppm	2.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	921 cps	0.3438 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,308 cps	91.6998 ppm	1.3 %	1.1 ppm
Li 670.784 {50} (Radial)	112 cps	0.0806 ppm	4.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	43,535 cps	5.2852 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0181 ppm	12.4 %	0.0 ppm
Na 589.592 {57} (Radial)	318 cps	1.5042 ppm	2.6 %	0.0 ppm
Ni 231.604 {445} (Axial)	25 cps	0.0500 ppm	4.7 %	0.0 ppm
K 766.490 {44} (Radial)	364 cps	5.9976 ppm	1.4 %	0.1 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0251 ppm	147.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	27 cps	0.0189 ppm	9.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,566 cps	0.4287 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0746 ppm	4.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	220 cps	1.3640 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	199 cps	0.1036 ppm	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,051 cps	9.7809 ppm	1.0 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.0259 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		94.5641 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	1,420 cps	244.8029 ppm	1.9 %	4.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0029 ppm	316.2 %	0.0 ppm
Al 167.079 {502} (Axial)	7,602 cps	50.5707 ppm	1.0 %	0.5 ppm
Sc 227.318 {448} (Axial)		90.6194 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	9 cps	0.2512 ppm	7.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3,928 cps	65.0140 ppm	1.3 %	0.8 ppm
Si 251.611 {134} (Radial)	744 cps	63.2401 ppm	0.3 %	0.2 ppm
Pb 220.353 {453} (Axial)	386 cps	3.1334 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.7804 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		101.2930 %	0.3 %	0.3 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-29A

Sample type: UNKNOWN Analysis started at: 11/20/2020 8:53:26 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	23 cps	0.3352 ppm	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	9 cps	0.1943 ppm	3.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,150 cps	0.4477 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,226 cps	0.5106 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	133 cps	0.0030 ppm	6.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	13,548 cps	365.6547 ppm	0.9 %	3.5 ppm
Cd 228.802 {447} (Axial)	49 cps	0.0353 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	89 cps	0.0807 ppm	2.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	64 cps	0.0842 ppm	2.9 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0397 ppm	3.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,773 cps	0.6616 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,089 cps	113.3557 ppm	0.9 %	1.0 ppm
Li 670.784 {50} (Radial)	60 cps	0.0435 ppm	3.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	23,847 cps	2.8951 ppm	0.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	4 cps	0.0109 ppm	12.1 %	0.0 ppm
Na 589.592 {57} (Radial)	114 cps	0.5403 ppm	10.9 %	0.1 ppm
Ni 231.604 {445} (Axial)	58 cps	0.1154 ppm	2.4 %	0.0 ppm
K 766.490 {44} (Radial)	261 cps	4.2961 ppm	7.4 %	0.3 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0318 ppm	61.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	54 cps	0.0379 ppm	5.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,182 cps	0.1975 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	17 cps	0.1341 ppm	3.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	184 cps	1.1398 ppm	0.1 %	0.0 ppm
V 292.402 {115} (Axial)	216 cps	0.1125 ppm	0.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	30,709 cps	24.9237 ppm	2.7 %	0.7 ppm
Sc 357.253 {94} (Axial)		100.1393 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		96.0792 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	1,079 cps	185.9225 ppm	0.8 %	1.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0106 ppm	139.4 %	0.0 ppm
Al 167.079 {502} (Axial)	4,404 cps	29.2929 ppm	2.3 %	0.7 ppm
Sc 227.318 {448} (Axial)		92.1429 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	10 cps	0.2635 ppm	6.0 %	0.0 ppm
Al 396.152 {85} (Radial)	2,054 cps	33.9932 ppm	1.0 %	0.3 ppm
Si 251.611 {134} (Radial)	158 cps	13.4071 ppm	0.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	2,113 cps	17.1668 ppm	2.7 %	0.5 ppm
Y 224.306 {450} (Axial)		96.2427 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.7788 %	0.2 %	0.2 %

Simple Sample Report

11/21/2020 11:26:14 AM

QTEGRA

20111251-39A

Sample type: UNKNOWN Analysis started at: 11/20/2020 10:03:53 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.6720 ppm	3.0 %	0.0 ppm
As 189.042 {478} (Axial)	5 cps	0.1030 ppm	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,942 cps	0.8210 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,824 cps	0.8771 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	186 cps	0.0042 ppm	22.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,654 cps	503.4731 ppm	2.0 %	10.3 ppm
Cd 228.802 {447} (Axial)	31 cps	0.0220 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	123 cps	0.1111 ppm	5.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	91 cps	0.1191 ppm	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	39 cps	0.0390 ppm	3.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,708 cps	0.6374 ppm	7.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	4,608 cps	127.7422 ppm	2.0 %	2.5 ppm
Li 670.784 {50} (Radial)	80 cps	0.0577 ppm	16.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,372 cps	4.1729 ppm	5.8 %	0.2 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0184 ppm	3.0 %	0.0 ppm
Na 589.592 {57} (Radial)	61 cps	0.2877 ppm	9.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	50 cps	0.1005 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	383 cps	6.3221 ppm	1.5 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0146 ppm	139.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	38 cps	0.0267 ppm	24.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,332 cps	0.3896 ppm	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	26 cps	0.2054 ppm	2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	155 cps	0.9633 ppm	1.2 %	0.0 ppm
V 292.402 {115} (Axial)	237 cps	0.1233 ppm	9.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	25,429 cps	20.6392 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		97.7143 %	4.6 %	4.5 %
Sc 188.060 {479} (Axial)		94.8243 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	668 cps	115.1616 ppm	1.9 %	2.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0094 ppm	55.7 %	0.0 ppm
Al 167.079 {502} (Axial)	4,934 cps	32.8209 ppm	0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		91.0449 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	13 cps	0.3442 ppm	11.5 %	0.0 ppm
Al 396.152 {85} (Radial)	2,110 cps	34.9335 ppm	1.8 %	0.6 ppm
Si 251.611 {134} (Radial)	170 cps	14.4504 ppm	1.7 %	0.2 ppm
Pb 220.353 {453} (Axial)	2,982 cps	24.2324 ppm	0.4 %	0.1 ppm
Y 224.306 {450} (Axial)		95.6300 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		104.2992 %	0.0 %	0.0 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-20A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:03:22 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0050 ppm	32.2 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0015 ppm	46.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,844 cps	0.0373 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,459 cps	0.0535 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	91 cps	0.0002 ppm	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,819 cps	14.4177 ppm	2.7 %	0.4 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0007 ppm	13.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0003 ppm	103.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	15.9 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	1,205.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	113 cps	0.0041 ppm	3.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0137 ppm	3.2 %	0.0 ppm
Li 670.784 {50} (Radial)	39 cps	0.0027 ppm	21.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,443 cps	0.0856 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	73.8 %	0.0 ppm
Na 589.592 {57} (Radial)	266,212 cps	118.4130 ppm	2.2 %	2.6 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0006 ppm	24.1 %	0.0 ppm
K 766.490 {44} (Radial)	148 cps	0.2427 ppm	6.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0033 ppm	66.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	19 cps	0.0012 ppm	26.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	726 cps	0.0122 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	24.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0036 ppm	27.5 %	0.0 ppm
V 292.402 {115} (Axial)	-6 cps	-0.0003 ppm	46.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,256 cps	0.0995 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3032 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		84.2677 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	316 cps	5.1514 ppm	2.0 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0014 ppm	55.1 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0083 ppm	5.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		82.2175 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	5 cps	0.0121 ppm	16.3 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0042 ppm	126.8 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.2183 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	51 cps	0.0406 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		89.5097 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.9452 %	0.7 %	0.7 %

Simple Sample Report

11/20/2020 11:37:30 AM

QTEGRA

20111251-40A

Sample type: UNKNOWN Analysis started at: 11/19/2020 11:59:39 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	10 cps	0.0147 ppm	7.6 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	409.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	5,218 cps	0.1056 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	5,457 cps	0.1187 ppm	0.7 %	0.0 ppm
Be 313.042 {108} (Axial)	86 cps	0.0002 ppm	5.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	38,856 cps	96.2756 ppm	0.8 %	0.8 ppm
Cd 228.802 {447} (Axial)	30 cps	0.0021 ppm	4.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0005 ppm	31.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0003 ppm	42.5 %	0.0 ppm
Co 228.616 {447} (Axial)	8 cps	0.0008 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	126 cps	0.0045 ppm	6.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	5 cps	0.0129 ppm	16.3 %	0.0 ppm
Li 670.784 {50} (Radial)	49 cps	0.0034 ppm	7.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	21,391 cps	0.2459 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0003 ppm	70.2 %	0.0 ppm
Na 589.592 {57} (Radial)	2,835 cps	1.2610 ppm	1.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	15 cps	0.0030 ppm	3.5 %	0.0 ppm
K 766.490 {44} (Radial)	229 cps	0.3759 ppm	2.6 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0030 ppm	50.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0010 ppm	10.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,972 cps	0.0833 ppm	0.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0007 ppm	48.5 %	0.0 ppm
Tl 334.941 {101} (Radial)	18 cps	0.0097 ppm	7.5 %	0.0 ppm
V 292.402 {115} (Axial)	-2 cps	-0.0001 ppm	137.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	21,778 cps	1.7259 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.9106 %	0.6 %	0.5 %
Sc 188.060 {479} (Axial)		86.4452 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	159 cps	2.5843 ppm	1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0015 ppm	58.8 %	0.0 ppm
Al 167.079 {502} (Axial)	44 cps	0.0289 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.4709 %	0.2 %	0.2 %
B 249.773 {135} (Radial)	6 cps	0.0138 ppm	14.5 %	0.0 ppm
Al 396.152 {85} (Radial)	21 cps	0.0340 ppm	25.1 %	0.0 ppm
Si 251.611 {134} (Radial)	62 cps	0.4888 ppm	0.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,091 cps	0.8733 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3728 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.2925 %	0.3 %	0.3 %

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Method: SW6010D **Analysis Lot:**ICP2_201119A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/19/2020	11:55	
2	ICAL2	ICAL2	11/19/2020	12:00	
3	ICAL3	ICAL3	11/19/2020	12:06	
4	ICAL4	ICAL4	11/19/2020	12:11	
5	ICAL5	ICAL5	11/19/2020	12:15	
8	ICVLL	ICVLL	11/19/2020	12:31	
10	ICSA	ICSA	11/19/2020	12:41	
11	LDR1	LDR1	11/19/2020	12:46	
12	LDR2	LDR2	11/19/2020	12:52	
15	CCV	CCV	11/19/2020	13:07 ✓	
16	CCB	CCB	11/19/2020	13:12 ✓	
27	CCV	CCV	11/19/2020	14:18 ✓	
28	CCB	CCB	11/19/2020	14:23 ✓	
39	CCV	CCV	11/19/2020	15:20 ✓	
40	CCB	CCB	11/19/2020	15:25 ✓	
52	CCV	CCV	11/19/2020	16:29 ✓	
53	CCB	CCB	11/19/2020	16:34 ✓	
62	CCV	CCV	11/19/2020	17:19 ✓	
63	CCB	CCB	11/19/2020	17:24 ✓	
71	MBLK-168037	MBLK-168037	11/19/2020	18:05	
72	LCS-168037	LCS-168037	11/19/2020	18:10 ✓	
74	CCV	CCV	11/19/2020	18:21 ✓	
75	CCB	CCB	11/19/2020	18:25 ✓	
77	IDA001:DU-E4:S000010	20111251-42	11/19/2020	18:36	
78	20111251-42AMS	20111251-42AMS	11/19/2020	18:41	
79	20111251-42AMSD	20111251-42AMSD	11/19/2020	18:46	
80	IDA001:DU-A5:S000010	20111251-44	11/19/2020	18:51	
86	CCV	CCV	11/19/2020	19:22 ✓	
87	CCB	CCB	11/19/2020	19:27 ✓	
99	CCV	CCV	11/19/2020	20:29 ✓	
100	CCB	CCB	11/19/2020	20:34 ✓	
112	CCV	CCV	11/19/2020	21:36 ✓	
113	CCB	CCB	11/19/2020	21:40 ✓	
116	MBLK-168036	MBLK-168036	11/19/2020	21:56	
117	LCS-168036	LCS-168036	11/19/2020	22:01	
118	IDA001:DU-A1:S000010	20111251-02	11/19/2020	22:06	
119	IDA001:DU-B1:S000010	20111251-04	11/19/2020	22:12	
120	IDA001:DU-E1:S000010	20111251-06	11/19/2020	22:17	
121	IDA001:DU-A2:S000010	20111251-08	11/19/2020	22:22	
122	IDA001:DU-B2:S000010	20111251-12	11/19/2020	22:27	
123	IDA001:DU-C2:S000010	20111251-14	11/19/2020	22:32	
125	CCV	CCV	11/19/2020	22:42 ✓	
126	CCB	CCB	11/19/2020	22:47 ✓	
127	IDA001:DU-D2:S000010	20111251-16	11/19/2020	22:52	

CCV + CCB missing in raw data.

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Method: SW6010D **Analysis Lot:**ICP2_201119A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
128	IDA001:DU-E2:S000010	20111251-18	11/19/2020	22:58	
129	IDA001:DU-A3:S000010	20111251-20	11/19/2020	23:03	
130	IDA001:DU-B3:S000010	20111251-22	11/19/2020	23:08	
131	IDA001:DU-C3:S000010	20111251-24	11/19/2020	23:13	
132	IDA001:DU-D3:S000010	20111251-26	11/19/2020	23:18	
133	IDA001:DU-E3:S000010	20111251-28	11/19/2020	23:24	
134	IDA001:DU-A4:S000010	20111251-32	11/19/2020	23:29	
135	IDA001:DU-B4:S000010	20111251-34	11/19/2020	23:34	
136	IDA001:DU-C4:S000010	20111251-38	11/19/2020	23:39	
138	CCV	CCV	11/19/2020	23:49	
139	CCB	CCB	11/19/2020	23:54	
140	IDA001:DU-D4:S000010	20111251-40	11/19/2020	23:59	
142	20111584-02AMS	20111584-02AMS	11/20/2020	00:10	
143	20111584-02AMSD	20111584-02AMSD	11/20/2020	00:15	
145	CCV	CCV	11/20/2020	00:25	
146	CCB	CCB	11/20/2020	00:29	

Analysis Method: SW6010D **Analysis Lot:**ICP2_201120A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/20/2020	13:56	
2	ICAL2	ICAL2	11/20/2020	14:01	
3	ICAL3	ICAL3	11/20/2020	14:07	
4	ICAL4	ICAL4	11/20/2020	14:11	
5	ICAL5	ICAL5	11/20/2020	14:16	
10	ICSA	ICSA	11/20/2020	14:42	
11	LDR1	LDR1	11/20/2020	14:47	
12	LDR2	LDR2	11/20/2020	14:53	
15	CCV	CCV	11/20/2020	15:08	
16	CCB	CCB	11/20/2020	15:13	
17	ICVLL	ICVLL	11/20/2020	15:18	
27	CCV	CCV	11/20/2020	16:14	
28	CCB	CCB	11/20/2020	16:19	
30	IDA001:DU-E4:S000010	20111251-42	11/20/2020	16:29	
31	20111251-42AMS	20111251-42AMS	11/20/2020	16:34	
32	20111251-42AMSD	20111251-42AMSD	11/20/2020	16:39	
39	CCV	CCV	11/20/2020	17:15	
41	CCB	CCB	11/20/2020	17:25	
53	CCV	CCV	11/20/2020	18:27	
54	CCB	CCB	11/20/2020	18:32	
58	IDA001:DU-C4:S000010	20111251-38	11/20/2020	18:52	
59	MBLK-168040	MBLK-168040	11/20/2020	18:57	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201120A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
60	LCS-168040	LCS-168040	11/20/2020	19:03	
61	IDA001:DU-A1:S000010	20111251-01	11/20/2020	19:08	
62	IDA001:DU-B1:S000010	20111251-03	11/20/2020	19:13	
63	IDA001:DU-E1:S000010	20111251-05	11/20/2020	19:18	
64	IDA001:DU-A2:S000010	20111251-07	11/20/2020	19:23	
65	CCV	CCV	11/20/2020	19:28	
67	CCB	CCB	11/20/2020	19:37	
68	IDA001:DU-A2-TE:S000010	20111251-09	11/20/2020	19:43	
69	IDA001:DU-A2-TS:S000010	20111251-10	11/20/2020	19:48	
70	IDA001:DU-B2:S000010	20111251-11	11/20/2020	19:53	
71	IDA001:DU-C2:S000010	20111251-13	11/20/2020	19:58	
72	IDA001:DU-D2:S000010	20111251-15	11/20/2020	20:03	
73	IDA001:DU-E2:S000010	20111251-17	11/20/2020	20:08	
74	IDA001:DU-A3:S000010	20111251-19	11/20/2020	20:13	
75	IDA001:DU-B3:S000010	20111251-21	11/20/2020	20:18	
76	IDA001:DU-C3:S000010	20111251-23	11/20/2020	20:23	
77	IDA001:DU-D3:S000010	20111251-25	11/20/2020	20:28	
78	CCV	CCV	11/20/2020	20:33	
80	CCB	CCB	11/20/2020	20:43	
81	IDA001:DU-E3:S000010	20111251-27	11/20/2020	20:48	
82	IDA001:DU-E3-TE:S000010	20111251-29	11/20/2020	20:53	
83	IDA001:DU-E3-TS:S000010	20111251-30	11/20/2020	20:58	
84	IDA001:DU-A4:S000010	20111251-31	11/20/2020	21:03	
85	IDA001:DU-B4:S000010	20111251-33	11/20/2020	21:08	
86	IDA001:DU-B4-TE:S000010	20111251-35	11/20/2020	21:13	
87	20111251-35AMS	20111251-35AMS	11/20/2020	21:18	
88	20111251-35AMSD	20111251-35AMSD	11/20/2020	21:23	
89	MBLK-168042	MBLK-168042	11/20/2020	21:28	
90	LCS-168042	LCS-168042	11/20/2020	21:33	
91	CCV	CCV	11/20/2020	21:38	
93	CCB	CCB	11/20/2020	21:48	
94	IDA001:DU-B4-TS:S000010	20111251-36	11/20/2020	21:53	
95	IDA001:DU-C4:S000010	20111251-37	11/20/2020	21:58	
96	IDA001:DU-D4:S000010	20111251-39	11/20/2020	22:03	
97	IDA001:DU-E4:S000010	20111251-41	11/20/2020	22:08	
98	IDA001:DU-A5:S000010	20111251-43	11/20/2020	22:14	
99	20111251-43AMS	20111251-43AMS	11/20/2020	22:19	
100	20111251-43AMSD	20111251-43AMSD	11/20/2020	22:24	
105	CCV	CCV	11/20/2020	22:49	
106	CCB	CCB	11/20/2020	22:54	
118	CCV	CCV	11/20/2020	23:55	
119	CCB	CCB	11/21/2020	00:00	
131	CCV	CCV	11/21/2020	01:03	
132	CCB	CCB	11/21/2020	01:07	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Method: SW6010D **Analysis Lot:**ICP2_201120A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
144	CCV	CCV	11/21/2020	02:10	
145	CCB	CCB	11/21/2020	02:14	
157	CCV	CCV	11/21/2020	03:17	
158	CCB	CCB	11/21/2020	03:22	
169	CCV	CCV	11/21/2020	04:18	
171	CCB	CCB	11/21/2020	04:28	
183	CCV	CCV	11/21/2020	05:31	
184	CCB	CCB	11/21/2020	05:36	
189	CCV	CCV	11/21/2020	06:01	- Below
190	CCB	CCB	11/21/2020	06:06	

Analysis Method: SW6010D **Analysis Lot:**ICP2_201121A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/21/2020	14:43	
2	ICAL2	ICAL2	11/21/2020	14:48	
3	ICAL3	ICAL3	11/21/2020	14:54	
4	ICAL4	ICAL4	11/21/2020	14:59	
5	ICAL5	ICAL5	11/21/2020	15:04	
10	ICVLL	ICVLL	11/21/2020	15:29	
11	ICSA	ICSA	11/21/2020	15:34	
12	LDR1	LDR1	11/21/2020	15:39	
13	LDR2	LDR2	11/21/2020	15:45	
16	CCV	CCV	11/21/2020	16:00	
17	CCB	CCB	11/21/2020	16:05	
28	CCV	CCV	11/21/2020	17:02	
29	CCB	CCB	11/21/2020	17:07	
40	CCV	CCV	11/21/2020	18:05	
41	CCB	CCB	11/21/2020	18:09	
52	CCV	CCV	11/21/2020	19:07	
53	CCB	CCB	11/21/2020	19:11	
56	IDA001:DU-E2:S000010	20111251-17	11/21/2020	19:27	
57	IDA001:DU-E3:S000010	20111251-27	11/21/2020	19:32	
58	IDA001:DU-E4:S000010	20111251-41	11/21/2020	19:37	
59	20111251-43ASD	20111251-43ASD	11/21/2020	19:43	
60	20111251-43APDS	20111251-43APDS	11/21/2020	19:48	
64	CCV	CCV	11/21/2020	20:08	
65	CCB	CCB	11/21/2020	20:13	
76	CCV	CCV	11/21/2020	21:10	
77	CCB	CCB	11/21/2020	21:15	
88	CCV	CCV	11/21/2020	22:12	
89	CCB	CCB	11/21/2020	22:17	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201121A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
100	CCV	CCV	11/21/2020	23:14	
101	CCB	CCB	11/21/2020	23:19	
112	CCV	CCV	11/22/2020	00:16	
114	CCB	CCB	11/22/2020	00:26	
125	CCV	CCV	11/22/2020	01:23	
127	CCB	CCB	11/22/2020	01:33	
132	CCV	CCV	11/22/2020	01:58	
133	CCB	CCB	11/22/2020	02:03	

Analysis Lot:ICPMS3_201117D
Analysis Method: MISC **Instrument ID:**ICPMS3

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
	IDA001:DU-A1:S000010	20111251-01	11/17/2020	00:00	
	IDA001:DU-B1:S000010	20111251-03	11/17/2020	00:00	
	IDA001:DU-E1:S000010	20111251-05	11/17/2020	00:00	
	IDA001:DU-A2:S000010	20111251-07	11/17/2020	00:00	
	IDA001:DU-A2-TE:S000010	20111251-09	11/17/2020	00:00	
	IDA001:DU-A2-TS:S000010	20111251-10	11/17/2020	00:00	
	IDA001:DU-B2:S000010	20111251-11	11/17/2020	00:00	
	IDA001:DU-C2:S000010	20111251-13	11/17/2020	00:00	
	IDA001:DU-D2:S000010	20111251-15	11/17/2020	00:00	
	IDA001:DU-E2:S000010	20111251-17	11/17/2020	00:00	
	IDA001:DU-A3:S000010	20111251-19	11/17/2020	00:00	
	IDA001:DU-B3:S000010	20111251-21	11/17/2020	00:00	
	IDA001:DU-C3:S000010	20111251-23	11/17/2020	00:00	
	IDA001:DU-D3:S000010	20111251-25	11/17/2020	00:00	
	IDA001:DU-E3:S000010	20111251-27	11/17/2020	00:00	
	IDA001:DU-E3-TE:S000010	20111251-29	11/17/2020	00:00	
	IDA001:DU-E3-TS:S000010	20111251-30	11/17/2020	00:00	
	IDA001:DU-A4:S000010	20111251-31	11/17/2020	00:00	
	IDA001:DU-B4:S000010	20111251-33	11/17/2020	00:00	
	IDA001:DU-B4-TE:S000010	20111251-35	11/17/2020	00:00	
	IDA001:DU-B4-TS:S000010	20111251-36	11/17/2020	00:00	
	IDA001:DU-C4:S000010	20111251-37	11/17/2020	00:00	
	IDA001:DU-D4:S000010	20111251-39	11/17/2020	00:00	
	IDA001:DU-E4:S000010	20111251-41	11/17/2020	00:00	
	IDA001:DU-A5:S000010	20111251-43	11/17/2020	00:00	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201119A

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
ICAL1	1	11/19/20 11:55		X																X					
ICAL2	1	11/19/20 12:00		X																X					
ICAL3	1	11/19/20 12:06		X																X					
ICAL4	1	11/19/20 12:11		X																X					
ICAL5	1	11/19/20 12:15		X																X					
ICV/QCS	1	11/19/20 12:20		X																X					
ICB	1	11/19/20 12:25		X																X					
ICSA	1	11/19/20 12:41		X																X					
CCV	1	11/19/20 13:07		X																X					
CCB	1	11/19/20 13:12		X																X					
ZZZZZZ	10	11/19/20 13:47																X							
ZZZZZZ	10	11/19/20 13:53																X							
ZZZZZZ	100	11/19/20 13:58																X							
ZZZZZZ	100	11/19/20 14:03																X							
ZZZZZZ	10	11/19/20 14:08																X							
ZZZZZZ	10	11/19/20 14:13																X							
CCV	1	11/19/20 14:18		X																X					
CCB	1	11/19/20 14:23		X																X					
ZZZZZZ	100	11/19/20 14:28																X							
ZZZZZZ	100	11/19/20 14:34																X							
ZZZZZZ	100	11/19/20 14:39			X		X							X				X							
ZZZZZZ	100	11/19/20 14:54			X		X							X				X							
ZZZZZZ	10	11/19/20 15:15																X							
CCV	1	11/19/20 15:20		X																X					
CCB	1	11/19/20 15:25		X																X					
ZZZZZZ	1	11/19/20 15:34			X																				
ZZZZZZ	1	11/19/20 15:59			X																				
ZZZZZZ	1	11/19/20 16:04			X																				
ZZZZZZ	1	11/19/20 16:09			X																				
ZZZZZZ	1	11/19/20 16:14			X																				
ZZZZZZ	10	11/19/20 16:19			X															X					
CCV	1	11/19/20 16:29		X																X					
CCB	1	11/19/20 16:34		X																X					
ZZZZZZ	10	11/19/20 16:39			X						X														X
ZZZZZZ	10	11/19/20 16:44			X															X					
ZZZZZZ	100	11/19/20 16:59										X													
ZZZZZZ	100	11/19/20 17:04																		X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201119A

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
CCV	1	11/19/20 17:19		X																X					
CCB	1	11/19/20 17:24		X																X					
ZZZZZZ	1	11/19/20 17:40	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 17:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 18:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
MBLK-168037	1	11/19/20 18:05		X																X					
LCS-168037	1	11/19/20 18:10		X																X					
ZZZZZZ	10	11/19/20 18:15	X																						
CCV	1	11/19/20 18:21		X																X					
CCB	1	11/19/20 18:25		X																X					
IDA001:DU-E4:S000010	1	11/19/20 18:36		X																					
20111251-42AMS	1	11/19/20 18:41		X																					
20111251-42AMSD	1	11/19/20 18:46		X																					
IDA001:DU-A5:S000010	1	11/19/20 18:51		X																X					
ZZZZZZ	1	11/19/20 18:56	X	X	X			X		X										X	X				
CCV	1	11/19/20 19:22		X																X					
CCB	1	11/19/20 19:27		X																X					
ZZZZZZ	1	11/19/20 19:32	X	X	X			X		X										X	X				
ZZZZZZ	1	11/19/20 19:37	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:42	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:48	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:53	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 19:58	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:13	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:19	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
CCV	1	11/19/20 20:29		X																X					
CCB	1	11/19/20 20:34		X																X					
ZZZZZZ	1	11/19/20 20:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 20:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	11/19/20 21:20	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201119A

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
ZZZZZZ	1	11/19/20 21:26	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X
CCV	1	11/19/20 21:36		X																X					
CCB	1	11/19/20 21:40		X																X					
ZZZZZZ	1	11/19/20 21:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
ZZZZZZ	1	11/19/20 21:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
MBLK-168036	1	11/19/20 21:56		X																X					
LCS-168036	1	11/19/20 22:01		X																X					
IDA001:DU-A1:S000010	1	11/19/20 22:06		X																X					
IDA001:DU-B1:S000010	1	11/19/20 22:12		X																X					
IDA001:DU-E1:S000010	1	11/19/20 22:17		X																X					
IDA001:DU-A2:S000010	1	11/19/20 22:22		X																X					
IDA001:DU-B2:S000010	1	11/19/20 22:27		X																X					
IDA001:DU-C2:S000010	1	11/19/20 22:32		X																X					
CCV	1	11/19/20 22:42		X																X					
CCB	1	11/19/20 22:47		X																X					
IDA001:DU-D2:S000010	1	11/19/20 22:52		X																X					
IDA001:DU-E2:S000010	1	11/19/20 22:58		X																X					
IDA001:DU-A3:S000010	1	11/19/20 23:03		X																X					
IDA001:DU-B3:S000010	1	11/19/20 23:08		X																X					
IDA001:DU-C3:S000010	1	11/19/20 23:13		X																X					
IDA001:DU-D3:S000010	1	11/19/20 23:18		X																X					
IDA001:DU-E3:S000010	1	11/19/20 23:24		X																X					
IDA001:DU-A4:S000010	1	11/19/20 23:29		X																X					
IDA001:DU-B4:S000010	1	11/19/20 23:34		X																X					
IDA001:DU-C4:S000010	1	11/19/20 23:39		X																					
CCV	1	11/19/20 23:49		X																X					
CCB	1	11/19/20 23:54		X																X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201119A

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CA	CD	CO	CR	CU	FE	Hard	K	LI	MG	MN	NA	NI	PB	SE	SN	TL	V	ZN
IDA001:DU-D4:S000010	1	11/19/20 23:59		X																X					
ZZZZZZ	1	11/20/20 00:04		X																X					
ZZZZZZMS	1	11/20/20 00:10		X																X					
ZZZZZZMSD	1	11/20/20 00:15		X																X					
CCV	1	11/20/20 00:25		X																X					
CCB	1	11/20/20 00:29		X																X					

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201120A

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
ICAL1	1	11/20/20 13:56		X												X				
ICAL2	1	11/20/20 14:01		X												X				
ICAL3	1	11/20/20 14:07		X												X				
ICAL4	1	11/20/20 14:11		X												X				
ICAL5	1	11/20/20 14:16		X												X				
ICV/QCS	1	11/20/20 14:21		X												X				
ICB	1	11/20/20 14:26		X												X				
ICSA	1	11/20/20 14:42		X												X				
CCV	1	11/20/20 15:08		X												X				
CCB	1	11/20/20 15:13		X												X				
ZZZZZZ	100	11/20/20 15:45													X					
ZZZZZZ	1	11/20/20 16:00										X					X			
ZZZZZZ	10	11/20/20 16:09													X		X			
CCV	1	11/20/20 16:14		X												X				
CCB	1	11/20/20 16:19		X												X				
ZZZZZZ	10	11/20/20 16:24													X		X			
IDA001:DU-E4:S000010	10	11/20/20 16:29														X				
20111251-42AMS	10	11/20/20 16:34														X				
20111251-42AMSD	10	11/20/20 16:39														X				
ZZZZZZ	10	11/20/20 16:44										X			X		X			
ZZZZZZ	10	11/20/20 16:50										X			X		X			
ZZZZZZ	10	11/20/20 16:55										X			X		X			
ZZZZZZ	10	11/20/20 17:00										X			X		X			
ZZZZZZ	1	11/20/20 17:05										X					X			
ZZZZZZ	10	11/20/20 17:10										X			X		X			
CCV	1	11/20/20 17:15		X												X				
CCB	1	11/20/20 17:25		X												X				
ZZZZZZ	10	11/20/20 17:30										X			X		X			
ZZZZZZ	1	11/20/20 17:35															X			
ZZZZZZ	1	11/20/20 17:41															X			
ZZZZZZ	1	11/20/20 17:46															X			
ZZZZZZ	1	11/20/20 17:51															X			
ZZZZZZ	1	11/20/20 17:56															X			
ZZZZZZ	1	11/20/20 18:01															X			
ZZZZZZ	1	11/20/20 18:06															X			
ZZZZZZ	1	11/20/20 18:12															X			
ZZZZZZ	10	11/20/20 18:17									X			X		X				

Printed 12/29/2020 2:41:33 PM

Superset Reference:20111251

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201120A

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
CCV	1	11/20/20 18:27		X												X				
CCB	1	11/20/20 18:32		X												X				
ZZZZZZ	10	11/20/20 18:37										X			X		X			
ZZZZZZ	10	11/20/20 18:42													X		X			X
ZZZZZZ	10	11/20/20 18:47													X		X			X
IDA001:DU-C4:S000010	10	11/20/20 18:52														X				
MBLK-168040	1	11/20/20 18:57		X												X				
LCS-168040	1	11/20/20 19:03		X												X				
IDA001:DU-A1:S000010	10	11/20/20 19:08		X												X				
IDA001:DU-B1:S000010	10	11/20/20 19:13		X												X				
IDA001:DU-E1:S000010	10	11/20/20 19:18		X												X				
IDA001:DU-A2:S000010	10	11/20/20 19:23		X												X				
CCV	1	11/20/20 19:28		X												X				
CCB	1	11/20/20 19:37		X												X				
IDA001:DU-A2-TE:S000010	10	11/20/20 19:43		X												X				
IDA001:DU-A2-TS:S000010	10	11/20/20 19:48		X												X				
IDA001:DU-B2:S000010	10	11/20/20 19:53		X												X				
IDA001:DU-C2:S000010	10	11/20/20 19:58		X												X				
IDA001:DU-D2:S000010	10	11/20/20 20:03		X												X				
IDA001:DU-E2:S000010	10	11/20/20 20:08		X																
IDA001:DU-A3:S000010	10	11/20/20 20:13		X												X				
IDA001:DU-B3:S000010	10	11/20/20 20:18		X												X				
IDA001:DU-C3:S000010	10	11/20/20 20:23		X												X				
IDA001:DU-D3:S000010	10	11/20/20 20:28		X												X				
CCV	1	11/20/20 20:33		X												X				
CCB	1	11/20/20 20:43		X												X				
IDA001:DU-E3:S000010	10	11/20/20 20:48		X																

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201120A**

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
IDA001:DU-E3-TE:S000010	10	11/20/20 20:53		X												X				
IDA001:DU-E3-TS:S000010	10	11/20/20 20:58		X												X				
IDA001:DU-A4:S000010	10	11/20/20 21:03		X												X				
IDA001:DU-B4:S000010	10	11/20/20 21:08		X												X				
IDA001:DU-B4-TE:S000010	10	11/20/20 21:13		X												X				
20111251-35AMS	10	11/20/20 21:18		X												X				
20111251-35AMSD	10	11/20/20 21:23		X												X				
MBLK-168042	1	11/20/20 21:28		X												X				
LCS-168042	1	11/20/20 21:33		X												X				
CCV	1	11/20/20 21:38		X												X				
CCB	1	11/20/20 21:48		X												X				
IDA001:DU-B4-TS:S000010	10	11/20/20 21:53		X												X				
IDA001:DU-C4:S000010	10	11/20/20 21:58		X												X				
IDA001:DU-D4:S000010	10	11/20/20 22:03		X												X				
IDA001:DU-E4:S000010	10	11/20/20 22:08		X																
IDA001:DU-A5:S000010	10	11/20/20 22:14		X												X				
20111251-43AMS	10	11/20/20 22:19		X												X				
20111251-43AMSD	10	11/20/20 22:24		X												X				
ZZZZZZ	10	11/20/20 22:29			X	X				X	X		X	X	X			X	X	
ZZZZZZ	10	11/20/20 22:34			X	X				X	X		X	X	X			X	X	
CCV	1	11/20/20 22:49		X												X				
CCB	1	11/20/20 22:54		X												X				
ZZZZZZ	1	11/20/20 23:04	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:19	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:24	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/20/20 23:29	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:34	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/20/20 23:40	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/20/20 23:45	X	X	X		X	X		X				X		X				
CCV	1	11/20/20 23:55		X												X				
CCB	1	11/21/20 00:00		X												X				

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QA/QC Report

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Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201120A

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
ZZZZZZ	1	11/21/20 00:05	X	X	X		X	X		X				X		X				
ZZZZZZ	1	11/21/20 00:11	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/21/20 00:16	X	X	X		X	X		X	X			X						
ZZZZZZ	1	11/21/20 00:21	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/21/20 00:27	X	X	X		X	X		X	X			X		X				
ZZZZZZ	1	11/21/20 00:32								X	X		X							
ZZZZZZ	10	11/21/20 00:37			X					X	X		X							
CCV	1	11/21/20 01:03		X												X				
CCB	1	11/21/20 01:07		X												X				
ZZZZZZ	1	11/21/20 01:18		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:33		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:39		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:44		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:49		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 01:54		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:00		X	X		X		X	X	X		X							X
CCV	1	11/21/20 02:10		X												X				
CCB	1	11/21/20 02:14		X												X				
ZZZZZZ	1	11/21/20 02:20		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 02:25		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 02:30		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:35		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 02:40		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:46		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:51		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 02:56		X	X		X		X	X	X		X							X
ZZZZZZ	1	11/21/20 03:01		X	X		X		X	X	X		X			X				X
ZZZZZZ	1	11/21/20 03:07		X	X		X		X	X	X		X			X				X
CCV	1	11/21/20 03:17		X												X				
CCB	1	11/21/20 03:22		X												X				
ZZZZZZ	1	11/21/20 03:27	X	X	X		X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 03:32	X	X	X	X	X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 03:37	X	X	X	X	X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 03:53	X	X	X	X	X	X	X	X	X		X	X						X
ZZZZZZ	1	11/21/20 03:58	X	X	X	X	X	X	X	X	X		X	X		X				X
ZZZZZZ	1	11/21/20 04:03									X		X							
CCV	1	11/21/20 04:18		X												X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201120A

Sample	Dilution Factor	Date/Time	AG	AS	BA	CA	CD	CR	CU	FE	K	LI	MG	MN	NA	PB	SB	SI	SR	ZN
CCB	1	11/21/20 04:28		X												X				
ZZZZZZ	1	11/21/20 04:33									X		X							
ZZZZZZ	1	11/21/20 04:38									X		X							
ZZZZZZ	1	11/21/20 04:44									X		X							
ZZZZZZ	1	11/21/20 04:49									X		X							
ZZZZZZ	1	11/21/20 04:54											X							
ZZZZZZ	1	11/21/20 04:59											X							
ZZZZZZ	1	11/21/20 05:05									X		X							
ZZZZZZ	1	11/21/20 05:10											X							
ZZZZZZ	1	11/21/20 05:15									X		X							
ZZZZZZ	1	11/21/20 05:21									X		X							
CCV	1	11/21/20 05:31		X												X				
CCB	1	11/21/20 05:36		X												X				
ZZZZZZ	1	11/21/20 05:41									X		X							
ZZZZZZ	1	11/21/20 05:46											X							
ZZZZZZ	1	11/21/20 05:51											X							
CCV	1	11/21/20 06:01		X												X				
CCB	1	11/21/20 06:06		X												X				

Printed 12/29/2020 2:41:33 PM

Superset Reference:20111251

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201121A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	CA	CR	K	MN	NA	PB	SE
ICAL1	1	11/21/20 14:43			X						X	
ICAL2	1	11/21/20 14:48			X						X	
ICAL3	1	11/21/20 14:54			X						X	
ICAL4	1	11/21/20 14:59			X						X	
ICAL5	1	11/21/20 15:04			X						X	
ICV/QCS	1	11/21/20 15:14			X						X	
ICB	1	11/21/20 15:19			X						X	
ICSA	1	11/21/20 15:34			X						X	
CCV	1	11/21/20 16:00			X						X	
CCB	1	11/21/20 16:05			X						X	
CCV	1	11/21/20 17:02			X						X	
CCB	1	11/21/20 17:07			X						X	
ZZZZZZ	1	11/21/20 17:12		X								
ZZZZZZ	1	11/21/20 17:17		X								
ZZZZZZ	1	11/21/20 17:23		X								
ZZZZZZ	1	11/21/20 17:28		X								
ZZZZZZ	1	11/21/20 17:33		X								
ZZZZZZ	1	11/21/20 17:38		X								
ZZZZZZ	1	11/21/20 17:43		X								
ZZZZZZ	1	11/21/20 17:49		X								
ZZZZZZ	1	11/21/20 17:54		X								
ZZZZZZ	1	11/21/20 17:59		X								
CCV	1	11/21/20 18:05			X						X	
CCB	1	11/21/20 18:09			X						X	
ZZZZZZ	1	11/21/20 18:15		X								
ZZZZZZ	1	11/21/20 18:20		X								
ZZZZZZ	1	11/21/20 18:25		X								
ZZZZZZ	1	11/21/20 18:30		X								
ZZZZZZ	1	11/21/20 18:35		X								
ZZZZZZ	1	11/21/20 18:41		X								
ZZZZZZ	1	11/21/20 18:46		X								
ZZZZZZ	1	11/21/20 18:51		X								
ZZZZZZ	1	11/21/20 18:56		X								
ZZZZZZ	1	11/21/20 19:01		X								
CCV	1	11/21/20 19:07			X						X	
CCB	1	11/21/20 19:11			X						X	
ZZZZZZ	1	11/21/20 19:17		X								

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201121A

Sample	Dilution Factor	Date/Time	AG	AL	AS	CA	CR	K	MN	NA	PB	SE
ZZZZZZ	1	11/21/20 19:22		X								
IDA001:DU-E2:S000010	100	11/21/20 19:27									X	
IDA001:DU-E3:S000010	100	11/21/20 19:32									X	
IDA001:DU-E4:S000010	100	11/21/20 19:37									X	
20111251-43ASD	50	11/21/20 19:43			X						X	
20111251-43APDS	10	11/21/20 19:48			X						X	
ZZZZZZ	10	11/21/20 19:53				X				X		X
CCV	1	11/21/20 20:08			X						X	
CCB	1	11/21/20 20:13			X						X	
ZZZZZZ	10	11/21/20 20:18				X				X		X
ZZZZZZ	1	11/21/20 20:23				X				X	X	X
ZZZZZZ	1	11/21/20 20:29				X				X		X
ZZZZZZ	10	11/21/20 20:34				X				X	X	X
ZZZZZZ	10	11/21/20 20:39				X				X		X
ZZZZZZ	10	11/21/20 20:44				X		X		X		X
ZZZZZZ	10	11/21/20 20:49				X		X		X		X
ZZZZZZ	10	11/21/20 20:54				X				X	X	X
ZZZZZZ	10	11/21/20 21:00				X				X	X	X
ZZZZZZ	10	11/21/20 21:05				X				X		X
CCV	1	11/21/20 21:10			X						X	
CCB	1	11/21/20 21:15			X						X	
ZZZZZZ	10	11/21/20 21:20				X				X		X
ZZZZZZ	10	11/21/20 21:25				X				X		
ZZZZZZ	100	11/21/20 21:31				X				X		
ZZZZZZ	10	11/21/20 21:36	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 21:51	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 21:57	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:02	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:07	X			X	X		X	X		X
CCV	1	11/21/20 22:12			X						X	
CCB	1	11/21/20 22:17			X						X	
ZZZZZZ	10	11/21/20 22:22	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:27	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:33	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:38	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:43	X			X	X		X	X		X

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111251
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201121A**

Sample	Dilution Factor	Date/Time	AG	AL	AS	CA	CR	K	MN	NA	PB	SE
ZZZZZZ	10	11/21/20 22:48	X			X	X		X	X	X	X
ZZZZZZ	10	11/21/20 22:53	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 22:58	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 23:04	X			X	X		X	X		X
ZZZZZZ	10	11/21/20 23:09	X			X	X		X		X	X
CCV	1	11/21/20 23:14			X						X	
CCB	1	11/21/20 23:19			X						X	
ZZZZZZ	10	11/21/20 23:24	X			X	X		X			
ZZZZZZ	1	11/21/20 23:29	X				X		X			
ZZZZZZ	10	11/21/20 23:35				X				X		
ZZZZZZ	10	11/21/20 23:40								X		
ZZZZZZ	10	11/21/20 23:45								X		
ZZZZZZ	10	11/21/20 23:50								X	X	
ZZZZZZ	10	11/21/20 23:55								X		
ZZZZZZ	10	11/22/20 00:01				X				X		
CCV	1	11/22/20 00:16			X						X	
CCB	1	11/22/20 00:26			X						X	
ZZZZZZ	1	11/22/20 00:31								X		
ZZZZZZ	10	11/22/20 00:36				X				X		
ZZZZZZ	10	11/22/20 00:41				X				X		
ZZZZZZ	10	11/22/20 00:47				X				X		
ZZZZZZ	1	11/22/20 00:52				X				X		
ZZZZZZ	1	11/22/20 00:57				X				X		
ZZZZZZ	10	11/22/20 01:02				X				X		
ZZZZZZ	1	11/22/20 01:07				X				X		
ZZZZZZ	10	11/22/20 01:12				X				X		
ZZZZZZ	10	11/22/20 01:18				X				X		
CCV	1	11/22/20 01:23			X						X	
CCB	1	11/22/20 01:33			X						X	
ZZZZZZ	10	11/22/20 01:38				X				X		
ZZZZZZ	1	11/22/20 01:43				X				X		
ZZZZZZ	1	11/22/20 01:48				X				X		
CCV	1	11/22/20 01:58			X						X	
CCB	1	11/22/20 02:03			X						X	

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168040
Analytical Method: SW6010D **Extraction Date:** 11/19/20 15:33

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-A1:S000010	20111251-01A	11/9/20	11/13/20	0.743 g	50 mL	88
IDA001:DU-B1:S000010	20111251-03A	11/9/20	11/13/20	0.756 g	50 mL	88
IDA001:DU-E1:S000010	20111251-05A	11/10/20	11/13/20	0.662 g	50 mL	90.5
IDA001:DU-A2:S000010	20111251-07A	11/9/20	11/13/20	0.616 g	50 mL	87
IDA001:DU-A2-TE:S000010	20111251-09A	11/9/20	11/13/20	0.757 g	50 mL	88
IDA001:DU-A2-TS:S000010	20111251-10A	11/9/20	11/13/20	0.781 g	50 mL	90.6
IDA001:DU-B2:S000010	20111251-11A	11/10/20	11/13/20	0.681 g	50 mL	93.6
IDA001:DU-C2:S000010	20111251-13A	11/10/20	11/13/20	0.673 g	50 mL	90.8
IDA001:DU-D2:S000010	20111251-15A	11/10/20	11/13/20	0.744 g	50 mL	91.6
IDA001:DU-E2:S000010	20111251-17A	11/10/20	11/13/20	0.74 g	50 mL	84
IDA001:DU-A3:S000010	20111251-19A	11/10/20	11/13/20	0.741 g	50 mL	89
IDA001:DU-B3:S000010	20111251-21A	11/10/20	11/13/20	0.714 g	50 mL	95
IDA001:DU-C3:S000010	20111251-23A	11/10/20	11/13/20	0.648 g	50 mL	95.5
IDA001:DU-D3:S000010	20111251-25A	11/11/20	11/13/20	0.689 g	50 mL	81
IDA001:DU-E3:S000010	20111251-27A	11/11/20	11/13/20	0.716 g	50 mL	88
IDA001:DU-E3-TE:S000010	20111251-29A	11/11/20	11/13/20	0.785 g	50 mL	89
IDA001:DU-E3-TS:S000010	20111251-30A	11/11/20	11/13/20	0.66 g	50 mL	89
IDA001:DU-A4:S000010	20111251-31A	11/11/20	11/13/20	0.757 g	50 mL	89
IDA001:DU-B4:S000010	20111251-33A	11/11/20	11/13/20	0.727 g	50 mL	93.6
IDA001:DU-B4-TE:S000010	20111251-35A	11/11/20	11/13/20	0.659 g	50 mL	94.3
Matrix Spike	20111251-35AMS	NA	NA	0.649 g	50 mL	0
Duplicate Matrix Spike	20111251-35AMSD	NA	NA	0.652 g	50 mL	0
LCS-168040	LCS-168040	NA	NA	1 g	50 mL	0
MBLK-168040	MBLK-168040	NA	NA	1 g	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168036
Analytical Method: SW6010D **Extraction Date:** 11/19/20 13:52

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-A1:S000010	20111251-02A	11/9/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B1:S000010	20111251-04A	11/9/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-E1:S000010	20111251-06A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-A2:S000010	20111251-08A	11/9/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B2:S000010	20111251-12A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-C2:S000010	20111251-14A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-D2:S000010	20111251-16A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-E2:S000010	20111251-18A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-A3:S000010	20111251-20A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B3:S000010	20111251-22A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-C3:S000010	20111251-24A	11/10/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-D3:S000010	20111251-26A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-E3:S000010	20111251-28A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-A4:S000010	20111251-32A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-B4:S000010	20111251-34A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-C4:S000010	20111251-38A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
IDA001:DU-D4:S000010	20111251-40A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
Matrix Spike	20111584-02AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111584-02AMSD	NA	NA	2.5 mL	27.5 mL	0
LCS-168036	LCS-168036	NA	NA	25 mL	27.5 mL	0
MBLK-168036	MBLK-168036	NA	NA	25 mL	27.5 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168042
Analytical Method: SW6010D **Extraction Date:** 11/19/20 15:33

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-B4-TS:S000010	20111251-36A	11/11/20	11/13/20	0.644 g	50 mL	94
IDA001:DU-C4:S000010	20111251-37A	11/11/20	11/13/20	0.691 g	50 mL	89
IDA001:DU-D4:S000010	20111251-39A	11/11/20	11/13/20	0.678 g	50 mL	84
IDA001:DU-E4:S000010	20111251-41A	11/11/20	11/13/20	0.694 g	50 mL	88
IDA001:DU-A5:S000010	20111251-43A	11/11/20	11/13/20	0.671 g	50 mL	84
Matrix Spike	20111251-43AMS	NA	NA	0.694 g	50 mL	0
Duplicate Matrix Spike	20111251-43AMSD	NA	NA	0.664 g	50 mL	0
LCS-168042	LCS-168042	NA	NA	1 g	50 mL	0
MBLK-168042	MBLK-168042	NA	NA	1 g	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111251
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168037
Analytical Method: SW6010D **Extraction Date:** 11/19/20 13:58

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-E4:S000010	20111251-42A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
Matrix Spike	20111251-42AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111251-42AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-A5:S000010	20111251-44A	11/11/20	11/13/20	2.5 mL	27.5 mL	0
LCS-168037	LCS-168037	NA	NA	25 mL	27.5 mL	0
MBLK-168037	MBLK-168037	NA	NA	25 mL	27.5 mL	0

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PREP BATCH REPORT

Batch ID: 168040 Prep Code: MP_6010_S

Start Date: 11/19/2020 1:54:54 PM End Date: 11/19/2020 3:33:08 PM

Technician: Kate Achatz

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-01A	Soil		0.743		0	50	67.2948
20111251-03A	Soil		0.756		0	50	66.1376
20111251-05A	Soil		0.662		0	50	75.5287
20111251-07A	Soil		0.616		0	50	81.1688
20111251-09A	Soil		0.757		0	50	66.0502
20111251-10A	Soil		0.781		0	50	64.0205
20111251-11A	Soil		0.681		0	50	73.4214
20111251-13A	Soil		0.673		0	50	74.2942
20111251-15A	Soil		0.744		0	50	67.2043
20111251-17A	Soil		0.74		0	50	67.5676
20111251-19A	Soil		0.741		0	50	67.4764
20111251-21A	Soil		0.714		0	50	70.028
20111251-23A	Soil		0.648		0	50	77.1605
20111251-25A	Soil		0.689		0	50	72.5689
20111251-27A	Soil		0.716		0	50	69.8324
20111251-29A	Soil		0.785		0	50	63.6943
20111251-30A	Soil		0.66		0	50	75.7576
20111251-31A	Soil		0.757		0	50	66.0502
20111251-33A	Soil		0.727		0	50	68.7758
20111251-35A	Soil		0.659		0	50	75.8725
20111251-35AMS	Soil		0.649		0	50	77.0416
20111251-35AMS	Soil		0.652		0	50	76.6871
LCS-168040			1		0	50	50
MBLK-168040			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3081-248-4; HCl:3214-4-4;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168036** Prep Code: **MP 3015A 6010**

Start Date: **11/19/2020 12:49:17 PM** End Date: **11/19/2020 1:52:50 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-04A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-06A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-08A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-12A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-14A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-16A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-18A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-20A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-22A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-24A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-26A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111251-28A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168036** Prep Code: **MP_3015A_6010**

Start Date: **11/19/2020 12:49:17 PM** End Date: **11/19/2020 1:52:50 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-32A	Tclp Extract	<2		2.5	0	27.5	11
11/19 @ 12:20 PM							
20111251-34A	Tclp Extract	<2		2.5	0	27.5	11
11/19 @ 12:20 PM							
20111251-38A	Tclp Extract	<2		2.5	0	27.5	11
11/19 @ 12:20 PM							
20111251-40A	Tclp Extract	<2		2.5	0	27.5	11
11/19 @ 12:20 PM							
20111584-02A	Tclp Extract			2.5	0	27.5	11
20111584-02AMS	Tclp Extract			2.5	0	27.5	11
20111584-02AMS	Tclp Extract			2.5	0	27.5	11
LCS-168036				25	0	27.5	1.1
MBLK-168036				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: 168042 Prep Code: MP_6010_S

Start Date: 11/19/2020 2:47:48 PM End Date: 11/19/2020 3:33:04 PM

Technician: Kate Achatz

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111251-36A	Soil		0.644		0	50	77.6398
20111251-37A	Soil		0.691		0	50	72.3589
20111251-39A	Soil		0.678		0	50	73.7463
20111251-41A	Soil		0.694		0	50	72.0461
20111251-43A	Soil		0.671		0	50	74.5156
20111251-43AMS	Soil		0.694		0	50	72.0461
20111251-43AMS	Soil		0.664		0	50	75.3012
20111715-01A	Solid		0.634		0	50	78.8644
20111716-01A	Liquid		0.719		0	50	69.541
LCS-168042			1		0	50	50
MBLK-168042			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3081-248-4; HCl:3214-4-4;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168037** Prep Code: **MP_3015A_6010**

Start Date: **11/19/2020 12:49:24 PM** End Date: **11/19/2020 1:58:42 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111085-04A	Tclp Extract			2.5	0	27.5	11
	1800 mL of Extraction Fluid #1 were added to 2000 mL volumetric flask. Four 40 mL vial were combined into another container, and 100 mL of those combined vials were pipetted into the 2000 mL flask. The flask was diluted to the mark and inverted about three times. Prep by AL.The prep HoldTime was exceeded by 43974 days.						
20111251-42A	Tclp Extract			2.5	0	27.5	11
20111251-42AMS	Tclp Extract			2.5	0	27.5	11
20111251-42AMS	Tclp Extract			2.5	0	27.5	11
20111251-44A	Tclp Extract	<2		2.5	0	27.5	11
	11/19 @ 12:20 PM						
20111464-02A	Tclp Extract	<2		2.5	0	27.5	11
	11/18 @ 10:40 AM						
LCS-168037				25	0	27.5	1.1
MBLK-168037				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

11/9/20	7 days Analyze by	11/16/20
11/10/20	7 days Analyze by	11/17/20
11/11/20	7 days Analyze by	11/18/20

Sample Date	Sample	Lab ID	Pan	Wet weight Sample	Final Dry Sample	% Solids	%solids Rptd	Date Analyzed
11/09/20	IDA001:DU-A1	20111251-01	1.0876	5.4811	5.8984	87.8%	87.77	11/18/20
11/09/20	IDA001:DU-A1	20111251-02				#DIV/0!		
11/9/20	IDA001:DU-B1	20111251-03	1.1132	5.4319	5.8787	87.7%	87.7	11/18/20
11/9/20	IDA001:DU-B1	20111251-04				#DIV/0!		
11/10/20	IDA001:DU-E1	20111251-05	1.1066	6.5859	7.0691	90.5%	90.53	11/18/20
11/10/20	IDA001:DU-E1	20111251-06				#DIV/0!		
11/9/20	IDA001:DU-A2	20111251-07	1.1	5.4554	5.8378	86.8%	86.85	11/18/20
11/9/20	IDA001:DU-A2	20111251-08				#DIV/0!		
11/9/20	IDA001:DU-A2 TE	20111251-09	1.0955	7.0855	7.3232	87.9%	87.89	11/18/20
11/9/20	IDA001:DU-A2 TS	20111251-10	1.0914	6.2477	6.7544	90.6%	90.64	11/18/20
11/10/20	IDA001:DU-B2	20111251-11	1.0975	5.7615	6.4925	93.6%	93.64	11/18/20
11/10/20	IDA001:DU-B2	20111251-12				#DIV/0!		
11/10/20	IDA001:DU-C2	20111251-13	1.1061	6.3381	6.8603	90.8%	90.79	11/18/20
11/10/20	IDA001:DU-C2	20111251-14				#DIV/0!		
11/10/20	IDA001:DU-D2	20111251-15	1.0959	7.2704	7.7587	91.6%	91.64	11/18/20
11/10/20	IDA001:DU-D2	20111251-16				#DIV/0!		
11/10/20	IDA001:DU-E2	20111251-17	1.0975	6.5443	6.6035	84.1%	84.13	11/18/20
11/10/20	IDA001:DU-E2	20111251-18				#DIV/0!		
11/10/20	IDA001:DU-A3	20111251-19	1.1065	5.6605	6.1283	88.7%	88.72	11/18/20
11/10/20	IDA001:DU-A3	20111251-20				#DIV/0!		
11/10/20	IDA001:DU-B3	20111251-21	1.0834	6.4519	7.2159	95.0%	95.05	11/18/20
11/10/20	IDA001:DU-B3	20111251-22				#DIV/0!		
11/10/20	IDA001:DU-C3	20111251-23	1.0925	5.9659	6.7889	95.5%	95.48	11/18/20
11/10/20	IDA001:DU-C3	20111251-24				#DIV/0!		
11/11/20	IDA001:DU-D3	20111251-25	1.0909	5.5825	5.6064	80.9%	80.89	11/18/20
11/11/20	IDA001:DU-D3	20111251-26				#DIV/0!		
11/11/20	IDA001:DU-E3	20111251-27	1.096	6.7669	7.0693	88.3%	88.27	11/18/20
11/11/20	IDA001:DU-E3	20111251-28				#DIV/0!		
11/11/20	IDA001:DU-E3 TE	20111251-29	1.1048	5.8316	6.3226	89.5%	89.47	11/18/20
11/11/20	IDA001:DU-E3 TS	20111251-30	1.0957	6.139	6.5642	89.1%	89.08	11/18/20
11/11/20	IDA001:DU-A4	20111251-31	1.1038	5.9033	6.3814	89.4%	89.4	11/18/20
11/11/20	IDA001:DU-A4	20111251-32				#DIV/0!		
11/11/20	IDA001:DU-B4	20111251-33	1.0897	5.7311	6.454	93.6%	93.6	11/18/20
11/11/20	IDA001:DU-B4	20111251-34				#DIV/0!		
11/11/20	IDA001:DU-B4 TE	20111251-35	1.0948	6.6434	7.3598	94.3%	94.3	11/18/20
11/11/20	IDA001:DU-B4 TS	20111251-36	1.091	7.1274	7.792	94.0%	94.02	11/18/20
11/11/20	IDA001:DU-C4	20111251-37	1.0829	5.7272	6.1959	89.3%	89.28	11/18/20
11/11/20	IDA001:DU-C4	20111251-38				#DIV/0!		
11/11/20	IDA001:DU-D4	20111251-39	1.0752	6.4868	6.5159	83.9%	83.87	11/18/20
11/11/20	IDA001:DU-D4	20111251-40				#DIV/0!		
11/11/20	IDA001:DU-E4	20111251-41	1.108	6.4599	6.8152	88.3%	88.35	11/18/20
11/11/20	IDA001:DU-E4	20111251-42				#DIV/0!		
11/11/20	IDA001:DU-A5	20111251-43	1.0792	9.6511	9.232	84.5%	84.48	11/18/20
11/11/20	IDA001:DU-A5	20111251-44				#DIV/0!		

COMPOUND	SAMPLE	DUPLICATE	RPD	Lab
	27			Value
	IDA001:DU-e3	dup		
%M	11.73	11.71	0.2	0.171
43	IDA001:DU-a5	dup		
%M	15.52	15.54	-0.1	0.129

not all samples were not analyzed within 7 days - no qualification - 7 days is recommended

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	WBLKS	**Basis:**	Wet
Lab Code:	WBLKS		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/18/20 14:54	NA	
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/18/20 13:32	NA	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/18/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111251-27A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-E3:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111251-27A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	11.73	11.71	0.171	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/18/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111251-43A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-A5:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111251-43A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	15.52	15.54	0.129	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/18/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201118B

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	100	100	100	98-102

ALS Group USA, Corp.
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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111251
Project:	IDA001/IDA001	**Date Analyzed:**	11/18/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201118C

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	99.99	100	100.0	98-102

Moisture

ALS Environmental

Analyst:	KT			Date/Time In:	11/18/20 1:32 PM				Temp In Deg C:	104			
Review By:				Date/Time Out:	11/19/20 8:21 AM				Temp Out Deg C:	104.5			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_201118B				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	11			

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.094	0	0.0000				1.0948	0.08	0.08	Moisture
LCS		LCS	LCS	1.0967	0	9.8363				10.9332	100.00	100.00	Moisture
20111582-16A	1	SAMP	B1	1.0968	0	9.6558				9.9991	92.20	7.80	Moisture
20111582-16A DUP	1	DUP	B2	1.0935	0	9.6304				9.991	92.39	7.61	Moisture
20111582-15A	1	SAMP	B3	1.1008	0	6.8521				7.4198	92.22	7.78	Moisture
20111584-01A	1	SAMP	B4	1.1079	0	6.2633				6.4327	85.02	14.98	Moisture
20111359-01A	1	SAMP	B5	1.11	0	5.2079				2.0323	17.71	82.29	Moisture
20111607-01A	1	SAMP	B6	1.0981	0	5.4109				5.3733	79.01	20.99	Moisture
20111251-01A	1	SAMP	B7	1.0876	0	5.4811				5.8984	87.77	12.23	Moisture
20111251-03A	1	SAMP	B8	1.1132	0	5.4319				5.8787	87.73	12.27	Moisture
20111251-05A	1	SAMP	B9	1.1066	0	6.5859				7.0691	90.53	9.47	Moisture
20111251-07A	1	SAMP	B10	1.1	0	5.4554				5.8378	86.85	13.15	Moisture
20111251-09A	1	SAMP	B11	1.0955	0	7.0855				7.3232	87.89	12.11	Moisture
20111353-01A	1	SAMP	B12	1.1063	0	7.4421				8.5476	99.99	0.01	Moisture
20111353-01A DUP	1	DUP	B13	1.1039	0	7.4426				8.5456	99.99	0.01	Moisture
20111251-10A	1	SAMP	B14	1.0914	0	6.2477				6.7544	90.64	9.36	Moisture
20111251-11A	1	SAMP	B15	1.0975	0	5.7615				6.4925	93.64	6.36	Moisture
20111251-13A	1	SAMP	B16	1.1061	0	6.3381				6.8603	90.79	9.21	Moisture
20111251-15A	1	SAMP	B17	1.0959	0	7.2704				7.7587	91.64	8.36	Moisture
20111251-17A	1	SAMP	B18	1.0975	0	6.5443				6.6035	84.13	15.87	Moisture
20111251-19A	1	SAMP	B19	1.1065	0	5.6605				6.1283	88.72	11.28	Moisture
20111251-21A	1	SAMP	B20	1.0834	0	6.4519				7.2159	95.05	4.95	Moisture
20111251-23A	1	SAMP	B21	1.0925	0	5.9659				6.7889	95.48	4.52	Moisture
20111251-25A	1	SAMP	B22	1.0909	0	5.5825				5.6064	80.89	19.11	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/19/2020 12:32	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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Moisture

ALS Environmental

Analyst:	KT	Date/Time In:	11/18/20 2:54 PM		Temp In Deg C:	104.5	
Review By:		Date/Time Out:	11/19/20 8:27 AM		Temp Out Deg C:	105.7	
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_201118C		Sand BPL:	2049-184-4	
SOP:	HN-WC-018	Balance ID:	6		Oven ID:	11	

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.0944	0	0.0000				1.0945	0.01	0.01	Moisture
LCS		LCS	LCS	1.0985	0	9.7566				10.8542	99.99	99.99	Moisture
20111251-27A	1	SAMP	E1	1.096	0	6.7669				7.0693	88.27	11.73	Moisture
20111251-27A DUP	1	DUP	E2	1.1105	0	6.7646				7.0831	88.29	11.71	Moisture
20111251-29A	1	SAMP	E3	1.1048	0	5.8316				6.3226	89.47	10.53	Moisture
20111251-30A	1	SAMP	E4	1.0957	0	6.139				6.5642	89.08	10.92	Moisture
20111251-31A	1	SAMP	E5	1.1038	0	5.9033				6.3814	89.40	10.60	Moisture
20111251-33A	1	SAMP	E6	1.0897	0	5.7311				6.454	93.60	6.40	Moisture
20111251-35A	1	SAMP	E7	1.0948	0	6.6434				7.3598	94.30	5.70	Moisture
20111251-36A	1	SAMP	E8	1.091	0	7.1274				7.792	94.02	5.98	Moisture
20111251-37A	1	SAMP	E9	1.0829	0	5.7272				6.1959	89.28	10.72	Moisture
20111251-39A	1	SAMP	E10	1.0752	0	6.4868				6.5156	83.87	16.13	Moisture
20111251-41A	1	SAMP	E11	1.108	0	6.4599				6.8152	88.35	11.65	Moisture
20111251-43A	1	SAMP	E12	1.0792	0	9.6511				9.232	84.48	15.52	Moisture
20111251-43A DUP	1	DUP	E13	1.0897	0	9.6994				9.2818	84.46	15.54	Moisture
20111403-01B	1	SAMP	E14	1.0853	0	9.3143				8.4932	79.53	20.47	Moisture
20111403-02B	1	SAMP	E15	1.086	0	6.931				6.5333	78.59	21.41	Moisture
20111403-03B	1	SAMP	E16	1.0853	0	8.1056				7.5578	79.85	20.15	Moisture
20111403-04B	1	SAMP	E17	1.0888	0	8.1236				7.5284	79.27	20.73	Moisture
20111403-05B	1	SAMP	E18	1.0766	0	7.493				6.4996	72.37	27.63	Moisture
20111403-06B	1	SAMP	E19	1.0889	0	7.3085				6.8603	78.97	21.03	Moisture
20111403-07B	1	SAMP	E20	1.0933	0	6.9204				6.7686	82.01	17.99	Moisture
20111403-08B	1	SAMP	E21	1.1064	0	6.3638				6.3187	81.91	18.09	Moisture
20111403-09B	1	SAMP	E22	1.0938	0	7.3549				6.8511	78.28	21.72	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/19/2020 13:11	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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TCLP

Batch			30 ± 2 rpm rotation	start 11/18/20	18 ± 2 hrs hours end 11/19/20	ex time	23 ± 2C temp	initial pH	If initial pH>5 add HCL and Heat HCl & Heat pH	pH<5; 1 pH> 5; 2 fluid	4.93 + 0.05 2.88 + 0.05 final pH	20x sample wt sample wt	vol ex fluid	date collected	Date TCLP	days elapsed
IDA001:DU-A1	20111251-01	solid												11/9/20		
IDA001:DU-A1	20111251-02	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.46	1.61	1/4.98	5.52	100.4	2000	11/9/20	11/18/20	9
IDA001:DU-B1	20111251-03	solid												11/9/20		
IDA001:DU-B1	20111251-04	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	7.38	1.59	1/4.98	5.03	100.0	2000	11/9/20	11/18/20	9
IDA001:DU-E1	20111251-05	solid												11/10/20		
IDA001:DU-E1	20111251-06	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	6.78	1.57	1/4.98	5.12	100.2	2000	11/10/20	11/18/20	8
IDA001:DU-A2	20111251-07	solid												11/9/20		
IDA001:DU-A2	20111251-08	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	6.91	1.48	1/4.98	5.08	100.2	2000	11/9/20	11/18/20	9
IDA001:DU-A2 TE	20111251-09	solid												11/9/20		
IDA001:DU-A2 TS	20111251-10	solid												11/9/20		
IDA001:DU-B2	20111251-11	solid												11/10/20		
IDA001:DU-B2	20111251-12	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.52	1.58	1/4.98	5.44	100.2	2000	11/10/20	11/18/20	8
IDA001:DU-C2	20111251-13	solid												11/10/20		
IDA001:DU-C2	20111251-14	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.49	1.58	1/4.98	5.4	100.0	2000	11/10/20	11/18/20	8
IDA001:DU-D2	20111251-15	solid												11/10/20		
IDA001:DU-D2	20111251-16	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.43	1.51	1/4.98	5.81	100.2	2000	11/10/20	11/18/20	8
IDA001:DU-E2	20111251-17	solid												11/10/20		
IDA001:DU-E2	20111251-18	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	7.68	2.01	1/4.98	6.32	100.3	2000	11/10/20	11/18/20	8
IDA001:DU-A3	20111251-19	solid												11/10/20		
IDA001:DU-A3	20111251-20	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.00	1.48	1/4.92	5.21	100.3	2000	11/10/20	11/18/20	8
IDA001:DU-B3	20111251-21	solid												11/10/20		
IDA001:DU-B3	20111251-22	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	7.97	1.77	1/4.92	5.18	100.1	2000	11/10/20	11/18/20	8
IDA001:DU-C3	20111251-23	solid												11/10/20		
IDA001:DU-C3	20111251-24	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.40	1.80	1/4.92	5.28	100.0	2000	11/10/20	11/18/20	8
IDA001:DU-D3	20111251-25	solid												11/11/20		
IDA001:DU-D3	20111251-26	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.30	5.45	2/2.93	5.58	100.0	2000	11/11/20	11/18/20	7
IDA001:DU-E3	20111251-27	solid												11/11/20		
IDA001:DU-E3	20111251-28	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.41	1.75	1/4.92	5.17	100.2	2000	11/11/20	11/18/20	7
IDA001:DU-E3 TE	20111251-29	solid												11/11/20		
IDA001:DU-E3 TS	20111251-30	solid												11/11/20		
IDA001:DU-A4	20111251-31	solid												11/11/20		
IDA001:DU-A4	20111251-32	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.21	1.74	1/4.92	5.15	100.3	2000	11/11/20	11/18/20	7
IDA001:DU-B4	20111251-33	solid												11/11/20		
IDA001:DU-B4	20111251-34	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	7.44	1.76	1/4.92	5.03	100.3	2000	11/11/20	11/18/20	7
IDA001:DU-B4 TE	20111251-35	solid												11/11/20		
IDA001:DU-B4 TS	20111251-36	solid												11/11/20		
IDA001:DU-C4	20111251-37	solid												11/11/20		
IDA001:DU-C4	20111251-38	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.26	2.16	1/4.92	5.34	100.3	2000	11/11/20	11/18/20	7
IDA001:DU-D4	20111251-39	solid												11/11/20		
IDA001:DU-D4	20111251-40	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	8.42	5.10	2/2.93	4.87	100.0	2000	11/11/20	11/18/20	7
IDA001:DU-E4	20111251-41	solid												11/11/20		
IDA001:DU-E4	20111251-42	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	7.74	1.71	1/4.92	5.11	100.1	2000	11/11/20	11/18/20	7
IDA001:DU-A5	20111251-43	solid												11/11/20		
IDA001:DU-A5	20111251-44	aqueous	30	15:18	7:32	16 hours 50 min	24.01 - 22.66	7.35	1.71	1/4.92	5.02	100.1	2000	11/11/20	11/18/20	7

VOCs - Fluid 1 only
pH >5 - acidifiy and recheck - if pH >5 fluid 2 if <5 fluid 1
if metals acidify pH <2 final prior to analysis - for MS/MSD - add spike then adjust pH

SAMPLE MAXIMUM HOLDING TIMES [DAYS]

	From: Field collection	From: TCLP extraction	From: Preparative extraction
	To: TCLP extraction	To: Preparative extraction	To: Total Determinative analysis
Volatiles	14	NA	14
Semi-volatiles	14	7	40
Mercury	28	NA	28
Metals	180	NA	180

Book Number 3225

ALS

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111351-02A ES 11/18/2020 ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.46 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.61 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-4

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.4 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020000

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.52 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-04A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

MW 11/18/2020 Balance ID: 11

INITIAL pH OF SLURRY: ~~5.43~~ 7.38 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.59 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-4

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5011 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.6 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11/7202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.03 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.060

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-06A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL P0102778001
Balance ID: 11

INITIAL pH OF SLURRY: 6.78 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.54 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: PH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-4

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 117202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.12 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: ~~117~~ 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.60

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-08A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100 % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102T18001

Balance ID: 11

INITIAL pH OF SLURRY: 6.91 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.48 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: PH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-4

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 3211 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 111720060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.08 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.166

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/19/2020 SAMPLE ID: 20111251-12A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: ~ g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: ~~5.0~~ Mw 11/18/20 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 6.52 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.58 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-4

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020bb

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/19/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.44 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 17072 4851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-14A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11

INITIAL pH OF SLURRY: 9.49 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.58 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 32316-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 32316-7-4
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5011 4.98
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020060
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732
RPM: 30

EXTRACTION pH AT FINISH: 5.40 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-16A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: 201027800

Balance ID: 11

INITIAL pH OF SLURRY: 8.43 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.51 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: PH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-4

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 1117

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 757

RPM: 30

EXTRACTION pH AT FINISH: 5.81 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-18A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102T78001
Balance ID: 11
INITIAL pH OF SLURRY: 7.68 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 2.01 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: PH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-9-4
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5011 4.98
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11720260
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 738
RPM: 30
EXTRACTION pH AT FINISH: 10.32 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-20A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: ~ g Sample Wt: ~ g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.00 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.46 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: PH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-7

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.92

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11720200600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.21 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-22A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 7.97 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.77 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 32360-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 32360-7-7
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.92
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020060
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/19/2020 1518 FINISH: 11/19/2020 732
RPM: 30
EXTRACTION pH AT FINISH: 5.18 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-24A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102767801
Balance ID: 11

INITIAL pH OF SLURRY: 8.40 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.80 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-7
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5 | 4.92
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11 & 20
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732
RPM: 30
EXTRACTION pH AT FINISH: 5.28 PRESERVATION BPL: —
pH Meter ID: pH TCLP THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No charge

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-26A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL P010 2778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.30 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 5.45 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-5-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-6-1

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 2 2.93

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 111720060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.58 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-28A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P010277800

Balance ID: 11

INITIAL pH OF SLURRY: 8.41 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236 - 7 - 7

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol .1 4.92

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 111720200

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.17 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 29.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-32A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: PO10277800 1

Balance ID: CL

INITIAL pH OF SLURRY: 8.21 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.34 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-7

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: SOL 1 4.92

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: JJ

EXTRACTOR ID #: — EXTRACTOR ID #: 111720206 00

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.15 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Charge

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-34A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102177000

Balance ID: 11

INITIAL pH OF SLURRY: 7.44 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.76 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-7

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 1 4.92

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: MT2020040

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.03 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-38A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.26 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 2.16 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 32360-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 32360-7-7

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.92

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 4/7202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.34 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-40A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102T18001

Balance ID: 11

INITIAL pH OF SLURRY: 8.42 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 5.10 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-6-1

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 2 2.93

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020160

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 4.97 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-012A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102177890
Balance ID: 11
INITIAL pH OF SLURRY: 7.74 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.71 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3231-7-7
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.92
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020160
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/18/2020 1518 FINISH: 11/19/2020 732
RPM: 30
EXTRACTION pH AT FINISH: 5.11 PRESERVATION BPL: —
pH Meter ID: pH TCLP THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.166

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/18/2020 SAMPLE ID: 20111251-44A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: 5 g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.4 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 7.35 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.71 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-7-7

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.92

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11720200

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/19/2020 1518 FINISH: 11/19/2020 732

RPM: 30

EXTRACTION pH AT FINISH: 5.02 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 24.01 LOW: 22.66

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

DATA VALIDATION REPORT

Project Name:	**IDA001 - USS Lead OU-1: Zone 1**
SDG #	**20111574**
Performed for:	Hull & Associates
Laboratory:	ALS Group, USA
Analytical Method:	Analytical Fraction:
SW 846 6010D	Metals (ICP)
SW 846 1311	Toxicity Characteristic Leaching Procedure (TCLP)
Validation Performed by:	ECT.CON INC
Validation Guidance:	USEPA National Functional Guidelines for Inorganic (2017) Data Review, Project QAPP and the Analytical Method
Validation Report Date:	1/12/21

Samples/Matrix:

	Sample Date	Sample ID	Laboratory ID	Matrix
1	11/13/20	IDA001:DU-C1	20111574-01	solid
2	11/13/20	IDA001:DU-C1	20111574-02	aqueous
3	11/13/20	IDA001:DU-D1	20111574-03	solid
4	11/13/20	IDA001:DU-D1	20111574-04	aqueous
5	11/12/20	IDA001:DU-E5	20111574-05	solid
6	11/12/20	IDA001:DU-E5	20111574-06	aqueous
7	11/12/20	IDA001:DU-B5	20111574-07	solid
8	11/12/20	IDA001:DU-B5	20111574-08	aqueous
9	11/12/20	IDA001:DU-C5	20111574-09	solid
10	11/12/20	IDA001:DU-C5	20111574-10	aqueous
11	11/12/20	IDA001:DU-D5	20111574-11	solid
12	11/12/20	IDA001:DU-D5	20111574-12	aqueous
13	11/12/20	IDA001:DU-D5 TE	20111574-13	solid
14	11/12/20	IDA001:DU-D5 TS	20111574-14	solid
15	11/14/20	IDA001:DU-E9	20111574-15	solid
16	11/14/20	IDA001:DU-E9	20111574-16	aqueous
17	11/14/20	IDA001:DU-E9 TE	20111574-17	solid
18	11/14/20	IDA001:DU-E9 TS	20111574-18	solid
19	11/14/20	IDA001:DU-D9	20111574-19	solid
20	11/14/20	IDA001:DU-D9	20111574-20	aqueous

	Sample Date	Sample ID	Laboratory ID	Matrix
21	11/14/20	IDA001:DU-C9	20111574-21	solid
22	11/14/20	IDA001:DU-C9	20111574-22	aqueous
23	11/14/20	IDA001:DU-B9	20111574-23	solid
24	11/14/20	IDA001:DU-B9	20111574-24	aqueous
25	11/14/20	IDA001:DU-A9	20111574-25	solid
26	11/14/20	IDA001:DU-A9	20111574-26	aqueous
27	11/14/20	IDA001:DU-A8	20111574-27	solid
28	11/14/20	IDA001:DU-A8	20111574-28	aqueous
29	11/14/20	IDA001:DU-A8 TE	20111574-29	solid
30	11/14/20	IDA001:DU-A8 TS	20111574-30	solid
31	11/14/20	IDA001:DU-B8	20111574-31	solid
32	11/14/20	IDA001:DU-B8	20111574-32	aqueous
33	11/14/20	IDA001:DU-C8	20111574-33	solid
34	11/14/20	IDA001:DU-C8	20111574-34	aqueous
35	11/14/20	IDA001:DU-D8	20111574-35	solid
36	11/14/20	IDA001:DU-D8	20111574-36	aqueous
37	11/15/20	IDA001:DU-E8	20111574-37	solid
38	11/15/20	IDA001:DU-E8	20111574-38	aqueous
39	11/15/20	IDA001:DU-E7	20111574-39	solid
40	11/15/20	IDA001:DU-E7	20111574-40	aqueous
41	11/15/20	IDA001:DU-D7	20111574-41	solid
42	11/15/20	IDA001:DU-D7	20111574-42	aqueous
43	11/15/20	IDA001:DU-C7	20111574-43	solid
44	11/15/20	IDA001:DU-C7	20111574-44	aqueous
45	11/15/20	IDA001:DU-B7	20111574-45	solid
46	11/15/20	IDA001:DU-B7	20111574-46	aqueous
47	11/15/20	IDA001:DU-A7	20111574-47	solid
48	11/15/20	IDA001:DU-A7	20111574-48	aqueous
49	11/15/20	IDA001:DU-A6	20111574-49	solid
50	11/15/20	IDA001:DU-A6	20111574-50	aqueous
51	11/15/20	IDA001:DU-B6	20111574-51	solid
52	11/15/20	IDA001:DU-B6	20111574-52	aqueous
53	11/15/20	IDA001:DU-C6	20111574-53	solid
54	11/15/20	IDA001:DU-C6	20111574-54	aqueous
55	11/15/20	IDA001:DU-C6 TE	20111574-55	solid
56	11/15/20	IDA001:DU-C6 TS	20111574-56	solid
57	11/15/20	IDA001:DU-D6	20111574-57	solid
58	11/15/20	IDA001:DU-D6	20111574-58	aqueous
59	11/15/20	IDA001:DU-E6	20111574-59	solid
60	11/15/20	IDA001:DU-E6	20111574-60	aqueous

This sample set consists of the following:

Field Samples :	44
Trip Blanks :	0
Equipment Blanks :	0
Field Blanks :	0
Field Duplicates:	0

Samples/Analytical Fraction

Project Number: 20111574
Analytical Method: Analytical Fraction:
SW 846 6010D Metals (ICP)
SW 846 1311 Toxicity Characteristic Leaching Procedure (TCLP)

					Metals ICP	TCLP
	Sample Date	Sample ID	Laboratory ID	Matrix	6010D	1311
1	11/13/20	IDA001:DU-C1	20111574-01	solid	X	
2	11/13/20	IDA001:DU-C1	20111574-02	aqueous	X	X
3	11/13/20	IDA001:DU-D1	20111574-03	solid	X	
4	11/13/20	IDA001:DU-D1	20111574-04	aqueous	X	X
5	11/12/20	IDA001:DU-E5	20111574-05	solid	X	
6	11/12/20	IDA001:DU-E5	20111574-06	aqueous	X	X
7	11/12/20	IDA001:DU-B5	20111574-07	solid	X	
8	11/12/20	IDA001:DU-B5	20111574-08	aqueous	X	X
9	11/12/20	IDA001:DU-C5	20111574-09	solid	X	
10	11/12/20	IDA001:DU-C5	20111574-10	aqueous	X	X
11	11/12/20	IDA001:DU-D5	20111574-11	solid	X	
12	11/12/20	IDA001:DU-D5	20111574-12	aqueous	X	X
13	11/12/20	IDA001:DU-D5 TE	20111574-13	solid	X	
14	11/12/20	IDA001:DU-D5 TS	20111574-14	solid	X	
15	11/14/20	IDA001:DU-E9	20111574-15	solid	X	
16	11/14/20	IDA001:DU-E9	20111574-16	aqueous	X	X
17	11/14/20	IDA001:DU-E9 TE	20111574-17	solid	X	
18	11/14/20	IDA001:DU-E9 TS	20111574-18	solid	X	
19	11/14/20	IDA001:DU-D9	20111574-19	solid	X	
20	11/14/20	IDA001:DU-D9	20111574-20	aqueous	X	X
21	11/14/20	IDA001:DU-C9	20111574-21	solid	X	
22	11/14/20	IDA001:DU-C9	20111574-22	aqueous	X	X
23	11/14/20	IDA001:DU-B9	20111574-23	solid	X	
24	11/14/20	IDA001:DU-B9	20111574-24	aqueous	X	X
25	11/14/20	IDA001:DU-A9	20111574-25	solid	X	
26	11/14/20	IDA001:DU-A9	20111574-26	aqueous	X	X
27	11/14/20	IDA001:DU-A8	20111574-27	solid	X	
28	11/14/20	IDA001:DU-A8	20111574-28	aqueous	X	X
29	11/14/20	IDA001:DU-A8 TE	20111574-29	solid	X	
30	11/14/20	IDA001:DU-A8 TS	20111574-30	solid	X	
31	11/14/20	IDA001:DU-B8	20111574-31	solid	X	
32	11/14/20	IDA001:DU-B8	20111574-32	aqueous	X	X
33	11/14/20	IDA001:DU-C8	20111574-33	solid	X	

	Sample Date	Sample ID	Laboratory ID	Matrix	Metals ICP 6010D	TCLP 1311
34	11/14/20	IDA001:DU-C8	20111574-34	aqueous	X	X
35	11/14/20	IDA001:DU-D8	20111574-35	solid	X	
36	11/14/20	IDA001:DU-D8	20111574-36	aqueous	X	X
37	11/15/20	IDA001:DU-E8	20111574-37	solid	X	
38	11/15/20	IDA001:DU-E8	20111574-38	aqueous	X	X
39	11/15/20	IDA001:DU-E7	20111574-39	solid	X	
40	11/15/20	IDA001:DU-E7	20111574-40	aqueous	X	X
41	11/15/20	IDA001:DU-D7	20111574-41	solid	X	
42	11/15/20	IDA001:DU-D7	20111574-42	aqueous	X	X
43	11/15/20	IDA001:DU-C7	20111574-43	solid	X	
44	11/15/20	IDA001:DU-C7	20111574-44	aqueous	X	X
45	11/15/20	IDA001:DU-B7	20111574-45	solid	X	
46	11/15/20	IDA001:DU-B7	20111574-46	aqueous	X	X
47	11/15/20	IDA001:DU-A7	20111574-47	solid	X	
48	11/15/20	IDA001:DU-A7	20111574-48	aqueous	X	X
49	11/15/20	IDA001:DU-A6	20111574-49	solid	X	
50	11/15/20	IDA001:DU-A6	20111574-50	aqueous	X	X
51	11/15/20	IDA001:DU-B6	20111574-51	solid	X	
52	11/15/20	IDA001:DU-B6	20111574-52	aqueous	X	X
53	11/15/20	IDA001:DU-C6	20111574-53	solid	X	
54	11/15/20	IDA001:DU-C6	20111574-54	aqueous	X	X
55	11/15/20	IDA001:DU-C6 TE	20111574-55	solid	X	
56	11/15/20	IDA001:DU-C6 TS	20111574-56	solid	X	
57	11/15/20	IDA001:DU-D6	20111574-57	solid	X	
58	11/15/20	IDA001:DU-D6	20111574-58	aqueous	X	X
59	11/15/20	IDA001:DU-E6	20111574-59	solid	X	
60	11/15/20	IDA001:DU-E6	20111574-60	aqueous	X	X
					60	26

Analytical data in this report were reviewed to determine analytical limitations of the data based on specific quality control criteria. This review is performed on a laboratory signed data data package. The laboratory signature indicates that the laboratory has reviewed and has certified that the information provided in the data package are correct and complete. The results of the review are an interpretation of the reported quality control information provided by the laboratory in comparison to the specified validation criteria for the project. Laboratory calculations have been verified as part of the validation. Form 1's and/or analytical results sheets are annotated with the results of the validation.

This evaluation was conducted in accordance with the requested validation guidelines, project requirement and the analytical method. Findings from this validation should be considered when using the analytical data.

The inorganic and general chemistry findings are based upon the assessment of the following, where applicable:

Sample Preservation
Holding Times
Calibration (Initial and Continuing)
Blanks (lab and field)
ICP MS Tune (if applicable)
ICP MS Internal Standards (if applicable)
ICP Spectral Interference Check sample
Laboratory Control Sample (LCS)
Duplicate Sample Analysis
Spike Sample Analysis
Graphite Furnace Atomic Absorption (GFAA) QC (if applicable)
ICP Serial Dilution
Field Duplicates (if applicable)

This report consists of the validation findings. This is followed by annotated Form 1's. The final section of the report is supporting documentation. This consists of the Chain of Custody, laboratory case narrative and the validation worksheets.

FINDINGS

Metals ICP

(1) Sample Preservation/Holding Time

All criteria were met.

(2) Initial Calibration

All criteria were met.

(3) Continuing Calibration

All criteria were met.

(4) Field and Lab Blanks

All criteria were met.

The following constituent(s) were detected in the listed blank(s):

Blank	Constituent	Conc. (ug/L)	Conc. (mg/kg)
CCB 11/26/20 00:26	lead	2.04 J	0.102 J

For the following samples that are associated with the blank(s), qualify as follows:

Sample result	Action
<RL	RL "U"

RL – Reporting Limit; BLK - Blank
Dilution and percent solids are taken into account when applying blank.

Solid

IDA001:DU-B8	IDA001:DU-D7
IDA001:DU-C8	IDA001:DU-C7
IDA001:DU-D8	IDA001:DU-B7
IDA001:DU-E8	IDA001:DU-A7
IDA001:DU-E7	IDA001:DU-A6

(5) ICP Spectral Interference Check Sample (SIC)

All criteria were met.

(6) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All criteria were met.

(7) Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

All criteria were met.

(8) ICP Serial Dilution

For serial dilution IDA001:DU-E6, the percent difference for arsenic (36%) and lead (12%) was greater than the lab control limit of 10%. It is not known if all samples in the sample delivery group are sufficiently similar as the sample selected for the serial dilution. For sample IDA001:DU-E6 qualify positive results of these constituents as estimated "J" and nondetected results as estimated "UJ".

(9) Compound Quantitation

Positive results less than the reporting limit are qualified as estimated "J" due to uncertainty near the detection limit.

Data Reviewer

1/12/21
Date

NOTES

Metals - ICP

A. Sample Receipt/Sample Preservation/Hold Time

There are no notes for this item.

B. Initial Calibration

There are no notes for this item.

C. Continuing Calibration

For continuing calibration (CCV) 11/29/20 23:47, the percent recovery of arsenic (113%) and lead (115%) was outside the control limit of 110%. The only sample associated with this CCV is the post digestion spike. Data are not qualified on this basis.

D. Field and Lab Blanks

There are no notes for this item.

E. ICP Spectral Interference Check Sample (SIC)

The analytical method (SW 846 6010D) requires a Spectral Interference Check (SIC) and not an ICS. The lab uses a mixed element SIC. This is run on at the beginning of an analytical run or once every 12 hours of continuing sample analysis. The SIC is to check that the instrument is free from interefence from elements typcially observed in high concentrations (arsenic and lead are not applicable via 6010D). ccording to the lab SOP, the concentration measured for any target analytes must be < 2x the MQL. Data are not qualified on this basis.

F. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

For IDA001:DU-C8 and IDA001:DU-E6 MS/MSD, the percent recovery and relative percent difference for lead is not applicable because the original sample concentration is greater than 4x the spike amount. Data are not qualified on this basis.

G. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

There are no notes for this item.

H. ICP Serial Dilution

There are no ICP serial dilutions for the TCLP (aqueous) samples. All aqueous matrix spike recoveries and relative percent differences were within control limits. Data are not qualified on this basis.

I. Compound Quantitation

The following sample(s) were analyzed at the listed dilution for the noted parameter(s).

Sample ID	Parameter(s)	Dilution Factor	Matrix
IDA001:DU-C1	arsenic and lead	10	solid
IDA001:DU-D1	arsenic and lead	10	solid
IDA001:DU-E5	arsenic	10	solid
	lead	100	solid
IDA001:DU-B5	arsenic and lead	10	solid
IDA001:DU-C5	arsenic and lead	10	solid
IDA001:DU-D5	arsenic	10	solid
	lead	100	solid
IDA001:DU-D5 TE	arsenic and lead	10	solid
IDA001:DU-D5 TS	arsenic and lead	10	solid
IDA001:DU-E9	arsenic	10	solid
	lead	100	solid
IDA001:DU-E9	lead	10	aqueous
IDA001:DU-E9 TE	arsenic	10	solid
	lead	100	solid
IDA001:DU-E9 TS	arsenic	10	solid
	lead	100	solid
IDA001:DU-D9	arsenic and lead	10	solid
IDA001:DU-C9	arsenic and lead	10	solid
IDA001:DU-B9	arsenic and lead	10	solid
IDA001:DU-A9	arsenic	10	solid
	lead	100	solid
IDA001:DU-A8	arsenic and lead	10	solid
IDA001:DU-A8 TE	arsenic and lead	10	solid
IDA001:DU-A8 TS	arsenic and lead	10	solid
IDA001:DU-B8	arsenic and lead	10	solid
IDA001:DU-C8	arsenic and lead	10	solid
IDA001:DU-D8	arsenic and lead	10	solid
IDA001:DU-E8	arsenic and lead	10	solid
IDA001:DU-E7	arsenic and lead	10	solid
IDA001:DU-D7	arsenic and lead	10	solid
IDA001:DU-C7	arsenic and lead	10	solid

Sample ID	Parameter(s)	Dilution Factor	Matrix
IDA001:DU-B7	arsenic and lead	10	solid
IDA001:DU-A7	arsenic and lead	10	solid
IDA001:DU-A6	arsenic and lead	10	solid
IDA001:DU-B6	arsenic	10	solid
	lead	100	solid
IDA001:DU-B6	lead	10	aqueous
IDA001:DU-C6	arsenic and lead	10	solid
IDA001:DU-C6 TE	arsenic and lead	10	solid
IDA001:DU-C6 TS	arsenic	10	solid
	lead	100	solid
IDA001:DU-D6	arsenic and lead	10	solid
IDA001:DU-E6	arsenic and lead	10	solid

This accounts for the elevated reporting limits. Data are not qualified on this basis.

J. Field Duplicates

No field duplicates were associated with this sample delivery group.

K. Sample Preparation

Samples were homogenized and sieved using a No. 10 sieve (2 mm).

For sample IDA001:DU-C6, the relative percent difference (RPD) for the percent moisture duplicate (40.2%) was greater than the control limit of 10%. The information for the sample duplicate on the QC summary form did not match the raw data. The RPD based on the raw data was 38%. Data are not qualified on this basis.

Data Reviewer

Date 1/12/21

FINDINGS/NOTES

TCLP

(1) Sample Preservation/Holding Time

All criteria were met.

(2) Preliminary Evaluation

All criteria were met.

(3) Extraction Requirements

All criteria were met.

(4) Physical Requirements

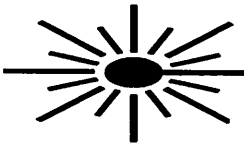
For sample IDA001:DU-C6, the TCLP raw data has a temperature range of 22.94 C to 21.92C. This is incorrect. According to the raw data for the other TCLP samples, the temperature range for thermometer 170724851 is 23.46C to 22.85C. Data were not qualified on this typographical error.

Data Reviewer

1/12/21
Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.
NJ	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts. Reported value may not be accurate or precise.



ECT.CON INC.
Environmental and Computer
Technology Consultants

Annotated Form 1's
(Spreadsheet)

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Dry
Lab Code:	20111574-01		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**8.5**	mg/Kg-dry	4.4	10	11/25/20 21:34	11/23/20 16:25	
Lead	SW6010D	**190**	mg/Kg-dry	4.4	10	11/25/20 21:34	11/23/20 16:25	

12/2/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-02		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.023** J	mg/L	0.050	1	11/25/20 13:38	11/23/20 13:04	
Lead	SW6010D	**0.11**	mg/L	0.050	1	11/25/20 13:38	11/23/20 13:04	

MMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Dry
Lab Code:	20111574-03		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	3.8	10	11/25/20 21:40	11/23/20 16:25	
Lead	SW6010D	**1,000**	mg/Kg-dry	3.8	10	11/25/20 21:40	11/23/20 16:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-04		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.040**	mg/L	0.050	1	11/25/20 14:04	11/23/20 13:04	
Lead	SW6010D	**25**	mg/L	0.050	1	11/25/20 14:04	11/23/20 13:04	

4/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Dry
Lab Code:	20111574-05		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**43**	mg/Kg-dry	4.7	10	11/25/20 21:45	11/23/20 16:25	
Lead	SW6010D	**7,300**	mg/Kg-dry	47	100	11/29/20 20:50	11/23/20 16:25	

DMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-06		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:09	11/23/20 13:04	
Lead	SW6010D	**16**	mg/L	0.050	1	11/25/20 14:09	11/23/20 13:04	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Dry
Lab Code:	20111574-07		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**24**	mg/Kg-dry	4.1	10	11/25/20 21:50	11/23/20 16:25	
Lead	SW6010D	**2,500**	mg/Kg-dry	4.1	10	11/25/20 21:50	11/23/20 16:25	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-08		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.021** J	mg/L	0.050	1	11/25/20 14:14	11/23/20 13:04	
Lead	SW6010D	**26**	mg/L	0.050	1	11/25/20 14:14	11/23/20 13:04	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Dry
Lab Code:	20111574-09		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**25**	mg/Kg-dry	4.6	10	11/25/20 21:55	11/23/20 16:25	
Lead	SW6010D	**3,400**	mg/Kg-dry	4.6	10	11/25/20 21:55	11/23/20 16:25	

1/4/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-10		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:19	11/23/20 13:04	
Lead	SW6010D	**32**	mg/L	0.050	1	11/25/20 14:19	11/23/20 13:04	

11/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Dry
Lab Code:	20111574-11		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**15**	mg/Kg-dry	3.8	10	11/25/20 22:00	11/23/20 16:25	
Lead	SW6010D	**4,500**	mg/Kg-dry	38	100	11/29/20 20:55	11/23/20 16:25	

11/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-12		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 14:24	11/23/20 13:04	
Lead	SW6010D	**2.2**	mg/L	0.050	1	11/25/20 14:24	11/23/20 13:04	

11/2/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-13		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**11**	mg/Kg-dry	3.8	10	11/25/20 22:05	11/23/20 16:25	
Lead	SW6010D	**2,300**	mg/Kg-dry	3.8	10	11/25/20 22:05	11/23/20 16:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-14		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.5**	mg/Kg-dry	4.2	10	11/25/20 22:10	11/23/20 16:25	
Lead	SW6010D	**970**	mg/Kg-dry	4.2	10	11/25/20 22:10	11/23/20 16:25	

DMB 1/2/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Dry
Lab Code:	20111574-15		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**450**	mg/Kg-dry	3.8	10	11/25/20 22:25	11/23/20 16:25	
Lead	SW6010D	**10,000**	mg/Kg-dry	38	100	11/29/20 21:00	11/23/20 16:25	

JMB 1/12/21

ALS Group USA, Corp.
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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-16		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.26**	mg/L	0.050	1	11/25/20 14:29	11/23/20 13:04	
Lead	SW6010D	**69**	mg/L	0.50	10	11/26/20 03:09	11/23/20 13:04	

11/2/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-17		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**570**	mg/Kg-dry	4.0	10	11/25/20 22:30	11/23/20 16:25	
Lead	SW6010D	**8,400**	mg/Kg-dry	40	100	11/29/20 21:05	11/23/20 16:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-18		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**1,000**	mg/Kg-dry	3.9	10	11/25/20 22:35	11/23/20 16:25	
Lead	SW6010D	**14,000**	mg/Kg-dry	39	100	11/29/20 21:10	11/23/20 16:25	

JMB 11/2/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Dry
Lab Code:	20111574-19		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**34**	mg/Kg-dry	4.4	10	11/25/20 22:40	11/23/20 16:25	
Lead	SW6010D	**1,100**	mg/Kg-dry	4.4	10	11/25/20 22:40	11/23/20 16:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-20		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.025**	mg/L	0.050	1	11/25/20 14:34	11/23/20 13:04	
Lead	SW6010D	**1.6**	mg/L	0.050	1	11/25/20 14:34	11/23/20 13:04	

JMB 1/4/21

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Dry
Lab Code:	20111574-21		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**32**	mg/Kg-dry	4.6	10	11/25/20 22:45	11/23/20 16:25	
Lead	SW6010D	**770**	mg/Kg-dry	4.6	10	11/25/20 22:45	11/23/20 16:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-22		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.024** J	mg/L	0.050	1	11/25/20 14:39	11/23/20 13:04	
Lead	SW6010D	**0.63**	mg/L	0.050	1	11/25/20 14:39	11/23/20 13:04	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Dry
Lab Code:	20111574-23		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**280**	mg/Kg-dry	3.6	10	11/25/20 22:50	11/23/20 16:25	
Lead	SW6010D	**4,700**	mg/Kg-dry	36	100	11/29/20 21:15	11/23/20 16:25	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-24		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.10**	mg/L	0.050	1	11/25/20 14:45	11/23/20 13:04	
Lead	SW6010D	**39**	mg/L	0.050	1	11/25/20 14:45	11/23/20 13:04	

JMB 11/24/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Dry
Lab Code:	20111574-25		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**180**	mg/Kg-dry	3.6	10	11/25/20 22:56	11/23/20 16:25	
Lead	SW6010D	**8,900**	mg/Kg-dry	36	100	11/29/20 21:21	11/23/20 16:25	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-26		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.074**	mg/L	0.050	1	11/25/20 14:50	11/23/20 13:04	
Lead	SW6010D	**30**	mg/L	0.050	1	11/25/20 14:50	11/23/20 13:04	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Dry
Lab Code:	20111574-27		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**56**	mg/Kg-dry	4.5	10	11/25/20 23:01	11/23/20 16:25	
Lead	SW6010D	**2,300**	mg/Kg-dry	4.5	10	11/25/20 23:01	11/23/20 16:25	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-28		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.058**	mg/L	0.050	1	11/25/20 15:05	11/23/20 13:04	
Lead	SW6010D	**7.2**	mg/L	0.050	1	11/25/20 15:05	11/23/20 13:04	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-29		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**42**	mg/Kg-dry	3.7	10	11/25/20 23:06	11/23/20 16:25	
Lead	SW6010D	**1,700**	mg/Kg-dry	3.7	10	11/25/20 23:06	11/23/20 16:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-30		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**46**	mg/Kg-dry	4.4	10	11/25/20 23:11	11/23/20 16:25	
Lead	SW6010D	**1,400**	mg/Kg-dry	4.4	10	11/25/20 23:11	11/23/20 16:25	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Dry
Lab Code:	20111574-31		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	3.8	10	11/25/20 23:31	11/23/20 16:25	
Lead	SW6010D	**550**	mg/Kg-dry	3.8	10	11/25/20 23:31	11/23/20 16:25	

DMB 1/12/21

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-32		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:10	11/23/20 13:04	
Lead	SW6010D	**0.53**	mg/L	0.050	1	11/25/20 15:10	11/23/20 13:04	

JMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Dry
Lab Code:	20111574-33		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**28**	mg/Kg-dry	3.5	10	11/25/20 23:36	11/23/20 16:25	
Lead	SW6010D	**940**	mg/Kg-dry	3.5	10	11/25/20 23:36	11/23/20 16:25	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-34		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.044** J	mg/L	0.050	1	11/25/20 15:15	11/23/20 13:04	
Lead	SW6010D	**9.9**	mg/L	0.050	1	11/25/20 15:15	11/23/20 13:04	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Dry
Lab Code:	20111574-35		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**70**	mg/Kg-dry	4.4	10	11/26/20 00:42	11/23/20 16:26	
Lead	SW6010D	**2,300**	mg/Kg-dry	4.4	10	11/26/20 00:42	11/23/20 16:26	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-36		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.038**	mg/L	0.050	1	11/25/20 15:20	11/23/20 13:04	
Lead	SW6010D	**29**	mg/L	0.050	1	11/25/20 15:20	11/23/20 13:04	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Dry
Lab Code:	20111574-37		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**19**	mg/Kg-dry	3.9	10	11/26/20 00:47	11/23/20 16:26	
Lead	SW6010D	**840**	mg/Kg-dry	3.9	10	11/26/20 00:47	11/23/20 16:26	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-38		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:26	11/23/20 13:04	
Lead	SW6010D	**1.5**	mg/L	0.050	1	11/25/20 15:26	11/23/20 13:04	

TMB 1/12/21

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Dry
Lab Code:	20111574-39		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**9.1**	mg/Kg-dry	4.7	10	11/26/20 00:52	11/23/20 16:26	
Lead	SW6010D	**650**	mg/Kg-dry	4.7	10	11/26/20 00:52	11/23/20 16:26	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-40		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:31	11/23/20 13:04	
Lead	SW6010D	**6.7**	mg/L	0.050	1	11/25/20 15:31	11/23/20 13:04	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Dry
Lab Code:	20111574-41		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**42**	mg/Kg-dry	4.0	10	11/26/20 00:57	11/23/20 16:26	
Lead	SW6010D	**1,800**	mg/Kg-dry	4.0	10	11/26/20 00:57	11/23/20 16:26	

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-42		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:36	11/23/20 13:04	
Lead	SW6010D	**2.6**	mg/L	0.050	1	11/25/20 15:36	11/23/20 13:04	

TMB
1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Dry
Lab Code:	20111574-43		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**15**	mg/Kg-dry	4.3	10	11/26/20 01:02	11/23/20 16:26	
Lead	SW6010D	**830**	mg/Kg-dry	4.3	10	11/26/20 01:02	11/23/20 16:26	

JMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-46		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:46	11/23/20 13:04	
Lead	SW6010D	**23**	mg/L	0.050	1	11/25/20 15:46	11/23/20 13:04	

DMB 1/8/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Dry
Lab Code:	20111574-47		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**19**	mg/Kg-dry	4.1	10	11/26/20 01:12	11/23/20 16:26	
Lead	SW6010D	**700**	mg/Kg-dry	4.1	10	11/26/20 01:12	11/23/20 16:26	

PMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-44		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 15:41	11/23/20 13:04	
Lead	SW6010D	**8.9**	mg/L	0.050	1	11/25/20 15:41	11/23/20 13:04	

DMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Dry
Lab Code:	20111574-45		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**97**	mg/Kg-dry	4.3	10	11/26/20 01:07	11/23/20 16:26	
Lead	SW6010D	**3,100**	mg/Kg-dry	4.3	10	11/26/20 01:07	11/23/20 16:26	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-48		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.023** J	mg/L	0.050	1	11/25/20 12:16	11/23/20 14:06	
Lead	SW6010D	**1.1**	mg/L	0.050	1	11/25/20 12:16	11/23/20 14:06	

JMP 11/2/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Dry
Lab Code:	20111574-49		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**64**	mg/Kg-dry	3.9	10	11/26/20 01:17	11/23/20 16:26	
Lead	SW6010D	**1,300**	mg/Kg-dry	3.9	10	11/26/20 01:17	11/23/20 16:26	

JMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-50		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.042** J5	mg/L	0.050	1	11/25/20 12:32	11/23/20 14:06	
Lead	SW6010D	**3.6**	mg/L	0.050	1	11/25/20 12:32	11/23/20 14:06	

DMP 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Dry
Lab Code:	20111574-51		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**87**	mg/Kg-dry	3.7	10	11/26/20 01:37	11/23/20 16:26	
Lead	SW6010D	**12,000**	mg/Kg-dry	37	100	11/29/20 22:21	11/23/20 16:26	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-54		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.017** J	mg/L	0.050	1	11/25/20 12:42	11/23/20 14:06	
Lead	SW6010D	**8.2**	mg/L	0.050	1	11/25/20 12:42	11/23/20 14:06	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Dry
Lab Code:	20111574-55		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**24**	mg/Kg-dry	4.1	10	11/26/20 01:48	11/23/20 16:26	
Lead	SW6010D	**1,400**	mg/Kg-dry	4.1	10	11/26/20 01:48	11/23/20 16:26	

PMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-52		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**0.031**	mg/L	0.050	1	11/25/20 12:37	11/23/20 14:06	
Lead	SW6010D	**53**	mg/L	0.50	10	11/26/20 03:04	11/23/20 14:06	

JMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Dry
Lab Code:	20111574-53		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**180**	mg/Kg-dry	4.6	10	11/26/20 01:42	11/23/20 16:26	
Lead	SW6010D	**1,500**	mg/Kg-dry	4.6	10	11/26/20 01:42	11/23/20 16:26	

JMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Dry
Lab Code:	20111574-56		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**32**	mg/Kg-dry	3.9	10	11/26/20 01:53	11/23/20 16:26	
Lead	SW6010D	**10,000**	mg/Kg-dry	39	100	11/29/20 22:26	11/23/20 16:26	

JMB 1/7/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Dry
Lab Code:	20111574-57		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	**20**	mg/Kg-dry	4.7	10	11/26/20 01:58	11/23/20 16:26	
Lead	SW6010D	**1,900**	mg/Kg-dry	4.7	10	11/26/20 01:58	11/23/20 16:26	

JMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-58		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 12:47	11/23/20 14:06	
Lead	SW6010D	**2.3**	mg/L	0.050	1	11/25/20 12:47	11/23/20 14:06	

DMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Dry
Lab Code:	20111574-59		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	4.9 J	mg/Kg-dry	3.9	10	11/26/20 02:03	11/23/20 16:26	
Lead	SW6010D	240 J	mg/Kg-dry	3.9	10	11/26/20 02:03	11/23/20 16:26	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Water	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-60		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.050 U	mg/L	0.050	1	11/25/20 13:02	11/23/20 14:06	
Lead	SW6010D	**1.3**	mg/L	0.050	1	11/25/20 13:02	11/23/20 14:06	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 14:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C1:S000010	**Basis:**	Wet
Lab Code:	20111574-01		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/13/20 13:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D1:S000010	**Basis:**	Wet
Lab Code:	20111574-03		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**4.9**	% of sample	0.10	1	11/25/20 12:21	NA	

11/2/21

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 14:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E5:S000010	**Basis:**	Wet
Lab Code:	20111574-05		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

11/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B5:S000010	**Basis:**	Wet
Lab Code:	20111574-07		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**7.3**	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 08:58
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C5:S000010	**Basis:**	Wet
Lab Code:	20111574-09		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 12:21	NA	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 09:48
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5:S000010	**Basis:**	Wet
Lab Code:	20111574-11		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/25/20 12:21	NA	

11/12/21

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dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 11:12
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-13		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**14**	% of sample	0.10	1	11/25/20 12:21	NA	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/12/20 10:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D5-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-14		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	17	% of sample	0.10	1	11/25/20 12:21	NA	

JMB 1/12/21

ALS Group USA, Corp.
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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9:S000010	**Basis:**	Wet
Lab Code:	20111574-15		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	11	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 09:49
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-17		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 12:21	NA	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 10:28
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E9-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-18		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	11	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:01
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D9:S000010	**Basis:**	Wet
Lab Code:	20111574-19		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 11:32
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C9:S000010	**Basis:**	Wet
Lab Code:	20111574-21		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	17	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:19
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B9:S000010	**Basis:**	Wet
Lab Code:	20111574-23		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	11	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 12:51
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A9:S000010	**Basis:**	Wet
Lab Code:	20111574-25		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	13	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 13:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8:S000010	**Basis:**	Wet
Lab Code:	20111574-27		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 12:21	NA	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-29		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	11	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 14:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A8-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-30		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**18**	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B8:S000010	**Basis:**	Wet
Lab Code:	20111574-31		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.9**	% of sample	0.10	1	11/25/20 12:21	NA	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 15:30
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C8:S000010	**Basis:**	Wet
Lab Code:	20111574-33		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**5.8**	% of sample	0.10	1	11/25/20 13:45	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/14/20 16:00
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D8:S000010	**Basis:**	Wet
Lab Code:	20111574-35		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**7.9**	% of sample	0.10	1	11/25/20 13:45	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 07:42
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E8:S000010	**Basis:**	Wet
Lab Code:	20111574-37		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	15	% of sample	0.10	1	11/25/20 13:45	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:08
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E7:S000010	**Basis:**	Wet
Lab Code:	20111574-39		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**20**	% of sample	0.10	1	11/25/20 13:45	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 08:34
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D7:S000010	**Basis:**	Wet
Lab Code:	20111574-41		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**15**	% of sample	0.10	1	11/25/20 13:45	NA	

1/6/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:07
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C7:S000010	**Basis:**	Wet
Lab Code:	20111574-43		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 13:45	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 09:39
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B7:S000010	**Basis:**	Wet
Lab Code:	20111574-45		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**26**	% of sample	0.10	1	11/25/20 13:45	NA	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 10:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A7:S000010	**Basis:**	Wet
Lab Code:	20111574-47		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	17	% of sample	0.10	1	11/25/20 13:45	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 11:40
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-A6:S000010	**Basis:**	Wet
Lab Code:	20111574-49		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	17	% of sample	0.10	1	11/25/20 13:45	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-B6:S000010	**Basis:**	Wet
Lab Code:	20111574-51		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**11**	% of sample	0.10	1	11/25/20 13:45	NA	

12/2/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:35
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6:S000010	**Basis:**	Wet
Lab Code:	20111574-53		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**13**	% of sample	0.10	1	11/25/20 13:45	NA	

DMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 12:55
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TE:S000010	**Basis:**	Wet
Lab Code:	20111574-55		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**12**	% of sample	0.10	1	11/25/20 13:45	NA	

DMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:20
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-C6-TS:S000010	**Basis:**	Wet
Lab Code:	20111574-56		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	17	% of sample	0.10	1	11/25/20 13:45	NA	

1/12/21

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 13:50
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-D6:S000010	**Basis:**	Wet
Lab Code:	20111574-57		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**16**	% of sample	0.10	1	11/25/20 13:45	NA	

DMB 1/12/21

ALS Group USA, Corp.
dba ALS Environmental

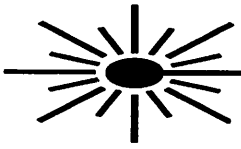
Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	11/15/20 14:10
Sample Matrix:	Soil	**Date Received:**	11/17/20 09:30
Sample Name:	IDA001:DU-E6:S000010	**Basis:**	Wet
Lab Code:	20111574-59		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	**9.5**	% of sample	0.10	1	11/25/20 13:45	NA	

11/24/21



ECT.CON INC.
Environmental and Computer
Technology Consultants

Support Documentation

COC

20111574

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HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK PAGE 1 OF 3
DATA ADMIN
LANCE TURLEY
NO. 377
REPORT TO: RAYMOND KENNEDY

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	148 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9845	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9077			P: (800) 241-7173	P: (412) 449-0315

Client: IDA
Site: VSS LEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order #: IDA-001 - DUS - RLK01

SAMPLE MATRIX: AA-AMBIENT AIR; C-ASBESTOS; D-SEDIMENT; G-GROUNDWATER; IA-INDOOR AIR; L-LEACHATE; P-PRODUCT; S-SOIL; SG-SOIL GAS; SS-SUBSLAB VAPOR; W-WATER; X-CONCRETE

PRESERVATIVES: A-Cool only, <4 deg C; B-HNO_3 pH<2; C-H_2SO_4 pH<2; D-NaOH pH>12; E-ZnAcetate + NaOH, pH>9; F-$Na_2S_2O_3$ (0.008%); G-HCL pH <2; H-EDTA; I-5ml 1:1 HCL; J-none; K-Stored in dark; L-NH4Cl; M-Methanol; S-Sodium

METALS: M - Not filtered; F45u- filtered with 0.45 micron; F5u- filtered with 5 micron

ANALYSES / PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C1 : S000010	1	COMPOSITE	11/13/20 / 1435	N	X	X	X	X	
IDA001 : DU-D1 : S000010	1	COMPOSITE	11/13/20 / 1355	N	X	X	X	X	
IDA001 : DU-E5 : S000010	1	COMPOSITE	11/12/20 / 1450	N	X	X	X	X	
IDA001 : DU-B5 : S000010	1	COMPOSITE	11/12/20 / 0820	N	X	X	X	X	
IDA001 : DU-C5 : S000010	1	COMPOSITE	11/12/20 / 0858	N	X	X	X	X	
IDA001 : DU-D5 : S000010	1	COMPOSITE	11/12/20 / 0948	N	X	X	X	X	
IDA001 : DU-D5-TE : S000010	1	COMPOSITE	11/12/20 / 1112	N	X	X			
IDA001 : DU-D5-TS : S000010	1	COMPOSITE	11/12/20 / 1034	N	X	X			
IDA001 : DU-E9 : S000010	1	COMPOSITE	11/14/20 / 0907	N	X	X	X	X	
IDA001 : DU-E9-TE : S000010	1	COMPOSITE	11/14/20 / 0949	N	X	X			
IDA001 : DU-E9-TS : S000010	1	COMPOSITE	11/14/20 / 1028	N	X	X			
IDA001 : DU-D9 : S000010	1	COMPOSITE	11/14/20 / 1101	N	X	X	X	X	

RELINQUISHED BY:	DATE: 16 NOV 20	RECEIVED BY: FEDEX	DATE: 16 NOV 20
	TIME: 1500		TIME: 1900
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
RELINQUISHED BY: FEDEX	DATE: 11/17/20	RECEIVED BY:	DATE:
	TIME: 0930		TIME:

COOLER TEMPERATURE AS RECEIVED: IR1 4.6°C °C 5.8°C 6.0°C 5.8°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI.
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

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20111574

HULL

CHAIN OF CUSTODY RECORD

TERCIE BARANEK PAGE 2 OF 3
DATA ADMIN
LANCE TURLEY NO. 378
REPORT TO: RAYMOND KENNEDY

Dublin, OH ☒	Newark, OH ☐	Mason, OH ☐	Bedford, OH ☐	Toledo, OH ☐	St. Clairsville, OH ☐	Pittsburgh, PA ☐
6397 Emerald Pkwy	59 Grant St	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	148 W. Main St	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9677			P: (800) 241-7173	P: (412) 469-0315

Client: IDA
Site: USSLEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOUS / JEREMY CONNER
Purchase Order # IDA001_DUS_RLK01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
M-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-Sod 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PRESERVATIVES: J

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010 D	LEAD 6010 D	TCLP-ARSENIC	TCLP-LEAD	COMMENTS
IDA001 : DU-C9 : S000010	1	COMPOSITE	11/14/20 / 1132	N	X	X	X	X	
IDA001 : DU-B9 : S000010	1	COMPOSITE	11/14/20 / 1219	N	X	X	X	X	
IDA001 : DU-A9 : S000010	1	COMPOSITE	11/14/20 / 1251	N	X	X	X	X	
IDA001 : DU-A8 : S000010	1	COMPOSITE	11/14/20 / 1330	N	X	X	X	X	
IDA001 : DU-A8-TE : S000010	1	COMPOSITE	11/14/20 / 1400	N	X	X			
IDA001 : DU-A8-TS : S000010	1	COMPOSITE	11/14/20 / 1430	N	X	X			
IDA001 : DU-B8 : S000010	1	COMPOSITE	11/14/20 / 1500	N	X	X	X	X	
IDA001 : DU-C8 : S000010	1	COMPOSITE	11/14/20 / 1530	N	X	X	X	X	
IDA001 : DU-D8 : S000010	1	COMPOSITE	11/14/20 / 1600	N	X	X	X	X	
IDA001 : DU-E8 : S000010	1	COMPOSITE	11/15/20 / 0442	N	X	X	X	X	
IDA001 : DU-E7 : S000010	1	COMPOSITE	11/15/20 / 0808	N	X	X	X	X	
IDA001 : DU-D7 : S000010	1	COMPOSITE	11/15/20 / 0834	N	X	X	X	X	

RELINQUISHED BY: DATE: 16 NOV 20
TIME: 1500
RELINQUISHED BY: DATE:
TIME:
RELINQUISHED BY: FED EX DATE: 11/17/20
TIME: 0930

RECEIVED BY: FEDEX DATE: 16 NOV 20
TIME: 1500
RECEIVED BY: DATE:
TIME:
RECEIVED BY: DATE:
TIME:

COOLER TEMPERATURE AS RECEIVED: 4.6 °C °C
5.8°C 6.0°C 5.8°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS
TURN AROUND TIME: STD DAYS

20111574

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HULL

CHAIN OF CUSTODY RECORD

Dublin, OH ☒ — 6397 Emerald Pkwy, Suite 200, Dublin, OH 43016, P: (614) 793-8777
Newark, OH ☐ — 59 Grant St., Newark, OH 43055, P: (740) 344-5451
Mason, OH ☐ — 4770 Duke Dr., Suite 300, Mason, OH 45040, P: (513) 459-9577
Bedford, OH ☐ — 4 Hemisphere Way, Bedford, OH 44146, P: (440) 232-9945
Toledo, OH ☐ — 219 S. Erie St., Toledo, OH 43604, P: (419) 385-2018
St Clairsville, OH ☐ — 148 W. Main St, 2nd Floor, St. Clairsville, OH 43950, P: (800) 241-7173
Pittsburgh, PA ☐ — 300 Merchant Ln., Suite 307, Pittsburgh, PA 15205, P: (412) 440-0315

TERRIE BARANEK
DATA ADMIN
LANCE TURLEY

PAGE 3 OF 3

NO. 379

REPORT TO: RAYMOND KENNEDY

Client: IDA
Site: USSLEAD 00-1 ; ZONE 1
Project #: IDA00' Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA001 — DUS_RLK101

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASSESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45o- filtered with 0.45 micron
F5o- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	PRESERVATIVES	ARSENIC 6010D	LEAD 6010D	TCLP - ARSENIC	TCLP - LEAD	COMMENTS
IDA001 : DU-C7 : S000010	1	COMPOSITE	11/15/20 / 0907	N	J	X	X	X	X	
IDA001 : DU-B7 : S000010	1	COMPOSITE	11/15/20 / 0939	N		X	X	X	X	
IDA001 : DU-A7 : S000010	1	COMPOSITE	11/15/20 / 1020	N		X	X	X	X	
IDA001 : DU-A6 : S000010	1	COMPOSITE	11/15/20 / 1140	N		X	X	X	X	
IDA001 : DU-B6 : S000010	1	COMPOSITE	11/15/20 / 1210	N		X	X	X	X	
IDA001 : DU-C6 : S000010	1	COMPOSITE	11/15/20 / 1235	N		X	X	X	X	
IDA001 : DU-CL-TE : S000010	1	COMPOSITE	11/15/20 / 1255	N		X	X			
IDA001 : DU-CL-TS : S000010	1	COMPOSITE	11/15/20 / 1320	N		X	X			
IDA001 : DU-DC : S000010	1	COMPOSITE	11/15/20 / 1350	N		X	X	X	X	
IDA001 : DU-E6 : S000010	1	COMPOSITE	11/15/20 / 1410	N		X	X	X	X	
: :			/							
: :			/							

RELINQUISHED BY:	DATE: 16 NOV 20	RECEIVED BY: FEDEX	DATE: 16 NOV 20
RELINQUISHED BY:	TIME: 1500	RECEIVED BY:	TIME: 1500
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:
FED EX	DATE: 11/17/20		DATE:
	TIME: 0930		TIME:

COOLER TEMPERATURE AS RECEIVED: IR1 °C
4.6°C 5.8°C 5.8°C 1.0°C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

Deliver To: ALS-HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: ~~STD~~ DAYS

Custody Seal
http://www.alsglobal.com
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Custody Seal
http://www.alsglobal.com

ALS Group, USA

Sample Receipt Checklist

Client Name: ***HULL&ASSOC-DUBLIN*** Date/Time Received: ***17-Nov-20 09:30***

Work Order: ***20111574*** Received by: ***DS***

Checklist completed by Diane Shaw (eSignature) 17-Nov-20 (Date) Reviewed by: Bill Carey (eSignature) 17-Nov-20 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	4.6/4.6, 5.8/5.8, 6.0/6.0, 5.8/5.8 c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/17/2020 2:32:13 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Laboratory Case Narrative

ALS Environmental

January 06, 2021

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Work Order: **20111574**

Re: **IDA001**

Dear Ray,

ALS Environmental received 60 sample(s) on Nov 17, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 857.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

/S/ Bill Carey

Bill Carey
Project Manager

ALS Group, USA *Date: 06-Jan-21*

Client: Hull & Associates
Project: IDA001
Work Order: 20111574

Case Narrative

Samples for the above noted Work Order were received on 11/17/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168176, Method SW6010D, Sample 20111574-33AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Batch 168177, Method SW6010D, Sample 20111574-59AMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Batch 168176, Method SW6010D, Sample 20111574-33AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Pb

Batch 168177, Method SW6010D, Sample 20111574-59AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb

Wet Chemistry:
No other deviations or anomalies were noted.Batch 168177, Method ICP_6010_S, Sample 20111574-59AMS: 1
Batch 168177, Method ICP_6010_S, Sample 20111574-59AMSD: 1

ALS Group, USA

Date: 06-Jan-21

Client: Hull & Associates
Project: IDA001
Work Order: **20111574**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111574-01	IDA001:DU-C1:S000010	Soil	DU-C1	11/13/2020 14:35	11/17/2020 09:30	
20111574-02	IDA001:DU-C1:S000010	Tclp Extract	DU-C1	11/13/2020 14:35	11/17/2020 09:30	
20111574-03	IDA001:DU-D1:S000010	Soil	DU-D1	11/13/2020 13:55	11/17/2020 09:30	
20111574-04	IDA001:DU-D1:S000010	Tclp Extract	DU-D1	11/13/2020 13:55	11/17/2020 09:30	
20111574-05	IDA001:DU-E5:S000010	Soil	DU-E5	11/12/2020 14:50	11/17/2020 09:30	
20111574-06	IDA001:DU-E5:S000010	Tclp Extract	DU-E5	11/12/2020 14:50	11/17/2020 09:30	
20111574-07	IDA001:DU-B5:S000010	Soil	DU-B5	11/12/2020 08:20	11/17/2020 09:30	
20111574-08	IDA001:DU-B5:S000010	Tclp Extract	DU-B5	11/12/2020 08:20	11/17/2020 09:30	
20111574-09	IDA001:DU-C5:S000010	Soil	DU-C5	11/12/2020 08:58	11/17/2020 09:30	
20111574-10	IDA001:DU-C5:S000010	Tclp Extract	DU-C5	11/12/2020 08:58	11/17/2020 09:30	
20111574-11	IDA001:DU-D5:S000010	Soil	DU-D5	11/12/2020 09:48	11/17/2020 09:30	
20111574-12	IDA001:DU-D5:S000010	Tclp Extract	DU-D5	11/12/2020 09:48	11/17/2020 09:30	
20111574-13	IDA001:DU-D5-TE:S000010	Soil	DU-D5-TE	11/12/2020 11:12	11/17/2020 09:30	
20111574-14	IDA001:DU-D5-TS:S000010	Soil	DU-D5-TS	11/12/2020 10:34	11/17/2020 09:30	
20111574-15	IDA001:DU-E9:S000010	Soil	DU-E9	11/14/2020 09:07	11/17/2020 09:30	
20111574-16	IDA001:DU-E9:S000010	Tclp Extract	DU-E9	11/14/2020 09:07	11/17/2020 09:30	
20111574-17	IDA001:DU-E9-TE:S000010	Soil	DU-E9-TE	11/14/2020 09:49	11/17/2020 09:30	
20111574-18	IDA001:DU-E9-TS:S000010	Soil	DU-E9-TS	11/14/2020 10:28	11/17/2020 09:30	
20111574-19	IDA001:DU-D9:S000010	Soil	DU-D9	11/14/2020 11:01	11/17/2020 09:30	
20111574-20	IDA001:DU-D9:S000010	Tclp Extract	DU-D9	11/14/2020 11:01	11/17/2020 09:30	
20111574-21	IDA001:DU-C9:S000010	Soil	DU-C9	11/14/2020 11:32	11/17/2020 09:30	
20111574-22	IDA001:DU-C9:S000010	Tclp Extract	DU-C9	11/14/2020 11:32	11/17/2020 09:30	
20111574-23	IDA001:DU-B9:S000010	Soil	DU-B9	11/14/2020 12:19	11/17/2020 09:30	
20111574-24	IDA001:DU-B9:S000010	Tclp Extract	DU-B9	11/14/2020 12:19	11/17/2020 09:30	
20111574-25	IDA001:DU-A9:S000010	Soil	DU-A9	11/14/2020 12:51	11/17/2020 09:30	
20111574-26	IDA001:DU-A9:S000010	Tclp Extract	DU-A9	11/14/2020 12:51	11/17/2020 09:30	
20111574-27	IDA001:DU-A8:S000010	Soil	DU-A8:	11/14/2020 13:30	11/17/2020 09:30	
20111574-28	IDA001:DU-A8:S000010	Tclp Extract	DU-A8:	11/14/2020 13:30	11/17/2020 09:30	
20111574-29	IDA001:DU-A8-TE:S000010	Soil	DU-A8-TE	11/14/2020 14:00	11/17/2020 09:30	
20111574-30	IDA001:DU-A8-TS:S000010	Soil	DU-A8-TS	11/14/2020 14:30	11/17/2020 09:30	
20111574-31	IDA001:DU-B8:S000010	Soil	DU-B8	11/14/2020 15:00	11/17/2020 09:30	
20111574-32	IDA001:DU-B8:S000010	Tclp Extract	DU-B8	11/14/2020 15:00	11/17/2020 09:30	
20111574-33	IDA001:DU-C8:S000010	Soil	DU-C8	11/14/2020 15:30	11/17/2020 09:30	
20111574-34	IDA001:DU-C8:S000010	Tclp Extract	DU-C8	11/14/2020 15:30	11/17/2020 09:30	
20111574-35	IDA001:DU-D8:S000010	Soil	DU-D8	11/14/2020 16:00	11/17/2020 09:30	
20111574-36	IDA001:DU-D8:S000010	Tclp Extract	DU-D8	11/14/2020 16:00	11/17/2020 09:30	
20111574-37	IDA001:DU-E8:S000010	Soil	DU-E8	11/15/2020 07:42	11/17/2020 09:30	
20111574-38	IDA001:DU-E8:S000010	Tclp Extract	DU-E8	11/15/2020 07:42	11/17/2020 09:30	
20111574-39	IDA001:DU-E7:S000010	Soil	DU-E7	11/15/2020 08:08	11/17/2020 09:30	

Client: Hull & Associates
Project: IDA001
Work Order: **20111574**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111574-40	IDA001:DU-E7:S000010	Tclp Extract	DU-E7	11/15/2020 08:08	11/17/2020 09:30	☐
20111574-41	IDA001:DU-D7:S000010	Soil	DU-D7	11/15/2020 08:34	11/17/2020 09:30	☐
20111574-42	IDA001:DU-D7:S000010	Tclp Extract	DU-D7	11/15/2020 08:34	11/17/2020 09:30	☐
20111574-43	IDA001:DU-C7:S000010	Soil	DU-C7	11/15/2020 09:07	11/17/2020 09:30	☐
20111574-44	IDA001:DU-C7:S000010	Tclp Extract	DU-C7	11/15/2020 09:07	11/17/2020 09:30	☐
20111574-45	IDA001:DU-B7:S000010	Soil	DU-B7	11/15/2020 09:39	11/17/2020 09:30	☐
20111574-46	IDA001:DU-B7:S000010	Tclp Extract	DU-B7	11/15/2020 09:39	11/17/2020 09:30	☐
20111574-47	IDA001:DU-A7:S000010	Soil	DU-A7	11/15/2020 10:20	11/17/2020 09:30	☐
20111574-48	IDA001:DU-A7:S000010	Tclp Extract	DU-A7	11/15/2020 10:20	11/17/2020 09:30	☐
20111574-49	IDA001:DU-A6:S000010	Soil	DU-A6	11/15/2020 11:40	11/17/2020 09:30	☐
20111574-50	IDA001:DU-A6:S000010	Tclp Extract	DU-A6	11/15/2020 11:40	11/17/2020 09:30	☐
20111574-51	IDA001:DU-B6:S000010	Soil	DU-B6	11/15/2020 12:10	11/17/2020 09:30	☐
20111574-52	IDA001:DU-B6:S000010	Tclp Extract	DU-B6	11/15/2020 12:10	11/17/2020 09:30	☐
20111574-53	IDA001:DU-C6:S000010	Soil	DU-C6	11/15/2020 12:35	11/17/2020 09:30	☐
20111574-54	IDA001:DU-C6:S000010	Tclp Extract	DU-C6	11/15/2020 12:35	11/17/2020 09:30	☐
20111574-55	IDA001:DU-C6-TE:S000010	Soil	DU-C6-TE	11/15/2020 12:55	11/17/2020 09:30	☐
20111574-56	IDA001:DU-C6-TS:S000010	Soil	DU-C6-TS	11/15/2020 13:20	11/17/2020 09:30	☐
20111574-57	IDA001:DU-D6:S000010	Soil	DU-D6	11/15/2020 13:50	11/17/2020 09:30	☐
20111574-58	IDA001:DU-D6:S000010	Tclp Extract	DU-D6	11/15/2020 13:50	11/17/2020 09:30	☐
20111574-59	IDA001:DU-E6:S000010	Soil	DU-E6	11/15/2020 14:10	11/17/2020 09:30	☐
20111574-60	IDA001:DU-E6:S000010	Tclp Extract	DU-E6	11/15/2020 14:10	11/17/2020 09:30	☐

Worksheets

ALS Group, USA

Date: 06-Jan-21

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

ANALTYTICAL METHODS: **6010D**

HOLDING TIMES

Cooler Temp: <6C

Sample pH N/A for soils; aqueous pH <2

ICP Metals

180 days from collection to prep and analysis

Sample Date	11/13/20	Prepare by	5/12/21	Analyze by	5/12/21
Sample Date	11/12/20	Prepare by	5/11/21	Analyze by	5/11/21
Sample Date	11/14/20	Prepare by	5/13/21	Analyze by	5/13/21
Sample Date	11/15/20	Prepare by	5/14/21	Analyze by	5/14/21

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	As/Pb	Date Prepared	Date Analyzed	DF	matrix
1	11/13/20	IDA001:DU-C1	20111574-01	X	11/17/20	11/25/20	10	solid
2	11/13/20	IDA001:DU-C1	20111574-02	X	11/17/20	11/25/20	1	aqueous
3	11/13/20	IDA001:DU-D1	20111574-03	X	11/17/20	11/25/20	10	solid
4	11/13/20	IDA001:DU-D1	20111574-04	X	11/17/20	11/25/20	1	aqueous
5	11/12/20	IDA001:DU-E5	20111574-05	X	11/17/20	11/25-29/20	10/100 Pb	solid
6	11/12/20	IDA001:DU-E5	20111574-06	X	11/17/20	11/25/20	1	aqueous
7	11/12/20	IDA001:DU-B5	20111574-07	X	11/17/20	11/25/20	10	solid
8	11/12/20	IDA001:DU-B5	20111574-08	X	11/17/20	11/25/20	1	aqueous
9	11/12/20	IDA001:DU-C5	20111574-09	X	11/17/20	11/25/20	10	solid
10	11/12/20	IDA001:DU-C5	20111574-10	X	11/17/20	11/25/20	1	aqueous
11	11/12/20	IDA001:DU-D5	20111574-11	X	11/17/20	11/25-29/20	10/100 Pb	solid
12	11/12/20	IDA001:DU-D5	20111574-12	X	11/17/20	11/25/20	1	aqueous
13	11/12/20	IDA001:DU-D5 TE	20111574-13	X	11/17/20	11/25/20	10	solid
14	11/12/20	IDA001:DU-D5 TS	20111574-14	X	11/17/20	11/25/20	10	solid
15	11/14/20	IDA001:DU-E9	20111574-15	X	11/17/20	11/25-29/20	10/100 Pb	solid
16	11/14/20	IDA001:DU-E9	20111574-16	X	11/17/20	11/25-26/20	1/10 Pb	aqueous
17	11/14/20	IDA001:DU-E9 TE	20111574-17	X	11/17/20	11/25-29/20	10/100 Pb	solid
18	11/14/20	IDA001:DU-E9 TS	20111574-18	X	11/17/20	11/25-29/20	10/100 Pb	solid
19	11/14/20	IDA001:DU-D9	20111574-19	X	11/17/20	11/25/20	10	solid
20	11/14/20	IDA001:DU-D9	20111574-20	X	11/17/20	11/25/20	1	aqueous
21	11/14/20	IDA001:DU-C9	20111574-21	X	11/17/20	11/25/20	10	solid
22	11/14/20	IDA001:DU-C9	20111574-22	X	11/17/20	11/25/20	1	aqueous
23	11/14/20	IDA001:DU-B9	20111574-23	X	11/17/20	11/25/20	10	solid
24	11/14/20	IDA001:DU-B9	20111574-24	X	11/17/20	11/25/20	1	aqueous
25	11/14/20	IDA001:DU-A9	20111574-25	X	11/17/20	11/25-29/20	10/100 Pb	solid
26	11/14/20	IDA001:DU-A9	20111574-26	X	11/17/20	11/25/20	1	aqueous
27	11/14/20	IDA001:DU-A8	20111574-27	X	11/17/20	11/25/20	10	solid
28	11/14/20	IDA001:DU-A8	20111574-28	X	11/17/20	11/25/20	1	aqueous
29	11/14/20	IDA001:DU-A8 TE	20111574-29	X	11/17/20	11/25/20	10	solid
30	11/14/20	IDA001:DU-A8 TS	20111574-30	X	11/17/20	11/25/20	10	solid
31	11/14/20	IDA001:DU-B8	20111574-31	X	11/17/20	11/25/20	10	solid
32	11/14/20	IDA001:DU-B8	20111574-32	X	11/17/20	11/25/20	1	aqueous
33	11/14/20	IDA001:DU-C8	20111574-33	X	11/17/20	11/25/20	10	solid
34	11/14/20	IDA001:DU-C8	20111574-34	X	11/17/20	11/25/20	1	aqueous
35	11/14/20	IDA001:DU-D8	20111574-35	X	11/17/20	11/26/20	10	solid
36	11/14/20	IDA001:DU-D8	20111574-36	X	11/17/20	11/25/20	1	aqueous
37	11/15/20	IDA001:DU-E8	20111574-37	X	11/17/20	11/26/20	10	solid
38	11/15/20	IDA001:DU-E8	20111574-38	X	11/17/20	11/25/20	1	aqueous
39	11/15/20	IDA001:DU-E7	20111574-39	X	11/17/20	11/26/20	10	solid
40	11/15/20	IDA001:DU-E7	20111574-40	X	11/17/20	11/25/20	1	aqueous
41	11/15/20	IDA001:DU-D7	20111574-41	X	11/17/20	11/26/20	10	solid

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	As/Pb	Date Prepared	Date Analyzed	DF	matrix
42	11/15/20	IDA001:DU-D7	20111574-42	X	11/17/20	11/25/20	1	aqueous
43	11/15/20	IDA001:DU-C7	20111574-43	X	11/17/20	11/26/20	10	solid
44	11/15/20	IDA001:DU-C7	20111574-44	X	11/17/20	11/25/20	1	aqueous
45	11/15/20	IDA001:DU-B7	20111574-45	X	11/17/20	11/26/20	10	solid
46	11/15/20	IDA001:DU-B7	20111574-46	X	11/17/20	11/25/20	1	aqueous
47	11/15/20	IDA001:DU-A7	20111574-47	X	11/17/20	11/26/20	10	solid
48	11/15/20	IDA001:DU-A7	20111574-48	X	11/17/20	11/25/20	1	aqueous
49	11/15/20	IDA001:DU-A6	20111574-49	X	11/17/20	11/26/20	10	solid
50	11/15/20	IDA001:DU-A6	20111574-50	X	11/17/20	11/25/20	1	aqueous
51	11/15/20	IDA001:DU-B6	20111574-51	X	11/17/20	11/26-29/20	10/100 Pb	solid
52	11/15/20	IDA001:DU-B6	20111574-52	X	11/17/20	11/25-26/20	1/10 Pb	aqueous
53	11/15/20	IDA001:DU-C6	20111574-53	X	11/17/20	11/26/20	10	solid
54	11/15/20	IDA001:DU-C6	20111574-54	X	11/17/20	11/25/20	1	aqueous
55	11/15/20	IDA001:DU-C6 TE	20111574-55	X	11/17/20	11/26/20	10	solid
56	11/15/20	IDA001:DU-C6 TS	20111574-56	X	11/17/20	11/26-29/20	10/100 Pb	solid
57	11/15/20	IDA001:DU-D6	20111574-57	X	11/17/20	11/26/20	10	solid
58	11/15/20	IDA001:DU-D6	20111574-58	X	11/17/20	11/25/20	1	aqueous
59	11/15/20	IDA001:DU-E6	20111574-59	X	11/17/20	11/26/20	10	solid
60	11/15/20	IDA001:DU-E6	20111574-60	X	11/17/20	11/25/20	1	aqueous

aqueous is TCLP

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

Spike performed on field sample?	YES	C1, A7, C8, E6
Laboratory using correct control limit (RPD) SW 846 6010 - 25%?	Yes - lab 25%	
Percent recovery meet criteria (NFG 75-125) ?	Yes	
Outliers flagged with "N"?	yes	

	IDA001:DU-C1	IDA001:DU-A7	4x IDA001:DU-C8 E6	
Analyte	Pb	As	Pb	As
Original Sample	0.1122	0.0231	888	4.5
Spike Sample	1.0263	0.9240	1120	12.2
True Value	1.0000	1.0000	6.3780	6.7
Percent Recovery	91.4%	90.1%	3648.4%	114.1%
Lab Value	91.4%	90.1%	3650.0	**114.0**
Duplicate Sample	1.0549	0.9438	715	10.7
True Value	1.0000	1.0000	6.4180	7.0
Percent Recovery	94.3%	92.1%	-2689.9%	89.0%
Lab Value	**94.3%**	92.0%	2690.0	**89.0**
RPD	-2.7	-2.1	44.2	13.1
Lab Value	2.8	2.1	44.2	**13.1**

Percent Recovery = ((spike sample-original sample)/true value)*100

RPD = (Original - Duplicate)/((Original + Duplicate)/2)*100

IDA001:DU-C1

Pb	mg/L			DF		4x
Sample		0.0102	2.5	27.5	1	0.1122
MS		0.0933	2.5	27.5	1	1.0263
MSD		0.0959	2.5	27.5	1	1.0549

IDA001:DU-A7

As	mg/L			DF		
Sample		0.0021	2.5	27.5	1	0.0231
MS		0.084	2.5	27.5	1	0.924
MSD		0.0858	2.5	27.5	1	0.9438

C8

Pb					
Sample	13.563	0.764	50	1	887.6308901
MS	17.5667	0.784	50	1	1120.325255
MSD	11.1396	0.779	50	1	714.9935815

E6

As					
Sample	0.0635	0.711	50	1	4.465541491
MS	0.1803	0.741	50	1	12.1659919
MSD	0.153	0.717	50	1	10.66945607

DUPLICATE RELATIVE PERCENT DIFFERENCE see MS/MSD

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R
168173	all	ok
168174	all	ok
168176	all	ok
168177	all	ok

Were there any transcription errors between the raw data and Forms? No
Were laboratory acceptance limits used as the basis for validation? Yes
Percent recovery within control limits (70-130 - ICP/ Sb & Ag 50-150)? Yes
(SW 846 6010C - 80-120%)

SAMPLE 168173 COMPOUND Pb

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	0.09482	0.1	94.82%	94.8

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

SAMPLE 168174 COMPOUND As

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	0.08624	0.1	86.24	86.2

SAMPLE 168176 COMPOUND Pb

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	4.785	5	95.70%	95.7

SAMPLE 168177 COMPOUND As

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	4.26	5	85.20%	85.2

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

0.0862
25
27.5
1

0.0784
25
27.5
1

0.0957
50
1
1

0.0852
50
1
1

BLANKS

convert ug/L to mg/kg
1 ug/l / 1 g/cc = 1 ug *cc/ L * g x 1L/1000cc = 0.001ug/g
final volume is 50 ml conversion factor = 50*0.001 = 0.05

aqueous

Blank	Parameter	Concentration		Units
168173	all	ND		mg/L
168174	all	ND		mg/L
168176	all	ND		mg/kg
168177	all	ND		mg/kg
ICB/CCB				
ICB/CCB 11/25/20	lead	2.04 J		ug/L
ICB/CCB 11/20/20	all	nd		mg/L
ICB/CCB 11/21/20	all	nd		mg/L

0.102

ICP Interference Check Sample - Spectral Interference Check Sample (SIC)

ICP SIC performed beginning and end of run	beginning	all samples within 12 hours
The concentration measured for any target analytes must be less than1/2x the MQL (which according to lab is the MRL) (lab SOP). Spiked values must be 80%-120%	Yes	MQL = As = 0.05 Pb = 0.05
NOTES: As and Pb are not a required constituent in the SIC solution.		

ICP Serial Dilution

Serial Dilution performed on field sample?	yes
Analyte > 50 x IDL serial dilution meet QC limit of 10% (15% FOR SOIL)?	yes

Pb									
ORIGINAL		3.0915	0.711	50	1	1	217.4050633		
SD		3.4483	0.711	50	1	1	242.4964838		
As									
ORIGINAL		0.0635	0.711	50	1	1	4.465541491		
SD		0.0865	0.711	50	1	1	6.082981716		
E6									
	MDL	50*IDL	OS				OS>50IDL	OS-ND	SD-ND %D
As		0.065	3.25	4.466		6.083 j	Yes	Yes	36
Pb		0.2	10	217.4051		242.49648	Yes	Yes	12

CALIBRATION

ICV

ICP linear correl coeff ≥ 0.995 - NFG - SW 846 6020B ≥ 0.995 (r^2 = 0.99)?	Yes
Calibration = blank,low, mid and high level standard?	Yes
Percent recovery within ±20% for LLQC?	Yes
ICV analyzed after system standardized and for every analyte	Yes
Percent Recovery within limits for target parameters?	Yes

(90-110) ICP

	11/29/20	11/25/20
Analyte	Pb	As
Reported conc.	1.0032	0.9543
True conc.	1	1
Percent recovery	100.3%	95.4%
Lab Value	100.0%	95.4%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

NOTES: Low check - falls within 80-120 ; high standard check falls within 90-110

CCVs

CCV performed every 2 hours or 10% frequency	Yes
CCV performed beginning and end of sample analysis	Yes
CCV standard for all target analytes	Yes
Percent Recovery within limits for target parameters?	Yes

(90-110) ICP

	11/29/20 20:40	11/29/20 22:46	11/25/20 21:14	11/25/20 22:15	11/25/20 2:28	11/25/20 11:51
	CCV	CCV	CCV	CCV	CCV	CCV
Analyte	Pb	Pb	As	As	Pb	Pb
Reported conc.	0.5089	0.5395	0.4624	0.4698	0.4588	0.4982
True conc.	0.5	0.5	0.5	0.5	0.5	0.5
Percent recovery	101.8%	107.9%	92.5%	94.0%	91.8%	99.6%
Lab Value	102.0%	108.0%	92.5%	94.0%	91.8%	99.6%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

SAMPLE CALCULATION

	15	51	15	51
	IDA001:DU-E9	IDA001:DU-B6	DA001:DU-B	DA001:DU-B6
	As	As	Pb	Pb
Conc (ppm)	5.8584	1.1732	130.2868	166.1018
final vol	50	50	50	50
sample wt	0.729	0.758	0.729	0.758
Conversion	1	1	1	1
Dilution Factor	1	1	1	1
% solids	0.89	0.89	0.89	0.89
Result (mg/kg)	451.4726962	86.95265483	10040.44	12310.7675
Lab (mg/kg)	450	87	10000	12000

Please note that the DF is included in the conc. These samples were run at dilutions

Dilution Factor	10	10	100	100

	58 TCLP	26 TCLP		
	IDA001:DU-D6	IDA001:DU-A9		
	As	Pb		
Conc (ppm)	0.0009	2.7435		
final vol	27.5	27.5		
sample wt	25	25		
Conversion	0.1	0.1		
Dilution Factor	1	1		
Result (mg/L)	0.0099	30.1785		
Lab (mg/L)	0.05 U	30		

Are there any transcription errors?	NO
Are Form1s present for all field and quality control samples?	Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.?	Yes

QUARTERLY VERIFICATION OF INSTRUMENT PARAMETERS

IDL analyzed and reported quarterly for each element on Form 10?	not quarterly
IDL<RL for each element?	Yes
ICP interelement correction factor analyzed and reported for each element on Forms 11 and 12?	No - did SIC to verify
Linear range analyzed and reported annually and quarterly for each element on Forms 11 and 12?	No - given LDR sheet

	11/25/20 As	Pb	
	0	0	0
	0.005	2	6
	0.1	37	103
	0.2	75	206
	1	394	1024
correl cal		0.99994548	0.999999
lab corre		0.9998	1

	11/29/20 As	Pb	
	0	0	0
	0.005	2	5
	0.1	32	95
	0.2	65	190
	1	335	938
correl cal		0.999973506	0.999997
lab corre		0.9999	1

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-02A	**Units:**	mg/L
Lab Code:	IDA001:DU-C1:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111574-02AMS			Duplicate Matrix Spike 20111574-02AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	0.0231	0.9108	1	88.8	0.9317	1	90.9	75-125	2.27	20
Lead	0.1122	1.026	1	91.4	1.055	1	94.3	75-125	2.75	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-02A

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:38:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0028 ppm	45.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0021 ppm	28.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,308 cps	0.0404 ppm	3.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,269 cps	0.0433 ppm	3.1 %	0.0 ppm
Be 313.042 {108} (Axial)	35 cps	0.0001 ppm	109.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,706 cps	21.9029 ppm	3.5 %	0.8 ppm
Cd 228.802 {447} (Axial)	1 cps	0.0001 ppm	41.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	59.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	17.4 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	59.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	40 cps	0.0016 ppm	76.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	8 cps	0.0330 ppm	5.8 %	0.0 ppm
Li 670.784 {50} (Radial)	-12 cps	-0.0008 ppm	169.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,699 cps	0.0916 ppm	7.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	1,584.3 %	0.0 ppm
Na 589.592 {57} (Radial)	232,264 cps	117.8125 ppm	3.0 %	3.5 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0007 ppm	8.6 %	0.0 ppm
K 766.490 {44} (Radial)	78 cps	0.1695 ppm	13.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0014 ppm	51.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0003 ppm	266.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	909 cps	0.0235 ppm	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0010 ppm	20.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0020 ppm	79.2 %	0.0 ppm
V 292.402 {115} (Axial)	3 cps	0.0002 ppm	157.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,195 cps	0.1090 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.0963 %	5.8 %	5.4 %
Sc 188.060 {479} (Axial)		88.2797 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	163 cps	4.6009 ppm	3.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0003 ppm	487.1 %	0.0 ppm
Al 167.079 {502} (Axial)	8 cps	0.0067 ppm	0.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.6920 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	3 cps	0.0098 ppm	24.6 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0011 ppm	1,071.6 %	0.0 ppm
Si 251.611 {134} (Radial)	23 cps	0.2537 ppm	2.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	10 cps	0.0102 ppm	8.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9755 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.4515 %	0.8 %	0.8 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-02AMS

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:43:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	50 cps	0.0841 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0828 ppm	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,211 cps	0.1300 ppm	2.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,798 cps	0.1297 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	31,864 cps	0.0836 ppm	0.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,787 cps	29.8917 ppm	2.3 %	0.7 ppm
Cd 228.802 {447} (Axial)	990 cps	0.0804 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	806 cps	0.0826 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	487 cps	0.0845 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	701 cps	0.0807 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,118 cps	0.0840 ppm	0.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,187 cps	8.6197 ppm	2.1 %	0.2 ppm
Li 670.784 {50} (Radial)	1,263 cps	0.0878 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,169 cps	0.1664 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	230 cps	0.0841 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	243,588 cps	123.5564 ppm	2.1 %	2.6 ppm
Ni 231.604 {445} (Axial)	346 cps	0.0805 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	4,341 cps	9.3842 ppm	2.4 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0814 ppm	1.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,104 cps	0.0854 ppm	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,267 cps	0.1105 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	84 cps	0.0813 ppm	1.2 %	0.0 ppm
Tl 334.941 {101} (Radial)	117 cps	0.0900 ppm	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	1,445 cps	0.0849 ppm	0.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,992 cps	0.1818 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.9876 %	0.6 %	0.5 %
Sc 188.060 {479} (Axial)		87.6977 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	458 cps	12.9102 ppm	2.3 %	0.3 ppm
Tl 190.856 {477} (Axial)	29 cps	0.0801 ppm	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	123 cps	0.1081 ppm	1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.2616 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	151 cps	0.4489 ppm	3.3 %	0.0 ppm
Al 396.152 {85} (Radial)	43 cps	0.0940 ppm	3.9 %	0.0 ppm
Si 251.611 {134} (Radial)	766 cps	8.5553 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	96 cps	0.0933 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6815 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		101.5155 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-02AMSD

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:48:55 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	52 cps	0.0869 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0847 ppm	2.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,475 cps	0.1381 ppm	2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	4,032 cps	0.1377 ppm	3.6 %	0.0 ppm
Be 313.042 {108} (Axial)	32,971 cps	0.0866 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,291 cps	31.8297 ppm	2.9 %	0.9 ppm
Cd 228.802 {447} (Axial)	1,024 cps	0.0831 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	831 cps	0.0853 ppm	0.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	502 cps	0.0872 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	723 cps	0.0833 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,198 cps	0.0872 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,306 cps	9.0887 ppm	2.7 %	0.2 ppm
Li 670.784 {50} (Radial)	1,329 cps	0.0924 ppm	3.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,672 cps	0.1733 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	237 cps	0.0867 ppm	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	260,766 cps	132.2695 ppm	2.8 %	3.7 ppm
Ni 231.604 {445} (Axial)	356 cps	0.0830 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	4,564 cps	9.8659 ppm	2.6 %	0.3 ppm
Se 196.090 {472} (Axial)	21 cps	0.0848 ppm	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,138 cps	0.0880 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,544 cps	0.1177 ppm	2.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	87 cps	0.0838 ppm	1.3 %	0.0 ppm
Tl 334.941 {101} (Radial)	125 cps	0.0957 ppm	3.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,493 cps	0.0878 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,090 cps	0.1907 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.2569 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		86.7885 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	482 cps	13.5870 ppm	2.6 %	0.4 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0825 ppm	2.3 %	0.0 ppm
Al 167.079 {502} (Axial)	133 cps	0.1172 ppm	1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.2822 %	0.2 %	0.1 %
B 249.773 {135} (Radial)	161 cps	0.4781 ppm	3.0 %	0.0 ppm
Al 396.152 {85} (Radial)	49 cps	0.1060 ppm	6.6 %	0.0 ppm
Si 251.611 {134} (Radial)	807 cps	9.0035 ppm	2.6 %	0.2 ppm
Pb 220.353 {453} (Axial)	98 cps	0.0959 ppm	0.5 %	0.0 ppm
Y 224.306 {450} (Axial)		93.8816 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.7557 %	2.1 %	2.1 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-33A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-C8:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111574-33AMS			Duplicate Matrix Spike 20111574-33AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	25.98	25.32 SO	6.378	-10.4 *	42.62 SRO	6.418	259 *	75-125	50.9*	20
Lead	887.6	1120 SO	6.378	3650 *	715 SRO	6.418	-2690 *	75-125	44.2*	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-33A

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:36:22 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	55 cps	0.9290 ppm	8.7 %	0.1 ppm
As 189.042 {478} (Axial)	16 cps	0.3970 ppm	9.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	910 cps	0.2807 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	971 cps	0.3317 ppm	5.6 %	0.0 ppm
Be 313.042 {108} (Axial)	37 cps	0.0010 ppm	14.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,849 cps	339.7179 ppm	1.6 %	5.4 ppm
Cd 228.802 {447} (Axial)	48 cps	0.0388 ppm	9.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	127 cps	0.1307 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	67 cps	0.1162 ppm	7.7 %	0.0 ppm
Co 228.616 {447} (Axial)	30 cps	0.0344 ppm	7.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,457 cps	0.5777 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,743 cps	108.1291 ppm	1.8 %	1.9 ppm
Li 670.784 {50} (Radial)	35 cps	0.0240 ppm	2.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	33,825 cps	4.6264 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0071 ppm	28.3 %	0.0 ppm
Na 589.592 {57} (Radial)	251 cps	1.2732 ppm	3.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	34 cps	0.0792 ppm	8.5 %	0.0 ppm
K 766.490 {44} (Radial)	154 cps	3.3224 ppm	11.0 %	0.4 ppm
Se 196.090 {472} (Axial)	1 cps	0.0326 ppm	39.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	68 cps	0.0530 ppm	5.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	819 cps	0.2123 ppm	2.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	24 cps	0.2295 ppm	8.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	156 cps	1.1943 ppm	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	197 cps	0.1158 ppm	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,466 cps	9.5481 ppm	8.8 %	0.8 ppm
Sc 357.253 {94} (Axial)		100.1936 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		92.2099 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	567 cps	159.6894 ppm	1.6 %	2.5 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0057 ppm	222.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,375 cps	20.9425 ppm	7.3 %	1.5 ppm
Sc 227.318 {448} (Axial)		91.5347 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	6 cps	0.1750 ppm	28.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,263 cps	27.3356 ppm	1.8 %	0.5 ppm
Si 251.611 {134} (Radial)	144 cps	16.1253 ppm	1.8 %	0.3 ppm
Pb 220.353 {453} (Axial)	1,389 cps	13.5630 ppm	8.8 %	1.2 ppm
Y 224.306 {450} (Axial)		96.9043 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.8862 %	1.5 %	1.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-33AMS

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:41:28 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	67 cps	1.1335 ppm	1.9 %	0.0 ppm
As 189.042 {478} (Axial)	16 cps	0.3969 ppm	4.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,230 cps	0.3795 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,235 cps	0.4219 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	3,804 cps	0.0999 ppm	0.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,481 cps	325.5940 ppm	1.6 %	5.2 ppm
Cd 228.802 {447} (Axial)	158 cps	0.1280 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	218 cps	0.2238 ppm	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	127 cps	0.2197 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	116 cps	0.1339 ppm	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,523 cps	1.0004 ppm	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,889 cps	113.8614 ppm	1.4 %	1.6 ppm
Li 670.784 {50} (Radial)	205 cps	0.1427 ppm	7.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	29,330 cps	4.0117 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1018 ppm	2.5 %	0.0 ppm
Na 589.592 {57} (Radial)	2,507 cps	12.7170 ppm	2.0 %	0.3 ppm
Ni 231.604 {445} (Axial)	78 cps	0.1826 ppm	2.5 %	0.0 ppm
K 766.490 {44} (Radial)	706 cps	15.2560 ppm	2.1 %	0.3 ppm
Se 196.090 {472} (Axial)	3 cps	0.1086 ppm	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	195 cps	0.1506 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,188 cps	0.3078 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	42 cps	0.4040 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	203 cps	1.5623 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	367 cps	0.2158 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	9,046 cps	8.2523 ppm	1.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.8524 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.1038 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	555 cps	156.3582 ppm	1.8 %	2.7 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0948 ppm	7.5 %	0.0 ppm
Al 167.079 {502} (Axial)	3,259 cps	28.7419 ppm	1.0 %	0.3 ppm
Sc 227.318 {448} (Axial)		91.3612 %	0.3 %	0.2 %
B 249.773 {135} (Radial)	25 cps	0.7463 ppm	5.7 %	0.0 ppm
Al 396.152 {85} (Radial)	1,616 cps	34.9603 ppm	1.5 %	0.5 ppm
Si 251.611 {134} (Radial)	280 cps	31.3039 ppm	1.7 %	0.5 ppm
Pb 220.353 {453} (Axial)	1,799 cps	17.5667 ppm	1.3 %	0.2 ppm
Y 224.306 {450} (Axial)		97.0928 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		102.6006 %	1.0 %	1.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-33AMSD

Sample type: UNKNOWN Analysis started at: 11/25/2020 11:46:30 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	78 cps	1.3076 ppm	6.2 %	0.1 ppm
As 189.042 {478} (Axial)	26 cps	0.6635 ppm	5.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,340 cps	0.4136 ppm	1.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,342 cps	0.4584 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	4,051 cps	0.1063 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,767 cps	374.9321 ppm	1.7 %	6.4 ppm
Cd 228.802 {447} (Axial)	165 cps	0.1336 ppm	5.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	210 cps	0.2155 ppm	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	114 cps	0.1977 ppm	5.7 %	0.0 ppm
Co 228.616 {447} (Axial)	114 cps	0.1311 ppm	5.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,684 cps	0.6679 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	3,225 cps	127.1137 ppm	1.9 %	2.4 ppm
Li 670.784 {50} (Radial)	218 cps	0.1515 ppm	3.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	27,317 cps	3.7363 ppm	1.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1010 ppm	5.0 %	0.0 ppm
Na 589.592 {57} (Radial)	2,759 cps	13.9953 ppm	0.7 %	0.1 ppm
Ni 231.604 {445} (Axial)	72 cps	0.1671 ppm	5.1 %	0.0 ppm
K 766.490 {44} (Radial)	793 cps	17.1519 ppm	1.3 %	0.2 ppm
Se 196.090 {472} (Axial)	3 cps	0.1220 ppm	20.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	190 cps	0.1470 ppm	1.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,399 cps	0.3623 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	33 cps	0.3183 ppm	5.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	216 cps	1.6596 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	393 cps	0.2311 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,338 cps	10.3433 ppm	5.6 %	0.6 ppm
Sc 357.253 {94} (Axial)		99.0348 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		92.0247 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	614 cps	172.9798 ppm	1.7 %	2.9 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0964 ppm	10.8 %	0.0 ppm
Al 167.079 {502} (Axial)	2,931 cps	25.8488 ppm	4.3 %	1.1 ppm
Sc 227.318 {448} (Axial)		91.1998 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	28 cps	0.8208 ppm	2.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1,602 cps	34.6548 ppm	2.0 %	0.7 ppm
Si 251.611 {134} (Radial)	298 cps	33.2775 ppm	1.6 %	0.5 ppm
Pb 220.353 {453} (Axial)	1,141 cps	11.1396 ppm	5.7 %	0.6 ppm
Y 224.306 {450} (Axial)		96.9858 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		101.7324 %	1.6 %	1.6 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/25/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-48A	**Units:**	mg/L
Lab Code:	IDA001:DU-A7:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3015A		

		Matrix Spike 20111574-48AMS			Duplicate Matrix Spike 20111574-48AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	0.02343	0.9240	1	90.1	0.9438	1	92.0	75-125	2.12	20
Lead	1.126	2.042	1	91.6	2.043	1	91.7	75-125	0.0436	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-48A

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:16:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.0140 ppm	7.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0021 ppm	15.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,558 cps	0.0481 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,489 cps	0.0509 ppm	6.2 %	0.0 ppm
Be 313.042 {108} (Axial)	26 cps	0.0001 ppm	16.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,209 cps	19.9975 ppm	3.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0007 ppm	9.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0007 ppm	62.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0005 ppm	8.1 %	0.0 ppm
Co 228.616 {447} (Axial)	2 cps	0.0002 ppm	75.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	78 cps	0.0031 ppm	2.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	8 cps	0.0335 ppm	3.2 %	0.0 ppm
Li 670.784 {50} (Radial)	-18 cps	-0.0012 ppm	59.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,920 cps	0.0947 ppm	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	32.1 %	0.0 ppm
Na 589.592 {57} (Radial)	249,636 cps	126.6244 ppm	2.9 %	3.7 ppm
Ni 231.604 {445} (Axial)	9 cps	0.0020 ppm	3.2 %	0.0 ppm
K 766.490 {44} (Radial)	73 cps	0.1569 ppm	13.4 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0020 ppm	7.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	2 cps	0.0002 ppm	99.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	888 cps	0.0230 ppm	3.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	100.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0018 ppm	16.5 %	0.0 ppm
V 292.402 {115} (Axial)	3 cps	0.0002 ppm	98.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	11,409 cps	1.0408 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.0648 %	1.6 %	1.5 %
Sc 188.060 {479} (Axial)		88.5516 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	89 cps	2.5072 ppm	2.9 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0006 ppm	114.8 %	0.0 ppm
Al 167.079 {502} (Axial)	9 cps	0.0082 ppm	0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		88.0296 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0114 ppm	27.6 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0070 ppm	64.3 %	0.0 ppm
Si 251.611 {134} (Radial)	42 cps	0.4736 ppm	3.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	105 cps	0.1023 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8566 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.1944 %	1.3 %	1.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-48AMS

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:22:07 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	58 cps	0.0968 ppm	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0840 ppm	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,339 cps	0.1339 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,870 cps	0.1322 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	32,308 cps	0.0848 ppm	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,165 cps	27.5075 ppm	1.3 %	0.4 ppm
Cd 228.802 {447} (Axial)	1,026 cps	0.0833 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	815 cps	0.0836 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	499 cps	0.0867 ppm	1.9 %	0.0 ppm
Co 228.616 {447} (Axial)	722 cps	0.0831 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,187 cps	0.0867 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,215 cps	8.7318 ppm	1.3 %	0.1 ppm
Li 670.784 {50} (Radial)	1,242 cps	0.0863 ppm	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,756 cps	0.1745 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	236 cps	0.0862 ppm	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	250,187 cps	126.9039 ppm	1.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	362 cps	0.0843 ppm	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	4,300 cps	9.2944 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0830 ppm	4.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,113 cps	0.0861 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,192 cps	0.1086 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	87 cps	0.0842 ppm	1.4 %	0.0 ppm
Tl 334.941 {101} (Radial)	118 cps	0.0907 ppm	3.1 %	0.0 ppm
V 292.402 {115} (Axial)	1,458 cps	0.0857 ppm	2.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,121 cps	1.1058 ppm	1.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6686 %	0.8 %	0.7 %
Sc 188.060 {479} (Axial)		86.4536 %	1.0 %	0.9 %
Mg 279.079 {121} (Radial)	387 cps	10.8932 ppm	1.4 %	0.2 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0825 ppm	3.0 %	0.0 ppm
Al 167.079 {502} (Axial)	136 cps	0.1196 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.0925 %	1.2 %	1.0 %
B 249.773 {135} (Radial)	152 cps	0.4522 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	48 cps	0.1030 ppm	4.1 %	0.0 ppm
Si 251.611 {134} (Radial)	782 cps	8.7293 ppm	1.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	190 cps	0.1856 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.4878 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		99.4806 %	0.3 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-48AMSD

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:27:06 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	58 cps	0.0982 ppm	2.5 %	0.0 ppm
As 189.042 {478} (Axial)	34 cps	0.0858 ppm	1.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	4,326 cps	0.1335 ppm	2.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,886 cps	0.1327 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	32,523 cps	0.0854 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,173 cps	27.5369 ppm	2.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	1,034 cps	0.0839 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	832 cps	0.0854 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	508 cps	0.0883 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	727 cps	0.0837 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,178 cps	0.0864 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,231 cps	8.7941 ppm	2.4 %	0.2 ppm
Li 670.784 {50} (Radial)	1,240 cps	0.0861 ppm	2.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,822 cps	0.1754 ppm	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	237 cps	0.0866 ppm	0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	247,879 cps	125.7332 ppm	2.8 %	3.6 ppm
Ni 231.604 {445} (Axial)	368 cps	0.0856 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	4,290 cps	9.2737 ppm	3.2 %	0.3 ppm
Se 196.090 {472} (Axial)	20 cps	0.0844 ppm	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,117 cps	0.0864 ppm	1.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,185 cps	0.1084 ppm	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	88 cps	0.0851 ppm	0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	118 cps	0.0909 ppm	4.1 %	0.0 ppm
V 292.402 {115} (Axial)	1,468 cps	0.0863 ppm	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,135 cps	1.1071 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.1598 %	1.6 %	1.5 %
Sc 188.060 {479} (Axial)		87.1700 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	390 cps	10.9880 ppm	1.5 %	0.2 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0825 ppm	0.2 %	0.0 ppm
Al 167.079 {502} (Axial)	135 cps	0.1190 ppm	0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.7654 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	153 cps	0.4529 ppm	3.1 %	0.0 ppm
Al 396.152 {85} (Radial)	54 cps	0.1170 ppm	5.0 %	0.0 ppm
Si 251.611 {134} (Radial)	781 cps	8.7223 ppm	2.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	190 cps	0.1857 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.1562 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		97.7589 %	0.1 %	0.1 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	11/26/2020
		Date Extracted:	11/23/2020

Duplicate Matrix Spike Summary
Metals

Sample Name:	20111574-59A	**Units:**	mg/Kg
Lab Code:	IDA001:DU-E6:S000010	**Basis:**	Wet
Analysis Method:	SW6010D		
Prep Method:	SW3050B		

		Matrix Spike 20111574-59AMS			Duplicate Matrix Spike 20111574-59AMSD					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic	4.466	12.17	6.748	114	10.67	6.973	89.0	75-125	13.1	20
Lead	217.4	493.3 SO	6.748	4090 *	272 SRO	6.973	783 *	75-125	57.8*	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-59A

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:03:16 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.1387 ppm	18.0 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0635 ppm	20.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,122 cps	0.3463 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,088 cps	0.3714 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	25 cps	0.0007 ppm	14.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,069 cps	463.3085 ppm	1.1 %	5.3 ppm
Cd 228.802 {447} (Axial)	21 cps	0.0169 ppm	18.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	73 cps	0.0748 ppm	5.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	33 cps	0.0570 ppm	12.1 %	0.0 ppm
Co 228.616 {447} (Axial)	26 cps	0.0301 ppm	19.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,773 cps	0.7033 ppm	4.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,600 cps	102.4709 ppm	1.4 %	1.4 ppm
Li 670.784 {50} (Radial)	49 cps	0.0337 ppm	21.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	18,696 cps	2.5572 ppm	4.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0059 ppm	14.4 %	0.0 ppm
Na 589.592 {57} (Radial)	193 cps	0.9769 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	28 cps	0.0658 ppm	14.4 %	0.0 ppm
K 766.490 {44} (Radial)	194 cps	4.1833 ppm	3.0 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0128 ppm	39.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	12 cps	0.0089 ppm	33.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	878 cps	0.2275 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	26 cps	0.2518 ppm	12.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	149 cps	1.1405 ppm	3.1 %	0.0 ppm
V 292.402 {115} (Axial)	170 cps	0.1000 ppm	8.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,566 cps	14.2008 ppm	13.6 %	1.9 ppm
Sc 357.253 {94} (Axial)		100.7322 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		93.5377 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	716 cps	201.5532 ppm	0.7 %	1.5 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0035 ppm	264.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,284 cps	20.1433 ppm	11.8 %	2.4 ppm
Sc 227.318 {448} (Axial)		92.7346 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	5 cps	0.1481 ppm	10.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,519 cps	32.8583 ppm	1.4 %	0.5 ppm
Si 251.611 {134} (Radial)	170 cps	19.0207 ppm	1.7 %	0.3 ppm
Pb 220.353 {453} (Axial)	317 cps	3.0915 ppm	13.7 %	0.4 ppm
Y 224.306 {450} (Axial)		98.3529 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.0722 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-59AMS

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:08:23 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	18 cps	0.3024 ppm	3.1 %	0.0 ppm
As 189.042 {478} (Axial)	7 cps	0.1803 ppm	6.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,364 cps	0.4210 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,332 cps	0.4548 ppm	1.2 %	0.0 ppm
Be 313.042 {108} (Axial)	3,752 cps	0.0985 ppm	0.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	9,734 cps	373.6759 ppm	1.1 %	4.1 ppm
Cd 228.802 {447} (Axial)	137 cps	0.1115 ppm	2.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	175 cps	0.1797 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	103 cps	0.1796 ppm	1.8 %	0.0 ppm
Co 228.616 {447} (Axial)	115 cps	0.1327 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,652 cps	0.6550 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,705 cps	106.6271 ppm	0.6 %	0.6 ppm
Li 670.784 {50} (Radial)	226 cps	0.1569 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	18,548 cps	2.5370 ppm	0.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1033 ppm	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	2,462 cps	12.4858 ppm	0.9 %	0.1 ppm
Ni 231.604 {445} (Axial)	75 cps	0.1738 ppm	2.1 %	0.0 ppm
K 766.490 {44} (Radial)	793 cps	17.1392 ppm	2.8 %	0.5 ppm
Se 196.090 {472} (Axial)	3 cps	0.1127 ppm	22.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	161 cps	0.1245 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,242 cps	0.3217 ppm	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	38 cps	0.3671 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	188 cps	1.4401 ppm	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	371 cps	0.2179 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	31,379 cps	28.6264 ppm	1.9 %	0.6 ppm
Sc 357.253 {94} (Axial)		100.9694 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		93.1244 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	593 cps	166.9735 ppm	1.0 %	1.7 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0965 ppm	17.9 %	0.0 ppm
Al 167.079 {502} (Axial)	3,637 cps	32.0794 ppm	1.4 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.4665 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	23 cps	0.6958 ppm	6.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,857 cps	40.1824 ppm	0.9 %	0.4 ppm
Si 251.611 {134} (Radial)	271 cps	30.2916 ppm	1.0 %	0.3 ppm
Pb 220.353 {453} (Axial)	749 cps	7.3114 ppm	1.9 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5048 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		102.4154 %	0.5 %	0.5 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-59AMSD

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:13:25 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	15 cps	0.2463 ppm	4.8 %	0.0 ppm
As 189.042 {478} (Axial)	6 cps	0.1530 ppm	3.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,244 cps	0.3840 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,192 cps	0.4069 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	3,557 cps	0.0934 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,965 cps	344.1539 ppm	0.9 %	2.9 ppm
Cd 228.802 {447} (Axial)	132 cps	0.1069 ppm	1.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	165 cps	0.1693 ppm	2.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	99 cps	0.1714 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	110 cps	0.1271 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,972 cps	0.7822 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,748 cps	108.3273 ppm	0.6 %	0.7 ppm
Li 670.784 {50} (Radial)	194 cps	0.1346 ppm	2.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	17,371 cps	2.3760 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	28 cps	0.1009 ppm	2.1 %	0.0 ppm
Na 589.592 {57} (Radial)	2,251 cps	11.4193 ppm	0.5 %	0.1 ppm
Ni 231.604 {445} (Axial)	74 cps	0.1735 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	684 cps	14.7766 ppm	2.0 %	0.3 ppm
Se 196.090 {472} (Axial)	3 cps	0.1092 ppm	1.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	162 cps	0.1250 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,104 cps	0.2860 ppm	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	38 cps	0.3638 ppm	2.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	164 cps	1.2597 ppm	0.4 %	0.0 ppm
V 292.402 {115} (Axial)	339 cps	0.1992 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	18,167 cps	16.5730 ppm	1.5 %	0.3 ppm
Sc 357.253 {94} (Axial)		101.0256 %	1.3 %	1.3 %
Sc 188.060 {479} (Axial)		93.6436 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	542 cps	152.5914 ppm	0.7 %	1.1 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0867 ppm	10.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,402 cps	30.0010 ppm	1.4 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.9235 %	0.8 %	0.7 %
B 249.773 {135} (Radial)	22 cps	0.6648 ppm	4.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,648 cps	35.6582 ppm	0.5 %	0.2 ppm
Si 251.611 {134} (Radial)	270 cps	30.1063 ppm	0.9 %	0.3 ppm
Pb 220.353 {453} (Axial)	400 cps	3.9006 ppm	1.8 %	0.1 ppm
Y 224.306 {450} (Axial)		98.6389 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		102.8784 %	0.2 %	0.2 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Water	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168173

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.08613	0.1	86.1	80-120
Lead	0.09482	0.1	94.8	80-120

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168173

Sample type: UNKNOWN Analysis started at: 11/25/2020 1:33:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	48 cps	0.0815 ppm	1.4 %	0.0 ppm
As 189.042 {478} (Axial)	31 cps	0.0783 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,815 cps	0.0869 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,532 cps	0.0865 ppm	2.8 %	0.0 ppm
Be 313.042 {108} (Axial)	31,016 cps	0.0814 ppm	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,140 cps	8.2134 ppm	1.8 %	0.1 ppm
Cd 228.802 {447} (Axial)	981 cps	0.0796 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	801 cps	0.0822 ppm	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	492 cps	0.0855 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	720 cps	0.0829 ppm	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,086 cps	0.0827 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,121 cps	8.3596 ppm	1.9 %	0.2 ppm
Li 670.784 {50} (Radial)	1,123 cps	0.0781 ppm	2.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,143 cps	0.0840 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	230 cps	0.0843 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	16,250 cps	8.2428 ppm	2.4 %	0.2 ppm
Ni 231.604 {445} (Axial)	353 cps	0.0822 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	3,803 cps	8.2209 ppm	2.2 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0805 ppm	1.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,093 cps	0.0845 ppm	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,260 cps	0.0845 ppm	2.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	85 cps	0.0825 ppm	1.0 %	0.0 ppm
Tl 334.941 {101} (Radial)	109 cps	0.0838 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,424 cps	0.0837 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	852 cps	0.0777 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.4088 %	0.5 %	0.6 %
Sc 188.060 {479} (Axial)		94.8375 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	291 cps	8.2019 ppm	1.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	31 cps	0.0853 ppm	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	116 cps	0.1019 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		94.3307 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	144 cps	0.4286 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	39 cps	0.0834 ppm	7.9 %	0.0 ppm
Si 251.611 {134} (Radial)	715 cps	7.9837 ppm	2.1 %	0.2 ppm
Pb 220.353 {453} (Axial)	88 cps	0.0862 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		98.6737 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		103.1958 %	0.2 %	0.2 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Water	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/L
Prep Method:	SW3015A	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168174

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.08624	0.1	86.2	80-120
Lead	0.09724	0.1	97.2	80-120

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168174

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:11:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	49 cps	0.0821 ppm	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	31 cps	0.0784 ppm	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,976 cps	0.0918 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,781 cps	0.0950 ppm	2.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,428 cps	0.0825 ppm	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,286 cps	8.7776 ppm	1.9 %	0.2 ppm
Cd 228.802 {447} (Axial)	991 cps	0.0804 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	816 cps	0.0837 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	497 cps	0.0863 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	724 cps	0.0833 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,113 cps	0.0838 ppm	2.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,276 cps	8.9710 ppm	1.5 %	0.1 ppm
Li 670.784 {50} (Radial)	1,206 cps	0.0838 ppm	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,217 cps	0.0850 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	232 cps	0.0849 ppm	1.1 %	0.0 ppm
Na 589.592 {57} (Radial)	17,131 cps	8.6896 ppm	2.1 %	0.2 ppm
Ni 231.604 {445} (Axial)	356 cps	0.0828 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	4,053 cps	8.7600 ppm	2.2 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0808 ppm	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,102 cps	0.0852 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,430 cps	0.0889 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	86 cps	0.0834 ppm	1.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	118 cps	0.0905 ppm	4.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,441 cps	0.0847 ppm	2.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	861 cps	0.0786 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.5910 %	2.2 %	2.2 %
Sc 188.060 {479} (Axial)		94.2549 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	314 cps	8.8380 ppm	1.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	31 cps	0.0863 ppm	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	131 cps	0.1154 ppm	1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.9077 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	157 cps	0.4652 ppm	2.3 %	0.0 ppm
Al 396.152 {85} (Radial)	48 cps	0.1028 ppm	5.9 %	0.0 ppm
Si 251.611 {134} (Radial)	759 cps	8.4692 ppm	2.3 %	0.2 ppm
Pb 220.353 {453} (Axial)	91 cps	0.0884 ppm	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.7870 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		98.5241 %	0.5 %	0.5 %

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QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Soil	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168176

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.24	5	84.8	80-120
Lead	4.785	5	95.7	80-120

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168176

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:29:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	53 cps	0.0894 ppm	0.7 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0848 ppm	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,288 cps	0.1015 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,973 cps	0.1015 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	33,171 cps	0.0871 ppm	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,366 cps	9.0846 ppm	1.9 %	0.2 ppm
Cd 228.802 {447} (Axial)	1,060 cps	0.0861 ppm	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	883 cps	0.0906 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	557 cps	0.0968 ppm	0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	791 cps	0.0911 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,361 cps	0.0936 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,353 cps	9.2729 ppm	2.2 %	0.2 ppm
Li 670.784 {50} (Radial)	1,370 cps	0.0952 ppm	2.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,747 cps	0.0923 ppm	1.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	258 cps	0.0944 ppm	1.0 %	0.0 ppm
Na 589.592 {57} (Radial)	19,259 cps	9.7687 ppm	2.5 %	0.2 ppm
Ni 231.604 {445} (Axial)	387 cps	0.0901 ppm	0.6 %	0.0 ppm
K 766.490 {44} (Radial)	4,427 cps	9.5686 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	21 cps	0.0873 ppm	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,195 cps	0.0924 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,782 cps	0.0980 ppm	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	92 cps	0.0894 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	128 cps	0.0985 ppm	3.7 %	0.0 ppm
V 292.402 {115} (Axial)	1,567 cps	0.0922 ppm	1.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	933 cps	0.0851 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.6901 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		90.5347 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	318 cps	8.9559 ppm	2.0 %	0.2 ppm
Tl 190.856 {477} (Axial)	32 cps	0.0893 ppm	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	130 cps	0.1145 ppm	0.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		89.8472 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	163 cps	0.4830 ppm	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	47 cps	0.1025 ppm	4.8 %	0.0 ppm
Si 251.611 {134} (Radial)	776 cps	8.6637 ppm	2.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	98 cps	0.0957 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		97.1700 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.7373 %	0.3 %	0.3 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/26/2020
Sample Matrix:	Soil	**Date Extracted:**	11/23/2020

Lab Control Sample Summary
Metals

Analysis Method:	SW6010D	**Units:**	mg/Kg
Prep Method:	SW3050B	**Basis:**	Wet
		Analysis Lot:	ICP2_201125A

LCS-168177

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.26	5	85.2	80-120
Lead	4.875	5	97.5	80-120

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LCS-168177

Sample type: UNKNOWN Analysis started at: 11/26/2020 12:37:07 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	55 cps	0.0919 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0852 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,287 cps	0.1014 ppm	1.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,938 cps	0.1003 ppm	2.2 %	0.0 ppm
Be 313.042 {108} (Axial)	32,819 cps	0.0862 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,407 cps	9.2414 ppm	1.4 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,078 cps	0.0875 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	872 cps	0.0895 ppm	2.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	561 cps	0.0974 ppm	1.1 %	0.0 ppm
Co 228.616 {447} (Axial)	802 cps	0.0924 ppm	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,335 cps	0.0926 ppm	2.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,385 cps	9.4005 ppm	1.4 %	0.1 ppm
Li 670.784 {50} (Radial)	1,375 cps	0.0956 ppm	2.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,678 cps	0.0913 ppm	2.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	261 cps	0.0955 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	19,022 cps	9.6489 ppm	1.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	394 cps	0.0917 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	4,407 cps	9.5269 ppm	1.6 %	0.1 ppm
Se 196.090 {472} (Axial)	21 cps	0.0871 ppm	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,179 cps	0.0912 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,780 cps	0.0979 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	96 cps	0.0926 ppm	1.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	131 cps	0.1008 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,554 cps	0.0914 ppm	2.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	975 cps	0.0889 ppm	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		102.7563 %	1.5 %	1.5 %
Sc 188.060 {479} (Axial)		90.7584 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	322 cps	9.0762 ppm	1.4 %	0.1 ppm
Tl 190.856 {477} (Axial)	33 cps	0.0913 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	149 cps	0.1310 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		90.0935 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	163 cps	0.4844 ppm	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	56 cps	0.1207 ppm	8.4 %	0.0 ppm
Si 251.611 {134} (Radial)	787 cps	8.7805 ppm	2.2 %	0.2 ppm
Pb 220.353 {453} (Axial)	100 cps	0.0975 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		97.4427 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		103.1657 %	0.2 %	0.2 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/25/20 08:57						
Aluminum	SW6010D	ICP2_201125A	1.035	1	103	90-110
Antimony	SW6010D	ICP2_201125A	0.9729	1	97.3	90-110
Arsenic	SW6010D	ICP2_201125A	0.9543	1	95.4	90-110
Barium	SW6010D	ICP2_201125A	1.029	1	103	90-110
Beryllium	SW6010D	ICP2_201125A	0.9785	1	97.9	90-110
Cadmium	SW6010D	ICP2_201125A	0.9721	1	97.2	90-110
Calcium	SW6010D	ICP2_201125A	6.265	6	104	90-110
Cobalt	SW6010D	ICP2_201125A	0.9866	1	98.7	90-110
Copper	SW6010D	ICP2_201125A	1.006	1	101	90-110
Iron	SW6010D	ICP2_201125A	1.049	1	105	90-110
Lead	SW6010D	ICP2_201125A	1.012	1	101	90-110
Magnesium	SW6010D	ICP2_201125A	1.046	1	105	90-110
Manganese	SW6010D	ICP2_201125A	1.008	1	101	90-110
Nickel	SW6010D	ICP2_201125A	0.9919	1	99.2	90-110
Potassium	SW6010D	ICP2_201125A	20.96	21	99.8	90-110
Selenium	SW6010D	ICP2_201125A	0.9656	1	96.6	90-110
Silver	SW6010D	ICP2_201125A	1.042	1	104	90-110
Sodium	SW6010D	ICP2_201125A	21.16	21	101	90-110
Thallium	SW6010D	ICP2_201125A	1.026	1	103	90-110
Vanadium	SW6010D	ICP2_201125A	1.005	1	101	90-110
Zinc	SW6010D	ICP2_201125A	0.9639	1	96.4	90-110
CCV 11/25/20 09:43						
Aluminum	SW6010D	ICP2_201125A	2.473	2.5	98.9	90-110
Antimony	SW6010D	ICP2_201125A	0.4942	0.5	98.8	90-110
Arsenic	SW6010D	ICP2_201125A	0.4894	0.5	97.9	90-110
Barium	SW6010D	ICP2_201125A	2.479	2.5	99.1	90-110
Beryllium	SW6010D	ICP2_201125A	0.4942	0.5	98.8	90-110
Cadmium	SW6010D	ICP2_201125A	0.4908	0.5	98.2	90-110
Calcium	SW6010D	ICP2_201125A	2.435	2.5	97.4	90-110
Cobalt	SW6010D	ICP2_201125A	2.476	2.5	99.0	90-110
Copper	SW6010D	ICP2_201125A	2.45	2.5	98.0	90-110
Iron	SW6010D	ICP2_201125A	2.49	2.5	99.6	90-110
Lead	SW6010D	ICP2_201125A	0.4988	0.5	99.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.407	2.5	96.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4854	0.5	97.1	90-110
Nickel	SW6010D	ICP2_201125A	2.48	2.5	99.2	90-110

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/25/2020 8:57:10 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	578 cps	0.9729 ppm	97.285 %	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	375 cps	0.9543 ppm	95.429 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	34,198 cps	1.0555 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	30,143 cps	1.0294 ppm	102.936 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	372,762 cps	0.9785 ppm	97.853 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,632 cps	6.2654 ppm	104.423 %	1.2 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,980 cps	0.9721 ppm	97.206 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,667 cps	0.9917 ppm	99.171 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,793 cps	1.0061 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	8,566 cps	0.9866 ppm	98.662 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	25,365 cps	1.0059 ppm	100.590 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	266 cps	1.0489 ppm	104.890 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	14,547 cps	1.0110 ppm	101.097 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	73,695 cps	1.0080 ppm	100.798 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,742 cps	1.0033 ppm	100.333 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	41,714 cps	21.1588 ppm	100.756 %	1.4 %	0.3 ppm
Ni 231.604 {445} (Axial)	4,258 cps	0.9919 ppm	99.192 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	9,698 cps	20.9620 ppm	99.819 %	1.6 %	0.3 ppm
Se 196.090 {472} (Axial)	234 cps	0.9656 ppm	96.559 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	13,468 cps	1.0417 ppm	104.168 %	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	39,842 cps	1.0320 ppm	103.203 %	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,028 cps	0.9950 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,335 cps	1.0249 ppm	102.490 %	1.0 %	0.0 ppm
V 292.402 {115} (Axial)	17,094 cps	1.0050 ppm	100.503 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,566 cps	0.9639 ppm	96.391 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.1861 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		92.8985 %		0.6 %	0.6 %
Mg 279.079 {121} (Radial)	37 cps	1.0463 ppm	104.629 %	3.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	368 cps	1.0264 ppm	102.644 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1,134 cps	0.9999 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		93.4551 %		0.7 %	0.6 %
B 249.773 {135} (Radial)	354 cps	1.0496 ppm	104.964 %	1.2 %	0.0 ppm
Al 396.152 {85} (Radial)	478 cps	1.0346 ppm	103.457 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	103 cps	1.1506 ppm		2.6 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,037 cps	1.0120 ppm	101.204 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		96.1963 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.8956 %		0.1 %	0.1 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 09:43						
Potassium	SW6010D	ICP2_201125A	49.24	50	98.5	90-110
Selenium	SW6010D	ICP2_201125A	2.452	2.5	98.1	90-110
Silver	SW6010D	ICP2_201125A	0.4895	0.5	97.9	90-110
Sodium	SW6010D	ICP2_201125A	49.57	50	99.1	90-110
Thallium	SW6010D	ICP2_201125A	0.508	0.5	102	90-110
Vanadium	SW6010D	ICP2_201125A	0.4882	0.5	97.6	90-110
Zinc	SW6010D	ICP2_201125A	1.222	1.25	97.7	90-110
CCV 11/25/20 10:50						
Aluminum	SW6010D	ICP2_201125A	2.525	2.5	101	90-110
Antimony	SW6010D	ICP2_201125A	0.4782	0.5	95.6	90-110
Arsenic	SW6010D	ICP2_201125A	0.4788	0.5	95.8	90-110
Barium	SW6010D	ICP2_201125A	2.531	2.5	101	90-110
Beryllium	SW6010D	ICP2_201125A	0.505	0.5	101	90-110
Cadmium	SW6010D	ICP2_201125A	0.4808	0.5	96.2	90-110
Calcium	SW6010D	ICP2_201125A	2.585	2.5	103	90-110
Cobalt	SW6010D	ICP2_201125A	2.446	2.5	97.8	90-110
Copper	SW6010D	ICP2_201125A	2.448	2.5	97.9	90-110
Iron	SW6010D	ICP2_201125A	2.595	2.5	104	90-110
Lead	SW6010D	ICP2_201125A	0.4944	0.5	98.9	90-110
Magnesium	SW6010D	ICP2_201125A	2.537	2.5	101	90-110
Manganese	SW6010D	ICP2_201125A	0.4948	0.5	99.0	90-110
Nickel	SW6010D	ICP2_201125A	2.456	2.5	98.2	90-110
Potassium	SW6010D	ICP2_201125A	50.98	50	102	90-110
Selenium	SW6010D	ICP2_201125A	2.374	2.5	94.9	90-110
Silver	SW6010D	ICP2_201125A	0.49	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201125A	50.42	50	101	90-110
Thallium	SW6010D	ICP2_201125A	0.4992	0.5	99.8	90-110
Vanadium	SW6010D	ICP2_201125A	0.4983	0.5	99.7	90-110
Zinc	SW6010D	ICP2_201125A	1.202	1.25	96.2	90-110
CCV 11/25/20 11:51						
Aluminum	SW6010D	ICP2_201125A	2.441	2.5	97.6	90-110
Antimony	SW6010D	ICP2_201125A	0.4738	0.5	94.8	90-110
Arsenic	SW6010D	ICP2_201125A	0.4804	0.5	96.1	90-110
Barium	SW6010D	ICP2_201125A	2.44	2.5	97.6	90-110
Beryllium	SW6010D	ICP2_201125A	0.5121	0.5	102	90-110
Cadmium	SW6010D	ICP2_201125A	0.4802	0.5	96.0	90-110

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 11:51:31 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	282 cps	0.4738 ppm	94.755 %	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	189 cps	0.4804 ppm	96.072 %	1.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	81,482 cps	2.5149 ppm		1.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	71,451 cps	2.4400 ppm	97.599 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	195,079 cps	0.5121 ppm	102.420 %	2.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	656 cps	2.5176 ppm	100.702 %	2.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	5,918 cps	0.4802 ppm	96.038 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,873 cps	0.4999 ppm	99.978 %	2.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,910 cps	0.5054 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	21,385 cps	2.4632 ppm	98.526 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,391 cps	2.3949 ppm	95.798 %	2.5 %	0.1 ppm
Fe 259.940 {130} (Radial)	656 cps	2.5854 ppm	103.415 %	1.1 %	0.0 ppm
Li 670.784 {50} (Radial)	34,774 cps	2.4166 ppm	96.664 %	1.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	36,573 cps	0.5002 ppm	100.047 %	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,708 cps	2.4541 ppm	98.165 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	96,578 cps	48.9880 ppm	97.976 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,623 cps	2.4750 ppm	99.001 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	23,094 cps	49.9190 ppm	99.838 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	574 cps	2.3687 ppm	94.750 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,326 cps	0.4893 ppm	97.862 %	2.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,022 cps	0.4927 ppm	98.547 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	522 cps	0.5051 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	633 cps	0.4860 ppm	97.202 %	1.8 %	0.0 ppm
V 292.402 {115} (Axial)	8,497 cps	0.4996 ppm	99.912 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,223 cps	1.2063 ppm	96.505 %	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.7384 %		0.5 %	0.5 %
Sc 188.060 {479} (Axial)		91.6053 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	90 cps	2.5427 ppm	101.708 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	179 cps	0.5000 ppm	100.003 %	1.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,739 cps	2.4160 ppm		1.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.2948 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	835 cps	2.4772 ppm	99.086 %	1.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1,128 cps	2.4407 ppm	97.628 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	224 cps	2.5053 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	510 cps	0.4982 ppm	99.642 %	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9849 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		94.4103 %		0.6 %	0.6 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 11:51						
Calcium	SW6010D	ICP2_201125A	2.518	2.5	101	90-110
Cobalt	SW6010D	ICP2_201125A	2.463	2.5	98.5	90-110
Copper	SW6010D	ICP2_201125A	2.395	2.5	95.8	90-110
Iron	SW6010D	ICP2_201125A	2.585	2.5	103	90-110
Lead	SW6010D	ICP2_201125A	0.4982	0.5	99.6	90-110
Magnesium	SW6010D	ICP2_201125A	2.543	2.5	102	90-110
Manganese	SW6010D	ICP2_201125A	0.5002	0.5	100	90-110
Nickel	SW6010D	ICP2_201125A	2.475	2.5	99.0	90-110
Potassium	SW6010D	ICP2_201125A	49.92	50	99.8	90-110
Selenium	SW6010D	ICP2_201125A	2.369	2.5	94.7	90-110
Silver	SW6010D	ICP2_201125A	0.4893	0.5	97.9	90-110
Sodium	SW6010D	ICP2_201125A	48.99	50	98.0	90-110
Thallium	SW6010D	ICP2_201125A	0.5	0.5	100	90-110
Vanadium	SW6010D	ICP2_201125A	0.4996	0.5	99.9	90-110
Zinc	SW6010D	ICP2_201125A	1.206	1.25	96.5	90-110
CCV 11/25/20 12:52						
Aluminum	SW6010D	ICP2_201125A	2.49	2.5	99.6	90-110
Antimony	SW6010D	ICP2_201125A	0.4711	0.5	94.2	90-110
Arsenic	SW6010D	ICP2_201125A	0.4752	0.5	95.0	90-110
Barium	SW6010D	ICP2_201125A	2.505	2.5	100	90-110
Beryllium	SW6010D	ICP2_201125A	0.5027	0.5	101	90-110
Cadmium	SW6010D	ICP2_201125A	0.4751	0.5	95.0	90-110
Calcium	SW6010D	ICP2_201125A	2.543	2.5	102	90-110
Cobalt	SW6010D	ICP2_201125A	2.432	2.5	97.3	90-110
Copper	SW6010D	ICP2_201125A	2.377	2.5	95.1	90-110
Iron	SW6010D	ICP2_201125A	2.565	2.5	103	90-110
Lead	SW6010D	ICP2_201125A	0.489	0.5	97.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.554	2.5	102	90-110
Manganese	SW6010D	ICP2_201125A	0.4908	0.5	98.2	90-110
Nickel	SW6010D	ICP2_201125A	2.441	2.5	97.7	90-110
Potassium	SW6010D	ICP2_201125A	50.28	50	101	90-110
Selenium	SW6010D	ICP2_201125A	2.372	2.5	94.9	90-110
Silver	SW6010D	ICP2_201125A	0.4808	0.5	96.2	90-110
Sodium	SW6010D	ICP2_201125A	50.12	50	100	90-110
Thallium	SW6010D	ICP2_201125A	0.4943	0.5	98.9	90-110
Vanadium	SW6010D	ICP2_201125A	0.491	0.5	98.2	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 12:52						
Zinc	SW6010D	ICP2_201125A	1.191	1.25	95.3	90-110
CCV 11/25/20 13:53						
Aluminum	SW6010D	ICP2_201125A	2.444	2.5	97.8	90-110
Antimony	SW6010D	ICP2_201125A	0.4727	0.5	94.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4724	0.5	94.5	90-110
Barium	SW6010D	ICP2_201125A	2.486	2.5	99.5	90-110
Beryllium	SW6010D	ICP2_201125A	0.49	0.5	98.0	90-110
Cadmium	SW6010D	ICP2_201125A	0.4705	0.5	94.1	90-110
Calcium	SW6010D	ICP2_201125A	2.413	2.5	96.5	90-110
Cobalt	SW6010D	ICP2_201125A	2.398	2.5	95.9	90-110
Copper	SW6010D	ICP2_201125A	2.378	2.5	95.1	90-110
Iron	SW6010D	ICP2_201125A	2.486	2.5	99.4	90-110
Lead	SW6010D	ICP2_201125A	0.4809	0.5	96.2	90-110
Magnesium	SW6010D	ICP2_201125A	2.413	2.5	96.5	90-110
Manganese	SW6010D	ICP2_201125A	0.4796	0.5	95.9	90-110
Nickel	SW6010D	ICP2_201125A	2.406	2.5	96.2	90-110
Potassium	SW6010D	ICP2_201125A	49.84	50	99.7	90-110
Selenium	SW6010D	ICP2_201125A	2.367	2.5	94.7	90-110
Silver	SW6010D	ICP2_201125A	0.4741	0.5	94.8	90-110
Sodium	SW6010D	ICP2_201125A	49.57	50	99.1	90-110
Thallium	SW6010D	ICP2_201125A	0.4908	0.5	98.2	90-110
Vanadium	SW6010D	ICP2_201125A	0.4833	0.5	96.7	90-110
Zinc	SW6010D	ICP2_201125A	1.177	1.25	94.1	90-110
CCV 11/25/20 14:55						
Aluminum	SW6010D	ICP2_201125A	2.474	2.5	99.0	90-110
Antimony	SW6010D	ICP2_201125A	0.495	0.5	99.0	90-110
Arsenic	SW6010D	ICP2_201125A	0.4903	0.5	98.1	90-110
Barium	SW6010D	ICP2_201125A	2.579	2.5	103	90-110
Beryllium	SW6010D	ICP2_201125A	0.4986	0.5	99.7	90-110
Cadmium	SW6010D	ICP2_201125A	0.4876	0.5	97.5	90-110
Calcium	SW6010D	ICP2_201125A	2.371	2.5	94.9	90-110
Cobalt	SW6010D	ICP2_201125A	2.481	2.5	99.2	90-110
Copper	SW6010D	ICP2_201125A	2.469	2.5	98.8	90-110
Iron	SW6010D	ICP2_201125A	2.402	2.5	96.1	90-110
Lead	SW6010D	ICP2_201125A	0.495	0.5	99.0	90-110
Magnesium	SW6010D	ICP2_201125A	2.317	2.5	92.7	90-110

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 1:53:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	281 cps	0.4727 ppm	94.548 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	186 cps	0.4724 ppm	94.475 %	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	83,077 cps	2.5641 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	72,807 cps	2.4863 ppm	99.451 %	1.3 %	0.0 ppm
Be 313.042 {108} (Axial)	186,680 cps	0.4901 ppm	98.010 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	629 cps	2.4131 ppm	96.523 %	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,799 cps	0.4705 ppm	94.103 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,638 cps	0.4758 ppm	95.160 %	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,844 cps	0.4939 ppm		2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,820 cps	2.3980 ppm	95.921 %	2.4 %	0.1 ppm
Cu 324.754 {104} (Axial)	59,953 cps	2.3775 ppm	95.102 %	2.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	631 cps	2.4861 ppm	99.445 %	1.3 %	0.0 ppm
Li 670.784 {50} (Radial)	35,589 cps	2.4732 ppm	98.929 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	35,067 cps	0.4796 ppm	95.927 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,591 cps	2.4113 ppm	96.452 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	97,726 cps	49.5703 ppm	99.141 %	1.4 %	0.7 ppm
Ni 231.604 {445} (Axial)	10,327 cps	2.4061 ppm	96.245 %	2.3 %	0.1 ppm
K 766.490 {44} (Radial)	23,058 cps	49.8411 ppm	99.682 %	1.7 %	0.8 ppm
Se 196.090 {472} (Axial)	574 cps	2.3673 ppm	94.692 %	2.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,130 cps	0.4741 ppm	94.818 %	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,291 cps	0.4997 ppm	99.942 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	502 cps	0.4862 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	631 cps	0.4843 ppm	96.869 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,220 cps	0.4833 ppm	96.660 %	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,897 cps	1.1766 ppm	94.124 %	2.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.4402 %		1.2 %	1.2 %
Sc 188.060 {479} (Axial)		90.8049 %		1.5 %	1.4 %
Mg 279.079 {121} (Radial)	86 cps	2.4129 ppm	96.514 %	2.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	176 cps	0.4908 ppm	98.168 %	2.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,606 cps	2.2984 ppm		2.2 %	0.1 ppm
Sc 227.318 {448} (Axial)		97.1718 %		1.2 %	1.2 %
B 249.773 {135} (Radial)	823 cps	2.4413 ppm	97.651 %	1.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,130 cps	2.4439 ppm	97.757 %	1.1 %	0.0 ppm
Si 251.611 {134} (Radial)	219 cps	2.4485 ppm		2.4 %	0.1 ppm
Pb 220.353 {453} (Axial)	493 cps	0.4809 ppm	96.185 %	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		95.4938 %		1.0 %	1.0 %
Sc 361.384 {93} (Radial)		102.2923 %		0.1 %	0.1 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 14:55						
Manganese	SW6010D	ICP2_201125A	0.4877	0.5	97.5	90-110
Nickel	SW6010D	ICP2_201125A	2.485	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201125A	52.04	50	104	90-110
Selenium	SW6010D	ICP2_201125A	2.467	2.5	98.7	90-110
Silver	SW6010D	ICP2_201125A	0.4878	0.5	97.6	90-110
Sodium	SW6010D	ICP2_201125A	51.18	50	102	90-110
Thallium	SW6010D	ICP2_201125A	0.5099	0.5	102	90-110
Vanadium	SW6010D	ICP2_201125A	0.4941	0.5	98.8	90-110
Zinc	SW6010D	ICP2_201125A	1.217	1.25	97.4	90-110
CCV 11/25/20 15:56						
Aluminum	SW6010D	ICP2_201125A	2.405	2.5	96.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4831	0.5	96.6	90-110
Arsenic	SW6010D	ICP2_201125A	0.4823	0.5	96.5	90-110
Barium	SW6010D	ICP2_201125A	2.496	2.5	99.8	90-110
Beryllium	SW6010D	ICP2_201125A	0.4868	0.5	97.4	90-110
Cadmium	SW6010D	ICP2_201125A	0.4792	0.5	95.8	90-110
Calcium	SW6010D	ICP2_201125A	2.358	2.5	94.3	90-110
Cobalt	SW6010D	ICP2_201125A	2.448	2.5	97.9	90-110
Copper	SW6010D	ICP2_201125A	2.388	2.5	95.5	90-110
Iron	SW6010D	ICP2_201125A	2.391	2.5	95.6	90-110
Lead	SW6010D	ICP2_201125A	0.4903	0.5	98.1	90-110
Magnesium	SW6010D	ICP2_201125A	2.322	2.5	92.9	90-110
Manganese	SW6010D	ICP2_201125A	0.4765	0.5	95.3	90-110
Nickel	SW6010D	ICP2_201125A	2.455	2.5	98.2	90-110
Potassium	SW6010D	ICP2_201125A	50.32	50	101	90-110
Selenium	SW6010D	ICP2_201125A	2.428	2.5	97.1	90-110
Silver	SW6010D	ICP2_201125A	0.4741	0.5	94.8	90-110
Sodium	SW6010D	ICP2_201125A	50.02	50	100	90-110
Thallium	SW6010D	ICP2_201125A	0.4984	0.5	99.7	90-110
Vanadium	SW6010D	ICP2_201125A	0.4807	0.5	96.1	90-110
Zinc	SW6010D	ICP2_201125A	1.199	1.25	95.9	90-110
CCV 11/25/20 17:06						
Aluminum	SW6010D	ICP2_201125A	2.478	2.5	99.1	90-110
Antimony	SW6010D	ICP2_201125A	0.4926	0.5	98.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4899	0.5	98.0	90-110
Barium	SW6010D	ICP2_201125A	2.569	2.5	103	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 17:06						
Beryllium	SW6010D	ICP2_201125A	0.4965	0.5	99.3	90-110
Cadmium	SW6010D	ICP2_201125A	0.4859	0.5	97.2	90-110
Calcium	SW6010D	ICP2_201125A	2.378	2.5	95.1	90-110
Cobalt	SW6010D	ICP2_201125A	2.476	2.5	99.1	90-110
Copper	SW6010D	ICP2_201125A	2.472	2.5	98.9	90-110
Iron	SW6010D	ICP2_201125A	2.53	2.5	101	90-110
Lead	SW6010D	ICP2_201125A	0.4935	0.5	98.7	90-110
Magnesium	SW6010D	ICP2_201125A	2.369	2.5	94.8	90-110
Manganese	SW6010D	ICP2_201125A	0.4859	0.5	97.2	90-110
Nickel	SW6010D	ICP2_201125A	2.479	2.5	99.2	90-110
Potassium	SW6010D	ICP2_201125A	51.7	50	103	90-110
Selenium	SW6010D	ICP2_201125A	2.457	2.5	98.3	90-110
Silver	SW6010D	ICP2_201125A	0.4899	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201125A	51.04	50	102	90-110
Thallium	SW6010D	ICP2_201125A	0.5073	0.5	101	90-110
Vanadium	SW6010D	ICP2_201125A	0.4913	0.5	98.3	90-110
Zinc	SW6010D	ICP2_201125A	1.214	1.25	97.1	90-110
CCV 11/25/20 18:08						
Aluminum	SW6010D	ICP2_201125A	2.456	2.5	98.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4913	0.5	98.3	90-110
Arsenic	SW6010D	ICP2_201125A	0.488	0.5	97.6	90-110
Barium	SW6010D	ICP2_201125A	2.56	2.5	102	90-110
Beryllium	SW6010D	ICP2_201125A	0.5058	0.5	101	90-110
Cadmium	SW6010D	ICP2_201125A	0.485	0.5	97.0	90-110
Calcium	SW6010D	ICP2_201125A	2.388	2.5	95.5	90-110
Cobalt	SW6010D	ICP2_201125A	2.473	2.5	98.9	90-110
Copper	SW6010D	ICP2_201125A	2.487	2.5	99.5	90-110
Iron	SW6010D	ICP2_201125A	2.431	2.5	97.3	90-110
Lead	SW6010D	ICP2_201125A	0.4937	0.5	98.7	90-110
Magnesium	SW6010D	ICP2_201125A	2.357	2.5	94.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4937	0.5	98.7	90-110
Nickel	SW6010D	ICP2_201125A	2.476	2.5	99.0	90-110
Potassium	SW6010D	ICP2_201125A	51.75	50	104	90-110
Selenium	SW6010D	ICP2_201125A	2.444	2.5	97.7	90-110
Silver	SW6010D	ICP2_201125A	0.4978	0.5	99.6	90-110
Sodium	SW6010D	ICP2_201125A	50.57	50	101	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 18:08						
Thallium	SW6010D	ICP2_201125A	0.5064	0.5	101	90-110
Vanadium	SW6010D	ICP2_201125A	0.4962	0.5	99.2	90-110
Zinc	SW6010D	ICP2_201125A	1.212	1.25	97.0	90-110
CCV 11/25/20 19:09						
Aluminum	SW6010D	ICP2_201125A	2.501	2.5	100	90-110
Antimony	SW6010D	ICP2_201125A	0.4686	0.5	93.7	90-110
Arsenic	SW6010D	ICP2_201125A	0.4731	0.5	94.6	90-110
Barium	SW6010D	ICP2_201125A	2.565	2.5	103	90-110
Beryllium	SW6010D	ICP2_201125A	0.4945	0.5	98.9	90-110
Cadmium	SW6010D	ICP2_201125A	0.4674	0.5	93.5	90-110
Calcium	SW6010D	ICP2_201125A	2.468	2.5	98.7	90-110
Cobalt	SW6010D	ICP2_201125A	2.394	2.5	95.7	90-110
Copper	SW6010D	ICP2_201125A	2.399	2.5	96.0	90-110
Iron	SW6010D	ICP2_201125A	2.541	2.5	102	90-110
Lead	SW6010D	ICP2_201125A	0.4788	0.5	95.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.479	2.5	99.2	90-110
Manganese	SW6010D	ICP2_201125A	0.484	0.5	96.8	90-110
Nickel	SW6010D	ICP2_201125A	2.403	2.5	96.1	90-110
Potassium	SW6010D	ICP2_201125A	51.45	50	103	90-110
Selenium	SW6010D	ICP2_201125A	2.371	2.5	94.8	90-110
Silver	SW6010D	ICP2_201125A	0.479	0.5	95.8	90-110
Sodium	SW6010D	ICP2_201125A	51.59	50	103	90-110
Thallium	SW6010D	ICP2_201125A	0.4888	0.5	97.8	90-110
Vanadium	SW6010D	ICP2_201125A	0.4858	0.5	97.2	90-110
Zinc	SW6010D	ICP2_201125A	1.172	1.25	93.8	90-110
CCV 11/25/20 20:13						
Aluminum	SW6010D	ICP2_201125A	2.389	2.5	95.5	90-110
Antimony	SW6010D	ICP2_201125A	0.4633	0.5	92.7	90-110
Arsenic	SW6010D	ICP2_201125A	0.4654	0.5	93.1	90-110
Barium	SW6010D	ICP2_201125A	2.451	2.5	98.1	90-110
Beryllium	SW6010D	ICP2_201125A	0.4819	0.5	96.4	90-110
Cadmium	SW6010D	ICP2_201125A	0.4621	0.5	92.4	90-110
Calcium	SW6010D	ICP2_201125A	2.359	2.5	94.4	90-110
Cobalt	SW6010D	ICP2_201125A	2.367	2.5	94.7	90-110
Copper	SW6010D	ICP2_201125A	2.353	2.5	94.1	90-110
Iron	SW6010D	ICP2_201125A	2.39	2.5	95.6	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 20:13						
Lead	SW6010D	ICP2_201125A	0.474	0.5	94.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.339	2.5	93.6	90-110
Manganese	SW6010D	ICP2_201125A	0.4729	0.5	94.6	90-110
Nickel	SW6010D	ICP2_201125A	2.374	2.5	95.0	90-110
Potassium	SW6010D	ICP2_201125A	49.47	50	98.9	90-110
Selenium	SW6010D	ICP2_201125A	2.349	2.5	93.9	90-110
Silver	SW6010D	ICP2_201125A	0.4713	0.5	94.3	90-110
Sodium	SW6010D	ICP2_201125A	49.58	50	99.2	90-110
Thallium	SW6010D	ICP2_201125A	0.4837	0.5	96.7	90-110
Vanadium	SW6010D	ICP2_201125A	0.4737	0.5	94.7	90-110
Zinc	SW6010D	ICP2_201125A	1.159	1.25	92.7	90-110
CCV 11/25/20 21:14						
Aluminum	SW6010D	ICP2_201125A	2.345	2.5	93.8	90-110
Antimony	SW6010D	ICP2_201125A	0.463	0.5	92.6	90-110
Arsenic	SW6010D	ICP2_201125A	0.4624	0.5	92.5	90-110
Barium	SW6010D	ICP2_201125A	2.434	2.5	97.4	90-110
Beryllium	SW6010D	ICP2_201125A	0.4654	0.5	93.1	90-110
Cadmium	SW6010D	ICP2_201125A	0.4571	0.5	91.4	90-110
Calcium	SW6010D	ICP2_201125A	2.271	2.5	90.8	90-110
Cobalt	SW6010D	ICP2_201125A	2.336	2.5	93.4	90-110
Copper	SW6010D	ICP2_201125A	2.325	2.5	93.0	90-110
Iron	SW6010D	ICP2_201125A	2.314	2.5	92.5	90-110
Lead	SW6010D	ICP2_201125A	0.4653	0.5	93.1	90-110
Magnesium	SW6010D	ICP2_201125A	2.251	2.5	90.1	90-110
Manganese	SW6010D	ICP2_201125A	0.4572	0.5	91.4	90-110
Nickel	SW6010D	ICP2_201125A	2.34	2.5	93.6	90-110
Potassium	SW6010D	ICP2_201125A	48.83	50	97.7	90-110
Selenium	SW6010D	ICP2_201125A	2.342	2.5	93.7	90-110
Silver	SW6010D	ICP2_201125A	0.4584	0.5	91.7	90-110
Sodium	SW6010D	ICP2_201125A	49.05	50	98.1	90-110
Thallium	SW6010D	ICP2_201125A	0.4777	0.5	95.5	90-110
Vanadium	SW6010D	ICP2_201125A	0.4611	0.5	92.2	90-110
Zinc	SW6010D	ICP2_201125A	1.145	1.25	91.6	90-110
CCV 11/25/20 22:15						
Aluminum	SW6010D	ICP2_201125A	2.431	2.5	97.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4704	0.5	94.1	90-110

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 9:14:36 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	275 cps	0.4630 ppm	92.608 %	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	182 cps	0.4624 ppm	92.490 %	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	81,119 cps	2.5037 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	71,286 cps	2.4343 ppm	97.374 %	2.3 %	0.1 ppm
Be 313.042 {108} (Axial)	177,276 cps	0.4654 ppm	93.073 %	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	591 cps	2.2705 ppm	90.822 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,633 cps	0.4571 ppm	91.412 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,408 cps	0.4523 ppm	90.455 %	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,789 cps	0.4843 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	20,279 cps	2.3357 ppm	93.429 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,629 cps	2.3250 ppm	93.001 %	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	587 cps	2.3136 ppm	92.542 %	2.3 %	0.1 ppm
Li 670.784 {50} (Radial)	35,383 cps	2.4590 ppm	98.359 %	2.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	33,426 cps	0.4572 ppm	91.437 %	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,417 cps	2.3477 ppm	93.910 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	96,708 cps	49.0537 ppm	98.107 %	2.4 %	1.2 ppm
Ni 231.604 {445} (Axial)	10,044 cps	2.3401 ppm	93.605 %	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	22,591 cps	48.8324 ppm	97.665 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	568 cps	2.3424 ppm	93.697 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,927 cps	0.4584 ppm	91.690 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,759 cps	0.4859 ppm	97.183 %	2.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	484 cps	0.4687 ppm		1.3 %	0.0 ppm
Tl 334.941 {101} (Radial)	619 cps	0.4752 ppm	95.047 %	2.0 %	0.0 ppm
V 292.402 {115} (Axial)	7,842 cps	0.4611 ppm	92.215 %	0.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,547 cps	1.1446 ppm	91.568 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7270 %		1.2 %	1.2 %
Sc 188.060 {479} (Axial)		91.7594 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	80 cps	2.2515 ppm	90.059 %	2.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	171 cps	0.4777 ppm	95.542 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,526 cps	2.2274 ppm		1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.6847 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	787 cps	2.3338 ppm	93.353 %	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,084 cps	2.3449 ppm	93.795 %	2.0 %	0.0 ppm
Si 251.611 {134} (Radial)	207 cps	2.3136 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	477 cps	0.4653 ppm	93.069 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		95.7861 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		103.4519 %		0.5 %	0.5 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 22:15						
Arsenic	SW6010D	ICP2_201125A	0.4698	0.5	94.0	90-110
Barium	SW6010D	ICP2_201125A	2.507	2.5	100	90-110
Beryllium	SW6010D	ICP2_201125A	0.4773	0.5	95.5	90-110
Cadmium	SW6010D	ICP2_201125A	0.4649	0.5	93.0	90-110
Calcium	SW6010D	ICP2_201125A	2.358	2.5	94.3	90-110
Cobalt	SW6010D	ICP2_201125A	2.371	2.5	94.9	90-110
Copper	SW6010D	ICP2_201125A	2.397	2.5	95.9	90-110
Iron	SW6010D	ICP2_201125A	2.457	2.5	98.3	90-110
Lead	SW6010D	ICP2_201125A	0.472	0.5	94.4	90-110
Magnesium	SW6010D	ICP2_201125A	2.318	2.5	92.7	90-110
Manganese	SW6010D	ICP2_201125A	0.4686	0.5	93.7	90-110
Nickel	SW6010D	ICP2_201125A	2.375	2.5	95.0	90-110
Potassium	SW6010D	ICP2_201125A	50.18	50	100	90-110
Selenium	SW6010D	ICP2_201125A	2.375	2.5	95.0	90-110
Silver	SW6010D	ICP2_201125A	0.4717	0.5	94.3	90-110
Sodium	SW6010D	ICP2_201125A	50.3	50	101	90-110
Thallium	SW6010D	ICP2_201125A	0.4854	0.5	97.1	90-110
Vanadium	SW6010D	ICP2_201125A	0.4737	0.5	94.7	90-110
Zinc	SW6010D	ICP2_201125A	1.162	1.25	92.9	90-110
CCV 11/25/20 23:21						
Aluminum	SW6010D	ICP2_201125A	2.367	2.5	94.7	90-110
Antimony	SW6010D	ICP2_201125A	0.4686	0.5	93.7	90-110
Arsenic	SW6010D	ICP2_201125A	0.4688	0.5	93.8	90-110
Barium	SW6010D	ICP2_201125A	2.433	2.5	97.3	90-110
Beryllium	SW6010D	ICP2_201125A	0.4748	0.5	95.0	90-110
Cadmium	SW6010D	ICP2_201125A	0.4642	0.5	92.8	90-110
Calcium	SW6010D	ICP2_201125A	2.288	2.5	91.5	90-110
Cobalt	SW6010D	ICP2_201125A	2.368	2.5	94.7	90-110
Copper	SW6010D	ICP2_201125A	2.363	2.5	94.5	90-110
Iron	SW6010D	ICP2_201125A	2.335	2.5	93.4	90-110
Lead	SW6010D	ICP2_201125A	0.4715	0.5	94.3	90-110
Magnesium	SW6010D	ICP2_201125A	2.257	2.5	90.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4661	0.5	93.2	90-110
Nickel	SW6010D	ICP2_201125A	2.373	2.5	94.9	90-110
Potassium	SW6010D	ICP2_201125A	48.7	50	97.4	90-110
Selenium	SW6010D	ICP2_201125A	2.377	2.5	95.1	90-110

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/25/2020 10:15:43 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	280 cps	0.4704 ppm	94.079 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	185 cps	0.4698 ppm	93.959 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	83,441 cps	2.5753 ppm		1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	73,406 cps	2.5067 ppm	100.268 %	1.4 %	0.0 ppm
Be 313.042 {108} (Axial)	181,820 cps	0.4773 ppm	95.458 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	614 cps	2.3582 ppm	94.328 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,729 cps	0.4649 ppm	92.978 %	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,509 cps	0.4626 ppm	92.522 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,829 cps	0.4913 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	20,588 cps	2.3713 ppm	94.854 %	1.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	60,450 cps	2.3973 ppm	95.890 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	623 cps	2.4569 ppm	98.276 %	0.2 %	0.0 ppm
Li 670.784 {50} (Radial)	36,542 cps	2.5395 ppm	101.578 %	1.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,260 cps	0.4686 ppm	93.719 %	1.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,527 cps	2.3881 ppm	95.526 %	1.5 %	0.0 ppm
Na 589.592 {57} (Radial)	99,172 cps	50.3033 ppm	100.607 %	1.7 %	0.8 ppm
Ni 231.604 {445} (Axial)	10,194 cps	2.3749 ppm	94.998 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	23,214 cps	50.1790 ppm	100.358 %	2.0 %	1.0 ppm
Se 196.090 {472} (Axial)	575 cps	2.3746 ppm	94.984 %	1.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,099 cps	0.4717 ppm	94.341 %	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	19,268 cps	0.4991 ppm	99.822 %	1.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	492 cps	0.4759 ppm		1.6 %	0.0 ppm
Tl 334.941 {101} (Radial)	634 cps	0.4865 ppm	97.292 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	8,058 cps	0.4737 ppm	94.747 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,734 cps	1.1617 ppm	92.933 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.0247 %		0.2 %	0.2 %
Sc 188.060 {479} (Axial)		90.2724 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	82 cps	2.3185 ppm	92.738 %	1.0 %	0.0 ppm
Tl 190.856 {477} (Axial)	174 cps	0.4854 ppm	97.084 %	1.5 %	0.0 ppm
Al 167.079 {502} (Axial)	2,560 cps	2.2579 ppm		1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.3070 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	816 cps	2.4217 ppm	96.867 %	1.3 %	0.0 ppm
Al 396.152 {85} (Radial)	1,124 cps	2.4308 ppm	97.234 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	214 cps	2.3915 ppm		2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	483 cps	0.4720 ppm	94.397 %	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.6056 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		102.6250 %		0.7 %	0.7 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/25/20 23:21						
Silver	SW6010D	ICP2_201125A	0.4677	0.5	93.5	90-110
Sodium	SW6010D	ICP2_201125A	48.84	50	97.7	90-110
Thallium	SW6010D	ICP2_201125A	0.4845	0.5	96.9	90-110
Vanadium	SW6010D	ICP2_201125A	0.4692	0.5	93.8	90-110
Zinc	SW6010D	ICP2_201125A	1.161	1.25	92.9	90-110
CCV 11/26/20 00:21						
Aluminum	SW6010D	ICP2_201125A	2.368	2.5	94.7	90-110
Antimony	SW6010D	ICP2_201125A	0.4596	0.5	91.9	90-110
Arsenic	SW6010D	ICP2_201125A	0.4604	0.5	92.1	90-110
Barium	SW6010D	ICP2_201125A	2.407	2.5	96.3	90-110
Beryllium	SW6010D	ICP2_201125A	0.4813	0.5	96.3	90-110
Cadmium	SW6010D	ICP2_201125A	0.4575	0.5	91.5	90-110
Calcium	SW6010D	ICP2_201125A	2.324	2.5	93.0	90-110
Cobalt	SW6010D	ICP2_201125A	2.335	2.5	93.4	90-110
Copper	SW6010D	ICP2_201125A	2.391	2.5	95.7	90-110
Iron	SW6010D	ICP2_201125A	2.472	2.5	98.9	90-110
Lead	SW6010D	ICP2_201125A	0.4699	0.5	94.0	90-110
Magnesium	SW6010D	ICP2_201125A	2.279	2.5	91.2	90-110
Manganese	SW6010D	ICP2_201125A	0.473	0.5	94.6	90-110
Nickel	SW6010D	ICP2_201125A	2.339	2.5	93.6	90-110
Potassium	SW6010D	ICP2_201125A	47.98	50	96.0	90-110
Selenium	SW6010D	ICP2_201125A	2.337	2.5	93.5	90-110
Silver	SW6010D	ICP2_201125A	0.4729	0.5	94.6	90-110
Sodium	SW6010D	ICP2_201125A	48.77	50	97.5	90-110
Thallium	SW6010D	ICP2_201125A	0.4768	0.5	95.4	90-110
Vanadium	SW6010D	ICP2_201125A	0.4754	0.5	95.1	90-110
Zinc	SW6010D	ICP2_201125A	1.143	1.25	91.4	90-110
CCV 11/26/20 01:22						
Aluminum	SW6010D	ICP2_201125A	2.346	2.5	93.8	90-110
Antimony	SW6010D	ICP2_201125A	0.4576	0.5	91.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4597	0.5	91.9	90-110
Barium	SW6010D	ICP2_201125A	2.405	2.5	96.2	90-110
Beryllium	SW6010D	ICP2_201125A	0.46	0.5	92.0	90-110
Cadmium	SW6010D	ICP2_201125A	0.4535	0.5	90.7	90-110
Calcium	SW6010D	ICP2_201125A	2.274	2.5	91.0	90-110
Cobalt	SW6010D	ICP2_201125A	2.319	2.5	92.8	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/26/20 01:22						
Copper	SW6010D	ICP2_201125A	2.292	2.5	91.7	90-110
Iron	SW6010D	ICP2_201125A	2.342	2.5	93.7	90-110
Lead	SW6010D	ICP2_201125A	0.463	0.5	92.6	90-110
Magnesium	SW6010D	ICP2_201125A	2.258	2.5	90.3	90-110
Manganese	SW6010D	ICP2_201125A	0.4521	0.5	90.4	90-110
Nickel	SW6010D	ICP2_201125A	2.323	2.5	92.9	90-110
Potassium	SW6010D	ICP2_201125A	47.53	50	95.1	90-110
Selenium	SW6010D	ICP2_201125A	2.331	2.5	93.3	90-110
Silver	SW6010D	ICP2_201125A	0.4523	0.5	90.5	90-110
Sodium	SW6010D	ICP2_201125A	48.67	50	97.3	90-110
Thallium	SW6010D	ICP2_201125A	0.4749	0.5	95.0	90-110
Vanadium	SW6010D	ICP2_201125A	0.4547	0.5	90.9	90-110
Zinc	SW6010D	ICP2_201125A	1.135	1.25	90.8	90-110
CCV 11/26/20 02:28						
Aluminum	SW6010D	ICP2_201125A	2.332	2.5	93.3	90-110
Antimony	SW6010D	ICP2_201125A	0.4573	0.5	91.5	90-110
Arsenic	SW6010D	ICP2_201125A	0.4589	0.5	91.8	90-110
Barium	SW6010D	ICP2_201125A	2.404	2.5	96.1	90-110
Beryllium	SW6010D	ICP2_201125A	0.4581	0.5	91.6	90-110
Cadmium	SW6010D	ICP2_201125A	0.4517	0.5	90.3	90-110
Calcium	SW6010D	ICP2_201125A	3.1	2.5	124 *	90-110
Cobalt	SW6010D	ICP2_201125A	2.308	2.5	92.3	90-110
Copper	SW6010D	ICP2_201125A	2.3	2.5	92.0	90-110
Iron	SW6010D	ICP2_201125A	2.335	2.5	93.4	90-110
Lead	SW6010D	ICP2_201125A	0.4588	0.5	91.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.275	2.5	91.0	90-110
Manganese	SW6010D	ICP2_201125A	0.4504	0.5	90.1	90-110
Nickel	SW6010D	ICP2_201125A	2.311	2.5	92.4	90-110
Potassium	SW6010D	ICP2_201125A	47.83	50	95.7	90-110
Selenium	SW6010D	ICP2_201125A	2.317	2.5	92.7	90-110
Silver	SW6010D	ICP2_201125A	0.4517	0.5	90.3	90-110
Sodium	SW6010D	ICP2_201125A	48.1	50	96.2	90-110
Thallium	SW6010D	ICP2_201125A	0.4712	0.5	94.2	90-110
Vanadium	SW6010D	ICP2_201125A	0.4547	0.5	90.9	90-110
Zinc	SW6010D	ICP2_201125A	1.13	1.25	90.4	90-110

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/26/2020 2:28:50 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	272 cps	0.4573 ppm	91.466 %	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	180 cps	0.4589 ppm	91.783 %	1.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	80,079 cps	2.4716 ppm		2.7 %	0.1 ppm
Ba 493.409 {68} (Radial)	70,384 cps	2.4035 ppm	96.141 %	2.6 %	0.1 ppm
Be 313.042 {108} (Axial)	174,501 cps	0.4581 ppm	91.616 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	808 cps	3.1001 ppm	124.002 %	7.2 %	0.2 ppm
Cd 228.802 {447} (Axial)	5,567 cps	0.4517 ppm	90.349 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,332 cps	0.4445 ppm	88.895 %	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,753 cps	0.4781 ppm		1.9 %	0.0 ppm
Co 228.616 {447} (Axial)	20,036 cps	2.3077 ppm	92.309 %	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	58,002 cps	2.3002 ppm	92.008 %	1.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	592 cps	2.3347 ppm	93.387 %	2.0 %	0.0 ppm
Li 670.784 {50} (Radial)	34,817 cps	2.4196 ppm	96.784 %	2.7 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,929 cps	0.4504 ppm	90.079 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,364 cps	2.3283 ppm	93.131 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	94,834 cps	48.1030 ppm	96.206 %	2.9 %	1.4 ppm
Ni 231.604 {445} (Axial)	9,919 cps	2.3110 ppm	92.439 %	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	22,128 cps	47.8311 ppm	95.662 %	2.9 %	1.4 ppm
Se 196.090 {472} (Axial)	561 cps	2.3166 ppm	92.663 %	1.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,841 cps	0.4517 ppm	90.346 %	1.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	18,503 cps	0.4793 ppm	95.858 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	479 cps	0.4640 ppm		2.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	617 cps	0.4736 ppm	94.728 %	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	7,734 cps	0.4547 ppm	90.946 %	1.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,390 cps	1.1303 ppm	90.427 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.6280 %		0.6 %	0.6 %
Sc 188.060 {479} (Axial)		91.6156 %		0.4 %	0.3 %
Mg 279.079 {121} (Radial)	81 cps	2.2754 ppm	91.017 %	2.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	169 cps	0.4712 ppm	94.234 %	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,500 cps	2.2049 ppm		1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.5441 %		0.1 %	0.0 %
B 249.773 {135} (Radial)	770 cps	2.2857 ppm	91.426 %	2.7 %	0.1 ppm
Al 396.152 {85} (Radial)	1,078 cps	2.3316 ppm	93.265 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	238 cps	2.6527 ppm		2.3 %	0.1 ppm
Pb 220.353 {453} (Axial)	470 cps	0.4588 ppm	91.753 %	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		96.5111 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		104.0117 %		1.6 %	1.7 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/26/20 03:19						
Aluminum	SW6010D	ICP2_201125A	2.381	2.5	95.2	90-110
Antimony	SW6010D	ICP2_201125A	0.4554	0.5	91.1	90-110
Arsenic	SW6010D	ICP2_201125A	0.4575	0.5	91.5	90-110
Barium	SW6010D	ICP2_201125A	2.469	2.5	98.8	90-110
Beryllium	SW6010D	ICP2_201125A	0.478	0.5	95.6	90-110
Cadmium	SW6010D	ICP2_201125A	0.4509	0.5	90.2	90-110
Calcium	SW6010D	ICP2_201125A	2.316	2.5	92.7	90-110
Cobalt	SW6010D	ICP2_201125A	2.308	2.5	92.3	90-110
Copper	SW6010D	ICP2_201125A	2.38	2.5	95.2	90-110
Iron	SW6010D	ICP2_201125A	2.348	2.5	93.9	90-110
Lead	SW6010D	ICP2_201125A	0.4591	0.5	91.8	90-110
Magnesium	SW6010D	ICP2_201125A	2.224	2.5	89.0 *	90-110
Manganese	SW6010D	ICP2_201125A	0.4693	0.5	93.9	90-110
Nickel	SW6010D	ICP2_201125A	2.314	2.5	92.6	90-110
Potassium	SW6010D	ICP2_201125A	49.18	50	98.4	90-110
Selenium	SW6010D	ICP2_201125A	2.311	2.5	92.4	90-110
Silver	SW6010D	ICP2_201125A	0.4653	0.5	93.1	90-110
Sodium	SW6010D	ICP2_201125A	49.77	50	99.5	90-110
Thallium	SW6010D	ICP2_201125A	0.4716	0.5	94.3	90-110
Vanadium	SW6010D	ICP2_201125A	0.4756	0.5	95.1	90-110
Zinc	SW6010D	ICP2_201125A	1.129	1.25	90.3	90-110
ICV 11/29/20 18:53						
Aluminum	SW6010D	ICP2_201129B	0.9675	1	96.7	90-110
Antimony	SW6010D	ICP2_201129B	0.9757	1	97.6	90-110
Arsenic	SW6010D	ICP2_201129B	0.9571	1	95.7	90-110
Barium	SW6010D	ICP2_201129B	0.9454	1	94.5	90-110
Beryllium	SW6010D	ICP2_201129B	0.9291	1	92.9	90-110
Boron	SW6010D	ICP2_201129B	0.9699	1	97.0	90-110
Cadmium	SW6010D	ICP2_201129B	0.9745	1	97.5	90-110
Calcium	SW6010D	ICP2_201129B	5.831	6	97.2	90-110
Chromium	SW6010D	ICP2_201129B	0.9488	1	94.9	90-110
Cobalt	SW6010D	ICP2_201129B	0.9842	1	98.4	90-110
Copper	SW6010D	ICP2_201129B	0.9523	1	95.2	90-110
Iron	SW6010D	ICP2_201129B	0.9657	1	96.6	90-110
Lead	SW6010D	ICP2_201129B	1.003	1	100	90-110
Lithium	SW6010D	ICP2_201129B	0.9397	1	94.0	90-110

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/29/2020 6:53:54 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	467 cps	0.9757 ppm	97.568 %	0.5 %	0.0 ppm
As 189.042 {478} (Axial)	320 cps	0.9571 ppm	95.708 %	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	19,471 cps	0.9779 ppm		2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	16,965 cps	0.9454 ppm	94.542 %	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	302,946 cps	0.9291 ppm	92.910 %	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,081 cps	5.8313 ppm	97.188 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	10,484 cps	0.9745 ppm	97.453 %	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	7,858 cps	0.9488 ppm	94.878 %	2.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,037 cps	0.9817 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	7,545 cps	0.9842 ppm	98.425 %	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	17,778 cps	0.9523 ppm	95.233 %	3.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	168 cps	0.9657 ppm	96.571 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	8,686 cps	0.9397 ppm	93.968 %	2.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	58,645 cps	0.9622 ppm	96.217 %	3.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,354 cps	0.9998 ppm	99.978 %	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	25,459 cps	19.5131 ppm	92.919 %	2.6 %	0.5 ppm
Ni 231.604 {445} (Axial)	3,790 cps	0.9893 ppm	98.935 %	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	6,256 cps	19.4159 ppm	92.457 %	3.0 %	0.6 ppm
Se 196.090 {472} (Axial)	192 cps	0.9675 ppm	96.754 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,117 cps	0.9994 ppm	99.945 %	3.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	22,842 cps	0.9512 ppm	95.123 %	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	946 cps	0.9935 ppm		0.9 %	0.0 ppm
Ti 334.941 {101} (Radial)	777 cps	0.9420 ppm	94.204 %	2.3 %	0.0 ppm
V 292.402 {115} (Axial)	13,211 cps	0.9547 ppm	95.468 %	3.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	9,309 cps	0.9652 ppm	96.519 %	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		105.0139 %		2.7 %	2.8 %
Sc 188.060 {479} (Axial)		97.3998 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	27 cps	1.0096 ppm	100.956 %	7.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	322 cps	1.0231 ppm	102.312 %	0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	1,115 cps	0.9893 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.9722 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	213 cps	0.9699 ppm	96.991 %	2.3 %	0.0 ppm
Al 396.152 {85} (Radial)	293 cps	0.9675 ppm	96.747 %	2.7 %	0.0 ppm
Si 251.611 {134} (Radial)	70 cps	1.1395 ppm		3.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	942 cps	1.0032 ppm	100.321 %	0.6 %	0.0 ppm
Y 224.306 {450} (Axial)		98.6615 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.3324 %		0.5 %	0.5 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/29/20 18:53						
Magnesium	SW6010D	ICP2_201129B	1.01	1	101	90-110
Manganese	SW6010D	ICP2_201129B	0.9622	1	96.2	90-110
Molybdenum	SW6010D	ICP2_201129B	0.9998	1	100.0	90-110
Nickel	SW6010D	ICP2_201129B	0.9893	1	98.9	90-110
Potassium	SW6010D	ICP2_201129B	19.42	21	92.5	90-110
Selenium	SW6010D	ICP2_201129B	0.9675	1	96.8	90-110
Silicon	SW6010D	ICP2_201129B	1.139	1	114 *	90-110
Silver	SW6010D	ICP2_201129B	0.9994	1	99.9	90-110
Sodium	SW6010D	ICP2_201129B	19.51	21	92.9	90-110
Strontium	SW6010D	ICP2_201129B	0.9512	1	95.1	90-110
Thallium	SW6010D	ICP2_201129B	1.023	1	102	90-110
Tin	SW6010D	ICP2_201129B	0.9935	1	99.4	90-110
Titanium	SW6010D	ICP2_201129B	0.942	1	94.2	90-110
Vanadium	SW6010D	ICP2_201129B	0.9547	1	95.5	90-110
Zinc	SW6010D	ICP2_201129B	0.9652	1	96.5	90-110
CCV 11/29/20 19:40						
Aluminum	SW6010D	ICP2_201129B	2.409	2.5	96.4	90-110
Antimony	SW6010D	ICP2_201129B	0.492	0.5	98.4	90-110
Arsenic	SW6010D	ICP2_201129B	0.4906	0.5	98.1	90-110
Barium	SW6010D	ICP2_201129B	2.383	2.5	95.3	90-110
Beryllium	SW6010D	ICP2_201129B	0.4962	0.5	99.2	90-110
Boron	SW6010D	ICP2_201129B	2.381	2.5	95.2	90-110
Cadmium	SW6010D	ICP2_201129B	0.4928	0.5	98.6	90-110
Calcium	SW6010D	ICP2_201129B	2.426	2.5	97.0	90-110
Chromium	SW6010D	ICP2_201129B	0.4923	0.5	98.5	90-110
Cobalt	SW6010D	ICP2_201129B	2.489	2.5	99.5	90-110
Copper	SW6010D	ICP2_201129B	2.444	2.5	97.8	90-110
Iron	SW6010D	ICP2_201129B	2.411	2.5	96.4	90-110
Lead	SW6010D	ICP2_201129B	0.5012	0.5	100	90-110
Lithium	SW6010D	ICP2_201129B	2.344	2.5	93.7	90-110
Magnesium	SW6010D	ICP2_201129B	2.441	2.5	97.6	90-110
Manganese	SW6010D	ICP2_201129B	0.4926	0.5	98.5	90-110
Molybdenum	SW6010D	ICP2_201129B	2.476	2.5	99.0	90-110
Nickel	SW6010D	ICP2_201129B	2.491	2.5	99.7	90-110
Potassium	SW6010D	ICP2_201129B	46.79	50	93.6	90-110
Selenium	SW6010D	ICP2_201129B	2.469	2.5	98.7	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 19:40						
Silicon	SW6010D	ICP2_201129B	2.383	2.5	95.3	90-110
Silver	SW6010D	ICP2_201129B	0.4948	0.5	99.0	90-110
Sodium	SW6010D	ICP2_201129B	47.56	50	95.1	90-110
Strontium	SW6010D	ICP2_201129B	0.4797	0.5	95.9	90-110
Thallium	SW6010D	ICP2_201129B	0.5053	0.5	101	90-110
Tin	SW6010D	ICP2_201129B	0.5032	0.5	101	90-110
Titanium	SW6010D	ICP2_201129B	0.4828	0.5	96.6	90-110
Vanadium	SW6010D	ICP2_201129B	0.4914	0.5	98.3	90-110
Zinc	SW6010D	ICP2_201129B	1.229	1.25	98.3	90-110
CCV 11/29/20 20:40						
Aluminum	SW6010D	ICP2_201129B	2.403	2.5	96.1	90-110
Antimony	SW6010D	ICP2_201129B	0.4995	0.5	99.9	90-110
Arsenic	SW6010D	ICP2_201129B	0.499	0.5	99.8	90-110
Barium	SW6010D	ICP2_201129B	2.369	2.5	94.8	90-110
Beryllium	SW6010D	ICP2_201129B	0.4874	0.5	97.5	90-110
Boron	SW6010D	ICP2_201129B	2.354	2.5	94.2	90-110
Cadmium	SW6010D	ICP2_201129B	0.5018	0.5	100	90-110
Calcium	SW6010D	ICP2_201129B	2.449	2.5	98.0	90-110
Chromium	SW6010D	ICP2_201129B	0.4859	0.5	97.2	90-110
Cobalt	SW6010D	ICP2_201129B	2.523	2.5	101	90-110
Copper	SW6010D	ICP2_201129B	2.43	2.5	97.2	90-110
Iron	SW6010D	ICP2_201129B	2.406	2.5	96.3	90-110
Lead	SW6010D	ICP2_201129B	0.5089	0.5	102	90-110
Lithium	SW6010D	ICP2_201129B	2.349	2.5	93.9	90-110
Magnesium	SW6010D	ICP2_201129B	2.434	2.5	97.4	90-110
Manganese	SW6010D	ICP2_201129B	0.4848	0.5	97.0	90-110
Molybdenum	SW6010D	ICP2_201129B	2.509	2.5	100	90-110
Nickel	SW6010D	ICP2_201129B	2.526	2.5	101	90-110
Potassium	SW6010D	ICP2_201129B	46.55	50	93.1	90-110
Selenium	SW6010D	ICP2_201129B	2.526	2.5	101	90-110
Silicon	SW6010D	ICP2_201129B	2.39	2.5	95.6	90-110
Silver	SW6010D	ICP2_201129B	0.4937	0.5	98.7	90-110
Sodium	SW6010D	ICP2_201129B	47.34	50	94.7	90-110
Strontium	SW6010D	ICP2_201129B	0.4749	0.5	95.0	90-110
Thallium	SW6010D	ICP2_201129B	0.5132	0.5	103	90-110
Tin	SW6010D	ICP2_201129B	0.5095	0.5	102	90-110

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 8:40:33 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	239 cps	0.4995 ppm	99.906 %	2.2 %	0.0 ppm
As 189.042 {478} (Axial)	167 cps	0.4990 ppm	99.806 %	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	48,424 cps	2.4322 ppm		2.4 %	0.1 ppm
Ba 493.409 {68} (Radial)	42,517 cps	2.3694 ppm	94.776 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	158,920 cps	0.4874 ppm	97.478 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	454 cps	2.4489 ppm	97.955 %	1.7 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,399 cps	0.5018 ppm	100.365 %	2.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,024 cps	0.4859 ppm	97.171 %	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,602 cps	0.5072 ppm		2.5 %	0.0 ppm
Co 228.616 {447} (Axial)	19,342 cps	2.5233 ppm	100.932 %	2.3 %	0.1 ppm
Cu 324.754 {104} (Axial)	45,359 cps	2.4298 ppm	97.194 %	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	418 cps	2.4064 ppm	96.258 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	21,709 cps	2.3485 ppm	93.941 %	2.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	29,549 cps	0.4848 ppm	96.959 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,907 cps	2.5089 ppm	100.357 %	2.4 %	0.1 ppm
Na 589.592 {57} (Radial)	61,771 cps	47.3441 ppm	94.688 %	2.9 %	1.4 ppm
Ni 231.604 {445} (Axial)	9,678 cps	2.5260 ppm	101.039 %	2.3 %	0.1 ppm
K 766.490 {44} (Radial)	14,998 cps	46.5455 ppm	93.091 %	3.3 %	1.5 ppm
Se 196.090 {472} (Axial)	502 cps	2.5263 ppm	101.053 %	2.3 %	0.1 ppm
Ag 328.068 {103} (Axial)	4,998 cps	0.4937 ppm	98.748 %	1.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	11,403 cps	0.4749 ppm	94.974 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	485 cps	0.5095 ppm		2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	399 cps	0.4833 ppm	96.667 %	2.2 %	0.0 ppm
V 292.402 {115} (Axial)	6,676 cps	0.4825 ppm	96.492 %	1.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,065 cps	1.2509 ppm	100.073 %	2.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		101.6555 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		93.8258 %		0.5 %	0.5 %
Mg 279.079 {121} (Radial)	66 cps	2.4344 ppm	97.378 %	1.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	162 cps	0.5132 ppm	102.649 %	3.1 %	0.0 ppm
Al 167.079 {502} (Axial)	2,726 cps	2.4184 ppm		2.2 %	0.1 ppm
Sc 227.318 {448} (Axial)		101.2344 %		0.5 %	0.5 %
B 249.773 {135} (Radial)	517 cps	2.3544 ppm	94.175 %	2.6 %	0.1 ppm
Al 396.152 {85} (Radial)	727 cps	2.4026 ppm	96.103 %	2.1 %	0.1 ppm
Si 251.611 {134} (Radial)	147 cps	2.3904 ppm		1.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	478 cps	0.5089 ppm	101.787 %	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.2205 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		99.8137 %		0.1 %	0.1 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 20:40						
Titanium	SW6010D	ICP2_201129B	0.4833	0.5	96.7	90-110
Vanadium	SW6010D	ICP2_201129B	0.4825	0.5	96.5	90-110
Zinc	SW6010D	ICP2_201129B	1.251	1.25	100	90-110
CCV 11/29/20 21:46						
Aluminum	SW6010D	ICP2_201129B	2.45	2.5	98.0	90-110
Antimony	SW6010D	ICP2_201129B	0.5107	0.5	102	90-110
Arsenic	SW6010D	ICP2_201129B	0.5097	0.5	102	90-110
Barium	SW6010D	ICP2_201129B	2.43	2.5	97.2	90-110
Beryllium	SW6010D	ICP2_201129B	0.494	0.5	98.8	90-110
Boron	SW6010D	ICP2_201129B	2.437	2.5	97.5	90-110
Cadmium	SW6010D	ICP2_201129B	0.5123	0.5	102	90-110
Calcium	SW6010D	ICP2_201129B	2.458	2.5	98.3	90-110
Chromium	SW6010D	ICP2_201129B	0.4922	0.5	98.4	90-110
Cobalt	SW6010D	ICP2_201129B	2.58	2.5	103	90-110
Copper	SW6010D	ICP2_201129B	2.463	2.5	98.5	90-110
Iron	SW6010D	ICP2_201129B	2.444	2.5	97.7	90-110
Lead	SW6010D	ICP2_201129B	0.5212	0.5	104	90-110
Lithium	SW6010D	ICP2_201129B	2.433	2.5	97.3	90-110
Magnesium	SW6010D	ICP2_201129B	2.468	2.5	98.7	90-110
Manganese	SW6010D	ICP2_201129B	0.4915	0.5	98.3	90-110
Molybdenum	SW6010D	ICP2_201129B	2.562	2.5	102	90-110
Nickel	SW6010D	ICP2_201129B	2.581	2.5	103	90-110
Potassium	SW6010D	ICP2_201129B	48.06	50	96.1	90-110
Selenium	SW6010D	ICP2_201129B	2.583	2.5	103	90-110
Silicon	SW6010D	ICP2_201129B	2.439	2.5	97.6	90-110
Silver	SW6010D	ICP2_201129B	0.4993	0.5	99.9	90-110
Sodium	SW6010D	ICP2_201129B	49.07	50	98.1	90-110
Strontium	SW6010D	ICP2_201129B	0.489	0.5	97.8	90-110
Thallium	SW6010D	ICP2_201129B	0.5254	0.5	105	90-110
Tin	SW6010D	ICP2_201129B	0.522	0.5	104	90-110
Titanium	SW6010D	ICP2_201129B	0.4964	0.5	99.3	90-110
Vanadium	SW6010D	ICP2_201129B	0.4886	0.5	97.7	90-110
Zinc	SW6010D	ICP2_201129B	1.277	1.25	102	90-110
CCV 11/29/20 22:46						
Aluminum	SW6010D	ICP2_201129B	2.58	2.5	103	90-110
Antimony	SW6010D	ICP2_201129B	0.5304	0.5	106	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 22:46						
Arsenic	SW6010D	ICP2_201129B	0.5283	0.5	106	90-110
Barium	SW6010D	ICP2_201129B	2.557	2.5	102	90-110
Beryllium	SW6010D	ICP2_201129B	0.5285	0.5	106	90-110
Boron	SW6010D	ICP2_201129B	2.564	2.5	103	90-110
Cadmium	SW6010D	ICP2_201129B	0.5311	0.5	106	90-110
Calcium	SW6010D	ICP2_201129B	2.586	2.5	103	90-110
Chromium	SW6010D	ICP2_201129B	0.5256	0.5	105	90-110
Cobalt	SW6010D	ICP2_201129B	2.673	2.5	107	90-110
Copper	SW6010D	ICP2_201129B	2.63	2.5	105	90-110
Iron	SW6010D	ICP2_201129B	2.576	2.5	103	90-110
Lead	SW6010D	ICP2_201129B	0.5395	0.5	108	90-110
Lithium	SW6010D	ICP2_201129B	2.568	2.5	103	90-110
Magnesium	SW6010D	ICP2_201129B	2.535	2.5	101	90-110
Manganese	SW6010D	ICP2_201129B	0.5251	0.5	105	90-110
Molybdenum	SW6010D	ICP2_201129B	2.657	2.5	106	90-110
Nickel	SW6010D	ICP2_201129B	2.675	2.5	107	90-110
Potassium	SW6010D	ICP2_201129B	50.77	50	102	90-110
Selenium	SW6010D	ICP2_201129B	2.679	2.5	107	90-110
Silicon	SW6010D	ICP2_201129B	2.555	2.5	102	90-110
Silver	SW6010D	ICP2_201129B	0.5331	0.5	107	90-110
Sodium	SW6010D	ICP2_201129B	51.61	50	103	90-110
Strontium	SW6010D	ICP2_201129B	0.5133	0.5	103	90-110
Thallium	SW6010D	ICP2_201129B	0.5438	0.5	109	90-110
Tin	SW6010D	ICP2_201129B	0.5417	0.5	108	90-110
Titanium	SW6010D	ICP2_201129B	0.52	0.5	104	90-110
Vanadium	SW6010D	ICP2_201129B	0.523	0.5	105	90-110
Zinc	SW6010D	ICP2_201129B	1.324	1.25	106	90-110
CCV 11/29/20 23:47						
Aluminum	SW6010D	ICP2_201129B	2.715	2.5	109	90-110
Antimony	SW6010D	ICP2_201129B	0.5634	0.5	113 *	90-110
Arsenic	SW6010D	ICP2_201129B	0.5635	0.5	113 *	90-110
Barium	SW6010D	ICP2_201129B	2.667	2.5	107	90-110
Beryllium	SW6010D	ICP2_201129B	0.5464	0.5	109	90-110
Boron	SW6010D	ICP2_201129B	2.675	2.5	107	90-110
Cadmium	SW6010D	ICP2_201129B	0.5655	0.5	113 *	90-110
Calcium	SW6010D	ICP2_201129B	2.714	2.5	109	90-110

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/29/2020 10:46:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	254 cps	0.5304 ppm	106.078 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	177 cps	0.5283 ppm	105.657 %	1.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	52,404 cps	2.6321 ppm		2.1 %	0.1 ppm
Ba 493.409 {68} (Radial)	45,883 cps	2.5570 ppm	102.279 %	2.2 %	0.1 ppm
Be 313.042 {108} (Axial)	172,327 cps	0.5285 ppm	105.701 %	1.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	479 cps	2.5858 ppm	103.432 %	1.9 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,714 cps	0.5311 ppm	106.225 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,353 cps	0.5256 ppm	105.114 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,762 cps	0.5383 ppm		1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	20,486 cps	2.6725 ppm	106.901 %	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	49,097 cps	2.6301 ppm	105.204 %	1.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	448 cps	2.5762 ppm	103.049 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	23,734 cps	2.5676 ppm	102.703 %	2.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	32,006 cps	0.5251 ppm	105.023 %	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,256 cps	2.6573 ppm	106.291 %	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	67,342 cps	51.6144 ppm	103.229 %	2.5 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,247 cps	2.6746 ppm	106.986 %	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	16,358 cps	50.7658 ppm	101.532 %	2.8 %	1.4 ppm
Se 196.090 {472} (Axial)	533 cps	2.6794 ppm	107.175 %	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,396 cps	0.5331 ppm	106.614 %	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	12,326 cps	0.5133 ppm	102.664 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	516 cps	0.5417 ppm		1.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	429 cps	0.5200 ppm	103.999 %	1.9 %	0.0 ppm
V 292.402 {115} (Axial)	7,237 cps	0.5230 ppm	104.591 %	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,774 cps	1.3244 ppm	105.954 %	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.4833 %		2.1 %	2.0 %
Sc 188.060 {479} (Axial)		91.1467 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	68 cps	2.5354 ppm	101.415 %	1.3 %	0.0 ppm
Tl 190.856 {477} (Axial)	171 cps	0.5438 ppm	108.754 %	2.2 %	0.0 ppm
Al 167.079 {502} (Axial)	2,908 cps	2.5797 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.6220 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	563 cps	2.5639 ppm	102.555 %	2.9 %	0.1 ppm
Al 396.152 {85} (Radial)	781 cps	2.5802 ppm	103.207 %	2.0 %	0.1 ppm
Si 251.611 {134} (Radial)	157 cps	2.5550 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	507 cps	0.5395 ppm	107.903 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		93.3692 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		94.5661 %		0.3 %	0.3 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/29/20 23:47						
Chromium	SW6010D	ICP2_201129B	0.543	0.5	109	90-110
Cobalt	SW6010D	ICP2_201129B	2.845	2.5	114 *	90-110
Copper	SW6010D	ICP2_201129B	2.712	2.5	108	90-110
Iron	SW6010D	ICP2_201129B	2.746	2.5	110	90-110
Lead	SW6010D	ICP2_201129B	0.5733	0.5	115 *	90-110
Lithium	SW6010D	ICP2_201129B	2.678	2.5	107	90-110
Magnesium	SW6010D	ICP2_201129B	2.716	2.5	109	90-110
Manganese	SW6010D	ICP2_201129B	0.5437	0.5	109	90-110
Molybdenum	SW6010D	ICP2_201129B	2.827	2.5	113 *	90-110
Nickel	SW6010D	ICP2_201129B	2.847	2.5	114 *	90-110
Potassium	SW6010D	ICP2_201129B	52.75	50	106	90-110
Selenium	SW6010D	ICP2_201129B	2.84	2.5	114 *	90-110
Silicon	SW6010D	ICP2_201129B	2.698	2.5	108	90-110
Silver	SW6010D	ICP2_201129B	0.5478	0.5	110	90-110
Sodium	SW6010D	ICP2_201129B	53.84	50	108	90-110
Strontium	SW6010D	ICP2_201129B	0.5366	0.5	107	90-110
Thallium	SW6010D	ICP2_201129B	0.5814	0.5	116 *	90-110
Tin	SW6010D	ICP2_201129B	0.5759	0.5	115 *	90-110
Titanium	SW6010D	ICP2_201129B	0.5423	0.5	108	90-110
Vanadium	SW6010D	ICP2_201129B	0.5422	0.5	108	90-110
Zinc	SW6010D	ICP2_201129B	1.41	1.25	113 *	90-110
CCV 11/30/20 00:52						
Aluminum	SW6010D	ICP2_201129B	3.911	2.5	156 *	90-110
Antimony	SW6010D	ICP2_201129B	0.8631	0.5	173 *	90-110
Arsenic	SW6010D	ICP2_201129B	0.8538	0.5	171 *	90-110
Barium	SW6010D	ICP2_201129B	3.895	2.5	156 *	90-110
Beryllium	SW6010D	ICP2_201129B	0.9336	0.5	187 *	90-110
Boron	SW6010D	ICP2_201129B	3.887	2.5	155 *	90-110
Cadmium	SW6010D	ICP2_201129B	0.8569	0.5	171 *	90-110
Calcium	SW6010D	ICP2_201129B	3.963	2.5	159 *	90-110
Chromium	SW6010D	ICP2_201129B	0.9233	0.5	185 *	90-110
Cobalt	SW6010D	ICP2_201129B	4.314	2.5	173 *	90-110
Copper	SW6010D	ICP2_201129B	4.546	2.5	182 *	90-110
Iron	SW6010D	ICP2_201129B	3.9	2.5	156 *	90-110
Lead	SW6010D	ICP2_201129B	0.8695	0.5	174 *	90-110
Lithium	SW6010D	ICP2_201129B	3.861	2.5	154 *	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 00:52						
Magnesium	SW6010D	ICP2_201129B	3.951	2.5	158 *	90-110
Manganese	SW6010D	ICP2_201129B	0.9188	0.5	184 *	90-110
Molybdenum	SW6010D	ICP2_201129B	4.283	2.5	171 *	90-110
Nickel	SW6010D	ICP2_201129B	4.317	2.5	173 *	90-110
Potassium	SW6010D	ICP2_201129B	76.98	50	154 *	90-110
Selenium	SW6010D	ICP2_201129B	4.317	2.5	173 *	90-110
Silicon	SW6010D	ICP2_201129B	3.918	2.5	157 *	90-110
Silver	SW6010D	ICP2_201129B	0.9275	0.5	186 *	90-110
Sodium	SW6010D	ICP2_201129B	78	50	156 *	90-110
Strontium	SW6010D	ICP2_201129B	0.775	0.5	155 *	90-110
Thallium	SW6010D	ICP2_201129B	0.8744	0.5	175 *	90-110
Tin	SW6010D	ICP2_201129B	0.8782	0.5	176 *	90-110
Titanium	SW6010D	ICP2_201129B	0.7842	0.5	157 *	90-110
Vanadium	SW6010D	ICP2_201129B	0.9124	0.5	182 *	90-110
Zinc	SW6010D	ICP2_201129B	2.142	1.25	171 *	90-110
CCV 11/30/20 01:57						
Aluminum	SW6010D	ICP2_201129B	6.347	2.5	254 *	90-110
Antimony	SW6010D	ICP2_201129B	1.372	0.5	274 *	90-110
Arsenic	SW6010D	ICP2_201129B	1.364	0.5	273 *	90-110
Barium	SW6010D	ICP2_201129B	6.329	2.5	253 *	90-110
Beryllium	SW6010D	ICP2_201129B	1.213	0.5	243 *	90-110
Boron	SW6010D	ICP2_201129B	6.294	2.5	252 *	90-110
Cadmium	SW6010D	ICP2_201129B	1.371	0.5	274 *	90-110
Calcium	SW6010D	ICP2_201129B	6.478	2.5	259 *	90-110
Chromium	SW6010D	ICP2_201129B	1.193	0.5	239 *	90-110
Cobalt	SW6010D	ICP2_201129B	6.907	2.5	276 *	90-110
Copper	SW6010D	ICP2_201129B	5.857	2.5	234 *	90-110
Iron	SW6010D	ICP2_201129B	6.455	2.5	258 *	90-110
Lead	SW6010D	ICP2_201129B	1.386	0.5	277 *	90-110
Lithium	SW6010D	ICP2_201129B	6.285	2.5	251 *	90-110
Magnesium	SW6010D	ICP2_201129B	6.445	2.5	258 *	90-110
Manganese	SW6010D	ICP2_201129B	1.191	0.5	238 *	90-110
Molybdenum	SW6010D	ICP2_201129B	6.844	2.5	274 *	90-110
Nickel	SW6010D	ICP2_201129B	6.911	2.5	276 *	90-110
Potassium	SW6010D	ICP2_201129B	124.1	50	248 *	90-110
Selenium	SW6010D	ICP2_201129B	6.921	2.5	277 *	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 01:57						
Silicon	SW6010D	ICP2_201129B	6.421	2.5	257 *	90-110
Silver	SW6010D	ICP2_201129B	1.194	0.5	239 *	90-110
Sodium	SW6010D	ICP2_201129B	126.7	50	253 *	90-110
Strontium	SW6010D	ICP2_201129B	1.255	0.5	251 *	90-110
Thallium	SW6010D	ICP2_201129B	1.399	0.5	280 *	90-110
Tin	SW6010D	ICP2_201129B	1.407	0.5	281 *	90-110
Titanium	SW6010D	ICP2_201129B	1.286	0.5	257 *	90-110
Vanadium	SW6010D	ICP2_201129B	1.182	0.5	236 *	90-110
Zinc	SW6010D	ICP2_201129B	3.424	1.25	274 *	90-110
CCV 11/30/20 03:01						
Aluminum	SW6010D	ICP2_201129B	7.637	2.5	305 *	90-110
Antimony	SW6010D	ICP2_201129B	1.666	0.5	333 *	90-110
Arsenic	SW6010D	ICP2_201129B	1.658	0.5	332 *	90-110
Barium	SW6010D	ICP2_201129B	7.653	2.5	306 *	90-110
Beryllium	SW6010D	ICP2_201129B	1.373	0.5	275 *	90-110
Boron	SW6010D	ICP2_201129B	7.537	2.5	301 *	90-110
Cadmium	SW6010D	ICP2_201129B	1.662	0.5	332 *	90-110
Calcium	SW6010D	ICP2_201129B	7.741	2.5	310 *	90-110
Chromium	SW6010D	ICP2_201129B	1.35	0.5	270 *	90-110
Cobalt	SW6010D	ICP2_201129B	8.373	2.5	335 *	90-110
Copper	SW6010D	ICP2_201129B	6.65	2.5	266 *	90-110
Iron	SW6010D	ICP2_201129B	7.614	2.5	305 *	90-110
Lead	SW6010D	ICP2_201129B	1.68	0.5	336 *	90-110
Lithium	SW6010D	ICP2_201129B	7.584	2.5	303 *	90-110
Magnesium	SW6010D	ICP2_201129B	7.689	2.5	308 *	90-110
Manganese	SW6010D	ICP2_201129B	1.344	0.5	269 *	90-110
Molybdenum	SW6010D	ICP2_201129B	8.295	2.5	332 *	90-110
Nickel	SW6010D	ICP2_201129B	8.375	2.5	335 *	90-110
Potassium	SW6010D	ICP2_201129B	148.4	50	297 *	90-110
Selenium	SW6010D	ICP2_201129B	8.473	2.5	339 *	90-110
Silicon	SW6010D	ICP2_201129B	7.559	2.5	302 *	90-110
Silver	SW6010D	ICP2_201129B	1.359	0.5	272 *	90-110
Sodium	SW6010D	ICP2_201129B	151.8	50	304 *	90-110
Strontium	SW6010D	ICP2_201129B	1.509	0.5	302 *	90-110
Thallium	SW6010D	ICP2_201129B	1.687	0.5	337 *	90-110
Tin	SW6010D	ICP2_201129B	1.701	0.5	340 *	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 03:01						
Titanium	SW6010D	ICP2_201129B	1.546	0.5	309 *	90-110
Vanadium	SW6010D	ICP2_201129B	1.334	0.5	267 *	90-110
Zinc	SW6010D	ICP2_201129B	4.159	1.25	333 *	90-110
ICV 11/30/20 14:50						
Aluminum	SW6010D	ICP2_201130B	0.9886	1	98.9	90-110
CCV 11/30/20 15:37						
Aluminum	SW6010D	ICP2_201130B	2.498	2.5	99.9	90-110
CCV 11/30/20 16:39						
Aluminum	SW6010D	ICP2_201130B	2.461	2.5	98.4	90-110
CCV 11/30/20 17:40						
Aluminum	SW6010D	ICP2_201130B	2.522	2.5	101	90-110
CCV 11/30/20 18:41						
Aluminum	SW6010D	ICP2_201130B	2.542	2.5	102	90-110
CCV 11/30/20 19:42						
Aluminum	SW6010D	ICP2_201130B	2.596	2.5	104	90-110
CCV 11/30/20 20:44						
Aluminum	SW6010D	ICP2_201130B	2.523	2.5	101	90-110
CCV 11/30/20 21:50						
Aluminum	SW6010D	ICP2_201130B	0	2.5	0.0408 *	90-110
CCV 11/30/20 22:51						
Aluminum	SW6010D	ICP2_201130B	2.564	2.5	103	90-110
CCV 11/30/20 23:52						
Aluminum	SW6010D	ICP2_201130B	2.657	2.5	106	90-110
CCV 12/01/20 00:53						
Aluminum	SW6010D	ICP2_201130B	2.562	2.5	102	90-110
CCV 12/01/20 01:55						
Aluminum	SW6010D	ICP2_201130B	2.624	2.5	105	90-110
CCV 12/01/20 02:57						
Aluminum	SW6010D	ICP2_201130B	2.342	2.5	93.7	90-110
CCV 12/01/20 03:12						
Aluminum	SW6010D	ICP2_201130B	2.402	2.5	96.1	90-110
ICV 12/01/20 11:49						
Potassium	SW6010D	ICP2_201201B	20.98	21	99.9	90-110
CCV 12/01/20 12:35						
Potassium	SW6010D	ICP2_201201B	49.92	50	99.8	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 13:41						
Potassium	SW6010D	ICP2_201201B	47.22	50	94.4	90-110
CCV 12/01/20 14:53						
Potassium	SW6010D	ICP2_201201B	50.41	50	101	90-110
CCV 12/01/20 16:00						
Potassium	SW6010D	ICP2_201201B	51.28	50	103	90-110
CCV 12/01/20 17:07						
Potassium	SW6010D	ICP2_201201B	53.19	50	106	90-110
CCV 12/01/20 18:10						
Potassium	SW6010D	ICP2_201201B	53.71	50	107	90-110
CCV 12/01/20 19:17						
Potassium	SW6010D	ICP2_201201B	55.19	50	110 *	90-110
CCV 12/01/20 20:25						
Potassium	SW6010D	ICP2_201201B	54.49	50	109	90-110
CCV 12/01/20 21:31						
Potassium	SW6010D	ICP2_201201B	56.75	50	113 *	90-110
CCV 12/01/20 22:42						
Potassium	SW6010D	ICP2_201201B	55.77	50	112 *	90-110
CCV 12/01/20 23:50						
Potassium	SW6010D	ICP2_201201B	55.62	50	111 *	90-110
CCV 12/02/20 00:46						
Potassium	SW6010D	ICP2_201201B	55.12	50	110 *	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV								
	Aluminum	SW6010D	ICP2_201125A	0.0117	0.01	117	80-120	11/25/20 09:07
	Antimony	SW6010D	ICP2_201125A	0.00441	0.005	88.2	80-120	11/25/20 09:07
	Arsenic	SW6010D	ICP2_201125A	0.00517	0.005	103	80-120	11/25/20 09:07
	Barium	SW6010D	ICP2_201125A	0.00538	0.005	108	80-120	11/25/20 09:07
	Beryllium	SW6010D	ICP2_201125A	0.00199	0.002	99.5	80-120	11/25/20 09:07
	Cadmium	SW6010D	ICP2_201125A	0.00958	0.01	95.8	80-120	11/25/20 09:07
	Calcium	SW6010D	ICP2_201125A	0.5072	0.5	101	80-120	11/25/20 09:07
	Cobalt	SW6010D	ICP2_201125A	0.00486	0.005	97.2	80-120	11/25/20 09:07
	Copper	SW6010D	ICP2_201125A	0.0104	0.01	104	80-120	11/25/20 09:07
	Iron	SW6010D	ICP2_201125A	0.0842	0.08	105	80-120	11/25/20 09:07
	Lead	SW6010D	ICP2_201125A	0.00538	0.005	108	80-120	11/25/20 09:07
	Magnesium	SW6010D	ICP2_201125A	0.252	0.2	126 *	80-120	11/25/20 09:07
	Manganese	SW6010D	ICP2_201125A	0.00505	0.005	101	80-120	11/25/20 09:07
	Nickel	SW6010D	ICP2_201125A	0.00496	0.005	99.2	80-120	11/25/20 09:07
	Potassium	SW6010D	ICP2_201125A	0	0.2	79.3 *	80-120	11/25/20 09:07
	Selenium	SW6010D	ICP2_201125A	0.0109	0.01	109	80-120	11/25/20 09:07
	Silver	SW6010D	ICP2_201125A	0.00547	0.005	109	80-120	11/25/20 09:07
	Sodium	SW6010D	ICP2_201125A	0	0.2	101	80-120	11/25/20 09:07
	Thallium	SW6010D	ICP2_201125A	0.0103	0.01	103	80-120	11/25/20 09:07
	Vanadium	SW6010D	ICP2_201125A	0.00491	0.005	98.2	80-120	11/25/20 09:07
	Zinc	SW6010D	ICP2_201125A	0.009795	0.01	97.9	80-120	11/25/20 09:07
LLICV								
	Aluminum	SW6010D	ICP2_201129B	0.0119	0.01	119	80-120	11/29/20 19:09
	Antimony	SW6010D	ICP2_201129B	0.0023	0.005	46.0 *	80-120	11/29/20 19:09
	Arsenic	SW6010D	ICP2_201129B	0.00593	0.005	119	80-120	11/29/20 19:09
	Barium	SW6010D	ICP2_201129B	0.00458	0.005	91.6	80-120	11/29/20 19:09
	Beryllium	SW6010D	ICP2_201129B	0.00178	0.002	89.0	80-120	11/29/20 19:09
	Boron	SW6010D	ICP2_201129B	0.0143	0.02	71.5 *	80-120	11/29/20 19:09
	Cadmium	SW6010D	ICP2_201129B	0.0097	0.01	97.0	80-120	11/29/20 19:09
	Calcium	SW6010D	ICP2_201129B	0.4967	0.5	99.3	80-120	11/29/20 19:09
	Chromium	SW6010D	ICP2_201129B	0.00492	0.005	98.4	80-120	11/29/20 19:09
	Cobalt	SW6010D	ICP2_201129B	0.0048	0.005	96.0	80-120	11/29/20 19:09
	Copper	SW6010D	ICP2_201129B	0.009	0.01	90.0	80-120	11/29/20 19:09
	Iron	SW6010D	ICP2_201129B	0	0.08	98.6	80-120	11/29/20 19:09
	Lead	SW6010D	ICP2_201129B	0.00515	0.005	103	80-120	11/29/20 19:09
	Lithium	SW6010D	ICP2_201129B	0	0.01	41.4 *	80-120	11/29/20 19:09

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/25/2020 9:07:21 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0044 ppm	88.104 %	18.6 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0052 ppm	103.341 %	9.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	174 cps	0.0054 ppm		5.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	302 cps	0.0103 ppm		7.3 %	0.0 ppm
Be 313.042 {108} (Axial)	758 cps	0.0020 ppm	99.442 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	132 cps	0.5072 ppm	101.431 %	1.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	118 cps	0.0096 ppm	95.808 %	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0048 ppm	96.880 %	3.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	29 cps	0.0050 ppm	100.146 %	3.4 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0049 ppm	97.279 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	262 cps	0.0104 ppm	103.868 %	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	21 cps	0.0842 ppm	105.284 %	2.1 %	0.0 ppm
Li 670.784 {50} (Radial)	119 cps	0.0082 ppm	82.460 %	6.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	369 cps	0.0050 ppm	100.932 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	14 cps	0.0051 ppm	101.971 %	1.2 %	0.0 ppm
Na 589.592 {57} (Radial)	400 cps	0.2027 ppm	101.346 %	0.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	21 cps	0.0050 ppm	99.127 %	4.4 %	0.0 ppm
K 766.490 {44} (Radial)	73 cps	0.1585 ppm	79.253 %	3.0 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0109 ppm	108.625 %	20.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	71 cps	0.0055 ppm	109.458 %	7.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	196 cps	0.0051 ppm	101.376 %	4.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	11 cps	0.0102 ppm		4.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	7 cps	0.0052 ppm	103.283 %	25.5 %	0.0 ppm
V 292.402 {115} (Axial)	83 cps	0.0049 ppm	98.127 %	2.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	107 cps	0.0098 ppm	97.948 %	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.4503 %		0.3 %	0.3 %
Sc 188.060 {479} (Axial)		97.5597 %		1.2 %	1.2 %
Mg 279.079 {121} (Radial)	9 cps	0.2520 ppm	126.004 %	5.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0103 ppm	103.038 %	18.0 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0117 ppm		3.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.4866 %		1.3 %	1.3 %
B 249.773 {135} (Radial)	10 cps	0.0291 ppm	145.301 %	18.4 %	0.0 ppm
Al 396.152 {85} (Radial)	6 cps	0.0131 ppm		59.2 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.3082 ppm		8.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0054 ppm	107.517 %	5.6 %	0.0 ppm
Y 224.306 {450} (Axial)		97.9212 %		0.6 %	0.6 %
Sc 361.384 {93} (Radial)		99.3701 %		0.5 %	0.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/29/2020 7:09:11 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	1 cps	0.0023 ppm	45.996 %	13.2 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0059 ppm	118.684 %	10.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	91 cps	0.0046 ppm		7.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	109 cps	0.0061 ppm		15.3 %	0.0 ppm
Be 313.042 {108} (Axial)	580 cps	0.0018 ppm	88.957 %	3.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	92 cps	0.4967 ppm	99.349 %	1.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	104 cps	0.0097 ppm	96.995 %	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	39 cps	0.0047 ppm	93.755 %	3.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	25 cps	0.0049 ppm	98.322 %	1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0048 ppm	95.905 %	3.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	168 cps	0.0090 ppm	90.021 %	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0789 ppm	98.628 %	1.0 %	0.0 ppm
Li 670.784 {50} (Radial)	38 cps	0.0041 ppm	41.395 %	31.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	310 cps	0.0051 ppm	101.707 %	3.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0050 ppm	99.138 %	7.9 %	0.0 ppm
Na 589.592 {57} (Radial)	259 cps	0.1985 ppm	99.268 %	2.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	18 cps	0.0047 ppm	94.941 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	42 cps	0.1317 ppm	65.839 %	14.8 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0077 ppm	76.671 %	23.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	59 cps	0.0058 ppm	115.632 %	16.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	115 cps	0.0048 ppm	95.547 %	3.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0110 ppm		4.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	3 cps	0.0042 ppm	84.385 %	103.4 %	0.0 ppm
V 292.402 {115} (Axial)	62 cps	0.0044 ppm	88.901 %	4.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	94 cps	0.0097 ppm	97.076 %	0.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.7554 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		100.7150 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	5 cps	0.2020 ppm	100.988 %	23.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0106 ppm	106.035 %	3.7 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0119 ppm		2.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.7562 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	3 cps	0.0143 ppm	71.332 %	14.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0033 ppm		75.1 %	0.0 ppm
Si 251.611 {134} (Radial)	14 cps	0.2295 ppm		4.4 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0052 ppm	103.067 %	12.6 %	0.0 ppm
Y 224.306 {450} (Axial)		100.5169 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		99.8271 %		0.6 %	0.6 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV								
	Magnesium	SW6010D	ICP2_201129B	0.202	0.2	101	80-120	11/29/20 19:09
	Manganese	SW6010D	ICP2_201129B	0.00509	0.005	102	80-120	11/29/20 19:09
	Molybdenum	SW6010D	ICP2_201129B	0.00496	0.005	99.2	80-120	11/29/20 19:09
	Nickel	SW6010D	ICP2_201129B	0.00475	0.005	95.0	80-120	11/29/20 19:09
	Potassium	SW6010D	ICP2_201129B	0	0.2	65.8 *	80-120	11/29/20 19:09
	Selenium	SW6010D	ICP2_201129B	0.00767	0.01	76.7 *	80-120	11/29/20 19:09
	Silicon	SW6010D	ICP2_201129B	0.2295	0.2	115	80-120	11/29/20 19:09
	Silver	SW6010D	ICP2_201129B	0.00578	0.005	116	80-120	11/29/20 19:09
	Sodium	SW6010D	ICP2_201129B	0	0.2	99.3	80-120	11/29/20 19:09
	Strontium	SW6010D	ICP2_201129B	0.00478	0.005	95.6	80-120	11/29/20 19:09
	Thallium	SW6010D	ICP2_201129B	0.0106	0.01	106	80-120	11/29/20 19:09
	Tin	SW6010D	ICP2_201129B	0.011	0.01	110	80-120	11/29/20 19:09
	Titanium	SW6010D	ICP2_201129B	0.00422	0.005	84.4	80-120	11/29/20 19:09
	Vanadium	SW6010D	ICP2_201129B	0.00445	0.005	89.0	80-120	11/29/20 19:09
	Zinc	SW6010D	ICP2_201129B	0.00971	0.01	97.1	80-120	11/29/20 19:09
LLICV								
	Aluminum	SW6010D	ICP2_201130B	0.011	0.01	110	80-120	11/30/20 15:05
LLICV								
	Potassium	SW6010D	ICP2_201201B	0.1937	0.2	96.9	80-120	12/01/20 12:03

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/25/20 09:02				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 09:48				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 09:48					
	Potassium	SW6010D	ICP2_201125A	0	
	Selenium	SW6010D	ICP2_201125A	0	
	Silver	SW6010D	ICP2_201125A	0	
	Sodium	SW6010D	ICP2_201125A	0	
	Thallium	SW6010D	ICP2_201125A	0	
	Vanadium	SW6010D	ICP2_201125A	0	
	Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 10:55					
	Aluminum	SW6010D	ICP2_201125A	0	
	Antimony	SW6010D	ICP2_201125A	0	
	Arsenic	SW6010D	ICP2_201125A	0	
	Barium	SW6010D	ICP2_201125A	0	
	Beryllium	SW6010D	ICP2_201125A	0	
	Cadmium	SW6010D	ICP2_201125A	0	
	Calcium	SW6010D	ICP2_201125A	0	
	Cobalt	SW6010D	ICP2_201125A	0	
	Copper	SW6010D	ICP2_201125A	0	
	Iron	SW6010D	ICP2_201125A	0	
	Lead	SW6010D	ICP2_201125A	0	
	Magnesium	SW6010D	ICP2_201125A	0	
	Manganese	SW6010D	ICP2_201125A	0	
	Nickel	SW6010D	ICP2_201125A	0	
	Potassium	SW6010D	ICP2_201125A	0	
	Selenium	SW6010D	ICP2_201125A	0	
	Silver	SW6010D	ICP2_201125A	0	
	Sodium	SW6010D	ICP2_201125A	0	
	Thallium	SW6010D	ICP2_201125A	0	
	Vanadium	SW6010D	ICP2_201125A	0	
	Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 11:56					
	Aluminum	SW6010D	ICP2_201125A	0	
	Antimony	SW6010D	ICP2_201125A	0	
	Arsenic	SW6010D	ICP2_201125A	0	
	Barium	SW6010D	ICP2_201125A	0	
	Beryllium	SW6010D	ICP2_201125A	0	
	Cadmium	SW6010D	ICP2_201125A	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 11:56					
	Calcium	SW6010D	ICP2_201125A	0	
	Cobalt	SW6010D	ICP2_201125A	0	
	Copper	SW6010D	ICP2_201125A	0	
	Iron	SW6010D	ICP2_201125A	0	
	Lead	SW6010D	ICP2_201125A	0	
	Magnesium	SW6010D	ICP2_201125A	0	
	Manganese	SW6010D	ICP2_201125A	0	
	Nickel	SW6010D	ICP2_201125A	0	
	Potassium	SW6010D	ICP2_201125A	0	
	Selenium	SW6010D	ICP2_201125A	0	
	Silver	SW6010D	ICP2_201125A	0	
	Sodium	SW6010D	ICP2_201125A	0	
	Thallium	SW6010D	ICP2_201125A	0	
	Vanadium	SW6010D	ICP2_201125A	0	
	Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 12:57					
	Aluminum	SW6010D	ICP2_201125A	0	
	Antimony	SW6010D	ICP2_201125A	0	
	Arsenic	SW6010D	ICP2_201125A	0	
	Barium	SW6010D	ICP2_201125A	0	
	Beryllium	SW6010D	ICP2_201125A	0	
	Cadmium	SW6010D	ICP2_201125A	0	
	Calcium	SW6010D	ICP2_201125A	0	
	Cobalt	SW6010D	ICP2_201125A	0	
	Copper	SW6010D	ICP2_201125A	0	
	Iron	SW6010D	ICP2_201125A	0	
	Lead	SW6010D	ICP2_201125A	0	
	Magnesium	SW6010D	ICP2_201125A	0	
	Manganese	SW6010D	ICP2_201125A	0	
	Nickel	SW6010D	ICP2_201125A	0	
	Potassium	SW6010D	ICP2_201125A	0	
	Selenium	SW6010D	ICP2_201125A	0	
	Silver	SW6010D	ICP2_201125A	0	
	Sodium	SW6010D	ICP2_201125A	0	
	Thallium	SW6010D	ICP2_201125A	0	
	Vanadium	SW6010D	ICP2_201125A	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 12:57				
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 13:58				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 15:00				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 15:00				
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 16:01				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00377	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 17:11				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 17:11				
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00541 MP	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 18:13				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	

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QA/QC Report

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Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 18:13				
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 19:14				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 20:18				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	

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QA/QC Report

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Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 20:18				
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 21:19				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00377	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 22:20				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 22:20				
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/25/20 23:26				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/25/20 23:26				
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/26/20 00:26				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0.00204	J
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0.00339	J
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/26/20 01:32				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	

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Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/26/20 01:32				
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
CCB 11/26/20 02:38				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	

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Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/26/20 03:24				
Aluminum	SW6010D	ICP2_201125A	0	
Antimony	SW6010D	ICP2_201125A	0	
Arsenic	SW6010D	ICP2_201125A	0	
Barium	SW6010D	ICP2_201125A	0	
Beryllium	SW6010D	ICP2_201125A	0	
Cadmium	SW6010D	ICP2_201125A	0	
Calcium	SW6010D	ICP2_201125A	0	
Cobalt	SW6010D	ICP2_201125A	0	
Copper	SW6010D	ICP2_201125A	0	
Iron	SW6010D	ICP2_201125A	0	
Lead	SW6010D	ICP2_201125A	0	
Magnesium	SW6010D	ICP2_201125A	0	
Manganese	SW6010D	ICP2_201125A	0	
Nickel	SW6010D	ICP2_201125A	0	
Potassium	SW6010D	ICP2_201125A	0	
Selenium	SW6010D	ICP2_201125A	0	
Silver	SW6010D	ICP2_201125A	0	
Sodium	SW6010D	ICP2_201125A	0	
Thallium	SW6010D	ICP2_201125A	0	
Vanadium	SW6010D	ICP2_201125A	0	
Zinc	SW6010D	ICP2_201125A	0	
ICB 11/29/20 18:58				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	

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QA/QC Report

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Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/29/20 18:58				
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.000599	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0.00567	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 19:45				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0.00767	J
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00109	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 19:45				
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 20:45				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.000996	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 20:45				
Titanium	SW6010D	ICP2_201129B	0.00351	J
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 21:51				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00106	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 22:51				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 22:51				
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0	
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.000973	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/29/20 23:57				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.00229	J
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0	
Beryllium	SW6010D	ICP2_201129B	0.000224	J
Boron	SW6010D	ICP2_201129B	0	
Cadmium	SW6010D	ICP2_201129B	0	
Calcium	SW6010D	ICP2_201129B	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/29/20 23:57				
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0	
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.0012	J
Nickel	SW6010D	ICP2_201129B	0	
Potassium	SW6010D	ICP2_201129B	0	
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0	
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0	
Vanadium	SW6010D	ICP2_201129B	0	
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/30/20 01:02				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.00773	C
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0.00478	J
Beryllium	SW6010D	ICP2_201129B	0.00122	J
Boron	SW6010D	ICP2_201129B	0.0127	J
Cadmium	SW6010D	ICP2_201129B	0.000819	J
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0.000654	J
Copper	SW6010D	ICP2_201129B	0.00691	J
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 01:02				
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00235	J
Nickel	SW6010D	ICP2_201129B	0.000901	J
Potassium	SW6010D	ICP2_201129B	0.2086	C
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0.00256	J
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0.00389	J
Vanadium	SW6010D	ICP2_201129B	0.00211	J
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/30/20 02:06				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.0141	C
Arsenic	SW6010D	ICP2_201129B	0	
Barium	SW6010D	ICP2_201129B	0.0067	C
Beryllium	SW6010D	ICP2_201129B	0.00224	C
Boron	SW6010D	ICP2_201129B	0.00723	J
Cadmium	SW6010D	ICP2_201129B	0.00114	J
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0	
Copper	SW6010D	ICP2_201129B	0.0137	C
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	
Lithium	SW6010D	ICP2_201129B	0	
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00299	J
Nickel	SW6010D	ICP2_201129B	0.000814	J
Potassium	SW6010D	ICP2_201129B	0.3684	C
Selenium	SW6010D	ICP2_201129B	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 02:06				
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0.00481	J
Sodium	SW6010D	ICP2_201129B	0	
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	
Titanium	SW6010D	ICP2_201129B	0.0118	C
Vanadium	SW6010D	ICP2_201129B	0.0032	J
Zinc	SW6010D	ICP2_201129B	0	
CCB 11/30/20 03:10				
Aluminum	SW6010D	ICP2_201129B	0	
Antimony	SW6010D	ICP2_201129B	0.0222	C
Arsenic	SW6010D	ICP2_201129B	0	C
Barium	SW6010D	ICP2_201129B	0.0086	C
Beryllium	SW6010D	ICP2_201129B	0.00249	C
Boron	SW6010D	ICP2_201129B	0.0386	C
Cadmium	SW6010D	ICP2_201129B	0.00167	J
Calcium	SW6010D	ICP2_201129B	0	
Chromium	SW6010D	ICP2_201129B	0	
Cobalt	SW6010D	ICP2_201129B	0.000647	J
Copper	SW6010D	ICP2_201129B	0.015	C
Iron	SW6010D	ICP2_201129B	0	
Lead	SW6010D	ICP2_201129B	0	C
Lithium	SW6010D	ICP2_201129B	0.009	J
Magnesium	SW6010D	ICP2_201129B	0	
Manganese	SW6010D	ICP2_201129B	0	
Molybdenum	SW6010D	ICP2_201129B	0.00433	J
Nickel	SW6010D	ICP2_201129B	0.0012	J
Potassium	SW6010D	ICP2_201129B	0.6402	C
Selenium	SW6010D	ICP2_201129B	0	
Silicon	SW6010D	ICP2_201129B	0	
Silver	SW6010D	ICP2_201129B	0.00349	J
Sodium	SW6010D	ICP2_201129B	0.2667	J
Strontium	SW6010D	ICP2_201129B	0	
Thallium	SW6010D	ICP2_201129B	0	
Tin	SW6010D	ICP2_201129B	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 03:10				
Titanium	SW6010D	ICP2_201129B	0.00959	C
Vanadium	SW6010D	ICP2_201129B	0.00459	J
Zinc	SW6010D	ICP2_201129B	0	
ICB 11/30/20 14:55				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 15:41				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 16:44				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 17:44				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 18:46				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 19:47				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 20:49				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 21:55				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 22:56				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 11/30/20 23:57				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 00:58				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 02:00				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:02				
Aluminum	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:17				
Aluminum	SW6010D	ICP2_201130B	0	
ICB 12/01/20 11:54				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 12:40				
Potassium	SW6010D	ICP2_201201B	0	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 13:46				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 14:58				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 16:04				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 17:12				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 18:15				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 19:22				
Potassium	SW6010D	ICP2_201201B	0.2058	C
CCB 12/01/20 20:35				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 21:41				
Potassium	SW6010D	ICP2_201201B	0	
CCB 12/01/20 22:47				
Potassium	SW6010D	ICP2_201201B	0.7633	C
CCB 12/01/20 23:55				
Potassium	SW6010D	ICP2_201201B	0.2528	C
CCB 12/02/20 00:51				
Potassium	SW6010D	ICP2_201201B	0.189	J

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168173	**Basis:**	Wet
Lab Code:	MBLK-168173		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 13:28	11/23/20 13:04	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 13:28	11/23/20 13:04	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-168174	**Basis:**	Wet
Lab Code:	MBLK-168174		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 12:06	11/23/20 14:06	
Lead	SW6010D	0.0050 U	mg/L	0.0050	1	11/25/20 12:06	11/23/20 14:06	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168176	**Basis:**	Wet
Lab Code:	MBLK-168176		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/25/20 21:24	11/23/20 16:25	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/25/20 21:24	11/23/20 16:25	

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Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	MBLK-168177	**Basis:**	Wet
Lab Code:	MBLK-168177		

Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	SW6010D	0.25 U	mg/Kg	0.25	1	11/26/20 00:31	11/23/20 16:26	
Lead	SW6010D	0.25 U	mg/Kg	0.25	1	11/26/20 00:31	11/23/20 16:26	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201125A	95.18	100	95.2	80-120	11/25/20 09:17
Antimony	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Arsenic	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Barium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Beryllium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Cadmium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Calcium	SW6010D	ICP2_201125A	94.07	100	94.1	80-120	11/25/20 09:17
Cobalt	SW6010D	ICP2_201125A	0.00085 J	-	-	-	11/25/20 09:17
Copper	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Iron	SW6010D	ICP2_201125A	95.54	100	95.5	80-120	11/25/20 09:17
Lead	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Magnesium	SW6010D	ICP2_201125A	96.63	100	96.6	80-120	11/25/20 09:17
Manganese	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Molybdenum	SW6010D	ICP2_201125A	1.933	2	96.7	80-120	11/25/20 09:17
Nickel	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Potassium	SW6010D	ICP2_201125A	101.6 E	100	102	80-120	11/25/20 09:17
Selenium	SW6010D	ICP2_201125A	0.00616 J	-	-	-	11/25/20 09:17
Silver	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Sodium	SW6010D	ICP2_201125A	99.56 E	100	99.6	80-120	11/25/20 09:17
Thallium	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17
Titanium	SW6010D	ICP2_201125A	1.926	2	96.3	80-120	11/25/20 09:17
Vanadium	SW6010D	ICP2_201125A	0.00209 J	-	-	-	11/25/20 09:17
Zinc	SW6010D	ICP2_201125A	0	-	-	-	11/25/20 09:17

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/25/2020 9:17:45 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-12 cps	-0.0208 ppm		7.9 %	0.0 ppm
As 189.042 {478} (Axial)	-11 cps	-0.0281 ppm	0.000 %	3.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	19 cps	0.0006 ppm	0.000 %	27.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	229 cps	0.0078 ppm	0.000 %	6.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-1,033 cps	-0.0027 ppm	0.000 %	1.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	24,504 cps	94.0702 ppm	94.070 %	2.0 %	1.9 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.000 %	578.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	13 cps	0.0013 ppm	0.000 %	26.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0006 ppm	0.000 %	10.1 %	0.0 ppm
Co 228.616 {447} (Axial)	7 cps	0.0008 ppm	0.000 %	10.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	83 cps	0.0033 ppm	0.000 %	9.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	24,240 cps	95.5402 ppm	95.540 %	1.6 %	1.6 ppm
Li 670.784 {50} (Radial)	1 cps	0.0000 ppm		1,006.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	-369 cps	-0.0050 ppm	0.000 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,284 cps	1.9331 ppm	96.657 %	2.1 %	0.0 ppm
Na 589.592 {57} (Radial)	196,287 cps	99.5636 ppm	99.564 %	2.3 %	2.3 ppm
Ni 231.604 {445} (Axial)	-57 cps	-0.0132 ppm	0.000 %	1.0 %	0.0 ppm
K 766.490 {44} (Radial)	46,982 cps	101.5538 ppm	101.554 %	2.5 %	2.6 ppm
Se 196.090 {472} (Axial)	1 cps	0.0062 ppm	0.000 %	63.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	5 cps	0.0004 ppm	0.000 %	128.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	-76 cps	-0.0020 ppm		9.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	-8 cps	-0.0081 ppm		3.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	2,508 cps	1.9257 ppm		2.1 %	0.0 ppm
V 292.402 {115} (Axial)	35 cps	0.0021 ppm	0.000 %	8.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-110 cps	-0.0100 ppm	0.000 %	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.0567 %		0.7 %	0.6 %
Sc 188.060 {479} (Axial)		79.2263 %		0.6 %	0.4 %
Mg 279.079 {121} (Radial)	3,431 cps	96.6321 ppm	96.632 %	2.1 %	2.1 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0082 ppm	0.000 %	8.8 %	0.0 ppm
Al 167.079 {502} (Axial)	17,658 cps	15.5732 ppm		0.8 %	0.1 ppm
Sc 227.318 {448} (Axial)		80.0141 %		0.6 %	0.5 %
B 249.773 {135} (Radial)	26 cps	0.0779 ppm		2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	43,991 cps	95.1791 ppm	95.179 %	1.7 %	1.6 ppm
Si 251.611 {134} (Radial)	4 cps	0.0467 ppm	0.000 %	35.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	-0.0002 ppm	0.000 %	111.2 %	0.0 ppm
Y 224.306 {450} (Axial)		88.5599 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.4214 %		0.3 %	0.3 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201129B	89.53	100	89.5	80-120	11/29/20 19:14
Antimony	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Arsenic	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Barium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Beryllium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Boron	SW6010D	ICP2_201129B	0.09086	-	-	-	11/29/20 19:14
Cadmium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Calcium	SW6010D	ICP2_201129B	90.46	100	90.5	80-120	11/29/20 19:14
Chromium	SW6010D	ICP2_201129B	0.00105 J	-	-	-	11/29/20 19:14
Cobalt	SW6010D	ICP2_201129B	0.00135 J	-	-	-	11/29/20 19:14
Copper	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Iron	SW6010D	ICP2_201129B	90.76	100	90.8	80-120	11/29/20 19:14
Lead	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Lithium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Magnesium	SW6010D	ICP2_201129B	92.9	100	92.9	80-120	11/29/20 19:14
Manganese	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Molybdenum	SW6010D	ICP2_201129B	1.971	2	98.5	80-120	11/29/20 19:14
Nickel	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Potassium	SW6010D	ICP2_201129B	93.17 E	100	93.2	80-120	11/29/20 19:14
Selenium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Silicon	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Silver	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Sodium	SW6010D	ICP2_201129B	92.59 E	100	92.6	80-120	11/29/20 19:14
Strontium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Thallium	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Tin	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14
Titanium	SW6010D	ICP2_201129B	1.857	2	92.8	80-120	11/29/20 19:14
Vanadium	SW6010D	ICP2_201129B	0.00221 J	-	-	-	11/29/20 19:14
Zinc	SW6010D	ICP2_201129B	0	-	-	-	11/29/20 19:14

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 11/29/2020 7:14:19 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-7 cps	-0.0152 ppm		13.2 %	0.0 ppm
As 189.042 {478} (Axial)	-7 cps	-0.0220 ppm	0.000 %	6.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	4 cps	0.0002 ppm	0.000 %	214.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	25 cps	0.0014 ppm	0.000 %	45.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-862 cps	-0.0026 ppm	0.000 %	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	16,771 cps	90.4606 ppm	90.461 %	2.3 %	2.1 ppm
Cd 228.802 {447} (Axial)	-1 cps	-0.0001 ppm	0.000 %	31.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	12 cps	0.0014 ppm	0.000 %	14.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0011 ppm	0.000 %	22.0 %	0.0 ppm
Co 228.616 {447} (Axial)	10 cps	0.0013 ppm	0.000 %	16.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	43 cps	0.0023 ppm	0.000 %	9.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	15,766 cps	90.7568 ppm	90.757 %	1.8 %	1.6 ppm
Li 670.784 {50} (Radial)	-30 cps	-0.0032 ppm		11.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-378 cps	-0.0062 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	4,640 cps	1.9710 ppm	98.548 %	2.1 %	0.0 ppm
Na 589.592 {57} (Radial)	120,803 cps	92.5887 ppm	92.589 %	2.7 %	2.5 ppm
Ni 231.604 {445} (Axial)	-61 cps	-0.0159 ppm	0.000 %	2.6 %	0.0 ppm
K 766.490 {44} (Radial)	30,021 cps	93.1688 ppm	93.169 %	3.2 %	3.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0008 ppm	0.000 %	414.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	-1 cps	-0.0001 ppm	0.000 %	1,187.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	-56 cps	-0.0023 ppm		5.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0111 ppm		9.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,532 cps	1.8566 ppm		2.0 %	0.0 ppm
V 292.402 {115} (Axial)	31 cps	0.0022 ppm	0.000 %	10.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	-39 cps	-0.0040 ppm	0.000 %	5.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.8010 %		1.4 %	1.3 %
Sc 188.060 {479} (Axial)		85.5192 %		0.9 %	0.8 %
Mg 279.079 {121} (Radial)	2,505 cps	92.8998 ppm	92.900 %	2.2 %	2.0 ppm
Tl 190.856 {477} (Axial)	-2 cps	-0.0073 ppm	0.000 %	15.6 %	0.0 ppm
Al 167.079 {502} (Axial)	22,918 cps	20.3282 ppm		1.1 %	0.2 ppm
Sc 227.318 {448} (Axial)		86.5789 %		0.9 %	0.8 %
B 249.773 {135} (Radial)	20 cps	0.0909 ppm		4.3 %	0.0 ppm
Al 396.152 {85} (Radial)	27,086 cps	89.5281 ppm	89.528 %	2.0 %	1.8 ppm
Si 251.611 {134} (Radial)	2 cps	0.0371 ppm	0.000 %	33.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	-5 cps	-0.0052 ppm	0.000 %	39.4 %	0.0 ppm
Y 224.306 {450} (Axial)		93.5860 %		0.8 %	0.7 %
Sc 361.384 {93} (Radial)		99.5348 %		0.4 %	0.4 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201130B	92.13	100	92.1	80-120	11/30/20 15:10
Calcium	SW6010D	ICP2_201130B	92.22	100	92.2	80-120	11/30/20 15:10
Iron	SW6010D	ICP2_201130B	93.09	100	93.1	80-120	11/30/20 15:10
Magnesium	SW6010D	ICP2_201130B	95.39	100	95.4	80-120	11/30/20 15:10
Molybdenum	SW6010D	ICP2_201130B	1.92	2	96.0	80-120	11/30/20 15:10
Potassium	SW6010D	ICP2_201130B	96.41 E	100	96.4	80-120	11/30/20 15:10
Sodium	SW6010D	ICP2_201130B	94.44 E	100	94.4	80-120	11/30/20 15:10
Titanium	SW6010D	ICP2_201130B	1.896	2	94.8	80-120	11/30/20 15:10

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201201B	95.19	100	95.2	80-120	12/01/20 12:09
Calcium	SW6010D	ICP2_201201B	96.29	100	96.3	80-120	12/01/20 12:09
Iron	SW6010D	ICP2_201201B	97.13	100	97.1	80-120	12/01/20 12:09
Magnesium	SW6010D	ICP2_201201B	98.84	100	98.8	80-120	12/01/20 12:09
Molybdenum	SW6010D	ICP2_201201B	1.94	2	97.0	80-120	12/01/20 12:09
Potassium	SW6010D	ICP2_201201B	100.6 E	100	101	80-120	12/01/20 12:09
Sodium	SW6010D	ICP2_201201B	98.75 E	100	98.7	80-120	12/01/20 12:09
Titanium	SW6010D	ICP2_201201B	1.972	2	98.6	80-120	12/01/20 12:09

No project samples

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

ICP SERIAL DILUTIONS

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dilution Result	% Diff	% Diff. Limit	Analysis Date
20111574-59ASD							
Arsenic	SW6010D	ICP2_201129B	4.466	6.083 J	0	10	11/29/20 22:41
Lead	SW6010D	ICP2_201129B	217.4	242.6 R	11.6	10	11/29/20 22:41

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-59A

Sample type: UNKNOWN Analysis started at: 11/26/2020 2:03:16 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	8 cps	0.1387 ppm	18.0 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0635 ppm	20.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,122 cps	0.3463 ppm	0.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,088 cps	0.3714 ppm	1.9 %	0.0 ppm
Be 313.042 {108} (Axial)	25 cps	0.0007 ppm	14.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,069 cps	463.3085 ppm	1.1 %	5.3 ppm
Cd 228.802 {447} (Axial)	21 cps	0.0169 ppm	18.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	73 cps	0.0748 ppm	5.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	33 cps	0.0570 ppm	12.1 %	0.0 ppm
Co 228.616 {447} (Axial)	26 cps	0.0301 ppm	19.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,773 cps	0.7033 ppm	4.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,600 cps	102.4709 ppm	1.4 %	1.4 ppm
Li 670.784 {50} (Radial)	49 cps	0.0337 ppm	21.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	18,696 cps	2.5572 ppm	4.3 %	0.1 ppm
Mo 202.030 {467} (Axial)	2 cps	0.0059 ppm	14.4 %	0.0 ppm
Na 589.592 {57} (Radial)	193 cps	0.9769 ppm	2.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	28 cps	0.0658 ppm	14.4 %	0.0 ppm
K 766.490 {44} (Radial)	194 cps	4.1833 ppm	3.0 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0128 ppm	39.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	12 cps	0.0089 ppm	33.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	878 cps	0.2275 ppm	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	26 cps	0.2518 ppm	12.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	149 cps	1.1405 ppm	3.1 %	0.0 ppm
V 292.402 {115} (Axial)	170 cps	0.1000 ppm	8.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	15,566 cps	14.2008 ppm	13.6 %	1.9 ppm
Sc 357.253 {94} (Axial)		100.7322 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		93.5377 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	716 cps	201.5532 ppm	0.7 %	1.5 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0035 ppm	264.9 %	0.0 ppm
Al 167.079 {502} (Axial)	2,284 cps	20.1433 ppm	11.8 %	2.4 ppm
Sc 227.318 {448} (Axial)		92.7346 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	5 cps	0.1481 ppm	10.2 %	0.0 ppm
Al 396.152 {85} (Radial)	1,519 cps	32.8583 ppm	1.4 %	0.5 ppm
Si 251.611 {134} (Radial)	170 cps	19.0207 ppm	1.7 %	0.3 ppm
Pb 220.353 {453} (Axial)	317 cps	3.0915 ppm	13.7 %	0.4 ppm
Y 224.306 {450} (Axial)		98.3529 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.0722 %	0.2 %	0.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-59ASD

Sample type: UNKNOWN Analysis started at: 11/29/2020 10:41:19 PM

Standard DF: 50

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.2021 ppm	10.5 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0865 ppm	52.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	84 cps	0.2108 ppm	3.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	134 cps	0.3739 ppm	16.2 %	0.1 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	2,339.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,247 cps	336.2066 ppm	3.2 %	10.6 ppm
Cd 228.802 {447} (Axial)	3 cps	0.0157 ppm	32.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0516 ppm	45.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	7 cps	0.0678 ppm	4.4 %	0.0 ppm
Co 228.616 {447} (Axial)	4 cps	0.0279 ppm	29.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	213 cps	0.5697 ppm	3.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	255 cps	73.4345 ppm	1.4 %	1.0 ppm
Li 670.784 {50} (Radial)	-22 cps	-0.1177 ppm	129.0 %	0.2 ppm
Mn 257.610 {131} (Axial)	2,587 cps	2.1221 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0007 ppm	2,100.7 %	0.0 ppm
Na 589.592 {57} (Radial)	8 cps	0.3237 ppm	168.7 %	0.5 ppm
Ni 231.604 {445} (Axial)	5 cps	0.0713 ppm	8.4 %	0.0 ppm
K 766.490 {44} (Radial)	22 cps	3.3882 ppm	42.7 %	1.4 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.1806 ppm	134.6 %	0.2 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0536 ppm	48.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	77 cps	0.1597 ppm	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	5 cps	0.2778 ppm	2.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	15 cps	0.9243 ppm	19.7 %	0.2 ppm
V 292.402 {115} (Axial)	16 cps	0.0586 ppm	14.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	3,045 cps	15.7852 ppm	1.7 %	0.3 ppm
Sc 357.253 {94} (Axial)		101.3800 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		95.8244 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	82 cps	151.3121 ppm	2.8 %	4.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0197 ppm	27.5 %	0.0 ppm
Al 167.079 {502} (Axial)	547 cps	24.2709 ppm	1.7 %	0.4 ppm
Sc 227.318 {448} (Axial)		95.7703 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	-3 cps	-0.6384 ppm	32.7 %	0.2 ppm
Al 396.152 {85} (Radial)	141 cps	23.3249 ppm	5.3 %	1.2 ppm
Si 251.611 {134} (Radial)	20 cps	16.0097 ppm	6.3 %	1.0 ppm
Pb 220.353 {453} (Axial)	65 cps	3.4483 ppm	1.9 %	0.1 ppm
Y 224.306 {450} (Axial)		96.9353 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		94.1238 %	1.7 %	1.6 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Detection Limits

Instrument: ICP2 **Matrix:** Soil

Analyte	Units	MRL	MDL	Method
Arsenic	mg/Kg-dry	0.25	0.065	SW6010D
Lead	mg/Kg-dry	0.25	0.20	SW6010D
Miscellaneous		0	0	MISC

Instrument: ICP2 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.0016	SW6010D
Lead	mg/L	0.0050	0.0013	SW6010D

Test Specifications

TestCode	TestName		TestNo	Matrix	Units
SampType					
Analyte	Type	SpkVal	LowLimit	HighLimit	RPDLimit
ICP_6010_W	Metals Analysis by ICP		SW6010D	Water	mg/L
LDR					
Aluminum	A	200	90	110	
Antimony	A	5	90	110	
Arsenic	A	5	90	110	
Barium	A	20	90	110	
Beryllium	A	2	90	110	
Boron	A	20	90	110	
Cadmium	A	1	90	110	
Calcium	A	200	90	110	
Chromium	A	10	90	110	
Cobalt	A	10	90	110	
Copper	A	20	90	110	
Iron	A	200	90	110	
Lead	A	5	90	110	
Lithium	A	10	90	110	
Magnesium	A	200	90	110	
Manganese	A	10	90	110	
Molybdenum	A	10	90	110	
Nickel	A	10	90	110	
Selenium	A	5	90	110	
Silicon	A	20	90	110	
Silver	A	2	90	110	
Strontium	A	10	90	110	
Thallium	A	5	90	110	
Tin	A	5	90	110	
Titanium	A	10	90	110	
Vanadium	A	10	90	110	
Zinc	A	5	90	110	

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/25/2020 9:28:33 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,968 cps	4.9915 ppm	1.1 %	0.1 ppm
As 189.042 {478} (Axial)	1,829 cps	4.6568 ppm	1.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	229 cps	0.0071 ppm	25.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	383 cps	0.0131 ppm	16.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-38 cps	-0.0001 ppm	94.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	23 cps	0.0895 ppm	33.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	262 cps	0.0212 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	8 cps	0.0009 ppm	116.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	32 cps	0.0055 ppm	3.5 %	0.0 ppm
Co 228.616 {447} (Axial)	87,274 cps	10.0523 ppm	1.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	227 cps	0.0090 ppm	8.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	44 cps	0.1745 ppm	23.6 %	0.0 ppm
Li 670.784 {50} (Radial)	50 cps	0.0035 ppm	44.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-183 cps	-0.0025 ppm	15.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	27,052 cps	9.8974 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	40 cps	0.0205 ppm	34.0 %	0.0 ppm
Ni 231.604 {445} (Axial)	42,962 cps	10.0093 ppm	1.0 %	0.1 ppm
K 766.490 {44} (Radial)	-22 cps	-0.0485 ppm	32.2 %	0.0 ppm
Se 196.090 {472} (Axial)	1,133 cps	4.6743 ppm	0.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-7 cps	-0.0005 ppm	45.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	131 cps	0.0034 ppm	28.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,050 cps	4.8880 ppm	1.2 %	0.1 ppm
Ti 334.941 {101} (Radial)	24 cps	0.0183 ppm	23.2 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0010 ppm	24.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	51,561 cps	4.7038 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8515 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		95.9409 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	3 cps	0.0946 ppm	4.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,916 cps	5.3443 ppm	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	16 cps	0.0141 ppm	26.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.2042 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	21 cps	0.0619 ppm	7.0 %	0.0 ppm
Al 396.152 {85} (Radial)	206 cps	0.4449 ppm	3.6 %	0.0 ppm
Si 251.611 {134} (Radial)	7 cps	0.0806 ppm	17.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,270 cps	5.1451 ppm	1.0 %	0.1 ppm
Y 224.306 {450} (Axial)		97.0972 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		101.1327 %	0.5 %	0.5 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/29/2020 7:24:56 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,466 cps	5.1503 ppm	1.5 %	0.1 ppm
As 189.042 {478} (Axial)	1,624 cps	4.8536 ppm	1.2 %	0.1 ppm
Ba 455.403 {74} (Radial)	139 cps	0.0070 ppm	27.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	100 cps	0.0056 ppm	51.8 %	0.0 ppm
Be 313.042 {108} (Axial)	-65 cps	-0.0002 ppm	47.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	18 cps	0.0949 ppm	29.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	267 cps	0.0248 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	9 cps	0.0011 ppm	27.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	35 cps	0.0068 ppm	5.9 %	0.0 ppm
Co 228.616 {447} (Axial)	79,455 cps	10.3652 ppm	1.2 %	0.1 ppm
Cu 324.754 {104} (Axial)	152 cps	0.0081 ppm	8.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	18 cps	0.1060 ppm	27.1 %	0.0 ppm
Li 670.784 {50} (Radial)	1 cps	0.0001 ppm	2,551.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	-141 cps	-0.0023 ppm	23.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	24,063 cps	10.2209 ppm	1.3 %	0.1 ppm
Na 589.592 {57} (Radial)	4 cps	0.0029 ppm	132.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	39,506 cps	10.3118 ppm	1.2 %	0.1 ppm
K 766.490 {44} (Radial)	-34 cps	-0.1065 ppm	16.0 %	0.0 ppm
Se 196.090 {472} (Axial)	976 cps	4.9101 ppm	1.1 %	0.1 ppm
Ag 328.068 {103} (Axial)	1 cps	0.0001 ppm	164.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	86 cps	0.0036 ppm	29.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	4,779 cps	5.0203 ppm	1.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	12 cps	0.0140 ppm	11.1 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0012 ppm	75.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	47,560 cps	4.9310 ppm	1.2 %	0.1 ppm
Sc 357.253 {94} (Axial)		104.6117 %	0.9 %	1.0 %
Sc 188.060 {479} (Axial)		99.4894 %	0.6 %	0.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0535 ppm	54.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,720 cps	5.4579 ppm	1.0 %	0.1 ppm
Al 167.079 {502} (Axial)	20 cps	0.0177 ppm	32.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.1637 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	13 cps	0.0579 ppm	15.4 %	0.0 ppm
Al 396.152 {85} (Radial)	145 cps	0.4782 ppm	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	5 cps	0.0800 ppm	11.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	4,934 cps	5.2552 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		100.0577 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.4426 %	0.6 %	0.6 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-58A

Sample type: UNKNOWN Analysis started at: 11/25/2020 12:47:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	13 cps	0.0213 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	60.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,190 cps	0.0676 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,983 cps	0.0677 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	23 cps	0.0001 ppm	180.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	12,878 cps	49.4359 ppm	1.4 %	0.7 ppm
Cd 228.802 {447} (Axial)	27 cps	0.0022 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	54.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	2 cps	0.0004 ppm	23.3 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0002 ppm	37.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	69 cps	0.0027 ppm	61.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	3 cps	0.0101 ppm	20.1 %	0.0 ppm
Li 670.784 {50} (Radial)	-7 cps	-0.0005 ppm	113.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	4,638 cps	0.0634 ppm	8.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	134.0 %	0.0 ppm
Na 589.592 {57} (Radial)	231,167 cps	117.2563 ppm	2.1 %	2.4 ppm
Ni 231.604 {445} (Axial)	9 cps	0.0020 ppm	10.9 %	0.0 ppm
K 766.490 {44} (Radial)	42 cps	0.0911 ppm	22.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0004 ppm	814.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	-4 cps	-0.0003 ppm	314.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,831 cps	0.0474 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0008 ppm	31.6 %	0.0 ppm
Tl 334.941 {101} (Radial)	3 cps	0.0020 ppm	77.1 %	0.0 ppm
V 292.402 {115} (Axial)	6 cps	0.0003 ppm	87.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	36,173 cps	3.2999 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		90.9627 %	7.2 %	6.6 %
Sc 188.060 {479} (Axial)		88.2362 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	40 cps	1.1261 ppm	1.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0007 ppm	90.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3 cps	0.0025 ppm	3.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		87.6869 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0095 ppm	8.0 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0025 ppm	206.7 %	0.0 ppm
Si 251.611 {134} (Radial)	40 cps	0.4422 ppm	1.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	214 cps	0.2088 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9268 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		99.5910 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-26A

Sample type: UNKNOWN Analysis started at: 11/25/2020 2:50:15 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	50 cps	0.0842 ppm	1.3 %	0.0 ppm
As 189.042 {478} (Axial)	3 cps	0.0067 ppm	10.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,198 cps	0.0678 ppm	2.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,177 cps	0.0743 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	53 cps	0.0001 ppm	25.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,050 cps	15.5490 ppm	2.5 %	0.4 ppm
Cd 228.802 {447} (Axial)	174 cps	0.0141 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	5 cps	0.0005 ppm	31.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	3 cps	0.0005 ppm	7.6 %	0.0 ppm
Co 228.616 {447} (Axial)	17 cps	0.0019 ppm	4.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	718 cps	0.0285 ppm	0.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	4 cps	0.0152 ppm	30.0 %	0.0 ppm
Li 670.784 {50} (Radial)	-23 cps	-0.0016 ppm	18.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	20,579 cps	0.2815 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	-0.0001 ppm	37.8 %	0.0 ppm
Na 589.592 {57} (Radial)	248,313 cps	125.9531 ppm	2.1 %	2.7 ppm
Ni 231.604 {445} (Axial)	42 cps	0.0098 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	53 cps	0.1146 ppm	17.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1 cps	0.0023 ppm	95.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	9 cps	0.0007 ppm	5.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	893 cps	0.0231 ppm	1.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0011 ppm	11.3 %	0.0 ppm
Tl 334.941 {101} (Radial)	3 cps	0.0021 ppm	50.9 %	0.0 ppm
V 292.402 {115} (Axial)	2 cps	0.0001 ppm	63.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	26,204 cps	2.3905 ppm	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.3884 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		83.6742 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	49 cps	1.3722 ppm	5.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0001 ppm	498.0 %	0.0 ppm
Al 167.079 {502} (Axial)	25 cps	0.0220 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.1427 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	18 cps	0.0545 ppm	7.5 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0268 ppm	0.8 %	0.0 ppm
Si 251.611 {134} (Radial)	104 cps	1.1641 ppm	2.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	2,810 cps	2.7435 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		90.0724 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		98.9568 %	0.4 %	0.4 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-15A

Sample type: UNKNOWN Analysis started at: 11/25/2020 10:25:50 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	287 cps	4.8265 ppm	3.3 %	0.2 ppm
As 189.042 {478} (Axial)	230 cps	5.8584 ppm	3.3 %	0.2 ppm
Ba 455.403 {74} (Radial)	3,914 cps	1.2080 ppm	0.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	3,539 cps	1.2085 ppm	0.2 %	0.0 ppm
Be 313.042 {108} (Axial)	165 cps	0.0043 ppm	3.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,250 cps	201.5293 ppm	0.5 %	1.0 ppm
Cd 228.802 {447} (Axial)	405 cps	0.3287 ppm	3.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	157 cps	0.1609 ppm	2.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	90 cps	0.1569 ppm	2.6 %	0.0 ppm
Co 228.616 {447} (Axial)	48 cps	0.0552 ppm	3.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,385 cps	1.7388 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	5,415 cps	213.4109 ppm	0.6 %	1.3 ppm
Li 670.784 {50} (Radial)	80 cps	0.0558 ppm	4.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	45,597 cps	6.2366 ppm	0.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0189 ppm	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	398 cps	2.0179 ppm	2.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	78 cps	0.1811 ppm	4.0 %	0.0 ppm
K 766.490 {44} (Radial)	335 cps	7.2462 ppm	4.4 %	0.3 ppm
Se 196.090 {472} (Axial)	2 cps	0.0668 ppm	36.8 %	0.0 ppm
Ag 328.068 {103} (Axial)	65 cps	0.0506 ppm	11.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	955 cps	0.2473 ppm	0.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	340 cps	3.2919 ppm	2.8 %	0.1 ppm
Tl 334.941 {101} (Radial)	218 cps	1.6758 ppm	1.1 %	0.0 ppm
V 292.402 {115} (Axial)	319 cps	0.1876 ppm	1.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	57,210 cps	52.1910 ppm	3.1 %	1.6 ppm
Sc 357.253 {94} (Axial)		100.3283 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		93.1695 %	0.4 %	0.4 %
Mg 279.079 {121} (Radial)	307 cps	86.5458 ppm	0.9 %	0.8 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0022 ppm	477.7 %	0.0 ppm
Al 167.079 {502} (Axial)	5,347 cps	47.1565 ppm	2.1 %	1.0 ppm
Sc 227.318 {448} (Axial)		92.4182 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	11 cps	0.3209 ppm	5.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3,075 cps	66.5322 ppm	1.0 %	0.6 ppm
Si 251.611 {134} (Radial)	226 cps	25.1837 ppm	1.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	11,544 cps	112.7023 ppm	3.3 %	3.7 ppm
Y 224.306 {450} (Axial)		97.6459 %	0.2 %	0.1 %
Sc 361.384 {93} (Radial)		103.5248 %	0.3 %	0.3 %

out.

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

20111574-51A

Sample type: UNKNOWN Analysis started at: 11/26/2020 1:37:46 AM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	296 cps	4.9713 ppm	1.6 %	0.1 ppm
As 189.042 {478} (Axial)	46 cps	1.1732 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,706 cps	0.8350 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,439 cps	0.8327 ppm	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	57 cps	0.0015 ppm	8.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	6,362 cps	244.2462 ppm	0.8 %	1.9 ppm
Cd 228.802 {447} (Axial)	176 cps	0.1428 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	104 cps	0.1072 ppm	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	62 cps	0.1075 ppm	1.0 %	0.0 ppm
Co 228.616 {447} (Axial)	43 cps	0.0501 ppm	3.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	30,689 cps	12.1705 ppm	0.8 %	0.1 ppm
Fe 259.940 {130} (Radial)	3,504 cps	138.0911 ppm	0.6 %	0.8 ppm
Li 670.784 {50} (Radial)	73 cps	0.0506 ppm	8.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	22,989 cps	3.1443 ppm	0.9 %	0.0 ppm
Mo 202.030 {467} (Axial)	5 cps	0.0184 ppm	15.0 %	0.0 ppm
Na 589.592 {57} (Radial)	353 cps	1.7892 ppm	0.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	99 cps	0.2297 ppm	1.5 %	0.0 ppm
K 766.490 {44} (Radial)	86 cps	1.8566 ppm	3.9 %	0.1 ppm
Se 196.090 {472} (Axial)	2 cps	0.0653 ppm	59.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	571 cps	0.4414 ppm	0.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	960 cps	0.2486 ppm	1.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	196 cps	1.8938 ppm	1.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	216 cps	1.6613 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	205 cps	0.1207 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	312,413 cps	285.0050 ppm	1.6 %	4.6 ppm
Sc 357.253 {94} (Axial)		101.6281 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		94.2803 %	0.7 %	0.7 %
Mg 279.079 {121} (Radial)	410 cps	115.3344 ppm	0.5 %	0.5 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0013 ppm	883.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,859 cps	25.2108 ppm	1.2 %	0.3 ppm
Sc 227.318 {448} (Axial)		93.3387 %	0.7 %	0.6 %
B 249.773 {135} (Radial)	8 cps	0.2341 ppm	8.1 %	0.0 ppm
Al 396.152 {85} (Radial)	1,313 cps	28.4099 ppm	1.1 %	0.3 ppm
Si 251.611 {134} (Radial)	191 cps	21.2853 ppm	0.5 %	0.1 ppm
Pb 220.353 {453} (Axial)	14,968 cps	146.1237 ppm	1.4 %	2.0 ppm — out.
Y 224.306 {450} (Axial)		99.1897 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		103.8522 %	0.2 %	0.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-15A

Sample type: UNKNOWN Analysis started at: 11/29/2020 9:00:45 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	25 cps	5.1270 ppm	0.3 %	0.0 ppm
As 189.042 {478} (Axial)	22 cps	6.6156 ppm	0.8 %	0.1 ppm
Ba 455.403 {74} (Radial)	210 cps	1.0547 ppm	5.8 %	0.1 ppm
Ba 493.409 {68} (Radial)	218 cps	1.2168 ppm	25.4 %	0.3 ppm
Be 313.042 {108} (Axial)	-15 cps	-0.0045 ppm	61.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	381 cps	205.2859 ppm	3.6 %	7.4 ppm
Cd 228.802 {447} (Axial)	39 cps	0.3651 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	13 cps	0.1554 ppm	11.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	9 cps	0.1766 ppm	6.5 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0371 ppm	38.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	292 cps	1.5659 ppm	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	364 cps	209.6060 ppm	3.7 %	7.8 ppm
Li 670.784 {50} (Radial)	-42 cps	-0.4537 ppm	16.4 %	0.1 ppm
Mn 257.610 {131} (Axial)	3,944 cps	6.4702 ppm	1.4 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0331 ppm	55.4 %	0.0 ppm
Na 589.592 {57} (Radial)	46 cps	3.5424 ppm	55.7 %	2.0 ppm
Ni 231.604 {445} (Axial)	7 cps	0.1945 ppm	4.7 %	0.0 ppm
K 766.490 {44} (Radial)	-1 cps	-0.3863 ppm	742.0 %	2.9 ppm
Se 196.090 {472} (Axial)	0 cps	-0.1324 ppm	286.8 %	0.4 ppm
Ag 328.068 {103} (Axial)	14 cps	0.1390 ppm	35.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	55 cps	0.2291 ppm	0.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	35 cps	3.7168 ppm	1.6 %	0.1 ppm
Tl 334.941 {101} (Radial)	13 cps	1.5746 ppm	6.2 %	0.1 ppm
V 292.402 {115} (Axial)	22 cps	0.1608 ppm	23.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,880 cps	60.9694 ppm	0.6 %	0.4 ppm
Sc 357.253 {94} (Axial)		104.6843 %	0.5 %	0.5 %
Sc 188.060 {479} (Axial)		98.4506 %	1.1 %	1.1 %
Mg 279.079 {121} (Radial)	23 cps	87.0031 ppm	4.3 %	3.8 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0259 ppm	381.9 %	0.1 ppm
Al 167.079 {502} (Axial)	757 cps	67.1611 ppm	0.7 %	0.4 ppm
Sc 227.318 {448} (Axial)		98.3193 %	1.2 %	1.1 %
B 249.773 {135} (Radial)	-2 cps	-0.7132 ppm	106.7 %	0.8 ppm
Al 396.152 {85} (Radial)	193 cps	63.7305 ppm	4.2 %	2.7 ppm
Si 251.611 {134} (Radial)	17 cps	27.6771 ppm	6.0 %	1.7 ppm
Pb 220.353 {453} (Axial)	1,223 cps	130.2868 ppm	0.5 %	0.6 ppm
Y 224.306 {450} (Axial)		99.4336 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		97.4004 %	1.9 %	1.9 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

20111574-51A

Sample type: UNKNOWN Analysis started at: 11/29/2020 10:21:05 PM

Standard DF: 100

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	25 cps	5.3008 ppm	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	1.1828 ppm	7.8 %	0.1 ppm
Ba 455.403 {74} (Radial)	147 cps	0.7405 ppm	7.5 %	0.1 ppm
Ba 493.409 {68} (Radial)	198 cps	1.1025 ppm	27.8 %	0.3 ppm
Be 313.042 {108} (Axial)	-1 cps	-0.0004 ppm	241.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	444 cps	239.4909 ppm	2.1 %	5.1 ppm
Cd 228.802 {447} (Axial)	17 cps	0.1545 ppm	3.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	6 cps	0.0781 ppm	86.2 %	0.1 ppm
Cr 205.560 {464} (Axial)	6 cps	0.1072 ppm	17.2 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0453 ppm	13.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,240 cps	11.9981 ppm	2.3 %	0.3 ppm
Fe 259.940 {130} (Radial)	236 cps	135.6961 ppm	1.9 %	2.6 ppm
Li 670.784 {50} (Radial)	-50 cps	-0.5396 ppm	4.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	1,932 cps	3.1704 ppm	2.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0155 ppm	120.6 %	0.0 ppm
Na 589.592 {57} (Radial)	43 cps	3.3002 ppm	19.1 %	0.6 ppm
Ni 231.604 {445} (Axial)	9 cps	0.2244 ppm	4.3 %	0.0 ppm
K 766.490 {44} (Radial)	-29 cps	-9.0055 ppm	18.9 %	1.7 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.5888 ppm	31.3 %	0.2 ppm
Ag 328.068 {103} (Axial)	54 cps	0.5315 ppm	15.2 %	0.1 ppm
Sr 407.771 {83} (Radial)	57 cps	0.2365 ppm	6.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	21 cps	2.1831 ppm	1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	14 cps	1.7389 ppm	10.0 %	0.2 ppm
V 292.402 {115} (Axial)	17 cps	0.1227 ppm	35.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	41,769 cps	433.0637 ppm	2.3 %	10.0 ppm
Sc 357.253 {94} (Axial)		103.6726 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		97.7650 %	0.8 %	0.8 %
Mg 279.079 {121} (Radial)	30 cps	113.0933 ppm	3.6 %	4.0 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.1234 ppm	51.7 %	0.1 ppm
Al 167.079 {502} (Axial)	334 cps	29.6178 ppm	2.5 %	0.7 ppm
Sc 227.318 {448} (Axial)		97.6590 %	0.7 %	0.7 %
B 249.773 {135} (Radial)	-1 cps	-0.4610 ppm	128.6 %	0.6 ppm
Al 396.152 {85} (Radial)	84 cps	27.7307 ppm	8.8 %	2.4 ppm
Si 251.611 {134} (Radial)	12 cps	19.0522 ppm	11.1 %	2.1 ppm
Pb 220.353 {453} (Axial)	1,559 cps	166.1018 ppm	2.2 %	3.7 ppm
Y 224.306 {450} (Axial)		98.5973 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		96.6729 %	1.0 %	1.0 %

Calibration Summary

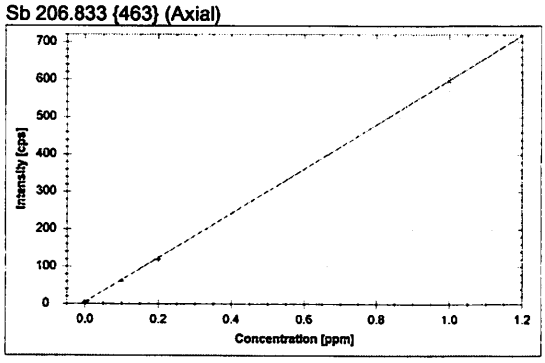
11/29/2020 10:55:31 AM

QTEGRA

LabBook: ICP2_201125A.imexp

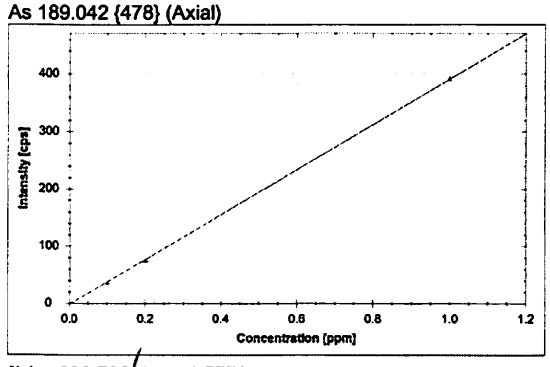
Calibration Graphs

Sb 206.833 {463} (Axial)



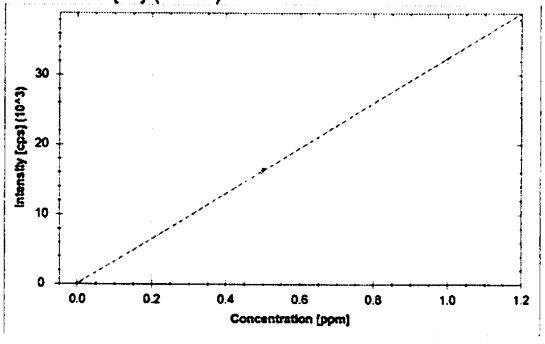
f(x) = 594.6076*x + 4.3973
R² = 0.9999
BEC = 0.007 ppm
LoD = 0.0022 ppm

As 189.042 {478} (Axial)



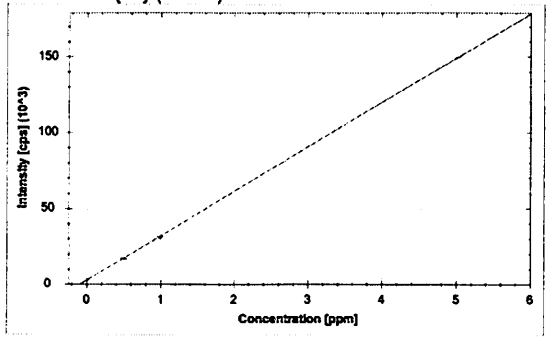
f(x) = 392.7329*x + -1.7770
R² = 0.9998
BEC = -0.005 ppm
LoD = 0.0007 ppm

Ba 455.403 {74} (Radial)



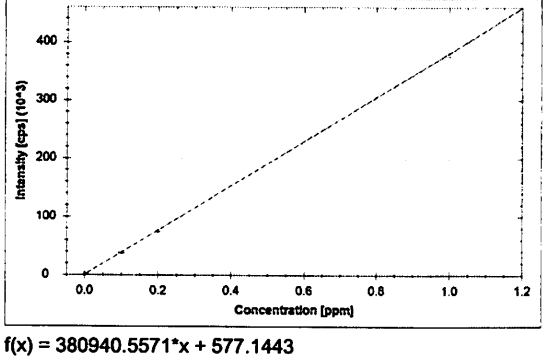
f(x) = 32399.9454*x + 39.5630
R² = 1.0000
BEC = 0.001 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



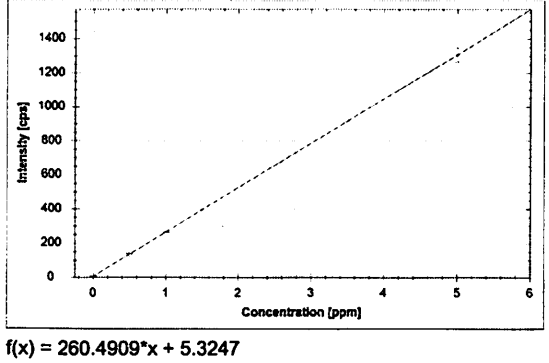
f(x) = 29283.6575*x + 2710.0596
R² = 0.9999
BEC = 0.093 ppm
LoD = 0.0002 ppm

Be 313.042 {108} (Axial)



f(x) = 380940.5571*x + 577.1443
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



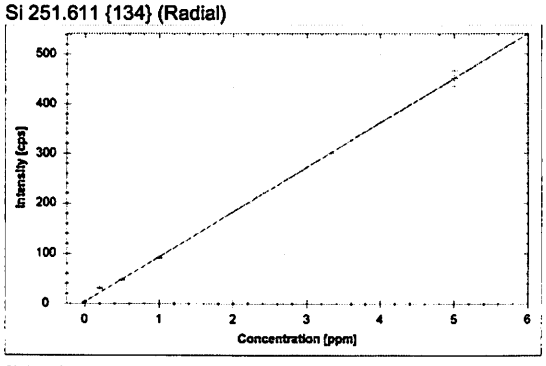
f(x) = 260.4909*x + 5.3247
R² = 1.0000
BEC = 0.020 ppm
LoD = 0.0302 ppm

Calibration Summary

11/29/2020 10:55:31 AM

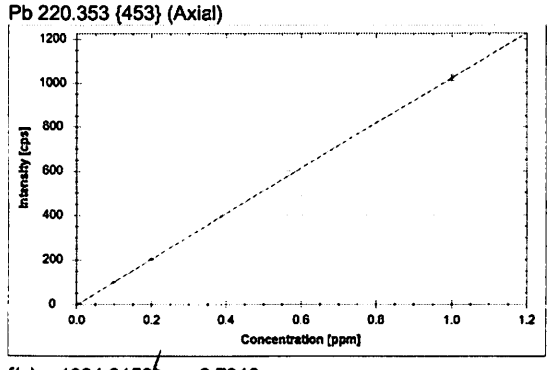
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 89.5858*x + 3.5460
R^2 = 0.9993
BEC = 0.040 ppm
LoD = 0.0152 ppm

Pb 220.353 {453} (Axial)



f(x) = 1024.3159*x + -2.7912
R^2 = 1.0000
BEC = -0.003 ppm
LoD = 0.0007 ppm

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

LabBook: ICP2_201125A.imexp

ICAL1

Sample type: BLK Analysis started at: 11/25/2020 8:31:51 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.8 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.9 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	-0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Tl 334.941 {101} (Radial)	0 cps	0.0000 ppm	2.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	1.5 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/25/2020 8:37:03 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0040 ppm	18.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0042 ppm	28.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	170 cps	0.0053 ppm	2.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	744 cps	0.0020 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	133 cps	0.5101 ppm	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	118 cps	0.0095 ppm	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	28 cps	0.0049 ppm	3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0048 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	247 cps	0.0098 ppm	3.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	20 cps	0.0801 ppm	9.0 %	0.0 ppm
Li 670.784 {50} (Radial)	130 cps	0.0091 ppm	4.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	370 cps	0.0051 ppm	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0047 ppm	3.0 %	0.0 ppm
Na 589.592 {57} (Radial)	382 cps	0.1937 ppm	2.1 %	0.0 ppm
Ni 231.604 {445} (Axial)	22 cps	0.0050 ppm	1.8 %	0.0 ppm
K 766.490 {44} (Radial)	59 cps	0.1285 ppm	25.4 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0123 ppm	5.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	69 cps	0.0053 ppm	1.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	189 cps	0.0049 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0094 ppm	3.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	4 cps	0.0030 ppm	22.7 %	0.0 ppm
V 292.402 {115} (Axial)	83 cps	0.0049 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	109 cps	0.0100 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7871 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		99.1282 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	8 cps	0.2186 ppm	7.2 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0102 ppm	15.4 %	0.0 ppm
Al 167.079 {502} (Axial)	19 cps	0.0165 ppm	17.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.3500 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	7 cps	0.0213 ppm	16.2 %	0.0 ppm
Al 396.152 {85} (Radial)	12 cps	0.0262 ppm	37.1 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.3045 ppm	6.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	6 cps	0.0061 ppm	6.1 %	0.0 ppm
Y 224.306 {450} (Axial)		99.5003 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		100.5930 %	0.1 %	0.1 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/25/2020 8:42:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	57 cps	0.0954 ppm	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	37 cps	0.0935 ppm	0.6 %	0.0 ppm
Ba 455.403 {74} (Radial)	16,252 cps	0.5016 ppm	2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	14,231 cps	0.4860 ppm	2.5 %	0.0 ppm
Be 313.042 {108} (Axial)	36,654 cps	0.0962 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	133 cps	0.5115 ppm	0.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,174 cps	0.0953 ppm	0.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	574 cps	0.0997 ppm	0.6 %	0.0 ppm
Co 228.616 {447} (Axial)	4,257 cps	0.4903 ppm	0.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	12,278 cps	0.4869 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	126 cps	0.4965 ppm	2.2 %	0.0 ppm
Li 670.784 {50} (Radial)	6,676 cps	0.4639 ppm	2.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	7,187 cps	0.0983 ppm	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,316 cps	0.4815 ppm	0.6 %	0.0 ppm
Na 589.592 {57} (Radial)	18,857 cps	9.5651 ppm	2.8 %	0.3 ppm
Ni 231.604 {445} (Axial)	2,118 cps	0.4935 ppm	0.5 %	0.0 ppm
K 766.490 {44} (Radial)	4,280 cps	9.2509 ppm	3.0 %	0.3 ppm
Se 196.090 {472} (Axial)	114 cps	0.4704 ppm	0.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,257 cps	0.0972 ppm	1.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,805 cps	0.0986 ppm	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	101 cps	0.0982 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	126 cps	0.0966 ppm	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,633 cps	0.0960 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,594 cps	0.2366 ppm	0.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.1403 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		97.3955 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	18 cps	0.5177 ppm	1.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	37 cps	0.1036 ppm	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	576 cps	0.5077 ppm	0.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		98.8580 %	0.5 %	0.5 %
B 249.773 {135} (Radial)	163 cps	0.4840 ppm	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	228 cps	0.4941 ppm	0.5 %	0.0 ppm
Si 251.611 {134} (Radial)	44 cps	0.4859 ppm	2.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	103 cps	0.1006 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		98.1768 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		101.3503 %	0.2 %	0.3 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/25/2020 8:47:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	115 cps	0.1930 ppm	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	75 cps	0.1906 ppm	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	32,374 cps	0.9992 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	28,585 cps	0.9762 ppm	1.7 %	0.0 ppm
Be 313.042 {108} (Axial)	73,945 cps	0.1941 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	260 cps	0.9982 ppm	1.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,372 cps	0.1924 ppm	1.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,891 cps	0.1940 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,152 cps	0.2001 ppm	2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	8,533 cps	0.9828 ppm	2.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	24,373 cps	0.9666 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	251 cps	0.9874 ppm	2.3 %	0.0 ppm
Li 670.784 {50} (Radial)	13,537 cps	0.9407 ppm	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,237 cps	0.1947 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,658 cps	0.9724 ppm	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	37,933 cps	19.2408 ppm	2.1 %	0.4 ppm
Ni 231.604 {445} (Axial)	4,240 cps	0.9879 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	8,705 cps	18.8160 ppm	2.5 %	0.5 ppm
Se 196.090 {472} (Axial)	231 cps	0.9532 ppm	2.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,502 cps	0.1935 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	7,560 cps	0.1958 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	204 cps	0.1972 ppm	2.0 %	0.0 ppm
Tl 334.941 {101} (Radial)	253 cps	0.1944 ppm	1.7 %	0.0 ppm
V 292.402 {115} (Axial)	3,263 cps	0.1919 ppm	1.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,257 cps	0.4796 ppm	1.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.8102 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		94.4971 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	36 cps	1.0250 ppm	3.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	74 cps	0.2053 ppm	1.2 %	0.0 ppm
Al 167.079 {502} (Axial)	1,129 cps	0.9961 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2519 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	329 cps	0.9754 ppm	2.2 %	0.0 ppm
Al 396.152 {85} (Radial)	447 cps	0.9680 ppm	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	87 cps	0.9710 ppm	1.8 %	0.0 ppm
Pb 220.353 {453} (Axial)	206 cps	0.2008 ppm	2.2 %	0.0 ppm
Y 224.306 {450} (Axial)		96.4431 %	0.5 %	0.5 %
Sc 361.384 {93} (Radial)		100.5283 %	0.2 %	0.2 %

Simple Sample Report

11/29/2020 10:56:15 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/25/2020 8:52:12 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	596 cps	1.0019 ppm	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	394 cps	1.0025 ppm	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	146,599 cps	5.0062 ppm	3.3 %	0.2 ppm
Be 313.042 {108} (Axial)	381,533 cps	1.0016 ppm	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,302 cps	4.9982 ppm	3.2 %	0.2 ppm
Cd 228.802 {447} (Axial)	12,348 cps	1.0020 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,759 cps	1.0012 ppm	1.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	43,448 cps	5.0044 ppm	1.1 %	0.1 ppm
Cu 324.754 {104} (Axial)	126,283 cps	5.0080 ppm	1.4 %	0.1 ppm
Fe 259.940 {130} (Radial)	1,269 cps	5.0029 ppm	3.1 %	0.2 ppm
Li 670.784 {50} (Radial)	72,170 cps	5.0155 ppm	3.6 %	0.2 ppm
Mn 257.610 {131} (Axial)	73,202 cps	1.0012 ppm	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	13,686 cps	5.0074 ppm	1.1 %	0.1 ppm
Na 589.592 {57} (Radial)	197,532 cps	100.1953 ppm	3.6 %	3.6 ppm
Ni 231.604 {445} (Axial)	21,474 cps	5.0031 ppm	1.1 %	0.1 ppm
K 766.490 {44} (Radial)	46,407 cps	100.3118 ppm	3.8 %	3.8 ppm
Se 196.090 {472} (Axial)	1,215 cps	5.0123 ppm	1.0 %	0.1 ppm
Ag 328.068 {103} (Axial)	12,950 cps	1.0016 ppm	1.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	38,643 cps	1.0010 ppm	3.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,034 cps	1.0007 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,304 cps	1.0015 ppm	3.3 %	0.0 ppm
V 292.402 {115} (Axial)	17,043 cps	1.0020 ppm	1.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	27,464 cps	2.5054 ppm	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.2200 %	0.9 %	0.8 %
Sc 188.060 {479} (Axial)		86.4623 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	177 cps	4.9925 ppm	3.5 %	0.2 ppm
Tl 190.856 {477} (Axial)	358 cps	0.9986 ppm	1.0 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		100.9557 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	1,687 cps	5.0065 ppm	3.5 %	0.2 ppm
Al 396.152 {85} (Radial)	2,314 cps	5.0070 ppm	3.4 %	0.2 ppm
Si 251.611 {134} (Radial)	448 cps	5.0030 ppm	3.5 %	0.2 ppm
Pb 220.353 {453} (Axial)	1,024 cps	0.9998 ppm	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		92.3973 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		100.9367 %	0.4 %	0.4 %

Calibration Summary

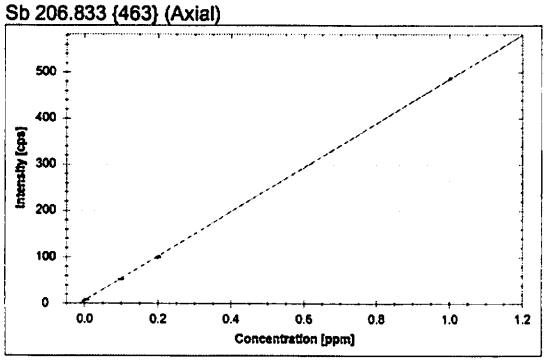
11/30/2020 11:19:07 AM

QTEGRA

LabBook: ICP2_201129B.imexp

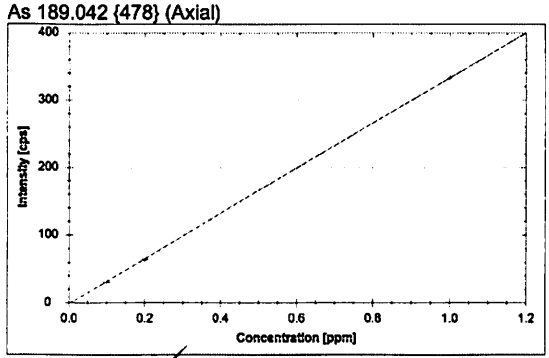
Calibration Graphs

Sb 206.833 {463} (Axial)



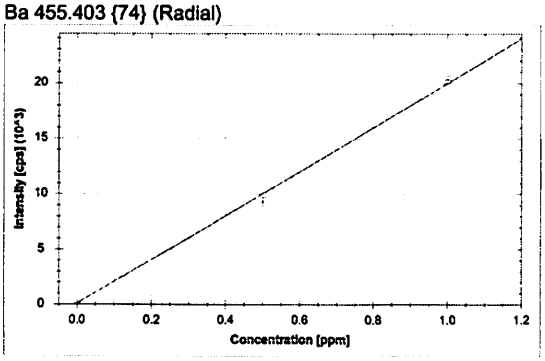
f(x) = 478.8389*x + 6.5298
R^2 = 0.9999
BEC = 0.014 ppm
LoD = 0.0025 ppm

As 189.042 {478} (Axial)



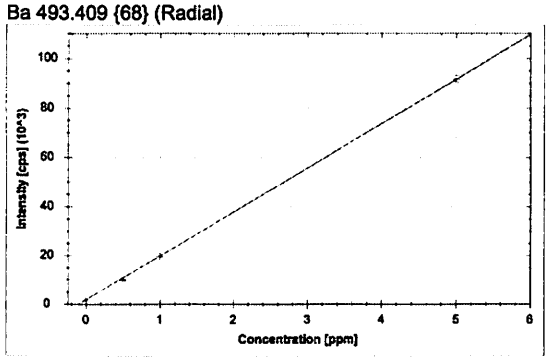
f(x) = 334.5984*x + -1.8175
R^2 = 0.9999
BEC = -0.005 ppm
LoD = 0.0035 ppm

Ba 455.403 {74} (Radial)



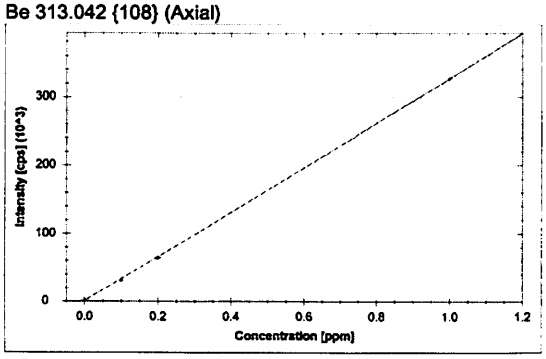
f(x) = 19909.8151*x + 63.7258
R^2 = 0.9977
BEC = 0.003 ppm
LoD = 0.0012 ppm

Ba 493.409 {68} (Radial)



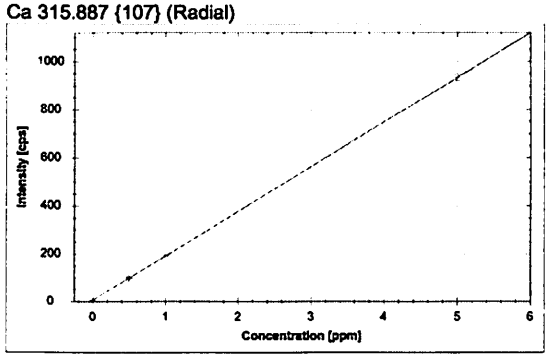
f(x) = 17944.2920*x + 1875.7622
R^2 = 0.9998
BEC = 0.105 ppm
LoD = 0.0047 ppm

Be 313.042 {108} (Axial)



f(x) = 326064.4445*x + 537.7838
R^2 = 0.9999
BEC = 0.002 ppm
LoD = 0.0005 ppm

Ca 315.887 {107} (Radial)



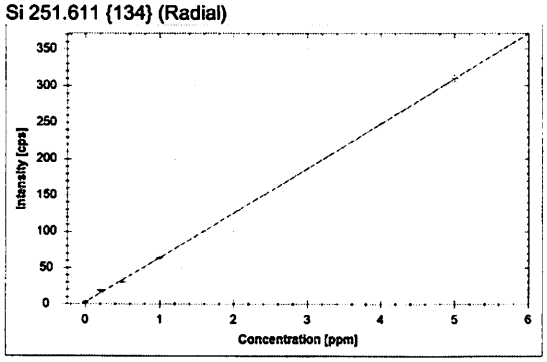
f(x) = 185.3912*x + 6.2718
R^2 = 0.9999
BEC = 0.034 ppm
LoD = 0.0142 ppm

Calibration Summary

11/30/2020 11:19:07 AM

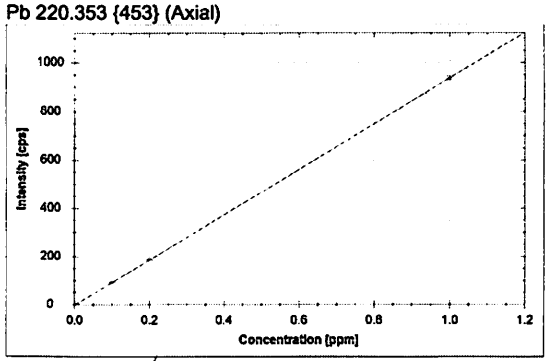
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 61.3727*x + 2.6123
R^2 = 0.9997
BEC = 0.043 ppm
LoD = 0.0361 ppm

Pb 220.353 {453} (Axial)



f(x) = 938.8512*x + -2.8437
R^2 = 1.0000
BEC = -0.003 ppm
LoD = 0.0024 ppm

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

LabBook: ICP2_201129B.imexp

ICAL1

Sample type: BLK Analysis started at: 11/29/2020 6:28:44 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Be 313.042 {108} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	0 cps	0.0000 ppm	-0.8 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	-0.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	0 cps	0.0000 ppm	0.7 %	0.0 ppm
Li 670.784 {50} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Na 589.592 {57} (Radial)	0 cps	0.0000 ppm	1.3 %	0.0 ppm
Ni 231.604 {445} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
K 766.490 {44} (Radial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	0.0000 ppm	3.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	0 cps	0.0000 ppm	-0.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	0 cps	0.0000 ppm	-0.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	0 cps	0.0000 ppm	-2.0 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Zn 213.856 {457} (Axial)	0 cps	0.0000 ppm	0.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.0000 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		100.0000 %	0.0 %	0.0 %
Mg 279.079 {121} (Radial)	0 cps	0.0000 ppm	-1.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	0 cps	0.0000 ppm	-0.5 %	0.0 ppm
Al 167.079 {502} (Axial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0000 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	0 cps	0.0000 ppm	0.1 %	0.0 ppm
Al 396.152 {85} (Radial)	0 cps	0.0000 ppm	0.2 %	0.0 ppm
Si 251.611 {134} (Radial)	0 cps	0.0000 ppm	0.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	0 cps	0.0000 ppm	-0.3 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0000 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		100.0000 %	0.0 %	0.0 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL2

Sample type: STD Analysis started at: 11/29/2020 6:33:53 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0033 ppm	47.5 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0053 ppm	8.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	90 cps	0.0045 ppm	6.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	N/A	N/A	N/A	N/A
Be 313.042 {108} (Axial)	592 cps	0.0018 ppm	0.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	95 cps	0.5143 ppm	1.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	105 cps	0.0097 ppm	1.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	26 cps	0.0050 ppm	3.5 %	0.0 ppm
Co 228.616 {447} (Axial)	37 cps	0.0048 ppm	3.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	172 cps	0.0092 ppm	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0818 ppm	7.6 %	0.0 ppm
Li 670.784 {50} (Radial)	58 cps	0.0063 ppm	12.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	306 cps	0.0050 ppm	1.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	12 cps	0.0049 ppm	4.4 %	0.0 ppm
Na 589.592 {57} (Radial)	264 cps	0.2024 ppm	3.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	19 cps	0.0050 ppm	2.9 %	0.0 ppm
K 766.490 {44} (Radial)	73 cps	0.2264 ppm	0.5 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0077 ppm	6.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	60 cps	0.0059 ppm	6.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	123 cps	0.0051 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0105 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0065 ppm	17.7 %	0.0 ppm
V 292.402 {115} (Axial)	67 cps	0.0049 ppm	6.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	94 cps	0.0097 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.3170 %	0.3 %	0.4 %
Sc 188.060 {479} (Axial)		100.0017 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	5 cps	0.1776 ppm	33.5 %	0.1 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0112 ppm	8.6 %	0.0 ppm
Al 167.079 {502} (Axial)	12 cps	0.0109 ppm	4.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.0078 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	4 cps	0.0163 ppm	59.8 %	0.0 ppm
Al 396.152 {85} (Radial)	9 cps	0.0312 ppm	85.5 %	0.0 ppm
Si 251.611 {134} (Radial)	15 cps	0.2484 ppm	11.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0051 ppm	16.5 %	0.0 ppm
Y 224.306 {450} (Axial)		100.0134 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		99.1428 %	0.8 %	0.8 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL3

Sample type: STD Analysis started at: 11/29/2020 6:39:00 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	46 cps	0.0960 ppm	2.8 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.0965 ppm	1.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	9,240 cps	0.4641 ppm	3.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	7,987 cps	0.4451 ppm	3.8 %	0.0 ppm
Be 313.042 {108} (Axial)	30,129 cps	0.0924 ppm	2.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	87 cps	0.4709 ppm	5.5 %	0.0 ppm
Cd 228.802 {447} (Axial)	1,048 cps	0.0974 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	N/A	N/A	N/A	N/A
Cr 205.560 {464} (Axial)	507 cps	0.0988 ppm	1.5 %	0.0 ppm
Co 228.616 {447} (Axial)	3,797 cps	0.4953 ppm	1.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	8,893 cps	0.4764 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	78 cps	0.4511 ppm	6.0 %	0.0 ppm
Li 670.784 {50} (Radial)	3,974 cps	0.4299 ppm	4.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,846 cps	0.0959 ppm	2.0 %	0.0 ppm
Mo 202.030 {467} (Axial)	1,149 cps	0.4879 ppm	1.6 %	0.0 ppm
Na 589.592 {57} (Radial)	11,578 cps	8.8743 ppm	3.9 %	0.3 ppm
Ni 231.604 {445} (Axial)	1,908 cps	0.4980 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	2,793 cps	8.6675 ppm	4.1 %	0.4 ppm
Se 196.090 {472} (Axial)	95 cps	0.4781 ppm	1.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	974 cps	0.0962 ppm	2.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,184 cps	0.0909 ppm	4.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.0984 ppm	1.8 %	0.0 ppm
Tl 334.941 {101} (Radial)	74 cps	0.0898 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,295 cps	0.0936 ppm	2.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,334 cps	0.2420 ppm	1.6 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.2606 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		98.7359 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	12 cps	0.4453 ppm	3.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	33 cps	0.1055 ppm	2.4 %	0.0 ppm
Al 167.079 {502} (Axial)	565 cps	0.5011 ppm	1.5 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.9935 %	0.8 %	0.8 %
B 249.773 {135} (Radial)	98 cps	0.4482 ppm	4.4 %	0.0 ppm
Al 396.152 {85} (Radial)	136 cps	0.4498 ppm	5.6 %	0.0 ppm
Si 251.611 {134} (Radial)	28 cps	0.4527 ppm	1.5 %	0.0 ppm
Pb 220.353 {453} (Axial)	95 cps	0.1009 ppm	2.1 %	0.0 ppm
Y 224.306 {450} (Axial)		99.1428 %	0.8 %	0.8 %
Sc 361.384 {93} (Radial)		101.3730 %	0.2 %	0.2 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL4

Sample type: STD Analysis started at: 11/29/2020 6:43:59 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	94 cps	0.1956 ppm	2.1 %	0.0 ppm
As 189.042 {478} (Axial)	65 cps	0.1951 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	20,267 cps	1.0180 ppm	1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	17,680 cps	0.9853 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	63,810 cps	0.1957 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	188 cps	1.0121 ppm	1.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	2,124 cps	0.1975 ppm	1.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	1,634 cps	0.1972 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	1,029 cps	0.2006 ppm	1.7 %	0.0 ppm
Co 228.616 {447} (Axial)	7,678 cps	1.0016 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	18,516 cps	0.9919 ppm	1.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	174 cps	1.0020 ppm	1.5 %	0.0 ppm
Li 670.784 {50} (Radial)	8,863 cps	0.9589 ppm	1.8 %	0.0 ppm
Mn 257.610 {131} (Axial)	12,106 cps	0.1986 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,334 cps	0.9913 ppm	1.7 %	0.0 ppm
Na 589.592 {57} (Radial)	25,471 cps	19.5220 ppm	1.5 %	0.3 ppm
Ni 231.604 {445} (Axial)	3,855 cps	1.0062 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	6,119 cps	18.9904 ppm	1.5 %	0.3 ppm
Se 196.090 {472} (Axial)	196 cps	0.9845 ppm	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	2,014 cps	0.1989 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	4,782 cps	0.1991 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	190 cps	0.1999 ppm	1.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	164 cps	0.1985 ppm	2.1 %	0.0 ppm
V 292.402 {115} (Axial)	2,724 cps	0.1969 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	4,745 cps	0.4920 ppm	1.5 %	0.0 ppm
Sc 357.253 {94} (Axial)		103.5509 %	0.6 %	0.6 %
Sc 188.060 {479} (Axial)		97.3627 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	27 cps	1.0133 ppm	4.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	65 cps	0.2068 ppm	1.4 %	0.0 ppm
Al 167.079 {502} (Axial)	1,127 cps	0.9994 ppm	1.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.2239 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	216 cps	0.9831 ppm	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	301 cps	0.9951 ppm	1.4 %	0.0 ppm
Si 251.611 {134} (Radial)	61 cps	0.9956 ppm	1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	190 cps	0.2024 ppm	1.3 %	0.0 ppm
Y 224.306 {450} (Axial)		98.5390 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.3795 %	1.9 %	1.9 %

Simple Sample Report

11/30/2020 11:20:00 AM

QTEGRA

ICAL5

Sample type: STD Analysis started at: 11/29/2020 6:48:57 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	479 cps	1.0013 ppm	0.6 %	0.0 ppm
As 189.042 {478} (Axial)	335 cps	1.0013 ppm	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	N/A	N/A	N/A	N/A
Ba 493.409 {68} (Radial)	89,873 cps	5.0084 ppm	1.6 %	0.1 ppm
Be 313.042 {108} (Axial)	326,593 cps	1.0016 ppm	0.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	927 cps	4.9990 ppm	1.3 %	0.1 ppm
Cd 228.802 {447} (Axial)	10,767 cps	1.0008 ppm	0.7 %	0.0 ppm
Cr 267.716 {126} (Axial)	8,287 cps	1.0006 ppm	0.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	N/A	N/A	N/A	N/A
Co 228.616 {447} (Axial)	38,329 cps	5.0002 ppm	0.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	93,411 cps	5.0040 ppm	0.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	869 cps	5.0045 ppm	1.7 %	0.1 ppm
Li 670.784 {50} (Radial)	46,360 cps	5.0152 ppm	1.9 %	0.1 ppm
Mn 257.610 {131} (Axial)	60,993 cps	1.0007 ppm	0.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	11,779 cps	5.0029 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	130,744 cps	100.2082 ppm	1.9 %	1.9 ppm
Ni 231.604 {445} (Axial)	19,152 cps	4.9990 ppm	0.7 %	0.0 ppm
K 766.490 {44} (Radial)	32,330 cps	100.3351 ppm	2.1 %	2.1 ppm
Se 196.090 {472} (Axial)	995 cps	5.0053 ppm	0.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,129 cps	1.0006 ppm	1.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	24,039 cps	1.0011 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	952 cps	1.0002 ppm	0.7 %	0.0 ppm
Tl 334.941 {101} (Radial)	826 cps	1.0013 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	13,855 cps	1.0013 ppm	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	24,136 cps	2.5024 ppm	0.7 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.2095 %	0.8 %	0.8 %
Sc 188.060 {479} (Axial)		90.3879 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	135 cps	5.0037 ppm	2.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	315 cps	0.9981 ppm	0.6 %	0.0 ppm
Al 167.079 {502} (Axial)	N/A	N/A	N/A	N/A
Sc 227.318 {448} (Axial)		105.2031 %	0.3 %	0.4 %
B 249.773 {135} (Radial)	1,101 cps	5.0086 ppm	2.0 %	0.1 ppm
Al 396.152 {85} (Radial)	1,515 cps	5.0060 ppm	1.5 %	0.1 ppm
Si 251.611 {134} (Radial)	307 cps	5.0037 ppm	1.6 %	0.1 ppm
Pb 220.353 {453} (Axial)	938 cps	0.9994 ppm	0.8 %	0.0 ppm
Y 224.306 {450} (Axial)		94.9080 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		99.9108 %	0.4 %	0.4 %

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201119B
Analysis Method: MISC **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
	IDA001:DU-C1:S000010	20111574-01	11/19/2020	00:00	
	IDA001:DU-D1:S000010	20111574-03	11/19/2020	00:00	
	IDA001:DU-E5:S000010	20111574-05	11/19/2020	00:00	
	IDA001:DU-B5:S000010	20111574-07	11/19/2020	00:00	
	IDA001:DU-C5:S000010	20111574-09	11/19/2020	00:00	
	IDA001:DU-D5:S000010	20111574-11	11/19/2020	00:00	
	IDA001:DU-D5-TE:S000010	20111574-13	11/19/2020	00:00	
	IDA001:DU-D5-TS:S000010	20111574-14	11/19/2020	00:00	
	IDA001:DU-E9:S000010	20111574-15	11/19/2020	00:00	
	IDA001:DU-E9-TE:S000010	20111574-17	11/19/2020	00:00	
	IDA001:DU-E9-TS:S000010	20111574-18	11/19/2020	00:00	
	IDA001:DU-D9:S000010	20111574-19	11/19/2020	00:00	
	IDA001:DU-C9:S000010	20111574-21	11/19/2020	00:00	
	IDA001:DU-B9:S000010	20111574-23	11/19/2020	00:00	
	IDA001:DU-A9:S000010	20111574-25	11/19/2020	00:00	
	IDA001:DU-A8:S000010	20111574-27	11/19/2020	00:00	
	IDA001:DU-A8-TE:S000010	20111574-29	11/19/2020	00:00	
	IDA001:DU-A8-TS:S000010	20111574-30	11/19/2020	00:00	
	IDA001:DU-B8:S000010	20111574-31	11/19/2020	00:00	
	IDA001:DU-C8:S000010	20111574-33	11/19/2020	00:00	
	IDA001:DU-D8:S000010	20111574-35	11/19/2020	00:00	
	IDA001:DU-E8:S000010	20111574-37	11/19/2020	00:00	
	IDA001:DU-E7:S000010	20111574-39	11/19/2020	00:00	
	IDA001:DU-D7:S000010	20111574-41	11/19/2020	00:00	
	IDA001:DU-C7:S000010	20111574-43	11/19/2020	00:00	
	IDA001:DU-B7:S000010	20111574-45	11/19/2020	00:00	
	IDA001:DU-A7:S000010	20111574-47	11/19/2020	00:00	
	IDA001:DU-A6:S000010	20111574-49	11/19/2020	00:00	
	IDA001:DU-B6:S000010	20111574-51	11/19/2020	00:00	
	IDA001:DU-C6:S000010	20111574-53	11/19/2020	00:00	
	IDA001:DU-C6-TE:S000010	20111574-55	11/19/2020	00:00	
	IDA001:DU-C6-TS:S000010	20111574-56	11/19/2020	00:00	
	IDA001:DU-D6:S000010	20111574-57	11/19/2020	00:00	
	IDA001:DU-E6:S000010	20111574-59	11/19/2020	00:00	

Analysis Lot:ICP2_201125A
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/25/2020	08:31	
2	ICAL2	ICAL2	11/25/2020	08:37	
3	ICAL3	ICAL3	11/25/2020	08:42	
4	ICAL4	ICAL4	11/25/2020	08:47	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Method: SW6010D **Analysis Lot:**ICP2_201125A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
5	ICAL5	ICAL5	11/25/2020	08:52	
8	ICVLL	ICVLL	11/25/2020	09:07	
10	ICSA	ICSA	11/25/2020	09:17	
11	LDR1	LDR1	11/25/2020	09:22	
12	LDR2	LDR2	11/25/2020	09:28	
15	CCV	CCV	11/25/2020	09:43	
16	CCB	CCB	11/25/2020	09:48	
27	CCV	CCV	11/25/2020	10:50	
28	CCB	CCB	11/25/2020	10:55	
39	CCV	CCV	11/25/2020	11:51	
40	CCB	CCB	11/25/2020	11:56	
42	MBLK-168174	MBLK-168174	11/25/2020	12:06	
43	LCS-168174	LCS-168174	11/25/2020	12:11	
44	IDA001:DU-A7:S000010	20111574-48	11/25/2020	12:16	
45	20111574-48AMS	20111574-48AMS	11/25/2020	12:22	
46	20111574-48AMSD	20111574-48AMSD	11/25/2020	12:27	
47	IDA001:DU-A6:S000010	20111574-50	11/25/2020	12:32	
48	IDA001:DU-B6:S000010	20111574-52	11/25/2020	12:37	
49	IDA001:DU-C6:S000010	20111574-54	11/25/2020	12:42	
50	IDA001:DU-D6:S000010	20111574-58	11/25/2020	12:47	
51	CCV	CCV	11/25/2020	12:52	
52	CCB	CCB	11/25/2020	12:57	
53	IDA001:DU-E6:S000010	20111574-60	11/25/2020	13:02	
58	MBLK-168173	MBLK-168173	11/25/2020	13:28	
59	LCS-168173	LCS-168173	11/25/2020	13:33	
60	IDA001:DU-C1:S000010	20111574-02	11/25/2020	13:38	
61	20111574-02AMS	20111574-02AMS	11/25/2020	13:43	
62	20111574-02AMSD	20111574-02AMSD	11/25/2020	13:48	
63	CCV	CCV	11/25/2020	13:53	
64	CCB	CCB	11/25/2020	13:58	
65	IDA001:DU-D1:S000010	20111574-04	11/25/2020	14:04	
66	IDA001:DU-E5:S000010	20111574-06	11/25/2020	14:09	
67	IDA001:DU-B5:S000010	20111574-08	11/25/2020	14:14	
68	IDA001:DU-C5:S000010	20111574-10	11/25/2020	14:19	
69	IDA001:DU-D5:S000010	20111574-12	11/25/2020	14:24	
70	IDA001:DU-E9:S000010	20111574-16	11/25/2020	14:29	
71	IDA001:DU-D9:S000010	20111574-20	11/25/2020	14:34	
72	IDA001:DU-C9:S000010	20111574-22	11/25/2020	14:39	
73	IDA001:DU-B9:S000010	20111574-24	11/25/2020	14:45	
74	IDA001:DU-A9:S000010	20111574-26	11/25/2020	14:50	
75	CCV	CCV	11/25/2020	14:55	
76	CCB	CCB	11/25/2020	15:00	
77	IDA001:DU-A8:S000010	20111574-28	11/25/2020	15:05	
78	IDA001:DU-B8:S000010	20111574-32	11/25/2020	15:10	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Method: SW6010D **Analysis Lot:**ICP2_201125A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
79	IDA001:DU-C8:S000010	20111574-34	11/25/2020	15:15	
80	IDA001:DU-D8:S000010	20111574-36	11/25/2020	15:20	
81	IDA001:DU-E8:S000010	20111574-38	11/25/2020	15:26	
82	IDA001:DU-E7:S000010	20111574-40	11/25/2020	15:31	
83	IDA001:DU-D7:S000010	20111574-42	11/25/2020	15:36	
84	IDA001:DU-C7:S000010	20111574-44	11/25/2020	15:41	
85	IDA001:DU-B7:S000010	20111574-46	11/25/2020	15:46	
87	CCV	CCV	11/25/2020	15:56	
88	CCB	CCB	11/25/2020	16:01	
99	CCV	CCV	11/25/2020	17:06	
100	CCB	CCB	11/25/2020	17:11	
111	CCV	CCV	11/25/2020	18:08	
112	CCB	CCB	11/25/2020	18:13	
123	CCV	CCV	11/25/2020	19:09	
124	CCB	CCB	11/25/2020	19:14	
135	CCV	CCV	11/25/2020	20:13	
136	CCB	CCB	11/25/2020	20:18	
147	CCV	CCV	11/25/2020	21:14	
148	CCB	CCB	11/25/2020	21:19	
149	MBLK-168176	MBLK-168176	11/25/2020	21:24	
150	LCS-168176	LCS-168176	11/25/2020	21:29	
151	IDA001:DU-C1:S000010	20111574-01	11/25/2020	21:34	
152	IDA001:DU-D1:S000010	20111574-03	11/25/2020	21:40	
153	IDA001:DU-E5:S000010	20111574-05	11/25/2020	21:45	
154	IDA001:DU-B5:S000010	20111574-07	11/25/2020	21:50	
155	IDA001:DU-C5:S000010	20111574-09	11/25/2020	21:55	
156	IDA001:DU-D5:S000010	20111574-11	11/25/2020	22:00	
157	IDA001:DU-D5-TE:S000010	20111574-13	11/25/2020	22:05	
158	IDA001:DU-D5-TS:S000010	20111574-14	11/25/2020	22:10	
159	CCV	CCV	11/25/2020	22:15	
160	CCB	CCB	11/25/2020	22:20	
161	IDA001:DU-E9:S000010	20111574-15	11/25/2020	22:25	
162	IDA001:DU-E9-TE:S000010	20111574-17	11/25/2020	22:30	
163	IDA001:DU-E9-TS:S000010	20111574-18	11/25/2020	22:35	
164	IDA001:DU-D9:S000010	20111574-19	11/25/2020	22:40	
165	IDA001:DU-C9:S000010	20111574-21	11/25/2020	22:45	
166	IDA001:DU-B9:S000010	20111574-23	11/25/2020	22:50	
167	IDA001:DU-A9:S000010	20111574-25	11/25/2020	22:56	
168	IDA001:DU-A8:S000010	20111574-27	11/25/2020	23:01	
169	IDA001:DU-A8-TE:S000010	20111574-29	11/25/2020	23:06	
170	IDA001:DU-A8-TS:S000010	20111574-30	11/25/2020	23:11	
172	CCV	CCV	11/25/2020	23:21	
173	CCB	CCB	11/25/2020	23:26	
174	IDA001:DU-B8:S000010	20111574-31	11/25/2020	23:31	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Method: SW6010D **Analysis Lot:**ICP2_201125A
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
175	IDA001:DU-C8:S000010	20111574-33	11/25/2020	23:36	
176	20111574-33AMS	20111574-33AMS	11/25/2020	23:41	
177	20111574-33AMSD	20111574-33AMSD	11/25/2020	23:46	
184	CCV	CCV	11/26/2020	00:21	
185	CCB	CCB	11/26/2020	00:26	
186	MBLK-168177	MBLK-168177	11/26/2020	00:31	
187	LCS-168177	LCS-168177	11/26/2020	00:37	
188	IDA001:DU-D8:S000010	20111574-35	11/26/2020	00:42	
189	IDA001:DU-E8:S000010	20111574-37	11/26/2020	00:47	
190	IDA001:DU-E7:S000010	20111574-39	11/26/2020	00:52	
191	IDA001:DU-D7:S000010	20111574-41	11/26/2020	00:57	
192	IDA001:DU-C7:S000010	20111574-43	11/26/2020	01:02	
193	IDA001:DU-B7:S000010	20111574-45	11/26/2020	01:07	
194	IDA001:DU-A7:S000010	20111574-47	11/26/2020	01:12	
195	IDA001:DU-A6:S000010	20111574-49	11/26/2020	01:17	
196	CCV	CCV	11/26/2020	01:22	
198	CCB	CCB	11/26/2020	01:32	
199	IDA001:DU-B6:S000010	20111574-51	11/26/2020	01:37	
200	IDA001:DU-C6:S000010	20111574-53	11/26/2020	01:42	
201	IDA001:DU-C6-TE:S000010	20111574-55	11/26/2020	01:48	
202	IDA001:DU-C6-TS:S000010	20111574-56	11/26/2020	01:53	
203	IDA001:DU-D6:S000010	20111574-57	11/26/2020	01:58	
204	IDA001:DU-E6:S000010	20111574-59	11/26/2020	02:03	
205	20111574-59AMS	20111574-59AMS	11/26/2020	02:08	
206	20111574-59AMSD	20111574-59AMSD	11/26/2020	02:13	
209	CCV	CCV	11/26/2020	02:28	
211	CCB	CCB	11/26/2020	02:38	
216	IDA001:DU-B6:S000010	20111574-52	11/26/2020	03:04	
217	IDA001:DU-E9:S000010	20111574-16	11/26/2020	03:09	
219	CCV	CCV	11/26/2020	03:19	
220	CCB	CCB	11/26/2020	03:24	

Analysis Method: SW6010D **Analysis Lot:**ICP2_201129B
Instrument ID:ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/29/2020	18:28	
2	ICAL2	ICAL2	11/29/2020	18:33	
3	ICAL3	ICAL3	11/29/2020	18:39	
4	ICAL4	ICAL4	11/29/2020	18:43	
5	ICAL5	ICAL5	11/29/2020	18:48	
9	ICVLL	ICVLL	11/29/2020	19:09	
10	ICSA	ICSA	11/29/2020	19:14	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201129B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
11	LDR1	LDR1	11/29/2020	19:19	
12	LDR2	LDR2	11/29/2020	19:24	
15	CCV	CCV	11/29/2020	19:40	
16	CCB	CCB	11/29/2020	19:45	
27	CCV	CCV	11/29/2020	20:40	
28	CCB	CCB	11/29/2020	20:45	
29	IDA001:DU-E5:S000010	20111574-05	11/29/2020	20:50	
30	IDA001:DU-D5:S000010	20111574-11	11/29/2020	20:55	
31	IDA001:DU-E9:S000010	20111574-15	11/29/2020	21:00	
32	IDA001:DU-E9-TE:S000010	20111574-17	11/29/2020	21:05	
33	IDA001:DU-E9-TS:S000010	20111574-18	11/29/2020	21:10	
34	IDA001:DU-B9:S000010	20111574-23	11/29/2020	21:15	
35	IDA001:DU-A9:S000010	20111574-25	11/29/2020	21:21	
40	CCV	CCV	11/29/2020	21:46	
41	CCB	CCB	11/29/2020	21:51	
47	IDA001:DU-B6:S000010	20111574-51	11/29/2020	22:21	
48	IDA001:DU-C6-TS:S000010	20111574-56	11/29/2020	22:26	
51	20111574-59ASD	20111574-59ASD	11/29/2020	22:41	
52	CCV	CCV	11/29/2020	22:46	
53	CCB	CCB	11/29/2020	22:51	
54	20111574-59APDS	20111574-59APDS	11/29/2020	22:56	
64	CCV	CCV As high out.	11/29/2020	23:47	
66	CCB	CCB	11/29/2020	23:57	
77	CCV	CCV As high out	11/30/2020	00:52	
79	CCB	CCB	11/30/2020	01:02	
90	CCV	CCV As high out.	11/30/2020	01:57	
92	CCB	CCB	11/30/2020	02:06	
103	CCV	CCV As high out.	11/30/2020	03:01	
105	CCB	CCB	11/30/2020	03:10	

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/30/2020	14:25	
2	ICAL2	ICAL2	11/30/2020	14:30	
3	ICAL3	ICAL3	11/30/2020	14:35	
4	ICAL4	ICAL4	11/30/2020	14:40	
5	ICAL5	ICAL5	11/30/2020	14:45	
9	ICVLL	ICVLL	11/30/2020	15:05	
10	ICSA	ICSA	11/30/2020	15:10	
11	LDR1	LDR1	11/30/2020	15:15	
15	CCV	CCV	11/30/2020	15:37	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
16	CCB	CCB	11/30/2020	15:41	
25	CCV	CCV	11/30/2020	16:39	
26	CCB	CCB	11/30/2020	16:44	
37	CCV	CCV	11/30/2020	17:40	
38	CCB	CCB	11/30/2020	17:44	
49	CCV	CCV	11/30/2020	18:41	
50	CCB	CCB	11/30/2020	18:46	
61	CCV	CCV	11/30/2020	19:42	
62	CCB	CCB	11/30/2020	19:47	
73	CCV	CCV	11/30/2020	20:44	
74	CCB	CCB	11/30/2020	20:49	
86	CCV	CCV	11/30/2020	21:50	
87	CCB	CCB	11/30/2020	21:55	
98	CCV	CCV	11/30/2020	22:51	
99	CCB	CCB	11/30/2020	22:56	
110	CCV	CCV	11/30/2020	23:52	
111	CCB	CCB	11/30/2020	23:57	
122	CCV	CCV	12/01/2020	00:53	
123	CCB	CCB	12/01/2020	00:58	
134	CCV	CCV	12/01/2020	01:55	
135	CCB	CCB	12/01/2020	02:00	
146	CCV	CCV	12/01/2020	02:57	
147	CCB	CCB	12/01/2020	03:02	
149	CCV	CCV	12/01/2020	03:12	
150	CCB	CCB	12/01/2020	03:17	

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	12/01/2020	11:24	
2	ICAL2	ICAL2	12/01/2020	11:29	
3	ICAL3	ICAL3	12/01/2020	11:34	
4	ICAL4	ICAL4	12/01/2020	11:39	
5	ICAL5	ICAL5	12/01/2020	11:44	
9	ICVLL	ICVLL	12/01/2020	12:03	
10	ICSA	ICSA	12/01/2020	12:09	
15	CCV	CCV	12/01/2020	12:35	
16	CCB	CCB	12/01/2020	12:40	
28	CCV	CCV	12/01/2020	13:41	
29	CCB	CCB	12/01/2020	13:46	
40	CCV	CCV	12/01/2020	14:53	
41	CCB	CCB	12/01/2020	14:58	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
53	CCV	CCV	12/01/2020	16:00	
54	CCB	CCB	12/01/2020	16:04	
66	CCV	CCV	12/01/2020	17:07	
67	CCB	CCB	12/01/2020	17:12	
78	CCV	CCV	12/01/2020	18:10	
79	CCB	CCB	12/01/2020	18:15	
91	CCV	CCV	12/01/2020	19:17	
92	CCB	CCB	12/01/2020	19:22	
103	CCV	CCV	12/01/2020	20:25	
105	CCB	CCB	12/01/2020	20:35	
116	CCV	CCV	12/01/2020	21:31	
118	CCB	CCB	12/01/2020	21:41	
130	CCV	CCV	12/01/2020	22:42	
131	CCB	CCB	12/01/2020	22:47	
143	CCV	CCV	12/01/2020	23:50	
144	CCB	CCB	12/01/2020	23:55	
154	CCV	CCV	12/02/2020	00:46	
155	CCB	CCB	12/02/2020	00:51	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201125A

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
ICAL1	1	11/25/20 08:31			X														X							
ICAL2	1	11/25/20 08:37			X														X							
ICAL3	1	11/25/20 08:42			X														X							
ICAL4	1	11/25/20 08:47			X														X							
ICAL5	1	11/25/20 08:52			X														X							
ICV/QCS	1	11/25/20 08:57			X														X							
ICB	1	11/25/20 09:02			X														X							
ICSA	1	11/25/20 09:17			X														X							
CCV	1	11/25/20 09:43			X														X							
CCB	1	11/25/20 09:48			X														X							
ZZZZZZ	100	11/25/20 10:09															X									
ZZZZZZ	100	11/25/20 10:14															X				X					
ZZZZZZ	10	11/25/20 10:24						X									X				X					
ZZZZZZ	1	11/25/20 10:29																			X					
ZZZZZZ	1	11/25/20 10:34																			X					
ZZZZZZ	1	11/25/20 10:40																			X					
ZZZZZZ	1	11/25/20 10:45																			X					
CCV	1	11/25/20 10:50			X														X							
CCB	1	11/25/20 10:55			X														X							
ZZZZZZ	1	11/25/20 11:00																			X					
ZZZZZZ	10	11/25/20 11:15						X																		
ZZZZZZ	1	11/25/20 11:31	X		X	X			X		X								X		X					
ZZZZZZ	1	11/25/20 11:46	X		X	X			X		X								X		X					
CCV	1	11/25/20 11:51			X														X							
CCB	1	11/25/20 11:56			X														X							
ZZZZZZ	1	11/25/20 12:01	X		X	X			X		X								X		X					
MBLK-168174	1	11/25/20 12:06			X														X							
LCS-168174	1	11/25/20 12:11			X														X							
IDA001:DU-A7:S000010	1	11/25/20 12:16			X														X							
20111574-48AMS	1	11/25/20 12:22			X														X							
20111574-48AMSD	1	11/25/20 12:27			X														X							
IDA001:DU-A6:S000010	1	11/25/20 12:32			X														X							
IDA001:DU-B6:S000010	1	11/25/20 12:37			X																					
IDA001:DU-C6:S000010	1	11/25/20 12:42			X														X							

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201125A

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	KG	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-D6:S000010	1	11/25/20 12:47			X														X							
CCV	1	11/25/20 12:52			X														X							
CCB	1	11/25/20 12:57			X														X							
IDA001:DU-E6:S000010	1	11/25/20 13:02			X														X							
ZZZZZZ	1	11/25/20 13:07		X	X								X													
ZZZZZZ	1	11/25/20 13:13		X	X								X													
ZZZZZZ	1	11/25/20 13:18		X	X								X													
ZZZZZZ	1	11/25/20 13:23		X	X								X													
MBLK-168173	1	11/25/20 13:28			X														X							
LCS-168173	1	11/25/20 13:33			X														X							
IDA001:DU-C1:S000010	1	11/25/20 13:38			X														X							
20111574-02AMS	1	11/25/20 13:43			X														X							
20111574-02AMSD	1	11/25/20 13:48			X														X							
CCV	1	11/25/20 13:53			X														X							
CCB	1	11/25/20 13:58			X														X							
IDA001:DU-D1:S000010	1	11/25/20 14:04			X														X							
IDA001:DU-E5:S000010	1	11/25/20 14:09			X														X							
IDA001:DU-B5:S000010	1	11/25/20 14:14			X														X							
IDA001:DU-C5:S000010	1	11/25/20 14:19			X														X							
IDA001:DU-D5:S000010	1	11/25/20 14:24			X														X							
IDA001:DU-E9:S000010	1	11/25/20 14:29			X																					
IDA001:DU-D9:S000010	1	11/25/20 14:34			X														X							
IDA001:DU-C9:S000010	1	11/25/20 14:39			X														X							
IDA001:DU-B9:S000010	1	11/25/20 14:45			X														X							
IDA001:DU-A9:S000010	1	11/25/20 14:50			X														X							
CCV	1	11/25/20 14:55			X														X							
CCB	1	11/25/20 15:00			X														X							
IDA001:DU-A8:S000010	1	11/25/20 15:05			X														X							

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201125A

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-B8:S000010	1	11/25/20 15:10			X														X							
IDA001:DU-C8:S000010	1	11/25/20 15:15			X														X							
IDA001:DU-D8:S000010	1	11/25/20 15:20			X														X							
IDA001:DU-E8:S000010	1	11/25/20 15:26			X														X							
IDA001:DU-E7:S000010	1	11/25/20 15:31			X														X							
IDA001:DU-D7:S000010	1	11/25/20 15:36			X														X							
IDA001:DU-C7:S000010	1	11/25/20 15:41			X														X							
IDA001:DU-B7:S000010	1	11/25/20 15:46			X														X							
CCV	1	11/25/20 15:56			X														X							
CCB	1	11/25/20 16:01			X														X							
ZZZZZZ	1	11/25/20 16:19											X			X										
ZZZZZZ	1	11/25/20 16:24											X			X										
ZZZZZZ	1	11/25/20 16:30											X			X										
ZZZZZZ	1	11/25/20 16:45											X			X										
ZZZZZZ	1	11/25/20 17:01																	X							
CCV	1	11/25/20 17:06			X														X							
CCB	1	11/25/20 17:11			X														X							
ZZZZZZ	1	11/25/20 17:16																	X							
ZZZZZZ	1	11/25/20 17:21																	X							
ZZZZZZ	1	11/25/20 17:27																	X							
ZZZZZZ	1	11/25/20 17:32																	X							
ZZZZZZ	1	11/25/20 17:37																	X							
ZZZZZZ	1	11/25/20 17:42																	X							
ZZZZZZ	1	11/25/20 17:47																	X							
ZZZZZZ	1	11/25/20 17:52																	X							
ZZZZZZ	1	11/25/20 17:57																	X							
ZZZZZZ	1	11/25/20 18:03																	X							
CCV	1	11/25/20 18:08			X														X							
CCB	1	11/25/20 18:13			X														X							
ZZZZZZ	1	11/25/20 18:18																	X							
ZZZZZZ	1	11/25/20 18:23																	X							
ZZZZZZ	1	11/25/20 18:28																	X							
ZZZZZZ	1	11/25/20 18:33																	X							

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201125A

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
ZZZZZZ	10	11/25/20 18:38				X		X					X	X	X	X	X					X	X			
ZZZZZZ	1	11/25/20 18:54																	X							
ZZZZZZ	1	11/25/20 18:59																	X							
ZZZZZZ	1	11/25/20 19:04																	X							
CCV	1	11/25/20 19:09			X														X							
CCB	1	11/25/20 19:14			X														X							
ZZZZZZ	1	11/25/20 19:19																	X							
ZZZZZZ	1	11/25/20 19:24																	X							
ZZZZZZ	1	11/25/20 19:32																	X							
ZZZZZZ	1	11/25/20 19:37																	X							
ZZZZZZ	1	11/25/20 19:42																	X							
ZZZZZZ	1	11/25/20 19:47																	X							
ZZZZZZ	1	11/25/20 19:52																	X							
ZZZZZZ	1	11/25/20 19:58																	X							
ZZZZZZ	1	11/25/20 20:03																	X							
ZZZZZZ	1	11/25/20 20:08																	X							
CCV	1	11/25/20 20:13			X														X							
CCB	1	11/25/20 20:18			X														X							
ZZZZZZ	1	11/25/20 20:23																	X							
ZZZZZZ	1	11/25/20 20:28																	X							
ZZZZZZ	1	11/25/20 20:33																	X							
ZZZZZZ	1	11/25/20 20:49																	X							
ZZZZZZ	1	11/25/20 21:04																	X							
ZZZZZZ	1	11/25/20 21:09																	X							
CCV	1	11/25/20 21:14			X														X							
CCB	1	11/25/20 21:19			X														X							
MBLK-168176	1	11/25/20 21:24			X														X							
LCS-168176	1	11/25/20 21:29			X														X							
IDA001:DU-C1:S000010	10	11/25/20 21:34			X														X							
IDA001:DU-D1:S000010	10	11/25/20 21:40			X														X							
IDA001:DU-E5:S000010	10	11/25/20 21:45			X																					
IDA001:DU-B5:S000010	10	11/25/20 21:50			X														X							
IDA001:DU-C5:S000010	10	11/25/20 21:55			X														X							
IDA001:DU-D5:S000010	10	11/25/20 22:00			X																					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201125A

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-D5-TE:S000010	10	11/25/20 22:05			X														X							
IDA001:DU-D5-TS:S000010	10	11/25/20 22:10			X														X							
CCV	1	11/25/20 22:15			X														X							
CCB	1	11/25/20 22:20			X														X							
IDA001:DU-E9:S000010	10	11/25/20 22:25			X																					
IDA001:DU-E9-TE:S000010	10	11/25/20 22:30			X																					
IDA001:DU-E9-TS:S000010	10	11/25/20 22:35			X																					
IDA001:DU-D9:S000010	10	11/25/20 22:40			X														X							
IDA001:DU-C9:S000010	10	11/25/20 22:45			X														X							
IDA001:DU-B9:S000010	10	11/25/20 22:50			X																					
IDA001:DU-A9:S000010	10	11/25/20 22:56			X																					
IDA001:DU-A8:S000010	10	11/25/20 23:01			X														X							
IDA001:DU-A8-TE:S000010	10	11/25/20 23:06			X														X							
IDA001:DU-A8-TS:S000010	10	11/25/20 23:11			X														X							
CCV	1	11/25/20 23:21			X														X							
CCB	1	11/25/20 23:26			X														X							
IDA001:DU-B8:S000010	10	11/25/20 23:31			X														X							
IDA001:DU-C8:S000010	10	11/25/20 23:36			X														X							
20111574-33AMS	10	11/25/20 23:41			X														X							
20111574-33AMSD	10	11/25/20 23:46			X														X							
ZZZZZZ	1	11/26/20 00:01	X		X	X			X		X										X					
ZZZZZZ	1	11/26/20 00:16	X		X	X			X		X								X		X					
CCV	1	11/26/20 00:21			X														X							
CCB	1	11/26/20 00:26			X														X							
MBLK-168177	1	11/26/20 00:31			X														X							
LCS-168177	1	11/26/20 00:37			X														X							
IDA001:DU-D8:S000010	10	11/26/20 00:42			X														X							
IDA001:DU-E8:S000010	10	11/26/20 00:47			X														X							

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201125A

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE	K	MG	MN	NA	NI	PB	SB	SE	SI	SR	TL	V	ZN
IDA001:DU-E7:S000010	10	11/26/20 00:52			X														X							
IDA001:DU-D7:S000010	10	11/26/20 00:57			X														X							
IDA001:DU-C7:S000010	10	11/26/20 01:02			X														X							
IDA001:DU-B7:S000010	10	11/26/20 01:07			X														X							
IDA001:DU-A7:S000010	10	11/26/20 01:12			X														X							
IDA001:DU-A6:S000010	10	11/26/20 01:17			X														X							
CCV	1	11/26/20 01:22			X														X							
CCB	1	11/26/20 01:32			X														X							
IDA001:DU-B6:S000010	10	11/26/20 01:37			X																					
IDA001:DU-C6:S000010	10	11/26/20 01:42			X														X							
IDA001:DU-C6-TE:S000010	10	11/26/20 01:48			X														X							
IDA001:DU-C6-TS:S000010	10	11/26/20 01:53			X																					
IDA001:DU-D6:S000010	10	11/26/20 01:58			X														X							
IDA001:DU-E6:S000010	10	11/26/20 02:03			X														X							
20111574-59AMS	10	11/26/20 02:08			X														X							
20111574-59AMSD	10	11/26/20 02:13			X														X							
ZZZZZZ	1	11/26/20 02:18	X		X	X	X		X	X		X	X	X		X	X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:23	X		X	X	X		X	X		X	X	X		X	X	X	X	X	X			X	X	X
CCV	1	11/26/20 02:28			X														X							
CCB	1	11/26/20 02:38			X														X							
ZZZZZZ	1	11/26/20 02:43	X		X	X	X		X	X		X	X	X		X	X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:49	X		X	X	X		X	X		X	X	X			X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:54	X		X	X	X		X	X		X	X	X			X	X	X	X	X			X	X	X
ZZZZZZ	1	11/26/20 02:59	X		X	X	X		X	X		X	X	X			X	X	X	X	X			X	X	X
IDA001:DU-B6:S000010	10	11/26/20 03:04																	X							
IDA001:DU-E9:S000010	10	11/26/20 03:09																	X							
CCV	1	11/26/20 03:19			X														X							
CCB	1	11/26/20 03:24			X														X							

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201129B

Sample	Dilution Factor	Date/Time	AL	AS	CA	CR	CU	FE	MG	MN	PB	ZN
ICAL1	1	11/29/20 18:28		X							X	
ICAL2	1	11/29/20 18:33		X							X	
ICAL3	1	11/29/20 18:39		X							X	
ICAL4	1	11/29/20 18:43		X							X	
ICAL5	1	11/29/20 18:48		X							X	
ICV/QCS	1	11/29/20 18:53		X							X	
ICB	1	11/29/20 18:58		X							X	
ICSA	1	11/29/20 19:14		X							X	
CCV	1	11/29/20 19:40		X							X	
CCB	1	11/29/20 19:45		X							X	
CCV	1	11/29/20 20:40		X							X	
CCB	1	11/29/20 20:45		X							X	
IDA001:DU-E5:S000010	100	11/29/20 20:50									X	
IDA001:DU-D5:S000010	100	11/29/20 20:55									X	
IDA001:DU-E9:S000010	100	11/29/20 21:00									X	
IDA001:DU-E9-TE:S000010	100	11/29/20 21:05									X	
IDA001:DU-E9-TS:S000010	100	11/29/20 21:10									X	
IDA001:DU-B9:S000010	100	11/29/20 21:15									X	
IDA001:DU-A9:S000010	100	11/29/20 21:21									X	
ZZZZZZ	100	11/29/20 21:26									X	
CCV	1	11/29/20 21:46		X							X	
CCB	1	11/29/20 21:51		X							X	
ZZZZZZ	10	11/29/20 21:56					X					X
IDA001:DU-B6:S000010	100	11/29/20 22:21									X	
IDA001:DU-C6-TS:S000010	100	11/29/20 22:26									X	
20111574-59ASD	50	11/29/20 22:41		X							X	
CCV	1	11/29/20 22:46		X							X	
CCB	1	11/29/20 22:51		X							X	
20111574-59APDS	10	11/29/20 22:56		X							X	
ZZZZZZ	100	11/29/20 23:01	X		X	X			X			
ZZZZZZ	100	11/29/20 23:06	X		X	X			X			
ZZZZZZ	100	11/29/20 23:11	X		X	X			X			

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201129B

Sample	Dilution Factor	Date/Time	AL	AS	CA	CR	CU	FE	MG	MN	PB	ZN
ZZZZZZ	100	11/29/20 23:16	X		X	X			X	X		
ZZZZZZ	100	11/29/20 23:21	X		X	X			X	X		
ZZZZZZ	100	11/29/20 23:26	X		X	X			X	X		
CCV	1	11/29/20 23:47		X							X	
CCB	1	11/29/20 23:57		X							X	
ZZZZZZ	1	11/30/20 00:12									X	
ZZZZZZ	1	11/30/20 00:37									X	
ZZZZZZ	1	11/30/20 00:42									X	
ZZZZZZ	1	11/30/20 00:47									X	
CCV	1	11/30/20 00:52		X							X	
CCB	1	11/30/20 01:02		X							X	
ZZZZZZ	1	11/30/20 01:07									X	
ZZZZZZ	1	11/30/20 01:12									X	
ZZZZZZ	1	11/30/20 01:17									X	
ZZZZZZ	1	11/30/20 01:22									X	
ZZZZZZ	1	11/30/20 01:27									X	
ZZZZZZ	1	11/30/20 01:32									X	
ZZZZZZ	1	11/30/20 01:37									X	
CCV	1	11/30/20 01:57		X							X	
CCB	1	11/30/20 02:06		X							X	
ZZZZZZ	1	11/30/20 02:21						X				
CCV	1	11/30/20 03:01		X							X	
CCB	1	11/30/20 03:10		X							X	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201201B

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 13:16	X																			
ZZZZZZ	1	12/01/20 13:21	X																			
ZZZZZZ	100	12/01/20 13:26															X					
ZZZZZZ	1	12/01/20 13:31	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
ZZZZZZ	1	12/01/20 14:03	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1	12/01/20 14:18	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	10	12/01/20 14:24			X												X					
ZZZZZZ	10	12/01/20 14:29			X												X					
ZZZZZZ	10	12/01/20 14:34			X												X					
ZZZZZZ	10	12/01/20 14:38			X												X					
ZZZZZZ	10	12/01/20 14:43			X												X					
ZZZZZZ	10	12/01/20 14:48			X												X					
ZZZZZZ	10	12/01/20 15:04			X												X					
ZZZZZZ	100	12/01/20 15:09															X					
ZZZZZZ	100	12/01/20 15:14															X					
ZZZZZZ	10	12/01/20 15:19															X					
ZZZZZZ	100	12/01/20 15:24								X												
ZZZZZZ	1	12/01/20 15:39										X										
ZZZZZZ	1	12/01/20 16:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:30										X					X					
ZZZZZZ	1	12/01/20 16:46										X										
ZZZZZZ	1	12/01/20 16:51										X					X					
ZZZZZZ	1	12/01/20 16:57										X										
ZZZZZZ	1	12/01/20 17:17										X					X					
ZZZZZZ	1	12/01/20 17:22										X										
ZZZZZZ	1	12/01/20 17:28										X					X					
ZZZZZZ	1	12/01/20 17:33										X										
ZZZZZZ	1	12/01/20 17:38															X					
ZZZZZZ	1	12/01/20 17:43															X					
ZZZZZZ	1	12/01/20 17:48															X					
ZZZZZZ	1	12/01/20 17:54															X					
ZZZZZZ	1	12/01/20 17:59															X					
ZZZZZZ	1	12/01/20 18:04															X					
ZZZZZZ	1	12/01/20 18:20	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:25	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:30	X		X	X		X		X							X		X			

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111574
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201201B

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 18:35	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:41	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:46	X					X		X						X	X					
ZZZZZZ	1	12/01/20 19:01	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:07	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:50	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:55	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:00	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:05	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:20	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
ZZZZZZ	1	12/01/20 20:51						X									X					
ZZZZZZ	1	12/01/20 20:56						X									X					
ZZZZZZ	1	12/01/20 21:01						X									X					
ZZZZZZ	1	12/01/20 21:06						X									X					
ZZZZZZ	1	12/01/20 21:11						X									X					
ZZZZZZ	1	12/01/20 21:16						X									X					
ZZZZZZ	1	12/01/20 21:21						X									X					
ZZZZZZ	1	12/01/20 21:26						X									X					
ZZZZZZ	1	12/01/20 21:46						X									X					
ZZZZZZ	1	12/01/20 21:51						X									X					
ZZZZZZ	1	12/01/20 22:16			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:22			X												X					
ZZZZZZ	1	12/01/20 22:27			X	X	X	X								X	X	X	X	X		
ZZZZZZ	1	12/01/20 22:32			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:53			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:58			X	X		X									X		X			
ZZZZZZ	10	12/01/20 23:08				X						X			X							
ZZZZZZ	10	12/01/20 23:13				X						X										
ZZZZZZ	10	12/01/20 23:19				X						X			X							
ZZZZZZ	10	12/01/20 23:24				X						X			X							
ZZZZZZ	10	12/01/20 23:29				X						X			X							
ZZZZZZ	10	12/01/20 23:34				X						X			X							
ZZZZZZ	10	12/01/20 23:40				X						X										
ZZZZZZ	1	12/02/20 00:00	X		X	X		X									X		X			

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168176
Analytical Method: SW6010D **Extraction Date:** 11/23/20 16:25

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-C1:S000010	20111574-01A	11/13/20	11/17/20	0.673 g	50 mL	85
IDA001:DU-D1:S000010	20111574-03A	11/13/20	11/17/20	0.684 g	50 mL	95.1
IDA001:DU-E5:S000010	20111574-05A	11/12/20	11/17/20	0.624 g	50 mL	85
IDA001:DU-B5:S000010	20111574-07A	11/12/20	11/17/20	0.656 g	50 mL	92.7
IDA001:DU-C5:S000010	20111574-09A	11/12/20	11/17/20	0.633 g	50 mL	85
IDA001:DU-D5:S000010	20111574-11A	11/12/20	11/17/20	0.781 g	50 mL	84
IDA001:DU-D5-TE:S000010	20111574-13A	11/12/20	11/17/20	0.762 g	50 mL	86
IDA001:DU-D5-TS:S000010	20111574-14A	11/12/20	11/17/20	0.716 g	50 mL	83
IDA001:DU-E9:S000010	20111574-15A	11/14/20	11/17/20	0.729 g	50 mL	89
IDA001:DU-E9-TE:S000010	20111574-17A	11/14/20	11/17/20	0.701 g	50 mL	89
IDA001:DU-E9-TS:S000010	20111574-18A	11/14/20	11/17/20	0.722 g	50 mL	89
IDA001:DU-D9:S000010	20111574-19A	11/14/20	11/17/20	0.653 g	50 mL	88
IDA001:DU-C9:S000010	20111574-21A	11/14/20	11/17/20	0.646 g	50 mL	83
IDA001:DU-B9:S000010	20111574-23A	11/14/20	11/17/20	0.774 g	50 mL	89
IDA001:DU-A9:S000010	20111574-25A	11/14/20	11/17/20	0.793 g	50 mL	87
IDA001:DU-A8:S000010	20111574-27A	11/14/20	11/17/20	0.63 g	50 mL	88
IDA001:DU-A8-TE:S000010	20111574-29A	11/14/20	11/17/20	0.767 g	50 mL	89
IDA001:DU-A8-TS:S000010	20111574-30A	11/14/20	11/17/20	0.695 g	50 mL	82
IDA001:DU-B8:S000010	20111574-31A	11/14/20	11/17/20	0.726 g	50 mL	90.1
IDA001:DU-C8:S000010	20111574-33A	11/14/20	11/17/20	0.764 g	50 mL	94.2
Matrix Spike	20111574-33AMS	NA	NA	0.784 g	50 mL	0
Duplicate Matrix Spike	20111574-33AMSD	NA	NA	0.779 g	50 mL	0
LCS-168176	LCS-168176	NA	NA	1 g	50 mL	0
MBLK-168176	MBLK-168176	NA	NA	1 g	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168173
Analytical Method: SW6010D **Extraction Date:** 11/23/20 13:04

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-C1:S000010	20111574-02A	11/13/20	11/17/20	2.5 mL	27.5 mL	0
Matrix Spike	20111574-02AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111574-02AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-D1:S000010	20111574-04A	11/13/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E5:S000010	20111574-06A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B5:S000010	20111574-08A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C5:S000010	20111574-10A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D5:S000010	20111574-12A	11/12/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E9:S000010	20111574-16A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D9:S000010	20111574-20A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C9:S000010	20111574-22A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B9:S000010	20111574-24A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-A9:S000010	20111574-26A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-A8:S000010	20111574-28A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B8:S000010	20111574-32A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C8:S000010	20111574-34A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D8:S000010	20111574-36A	11/14/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E8:S000010	20111574-38A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E7:S000010	20111574-40A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D7:S000010	20111574-42A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C7:S000010	20111574-44A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B7:S000010	20111574-46A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
LCS-168173	LCS-168173	NA	NA	25 mL	27.5 mL	0
MBLK-168173	MBLK-168173	NA	NA	25 mL	27.5 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168177
Analytical Method: SW6010D **Extraction Date:** 11/23/20 16:26

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-D8:S000010	20111574-35A	11/14/20	11/17/20	0.615 g	50 mL	92.1
IDA001:DU-E8:S000010	20111574-37A	11/15/20	11/17/20	0.747 g	50 mL	85
IDA001:DU-E7:S000010	20111574-39A	11/15/20	11/17/20	0.669 g	50 mL	80
IDA001:DU-D7:S000010	20111574-41A	11/15/20	11/17/20	0.745 g	50 mL	85
IDA001:DU-C7:S000010	20111574-43A	11/15/20	11/17/20	0.661 g	50 mL	88
IDA001:DU-B7:S000010	20111574-45A	11/15/20	11/17/20	0.784 g	50 mL	74
IDA001:DU-A7:S000010	20111574-47A	11/15/20	11/17/20	0.728 g	50 mL	83
IDA001:DU-A6:S000010	20111574-49A	11/15/20	11/17/20	0.765 g	50 mL	83
IDA001:DU-B6:S000010	20111574-51A	11/15/20	11/17/20	0.758 g	50 mL	89
IDA001:DU-C6:S000010	20111574-53A	11/15/20	11/17/20	0.632 g	50 mL	87
IDA001:DU-C6-TE:S000010	20111574-55A	11/15/20	11/17/20	0.694 g	50 mL	88
IDA001:DU-C6-TS:S000010	20111574-56A	11/15/20	11/17/20	0.778 g	50 mL	83
IDA001:DU-D6:S000010	20111574-57A	11/15/20	11/17/20	0.635 g	50 mL	84
IDA001:DU-E6:S000010	20111574-59A	11/15/20	11/17/20	0.711 g	50 mL	90.5
Matrix Spike	20111574-59AMS	NA	NA	0.741 g	50 mL	0
Duplicate Matrix Spike	20111574-59AMSD	NA	NA	0.717 g	50 mL	0
LCS-168177	LCS-168177	NA	NA	1 g	50 mL	0
MBLK-168177	MBLK-168177	NA	NA	1 g	50 mL	0

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111574
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168174
Analytical Method: SW6010D **Extraction Date:** 11/23/20 14:06

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-A7:S000010	20111574-48A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
Matrix Spike	20111574-48AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111574-48AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-A6:S000010	20111574-50A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-B6:S000010	20111574-52A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-C6:S000010	20111574-54A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-D6:S000010	20111574-58A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
IDA001:DU-E6:S000010	20111574-60A	11/15/20	11/17/20	2.5 mL	27.5 mL	0
LCS-168174	LCS-168174	NA	NA	25 mL	27.5 mL	0
MBLK-168174	MBLK-168174	NA	NA	25 mL	27.5 mL	0

ALS Group, USA

PREP BATCH REPORT

Batch ID: 168176 Prep Code: MP_6010_S

Start Date: 11/23/2020 1:47:53 PM End Date: 11/23/2020 4:25:57 PM

Technician: Kate Achatz

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-01A	Soil		0.673		0	50	74.2942
20111574-03A	Soil		0.684		0	50	73.0994
20111574-05A	Soil		0.624		0	50	80.1282
20111574-07A	Soil		0.656		0	50	76.2195
20111574-09A	Soil		0.633		0	50	78.9889
20111574-11A	Soil		0.781		0	50	64.0205
20111574-13A	Soil		0.762		0	50	65.6168
20111574-14A	Soil		0.716		0	50	69.8324
20111574-15A	Soil		0.729		0	50	68.5871
20111574-17A	Soil		0.701		0	50	71.3267
20111574-18A	Soil		0.722		0	50	69.2521
20111574-19A	Soil		0.653		0	50	76.5697
20111574-21A	Soil		0.646		0	50	77.3994
20111574-23A	Soil		0.774		0	50	64.5995
20111574-25A	Soil		0.793		0	50	63.0517
20111574-27A	Soil		0.63		0	50	79.3651
20111574-29A	Soil		0.767		0	50	65.189
20111574-30A	Soil		0.695		0	50	71.9424
20111574-31A	Soil		0.726		0	50	68.8705
20111574-33A	Soil		0.764		0	50	65.445
20111574-33AMS	Soil		0.784		0	50	63.7755
20111574-33AMS	Soil		0.779		0	50	64.1849
LCS-168176			1		0	50	50
MBLK-168176			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168173** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 11:58:46 AM** End Date: **11/23/2020 1:04:09 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-02A	Tclp Extract			2.5	0	27.5	11
20111574-02AMS	Tclp Extract			2.5	0	27.5	11
20111574-02AMS	Tclp Extract			2.5	0	27.5	11
20111574-04A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-06A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-08A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-10A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-12A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-16A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-20A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-22A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-24A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-26A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-28A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: 168177 Prep Code: MP_6010_S

Start Date: 11/23/2020 1:48:56 PM End Date: 11/23/2020 4:26:34 PM

Technician: Kate Achatz

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-35A	Soil		0.615		0	50	81.3008
20111574-37A	Soil		0.747		0	50	66.9344
20111574-39A	Soil		0.669		0	50	74.7384
20111574-41A	Soil		0.745		0	50	67.1141
20111574-43A	Soil		0.661		0	50	75.643
20111574-45A	Soil		0.784		0	50	63.7755
20111574-47A	Soil		0.728		0	50	68.6813
20111574-49A	Soil		0.765		0	50	65.3595
20111574-51A	Soil		0.758		0	50	65.9631
20111574-53A	Soil		0.632		0	50	79.1139
20111574-55A	Soil		0.694		0	50	72.0461
20111574-56A	Soil		0.778		0	50	64.2674
20111574-57A	Soil		0.635		0	50	78.7402
20111574-59A	Soil		0.711		0	50	70.3235
20111574-59AMS	Soil		0.741		0	50	67.4764
20111574-59AMS	Soil		0.717		0	50	69.735
20111726-01A	Soil		0.696		0	50	71.8391
20111726-08A	Soil		0.701		0	50	71.3267
20111726-14A	Soil		0.695		0	50	71.9424
20111726-21A	Soil		0.779		0	50	64.1849
20111726-22A	Soil		0.664		0	50	75.3012
20111726-28A	Soil		0.638		0	50	78.3699
LCS-168177			1		0	50	50
MBLK-168177			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168173** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 11:58:46 AM** End Date: **11/23/2020 1:04:09 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-32A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-34A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-36A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-38A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-40A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-42A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-44A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
20111574-46A	Tclp Extract	<2		2.5	0	27.5	11
	11/23 @ 11:32 AM						
LCS-168173				25	0	27.5	1.1
MBLK-168173				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168174** Prep Code: **MP_3015A_6010**

Start Date: **11/23/2020 1:05:54 PM** End Date: **11/23/2020 2:06:35 PM**

Technician: **Megan Potter**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111574-48A	Tclp Extract			2.5	0	27.5	11
20111574-48AMS	Tclp Extract			2.5	0	27.5	11
20111574-48AMS	Tclp Extract			2.5	0	27.5	11
20111574-50A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-52A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-54A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-58A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111574-60A	Tclp Extract	<2		2.5	0	27.5	11
11/23 @ 11:32 AM							
20111734-02B	Water			25	0	27.5	1.1
20111734-03B	Water			25	0	27.5	1.1
20111734-04B	Water			25	0	27.5	1.1
20111734-05B	Water			25	0	27.5	1.1
LCS-168174				25	0	27.5	1.1
MBLK-168174				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-10-12; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP-HN-MET-016-R02*

11/13/20	7 days Analyze by	11/20/20
11/12/20	7 days Analyze by	11/19/20
11/14/20	7 days Analyze by	11/21/20
11/15/20	7 days Analyze by	11/22/20

Sample Date	Sample	Lab ID	Pan	Wet weight Sample	Final Dry Sample	% Solids	%solids Rptd	Date Analyzed
11/13/20	IDA001:DU-C1	20111574-01	1.078	6.2027	6.3701	85.3%	85.32	11/25/20
11/13/20	IDA001:DU-C1	20111574-02						
11/13/20	IDA001:DU-D1	20111574-03	1.0941	6.3095	7.0944	95.1%	95.1	11/25/20
11/13/20	IDA001:DU-D1	20111574-04						
11/12/20	IDA001:DU-E5	20111574-05	1.0908	6.3109	6.4858	85.5%	85.49	11/25/20
11/12/20	IDA001:DU-E5	20111574-06						
11/12/20	IDA001:DU-B5	20111574-07	1.1082	5.9248	6.6004	92.7%	92.7	11/25/20
11/12/20	IDA001:DU-B5	20111574-08						
11/12/20	IDA001:DU-C5	20111574-09	1.105	6.108	6.3113	85.2%	85.24	11/25/20
11/12/20	IDA001:DU-C5	20111574-10						
11/12/20	IDA001:DU-D5	20111574-11	1.0984	6.5043	6.5521	83.8%	83.85	11/25/20
11/12/20	IDA001:DU-D5	20111574-12						
11/12/20	IDA001:DU-D5 TE	20111574-13	1.0984	6.2625	6.5013	86.3%	86.27	11/25/20
11/12/20	IDA001:DU-D5 TS	20111574-14	1.0891	6.1533	6.1669	82.5%	82.52	11/25/20
11/14/20	IDA001:DU-E9	20111574-15	1.0862	6.8381	7.2025	89.4%	89.44	11/25/20
11/14/20	IDA001:DU-E9	20111574-16						
11/14/20	IDA001:DU-E9 TE	20111574-17	1.0915	6.3229	6.7251	89.1%	89.1	11/25/20
11/14/20	IDA001:DU-E9 TS	20111574-18	1.105	6.273	6.6626	88.6%	88.6	11/25/20
11/14/20	IDA001:DU-D9	20111574-19	1.0769	6.265	6.5781	87.8%	87.81	11/25/20
11/14/20	IDA001:DU-D9	20111574-20						
11/14/20	IDA001:DU-C9	20111574-21	1.0885	6.0934	6.1732	83.4%	83.45	11/25/20
11/14/20	IDA001:DU-C9	20111574-22						
11/14/20	IDA001:DU-B9	20111574-23	1.0828	6.2099	6.599	88.8%	88.83	11/25/20
11/14/20	IDA001:DU-B9	20111574-24						
11/14/20	IDA001:DU-A9	20111574-25	1.1109	6.5881	6.8132	86.6%	86.55	11/25/20
11/14/20	IDA001:DU-A9	20111574-26						
11/14/20	IDA001:DU-A8	20111574-27	1.097	5.9469	6.3538	88.4%	88.4	11/25/20
11/14/20	IDA001:DU-A8	20111574-28						
11/14/20	IDA001:DU-A8 TE	20111574-29	1.1025	6.8251	7.1659	88.8%	88.84	11/25/20
11/14/20	IDA001:DU-A8 TS	20111574-30	1.1134	6.0645	6.0561	81.5%	81.5	11/25/20
11/14/20	IDA001:DU-B8	20111574-31	1.0776	6.0861	6.5639	90.1%	90.14	11/25/20
11/14/20	IDA001:DU-B8	20111574-32						
11/14/20	IDA001:DU-C8	20111574-33	1.1023	5.552	6.3299	94.2%	94.16	11/25/20
11/14/20	IDA001:DU-C8	20111574-34						
11/14/20	IDA001:DU-D8	20111574-35	1.0923	5.5985	6.2476	92.1%	92.08	11/25/20
11/14/20	IDA001:DU-D8	20111574-36						
11/15/20	IDA001:DU-E8	20111574-37	1.1078	6.4801	6.6424	85.4%	85.41	11/25/20
11/15/20	IDA001:DU-E8	20111574-38						
11/15/20	IDA001:DU-E7	20111574-39	1.1148	6.9803	6.6952	79.9%	79.94	11/25/20
11/15/20	IDA001:DU-E7	20111574-40						
11/15/20	IDA001:DU-D7	20111574-41	1.1025	5.6364	5.8792	84.7%	84.75	11/25/20
11/15/20	IDA001:DU-D7	20111574-42						
11/15/20	IDA001:DU-C7	20111574-43	1.0948	6.8654	7.1467	88.2%	88.15	11/25/20
11/15/20	IDA001:DU-C7	20111574-44						
11/15/20	IDA001:DU-B7	20111574-45	1.098	6.4008	5.8196	73.8%	73.77	11/25/20
11/15/20	IDA001:DU-B7	20111574-46						
11/15/20	IDA001:DU-A7	20111574-47	1.1013	6.3886	6.407	83.0%	83.05	11/25/20
11/15/20	IDA001:DU-A7	20111574-48						
11/15/20	IDA001:DU-A6	20111574-49	1.1197	5.2055	5.4573	83.3%	83.33	11/25/20
11/15/20	IDA001:DU-A6	20111574-50						
11/15/20	IDA001:DU-B6	20111574-51	1.0928	5.1747	5.7074	89.2%	89.18	11/25/20
11/15/20	IDA001:DU-B6	20111574-52						
11/15/20	IDA001:DU-C6	20111574-53	1.0945	5.3747	5.7647	86.9%	86.89	11/25/20
11/15/20	IDA001:DU-C6	20111574-54						
11/15/20	IDA001:DU-C6 TE	20111574-55	1.0855	6.0621	6.4391	88.3%	88.31	11/25/20
11/15/20	IDA001:DU-C6 TS	20111574-56	1.0914	6.3658	6.3443	82.5%	82.52	11/25/20
11/15/20	IDA001:DU-D6	20111574-57	1.0924	6.3592	6.4585	84.4%	84.38	11/25/20
11/15/20	IDA001:DU-D6	20111574-58						
11/15/20	IDA001:DU-E6	20111574-59	1.1114	5.2575	5.8675	90.5%	90.46	11/25/20
11/15/20	IDA001:DU-E6	20111574-60						

COMPOUND	SAMPLE	DUPLICATE	RPD	Lab
	33			Value
	IDA001:DU-C8	dup		
%M	5.84	5.98	-2.4	2.37
53	IDA001:DU-C6	dup		
%M	13.11	19.21	-37.7	40.2

not all samples were not analyzed within 7 days - no qualification - 7 days is recommended

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	WBLKS	**Basis:**	Wet
Lab Code:	WBLKS		

General Chemistry

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/25/20 13:45	NA	
Moisture	SW3550C	0.10 U	% of sample	0.10	1	11/25/20 12:21	NA	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/25/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111574-33A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-C8:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111574-33A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	5.84	5.98	2.37	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/25/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111574-53A DUP	**Units:**	% of sample
Lab Code:	IDA001:DU-C6:S000010	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111574-53A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	13.11	19.7 R	40.2 *	10

doesn't match. raw data. raw data 19.21.

37.7.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project	IDA001/IDA001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	11/25/2020

Replicate Sample Summary
General Chemistry

Sample Name:	20111997-04A DUP	**Units:**	% of sample
Lab Code:	BatchQC	**Basis:**	Wet

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample 20111997-04A DUP Result	RPD	RPD Limit
Moisture	SW3550C	0.10	13.89	13.27	4.57	10

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201125A

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	100	100	100	98-102

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	HULL&ASSOC-DUBLIN	**Service Request:**	20111574
Project:	IDA001/IDA001	**Date Analyzed:**	11/25/2020
Sample Matrix:	Soil		

Lab Control Sample Summary
General Chemistry

Analysis Method:	SW3550C	**Units:**	% of sample
		Basis:	Wet
		Analysis Lot:	MOIST_201125B

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
LCS	LCS	99.98	100	100.0	98-102

Moisture

ALS Environmental

Analyst:	AJS			Date/Time In:	11/25/20 12:21 PM				Temp In Deg C:	104			
Review By:				Date/Time Out:	11/28/20 10:35 AM				Temp Out Deg C:	103			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_201125A				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	5			
WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.0866	0	0.0000				1.0868	0.02	0.02	Moisture
LCS		LCS	LCS	1.1006	0	6.616				7.7186	100.03	100.03	Moisture
20111997-04A	1	SAMP	E14	1.0852	0	6.959				7.0778	86.11	13.89	Moisture
2011997-04A DUP	1	DUP	E13	1.0897	0	7.0655				7.2179	86.73	13.27	Moisture
2011574-01A	1	SAMP	E12	1.078	0	6.2027				6.3701	85.32	14.68	Moisture
2011574-03A	1	SAMP	E22	1.0941	0	6.3095				7.0944	95.10	4.90	Moisture
2011574-05A	1	SAMP	E6	1.0908	0	6.3109				6.4858	85.49	14.51	Moisture
20111574-07A	1	SAMP	E11	1.1082	0	5.9248				6.6004	92.70	7.30	Moisture
20111574-09A	1	SAMP	E5	1.105	0	6.108				6.3113	85.24	14.76	Moisture
20111574-11A	1	SAMP	R21	1.0984	0	6.5043				6.5521	83.85	16.15	Moisture
20111574-14A	1	SAMP	E15	1.0891	0	6.1533				6.1669	82.52	17.48	Moisture
20111574-15A	1	SAMP	E16	1.0862	0	6.8381				7.2025	89.44	10.56	Moisture
20111574-13A	1	SAMP	E4	1.0984	0	6.2625				6.5013	86.27	13.73	Moisture
20111574-17A	1	SAMP	E8	1.0915	0	6.3229				6.7251	89.10	10.90	Moisture
20111574-17A DUP	1	DUP	E21	1.1092	0	6.4314					-17.25	117.25	Moisture
20111574-18A	1	SAMP	E3	1.105	0	6.273				6.6626	88.60	11.40	Moisture
20111571-19A	1	SAMP	E18	1.0769	0	6.265				6.5781	87.81	12.19	Moisture
20111574-21A	1	SAMP	E17	1.0885	0	6.0934				6.1732	83.45	16.55	Moisture
20111574-23A	1	SAMP	E9	1.0828	0	6.2099				6.599	88.83	11.17	Moisture
20111574-25A	1	SAMP	E2	1.1109	0	6.5881				6.8132	86.55	13.45	Moisture
20111574-27A	1	SAMP	E1	1.097	0	5.9469				6.3538	88.40	11.60	Moisture
20111574-29A	1	SAMP	E20	1.1025	0	6.8251				7.1659	88.84	11.16	Moisture
20111574-30A	1	SAMP	E7	1.1134	0	6.0645				6.0561	81.50	18.50	Moisture
20111574-31A	1	SAMP	E10	1.0776	0	6.0861				6.5639	90.14	9.86	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/28/2020 12:34PM	AJS

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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Moisture

ALS Environmental

Analyst:	AJS			Date/Time In:	11/25/20 1:45 PM				Temp In Deg C:	104			
Review By:				Date/Time Out:	11/28/2020 10:21AM				Temp Out Deg C:	103.5			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_201125B				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	9			
WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.0943	0	0.0000				1.0943	0.00	0.00	Moisture
LCS		LCS	LCS	1.0989	0	6.385				7.4826	99.98	99.98	Moisture
20111574-33A		SAMP	B16	1.1023	0	5.552				6.3299	94.16	5.84	Moisture
20111574-33A DUP		DUP	B11	1.1006	0	6.7798				7.4753	94.02	5.98	Moisture
20111574-35A		SAMP	Z6	1.0923	0	5.5985				6.2476	92.08	7.92	Moisture
20111574-37A		SAMP	B18	1.1078	0	6.4801				6.6424	85.41	14.59	Moisture
20111574-39A		SAMP	B5	1.1148	0	6.9803				6.6952	79.94	20.06	Moisture
20111574-41A		SAMP	B13	1.1025	0	5.6364				5.8792	84.75	15.25	Moisture
20111574-432A		SAMP	B2	1.0948	0	6.8654				7.1467	88.15	11.85	Moisture
20111574-45A		SAMP	Z5	1.098	0	6.4008				5.8196	73.77	26.23	Moisture
20111574-47A		SAMP	B1	1.1013	0	6.3886				6.407	83.05	16.95	Moisture
20111574-49A		SAMP	B8	1.1197	0	5.2055				5.4573	83.33	16.67	Moisture
20111574-51A		SAMP	Z16	1.0928	0	5.1747				5.7074	89.18	10.82	Moisture
20111574-53A		SAMP	Z7	1.0945	0	5.3747				5.7647	86.89	13.11	Moisture
20111574-53A DUP		DUP	Z9	1.0877	0	5.6753				5.6728	80.79	19.21	Moisture
20111574-55A		SAMP	B20	1.0855	0	6.0621				6.4391	88.31	11.69	Moisture
20111574-56A		SAMP	B21	1.0914	0	6.3658				6.3443	82.52	17.48	Moisture
20111574-57A		SAMP	B17	1.0924	0	6.3592				6.4585	84.38	15.62	Moisture
20111574-59A		SAMP	B4	1.1114	0	5.2575				5.8675	90.46	9.54	Moisture
20111367-02B		SAMP	B10	1.1002	0	7.2577				7.0816	82.41	17.59	Moisture
20112041-01A		SAMP	B15	1.0984	0	5.67				5.9037	84.75	15.25	Moisture
20111490-01A		SAMP	Z22	1.0893	0	8.5195				8.4491	86.39	13.61	Moisture
20111490-11A		SAMP	Z21	1.112	0	6.4803				6.4135	81.81	18.19	Moisture
20111571-01A		SAMP	Z4	1.0952	0	8.9309				7.5913	72.74	27.26	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/28/2020 11:31AM	AJS

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

20111574-432A is 20111574-43A

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TCLP

Batch			30 ± 2 rpm rotation	18 ± 2 hrs hours start	end	ex time	23 ± 2C temp	initial pH	If initial pH>5 add HCL and Heat HCl & Heat pH	pH<5; 1 4.93 + 0.05 pH> 5; 2 2.88 + 0.05 fluid	final pH	20x sample wt sample wt	vol ex fluid	date collected	Date TCLP	days elapsed
IDA001:DU-C1	20111574-01	solid		11/20/20	11/21/20											
IDA001:DU-C1	20111574-02	aqueous	30	15:25	9:35	19 hours	22.94-21.92	7.37	1.71	1/4.88	5.35	100.0	2000	11/13/20 11/13/20	11/20/20	7
IDA001:DU-D1	20111574-03	solid														
IDA001:DU-D1	20111574-04	aqueous	30	15:25	9:35	19 hours	22.94-21.92	8.93	1.80	1/4.88	5.08	100.2	2000	11/13/20 11/13/20	11/20/20	7
IDA001:DU-E5	20111574-05	solid														
IDA001:DU-E5	20111574-06	aqueous	30	15:25	9:35	19 hours	22.94-21.92	8.24	1.75	1/4.88	5.19	100.0	2000	11/12/20 11/12/20	11/20/20	8
IDA001:DU-B5	20111574-07	solid														
IDA001:DU-B5	20111574-08	aqueous	30	15:25	9:35	19 hours	22.94-21.92	8.91	1.62	1/4.88	5.34	100.2	2000	11/12/20 11/12/20	11/20/20	8
IDA001:DU-C5	20111574-09	solid														
IDA001:DU-C5	20111574-10	aqueous	30	15:25	9:35	19 hours	22.94-21.92	8.47	8.45	2/2.93	4.97	100.3	2000	11/12/20 11/12/20	11/20/20	8
IDA001:DU-D5	20111574-11	solid														
IDA001:DU-D5	20111574-12	aqueous	30	15:25	9:35	19 hours	22.94-21.92	8.51	2.07	1/4.88	7.33	100.0	2000	11/12/20 11/12/20	11/20/20	8
IDA001:DU-D5 TE	20111574-13	solid														
IDA001:DU-D5 TS	20111574-14	solid														
IDA001:DU-E9	20111574-15	solid														
IDA001:DU-E9	20111574-16	aqueous	30	15:25	9:35	19 hours	22.94-21.92	8.34	1.63	1/4.88	5.12	100.0	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-E9 TE	20111574-17	solid														
IDA001:DU-E9 TS	20111574-18	solid														
IDA001:DU-D9	20111574-19	solid														
IDA001:DU-D9	20111574-20	aqueous	30	15:25	9:35	19 hours	22.94-21.92	8.22	1.64	1/4.88	5.19	100.0	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-C9	20111574-21	solid														
IDA001:DU-C9	20111574-22	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.00	1.66	1/4.88	5.18	100.2	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-B9	20111574-23	solid														
IDA001:DU-B9	20111574-24	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.52	1.74	1/4.88	5.14	100.0	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-A9	20111574-25	solid														
IDA001:DU-A9	20111574-26	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.20	1.75	1/4.88	5.10	100.3	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-A8	20111574-27	solid														
IDA001:DU-A8	20111574-28	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	7.28	2.05	1/4.88	5.17	100.3	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-A8 TE	20111574-29	solid														
IDA001:DU-A8 TS	20111574-30	solid														
IDA001:DU-B8	20111574-31	solid														
IDA001:DU-B8	20111574-32	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.38	3.98	1/4.88	6.39	100.1	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-C8	20111574-33	solid														
IDA001:DU-C8	20111574-34	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.92	1.47	1/4.88	5.18	100.2	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-D8	20111574-35	solid														
IDA001:DU-D8	20111574-36	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.82	1.64	1/4.88	5.23	100.2	2000	11/14/20 11/14/20	11/20/20	6
IDA001:DU-E8	20111574-37	solid														
IDA001:DU-E8	20111574-38	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.40	1.80	1/4.88	5.16	100.3	2000	11/15/20 11/15/20	11/20/20	5
IDA001:DU-E7	20111574-39	solid														
IDA001:DU-E7	20111574-40	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.62	1.78	1/4.88	5.19	100.1	2000	11/15/20 11/15/20	11/20/20	5
IDA001:DU-D7	20111574-41	solid														
IDA001:DU-D7	20111574-42	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.15	1.90	1/4.88	5.94	100.2	2000	11/15/20 11/15/20	11/20/20	5
IDA001:DU-C7	20111574-43	solid														

IDA001:DU-C7	20111574-44	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.60	1.81	1/4.88	5.33	100.3	2000	11/15/20 11/20/20 5
IDA001:DU-B7	20111574-45	solid												11/15/20
IDA001:DU-B7	20111574-46	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.54	1.75	1/4.88	5.39	100.3	2000	11/15/20 11/20/20 5
IDA001:DU-A7	20111574-47	solid												11/15/20
IDA001:DU-A7	20111574-48	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.44	1.81	1/4.88	5.20	100.1	2000	11/15/20 11/20/20 5
IDA001:DU-A6	20111574-49	solid												11/15/20
IDA001:DU-A6	20111574-50	aqueous	30	15:25	9:35	19 hours	22.94-21.92	7.91	1.55	1/4.88	5.18	100.0	2000	11/15/20 11/20/20 5
IDA001:DU-B6	20111574-51	solid												11/15/20
IDA001:DU-B6	20111574-52	aqueous	30	15:25	9:35	19 hours	22.94-21.92	7.94	1.76	1/4.88	5.73	100.1	2000	11/15/20 11/20/20 5
IDA001:DU-C6	20111574-53	solid												11/15/20
IDA001:DU-C6	20111574-54	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.06	1.72	1/4.88	5.61	100.1	2000	11/15/20 11/20/20 5
IDA001:DU-C6 TE	20111574-55	solid												11/15/20
IDA001:DU-C6 TS	20111574-56	solid												11/15/20
IDA001:DU-D6	20111574-57	solid												11/15/20
IDA001:DU-D6	20111574-58	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.38	1.96	1/4.88	6.45	85.8	1720	11/15/20 11/20/20 5
IDA001:DU-E6	20111574-59	solid												11/15/20
IDA001:DU-E6	20111574-60	aqueous	30	15:25	9:33	18 hours 58 minutes	23.46-22.85	8.79	1.67	1/4.88	5.44	100.3	2000	11/15/20 11/20/20 5

VOCs - Fluid 1 only
pH >5 - acidifiy and recheck - if pH >5 fluid 2 if <5 fluid 1
if metals acidify pH <2 final prior to analysis - for MS/MSD - add spike then adjust pH

SAMPLE MAXIMUM HOLDING TIMES [DAYS]

	From: Field collection to: TCLP extraction	From: TCLP extraction to: Preparative extraction	From: Preparative extraction to: Total Determinative analysis
Volatiles	14	NA	14
Semi-volatiles	14	7	40
Mercury	28	NA	28
Metals	180	NA	180

Book Number 3225

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-02A ANALYST: EJ/MW

ANALYSIS REQUIRED: TLLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.7 g to 96.5mL DI Cup BPL P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 7.37 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.71 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-B-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL):

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 117202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.35 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-04A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102T780

Balance ID: 11

INITIAL pH OF SLURRY: 8.93 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.80 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.08 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-06A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: + g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.24 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-B-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 561 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11720206O

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-08A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P4027780001

Balance ID: 11

INITIAL pH OF SLURRY: 8.91 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.62 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11720200

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.34 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Charge

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-10A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL D0102771800

Balance ID: 11

INITIAL pH OF SLURRY: 8.47 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 6.45 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-6-1

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #2 2.93

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 117202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 4.97 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-12A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.51 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 2.07 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-B-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 5.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020100

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 7.33 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-16A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0102778005
Balance ID: 11

INITIAL pH OF SLURRY: 8.34 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.63 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: SOL 1 4.89
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: #11720260
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1505 FINISH: 11/21/2020 935
RPM: 30
EXTRACTION pH AT FINISH: 5.12 PRESERVATION BPL: —
pH Meter ID: pH TCLP THERMOMETER ID: 191951734
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-20A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.22 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.64 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 85 | 1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020160

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-22A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.00 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.66 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 111720020160

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.18 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-24A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 9.52 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.74 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.14 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 70724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-26A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.4 g to 96.5mL DI Cup BPL P0102778001
Balance ID: 11

INITIAL pH OF SLURRY: 8.20 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-3-3
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-5
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #1 | 4.88
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11172020600
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933
RPM: 30

EXTRACTION pH AT FINISH: 5.10 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724851
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-28A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 7.28 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 7.70 7.05 MW 11/20/2020 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 50 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020@0

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.17 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 17072485

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-32A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 6.34 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 3.98 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-B-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11720206D

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 6.39 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: no change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-34A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100.0 % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.92 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.47 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3230-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 111720206O

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.18 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-36A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.82 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.64 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 50 | 1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11720200 60

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.23 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-38A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P010277800

Balance ID: 11

INITIAL pH OF SLURRY: 8.40 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.80 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-3-3

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 50 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE):	— g	NON-VOLATILES:	100.3 g
BALANCE ID:	—	BALANCE ID:	11
EXTRACTOR ID #:	—	EXTRACTOR ID #:	11720200
FINAL Pressure:	— psi		

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.16 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011154-40A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.62 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.78 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 111720206O

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 10724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.4 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-42A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL# 2102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.15 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.90 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-B-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-B-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.2 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11172020@0

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.94 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-44A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102771800

Balance ID: 11

INITIAL pH OF SLURRY: 8.60 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.81 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 50/1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: #17202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1505 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.33 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574 - 46A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.54 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5/1 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11720206O

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2060 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 35

EXTRACTION pH AT FINISH: 5.39 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724/851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-48A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.44 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.81 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 \ 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 120202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.20 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: M0724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.4 LOW: 22.8

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-50A ANALYST: EJ/MLG

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 7.91 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.55 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: #1 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 112020200

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-52A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.21 g to 96.5mL DI Cup BPL: P002778001

Balance ID: n

INITIAL pH OF SLURRY: 7.94 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.76 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 1 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 935

RPM: 30

EXTRACTION pH AT FINISH: 5.73 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-54A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.06 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.72 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.1 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 120202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.61 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.94 LOW: 21.92

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

according to other readings. 23.46 - 2.85.

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 20111574-58A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.34 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.96 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 501 | 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 85.8 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 120202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 1720 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 6.45 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 17072485

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/20/2020 SAMPLE ID: 2011574-60A ANALYST: EJ/MW

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): brown soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100 % % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.2 g to 96.5mL DI Cup BPL: F0102778001
Balance ID: 11

INITIAL pH OF SLURRY: 8.79 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.67 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-6

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 5@1 4.98

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 112020060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/20/2020 1525 FINISH: 11/21/2020 933

RPM: 30

EXTRACTION pH AT FINISH: 5.44 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.46 LOW: 22.85

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

DATA VALIDATION REPORT

Project Name:	**IDA001 - USS Lead OU-1: Zone 1**
SDG #	**20111754**
Performed for:	Hull & Associates
Laboratory:	ALS Group, USA
Analytical Method:	Analytical Fraction:
SW 846 6010D	Metals (ICP)
SW 846 1311	Toxicity Characteristic Leaching Procedure (TCLP)
Validation Performed by:	ECT.CON INC
Validation Guidance:	USEPA National Functional Guidelines for Inorganic (2017) Data Review, Project QAPP and the Analytical Method
Validation Report Date:	12/15/20

Samples/Matrix:

	Sample Date	Sample ID	Laboratory ID	Matrix
1	11/16/20	IDA001:DU-F0	20111754-01	solid
2	11/16/20	IDA001:DU-F0	20111754-02	aqueous
3	11/16/20	IDA001:DU-F1	20111754-03	solid
4	11/16/20	IDA001:DU-F1	20111754-04	aqueous
5	11/16/20	IDA001:DU-F1 TE	20111754-05	solid
6	11/16/20	IDA001:DU-F1 TS	20111754-06	solid
7	11/16/20	IDA001:DU-F2	20111754-07	solid
8	11/16/20	IDA001:DU-F2	20111754-08	aqueous
9	11/16/20	IDA001:DU-F3	20111754-09	solid
10	11/16/20	IDA001:DU-F3	20111754-10	aqueous
11	11/16/20	IDA001:DU-F4	20111754-11	solid
12	11/16/20	IDA001:DU-F4	20111754-12	aqueous
13	11/16/20	IDA001:DU-F5	20111754-13	solid
14	11/16/20	IDA001:DU-F5	20111754-14	aqueous
15	11/16/20	IDA001:DU-F7	20111754-15	solid
16	11/16/20	IDA001:DU-F7	20111754-16	aqueous
17	11/16/20	IDA001:DU-F7 TE	20111754-17	solid
18	11/16/20	IDA001:DU-F7 TS	20111754-18	solid
19	11/17/20	IDA001:DU-F6	20111754-19	solid
20	11/17/20	IDA001:DU-F6	20111754-20	aqueous
21	11/17/20	IDA001:DU-F8	20111754-21	solid
22	11/17/20	IDA001:DU-F8	20111754-22	aqueous
23	11/17/20	IDA001:DU-F9	20111754-23	solid
24	11/17/20	IDA001:DU-F9	20111754-24	aqueous

This sample set consists of the following:

Field Samples :	24
Trip Blanks :	0
Equipment Blanks :	0
Field Blanks :	0
Field Duplicates:	0

Samples/Analytical Fraction

Project Number: 20111754
Analytical Method: Analytical Fraction:
SW 846 6010D Metals (ICP)
SW 846 1311 Toxicity Characteristic Leaching Procedure (TCLP)

					Metals ICP	TCLP
	Sample Date	**Sample ID**	**Laboratory ID**	**Matrix**	**6010D**	**1311**
1	11/16/20	IDA001:DU-F0	20111754-01	solid	X	
2	11/16/20	IDA001:DU-F0	20111754-02	aqueous	X	X
3	11/16/20	IDA001:DU-F1	20111754-03	solid	X	
4	11/16/20	IDA001:DU-F1	20111754-04	aqueous	X	X
5	11/16/20	IDA001:DU-F1 TE	20111754-05	solid	X	
6	11/16/20	IDA001:DU-F1 TS	20111754-06	solid	X	
7	11/16/20	IDA001:DU-F2	20111754-07	solid	X	
8	11/16/20	IDA001:DU-F2	20111754-08	aqueous	X	X
9	11/16/20	IDA001:DU-F3	20111754-09	solid	X	
10	11/16/20	IDA001:DU-F3	20111754-10	aqueous	X	X
11	11/16/20	IDA001:DU-F4	20111754-11	solid	X	
12	11/16/20	IDA001:DU-F4	20111754-12	aqueous	X	X
13	11/16/20	IDA001:DU-F5	20111754-13	solid	X	
14	11/16/20	IDA001:DU-F5	20111754-14	aqueous	X	X
15	11/16/20	IDA001:DU-F7	20111754-15	solid	X	
16	11/16/20	IDA001:DU-F7	20111754-16	aqueous	X	X
17	11/16/20	IDA001:DU-F7 TE	20111754-17	solid	X	
18	11/16/20	IDA001:DU-F7 TS	20111754-18	solid	X	
19	11/17/20	IDA001:DU-F6	20111754-19	solid	X	
20	11/17/20	IDA001:DU-F6	20111754-20	aqueous	X	X
21	11/17/20	IDA001:DU-F8	20111754-21	solid	X	
22	11/17/20	IDA001:DU-F8	20111754-22	aqueous	X	X
23	11/17/20	IDA001:DU-F9	20111754-23	solid	X	
24	11/17/20	IDA001:DU-F9	20111754-24	aqueous	X	X
					24	10

Analytical data in this report were reviewed to determine analytical limitations of the data based on specific quality control criteria. This review is performed on a laboratory signed data data package. The laboratory signature indicates that the laboratory has reviewed and has certified that the information provided in the data package are correct and complete. The results of the review are an interpretation of the reported quality control information provided by the laboratory in comparison to the specified validation criteria for the project. Laboratory calculations have been verified as part of the validation. Form 1's and/or analytical results sheets are annotated with the results of the validation.

This evaluation was conducted in accordance with the requested validation guidelines, project requirement and the analytical method. Findings from this validation should be considered when using the analytical data.

The inorganic and general chemistry findings are based upon the assessment of the following, where applicable:

Sample Preservation
Holding Times
Calibration (Initial and Continuing)
Blanks (lab and field)
ICP MS Tune (if applicable)
ICP MS Internal Standards (if applicable)
ICP Spectral Interference Check sample
Laboratory Control Sample (LCS)
Duplicate Sample Analysis
Spike Sample Analysis
Graphite Furnace Atomic Absorption (GFAA) QC (if applicable)
ICP Serial Dilution
Field Duplicates (if applicable)

This report consists of the validation findings. This is followed by annotated Form 1's. The final section of the report is supporting documentation. This consists of the Chain of Custody, laboratory case narrative and the validation worksheets.

FINDINGS

Metals ICP

(1) Sample Preservation/Holding Time

All criteria were met.

(2) Initial Calibration

All criteria were met.

(3) Continuing Calibration

All criteria were met.

(4) Field and Lab Blanks

The following constituent(s) were detected in the listed blank(s):

Blank	Constituent	Conc. (mg/kg)
168178	lead	0.7281

For the following samples that are associated with the blank(s), qualify as follows:

Sample result	Action
<RL	RL "U"
>RL < 10x BLK	Blank Result "U"

RL – Reporting Limit; BLK - Blank

Solid

Sample ID	Lab ID	Sample ID	Lab ID
IDA001:DU-F0	20111754-01	IDA001:DU-F5	20111754-13
IDA001:DU-F1	20111754-03	IDA001:DU-F7	20111754-15
IDA001:DU-F1 TE	20111754-05	IDA001:DU-F7 TE	20111754-17
IDA001:DU-F1 TS	20111754-06	IDA001:DU-F7 TS	20111754-18
IDA001:DU-F2	20111754-07	IDA001:DU-F6	20111754-19
IDA001:DU-F3	20111754-09	IDA001:DU-F8	20111754-21
IDA001:DU-F4	20111754-11	IDA001:DU-F9	20111754-23

(5) ICP Spectral Interference Check Sample (SIC)

All criteria were met.

(6) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All criteria were met.

(7) Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

All criteria were met.

(8) ICP Serial Dilution

All criteria were met.

(9) Compound Quantitation

All criteria were met.

Data Reviewer

12/15/2c
Date

NOTES

Metals - ICP

A. Sample Receipt/Sample Preservation/Hold Time

There are no notes for this item.

B. Initial Calibration

For the 12/2/20 14:22 low level verification sample, the arsenic percent recovery (126%) was greater than the control limit of 120%. This LLICV was applicable to only the MS/MSD performed on a sample that was not in project sample in this sample delivery group. Data are not qualified on this basis.

C. Continuing Calibration

There are no notes for this item.

D. Field and Lab Blanks

There are no notes for this item.

E. ICP Spectral Interference Check Sample (SIC)

The analytical method (SW 846 6010D) requires a Spectral Interference Check (SIC) and not an ICS. The lab uses a mixed element SIC. This is run on at the beginning of an analytical run or once every 12 hours of continuing sample analysis. The SIC is to check that the instrument is free from interefence from elements typcially observed in high concentrations (arsenic and lead are not applicable via 6010D). ccording to the lab SOP, the concentration measured for any target analytes must be < 2x the MQL. Data are not qualified on this basis.

F. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

For QC batch 168178 (solid), the MS/MSD was not a project sample in this sample delivery group. The arsenic MS was not within lab control limits. The arsenic MSD percent recovery and relative percent difference was within lab control limits. All leadMS/MSD items were within lab control limits. No raw data was provided for this MS/MSD. Data are not qualified on this basis.

G. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

There are no notes for this item.

H. ICP Serial Dilution

The solid ICP serial dilution was not performed on a project sample in this sample delivery group. No raw data was provided for the ICP serial dilution. The percent differences did not meet lab control limits. Since this is not a project sample in this sample delivery group, data are not qualified on this basis.

There are no ICP serial dilutions for the TCLP (aqueous) samples. All aqueous matrix spike recoveries and relative percent differences were within control limits. Data are not qualified on this basis.

I. Compound Quantitation

The following sample(s) were analyzed at the listed dilution for the noted parameter(s).

Sample ID	Parameter(s)	Dilution Factor	Matrix
IDA001:DU-F0	arsenic and lead	10	solid
IDA001:DU-F1	arsenic and lead	10	solid
IDA001:DU-F1 TE	arsenic and lead	10	solid
IDA001:DU-F1 TS	arsenic and lead	10	solid
IDA001:DU-F2	arsenic and lead	10	solid
IDA001:DU-F3	arsenic and lead	10	solid
IDA001:DU-F4	arsenic and lead	10	solid
IDA001:DU-F5	arsenic and lead	10	solid
IDA001:DU-F7	arsenic and lead	10	solid
IDA001:DU-F7 TE	arsenic and lead	10	solid
IDA001:DU-F7 TS	arsenic and lead	10	solid
IDA001:DU-F6	arsenic and lead	10	solid
IDA001:DU-F8	arsenic	10	solid
	lead	100	solid
IDA001:DU-F9	arsenic	10	solid
	lead	100	solid

This accounts for the elevated reporting limits. Data are not qualified on this basis.

J. Field Duplicates

No field duplicates were associated with this sample delivery group.

K. Sample Preparation

Samples were homogenized and sieved using a No. 10 sieve (2 mm).

Data Reviewer

Date

FINDINGS/NOTES

TCLP

(1) Sample Preservation/Holding Time

All criteria were met.

(2) Preliminary Evaluation

All criteria were met.

(3) Extraction Requirements

All criteria were met.

(4) Physical Requirements

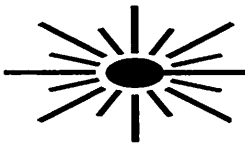
All criteria were met.

Data Reviewer

10/15/20
Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.
NJ	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts. Reported value may not be accurate or precise.



ECT.CON INC.
Environmental and Computer
Technology Consultants

Annotated Form 1's
(Spreadsheet)

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F0:S000010
Collection Date: 11/16/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-01
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	8.0		0.97	3.7	mg/Kg-dry	10	12/1/2020 14:24
Lead	450	B	3.0	3.7	mg/Kg-dry	10	12/1/2020 14:24
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	11		0.10	0.10	% of sample	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/15/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F0:S000010
Collection Date: 11/16/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-02
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 00:38
Lead	**0.73**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 00:38

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1:S000010
Collection Date: 11/16/2020 09:08 AM

Work Order: 20111754
Lab ID: 20111754-03
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**47**		**1.0**	**4.0**	**mg/Kg-dry**	10	12/1/2020 14:29
Lead	**2,000**	B	**3.2**	**4.0**	**mg/Kg-dry**	10	12/1/2020 14:29
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/15/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1:S000010
Collection Date: 11/16/2020 09:08 AM

Work Order: 20111754
Lab ID: 20111754-04
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:03
Lead	**0.43**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

JMB 12/15/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1-TE:S000010
Collection Date: 11/16/2020 09:34 AM

Work Order: 20111754
Lab ID: 20111754-05
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			Method: **SW6010D**		Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**37**		**1.1**	**4.1**	**mg/Kg-dry**	10	12/1/2020 14:34
Lead	**2,400**	B	**3.3**	**4.1**	**mg/Kg-dry**	10	12/1/2020 14:34
MOISTURE			Method: **SW3550C**				Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/15/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F1-TS:S000010
Collection Date: 11/16/2020 09:55 AM

Work Order: 20111754
Lab ID: 20111754-06
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**18**		**1.1**	**4.4**	**mg/Kg-dry**	10	12/1/2020 14:38
Lead	**770**	B	**3.5**	**4.4**	**mg/Kg-dry**	10	12/1/2020 14:38
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/7/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F2:S000010
Collection Date: 11/16/2020 10:38 AM

Work Order: 20111754
Lab ID: 20111754-07
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**18**		**1.3**	**4.9**	**mg/Kg-dry**	10	12/1/2020 14:43
Lead	**900**	B	**3.9**	**4.9**	**mg/Kg-dry**	10	12/1/2020 14:43
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**19**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F2:S000010
Collection Date: 11/16/2020 10:38 AM

Work Order: 20111754
Lab ID: 20111754-08
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:09
Lead	**0.47**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F3:S000010
Collection Date: 11/16/2020 11:26 AM

Work Order: 20111754
Lab ID: 20111754-09
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**26**		**1.1**	**4.2**	**mg/Kg-dry**	10	12/1/2020 14:48
Lead	**1,300**	B	**3.3**	**4.2**	**mg/Kg-dry**	10	12/1/2020 14:48
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**19**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/8/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F3:S000010
Collection Date: 11/16/2020 11:26 AM

Work Order: 20111754
Lab ID: 20111754-10
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:14
Lead	**0.36**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F4:S000010
Collection Date: 11/16/2020 12:00 PM

Work Order: 20111754
Lab ID: 20111754-11
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**25**		**1.4**	**5.3**	**mg/Kg-dry**	10	12/1/2020 15:04
Lead	**1,300**	B	**4.2**	**5.3**	**mg/Kg-dry**	10	12/1/2020 15:04
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**26**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 14:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F4:S000010
Collection Date: 11/16/2020 12:00 PM

Work Order: 20111754
Lab ID: 20111754-12
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:19
Lead	**0.41**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F5:S000010
Collection Date: 11/16/2020 12:45 PM

Work Order: 20111754
Lab ID: 20111754-13
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**6.1**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:21
Lead	**200**	B	**3.1**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:21
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F5:S000010
Collection Date: 11/16/2020 12:45 PM

Work Order: 20111754
Lab ID: 20111754-14
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:24
Lead	**0.080**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1/2

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7:S000010
Collection Date: 11/16/2020 01:10 PM

Work Order: 20111754
Lab ID: 20111754-15
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**13**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:26
Lead	**610**	B	**3.1**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:26
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**13**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7:S000010
Collection Date: 11/16/2020 01:10 PM

Work Order: 20111754
Lab ID: 20111754-16
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:29
Lead	**0.30**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/5/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7-TE:S000010
Collection Date: 11/16/2020 01:30 PM

Work Order: 20111754
Lab ID: 20111754-17
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**17**		**0.99**	**3.8**	**mg/Kg-dry**	10	11/30/2020 22:31
Lead	**620**	B	**3.1**	**3.8**	**mg/Kg-dry**	10	11/30/2020 22:31
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F7-TS:S000010
Collection Date: 11/16/2020 01:45 PM

Work Order: 20111754
Lab ID: 20111754-18
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**10**		**1.1**	**4.3**	**mg/Kg-dry**	10	11/30/2020 22:36
Lead	**310**	B	**3.5**	**4.3**	**mg/Kg-dry**	10	11/30/2020 22:36
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**12**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F6:S000010
Collection Date: 11/17/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-19
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**7.7**		**1.0**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:41
Lead	**240**	B	**3.1**	**3.9**	**mg/Kg-dry**	10	11/30/2020 22:41
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F6:S000010
Collection Date: 11/17/2020 08:40 AM

Work Order: 20111754
Lab ID: 20111754-20
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 01:34
Lead	**1.1**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 01:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F8:S000010
Collection Date: 11/17/2020 09:12 AM

Work Order: 20111754
Lab ID: 20111754-21
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**33**		**1.1**	**4.2**	**mg/Kg-dry**	10	11/30/2020 22:46
Lead	**880**	B	**34**	**42**	**mg/Kg-dry**	100	12/1/2020 15:09
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1/20

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F8:S000010
Collection Date: 11/17/2020 09:12 AM

Work Order: 20111754
Lab ID: 20111754-22
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 02:05
Lead	**0.44**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 02:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F9:S000010
Collection Date: 11/17/2020 09:58 AM

Work Order: 20111754
Lab ID: 20111754-23
Matrix: SOIL

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 11/23/20		Analyst: **ABL**
Arsenic	**46**		**1.0**	**4.0**	**mg/Kg-dry**	10	11/30/2020 23:01
Lead	**740**	B	**32**	**40**	**mg/Kg-dry**	100	12/1/2020 15:14
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**16**		**0.10**	**0.10**	**% of sample**	1	11/29/2020 15:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *02-Dec-20*

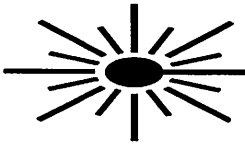
Client: Hull & Associates
Project: IDA001
Sample ID: IDA001:DU-F9:S000010
Collection Date: 11/17/2020 09:58 AM

Work Order: 20111754
Lab ID: 20111754-24
Matrix: TCLP EXTRACT

Analyses	Result	Qual	MDL	PQL	Units	Dilution Factor	Date Analyzed
TCLP METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3015A / 11/29/20		Analyst: **ABL**
Arsenic	U		0.016	0.050	mg/L	1	12/1/2020 02:20
Lead	**0.29**		**0.013**	**0.050**	**mg/L**	1	12/1/2020 02:20

Note: See Qualifiers page for a list of qualifiers and their definitions.

12/1/20



ECT.CON INC.
Environmental and Computer
Technology Consultants

Support Documentation

COC

20111754

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK PAGE 1 OF 2
DATA ADMIN
LANCE TURLEY
NO. 380

REPORT TO: RAYMOND KENNEDY

Dublin, OH	Newark, OH	Mason, OH	Bedford, OH	Toledo, OH	St. Clairsville, OH	Pittsburgh, PA
6397 Emerald Pkwy	59 Grant St	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	148 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-9877			P: (800) 241-7173	P: (412) 446-0315

Client: IDA
Site: USS LEAD OU-1; ZONE 1
Project #: IDA001 Phase: DU SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order #: IDA001_DUS_RI/FS01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
M-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-5ml 1:1 HCL
J-none
K-Stored in dark
L-NH_4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F45u- filtered with 0.45 micron
F5u- filtered with 5 micron

ANALYSES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	PRESERVATIVES	ARSENIC GOLD	LEAD GOLD	TCLP - ARSENIC	TCLP - LEAD					COMMENTS
IDA001 : DU-F0 : S000010	1	COMPOSITE	11/16/20/0840	N	J	X	X	X	X					
IDA001 : DU-F1 : S000010	1	COMPOSITE	11/16/20/0908	N	J	X	X	X	X					
IDA001 : DU-F1-TE : S000010	1	COMPOSITE	11/16/20/0934	N	J	X	X							
IDA001 : DU-F1-TS : S000010	1	COMPOSITE	11/16/20/0955	N	J	X	X							
IDA001 : DU-F2 : S000010	1	COMPOSITE	11/16/20/1038	N	J	X	X	X	X					
IDA001 : DU-F3 : S000010	1	COMPOSITE	11/16/20/1126	N	J	X	X	X	X					
IDA001 : DU-F4 : S000010	1	COMPOSITE	11/16/20/1200	N	J	X	X	X	X					
IDA001 : DU-F5 : S000010	1	COMPOSITE	11/16/20/1245	N	J	X	X	X	X					
IDA001 : DU-F7 : S000010	1	COMPOSITE	11/16/20/1310	N	J	X	X	X	X					
IDA001 : DU-F7-TE : S000010	1	COMPOSITE	11/16/20/1330	N	J	X	X							
IDA001 : DU-F7-TS : S000010	1	COMPOSITE	11/16/20/1345	N	J	X	X							
IDA001 : DU-F6 : S000010	1	COMPOSITE	11/17/20/0840	N	J	X	X	X	X					

RELINQUISHED BY:	DATE: 11/18/2020	RECEIVED BY: FEDEX	DATE: 11/18/2020
	TIME: 1600		TIME: 1600
RELINQUISHED BY: FEDEX	DATE: 11/19/20	RECEIVED BY:	DATE:
	TIME: 0930		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

Deliver To: ALS-HOLLAND, MI
Method of Delivery: FEDEX
Airbill Number:
Regulatory Program: CERCLA
Required Limits:

COOLER TEMPERATURE
AS RECEIVED 1.9, 2.4, 2.1 °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT); YELLOW -LAB USE; PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

183

20111754

38

HULL

CHAIN OF CUSTODY RECORD

TERRIE BARANEK
DATA ADMIN
LAKE TURLEY
RAYMOND KENNEDY

PAGE 1 OF 2

NO. 381

REPORT TO:

Dublin, OH X	Newark, OH	Mason, OH	Bedford, OH	Toledo, OH	St. Clairsville, OH	Pittsburgh, PA
6397 Emerald Pkwy	59 Grant St.	4770 Duke Dr.	4 Hemisphere Way	219 S. Erie St.	148 W. Main St.	300 Merchant Ln.,
Suite 200	Newark, OH 43055	Suite 300	Bedford, OH 44146	Toledo, OH 43604	2nd Floor	Suite 307
Dublin, OH 43016	P: (740) 344-5451	Mason, OH 45040	P: (440) 232-9945	P: (419) 385-2018	St. Clairsville, OH 43950	Pittsburgh, PA 15205
P: (614) 793-8777		P: (513) 459-8077			P: (800) 241-7173	P: (412) 446-0316

Client: IDA
Site: VSLEAD 03-1, ZONE 1
Project #: IDA001 Phase: DV SAMPLING
Samplers: TIM LOIS / JEREMY CONNER
Purchase Order # IDA001 - DVS - RLK-01

SAMPLE MATRIX
AA-AMBIENT AIR
C-ASBESTOS
D-SEDIMENT
G-GROUNDWATER
IA-INDOOR AIR
L-LEACHATE
P-PRODUCT
S-SOIL
SG-SOIL GAS
SS-SUBSLAB VAPOR
W-WATER
X-CONCRETE

PRESERVATIVES
A-Cool only, <4 deg. C
B-HNO_3 pH<2
C-H_2SO_4 pH<2
D-NaOH pH>12
E-ZnAcetate + NaOH, pH>9
F-$Na_2S_2O_3$ (0.008%)
G-HCL pH <2
H-EDTA
I-6ml 1:1 HCL
J-none
K-Stored in dark
L-NH4Cl
M-Methanol
S-Sodium

METALS
N - Not filtered
F46u- filtered with 0.45 micron
F8u- filtered with 5 micron

ANALYSES / PRESERVATIVES

PROJECT NO. : SAMPLE LOCATION : SAMPLE MATRIX & ID	NO. OF CONT.	SAMPLE TYPE (discrete, composite)	COLLECTION DATE/TIME	METALS	ARSENIC 6010D	LEAD 6010D	TCLP-ARSENIC J	TCLP-LEAD	COMMENTS
IDA001 : DV-F8 : S000010	1	COMPOSITE	11/17/20/0912	N	X	X	X	X	
IDA001 : DV-F9 : S000010	1	COMPOSITE	11/17/20/0958	N	X	X	X	X	
: :			/						
: :			/						
: :			/						
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: :			/						

RELINQUISHED BY:	DATE: 11/18/2020	RECEIVED BY: FEDEX	DATE: 11/18/2020	Deliver To:	ALS-HOLLAND, MI.
RELINQUISHED BY: FEDEX	TIME: 1600	RECEIVED BY:	TIME: 1600	Method of Delivery:	FEDEX
	DATE: 11/19/20		DATE:	Airbill Number:	
RELINQUISHED BY:	TIME: 0930	RECEIVED BY:	TIME:	Regulatory Program:	CERCLA
	DATE:		DATE:	Required Limits:	
	TIME:		TIME:		

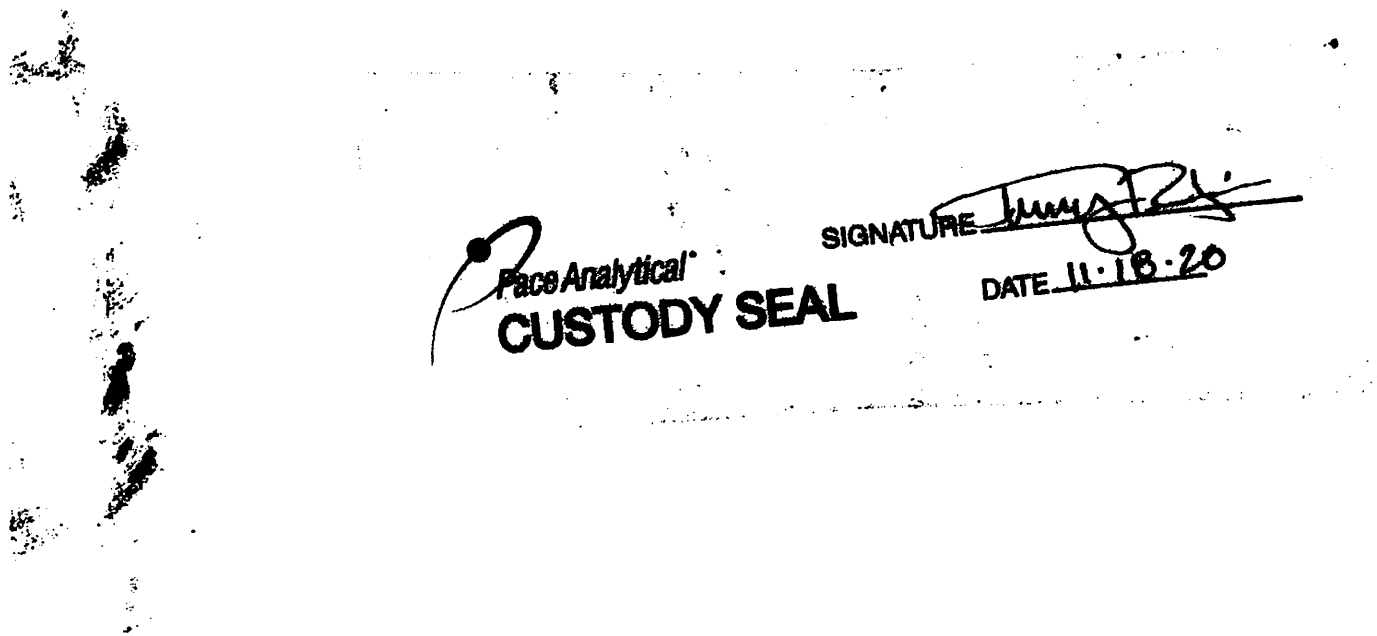
COOLER TEMPERATURE
AS RECEIVED °C

DISTRIBUTION: WHITE -LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -LAB USE
PINK -RETAINED BY HULL

NOTES: SAMPLES TO BE COMPOSITED / #10 SIEVE / HOMOGENIZED BY LAB PRIOR TO ANALYSIS

TURN AROUND TIME: STD DAYS

MK


Pace Analytical
CUSTODY SEAL
SIGNATURE
DATE 11·18·20

ALS Group, USA

Sample Receipt Checklist

Client Name: **HULL&ASSOC-DUBLIN** Date/Time Received: **19-Nov-20 09:30**

Work Order: **20111754** Received by: **KRW**

Checklist completed by *Keith Wareinga* 19-Nov-20 Reviewed by: *Bill Carey* 19-Nov-20
eSignature Date eSignature Date

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.9, 2.4, 2.1 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/19/2020 1:12:33 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Laboratory Case Narrative

ALS Environmental

02-Dec-2020

Ray Kennedy
Hull & Associates
6397 Emerald Parkway
Suite 200
Dublin, OH 43016

Re: **IDA001** Work Order: **20111754**

Dear Ray,

ALS Environmental received 24 samples on 19-Nov-2020 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 40.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: OH: CL 103

ALS Group, USA *Date: 02-Dec-20*

Client: Hull & Associates
Project: IDA001
Work Order: 20111754

Case Narrative

Samples for the above noted Work Order were received on 11/19/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Samples were homogenized and sieved using a No. 10 sieve (2.00mm) prior to analyses.

Batch 168178, Method SW6010D, Sample IDA001:DU-F0:S000010 (20111754-01A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1:S000010 (20111754-03A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1-TE:S000010 (20111754-05A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F1-TS:S000010 (20111754-06A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F2:S000010 (20111754-07A): The

concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F3:S000010 (20111754-09A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F4:S000010 (20111754-11A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F5:S000010 (20111754-13A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7:S000010 (20111754-15A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7-TE:S000010 (20111754-17A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F7-TS:S000010 (20111754-18A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F6:S000010 (20111754-19A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F8:S000010 (20111754-21A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is

necessary for this analyte: Pb

Batch 168178, Method SW6010D, Sample IDA001:DU-F9:S000010 (20111754-23A): The concentration in the Method Blank was greter than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Pb

Wet Chemistry:
No other deviations or anomalies were noted.

ALS Group, USA

Date: 02-Dec-20

Client: Hull & Associates
Project: IDA001
Work Order: **20111754**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20111754-01	IDA001:DU-F0:S000010	Soil	DU-F0	11/16/2020 08:40	11/19/2020 09:30	☐
20111754-02	IDA001:DU-F0:S000010	Tclp Extract	DU-F0	11/16/2020 08:40	11/19/2020 09:30	☐
20111754-03	IDA001:DU-F1:S000010	Soil	DU-F1	11/16/2020 09:08	11/19/2020 09:30	☐
20111754-04	IDA001:DU-F1:S000010	Tclp Extract	DU-F1	11/16/2020 09:08	11/19/2020 09:30	☐
20111754-05	IDA001:DU-F1-TE:S000010	Soil	DU-F1-TE	11/16/2020 09:34	11/19/2020 09:30	☐
20111754-06	IDA001:DU-F1-TS:S000010	Soil	DU-F1-TS	11/16/2020 09:55	11/19/2020 09:30	☐
20111754-07	IDA001:DU-F2:S000010	Soil	DU-F2	11/16/2020 10:38	11/19/2020 09:30	☐
20111754-08	IDA001:DU-F2:S000010	Tclp Extract	DU-F2	11/16/2020 10:38	11/19/2020 09:30	☐
20111754-09	IDA001:DU-F3:S000010	Soil	DU-F3	11/16/2020 11:26	11/19/2020 09:30	☐
20111754-10	IDA001:DU-F3:S000010	Tclp Extract	DU-F3	11/16/2020 11:26	11/19/2020 09:30	☐
20111754-11	IDA001:DU-F4:S000010	Soil	DU-F4	11/16/2020 12:00	11/19/2020 09:30	☐
20111754-12	IDA001:DU-F4:S000010	Tclp Extract	DU-F4	11/16/2020 12:00	11/19/2020 09:30	☐
20111754-13	IDA001:DU-F5:S000010	Soil	DU-F5	11/16/2020 12:45	11/19/2020 09:30	☐
20111754-14	IDA001:DU-F5:S000010	Tclp Extract	DU-F5	11/16/2020 12:45	11/19/2020 09:30	☐
20111754-15	IDA001:DU-F7:S000010	Soil	DU-F7	11/16/2020 13:10	11/19/2020 09:30	☐
20111754-16	IDA001:DU-F7:S000010	Tclp Extract	DU-F7	11/16/2020 13:10	11/19/2020 09:30	☐
20111754-17	IDA001:DU-F7-TE:S000010	Soil	DU-F7-TE	11/16/2020 13:30	11/19/2020 09:30	☐
20111754-18	IDA001:DU-F7-TS:S000010	Soil	DU-F7-TS	11/16/2020 13:45	11/19/2020 09:30	☐
20111754-19	IDA001:DU-F6:S000010	Soil	DU-F6	11/17/2020 08:40	11/19/2020 09:30	☐
20111754-20	IDA001:DU-F6:S000010	Tclp Extract	DU-F6	11/17/2020 08:40	11/19/2020 09:30	☐
20111754-21	IDA001:DU-F8:S000010	Soil	DU-F8	11/17/2020 09:12	11/19/2020 09:30	☐
20111754-22	IDA001:DU-F8:S000010	Tclp Extract	DU-F8	11/17/2020 09:12	11/19/2020 09:30	☐
20111754-23	IDA001:DU-F9:S000010	Soil	DU-F9	11/17/2020 09:58	11/19/2020 09:30	☐
20111754-24	IDA001:DU-F9:S000010	Tclp Extract	DU-F9	11/17/2020 09:58	11/19/2020 09:30	☐

Worksheets

ALS Group, USA

Date: 02-Dec-20

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

ANALTYTICAL METHODS: **6010D**

HOLDING TIMES

Cooler Temp: <6C

Sample pH N/A for soils; aqueous pH <2

ICP Metals

180 days from collection to prep and analysis

Sample Date	11/16/20	Prepare by	5/15/21	Analyze by	5/15/21
Sample Date	11/17/20	Prepare by	5/16/21	Analyze by	5/16/21

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	As/Pb	Date Prepared	Date Analyzed	DF	matrix
1	11/16/20	IDA001:DU-F0	20111754-01	X	11/23/20	12/1/20	10	solid
2	11/16/20	IDA001:DU-F0	20111754-02	X	11/29/20	12/1/20	1	aqueous
3	11/16/20	IDA001:DU-F1	20111754-03	X	11/23/20	12/1/20	10	solid
4	11/16/20	IDA001:DU-F1	20111754-04	X	11/29/20	12/1/20	1	aqueous
5	11/16/20	IDA001:DU-F1 TE	20111754-05	X	11/23/20	12/1/20	10	solid
6	11/16/20	IDA001:DU-F1 TS	20111754-06	X	11/23/20	12/1/20	10	solid
7	11/16/20	IDA001:DU-F2	20111754-07	X	11/23/20	12/1/20	10	solid
8	11/16/20	IDA001:DU-F2	20111754-08	X	11/29/20	12/1/20	1	aqueous
9	11/16/20	IDA001:DU-F3	20111754-09	X	11/23/20	12/1/20	10	solid
10	11/16/20	IDA001:DU-F3	20111754-10	X	11/29/20	12/1/20	1	aqueous
11	11/16/20	IDA001:DU-F4	20111754-11	X	11/23/20	12/1/20	10	solid
12	11/16/20	IDA001:DU-F4	20111754-12	X	11/29/20	12/1/20	1	aqueous
13	11/16/20	IDA001:DU-F5	20111754-13	X	11/23/20	11/30/20	10	solid
14	11/16/20	IDA001:DU-F5	20111754-14	X	11/29/20	12/1/20	1	aqueous
15	11/16/20	IDA001:DU-F7	20111754-15	X	11/23/20	11/30/20	10	solid
16	11/16/20	IDA001:DU-F7	20111754-16	X	11/29/20	12/1/20	1	aqueous
17	11/16/20	IDA001:DU-F7 TE	20111754-17	X	11/23/20	11/30/20	10	solid
18	11/16/20	IDA001:DU-F7 TS	20111754-18	X	11/23/20	11/30/20	10	solid
19	11/17/20	IDA001:DU-F6	20111754-19	X	11/23/20	11/30/20	10	solid
20	11/17/20	IDA001:DU-F6	20111754-20	X	11/29/20	12/1/20	1	aqueous
21	11/17/20	IDA001:DU-F8	20111754-21	X	11/23/20	11/30-12/1/20	10As/100Pb	solid
22	11/17/20	IDA001:DU-F8	20111754-22	X	11/29/20	12/1/20	1	aqueous
23	11/17/20	IDA001:DU-F9	20111754-23	X	11/23/20	11/30-12/1/20	10As/100Pb	solid
24	11/17/20	IDA001:DU-F9	20111754-24	X	11/29/20	12/1/20	1	aqueous

aqueous is TCLP

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

Spike performed on field sample?	YES	batch 168178 is not sample in SDG
Laboratory using correct control limit (RPD) SW 846 6020C - 20%?	Yes - lab 25%	
Percent recovery meet criteria (NFG 75-125) SW 846 6020C 80-120?	no	
Outliers flagged with "N"?	yes	

	IDA001:DU-F0	IDA001:DU-F8
Analyte	Pb	As
Original Sample	0.7293	-0.0044
Spike Sample	1.7226	1.0131
True Value	1.0000	1.0000
Percent Recovery	99.3%	101.8%
Lab Value	99.3%	102.0%
Duplicate Sample	1.7171	0.9900
True Value	1.0000	1.0000
Percent Recovery	98.8%	99.4%
Lab Value	**98.8%**	99.4%
RPD	0.3	2.3
Lab Value	0.3	2.3

Percent Recovery = ((spike sample-original sample)/true value)*100

RPD = (Original - Duplicate)/((Original + Duplicate)/2)*100

IDA001:DU-F0

Pb	mg/L			DF	
Sample	0.0663	2.5	27.5	1	0.7293
MS	0.1566	2.5	27.5	1	1.7226
MSD	0.1561	2.5	27.5	1	1.7171

IDA001:DU-F8

As	mg/L			DF	
Sample	-0.0004	2.5	27.5	1	-0.0044
MS	0.0921	2.5	27.5	1	1.0131
MSD	0.09	2.5	27.5	1	0.99

DUPLICATE RELATIVE PERCENT DIFFERENCE see MS/MSD

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R
168178	all	ok
168378	all	ok
168379	all	ok

Were there any transcription errors between the raw data and Forms? No
Were laboratory acceptance limits used as the basis for validation? Yes
Percent recovery within control limits (70-130 - ICP/ Sb & Ag 50-150)? Yes
(SW 846 6010C - 80-120%)

SAMPLE 168178 COMPOUND Pb

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	5.695	5	113.90%	114

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

SAMPLE 168378 COMPOUND As

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	0.09856	0.1	98.56	98.6

SAMPLE 168379 COMPOUND Pb

	AMOUNT FOUND	AMOUNT SPIKED	%R	Lab Value
LCS	0.10791	0.1	107.91%	108

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

0.1139
50
1
1
0.0896
25
27.5
1
0.0981
27.5
25
1

BLANKS

solid

Blank	Parameter	Concentration		Units	
168178	lead	0.7281		mg/kg	
Blank	**Parameter**	**Concentration**		**Units**	
ICB/CCB					MG/KG
ICB/CCB 11/30/20	all	nd		ug/L	#VALUE!
ICB/CCB 12/1/20	all	nd		ug/L	#VALUE!

convert ug/L to mg/kg
1 ug/l / 1 g/cc = 1 ug *cc/ L * g x 1L/1000cc = 0.001ug/g
final volume is 50 ml conversion factor = 50*0.001 = 0.05

aqueous

Blank	Parameter	Concentration		Units
168378	all	ND		mg/L
168379	all	ND		mg/L
ICB/CCB				
ICB/CCB 11/30/20	all	nd		mg/L
ICB/CCB 12/1/20	all	nd		mg/L

ICP Interference Check Sample - Spectral Interference Check Sample (SIC)

ICP SIC performed beginning and end of run	beginning	all samples within 12 hours
The concentration measured for any target analytes must be less than1/2x the MQL (which according to lab is the MRL) (lab SOP). Spiked values must be 80%-120%	Yes	MQL = As = 0.05 Pb = 0.05

NOTES: As and Pb are not a required constituent in the SIC solution.

ICP Serial Dilution

Serial Dilution performed on field sample?	NO
Analyte > 50 x IDL serial dilution meet QC limit of 10% (15% FOR SOIL)?	NO

CALIBRATION

ICV

ICP linear correl coeff ≥ 0.995 - NFG - SW 846 6020B ≥ 0.995 (r^2 = 0.99)?	Yes
Calibration = blank,low, mid and high level standard?	Yes
Percent recovery within ±20% for LLQC?	Yes
ICV analyzed after system standardized and for every analyte	Yes
Percent Recovery within limits for target parameters?	Yes

(90-110) ICP

	11/30/20	12/1/20
Analyte	Pb	As
Reported conc.	1.0192	0.9691
True conc.	1	1
Percent recovery	101.9%	96.9%
Lab Value	102.0%	96.9%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

NOTES: Low check - falls within 80-120 ; high standard check falls within 90-110

CCVs

CCV performed every 2 hours or 10% frequency	Yes
CCV performed beginning and end of sample analysis	Yes
CCV standard for all target analytes	Yes
Percent Recovery within limits for target parameters?	Yes

(90-110) ICP

	11/30/20 20:44	12/1/20 23:52	12/1/20 14:53	
	CCV	CCV	CCV	CCV
Analyte	Pb	As	Pb	Pb
Reported conc.	0.5343	0.5242	0.4904	47.724
True conc.	0.5	0.5	0.5	50
Percent recovery	106.9%	104.8%	98.1%	95.4%
Lab Value	107.0%	105.0%	98.1%	95.0%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

SAMPLE CALCULATION

	21	13	23	5
	IDA001:DU-F8	IDA001:DU-F5	IDA001:DU-F9	IDA001:DU-F1 TE
	Pb	As	As	Pb
Conc (ppm)	10.4472	0.0789	0.5749	29.6681
final vol	50	50	50	50
sample wt	0.725	0.765	0.741	0.735
Conversion	1	1	1	1
Dilution Factor	1	1	1	1
% solids	0.82	0.85	0.84	0.84
Result (mg/kg)	878.6543314	6.066897347	46.18116	2402.6644
Lab (mg/kg)	880	6.1	46	2400

Please note that the DF is included in the conc. These samples were run at dilutions

Dilution Factor	100	10	10	10

	16 TCLP	10 TCLP		
	IDA001:DU-F7	IDA001:DU-F3		
	Pb	Pb		
Conc (ppm)	0.0276	0.0323		
final vol	27.5	27.5		
sample wt	25	25		
Conversion	0.1	0.1		
Dilution Factor	1	1		
Result (mg/L)	0.3036	0.3553		
Lab (mg/L)	0.3	0.36		

Are there any transcription errors?	NO
Are Form1s present for all field and quality control samples?	Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.?	Yes

QUARTERLY VERIFICATION OF INSTRUMENT PARAMETERS

IDL analyzed and reported quarterly for each element on Form 10?	not quarterly
IDL<RL for each element?	Yes
ICP interelement correction factor analyzed and reported for each element on Forms 11 and 12?	No - did SIC to verify
Linear range analyzed and reported annually and quarterly for each element on Forms 11 and 12?	No - given LDR sheet

Hi Terrie,

1. The result presented on the data sheets are dilution corrected for the dilution factor. So the true raw value for sample 20111754-01A would be 0.59899 ppm, which is well within the LDR of 5 ppm. The uncorrected raw value is uploaded to our LIMS, where it is multiplied by the dilution factor and corrected for the preparation factor from the sample digestion. Same applies to the remaining samples identified.

1st /S/ DC 12/02/20
2nd /S/ AL 12/02/20

Simple Sample Report

12/2/2020 8:17:12 AM

20111754-01A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:24:00 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	7 cps	0.1393 ppm	8.5 %	0.0 ppm
As 189.042 {478} (Axial)	4 cps	0.1072 ppm	12.8 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,941 cps	0.9140 ppm	3.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,367 cps	0.8495 ppm	3.9 %	0.0 ppm
Be 313.042 {108} (Axial)	290 cps	0.0081 ppm	47.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	10,154 cps	530.5888 ppm	2.5 %	13.2 ppm
Cd 228.802 {447} (Axial)	18 cps	0.0155 ppm	3.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	170 cps	0.1868 ppm	16.3 %	0.0 ppm
Cr 205.560 {484} (Axial)	91 cps	0.1671 ppm	3.4 %	0.0 ppm
Co 228.616 {447} (Axial)	39 cps	0.0461 ppm	6.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,601 cps	0.7559 ppm	20.6 %	0.2 ppm
Fe 259.940 {130} (Radial)	4,498 cps	254.9170 ppm	3.1 %	7.9 ppm
Li 670.784 {50} (Radial)	78 cps	0.0766 ppm	8.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	48,737 cps	7.2371 ppm	16.7 %	1.2 ppm
Mo 202.030 {467} (Axial)	7 cps	0.0258 ppm	5.1 %	0.0 ppm
Na 589.592 {57} (Radial)	254 cps	1.7918 ppm	3.8 %	0.1 ppm
Ni 231.604 {445} (Axial)	38 cps	0.0909 ppm	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	165 cps	4.7853 ppm	1.9 %	0.1 ppm
Se 196.090 {472} (Axial)	0 cps	0.0075 ppm	215.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	14 cps	0.0151 ppm	16.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,228 cps	0.4778 ppm	3.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.9164 ppm	3.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	145 cps	1.6582 ppm	4.4 %	0.1 ppm
V 292.402 {115} (Axial)	267 cps	0.1735 ppm	19.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,258 cps	4.9864 ppm	4.3 %	0.2 ppm
Sc 357.253 {94} (Axial)		98.3680 %	15.3 %	15.1 %
Sc 188.060 {479} (Axial)		92.9788 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	582 cps	214.3285 ppm	2.9 %	6.2 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0099 ppm	82.6 %	0.0 ppm

Al 167.079 (502) (Axial)	5,000 cps	40.5214 ppm	3.2 %	1.3 ppm
Sc 227.318 (448) (Axial)		93.4081 %	0.2 %	0.2 %
B 249.773 (135) (Radial)	7 cps	0.3176 ppm	7.3 %	0.0 ppm
Al 396.152 (85) (Radial)	1,681 cps	52.2086 ppm	3.1 %	1.6 ppm
Si 251.611 (134) (Radial)	202 cps	32.5521 ppm	3.1 %	1.0 ppm
Pb 220.353 (453) (Axial)	608 cps	5.9899 ppm	4.4 %	0.3 ppm
Y 224.306 (450) (Axial)		100.1412 %	0.1 %	0.1 %
Sc 361.384 (93) (Radial)		118.2817 %	0.1 %	0.1 %

2. Please see attached TCLP log sheets.

3. Please see attached CCV 11-30-20 @ 23:52

4. In accordance with method 1311, the matrix spikes must be spiked prior to pH adjustment of the sample to <2. The acid is then added at time of sample digestion, after the spikes were added.

5. The MDL and PQL are adjusted for the preparation factor where 2.5 ml of sample is prepared to a final volume of 27.5 mL, as opposed to the base preparation volume of 25 mL. Therefore all the MDL/PQL are 10x higher.

6. Sample -21A 12/1/20 @ 3:09 PM

    a. 0.104472 * 100 = 10.4472 mg/L * 0.05L = 0.52236 mg / 0.000725 Kg = 720 mg/Kg

    b. 720 mg/Kg is corrected for 18% moisture, so 720 / 0.82 = 880 mg/Kg-dry

Best Regards,

Chad Stoike
Quality Manager, Environmental

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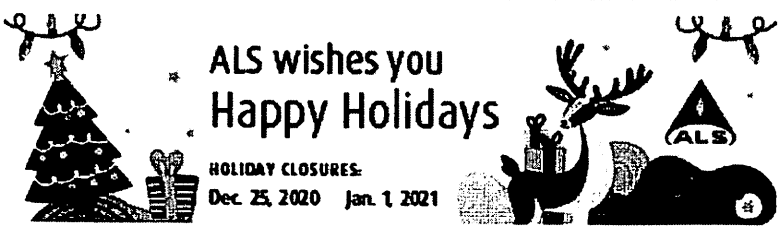

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From: Bill Carey
Sent: Monday, December 14, 2020 2:02 PM
To: terrie baranek <ectconinc@mac.com>
Cc: rkennedy@hullinc.com; 'dataadmin@hullinc.com' <dataadmin@hullinc.com>; Chad Stoike <Chad.Stoike@ALSGlobal.com>; Molly Bosworth <Molly.Bosworth@alsglobal.com>
Subject: RE: [EXTERNAL] - Re: 20111754 IDA001

Chad - Please see below.

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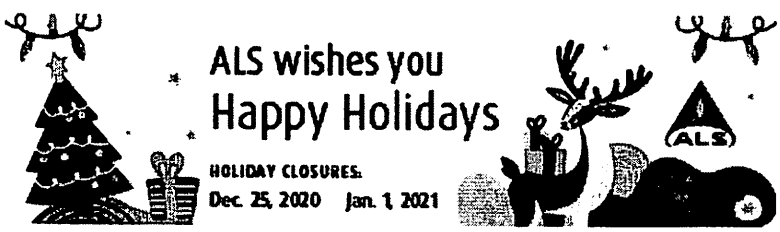

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From: terrie baranek [mailto:ectconinc@mac.com]
Sent: Monday, December 14, 2020 12:49 PM
To: Bill Carey <Bill.Carey@ALSGlobal.com>

Cc: rkennedy@hullinc.com; 'dataadmin@hullinc.com' <dataadmin@hullinc.com>

Subject: Re: [EXTERNAL] - Re: 20111754 IDA001

Hello Everyone

Thank you very much for getting back to me timely. I have finished my review of the metals portion of the data package. I have additional questions. I have followup questions on the responses that you gave me below.

FOLLOWUP QUESTIONS

ALS answer:

1. . We do not provide LDR summary forms. LDRs are processed with each run and presented in the raw data. A specifications sheet is attached for aid in evaluation.

Question - the LDR sheet shows that the LDR for both arsenic and lead is 5 mg/L. That corresponds with the LDR2 raw data. My question is for the following samples, the raw data result for lead was greater than 5 ppm

Samples 01A, 03A, 05A, 06A, 07A, 09A, 11A, 15A, 17A, 21A, 23A (all at a 10x dilution) and 21A, 23A 9at a 100x dilution).

I would assume that all of these results were outside the linear range of the calibration for lead. Please explain how you can use these results with an LDR of 5 ppm.

ALS Answer:

1. 2 Raw data for TCLP begins on page 443 of the data package.

Question - i have attached a copy of page 443 of my report (pdf). It is not raw data. I have attached a spreadsheet that shows the information I need to validate the TCLP data. Please provide this information.

NEW QUESTIONS AFTER REVIEW OF METAL DATA

1. The raw data for CCV 11/30/20 23:52 is missing. Please provide the raw data.

2 The prep batch sheet does not have the pH listed for sample 22A. Please provide pH.

3. The detection limit form has the following info (Pb MDL = 0.0013 andMRL = 0.005; As MDL = 0.0016 and MRL = 0.005). The analytical result sheet for a dilution of 1 (aqueous sample) has the following info (Pb MDL = 0.013 and MRL = 0.05; As MDL = 0.016 and MRL = 0.05). I also see in the calculations that a factor of 10 is used. Please explain.

4. Please check 21A for lead (12/1/20 3:09 pm). Did the lab use 100 as the DF when calculating the final result. I cannot replicate the 880 using a DF of 100.

Those are my questions on the metals portion. I will review the % solids and the TCLP when i get the info. Just checking - you have not QC info for sample homogenization. I never get any for particle size.

FYI - i will state in my report the following is a deficiency in the data package. There is no summary for the sample specific Internal standards.

Finally, please provide only the info that is requested and DO NOT reissue the data package. I have completed my review of this data package. IF you were to reissue the data package, i would have to charge the client 2x for this data package.

thanks so much for all of your help
Terrie Baranek

Terrie Baranek
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Palm Coast, FL 32164
cell: 724-288-1971
ectconinc@mac.com

On December 14, 2020 at 7:33 AM, Bill Carey <Bill.Carey@ALSGlobal.com> wrote:

From our QA Manager:

1. We do not provide LDR summary forms. LDRs are processed with each run and presented in the raw

data. A specifications sheet is attached for aid in evaluation.

2. LLOQ has been located by client

3. We do not provide an IS summary form. Metals IS's are not available in LIMS and are only presented on the raw data.

4. Raw data for TCLP begins on page 443 of the data package.

The ICSA is processed as described in 6010D. The SOP needs an update as the "ICSA" is actually the "SIC".
"0" is non-detect <MDL.
MQL = Reporting Limit

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From: terrie baranek [mailto:ectconinc@mac.com]
Sent: Friday, December 11, 2020 10:33 AM
To: Bill Carey <Bill.Carey@ALSGlobal.com>
Cc: rkennedy@hullinc.com; 'dataadmin@hullinc.com' <dataadmin@hullinc.com>
Subject: [EXTERNAL] - Re: 20111754 IDA001

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Good Morning

I am starting my review of the data package 20111754. I am just starting so I may have more detailed questions later but I have some general ones now.

The following is information that I did not see in the data package. If it is present, please let me know where to find it. If not, it is info that I will need.

1. LDR summary form
2. LLOQ summary form
3. IS summary form
4. raw data for TCLP

Also, is your ISCA really the SIC to check the IEC. I looked at your SOP in the QAPP. It states that you use <1/2 MQL for non-spiked analytes (i.e., As, and Pb). Do I use the MDL for your MQL?

On your summary forms does a "0" mean non detect?

This is it for now. I am just going through quickly and printing info out to review. I will follow up with additional questions. I think once we get it ironed out on this first package the others will not have many questions.

thanks for all your help
terrie

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On December 2, 2020 at 3:26 PM, Bill Carey <Bill.Carey@ALSGlobal.com> wrote:

Results of the analyses for the samples we received are attached.

Hardcopies will not follow unless specifically requested.

Please contact us if we can be of any further assistance.

Regards - Bill

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Test Specifications

TestCode	TestName		TestNo	Matrix	Units
SampType					
Analyte	Type	SpkVal	LowLimit	HighLimit	RPDLimit
ICP_6010_W	Metals Analysis by ICP		SW6010D	Water	mg/L
LDR					
Aluminum	A	200	90	110	
Antimony	A	5	90	110	
Arsenic	A	5	90	110	
Barium	A	20	90	110	
Beryllium	A	2	90	110	
Boron	A	20	90	110	
Cadmium	A	1	90	110	
Calcium	A	200	90	110	
Chromium	A	10	90	110	
Cobalt	A	10	90	110	
Copper	A	20	90	110	
Iron	A	200	90	110	
Lead	A	5	90	110	
Lithium	A	10	90	110	
Magnesium	A	200	90	110	
Manganese	A	10	90	110	
Molybdenum	A	10	90	110	
Nickel	A	10	90	110	
Selenium	A	5	90	110	
Silicon	A	20	90	110	
Silver	A	2	90	110	
Strontium	A	10	90	110	
Thallium	A	5	90	110	
Tin	A	5	90	110	
Titanium	A	10	90	110	
Vanadium	A	10	90	110	
Zinc	A	5	90	110	

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:19:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,256 cps	4.8171 ppm	1.7 %	0.1 ppm
As 189.042 {478} (Axial)	1,703 cps	4.5990 ppm	1.5 %	0.1 ppm
Ba 455.403 {74} (Radial)	158 cps	0.0075 ppm	17.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	131 cps	0.0082 ppm	29.3 %	0.0 ppm
Be 313.042 {108} (Axial)	-29 cps	-0.0001 ppm	83.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	18 cps	0.0940 ppm	16.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	263 cps	0.0223 ppm	1.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	7 cps	0.0008 ppm	45.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	35 cps	0.0064 ppm	4.5 %	0.0 ppm
Co 228.616 {447} (Axial)	81,535 cps	9.7600 ppm	1.6 %	0.2 ppm
Cu 324.754 {104} (Axial)	199 cps	0.0094 ppm	9.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0869 ppm	21.4 %	0.0 ppm
Li 670.784 {50} (Radial)	80 cps	0.0078 ppm	13.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	-153 cps	-0.0023 ppm	13.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	24,929 cps	9.6737 ppm	1.7 %	0.2 ppm
Na 589.592 {57} (Radial)	-7 cps	-0.0050 ppm	87.5 %	0.0 ppm
Ni 231.604 {445} (Axial)	40,682 cps	9.7694 ppm	1.7 %	0.2 ppm
K 766.490 {44} (Radial)	-3 cps	-0.0077 ppm	288.9 %	0.0 ppm
Se 196.090 {472} (Axial)	1,036 cps	4.6234 ppm	1.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	28 cps	0.0029 ppm	18.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	86 cps	0.0034 ppm	23.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	4,916 cps	4.7828 ppm	1.6 %	0.1 ppm
Ti 334.941 {101} (Radial)	6 cps	0.0064 ppm	28.9 %	0.0 ppm
V 292.402 {115} (Axial)	17 cps	0.0011 ppm	22.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	48,493 cps	4.5984 ppm	1.6 %	0.1 ppm
Sc 357.253 {94} (Axial)		100.4019 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		99.8376 %	1.6 %	1.6 %
Mg 279.079 {121} (Radial)	1 cps	0.0300 ppm	136.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,810 cps	5.2376 ppm	1.1 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0176 ppm	41.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		102.5577 %	1.5 %	1.5 %
B 249.773 {135} (Radial)	15 cps	0.0667 ppm	9.1 %	0.0 ppm
Al 396.152 {85} (Radial)	154 cps	0.4796 ppm	1.0 %	0.0 ppm
Si 251.611 {134} (Radial)	4 cps	0.0635 ppm	8.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,091 cps	5.0156 ppm	1.5 %	0.1 ppm
Y 224.306 {450} (Axial)		99.9713 %	0.9 %	0.9 %
Sc 361.384 {93} (Radial)		100.3664 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LDR2

Sample type: UNKNOWN Analysis started at: 11/30/2020 3:21:41 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2,500 cps	5.3549 ppm	2.8 %	0.2 ppm
As 189.042 {478} (Axial)	1,852 cps	5.1058 ppm	2.7 %	0.1 ppm
Ba 455.403 {74} (Radial)	176 cps	0.0080 ppm	27.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	166 cps	0.0083 ppm	28.2 %	0.0 ppm
Be 313.042 {108} (Axial)	-46 cps	-0.0001 ppm	48.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	19 cps	0.0955 ppm	14.4 %	0.0 ppm
Cd 228.802 {447} (Axial)	270 cps	0.0233 ppm	3.6 %	0.0 ppm
Cr 267.716 {126} (Axial)	11 cps	0.0012 ppm	25.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	36 cps	0.0066 ppm	3.0 %	0.0 ppm
Co 228.616 {447} (Axial)	90,106 cps	10.9360 ppm	2.7 %	0.3 ppm
Cu 324.754 {104} (Axial)	186 cps	0.0088 ppm	6.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	22 cps	0.1158 ppm	19.7 %	0.0 ppm
Li 670.784 {50} (Radial)	85 cps	0.0081 ppm	24.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	-176 cps	-0.0026 ppm	19.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	27,114 cps	10.7757 ppm	2.9 %	0.3 ppm
Na 589.592 {57} (Radial)	0 cps	0.0002 ppm	2,702.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	44,674 cps	10.8738 ppm	2.7 %	0.3 ppm
K 766.490 {44} (Radial)	-4 cps	-0.0130 ppm	223.8 %	0.0 ppm
Se 196.090 {472} (Axial)	1,151 cps	5.1297 ppm	2.6 %	0.1 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0002 ppm	126.4 %	0.0 ppm
Sr 407.771 {83} (Radial)	101 cps	0.0038 ppm	26.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	5,307 cps	5.3215 ppm	2.8 %	0.2 ppm
Ti 334.941 {101} (Radial)	13 cps	0.0131 ppm	14.6 %	0.0 ppm
V 292.402 {115} (Axial)	11 cps	0.0007 ppm	36.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	53,720 cps	5.1705 ppm	2.7 %	0.1 ppm
Sc 357.253 {94} (Axial)		99.5932 %	1.0 %	1.0 %
Sc 188.060 {479} (Axial)		97.4264 %	1.4 %	1.4 %
Mg 279.079 {121} (Radial)	2 cps	0.0754 ppm	44.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	1,953 cps	5.8011 ppm	2.2 %	0.1 ppm
Al 167.079 {502} (Axial)	22 cps	0.0185 ppm	32.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.1981 %	1.2 %	1.2 %
B 249.773 {135} (Radial)	13 cps	0.0547 ppm	13.3 %	0.0 ppm
Al 396.152 {85} (Radial)	169 cps	0.5093 ppm	4.3 %	0.0 ppm
Si 251.611 {134} (Radial)	7 cps	0.0996 ppm	11.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	5,530 cps	5.5764 ppm	2.6 %	0.1 ppm
Y 224.306 {450} (Axial)		98.5673 %	1.2 %	1.2 %
Sc 361.384 {93} (Radial)		99.7957 %	0.2 %	0.2 %

ALS Group, USA

Date: 02-Dec-20

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **168178** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168178-168178** Units: **mg/Kg** Analysis Date: **11/30/2020 08:54 PM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943662** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								

MBLK Sample ID: **MBLK-168178-168178** Units: **mg/Kg** Analysis Date: **12/1/2020 12:55 PM**
Client ID: Run ID: **ICP2_201201B** SeqNo: **6946781** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.7281	0.25								

LCS Sample ID: **LCS-168178-168178** Units: **mg/Kg** Analysis Date: **11/30/2020 08:59 PM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943663** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.89	0.25	5	0	97.8	80-120	0			
Lead	5.693	0.25	5	0	114	80-120	0			B

MS Sample ID: **20111726-41AMS** Units: **mg/Kg** Analysis Date: **12/1/2020 02:08 PM**
Client ID: Run ID: **ICP2_201201B** SeqNo: **6948865** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.743	0.37	7.386	-3.052	133	75-125	0			S
Lead	21.27	0.37	7.386	18.71	34.6	75-125	0			BS

MSD Sample ID: **20111726-41AMSD** Units: **mg/Kg** Analysis Date: **12/1/2020 02:13 PM**
Client ID: Run ID: **ICP2_201201B** SeqNo: **6948866** Prep Date: **11/23/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.273	0.39	7.716	-3.052	121	75-125	5.679	9.93	20	
Lead	27	0.39	7.716	18.71	107	75-125	22.3	19	20	B

The following samples were analyzed in this batch:

20111754-01A	20111754-03A	20111754-05A
20111754-06A	20111754-07A	20111754-09A
20111754-11A	20111754-13A	20111754-15A
20111754-17A	20111754-18A	20111754-19A
20111754-21A	20111754-23A	

not project sample in this SDG.

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LCS-168178

Sample type: UNKNOWN Analysis started at: 11/30/2020 8:59:52 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	48 cps	0.1035 ppm	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	35 cps	0.0978 ppm	2.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,311 cps	0.1057 ppm	3.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,188 cps	0.1096 ppm	3.1 %	0.0 ppm
Be 313.042 {108} (Axial)	35,316 cps	0.0996 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,970 cps	9.7936 ppm	4.1 %	0.4 ppm
Cd 228.802 {447} (Axial)	1,179 cps	0.1019 ppm	0.8 %	0.0 ppm
Cr 267.716 {126} (Axial)	935 cps	0.1036 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	590 cps	0.1089 ppm	0.7 %	0.0 ppm
Co 228.616 {447} (Axial)	863 cps	0.1048 ppm	0.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,296 cps	0.1093 ppm	1.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,864 cps	10.0360 ppm	3.9 %	0.4 ppm
Li 670.784 {50} (Radial)	1,026 cps	0.0979 ppm	5.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,987 cps	0.1047 ppm	1.7 %	0.0 ppm
Mo 202.030 {467} (Axial)	273 cps	0.1083 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	14,301 cps	9.6825 ppm	3.8 %	0.4 ppm
Ni 231.604 {445} (Axial)	426 cps	0.1037 ppm	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	3,486 cps	10.2264 ppm	3.7 %	0.4 ppm
Se 196.090 {472} (Axial)	22 cps	0.0964 ppm	1.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,204 cps	0.1070 ppm	1.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,699 cps	0.1006 ppm	3.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	106 cps	0.1060 ppm	1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	95 cps	0.0991 ppm	6.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,592 cps	0.1052 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,038 cps	0.0999 ppm	0.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		97.2803 %	0.2 %	0.2 %
Sc 188.060 {479} (Axial)		87.9871 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	279 cps	9.6957 ppm	3.5 %	0.3 ppm
Tl 190.856 {477} (Axial)	35 cps	0.1045 ppm	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	169 cps	0.1443 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		88.1687 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	119 cps	0.4899 ppm	2.5 %	0.0 ppm
Al 396.152 {85} (Radial)	40 cps	0.1206 ppm	8.2 %	0.0 ppm
Si 251.611 {134} (Radial)	624 cps	9.3992 ppm	3.8 %	0.4 ppm
Pb 220.353 {453} (Axial)	113 cps	0.1139 ppm	0.9 %	0.0 ppm
Y 224.306 {450} (Axial)		93.8257 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.7635 %	0.2 %	0.2 %

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **168378** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168378-168378** Units: **mg/L** Analysis Date: **11/30/2020 11:21 PM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943691** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168378-168378** Units: **mg/L** Analysis Date: **11/30/2020 11:26 PM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943692** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09857	0.0050	0.1	0	98.6	80-120	0			
Lead	0.1098	0.0050	0.1	0	110	80-120	0			

MS Sample ID: **20111754-02AMS** Units: **mg/L** Analysis Date: **12/1/2020 12:43 AM**
Client ID: **IDA001:DU-F0:S000010** Run ID: **ICP2_201130B** SeqNo: **6943726** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.014	0.050	1	0.008052	101	75-125	0			
Lead	1.722	0.050	1	0.7293	99.3	75-125	0			

MSD Sample ID: **20111754-02AMSD** Units: **mg/L** Analysis Date: **12/1/2020 12:48 AM**
Client ID: **IDA001:DU-F0:S000010** Run ID: **ICP2_201130B** SeqNo: **6943733** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.006	0.050	1	0.008052	99.8	75-125	1.014	0.762	20	
Lead	1.718	0.050	1	0.7293	98.8	75-125	1.722	0.283	20	

The following samples were analyzed in this batch:

20111754-02A	20111754-04A	20111754-08A
20111754-10A	20111754-12A	20111754-14A
20111754-16A	20111754-20A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LCS-168378

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:26:51 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0938 ppm	1.0 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.0896 ppm	2.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,099 cps	0.0960 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,955 cps	0.0980 ppm	3.0 %	0.0 ppm
Be 313.042 {108} (Axial)	32,434 cps	0.0915 ppm	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,805 cps	8.9756 ppm	3.0 %	0.3 ppm
Cd 228.802 {447} (Axial)	1,067 cps	0.0922 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	840 cps	0.0931 ppm	1.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	528 cps	0.0974 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	776 cps	0.0942 ppm	1.0 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,011 cps	0.0957 ppm	2.0 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,687 cps	9.0784 ppm	2.8 %	0.3 ppm
Li 670.784 {50} (Radial)	937 cps	0.0894 ppm	4.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,312 cps	0.0945 ppm	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	241 cps	0.0957 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	13,036 cps	8.8263 ppm	3.2 %	0.3 ppm
Ni 231.604 {445} (Axial)	381 cps	0.0928 ppm	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	3,142 cps	9.2174 ppm	3.4 %	0.3 ppm
Se 196.090 {472} (Axial)	20 cps	0.0908 ppm	3.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,051 cps	0.0934 ppm	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,456 cps	0.0916 ppm	2.9 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.0942 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	88 cps	0.0921 ppm	4.5 %	0.0 ppm
V 292.402 {115} (Axial)	1,421 cps	0.0939 ppm	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	932 cps	0.0897 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9676 %	0.9 %	0.9 %
Sc 188.060 {479} (Axial)		91.4236 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	257 cps	8.9453 ppm	3.0 %	0.3 ppm
Tl 190.856 {477} (Axial)	32 cps	0.0956 ppm	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	140 cps	0.1200 ppm	1.4 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.3760 %	0.4 %	0.3 %
B 249.773 {135} (Radial)	107 cps	0.4436 ppm	3.8 %	0.0 ppm
Al 396.152 {85} (Radial)	33 cps	0.0988 ppm	4.6 %	0.0 ppm
Si 251.611 {134} (Radial)	570 cps	8.5867 ppm	3.4 %	0.3 ppm
Pb 220.353 {453} (Axial)	99 cps	0.0998 ppm	1.5 %	0.0 ppm
Y 224.306 {450} (Axial)		94.8373 %	0.3 %	0.2 %
Sc 361.384 {93} (Radial)		96.2404 %	0.4 %	0.4 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-02A

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:38:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0062 ppm	11.3 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0007 ppm	91.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,242 cps	0.0568 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,194 cps	0.0598 ppm	2.0 %	0.0 ppm
Be 313.042 {108} (Axial)	79 cps	0.0002 ppm	9.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	7,171 cps	35.6570 ppm	2.1 %	0.8 ppm
Cd 228.802 {447} (Axial)	9 cps	0.0008 ppm	8.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4 cps	0.0004 ppm	14.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	57.0 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0003 ppm	20.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	47 cps	0.0022 ppm	12.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0127 ppm	34.5 %	0.0 ppm
Li 670.784 {50} (Radial)	15 cps	0.0014 ppm	52.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,274 cps	0.1389 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	215.0 %	0.0 ppm
Na 589.592 {57} (Radial)	182,556 cps	123.6033 ppm	2.1 %	2.6 ppm
Ni 231.604 {445} (Axial)	3 cps	0.0008 ppm	25.7 %	0.0 ppm
K 766.490 {44} (Radial)	26 cps	0.0763 ppm	15.2 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0022 ppm	14.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	7 cps	0.0007 ppm	56.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	880 cps	0.0328 ppm	1.8 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0012 ppm	26.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0020 ppm	57.6 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	372.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,425 cps	0.1371 ppm	1.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.2573 %	0.5 %	0.4 %
Sc 188.060 {479} (Axial)		85.3476 %	0.6 %	0.5 %
Mg 279.079 {121} (Radial)	148 cps	5.1508 ppm	1.1 %	0.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.0012 ppm	107.1 %	0.0 ppm
Al 167.079 {502} (Axial)	29 cps	0.0247 ppm	1.6 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.3533 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	-2 cps	-0.0069 ppm	68.4 %	0.0 ppm
Al 396.152 {85} (Radial)	8 cps	0.0226 ppm	29.4 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.4065 ppm	3.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	66 cps	0.0663 ppm	2.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.3890 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		94.4793 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-02AMS

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:43:47 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0951 ppm	1.6 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0922 ppm	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,192 cps	0.1461 ppm	2.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,922 cps	0.1464 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	32,329 cps	0.0912 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,421 cps	41.8732 ppm	2.2 %	0.9 ppm
Cd 228.802 {447} (Axial)	1,065 cps	0.0920 ppm	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	817 cps	0.0905 ppm	2.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	511 cps	0.0944 ppm	0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	748 cps	0.0908 ppm	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,975 cps	0.0940 ppm	1.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,638 cps	8.8143 ppm	1.9 %	0.2 ppm
Li 670.784 {50} (Radial)	949 cps	0.0906 ppm	2.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,892 cps	0.2231 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	237 cps	0.0943 ppm	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	184,356 cps	124.8220 ppm	2.2 %	2.8 ppm
Ni 231.604 {445} (Axial)	377 cps	0.0918 ppm	1.2 %	0.0 ppm
K 766.490 {44} (Radial)	3,261 cps	9.5665 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0897 ppm	3.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,024 cps	0.0910 ppm	2.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,210 cps	0.1197 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	92 cps	0.0923 ppm	0.8 %	0.0 ppm
Ti 334.941 {101} (Radial)	88 cps	0.0916 ppm	4.7 %	0.0 ppm
V 292.402 {115} (Axial)	1,410 cps	0.0931 ppm	2.3 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,311 cps	0.2224 ppm	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.5803 %	0.1 %	0.1 %
Sc 188.060 {479} (Axial)		85.5454 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	383 cps	13.3313 ppm	1.9 %	0.3 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0892 ppm	1.7 %	0.0 ppm
Al 167.079 {502} (Axial)	183 cps	0.1560 ppm	0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.6176 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	107 cps	0.4408 ppm	2.1 %	0.0 ppm
Al 396.152 {85} (Radial)	46 cps	0.1394 ppm	5.6 %	0.0 ppm
Si 251.611 {134} (Radial)	581 cps	8.7510 ppm	2.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	155 cps	0.1566 ppm	1.7 %	0.0 ppm
Y 224.306 {450} (Axial)		91.4494 %	0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.9830 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-02AMSD

Sample type: UNKNOWN Analysis started at: 12/1/2020 12:48:48 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	44 cps	0.0947 ppm	2.0 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0915 ppm	1.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,265 cps	0.1494 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,975 cps	0.1491 ppm	2.1 %	0.0 ppm
Be 313.042 {108} (Axial)	32,547 cps	0.0918 ppm	1.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	8,655 cps	43.0355 ppm	1.2 %	0.5 ppm
Cd 228.802 {447} (Axial)	1,054 cps	0.0911 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	822 cps	0.0910 ppm	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	508 cps	0.0937 ppm	2.2 %	0.0 ppm
Co 228.616 {447} (Axial)	743 cps	0.0901 ppm	1.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,997 cps	0.0951 ppm	1.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,676 cps	9.0197 ppm	1.0 %	0.1 ppm
Li 670.784 {50} (Radial)	978 cps	0.0933 ppm	2.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	14,944 cps	0.2238 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	236 cps	0.0937 ppm	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	187,947 cps	127.2532 ppm	1.8 %	2.3 ppm
Ni 231.604 {445} (Axial)	366 cps	0.0891 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	3,327 cps	9.7593 ppm	2.8 %	0.3 ppm
Se 196.090 {472} (Axial)	20 cps	0.0891 ppm	3.2 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,033 cps	0.0918 ppm	2.0 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,295 cps	0.1228 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	91 cps	0.0914 ppm	1.6 %	0.0 ppm
Tl 334.941 {101} (Radial)	90 cps	0.0933 ppm	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	1,415 cps	0.0934 ppm	0.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	2,284 cps	0.2198 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.8180 %	1.3 %	1.2 %
Sc 188.060 {479} (Axial)		84.9795 %	0.3 %	0.3 %
Mg 279.079 {121} (Radial)	397 cps	13.8194 ppm	1.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0877 ppm	1.9 %	0.0 ppm
Al 167.079 {502} (Axial)	157 cps	0.1337 ppm	2.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		84.9788 %	0.4 %	0.4 %
B 249.773 {135} (Radial)	109 cps	0.4507 ppm	0.5 %	0.0 ppm
Al 396.152 {85} (Radial)	39 cps	0.1171 ppm	2.3 %	0.0 ppm
Si 251.611 {134} (Radial)	597 cps	8.9989 ppm	2.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	155 cps	0.1561 ppm	1.8 %	0.0 ppm
Y 224.306 {450} (Axial)		91.4439 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		94.5800 %	0.5 %	0.5 %

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **168379** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-168379-168379** Units: **mg/L** Analysis Date: **12/1/2020 01:45 AM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943747** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Lead	U	0.0050								

LCS Sample ID: **LCS-168379-168379** Units: **mg/L** Analysis Date: **12/1/2020 01:50 AM**
Client ID: Run ID: **ICP2_201130B** SeqNo: **6943748** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09691	0.0050	0.1	0	96.9	80-120	0			
Lead	0.1079	0.0050	0.1	0	108	80-120	0			

MS Sample ID: **20111754-22AMS** Units: **mg/L** Analysis Date: **12/1/2020 02:10 AM**
Client ID: **IDA001:DU-F8:S000010** Run ID: **ICP2_201130B** SeqNo: **6943752** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.013	0.050	1	-0.004378	102	75-125	0			
Lead	1.467	0.050	1	0.4389	103	75-125	0			

MSD Sample ID: **20111754-22AMSD** Units: **mg/L** Analysis Date: **12/1/2020 02:15 AM**
Client ID: **IDA001:DU-F8:S000010** Run ID: **ICP2_201130B** SeqNo: **6943753** Prep Date: **11/29/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.99	0.050	1	-0.004378	99.4	75-125	1.013	2.28	20	
Lead	1.487	0.050	1	0.4389	105	75-125	1.467	1.32	20	

The following samples were analyzed in this batch: 20111754-22A 20111754-24A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

LCS-168379

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:50:18 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	43 cps	0.0930 ppm	0.1 %	0.0 ppm
As 189.042 {478} (Axial)	32 cps	0.0881 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,114 cps	0.0967 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,018 cps	0.1012 ppm	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,833 cps	0.0898 ppm	2.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,811 cps	9.0039 ppm	1.5 %	0.1 ppm
Cd 228.802 {447} (Axial)	1,058 cps	0.0915 ppm	2.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	823 cps	0.0911 ppm	1.2 %	0.0 ppm
Cr 205.560 {464} (Axial)	520 cps	0.0960 ppm	2.0 %	0.0 ppm
Co 228.616 {447} (Axial)	766 cps	0.0930 ppm	1.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,975 cps	0.0941 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,701 cps	9.1583 ppm	1.1 %	0.1 ppm
Li 670.784 {50} (Radial)	934 cps	0.0891 ppm	0.6 %	0.0 ppm
Mn 257.610 {131} (Axial)	6,185 cps	0.0926 ppm	1.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	238 cps	0.0948 ppm	2.0 %	0.0 ppm
Na 589.592 {57} (Radial)	13,116 cps	8.8807 ppm	1.9 %	0.2 ppm
Ni 231.604 {445} (Axial)	379 cps	0.0922 ppm	1.9 %	0.0 ppm
K 766.490 {44} (Radial)	3,143 cps	9.2192 ppm	1.2 %	0.1 ppm
Se 196.090 {472} (Axial)	19 cps	0.0866 ppm	4.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,030 cps	0.0915 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	2,471 cps	0.0921 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	93 cps	0.0936 ppm	1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	89 cps	0.0932 ppm	2.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,406 cps	0.0928 ppm	1.9 %	0.0 ppm
Zn 213.856 {457} (Axial)	921 cps	0.0886 ppm	1.8 %	0.0 ppm
Sc 357.253 {94} (Axial)		96.9441 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		91.3046 %	0.9 %	0.8 %
Mg 279.079 {121} (Radial)	258 cps	8.9950 ppm	2.2 %	0.2 ppm
Tl 190.856 {477} (Axial)	32 cps	0.0947 ppm	2.1 %	0.0 ppm
Al 167.079 {502} (Axial)	145 cps	0.1240 ppm	1.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		91.1809 %	1.0 %	0.9 %
B 249.773 {135} (Radial)	108 cps	0.4468 ppm	3.3 %	0.0 ppm
Al 396.152 {85} (Radial)	38 cps	0.1153 ppm	13.6 %	0.0 ppm
Si 251.611 {134} (Radial)	571 cps	8.6045 ppm	2.8 %	0.2 ppm
Pb 220.353 {453} (Axial)	97 cps	0.0981 ppm	2.3 %	0.0 ppm
Y 224.306 {450} (Axial)		94.7287 %	0.7 %	0.6 %
Sc 361.384 {93} (Radial)		95.6570 %	0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-22A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:05:27 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	4 cps	0.0082 ppm	17.7 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0004 ppm	126.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	916 cps	0.0419 ppm	0.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	976 cps	0.0489 ppm	1.8 %	0.0 ppm
Be 313.042 {108} (Axial)	75 cps	0.0002 ppm	5.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,055 cps	10.2198 ppm	1.0 %	0.1 ppm
Cd 228.802 {447} (Axial)	24 cps	0.0021 ppm	4.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	0 cps	0.0000 ppm	2,548.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0002 ppm	86.7 %	0.0 ppm
Co 228.616 {447} (Axial)	1 cps	0.0001 ppm	86.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	65 cps	0.0031 ppm	3.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	6 cps	0.0330 ppm	16.0 %	0.0 ppm
Li 670.784 {50} (Radial)	20 cps	0.0019 ppm	35.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	3,795 cps	0.0568 ppm	1.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0003 ppm	41.4 %	0.0 ppm
Na 589.592 {57} (Radial)	211,211 cps	143.0042 ppm	1.4 %	1.9 ppm
Ni 231.604 {445} (Axial)	13 cps	0.0032 ppm	3.4 %	0.0 ppm
K 766.490 {44} (Radial)	86 cps	0.2520 ppm	12.6 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0002 ppm	1,024.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	15 cps	0.0013 ppm	9.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,496 cps	0.0558 ppm	1.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	2 cps	0.0019 ppm	9.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0006 ppm	108.6 %	0.0 ppm
V 292.402 {115} (Axial)	1 cps	0.0001 ppm	535.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,055 cps	0.7753 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.8431 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		86.0997 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	97 cps	3.3899 ppm	0.6 %	0.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0021 ppm	18.5 %	0.0 ppm
Al 167.079 {502} (Axial)	33 cps	0.0280 ppm	0.8 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.0907 %	0.6 %	0.6 %
B 249.773 {135} (Radial)	-2 cps	-0.0088 ppm	41.7 %	0.0 ppm
Al 396.152 {85} (Radial)	10 cps	0.0296 ppm	29.4 %	0.0 ppm
Si 251.611 {134} (Radial)	42 cps	0.6255 ppm	2.0 %	0.0 ppm
Pb 220.353 {453} (Axial)	40 cps	0.0399 ppm	3.0 %	0.0 ppm
Y 224.306 {450} (Axial)		91.8211 %	0.6 %	0.6 %
Sc 361.384 {93} (Radial)		94.9201 %	0.6 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-22AMS

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:10:37 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	46 cps	0.0984 ppm	3.2 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0921 ppm	2.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,975 cps	0.1361 ppm	1.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,747 cps	0.1377 ppm	0.9 %	0.0 ppm
Be 313.042 {108} (Axial)	33,061 cps	0.0932 ppm	2.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,738 cps	18.5874 ppm	1.5 %	0.3 ppm
Cd 228.802 {447} (Axial)	1,093 cps	0.0944 ppm	2.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	836 cps	0.0925 ppm	2.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	520 cps	0.0960 ppm	2.1 %	0.0 ppm
Co 228.616 {447} (Axial)	759 cps	0.0921 ppm	1.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,042 cps	0.0973 ppm	2.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,708 cps	9.1934 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	1,001 cps	0.0956 ppm	1.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,843 cps	0.1474 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	241 cps	0.0958 ppm	2.4 %	0.0 ppm
Na 589.592 {57} (Radial)	209,862 cps	142.0908 ppm	2.0 %	2.9 ppm
Ni 231.604 {445} (Axial)	381 cps	0.0926 ppm	1.6 %	0.0 ppm
K 766.490 {44} (Radial)	3,441 cps	10.0938 ppm	2.3 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0906 ppm	8.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	1,048 cps	0.0932 ppm	2.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,869 cps	0.1442 ppm	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	94 cps	0.0942 ppm	2.1 %	0.0 ppm
Tl 334.941 {101} (Radial)	91 cps	0.0944 ppm	2.8 %	0.0 ppm
V 292.402 {115} (Axial)	1,425 cps	0.0941 ppm	2.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,753 cps	0.8425 ppm	2.0 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.3678 %	0.7 %	0.7 %
Sc 188.060 {479} (Axial)		85.5507 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	347 cps	12.0957 ppm	2.2 %	0.3 ppm
Tl 190.856 {477} (Axial)	30 cps	0.0895 ppm	2.7 %	0.0 ppm
Al 167.079 {502} (Axial)	170 cps	0.1451 ppm	2.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.5772 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	112 cps	0.4622 ppm	1.9 %	0.0 ppm
Al 396.152 {85} (Radial)	44 cps	0.1310 ppm	5.3 %	0.0 ppm
Si 251.611 {134} (Radial)	619 cps	9.3264 ppm	2.6 %	0.2 ppm
Pb 220.353 {453} (Axial)	132 cps	0.1334 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6821 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		93.8539 %	0.0 %	0.0 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-22AMSD

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:15:38 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	45 cps	0.0961 ppm	4.0 %	0.0 ppm
As 189.042 {478} (Axial)	33 cps	0.0900 ppm	0.7 %	0.0 ppm
Ba 455.403 {74} (Radial)	2,797 cps	0.1280 ppm	1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,544 cps	0.1275 ppm	0.6 %	0.0 ppm
Be 313.042 {108} (Axial)	31,240 cps	0.0881 ppm	2.3 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,527 cps	17.5369 ppm	1.4 %	0.2 ppm
Cd 228.802 {447} (Axial)	1,060 cps	0.0916 ppm	2.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	794 cps	0.0879 ppm	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	502 cps	0.0927 ppm	2.3 %	0.0 ppm
Co 228.616 {447} (Axial)	736 cps	0.0893 ppm	2.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	1,941 cps	0.0924 ppm	2.4 %	0.0 ppm
Fe 259.940 {130} (Radial)	1,618 cps	8.7103 ppm	1.2 %	0.1 ppm
Li 670.784 {50} (Radial)	940 cps	0.0897 ppm	1.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	9,304 cps	0.1394 ppm	2.3 %	0.0 ppm
Mo 202.030 {467} (Axial)	233 cps	0.0925 ppm	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	196,259 cps	132.8809 ppm	1.9 %	2.6 ppm
Ni 231.604 {445} (Axial)	369 cps	0.0897 ppm	2.0 %	0.0 ppm
K 766.490 {44} (Radial)	3,253 cps	9.5412 ppm	2.5 %	0.2 ppm
Se 196.090 {472} (Axial)	20 cps	0.0880 ppm	5.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	998 cps	0.0887 ppm	2.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	3,648 cps	0.1360 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	91 cps	0.0916 ppm	2.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	86 cps	0.0897 ppm	1.4 %	0.0 ppm
V 292.402 {115} (Axial)	1,356 cps	0.0895 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	8,876 cps	0.8543 ppm	2.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.7726 %	0.4 %	0.3 %
Sc 188.060 {479} (Axial)		85.8362 %	0.8 %	0.7 %
Mg 279.079 {121} (Radial)	328 cps	11.4302 ppm	1.7 %	0.2 ppm
Tl 190.856 {477} (Axial)	29 cps	0.0875 ppm	2.6 %	0.0 ppm
Al 167.079 {502} (Axial)	182 cps	0.1559 ppm	2.7 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.0298 %	0.9 %	0.8 %
B 249.773 {135} (Radial)	104 cps	0.4278 ppm	1.0 %	0.0 ppm
Al 396.152 {85} (Radial)	42 cps	0.1268 ppm	4.7 %	0.0 ppm
Si 251.611 {134} (Radial)	587 cps	8.8439 ppm	2.0 %	0.2 ppm
Pb 220.353 {453} (Axial)	134 cps	0.1352 ppm	2.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.6764 %	0.7 %	0.7 %
Sc 361.384 {93} (Radial)		95.8130 %	0.7 %	0.6 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/30/20 14:50						
Antimony	SW6010D	ICP2_201130B	0.9894	1	98.9	90-110
Arsenic	SW6010D	ICP2_201130B	0.9666	1	96.7	90-110
Barium	SW6010D	ICP2_201130B	0.9728	1	97.3	90-110
Beryllium	SW6010D	ICP2_201130B	0.9673	1	96.7	90-110
Cadmium	SW6010D	ICP2_201130B	0.983	1	98.3	90-110
Chromium	SW6010D	ICP2_201130B	0.9881	1	98.8	90-110
Cobalt	SW6010D	ICP2_201130B	0.9957	1	99.6	90-110
Lead	SW6010D	ICP2_201130B	1.019	1	102	90-110
Manganese	SW6010D	ICP2_201130B	1.002	1	100	90-110
Nickel	SW6010D	ICP2_201130B	1.001	1	100	90-110
Selenium	SW6010D	ICP2_201130B	0.9752	1	97.5	90-110
Silver	SW6010D	ICP2_201130B	1.038	1	104	90-110
Thallium	SW6010D	ICP2_201130B	1.038	1	104	90-110
Vanadium	SW6010D	ICP2_201130B	0.9933	1	99.3	90-110
Zinc	SW6010D	ICP2_201130B	0.9757	1	97.6	90-110
CCV 11/30/20 15:37						
Antimony	SW6010D	ICP2_201130B	0.5	0.5	100	90-110
Arsenic	SW6010D	ICP2_201130B	0.4986	0.5	99.7	90-110
Barium	SW6010D	ICP2_201130B	2.488	2.5	99.5	90-110
Beryllium	SW6010D	ICP2_201130B	0.5109	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5025	0.5	100	90-110
Chromium	SW6010D	ICP2_201130B	0.5056	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.531	2.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5104	0.5	102	90-110
Manganese	SW6010D	ICP2_201130B	0.506	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.533	2.5	101	90-110
Selenium	SW6010D	ICP2_201130B	2.486	2.5	99.4	90-110
Silver	SW6010D	ICP2_201130B	0.5081	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5169	0.5	103	90-110
Vanadium	SW6010D	ICP2_201130B	0.5078	0.5	102	90-110
Zinc	SW6010D	ICP2_201130B	1.251	1.25	100	90-110
CCV 11/30/20 16:39						
Antimony	SW6010D	ICP2_201130B	0.4994	0.5	99.9	90-110
Arsenic	SW6010D	ICP2_201130B	0.5038	0.5	101	90-110
Barium	SW6010D	ICP2_201130B	2.47	2.5	98.8	90-110
Beryllium	SW6010D	ICP2_201130B	0.5093	0.5	102	90-110

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 16:39						
Cadmium	SW6010D	ICP2_201130B	0.5071	0.5	101	90-110
Chromium	SW6010D	ICP2_201130B	0.5032	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.548	2.5	102	90-110
Lead	SW6010D	ICP2_201130B	0.5162	0.5	103	90-110
Manganese	SW6010D	ICP2_201130B	0.5044	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.548	2.5	102	90-110
Selenium	SW6010D	ICP2_201130B	2.495	2.5	99.8	90-110
Silver	SW6010D	ICP2_201130B	0.5085	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.52	0.5	104	90-110
Vanadium	SW6010D	ICP2_201130B	0.5056	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.261	1.25	101	90-110
CCV 11/30/20 17:40						
Antimony	SW6010D	ICP2_201130B	0.4955	0.5	99.1	90-110
Arsenic	SW6010D	ICP2_201130B	0.4992	0.5	99.8	90-110
Barium	SW6010D	ICP2_201130B	2.524	2.5	101	90-110
Beryllium	SW6010D	ICP2_201130B	0.5057	0.5	101	90-110
Cadmium	SW6010D	ICP2_201130B	0.5026	0.5	101	90-110
Chromium	SW6010D	ICP2_201130B	0.5001	0.5	100	90-110
Cobalt	SW6010D	ICP2_201130B	2.522	2.5	101	90-110
Lead	SW6010D	ICP2_201130B	0.5136	0.5	103	90-110
Manganese	SW6010D	ICP2_201130B	0.5014	0.5	100	90-110
Nickel	SW6010D	ICP2_201130B	2.526	2.5	101	90-110
Selenium	SW6010D	ICP2_201130B	2.477	2.5	99.1	90-110
Silver	SW6010D	ICP2_201130B	0.5033	0.5	101	90-110
Thallium	SW6010D	ICP2_201130B	0.5172	0.5	103	90-110
Vanadium	SW6010D	ICP2_201130B	0.5046	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.249	1.25	99.9	90-110
CCV 11/30/20 18:41						
Antimony	SW6010D	ICP2_201130B	0.5129	0.5	103	90-110
Arsenic	SW6010D	ICP2_201130B	0.5168	0.5	103	90-110
Barium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Beryllium	SW6010D	ICP2_201130B	0.5113	0.5	102	90-110
Cadmium	SW6010D	ICP2_201130B	0.5225	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.5031	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.605	2.5	104	90-110
Lead	SW6010D	ICP2_201130B	0.5408	0.5	108	90-110

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 18:41						
Manganese	SW6010D	ICP2_201130B	0.507	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.605	2.5	104	90-110
Selenium	SW6010D	ICP2_201130B	2.545	2.5	102	90-110
Silver	SW6010D	ICP2_201130B	0.515	0.5	103	90-110
Thallium	SW6010D	ICP2_201130B	0.5378	0.5	108	90-110
Vanadium	SW6010D	ICP2_201130B	0.514	0.5	103	90-110
Zinc	SW6010D	ICP2_201130B	1.292	1.25	103	90-110
CCV 11/30/20 19:42						
Antimony	SW6010D	ICP2_201130B	0.5223	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.526	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.638	2.5	106	90-110
Beryllium	SW6010D	ICP2_201130B	0.5307	0.5	106	90-110
Cadmium	SW6010D	ICP2_201130B	0.5302	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5238	0.5	105	90-110
Cobalt	SW6010D	ICP2_201130B	2.647	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5362	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5255	0.5	105	90-110
Nickel	SW6010D	ICP2_201130B	2.647	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.568	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5319	0.5	106	90-110
Thallium	SW6010D	ICP2_201130B	0.5448	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5328	0.5	107	90-110
Zinc	SW6010D	ICP2_201130B	1.312	1.25	105	90-110
CCV 11/30/20 20:44 begin						
Antimony	SW6010D	ICP2_201130B	0.5205	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5247	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.55	2.5	102	90-110
Beryllium	SW6010D	ICP2_201130B	0.5181	0.5	104	90-110
Cadmium	SW6010D	ICP2_201130B	0.5282	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5105	0.5	102	90-110
Cobalt	SW6010D	ICP2_201130B	2.639	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5343	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5133	0.5	103	90-110
Nickel	SW6010D	ICP2_201130B	2.637	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.578	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5215	0.5	104	90-110

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 11/30/2020 2:50:24 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	462 cps	0.9894 ppm	98.941 %	1.1 %	0.0 ppm
As 189.042 {478} (Axial)	351 cps	0.9666 ppm	96.657 %	1.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,198 cps	1.0156 ppm		2.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	19,410 cps	0.9728 ppm	97.282 %	2.4 %	0.0 ppm
Be 313.042 {108} (Axial)	343,074 cps	0.9673 ppm	96.733 %	1.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,211 cps	6.0225 ppm	100.374 %	2.1 %	0.1 ppm
Cd 228.802 {447} (Axial)	11,375 cps	0.9830 ppm	98.303 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	8,923 cps	0.9881 ppm	98.811 %	1.6 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,551 cps	1.0248 ppm		1.3 %	0.0 ppm
Co 228.616 {447} (Axial)	8,204 cps	0.9957 ppm	99.566 %	1.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	20,810 cps	0.9910 ppm	99.095 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	182 cps	0.9812 ppm	98.122 %	1.6 %	0.0 ppm
Li 670.784 {50} (Radial)	9,970 cps	0.9515 ppm	95.145 %	2.5 %	0.0 ppm
Mn 257.610 {131} (Axial)	66,873 cps	1.0016 ppm	100.161 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,546 cps	1.0120 ppm	101.203 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	29,457 cps	19.9441 ppm	94.972 %	2.6 %	0.5 ppm
Ni 231.604 {445} (Axial)	4,113 cps	1.0010 ppm	100.099 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	6,797 cps	19.9365 ppm	94.936 %	2.8 %	0.6 ppm
Se 196.090 {472} (Axial)	219 cps	0.9752 ppm	97.519 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	11,684 cps	1.0385 ppm	103.845 %	2.1 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,087 cps	0.9727 ppm	97.269 %	2.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	989 cps	0.9912 ppm		1.4 %	0.0 ppm
Tl 334.941 {101} (Radial)	927 cps	0.9665 ppm	96.647 %	2.5 %	0.0 ppm
V 292.402 {115} (Axial)	15,038 cps	0.9933 ppm	99.331 %	1.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,137 cps	0.9757 ppm	97.571 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.9448 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.4885 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	0.9369 ppm	93.694 %	3.1 %	0.0 ppm
Tl 190.856 {477} (Axial)	350 cps	1.0384 ppm	103.844 %	0.8 %	0.0 ppm
Al 167.079 {502} (Axial)	1,203 cps	1.0280 ppm		1.3 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.1732 %		0.2 %	0.2 %
B 249.773 {135} (Radial)	240 cps	0.9912 ppm	99.123 %	2.8 %	0.0 ppm
Al 396.152 {85} (Radial)	328 cps	0.9886 ppm	98.865 %	1.6 %	0.0 ppm
Si 251.611 {134} (Radial)	67 cps	1.0089 ppm		3.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,011 cps	1.0192 ppm	101.917 %	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		97.5577 %		0.2 %	0.2 %
Sc 361.384 {93} (Radial)		100.9516 %		0.3 %	0.3 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 8:44:34 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5205 ppm	104.105 %	1.2 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5247 ppm	104.943 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,860 cps	2.6471 ppm		1.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	50,873 cps	2.5497 ppm	101.989 %	1.5 %	0.0 ppm
Be 313.042 {108} (Axial)	183,750 cps	0.5181 ppm	103.620 %	3.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	508 cps	2.5275 ppm	101.101 %	1.1 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,113 cps	0.5282 ppm	105.648 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,610 cps	0.5105 ppm	102.101 %	3.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,929 cps	0.5407 ppm		1.6 %	0.0 ppm
Co 228.616 {447} (Axial)	21,743 cps	2.6389 ppm	105.556 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,707 cps	2.6051 ppm	104.203 %	3.2 %	0.1 ppm
Fe 259.940 {130} (Radial)	464 cps	2.4995 ppm	99.978 %	0.9 %	0.0 ppm
Li 670.784 {50} (Radial)	26,433 cps	2.5225 ppm	100.900 %	1.7 %	0.0 ppm
Mn 257.610 {131} (Axial)	34,268 cps	0.5133 ppm	102.653 %	3.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6616 ppm	106.463 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	73,751 cps	49.9348 ppm	99.870 %	2.0 %	1.0 ppm
Ni 231.604 {445} (Axial)	10,835 cps	2.6371 ppm	105.485 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,899 cps	52.5031 ppm	105.006 %	2.3 %	1.2 ppm
Se 196.090 {472} (Axial)	579 cps	2.5785 ppm	103.138 %	1.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	5,868 cps	0.5215 ppm	104.299 %	3.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,596 cps	0.5070 ppm	101.391 %	1.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	539 cps	0.5402 ppm		1.3 %	0.0 ppm
Ti 334.941 {101} (Radial)	457 cps	0.4760 ppm	95.198 %	1.6 %	0.0 ppm
V 292.402 {115} (Axial)	7,852 cps	0.5187 ppm	103.731 %	3.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,598 cps	1.3088 ppm	104.701 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		95.3493 %		0.9 %	0.9 %
Sc 188.060 {479} (Axial)		89.0648 %		0.4 %	0.4 %
Mg 279.079 {121} (Radial)	69 cps	2.4127 ppm	96.510 %	0.8 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5426 ppm	108.515 %	1.6 %	0.0 ppm
Al 167.079 {502} (Axial)	3,040 cps	2.5969 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.8495 %		0.3 %	0.3 %
B 249.773 {135} (Radial)	593 cps	2.4500 ppm	98.001 %	1.4 %	0.0 ppm
Al 396.152 {85} (Radial)	838 cps	2.5233 ppm	100.931 %	1.7 %	0.0 ppm
Si 251.611 {134} (Radial)	163 cps	2.4562 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	530 cps	0.5343 ppm	106.856 %	1.2 %	0.0 ppm
Y 224.306 {450} (Axial)		92.8151 %		0.3 %	0.3 %
Sc 361.384 {93} (Radial)		97.8360 %		0.1 %	0.1 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 20:44						
Thallium	SW6010D	ICP2_201130B	0.5426	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5187	0.5	104	90-110
Zinc	SW6010D	ICP2_201130B	1.309	1.25	105	90-110
CCV 11/30/20 21:50						
Antimony	SW6010D	ICP2_201130B	0.4722	0.5	94.4	90-110
Arsenic	SW6010D	ICP2_201130B	0.4698	0.5	94.0	90-110
Barium	SW6010D	ICP2_201130B	0	2.5	0 *	90-110
Beryllium	SW6010D	ICP2_201130B	0.4473	0.5	89.5 *	90-110
Cadmium	SW6010D	ICP2_201130B	0.4861	0.5	97.2	90-110
Chromium	SW6010D	ICP2_201130B	0.4471	0.5	89.4 *	90-110
Cobalt	SW6010D	ICP2_201130B	2.443	2.5	97.7	90-110
Lead	SW6010D	ICP2_201130B	0.4927	0.5	98.5	90-110
Manganese	SW6010D	ICP2_201130B	0.4442	0.5	88.8 *	90-110
Nickel	SW6010D	ICP2_201130B	2.442	2.5	97.7	90-110
Selenium	SW6010D	ICP2_201130B	2.364	2.5	94.6	90-110
Silver	SW6010D	ICP2_201130B	0.4418	0.5	88.3 *	90-110
Thallium	SW6010D	ICP2_201130B	0.4957	0.5	99.1	90-110
Vanadium	SW6010D	ICP2_201130B	0.4507	0.5	90.1	90-110
Zinc	SW6010D	ICP2_201130B	1.182	1.25	94.6	90-110
CCV 11/30/20 22:51						
Antimony	SW6010D	ICP2_201130B	0.5144	0.5	103	90-110
Arsenic	SW6010D	ICP2_201130B	0.5174	0.5	103	90-110
Barium	SW6010D	ICP2_201130B	2.576	2.5	103	90-110
Beryllium	SW6010D	ICP2_201130B	0.5001	0.5	100	90-110
Cadmium	SW6010D	ICP2_201130B	0.5215	0.5	104	90-110
Chromium	SW6010D	ICP2_201130B	0.4936	0.5	98.7	90-110
Cobalt	SW6010D	ICP2_201130B	2.608	2.5	104	90-110
Lead	SW6010D	ICP2_201130B	0.5288	0.5	106	90-110
Manganese	SW6010D	ICP2_201130B	0.4963	0.5	99.3	90-110
Nickel	SW6010D	ICP2_201130B	2.607	2.5	104	90-110
Selenium	SW6010D	ICP2_201130B	2.565	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5016	0.5	100	90-110
Thallium	SW6010D	ICP2_201130B	0.5355	0.5	107	90-110
Vanadium	SW6010D	ICP2_201130B	0.5007	0.5	100	90-110
Zinc	SW6010D	ICP2_201130B	1.292	1.25	103	90-110

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 11/30/20 23:52						
Antimony	SW6010D	ICP2_201130B	0.5207	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5242	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.664	2.5	107	90-110
Beryllium	SW6010D	ICP2_201130B	0.5384	0.5	108	90-110
Cadmium	SW6010D	ICP2_201130B	0.5277	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5318	0.5	106	90-110
Cobalt	SW6010D	ICP2_201130B	2.65	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5355	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5329	0.5	107	90-110
Nickel	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5372	0.5	107	90-110
Thallium	SW6010D	ICP2_201130B	0.5437	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5369	0.5	107	90-110
Zinc	SW6010D	ICP2_201130B	1.311	1.25	105	90-110
CCV 12/01/20 00:53						
Antimony	SW6010D	ICP2_201130B	0.5216	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5274	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.58	2.5	103	90-110
Beryllium	SW6010D	ICP2_201130B	0.531	0.5	106	90-110
Cadmium	SW6010D	ICP2_201130B	0.5284	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5252	0.5	105	90-110
Cobalt	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5373	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5256	0.5	105	90-110
Nickel	SW6010D	ICP2_201130B	2.653	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.612	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5306	0.5	106	90-110
Thallium	SW6010D	ICP2_201130B	0.5434	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.529	0.5	106	90-110
Zinc	SW6010D	ICP2_201130B	1.313	1.25	105	90-110
CCV 12/01/20 01:55						
Antimony	SW6010D	ICP2_201130B	0.5211	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.527	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.654	2.5	106	90-110
Beryllium	SW6010D	ICP2_201130B	0.5117	0.5	102	90-110

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 11/30/2020 11:52:26 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	243 cps	0.5207 ppm	104.131 %	0.9 %	0.0 ppm
As 189.042 {478} (Axial)	190 cps	0.5242 ppm	104.843 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	60,792 cps	2.7813 ppm		2.2 %	0.1 ppm
Ba 493.409 {68} (Radial)	53,148 cps	2.6638 ppm	106.551 %	2.1 %	0.1 ppm
Be 313.042 {108} (Axial)	190,956 cps	0.5384 ppm	107.684 %	1.5 %	0.0 ppm
Ca 315.887 {107} (Radial)	529 cps	2.6318 ppm	105.274 %	1.8 %	0.0 ppm
Cd 228.802 {447} (Axial)	6,106 cps	0.5277 ppm	105.531 %	1.1 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,802 cps	0.5318 ppm	106.355 %	1.9 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,958 cps	0.5461 ppm		1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	21,833 cps	2.6498 ppm	105.992 %	1.1 %	0.0 ppm
Cu 324.754 {104} (Axial)	56,364 cps	2.6840 ppm	107.359 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	490 cps	2.6375 ppm	105.501 %	1.7 %	0.0 ppm
Li 670.784 {50} (Radial)	27,699 cps	2.6433 ppm	105.731 %	2.3 %	0.1 ppm
Mn 257.610 {131} (Axial)	35,578 cps	0.5329 ppm	106.576 %	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,697 cps	2.6617 ppm	106.467 %	1.3 %	0.0 ppm
Na 589.592 {57} (Radial)	77,578 cps	52.5258 ppm	105.052 %	2.4 %	1.3 ppm
Ni 231.604 {445} (Axial)	10,890 cps	2.6505 ppm	106.022 %	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	18,356 cps	53.8427 ppm	107.685 %	2.8 %	1.5 ppm
Se 196.090 {472} (Axial)	584 cps	2.6011 ppm	104.044 %	1.1 %	0.0 ppm
Ag 328.068 {103} (Axial)	6,044 cps	0.5372 ppm	107.433 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	14,322 cps	0.5340 ppm	106.808 %	2.1 %	0.0 ppm
Sn 189.989 {477} (Axial)	541 cps	0.5422 ppm		1.3 %	0.0 ppm
Tl 334.941 {101} (Radial)	491 cps	0.5121 ppm	102.430 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	8,128 cps	0.5369 ppm	107.378 %	1.6 %	0.0 ppm
Zn 213.856 {457} (Axial)	13,619 cps	1.3108 ppm	104.861 %	1.2 %	0.0 ppm
Sc 357.253 {94} (Axial)		94.6087 %		1.0 %	1.0 %
Sc 188.060 {479} (Axial)		89.5617 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	77 cps	2.6663 ppm	106.651 %	0.7 %	0.0 ppm
Tl 190.856 {477} (Axial)	183 cps	0.5437 ppm	108.738 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	3,071 cps	2.6238 ppm		1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		97.2318 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	624 cps	2.5790 ppm	103.159 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	883 cps	2.6573 ppm	106.290 %	2.3 %	0.1 ppm
Si 251.611 {134} (Radial)	174 cps	2.6211 ppm		3.0 %	0.1 ppm
Pb 220.353 {453} (Axial)	531 cps	0.5355 ppm	107.096 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		93.0516 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		95.7441 %		0.3 %	0.3 %

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 01:55						
Cadmium	SW6010D	ICP2_201130B	0.5282	0.5	106	90-110
Chromium	SW6010D	ICP2_201130B	0.5047	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.649	2.5	106	90-110
Lead	SW6010D	ICP2_201130B	0.5356	0.5	107	90-110
Manganese	SW6010D	ICP2_201130B	0.5074	0.5	101	90-110
Nickel	SW6010D	ICP2_201130B	2.651	2.5	106	90-110
Selenium	SW6010D	ICP2_201130B	2.601	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5118	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5441	0.5	109	90-110
Vanadium	SW6010D	ICP2_201130B	0.5131	0.5	103	90-110
Zinc	SW6010D	ICP2_201130B	1.311	1.25	105	90-110
CCV 12/01/20 02:57						
Antimony	SW6010D	ICP2_201130B	0.5184	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5202	0.5	104	90-110
Barium	SW6010D	ICP2_201130B	2.363	2.5	94.5	90-110
Beryllium	SW6010D	ICP2_201130B	0.5035	0.5	101	90-110
Cadmium	SW6010D	ICP2_201130B	0.5246	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.5074	0.5	101	90-110
Cobalt	SW6010D	ICP2_201130B	2.616	2.5	105	90-110
Lead	SW6010D	ICP2_201130B	0.5301	0.5	106	90-110
Manganese	SW6010D	ICP2_201130B	0.4996	0.5	99.9	90-110
Nickel	SW6010D	ICP2_201130B	2.616	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.585	2.5	103	90-110
Silver	SW6010D	ICP2_201130B	0.5076	0.5	102	90-110
Thallium	SW6010D	ICP2_201130B	0.5382	0.5	108	90-110
Vanadium	SW6010D	ICP2_201130B	0.5042	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.299	1.25	104	90-110
CCV 12/01/20 03:12						
Antimony	SW6010D	ICP2_201130B	0.5209	0.5	104	90-110
Arsenic	SW6010D	ICP2_201130B	0.5235	0.5	105	90-110
Barium	SW6010D	ICP2_201130B	2.442	2.5	97.7	90-110
Beryllium	SW6010D	ICP2_201130B	0.5013	0.5	100	90-110
Cadmium	SW6010D	ICP2_201130B	0.5267	0.5	105	90-110
Chromium	SW6010D	ICP2_201130B	0.4939	0.5	98.8	90-110
Cobalt	SW6010D	ICP2_201130B	2.635	2.5	105	90-110
Lead	SW6010D	ICP2_201130B	0.5323	0.5	106	90-110

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 03:12						
Manganese	SW6010D	ICP2_201130B	0.4981	0.5	99.6	90-110
Nickel	SW6010D	ICP2_201130B	2.634	2.5	105	90-110
Selenium	SW6010D	ICP2_201130B	2.607	2.5	104	90-110
Silver	SW6010D	ICP2_201130B	0.5036	0.5	101	90-110
Thallium	SW6010D	ICP2_201130B	0.5389	0.5	108	90-110
Vanadium	SW6010D	ICP2_201130B	0.5053	0.5	101	90-110
Zinc	SW6010D	ICP2_201130B	1.307	1.25	105	90-110
ICV 12/01/20 11:49						
Antimony	SW6010D	ICP2_201201B	0.9945	1	99.4	90-110
Arsenic	SW6010D	ICP2_201201B	0.9691	1	96.9	90-110
Barium	SW6010D	ICP2_201201B	1.025	1	102	90-110
Beryllium	SW6010D	ICP2_201201B	0.9966	1	99.7	90-110
Cadmium	SW6010D	ICP2_201201B	0.9871	1	98.7	90-110
Calcium	SW6010D	ICP2_201201B	6.355	6	106	90-110
Chromium	SW6010D	ICP2_201201B	1.016	1	102	90-110
Cobalt	SW6010D	ICP2_201201B	0.9987	1	99.9	90-110
Copper	SW6010D	ICP2_201201B	1.025	1	102	90-110
Iron	SW6010D	ICP2_201201B	1.049	1	105	90-110
Lead	SW6010D	ICP2_201201B	1.02	1	102	90-110
Magnesium	SW6010D	ICP2_201201B	1.004	1	100	90-110
Manganese	SW6010D	ICP2_201201B	1.03	1	103	90-110
Nickel	SW6010D	ICP2_201201B	1.003	1	100	90-110
Potassium	SW6010D	ICP2_201201B	20.98	21	99.9	90-110
Selenium	SW6010D	ICP2_201201B	0.9781	1	97.8	90-110
Silver	SW6010D	ICP2_201201B	1.048	1	105	90-110
Sodium	SW6010D	ICP2_201201B	21.05	21	100	90-110
Thallium	SW6010D	ICP2_201201B	1.039	1	104	90-110
Vanadium	SW6010D	ICP2_201201B	1.024	1	102	90-110
Zinc	SW6010D	ICP2_201201B	0.9793	1	97.9	90-110
CCV 12/01/20 12:35						
Antimony	SW6010D	ICP2_201201B	0.4978	0.5	99.6	90-110
Arsenic	SW6010D	ICP2_201201B	0.4958	0.5	99.2	90-110
Barium	SW6010D	ICP2_201201B	2.533	2.5	101	90-110
Beryllium	SW6010D	ICP2_201201B	0.5083	0.5	102	90-110
Cadmium	SW6010D	ICP2_201201B	0.4995	0.5	99.9	90-110
Calcium	SW6010D	ICP2_201201B	2.545	2.5	102	90-110

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICV/QCS

Sample type: QC Analysis started at: 12/1/2020 11:49:15 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	466 cps	0.9945 ppm	99.445 %	0.8 %	0.0 ppm
As 189.042 {478} (Axial)	359 cps	0.9691 ppm	96.913 %	0.9 %	0.0 ppm
Ba 455.403 {74} (Radial)	22,669 cps	1.0676 ppm		1.1 %	0.0 ppm
Ba 493.409 {68} (Radial)	16,487 cps	1.0246 ppm	102.461 %	1.1 %	0.0 ppm
Be 313.042 {108} (Axial)	356,424 cps	0.9966 ppm	99.660 %	1.0 %	0.0 ppm
Ca 315.887 {107} (Radial)	1,216 cps	6.3553 ppm	105.922 %	0.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	11,662 cps	0.9871 ppm	98.710 %	1.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	9,231 cps	1.0160 ppm	101.600 %	1.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5,586 cps	1.0220 ppm		0.9 %	0.0 ppm
Co 228.616 {447} (Axial)	8,343 cps	0.9987 ppm	99.866 %	0.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	21,703 cps	1.0247 ppm	102.466 %	1.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	185 cps	1.0488 ppm	104.883 %	0.4 %	0.0 ppm
Li 670.784 {50} (Radial)	10,278 cps	1.0088 ppm	100.878 %	1.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	69,352 cps	1.0298 ppm	102.983 %	1.4 %	0.0 ppm
Mo 202.030 {467} (Axial)	2,617 cps	1.0154 ppm	101.539 %	0.9 %	0.0 ppm
Na 589.592 {57} (Radial)	29,848 cps	21.0473 ppm	100.225 %	1.5 %	0.3 ppm
Ni 231.604 {445} (Axial)	4,177 cps	1.0030 ppm	100.299 %	0.8 %	0.0 ppm
K 766.490 {44} (Radial)	7,237 cps	20.9765 ppm	99.888 %	1.4 %	0.3 ppm
Se 196.090 {472} (Axial)	219 cps	0.9781 ppm	97.807 %	0.9 %	0.0 ppm
Ag 328.068 {103} (Axial)	10,068 cps	1.0479 ppm	104.789 %	1.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	26,515 cps	1.0313 ppm	103.134 %	1.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	1,021 cps	0.9932 ppm		1.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	896 cps	1.0246 ppm	102.463 %	0.9 %	0.0 ppm
V 292.402 {115} (Axial)	15,733 cps	1.0241 ppm	102.413 %	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	10,327 cps	0.9793 ppm	97.932 %	0.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		98.7252 %		0.1 %	0.1 %
Sc 188.060 {479} (Axial)		95.8434 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	27 cps	1.0043 ppm	100.432 %	7.7 %	0.1 ppm
Tl 190.856 {477} (Axial)	359 cps	1.0394 ppm	103.943 %	0.7 %	0.0 ppm
Al 167.079 {502} (Axial)	1,262 cps	1.0231 ppm		0.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		96.5065 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	238 cps	1.0506 ppm	105.063 %	0.9 %	0.0 ppm
Al 396.152 {85} (Radial)	339 cps	1.0530 ppm	105.299 %	0.4 %	0.0 ppm
Si 251.611 {134} (Radial)	66 cps	1.0610 ppm		1.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	1,035 cps	1.0196 ppm	101.957 %	0.7 %	0.0 ppm
Y 224.306 {450} (Axial)		97.8822 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		101.0633 %		0.5 %	0.5 %

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dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 12:35						
Chromium	SW6010D	ICP2_201201B	0.5045	0.5	101	90-110
Cobalt	SW6010D	ICP2_201201B	2.515	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.522	2.5	101	90-110
Iron	SW6010D	ICP2_201201B	2.553	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.5054	0.5	101	90-110
Magnesium	SW6010D	ICP2_201201B	2.535	2.5	101	90-110
Manganese	SW6010D	ICP2_201201B	0.5042	0.5	101	90-110
Nickel	SW6010D	ICP2_201201B	2.516	2.5	101	90-110
Potassium	SW6010D	ICP2_201201B	49.92	50	99.8	90-110
Selenium	SW6010D	ICP2_201201B	2.487	2.5	99.5	90-110
Silver	SW6010D	ICP2_201201B	0.5023	0.5	100	90-110
Sodium	SW6010D	ICP2_201201B	50.42	50	101	90-110
Thallium	SW6010D	ICP2_201201B	0.5171	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.5034	0.5	101	90-110
Zinc	SW6010D	ICP2_201201B	1.244	1.25	99.5	90-110
CCV 12/01/20 13:41						
Antimony	SW6010D	ICP2_201201B	0.4931	0.5	98.6	90-110
Arsenic	SW6010D	ICP2_201201B	0.4938	0.5	98.8	90-110
Barium	SW6010D	ICP2_201201B	2.424	2.5	96.9	90-110
Beryllium	SW6010D	ICP2_201201B	0.5007	0.5	100	90-110
Cadmium	SW6010D	ICP2_201201B	0.496	0.5	99.2	90-110
Calcium	SW6010D	ICP2_201201B	2.507	2.5	100	90-110
Chromium	SW6010D	ICP2_201201B	0.4982	0.5	99.6	90-110
Cobalt	SW6010D	ICP2_201201B	2.498	2.5	99.9	90-110
Copper	SW6010D	ICP2_201201B	2.477	2.5	99.1	90-110
Iron	SW6010D	ICP2_201201B	2.438	2.5	97.5	90-110
Lead	SW6010D	ICP2_201201B	0.5025	0.5	100	90-110
Magnesium	SW6010D	ICP2_201201B	2.458	2.5	98.3	90-110
Manganese	SW6010D	ICP2_201201B	0.4956	0.5	99.1	90-110
Nickel	SW6010D	ICP2_201201B	2.498	2.5	99.9	90-110
Potassium	SW6010D	ICP2_201201B	47.22	50	94.4	90-110
Selenium	SW6010D	ICP2_201201B	2.479	2.5	99.1	90-110
Silver	SW6010D	ICP2_201201B	0.4979	0.5	99.6	90-110
Sodium	SW6010D	ICP2_201201B	48.02	50	96.0	90-110
Thallium	SW6010D	ICP2_201201B	0.5138	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.4928	0.5	98.6	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 13:41						
Zinc	SW6010D	ICP2_201201B	1.236	1.25	98.9	90-110
CCV 12/01/20 14:53						
Antimony	SW6010D	ICP2_201201B	0.5089	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.4974	0.5	99.5	90-110
Barium	SW6010D	ICP2_201201B	2.638	2.5	106	90-110
Beryllium	SW6010D	ICP2_201201B	0.4874	0.5	97.5	90-110
Cadmium	SW6010D	ICP2_201201B	0.4962	0.5	99.2	90-110
Calcium	SW6010D	ICP2_201201B	2.415	2.5	96.6	90-110
Chromium	SW6010D	ICP2_201201B	0.4819	0.5	96.4	90-110
Cobalt	SW6010D	ICP2_201201B	2.476	2.5	99.1	90-110
Copper	SW6010D	ICP2_201201B	2.595	2.5	104	90-110
Iron	SW6010D	ICP2_201201B	2.517	2.5	101	90-110
Lead	SW6010D	ICP2_201201B	0.4904	0.5	98.1	90-110
Magnesium	SW6010D	ICP2_201201B	2.341	2.5	93.6	90-110
Manganese	SW6010D	ICP2_201201B	0.4855	0.5	97.1	90-110
Nickel	SW6010D	ICP2_201201B	2.464	2.5	98.6	90-110
Potassium	SW6010D	ICP2_201201B	50.41	50	101	90-110
Selenium	SW6010D	ICP2_201201B	2.52	2.5	101	90-110
Silver	SW6010D	ICP2_201201B	0.4987	0.5	99.7	90-110
Sodium	SW6010D	ICP2_201201B	51.09	50	102	90-110
Thallium	SW6010D	ICP2_201201B	0.5107	0.5	102	90-110
Vanadium	SW6010D	ICP2_201201B	0.4908	0.5	98.2	90-110
Zinc	SW6010D	ICP2_201201B	1.229	1.25	98.3	90-110
CCV 12/01/20 16:00						
Antimony	SW6010D	ICP2_201201B	0.5172	0.5	103	90-110
Arsenic	SW6010D	ICP2_201201B	0.5044	0.5	101	90-110
Barium	SW6010D	ICP2_201201B	2.657	2.5	106	90-110
Beryllium	SW6010D	ICP2_201201B	0.4954	0.5	99.1	90-110
Cadmium	SW6010D	ICP2_201201B	0.5003	0.5	100	90-110
Calcium	SW6010D	ICP2_201201B	2.391	2.5	95.6	90-110
Chromium	SW6010D	ICP2_201201B	0.4888	0.5	97.8	90-110
Cobalt	SW6010D	ICP2_201201B	2.501	2.5	100	90-110
Copper	SW6010D	ICP2_201201B	2.653	2.5	106	90-110
Iron	SW6010D	ICP2_201201B	2.502	2.5	100	90-110
Lead	SW6010D	ICP2_201201B	0.4943	0.5	98.9	90-110
Magnesium	SW6010D	ICP2_201201B	2.307	2.5	92.3	90-110

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

CCV

Sample type: QC Analysis started at: 12/1/2020 2:53:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	238 cps	0.5089 ppm	101.784 %	1.5 %	0.0 ppm
As 189.042 {478} (Axial)	184 cps	0.4974 ppm	99.472 %	1.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	57,444 cps	2.7053 ppm		1.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	42,455 cps	2.6384 ppm	105.538 %	1.6 %	0.0 ppm
Be 313.042 {108} (Axial)	174,328 cps	0.4874 ppm	97.488 %	0.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	462 cps	2.4147 ppm	96.590 %	2.0 %	0.0 ppm
Cd 228.802 {447} (Axial)	5,862 cps	0.4962 ppm	99.236 %	1.3 %	0.0 ppm
Cr 267.716 {126} (Axial)	4,378 cps	0.4819 ppm	96.370 %	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	2,801 cps	0.5124 ppm		1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	20,687 cps	2.4763 ppm	99.052 %	1.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	54,968 cps	2.5952 ppm	103.808 %	0.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	444 cps	2.5171 ppm	100.685 %	1.4 %	0.0 ppm
Li 670.784 {50} (Radial)	26,605 cps	2.6114 ppm	104.454 %	1.9 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,697 cps	0.4855 ppm	97.105 %	0.8 %	0.0 ppm
Mo 202.030 {467} (Axial)	6,447 cps	2.5019 ppm	100.075 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	72,446 cps	51.0851 ppm	102.170 %	2.1 %	1.1 ppm
Ni 231.604 {445} (Axial)	10,262 cps	2.4644 ppm	98.575 %	1.3 %	0.0 ppm
K 766.490 {44} (Radial)	17,394 cps	50.4135 ppm	100.827 %	2.6 %	1.3 ppm
Se 196.090 {472} (Axial)	565 cps	2.5202 ppm	100.809 %	1.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	4,791 cps	0.4987 ppm	99.732 %	0.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	13,427 cps	0.5223 ppm	104.457 %	1.5 %	0.0 ppm
Sn 189.989 {477} (Axial)	507 cps	0.4933 ppm		1.4 %	0.0 ppm
Ti 334.941 {101} (Radial)	447 cps	0.5114 ppm	102.273 %	1.5 %	0.0 ppm
V 292.402 {115} (Axial)	7,540 cps	0.4908 ppm	98.168 %	0.7 %	0.0 ppm
Zn 213.856 {457} (Axial)	12,964 cps	1.2293 ppm	98.345 %	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		104.2385 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		92.0107 %		1.3 %	1.2 %
Mg 279.079 {121} (Radial)	64 cps	2.3410 ppm	93.639 %	1.9 %	0.0 ppm
Tl 190.856 {477} (Axial)	177 cps	0.5107 ppm	102.135 %	1.3 %	0.0 ppm
Al 167.079 {502} (Axial)	2,782 cps	2.2546 ppm		1.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		100.4838 %		1.2 %	1.2 %
B 249.773 {135} (Radial)	569 cps	2.5086 ppm	100.346 %	2.2 %	0.1 ppm
Al 396.152 {85} (Radial)	817 cps	2.5375 ppm	101.501 %	1.3 %	0.0 ppm
Si 251.611 {134} (Radial)	154 cps	2.4856 ppm		2.1 %	0.1 ppm
Pb 220.353 {453} (Axial)	498 cps	0.4904 ppm	98.071 %	1.1 %	0.0 ppm
Y 224.306 {450} (Axial)		98.4741 %		1.2 %	1.2 %
Sc 361.384 {93} (Radial)		115.7543 %		0.2 %	0.3 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 16:00						
Manganese	SW6010D	ICP2_201201B	0.4931	0.5	98.6	90-110
Nickel	SW6010D	ICP2_201201B	2.491	2.5	99.6	90-110
Potassium	SW6010D	ICP2_201201B	51.28	50	103	90-110
Selenium	SW6010D	ICP2_201201B	2.54	2.5	102	90-110
Silver	SW6010D	ICP2_201201B	0.5043	0.5	101	90-110
Sodium	SW6010D	ICP2_201201B	51.69	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5166	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.5029	0.5	101	90-110
Zinc	SW6010D	ICP2_201201B	1.242	1.25	99.4	90-110
CCV 12/01/20 17:07						
Antimony	SW6010D	ICP2_201201B	0.5041	0.5	101	90-110
Arsenic	SW6010D	ICP2_201201B	0.4961	0.5	99.2	90-110
Barium	SW6010D	ICP2_201201B	2.668	2.5	107	90-110
Beryllium	SW6010D	ICP2_201201B	0.4887	0.5	97.7	90-110
Cadmium	SW6010D	ICP2_201201B	0.4976	0.5	99.5	90-110
Calcium	SW6010D	ICP2_201201B	2.452	2.5	98.1	90-110
Chromium	SW6010D	ICP2_201201B	0.4813	0.5	96.3	90-110
Cobalt	SW6010D	ICP2_201201B	2.457	2.5	98.3	90-110
Copper	SW6010D	ICP2_201201B	2.622	2.5	105	90-110
Iron	SW6010D	ICP2_201201B	2.557	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.4893	0.5	97.9	90-110
Magnesium	SW6010D	ICP2_201201B	2.312	2.5	92.5	90-110
Manganese	SW6010D	ICP2_201201B	0.4862	0.5	97.2	90-110
Nickel	SW6010D	ICP2_201201B	2.45	2.5	98.0	90-110
Potassium	SW6010D	ICP2_201201B	53.19	50	106	90-110
Selenium	SW6010D	ICP2_201201B	2.467	2.5	98.7	90-110
Silver	SW6010D	ICP2_201201B	0.4901	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201201B	51.65	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5125	0.5	103	90-110
Vanadium	SW6010D	ICP2_201201B	0.4985	0.5	99.7	90-110
Zinc	SW6010D	ICP2_201201B	1.225	1.25	98.0	90-110
CCV 12/01/20 18:10						
Antimony	SW6010D	ICP2_201201B	0.5109	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.5098	0.5	102	90-110
Barium	SW6010D	ICP2_201201B	2.631	2.5	105	90-110
Beryllium	SW6010D	ICP2_201201B	0.4844	0.5	96.9	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 18:10						
Cadmium	SW6010D	ICP2_201201B	0.5127	0.5	103	90-110
Calcium	SW6010D	ICP2_201201B	2.535	2.5	101	90-110
Chromium	SW6010D	ICP2_201201B	0.4769	0.5	95.4	90-110
Cobalt	SW6010D	ICP2_201201B	2.528	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.604	2.5	104	90-110
Iron	SW6010D	ICP2_201201B	2.56	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.5041	0.5	101	90-110
Magnesium	SW6010D	ICP2_201201B	2.322	2.5	92.9	90-110
Manganese	SW6010D	ICP2_201201B	0.4828	0.5	96.6	90-110
Nickel	SW6010D	ICP2_201201B	2.521	2.5	101	90-110
Potassium	SW6010D	ICP2_201201B	53.71	50	107	90-110
Selenium	SW6010D	ICP2_201201B	2.518	2.5	101	90-110
Silver	SW6010D	ICP2_201201B	0.4814	0.5	96.3	90-110
Sodium	SW6010D	ICP2_201201B	51.2	50	102	90-110
Thallium	SW6010D	ICP2_201201B	0.5255	0.5	105	90-110
Vanadium	SW6010D	ICP2_201201B	0.4966	0.5	99.3	90-110
Zinc	SW6010D	ICP2_201201B	1.261	1.25	101	90-110
CCV 12/01/20 19:17						
Antimony	SW6010D	ICP2_201201B	0.5124	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.5105	0.5	102	90-110
Barium	SW6010D	ICP2_201201B	2.66	2.5	106	90-110
Beryllium	SW6010D	ICP2_201201B	0.4944	0.5	98.9	90-110
Cadmium	SW6010D	ICP2_201201B	0.514	0.5	103	90-110
Calcium	SW6010D	ICP2_201201B	2.415	2.5	96.6	90-110
Chromium	SW6010D	ICP2_201201B	0.4871	0.5	97.4	90-110
Cobalt	SW6010D	ICP2_201201B	2.523	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.678	2.5	107	90-110
Iron	SW6010D	ICP2_201201B	2.566	2.5	103	90-110
Lead	SW6010D	ICP2_201201B	0.504	0.5	101	90-110
Magnesium	SW6010D	ICP2_201201B	2.332	2.5	93.3	90-110
Manganese	SW6010D	ICP2_201201B	0.4916	0.5	98.3	90-110
Nickel	SW6010D	ICP2_201201B	2.515	2.5	101	90-110
Potassium	SW6010D	ICP2_201201B	55.19	50	110 *	90-110
Selenium	SW6010D	ICP2_201201B	2.488	2.5	99.5	90-110
Silver	SW6010D	ICP2_201201B	0.4901	0.5	98.0	90-110
Sodium	SW6010D	ICP2_201201B	51.42	50	103	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 19:17						
Thallium	SW6010D	ICP2_201201B	0.5295	0.5	106	90-110
Vanadium	SW6010D	ICP2_201201B	0.5077	0.5	102	90-110
Zinc	SW6010D	ICP2_201201B	1.26	1.25	101	90-110
CCV 12/01/20 20:25						
Antimony	SW6010D	ICP2_201201B	0.5085	0.5	102	90-110
Arsenic	SW6010D	ICP2_201201B	0.5073	0.5	101	90-110
Barium	SW6010D	ICP2_201201B	2.614	2.5	105	90-110
Beryllium	SW6010D	ICP2_201201B	0.487	0.5	97.4	90-110
Cadmium	SW6010D	ICP2_201201B	0.5089	0.5	102	90-110
Calcium	SW6010D	ICP2_201201B	3.075	2.5	123 *	90-110
Chromium	SW6010D	ICP2_201201B	0.479	0.5	95.8	90-110
Cobalt	SW6010D	ICP2_201201B	2.483	2.5	99.3	90-110
Copper	SW6010D	ICP2_201201B	2.72	2.5	109	90-110
Iron	SW6010D	ICP2_201201B	2.554	2.5	102	90-110
Lead	SW6010D	ICP2_201201B	0.4963	0.5	99.3	90-110
Magnesium	SW6010D	ICP2_201201B	2.478	2.5	99.1	90-110
Manganese	SW6010D	ICP2_201201B	0.4882	0.5	97.6	90-110
Nickel	SW6010D	ICP2_201201B	2.472	2.5	98.9	90-110
Potassium	SW6010D	ICP2_201201B	54.49	50	109	90-110
Selenium	SW6010D	ICP2_201201B	2.467	2.5	98.7	90-110
Silver	SW6010D	ICP2_201201B	0.4863	0.5	97.3	90-110
Sodium	SW6010D	ICP2_201201B	50.7	50	101	90-110
Thallium	SW6010D	ICP2_201201B	0.5231	0.5	105	90-110
Vanadium	SW6010D	ICP2_201201B	0.5067	0.5	101	90-110
Zinc	SW6010D	ICP2_201201B	1.243	1.25	99.4	90-110
CCV 12/01/20 21:31						
Antimony	SW6010D	ICP2_201201B	0.5346	0.5	107	90-110
Arsenic	SW6010D	ICP2_201201B	0.5217	0.5	104	90-110
Barium	SW6010D	ICP2_201201B	2.731	2.5	109	90-110
Beryllium	SW6010D	ICP2_201201B	0.4559	0.5	91.2	90-110
Cadmium	SW6010D	ICP2_201201B	0.517	0.5	103	90-110
Calcium	SW6010D	ICP2_201201B	2.17	2.5	86.8 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4443	0.5	88.9 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.513	2.5	101	90-110
Copper	SW6010D	ICP2_201201B	2.737	2.5	109	90-110
Iron	SW6010D	ICP2_201201B	2.575	2.5	103	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 21:31						
Lead	SW6010D	ICP2_201201B	0.4918	0.5	98.4	90-110
Magnesium	SW6010D	ICP2_201201B	2	2.5	80.0 *	90-110
Manganese	SW6010D	ICP2_201201B	0.4566	0.5	91.3	90-110
Nickel	SW6010D	ICP2_201201B	2.496	2.5	99.8	90-110
Potassium	SW6010D	ICP2_201201B	56.75	50	113 *	90-110
Selenium	SW6010D	ICP2_201201B	2.563	2.5	103	90-110
Silver	SW6010D	ICP2_201201B	0.4674	0.5	93.5	90-110
Sodium	SW6010D	ICP2_201201B	52.8	50	106	90-110
Thallium	SW6010D	ICP2_201201B	0.5293	0.5	106	90-110
Vanadium	SW6010D	ICP2_201201B	0.484	0.5	96.8	90-110
Zinc	SW6010D	ICP2_201201B	1.257	1.25	101	90-110
CCV 12/01/20 22:42						
Antimony	SW6010D	ICP2_201201B	0.539	0.5	108	90-110
Arsenic	SW6010D	ICP2_201201B	0.5253	0.5	105	90-110
Barium	SW6010D	ICP2_201201B	2.681	2.5	107	90-110
Beryllium	SW6010D	ICP2_201201B	0.4333	0.5	86.7 *	90-110
Cadmium	SW6010D	ICP2_201201B	0.5199	0.5	104	90-110
Calcium	SW6010D	ICP2_201201B	2.078	2.5	83.1 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4227	0.5	84.5 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.512	2.5	100	90-110
Copper	SW6010D	ICP2_201201B	2.632	2.5	105	90-110
Iron	SW6010D	ICP2_201201B	2.34	2.5	93.6	90-110
Lead	SW6010D	ICP2_201201B	0.494	0.5	98.8	90-110
Magnesium	SW6010D	ICP2_201201B	1.902	2.5	76.1 *	90-110
Manganese	SW6010D	ICP2_201201B	0.433	0.5	86.6 *	90-110
Nickel	SW6010D	ICP2_201201B	2.493	2.5	99.7	90-110
Potassium	SW6010D	ICP2_201201B	55.77	50	112 *	90-110
Selenium	SW6010D	ICP2_201201B	2.576	2.5	103	90-110
Silver	SW6010D	ICP2_201201B	0.4463	0.5	89.3 *	90-110
Sodium	SW6010D	ICP2_201201B	51.61	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5313	0.5	106	90-110
Vanadium	SW6010D	ICP2_201201B	0.4617	0.5	92.3	90-110
Zinc	SW6010D	ICP2_201201B	1.26	1.25	101	90-110
CCV 12/01/20 23:50						
Antimony	SW6010D	ICP2_201201B	0.5411	0.5	108	90-110
Arsenic	SW6010D	ICP2_201201B	0.5192	0.5	104	90-110

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/01/20 23:50						
Barium	SW6010D	ICP2_201201B	2.715	2.5	109	90-110
Beryllium	SW6010D	ICP2_201201B	0.4343	0.5	86.9 *	90-110
Cadmium	SW6010D	ICP2_201201B	0.5181	0.5	104	90-110
Calcium	SW6010D	ICP2_201201B	2.085	2.5	83.4 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4263	0.5	85.3 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.49	2.5	99.6	90-110
Copper	SW6010D	ICP2_201201B	2.69	2.5	108	90-110
Iron	SW6010D	ICP2_201201B	2.358	2.5	94.3	90-110
Lead	SW6010D	ICP2_201201B	0.4908	0.5	98.2	90-110
Magnesium	SW6010D	ICP2_201201B	1.928	2.5	77.1 *	90-110
Manganese	SW6010D	ICP2_201201B	0.4359	0.5	87.2 *	90-110
Nickel	SW6010D	ICP2_201201B	2.466	2.5	98.7	90-110
Potassium	SW6010D	ICP2_201201B	55.62	50	111 *	90-110
Selenium	SW6010D	ICP2_201201B	2.566	2.5	103	90-110
Silver	SW6010D	ICP2_201201B	0.4547	0.5	90.9	90-110
Sodium	SW6010D	ICP2_201201B	52.21	50	104	90-110
Thallium	SW6010D	ICP2_201201B	0.4746	0.5	94.9	90-110
Vanadium	SW6010D	ICP2_201201B	0.4653	0.5	93.1	90-110
Zinc	SW6010D	ICP2_201201B	1.251	1.25	100	90-110
CCV 12/02/20 00:46						
Antimony	SW6010D	ICP2_201201B	0.5434	0.5	109	90-110
Arsenic	SW6010D	ICP2_201201B	0.5215	0.5	104	90-110
Barium	SW6010D	ICP2_201201B	2.682	2.5	107	90-110
Beryllium	SW6010D	ICP2_201201B	0.4388	0.5	87.8 *	90-110
Cadmium	SW6010D	ICP2_201201B	0.5194	0.5	104	90-110
Calcium	SW6010D	ICP2_201201B	2.066	2.5	82.6 *	90-110
Chromium	SW6010D	ICP2_201201B	0.4286	0.5	85.7 *	90-110
Cobalt	SW6010D	ICP2_201201B	2.505	2.5	100	90-110
Copper	SW6010D	ICP2_201201B	2.689	2.5	108	90-110
Iron	SW6010D	ICP2_201201B	2.338	2.5	93.5	90-110
Lead	SW6010D	ICP2_201201B	0.4923	0.5	98.5	90-110
Magnesium	SW6010D	ICP2_201201B	1.9	2.5	76.0 *	90-110
Manganese	SW6010D	ICP2_201201B	0.4395	0.5	87.9 *	90-110
Nickel	SW6010D	ICP2_201201B	2.484	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201201B	55.12	50	110 *	90-110
Selenium	SW6010D	ICP2_201201B	2.578	2.5	103	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 00:46						
Silver	SW6010D	ICP2_201201B	0.4545	0.5	90.9	90-110
Sodium	SW6010D	ICP2_201201B	51.64	50	103	90-110
Thallium	SW6010D	ICP2_201201B	0.5067	0.5	101	90-110
Vanadium	SW6010D	ICP2_201201B	0.4687	0.5	93.7	90-110
Zinc	SW6010D	ICP2_201201B	1.257	1.25	101	90-110
ICV 12/02/20 14:06						
Aluminum	SW6010D	ICP2_201202B	0.9746	1	97.5	90-110
Antimony	SW6010D	ICP2_201202B	1.005	1	101	90-110
Arsenic	SW6010D	ICP2_201202B	0.9787	1	97.9	90-110
Barium	SW6010D	ICP2_201202B	0.9562	1	95.6	90-110
Beryllium	SW6010D	ICP2_201202B	0.9607	1	96.1	90-110
Boron	SW6010D	ICP2_201202B	0.9693	1	96.9	90-110
Cadmium	SW6010D	ICP2_201202B	0.9975	1	99.7	90-110
Calcium	SW6010D	ICP2_201202B	5.872	6	97.9	90-110
Chromium	SW6010D	ICP2_201202B	0.9891	1	98.9	90-110
Cobalt	SW6010D	ICP2_201202B	1.013	1	101	90-110
Copper	SW6010D	ICP2_201202B	0.9986	1	99.9	90-110
Iron	SW6010D	ICP2_201202B	0.9626	1	96.3	90-110
Lead	SW6010D	ICP2_201202B	1.035	1	104	90-110
Lithium	SW6010D	ICP2_201202B	0.9397	1	94.0	90-110
Magnesium	SW6010D	ICP2_201202B	0.9659	1	96.6	90-110
Manganese	SW6010D	ICP2_201202B	1.003	1	100	90-110
Molybdenum	SW6010D	ICP2_201202B	1.031	1	103	90-110
Nickel	SW6010D	ICP2_201202B	1.019	1	102	90-110
Potassium	SW6010D	ICP2_201202B	19.77	21	94.1	90-110
Selenium	SW6010D	ICP2_201202B	0.9859	1	98.6	90-110
Silicon	SW6010D	ICP2_201202B	1.036	1	104	90-110
Silver	SW6010D	ICP2_201202B	1.058	1	106	90-110
Sodium	SW6010D	ICP2_201202B	19.71	21	93.8	90-110
Strontium	SW6010D	ICP2_201202B	0.9544	1	95.4	90-110
Thallium	SW6010D	ICP2_201202B	1.045	1	105	90-110
Tin	SW6010D	ICP2_201202B	0.9943	1	99.4	90-110
Titanium	SW6010D	ICP2_201202B	0.9462	1	94.6	90-110
Vanadium	SW6010D	ICP2_201202B	0.9975	1	99.8	90-110
Zinc	SW6010D	ICP2_201202B	0.9908	1	99.1	90-110

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 14:53						
Aluminum	SW6010D	ICP2_201202B	2.375	2.5	95.0	90-110
Antimony	SW6010D	ICP2_201202B	0.4986	0.5	99.7	90-110
Arsenic	SW6010D	ICP2_201202B	0.495	0.5	99.0	90-110
Barium	SW6010D	ICP2_201202B	2.352	2.5	94.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4846	0.5	96.9	90-110
Boron	SW6010D	ICP2_201202B	2.334	2.5	93.4	90-110
Cadmium	SW6010D	ICP2_201202B	0.4974	0.5	99.5	90-110
Calcium	SW6010D	ICP2_201202B	2.375	2.5	95.0	90-110
Chromium	SW6010D	ICP2_201202B	0.4826	0.5	96.5	90-110
Cobalt	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Copper	SW6010D	ICP2_201202B	2.393	2.5	95.7	90-110
Iron	SW6010D	ICP2_201202B	2.357	2.5	94.3	90-110
Lead	SW6010D	ICP2_201202B	0.5082	0.5	102	90-110
Lithium	SW6010D	ICP2_201202B	2.304	2.5	92.2	90-110
Magnesium	SW6010D	ICP2_201202B	2.355	2.5	94.2	90-110
Manganese	SW6010D	ICP2_201202B	0.4801	0.5	96.0	90-110
Molybdenum	SW6010D	ICP2_201202B	2.497	2.5	99.9	90-110
Nickel	SW6010D	ICP2_201202B	2.513	2.5	101	90-110
Potassium	SW6010D	ICP2_201202B	46.07	50	92.1	90-110
Selenium	SW6010D	ICP2_201202B	2.486	2.5	99.4	90-110
Silicon	SW6010D	ICP2_201202B	2.34	2.5	93.6	90-110
Silver	SW6010D	ICP2_201202B	0.4819	0.5	96.4	90-110
Sodium	SW6010D	ICP2_201202B	46.85	50	93.7	90-110
Strontium	SW6010D	ICP2_201202B	0.4702	0.5	94.0	90-110
Thallium	SW6010D	ICP2_201202B	0.5112	0.5	102	90-110
Tin	SW6010D	ICP2_201202B	0.5008	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.4723	0.5	94.5	90-110
Vanadium	SW6010D	ICP2_201202B	0.4775	0.5	95.5	90-110
Zinc	SW6010D	ICP2_201202B	1.243	1.25	99.4	90-110
CCV 12/02/20 15:34						
Aluminum	SW6010D	ICP2_201202B	2.392	2.5	95.7	90-110
Antimony	SW6010D	ICP2_201202B	0.4974	0.5	99.5	90-110
Arsenic	SW6010D	ICP2_201202B	0.4968	0.5	99.4	90-110
Barium	SW6010D	ICP2_201202B	2.371	2.5	94.8	90-110
Beryllium	SW6010D	ICP2_201202B	0.4957	0.5	99.1	90-110
Boron	SW6010D	ICP2_201202B	2.374	2.5	94.9	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 15:34						
Cadmium	SW6010D	ICP2_201202B	0.4984	0.5	99.7	90-110
Calcium	SW6010D	ICP2_201202B	2.402	2.5	96.1	90-110
Chromium	SW6010D	ICP2_201202B	0.4936	0.5	98.7	90-110
Cobalt	SW6010D	ICP2_201202B	2.521	2.5	101	90-110
Copper	SW6010D	ICP2_201202B	2.446	2.5	97.9	90-110
Iron	SW6010D	ICP2_201202B	2.391	2.5	95.6	90-110
Lead	SW6010D	ICP2_201202B	0.5078	0.5	102	90-110
Lithium	SW6010D	ICP2_201202B	2.34	2.5	93.6	90-110
Magnesium	SW6010D	ICP2_201202B	2.382	2.5	95.3	90-110
Manganese	SW6010D	ICP2_201202B	0.4916	0.5	98.3	90-110
Molybdenum	SW6010D	ICP2_201202B	2.505	2.5	100	90-110
Nickel	SW6010D	ICP2_201202B	2.521	2.5	101	90-110
Potassium	SW6010D	ICP2_201202B	46.62	50	93.2	90-110
Selenium	SW6010D	ICP2_201202B	2.498	2.5	99.9	90-110
Silicon	SW6010D	ICP2_201202B	2.386	2.5	95.5	90-110
Silver	SW6010D	ICP2_201202B	0.4884	0.5	97.7	90-110
Sodium	SW6010D	ICP2_201202B	47.55	50	95.1	90-110
Strontium	SW6010D	ICP2_201202B	0.4778	0.5	95.6	90-110
Thallium	SW6010D	ICP2_201202B	0.5132	0.5	103	90-110
Tin	SW6010D	ICP2_201202B	0.501	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.4765	0.5	95.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.4907	0.5	98.1	90-110
Zinc	SW6010D	ICP2_201202B	1.245	1.25	99.6	90-110
CCV 12/02/20 16:44						
Aluminum	SW6010D	ICP2_201202B	2.343	2.5	93.7	90-110
Antimony	SW6010D	ICP2_201202B	0.5001	0.5	100	90-110
Arsenic	SW6010D	ICP2_201202B	0.4966	0.5	99.3	90-110
Barium	SW6010D	ICP2_201202B	2.327	2.5	93.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4866	0.5	97.3	90-110
Boron	SW6010D	ICP2_201202B	2.334	2.5	93.4	90-110
Cadmium	SW6010D	ICP2_201202B	0.4978	0.5	99.6	90-110
Calcium	SW6010D	ICP2_201202B	2.368	2.5	94.7	90-110
Chromium	SW6010D	ICP2_201202B	0.4822	0.5	96.4	90-110
Cobalt	SW6010D	ICP2_201202B	2.524	2.5	101	90-110
Copper	SW6010D	ICP2_201202B	2.418	2.5	96.7	90-110
Iron	SW6010D	ICP2_201202B	2.342	2.5	93.7	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 16:44						
Lead	SW6010D	ICP2_201202B	0.5082	0.5	102	90-110
Lithium	SW6010D	ICP2_201202B	2.298	2.5	91.9	90-110
Magnesium	SW6010D	ICP2_201202B	2.323	2.5	92.9	90-110
Manganese	SW6010D	ICP2_201202B	0.4831	0.5	96.6	90-110
Molybdenum	SW6010D	ICP2_201202B	2.507	2.5	100	90-110
Nickel	SW6010D	ICP2_201202B	2.522	2.5	101	90-110
Potassium	SW6010D	ICP2_201202B	45.76	50	91.5	90-110
Selenium	SW6010D	ICP2_201202B	2.506	2.5	100	90-110
Silicon	SW6010D	ICP2_201202B	2.384	2.5	95.4	90-110
Silver	SW6010D	ICP2_201202B	0.4826	0.5	96.5	90-110
Sodium	SW6010D	ICP2_201202B	46.93	50	93.9	90-110
Strontium	SW6010D	ICP2_201202B	0.4698	0.5	94.0	90-110
Thallium	SW6010D	ICP2_201202B	0.5123	0.5	102	90-110
Tin	SW6010D	ICP2_201202B	0.5008	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.475	0.5	95.0	90-110
Vanadium	SW6010D	ICP2_201202B	0.4814	0.5	96.3	90-110
Zinc	SW6010D	ICP2_201202B	1.246	1.25	99.7	90-110
CCV 12/02/20 17:45						
Aluminum	SW6010D	ICP2_201202B	2.363	2.5	94.5	90-110
Antimony	SW6010D	ICP2_201202B	0.4988	0.5	99.8	90-110
Arsenic	SW6010D	ICP2_201202B	0.4958	0.5	99.2	90-110
Barium	SW6010D	ICP2_201202B	2.353	2.5	94.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4798	0.5	96.0	90-110
Boron	SW6010D	ICP2_201202B	2.303	2.5	92.1	90-110
Cadmium	SW6010D	ICP2_201202B	0.4949	0.5	99.0	90-110
Calcium	SW6010D	ICP2_201202B	2.405	2.5	96.2	90-110
Chromium	SW6010D	ICP2_201202B	0.4754	0.5	95.1	90-110
Cobalt	SW6010D	ICP2_201202B	2.503	2.5	100	90-110
Copper	SW6010D	ICP2_201202B	2.429	2.5	97.2	90-110
Iron	SW6010D	ICP2_201202B	2.401	2.5	96.0	90-110
Lead	SW6010D	ICP2_201202B	0.502	0.5	100	90-110
Lithium	SW6010D	ICP2_201202B	2.334	2.5	93.4	90-110
Magnesium	SW6010D	ICP2_201202B	2.281	2.5	91.2	90-110
Manganese	SW6010D	ICP2_201202B	0.4781	0.5	95.6	90-110
Molybdenum	SW6010D	ICP2_201202B	2.49	2.5	99.6	90-110
Nickel	SW6010D	ICP2_201202B	2.5	2.5	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 17:45						
Potassium	SW6010D	ICP2_201202B	46.24	50	92.5	90-110
Selenium	SW6010D	ICP2_201202B	2.519	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.364	2.5	94.5	90-110
Silver	SW6010D	ICP2_201202B	0.4794	0.5	95.9	90-110
Sodium	SW6010D	ICP2_201202B	47.41	50	94.8	90-110
Strontium	SW6010D	ICP2_201202B	0.473	0.5	94.6	90-110
Thallium	SW6010D	ICP2_201202B	0.5104	0.5	102	90-110
Tin	SW6010D	ICP2_201202B	0.4946	0.5	98.9	90-110
Titanium	SW6010D	ICP2_201202B	0.4739	0.5	94.8	90-110
Vanadium	SW6010D	ICP2_201202B	0.478	0.5	95.6	90-110
Zinc	SW6010D	ICP2_201202B	1.236	1.25	98.9	90-110
CCV 12/02/20 18:47						
Aluminum	SW6010D	ICP2_201202B	2.473	2.5	98.9	90-110
Antimony	SW6010D	ICP2_201202B	0.5059	0.5	101	90-110
Arsenic	SW6010D	ICP2_201202B	0.5	0.5	100.0	90-110
Barium	SW6010D	ICP2_201202B	2.499	2.5	99.9	90-110
Beryllium	SW6010D	ICP2_201202B	0.4881	0.5	97.6	90-110
Boron	SW6010D	ICP2_201202B	2.404	2.5	96.2	90-110
Cadmium	SW6010D	ICP2_201202B	0.499	0.5	99.8	90-110
Calcium	SW6010D	ICP2_201202B	2.401	2.5	96.1	90-110
Chromium	SW6010D	ICP2_201202B	0.4837	0.5	96.7	90-110
Cobalt	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Copper	SW6010D	ICP2_201202B	2.484	2.5	99.3	90-110
Iron	SW6010D	ICP2_201202B	2.421	2.5	96.8	90-110
Lead	SW6010D	ICP2_201202B	0.5038	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.465	2.5	98.6	90-110
Magnesium	SW6010D	ICP2_201202B	2.373	2.5	94.9	90-110
Manganese	SW6010D	ICP2_201202B	0.4838	0.5	96.8	90-110
Molybdenum	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Nickel	SW6010D	ICP2_201202B	2.509	2.5	100	90-110
Potassium	SW6010D	ICP2_201202B	48.83	50	97.7	90-110
Selenium	SW6010D	ICP2_201202B	2.516	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.435	2.5	97.4	90-110
Silver	SW6010D	ICP2_201202B	0.4911	0.5	98.2	90-110
Sodium	SW6010D	ICP2_201202B	49.44	50	98.9	90-110
Strontium	SW6010D	ICP2_201202B	0.5001	0.5	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 18:47						
Thallium	SW6010D	ICP2_201202B	0.5137	0.5	103	90-110
Tin	SW6010D	ICP2_201202B	0.4983	0.5	99.7	90-110
Titanium	SW6010D	ICP2_201202B	0.4869	0.5	97.4	90-110
Vanadium	SW6010D	ICP2_201202B	0.4867	0.5	97.3	90-110
Zinc	SW6010D	ICP2_201202B	1.243	1.25	99.5	90-110
CCV 12/02/20 19:54						
Aluminum	SW6010D	ICP2_201202B	2.3	2.5	92.0	90-110
Antimony	SW6010D	ICP2_201202B	0.5133	0.5	103	90-110
Arsenic	SW6010D	ICP2_201202B	0.4954	0.5	99.1	90-110
Barium	SW6010D	ICP2_201202B	2.31	2.5	92.4	90-110
Beryllium	SW6010D	ICP2_201202B	0.4677	0.5	93.5	90-110
Boron	SW6010D	ICP2_201202B	2.22	2.5	88.8 *	90-110
Cadmium	SW6010D	ICP2_201202B	0.5043	0.5	101	90-110
Calcium	SW6010D	ICP2_201202B	2.217	2.5	88.7 *	90-110
Chromium	SW6010D	ICP2_201202B	0.4668	0.5	93.4	90-110
Cobalt	SW6010D	ICP2_201202B	2.493	2.5	99.7	90-110
Copper	SW6010D	ICP2_201202B	2.466	2.5	98.7	90-110
Iron	SW6010D	ICP2_201202B	2.226	2.5	89.1 *	90-110
Lead	SW6010D	ICP2_201202B	0.506	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.316	2.5	92.6	90-110
Magnesium	SW6010D	ICP2_201202B	2.153	2.5	86.1 *	90-110
Manganese	SW6010D	ICP2_201202B	0.4688	0.5	93.8	90-110
Molybdenum	SW6010D	ICP2_201202B	2.489	2.5	99.6	90-110
Nickel	SW6010D	ICP2_201202B	2.485	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201202B	45.76	50	91.5	90-110
Selenium	SW6010D	ICP2_201202B	2.536	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.228	2.5	89.1 *	90-110
Silver	SW6010D	ICP2_201202B	0.4806	0.5	96.1	90-110
Sodium	SW6010D	ICP2_201202B	46.59	50	93.2	90-110
Strontium	SW6010D	ICP2_201202B	0.4639	0.5	92.8	90-110
Thallium	SW6010D	ICP2_201202B	0.4609	0.5	92.2	90-110
Tin	SW6010D	ICP2_201202B	0.497	0.5	99.4	90-110
Titanium	SW6010D	ICP2_201202B	0.4565	0.5	91.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.4731	0.5	94.6	90-110
Zinc	SW6010D	ICP2_201202B	1.239	1.25	99.1	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 20:56						
Aluminum	SW6010D	ICP2_201202B	2.537	2.5	101	90-110
Antimony	SW6010D	ICP2_201202B	0.5144	0.5	103	90-110
Arsenic	SW6010D	ICP2_201202B	0.502	0.5	100	90-110
Barium	SW6010D	ICP2_201202B	2.565	2.5	103	90-110
Beryllium	SW6010D	ICP2_201202B	0.4834	0.5	96.7	90-110
Boron	SW6010D	ICP2_201202B	2.451	2.5	98.0	90-110
Cadmium	SW6010D	ICP2_201202B	0.5047	0.5	101	90-110
Calcium	SW6010D	ICP2_201202B	2.481	2.5	99.2	90-110
Chromium	SW6010D	ICP2_201202B	0.4788	0.5	95.8	90-110
Cobalt	SW6010D	ICP2_201202B	2.514	2.5	101	90-110
Copper	SW6010D	ICP2_201202B	2.498	2.5	99.9	90-110
Iron	SW6010D	ICP2_201202B	2.486	2.5	99.4	90-110
Lead	SW6010D	ICP2_201202B	0.5074	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.557	2.5	102	90-110
Magnesium	SW6010D	ICP2_201202B	2.408	2.5	96.3	90-110
Manganese	SW6010D	ICP2_201202B	0.4813	0.5	96.3	90-110
Molybdenum	SW6010D	ICP2_201202B	2.521	2.5	101	90-110
Nickel	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Potassium	SW6010D	ICP2_201202B	50.54	50	101	90-110
Selenium	SW6010D	ICP2_201202B	2.532	2.5	101	90-110
Silicon	SW6010D	ICP2_201202B	2.512	2.5	100	90-110
Silver	SW6010D	ICP2_201202B	0.4865	0.5	97.3	90-110
Sodium	SW6010D	ICP2_201202B	51	50	102	90-110
Strontium	SW6010D	ICP2_201202B	0.5146	0.5	103	90-110
Thallium	SW6010D	ICP2_201202B	0.4977	0.5	99.5	90-110
Tin	SW6010D	ICP2_201202B	0.5012	0.5	100	90-110
Titanium	SW6010D	ICP2_201202B	0.4934	0.5	98.7	90-110
Vanadium	SW6010D	ICP2_201202B	0.4871	0.5	97.4	90-110
Zinc	SW6010D	ICP2_201202B	1.248	1.25	99.8	90-110
CCV 12/02/20 22:03						
Aluminum	SW6010D	ICP2_201202B	2.331	2.5	93.2	90-110
Antimony	SW6010D	ICP2_201202B	0.5011	0.5	100	90-110
Arsenic	SW6010D	ICP2_201202B	0.4917	0.5	98.3	90-110
Barium	SW6010D	ICP2_201202B	2.353	2.5	94.1	90-110
Beryllium	SW6010D	ICP2_201202B	0.4862	0.5	97.2	90-110
Boron	SW6010D	ICP2_201202B	2.246	2.5	89.9 *	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 22:03						
Cadmium	SW6010D	ICP2_201202B	0.4955	0.5	99.1	90-110
Calcium	SW6010D	ICP2_201202B	2.294	2.5	91.8	90-110
Chromium	SW6010D	ICP2_201202B	0.4783	0.5	95.7	90-110
Cobalt	SW6010D	ICP2_201202B	2.481	2.5	99.3	90-110
Copper	SW6010D	ICP2_201202B	2.415	2.5	96.6	90-110
Iron	SW6010D	ICP2_201202B	2.303	2.5	92.1	90-110
Lead	SW6010D	ICP2_201202B	0.503	0.5	101	90-110
Lithium	SW6010D	ICP2_201202B	2.309	2.5	92.3	90-110
Magnesium	SW6010D	ICP2_201202B	2.277	2.5	91.1	90-110
Manganese	SW6010D	ICP2_201202B	0.4804	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201202B	2.488	2.5	99.5	90-110
Nickel	SW6010D	ICP2_201202B	2.486	2.5	99.4	90-110
Potassium	SW6010D	ICP2_201202B	46.79	50	93.6	90-110
Selenium	SW6010D	ICP2_201202B	2.466	2.5	98.6	90-110
Silicon	SW6010D	ICP2_201202B	2.296	2.5	91.9	90-110
Silver	SW6010D	ICP2_201202B	0.4754	0.5	95.1	90-110
Sodium	SW6010D	ICP2_201202B	46.37	50	92.7	90-110
Strontium	SW6010D	ICP2_201202B	0.4735	0.5	94.7	90-110
Thallium	SW6010D	ICP2_201202B	0.4995	0.5	99.9	90-110
Tin	SW6010D	ICP2_201202B	0.4963	0.5	99.3	90-110
Titanium	SW6010D	ICP2_201202B	0.4508	0.5	90.2	90-110
Vanadium	SW6010D	ICP2_201202B	0.4866	0.5	97.3	90-110
Zinc	SW6010D	ICP2_201202B	1.23	1.25	98.4	90-110
CCV 12/02/20 23:09						
Aluminum	SW6010D	ICP2_201202B	2.428	2.5	97.1	90-110
Antimony	SW6010D	ICP2_201202B	0.4997	0.5	99.9	90-110
Arsenic	SW6010D	ICP2_201202B	0.4918	0.5	98.4	90-110
Barium	SW6010D	ICP2_201202B	2.444	2.5	97.8	90-110
Beryllium	SW6010D	ICP2_201202B	0.523	0.5	105	90-110
Boron	SW6010D	ICP2_201202B	2.343	2.5	93.7	90-110
Cadmium	SW6010D	ICP2_201202B	0.4938	0.5	98.8	90-110
Calcium	SW6010D	ICP2_201202B	2.396	2.5	95.8	90-110
Chromium	SW6010D	ICP2_201202B	0.5158	0.5	103	90-110
Cobalt	SW6010D	ICP2_201202B	2.483	2.5	99.3	90-110
Copper	SW6010D	ICP2_201202B	2.569	2.5	103	90-110
Iron	SW6010D	ICP2_201202B	2.389	2.5	95.6	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/02/20 23:09						
Lead	SW6010D	ICP2_201202B	0.5002	0.5	100	90-110
Lithium	SW6010D	ICP2_201202B	2.392	2.5	95.7	90-110
Magnesium	SW6010D	ICP2_201202B	2.337	2.5	93.5	90-110
Manganese	SW6010D	ICP2_201202B	0.517	0.5	103	90-110
Molybdenum	SW6010D	ICP2_201202B	2.483	2.5	99.3	90-110
Nickel	SW6010D	ICP2_201202B	2.483	2.5	99.3	90-110
Potassium	SW6010D	ICP2_201202B	47.85	50	95.7	90-110
Selenium	SW6010D	ICP2_201202B	2.476	2.5	99.0	90-110
Silicon	SW6010D	ICP2_201202B	2.384	2.5	95.4	90-110
Silver	SW6010D	ICP2_201202B	0.5085	0.5	102	90-110
Sodium	SW6010D	ICP2_201202B	48.41	50	96.8	90-110
Strontium	SW6010D	ICP2_201202B	0.4925	0.5	98.5	90-110
Thallium	SW6010D	ICP2_201202B	0.5067	0.5	101	90-110
Tin	SW6010D	ICP2_201202B	0.4954	0.5	99.1	90-110
Titanium	SW6010D	ICP2_201202B	0.4866	0.5	97.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.5186	0.5	104	90-110
Zinc	SW6010D	ICP2_201202B	1.228	1.25	98.2	90-110
CCV 12/03/20 00:16						
Aluminum	SW6010D	ICP2_201202B	2.347	2.5	93.9	90-110
Antimony	SW6010D	ICP2_201202B	0.5024	0.5	100	90-110
Arsenic	SW6010D	ICP2_201202B	0.4909	0.5	98.2	90-110
Barium	SW6010D	ICP2_201202B	2.382	2.5	95.3	90-110
Beryllium	SW6010D	ICP2_201202B	0.4846	0.5	96.9	90-110
Boron	SW6010D	ICP2_201202B	2.281	2.5	91.3	90-110
Cadmium	SW6010D	ICP2_201202B	0.4939	0.5	98.8	90-110
Calcium	SW6010D	ICP2_201202B	2.295	2.5	91.8	90-110
Chromium	SW6010D	ICP2_201202B	0.4781	0.5	95.6	90-110
Cobalt	SW6010D	ICP2_201202B	2.478	2.5	99.1	90-110
Copper	SW6010D	ICP2_201202B	2.439	2.5	97.6	90-110
Iron	SW6010D	ICP2_201202B	2.295	2.5	91.8	90-110
Lead	SW6010D	ICP2_201202B	0.4984	0.5	99.7	90-110
Lithium	SW6010D	ICP2_201202B	2.351	2.5	94.0	90-110
Magnesium	SW6010D	ICP2_201202B	2.246	2.5	89.9 *	90-110
Manganese	SW6010D	ICP2_201202B	0.4803	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201202B	2.48	2.5	99.2	90-110
Nickel	SW6010D	ICP2_201202B	2.477	2.5	99.1	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/03/20 00:16						
Potassium	SW6010D	ICP2_201202B	46.77	50	93.5	90-110
Selenium	SW6010D	ICP2_201202B	2.495	2.5	99.8	90-110
Silicon	SW6010D	ICP2_201202B	2.306	2.5	92.2	90-110
Silver	SW6010D	ICP2_201202B	0.4785	0.5	95.7	90-110
Sodium	SW6010D	ICP2_201202B	47.04	50	94.1	90-110
Strontium	SW6010D	ICP2_201202B	0.4775	0.5	95.5	90-110
Thallium	SW6010D	ICP2_201202B	0.5042	0.5	101	90-110
Tin	SW6010D	ICP2_201202B	0.493	0.5	98.6	90-110
Titanium	SW6010D	ICP2_201202B	0.4666	0.5	93.3	90-110
Vanadium	SW6010D	ICP2_201202B	0.4851	0.5	97.0	90-110
Zinc	SW6010D	ICP2_201202B	1.226	1.25	98.1	90-110
CCV 12/03/20 01:22						
Aluminum	SW6010D	ICP2_201202B	2.299	2.5	92.0	90-110
Antimony	SW6010D	ICP2_201202B	0.4937	0.5	98.7	90-110
Arsenic	SW6010D	ICP2_201202B	0.4876	0.5	97.5	90-110
Barium	SW6010D	ICP2_201202B	2.313	2.5	92.5	90-110
Beryllium	SW6010D	ICP2_201202B	0.4719	0.5	94.4	90-110
Boron	SW6010D	ICP2_201202B	2.203	2.5	88.1 *	90-110
Cadmium	SW6010D	ICP2_201202B	0.4883	0.5	97.7	90-110
Calcium	SW6010D	ICP2_201202B	2.25	2.5	90.0 *	90-110
Chromium	SW6010D	ICP2_201202B	0.466	0.5	93.2	90-110
Cobalt	SW6010D	ICP2_201202B	2.461	2.5	98.5	90-110
Copper	SW6010D	ICP2_201202B	2.35	2.5	94.0	90-110
Iron	SW6010D	ICP2_201202B	2.236	2.5	89.4 *	90-110
Lead	SW6010D	ICP2_201202B	0.4958	0.5	99.2	90-110
Lithium	SW6010D	ICP2_201202B	2.263	2.5	90.5	90-110
Magnesium	SW6010D	ICP2_201202B	2.154	2.5	86.1 *	90-110
Manganese	SW6010D	ICP2_201202B	0.4681	0.5	93.6	90-110
Molybdenum	SW6010D	ICP2_201202B	2.457	2.5	98.3	90-110
Nickel	SW6010D	ICP2_201202B	2.458	2.5	98.3	90-110
Potassium	SW6010D	ICP2_201202B	44.53	50	89.1 *	90-110
Selenium	SW6010D	ICP2_201202B	2.48	2.5	99.2	90-110
Silicon	SW6010D	ICP2_201202B	2.239	2.5	89.6 *	90-110
Silver	SW6010D	ICP2_201202B	0.464	0.5	92.8	90-110
Sodium	SW6010D	ICP2_201202B	45.79	50	91.6	90-110
Strontium	SW6010D	ICP2_201202B	0.4666	0.5	93.3	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 12/03/20 01:22						
Thallium	SW6010D	ICP2_201202B	0.5025	0.5	100	90-110
Tin	SW6010D	ICP2_201202B	0.4882	0.5	97.6	90-110
Titanium	SW6010D	ICP2_201202B	0.466	0.5	93.2	90-110
Vanadium	SW6010D	ICP2_201202B	0.4696	0.5	93.9	90-110
Zinc	SW6010D	ICP2_201202B	1.214	1.25	97.2	90-110
CCV 12/03/20 01:37						
Aluminum	SW6010D	ICP2_201202B	2.389	2.5	95.6	90-110
Antimony	SW6010D	ICP2_201202B	0.4974	0.5	99.5	90-110
Arsenic	SW6010D	ICP2_201202B	0.4897	0.5	97.9	90-110
Barium	SW6010D	ICP2_201202B	2.393	2.5	95.7	90-110
Beryllium	SW6010D	ICP2_201202B	0.4844	0.5	96.9	90-110
Boron	SW6010D	ICP2_201202B	2.281	2.5	91.2	90-110
Cadmium	SW6010D	ICP2_201202B	0.4913	0.5	98.3	90-110
Calcium	SW6010D	ICP2_201202B	2.368	2.5	94.7	90-110
Chromium	SW6010D	ICP2_201202B	0.4789	0.5	95.8	90-110
Cobalt	SW6010D	ICP2_201202B	2.476	2.5	99.0	90-110
Copper	SW6010D	ICP2_201202B	2.409	2.5	96.3	90-110
Iron	SW6010D	ICP2_201202B	2.348	2.5	93.9	90-110
Lead	SW6010D	ICP2_201202B	0.4964	0.5	99.3	90-110
Lithium	SW6010D	ICP2_201202B	2.344	2.5	93.7	90-110
Magnesium	SW6010D	ICP2_201202B	2.278	2.5	91.1	90-110
Manganese	SW6010D	ICP2_201202B	0.4803	0.5	96.1	90-110
Molybdenum	SW6010D	ICP2_201202B	2.472	2.5	98.9	90-110
Nickel	SW6010D	ICP2_201202B	2.472	2.5	98.9	90-110
Potassium	SW6010D	ICP2_201202B	46.13	50	92.3	90-110
Selenium	SW6010D	ICP2_201202B	2.495	2.5	99.8	90-110
Silicon	SW6010D	ICP2_201202B	2.327	2.5	93.1	90-110
Silver	SW6010D	ICP2_201202B	0.4763	0.5	95.3	90-110
Sodium	SW6010D	ICP2_201202B	47.47	50	94.9	90-110
Strontium	SW6010D	ICP2_201202B	0.4834	0.5	96.7	90-110
Thallium	SW6010D	ICP2_201202B	0.5032	0.5	101	90-110
Tin	SW6010D	ICP2_201202B	0.4905	0.5	98.1	90-110
Titanium	SW6010D	ICP2_201202B	0.482	0.5	96.4	90-110
Vanadium	SW6010D	ICP2_201202B	0.48	0.5	96.0	90-110
Zinc	SW6010D	ICP2_201202B	1.222	1.25	97.7	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Antimony	SW6010D	ICP2_201130B	0.00548	0.005	110	80-120	11/30/20 15:05
Arsenic	SW6010D	ICP2_201130B	0.00411	0.005	82.2	80-120	11/30/20 15:05
Barium	SW6010D	ICP2_201130B	0.00527	0.005	105	80-120	11/30/20 15:05
Beryllium	SW6010D	ICP2_201130B	0.00194	0.002	97.0	80-120	11/30/20 15:05
Cadmium	SW6010D	ICP2_201130B	0.00972	0.01	97.2	80-120	11/30/20 15:05
Chromium	SW6010D	ICP2_201130B	0.005	0.005	100	80-120	11/30/20 15:05
Cobalt	SW6010D	ICP2_201130B	0.00504	0.005	101	80-120	11/30/20 15:05
Lead	SW6010D	ICP2_201130B	0.00463	0.005	92.6	80-120	11/30/20 15:05
Manganese	SW6010D	ICP2_201130B	0.00506	0.005	101	80-120	11/30/20 15:05
Nickel	SW6010D	ICP2_201130B	0.00468	0.005	93.6	80-120	11/30/20 15:05
Selenium	SW6010D	ICP2_201130B	0.0113	0.01	113	80-120	11/30/20 15:05
Silver	SW6010D	ICP2_201130B	0.00547	0.005	109	80-120	11/30/20 15:05
Thallium	SW6010D	ICP2_201130B	0.0102	0.01	102	80-120	11/30/20 15:05
Vanadium	SW6010D	ICP2_201130B	0.00465	0.005	93.0	80-120	11/30/20 15:05
Zinc	SW6010D	ICP2_201130B	0.00954	0.01	95.4	80-120	11/30/20 15:05
LLICV							
Antimony	SW6010D	ICP2_201201B	0.00443	0.005	88.6	80-120	12/01/20 12:03
Arsenic	SW6010D	ICP2_201201B	0.00467	0.005	93.4	80-120	12/01/20 12:03
Barium	SW6010D	ICP2_201201B	0.00455	0.005	91.0	80-120	12/01/20 12:03
Beryllium	SW6010D	ICP2_201201B	0.00201	0.002	101	80-120	12/01/20 12:03
Cadmium	SW6010D	ICP2_201201B	0.00982	0.01	98.2	80-120	12/01/20 12:03
Calcium	SW6010D	ICP2_201201B	0.5288	0.5	106	80-120	12/01/20 12:03
Chromium	SW6010D	ICP2_201201B	0.00513	0.005	103	80-120	12/01/20 12:03
Cobalt	SW6010D	ICP2_201201B	0.00482	0.005	96.4	80-120	12/01/20 12:03
Copper	SW6010D	ICP2_201201B	0.0102	0.01	102	80-120	12/01/20 12:03
Iron	SW6010D	ICP2_201201B	0.0802	0.08	100	80-120	12/01/20 12:03
Lead	SW6010D	ICP2_201201B	0.00535	0.005	107	80-120	12/01/20 12:03
Magnesium	SW6010D	ICP2_201201B	0.2306	0.2	115	80-120	12/01/20 12:03
Manganese	SW6010D	ICP2_201201B	0.0052	0.005	104	80-120	12/01/20 12:03
Nickel	SW6010D	ICP2_201201B	0.00533	0.005	107	80-120	12/01/20 12:03
Potassium	SW6010D	ICP2_201201B	0.1937	0.2	96.9	80-120	12/01/20 12:03
Selenium	SW6010D	ICP2_201201B	0.00875	0.01	87.5	80-120	12/01/20 12:03
Silver	SW6010D	ICP2_201201B	0.00543	0.005	109	80-120	12/01/20 12:03
Sodium	SW6010D	ICP2_201201B	0	0.2	96.3	80-120	12/01/20 12:03
Thallium	SW6010D	ICP2_201201B	0.0107	0.01	107	80-120	12/01/20 12:03
Vanadium	SW6010D	ICP2_201201B	0.00509	0.005	102	80-120	12/01/20 12:03

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 11/30/2020 3:05:45 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0055 ppm	109.561 %	13.0 %	0.0 ppm
As 189.042 {478} (Axial)	1 cps	0.0041 ppm	82.272 %	2.0 %	0.0 ppm
Ba 455.403 {74} (Radial)	115 cps	0.0053 ppm		6.5 %	0.0 ppm
Ba 493.409 {68} (Radial)	130 cps	0.0065 ppm		25.9 %	0.0 ppm
Be 313.042 {108} (Axial)	686 cps	0.0019 ppm	96.768 %	2.9 %	0.0 ppm
Ca 315.887 {107} (Radial)	100 cps	0.4988 ppm	99.760 %	2.2 %	0.0 ppm
Cd 228.802 {447} (Axial)	113 cps	0.0097 ppm	97.242 %	1.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	46 cps	0.0051 ppm	102.040 %	3.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	27 cps	0.0050 ppm	100.027 %	4.4 %	0.0 ppm
Co 228.616 {447} (Axial)	42 cps	0.0050 ppm	100.748 %	2.4 %	0.0 ppm
Cu 324.754 {104} (Axial)	209 cps	0.0100 ppm	99.665 %	5.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	15 cps	0.0785 ppm	98.120 %	6.3 %	0.0 ppm
Li 670.784 {50} (Radial)	98 cps	0.0094 ppm	93.996 %	12.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	338 cps	0.0051 ppm	101.107 %	2.2 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0051 ppm	102.874 %	1.8 %	0.0 ppm
Na 589.592 {57} (Radial)	274 cps	0.1858 ppm	92.904 %	1.4 %	0.0 ppm
Ni 231.604 {445} (Axial)	19 cps	0.0047 ppm	93.699 %	3.3 %	0.0 ppm
K 766.490 {44} (Radial)	44 cps	0.1304 ppm	65.202 %	21.2 %	0.0 ppm
Se 196.090 {472} (Axial)	3 cps	0.0113 ppm	113.018 %	3.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	62 cps	0.0055 ppm	109.494 %	12.9 %	0.0 ppm
Sr 407.771 {83} (Radial)	130 cps	0.0048 ppm	96.641 %	4.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0096 ppm		2.0 %	0.0 ppm
Ti 334.941 {101} (Radial)	5 cps	0.0050 ppm	100.098 %	17.1 %	0.0 ppm
V 292.402 {115} (Axial)	70 cps	0.0046 ppm	92.997 %	4.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	99 cps	0.0095 ppm	95.381 %	1.4 %	0.0 ppm
Sc 357.253 {94} (Axial)		100.1606 %		0.7 %	0.7 %
Sc 188.060 {479} (Axial)		99.6488 %		0.3 %	0.3 %
Mg 279.079 {121} (Radial)	6 cps	0.1970 ppm	98.492 %	6.4 %	0.0 ppm
Tl 190.856 {477} (Axial)	3 cps	0.0102 ppm	101.688 %	10.1 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0110 ppm		3.1 %	0.0 ppm
Sc 227.318 {448} (Axial)		99.6855 %		0.4 %	0.4 %
B 249.773 {135} (Radial)	3 cps	0.0118 ppm	58.850 %	49.8 %	0.0 ppm
Al 396.152 {85} (Radial)	1 cps	0.0017 ppm		190.4 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2444 ppm		7.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0046 ppm	92.613 %	19.7 %	0.0 ppm
Y 224.306 {450} (Axial)		99.6336 %		0.4 %	0.4 %
Sc 361.384 {93} (Radial)		100.2785 %		0.2 %	0.2 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICVLL

Sample type: QC Analysis started at: 12/1/2020 12:03:58 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0044 ppm	88.531 %	42.7 %	0.0 ppm
As 189.042 {478} (Axial)	2 cps	0.0047 ppm	93.467 %	9.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	97 cps	0.0046 ppm		4.9 %	0.0 ppm
Ba 493.409 {68} (Radial)	92 cps	0.0057 ppm		15.8 %	0.0 ppm
Be 313.042 {108} (Axial)	718 cps	0.0020 ppm	100.314 %	1.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	101 cps	0.5288 ppm	105.760 %	2.6 %	0.0 ppm
Cd 228.802 {447} (Axial)	116 cps	0.0098 ppm	98.206 %	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	47 cps	0.0052 ppm	103.223 %	4.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	28 cps	0.0051 ppm	102.576 %	3.3 %	0.0 ppm
Co 228.616 {447} (Axial)	40 cps	0.0048 ppm	96.301 %	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	215 cps	0.0102 ppm	101.663 %	3.3 %	0.0 ppm
Fe 259.940 {130} (Radial)	14 cps	0.0802 ppm	100.307 %	6.4 %	0.0 ppm
Li 670.784 {50} (Radial)	108 cps	0.0106 ppm	106.471 %	8.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	350 cps	0.0052 ppm	103.932 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0050 ppm	100.715 %	3.7 %	0.0 ppm
Na 589.592 {57} (Radial)	273 cps	0.1926 ppm	96.303 %	6.9 %	0.0 ppm
Ni 231.604 {445} (Axial)	22 cps	0.0053 ppm	106.695 %	2.7 %	0.0 ppm
K 766.490 {44} (Radial)	67 cps	0.1937 ppm	96.863 %	11.8 %	0.0 ppm
Se 196.090 {472} (Axial)	2 cps	0.0088 ppm	87.531 %	29.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	52 cps	0.0054 ppm	108.520 %	8.7 %	0.0 ppm
Sr 407.771 {83} (Radial)	133 cps	0.0052 ppm	103.842 %	2.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	10 cps	0.0098 ppm		1.4 %	0.0 ppm
Tl 334.941 {101} (Radial)	3 cps	0.0032 ppm	64.936 %	83.8 %	0.0 ppm
V 292.402 {115} (Axial)	78 cps	0.0051 ppm	101.769 %	2.5 %	0.0 ppm
Zn 213.856 {457} (Axial)	104 cps	0.0098 ppm	98.207 %	2.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		99.7136 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		101.0121 %		1.4 %	1.4 %
Mg 279.079 {121} (Radial)	6 cps	0.2306 ppm	115.305 %	15.5 %	0.0 ppm
Tl 190.856 {477} (Axial)	4 cps	0.0107 ppm	107.051 %	8.6 %	0.0 ppm
Al 167.079 {502} (Axial)	13 cps	0.0108 ppm		1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		101.0619 %		1.5 %	1.5 %
B 249.773 {135} (Radial)	5 cps	0.0214 ppm	106.973 %	16.9 %	0.0 ppm
Al 396.152 {85} (Radial)	3 cps	0.0078 ppm		129.1 %	0.0 ppm
Si 251.611 {134} (Radial)	16 cps	0.2503 ppm		13.7 %	0.0 ppm
Pb 220.353 {453} (Axial)	5 cps	0.0053 ppm	106.906 %	4.9 %	0.0 ppm
Y 224.306 {450} (Axial)		100.1436 %		0.8 %	0.8 %
Sc 361.384 {93} (Radial)		99.7226 %		0.2 %	0.2 %

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV								
	Zinc	SW6010D	ICP2_201201B	0.00982	0.01	98.2	80-120	12/01/20 12:03
LLICV								
	Aluminum	SW6010D	ICP2_201202B	0.011	0.01	110	80-120	12/02/20 14:22
	Antimony	SW6010D	ICP2_201202B	0.00558	0.005	112	80-120	12/02/20 14:22
	Arsenic	SW6010D	ICP2_201202B	0.0063	0.005	126 *	80-120	12/02/20 14:22
	Barium	SW6010D	ICP2_201202B	0.00471	0.005	94.2	80-120	12/02/20 14:22
	Beryllium	SW6010D	ICP2_201202B	0.00189	0.002	94.5	80-120	12/02/20 14:22
	Boron	SW6010D	ICP2_201202B	0.0207	0.02	103	80-120	12/02/20 14:22
	Cadmium	SW6010D	ICP2_201202B	0.00975	0.01	97.5	80-120	12/02/20 14:22
	Calcium	SW6010D	ICP2_201202B	0.4965	0.5	99.3	80-120	12/02/20 14:22
	Chromium	SW6010D	ICP2_201202B	0.00507	0.005	101	80-120	12/02/20 14:22
	Cobalt	SW6010D	ICP2_201202B	0.00492	0.005	98.4	80-120	12/02/20 14:22
	Copper	SW6010D	ICP2_201202B	0.00976	0.01	97.6	80-120	12/02/20 14:22
	Iron	SW6010D	ICP2_201202B	0	0.08	96.0	80-120	12/02/20 14:22
	Lead	SW6010D	ICP2_201202B	0.00584	0.005	117	80-120	12/02/20 14:22
	Lithium	SW6010D	ICP2_201202B	0.01	0.01	100	80-120	12/02/20 14:22
	Magnesium	SW6010D	ICP2_201202B	0.205	0.2	103	80-120	12/02/20 14:22
	Manganese	SW6010D	ICP2_201202B	0.00513	0.005	103	80-120	12/02/20 14:22
	Molybdenum	SW6010D	ICP2_201202B	0.00512	0.005	102	80-120	12/02/20 14:22
	Nickel	SW6010D	ICP2_201202B	0.00488	0.005	97.6	80-120	12/02/20 14:22
	Potassium	SW6010D	ICP2_201202B	0.1712	0.2	85.6	80-120	12/02/20 14:22
	Selenium	SW6010D	ICP2_201202B	0.00876	0.01	87.6	80-120	12/02/20 14:22
	Silicon	SW6010D	ICP2_201202B	0.2832	0.2	142 *	80-120	12/02/20 14:22
	Silver	SW6010D	ICP2_201202B	0.00518	0.005	104	80-120	12/02/20 14:22
	Sodium	SW6010D	ICP2_201202B	0	0.2	97.0	80-120	12/02/20 14:22
	Strontium	SW6010D	ICP2_201202B	0.00494	0.005	98.8	80-120	12/02/20 14:22
	Thallium	SW6010D	ICP2_201202B	0.0103	0.01	103	80-120	12/02/20 14:22
	Tin	SW6010D	ICP2_201202B	0.0103	0.01	103	80-120	12/02/20 14:22
	Titanium	SW6010D	ICP2_201202B	0.00546	0.005	109	80-120	12/02/20 14:22
	Vanadium	SW6010D	ICP2_201202B	0.00472	0.005	94.4	80-120	12/02/20 14:22
	Zinc	SW6010D	ICP2_201202B	0.0101	0.01	101	80-120	12/02/20 14:22

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/30/20 14:55				
Antimony	SW6010D	ICP2_201130B	0.00199	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.000312	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 15:41				
Antimony	SW6010D	ICP2_201130B	0.00204	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 16:44				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 16:44				
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 17:44				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 18:46				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0.00189	J

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 18:46				
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 19:47				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 20:49				
Antimony	SW6010D	ICP2_201130B	0.0022	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 11/30/20 20:49				
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 21:55				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0.000814	J
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0.00294	J
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0.00277	J
Selenium	SW6010D	ICP2_201130B	0.00455	J
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 11/30/20 22:56				
Antimony	SW6010D	ICP2_201130B	0.00242	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0	
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB	11/30/20 23:57				
	Antimony	SW6010D	ICP2_201130B	0	
	Arsenic	SW6010D	ICP2_201130B	0	
	Barium	SW6010D	ICP2_201130B	0	
	Beryllium	SW6010D	ICP2_201130B	0	
	Cadmium	SW6010D	ICP2_201130B	0	
	Chromium	SW6010D	ICP2_201130B	0	
	Cobalt	SW6010D	ICP2_201130B	0	
	Lead	SW6010D	ICP2_201130B	0	
	Manganese	SW6010D	ICP2_201130B	0	
	Nickel	SW6010D	ICP2_201130B	0	
	Selenium	SW6010D	ICP2_201130B	0	
	Silver	SW6010D	ICP2_201130B	0	
	Thallium	SW6010D	ICP2_201130B	0	
	Vanadium	SW6010D	ICP2_201130B	0	
	Zinc	SW6010D	ICP2_201130B	0	
CCB	12/01/20 00:58				
	Antimony	SW6010D	ICP2_201130B	0	
	Arsenic	SW6010D	ICP2_201130B	0	
	Barium	SW6010D	ICP2_201130B	0	
	Beryllium	SW6010D	ICP2_201130B	0	
	Cadmium	SW6010D	ICP2_201130B	0	
	Chromium	SW6010D	ICP2_201130B	0	
	Cobalt	SW6010D	ICP2_201130B	0	
	Lead	SW6010D	ICP2_201130B	0	
	Manganese	SW6010D	ICP2_201130B	0	
	Nickel	SW6010D	ICP2_201130B	0	
	Selenium	SW6010D	ICP2_201130B	0	
	Silver	SW6010D	ICP2_201130B	0	
	Thallium	SW6010D	ICP2_201130B	0	
	Vanadium	SW6010D	ICP2_201130B	0	
	Zinc	SW6010D	ICP2_201130B	0	
CCB	12/01/20 02:00				
	Antimony	SW6010D	ICP2_201130B	0.0027	J
	Arsenic	SW6010D	ICP2_201130B	0	
	Barium	SW6010D	ICP2_201130B	0	
	Beryllium	SW6010D	ICP2_201130B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 02:00				
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0	
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:02				
Antimony	SW6010D	ICP2_201130B	0.00202	J
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.000309	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0.00193	J
Cobalt	SW6010D	ICP2_201130B	0.000479	J
Lead	SW6010D	ICP2_201130B	0	
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
CCB 12/01/20 03:17				
Antimony	SW6010D	ICP2_201130B	0	
Arsenic	SW6010D	ICP2_201130B	0	
Barium	SW6010D	ICP2_201130B	0	
Beryllium	SW6010D	ICP2_201130B	0.0003	J
Cadmium	SW6010D	ICP2_201130B	0	
Chromium	SW6010D	ICP2_201130B	0	
Cobalt	SW6010D	ICP2_201130B	0.000441	J
Lead	SW6010D	ICP2_201130B	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 03:17				
Manganese	SW6010D	ICP2_201130B	0	
Nickel	SW6010D	ICP2_201130B	0	
Selenium	SW6010D	ICP2_201130B	0	
Silver	SW6010D	ICP2_201130B	0	
Thallium	SW6010D	ICP2_201130B	0	
Vanadium	SW6010D	ICP2_201130B	0	
Zinc	SW6010D	ICP2_201130B	0	
ICB 12/01/20 11:54				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0.000251	J
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 12:40				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 12:40					
	Chromium	SW6010D	ICP2_201201B	0	
	Cobalt	SW6010D	ICP2_201201B	0	
	Copper	SW6010D	ICP2_201201B	0	
	Iron	SW6010D	ICP2_201201B	0	
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	
	Manganese	SW6010D	ICP2_201201B	0	
	Nickel	SW6010D	ICP2_201201B	0	
	Potassium	SW6010D	ICP2_201201B	0	
	Selenium	SW6010D	ICP2_201201B	0	
	Silver	SW6010D	ICP2_201201B	0	
	Sodium	SW6010D	ICP2_201201B	0	
	Thallium	SW6010D	ICP2_201201B	0	
	Vanadium	SW6010D	ICP2_201201B	0	
	Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 13:46					
	Antimony	SW6010D	ICP2_201201B	0	
	Arsenic	SW6010D	ICP2_201201B	0	
	Barium	SW6010D	ICP2_201201B	0	
	Beryllium	SW6010D	ICP2_201201B	0	
	Cadmium	SW6010D	ICP2_201201B	0	
	Calcium	SW6010D	ICP2_201201B	0	
	Chromium	SW6010D	ICP2_201201B	0	
	Cobalt	SW6010D	ICP2_201201B	0	
	Copper	SW6010D	ICP2_201201B	0	
	Iron	SW6010D	ICP2_201201B	0	
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	
	Manganese	SW6010D	ICP2_201201B	0	
	Nickel	SW6010D	ICP2_201201B	0	
	Potassium	SW6010D	ICP2_201201B	0	
	Selenium	SW6010D	ICP2_201201B	0	
	Silver	SW6010D	ICP2_201201B	0	
	Sodium	SW6010D	ICP2_201201B	0	
	Thallium	SW6010D	ICP2_201201B	0	
	Vanadium	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 13:46					
	Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 14:58					
	Antimony	SW6010D	ICP2_201201B	0	
	Arsenic	SW6010D	ICP2_201201B	0	
	Barium	SW6010D	ICP2_201201B	0	
	Beryllium	SW6010D	ICP2_201201B	0	
	Cadmium	SW6010D	ICP2_201201B	0	
	Calcium	SW6010D	ICP2_201201B	0	
	Chromium	SW6010D	ICP2_201201B	0	
	Cobalt	SW6010D	ICP2_201201B	0	
	Copper	SW6010D	ICP2_201201B	0	
	Iron	SW6010D	ICP2_201201B	0	
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	
	Manganese	SW6010D	ICP2_201201B	0	
	Nickel	SW6010D	ICP2_201201B	0	
	Potassium	SW6010D	ICP2_201201B	0	
	Selenium	SW6010D	ICP2_201201B	0	
	Silver	SW6010D	ICP2_201201B	0	
	Sodium	SW6010D	ICP2_201201B	0	
	Thallium	SW6010D	ICP2_201201B	0	
	Vanadium	SW6010D	ICP2_201201B	0	
	Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 16:04					
	Antimony	SW6010D	ICP2_201201B	0	
	Arsenic	SW6010D	ICP2_201201B	0	
	Barium	SW6010D	ICP2_201201B	0	
	Beryllium	SW6010D	ICP2_201201B	0	
	Cadmium	SW6010D	ICP2_201201B	0	
	Calcium	SW6010D	ICP2_201201B	0	
	Chromium	SW6010D	ICP2_201201B	0	
	Cobalt	SW6010D	ICP2_201201B	0	
	Copper	SW6010D	ICP2_201201B	0	
	Iron	SW6010D	ICP2_201201B	0	
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 16:04				
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 17:12				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 18:15				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 18:15				
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 19:22				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0	
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0.00101	J
Potassium	SW6010D	ICP2_201201B	0.2058	C
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 19:22				
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 20:35				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0.000876	J
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	
Lead	SW6010D	ICP2_201201B	0	
Magnesium	SW6010D	ICP2_201201B	0	
Manganese	SW6010D	ICP2_201201B	0	
Nickel	SW6010D	ICP2_201201B	0	
Potassium	SW6010D	ICP2_201201B	0	
Selenium	SW6010D	ICP2_201201B	0	
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 21:41				
Antimony	SW6010D	ICP2_201201B	0	
Arsenic	SW6010D	ICP2_201201B	0	
Barium	SW6010D	ICP2_201201B	0	
Beryllium	SW6010D	ICP2_201201B	0	
Cadmium	SW6010D	ICP2_201201B	0.001	J
Calcium	SW6010D	ICP2_201201B	0	
Chromium	SW6010D	ICP2_201201B	0	
Cobalt	SW6010D	ICP2_201201B	0	
Copper	SW6010D	ICP2_201201B	0	
Iron	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 21:41					
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	
	Manganese	SW6010D	ICP2_201201B	0	
	Nickel	SW6010D	ICP2_201201B	0	
	Potassium	SW6010D	ICP2_201201B	0	
	Selenium	SW6010D	ICP2_201201B	0	
	Silver	SW6010D	ICP2_201201B	0	
	Sodium	SW6010D	ICP2_201201B	0	
	Thallium	SW6010D	ICP2_201201B	0	
	Vanadium	SW6010D	ICP2_201201B	0	
	Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 22:47					
	Antimony	SW6010D	ICP2_201201B	0	
	Arsenic	SW6010D	ICP2_201201B	0	
	Barium	SW6010D	ICP2_201201B	0	
	Beryllium	SW6010D	ICP2_201201B	0.000265	J
	Cadmium	SW6010D	ICP2_201201B	0.00125	J
	Calcium	SW6010D	ICP2_201201B	0	
	Chromium	SW6010D	ICP2_201201B	0	
	Cobalt	SW6010D	ICP2_201201B	0.000545	J
	Copper	SW6010D	ICP2_201201B	0	
	Iron	SW6010D	ICP2_201201B	0	
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	
	Manganese	SW6010D	ICP2_201201B	0	
	Nickel	SW6010D	ICP2_201201B	0	
	Potassium	SW6010D	ICP2_201201B	0.7633	C
	Selenium	SW6010D	ICP2_201201B	0	
	Silver	SW6010D	ICP2_201201B	0	
	Sodium	SW6010D	ICP2_201201B	0	
	Thallium	SW6010D	ICP2_201201B	0	
	Vanadium	SW6010D	ICP2_201201B	0	
	Zinc	SW6010D	ICP2_201201B	0	
CCB 12/01/20 23:55					
	Antimony	SW6010D	ICP2_201201B	0	
	Arsenic	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 12/01/20 23:55					
	Barium	SW6010D	ICP2_201201B	0	
	Beryllium	SW6010D	ICP2_201201B	0.000289	J
	Cadmium	SW6010D	ICP2_201201B	0.0014	J
	Calcium	SW6010D	ICP2_201201B	0	
	Chromium	SW6010D	ICP2_201201B	0	
	Cobalt	SW6010D	ICP2_201201B	0	
	Copper	SW6010D	ICP2_201201B	0	
	Iron	SW6010D	ICP2_201201B	0	
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	
	Manganese	SW6010D	ICP2_201201B	0	
	Nickel	SW6010D	ICP2_201201B	0	
	Potassium	SW6010D	ICP2_201201B	0.2528	C
	Selenium	SW6010D	ICP2_201201B	0	
	Silver	SW6010D	ICP2_201201B	0	
	Sodium	SW6010D	ICP2_201201B	0	
	Thallium	SW6010D	ICP2_201201B	0	
	Vanadium	SW6010D	ICP2_201201B	0	
	Zinc	SW6010D	ICP2_201201B	0	
CCB 12/02/20 00:51					
	Antimony	SW6010D	ICP2_201201B	0	
	Arsenic	SW6010D	ICP2_201201B	0	
	Barium	SW6010D	ICP2_201201B	0	
	Beryllium	SW6010D	ICP2_201201B	0	
	Cadmium	SW6010D	ICP2_201201B	0.00137	J
	Calcium	SW6010D	ICP2_201201B	0	
	Chromium	SW6010D	ICP2_201201B	0	
	Cobalt	SW6010D	ICP2_201201B	0	
	Copper	SW6010D	ICP2_201201B	0	
	Iron	SW6010D	ICP2_201201B	0	
	Lead	SW6010D	ICP2_201201B	0	
	Magnesium	SW6010D	ICP2_201201B	0	
	Manganese	SW6010D	ICP2_201201B	0	
	Nickel	SW6010D	ICP2_201201B	0	
	Potassium	SW6010D	ICP2_201201B	0.189	J
	Selenium	SW6010D	ICP2_201201B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 00:51				
Silver	SW6010D	ICP2_201201B	0	
Sodium	SW6010D	ICP2_201201B	0	
Thallium	SW6010D	ICP2_201201B	0	
Vanadium	SW6010D	ICP2_201201B	0	
Zinc	SW6010D	ICP2_201201B	0	
ICB 12/02/20 14:11				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0.00331	J
Arsenic	SW6010D	ICP2_201202B	0.00176	J
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0.000303	J
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00058	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 14:58				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0.00168	J
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0.00815	J
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00114	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 15:39				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0.000272	J
Boron	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 15:39					
	Cadmium	SW6010D	ICP2_201202B	0	
	Calcium	SW6010D	ICP2_201202B	0	
	Chromium	SW6010D	ICP2_201202B	0	
	Cobalt	SW6010D	ICP2_201202B	0	
	Copper	SW6010D	ICP2_201202B	0	
	Iron	SW6010D	ICP2_201202B	0	
	Lead	SW6010D	ICP2_201202B	0	
	Lithium	SW6010D	ICP2_201202B	0	
	Magnesium	SW6010D	ICP2_201202B	0	
	Manganese	SW6010D	ICP2_201202B	0	
	Molybdenum	SW6010D	ICP2_201202B	0.00102	J
	Nickel	SW6010D	ICP2_201202B	0	
	Potassium	SW6010D	ICP2_201202B	0	
	Selenium	SW6010D	ICP2_201202B	0.00355	J
	Silicon	SW6010D	ICP2_201202B	0	
	Silver	SW6010D	ICP2_201202B	0	
	Sodium	SW6010D	ICP2_201202B	0	
	Strontium	SW6010D	ICP2_201202B	0	
	Thallium	SW6010D	ICP2_201202B	0	
	Tin	SW6010D	ICP2_201202B	0	
	Titanium	SW6010D	ICP2_201202B	0	
	Vanadium	SW6010D	ICP2_201202B	0	
	Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 16:49					
	Aluminum	SW6010D	ICP2_201202B	0	
	Antimony	SW6010D	ICP2_201202B	0	
	Arsenic	SW6010D	ICP2_201202B	0	
	Barium	SW6010D	ICP2_201202B	0	
	Beryllium	SW6010D	ICP2_201202B	0	
	Boron	SW6010D	ICP2_201202B	0	
	Cadmium	SW6010D	ICP2_201202B	0	
	Calcium	SW6010D	ICP2_201202B	0	
	Chromium	SW6010D	ICP2_201202B	0	
	Cobalt	SW6010D	ICP2_201202B	0	
	Copper	SW6010D	ICP2_201202B	0	
	Iron	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 16:49					
	Lead	SW6010D	ICP2_201202B	0	
	Lithium	SW6010D	ICP2_201202B	0	
	Magnesium	SW6010D	ICP2_201202B	0	
	Manganese	SW6010D	ICP2_201202B	0	
	Molybdenum	SW6010D	ICP2_201202B	0.00109	J
	Nickel	SW6010D	ICP2_201202B	0	
	Potassium	SW6010D	ICP2_201202B	0	
	Selenium	SW6010D	ICP2_201202B	0	
	Silicon	SW6010D	ICP2_201202B	0	
	Silver	SW6010D	ICP2_201202B	0	
	Sodium	SW6010D	ICP2_201202B	0	
	Strontium	SW6010D	ICP2_201202B	0	
	Thallium	SW6010D	ICP2_201202B	0	
	Tin	SW6010D	ICP2_201202B	0	
	Titanium	SW6010D	ICP2_201202B	0	
	Vanadium	SW6010D	ICP2_201202B	0	
	Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 17:50					
	Aluminum	SW6010D	ICP2_201202B	0	
	Antimony	SW6010D	ICP2_201202B	0	
	Arsenic	SW6010D	ICP2_201202B	0.00182	J
	Barium	SW6010D	ICP2_201202B	0	
	Beryllium	SW6010D	ICP2_201202B	0	
	Boron	SW6010D	ICP2_201202B	0	
	Cadmium	SW6010D	ICP2_201202B	0	
	Calcium	SW6010D	ICP2_201202B	0	
	Chromium	SW6010D	ICP2_201202B	0	
	Cobalt	SW6010D	ICP2_201202B	0	
	Copper	SW6010D	ICP2_201202B	0	
	Iron	SW6010D	ICP2_201202B	0	
	Lead	SW6010D	ICP2_201202B	0	
	Lithium	SW6010D	ICP2_201202B	0	
	Magnesium	SW6010D	ICP2_201202B	0	
	Manganese	SW6010D	ICP2_201202B	0	
	Molybdenum	SW6010D	ICP2_201202B	0.00123	J
	Nickel	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 17:50				
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 18:52				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0.000284	J
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0.00052	J
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00143	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 18:52				
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 19:59				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0.00242	J
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0.000859	J
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00152	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0.2861	C
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0.0105	C
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 21:01					
	Aluminum	SW6010D	ICP2_201202B	0	
	Antimony	SW6010D	ICP2_201202B	0	
	Arsenic	SW6010D	ICP2_201202B	0	
	Barium	SW6010D	ICP2_201202B	0	
	Beryllium	SW6010D	ICP2_201202B	0	
	Boron	SW6010D	ICP2_201202B	0	
	Cadmium	SW6010D	ICP2_201202B	0	
	Calcium	SW6010D	ICP2_201202B	0	
	Chromium	SW6010D	ICP2_201202B	0	
	Cobalt	SW6010D	ICP2_201202B	0	
	Copper	SW6010D	ICP2_201202B	0	
	Iron	SW6010D	ICP2_201202B	0	
	Lead	SW6010D	ICP2_201202B	0	
	Lithium	SW6010D	ICP2_201202B	0	
	Magnesium	SW6010D	ICP2_201202B	0	
	Manganese	SW6010D	ICP2_201202B	0	
	Molybdenum	SW6010D	ICP2_201202B	0.00126	J
	Nickel	SW6010D	ICP2_201202B	0	
	Potassium	SW6010D	ICP2_201202B	0.1697	J
	Selenium	SW6010D	ICP2_201202B	0	
	Silicon	SW6010D	ICP2_201202B	0	
	Silver	SW6010D	ICP2_201202B	0	
	Sodium	SW6010D	ICP2_201202B	0	
	Strontium	SW6010D	ICP2_201202B	0	
	Thallium	SW6010D	ICP2_201202B	0	
	Tin	SW6010D	ICP2_201202B	0	
	Titanium	SW6010D	ICP2_201202B	0	
	Vanadium	SW6010D	ICP2_201202B	0	
	Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 22:08					
	Aluminum	SW6010D	ICP2_201202B	0	
	Antimony	SW6010D	ICP2_201202B	0.0021	J
	Arsenic	SW6010D	ICP2_201202B	0	
	Barium	SW6010D	ICP2_201202B	0	
	Beryllium	SW6010D	ICP2_201202B	0	
	Boron	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 22:08				
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0.00509	J
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.0014	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/02/20 23:14				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/02/20 23:14				
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00109	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/03/20 00:21				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00132	J
Nickel	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/03/20 00:21				
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/03/20 01:27				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0.00227	J
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.000952	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: mg/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/03/20 01:27				
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	
CCB 12/03/20 01:42				
Aluminum	SW6010D	ICP2_201202B	0	
Antimony	SW6010D	ICP2_201202B	0	
Arsenic	SW6010D	ICP2_201202B	0	
Barium	SW6010D	ICP2_201202B	0	
Beryllium	SW6010D	ICP2_201202B	0	
Boron	SW6010D	ICP2_201202B	0	
Cadmium	SW6010D	ICP2_201202B	0	
Calcium	SW6010D	ICP2_201202B	0	
Chromium	SW6010D	ICP2_201202B	0	
Cobalt	SW6010D	ICP2_201202B	0	
Copper	SW6010D	ICP2_201202B	0	
Iron	SW6010D	ICP2_201202B	0	
Lead	SW6010D	ICP2_201202B	0	
Lithium	SW6010D	ICP2_201202B	0	
Magnesium	SW6010D	ICP2_201202B	0	
Manganese	SW6010D	ICP2_201202B	0	
Molybdenum	SW6010D	ICP2_201202B	0.00115	J
Nickel	SW6010D	ICP2_201202B	0	
Potassium	SW6010D	ICP2_201202B	0	
Selenium	SW6010D	ICP2_201202B	0	
Silicon	SW6010D	ICP2_201202B	0	
Silver	SW6010D	ICP2_201202B	0	
Sodium	SW6010D	ICP2_201202B	0	
Strontium	SW6010D	ICP2_201202B	0	
Thallium	SW6010D	ICP2_201202B	0	
Tin	SW6010D	ICP2_201202B	0	
Titanium	SW6010D	ICP2_201202B	0	
Vanadium	SW6010D	ICP2_201202B	0	
Zinc	SW6010D	ICP2_201202B	0	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201130B	92.13	100	92.1	80-120	11/30/20 15:10
Antimony	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Arsenic	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Barium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Beryllium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Cadmium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Calcium	SW6010D	ICP2_201130B	92.22	100	92.2	80-120	11/30/20 15:10
Chromium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Cobalt	SW6010D	ICP2_201130B	0.00342 J	-	-	-	11/30/20 15:10
Iron	SW6010D	ICP2_201130B	93.09	100	93.1	80-120	11/30/20 15:10
Lead	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Magnesium	SW6010D	ICP2_201130B	95.39	100	95.4	80-120	11/30/20 15:10
Manganese	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Molybdenum	SW6010D	ICP2_201130B	1.92	2	96.0	80-120	11/30/20 15:10
Nickel	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Potassium	SW6010D	ICP2_201130B	96.41 E	100	96.4	80-120	11/30/20 15:10
Selenium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Silver	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Sodium	SW6010D	ICP2_201130B	94.44 E	100	94.4	80-120	11/30/20 15:10
Thallium	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10
Titanium	SW6010D	ICP2_201130B	1.896	2	94.8	80-120	11/30/20 15:10
Vanadium	SW6010D	ICP2_201130B	0.00245 J	-	-	-	11/30/20 15:10
Zinc	SW6010D	ICP2_201130B	0	-	-	-	11/30/20 15:10

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

Solve!
As ± 2x MDL (0.13 - -0.13)
Pb ± 2x MDL (0.4 - -0.4)

ICSA

Sample type: QC Analysis started at: 11/30/2020 3:10:53 PM

Standard DF: 1

Aqueous
As ± 2x MDL. (.0032 - -0.0032)
Pb ± 2x MDL. (0.0024 - -0.0024)

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-6 cps	-0.0125 ppm		9.0 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0215 ppm	0.000 %	4.3 %	0.0 ppm
Ba 455.403 {74} (Radial)	14 cps	0.0006 ppm	0.000 %	57.3 %	0.0 ppm
Ba 493.409 {68} (Radial)	77 cps	0.0039 ppm	0.000 %	33.7 %	0.0 ppm
Be 313.042 {108} (Axial)	-925 cps	-0.0026 ppm	0.000 %	1.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,547 cps	92.2233 ppm	92.223 %	0.8 %	0.7 ppm
Cd 228.802 {447} (Axial)	-2 cps	-0.0002 ppm	0.000 %	71.4 %	0.0 ppm
Cr 267.716 {126} (Axial)	19 cps	0.0021 ppm	0.000 %	10.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	4 cps	0.0007 ppm	0.000 %	18.7 %	0.0 ppm
Co 228.616 {447} (Axial)	28 cps	0.0034 ppm	0.000 %	2.2 %	0.0 ppm
Cu 324.754 {104} (Axial)	60 cps	0.0029 ppm	0.000 %	26.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,295 cps	93.0928 ppm	93.093 %	0.7 %	0.7 ppm
Li 670.784 {50} (Radial)	16 cps	0.0015 ppm		24.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	-388 cps	-0.0058 ppm	0.000 %	1.1 %	0.0 ppm
Mo 202.030 {467} (Axial)	4,831 cps	1.9200 ppm	95.998 %	1.9 %	0.0 ppm
Na 589.592 {57} (Radial)	139,481 cps	94.4384 ppm	94.438 %	1.5 %	1.4 ppm
Ni 231.604 {445} (Axial)	-60 cps	-0.0147 ppm	0.000 %	1.4 %	0.0 ppm
K 766.490 {44} (Radial)	32,868 cps	96.4105 ppm	96.411 %	2.0 %	1.9 ppm
Se 196.090 {472} (Axial)	0 cps	0.0010 ppm	0.000 %	465.3 %	0.0 ppm
Ag 328.068 {103} (Axial)	-8 cps	-0.0007 ppm	0.000 %	73.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	-66 cps	-0.0025 ppm		2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0112 ppm		7.7 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,819 cps	1.8955 ppm		0.6 %	0.0 ppm
V 292.402 {115} (Axial)	37 cps	0.0024 ppm	0.000 %	8.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	-47 cps	-0.0045 ppm	0.000 %	3.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		91.5605 %		0.4 %	0.4 %
Sc 188.060 {479} (Axial)		82.7742 %		0.1 %	0.1 %
Mg 279.079 {121} (Radial)	2,740 cps	95.3892 ppm	95.389 %	0.9 %	0.8 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0083 ppm	0.000 %	7.7 %	0.0 ppm
Al 167.079 {502} (Axial)	22,395 cps	19.1324 ppm		0.4 %	0.1 ppm
Sc 227.318 {448} (Axial)		83.7823 %		0.1 %	0.1 %
B 249.773 {135} (Radial)	16 cps	0.0643 ppm		15.1 %	0.0 ppm
Al 396.152 {85} (Radial)	30,598 cps	92.1279 ppm	92.128 %	0.7 %	0.6 ppm
Si 251.611 {134} (Radial)	7 cps	0.1008 ppm	0.000 %	9.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-4 cps	-0.0036 ppm	0.000 %	4.4 %	0.0 ppm
Y 224.306 {450} (Axial)		92.0948 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		96.0759 %		0.6 %	0.6 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201201B	95.19	100	95.2	80-120	12/01/20 12:09
Antimony	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Arsenic	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Barium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Beryllium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Cadmium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Calcium	SW6010D	ICP2_201201B	96.29	100	96.3	80-120	12/01/20 12:09
Chromium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Cobalt	SW6010D	ICP2_201201B	0.00355 J	-	-	-	12/01/20 12:09
Copper	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Iron	SW6010D	ICP2_201201B	97.13	100	97.1	80-120	12/01/20 12:09
Lead	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Magnesium	SW6010D	ICP2_201201B	98.84	100	98.8	80-120	12/01/20 12:09
Manganese	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Molybdenum	SW6010D	ICP2_201201B	1.94	2	97.0	80-120	12/01/20 12:09
Nickel	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Potassium	SW6010D	ICP2_201201B	100.6 E	100	101	80-120	12/01/20 12:09
Selenium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Silver	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Sodium	SW6010D	ICP2_201201B	98.75 E	100	98.7	80-120	12/01/20 12:09
Thallium	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09
Titanium	SW6010D	ICP2_201201B	1.972	2	98.6	80-120	12/01/20 12:09
Vanadium	SW6010D	ICP2_201201B	0.00221 J	-	-	-	12/01/20 12:09
Zinc	SW6010D	ICP2_201201B	0	-	-	-	12/01/20 12:09

Over Linear Range.

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

ICSA

Sample type: QC Analysis started at: 12/1/2020 12:09:20 PM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Recovery Percentage 1	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	-7 cps	-0.0156 ppm		18.4 %	0.0 ppm
As 189.042 {478} (Axial)	-8 cps	-0.0214 ppm	0.000 %	6.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	2 cps	0.0001 ppm	0.000 %	998.7 %	0.0 ppm
Ba 493.409 {68} (Radial)	75 cps	0.0046 ppm	0.000 %	49.0 %	0.0 ppm
Be 313.042 {108} (Axial)	-954 cps	-0.0027 ppm	0.000 %	1.7 %	0.0 ppm
Ca 315.887 {107} (Radial)	18,427 cps	96.2919 ppm	96.292 %	1.9 %	1.9 ppm
Cd 228.802 {447} (Axial)	-3 cps	-0.0002 ppm	0.000 %	20.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	16 cps	0.0017 ppm	0.000 %	18.3 %	0.0 ppm
Cr 205.560 {464} (Axial)	5 cps	0.0008 ppm	0.000 %	19.1 %	0.0 ppm
Co 228.616 {447} (Axial)	30 cps	0.0036 ppm	0.000 %	3.5 %	0.0 ppm
Cu 324.754 {104} (Axial)	63 cps	0.0030 ppm	0.000 %	19.2 %	0.0 ppm
Fe 259.940 {130} (Radial)	17,138 cps	97.1286 ppm	97.129 %	2.2 %	2.1 ppm
Li 670.784 {50} (Radial)	21 cps	0.0021 ppm		55.4 %	0.0 ppm
Mn 257.610 {131} (Axial)	-403 cps	-0.0060 ppm	0.000 %	1.6 %	0.0 ppm
Mo 202.030 {467} (Axial)	5,000 cps	1.9401 ppm	97.005 %	1.4 %	0.0 ppm
Na 589.592 {57} (Radial)	140,038 cps	98.7473 ppm	98.747 %	2.4 %	2.4 ppm
Ni 231.604 {445} (Axial)	-63 cps	-0.0151 ppm	0.000 %	2.3 %	0.0 ppm
K 766.490 {44} (Radial)	34,726 cps	100.6461 ppm	100.646 %	2.6 %	2.6 ppm
Se 196.090 {472} (Axial)	1 cps	0.0027 ppm	0.000 %	142.5 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0011 ppm	0.000 %	26.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	-61 cps	-0.0024 ppm		8.2 %	0.0 ppm
Sn 189.989 {477} (Axial)	-11 cps	-0.0107 ppm		3.2 %	0.0 ppm
Ti 334.941 {101} (Radial)	1,724 cps	1.9716 ppm		1.9 %	0.0 ppm
V 292.402 {115} (Axial)	34 cps	0.0022 ppm	0.000 %	24.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	-42 cps	-0.0040 ppm	0.000 %	4.9 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.2637 %		0.7 %	0.6 %
Sc 188.060 {479} (Axial)		82.7250 %		0.2 %	0.2 %
Mg 279.079 {121} (Radial)	2,686 cps	98.8441 ppm	98.844 %	2.2 %	2.2 ppm
Tl 190.856 {477} (Axial)	-3 cps	-0.0076 ppm	0.000 %	3.3 %	0.0 ppm
Al 167.079 {502} (Axial)	23,054 cps	18.6839 ppm		0.2 %	0.0 ppm
Sc 227.318 {448} (Axial)		83.9277 %		0.3 %	0.2 %
B 249.773 {135} (Radial)	21 cps	0.0927 ppm		4.7 %	0.0 ppm
Al 396.152 {85} (Radial)	30,653 cps	95.1867 ppm	95.187 %	2.0 %	1.9 ppm
Si 251.611 {134} (Radial)	6 cps	0.0945 ppm	0.000 %	38.9 %	0.0 ppm
Pb 220.353 {453} (Axial)	-3 cps	-0.0031 ppm	0.000 %	32.3 %	0.0 ppm
Y 224.306 {450} (Axial)		92.2943 %		0.1 %	0.1 %
Sc 361.384 {93} (Radial)		97.2398 %		0.2 %	0.2 %

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** mg/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Aluminum	SW6010D	ICP2_201202B	93.05	100	93.1	80-120	12/02/20 14:27
Antimony	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Arsenic	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Barium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Beryllium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Boron	SW6010D	ICP2_201202B	0.09642	-	-	-	12/02/20 14:27
Cadmium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Calcium	SW6010D	ICP2_201202B	92.03	100	92.0	80-120	12/02/20 14:27
Chromium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Cobalt	SW6010D	ICP2_201202B	0.00132 J	-	-	-	12/02/20 14:27
Copper	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Iron	SW6010D	ICP2_201202B	92.41	100	92.4	80-120	12/02/20 14:27
Lead	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Lithium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Magnesium	SW6010D	ICP2_201202B	95.54	100	95.5	80-120	12/02/20 14:27
Manganese	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Molybdenum	SW6010D	ICP2_201202B	1.981	2	99.0	80-120	12/02/20 14:27
Nickel	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Potassium	SW6010D	ICP2_201202B	96.23 E	100	96.2	80-120	12/02/20 14:27
Selenium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Silicon	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Silver	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Sodium	SW6010D	ICP2_201202B	94.79 E	100	94.8	80-120	12/02/20 14:27
Strontium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Thallium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Tin	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Titanium	SW6010D	ICP2_201202B	1.878	2	93.9	80-120	12/02/20 14:27
Vanadium	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27
Zinc	SW6010D	ICP2_201202B	0	-	-	-	12/02/20 14:27

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

ICP SERIAL DILUTIONS

Concentration Units: mg/Kg

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
20111726-41ASD							
Arsenic	SW6010D	ICP2_201202B	6.196	0.7634 JR	87.7	10	12/02/20 16:04
Lead	SW6010D	ICP2_201202B	25.15	15.07 BR	40.1	10	12/02/20 16:04

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Detection Limits

Instrument: ICP2 **Matrix:** Soil

Analyte	Units	MRL	MDL	Method
Arsenic	mg/Kg-dry	0.25	0.065	SW6010D
Lead	mg/Kg-dry	0.25	0.20	SW6010D
Miscellaneous		0	0	MISC

Instrument: ICP2 **Matrix:** Water

Analyte	Units	MRL	MDL	Method
Arsenic	mg/L	0.0050	0.0016	SW6010D
Lead	mg/L	0.0050	0.0013	SW6010D

Calibration Summary

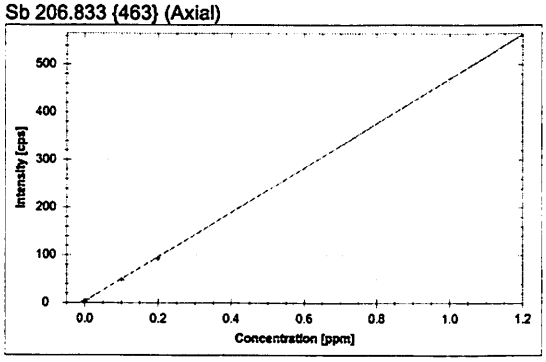
12/1/2020 8:29:17 AM

QTEGRA

LabBook: ICP2_201130B.imexp

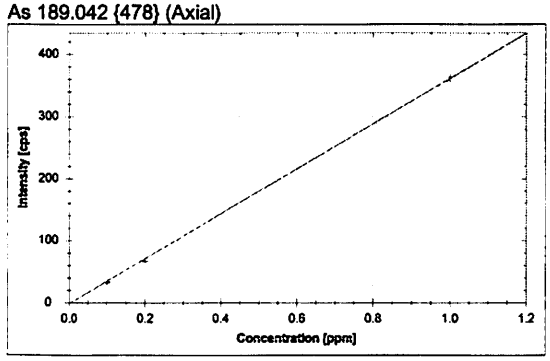
Calibration Graphs

Sb 206.833 {463} (Axial)



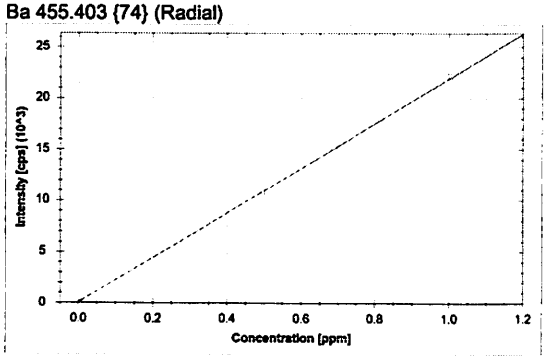
f(x) = 466.8351*x + 2.9259
R² = 0.9998
BEC = 0.006 ppm
LoD = 0.0034 ppm

As 189.042 {478} (Axial)



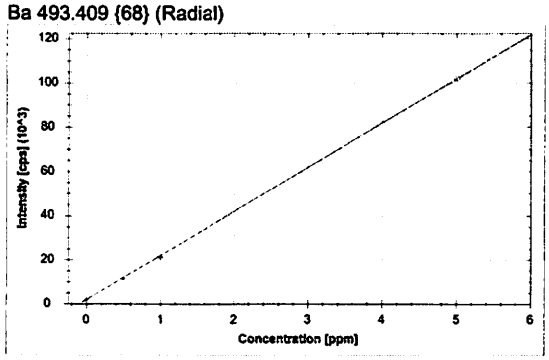
f(x) = 362.6423*x + -1.6820
R² = 0.9997
BEC = -0.005 ppm
LoD = 0.0034 ppm

Ba 455.403 {74} (Radial)



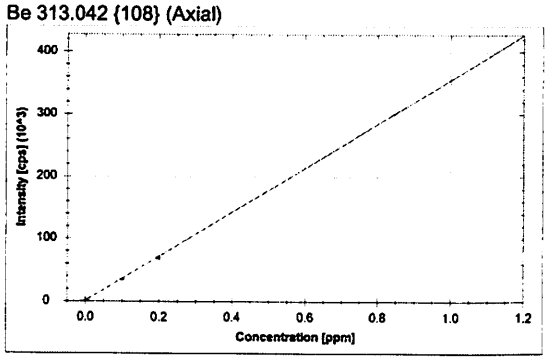
f(x) = 21857.4958*x + 50.1134
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0022 ppm

Ba 493.409 {68} (Radial)



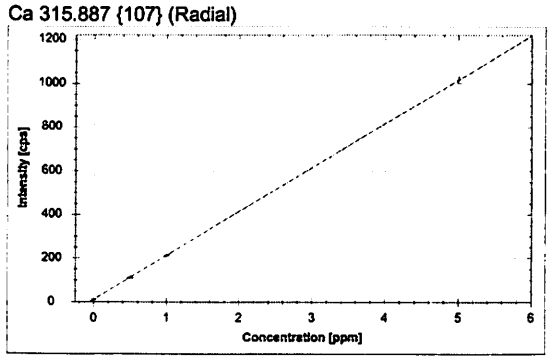
f(x) = 19952.1562*x + 2001.4971
R² = 0.9998
BEC = 0.100 ppm
LoD = 0.0018 ppm

Be 313.042 {108} (Axial)



f(x) = 354660.3706*x + 535.4197
R² = 0.9999
BEC = 0.002 ppm
LoD = 0.0001 ppm

Ca 315.887 {107} (Radial)



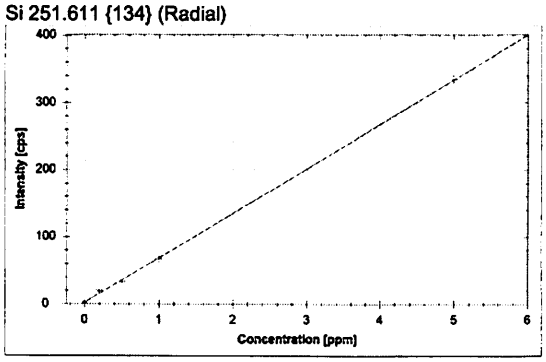
f(x) = 201.1067*x + 11.2014
R² = 1.0000
BEC = 0.056 ppm
LoD = 0.0259 ppm

Calibration Summary

12/1/2020 8:29:17 AM

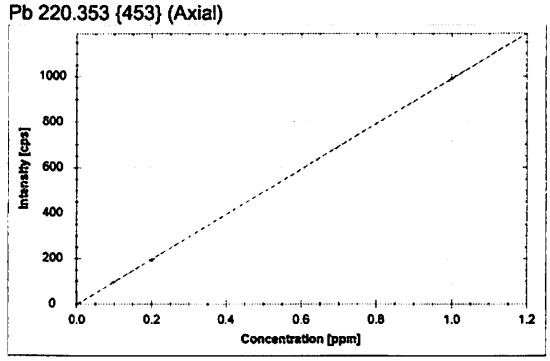
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 66.3807*x + 2.0934
R^2 = 0.9997
BEC = 0.032 ppm
LoD = 0.0347 ppm

Pb 220.353 {453} (Axial)



f(x) = 991.6667*x + -2.6978
R^2 = 1.0000
BEC = -0.003 ppm
LoD = 0.0008 ppm

Calibration Summary

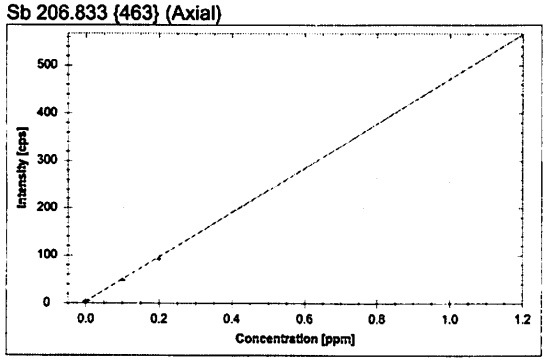
12/2/2020 8:16:42 AM

QTEGRA

LabBook: ICP2_201201C.lmexp

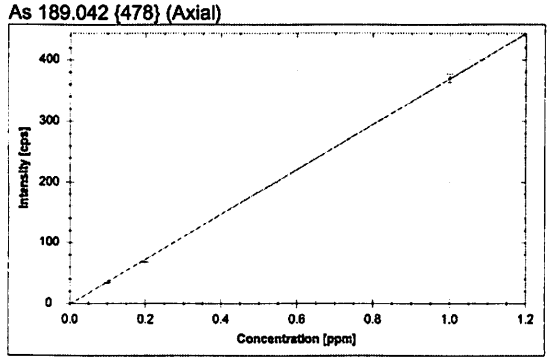
Calibration Graphs

Sb 206.833 {463} (Axial)



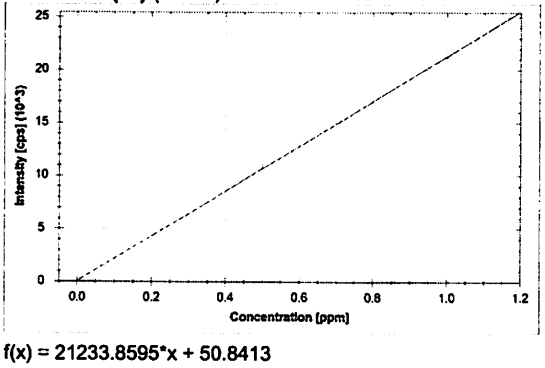
f(x) = 468.3114*x + 3.1847
R^2 = 0.9998
BEC = 0.007 ppm
LoD = 0.0052 ppm

As 189.042 {478} (Axial)



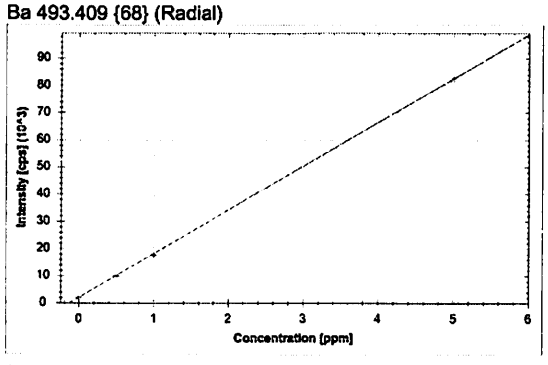
f(x) = 370.3503*x + -1.6228
R^2 = 0.9997
BEC = -0.004 ppm
LoD = 0.0023 ppm

Ba 455.403 {74} (Radial)



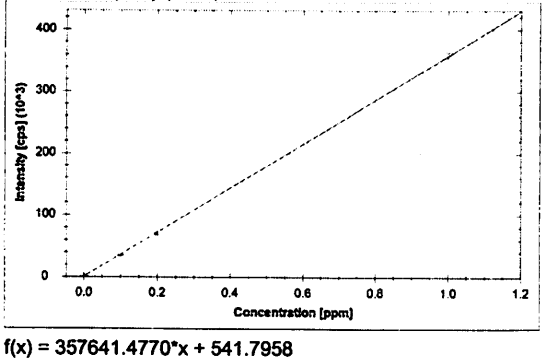
f(x) = 21233.8595*x + 50.8413
R^2 = 0.9999
BEC = 0.002 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



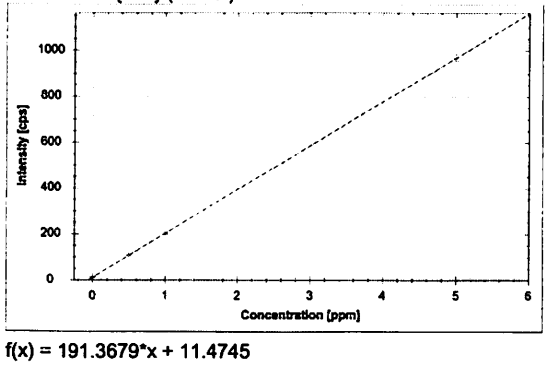
f(x) = 16090.9736*x + 2122.6339
R^2 = 0.9999
BEC = 0.132 ppm
LoD = 0.0013 ppm

Be 313.042 {108} (Axial)



f(x) = 357641.4770*x + 541.7958
R^2 = 0.9999
BEC = 0.002 ppm
LoD = 0.0000 ppm

Ca 315.887 {107} (Radial)



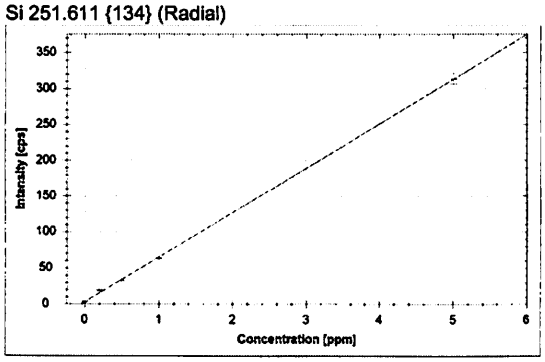
f(x) = 191.3679*x + 11.4745
R^2 = 1.0000
BEC = 0.060 ppm
LoD = 0.0207 ppm

Calibration Summary

12/2/2020 8:16:42 AM

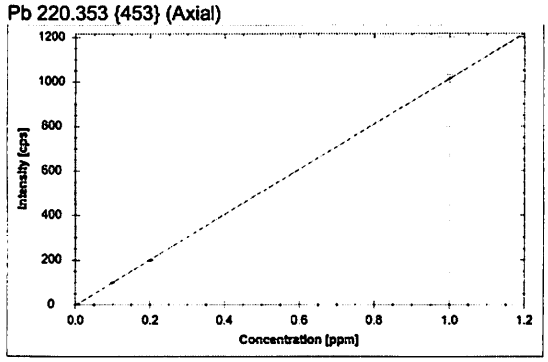
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 61.9682*x + 3.0697
R^2 = 0.9997
BEC = 0.050 ppm
LoD = 0.0650 ppm

Pb 220.353 {453} (Axial)



f(x) = 1014.9581*x + -2.6530
R^2 = 1.0000
BEC = -0.003 ppm
LoD = 0.0020 ppm

Calibration Summary

12/3/2020 9:59:42 AM

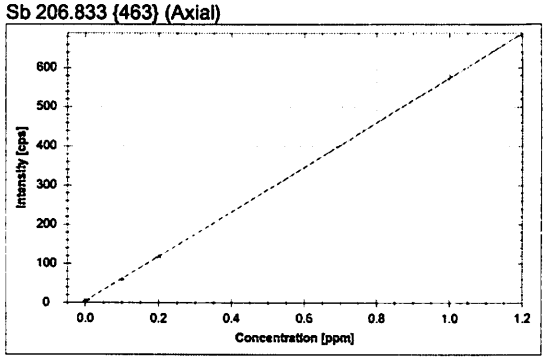
GC only MS/MSP not accept sample!

QTEGRA

LabBook: ICP2_201202C.imexp

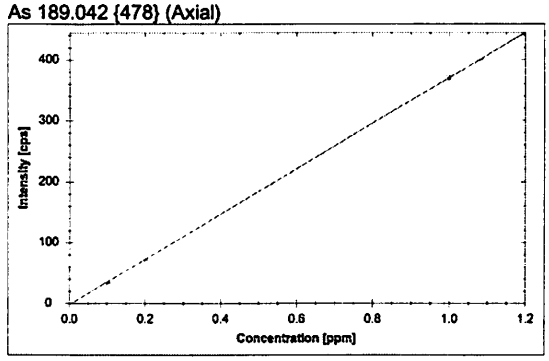
Calibration Graphs

Sb 206.833 {463} (Axial)



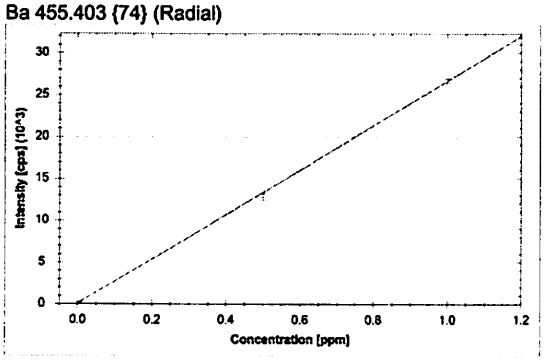
f(x) = 568.8610*x + 4.3946
R^2 = 1.0000
BEC = 0.008 ppm
LoD = 0.0007 ppm

As 189.042 {478} (Axial)



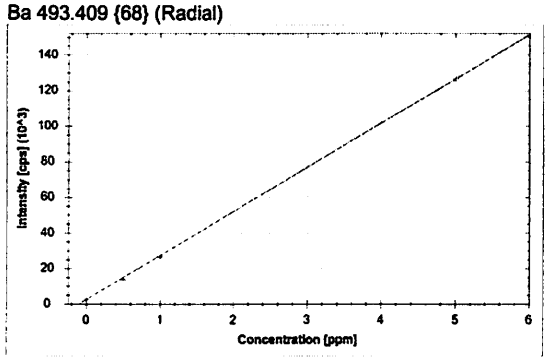
f(x) = 372.0209*x + -2.1371
R^2 = 0.9999
BEC = -0.006 ppm
LoD = 0.0075 ppm

Ba 455.403 {74} (Radial)



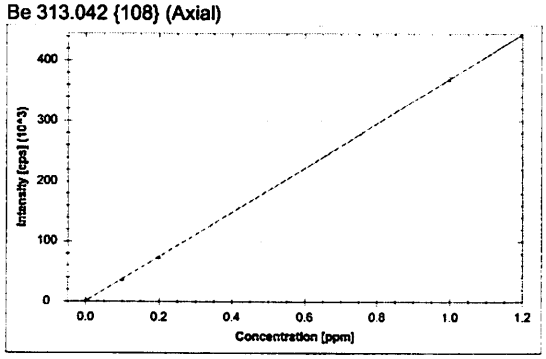
f(x) = 26612.2977*x + 45.4143
R^2 = 0.9993
BEC = 0.002 ppm
LoD = 0.0007 ppm

Ba 493.409 {68} (Radial)



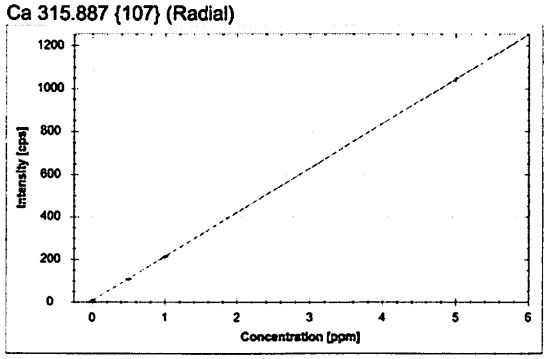
f(x) = 24789.7347*x + 2556.9160
R^2 = 0.9998
BEC = 0.103 ppm
LoD = 0.0001 ppm

Be 313.042 {108} (Axial)



f(x) = 369128.2871*x + 629.0861
R^2 = 0.9999
BEC = 0.002 ppm
LoD = 0.0001 ppm

Ca 315.887 {107} (Radial)



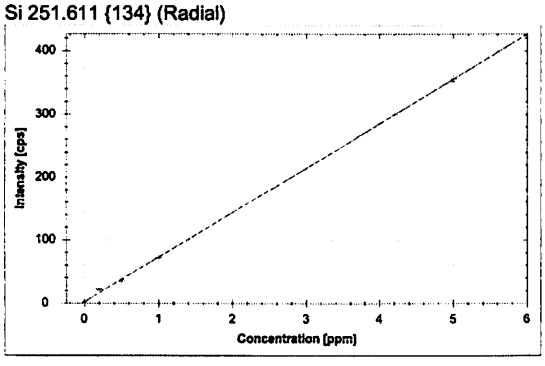
f(x) = 207.5117*x + 6.9253
R^2 = 0.9999
BEC = 0.033 ppm
LoD = 0.0475 ppm

Calibration Summary

12/3/2020 9:59:42 AM

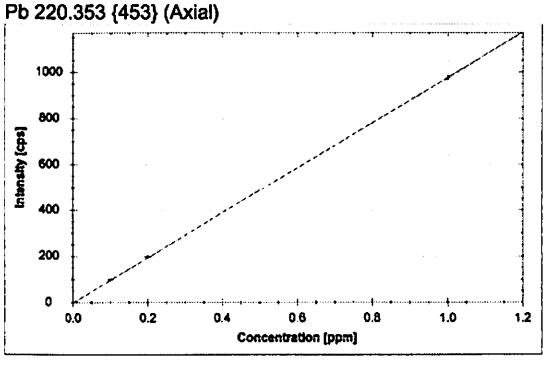
QTEGRA

Si 251.611 {134} (Radial)



f(x) = 70.6557*x + 2.1644
R^2 = 0.9996
BEC = 0.031 ppm
LoD = 0.0114 ppm

Pb 220.353 {453} (Axial)



f(x) = 979.3602*x + -2.8296
R^2 = 1.0000
BEC = -0.003 ppm
LoD = 0.0009 ppm

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

20111754-05A

Sample type: UNKNOWN Analysis started at: 12/1/2020 2:34:00 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	46 cps	0.9838 ppm	9.8 %	0.1 ppm
As 189.042 {478} (Axial)	17 cps	0.4602 ppm	7.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	3,619 cps	1.7043 ppm	1.8 %	0.0 ppm
Ba 493.409 {68} (Radial)	2,619 cps	1.6273 ppm	2.3 %	0.0 ppm
Be 313.042 {108} (Axial)	363 cps	0.0102 ppm	0.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	5,549 cps	289.9900 ppm	1.8 %	5.2 ppm
Cd 228.802 {447} (Axial)	62 cps	0.0525 ppm	9.0 %	0.0 ppm
Cr 267.716 {126} (Axial)	533 cps	0.5863 ppm	0.1 %	0.0 ppm
Cr 205.560 {464} (Axial)	311 cps	0.5696 ppm	7.7 %	0.0 ppm
Co 228.616 {447} (Axial)	65 cps	0.0774 ppm	8.3 %	0.0 ppm
Cu 324.754 {104} (Axial)	4,535 cps	2.1411 ppm	0.7 %	0.0 ppm
Fe 259.940 {130} (Radial)	9,295 cps	526.7759 ppm	1.7 %	8.8 ppm
Li 670.784 {50} (Radial)	72 cps	0.0706 ppm	12.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	84,290 cps	12.5165 ppm	0.8 %	0.1 ppm
Mo 202.030 {467} (Axial)	13 cps	0.0521 ppm	10.6 %	0.0 ppm
Na 589.592 {57} (Radial)	387 cps	2.7320 ppm	0.7 %	0.0 ppm
Ni 231.604 {445} (Axial)	107 cps	0.2566 ppm	7.3 %	0.0 ppm
K 766.490 {44} (Radial)	309 cps	8.9488 ppm	3.8 %	0.3 ppm
Se 196.090 {472} (Axial)	1 cps	0.0350 ppm	21.6 %	0.0 ppm
Ag 328.068 {103} (Axial)	142 cps	0.1483 ppm	4.2 %	0.0 ppm
Sr 407.771 {83} (Radial)	1,631 cps	0.6345 ppm	2.0 %	0.0 ppm
Sn 189.989 {477} (Axial)	308 cps	2.9953 ppm	7.4 %	0.2 ppm
Ti 334.941 {101} (Radial)	311 cps	3.5540 ppm	1.5 %	0.1 ppm
V 292.402 {115} (Axial)	967 cps	0.6294 ppm	0.8 %	0.0 ppm
Zn 213.856 {457} (Axial)	29,298 cps	27.7822 ppm	7.3 %	2.0 ppm
Sc 357.253 {94} (Axial)		108.0011 %	0.4 %	0.5 %
Sc 188.060 {479} (Axial)		93.0974 %	0.5 %	0.4 %
Mg 279.079 {121} (Radial)	237 cps	87.3665 ppm	1.5 %	1.3 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0216 ppm	25.9 %	0.0 ppm
Al 167.079 {502} (Axial)	6,257 cps	50.7079 ppm	5.7 %	2.9 ppm
Sc 227.318 {448} (Axial)		93.5214 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	18 cps	0.7862 ppm	5.6 %	0.0 ppm
Al 396.152 {85} (Radial)	2,321 cps	72.0716 ppm	1.5 %	1.0 ppm
Si 251.611 {134} (Radial)	170 cps	27.4711 ppm	1.9 %	0.5 ppm
Pb 220.353 {453} (Axial)	3,011 cps	29.6681 ppm	7.0 %	2.1 ppm
Y 224.306 {450} (Axial)		100.0613 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		118.8916 %	0.3 %	0.3 %

Simple Sample Report

12/2/2020 8:17:12 AM

QTEGRA

20111754-21A

Sample type: UNKNOWN Analysis started at: 12/1/2020 3:09:04 PM

Standard DF: 100

Pb only. 100x.

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.3575 ppm	22.7 %	0.1 ppm
As 189.042 {478} (Axial)	1 cps	0.2577 ppm	7.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	214 cps	1.0101 ppm	2.6 %	0.0 ppm
Ba 493.409 {68} (Radial)	145 cps	0.9031 ppm	7.6 %	0.1 ppm
Be 313.042 {108} (Axial)	10 cps	0.0027 ppm	68.6 %	0.0 ppm
Ca 315.887 {107} (Radial)	158 cps	82.5198 ppm	1.5 %	1.2 ppm
Cd 228.802 {447} (Axial)	10 cps	0.0839 ppm	4.5 %	0.0 ppm
Cr 267.716 {126} (Axial)	15 cps	0.1690 ppm	15.4 %	0.0 ppm
Cr 205.560 {464} (Axial)	11 cps	0.2072 ppm	0.4 %	0.0 ppm
Co 228.616 {447} (Axial)	5 cps	0.0602 ppm	13.8 %	0.0 ppm
Cu 324.754 {104} (Axial)	303 cps	1.4316 ppm	2.9 %	0.0 ppm
Fe 259.940 {130} (Radial)	810 cps	459.3168 ppm	1.1 %	5.1 ppm
Li 670.784 {50} (Radial)	13 cps	0.1324 ppm	91.5 %	0.1 ppm
Mn 257.610 {131} (Axial)	3,965 cps	5.8879 ppm	1.9 %	0.1 ppm
Mo 202.030 {467} (Axial)	1 cps	0.0327 ppm	34.3 %	0.0 ppm
Na 589.592 {57} (Radial)	5 cps	0.3421 ppm	163.9 %	0.6 ppm
Ni 231.604 {445} (Axial)	9 cps	0.2165 ppm	2.6 %	0.0 ppm
K 766.490 {44} (Radial)	11 cps	3.1661 ppm	104.2 %	3.3 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0960 ppm	270.8 %	0.3 ppm
Ag 328.068 {103} (Axial)	-3 cps	-0.0308 ppm	123.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	120 cps	0.4660 ppm	3.4 %	0.0 ppm
Sn 189.989 {477} (Axial)	74 cps	7.1636 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	14 cps	1.5515 ppm	17.2 %	0.3 ppm
V 292.402 {115} (Axial)	22 cps	0.1407 ppm	12.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	1,998 cps	18.9457 ppm	0.4 %	0.1 ppm
Sc 357.253 {94} (Axial)		109.3811 %	0.7 %	0.8 %
Sc 188.060 {479} (Axial)		98.8025 %	0.2 %	0.2 %
Mg 279.079 {121} (Radial)	7 cps	25.9414 ppm	15.6 %	4.1 ppm
Tl 190.856 {477} (Axial)	0 cps	-0.1424 ppm	29.7 %	0.0 ppm
Al 167.079 {502} (Axial)	524 cps	42.5025 ppm	0.5 %	0.2 ppm
Sc 227.318 {448} (Axial)		99.0183 %	0.1 %	0.1 %
B 249.773 {135} (Radial)	0 cps	-0.0140 ppm	1,483.2 %	0.2 ppm
Al 396.152 {85} (Radial)	128 cps	39.9003 ppm	0.8 %	0.3 ppm
Si 251.611 {134} (Radial)	13 cps	21.4260 ppm	3.4 %	0.7 ppm
Pb 220.353 {453} (Axial)	106 cps	10.4472 ppm	1.5 %	0.2 ppm
Y 224.306 {450} (Axial)		102.5718 %	0.3 %	0.3 %
Sc 361.384 {93} (Radial)		118.5905 %	0.2 %	0.2 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-13A

Sample type: UNKNOWN Analysis started at: 11/30/2020 10:21:05 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0690 ppm	9.6 %	0.0 ppm
As 189.042 {478} (Axial)	3 cps	0.0789 ppm	1.5 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,984 cps	0.9078 ppm	2.2 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,896 cps	0.9504 ppm	0.8 %	0.0 ppm
Be 313.042 {108} (Axial)	264 cps	0.0074 ppm	1.1 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,572 cps	227.3349 ppm	2.1 %	4.7 ppm
Cd 228.802 {447} (Axial)	23 cps	0.0198 ppm	0.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	177 cps	0.1957 ppm	0.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	108 cps	0.1989 ppm	1.4 %	0.0 ppm
Co 228.616 {447} (Axial)	38 cps	0.0460 ppm	1.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	928 cps	0.4420 ppm	1.8 %	0.0 ppm
Fe 259.940 {130} (Radial)	2,742 cps	147.6093 ppm	1.7 %	2.5 ppm
Li 670.784 {50} (Radial)	58 cps	0.0553 ppm	12.0 %	0.0 ppm
Mn 257.610 {131} (Axial)	40,440 cps	6.0571 ppm	1.5 %	0.1 ppm
Mo 202.030 {467} (Axial)	6 cps	0.0220 ppm	0.7 %	0.0 ppm
Na 589.592 {57} (Radial)	112 cps	0.7612 ppm	14.0 %	0.1 ppm
Ni 231.604 {445} (Axial)	46 cps	0.1112 ppm	3.2 %	0.0 ppm
K 766.490 {44} (Radial)	181 cps	5.3099 ppm	7.5 %	0.4 ppm
Se 196.090 {472} (Axial)	0 cps	0.0013 ppm	1,232.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	11 cps	0.0099 ppm	38.6 %	0.0 ppm
Sr 407.771 {83} (Radial)	683 cps	0.2545 ppm	1.7 %	0.0 ppm
Sn 189.989 {477} (Axial)	132 cps	1.3253 ppm	0.5 %	0.0 ppm
Ti 334.941 {101} (Radial)	127 cps	1.3191 ppm	0.8 %	0.0 ppm
V 292.402 {115} (Axial)	293 cps	0.1934 ppm	2.2 %	0.0 ppm
Zn 213.856 {457} (Axial)	5,731 cps	5.5160 ppm	0.9 %	0.1 ppm
Sc 357.253 {94} (Axial)		96.9252 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		92.0307 %	0.1 %	0.1 %
Mg 279.079 {121} (Radial)	283 cps	98.3514 ppm	1.7 %	1.7 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0204 ppm	41.1 %	0.0 ppm
Al 167.079 {502} (Axial)	6,744 cps	57.6135 ppm	0.8 %	0.4 ppm
Sc 227.318 {448} (Axial)		92.0561 %	0.0 %	0.0 %
B 249.773 {135} (Radial)	3 cps	0.1053 ppm	20.6 %	0.0 ppm
Al 396.152 {85} (Radial)	2,142 cps	64.4954 ppm	1.6 %	1.0 ppm
Si 251.611 {134} (Radial)	164 cps	24.6521 ppm	1.3 %	0.3 ppm
Pb 220.353 {453} (Axial)	258 cps	2.6000 ppm	1.0 %	0.0 ppm
Y 224.306 {450} (Axial)		95.9034 %	0.0 %	0.0 %
Sc 361.384 {93} (Radial)		96.9807 %	0.1 %	0.1 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-23A

Sample type: UNKNOWN Analysis started at: 11/30/2020 11:01:16 PM

Standard DF: 10

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	24 cps	0.5198 ppm	1.8 %	0.0 ppm
As 189.042 {478} (Axial)	21 cps	0.5749 ppm	3.2 %	0.0 ppm
Ba 455.403 {74} (Radial)	1,607 cps	0.7351 ppm	2.4 %	0.0 ppm
Ba 493.409 {68} (Radial)	1,569 cps	0.7863 ppm	3.3 %	0.0 ppm
Be 313.042 {108} (Axial)	242 cps	0.0068 ppm	2.8 %	0.0 ppm
Ca 315.887 {107} (Radial)	3,149 cps	156.5856 ppm	1.9 %	3.0 ppm
Cd 228.802 {447} (Axial)	60 cps	0.0520 ppm	1.2 %	0.0 ppm
Cr 267.716 {126} (Axial)	145 cps	0.1606 ppm	3.0 %	0.0 ppm
Cr 205.560 {464} (Axial)	91 cps	0.1689 ppm	0.5 %	0.0 ppm
Co 228.616 {447} (Axial)	49 cps	0.0597 ppm	3.9 %	0.0 ppm
Cu 324.754 {104} (Axial)	2,227 cps	1.0607 ppm	1.5 %	0.0 ppm
Fe 259.940 {130} (Radial)	7,676 cps	413.1959 ppm	1.5 %	6.2 ppm
Li 670.784 {50} (Radial)	33 cps	0.0315 ppm	29.2 %	0.0 ppm
Mn 257.610 {131} (Axial)	32,612 cps	4.8846 ppm	1.6 %	0.1 ppm
Mo 202.030 {467} (Axial)	7 cps	0.0295 ppm	8.0 %	0.0 ppm
Na 589.592 {57} (Radial)	138 cps	0.9356 ppm	11.6 %	0.1 ppm
Ni 231.604 {445} (Axial)	67 cps	0.1640 ppm	1.1 %	0.0 ppm
K 766.490 {44} (Radial)	166 cps	4.8838 ppm	8.0 %	0.4 ppm
Se 196.090 {472} (Axial)	1 cps	0.0412 ppm	48.7 %	0.0 ppm
Ag 328.068 {103} (Axial)	30 cps	0.0268 ppm	8.3 %	0.0 ppm
Sr 407.771 {83} (Radial)	613 cps	0.2288 ppm	1.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	635 cps	6.3717 ppm	1.3 %	0.1 ppm
Ti 334.941 {101} (Radial)	157 cps	1.6358 ppm	0.1 %	0.0 ppm
V 292.402 {115} (Axial)	273 cps	0.1800 ppm	1.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	14,914 cps	14.3547 ppm	1.2 %	0.2 ppm
Sc 357.253 {94} (Axial)		97.2818 %	0.3 %	0.3 %
Sc 188.060 {479} (Axial)		91.7248 %	0.3 %	0.2 %
Mg 279.079 {121} (Radial)	208 cps	72.2448 ppm	1.4 %	1.0 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0332 ppm	48.2 %	0.0 ppm
Al 167.079 {502} (Axial)	4,458 cps	38.0842 ppm	1.1 %	0.4 ppm
Sc 227.318 {448} (Axial)		91.7054 %	0.3 %	0.3 %
B 249.773 {135} (Radial)	11 cps	0.4506 ppm	13.1 %	0.1 ppm
Al 396.152 {85} (Radial)	1,272 cps	38.2947 ppm	1.7 %	0.7 ppm
Si 251.611 {134} (Radial)	148 cps	22.2783 ppm	1.2 %	0.3 ppm
Pb 220.353 {453} (Axial)	1,043 cps	10.5207 ppm	1.2 %	0.1 ppm
Y 224.306 {450} (Axial)		95.5565 %	0.2 %	0.2 %
Sc 361.384 {93} (Radial)		96.7021 %	0.3 %	0.2 %

← cannot use. use 100x.

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-16A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:29:40 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	2 cps	0.0042 ppm	24.5 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	0.0009 ppm	72.1 %	0.0 ppm
Ba 455.403 {74} (Radial)	851 cps	0.0389 ppm	1.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	833 cps	0.0417 ppm	3.7 %	0.0 ppm
Be 313.042 {108} (Axial)	76 cps	0.0002 ppm	12.4 %	0.0 ppm
Ca 315.887 {107} (Radial)	2,816 cps	14.0034 ppm	1.5 %	0.2 ppm
Cd 228.802 {447} (Axial)	27 cps	0.0023 ppm	2.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	506 cps	0.0561 ppm	2.8 %	0.0 ppm
Cr 205.560 {464} (Axial)	315 cps	0.0582 ppm	1.2 %	0.0 ppm
Co 228.616 {447} (Axial)	0 cps	0.0000 ppm	1,216.7 %	0.0 ppm
Cu 324.754 {104} (Axial)	75 cps	0.0036 ppm	7.1 %	0.0 ppm
Fe 259.940 {130} (Radial)	2 cps	0.0081 ppm	64.8 %	0.0 ppm
Li 670.784 {50} (Radial)	12 cps	0.0012 ppm	59.3 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,612 cps	0.0841 ppm	2.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	109.3 %	0.0 ppm
Na 589.592 {57} (Radial)	190,662 cps	129.0915 ppm	2.1 %	2.8 ppm
Ni 231.604 {445} (Axial)	8 cps	0.0021 ppm	6.7 %	0.0 ppm
K 766.490 {44} (Radial)	63 cps	0.1841 ppm	10.3 %	0.0 ppm
Se 196.090 {472} (Axial)	0 cps	-0.0019 ppm	179.0 %	0.0 ppm
Ag 328.068 {103} (Axial)	3 cps	0.0002 ppm	236.8 %	0.0 ppm
Sr 407.771 {83} (Radial)	480 cps	0.0179 ppm	2.6 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0012 ppm	23.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	1 cps	0.0011 ppm	385.0 %	0.0 ppm
V 292.402 {115} (Axial)	-7 cps	-0.0005 ppm	29.0 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,459 cps	0.7179 ppm	1.1 %	0.0 ppm
Sc 357.253 {94} (Axial)		92.5709 %	1.1 %	1.0 %
Sc 188.060 {479} (Axial)		86.2261 %	0.5 %	0.5 %
Mg 279.079 {121} (Radial)	121 cps	4.2235 ppm	2.2 %	0.1 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0026 ppm	32.2 %	0.0 ppm
Al 167.079 {502} (Axial)	22 cps	0.0189 ppm	1.0 %	0.0 ppm
Sc 227.318 {448} (Axial)		86.1552 %	0.5 %	0.4 %
B 249.773 {135} (Radial)	-4 cps	-0.0153 ppm	20.6 %	0.0 ppm
Al 396.152 {85} (Radial)	4 cps	0.0125 ppm	66.1 %	0.0 ppm
Si 251.611 {134} (Radial)	27 cps	0.4112 ppm	3.2 %	0.0 ppm
Pb 220.353 {453} (Axial)	27 cps	0.0276 ppm	1.6 %	0.0 ppm
Y 224.306 {450} (Axial)		91.7724 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		95.7739 %	0.5 %	0.5 %

Simple Sample Report

12/1/2020 8:29:55 AM

QTEGRA

20111754-10A

Sample type: UNKNOWN Analysis started at: 12/1/2020 1:14:12 AM

Standard DF: 1

	Blank Corrected Intensity Average	Concentration average	Concentration RSD	Concentration SD
Sb 206.833 {463} (Axial)	3 cps	0.0057 ppm	36.8 %	0.0 ppm
As 189.042 {478} (Axial)	0 cps	-0.0003 ppm	429.4 %	0.0 ppm
Ba 455.403 {74} (Radial)	865 cps	0.0396 ppm	3.0 %	0.0 ppm
Ba 493.409 {68} (Radial)	893 cps	0.0447 ppm	4.8 %	0.0 ppm
Be 313.042 {108} (Axial)	60 cps	0.0002 ppm	5.2 %	0.0 ppm
Ca 315.887 {107} (Radial)	4,802 cps	23.8796 ppm	2.7 %	0.6 ppm
Cd 228.802 {447} (Axial)	18 cps	0.0015 ppm	8.9 %	0.0 ppm
Cr 267.716 {126} (Axial)	2 cps	0.0002 ppm	136.5 %	0.0 ppm
Cr 205.560 {464} (Axial)	1 cps	0.0003 ppm	27.5 %	0.0 ppm
Co 228.616 {447} (Axial)	3 cps	0.0004 ppm	14.6 %	0.0 ppm
Cu 324.754 {104} (Axial)	54 cps	0.0026 ppm	16.6 %	0.0 ppm
Fe 259.940 {130} (Radial)	1 cps	0.0077 ppm	22.2 %	0.0 ppm
Li 670.784 {50} (Radial)	21 cps	0.0020 ppm	61.1 %	0.0 ppm
Mn 257.610 {131} (Axial)	5,040 cps	0.0755 ppm	1.5 %	0.0 ppm
Mo 202.030 {467} (Axial)	0 cps	0.0001 ppm	65.3 %	0.0 ppm
Na 589.592 {57} (Radial)	177,116 cps	119.9198 ppm	3.0 %	3.6 ppm
Ni 231.604 {445} (Axial)	8 cps	0.0021 ppm	3.7 %	0.0 ppm
K 766.490 {44} (Radial)	133 cps	0.3911 ppm	5.8 %	0.0 ppm
Se 196.090 {472} (Axial)	-1 cps	-0.0024 ppm	203.4 %	0.0 ppm
Ag 328.068 {103} (Axial)	10 cps	0.0009 ppm	30.5 %	0.0 ppm
Sr 407.771 {83} (Radial)	769 cps	0.0287 ppm	2.3 %	0.0 ppm
Sn 189.989 {477} (Axial)	1 cps	0.0009 ppm	48.6 %	0.0 ppm
Ti 334.941 {101} (Radial)	2 cps	0.0022 ppm	83.9 %	0.0 ppm
V 292.402 {115} (Axial)	0 cps	0.0000 ppm	481.4 %	0.0 ppm
Zn 213.856 {457} (Axial)	7,790 cps	0.7497 ppm	1.3 %	0.0 ppm
Sc 357.253 {94} (Axial)		93.9109 %	0.4 %	0.4 %
Sc 188.060 {479} (Axial)		85.6219 %	0.4 %	0.3 %
Mg 279.079 {121} (Radial)	324 cps	11.2760 ppm	2.5 %	0.3 ppm
Tl 190.856 {477} (Axial)	-1 cps	-0.0015 ppm	92.9 %	0.0 ppm
Al 167.079 {502} (Axial)	15 cps	0.0132 ppm	1.9 %	0.0 ppm
Sc 227.318 {448} (Axial)		85.6003 %	0.6 %	0.5 %
B 249.773 {135} (Radial)	-1 cps	-0.0039 ppm	98.2 %	0.0 ppm
Al 396.152 {85} (Radial)	9 cps	0.0265 ppm	38.0 %	0.0 ppm
Si 251.611 {134} (Radial)	24 cps	0.3576 ppm	5.3 %	0.0 ppm
Pb 220.353 {453} (Axial)	32 cps	0.0323 ppm	1.4 %	0.0 ppm
Y 224.306 {450} (Axial)		91.2654 %	0.4 %	0.4 %
Sc 361.384 {93} (Radial)		96.6114 %	1.1 %	1.1 %

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001
Sample Matrix: Soil

Metals

Prep Method: SW3050B **Extraction Lot:** 168178
Analytical Method: SW6010D **Extraction Date:** 11/23/20 16:27

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	20111726-41AMS	NA	NA	0.677 g	50 mL	0
Duplicate Matrix Spike	20111726-41AMSD	NA	NA	0.648 g	50 mL	0
IDA001:DU-F0:S000010	20111754-01A	11/16/20	11/19/20	0.747 g	50 mL	89
IDA001:DU-F1:S000010	20111754-03A	11/16/20	11/19/20	0.755 g	50 mL	83
IDA001:DU-F1-TE:S000010	20111754-05A	11/16/20	11/19/20	0.735 g	50 mL	84
IDA001:DU-F1-TS:S000010	20111754-06A	11/16/20	11/19/20	0.69 g	50 mL	82
IDA001:DU-F2:S000010	20111754-07A	11/16/20	11/19/20	0.625 g	50 mL	81
IDA001:DU-F3:S000010	20111754-09A	11/16/20	11/19/20	0.739 g	50 mL	81
IDA001:DU-F4:S000010	20111754-11A	11/16/20	11/19/20	0.636 g	50 mL	74
IDA001:DU-F5:S000010	20111754-13A	11/16/20	11/19/20	0.765 g	50 mL	85
IDA001:DU-F7:S000010	20111754-15A	11/16/20	11/19/20	0.735 g	50 mL	87
IDA001:DU-F7-TE:S000010	20111754-17A	11/16/20	11/19/20	0.779 g	50 mL	84
IDA001:DU-F7-TS:S000010	20111754-18A	11/16/20	11/19/20	0.655 g	50 mL	88
IDA001:DU-F6:S000010	20111754-19A	11/17/20	11/19/20	0.783 g	50 mL	82
IDA001:DU-F8:S000010	20111754-21A	11/17/20	11/19/20	0.725 g	50 mL	82
IDA001:DU-F9:S000010	20111754-23A	11/17/20	11/19/20	0.741 g	50 mL	84
LCS-168178	LCS-168178	NA	NA	1 g	50 mL	0
MBLK-168178	MBLK-168178	NA	NA	1 g	50 mL	0

ALS Group, USA

PREP BATCH REPORT

Batch ID: 168178 Prep Code: MP_6010_S

Start Date: 11/23/2020 1:50:00 PM End Date: 11/23/2020 4:27:16 PM

Technician: Kate Achatz

InitSamp Wt/Vol: 1 g
FinSampVol: 50 mL
OriginalFac: 50
PrepUnitFac:

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111726-35A	Soil		0.742		0	50	67.3854
20111726-41A	Soil		0.652		0	50	76.6871
20111726-41AMS	Soil		0.677		0	50	73.8552
20111726-41AMS	Soil		0.648		0	50	77.1605
20111726-47A	Soil		0.698		0	50	71.6332
20111754-01A	Soil		0.747		0	50	66.9344
20111754-03A	Soil		0.755		0	50	66.2252
20111754-05A	Soil		0.735		0	50	68.0272
20111754-06A	Soil		0.69		0	50	72.4638
20111754-07A	Soil		0.625		0	50	80
20111754-09A	Soil		0.739		0	50	67.659
20111754-11A	Soil		0.636		0	50	78.6164
20111754-13A	Soil		0.765		0	50	65.3595
20111754-15A	Soil		0.735		0	50	68.0272
20111754-17A	Soil		0.779		0	50	64.1849
20111754-18A	Soil		0.655		0	50	76.3359
20111754-19A	Soil		0.783		0	50	63.857
20111754-21A	Soil		0.725		0	50	68.9655
20111754-23A	Soil		0.741		0	50	67.4764
20111847-01A	Solid		0.625		0	50	80
20111847-02A	Solid		0.654		0	50	76.4526
20111847-03A	Solid		0.729		0	50	68.5871
LCS-168178			1		0	50	50
MBLK-168178			1		0	50	50

Notes: *BPL: Ti:3235-1-7/Si:1461-116-2/M:3081-247-7/U:1461-115-14; HNO3:3214-15-4; HCl:3214-4-6;H2O2: 3081-192-1;Balance 13;Digestion cups: 2001329;Baking chips:3081-218-7; Pipette:ME-31; Pipette tips: 13520428*

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: HULL&ASSOC-DUBLIN
Project: IDA001/IDA001
Sample Matrix: Water

Service Request:20111754

Metals

Prep Method: SW3015A
Analytical Method: SW6010D

Extraction Lot: 168378
Extraction Date: 11/29/20 15:02

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-F0:S000010	20111754-02A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
Matrix Spike	20111754-02AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111754-02AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-F1:S000010	20111754-04A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F2:S000010	20111754-08A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F3:S000010	20111754-10A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F4:S000010	20111754-12A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F5:S000010	20111754-14A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F7:S000010	20111754-16A	11/16/20	11/19/20	2.5 mL	27.5 mL	0
IDA001:DU-F6:S000010	20111754-20A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
LCS-168378	LCS-168378	NA	NA	25 mL	27.5 mL	0
MBLK-168378	MBLK-168378	NA	NA	25 mL	27.5 mL	0

ALS Group, USA

PREP BATCH REPORT

Batch ID: 168378 Prep Code: MP_3015A_6010

Start Date: 11/29/2020 1:59:41 PM End Date: 11/29/2020 3:02:17 PM

Technician: Amber Luke

InitSamp Wt/Vol: 25
FinSampVol: 27.5 mL
OriginalFac: 1.1
PrepUnitFac: 1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111391-01B	Groundwater			25	0	27.5	1.1
20111391-01C	Groundwater			25	0	27.5	1.1
20111391-02B	Groundwater			25	0	27.5	1.1
20111391-02C	Groundwater			25	0	27.5	1.1
20111391-03B	Groundwater			25	0	27.5	1.1
20111391-03C	Groundwater			25	0	27.5	1.1
20111391-04B	Groundwater			25	0	27.5	1.1
20111391-04C	Groundwater			25	0	27.5	1.1
20111391-05B	Groundwater			25	0	27.5	1.1
20111391-05C	Groundwater			25	0	27.5	1.1
20111391-06B	Groundwater			25	0	27.5	1.1
20111754-02A	Tclp Extract			2.5	0	27.5	11
20111754-02AMS	Tclp Extract			2.5	0	27.5	11
20111754-02AMS	Tclp Extract			2.5	0	27.5	11
20111754-04A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-08A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-10A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-12A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111754-14A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168378** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 1:59:41 PM** End Date: **11/29/2020 3:02:17 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111754-16A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20111754-20A	Tclp Extract	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
20112050-01A	Solid	<2		2.5	0	27.5	11
	11/29 @ 1:09 PM						
LCS-168378				25	0	27.5	1.1
MBLK-168378				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

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Prep Summary Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001
Sample Matrix: Water

Metals

Prep Method: SW3015A **Extraction Lot:** 168379
Analytical Method: SW6010D **Extraction Date:** 11/29/20 15:04

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDA001:DU-F8:S000010	20111754-22A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
Matrix Spike	20111754-22AMS	NA	NA	2.5 mL	27.5 mL	0
Duplicate Matrix Spike	20111754-22AMSD	NA	NA	2.5 mL	27.5 mL	0
IDA001:DU-F9:S000010	20111754-24A	11/17/20	11/19/20	2.5 mL	27.5 mL	0
LCS-168379	LCS-168379	NA	NA	25 mL	27.5 mL	0
MBLK-168379	MBLK-168379	NA	NA	25 mL	27.5 mL	0

ALS Group, USA

PREP BATCH REPORT

Batch ID: **168379** Prep Code: **MP_3015A_6010**

Start Date: **11/29/2020 2:02:56 PM** End Date: **11/29/2020 3:04:23 PM**

Technician: **Amber Luke**

InitSamp Wt/Vol:	25
FinSampVol:	27.5 mL
OriginalFac:	1.1
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
20111754-22A	Tclp Extract			2.5	0	27.5	11
20111754-22AMS	Tclp Extract			2.5	0	27.5	11
20111754-22AMS	Tclp Extract			2.5	0	27.5	11
20111754-24A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111764-02A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111764-04A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111764-06A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111823-01A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111824-02A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111826-01A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
20111827-02A	Tclp Extract	<2		2.5	0	27.5	11
11/29 @ 1:09 PM							
LCS-168379				25	0	27.5	1.1
MBLK-168379				25	0	27.5	1.1

Notes: *BPL: Ti:3235-1-7/Si:3235-3-4/M:3081-240-1; HNO3:3214-15-4; HCl:3214-4-6; Pipette:ME-40, Pipette tips: 08820425, 5mL Pipette tip:2A1106Y Digestion cup lot #: 2008043, SOP- HN-MET-016-R02*

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201123A
Analysis Method: MISC **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
	IDA001:DU-F0:S000010	20111754-01	11/23/2020	00:00	
	IDA001:DU-F1:S000010	20111754-03	11/23/2020	00:00	
	IDA001:DU-F1-TE:S000010	20111754-05	11/23/2020	00:00	
	IDA001:DU-F1-TS:S000010	20111754-06	11/23/2020	00:00	
	IDA001:DU-F2:S000010	20111754-07	11/23/2020	00:00	
	IDA001:DU-F3:S000010	20111754-09	11/23/2020	00:00	
	IDA001:DU-F4:S000010	20111754-11	11/23/2020	00:00	
	IDA001:DU-F5:S000010	20111754-13	11/23/2020	00:00	
	IDA001:DU-F7:S000010	20111754-15	11/23/2020	00:00	
	IDA001:DU-F7-TE:S000010	20111754-17	11/23/2020	00:00	
	IDA001:DU-F7-TS:S000010	20111754-18	11/23/2020	00:00	
	IDA001:DU-F6:S000010	20111754-19	11/23/2020	00:00	
	IDA001:DU-F8:S000010	20111754-21	11/23/2020	00:00	
	IDA001:DU-F9:S000010	20111754-23	11/23/2020	00:00	

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	11/30/2020	14:25	
2	ICAL2	ICAL2	11/30/2020	14:30	
3	ICAL3	ICAL3	11/30/2020	14:35	
4	ICAL4	ICAL4	11/30/2020	14:40	
5	ICAL5	ICAL5	11/30/2020	14:45	
9	ICVLL	ICVLL	11/30/2020	15:05	
10	ICSA	ICSA	11/30/2020	15:10	
11	LDR1	LDR1	11/30/2020	15:15	
12	LDR2	LDR2	11/30/2020	15:21	
15	CCV	CCV	11/30/2020	15:37	
16	CCB	CCB	11/30/2020	15:41	
25	CCV	CCV	11/30/2020	16:39	
26	CCB	CCB	11/30/2020	16:44	
37	CCV	CCV	11/30/2020	17:40	
38	CCB	CCB	11/30/2020	17:44	
49	CCV	CCV	11/30/2020	18:41	
50	CCB	CCB	11/30/2020	18:46	
61	CCV	CCV	11/30/2020	19:42	
62	CCB	CCB	11/30/2020	19:47	
73	CCV	CCV	11/30/2020	20:44	
74	CCB	CCB	11/30/2020	20:49	
75	MBLK-168178	MBLK-168178	11/30/2020	20:54	
76	LCS-168178	LCS-168178	11/30/2020	20:59	
86	CCV	CCV	11/30/2020	21:50	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201130B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
87	CCB	CCB	11/30/2020	21:55	
92	IDA001:DU-F5:S000010	20111754-13 soil	11/30/2020	22:21	– 10X
93	IDA001:DU-F7:S000010	20111754-15	11/30/2020	22:26	– 10X
94	IDA001:DU-F7-TE:S000010	20111754-17	11/30/2020	22:31	– 10X
95	IDA001:DU-F7-TS:S000010	20111754-18	11/30/2020	22:36	– 10X
96	IDA001:DU-F6:S000010	20111754-19	11/30/2020	22:41	– 10X
97	IDA001:DU-F8:S000010	20111754-21	11/30/2020	22:46	– 10X – As only
98	last → CCV	CCV	11/30/2020	22:51	
99	CCB	CCB	11/30/2020	22:56	
100	IDA001:DU-F9:S000010	20111754-23 soil	11/30/2020	23:01	– 10X As only
104	MBLK-168378	MBLK-168378	11/30/2020	23:21	Pb only
105	LCS-168378	LCS-168378	11/30/2020	23:26	
110	CCV	CCV	11/30/2020	23:52	
111	1st → CCB	CCB	11/30/2020	23:57	
119	IDA001:DU-F0:S000010	20111754-02 TCLP	12/01/2020	00:38	
120	20111754-02AMS	20111754-02AMS	12/01/2020	00:43	
121	20111754-02AMSD	20111754-02AMSD	12/01/2020	00:48	
122	CCV	CCV	12/01/2020	00:53	
123	CCB	CCB	12/01/2020	00:58	
124	IDA001:DU-F1:S000010	20111754-04 TCLP	12/01/2020	01:03	
125	IDA001:DU-F2:S000010	20111754-08	12/01/2020	01:09	
126	IDA001:DU-F3:S000010	20111754-10	12/01/2020	01:14	
127	IDA001:DU-F4:S000010	20111754-12	12/01/2020	01:19	
128	IDA001:DU-F5:S000010	20111754-14	12/01/2020	01:24	
129	IDA001:DU-F7:S000010	20111754-16	12/01/2020	01:29	
130	IDA001:DU-F6:S000010	20111754-20	12/01/2020	01:34	
132	MBLK-168379	MBLK-168379	12/01/2020	01:45	
133	LCS-168379	LCS-168379	12/01/2020	01:50	
134	CCV	CCV	12/01/2020	01:55	
135	CCB	CCB	12/01/2020	02:00	
136	IDA001:DU-F8:S000010	20111754-22 TCLP	12/01/2020	02:05	
137	20111754-22AMS	20111754-22AMS	12/01/2020	02:10	
138	20111754-22AMSD	20111754-22AMSD	12/01/2020	02:15	
139	IDA001:DU-F9:S000010	20111754-24 TCLP	12/01/2020	02:20	
146	CCV	CCV	12/01/2020	02:57	
147	CCB	CCB	12/01/2020	03:02	
149	CCV	CCV	12/01/2020	03:12	
150	CCB	CCB	12/01/2020	03:17	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

recalculate for other CCVs that are listed from Evening

Analysis Run Log
Metals

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	12/01/2020	11:24	
2	ICAL2	ICAL2	12/01/2020	11:29	
3	ICAL3	ICAL3	12/01/2020	11:34	
4	ICAL4	ICAL4	12/01/2020	11:39	
5	ICAL5	ICAL5	12/01/2020	11:44	
9	ICVLL	ICVLL	12/01/2020	12:03	
10	ICSA	ICSA	12/01/2020	12:09	
11	LDR1	LDR1	12/01/2020	12:14	
12	LDR2	LDR2	12/01/2020	12:19	
15	CCV	CCV	12/01/2020	12:35 ✓	
16	CCB	CCB	12/01/2020	12:40 ✓	
19	MBLK-168178	MBLK-168178	12/01/2020	12:55	
28	CCV	CCV	12/01/2020	13:41 ✓	
29	CCB	CCB	12/01/2020	13:46	
31	20111726-41AMS	20111726-41AMS	12/01/2020	14:08	
32	20111726-41AMSD	20111726-41AMSD	12/01/2020	14:13	
34	IDA001:DU-F0:S000010	20111754-01	12/01/2020	14:24	
35	IDA001:DU-F1:S000010	20111754-03	12/01/2020	14:29	
36	IDA001:DU-F1-TE:S000010	20111754-05	12/01/2020	14:34	
37	IDA001:DU-F1-TS:S000010	20111754-06	12/01/2020	14:38	
38	IDA001:DU-F2:S000010	20111754-07	12/01/2020	14:43	
39	IDA001:DU-F3:S000010	20111754-09	12/01/2020	14:48	
40	CCV	CCV	12/01/2020	14:53 ✓	
41	CCB	CCB	12/01/2020	14:58	
42	IDA001:DU-F4:S000010	20111754-11	12/01/2020	15:04	
43	IDA001:DU-F8:S000010	20111754-21	12/01/2020	15:09	
44	IDA001:DU-F9:S000010	20111754-23	12/01/2020	15:14	
53	CCV	CCV	12/01/2020	16:00 ✓	
54	CCB	CCB	12/01/2020	16:04	
66	CCV	CCV	12/01/2020	17:07	
67	CCB	CCB	12/01/2020	17:12	
78	CCV	CCV	12/01/2020	18:10	
79	CCB	CCB	12/01/2020	18:15	
91	CCV	CCV	12/01/2020	19:17	
92	CCB	CCB	12/01/2020	19:22	
103	CCV	CCV	12/01/2020	20:25	
105	CCB	CCB	12/01/2020	20:35	
116	CCV	CCV	12/01/2020	21:31 ✓	
118	CCB	CCB	12/01/2020	21:41	
130	CCV	CCV	12/01/2020	22:42 ✓	
131	CCB	CCB	12/01/2020	22:47	
143	CCV	CCV	12/01/2020	23:50 ✓	
144	CCB	CCB	12/01/2020	23:55	
154	CCV	CCV	12/02/2020	00:46 ✓	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:**20111754
Project: IDA001/IDA001

Analysis Run Log
Metals

Analysis Lot:ICP2_201201B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
155	CCB	CCB	12/02/2020	00:51	

not for raw data.

Analysis Lot:ICP2_201202B
Analysis Method: SW6010D **Instrument ID:**ICP2

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
1	ICAL1	ICAL1	12/02/2020	13:41	
2	ICAL2	ICAL2	12/02/2020	13:46	
3	ICAL3	ICAL3	12/02/2020	13:51	
4	ICAL4	ICAL4	12/02/2020	13:56	
5	ICAL5	ICAL5	12/02/2020	14:01	
9	ICVLL	ICVLL	12/02/2020	14:22	
10	ICSA	ICSA	12/02/2020	14:27	
11	LDR1	LDR1	12/02/2020	14:32	
12	LDR2	LDR2	12/02/2020	14:38	
15	CCV	CCV	12/02/2020	14:53	
16	CCB	CCB	12/02/2020	14:58	
23	CCV	CCV	12/02/2020	15:34	
24	CCB	CCB	12/02/2020	15:39	
29	20111726-41ASD	20111726-41ASD	12/02/2020	16:04	
30	20111726-41APDS	20111726-41APDS	12/02/2020	16:14	
36	CCV	CCV	12/02/2020	16:44	
37	CCB	CCB	12/02/2020	16:49	
48	CCV	CCV	12/02/2020	17:45	
49	CCB	CCB	12/02/2020	17:50	
60	CCV	CCV	12/02/2020	18:47	
61	CCB	CCB	12/02/2020	18:52	
73	CCV	CCV	12/02/2020	19:54	
74	CCB	CCB	12/02/2020	19:59	
85	CCV	CCV	12/02/2020	20:56	
86	CCB	CCB	12/02/2020	21:01	
98	CCV	CCV	12/02/2020	22:03	
99	CCB	CCB	12/02/2020	22:08	
111	CCV	CCV	12/02/2020	23:09	
112	CCB	CCB	12/02/2020	23:14	
124	CCV	CCV	12/03/2020	00:16	
125	CCB	CCB	12/03/2020	00:21	
137	CCV	CCV	12/03/2020	01:22	
138	CCB	CCB	12/03/2020	01:27	
140	CCV	CCV	12/03/2020	01:37	
141	CCB	CCB	12/03/2020	01:42	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ICAL1	1	11/30/20 14:25		X									X				
ICAL2	1	11/30/20 14:30		X									X				
ICAL3	1	11/30/20 14:35		X									X				
ICAL4	1	11/30/20 14:40		X									X				
ICAL5	1	11/30/20 14:45		X									X				
ICV/QCS	1	11/30/20 14:50		X									X				
ICB	1	11/30/20 14:55		X									X				
ICSA	1	11/30/20 15:10		X									X				
CCV	1	11/30/20 15:37		X									X				
CCB	1	11/30/20 15:41		X									X				
CCV	1	11/30/20 16:39		X									X				
CCB	1	11/30/20 16:44		X									X				
ZZZZZZ	1	11/30/20 16:49											X				
ZZZZZZ	1	11/30/20 17:14											X				
ZZZZZZ	1	11/30/20 17:19											X				
ZZZZZZ	1	11/30/20 17:24								X							
ZZZZZZ	1	11/30/20 17:29								X							
ZZZZZZ	10	11/30/20 17:34								X							
CCV	1	11/30/20 17:40		X									X				
CCB	1	11/30/20 17:44		X									X				
ZZZZZZ	10	11/30/20 17:50								X							
ZZZZZZ	1	11/30/20 17:55								X							
ZZZZZZ	1	11/30/20 18:10	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:25	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:30	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 18:36	X	X	X		X		X						X		
CCV	1	11/30/20 18:41		X									X				
CCB	1	11/30/20 18:46		X									X				
ZZZZZZ	1	11/30/20 19:01	X	X	X		X		X				X		X		
ZZZZZZ	1	11/30/20 19:06								X							
ZZZZZZ	1	11/30/20 19:22								X							
ZZZZZZ	1	11/30/20 19:27								X							
ZZZZZZ	1	11/30/20 19:32								X							
ZZZZZZ	1	11/30/20 19:37															X
CCV	1	11/30/20 19:42		X									X				
CCB	1	11/30/20 19:47		X									X				
ZZZZZZ	1	11/30/20 19:52															X

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ZZZZZZ	1	11/30/20 19:58															X
ZZZZZZ	1	11/30/20 20:03															X
ZZZZZZ	1	11/30/20 20:08															X
ZZZZZZ	1	11/30/20 20:13															X
ZZZZZZ	1	11/30/20 20:18															X
ZZZZZZ	1	11/30/20 20:23															X
ZZZZZZ	1	11/30/20 20:29															X
ZZZZZZ	1	11/30/20 20:34															X
ZZZZZZ	1	11/30/20 20:39		X			X						X				
CCV	1	11/30/20 20:44		X									X				
CCB	1	11/30/20 20:49		X									X				
MBLK-168178	1	11/30/20 20:54		X													
LCS-168178	1	11/30/20 20:59		X									X				
CCV	1	11/30/20 21:50		X									X				
CCB	1	11/30/20 21:55		X									X				
IDA001:DU-F5:S000010	10	11/30/20 22:21		X									X				
IDA001:DU-F7:S000010	10	11/30/20 22:26		X									X				
IDA001:DU-F7-TE:S000010	10	11/30/20 22:31		X									X				
IDA001:DU-F7-TS:S000010	10	11/30/20 22:36		X									X				
IDA001:DU-F6:S000010	10	11/30/20 22:41		X									X				
IDA001:DU-F8:S000010	10	11/30/20 22:46		X													
CCV	1	11/30/20 22:51		X									X				
CCB	1	11/30/20 22:56		X									X				
IDA001:DU-F9:S000010	10	11/30/20 23:01		X													
ZZZZZZ	1	11/30/20 23:06		X		X	X	X	X		X	X		X	X		
ZZZZZZ	1	11/30/20 23:11		X		X	X	X	X		X	X		X	X		
ZZZZZZ	1	11/30/20 23:16		X		X	X	X	X		X	X		X	X		
MBLK-168378	1	11/30/20 23:21		X									X				
LCS-168378	1	11/30/20 23:26		X									X				
ZZZZZZ	1	11/30/20 23:31									X		X				
ZZZZZZ	1	11/30/20 23:37									X		X				
ZZZZZZ	1	11/30/20 23:42									X		X				
ZZZZZZ	1	11/30/20 23:47									X		X				

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201130B

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V	
CCV	1	11/30/20 23:52		X									X					
CCB	1	11/30/20 23:57		X									X					
ZZZZZZ	1	12/01/20 00:02									X		X					
ZZZZZZ	1	12/01/20 00:07									X		X					
ZZZZZZ	1	12/01/20 00:12									X		X					
ZZZZZZ	1	12/01/20 00:17									X		X					
ZZZZZZ	1	12/01/20 00:23									X		X					
ZZZZZZ	1	12/01/20 00:28									X		X					
ZZZZZZ	1	12/01/20 00:33									X		X					
IDA001:DU-F0:S000010	1	12/01/20 00:38		X									X					-TCLP
20111754-02AMS	1	12/01/20 00:43		X									X					
20111754-02AMSD	1	12/01/20 00:48		X									X					
CCV	1	12/01/20 00:53		X									X					
CCB	1	12/01/20 00:58		X									X					
IDA001:DU-F1:S000010	1	12/01/20 01:03		X									X					TCLP
IDA001:DU-F2:S000010	1	12/01/20 01:09		X									X					
IDA001:DU-F3:S000010	1	12/01/20 01:14		X									X					
IDA001:DU-F4:S000010	1	12/01/20 01:19		X									X					
IDA001:DU-F5:S000010	1	12/01/20 01:24		X									X					
IDA001:DU-F7:S000010	1	12/01/20 01:29		X									X					
IDA001:DU-F6:S000010	1	12/01/20 01:34		X									X					
ZZZZZZ	1	12/01/20 01:39	X	X	X		X		X				X		X			
MBLK-168379	1	12/01/20 01:45		X									X					
LCS-168379	1	12/01/20 01:50		X									X					
CCV	1	12/01/20 01:55		X									X					
CCB	1	12/01/20 02:00		X									X					
IDA001:DU-F8:S000010	1	12/01/20 02:05		X									X					TCLP
20111754-22AMS	1	12/01/20 02:10		X									X					
20111754-22AMSD	1	12/01/20 02:15		X									X					
IDA001:DU-F9:S000010	1	12/01/20 02:20		X									X					TCLP
ZZZZZZ	1	12/01/20 02:25	X	X	X		X		X						X			

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201130B**

Sample	Dilution Factor	Date/Time	AG	AS	BA	BE	CD	CO	CR	FE	MN	NI	PB	SB	SE	TL	V
ZZZZZZ	1	12/01/20 02:30	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 02:36	X	X	X		X		X				X		X		
ZZZZZZ	1	12/01/20 02:41	X	X	X	X	X		X			X	X	X	X	X	
ZZZZZZ	1	12/01/20 02:46	X	X	X	X	X					X	X	X	X	X	
ZZZZZZ	1	12/01/20 02:51	X	X	X	X	X		X			X	X	X	X	X	
CCV	1	12/01/20 02:57		X									X				
CCB	1	12/01/20 03:02		X									X				
ZZZZZZ	1	12/01/20 03:07	X	X	X	X	X		X			X	X	X	X	X	
CCV	1	12/01/20 03:12		X									X				
CCB	1	12/01/20 03:17		X									X				

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201201B

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ICAL1	1	12/01/20 11:24			X												X					
ICAL2	1	12/01/20 11:29			X												X					
ICAL3	1	12/01/20 11:34			X												X					
ICAL4	1	12/01/20 11:39			X												X					
ICAL5	1	12/01/20 11:44			X												X					
ICV/QCS	1	12/01/20 11:49			X												X					
ICB	1	12/01/20 11:54			X												X					
ICSA	1	12/01/20 12:09			X												X					
CCV	1	12/01/20 12:35			X												X					
CCB	1	12/01/20 12:40			X												X					
MBLK-168178	1	12/01/20 12:55															X					
ZZZZZZ	1	12/01/20 13:16	X																			
ZZZZZZ	1	12/01/20 13:21	X																			
ZZZZZZ	100	12/01/20 13:26															X					
ZZZZZZ	1	12/01/20 13:31	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
CCV	1	12/01/20 13:41			X												X					
CCB	1	12/01/20 13:46			X												X					
ZZZZZZ	1	12/01/20 14:03	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZMS	1	12/01/20 14:08			X												X					
ZZZZZZMSD	1	12/01/20 14:13			X												X					
ZZZZZZ	1	12/01/20 14:18	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDA001:DU-F0:S000010	10	12/01/20 14:24			X												X					
IDA001:DU-F1:S000010	10	12/01/20 14:29			X												X					
IDA001:DU-F1-TE:S000010	10	12/01/20 14:34			X												X					
IDA001:DU-F1-TS:S000010	10	12/01/20 14:38			X												X					
IDA001:DU-F2:S000010	10	12/01/20 14:43			X												X					
IDA001:DU-F3:S000010	10	12/01/20 14:48			X												X					
CCV	1	12/01/20 14:53			X												X					
CCB	1	12/01/20 14:58			X												X					
IDA001:DU-F4:S000010	10	12/01/20 15:04			X												X					
IDA001:DU-F8:S000010	100	12/01/20 15:09															X					
IDA001:DU-F9:S000010	100	12/01/20 15:14															X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	10	12/01/20 15:19															X					
ZZZZZZ	100	12/01/20 15:24								X												
ZZZZZZ	1	12/01/20 15:39										X										
CCV	1	12/01/20 16:00			X												X					
CCB	1	12/01/20 16:04			X												X					
ZZZZZZ	1	12/01/20 16:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 16:30										X					X					
ZZZZZZ	1	12/01/20 16:46										X										
ZZZZZZ	1	12/01/20 16:51										X					X					
ZZZZZZ	1	12/01/20 16:57										X										
CCV	1	12/01/20 17:07			X												X					
CCB	1	12/01/20 17:12			X												X					
ZZZZZZ	1	12/01/20 17:17										X					X					
ZZZZZZ	1	12/01/20 17:22										X										
ZZZZZZ	1	12/01/20 17:28										X					X					
ZZZZZZ	1	12/01/20 17:33										X										
ZZZZZZ	1	12/01/20 17:38															X					
ZZZZZZ	1	12/01/20 17:43															X					
ZZZZZZ	1	12/01/20 17:48															X					
ZZZZZZ	1	12/01/20 17:54															X					
ZZZZZZ	1	12/01/20 17:59															X					
ZZZZZZ	1	12/01/20 18:04															X					
CCV	1	12/01/20 18:10			X												X					
CCB	1	12/01/20 18:15			X												X					
ZZZZZZ	1	12/01/20 18:20	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:25	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:30	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:35	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:41	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 18:46	X					X		X						X	X					
ZZZZZZ	1	12/01/20 19:01	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:07	X		X	X		X		X							X		X			
CCV	1	12/01/20 19:17			X												X					
CCB	1	12/01/20 19:22			X												X					
ZZZZZZ	1	12/01/20 19:50	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 19:55	X		X	X		X		X							X		X			

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/01/20 20:00	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:05	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:10	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:15	X		X	X		X		X							X		X			
ZZZZZZ	1	12/01/20 20:20	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
CCV	1	12/01/20 20:25			X												X					
CCB	1	12/01/20 20:35			X												X					
ZZZZZZ	1	12/01/20 20:51						X									X					
ZZZZZZ	1	12/01/20 20:56						X									X					
ZZZZZZ	1	12/01/20 21:01						X									X					
ZZZZZZ	1	12/01/20 21:06						X									X					
ZZZZZZ	1	12/01/20 21:11						X									X					
ZZZZZZ	1	12/01/20 21:16						X									X					
ZZZZZZ	1	12/01/20 21:21						X									X					
ZZZZZZ	1	12/01/20 21:26						X									X					
CCV	1	12/01/20 21:31			X												X					
CCB	1	12/01/20 21:41			X												X					
ZZZZZZ	1	12/01/20 21:46						X									X					
ZZZZZZ	1	12/01/20 21:51						X									X					
ZZZZZZ	1	12/01/20 22:16			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:22			X												X					
ZZZZZZ	1	12/01/20 22:27			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:32			X	X		X									X		X			
CCV	1	12/01/20 22:42			X												X					
CCB	1	12/01/20 22:47			X												X					
ZZZZZZ	1	12/01/20 22:53			X	X		X									X		X			
ZZZZZZ	1	12/01/20 22:58			X	X		X									X		X			
ZZZZZZ	1	12/01/20 23:03			X	X		X								X	X	X	X	X		
ZZZZZZ	10	12/01/20 23:08				X						X			X							
ZZZZZZ	10	12/01/20 23:13				X						X										
ZZZZZZ	10	12/01/20 23:19				X						X			X							
ZZZZZZ	10	12/01/20 23:24				X						X			X							
ZZZZZZ	10	12/01/20 23:29				X						X			X							
ZZZZZZ	10	12/01/20 23:34				X						X			X							
ZZZZZZ	10	12/01/20 23:40				X						X										
CCV	1	12/01/20 23:50			X												X					
CCB	1	12/01/20 23:55			X												X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201201B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CD	CO	CR	CU	FE	K	MN	NA	NI	PB	SB	SE	TL	V	ZN
ZZZZZZ	1	12/02/20 00:00	X		X	X		X									X		X			
CCV	1	12/02/20 00:46			X												X					
CCB	1	12/02/20 00:51			X												X					

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

QCon's MS/MSD not project samples

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201202B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CR	CU	FE	KG	MN	MO	NA	NI	PB	SE	ZN
ICAL1	1	12/02/20 13:41			X													X		
ICAL2	1	12/02/20 13:46			X													X		
ICAL3	1	12/02/20 13:51			X													X		
ICAL4	1	12/02/20 13:56			X													X		
ICAL5	1	12/02/20 14:01			X													X		
ICV/QCS	1	12/02/20 14:06			X													X		
ICB	1	12/02/20 14:11			X													X		
ICSA	1	12/02/20 14:27			X													X		
CCV	1	12/02/20 14:53			X													X		
CCB	1	12/02/20 14:58			X													X		
ZZZZZZ	1	12/02/20 15:13	X						X	X								X	X	
ZZZZZZ	1	12/02/20 15:29							X	X								X		
CCV	1	12/02/20 15:34			X													X		
CCB	1	12/02/20 15:39			X													X		
ZZZZZZ	100	12/02/20 15:44						X					X							
ZZZZZZ	100	12/02/20 15:49						X					X							
ZZZZZZSD	5	12/02/20 16:04			X													X		
ZZZZZZPDS	1	12/02/20 16:14			X													X		
ZZZZZZ	100	12/02/20 16:19						X					X							
ZZZZZZ	10	12/02/20 16:24						X				X	X	X						
CCV	1	12/02/20 16:44			X													X		
CCB	1	12/02/20 16:49			X													X		
ZZZZZZ	1	12/02/20 16:55	X			X			X	X								X	X	
ZZZZZZ	1	12/02/20 17:21								X										
ZZZZZZ	1	12/02/20 17:26								X										
ZZZZZZ	1	12/02/20 17:31								X										
ZZZZZZ	1	12/02/20 17:36								X										
ZZZZZZ	1	12/02/20 17:41								X										
CCV	1	12/02/20 17:45			X													X		
CCB	1	12/02/20 17:50			X													X		
ZZZZZZ	1	12/02/20 17:56								X										
ZZZZZZ	1	12/02/20 18:01								X										
ZZZZZZ	1	12/02/20 18:07								X										
ZZZZZZ	1	12/02/20 18:12								X										
ZZZZZZ	1	12/02/20 18:17								X										
ZZZZZZ	1	12/02/20 18:42	X							X										
CCV	1	12/02/20 18:47			X													X		

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: ICP2 **Analytical BatchID:** ICP2_201202B

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CR	CU	FE	K	MG	MN	MO	NA	NI	PB	SE	ZN
CCB	1	12/02/20 18:52			X														X		
ZZZZZZ	1	12/02/20 19:03								X											
ZZZZZZ	1	12/02/20 19:08	X							X											
ZZZZZZ	1	12/02/20 19:13	X							X											
ZZZZZZ	1	12/02/20 19:18	X							X											
ZZZZZZ	1	12/02/20 19:24	X							X											
ZZZZZZ	1	12/02/20 19:29	X				X														
ZZZZZZ	100	12/02/20 19:39											X				X				
ZZZZZZ	10	12/02/20 19:44											X								
CCV	1	12/02/20 19:54			X														X		
CCB	1	12/02/20 19:59			X														X		
ZZZZZZ	10	12/02/20 20:04											X								
ZZZZZZ	100	12/02/20 20:20											X				X				
ZZZZZZ	1	12/02/20 20:25								X											
ZZZZZZ	1	12/02/20 20:46													X						
CCV	1	12/02/20 20:56			X														X		
CCB	1	12/02/20 21:01			X														X		
ZZZZZZ	1	12/02/20 21:06													X						
ZZZZZZ	1	12/02/20 21:11										X									
ZZZZZZ	1	12/02/20 21:17													X						
ZZZZZZ	1	12/02/20 21:22										X									
ZZZZZZ	1	12/02/20 21:27													X						
ZZZZZZ	1	12/02/20 21:32										X									
ZZZZZZ	1	12/02/20 21:37													X						
ZZZZZZ	1	12/02/20 21:42										X									
ZZZZZZ	1	12/02/20 21:48													X						
ZZZZZZ	1	12/02/20 21:53	X						X	X									X	X	
CCV	1	12/02/20 22:03			X														X		
CCB	1	12/02/20 22:08			X														X		
ZZZZZZ	1	12/02/20 22:13	X						X	X									X	X	
ZZZZZZ	1	12/02/20 22:18	X		X				X	X									X	X	
ZZZZZZ	1	12/02/20 22:23	X						X	X									X	X	
ZZZZZZ	1	12/02/20 22:28	X		X				X	X									X	X	
ZZZZZZ	1	12/02/20 22:34	X						X	X									X	X	
CCV	1	12/02/20 23:09			X														X		
CCB	1	12/02/20 23:14			X														X		
ZZZZZZ	1	12/02/20 23:24	X		X	X			X	X									X	X	

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QA/QC Report

Client: HULL&ASSOC-DUBLIN **Service Request:** 20111754
Project: IDA001/IDA001

Analysis Run Log

Instrument ID: **ICP2** **Analytical BatchID:** **ICP2_201202B**

Sample	Dilution Factor	Date/Time	AG	AL	AS	BA	BE	CA	CD	CR	CU	FE	K	MG	MN	MO	NA	NI	PB	SE	ZN
ZZZZZZ	1	12/02/20 23:30	X		X	X			X	X									X	X	
ZZZZZZ	1	12/02/20 23:35	X		X	X			X	X	X							X	X	X	
ZZZZZZ	10	12/03/20 00:01		X															X		
ZZZZZZ	10	12/03/20 00:06		X																	
CCV	1	12/03/20 00:16			X														X		
CCB	1	12/03/20 00:21			X														X		
ZZZZZZ	10	12/03/20 00:36		X																	
ZZZZZZ	1	12/03/20 00:41																	X		
ZZZZZZ	1	12/03/20 00:46																	X		
ZZZZZZ	1	12/03/20 00:52																	X		
ZZZZZZ	1	12/03/20 00:57	X			X			X	X									X	X	
ZZZZZZ	1	12/03/20 01:02	X		X	X			X	X									X	X	
ZZZZZZ	1	12/03/20 01:07				X			X	X									X	X	
ZZZZZZ	1	12/03/20 01:12	X			X			X	X									X	X	
CCV	1	12/03/20 01:22			X														X		
CCB	1	12/03/20 01:27			X														X		
ZZZZZZ	1	12/03/20 01:32	X			X			X	X	X					X		X	X	X	X
CCV	1	12/03/20 01:37			X														X		
CCB	1	12/03/20 01:42			X														X		

11/16/20 7 days Analyze by 11/23/20
11/17/20 7 days Analyze by 11/24/20

Sample Date	Sample	Lab ID	Pan	Wet weight Sample	Final Dry Sample	% Solids	%solids Rptd	Date Analyzed
11/16/20	IDA001:DU-F0	20111754-01	1.0895	7.9831	8.2172	89.3%	89.28	11/29/20
11/16/20	IDA001:DU-F0	20111754-02				#DIV/0!		
11/16/20	IDA001:DU-F1	20111754-03	1.0895	7.2199	7.0659	82.8%	82.78	11/29/20
11/16/20	IDA001:DU-F1	20111754-04				#DIV/0!		
11/16/20	IDA001:DU-F1 TE	20111754-05	1.0998	8.1705	7.9262	83.5%	83.55	11/29/20
11/16/20	IDA001:DU-F1 TS	20111754-06	1.0894	6.3007	6.278	82.3%	82.35	11/29/20
11/16/20	IDA001:DU-F2	20111754-07	1.0955	8.0723	7.657	81.3%	81.28	11/29/20
11/16/20	IDA001:DU-F2	20111754-08				#DIV/0!		
11/16/20	IDA001:DU-F3	20111754-09	1.1011	8.7513	8.2065	81.2%	81.19	11/29/20
11/16/20	IDA001:DU-F3	20111754-10				#DIV/0!		
11/16/20	IDA001:DU-F4	20111754-11	1.0949	6.8181	6.1702	74.4%	74.44	11/29/20
11/16/20	IDA001:DU-F4	20111754-12				#DIV/0!		
11/16/20	IDA001:DU-F5	20111754-13	1.0909	7.4591	7.4102	84.7%	84.72	11/29/20
11/16/20	IDA001:DU-F5	20111754-14				#DIV/0!		
11/16/20	IDA001:DU-F7	20111754-15	1.1041	8.3102	8.3045	86.6%	86.65	11/29/20
11/16/20	IDA001:DU-F7	20111754-16				#DIV/0!		
11/16/20	IDA001:DU-F7 TE	20111754-17	1.0996	8.8921	8.5753	84.1%	84.07	11/29/20
11/16/20	IDA001:DU-F7 TS	20111754-18	1.0968	7.7198	7.9277	88.5%	88.49	11/29/20
11/17/20	IDA001:DU-F6	20111754-19	1.1011	7.5464	7.3008	82.2%	82.15	11/29/20
11/17/20	IDA001:DU-F6	20111754-20				#DIV/0!		
11/17/20	IDA001:DU-F8	20111754-21	1.0941	7.1947	6.9579	81.5%	81.5	11/29/20
11/17/20	IDA001:DU-F8	20111754-22				#DIV/0!		
11/17/20	IDA001:DU-F9	20111754-23	1.1078	7.2688	7.2491	84.5%	84.49	11/29/20
11/17/20	IDA001:DU-F9	20111754-24				#DIV/0!		

COMPOUND	SAMPLE	DUPLICATE	RPD	Lab
	23			Value
	IDA001:DU-F9	dup		
%Solids	15.51	15.07	2.9	2.88

samples were not analyzed within 7 days - no qualification - 7 days is recommended

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **R304622** Instrument ID **MOIST** Method: **SW3550C**

MBLK	Sample ID: **WBLKS-R304622**					Units: **% of sample**		Analysis Date: **11/29/2020 02:53 PM**		
Client ID:	Run ID: **MOIST_201129C**			SeqNo: **6939769**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS	Sample ID: **LCS-R304622**					Units: **% of sample**		Analysis Date: **11/29/2020 02:53 PM**		
Client ID:	Run ID: **MOIST_201129C**			SeqNo: **6939768**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP	Sample ID: **20112166-25A DUP**					Units: **% of sample**		Analysis Date: **11/29/2020 02:53 PM**		
Client ID:	Run ID: **MOIST_201129C**			SeqNo: **6939760**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.73	0.10	0	0	0	0-0	13.99	1.88	10	

DUP	Sample ID: **20112166-31A DUP**					Units: **% of sample**		Analysis Date: **11/29/2020 02:53 PM**		
Client ID:	Run ID: **MOIST_201129C**			SeqNo: **6939767**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.08	0.10	0	0	0	0-0	8.41	7.66	10	

The following samples were analyzed in this batch:

20111754-01A	20111754-03A	20111754-05A
20111754-06A	20111754-07A	20111754-09A
20111754-11A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Hull & Associates
Work Order: 20111754
Project: IDA001

QC BATCH REPORT

Batch ID: **R304624** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R304624** Units: **% of sample** Analysis Date: **11/29/2020 03:15 PM**
Client ID: Run ID: **MOIST_201129D** SeqNo: **6939783** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R304624** Units: **% of sample** Analysis Date: **11/29/2020 03:15 PM**
Client ID: Run ID: **MOIST_201129D** SeqNo: **6939782** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20111754-23A DUP** Units: **% of sample** Analysis Date: **11/29/2020 03:15 PM**
Client ID: **IDA001:DU-F9:S000010** Run ID: **MOIST_201129D** SeqNo: **6939781** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.07	0.10	0	0	0	0-0	15.51	2.88	10	

The following samples were analyzed in this batch:

20111754-13A	20111754-15A	20111754-17A
20111754-18A	20111754-19A	20111754-21A
20111754-23A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Moisture

ALS Environmental

Analyst:	KT	Date/Time In:	11/29/20 2:53 PM	Temp In Deg C:	105.3	
Review By:		Date/Time Out:	11/30/20 7:49 AM	Temp Out Deg C:	105.8	
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_201129C	Sand BPL:	2049-184-4	
SOP:	HN-WC-018	Balance ID:	6	Oven ID:	11	

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	% Moisture	Analyte
WBLKS		MBLK	BLK	1.1027	0	0.0000				1.1026	0.01	0.01	Moisture
LCS		LCS	LCS	1.0995	0	8.0922				9.1913	100.00	100.00	Moisture
20112166-25A	2	SAMP	C1	1.0975	0	6.8034				6.9492	86.01	13.99	Moisture
20112166-25A DUP	2	DUP	C2	1.0957	0	6.8323				6.9897	86.27	13.73	Moisture
20112166-20A	1	SAMP	C3	1.1057	0	6.5445				4.6642	54.37	45.63	Moisture
20112166-21A	1	SAMP	C4	1.0899	0	6.7264				4.6265	52.58	47.42	Moisture
20112166-22A	1	SAMP	C5	1.1026	0	8.5105				7.4499	74.58	25.42	Moisture
20112166-23A	1	SAMP	C6	1.0989	0	8.5207				8.729	89.55	10.45	Moisture
20112166-19A	1	SAMP	C7	1.0993	0	6.8629				6.5436	79.33	20.67	Moisture
20112166-24A	1	SAMP	C8	1.0865	0	8.7577				9.0945	91.44	8.56	Moisture
20112166-26A	1	SAMP	C9	1.0932	0	6.2274				6.2371	82.60	17.40	Moisture
20112166-27A	1	SAMP	C10	1.0919	0	6.7716				5.0892	59.03	40.97	Moisture
20112166-28A	1	SAMP	C11	1.0865	0	5.7111				4.9391	67.46	32.54	Moisture
20112166-31A	1	SAMP	C12	1.097	0	8.9133				9.2609	91.59	8.41	Moisture
20112166-31A DUP	1	DUP	C13	1.0898	0	8.886				9.1692	90.92	9.08	Moisture
20112166-29A	1	SAMP	C14	1.0916	0	6.986				5.4653	62.61	37.39	Moisture
20112166-30A	1	SAMP	C15	1.0945	0	6.2251				4.6565	57.22	42.78	Moisture
20111754-01A	1	SAMP	C16	1.0895	0	7.9831				8.2172	89.28	10.72	Moisture
20111754-03A	1	SAMP	C17	1.0895	0	7.2199				7.0659	82.78	17.22	Moisture
20111754-05A	1	SAMP	C18	1.0998	0	8.1705				7.9262	83.55	16.45	Moisture
20111754-07A	1	SAMP	C19	1.0955	0	8.0723				7.657	81.28	18.72	Moisture
20111754-06A	1	SAMP	C20	1.0894	0	6.3007				6.278	82.35	17.65	Moisture
20111754-09A	1	SAMP	C21	1.1011	0	8.7513				8.2065	81.19	18.81	Moisture
20111754-11A	1	SAMP	C22	1.0949	0	6.8181				6.1702	74.44	25.56	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/30/2020 9:34	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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Moisture

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Analyst:	KT	Date/Time In:	11/29/20 3:15 PM		Temp In Deg C:	104	
Review By:		Date/Time Out:	11/30/20 7:43 AM		Temp Out Deg C:	105.8	
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_201129D		Sand BPL:	2049-184-4	
SOP:	HN-WC-018	Balance ID:	6		Oven ID:	11	

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.0869	0	0.0000				1.0863	0.06	0.06	Moisture
LCS		LCS	LCS	1.1048	0	9.0045				10.1089	100.00	100.00	Moisture
20111754-23A	1	SAMP	E1	1.1078	0	7.2688				7.2491	84.49	15.51	Moisture
20111754-23A DUP	1	DUP	E2	1.0975	0	7.2486				7.254	84.93	15.07	Moisture
20111754-21A	1	SAMP	E3	1.0941	0	7.1947				6.9579	81.50	18.50	Moisture
20111754-18A	1	SAMP	E4	1.0968	0	7.7198				7.9277	88.49	11.51	Moisture
20111754-19A	1	SAMP	E5	1.1011	0	7.5464				7.3008	82.15	17.85	Moisture
20111754-15A	1	SAMP	E6	1.1041	0	8.3102				8.3045	86.65	13.35	Moisture
20111754-13A	1	SAMP	E7	1.0909	0	7.4591				7.4102	84.72	15.28	Moisture
20111754-17A	1	SAMP	E8	1.0996	0	8.8921				8.5753	84.07	15.93	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		DUP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
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		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/30/2020 9:38	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

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TCLP

Batch			30 ± 2 rpm rotation	start	18 ± 2 hrs hours end	ex time	23 ± 2C temp	initial pH	If initial pH>5 add HCL and Heat HCl & Heat pH	pH<5; 1 4.93 + 0.05 pH> 5; 2 2.88 + 0.05 fluid	final pH	20x sample wt sample wt	vol ex fluid	date collected	Date TCLP	days elapsed
IDA001:DU-F0	20111754-01	solid		11/23/20	11/24/20									11/16/20		
IDA001:DU-F0	20111754-02	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	7.94	1.75	1/4.95	5.55	60.0	1200	11/16/20	11/23/20	7
IDA001:DU-F1	20111754-03	solid												11/16/20		
IDA001:DU-F1	20111754-04	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	8.06	1.90	1/4.95	6.01	100.0	2000	11/16/20	11/23/20	7
IDA001:DU-F1 TE	20111754-05	solid												11/16/20		
IDA001:DU-F1 TS	20111754-06	solid												11/16/20		
IDA001:DU-F2	20111754-07	solid												11/16/20		
IDA001:DU-F2	20111754-08	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	7.08	1.75	1/4.95	5.09	100.0	2000	11/16/20	11/23/20	7
IDA001:DU-F3	20111754-09	solid												11/16/20		
IDA001:DU-F3	20111754-10	aqueous	30	18:20	10:25	16 hours 45 min	22.76-22.12	7.22	2.03	1/4.95	5.53	100.3	2000	11/16/20	11/23/20	7
IDA001:DU-F4	20111754-11	solid												11/16/20		
IDA001:DU-F4	20111754-12	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	7.38	1.87	1/4.95	5.32	80.2	1600	11/16/20	11/23/20	7
IDA001:DU-F5	20111754-13	solid												11/16/20		
IDA001:DU-F5	20111754-14	aqueous	30	18:20	10:25	16 hours 45 min	22.76-22.12	7.57	1.79	1/4.95	5.25	100.0	2000	11/16/20	11/23/20	7
IDA001:DU-F7	20111754-15	solid												11/16/20		
IDA001:DU-F7	20111754-16	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	7.18	1.82	1/4.88	5.14	71.6	1440	11/16/20	11/23/20	7
IDA001:DU-F7 TE	20111754-17	solid												11/16/20		
IDA001:DU-F7 TS	20111754-18	solid												11/16/20		
IDA001:DU-F6	20111754-19	solid												11/17/20		
IDA001:DU-F6	20111754-20	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	8.08	1.87	1/4.95	5.34	50.3	1000	11/17/20	11/23/20	6
IDA001:DU-F8	20111754-21	solid												11/17/20		
IDA001:DU-F8	20111754-22	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	6.69	1.80	1/4.95	5.08	85.4	1708	11/17/20	11/23/20	6
IDA001:DU-F9	20111754-23	solid												11/17/20		
IDA001:DU-F9	20111754-24	aqueous	30	17:45	10:02	16 hours 17 min	23.89-22.29	6.94	1.82	1/4.95	5.19	100.0	2000	11/17/20	11/23/20	6

VOCs - Fluid 1 only
pH >5 - acidifiy and recheck - if pH >5 fluid 2 if <5 fluid 1
if metals acidify pH <2 final prior to analysis - for MS/MSD - add spike then adjust pH

SAMPLE MAXIMUM HOLDING TIMES [DAYS]

	From: Field collection	From: TCLP extraction	From: Preparative extraction
	To: TCLP extraction	**To: Preparative extraction**	**To: Total Determinative analysis**
Volatiles	14	NA	14
Semi-volatiles	14	7	40
Mercury	28	NA	28
Metals	180	NA	180

ALS Environmental

Book Number 3225

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111754-021A ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102T7800
Balance ID: 11
INITIAL pH OF SLURRY: 7.94 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.73 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: SOIL 4.95
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 60.0 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 1200 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002
RPM: 30
EXTRACTION pH AT FINISH: 5.55 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 170724051
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.09 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change
limited volume

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111754-044 ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.06 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.90 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: SOIL 4.95

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: #1

EXTRACTOR ID #: — EXTRACTOR ID #: 11202020160

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002

RPM: 30

EXTRACTION pH AT FINISH: 6.01 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.89 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

Book Number 3225

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111754-08A ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: ___ g Sample Wt: ___ g Filtered Wt: ___ g

%SOLIDS[1]: 100.0 % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778061

Balance ID: 11

INITIAL pH OF SLURRY: 7.08 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.75 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.95

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002

RPM: 30

EXTRACTION pH AT FINISH: 5.09 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724951

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.89 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111754-10A ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 7.22 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 2.03 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.95
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 100.3 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 11202020d0
FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1820 FINISH: 11/24/2020 1025
RPM: 30
EXTRACTION pH AT FINISH: 5.53 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 191956734
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.76 LOW: 22.12

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111764-12A ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)
SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11
INITIAL pH OF SLURRY: 7.38 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)
pH AFTER HCl & Heat: 1.87 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)
pH Meter ID: pH TCLP HCl BPL: 3236-8-7
EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9
and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: 801 / 4.95
EXTRACTION FLUID USED FOR VOLATILES (BPL): —
and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):
VOLATILES (ZHE): — g NON-VOLATILES: 80.2 g
BALANCE ID: — BALANCE ID: 11
EXTRACTOR ID #: — EXTRACTOR ID #: 120202060
FINAL Pressure: — psi
EXTRACTION FLUID VOLUMES (mLs):
VOLATILES (ZHE): — mL NON-VOLATILES: 1600 mL
NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002
RPM: 30
EXTRACTION pH AT FINISH: 5.32 PRESERVATION BPL: —
pH Meter ID: pH TCLP
THERMOMETER ID: 17072485
TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.89 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No change
Limited volume

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111764-14A ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —
([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0102778001
Balance ID: 11

INITIAL pH OF SLURRY: 7.57 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.79 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.95

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 112020206O

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: T3 START: 11/23/2020 1920 FINISH: 11/24/2020 1025

RPM: 30

EXTRACTION pH AT FINISH: 5.25 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 191956734

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 22.76 LOW: 22.12

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111754-16A ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): SOIL

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.3 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 7.18 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.82 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-8

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: SOIL 4.88

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 71.6 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 120202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 1440 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002

RPM: 30

EXTRACTION pH AT FINISH: 5.14 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.99 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change
limited volume

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

TCLP/SPLP/ASTM
EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111764-204 ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): SOIL

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.1 g to 96.5mL DI Cup BPL P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 8.08 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.86 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Sol 1 4.95

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 50.3 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 1000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002

RPM: 30

EXTRACTION pH AT FINISH: 5.34 PRESERVATION BPL: —

pH Meter ID: pH TCLP THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.89 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No change
limited volume

Note: One Blank extraction must be processed for every 20 sample extractions.

ALS Environmental

Book Number 3225

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20111784-22A ANALYST: AL/JJ

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): Soil

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100 % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 6.69 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.80 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: Soil 4.95

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 85.4 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11202020600

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 1700 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002

RPM: 30

EXTRACTION pH AT FINISH: 5.00 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 170724851

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.89 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): —

EXTRACTION COMMENTS: No Change limited volume

Note: One Blank extraction must be processed for every 20 sample extractions.

Book Number 3225

ALS Environmental

TCLP/SPLP/ASTM EXTRACTION PROCEDURE

DATE: 11/23/2020 SAMPLE ID: 20117764-24A ANALYST: AJS

ANALYSIS REQUIRED: TCLP MET

SAMPLE DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.): SOIL

Filter Wt: — g Sample Wt: — g Filtered Wt: — g

%SOLIDS[1]: 100% % DRY SOLIDS[2]: —

([1]IF LESS THAN 0.5%, EXTRACTION NOT NECESSARY) ([2]Only use if liquid is entrained in filter)

SAMPLE PREPARATION (CRUSH, GRIND, CUT, etc.): —

EXTRACTION FLUID DETERMINATION: 5.0 g to 96.5mL DI Cup BPL: P0102778001

Balance ID: 11

INITIAL pH OF SLURRY: 6.94 (If < 5.0, use Fluid #1. If > 5.0, add HCl & Heat)

pH AFTER HCl & Heat: 1.82 (If <5.0, use Fluid #1. If > 5.0, use Fluid #2)

pH Meter ID: pH TCLP HCl BPL: 3236-8-7

EXTRACTION FLUID USED FOR NON-VOLATILES (BPL): 3236-8-9

and pH OF EXTRACTION FLUID USED FOR NON-VOLATILES: SOL 1 4.95

EXTRACTION FLUID USED FOR VOLATILES (BPL): —

and pH OF EXTRACTION FLUID USED FOR VOLATILES: —

SAMPLE WEIGHT (grams - corrected for % Solids):

VOLATILES (ZHE): — g NON-VOLATILES: 100.0 g

BALANCE ID: — BALANCE ID: 11

EXTRACTOR ID #: — EXTRACTOR ID #: 11202060

FINAL Pressure: — psi

EXTRACTION FLUID VOLUMES (mLs):

VOLATILES (ZHE): — mL NON-VOLATILES: 2000 mL

NOTE: FLUID VOLUME = 20 X SAMPLE WEIGHT USED

EXTRACTION DATE/TIME: START: 11/23/2020 1745 FINISH: 11/24/2020 1002

RPM: 30

EXTRACTION pH AT FINISH: 5.19 PRESERVATION BPL: —

pH Meter ID: pH TCLP

THERMOMETER ID: 17072485

TEMPERATURE RANGE DURING EXTRACTION (°C): HIGH: 23.89 LOW: 22.29

POST EXTRACTION DESCRIPTION (COLOR, TEXTURE, PARTICLE SIZE, ETC.):

EXTRACTION COMMENTS: No Change

Note: One Blank extraction must be processed for every 20 sample extractions.